

VANDERBILT LAW REVIEW

VOLUME 55

MAY 2002

NUMBER 4

Credit Cards and Debit Cards in the  
United States and Japan

Ronald J. Mann\*

I.	THE INSTITUTIONAL PRECURSORS OF CREDIT CARDS AND DEBIT CARDS.....	1061
A.	<i>A General Framework</i> .....	1062
B.	<i>A Set of Precursors</i> .....	1063
1.	Banking Powers.....	1063
a.	<i>Historical Patterns</i> .....	1064
b.	<i>Theoretical Explanations</i> .....	1066
2.	Merchant Size .....	1069
3.	Telecommunications Costs.....	1069
4.	Economies of Scale .....	1070
II.	CREDIT CARDS IN THE UNITED STATES AND JAPAN.....	1071
A.	<i>Usage in the United States and Japan</i> .....	1072
1.	Describing the Transactions .....	1072
2.	Explaining the Differences.....	1076

\* Roy F. & Jean Humphrey Proffitt Research Professor of Law and Professor of Law, The University of Michigan Law School. For valuable comments on earlier drafts, I thank Omri Ben-Shahar, Rebecca Eisenberg, Frances Foster, John Haley, Dan Keating, Atsushi Kinami, Rick Lempert, Lynn LoPucki, Bob Rasmussen, Hiroo Sono, Elizabeth Warren, Jay Westbrook, and Mark West. I also received useful feedback from presentations of all or part of this paper at the Conference on Japanese Law in the 21st Century at the University of Michigan Law School, at Notre Dame Law School, at the Faculties of Law at Tohoku University and the University of Tokyo, and at the Japanese Business Law Association. Finally, I could not have completed this work without translation assistance from Keisuke Hasegawa, Mariko Maeda, and Masayuki Tamaruya. © 2001 by Ronald J. Mann.

For support during the preparation of this paper, and for extraordinary assistance in collecting the information used in this paper, I am grateful to the Institute of Monetary and Economic Studies at the Bank of Japan and in particular to Michio Ayuse, Masao Okawa, Naoyuki Iwashita, Nami Numoto, Daisuke Terayama, and Yukari Haga. I also thank the Proffitt Fund at the University of Michigan Law School for unstinting support of this research.

	a.	<i>The Disempowered-Bank Hypothesis</i> .....	1077
	b.	<i>Merchant Size</i> .....	1082
	c.	<i>Other Explanations</i> .....	1083
	i.	Cautious Consumers.....	1083
	ii.	Limited Consumer Protection Laws.....	1087
B.		<i>The Costs of the System</i> .....	1088
	1.	Fraud Rates .....	1088
	2.	Discount Rates and Cardholder Fees .....	1093
III.		DEBIT CARDS IN THE UNITED STATES AND JAPAN .....	1099
	A.	<i>Usage in the United States and Japan</i> .....	1100
	1.	Describing the Transactions .....	1100
	2.	Explaining the Differences.....	1102
	B.	<i>The Costs of the System</i> .....	1103
	1.	Fraud Rates .....	1104
	2.	Discount Rates.....	1106
IV.		CONCLUSION .....	1108

The widespread use of cards is one of the most salient features of consumer retail payment systems in the United States. American consumers use those cards to pay for about one-fourth of their retail purchases each year.<sup>1</sup> And this is not a static phenomenon; among other things, the use of debit cards,<sup>2</sup> though still relatively small, is rising rapidly.<sup>3</sup> That pattern of use is not, however, typical of other

1. See *Consumer Payment Systems*, NILSON REP. (HSN Consultants, Inc., Oxnard, CA), Dec. 2000, Issue 729, at 1, 6 [hereinafter *1999 U.S. Payment Systems Data*]. I rely throughout this paper on the *Nilson Report* for statistics regarding the American card industry. Although the source of the statistics published in the *Nilson Report* is rarely clear, I follow the lead of American 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 American 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, while a credit card transaction 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. (HSN Consultants, Inc., Oxnard, CA), Apr. 2001, Issue 737, at 1, 6 [hereinafter *2000 U.S. Debit Card Data*] (reporting 8.3 billion United States debit card purchase transactions in 2000, up 30% from the previous year, for a total of \$318 billion in purchases); *1999 U.S. Payment Systems Data*, *supra* note 1, at 1, 6 (reporting that debit cards were used for 6.1% of consumer purchases in 1999, which represented 4.7% of the dollar amount of consumer purchases); see also *Visa and MasterCard—U.S. 1998*, NILSON REP. (HSN Consultants, Inc., Oxnard, CA), Apr. 1999, Issue

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 sixty card-based payment transactions per person per year in the United States, but only four such transactions per person per year in Japan.<sup>4</sup> 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 American cardholders: borrowing beyond the first statement period appears in only about one-tenth of Japanese credit card transactions, while about half of American cardholders borrow each month.<sup>5</sup>

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.<sup>6</sup> Third, there is good reason to believe that 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,<sup>7</sup> 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.

---

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 COMM. ON PAYMENT & SETTLEMENT SYS., BANK FOR INT'L SETTLEMENTS, RETAIL PAYMENTS IN SELECTED COUNTRIES: A COMPARATIVE STUDY 23, chart 5 (1999), available at <http://www.bis.org/publ/cps33.pdf> [hereinafter BIS, COMPARATIVE PAYMENTS STUDY].

5. For details, see *infra* Part II.A.1.

6. See, e.g., TERESA A. SULLIVAN, ELIZABETH WARREN & JAY LAWRENCE WESTBROOK, THE FRAGILE MIDDLE CLASS: AMERICANS IN DEBT 108-40 (2000) (offering detailed data and analysis of the relationship between the credit card industry and consumer bankruptcy in the United States). This view is also supported by analysis from government experts. See 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, Div. of Ins., Mar. 1998).

7. See ROBERT D. MANNING, CREDIT CARD NATION: THE CONSEQUENCES OF AMERICA'S ADDICTION TO CREDIT 127-32, 291-99 (2000).

At the outset, it is natural to wonder whether the pattern is dominated more by factors of social construction than by those of institutional economics. 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, you 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.<sup>8</sup> You also might think that the risk of street crime could explain much of the pattern. Focusing on that problem, you 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.<sup>9</sup>

Those explanations certainly have some truth,<sup>10</sup> but by themselves they cannot explain the pattern that I observe. In

---

8. See *id.* 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 2000 voters by Yomiuri Shimbun concluded that 64% 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 2000 voters by Asahi Shimbun reports that 59% 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 this 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 does 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 I-5 (1998) [hereinafter, SUMMARY OF THE WHITE PAPER ON CRIME] (reporting 2809 robbery offenses in 1997), and *id.* tbl.I-3, at 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 appears to have been increasing in Japan during the 1990s at the same time that credit card use has been rising, so the connection seems weak at best. See SUMMARY OF THE WHITE PAPER ON CRIME, *supra*, tbl.I-4, at 80 (reporting 1586 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. 35-39. 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 (most of the areas where I have lived in this country) where a perception of a substantial risk of mugging seems most unlikely. For data comparing United States and Japanese willingness to use and carry cash, see *infra* note 16.

Another reader suggested to me the possibility that gender differences might explain some of the disparity. If men and women have differing preferences for cash and credit cards—perhaps



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 American patterns.<sup>11</sup> The purpose of this Article is to explore the legal and economic institutions that might affect that pattern.

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 begins with the premise 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.<sup>12</sup> 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.

Part I argues that four separate institutional considerations are important precursors to the development of card networks:<sup>13</sup>

---

because of differing levels of concern about crime, or because of differing levels of receptiveness to new technology—and if men and women make different patterns of purchases in the two countries—perhaps because women have a more traditional role in Japanese society than they do in the United States—then the pattern of credit card usage would be different in Japan. Although that is an intriguing suggestion, and may provide some part of an explanation for different usage, it seems to me even more difficult to analyze than the factors that I examine here.

11. See *infra* text accompanying notes 74-77.

12. For a general introductory summary, see, for example, 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., Mar. 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 American consumers. See JAPANESE BANKERS ASS'N, PAYMENT SYSTEMS IN JAPAN 3 (2000) (reporting that checks are used for only 5% of Japanese noncash payments, compared to 74% 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, the United States, and a few European countries as cheque countries and the continental EU and Japan as giro countries).

