

Credit Cards and Debit Cards in the United States and Japan

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This article examines differences in credit-card and debit-card usage between the United States and Japan. Although I do not doubt that social and psychological factors have some significance, I contend that four institutional factors also have useful explanatory power: the freedom of banks to enter the industry; the size of retailers; the level of telecommunications costs; and the size of the national economy.

Generally, credit cards in Japan are used for a smaller share of transactions, with a higher average amount, and with less borrowing per transaction. The costs to merchants that take the cards and the rates of fraud also are noticeably higher in Japan than in the United States. The article argues that the difference in usage is attributable primarily to regulations that largely excluded banks and their affiliates from credit-card lending until 1992 and also, to some lesser degree, to the relatively small size of Japanese retailers.

The article concludes that the differences in discount rates and fraud rates are more likely to be transient, but attributable to a combination of factors, including the comparatively small payment-card market and high telecommunications costs, both of which have hampered the sophistication of responses to fraudulent transactions.

Debit cards are used quite rarely in Japan—the first general-use debit card was not introduced until the spring of 2000. Although that card is cheaper for the merchants that take it than credit cards, and also is much more resistant to fraudulent transactions, the article suggests that the debit card will not find as large a market in Japan as it has in the United States. The reason is that the shift of the credit card from its use as a borrowing device in the United States to its use as a near-cash payment device in Japan leaves a much smaller niche for the debit card in Japan.

Key words: Credit cards; Debit cards

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I. Introduction

The widespread use of cards is one of the most salient features of consumer retail payment systems in the United States. U.S. consumers use those cards to pay for about one-fourth of their retail purchases each year.¹ And this is not a static phenomenon; among other things, the use of debit cards,² though still relatively small, is rising rapidly.³ That pattern of use is not, however, typical of other countries. Even in some highly industrialized nations, consumers use cards to pay for purchases much less frequently. Statistics from the Bank for International Settlements, for example, suggest about 60 card-based payment transactions per person per year in the United States, but only four such transactions per person per year in Japan.⁴ But the differences go far beyond a simple willingness to use cards to make retail payments. The average transaction for which a card is used in Japan is much larger than the average card-paid transaction in the United States. At the same time, Japanese cardholders are much more likely to pay their entire bills each month than U.S. cardholders: borrowing beyond the first statement period appears in only about one-tenth of Japanese credit-card transactions, while about half of U.S. cardholders borrow each month.⁵

The reasons for the differing patterns of use (or disuse) of cards have several important policy ramifications. First, in the countries in which cards are used frequently, their success suggests that they generally provide payment more cheaply and effectively than competing retail payment systems. By lowering the transaction costs of retail transactions, those systems generally bolster the efficiency of the economy's retail sector. Second, at least in the United States, leading scholars associate the credit card with an embarrassingly high rate of consumer bankruptcy—generally the highest of any industrialized country.⁶ Third, there is good reason to believe that

1. See *Consumer Payment Systems*, NILSON REP., Dec. 2000 (Issue 729) [hereinafter *1999 U.S. Payment Systems Data*], at 1, 6. I rely throughout this paper on the *Nilson Report* for statistics regarding the U.S. card industry. Although the source of the statistics published in the *Nilson Report* is rarely clear, I follow the lead of U.S. government agencies and earlier academics, which generally have accepted them as authoritative.
2. Generally speaking, a debit card is a card that pays for transactions by removing funds from a specified bank account at the time of the transaction. In the U.S. market, the functional difference between a debit card and a credit card is that the funds for a debit-card transaction are removed from the bank account automatically a few days after the transaction, whereas a credit card would lead to removal of funds only at the end of the month when (if) the cardholder pays the bill. For a general introductory discussion of debit cards, see RONALD J. MANN, PAYMENT SYSTEMS AND OTHER FINANCIAL TRANSACTIONS 141–46 (1999).
3. See *Debit Cards at the Point of Sale in the United States 2000*, NILSON REP., Apr. 2001 (Issue 737), at 1, 6 [hereinafter *2000 U.S. Debit-Card Data*] (reporting 8.3 billion U.S. debit-card purchase transactions in 2000, up 30 percent from the previous year, for a total of US\$318 billion); *1999 U.S. Payment Systems Data*, *supra* note 1, at 1, 6 (reporting that debit cards were used for 6.1 percent of 1999 consumer purchases, representing 4.7 percent of the U.S. dollar amount of consumer purchases); see also *Visa and MasterCard—US 1998*, NILSON REP., Apr. 1999 (Issue 689), at 1, 5–7 (showing growth of Visa and MasterCard debit transactions from 400 million in 1994 to 2.9 billion in 1998).
4. See Bank for International Settlements, Committee on Payment and Settlement Systems, *Retail Payments in Selected Countries: A Comparative Study* 23 chart 5 (Sept. 1999), available at <http://www.bis.org> [hereinafter *BIS, Comparative Payments Study*].
5. For details, see *infra* pp. 134–137.
6. See, e.g., TERESA A. SULLIVAN, ELIZABETH WARREN & JAY LAWRENCE WESTBROOK, *THE FRAGILE MIDDLE CLASS: AMERICANS IN DEBT* ch. 4 (2000) (detailed data and analysis of the relation between the credit-card industry and consumer bankruptcy in the United States). The view is supported by analysis from government experts as well. See also Diane Ellis, *The Effect of Consumer Interest Rate Deregulation on Credit Card Volumes, Charge-Offs, and the Personal Bankruptcy Rate*, BANK TRENDS 98-05 (FDIC, Division of Insurance, March 1998).

wide use of credit cards is inversely related to a nation's savings rate. If, as some scholars argue, credit-card usage *causes* the decline in savings,⁷ then policies that foster credit-card usage are relevant to those aspects of macroeconomic planning that are affected by savings rates. Thus, concerned policymakers should welcome an enhanced understanding of the institutional factors that motivate the use of cards in general or the use of cards as a borrowing device in particular.

At the outset, it is natural to wonder whether the pattern is dominated more by factors of economics than by those of social construction. For example, perhaps there is something about payment cards that is uniquely attractive to certain types of consumer personalities and perspectives. Thinking in that vein, one might suppose that card-based payment systems are more attractive to the relatively profligate and confident consumers of the United States and less attractive to the more prudent and cautious consumers in countries such as Japan.⁸ One also might think that the risk of street crime could explain much of the pattern. Focusing on that problem, one might suppose that Americans carry cards because of a reluctance to carry cash that might be stolen from them; Japanese have a lower incentive to carry cards because their relatively crime-free society makes it safer to carry large quantities of cash.⁹

Those explanations certainly have some truth,¹⁰ but by themselves they cannot explain the pattern that I observe. In particular, because those factors are for the most part static, they cannot explain the significant changes in Japanese card usage that generally are making the use of Japanese cards look more and more like U.S. patterns.¹¹ The purpose of this paper is to explore the legal and economic institutions that might affect that pattern.

7. See ROBERT D. MANNING, CREDIT CARD NATION: THE CONSEQUENCES OF AMERICA'S ADDICTION TO CREDIT chs. 4–5, 10 (2000).

8. See MANNING, *supra* note 7, at 301 (attributing limited credit-card usage in Japan to fear of “American-style debt”). Although it is difficult to provide objective support for such a phenomenon, recent surveys of Japanese voters do suggest widespread discomfort with the use of credit cards. For example, one 1991 survey of 2,000 voters by the *Yomiuri Shimbun* concluded that 64 percent found it not very desirable or not very desirable at all for Japan to become a cashless society in which people did not need to carry cash because of card-based payment systems. A 1998 survey of 2,000 voters by the *Asahi Shimbun* reports that 59 percent feel uneasy when they shop with credit cards. {Summary of survey data on file with author.} Given the widespread use of credit cards in the United States, it would be surprising to see similar results from such surveys in that country.

9. It is quite difficult to assess the force of that consideration, not only because it is difficult to compare crime rates between jurisdictions with differing systems of criminal law and different conventions for reporting offenses, but also because the relevant question is not whether there is a difference in the actual risk of crime, but whether there is a difference in the perceived risk of crime. Having said that, and even though official crime statistics do not include a category for “street crime,” the existing data do suggest that street crime is substantially less common in Japan than it is in the United States. Compare GOVERNMENT OF JAPAN, SUMMARY OF THE WHITE PAPER ON CRIME tbl. I-4, at page I-5 (1998) (reporting 2,809 robbery offenses in 1997); *id.* tbl. I-3, at page I-4 (reporting 1.7 million cases of larceny in 1997), with STATISTICAL ABSTRACT OF THE UNITED STATES 207 (2000) (reporting 219,000 robberies on “street or highway” and 7.4 million cases of larceny, including 44,000 cases of larceny by pocket picking, and 42,000 cases of larceny by purse snatching). On the other hand, crime seems if anything to have been rising in Japan during the 1990s at the same time that credit-card use has been rising, so the connection seems weak at best. See GOVERNMENT OF JAPAN, SUMMARY OF THE WHITE PAPER ON CRIME tbl. I-4, at 80 (1990) (1989 statistics) (reporting 1,586 robbery offenses in 1989); *id.* tbl. I-3, at 79 (reporting 1.48 million cases of larceny in 1989).

10. I discuss the relevance of the relatively high Japanese savings rates *infra* pp. 142–144. As for the perception of crime, whatever weight it might have generally, my impression is that cash in the United States is used much less frequently even in areas where even a perception of a substantial risk of mugging seems most unlikely. For data comparing U.S. and Japanese willingness to use and carry cash, see *infra* note 15.

11. See *infra* notes 71–74 and accompanying text.

Working from that perspective, the first part of the article attempts to articulate the institutional factors likely to have general explanatory power in predicting the success of a payment-card system. The analysis starts from the point that any system of card-based payments must operate as a network—plagued by the economic constraints that make it difficult to bring networks into existence and aided by the network effects that make them difficult to displace once they have arisen.¹² This particular type of network is perhaps uniquely difficult to create, because it requires participation by three generally separate groups of entities—the financial institutions that issue the cards, the consumers that use them, and the merchants that accept them. Indeed, taking account of that basic problem, it is not at all remarkable that many countries do not have successful credit-card industries; it is somewhat more remarkable that such an industry has succeeded anywhere.

Section II argues that four separate institutional considerations are important precursors to the development of card networks:¹³

- A regulatory environment that permits free participation by banks in the credit-card market (because depository institutions are best-placed to develop card-based payment and credit products).
- A retail environment that includes a substantial base of relatively large retailers (for whom the fixed costs of accepting credit cards are easier to bear).
- Low telecommunications costs (because low telecommunications costs foster an effective anti-fraud system).
- The size of the national retail economy (because of economies of scale in the rapid implementation of technological advances).¹⁴

Structurally, the first of those factors affects the supply of cards by financial institutions; the second affects the willingness of merchants to accept cards; the third and fourth factors generally affect the cost-effectiveness of the system.

Section III applies those factors to explain the differences in the changing patterns of usage between the United States and Japan. The last two factors are long-standing ones that help to explain the glacial pace at which the card industry has developed in Japan. By contrast, the first two factors have undergone significant

12. For a general introductory summary, see, e.g., CARL SHAPIRO & HAL R. VARIAN, INFORMATION RULES 13-17 (1999); W. Brian Arthur, *Competing Technologies, Increasing Returns, and Lock-in by Historical Events*, ECON. J., March 1989, at 116.

13. A number of other factors might have some relevance in some contexts, but they seem to me sufficiently minor to omit from the general discussion. For example, it seems likely that the failure of checks to develop in Japan has some relevance to the limited success of the credit card, if only because the limited familiarity of Japanese consumers with noncash retail payment systems at the time credit cards first were introduced might have made Japanese consumers less receptive than U.S. consumers. See JAPANESE BANKERS ASSOCIATION, PAYMENT SYSTEMS IN JAPAN 3 (2000) (reporting that checks are used for only 5 percent of Japanese noncash payments, compared to 74 percent of such payments in the United States). More generally, this reflects Japan's status as a "giro" country (that is, a country that pays by cash and electronic transfer) rather than a "cheque" country. See BIS, *Comparative Payments Study*, *supra* note 4, at 10 (characterizing Australia, Canada, France, the United Kingdom, and the United States as cheque countries and the continental European Union and Japan as giro countries).

14. I recognize that the last factor depends to some degree on the others. The payment-card market in Japan is much smaller than the market in the United States, not so much because Japan is a small country—it is not—but because of the effects of the other factors that have retarded the growth of the credit-card market. My point is that the smallness of the market (caused in this case by the other factors) itself limits the system's ability to develop and grow. In other countries that would have small payment-card markets even if cards were used universally, that factor should have even greater significance.

changes in the last decade. Thus, the Japanese retail sector has become much more hospitable to credit cards, both because of new legal rules regarding the types of credit cards that bank-affiliated companies can issue and because of the appearance of the very large retailers common in the United States. In my view, those factors go far in explaining the changing pattern of Japanese credit-card usage.

Section IV discusses debit cards, focusing on their minuscule usage in Japan. I attribute the small role for debit cards to the strange debit-like product into which the Japanese credit card has developed. Because the credit card in Japan has mutated to fill a product niche quite similar to the niche that the debit card fills in the United States, there is little remaining room for the debit card to succeed. Thus, although the Japanese debit card in some ways seems to be a more effective product than the U.S. debit card—and in the abstract, one that should be more attractive to cash-preferent Japanese consumers¹⁵—it seems unlikely to garner a significant role in Japanese commerce.

II. The Institutional Precursors of Credit Cards and Debit Cards

Because the goal of this research is to develop a general understanding of the institutional factors that support and retard the growth of card-based payment systems, it is important to start by offering a general description of the institutional precursors identified in my work in the United States and Japan.

A. A General Framework

As a structural matter, the most important point to make about any card-based payment system is that successful operation requires cooperation among a three-sided network of participants. A card can gain a significant market share only if financial institutions decide to issue it, only if consumers decide to carry it, and only if merchants decide to accept it. The interactive aspect is enhanced by network effects: the decision of any single participant to join the network has the twin effects of making the network more valuable for all preexisting participants and more attractive to potential participants. For example, each merchant that decides to take the card makes the card more useful to those consumers that already have it, which makes consumers more likely to carry the card, which makes the card more profitable both for other merchants that already accept the card and for institutions that already issue

15. A 1998 survey of 2,000 Japanese voters by the *Asahi Shimbun* reports that 37 percent of Japanese adults carry more than ¥30,000 (about US\$270) and 81 percent more than ¥10,000 (about US\$90). [Summary of survey results on file with author.] My impression based on anecdotal evidence is that similar figures in the United States would be much lower. The most startling data point for me is the typical Japanese automated teller machine (ATM) policy that permits withdrawal of ¥2 million per day (about US\$18,000), some 40 times the typical U.S. limit. See JAPANESE BANKERS ASSOCIATION, *supra* note 13, at 16; see also *Gov't, Banks Keen to Lower Debit Card Limits*, NIHON KEIZAI SHIMBUN, Jan. 18, 2001 [hereinafter *Lower Debit Card Limits*] (reporting plans to lower the limit to ¥500,000 (about US\$4,500)). For aggregate data, see JAPANESE BANKERS ASSOCIATION, *supra* note 13, at 2 (reporting that the amount of outstanding currency in Japan [as a share of GDP] is more than twice what it is in the United States and describing "the Japanese citizens' strong preference for using cash as a means of payment").

the card. Concurrently, by increasing the size of the network, those events (all other things being equal)¹⁶ make it more beneficial for new merchants to begin accepting the card and for new institutions to begin issuing the card.¹⁷

To understand the institutional factors likely to promote or hinder the development of such networks, it is useful to think about how the economics of networks affect the incentives of the individual parties to participate. Two points are salient. The first is the unduly low incentive that any individual party has to participate in the network. As the preceding discussion suggests, each party that joins a network increases the value of the network in ways that accrue to the benefit of existing and future participants. Unless the party joining the network can obtain compensation for those benefits that it bestows on the others, the incentive to join the network will (as a social matter) be unduly low. This is the familiar “increasing returns” problem, under which a network becomes more valuable on average to each participant as other participants join the network.¹⁸

Given the large number of participants that participate in networks of this sort, and the difficulty in defining the monetary value of those benefits, it is not generally practical to obtain compensation for them. At most, a party can arrogate to itself all of the benefits of one or more sides of the network by designing the network so that a single party (or group of related parties) is the only party on that side. Thus, for example, entities related to American Express issue all American Express cards; entities related to Target both issue all cards in the Target network and serve as the sole merchants that accept the cards.¹⁹

The second point relates to the three-sided nature of this particular type of network. Because a payment-card network can arise only with concurrent participation by three groups of entities, the institutional environment that will support the deployment of payment cards must be one that includes favorable conditions on all three sides of the triangle: favorable conditions for participation by financial institutions that issue the cards, by merchants that accept the cards, and by consumers that carry them.

B. A Set of Precursors

Examining the payment-card system from the perspective discussed above, four particular factors appear to have general use in explaining the success or lack of success of payment-card systems: the breadth of banking powers; the existence of relatively large merchants; the level of telecommunications costs; and the size of the retail economy.

16. Of course, those effects could be counteracted if the effective price of the card to consumers or merchants is raised in some way or if the market price that banks issuing the card can charge falls in some way (perhaps because of competition among card issuers or card-issuing networks).

17. For a general discussion of the economic implications of the network structure of the card industry, see DAVID EVANS & RICHARD SCHMALENSEE, *PAYING WITH PLASTIC: THE DIGITAL REVOLUTION IN BUYING AND BORROWING* 149–63 (1999).

18. See EVANS & SCHMALENSEE, *supra* note 17, at 149–51.

19. For a discussion of some of the economic advantages of closed-loop card systems, see EVANS & SCHMALENSEE, *supra* note 17, at 158–63.

1. Banking powers

As a logical matter, one of the most important institutional precursors for a card-based payment system would be a regulatory climate that permits free participation by those best-placed to issue the cards. The most important thesis of this article is that banks traditionally have been best-placed to issue those cards, and thus that a regulatory climate that excluded banks would retard the development of the card industry. Several difficulties plague my analysis of that factor. For one thing, my theoretical basis for claiming a connection between bank regulations and the success of the credit-card industry is not overwhelming: there is no obvious reason why non-depository institutions cannot successfully deploy card-based payment products. To be sure, non-depository institutions do have a significant disadvantage in promulgating debit cards—because only depository institutions have immediate access to the accounts against which debit-card payments are made. But no such difficulty bars participation by non-depository institutions in the credit-card industry. Still, although my theoretical understanding remains quite tentative, the historical record in the United States and Japan provides considerable support for my thesis.

a. Historical patterns

The credit-card market as it exists in the United States today developed in the late 1960s and 1970s out of a relatively small earlier market for payment cards exemplified by American Express, Diners Club, and Carte Blanche.²⁰ As the name “payment” card suggests, those cards did not contemplate an extension of credit; they provided only a payment function—facilitating transactions at distant merchants that would be reluctant to accept checks from the cardholder.²¹

The general-purpose credit card—and the high rate of borrowing that makes that card profitable—did not develop until the 1970s and 1980s, and when it did develop it came largely from efforts by U.S. banks (primarily Bank of America in California).²² Notwithstanding the first-mover advantage of its initially dominant payment card, American Express—an experienced, sophisticated, and well-capitalized player in the financial marketplace—was unable to develop a successful credit-card product. Indeed, its repeated, unsuccessful efforts to develop a viable credit-card product have lost staggering sums of money.²³

20. See, e.g., EVANS & SCHMALENSEE, *supra* note 17, at 61–84.

21. See EVANS & SCHMALENSEE, *supra* note 17, at 62–65. The market for that card depended on a sufficiently large country for remote travel to be frequent and also on a payment market in which checks were common. Those cards filled a niche created by the difficulty of using existing noncash payment systems (principally checks) to make payments in remote locations.

22. See EVANS & SCHMALENSEE, *supra* note 17, at 65–69.

23. See EVANS & SCHMALENSEE, *supra* note 17, at 75 (discussing heavy losses incurred by American Express in its attempts to enter the credit-card market).

A similar pattern appears in Japan, which has a long history of regulatory limitations on the participation of banks and their affiliates in the credit-card market. Although the precise reason for the exclusion is not clear,²⁴ it was 1992 before bank-affiliated issuers were permitted to issue cards that allowed revolving credit.²⁵ Thus, at least as to borrowing transactions, the pre-1992 credit-card market was dominated by *shimpan kaisha* and other non-bank lenders. And not until 2001 were companies affiliated with Japanese banks permitted to issue cards that include all of the other borrowing options typical of the Japanese card industry.²⁶

Two points about the resulting market structure (both discussed in more detail in Section III) are central to my conclusions. First, for decades after its introduction in Japan, the credit card was not successful either in gaining a significant market share as a matter of transaction volume or, even more surprising, in luring consumers into borrowing with the cards when they did use them.²⁷ Second, during the nine years since bank affiliates have been able to issue cards with substantial borrowing options, the usages in Japan have begun to move (albeit slowly) to bring Japanese usage closer to the U.S. pattern.²⁸ The movement of Japanese usage to resemble the U.S. experience shortly after those institutional changes at least suggests the significance of untrammelled bank participation in credit-card markets.

b. Theoretical explanations

The biggest difficulty is in explaining precisely why non-depository credit-card issuers have been unable to develop successful credit-card products. Two explanations seem plausible: one that relies on the informational advantage banks gain from

24. Mark Ramseyer and Frances Rosenbluth argue that the exclusion was designed to protect smaller credit companies which would have suffered from competition with the banks. See J. MARK RAMSEYER & FRANCES MCCALL ROSENBLUTH, *JAPAN'S POLITICAL MARKETPLACE* 55–57 (1993). There is some reason to think, though, that the regulation in fact was designed to protect small retailers rather than small credit companies. That might seem counterintuitive—because credit limitations in fact could harm small retailers by lowering their sales—but contemporary sources suggest it as a possibility. For sources discussing the need to protect small retailers, see Kurejitto Sangyou Bukai, Kappu Hanbai Shingikai [The Credit Industry Committee in the Installment Sales Council], *Kurejitto Sangyou no Kongo no Arikatani Tsuite* [Interim Report: The Desirable Future of the Credit Industry] (1990) (discussing the need for protection of small retailers as part of the historical background behind the restriction preventing bank-affiliated issuers from issuing cards that allow revolving credit).

25. No specific statute barred revolving credit, but the legislative sentiments expressed in a resolution accompanying a statute that amended the Installment Sales Law caused the government to bar bank-affiliated entities from offering revolving credit. For the resolution itself, see Kappu Hanbaihou no Ichibu wo Kaiseisuru Houritsuanni Taisuru Futai Ketsugi [Supplementary Resolution Amending Installment Sales Law] (May 10, 1984). For discussion of its significance to later policy, see KIN'YU IT KENKYUKAI [STUDY GROUP REGARDING INFORMATION TECHNOLOGY IN FINANCIAL SERVICES], DEBITTO KADO KAKUMEI [THE REVOLUTION IN DEBIT CARDS] 53–54 (Takarajimasha 2000) [hereinafter THE REVOLUTION IN JAPANESE DEBIT CARDS]; *Dai Ippen Kurejitto Sangyou no Jittai* [Part 1: The History and Current Situation of Credit Industries], in KUREJITTO TORIHIKI JITSUMUZENSHO [CREDIT TRANSACTION GUIDANCE] 110 (Daichihouki 1991) [hereinafter CREDIT TRANSACTION GUIDANCE].

26. Although the 1992 decision did not permit bank-affiliated cards to offer *sankai barai* (repayment in three installments) or *jukkai barai* (repayment in 10 installments), the government ultimately decided to permit bank-affiliated card issuers to offer all of the common forms of borrowing after July 2001. See *Tokubetsu Ronbun: Kin'yu Sabisuni Okeru Kado no Yakuwari to Tenbou* [Special Report: The Perspective and Function of Cards in Financial Services], in KIN'YU JOUHO SHISUTEMU HAKUSHO 3, 25 (Zaikaishouhousha 2000); THE REVOLUTION IN JAPANESE DEBIT CARDS, *supra* note 25, at 96–97; Kurejitto Sangyou Bukai, Kappu Hanbai Shingikai [The Credit Industry Committee in the Installment Sales Council], *Kurejitto Kado no Seidoteki Seiyaku no Kaiketsu no Arikata to Kurejitto Sangyou ni Kyoutsusuru Kadai e no Torikumi ni Kansuru Houkoku* [Interim Report: The Way to Solve Structural Limitations in Credit Cards and a Program for Solving Common Problems in Credit Industries] (1998).

27. See *infra* pp. 134–137 (discussing the limited success of Japanese credit cards).

28. See *infra* p. 138.

depository relations, another on the value of credit cards as a service to enhance the attractiveness to the customer of the bank as a location for the customer's deposits.

The first explanation is the possibility that the information that banks acquire from their depository and other relations with their customers gave them a superior position to design credit-card lending services. It is easy to forget, but the credit-card business was extraordinarily risky in the early days when the modern credit-card business model was developed.²⁹

If it was difficult even for banks with their customer-relation information to develop the sophistication necessary for a profitable credit-card operation focused on their depository customers, it is plausible to think that other types of financial institutions without such information advantages might have been cautious (or unsuccessful) in pushing into the area. Of course, it seems unlikely that the informational advantage would have great relevance in the modern market. In the current information-rich environment, it is no longer the case that the depository relation is the only—or even the most—reliable source of information about the creditworthiness of a potential credit-cardholder. Accordingly, any advantage that banks might have held when the system developed should have dissipated over time.

The second explanation builds on the difficulty of the credit-card industry in its early days. From that perspective, the credit card began not as a profitable line of business, but rather as a costly service that banks provided as a convenience to attract customers.³⁰ Given the limited ability of banks in the 1960s and 1970s to compete on price,³¹ it would have been rational for banks to attempt to distinguish themselves from one another by offering credit-card services even if they were unable to provide those services in a profitable manner.³² After decades of practice, however, the industry developed sufficient expertise to earn considerable profits from credit-card lending.³³ At that point, it would be rational for other issuers to enter the market vigorously, even if they did not have substantial depository relations with their cardholders.

Given the foregoing, it should be no surprise that non-depository institutions in the United States now are quite successful at credit-card lending. For example,

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29. See, e.g., EVANS & SCHMALENSSEE, *supra* note 17, at 68–69 (discussing large losses in the early days of the credit-card industry incurred by, among others, Wells Fargo, Bankers Trust, and Citibank); *id.* at 75 (discussing heavy losses incurred by American Express in its attempt to enter the credit-card market); MANNING, *supra* note 7, at 84–86 (discussing heavy losses incurred by Chase Manhattan and Bank of America); MANNING, *supra* note 7, at 89–91 (discussing US\$100 million of losses by Citibank in the 1970s and characterizing the late 1970s and early 1980s as a “Dickensian nightmare” for the industry as a whole); see also Todd J. Zywicki, *The Economics of Credit Cards*, 3 CHAPMAN L. REV. 79, 137–38 (2000) (arguing that the credit-card industry traditionally has been “dynamically” competitive, so that earlier entrants periodically are replaced by late-coming, more effective rivals).
30. See MANNING, *supra* note 7, at 89–91 (characterizing credit cards before the 1980s as “loss leader[s] that] helped to cultivate customer loyalty and attract new clients”).
31. See, e.g., MARCIA STIGUM, *THE MONEY MARKET* 968–69 (3rd ed. 1990) (discussing the importance to the market of the limitations on bank-deposit interest imposed by the Federal Reserve’s Regulation Q).
32. See MANNING, *supra* note 7, at 84–85 (explaining that the first large-scale use of a universal bank credit card resulted from a mailing by Bank of America of 60,000 unsolicited credit cards to its depository customers).
33. Cf. Arthur J. Alexander, *Consumer Credit in Japan since the Bubble Economy’s End*, JAPAN ECONOMIC INSTITUTE REPORT, June 20, 1977 (No. 23), at 10–12, available at <http://www.jei.org/Archive/IEIR97/9723f.html> (arguing that Japanese banks are handicapped in credit-card lending because they have not had sufficient experience to develop expertise at individual risk assessment).

store cards in the United States have a phenomenal ability to generate borrowings.³⁴ But they showed no capacity to generate those borrowing in the early days of the industry, before banks developed and popularized the credit-card model.³⁵

It also is true that much of the credit-card market in the United States has been taken over by “monoline” banks, which generally have no depositary relation with their customers. Thus, as of 1995, only 16 percent of MasterCard and Visa cards issued in the United States were issued to cardholders that had any relationship with the issuing bank beyond the card.³⁶ But those banks appeared quite late in the development of the credit-card market in the United States.³⁷ And they depend for their success on the economies of scale in sophisticated analysis—“credit-scoring”—of the individuals to whom they issue cards.³⁸ With that type of technology, it is easy to see that the bank’s customer-relation information is not nearly so important as it might have been in the early days of the industry.³⁹

In sum, although the mechanism is not entirely clear, there are good reasons to think that the market would not have developed in the United States in the absence of the profitable and information-generating depositary relationship between banks and potential cardholders.

2. Merchant size

Looking at the network from the merchant side, the typical size of merchants that accept the cards also could affect the deployment and growth of payment-card networks. That is true because there are nontrivial fixed costs incurred when a merchant decides to accept credit cards. For example, in the modern era, a merchant that accepts a major credit card must acquire an authorization terminal which can swipe the card (to obtain data from the magnetic stripe or chip on the card) and contact the credit-card network to determine if the card issuer will authorize the transaction.⁴⁰

34. At the end of 2000, the ratio of outstanding receivables to total annual purchase volume for U.S. store cards was 77 percent, which compares favorably to the analogous ratios for MasterCard (76 percent), Visa (55 percent), Discover (53 percent), and American Express (23 percent). {The ratio for store cards is calculated from *Store Cards in the U.S. 2000*, NILSON REP., June 2001 (Issue 741), at 1, 6–7. The ratios for Visa and MasterCard are calculated from *Year 2000 Results U.S. General Purpose Cards*, NILSON REP., Apr. 2001 (Issue 738), at 1, 4–5. The ratios for American Express and Discover are calculated based on year 2000 results published at *Amex Results—U.S.*, NILSON REP., Jan. 2001 (Issue 732), at 1, 7 and *Discover Card Results*, NILSON REP., Jan. 2001 (Issue 732), at 1, 7.} For a discussion of historical trends of that ratio, see *infra* note 56.

35. See EVANS & SCHMALENSSEE, *supra* note 17, at 61–62 (discussing in-house cards in the early days of the industry); GEORGE RITZER, *Expressing America: A Critique of the Global Credit Card Society* 33–34 (1995) (discussing the limited use of revolving credit in the early days of the industry).

36. See EVANS & SCHMALENSSEE, *supra* note 17, at 208–09.

37. See, e.g., EVANS & SCHMALENSSEE, *supra* note 17, at 12 (discussing the rise of monoline banks in the early 1990s).

38. See Jane Tanner, *Investing: Everyday Plastic, Spun into Gold*, N.Y. TIMES, Sept. 17, 2000, available at <http://www.nytimes.com> (discussing underwriting techniques of monoline banks); Miriam Kreinin Souccar, *Providian Pitch Spurs Fear of Credit Data Poaching*, AM. BANKER, Dec. 6, 1999, at 1, available at 1999 WL 21145379 (same).

39. Looked at from another perspective, the monoline bank—credit-card issuer without depositary relation—in some ways resembles the *shimpan kaisha* that is an important player in the Japanese market. The key difference, of course, is that the *shimpan kaisha*’s transactions have a much lower share of borrowing than those of the typical U.S. monoline bank. See *infra* note 62 (reporting estimates of the rate of borrowing in *shimpan kaisha* transactions).

40. The cost of the terminal might nominally be borne by either the merchant or the credit-card network (see *infra* note 149), but in any event it must be incurred, which is the relevant question here.