For several reasons, this Article does not pursue that possibility. The biggest problem with placing weight on the success of checks as an institutional precursor for card-based payment

- 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 telecommunication costs (because low telecommunication costs foster an effective antifraud system);
- The size of the national retail economy (because of economies of scale in the rapid implementation of technological advances).<sup>14</sup>

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

The second part of the Article applies those factors to explain the differences in the changing patterns of usage between the United States and Japan. The last two factors are longstanding factors 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 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 to explain the changing pattern of Japanese credit card usage.

systems is that the reasons for the success and failure of checks in different countries are no better understood than the reasons for the success and failure of card-based payment systems. The most persuasive explanation for the success of checks in the United States is the early and forceful intervention of the Federal Reserve to provide a subsidized check collection system that made the check the only method for long-distance payments that was free to both the payor and the payee. See R. Alton Gilbert, *The Advent of the Federal Reserve and the Efficiency of the Payments System: The Collection of Checks, 1915-1930*, 37 *EXPLORATIONS IN ECON. HIST.* 121, 128-40 (2000). To my knowledge, Japanese scholars have not yet fully explained the Japanese experience.

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 slowed 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 also have small payment card markets even if cards were used universally, that factor should have even greater significance.

One difficulty that complicates analysis is the inextricable relation between the credit card system and the consumer credit industry in any particular country.<sup>15</sup> That relation makes it difficult to provide a clear understanding of the role that credit cards play without an understanding of the role of consumer credit. It is not practical in a paper of this scope to undertake a thorough analysis of the consumer credit markets in Japan and the United States. Recognizing that problem, Part II still attempts to provide enough information about the consumer credit industries in the United States and Japan to illuminate the credit card systems of the two countries.

The last part of the Article 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 American debit card—and in the abstract one that should be more attractive to cash-preferent Japanese consumers<sup>16</sup>—it seems unlikely to garner a significant role in Japanese commerce.

## I. 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

---

15. The connection is most obvious in the sense that, at least in the United States, profits from consumer lending on credit cards can be viewed as subsidizing the issuance of credit cards as a payment device. See *infra* Part II.B.2 (explaining why American cards can operate profitably with less reliance on revenue from merchants).

16. A 1998 survey of 2000 Japanese voters by Asahi Shimbun reports that 37% of Japanese adults carry more than ¥30,000 (about \$270) and 81% more than ¥10,000 (about \$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 ATM policy that permits withdrawal of ¥2,000,000 per day (about \$18,000), some forty times the typical United States limit. See JAPANESE BANKERS ASS'N, *supra* note 13, at 16; see also Gov't, *Banks Keen to Lower Debit Card Limits*, NIHON KEIZAI SHIMBUN, Jan. 18, 2001, available at <http://www.nni.nikkei.co.jp> [hereinafter *Lower Debit Card Limits*] (reporting plans to lower the limit to ¥500,000). 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 difference in the amount of cash in the hands of consumers might be even larger than that data suggests, because the share of the American currency supply held in other countries probably is greater than the share of the Japanese currency supply held in other countries.

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, consumers decide to carry it, and 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 banks that already issue the card. Concurrently, by increasing the size of the network, those events (all other things being equal)<sup>17</sup> make it more beneficial for new merchants to begin accepting the card and for new banks to begin issuing the card.<sup>18</sup>

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 upon 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.<sup>19</sup>

---

17. 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).

18. 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).

19. See *id.* at 149-51.

Given the large number of participants 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.<sup>20</sup>

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 telecommunication costs; and the size of the retail economy.

#### 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. This Article's most important thesis is that banks traditionally have been best placed to issue those cards, and thus a regulatory climate that excludes banks will retard the development of the card industry. Several difficulties plague my analysis of that factor, which motivate me to analyze it at greater length than I do the other factors (which are more intuitively obvious). For one thing, my theoretical basis for claiming a connection between bank regulations and the success of the credit card industry is not initially overwhelming: there is no obvious reason why nondepository

---

20. For a discussion of some of the economic advantages of closed-loop card systems, see *id.* at 158-63.

institutions cannot successfully deploy card-based payment products. To be sure, nondepository institutions do have a significant disadvantage in promulgating debit cards—only depository institutions have immediate access to the accounts against which debit card payments are made. But no such difficulty bars participation by nondepository 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. Accordingly, I defer discussion of theoretical explanations for that phenomenon, and first offer a brief summary of the historical patterns.

*a. Historical Patterns*

As others have explained, 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.<sup>21</sup> 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.<sup>22</sup>

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 American banks (primarily Bank of America in California).<sup>23</sup> 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 successful credit card product have resulted in staggering monetary losses.<sup>24</sup> The credit card as a borrowing device developed uniquely as a bank product.

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. That may sound odd to outsiders

---

21. See, e.g., *id.* at 61-84.

22. See *id.* 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.

23. See *id.* at 65-69.

24. See *id.* at 75 (discussing heavy losses incurred by American Express in its attempts to enter the credit card market).



accustomed to thinking of Japanese bank regulation as weaker than bank regulation in other countries, but in this case it seems to have been caused by a battle between two Japanese agencies: the Ministry of Finance and the Ministry of International Trade and Industry.<sup>25</sup> Although the precise reason for the exclusion is not clear,<sup>26</sup> it was 1992 before bank-affiliated issuers were permitted to issue cards that allowed revolving credit.<sup>27</sup> Thus, at least as to borrowing transactions, the pre-1992 credit card market was dominated by *shinpan kaisha* and other nonbank lenders. It was not until 2001 that companies affiliated with Japanese banks permitted to issue cards that include all of the other borrowing options typical of the Japanese card industry.<sup>28</sup>

25. See J. MARK RAMSEYER & FRANCES MCCALL ROSENBLUTH, JAPAN'S POLITICAL MARKETPLACE 55-57 (1993).

26. Mark Ramseyer and Frances Rosenbluth argue that the exclusion was designed to protect smaller credit companies that would have suffered from competition with the banks. See *id.* 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 a source discussing the need to protect small retailers, see Kurejitto Sangyō Bukai, Kappu Hanbai Shingikai [The Credit Industry Committee in the Installment Sales Council], *Kurejitto Sangyō 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).

27. 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 Hanbaihō no Ichibu wo Kaiseisuru Hōritsuanni Taisuru Futai Ketsugi [Supplementary Resolution Amending Installment Sales Law] (May 10, 1984). For discussion of its significance to later policy, see KINYŪ IT KENKYŪKAI [STUDY GROUP REGARDING INFORMATION TECHNOLOGY IN FINANCIAL SERVICES], DEBITTO KĀDO KAKUMEI [THE REVOLUTION IN DEBIT CARDS] 53-54 (Takarajimasha 2000) [hereinafter THE REVOLUTION IN JAPANESE DEBIT CARDS]; *Dai Ippen Kurejitto Sangyō no Jittai* [Part 1: The History and Current Situation of Credit Industries], in KUREJITTO TORIHIKI JITSUMUZENSHO [CREDIT TRANSACTION GUIDANCE] 110 (Daiichihōki 1991) [hereinafter CREDIT TRANSACTION GUIDANCE].

28. It is not unusual in Japanese credit card transactions that involve borrowing to call for repayment in three equal monthly installments (*"sankai barai"*) or in ten equal monthly installments (*"jukkai barai"*), or out of the cardholder's semiannual bonus. Those options were not permitted to bank-affiliated card issuers by the 1992 decision. The government ultimately decided to permit bank-affiliated card issuers to offer all of the common forms of borrowing. See *Tokubestu Ronbun: Kinyū Sābisuni Okeru Kādo no Yakuwari to Tenbō* [Special Report: The Perspective and Function of Cards in Financial Services], in KINYŪ JYŌHŌ SHISUTEMU HAKUSHO 3, 25 (Zaikaishōhōsha 2000); THE REVOLUTION IN JAPANESE DEBIT CARDS, *supra* note 27, at 96-97; Kurejitto Sangyō Bukai, Kappu Hanbai Shingikai [The Credit Industry Committee in the Installment Sales Council], *Kurejitto Kado no Seidoteki Seiyaku no Kaiketsu no Arikata to Kurejitto Sangyō ni Kyōtsūsuru Kadai e no Torikumi ni Kansuru Hōkoku* [Interim Report: The Way to Solve Structural Limitations in Credit Cards and a Program for Solving Common Problems in Credit Industries] (1998).