The decision whether it is profitable for a merchant to accept a card depends on the profits from taking the card—the profits in new sales, reduced by the charges the merchant pays for accepting the card (charges that the merchant incurs not only in card-induced sales, but in all sales in which the card is used).⁴¹ All other things being equal, larger merchants are likely to have more card-induced transactions than smaller merchants, and thus a greater incentive to incur the costs to accept the card.⁴²

3. Telecommunications costs

At this point, I turn to general factors—which affect neither the supply nor the demand for cards, but the costliness of operating the system effectively. The most obvious consideration of that type is the relative level of telecommunications costs. Effective protections against fraudulent credit-card transactions require the merchant to contact the issuer at the time of the transaction to permit the issuer to consider the likelihood that the transaction is fraudulent. Ideally (and typically in the United States),⁴³ that process starts with a swiping of the card at the merchant's counter. The terminal at which the card is swiped transmits to the issuer not only the card number, but also additional information on the magnetic stripe (which helps to demonstrate the authenticity of the card) and information about the transaction (which helps the issuer to assess the likelihood that the cardholder is in fact engaged in the transaction).⁴⁴

Because such a process necessarily involves some form of online connection between the merchant and the issuer, high telecommunications costs pose an obstacle to such systems.⁴⁵ The reason is that the more it costs the merchant to place those calls, the more likely it is that the cost of making such calls routinely will exceed the expected present value of the losses from fraud that such calls will deter. Hence, the level of those costs presents a kind of friction setting the level below which it is not profitable to deter fraud: the lower those costs, the more vigorous (and successful) the system can be in efforts to eradicate fraud.

As it happens, it is widely recognized that Japan's telecommunications costs are among the highest of any developed nation.⁴⁶ Among other things, those costs typically include charges on a per-call and per-minute basis that are relatively unusual

41. For a more detailed discussion of that point, see *infra* note 147.

42. In a market in which the network is bearing the fixed costs, the analysis is similar—the network will be more likely to earn sufficient profits from the merchant's acceptance of the card if the merchant uses the card for more transactions, which is more likely for larger merchants than for smaller merchants.

43. See *Smart Card Economics*, NILSON REP., Sept. 2000 (Issue 724), at 1, 5 (reporting that over 95 percent of U.S. Visa and MasterCard transactions are authorized in real time, a higher rate than in any other country).

44. For a basic description of that process, see MANN, *supra* note 2, at 111–12.

45. See *Smart Card Economics*, *supra* note 43, at 5 (connecting the careful authorization practices in the United States with the perception that “[c]osts for POS [point-of-sale] terminals, telecommunications, and cardholder and merchant account processing are cheaper than anywhere else in the world”).

46. See, e.g., RICHARD KATZ, JAPAN: THE SYSTEM THAT SOURED 35 (1998) (discussing reasons for relatively high telecommunications costs in Japan); Mark Magnier, *Japan's Big Hang-Up*, LOS ANGELES TIMES, June 4, 2000, at C1, available at 2000 WL 2247206 (arguing that Japanese telephone interconnection charges are about four times those in the United States and Great Britain and 2.5 times those in France and Sweden); *Japanese Government Panel Urges End to NTT Stranglehold*, AGENCE FRANCE-PRESSE, Aug. 17, 2000, available at 2000 WL 24691668 (noting that local charges in Japan (for which NTT has a monopoly) have risen by 13 percent since 1985, while long-distance charges (for which NTT faces competition) have fallen by 78 percent).

in Western countries.⁴⁷ All other things being equal, those high costs should pose an obstacle to effective prevention of fraudulent transactions.

4. Economies of scale

The simplest of the institutional precursors is economies of scale. Like most large-volume transactions, advances in information technology (IT) are important in a variety of ways—not only in the initial issuance of the cards (discussed above), but also in the processing of transactions.⁴⁸ Because we live in a period when that technology is developing and improving so rapidly, economies of scale are likely to be important in the rapid development and deployment of that technology.⁴⁹ Thus, all other things being equal, marginally larger countries should be able to deploy more sophisticated technology more rapidly than marginally smaller countries.⁵⁰ As a result, the systems in marginally larger countries should become more effective—less costly and more impervious to fraud—more rapidly than systems in marginally smaller countries.⁵¹

III. Credit Cards in the United States and Japan

Turning from abstract analysis to specifics, I start with the credit card. First, I discuss how consumers use the cards in the two countries. Second, I discuss how effectively the system processes the transactions in which the cards are used.

A. Usage in the United States and Japan

1. Describing the transactions

In the market for retail purchases in the United States, the credit card is a massive success: it was used in 1999 for 14 billion transactions worth almost US\$1.1 trillion dollars, about US\$76 per transaction.⁵² Department of Commerce statistics indicate that in the same year credit cards were used in about 18 percent of all transactions,

47. Akiko Kashiwagi, *Criticism of NTT Mounts as Japan's Internet Era Stalls*, INTERNATIONAL HERALD TRIBUNE, Jan. 11, 2001, available at <http://www.newsonjapan.com> (discussing NTT's practice of charging by the call and minute for telephone calls in Japan).

48. See, e.g., MANNING, *supra* note 7, at 85, 87 (discussing research and development that led to technological advances making it easier for credit-card operations to become profitable). Some evidence of this appears in the increasing concentration of the various sectors of the credit-card market. For example, in the market for acquiring and processing credit-card transactions, First Data had a 44 percent market share as of 1999 (up from 36 percent in 1998). The top 10 acquirers increased their market share from 65.5 percent in 1997 to 76.2 percent in 1999. See *Top U.S. Acquirers*, NILSON REP., Apr. 2000 (Issue 713), at 1, 9 [hereinafter *1999 U.S. Acquisition Data*] (reporting increases in concentration from 1998 to 1999); *Top U.S. Acquirers*, NILSON REP., Mar. 1999 (Issue 688), at 1, 9 (reporting increases in concentration from 1997 to 1998). In the market for issuing cards, the top five issuers currently control 57 percent of the market and the top 10 issuers control 82 percent of the market. In 1990, the top five issuers controlled 36 percent and the top 10 only 51 percent. In 1980, the top 50 card issuers controlled less than 60 percent of the market. See MANNING, *supra* note 7, at 298; *Superportfolios*, NILSON REP., Feb. 2001, at 1, 6–7 (Issue 733).

49. See RITZER, *supra* note 35, at 42–43 (discussing economies of scale in the U.S. credit-card industry).

50. Of course, once the technology is developed and freely available, it may be that economies of scale in use of the technology are minimal. Thus, this factor suggests only a slowing of the pace of development, not a permanent difference in the level of development.

51. As discussed in the introduction, the analysis assumes that national borders still matter in the development of payment systems. That is, of course, an assumption that weakens with the rise of globalization.

52. See *Credit & Debit Cards*, NILSON REP., Nov. 2000 (Issue 726) [hereinafter *1999 US Card Data*], at 1, 7.

for about 23 percent of the value paid in all U.S. consumer payment transactions.⁵³ For the most part, those transactions were conducted as revolving-credit transactions.⁵⁴ Under U.S. practices, that means that the cardholder decides each month what share of the total account balance he/she will pay back; the cardholder is required to make only a tiny minimal payment, in an amount that often would not amortize the entire balance for several years.⁵⁵ In practice, somewhat more than half of U.S. cardholders take advantage of that option to defer payment of some or all of their credit-card account balance each month.⁵⁶ The payments that they do make are made for the most part by writing a check and mailing it to the issuer.

The contrast with Japan is considerable. First, Japanese consumers plainly do not use cards as frequently as U.S. consumers: one recent study, for example, indicated that even excluding cash transactions (by all accounts the dominant method of point-of-sale payment in Japan),⁵⁷ credit cards accounted for only 10 percent of the value of payment transactions.⁵⁸ Industry statistics indicate only ¥21.58 trillion (US\$194 billion at an exchange rate of ¥111/US\$1) in credit-card transactions in 2000, about 6 percent of Japanese consumer spending that year.⁵⁹ That reflects

53. See 1999 *U.S. Payment Systems Data*, *supra* note 1, at 1, 6. The credit card's share of retail purchase transactions doubtless is even higher, because the share that credit cards have for non-retail payment transactions surely is lower (close to zero) than the share which they have for retail payment transactions. Cash, by the way, was used in 44 percent of all U.S. payment transactions, but those transactions had an average amount of only US\$20.08, totaling less than 19 percent of the total dollar transaction volume. See *id.*

54. In U.S. terminology, the principal exception is a "payment card" like American Express, which requires full payment of the balance each month. In terms of transaction value at the merchant point of sale, American Express currently has about a 15 percent share of the U.S. market. See *U.S. Annual Credit Card Charge Volume by Brand—Current*, available at <http://www.cardweb.com/carldata/charts/chargevolume.html> (visited Sept. 17, 2001).

55. See MANNING, *supra* note 7, at 352 n.57; RITZER, *supra* note 35, at 95–96. The perception that those options are too lenient has motivated Congressional efforts to require various remedies designed to ensure consumer awareness of the length of time repayment would take at the minimum payment rates. See Dean Anason, *LaFalce Sees Compromise as Reform's Best Hope*, AM. BANKER, Apr. 29, 1999, at 3, available at 1999 WL 6034812 (discussing possible disclosure requirements); Dean Anason, *Bankruptcy Bill Is Getting Last-Minute Tweaks*, AM. BANKER, Sept. 10, 1999, at 2 (same); Michelle Heller, *Bankruptcy Reform on the Hill's Fast Track*, AM. BANKER, Feb. 7, 2001, at 1, 4 (same).

56. See MANNING, *supra* note 7, at 102 (reporting industry estimates of an increase in convenience users from 31 percent in 1990 to 43 percent in 2000); Jeremy Simon, *More Users of Plastic Wielding It More Wisely*, ORANGE COUNTY REGISTER, Apr. 18, 1999, at K05, available at 1999 WL 4295534 (reporting an increase in "convenience users" from 29 percent in 1990 to 42 percent in 1997); Miriam Kreinin Souccar, *Mortgage Refinancing Slump Good for Card Firms*, AM. BANKER, Jan. 18, 2000, at 1, 15 (reporting MasterCard statistics indicating that only 54 percent of its customers retained balances in 1998, down from 57 percent in 1997); Mickey Meece, *Rise in Consumer Debt Burden Is an Illusion, MasterCard Says*, AM. BANKER, Mar. 18, 1997, at 14 (reporting industry studies indicating that 60 percent of credit-card users pay off their charges before interest accrues). A good way to understand the trend is to track the ratio of outstanding balances at any given time against the annual credit-card purchase volume. That figure was above 70 percent throughout the early 1990s, but fell to 68 percent in 1998, 57 percent in 1999, and 53 percent in 2000. See *Bank Cards*, NILSON REP., Sept. 1999 (Issue 699), at 1, 6 (discussing the historical trends in that metric); *1999 US Card Data*, *supra* note 52, at 1, 7 (data from which I calculate the 1999 figure); *Credit Cards in the U.S.*, NILSON REP., Dec. 2000 (Issue 730), at 1, 5 (reporting the 2000 figure).

57. See *supra* notes 13 & 15.

58. See JAPANESE BANKERS ASSOCIATION, *supra* note 13, at 3. As mentioned above, credit cards in the United States accounted for 21 percent of the value of transactions even when cash is included. Excluding the 19 percent of transaction value handled by cash (to make the figures comparable), the share of credit cards in the United States would rise to 26 percent, more than twice the Japanese share.

59. See Ministry of Economy, Trade and Industry, "METI: Current Survey of Selected Service Industries," available at <http://www.meti.go.jp/statistics/index.html>. For a similar estimate, see *Credit Cards in Japan: A Borrower Be*, ECONOMIST, Apr. 21, 2001, at 71, 71 (relying on a report from Deutsche Securities stating that purchases on credit cards account for 8 percent of consumer spending).

purchases of about US\$1,650 per capita, compared to about US\$3,500 per capita in the United States.⁶⁰ The data also show that the average credit-card transaction is about three times as large in Japan as it is in the United States, in the range of ¥25,000 (US\$225).⁶¹

Perhaps the most striking feature of the Japanese transactions is the limited extent to which they involve credit. The overwhelming majority—about 85 percent—of Japanese credit-card transactions are settled by *ikkai barai* (repayment in one installment).⁶² Under *ikkai barai*, the consumer agrees that the transaction will be paid to the issuer in full on the next monthly payment date.⁶³ Also different from U.S. practice is the timing of the payment decision: whereas U.S. cardholders typically decide their repayment schedule when they receive their monthly bills, the Japanese cardholder typically makes that decision at the cash register at the time of the sale.

The full implications of *ikkai barai* for the credit-card system come from its interaction with the general absence of the check from the Japanese consumer payment system.⁶⁴ The ordinary Japanese consumer pays bills by a credit transfer or a prearranged debit transfer. Thus, in the credit-card transaction, the customer's consent to *ikkai barai* amounts not only to a general commitment to pay in one month; it also includes an authorization for a transfer out of the customer's account to pay the transaction shortly after the last day of the payment cycle.⁶⁵ Because the cardholder at the point of purchase already has given the issuer access to a specified amount of funds in a specified account, the transaction resembles much more closely a U.S. debit-card transaction than a U.S. credit-card transaction.⁶⁶

60. The US\$3,500 figure is calculated from the data *supra* in the text accompanying note 52. See also *supra* note 4 and accompanying text (reporting four card transactions per person per year in Japan, compared to more than 60 in the United States).

61. I base that estimate on 1999 statistics from the Bank for International Settlements, which show 825 million transactions for a total of ¥18.4 trillion (US\$165 billion). Bank for International Settlements, Committee on Payment and Settlement Systems, *Statistics on Payment Systems in the Group of Ten Countries*, 61–62 tbls. 12, 13 (March 2001), available at <http://www.bis.org> [hereinafter BIS, 1999 Payments Statistics]. Although the table is not explicit on that point, I believe that it includes only credit-card use for purchase activity, because the total transaction value is similar to statistics published by the Japan Consumer Credit Industry Association (JCIA). JCIA statistics show a total of ¥20 trillion (US\$180 billion) in Japanese credit-card shopping transactions for 1999. NIHON NO SHOUHISHA SHINYOU TOUKEI [JAPAN CONSUMER CREDIT INDUSTRY ASSOCIATION, CONSUMER CREDIT STATISTICS OF JAPAN] 30 (2001) [hereinafter JCIA ANNUAL STATISTICS].

62. None of the published aggregate industry data separates out the precise share of *ikkai barai* or revolving credit; instead it divides transactions into *kappu*, those which involve a substantial deferral of payment, and *hikappu*, those which do not. *Hikappu* generally includes not only *ikkai barai*, but also *nikai barai* (repayment in two installments) and bonus payment (repayment out of the cardholder's biannual bonus). *Kappu* includes revolving credit and installment plans that are both three or more payments and two or more months. See KAPPU HANBAIHOU [INSTALLMENT SALES LAW], Law No. 159 of 1961, art. 2(3). For the industry as a whole, data from the Japan Consumer Credit Industry Association show that *kappu* transactions as of 1999 were only 11.8 percent of all transactions, and only 1.7 percent of transactions at bank-affiliated card issuers. See JCIA ANNUAL STATISTICS, *supra* note 61, at 49–50. My belief that *ikkai barai* constitutes almost all of the *hikappu* transactions is based on several anonymous interviews at Japanese financial institutions.

63. See JCB Card Rules and Regulations arts. 8, 9(1) (undated) [copy on file with author] [hereinafter JCB Cardholder's Agreement] (providing for calculation of charges as of the 15th day of each month, mailing of a statement showing those charges, and a bank transfer to pay the charges on the 10th day of the following month).

64. See *supra* note 13.

65. See JCB Cardholder's Agreement, *supra* note 63, art. 9(1) (establishing payment cycles that end on the 15th day of each month, with payments transferred on the 10th day of the succeeding month).

66. This method of paying credit-card bills is not unique to Japan. My discussion with European students suggests that it is common in Europe as well. That may reflect the similarity of continental Europe to Japan in that neither has checks as a substantial consumer payment system. See *supra* note 13.

After the end of each payment cycle, the issuer sends the cardholder a statement summarizing the charges.⁶⁷ Absent an affirmative and timely objection by the cardholder, the issuer causes the funds to be transferred from the cardholder's bank account to the issuer's account on the designated date.⁶⁸ When the cardholder uses *ikkai barai*, there typically is no interest or other charge for the deferral of payment from the date of the transaction to the monthly payment date.⁶⁹ Thus, the roughly 85 percent share of transactions processed by *ikkai barai* involves no significant extension of credit by the issuer.