Two points about the resulting market structure (both discussed in more detail in Part II) 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.<sup>29</sup> 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 American pattern.<sup>30</sup> The movement of Japanese usage to resemble the United States 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 nondepository credit card issuers have been unable to develop successful credit card products. For me, two explanations are plausible: one that relies on the informational advantage banks gain from depository relations and 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.<sup>31</sup>

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

29. See *infra* Part II.A.1 (discussing the limited success of Japanese credit cards).

30. See *infra* text accompanying notes 74-77.

31. See, e.g., EVANS & SCHMALENSSEE, *supra* note 18, 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); *id.* at 89-91 (discussing \$100 million in 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).

such informational 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 depositary relation is the only reliable—or even the best—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 encountered by 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.<sup>32</sup> Given the limited ability of banks in the 1960s and 1970s to compete on price,<sup>33</sup> 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.<sup>34</sup> After decades of practice, however, the industry developed sufficient expertise to earn considerable profits from credit card lending.<sup>35</sup> At that point, it would be rational for other issuers to enter the market vigorously, even if they did not have substantial depositary relations with their cardholders.

Given the foregoing, it should be no surprise that nondepositary institutions in the United States now are quite successful at credit card lending. For example, store cards in the United States have a phenomenal ability to generate borrowings.<sup>36</sup>

---

32. 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”).

33. See, e.g., MARCIA STIGUM, *THE MONEY MARKET* 968 (3d ed. 1990) (discussing the importance to the market of the limitations on bank-deposit interest imposed by the Federal Reserve’s Regulation Q).

34. See MANNING, *supra* note 7, at 84 (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 depositary customers).

35. Cf. Arthur J. Alexander, *Consumer Credit in Japan Since the Bubble Economy’s End*, JAPAN ECON. INST. REP., June 20, 1997 (arguing that Japanese banks are handicapped in credit card lending because they have not had sufficient experience to develop expertise in individual risk assessment), available at <http://www.jei.org/Archive/JEIR97/9723f.html#whos>.

36. At the end of 2000, the ratio of outstanding receivables to total annual purchase volume for United States store cards was 77%, which compares favorably to the analogous ratios for MasterCard (76%), Visa (55%), Discover (53%), and American Express (23%). (The ratio for store cards is calculated from *Store Cards in the U.S. 2000*, NILSON REP. (HSN Consultants, Inc., Oxnard, CA), 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. (HSN Consultants, Inc., Oxnard, CA), Apr. 2001, Issue 738, at 1, 4-5 [hereinafter *2000 U.S. Card Data*]. The ratios for American Express and Discover are calculated based on year 2000 results published at Amex

But they showed no capacity to generate those borrowings in the early days of the industry, before banks developed and popularized the credit card model.<sup>37</sup>

It is also 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 sixteen 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.<sup>38</sup> But those banks appeared quite late in the development of the credit card market in the United States.<sup>39</sup> And they depend for their success on the economies of scale in sophisticated analysis—"credit scoring"—of the individuals to whom they issue cards.<sup>40</sup> 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.<sup>41</sup>

\* \* \* \* \*

In sum, there are good reasons to think that a regulatory climate that grants banks free entry into the credit card market is a substantial factor leading to the development of a large credit card market. The mechanism is not entirely clear, but 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.

*Results—U.S.*, NILSON REP. (HSN Consultants, Inc., Oxnard, CA), Jan. 2001, Issue 732, at 1, 7 and *Discover Card Results*, NILSON REP. (HSN Consultants, Inc., Oxnard, CA), Jan. 2001, Issue 732, at 1, 7.) For a discussion of historical trends of that ratio, see *infra* note 58.

37. See EVANS & SCHMALENSEE, *supra* note 18, 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).

38. See EVANS & SCHMALENSEE, *supra* note 18, at 209.

39. See, e.g., *id.* at 12 (discussing the rise of monoline banks in the early 1990s).

40. See Miriam Kreinin Souccar, *Providian Pitch Spurs Fear of Credit Data Poaching*, AM. BANKER, Dec. 6, 1999, at 1, available at 1999 WL 21145379 (discussing underwriting techniques of monoline banks); Jane Tanner, *Investing: Everyday Plastic, Spun into Gold*, N.Y. TIMES, Sept. 17, 2000, § 3, at 7 (same).

41. Looked at from another perspective, the monoline bank—credit card issuer without depositary relation—in some ways resembles the *shinpan kaisha* that is an important player in the Japanese market. The key difference, of course, is that the *shinpan kaisha*'s transactions have a much lower share of borrowing than those of the typical American monoline bank. See *infra* note 64 (reporting estimates of the rate of borrowing in *shinpan kaisha* transactions).

## 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 that are 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 that 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.<sup>42</sup>

The decision whether it is profitable for a merchant to accept a card depends upon 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).<sup>43</sup> 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.<sup>44</sup>

## 3. Telecommunications Costs

At this point, I turn to general factors—those 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. Those costs affect the deployment of an effective credit card system because of the importance of telecommunications to an effective antifraud system. Most obviously, 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, at least),<sup>45</sup> that process starts with a swiping of the card at the

---

42. See *infra* note 167. The cost of the terminal might nominally be borne by either the merchant or the credit card network, but in any event they must be incurred, which is the relevant question here. See EVANS & SCHMALENSEE, *supra* note 18, at 121-27.

43. For a more detailed discussion of that point, see *infra* note 165.

44. 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.

45. See *Smart Card Economics—U.S.*, NILSON REP. (HSN Consultants, Inc., Oxnard, CA), Sept. 2000, Issue 724, at 1, 5 (reporting that over ninety-five percent of Visa and MasterCard transactions in the United States are authorized in real time, a higher rate than in any other country).

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).<sup>46</sup>

Because such a process necessarily involves some form of online connection between the merchant and the issuer, high telecommunication costs pose an obstacle to such systems.<sup>47</sup> 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 has telecommunication costs that are among the highest of any developed nation.<sup>48</sup> Among other things, those costs typically include charges on a per-call and per-minute basis that are relatively unusual in Western countries.<sup>49</sup> 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 are important in a variety of ways—not only in the initial issuance of the cards (discussed above), but also in the processing of

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

47. See *Smart Card Economics—U.S.*, *supra* note 45, 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”).

48. See, e.g., RICHARD KATZ, JAPAN: THE SYSTEM THAT SOURED 35 (1998) (discussing reasons for relatively high telecommunications costs in Japan); *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 thirteen percent since 1985, while long-distance charges (for which NTT faces competition) have fallen by seventy-eight percent); Mark Magnier, *Japan's Big Hang-Up*, L.A. 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 Britain and two-and-a-half times those in France and Sweden).

49. Akiko Kashiwagi & Clay Chandler, *Foes Hoping to Tether Japan's Telecom Giant*, WASH. POST, Jan. 10, 2001, at E1 (discussing NTT's practice of charging by the call and minute for telephone calls in Japan).



transactions.<sup>50</sup> 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.<sup>51</sup> Thus, all other things being equal, marginally larger countries should be able to deploy more sophisticated technology more rapidly than marginally smaller countries.<sup>52</sup> 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.<sup>53</sup>

## II. CREDIT CARDS IN THE UNITED STATES AND JAPAN

Turning from abstract analysis to specifics, I start with the credit card, the dominant card-based payment system in the world. My analysis of the credit card proceeds in two steps. 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.

---

50. 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 phenomenon 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% market share as of 1999 (up from 36% in 1998). The top ten acquirers increased their market share from 65.5% in 1997 to 76.2% in 1999. See *Top U.S. Acquirers*, NILSON REP. (HSN Consultants, Inc., Oxnard, CA), Apr. 2000, Issue 713, at 1, 9 [hereinafter *1999 US Acquisition Data*] (reporting increases in concentration from 1998 to 1999); *Top U.S. Acquirers*, NILSON REP. (HSN Consultants, Inc., Oxnard, CA), 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% of the market and the top ten issuers control 82% of the market. Ten years ago in 1990, the top five issuers controlled 36% and the top ten issuers controlled only 51%. Twenty years ago in 1980, the top fifty card issuers controlled less than 60% of the market. See MANNING, *supra* note 7, at 298; *Superportfolios*, NILSON REP. (HSN Consultants, Inc., Oxnard, CA), Feb. 2001, Issue 733, at 1, 6-7.

51. See RITZER, *supra* note 37, at 42-43 (discussing economies of scale in the United States credit card industry).

52. 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.

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

*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 \$1.1 trillion, about \$76 per transaction.<sup>54</sup> U.S. Department of Commerce statistics indicate that in the same year credit cards were used in about eighteen percent of all transactions, for about twenty-three percent of the value paid in all American consumer payment transactions.<sup>55</sup> For the most part, those transactions were conducted as revolving credit transactions.<sup>56</sup> Under American practices, that means that the cardholder decides each month what share of the total account balance it 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.<sup>57</sup> In practice, somewhat more than half of American cardholders take advantage of that option to defer payment of some or all of their credit card account balance each month.<sup>58</sup> The payments that they do

---

54. See *Credit & Debit Cards*, NILSON REP. (HSN Consultants, Inc., Oxnard, CA), Nov. 2000, Issue 726, at 1, 7 [hereinafter 1999 U.S. Card Data].