2. Explaining the differences

The foregoing subsection suggests three salient differences between Japanese and U.S. use of credit cards: the transactions in Japan are less common, larger, and less often involve significant borrowing (by which I mean borrowing that results in the payment of interest to the card issuer). Each of those differences, I believe, is at least partially attributable to differences in the institutional precursors discussed in Section II. Two of those precursors are sufficiently obvious to make extended discussion superfluous. First, Japan's retail economy, albeit one of the largest on the planet, is significantly smaller than that of the United States. Thus, any economies of scale in the deployment of IT would render the Japanese system marginally less effective than the U.S. system. Second, it is widely recognized that Japan's telecommunications costs are among the highest of any developed nation. Both of those precursors contribute to higher costs that should make the systems less competitive than their counterparts in the United States.

In my view, however, the costs that plausibly can be attributed to those precursors cannot explain the specific pattern of differences described above: not only the limited usage of cards, but also the large size of the transactions and the limited amount of borrowing. To the extent institutional factors can explain those differences, the limited powers of Japanese banks and the relatively small size of Japanese retailers appear to me to be the best explanations. Accordingly, I defer discussion of the relevance of telecommunications costs and economies of scale to the next subsection.⁷⁰

67. See JCB Cardholder's Agreement, *supra* note 63, art. 8 (providing for a statement sent by ordinary mail describing all charges made by the 15th day of each calendar month).

68. See JCB Cardholder's Agreement, *supra* note 63, arts. 8, 9(1) (authorizing a payment on the 10th day of the month if the customer does not object within one week of the customer's receipt of the monthly statement). In the rare case in which the card is issued directly by a bank, the bank might take the funds by a simple removal of funds from the account. In the more common case in which the card is issued by some entity that is not a bank (that is, a bank affiliate, *shimpan kaisha*, or retailer-affiliated card issuer), the issuer obtains the funds by a bank-debit transfer. See JCB Cardholder's Agreement, *supra* note 63, art. 9(1) (granting permission for the bank transfer). The need for the issuer to obtain payment by such a transfer means that issuers will issue cards only to consumers that have bank accounts at institutions with which the issuer has a debit-transfer agreement. Most issuers have such relations with several institutions, but those relations are sufficiently limited that the need for such a relation apparently does constrain issuers' ability to issue cards. See Anonymous Interview One, Tokyo (Sept. 22 & Oct. 10, 2000) [hereinafter Anonymous Interview One].

69. There is nothing unusual about the absence of interest in those transactions; it is similar to the typical U.S. practice, in which there is no interest charge for convenience users who pay their bills in their entirety each month. See Zywicki, *supra* note 29, at 101–04 (analyzing the competitive reasons that have led the U.S. market to that pattern).

70. See *infra* Subsection III.B (suggesting that telecommunications costs and economies of scale are relevant in explaining levels of fraud and discount rates).

a. The disempowered-bank hypothesis

In comparing the power of various potential explanations, I am influenced strongly by data suggesting that credit-card use in Japan over the last several years has displayed a marked convergence with the U.S. pattern of usage on each of the axes of difference discussed above. First, Japanese use of credit cards more than doubled between 1995 and 1999 (from 371.8 million transactions to 824.8 million transactions).⁷¹ Second, because the amount of the transactions rose by less than 50 percent (from ¥13.3 trillion [US\$120 billion] to ¥18.4 trillion [US\$165 billion]), the average transaction decreased by about 38 percent (from almost ¥35,000 [US\$315] to just under ¥22,000 [US\$198]).⁷² Third, the total amount of borrowing transactions (*kappu*) is increasing as well (by 11 percent from 1995 to 1999).⁷³ Also, the share of *kappu* among bank-affiliated credit-card transactions is growing with particular rapidity (by 127 percent from 1995 to 1999).⁷⁴

It would be imprudent to give great weight to evidence of a macroeconomic trend appearing over such a short period of time—less than an entire economic cycle. And the changes themselves are somewhat ambiguous: for example, the share of transactions that involve borrowing is increasing less rapidly than the total number of transactions, which could be interpreted as evidence that borrowing is becoming less important. I am inclined, however, to look at the data as evidence of an increased rate of borrowing—particularly among bank-affiliated issuers, who are just now finally getting into the market. In any event, the significant rates of change on all three parameters suggest that something has happened during the last decade which has mitigated the force of whatever factors have led to the striking differences between the U.S. and Japanese credit-card markets. To some degree, the changes doubtless are attributable to the generally homogenizing forces of globalization.⁷⁵ The most obvious candidate is the one discussed above, the opening of the revolving-card market to bank-affiliated issuers in 1992.⁷⁶

One way to look at the Japanese card market is to view it as just starting to move beyond the payment cards that populated the U.S. market in the 1950s and 1960s. It is not a coincidence that the credit card first introduced in Japan (in 1960)⁷⁷ is said to

71. See BIS, *1999 Payments Statistics*, *supra* note 61, at 61 (tbl. 12).

72. See BIS, *1999 Payments Statistics*, *supra* note 61, at 62 (tbl. 13).

73. See JCIA ANNUAL STATISTICS, *supra* note 61, at 49–50 (comparing 1995 to 1999). For comparison, the total amount of *kappu* from 1990 to 1994 actually decreased slightly, before beginning to rise in 1994, as participation by bank affiliates in *kappu* transactions began to have a significant effect on the market.

74. See JCIA ANNUAL STATISTICS, *supra* note 61, at 49–50. Because revolving credit at that time still was the only form of *kappu* permitted to bank-affiliated issuers, see *supra* note 62, all of those transactions must be revolving credit. That trend seems to be continuing. One large Japanese bank-affiliated credit-card issuer reported an increase of the share of revolving-credit value in its portfolio of 13.6 percent from 1998 to 1999 alone. See Anonymous Interview Two, Tokyo (Oct. 17, 2000) [hereinafter Anonymous Interview Two]. Another bank-affiliated issuer emphasized that revolving-credit usage is particularly increasing among its younger card users. See Anonymous Interview Three, Tokyo (Oct. 31, 2000) [hereinafter Anonymous Interview Three].

75. For a general discussion of that point, see THOMAS L. FRIEDMAN, *THE LEXUS AND THE OLIVE TREE: UNDERSTANDING GLOBALIZATION* 83–92 (1999) (describing a “one size fits all” “golden straitjacket” that forces all developed countries into a similar mode of economic organization).

76. To be sure, the rates of change are quite slow, and borrowing is still less common on cards issued by affiliates of banks than it is on the credit cards of other consumer lenders. But that seems fairly attributable to the complexity of experience involved in a successful credit-card operation, experience that it took decades for U.S. lenders and Japanese lenders to acquire. See *supra* note 33.

77. See CREDIT TRANSACTION GUIDANCE, *supra* note 25, at 108.

have been modeled directly on the American Express and Diners Club payment cards.⁷⁸ With banks and their affiliates excluded for decades from the revolving-credit sector of the market, the industry has for the most part been static since that time: the products available to consumers have not been sufficiently attractive to produce the consumer receptiveness to borrowing evident from the U.S. transaction data.⁷⁹ Thus, although Japanese banks (and their affiliates) have quite a respectable market share of credit-card transactions (about 49 percent) of Japanese credit-card shopping,⁸⁰ their share of borrowing transactions is much smaller: bank-affiliated issuers had only 15 percent of the extended borrowing (*kappu*) done by credit cards.⁸¹

The most obvious explanation for those poor results is the general lack of success of revolving credit:⁸² the product on which U.S. banks have built their large credit-card receivables. At least part of the answer must be the relatively unattractive features of that product as it exists in Japan. Specifically, “revolving” credit in Japan does not permit the freely chosen, month-to-month varying payments typical of the U.S. cardholder. Rather, the cardholder agrees, at the time that the card is issued, that any transactions designated as “revolving” will be paid back over a prearranged schedule (perhaps 10 percent per month, perhaps ¥10,000 [US\$90] per month).⁸³ And the designation of the transactions as revolving generally must occur at the cash register—with an admission to the sales clerk that the cardholder does not plan to pay for the purchase out of current income.⁸⁴ Many of my interviews suggested a practical explanation for the cumbersome design; executives argued that it is much less practical for the check-less Japanese cardholder to make the odd-amount monthly payments than it is for the U.S. cardholder, who normally pays by check.⁸⁵ Given the frequency with which Japanese consumers pay other bills by means of bank transfers, that explanation seems most implausible—there is no obvious reason why they could not pay credit-card bills in the same way.⁸⁶ But the plausibility of the

78. See CREDIT TRANSACTION GUIDANCE, *supra* note 25, at 108; Anonymous Interview One, *supra* note 68.

79. The limited success of banks in the credit-card system surely is related not only to the particular limitations on credit-card activities, but also in a general way to the limited attention that banks in Japan have devoted to consumer finance. See STEPHEN M. HARMER, JAPAN’S FINANCIAL REVOLUTION AND HOW AMERICAN FIRMS ARE PROFITING 37 (2000): (“[W]hile banks in the United States quickly reoriented themselves to the consumer finance market when corporate lending spreads narrowed, Japanese banks never made the transition.”). Even now, notwithstanding the financial pressures that have confronted the Japanese banking industry in the late 1990s, it is not clear that Japanese banks have turned wholeheartedly to consumer finance. See HARMER, *supra*, at 40–41, 126, 136.

80. See JCIA ANNUAL STATISTICS, *supra* note 61, at 68. Retailers generally account for another 29 percent and *shimpan kaisha* for 17 percent. See *id.*

81. See JCIA ANNUAL STATISTICS, *supra* note 61, at 49–50.

82. See *supra* note 61 (reporting data indicating less than 15 percent of Japanese credit-card transactions involve extended borrowing).

83. See CREDIT TRANSACTION GUIDANCE, *supra* note 25, at 6493 (describing the typical schedules for repayment of revolving credit from JCB).

84. The distinction on that point from U.S. practice seems crucial. See MANNING, *supra* note 7, at 3 (discussing how the “magic of plastic” can “shelter Americans from the social cost of borrowing”).

85. See Anonymous Interview Two, *supra* note 74; Anonymous Interview Four, Tokyo (Oct. 12, 2000) [hereinafter Anonymous Interview Four].

86. Unlike U.S. consumers, Japanese consumers easily can initiate bank transfers directly from ATMs or, for large payees like utility companies, even from convenience stores. For statistics on the high use of bank transfers, see JAPANESE BANKERS ASSOCIATION, *supra* note 13, at 3 (data indicating that bank transfers are used for 85 percent of noncash payments in Japan). My sense that the explanation is implausible is bolstered by the recent introduction of a conventional revolving-credit product in Japan that does permit consumers free choice of their monthly payment amounts. See *infra* notes 89–93 and accompanying text.

explanation is less important than the facts of the market: the so-called revolving credit traditionally offered to Japanese consumers is not nearly as convenient as the product available in the United States.

Still, it is difficult to understand why the non-bank players in the credit-card industry have not stepped into the void to provide the seductive products that U.S. banks have designed to facilitate the profitable extension of so much consumer credit in the United States. It is clear that the major players are aware of the profitability of revolving credit; most of them have simply failed in their efforts to persuade their customers to use it.⁸⁷ My best answer is the one suggested above, that banks traditionally have been best-placed to develop credit-card products which facilitate large amounts of borrowing. The exclusion of banks from the Japanese market during the period that those products were developed in the United States—when depositary relations seemed to be crucial to successful credit-card issuance—stifled development of those products until the last few years.

The plausibility of that analysis is bolstered by a significant recent innovation in the Japanese credit-card market: the 1999 introduction by at least one consumer-finance company of a credit card that offers the type of revolving credit which has been so successful in the United States.⁸⁸ Such a card permits consumers to select their repayment schedule not at the time of purchase, but at the end of each billing cycle when they make a payment.⁸⁹ The identity of the issuer—a consumer finance company not affiliated with any depositary institution—suggests that the same developments in IT which foster successful credit-card lending by U.S. monoline banks—with no depositary relations with their customers—have shown the way to similar products in Japan.⁹⁰

As you would expect based on the U.S. market experience, the product apparently was at least initially successful in attracting customers: the company issued more than 500,000 cards in the first 18 months of the program (more than a third of them to customers with no previous relationship with the lender).⁹¹ For present purposes, the most important thing about the program is that those customers are selecting revolving credit for a staggering (for Japan) 91 percent of their purchases.⁹² The

87. See KUREJITTO SANGYOU HAKUSHO [*White Paper on Credit Industry*], GEKKAN SHOUHISHA SHINYOU [CONSUMER CREDIT MONTHLY], 2000-9, at 12, 14–15 [hereinafter *Credit Industry White Paper*] (discussing efforts of banks to increase the amount of revolving credit). I asked executives at more than one interview why—if they want their consumers to use revolving credit—the default repayment option for Japanese credit cards is *ikkai barai* rather than revolving credit. The most cogent explanation was that so many of their cardholders so clearly want *ikkai barai* that they expected that they would face a serious adverse market reaction if their cards had anything other than *ikkai barai* as the default repayment option. See Anonymous Interview Five, Tokyo (Sept. 19, 2000) [hereinafter Anonymous Interview Five].

88. See HARMER, *supra* note 79, at 135–36 (discussing such a card).

89. Some other issuers have used online connections to permit their customers an intermediate degree of flexibility, under which customers who have selected *ikkai barai* at the time of the transaction can go to the issuer's website and change the designation of any particular transaction to revolving credit. See http://www.smbc-card.com/members/revo/revo_about.asp?ctype=k (Sumitomo Mitsui Card); http://home3.americanexpress.com/japan/blue/flex/flex_pay.asp (American Express). Although that might have much the same effect in theory, it is still cumbersome in comparison to the typical U.S. product.

90. See *supra* notes 34–39 (suggesting that depositary relations are irrelevant to the successful marketing of modern credit-card products); see also Naomi Tanaka, *Toyota Cruises into Consumer Finance*, NIKKEI WEEKLY, Feb. 26, 2001, at 14 (discussing plans for Toyota to issue a credit card starting in April 2001).

91. See Anonymous Interview Six, Tokyo (Oct. 11, 2000) [hereinafter Anonymous Interview Six].

92. See Anonymous Interview Six, *supra* note 91.

company's underwriting appears to rely heavily on a credit-scoring model, an approach that seems to resemble closely the models used by U.S. issuers.⁹³ The use of that technology is particularly surprising given the relatively limited availability in the Japanese consumer-finance industry of consumer financial information.⁹⁴

All in all, the result is a market into which credit cards have made relatively little headway and—which is much the same thing in a retail economy without checks—in which cash payment is unusually dominant. Thus, from that perspective it is easy to see why the average credit-card transaction in Japan is so much larger than the average U.S. credit-card transaction. If we assume that the retail economies of the two countries have reasonably similar sets of transactions of different sizes, and assume that Japanese credit cards are not—as a relative matter—as attractive to Japanese consumers as U.S. credit cards are to U.S. consumers, then we would expect to observe larger credit-card transactions in Japan than we do in the United States. Essentially, Japanese consumers are much more willing to carry larger amounts of cash, which they use to pay for larger transactions, than U.S. consumers. U.S. consumers, on the other hand, are much more willing to use credit cards for smaller transactions, for which Japanese consumers would use cash.⁹⁵

In sum, the disempowered-bank hypothesis is consistent with both the structure of the current market and the changes that seem to be occurring in that market. That at least suggests that bank powers are in some way causally related to that market. It remains to examine other potential explanations.

b. Merchant size

The casual visitor to Japan finds that credit cards are readily acceptable at many of the places where they are accepted in the United States—department stores, book

93. See Anonymous Interview Six, *supra* note 91.

94. It is difficult to understand exactly what kinds of information are available to consumer lenders in Japan, but it is clear that general statistical use of the information is not as common in Japan as it is in the United States. For example, the largest consumer credit-reporting service in Japan reports that as of 1998 it had less than 70 million entries and that it received less than 20 million requests for information during 1998. See Personal Credit Information Center <<http://www.zenginkyo.or.jp/en/pcic/pcic.htm>> (visited Nov. 13, 2000). One likely reason for the limited information is that lenders must have the customer's consent to submit information to that center. See *id.*

Efforts to rely on the kind of credit-scoring models that U.S. card issuers use are hampered by the limited willingness of the consumer-lending industry as a whole to share information. It appears that information traditionally has been shared only within each sector (consumer-finance companies, *shimpan kaisha*, and banks). Under that arrangement, the only information that was shared industrywide was information about specific defaults. See *id.* Plans for more complete sharing of information are ongoing, as evidenced by the advent in late 2000 of a company that provides information to a wide variety of consumer lenders (but not banks). See <http://www.teranet-corp.co.jp>; *Kokyaku Shinyou Jouhou 12-Gatsu Kaihou [Consumer Credit Reports of Consumer Credit Companies Will Be Open to Shimpan and Bank-Affiliated Companies in December]*, Nihon Keizai Shimbun, Oct. 26, 2000, at 1. On the other hand, the government may move to enact privacy legislation that would restrict information sharing. See W.A. Lee, *U.S. Banks Urged to Meet E.U. Data Rules*, AM. BANKER, Oct. 24, 2000, at 1, 10 (reporting Japanese promulgation of a draft privacy directive similar to the European directive); Jouhou Tsushin Senryaku Honbu [Committee on IT Strategy Headquarters], *Kojin Jouhou Hogo Kihon Housei ni Kansuru Taikou [Consulting Report on Protecting Privacy]* <<http://www.kantei.go.jp/jp/it/privacy/houseika/taikouan/101Itaikou.html>> (Oct. 11, 2000) (discussing plans to enact Kojin Jouhou Hogo Kihonhou [Law Regarding the Protection of Privacy]). Given the relatively limited availability of information, it is impossible at this point to evaluate the effectiveness of that particular credit-scoring model: if it is properly designed, it would be a bold stroke of technological expertise; if not, it could be a cover that supports excessively risky lending. Only the vagaries of a downturn in economic growth can provide a definitive assessment.

95. See *supra* note 15 (discussing survey results regarding the amount of cash typically carried by Japanese).

stores, and other large retailers. But it does seem clear that the credit card has a much less complete penetration into the Japanese retail market than it does in the United States. A consumer in the United States with relatively little difficulty could incur almost all ordinary living expenses on a credit card. In contrast, my impression is that it would be quite difficult to subsist in Japan for any significant period of time without a source of cash.⁹⁶

Although I have no data to support a firm connection, it is plausible that this is related to the relatively small size of Japanese retailers.⁹⁷ Historically, Japan protected small retailers through a complex web of formal and informal constraints that limited competition among retailers so as to limit the growth and consolidation of retailers.⁹⁸

Those constraints degraded in a substantial way only in the early 1990s, permitting the rise of large chain stores and consolidation of retailers that is making the Japanese retail market look increasingly like the U.S. retail market. As explained in Section II, the increasing size of retailers generally should enhance the attractiveness of credit cards to retailers by lowering the significance of the fixed costs of credit-card acceptance. Most importantly, I believe, the consolidation occurred at about the same time as bank affiliates were permitted entry into the revolving-credit market. Thus, it is at least possible that the increasing prevalence of larger retailers has supported a rise in the share of the retail market in which credit cards are accepted, which would help explain the observed increase in the number and volume of transactions.

c. Other explanations: cautious consumers

The most obvious alternate explanation is the simplest, but also the least satisfying: Japanese cardholders by nature are more cautious and averse to borrowing than U.S. consumers. Thus, one might think that it is natural that they should use credit less. That habit could be connected to the substantial literature attempting to explain what seems to be the higher predilection to save of the individual Japanese consumer.⁹⁹ From that perspective, the other side of a higher predilection for savings would be a lower tendency to use consumer credit. That tendency also might be

96. Despite considerable effort, I have been unable to locate any data on this point. I rely with some reluctance on my own experience living in Tokyo, on conversations with colleagues who have visited Japan for extended stays, and on the views of credit-card-carrying friends from Japan.

97. Another possibility (suggested to me by Rick Lempert) is that U.S. retailers which take credit cards gain to the extent credit cards substitute for checks, because of the expenses they incur in collecting bad checks. Japanese retailers—who do not take checks—do not have that additional incentive to accept credit cards.

98. See generally Frank Upham, *Privatizing Regulation: The Implementation of the Large-Scale Retail Stores Law*, in POLITICAL DYNAMICS IN CONTEMPORARY JAPAN 264 (Gary D. Allison & Yasunori Sone, eds. 1993) (discussing the complex alliances among Japanese interest groups that finally led to the introduction of foreign competition and chain retail stores); Frank K. Upham, *Privatized Regulation: Japanese Regulatory Style in Comparative and International Perspective*, 20 FORDHAM L. REV. 396, 404–25 (1997) (same).

99. The U.S. rate for some time hovered around 10 percent, but in recent years has sunk quite low, arguably near zero. See MANNING, *supra* note 7, at 31, 100, 321 n.1, 337 n.3 (reporting a net savings rate during 1998 of 0.5 percent). Data from different sources report widely varying rates of savings in Japan. Compare Yoshikazu Yada & Haruki Hirano, *Statistics on Personal Savings Tell Half the Story: Despite Statistics, Most People Aren't That Rich*, ASAHI SHIMBUN, Aug. 10, 2000, available at <http://www.asahi.com/english/asahi/0810/asahi081002.html> (visited Aug. 11, 2000) (reporting that Japanese working households save about 28.5 percent of their income (up from 20.9 percent in 1983)), with Sheldon Garon, *Fashioning a Culture of Thrift: Promoting Saving in Twentieth-Century Japan* (unpublished 2000 manuscript) (reporting that the Japanese rate has leveled off at around 13 percent). All reports indicate, however, that the rate is higher in Japan than it is in the United States.

supported by the historically ungenerous provisions of the Japanese consumer bankruptcy system (which might deter consumer borrowing) or by the relatively undeveloped credit-bureau system¹⁰⁰ (which might deter consumer lending).

That theory has several salient empirical difficulties. The first is the empirical fact that the size of the Japanese consumer-credit market does not in fact suggest that Japanese consumers have a higher aversion to borrowing than U.S. consumers. Indeed, if anything, the Japanese market is slightly larger per capita than the U.S. consumer-credit market. This market (excluding home mortgages) is now in the range of US\$1.2 trillion (about US\$4,400 per capita).¹⁰¹ The Japanese market (again excluding home mortgages) seems to be about ¥73 trillion (about US\$5,300 per person).¹⁰² Thus, although it seems plausible that there are distinctively Japanese cultural constraints on consumer borrowing, it is difficult to believe that those constraints are more powerful than the analogous U.S. constraints.¹⁰³

More generally, the basic problem in postulating a cultural connection between a predilection to save and an aversion to borrow is that statistics about the savings rate—the ratio of overall savings to overall consumption—have no necessary relation to the number of people who borrow or to the amount that they borrow. Thus, it would be entirely possible for Japan to have a higher savings rate than the United States because a higher percentage of its people save more, but at the same time to have a similar (or greater) amount of consumer credit per capita. For example, that could be true if either a higher percentage of Japanese non-savers than U.S. non-savers use consumer credit or those Japanese non-savers who do use consumer credit use (on the average) more than the borrowers in the United States. I have not located any data that are sufficiently specific to describe the pattern precisely, but the generally similar amounts of consumer borrowing per capita prompt skepticism as to any heavy reliance on a Japanese aversion to borrowing.

That empirical evidence is bolstered by the theoretical literature attempting to explain the differing levels of savings in the United States and Japan. Although some scholars do think that the higher savings rate reflects a special aspect of the Japanese personality,¹⁰⁴ others attribute it to other institutional features of the Japanese economy. For example, some scholars think the higher rate of savings is

100. See *supra* note 94 (discussing that system).

101. See *Federal Reserve Statistical Release G.19 (Consumer Credit)* (Jan. 8, 2001), available at <http://www.federalreserve.gov/releases/G19/Current/g19.pdf>; SULLIVAN, WARREN & WESTBROOK, *supra* note 6, at 258.

102. JCIA ANNUAL STATISTICS, *supra* note 61, at 30; see also Alexander, *supra* note 33, at 6 (presenting data illustrating that Japan since 1990 has had a higher ratio of consumer credit to disposable income than the United States).

103. It is not as though U.S. culture venerates those who rely on borrowing to support spending beyond their income. See MANNING, *supra* note 7, at 2–3 (discussing the condemnation of excessive borrowing as part of the “nonmonetary price of debt”).

104. And not necessarily a native aspect of the personality. See SHELDON GARON, *THE STATE IN EVERYDAY LIFE* 153–57, 171–77 (1997) (discussing government efforts to popularize thrift and savings in Japan after World War II); Sheldon Garon, *Luxury Is the Enemy: Mobilizing Savings and Popularizing Thrift in Wartime Japan*, 26 J. JAPANESE STUD. 41 (2000) (discussing government efforts to popularize thrift and savings in Japan during World War II); Garon, *supra* note 99 (arguing that high Japanese savings rates are caused by more than a century of vigorous government efforts to inculcate a “culture of thrift”).

caused by the Japanese system for intergenerational transfers of wealth,¹⁰⁵ while others view it (even now) as an artifact of Japan's stage of industrial development.¹⁰⁶ Although those explanations would explain a lower rate of consumer spending, they provide much less direct support for the lower rate of consumer borrowing that appears in the credit-card market. Specifically, they provide little support for the specific observation in question: a lower rate of borrowing in those transactions in which consumers choose to purchase by credit card.

Thus, notwithstanding the strong evidence that Japanese consumers save more than U.S. consumers, the general impression is that the consumer-credit market as a whole is approximately as attractive to consumers as the analogous market in the United States. The culture of each country includes strands that strongly condemn excessive borrowing, but in each country the consumer-credit industry in the last few decades has broken through those constraints to create about US\$5,000 per person in borrowing. While a good deal of work has been done to explain how that occurred in the United States,¹⁰⁷ I am not aware of similar scholarship explaining the inconsistency between the widely noted Japanese aversion to borrowing and the statistics showing a U.S.-style level of consumer debt. But, whatever the cause, it is apparent that there is a great deal of consumer credit in Japan; it is the second largest consumer-credit market in the world. To be sure, little of it comes from credit-card lending. Rather, it comes from a collection of consumer lenders such as *shimpan kaisha* (which generally finance purchases of consumer products) and other consumer finance companies.¹⁰⁸ Thus, the question remains: why, within that market, do consumers use credit cards for such a small share of borrowings? As I explain above, I think that institutional factors peculiar to the Japanese market provide a plausible answer to that question.

To summarize, it may be that some part of the difference in the use of credit in credit-card transactions arises from a Japanese "distaste" for borrowing, but those factors cannot explain the changes in the market which have occurred during recent years. Those changes are best explained by changes in the institutional framework within which the card has developed, and in which it is used.

B. The Costs of the System

The previous subsection contends that the principal reasons that the Japanese credit-card industry looks so different from the U.S. industry are institutional factors which made it more difficult for financial institutions and merchants to participate than it is in the United States. This subsection argues that the system also has been

105. For a thorough but ultimately inconclusive attempt to explain that phenomenon, see FUMIO HAYASHI, *UNDERSTANDING SAVINGS* ch. 11 (1997).

106. Richard Katz argues that consumers in the aggregate save more at earlier stages of Japanese development and thus that the post-World War II data suggesting higher savings by Japanese consumers are caused by Japan's place at an earlier stage in the development process during those years. See KATZ, *supra* note 46, at 141–42, 199–206.

107. See, e.g., MANNING, *supra* note 7, at 101–24 (discussing the "cognitive connect" between income and current spending, and how its force diminished during the passage of the 20th century).

108. See HARMER, *supra* note 79, at 126–37.

hindered in a subsidiary way, by higher costs, which make the system less attractive to the merchants and cardholders that bear a significant portion of those costs. The most obvious source of those costs is in the losses from fraud, which are significantly higher in Japan than they are in the United States. The most obvious evidence of the significance of those costs would be in the higher discount rates and cardholder fees charged in the Japanese system. This subsection considers those topics in turn.

1. Fraud rates

Surely one of the most important metrics of the effectiveness of a payment system is reliability: how well does it prevent fraud (transactions that are on stolen cards or otherwise not authorized by the cardholder)? On that point, the raw data suggest that Japan has a problem. Specifically, the fraud rate in the United States is in the range of 0.06 percent to 0.07 percent (six or seven cents per US\$100).¹⁰⁹ In Japan, by contrast, the fraud rate is much higher, about 0.14 percent.¹¹⁰ Looking specifically to losses from forged cards, the Japanese rate of about 6.2 basis points is about five times the U.S. rate of 1.3 basis points.¹¹¹

One possibility that initially seemed attractive was that the high fraud is associated with the diminished statutory incentive for Japanese card issuers to prevent unauthorized transactions. Among other things, the U.S. Truth-in-Lending Act also prevents U.S. issuers from shifting the risk of unauthorized transactions to their cardholders;¹¹² Japanese law includes no such rule. At first glance, then, one might think that the difference in formal legal treatment could lead to a lower level of care by the card issuer.¹¹³ On reflection, however, that explanation does not seem plausible. For one thing, Japanese issuers in practice retain the risk of unauthorized transactions, because they purchase insurance for much of that risk and voluntarily

109. See *Card Fraud in the U.S.—1999*, NILSON REP., June 2000 (Issue 718) [hereinafter *1999 U.S. Fraud Data*], at 1, 4 (reporting a rate of 0.06 percent for 1999). I have not yet seen final data for 2000, but press reports suggest that fraud losses have risen slightly to about 0.07 percent. See David Breikopf, *Warped Plastic? New Card Reader Irons Out Problem*, AM. BANKER, July 16, 2001, at 8. Indeed, interim data suggest that the rate in the United States has continued to rise, to approximately 0.09 percent for the first half of 2001. See *U.S. Fraud Losses/Gross Volume: Monthly Average—Current*, available at <http://www.cardweb.com/carddata/charts/fraud.html> (visited September 17, 2001).

110. See *Kurejito Kado Fusei Shiyō Higai no Hasei Joukyō* [Statistics on Losses from Unauthorized Credit-Card Transactions in Japan], CARDWAVE, 2001-10, at 10-17, 10 [hereinafter *Japanese Credit-Card Fraud Data*]. That rate is calculated based on ¥21.58 trillion of transactions for 2000. See *supra* note 59 and accompanying text.

111. The Japanese rate is calculated based on ¥14 billion of forged credit card losses, divided by the total ¥21.58 trillion of transactions for 2000, see *supra* note 59 and accompanying text. The U.S. rate is calculated from *1999 U.S. Fraud Data*, *supra* note 109, at 4, including losses from skimming, altered cards, and new counterfeit cards.

112. Truth-in-Lending Act § 133, 15 U.S.C. § 1643. That statute permits issuers to impose US\$50 of liability on cardholders, but Visa and MasterCard both have generally agreed that their issuers will waive the right to pass that loss to the cardholders. See Lisa Fickensher, *Visa Shores Up Web Position, Ends Fees on Theft of Card Numbers*, AM. BANKER, Feb. 22, 2000, at 1, 14 (Visa policy); <http://www.mastercard.com/general/zero_liability.html> (MasterCard policy); see also RITZER, *supra* note 35, at 101 (“[C]redit card companies rarely assess a fraud victim for even that sum [i.e., the US\$50 permitted by the Truth-in-Lending Act].”).

113. See generally Clayton P. Gillette, *Rules, Standards, and Precautions in Payment Systems*, 82 VA. L. REV. 181 (1996) (discussing the effects of increased liability for issuers and consumers).

cover most of the losses that the insurance does not cover.¹¹⁴ Because they purchase that insurance from third-party insurers,¹¹⁵ it is fair to expect that the rates that they pay in the long run are affected substantially by their performance. Thus, it is at least plausible to think that Japanese card-issuers have a significant incentive to reduce fraud losses.