55. 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 nonretail payment transactions surely is lower (close to zero) than the share that they have for retail payment transactions. Cash, by the way, was used in 44% of all United States payment transactions, but those transactions had an average amount of only \$20.08, totaling less than 19% of the total dollar transaction volume. *Id.*

56. In American 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 fifteen percent share of the American market. See *U.S. Annual Credit Card Charge Volume by Brand—Current*, available at <http://www.cardweb.com/carddata/charts/chargevolume.html> (last visited Sept. 17, 2001). Even with American Express, however, the cardholder has the power to withhold payment by the simple expedient of neglecting to mail a check. That differs from the arrangements discussed below for Japan, in which the issuer receives funds on the payment date through a debit transfer from the cardholder's account. See *infra* notes 67-70 and accompanying text.

57. See MANNING, *supra* note 7, at 352 n.57; RITZER, *supra* note 37, 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, *Bankruptcy Bill Is Getting Last-Minute Tweaks*, AM. BANKER, Sept. 10, 1999, at 2 (discussing possible disclosure requirements), available at 1999 WL 21143154; Dean Anason, *LaFalce Sees Compromise as Reform's Best Hope*, AM. BANKER, Apr. 29, 1999, at 3 (same), available at 1999 WL 6034812; Michelle Heller, *Bankruptcy Reform on the Hill's Fast Track*, AM. BANKER, Feb. 7, 2001, at 1 (same), available at 2001 WL 3909314.

58. See MANNING, *supra* note 7, at 102 (reporting industry estimates of an increase in convenience users from 31% in 1990 to 43% in 2000); 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% of credit card users pay off their charges before interest accrues),

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 American 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),<sup>59</sup> credit cards accounted for only ten percent of the value of payment transactions.<sup>60</sup> Industry statistics indicate only ¥21.58 trillion (\$195 billion) of credit card transactions in 2000, about six percent of Japanese consumer spending that year.<sup>61</sup> That reflects purchases of about \$1,650 per capita, as compared to about \$3,500 per capita in the United States.<sup>62</sup> 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 (\$225).<sup>63</sup>

available at 1997 WL 4748488; Jeremy Simon, *More Users of Plastic Wielding It More Wisely*, ORANGE COUNTY REG., Apr. 18, 1999, at K05 (reporting an increase in "convenience users" from 29% in 1990 to 42% in 1997), available at 1999 WL 4295534; Miriam Kreinin Souccar, *Mortgage Refinancing Slump Good for Card Firms*, AM. BANKER, Jan. 18, 2000, at 1 (reporting MasterCard statistics indicating that only 54% of its customers retained balances in 1998, down from 57% in 1997), available at 2000 WL 3358981. 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% throughout the early 1990s, but fell to 68% in 1998, 57% in 1999, and 53% in 2000. See *The Evolving Bank Card Industry*, NILSON REP. (HSN Consultants, Inc., Oxnard, CA), Sept. 1999, Issue 699, at 1, 6 (discussing the historical trends in that metric); *1999 U.S. Card Data*, supra note 54, at 1, 7 (reporting data from which I calculate the 1999 figure); *Credit Cards in the U.S.*, NILSON REP. (HSN Consultants, Inc., Oxnard, CA), Dec. 2000, Issue 730, at 1, 5 (reporting the 2000 figure).

59. See supra notes 13, 16.

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

61. 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 [hereinafter *METI Credit Card Data*] (relying on a report from Deutsche Securities stating that purchases on credit cards account for eight percent of consumer spending).

62. The \$3,500 figure is calculated from the data supra text accompanying note 54. See also supra note 4 and accompanying text (reporting four card transactions per person per year in Japan compared to more than sixty in the United States).

63. 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 (\$165 billion). COMM. ON PAYMENT & SETTLEMENT SYS., BANK FOR INT'L SETTLEMENTS, STATISTICS ON PAYMENT SYSTEMS IN THE GROUP OF TEN COUNTRIES 61-62 tbls.12, 13 (2001) [hereinafter BIS, 1999 PAYMENTS STATISTICS], available at <http://www.bis.org/publ/cps44.pdf>. 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 (JCCIA). JCCIA statistics show a total of ¥20 trillion (\$180 billion) in Japanese credit card shopping transactions for 1999. NIHON NO SHŌHISHA SHINYŌ TŌKEI [JAPAN

Perhaps the most striking feature of the Japanese transactions is the limited extent to which they involve credit. The overwhelming majority—about eight-five percent—of Japanese credit card transactions are settled by “*ikkai barai*” (which means something like “payment in one cycle”).<sup>64</sup> Under *ikkai barai*, the consumer agrees that the transaction will be paid to the issuer in full on the next monthly payment date.<sup>65</sup> Also different from American practice is the timing of the payment decision: where American 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.<sup>66</sup> The ordinary Japanese consumer pays bills by a credit transfer or a prearranged debit transfer (similar to the automated clearinghouse transactions American consumers often use to pay mortgages or other regularly recurring bills). Thus, in the credit card transaction, the customer’s consent to *ikkai barai* amounts to a general commitment to pay in one month—analogueous to the American cardholder’s general commitment when it signs a credit card slip that it will repay “in accordance with the agreement with the card issuer.” The consent to *ikkai barai* 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.<sup>67</sup> Because the cardholder at the point of purchase already has given the

---

CONSUMER CREDIT INDUSTRY ASSOCIATION, CONSUMER CREDIT STATISTICS OF JAPAN] 30 (2001) [hereinafter JCCIA ANNUAL STATISTICS].

64. 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* (payment 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 hanbaihō* [INSTALLMENT SALES LAW], Law No. 159 of 1961, art. 2(3). For the industry as a whole, data from the JCCIA shows that *kappu* transactions as of 1999 were only 11.8% of all transactions, and only 1.7% of transactions at bank-affiliated card issuers. See JCCIA ANNUAL STATISTICS, *supra* note 63, at 49-50. My sense that *ikkai barai* constitutes almost all of the *hikappu* transactions is based on several anonymous interviews at Japanese financial institutions.

65. See JCB Card Rules and Regulations, arts. 8, 9(1) (undated) [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).

66. See *supra* note 13.

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

issuer access to a specified amount of funds in a specified account, the transaction resembles much more closely an American debit card transaction than an American credit card transaction.<sup>68</sup>

After the end of each payment cycle, the issuer sends the cardholder a statement summarizing the charges.<sup>69</sup> 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.<sup>70</sup> 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.<sup>71</sup> Thus, the roughly eighty-five percent share of transactions processed by *ikkai barai* involves no significant extension of credit by the issuer. When credit is extended, the rates are relatively modest by American standards, in the range of twelve percent per annum.<sup>72</sup>

---

68. 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.

69. See JCB Cardholder's Agreement, *supra* note 65, art. 8 (providing for a statement sent by ordinary mail describing all charges made by the 15th day of each calendar month).

70. See *id.* 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, *shinpan kaisha*, or retailer-affiliated card issuer), the issuer obtains the funds by a bank-debit transfer. See *id.* art. 9(1) (granting permission for the bank transfer); Anonymous Interview Two, in Tokyo, Japan (Sept. 19, 2000) [hereinafter Anonymous Interview Two]. 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 Three, in Tokyo, Japan (Sept. 22 & Oct. 10, 2000) [hereinafter Anonymous Interview Three].

71. See Anonymous Interview Two, *supra* note 70. There is nothing unusual about the absence of interest in those transactions; it is similar to the typical American practice, in which there is no interest charge for convenience users that pay their bills in the entirety each month. See Zywicki, *supra* note 31, at 101-04 (analyzing the competitive reasons that have led the American market to that pattern).

72. Because rates vary considerably even within a single issuer's portfolio, and because the pattern of rates an issuer charges is highly proprietary, it is difficult to generalize on that point or to provide specific data from specific issuers. I offer the estimate in the text as a general impression based on the interviews I conducted in Japan.

Table 1  
Summary Comparison of  
Japanese and United States Credit Card Usage

	UNITED STATES	JAPAN
Purchases per Capita	\$3,500	\$1,650
Share of Consumer Spending	21%	6%
Share of Noncash Payments	26%	10%
Mean Transaction Amount	\$76	\$200
Use for Borrowing	50%	10%

## 2. Explaining the Differences

The foregoing section suggests three salient differences between Japanese and United States credit card use: 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 Part I. 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 information technology would render the Japanese system marginally less effective than the United States system. Second, it is widely recognized that Japan has telecommunication costs that are among the highest of any developed nation. Both of those precursors contribute to higher costs that should make the Japanese 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 telecommunication costs and economies



of scale to the next section.<sup>73</sup> This section compares the explanatory power of the disempowered-bank hypothesis, the merchant-size hypothesis, and several potential alternative explanations.

*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 American 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).<sup>74</sup> Second, because the amount of the transactions rose by less than fifty percent (from ¥13.3 trillion (\$120 billion) to ¥18.8 trillion (\$165 billion), the average transaction decreased by about thirty-eight percent (from almost ¥35,000 (\$315) to just under ¥22,000 (\$200)).<sup>75</sup> Third, the total amount of borrowing transactions (*kappu*) is increasing rapidly (by eleven percent from 1994 to 1998).<sup>76</sup> Moreover, the share of *kappu* among bank-affiliated credit card transactions is growing with particular rapidity (by 127 percent from 1995 to 1999).<sup>77</sup>

It would be imprudent to give dispositive 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 rate of borrowing is increasing less rapidly than the rate 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

73. See *infra* Part II.B (suggesting that telecommunications costs and economies of scale are relevant in explaining levels of fraud and discount rates).

74. See BIS, 1999 PAYMENTS STATISTICS, *supra* note 63, at 61 tbl.12.

75. See *id.* at 62 tbl.13.

76. See JCCIA ANNUAL STATISTICS, *supra* note 63, 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.

77. See *id.* Because revolving credit at that time still was the only form of *kappu* permitted to bank-affiliated issuers, see *supra* note 64, 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% from 1998 to 1999 alone. See Anonymous Interview Four, in Tokyo, Japan (Oct. 17, 2000) [hereinafter Anonymous Interview Four]. Another bank-affiliated issuer emphasized that revolving credit usage is increasing among its younger card users in particular. See Anonymous Interview Six, in Tokyo, Japan (Oct. 31, 2000) [hereinafter Anonymous Interview Six].

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 that has mitigated the force of whatever factors have led to the striking differences between the United States and Japanese credit card markets. To some degree, the changes doubtless are attributable to the generally homogenizing forces of globalization.<sup>78</sup> The most obvious candidate is the one discussed above, the general opening of the revolving card market to bank-affiliated issuers in 1992.<sup>79</sup>

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 American market in the 1950s and 1960s. It is not a coincidence that the credit card first introduced in Japan (in 1960)<sup>80</sup> is said to have been modeled directly on the American Express and Diner's Club payment cards.<sup>81</sup> With banks and their affiliates excluded for decades from the revolving credit sector of the market, the industry has been static for the most part since that time: the products available to consumers have not been sufficiently attractive to produce the consumer receptiveness to borrowing evident from the United States transaction data.<sup>82</sup> Thus, although Japanese banks (and their affiliates) have a respectable market share of credit card transactions

---

78. 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).

79. To be sure, the rates of change are quite slow, and borrowing is still less common on cards issued by bank affiliates than it is on the credit cards of other consumer lenders. But that slow growth seems fairly attributable to the complexity of experience involved in a successful credit card operation, experience that it took decades for American and Japanese lenders to acquire. See *supra* note 35. As the following pages make clear, the borrowing products available from Japanese credit card lenders for the most part remain quite unattractive as compared to the analogous products available from American credit card lenders.

80. See CREDIT TRANSACTION GUIDANCE, *supra* note 27, at 108.

81. See *id.*; Anonymous Interview Three, *supra* note 70.

82. 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. HARNER, *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 whole-heartedly to consumer finance. See *id.* at 40-41, 126, 136. It is possible, of course, that the limited interest of banks in consumer finance is attributable to the regulatory hurdles that in past decades hindered bank participation in the industry (by preventing banks from issuing revolving credit cards). One Japanese reader also suggested to me that Japanese banks continue to worry about adverse reputational effects that they would suffer if they became involved in the vigorous collection efforts and high interest rates that are typical of successful consumer lending.

(about forty-nine percent of Japanese credit card shopping),<sup>83</sup> their share of borrowing transactions is much smaller: bank-affiliated issuers had only fifteen percent of the extended borrowing ("*kappu*") done by credit cards.<sup>84</sup>

The most obvious explanation for those poor results is the general lack of success of revolving credit,<sup>85</sup> the product on which American 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 American 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 ten percent per month, perhaps ¥10,000 per month).<sup>86</sup> 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.<sup>87</sup> Many of my interviews suggested a practical explanation for the cumbersome design; executives argued that it is much less practical for the checkless Japanese cardholder to make the odd-amount monthly payments than it is for the American cardholder that normally pays by check.<sup>88</sup> 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 they could not pay credit card bills in the same way.<sup>89</sup> But the plausibility

---

83. See JCCIA ANNUAL STATISTICS, *supra* note 63, at 68. Retailers generally account for another twenty-nine percent and *shinpan kaisha* for seventeen percent. See *id.*

84. See *id.* at 49-50.

85. See *supra* note 64 (reporting data indicating less than twelve percent of Japanese credit card transactions involve extended borrowing).

86. See CREDIT TRANSACTION GUIDANCE, *supra* note 27, at 6493 (describing the typical schedules for repayment of revolving credit from JCB); Anonymous Interview Three, *supra* note 70.

87. The distinction on that point from American practice seems crucial. See MANNING, *supra* note 7, at 3 (discussing how the "magic of plastic" allows American consumers to "shelter [themselves] from the social cost of borrowing").

88. See Anonymous Interview Four, *supra* note 77; Anonymous Interview Five, in Tokyo, Japan (Oct. 12, 2000) [hereinafter Anonymous Interview Five].

89. Unlike American consumers, Japanese consumers easily can initiate bank transfers directly from ATM machines 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 eighty-five 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 91-96 and accompanying text.

of the 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 nonbank players in the credit card industry have not stepped into the void to provide the seductive products that American 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.<sup>90</sup> My best answer is the one suggested above, that banks traditionally have been best placed to develop credit card products that 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 that has been so successful in the United States.<sup>91</sup> 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.<sup>92</sup> The identity of the issuer—a consumer finance company not affiliated with any depositary institution—suggests that the same developments in information technology that foster successful credit card lending by

---

90. See KUREJITTO SANGYŌ HAKUSHO [WHITE PAPER ON CREDIT INDUSTRY], GEKKAN SHŌHISHA SHINYŌ [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 Two, *supra* note 70.

91. See HARNER, *supra* note 82, at 135-36 (discussing such a card).

92. Some other issuers have used online connections to permit their customers an intermediate degree of flexibility, under which customers that 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://sumitomovisa.co.jp/carduse/atoribo.html> (Sumitomo Credit); [http://home3.americanexpress.com/japan/blue/flex/flex\\_pay.html](http://home3.americanexpress.com/japan/blue/flex/flex_pay.html) (American Express). Although that might have much the same effect in theory, it is still cumbersome by comparison to the typical American product.

American monoline banks—with no depositary relations with their customers—have paved the way to similar products in Japan.<sup>93</sup>

As you would expect based on the American market experience, the product was initially successful in attracting customers: the company issued more than 500,000 cards in the first eighteen months of the program (more than one-third of them to customers with no previous relationship with the lender).<sup>94</sup> For present purposes, the most important thing about the program is that those customers are selecting revolving credit for a staggering (for Japan) ninety-one percent of their purchases.<sup>95</sup> The company's underwriting appears to rely heavily on a credit scoring model, an approach that seems to resemble closely the models used by American issuers.<sup>96</sup> The use of that technology is particularly surprising given the relatively limited availability in the Japanese consumer finance industry of consumer financial information.<sup>97</sup>

93. See *supra* notes 36-41 (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 WKLY., Feb. 26, 2001, at 14 (discussing plans for Toyota to issue a credit card starting in April 2001).

94. See Anonymous Interview One, in Tokyo, Japan (Oct. 11, 2000).

95. See *id.*

96. See *id.*

97. 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 America. For example, the largest consumer credit reporting service in Japan reports that as of 1998 it had less than seventy million entries and that it received less than twenty million requests for information during 1998. See Personal Credit Information Center, <http://www.zenginkyo.or.jp/en/pcic/pcic11.htm> (last 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.* at <http://www.zenginkyo.or.jp/en/pcic/pcic05.htm>.