Moreover, it is clear that the fraud rates in both countries are not stable, as one would expect if the rates were associated with long-standing differences in the legal framework. In the United States, for example, the fraud rate has fallen by more than half in the last decade.¹¹⁶ Similarly, the fraud problem in Japan is relatively recent; fraud losses in 2000 were 43 percent higher than they were just two years earlier in 1998, with 64 percent of the increase attributable to losses from forged cards.¹¹⁷

The more likely cause of the losses is exploitation of technical vulnerabilities in the Japanese system.¹¹⁸ Most obviously, the Japanese system uses contemporaneous telephone authorizations much less frequently than the U.S. system,¹¹⁹ apparently

114. To be sure, the third-party insurance does not cover all types of unauthorized transactions. See Takayoshi Suefujii, *Kurejitto Kado Nyumon [Introduction to Credit Cards]*, GEKKAN SHOUHISHA SHINYOU [CONSUMER CREDIT MONTHLY], 2000-8, at 74, 75 (describing insurance limited to theft and loss of the card). Moreover, it is limited to unauthorized transactions that occur no more than 60 days before, and no more than 60 days after, the cardholder advises the issuer of the loss. See *id.* It is possible that a few losses occur outside that window, especially if cardholders fail to examine their statements. Like the US\$50 limit discussed in note 112 *supra*, however, those limitations seem to be widely ignored. Specifically, my interviews strongly suggest that issuers commonly cover losses whether the losses are covered by the insurance or not. The sole exception seems to be in cases in which the cardholder was seriously negligent in losing the card; even that possibility seems not to be commonly applied. See Anonymous Interview One, *supra* note 68; Anonymous Interview Three, *supra* note 74; Anonymous Interview Five, *supra* note 87. It appears that the issuers' common willingness to cover transactions without regard to the precise boundaries of the insurance coverage is related at least in part to administrative guidance from the former Ministry of International Trade and Industry (MITI), which suggested to credit-card issuers that the formal terms of the typical insurance policies do not provide adequate protection to consumers. Kado no Anzensei no Kakuho ni Tsuite [To Ensure the Security of Credit Cards] (guidance sent from MITI to the Japan Consumer Credit Industry Association on July 31, 1979).

115. The issuers normally purchase the insurance from third-party providers, but sometimes they self-insure. See Anonymous Interview One, *supra* note 68; Anonymous Interview Five, *supra* note 87.

116. See 1999 U.S. *Fraud Data*, *supra* note 109, at 1, 4 (reporting a drop in fraud losses from 16.1 cents to 6.0 cents per US\$100).

117. See *Japanese Credit-Card Fraud Data*, *supra* note 110, at 12.

118. The Japanese government apparently attributes the fraud losses to lax criminal laws and is responding in several ways. See Keihou no Ichibu wo Kaiseisuru Houritsu [Law Amending Penal Code], Law No. 97 of 2001 (effective July 24, 2001) (criminalizing the theft of data to forge cards as well as manufacturing, possessing, or using forged cards); *Lax Law Made Japan Card-Forgery Haven*, NIKKEI WEEKLY, Apr. 24, 2000, at 4 (reporting plans to criminalize skimming and the possession of forged cards); *Govt to Crack Down on Credit Card Crimes*, NIHON KEIZAI SHIMBUN, June 16, 2000 (same); *NPA Targets Credit Card Fraud*, JAPAN TIMES ONLINE, Oct. 6, 2000, available at <http://www.newsonjapan.com> (reporting plans for the National Police Agency to develop a system for analyzing fake credit cards to identify and locate professional card counterfeiters). As the discussion in the text suggests, I am skeptical of the significance of those legal problems.

119. See Anonymous Interview Five, *supra* note 87. The details about the use of contemporaneous authorizations are difficult to discern, because I received directly inconsistent explanations in several of my interviews. Those explanations convince me, at a minimum, that contemporaneous authorizations are not as ubiquitous in Japan as they are in the United States. See *supra* note 43 and accompanying text (reporting 95 percent authorization rates for U.S. transactions). As a rule of thumb, it appears that until very recently many merchants were not doing contemporaneous on-line authorizations for transactions below ¥10,000 (about US\$90). See Anonymous Interview Two, *supra* note 74; Anonymous Interview Four, *supra* note 85; Anonymous Interview Five, *supra* note 87; Anonymous Interview Six, *supra* note 91. That ¥10,000 limit itself was implemented only in 1999, before which that floor had been ¥30,000 (US\$270). Moreover, for several categories of merchants (such as hotels, airports, and hospitals), the floors historically have been much higher, in the range of ¥180,000–300,000 (about US\$1,600–US\$2,700). See Anonymous Interview Four, *supra* note 85. One large issuer told me that about 30 percent of its transactions are not authorized because they fall below the floors. See Anonymous Interview Four, *supra* note 85.

because of the relatively high cost of Japanese telecommunications.¹²⁰ Without those authorizations, the potential for fraud is much higher, because the system has no practical way to identify a card that bears a valid number, even if the magnetic stripe fails to include the information which would appear on a legitimate card.¹²¹

But it is most implausible to regard that difficulty as a permanent feature of the system. It is unlikely that Japanese issuers and merchants will tolerate for long substantial losses from fraud which easily could be eradicated by simple authorization procedures that are standard operating practice in the United States. Thus, it is not surprising that the industry already is implementing responses which target the problem: industry sources explained that as of late 2000 or 2001 most department stores¹²² and hotels in Japan would process transactions without any floor at all—seeking online authorizations for all transactions regardless of size.¹²³ Another response that seems to be appearing in the market already is an increasing tendency for large store-related issuers to adopt the Visa and MasterCard brands.¹²⁴ Use of those brands gives the issuers access to all of the anti-fraud technology that has been effective in the United States.¹²⁵

But advances in anti-fraud technology cannot solve the problem entirely. Even contemporaneous authorizations are to some degree vulnerable to sophisticated cards created by “skimmers” (who obtain not only the card-account number, but also the

120. Those high costs contribute to the high floors by making it difficult to persuade merchants to accept the costs of more frequent authorizations associated with lower floors. Although my interviews produced conflicting views on the point, more than one source argued that high telecommunications costs also contribute to a persistent merchant practice of failing to authorize transactions above the floors. The normal mechanism of forcing merchants to engage in particular procedures is a contract under which the merchant is protected from losses for unauthorized transactions only if it follows the contractually required procedures. Thus, if the agreement requires telephonic authorization, the merchant omits that authorization at the cost of accepting the risk that the transaction is fraudulent. The interviews attribute merchant noncompliance to the (not entirely implausible) view of the merchant that the cost of the authorization exceeds the potential fraud savings from the authorization.

121. See MANN, *supra* note 2, at 113–14 (discussing the importance of contemporaneous transaction authorization).

122. The rapid change is evident from anecdotal discussions of department stores in my interviews. Several different interview subjects reported to me the view that the rise in fraud was attributable generally to the vulnerability of Japanese department stores, specifically to their general failure to conduct sufficiently frequent telephone authorizations. Many observers believe that organized crime targeted department stores because of that vulnerability. The most reliable data I have found, however, suggest that department stores during 2000 in fact were relatively impervious to fraud. Those data suggest that department-store transactions accounted for less than 10 percent of 2000 fraud, although those transactions generally are 20–25 percent of volume. If there is a problem sector, it clearly is the electronics shop, which accounted for about 21 percent of 2000 fraud. See *Japanese Credit-Card Fraud Data* at 14, *supra* note 110 (card issuer reporting that fraud is significantly more common in its electronics-store transactions than in its department-store transactions); Anonymous Interview Four, *supra* note 85 (suggesting that problems with department stores are being solved). Smaller, but less tractable, problems are in the gasoline and highway-toll sectors, for which it is not thought economically practicable to have authorization terminals at each payment location. See Anonymous Interview Three, *supra* note 74 (discussing problems at gasoline stations and highway-toll facilities); Anonymous Interview Two, *supra* note 74 (reporting that 10 percent of fraud in one large credit-card portfolio occurs at gasoline stations).

123. See Anonymous Interview Seven, Tokyo (Oct. 16, 2000) [hereinafter Anonymous Interview Seven].

124. See Anonymous Interview One, *supra* note 68. My particular emphasis on the activity of department stores is supported by brochures that I collected from department stores in Tokyo in the fall of 2000. Those brochures included, among others, Credit Saison (the largest store-related card issuer in Japan and the third largest issuer overall) and Mitsukoshi, one of the oldest and most prestigious Japanese department stores. Although it would have been valuable to my research, I was unable to interview a card executive at a Japanese department store.

125. For example, my anecdotal impression (based on examining cards while in Japan) is that many cards issued by indigenous Japanese issuers do not include the indented printing and multicolor signature tape that hinder forgery of standard Visa and MasterCard products. Japanese-issued Visa and MasterCard products in those respects are (at least to the naked eye) indistinguishable from the U.S. products.

other information on the magnetic stripe of the legitimate card).¹²⁶ The only existing defense against those cards is the relatively vulnerable capacity of issuer-based expert computer systems to detect questionable patterns in the usage of cards.¹²⁷ And to some degree, Japan's high fraud rate is caused by two unfortunate features that make it a likely target for such attacks: the high telecommunications costs which continue to deter merchants from consistent authorization of transactions¹²⁸ and its proximity to the locations where the most sophisticated card forgers seem to reside.¹²⁹ To the extent those features are ineradicable, the Japanese credit-card industry will continue to endure fraud losses somewhat higher than those in the United States.

2. Discount rates and cardholder fees

Although the issuer nominally bears the losses from unauthorized transactions in ordinary retail credit-card transactions, the amount of those losses ineluctably affects the costs that the cardholders and merchants pay, because they affect the prices which the system¹³⁰ must charge in the form of cardholder fees and discount fees¹³¹ to remain profitable. Hence, it is natural to expect that the higher losses from fraud discussed in the previous subsection would lead to higher charges to merchants and cardholders. These are particularly important to the success of the system, because they directly influence the willingness of consumers to obtain the cards and of merchants to accept the cards.

Thus, it is no surprise that the objective costs of the Japanese system seem to be significantly higher than those in the United States. First, the charges to cardholders, although no more uniform than in the United States, seem to be substantially higher. The U.S. charges are relatively low both because cards with no annual fees are quite common and because the frequent use of the card makes the fee per transaction very low (probably only a few pennies at most).¹³² In Japan, by contrast, the fees seem to be much higher—cards with no annual fee seem to be

126. See, e.g., Jay Lyman, *Newly Discovered Bug 'Skims Credit Card Data'*, NEWS FACTOR NETWORK (June 22, 2001) available at <http://www.ecommercetimes.com> (visited June 25, 2001) (discussing skimmer "bugs" in payment terminals).

127. See MANN, *supra* note 2, at 111–12. *But cf.* David Breitkopf, *MasterCard Tests Device That 'Hears' Cloned Cards*, AM. BANKER, Mar. 7, 2001, at 6 (discussing an anti-fraud system that would recognize counterfeit cards based on unique fingerprint-like characteristics of each magnetic stripe, which produce detectably different sounds when the cards are swiped).

128. See *supra* note 120 (discussing that problem).

129. See Anonymous Interview Seven, *supra* note 123. Card forgery of a type that will succeed in the face of modern telephone authorization requires relatively sophisticated fabrication facilities. It appears that several of the countries which tolerate such facilities are located relatively close to Japan. See RITZER, *supra* note 35, at 88 (suggesting that Hong Kong was a prime location for those facilities in the early 1990s).

130. A closed-loop issuer like American Express contracts directly with both cardholders and merchants that accept the card. In an open-loop system like Visa, an issuing bank charges fees to cardholders and an acquiring or merchant bank charges discount fees to merchants. It is typical for the acquiring bank to pass a set portion of the discount fee to the issuing bank in the form of an interchange fee. See MANN, *supra* note 2, at 115–16.

131. The discount fee is the fee that the merchant pays to its acquiring bank for each credit-card transaction. See MANN, *supra* note 2, at 115–16.

132. See EVANS & SCHMALENSEE, *supra* note 17, at 165 (U.S. credit-card issuers derive only 2 percent of their income from annual fees); see *supra* note 4 and accompanying text (discussing the relative frequency of U.S. card use).

particularly uncommon—and the lower number of transactions per card makes the cost per transaction even higher.¹³³

Because of the wide variations in cardholder fees, my information on that topic is not particularly firm. The differences in the charges to merchants, however, are obvious and widely known within the industry.¹³⁴ For the Visa and MasterCard credit-card systems that dominate the U.S. market, the discount fee varies widely depending on the type of merchant, but normally ranges between 1.5 to 5 percent, with most merchants seeming to pay something less than 2 percent. The discount fee for American Express (the largest competitor) is quite a bit higher, about 2.75 percent.¹³⁵ Although it is difficult to get specific information, the discount rates in Japan seem to be somewhat higher. Published sources suggest that rates often are above 5 percent,¹³⁶ but in fact rates seem to be quite a bit lower. Based on my interviews, my impression is that a typical rate is more commonly in the vicinity of 3 to 3.5 percent.

That difference seems much too large to be explained solely by the difference in fraud rates: the rate of fraud losses in Japan exceeds the U.S. rate by less than 0.1 percent of the gross amount of transactions,¹³⁷ which hardly could justify a discount rate more than 1 percent higher. A much more persuasive explanation for the higher discount fees is the paucity of credit transactions. In the United States, credit-card issuers rely heavily on revenue from interest that their cardholders pay on borrowed funds. Thus, they can operate profitably with a relatively smaller reliance on revenue from the merchant.¹³⁸ For example, credit-card issuers in the United States derive 88 percent of their revenues from finance charges (including late fees), and only 10 percent from interchange fees.¹³⁹ In Japan, revenues from interest are a relatively small portion of the revenues of the card issuer, about 23 percent over the industry as a whole, but only 14 percent of the revenues of bank-affiliated card issuers that have only recently been permitted to extend revolving credit.¹⁴⁰ Thus,

133. See HARMER, *supra* note 79, at 132–33 (reporting data indicating that, excluding revenue from cashing commissions, 26 percent of credit-card industry revenue (37 percent of bank-affiliated issuer revenue) is from card members' fees). {I exclude revenue from cashing commissions because my purpose is to study the profitability of credit cards as a payment mechanism. I also exclude the much smaller share of cashing fees from the analogous statistics about U.S. credit-card issuers.} Based on credit-card brochures that I collected during my stay in Japan, I estimate that a typical annual fee is in the range of ¥1,500 (a little less than US\$14).

134. Given their importance to the system, it is surprising that there are no official data from the United States or Japan regarding the size of the charges that merchants pay. Thus, I rely entirely on reports from secondary sources and from interviews. Because the information has great competitive value, it is highly proprietary. Accordingly, much of the information in the succeeding paragraphs is not attributed to particular sources.

135. See EVANS & SCHMALENSEE, *supra* note 17, at 169–72 (discussing American Express discount fees).

136. See *Would-Be Net Banks Jockey for Position*, NIKKEI WEEKLY, May 8, 2000, at 12 (reporting discount rates of over 5 percent); *Debit Cards Getting Ready for Big Time*, NIKKEI WEEKLY, Feb. 28, 2000 [hereinafter *Debit Cards Getting Ready*], at 15 (reporting credit-card discount rates of 3–7 percent).

137. See *supra* notes 109–111 and accompanying text (discussing fraud rates of 14 basis points in Japan and six in the United States).

138. The issuer typically obtains those revenues indirectly through an interchange fee paid by the bank that acquires the transaction from the merchant. The acquiring bank pays the fee out of the (presumably larger) discount that the merchant pays to the acquiring bank. See *supra* note 131. For economic analyses of the reasons for those fees, see Joshua S. Gans & Stephen P. King, *The Neutrality of Interchange Fees in Payment Systems* (unpublished manuscript, July 9, 2001), available at <http://www.ssrn.com>; Richard Schmalensee, *Payment Systems and Interchange Fees* (unpublished manuscript, April 2001), available at <http://www.ssrn.com>.

139. See EVANS & SCHMALENSEE, *supra* note 17, at 165.

140. See HARMER, *supra* note 79, at 132–33.

the issuer's operations can be profitable only if it obtains a relatively higher share of revenue from the merchant and the cardholder. In Japan, those fees amount to 77 percent of all industry revenues, but 86 percent of the revenues of bank-affiliated issuers.¹⁴¹ And in fact, the apparent discount rates of 3 to 4 percent are not out of line if they are compared to the rates that American Express charges for its payment card rather than the rates Visa and MasterCard charge for their credit cards.¹⁴² Because American Express faces the same lack of interest income that Japanese issuers do, its discount rates provide a more appropriate benchmark for comparison.

To be sure, the discount rates do appear to be perceptibly higher than those that American Express charges in the United States. But several structural explanations make that slight difference readily understandable. Most obviously, a merchant's selection of an acquirer in the United States occurs in a relatively competitive market characterized by a small number of clearing networks with a large number of potential acquirers in each network. Thus, in the United States, a typical merchant can gain access to the Visa and MasterCard systems from any of literally dozens of banks, as well as a large number of sophisticated third-party acquirers. First Data surely has a dominating share of the market (more than 40 percent), but there is such a large number of competitors of significant size that the market is relatively competitive,¹⁴³ in the sense that there is extensive *intra-brand* competition notwithstanding the limited *inter-brand* competition.¹⁴⁴ And even if American Express is the sole way for a merchant to get access to *its* cardholders, history shows that the rates that American Express can charge are affected by the rates that the larger Visa and MasterCard systems charge.¹⁴⁵

In Japan, by contrast, a merchant that wishes to accept credit cards is confronted with a market featuring a large number of clearance networks with a relatively small number of potential acquirers in each market. Most merchants that accept credit cards find it necessary to make arrangements with several of the large Japanese systems, because most of those systems clear and process their own transactions: a typical merchant might accept a dozen or more different cards and some accept as many as 25. Thus, for each of those systems, the merchant faces a single system

141. See HARMER, *supra* note 79, at 132–33. Thus, the overall revenue model closely resembles American Express, which obtains only 15 percent of its revenues from finance charges (late fees), but derives 85 percent of its revenues from charges to users (66 percent from the charges it imposes on merchants and 19 percent from card fees). See EVANS & SCHMALENSSEE, *supra* note 17, at 165. Indeed, the most prominent difference is that Japanese bank-affiliated credit-card issuers impose a *smaller* share of their user charges on the merchants (57 percent) than American Express (78 percent). {The shares are calculated from the data for Japanese issuers in HARMER, *supra* note 79, at 132–33, and from the data for American Express in EVANS & SCHMALENSSEE, *supra* note 17, at 165.}

142. See *supra* note 135 and accompanying text (discussing American Express discount fees).

143. The market shares drop off rapidly after First Data: the second largest acquirer (National Processing) has a 13 percent share. But the number of significant players is impressive. In 1999, the top 87 companies processed more than US\$1 million of transactions per week. See 1999 *U.S. Acquisition Data*, *supra* note 48, at 9.

144. My sanguine views about the competitiveness of the industry conflict with the views of the U.S. government, which has instituted a major antitrust enforcement proceeding against Visa and MasterCard, generally arguing that they have colluded to hinder competition and innovation in the U.S. card industry. For an overview of the case and links to significant filings, go to <http://www.usdoj.gov/atr/cases/indx57.htm>. For a vigorous and scholarly rebuttal of the government's claims, see Zywicki, *supra* note 29, at 110–28. In any event, the aspects of the credit-card market that I describe favorably in this paper are not aspects that the government has challenged in its action.

145. See EVANS & SCHMALENSSEE, *supra* note 17, at 169–73, 185–97 (discussing pressure on American Express merchant fees arising from the lower fees charged by Visa and MasterCard).

operator with which it must reach an agreement.¹⁴⁶ It should be no surprise if the charges in that market are higher than in the United States.¹⁴⁷

On the other hand, that problem should be mitigated in the next few years, with the increasing tendency of all of the Japanese systems to issue cards with the Visa and MasterCard brand; cards with those brands can be cleared through any entity that is a member of those networks.¹⁴⁸ If competition among members of those networks lowers the rates for acquisition of transactions of those brands, the large market presence of those brands should put pressure on the discount rates for other brands in Japan just as it has in the United States.¹⁴⁹

One last explanation for the higher discount rates is the relatively small size of the Japanese system. If discount rates are affected by economies of scale in the development and use of IT, then it would be natural for the Japanese system—in which fewer consumers use their cards less frequently—to be somewhat more expensive per transaction than the U.S. system.¹⁵⁰ That explanation does not necessarily suggest a long-term difference, but it does support a pattern in which Japanese rates tended to

146. The process works much like the process for American Express transactions in the United States, which typically are acquired and processed by the card issuer.

147. To be sure, the limited use of credit cards by Japanese consumers provides a countervailing influence that arguably could push the discount rates down. The economics of a merchant's decision to accept a card turn on the balance between (1) increased charges (discount fees) on transactions that otherwise would have been made with cash (or some other payment system cheaper for the merchant than the credit card); and (2) the likely profit from new sales that would be gained by accepting cards. See EVANS & SCHMALENSEE, *supra* note 17, at 121–27. Because the limited penetration of cards in Japan means that (2) is likely to be lower in Japan than it is in the United States, a Japanese merchant's benefit from accepting a card is smaller than the benefit to a corresponding U.S. merchant; that smaller benefit would tend to push discount rates downward (because the lower benefits from taking cards tend to make merchants willing to pay less for the privilege of taking them). Yet another complication comes from the relatively small size of Japanese retailers. If the typical Japanese retailer is smaller than the typical retailer in the United States, and if there are fixed costs in the initial decision to accept credit cards, the increasing size of retailers should have helped credit-card acceptance to spread among Japanese retailers. Given the cross-cutting effects of those factors, it seems to me at best difficult to predict that Japanese discount rates would be higher or lower than U.S. rates. The point of the text is only that there are some market-structure reasons which could explain the observation of slightly higher rates.

148. See Anonymous Interview One, *supra* note 68.

149. See *supra* note 145. Another possible explanation for the higher discount rates is the possibility that Japanese acquirers spend more to provide authorization terminals for their merchants. Those terminals, which are relatively expensive, ordinarily are purchased by U.S. merchants. In at least some contexts, Japanese acquirers support the costs that their merchants incur for the acquisition of those terminals. It is clear, however, that there is no universal practice of acquirers buying the terminals, so it is difficult to quantify the amount of the difference attributable to that practice. See Anonymous Interview Two, *supra* note 74; Anonymous Interview Seven, *supra* note 123.

150. Another reason for the smaller size of the system is Japan's relatively restrictive market for credit information. U.S. institutions can evaluate the creditworthiness and reliability of even the smallest businesses quickly and accurately. See generally Ronald J. Mann, *Information Technology and Non-Legal Sanctions in Financing Transactions*, 54 VAND. L. REV. 1627 (2001) (discussing the mechanisms by which businesses are evaluated), excerpted version published as *IT to Yushi Torihiki ni Okeru Hou ni Yoranai Sankushon*, 1193 JURISUTO 72 (2001). That is much more difficult in Japan. See *eCredit.Com to Start Real-Time B2B Credit Service in Japan*, NIKKEI INDUSTRIAL DAILY, Nov. 1, 2000, available at <http://www.nni.nikkei.co.jp> (discussing the nascent state of Japanese business credit scoring); See also *supra* note 94 (discussing similar problems for consumer credit information). That problem is exacerbated by the still relatively high number of small businesses in Japan (see *supra* note 147)—which makes it all that much more costly for credit-card networks to gain full penetration of the market. Thus, it is not surprising that Japanese credit-card acquirers actually exclude many merchants from their systems because of concerns about merchant character. See Anonymous Interview One, *supra* note 68; Anonymous Interview Five, *supra* note 87. Such an exclusion would be almost unheard of in the United States, where the credit-card systems literally beg merchants to join and accept their cards. See Telephone Interview with Paul Confrey, Vice President, Electronic Commerce Planning and Communications, MasterCard (Nov. 10, 1999) [hereinafter Confrey Interview] [transcript on file with author] (transcript at 4).

lag above slowly decreasing U.S. rates. Although the information I have is sketchy, that seems to be the case: industry observers and executives believe that the rates have been dropping already during the last few years as Japanese patterns of usage drift toward U.S. patterns.¹⁵¹ Thus, although the fraud problems discussed above suggest that the rates should never be precisely equal, it seems unlikely that they will be substantially higher in the long term.

To sum up, the credit-card systems of the two countries operate quite differently, in markets of different sizes, with different lineups of potential card-issuing institutions and card-receiving merchants, facing a customer base that arguably has a significantly different taste for the credit card. Thus, I finish my analysis not the least bit surprised by the differences in the way the cards function in the two countries. If anything, it is surprising that the results are converging as rapidly as they are.

IV. Debit Cards in the United States and Japan

Credit cards, of course, are not the only card-based payment system. In the last few years, the use of debit cards has grown rapidly, especially in the United States.¹⁵² A debit card is physically quite similar to a standard credit card: a piece of plastic of the same dimensions, with a magnetic stripe on the back. That stripe, like the stripe on the credit card, includes not only the account number, but also other information not known to the cardholder; the secret information is designed to verify transactions in which the card is swiped at a card-reader. The defining difference from a credit card is that the debit card necessarily is tied to a particular bank account,¹⁵³ with the result that funds for transactions which use the card are withdrawn from the account in one to two business days.¹⁵⁴ Most importantly, the funds are withdrawn from the account without further action by the cardholder. A corollary of that aspect of the cards is that debit-card transactions require some form of on-line connection: the merchant does not accept the card for payment until the merchant can verify with the issuer that the issuer will remove funds from the cardholder's account to pay for the transaction.¹⁵⁵

151. See, e.g., *Credit Industry White Paper*, *supra* note 87, at 14–15; Anonymous Interview One, *supra* note 68; Anonymous Interview Two, *supra* note 74; Anonymous Interview Three, *supra* note 74; Anonymous Interview Four, *supra* note 85.

152. See *infra* notes 156–159 and accompanying text.

153. See MANN, *supra* note 2, at 141–46.

154. See MANN, *supra* note 44, at 144–46 (discussing U.S. collection practices). In Japan, the funds are removed from the cardholder's account immediately, but usually not received by the merchant until at least the third business day. See Nihon Debito Kado Torihiki Suishin Kyougikai Houmu Iinkai [Legal Committee, Japan Debit Card Promotion Association], *Debito Kado no Shikumi Oyobi Sono Houteki Wakugumi no Gaiyou (1)* [*The Structure and Legal Framework of J-Debit (1)*], 1573 KIN'YU HOUMU 12, 13–14 (2000); Kado Makettingu Kenkyukai [Society for the Study of Card Marketing], DEBITTO KADO DOUNYU KATSUYOU NO TEBIKI Q & A [Q & A 100, INFORMATION ABOUT DEBIT CARDS] qu. 27 (1999) [hereinafter DEBIT CARD Q & A].

155. See MANN, *supra* note 2, at 144–46 (discussing U.S. collection practices). For Japanese practices, see Article 2 of the model cardholder agreement [hereinafter J-Debit Cardholder Agreement] published at Nihon Debito Kado Suishin Kyougikai Houmu Iinkai [The Legal Committee of Japan Debit-Card Promotion Association], *Debito Kado no Shikumi Oyobi Sono Houteki Wakugumi no Gaiyou (5)* [*The Structure and Legal Framework of J-Debit (5)*], 1583 KIN'YU HOUMU 48–53 (2000) (reprinting a model cardholder agreement).

The discussion of debit cards proceeds along the same lines as the discussion of credit cards. This section starts by discussing and explaining the differing patterns of usage. It closes with a tentative discussion of the effectiveness of the still-nascent Japanese debit-card system.

A. Usage in the United States and Japan

1. Describing the transactions

In the United States, debit cards are used for about 6 percent of all retail payment transactions.¹⁵⁶ Because the data from which that figure is derived include payments sent through the mail (or made electronically)—payments for which debit-card usage is quite rare—it substantially understates the debit card's share of payments made at the point of sale. Looking solely at retail purchase transactions, the debit card in 1999 was used in about 32 percent of all card-based transactions.¹⁵⁷ Even though the debit-card transactions tend to be relatively small (about US\$36, as opposed to US\$76 for the average retail credit-card transaction),¹⁵⁸ they still accounted for 15 percent of the total transaction volume at the point of sale (with industry sources estimating that they will account for one-third of that volume by 2010).¹⁵⁹

The Japanese debit-card system (J-Debit), in contrast, is used much more rarely. Specifically, J-Debit cards were used in December 2000 for just over 500,000 transactions, significantly less than 1 percent of all card-based transactions.¹⁶⁰ It is interesting that the average debit-card transaction—contrary to U.S. usage—is significantly larger than the average credit-card transaction: about ¥45,000 for the debit-card transaction (about US\$400), as compared to ¥25,000 for the average credit-card transaction (about US\$225).¹⁶¹

The ¥45,000 figure is somewhat misleading, because it reflects a relatively small number of large securities transactions. News reports from the *Nihon Keizai Shimbun* suggest that securities transactions averaging ¥1 million (about US\$9,000) are about a third of all J-Debit transactions.¹⁶² Even if that figure seems exaggerated, it is clear that the securities transactions are large and pull the average-transaction size up significantly.¹⁶³ Another major component of the transactions are relatively large

156. See 1999 U.S. Payment Systems Data, *supra* note 1, at 6.

157. See 1999 U.S. Card Data, *supra* note 52, at 1, 5.

158. See *supra* note 52 and accompanying text.

159. See 1999 U.S. Card Data, *supra* note 52, at 6.

160. I rely on statistics published on the J-Debit home page at <<http://www.debitcard.gr.jp>>. {The specific URL is <http://211.2.244.164/download/48767089/debittorihiki.xls>} [hereinafter *J-Debit Home Page*].

161. See *J-Debit Home Page*, *supra* note 160. The figure in the text is the average transaction amount over the entire year. Although the amount has at all times been much larger than comparable figures for U.S. cards or Japanese credit cards, the specific amount should be taken loosely, because it has varied considerably since March 2000 (when the full-scale program began), ranging from a high in June 2000 of ¥50,303 (about US\$450) to a low in September 2000 of ¥41,230 (about US\$370).

162. See *Kokusai to Take Debit Cards for Securities Trades*, NIKKEI WEEKLY, July 10, 2000, at 16 (reporting that securities trades are 30 percent of nationwide debit-card usage and that the average transaction amount at two leading brokers (Nomura and Daiwa) is about ¥1 million (about US\$9,000)).

163. The published data from J-Debit (which cover March 2000, the first month of the full-scale system) suggest that securities transactions amount to only 1.5 percent of the transactions, and that the average amount of those transactions was ¥822,400 (about US\$7,500). See Nihon Debitto Kado Suishin Kyougikai [Japan Debit-Card Promotion Association], *Dai ni Feizu Honkaku Tenkaikara 1-Kagetsu Debitto Kado no Riyouga Ouhaba Appu* [The Number of Payments through J-Debit Has Significantly Risen since the Start of the Second Phase], CARDWAVE, June 2000 [hereinafter *J-Debit Transaction Breakdown Statistics*], at 52.

transactions at electronics stores, doubtless driven by merchants' desire to save money on credit-card transaction fees¹⁶⁴ as well as their desire to mitigate the risk of fraud.¹⁶⁵ But even putting those unusually large transactions to one side, the average transaction would be in the range of ¥24,000 (about US\$220),¹⁶⁶ much bigger than the average U.S. debit-card transaction.

2. Explaining the differences

As with credit cards, the Japanese system differs from the U.S. system in having a much smaller number of much larger transactions. The explanation for the transaction size doubtless is the same here as in the credit-card context. Because the debit-card system is not yet penetrating the market for small-dollar transactions, cash is being used in Japan for the smaller transactions for which debit cards are coming to be used in the United States.¹⁶⁷

But that explanation seems a bit incomplete. The credit-card system faces similar differences, but it has had a substantial presence in Japan for decades. The debit-card system, however, was only introduced in the spring of 2000. It is so strange to see a payment system used for about a quarter of all card-based retail transactions in the United States being introduced to Japan on a general basis so recently¹⁶⁸ that some further explanation seems appropriate.

The first point must be that the U.S. debit card, albeit successful, has not itself been in use for very long. Although they first were designed in the 1960s,¹⁶⁹ debit cards gained a significant market share only in the mid-1990s.¹⁷⁰ The key event was a fall in the cost of personal identification number (PIN)-pad point-of-sale terminals that made it practicable for merchants to purchase the terminals.¹⁷¹ So what the evidence suggests for now is a delay in mass introduction of just a few years—not decades of differences as in the credit-card system.

Having said that, it remains unclear whether the debit card in Japan ever will develop as successfully as the debit card in the United States. The basic problem is that neither of the two main market functions which the debit card serves in the United States are as promising in Japan as they are in the United States. First (speaking as a U.S. debit-cardholder), one of the primary roles of the U.S. debit card

164. As I explain below, debit cards in the United States are, at least from the perspective of the merchant, considerably cheaper than credit cards. See *infra* notes 190–191 and accompanying text.