Efforts to rely on the kind of credit scoring models that American 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, *shinpan kaisha*, and banks). Under that arrangement, the only information that was shared industrywide was information about specific defaults. See *id.* at <http://www.zenginkyo.or.jp/en/pcic/pcic08.htm>. Plans for more complete sharing of information are ongoing, as evidenced by the advent in late 2000 of a company that shares information among a variety of consumer lenders (but not banks). See *Kokyaku Shinyō Jyōhō 12gatsu Kaihō* [*Consumer Credit Reports of Consumer Credit Companies Will Be Open to Shinpan and Bank-affiliated Companies in December*], NIHON KEIZAI SHIMBUN, Oct. 26, 2000, at 1; <http://www.teranet-corp.co.jp>. 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 (reporting Japanese promulgation of a draft privacy directive similar to the European directive), available at 2000 WL 25346343; *Jyōhō Tsūshin Senryaku Honbu* [Committee on IT Strategy Headquarters], KOJIN JYŌHŌ KIHON HŌSEI NI KANSURU TAIKŌ [CONSULTING REPORT ON PROTECTING PRIVACY], at <http://www.kantei.go.jp/jp/it/pri-vacy/houseika/taikouan/1011taikou.html> (2000) (discussing plans to enact Kojin Jyōhō Kihonhō [Law Regarding the Protection of Privacy]). Given the relatively limited availability of information, it is impossible at this point to evaluate the

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 United States credit card transaction. If we assume that the retail economies of the two countries have reasonably similar sets of transactions of different sizes, and further assume that Japanese credit cards are not—as a relative matter—as attractive to Japanese consumers as American credit cards are to American 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 American consumers. American consumers, on the other hand, are much more willing to use credit cards for smaller transactions, for which Japanese consumers would use cash.<sup>98</sup>

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 accepted at many of the places where they are accepted in the United States: department stores, book 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 could incur almost all ordinary living expenses on a credit card with relatively little difficulty. 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.<sup>99</sup>

---

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.

98. *Cf. supra* note 16 (discussing survey results regarding the amount of cash typically carried by Japanese).

99. 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



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.<sup>100</sup> Historically, Japan protected small retailers through a complex web of formal and informal constraints that limited competition among retailers so as to limit their growth and consolidation.<sup>101</sup>

Those constraints degraded in a substantial way only in the early 1990s, permitting the rise of large chain stores and the consolidation of retailers that are making the Japanese retail market look increasingly like the American retail market.<sup>102</sup> As explained in Part I, 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, from my point of view, 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 an increase 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*

#### *i. Cautious Consumers*

The most obvious alternative explanation is the simplest, but also the least satisfying: Japanese cardholders by nature are more cautious and averse to borrowing than American 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 Japanese consumer's higher

---

who have visited Japan for extended stays, and on the views of credit card-carrying friends from Japan.

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

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

102. I thank Mark West for this point.

predilection to save.<sup>103</sup> 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 supported by the historically ungenerous provisions of the Japanese consumer bankruptcy system (which might deter consumer borrowing) or by the relatively undeveloped credit bureau system<sup>104</sup> (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 American consumers. Indeed, if anything, the Japanese consumer credit market is slightly larger per capita than the American consumer credit market. The American consumer credit market (excluding home mortgages) is now in the range of \$1.2 trillion (about \$4,400 per capita).<sup>105</sup> The Japanese market (again excluding home mortgages) seems to be about ¥73 trillion (about \$5,300 per person).<sup>106</sup> 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 American constraints.<sup>107</sup>

Looking to the legal system, one might suppose that the perceived leniency of the American consumer bankruptcy system fosters greater credit card borrowing. One problem is that it is difficult to discern any cognizable way in which the Japanese consumer

---

103. The American rate for some time hovered around ten 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%). 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 (reporting that Japanese working households save about 28.5% of their income (up from 20.9% in 1983)), available at <http://www.asahi.com/english/asahi/0810/asahi081002.html> (last visited Aug. 11, 2000), with Sheldon Garon, *Fashioning a Culture of Thrift: Promoting Saving in Twentieth-Century Japan* (2000) (unpublished manuscript) (reporting that the Japanese rate has leveled off around thirteen percent), available at <http://www.iar-ubc.ca/centres/cjr/jsac2000/garon.pdf>. All reports indicate, however, that the rate is higher in Japan than it is in the United States.

104. See *supra* note 97 (discussing the credit bureau system).

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

106. JCCIA ANNUAL STATISTICS, *supra* note 63, at 30; see also Alexander, *supra* note 35 (presenting data illustrating that Japan since 1990 has had a higher ratio of consumer credit to disposable income than the United States).

107. It is not as though American culture venerates those who rely on borrowing to support spending beyond their income. See MANNING, *supra* note 7, at 3 (discussing the condemnation of excessive borrowing as part of the "nonmonetary price of debt").

bankruptcy system is harsher than the American system.<sup>108</sup> As a practical matter, Japanese consumer bankruptcy grants a discharge in a relatively routine manner. Moreover, whatever the social stigma of bankruptcy might be, resistance to bankruptcy seems to be falling in Japan, where about one-tenth of one percent of the populace filed for bankruptcy in 1999.<sup>109</sup> Although that is still much lower than the American rate of about one-half of one percent, it has been growing over the last decade so rapidly that it is difficult to be sure that the difference means much.<sup>110</sup>

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. That could be true, for example, if either a higher percentage of Japanese nonsavers than American nonsavers use consumer credit or those Japanese nonsavers who do use consumer credit use (on the average) more than the borrowers in the United States. I have not located any data that is sufficiently specific to describe the pattern precisely, but for purposes of my topic the generally similar amounts of consumer borrowing per capita make me skeptical of 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,<sup>111</sup> others attribute it to other institutional features of the

---

108. For information on the Japanese consumer bankruptcy system, I am grateful to Professor Kent Anderson at Hokkaido University.

109. I base that estimate on data collected by Kent Anderson from the Supreme Court of Japan. See e-mail from Kent Anderson, Associate Professor, Hokkaido University, School of Law (Feb. 16, 2001) (copy on file with author) (reporting 124,000 consumer bankruptcies in Japan in 1999, after a more than ten-fold increase during the 1990s).

110. See News Release, Administrative Office of the United States Courts, Bankruptcy Filings Down in Calendar Year (Feb. 23, 2001) (on file with author) (reporting 1.2 million personal bankruptcies in the United States during 2000); Nicole Duran, *Consumers Slam Bankruptcy Bill*, AM. BANKER, Feb. 28, 2001, at 4 (same), available at 2001 WL 3909819. The American rate also has been dropping for the last few years, which further undermines any effort to put great significance in the difference between that rate and the Japanese rate.

111. This scholarship does not necessarily implicate 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); see generally Sheldon

Japanese economy. For example, some scholars think the higher rate of savings is caused by the Japanese system for intergenerational transfers of wealth,<sup>112</sup> while others view it (even now) as an artifact of Japan's stage of industrial development.<sup>113</sup> 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 American consumers, my 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 \$5000 per person in borrowing. While a good deal of work has been done to explain how that was accomplished in the United States,<sup>114</sup> I am not aware of similar scholarship explaining the inconsistency between the widely noted Japanese aversion to borrowing and the statistics showing an American-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 *shinpan kaisha* (which generally finance purchases of consumer products) and other consumer finance companies (ranging from large and reputable

---

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 103 (arguing that high Japanese savings rates are caused by more than a century of vigorous government efforts to inculcate a "culture of thrift"); Charles Yuji Horioka, *Comments on Fashioning a Culture of Thrift: Promoting Savings in Japan and the World* (2000) (unpublished manuscript, copy on file with author) (discussing empirical research indicating that savings education alters the habits of those subjected to it).

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

113. Richard Katz argues that consumers in the aggregate save more at earlier stages of development and thus that the post-World War II data suggesting higher savings by Japanese consumers is caused by Japan's position at an earlier stage in the development process during those years. See KATZ, *supra* note 48, at 141-42, 199-206.

114. 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 twentieth century).

companies, such as Takefuji and Acom, to smaller less-reputable “*sarakin*” (literally “salaryman finance”).<sup>115</sup> Thus, the question remains why, within that market, do consumers use credit cards for such a small share of borrowing. As I explain above, I think that institutional factors peculiar to the Japanese market provide a plausible answer to that question.

## ii. Limited Consumer Protection Laws

Another possibility is that the limited success of the credit card derives from the relatively limited protection Japanese law provides Japanese credit cardholders. Most obviously, Japan has no analogue to section 170 of the Truth-in-Lending Act (“TILA”),<sup>116</sup> which generally preserves the right of American cardholders to present against the issuer any defense to payment that they would have against the merchant.<sup>117</sup> The parallel Japanese statute at first glance seems to provide the same protection, but it is limited to transactions that involve extended borrowing (*kappu*).<sup>118</sup> Because those transactions are a relatively small share of the Japanese credit card industry,<sup>119</sup> that provision has little impact. For comparison, notice that the TILA provision applies until the bill is repaid, even if it happens that the bill is paid during the first billing cycle.<sup>120</sup> Because those laws are much less protective than American laws, Japanese consumers might fear losses that they would incur if they carry or use credit cards.

Again, because there has been no significant change in those laws in the last decade, the legal differences cannot explain the observed pattern.<sup>121</sup> More broadly, however, my impressions based upon American experience with such protections make me doubt that the difference in formal legal rules can have much significance. In the United States, we see that American consumers are so unfamiliar

115. See generally HARNER, *supra* note 82, at 126-37 (discussing consumer lending in Japan).

116. 15 U.S.C. § 1666i (2000).

117. See generally MANN, *supra* note 2, at 125-36 (discussing those protections).

118. *Kappu hanbaihō* [Installment sales law], Law No. 159 of 1961, arts. 30-4 & 30-5; see *supra* note 64 (discussing the definition of “*kappu*”).

119. See JCCIA ANNUAL STATISTICS, *supra* note 63, at 64 (reporting about 12.7% of 1998 transaction value).

120. See § 1666i(A); MANN, *supra* note 2, at 118 (discussing that aspect of TILA).

121. For minor revisions in 1999, see *Hōmon hanbai tō ni kansuru hōritsu oyobi kappu hanbaihō no ichibu wo kaisei suru hōritsu* [Law amending door-to-door and other direct sales law and installment sales law], Law No. 34 of 1999 (broadening the coverage of the protection in minor respects); Ministry of International Trade and Industry, *Outline of Amendment to Door-to-Door Sales and Other Direct Sales Law and Installment Sales Law* (Draft) (Mar. 4, 1999) (describing the purpose of the revisions), available at <http://www.meti.go.jp/english/report/data/gCD1101e.html>.

with the protection that it is unlikely to be a significant motivation in their willingness to use credit cards.<sup>122</sup>

\* \* \* \* \*

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 that 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 section contends that the Japanese credit card industry looks so different from the United States industry because of institutional factors that made it more difficult for financial institutions and merchants to participate in the Japanese credit card market than in its United States counterpart. This section argues that the system has also been 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 section 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 suggests 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 \$100).<sup>123</sup>

122. See Telephone Interview with Michael Butts, CreditCard.com (Oct. 15, 1999) (transcript at 1) (transcript on file with author) (discussing rarity of claims under section 170 of TILA); Telephone Interview with Steven Klebe, Vice President, Payment Industry Alliances, CyberSource Corp. (Oct. 19, 1999) (transcript on file with author) [hereinafter Klebe Interview] (same).

123. See *Card Fraud in the U.S.—1999*, NILSON REP. (HSN Consultants, Inc., Oxnard, CA), June 2000, Issue 718, at 1, 4 [hereinafter *1999 U.S. Fraud Data*] (reporting a rate of 0.06% for 1999). I have not seen final data for 2000, but news reports suggest that the rate for 2000 rose

In Japan, by contrast, the fraud rate is much higher, about 0.14%.<sup>124</sup> Looking specifically to losses from forged cards, the Japanese rate of about 6.2 basis points is about five times the American rate of 1.3 basis points.<sup>125</sup>

One possibility that initially seemed attractive was that the high fraud rate is associated with the diminished statutory incentive for Japanese card issuers to prevent unauthorized transactions. In addition to the protection mentioned above with respect to defective purchases,<sup>126</sup> the Truth-in-Lending Act also prevents American issuers from shifting the risk of unauthorized transactions to their cardholders;<sup>127</sup> Japanese law includes no such rule.<sup>128</sup> 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.<sup>129</sup> 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 cover most of the losses that the insurance does not

---

slightly to 0.07%. See David Breitkopf, *Warped Plastic? New Card Reader Irons Out Problem*, AM. BANKER, July 16, 2001, at 8 (explaining that Visa's fraud rate had fallen to 0.07% in 2000), available at 2001 WL 3912819. Indeed, interim data suggests that the rate in the United States has continued to rise, to approximately 0.09% for the first half of 2001. See U.S. *Fraud Losses/Gross Volume: Monthly Average—Current*, at <http://www.cardweb.com/card-data/charts/fraud.html> (last visited Sept. 17, 2001).

124. See Kurejitto Kā-do Fusei Shiyō Higai no Hassei Jyōkyō [Statistics on Losses from Unauthorized Credit Card Transactions in Japan], CARDWAVE, 2001-10, at 10-11 [hereinafter *Japanese Credit Card Fraud Data*]. That rate is calculated based on ¥21.58 trillion of transactions for 2000. See *supra* note 61 and accompanying text.

125. The Japanese rate is calculated based on ¥9 billion of forged credit card losses, divided by the total ¥21.58 trillion of transactions for 2000. See *supra* note 61 and accompanying text. The American rate is calculated from 1999 US *Fraud Data*, *supra* note 123, at 4, including losses from skimming, altered cards, and new counterfeit cards.

126. See *supra* notes 117-22 and accompanying text.

127. Truth-in-Lending Act § 133, 15 U.S.C. § 1643 (2000). That statute permits issuers to impose fifty dollars 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 Fickenschner, *Visa Shores Up Web Position, Ends Fees on Theft of Card Numbers*, AM. BANKER, Feb. 22, 2000, at 1 (describing Visa's new policy, which does not require customers to pay a fifty dollar fee), available at 2000 WL 3359755; MasterCard, *Zero Liability*, at <http://www.mastercard.com/general/zero-liability.html> (last visited May 8, 2002) (summarizing MasterCard policy); see also RITZER, *supra* note 37, at 101 ("[C]redit card companies rarely assess a fraud victim for even that sum [i.e., the \$50 permitted by the Truth-in-Lending Act].").

128. See Anonymous Interview Two, *supra* note 70; Anonymous Interview Three, *supra* note 70; Anonymous Interview Six, *supra* note 77.

129. 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.<sup>130</sup> Because they purchase that insurance from third-party insurers,<sup>131</sup> 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 you would expect if the rates were associated with longstanding differences in the legal framework. In the United States, for example, the fraud rate has fallen by more than half in the last decade.<sup>132</sup> Similarly, the fraud problem in Japan is relatively recent; fraud losses in 2000 were forty-three percent higher than they were just two years earlier in 1998, with sixty-four percent of the increase attributable to losses from forged cards.<sup>133</sup>

The more likely cause of the losses is exploitation of technical vulnerabilities in the Japanese system.<sup>134</sup> Most obviously, the

130. To be sure, the third-party insurance does not cover all types of unauthorized transactions. See Takayoshi Suefuji, *Kurejitto Kādo Nyūmon* [Introduction to Credit Cards], GEKKAN SHŌHISHA SHINYŌ [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 sixty days before, and no more than sixty 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 fifty dollar limit discussed *supra* note 127, 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 Two, *supra* note 70; Anonymous Interview Three, *supra* note 70; Anonymous Interview Six, *supra* note 77. 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 MITI, which has suggested to credit card issuers that the formal terms of the typical insurance policies do not provide adequate protection to consumers. MINISTRY OF INT'L TRADE & INDUSTRY, KĀDO NO ANZEN SEI NO KAKUHO NI TSUITE [To Ensure the Security of Credit Cards] (July 21, 1979) (guidance sent to the JCCIA).

131. The issuers normally purchase the insurance from third-party providers, but sometimes they self-insure. See Anonymous Interview Two, *supra* note 70; Anonymous Interview Three, *supra* note 70.

132. See 1999 U.S. Fraud Data, *supra* note 123, at 1 (reporting drop in fraud losses from 16.1 cents to 6.0 cents per \$100).

133. See Japanese Credit Card Fraud Data, *supra* note 124, at 12.

134. The Japanese government apparently attributes the fraud losses to lax criminal laws and is responding in several ways. See Keihō no ichibu wo kaisei suru hōritsu [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); *Govt to Crack down on Credit Card Crimes*, Nihon Keizai Shimbun, June 16, 2000 (reporting plans to criminalize skimming and the possession of forged cards); *Lax Laws Make Japan Card-Forgery Haven*, NIKKEI WKLY., Apr. 24, 2000, at 4 (same); *NPA Targets Credit Card Fraud*, JAPAN TIMES ONLINE, Oct. 6, 2000 (reporting plans for the National Police Agency to develop a system for analyzing fake credit cards to identify and locate professional card counterfeiters), available at

Japanese system uses contemporaneous telephone authorizations much less frequently than the American system,<sup>135</sup> apparently because of the relatively high cost of Japanese telecommunications.<sup>136</sup> 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 that would appear on a legitimate card.<sup>137</sup>

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 that 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 that target that problem: industry sources explain that as of late 2000 or

---

<http://www.newsonjapan.com>. As the discussion in the text suggests, I am skeptical of the significance of those legal problems.