165. Electronics dealers might have the largest incentive to urge customers to use debit cards, because they probably have one of the highest average transaction amounts of any high-volume merchant in Japan. Those shops also might be driven by a high rate of fraudulent transactions on credit cards at their store and a desire to limit their potential exposure in those transactions. See *supra* note 122 (discussing problems with credit-card fraud at electronics stores). J-Debit statistics from March 2000 report that transactions at electronics stores were 34 percent of all transactions and that they had an average amount of ¥53,100 (about US\$480). See *J-Debit Transaction Breakdown Statistics*, *supra* note 163, at 52.

166. Calculated from *J-Debit Transaction Breakdown Statistics*, *supra* note 163, at 52.

167. See *supra* p. 141 (articulating a similar explanation for the relatively large size of Japanese credit-card transactions).

168. A debit-card system called Bank-POS was introduced in Japan in 1984, but remained only as a local, barely used system partly because of regulations requiring prior written agreement for the transactions. The key event for the development of J-Debit was the lifting of such restrictions in 1998. See JAPANESE BANKERS ASSOCIATION, *supra* note 13, at 19.

169. See D. BAKER ET AL., *THE LAW OF ELECTRONIC FUND TRANSFER SYSTEMS: LEGAL AND STRATEGIC PLANNING* ¶7.02 (rev. ed. 1999) (discussing the early history of the use of the debit card at retail locations).

170. See EVANS & SCHMALENSEE, *supra* note 17, at 298–300.

171. See EVANS & SCHMALENSEE, *supra* note 17, at 306–15.

is to accommodate the relatively limited willingness of U.S. consumers to carry cash.¹⁷² To the extent they have a rational reason to use a debit card in preference to a credit card, U.S. consumers use a debit card because it limits the frequency with which they must go to an automated teller machine (ATM) or bank to obtain cash. Indeed, the debit card itself for many might be the most convenient source of cash, because most merchants that accept debit cards at the point of sale allow cardholders to use the card to withdraw cash in connection with the purchase.¹⁷³ Because those transactions carry no fees at all for the cardholder, they are attractive to consumers. Japanese consumers, however, tend to carry more cash than U.S. consumers, and also can obtain much larger amounts of cash at each trip to an ATM.¹⁷⁴ Thus, their need to use a card for small-dollar purchases is much smaller. Hence, that market niche for the debit card is much smaller in Japan.

A second market role that the debit card plays in the United States is that it allows cardholders the quasi-rational convenience of paying with a card without having to resist the risky temptation of overextending themselves with credit purchases.¹⁷⁵ But Japanese consumers do not need a debit card to have that comfort. They get it by accepting *ikkai barai* as the method of payment with standard Japanese credit-card transactions. As explained above,¹⁷⁶ when a cardholder pays by *ikkai barai* (as the overwhelming majority of Japanese cardholders do), the funds for the transaction are removed from the bank account without further action by the cardholder. Thus, the *ikkai-barai* card does not present nearly the same temptations to borrowing as the U.S. credit card.

B. The Costs of the System

The Japanese debit-card system is so young that it is speculative to offer any firm analysis of its effectiveness. But enough information is available from the general structure to support generally positive inferences about its future effectiveness.

1. Fraud rates

On the issue of fraud, the Japanese system might not be perfect, but it seems to be much safer than the U.S. system. A large share (more than two-thirds by value) of U.S. transactions use the PIN-less¹⁷⁷ Visa and MasterCard debit products.¹⁷⁸ For those cards, the fraud losses seem to be about the same as they are for regular credit cards

172. See *supra* note 15.

173. Because debit cards are so much cheaper for merchants than credit cards (*compare supra* note 136 and accompanying text with *infra* notes 189–190 and accompanying text), it is rational for the merchants to permit cash withdrawals, even if those withdrawals increase the fees the merchants must pay to the bank for the transaction. Setting to the side the cost to the merchant of having the cash on hand (which seems unlikely to be large enough to alter the decision significantly), that would be true until the point at which the cash withdrawals increase the total discount fee to an amount greater than the discount fee would have been for a credit-card transaction. Because PIN-based debit cards often have fixed discount fees per transaction, it makes particularly good sense for merchants that accept those cards to use “cash-back” services as a way to promote debit-card use.

174. See *supra* note 15.

175. See RITZER, *supra* note 35, at 182.

176. See *supra* notes 62–69 and accompanying text.

177. Traditional debit cards require entry of a PIN at the point of sale. The Visa and MasterCard debit products introduced in the mid-1990s, however, do not require use of a PIN. For general discussion, see MANN, *supra* note 2, at 143–46.

178. See 2000 U.S. Debit-Card Data, *supra* note 3, at 7.

(six cents per US\$100).¹⁷⁹ For conventional PIN-based debit cards, however, the fraud rate is much smaller, about one-twentieth as big (0.3 cent per US\$100).¹⁸⁰

In the J-Debit system, by contrast, all transactions are PIN-based.¹⁸¹ Thus, one would expect the fraud rate to be somewhere near the U.S. fraud rate of only 0.3 cent per US\$100. And early results suggest that fraud is not yet a serious problem.¹⁸² To be sure, there are a few causes for concern. One problem is that the Japanese banking system traditionally has not used encryption for PIN transmissions because all ATMs have been in secure locations (generally inside bank locations). Thus, unlike the United States, the use of debit cards at the point of sale is the first time that cards giving access to a bank account have used terminals which access the bank's computers over an open network.¹⁸³ It is thus the first occasion at which the use of encryption has been crucial to safety of the system. Still, although it necessarily is difficult to evaluate the security of the system from the outside, the available information suggests that J-Debit is conscious of the need for reliable encryption.¹⁸⁴

Observers also worry that PINs in Japan are not as secure as PINs in the United States, relying on surveys indicating that about one-third of Japanese use their birthdays as their PIN numbers.¹⁸⁵ If a significant number of debit cards are stolen, that could become something of a problem. Still, this seems such an easy problem to fix that it is difficult to believe that the system operators would allow it to become significant. For example, a system in which banks assign the PINs (as often happens in the United States) would solve much of the problem immediately.¹⁸⁶ On the other hand,

179. See 1999 U.S. Fraud Data, *supra* note 109, at 4 (aggregating fraud rates for credit cards and PIN-less cards).

180. See 1999 U.S. Fraud Data, *supra* note 109, at 4.

181. See J-Debit Cardholder Agreement, *supra* note 155, art. 2.

182. As of January 2001, J-Debit still reports no claims of unauthorized transactions in its system. See *Lower Debit Card Limits*, *supra* note 15 (no reports of fraudulent transactions as of January 2001); *Debit Card Usage Exceeds 100 Bln Yen in Jan–Oct*, NIHON KEIZAI SHIMBUN, Nov. 13, 2000, available at <http://www.nni.nikkei.co.jp> [hereinafter *Debit Card Usage*] (same as of October 2000).

183. I use the term “open” to describe those networks because there are places from which customers (or interlopers) can access the network that are not within the control of the financial institution. See Naoyuki Iwashita, *Business Needs for Cryptographic Technology in Japan's Financial Industry* <<http://www.imes.boj.or.jp/japanese/kouen/h9903.pdf>> (discussing historical use of leased lines for ATM-card transactions in Japan).

184. It appears that J-Debit contemplates encryption of transmissions from the merchant to the clearance center by the same DES encryption used in the United States. See Japan Settlement Information Center, Ltd. <<http://www.jpnsic.co.jp/servis2.html>>; Iwashita, *supra* note 183, at 1 (discussing use of DES encryption for U.S. PIN transmissions).

185. See *Debit Cards Getting Ready*, *supra* note 136, at 15 (“Critics also warn that personal identification codes can be stolen while being punched in at the store.”).

186. It would be plausible to expect that Japanese system operators would have less concern than U.S. operators because the Japanese system places the risk of loss from unauthorized transactions on cardholders, while the U.S. legal system requires the issuers to bear that risk. Compare *Aoki v K. K. Fujibank*, 1369 KIN'YU HOUMU 6–8 (Sup. Ct., July 19, 1993) (upholding a provision of a Japanese ATM-card agreement, holding that absent some special circumstance a bank is not responsible when somebody other than the cardholder withdraws cash from an ATM with the authentic card and correct PIN); with 15 U.S.C. § 1693g, Electronic Funds Transfer Act § 909 (limiting liability of debit-card holder for unauthorized U.S. transactions to US\$50, unless the cardholder fails to report either the theft of the card or unauthorized transactions that appear on the cardholder's statement); Regulation E, 12 CFR § 205.6 (same). But the generally superior design of the Japanese system (that is, its universal use of PINs) suggests that those legal provisions are not unduly undermining the incentive of the Japanese operators to limit fraud losses.

it is not nearly so clear how system operators can assuage the strong consumer perception that the system is unsafe.¹⁸⁷

The fact is, the U.S. systems that have used PINs for years have experienced very low rates of losses compared to card systems that do not use PINs. And even those rates seem misleading, because, according to industry observers, the losses are almost entirely attributable to so-called friendly fraud: unauthorized transactions by individuals (spouses, children, paramours) to whom the cardholders voluntarily delivered the card and PIN.¹⁸⁸ It seems surprising, but there appears in the United States to be no quantifiable number of transactions in which interlopers have managed to steal both a card and a PIN and successfully conduct transactions before the cardholder advises his/her bank of the theft. The lesson of that experience is that Japan's entirely PIN-based system should be quite secure.

2. Discount rates

Despite the relatively robust anti-fraud protections, the Japanese system currently is considerably more expensive for the participants in the transactions than the U.S. system. Although rates differ considerably from merchant to merchant, a typical merchant would pay at least ¥50 on a ¥5,000 transaction.¹⁸⁹ In the United States, a grocery store with a similar transaction probably would pay the equivalent of ¥15–20 (about 14–18 cents).¹⁹⁰

Although the fee for now is higher than the analogous fees in the United States, it seems unlikely to be a substantial problem. For one thing, even though the fee is higher than the analogous U.S. fee, it still is lower than the fee for any competing Japanese payment system.¹⁹¹ For another, the rates have not yet stabilized during the

187. *See Only 3% of Japanese Use Debit Cards on Security Worries*, NIHON KEIZAI SHIMBUN, Dec. 22, 2000, available at <http://www.nni.nikkei.co.jp> (reporting survey indicating that 48 percent of respondents cited security concerns as their primary reason for not using the cards).

188. *Compare Kono v. Otsuyama*, 1048 HANREI JIHOU 109 (Tokyo High Ct. Apr. 28, 1982) (concluding that a man who gave his cash card to a woman with whom he had a romantic relationship implicitly consented to her withdrawal of funds with the card in any amount that suited her).

189. *See DEBIT CARD Q & A*, *supra* note 154, qu. 54 (explaining that the discount rate varies based on negotiations between the acquiring bank and the merchant, and that it typically ranges from 1–3 percent). As a matter of structure, the discount fee that the acquiring bank collects from the merchant must be more than the interchange fee that the acquiring bank pays to the issuing bank. *See supra* note 138 (discussing the relation between merchant discount fees and interchange fees in the credit-card context). In the J-Debit system, the interchange fee currently is 1 percent, with a floor of ¥3 and a ceiling of ¥100. *See id.*

190. The largest of the PIN-based networks (STAR) reportedly charges 12.5 cents for supermarkets; Visa's Interlink PIN-based system (the second largest) charges 22 cents. The next three largest PIN-based networks charge fees ranging from 8.5 to 12.5 cents. *See Debit Card Interchange*, NILSON REP., July 2001 (Issue 744), at 1, 10 (reporting interchange fees of the largest PIN-based networks). The PIN-less VISA network charges a flat fee of 40 cents. *See David Breitkopf, Visa to Raise Fee Cited in Wal-Mart Case*, AM. BANKER, July 12, 2001, at 1, 10.

191. The fee is perceptibly lower than the fee for a bank transfer, the other common method of noncash consumer payment in Japan. *See supra* note 86 (discussing Japanese use of bank transfers). {It is difficult to generalize about bank-transfer fees, because the fee structures typically have several tiers and differ from bank to bank. The cheapest fees for transfers to an account at a different bank, however, typically exceed ¥100. *See* <http://www.btm.co.jp/listj/tesuu.htm> (fees for Bank of Tokyo-Mitsubishi); <http://www.fujibank.co.jp/jis/tb/service/tesuuryou.html> (fees for Fuji Bank).} For comparison's sake, the J-Debit fee is considerably lower than the fees that Visa and MasterCard acquirers charge in the United States for their PIN-less debit-card products. Those higher fees have disturbed U.S. merchants, but have not stopped the rapid spread of use of the cards. *See Lisa Fickensher, Visa Hires Exec to Strengthen Relationships with Merchants*, AM. BANKER, Mar. 12, 1999, at 8 (discussing a lawsuit brought by a group of merchants including Wal-Mart and Sears, against MasterCard and Visa, challenging the rules requiring merchants to accept the PIN-less debit-card products issued by MasterCard and Visa members).

short life of the system; one observer suggested that the rates are lower now than they were in the initial months of the system.¹⁹²

Finally, the structure of the market should foster considerable competition that eventually should lead to good rates. The key point is that there is only one debit-card network for the entire country and each merchant needs access to that network from only a single bank. That is the same many-acquirers/few-networks pattern which U.S. merchants face when they want access to credit-card networks.¹⁹³ Thus, all of the banks in Japan that want to be in the business of capturing J-Debit transactions must compete for the business of each merchant.

To be sure, long-term merchant/bank relationships might give merchants a significant preference for a particular bank within their corporate family. But those relationships in the Japanese financial industry seem to be weakening rapidly.¹⁹⁴ At this point, it is difficult to believe that those relationships will be sufficiently strong to permit banks to charge uncompetitive rates to related-company merchants for their debit transactions. If one bank charges significantly better rates for the service than its competitors, it is highly likely to obtain a substantial share of the market.¹⁹⁵ Thus, it seems unlikely that high system costs will pose an obstacle to the success of the system.

To sum up this section, it is much harder to draw firm conclusions about the Japanese debit-card system than the Japanese credit-card system, because its baseline of operation is so short. But its major problem seems to be that much of its market niche has been occupied by the general mutation of the credit card in Japan into something that closely resembles the debit card in the United States. The only real differences that a debit card brings to Japanese consumers are that (1) the more secure authorization makes the transactions safer (at least compared to credit-card transactions); and (2) the funds are removed from the account much more rapidly. Neither of those differences benefits cardholders significantly, so neither is likely to push consumers toward the card rapidly. Moreover, consumer fears of losses from inadequate security (whether or not rational) could hinder the system even more.

Thus, although the system is much cheaper for the parties to transactions, much more secure, and much more accommodating to any Japanese preference for transactions that resemble “cash payment” and avoid any hint of borrowing, it seems to have a relatively limited chance of broad success in Japan. Absent any strong reason for consumers to use the card—and no such reason seems apparent at this point—it is likely to languish as a relatively minor system, as it did in the United States for so many years.¹⁹⁶

192. See Anonymous Interview Eight, Tokyo (Sept. 28, 2000).

193. See *supra* notes 143–144 and accompanying text.

194. See HARMER, *supra* note 79, at 142–43.

195. See *DKB Dominates Debit Card Deals*, NIHON KEIZAI SHIMBUN, Oct. 19, 2000, at 1, 1 (reporting that Dai-Ichi Kangyo Bank has succeeded in becoming the sole or primary provider of debit-card settlement services for 54 percent of the merchants in the J-Debit program).

196. See D. BAKER ET AL., *supra* note 169 and accompanying text.

V. Conclusion

The basic message of this paper is a simple one: institutions matter. Financial systems that develop in one country cannot be transplanted without change to other countries which have different institutional settings. If they are transplanted—as the debit card and credit card have been—then the roles that they play will shift to account for the backgrounds in which they are placed as surely as the growth of new plants seeks the spaces between plants already nearby. An understanding of the factors that influence that growth is important not only to the businesses which want to develop more effective payment systems, but also to policy analysts who want to limit the development of payment systems that can have harmful effects on those which use them.