135. See Anonymous Interview Two, *supra* note 70. 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 45 and accompanying text (reporting ninety-five percent authorization rates for United States transactions). As a rule of thumb, it appears that until very recently many merchants were not doing contemporaneous online authorizations for transactions below ¥10,000 (about ninety dollars). See Anonymous Interview One, *supra* note 94; Anonymous Interview Two, *supra* note 70; Anonymous Interview Four, *supra* note 88; Anonymous Interview Five, *supra* note 88. That ¥10,000 limit itself was implemented only in 1999, before which that floor had been ¥30,000. 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 \$170-\$270). See *id.* One large issuer told me that about thirty percent of its transactions are not authorized because they fall below the floors. Anonymous Interview Four, *supra* note 88.

136. 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 telecommunication 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. Anonymous Interview Four, *supra* note 88; Anonymous Interview Seven, in Tokyo, Japan (Oct. 16, 2000) [hereinafter Anonymous Interview Seven]. For example, if the telephone call costs ten yen on a ¥10,000 transaction, it would make sense to call only if the likelihood of fraud was 0.10 percent, just slightly less than the typical Japanese fraud rate of 0.14 percent. See *supra* note 124. Thus, it would be rational for the merchant to decline to call in any transaction in which the merchant thought that the likelihood of fraud was significantly less than is typical.

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

2001 most department stores<sup>138</sup> and hotels in Japan will process transactions without any floor at all—seeking online authorizations for all transactions regardless of size.<sup>139</sup> 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.<sup>140</sup> Use of those brands gives the issuers access to all of the antifraud technology that has been effective in the United States.<sup>141</sup>

But advances in antifraud 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 other information on the magnetic stripe of the legitimate card).<sup>142</sup> The only existing defense against those cards is the relatively vulnerable capacity of issuer-based expert computer systems to detect questionable patterns

---

138. 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, suggests that department stores during 2000 in fact were relatively impervious to fraud. That data suggests that department store transactions accounted for less than ten percent of 1999 fraud, although those transactions generally are twenty to twenty-five percent of volume. If there is a problem sector, it clearly is the electronics shop, which accounted for about twenty-one percent of 2000 fraud. See *Japanese Credit Card Fraud Data*, *supra* note 124, at 10-11; see also Anonymous Interview Four, *supra* note 88 (discussing report by card issuer that fraud is significantly more common in its electronic-store transactions than in its department-store transactions); Anonymous Interview Five, *supra* note 88 (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 Six, *supra* note 130 (discussing problems at gasoline stations and highway-toll facilities); Anonymous Interview Four, *supra* note 88 (reporting that ten percent of fraud in one large credit card portfolio occurs at gasoline stations).

139. See Anonymous Interview Seven, *supra* note 136.

140. See Anonymous Interview Three, *supra* note 70. 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.

141. For example, my anecdotal impression (based on examining cards while I have been 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 American products.

142. See, e.g., Jay Lyman, *Newly Discovered Bug ‘Skims’ Credit Card Data*, NEWS FACTOR NETWORK, June 22, 2001 (discussing the discovery in Hong Kong card payment terminals of “skimmer bugs”), available at <http://www.newsfactor.com/perl/prINTER/11494> (last visited Feb. 7, 2002).

in the usage of cards.<sup>143</sup> 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 telecommunication costs that continue to deter merchants from consistent authorization of transactions<sup>144</sup> and its proximity to the locations where the most sophisticated card forgers seem to reside.<sup>145</sup> 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 that the system<sup>146</sup> must charge in the form of cardholder fees and discount fees<sup>147</sup> in order to remain profitable. Hence, it is natural to expect that the higher losses from fraud discussed in the previous section would lead to higher charges to merchants and cardholders. Those 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. Charges in

---

143. 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 antifraud 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), available at 2001 WL 3909986.

144. See *supra* note 136 (discussing that problem).

145. Card forgery of a type that will succeed in the face of modern telephone authorization requires relatively sophisticated fabrication facilities. Without identifying particular countries mentioned in my interviews, it appears that several of the countries that tolerate such facilities are located relatively close to Japan. See RITZER, *supra* note 37, at 88 (suggesting that Hong Kong was a prime location for those facilities in the early 1990s). For those facilities, the easy international transportation connections into Japan and the luxury goods available in Japanese department and electronics stores offer a natural target. See Anonymous Interview Seven, *supra* note 136.

146. 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.

147. The discount fee is the fee that the merchant pays to its acquiring bank for each credit card transaction. See *id.*

the United States 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).<sup>148</sup> In Japan, by contrast, the fees seem to be much higher—cards with no annual fee seem to be particularly uncommon—and the lower number of transactions per card makes the cost per transaction even higher.<sup>149</sup>

Because of the wide variations in cardholder fees, my information on that topic is not particularly firm. The differences in the charges to merchants are obvious, however, and widely known within the industry.<sup>150</sup> For the Visa and MasterCard credit card systems that dominate the United States market, the discount fee varies widely depending on the type of merchant, but normally ranges between one-and-one-half to five percent, with most merchants seeming to pay something less than two percent. The discount fee for American Express (the largest competitor) is quite a bit higher, about 2.75%.<sup>151</sup> 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 five percent,<sup>152</sup> 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 three to three-and-a-half 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

148. See EVANS & SCHMALENSEE, *supra* note 18, at 165 (illustrating that American credit card issuers derive only two percent of their income from annual fees); *supra* note 4 and accompanying text (discussing the relative frequency of American card use).

149. See HARNER, *supra* note 82, at 132-33 (reporting data indicating that, excluding revenue from cashing commissions, twenty-six percent of credit card industry revenue (thirty-seven 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 American 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 fifteen dollars).

150. Given their importance to the system, it is surprising that there is 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.

151. See EVANS & SCHMALENSEE, *supra* note 18, at 169-72 (discussing American Express merchant discount fees).

152. See *Debit Cards Getting Ready for Big Time*, NIKKEI WKLY., Feb. 28, 2000, at 15 [hereinafter *Debit Cards Getting Ready*] (reporting credit card discount rates of three to seven percent); Makoto Sato, *Would-Be Net Banks Jockey for Position*, NIKKEI WKLY., May 8, 2000, at 12 (reporting discount rates of over five percent).

the United States rate by less than one-tenth of one percent of the gross amount of transactions,<sup>153</sup> which hardly could justify a discount rate more than one 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.<sup>154</sup> For example, credit card issuers in the United States derive 88% of their revenues from finance charges (including late fees), and only 10% from interchange fees.<sup>155</sup> In Japan, revenues from interest are a relatively small portion of the revenues of the card issuer, about 23% over the industry as a whole, but only 14% of the revenues of bank-affiliated card issuers who have only recently been permitted to extend revolving credit.<sup>156</sup> Thus, 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% of all industry revenues, but 86% of the revenues of bank-affiliated issuers.<sup>157</sup> And in fact the apparent discount rates of 3-4% 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.<sup>158</sup> Because American Express faces the same lack of interest income that Japanese issuers do, its discount rates provide a more appropriate benchmark for comparison.

---

153. See *supra* notes 123-25 and accompanying text (discussing fraud rates of thirteen basis points in Japan and six in the United States).

154. 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 147. For economic analyses of the reasons for those fees, see Joshua S. Gans & Stephen P. King, *The Neutrality of Interchange Fees in Payment Systems* (July 9, 2001) (unpublished manuscript), available at <http://www.ssrn.com>; Richard Schmalensee, *Payment Systems and Interchange Fees* (Apr. 2001) (unpublished manuscript), available at <http://www.ssrn.com>.

155. See EVANS & SCHMALENSEE, *supra* note 18, at 165.

156. See HARNER, *supra* note 82, at 132-33.

157. See *id.* Thus, the overall revenue model closely resembles American Express, which obtains only 15% of its revenues from finance charges (late fees), but derives 85% of its revenues from charges to users (66% from the charges it imposes on merchants and 19% from card fees). See EVANS & SCHMALENSEE, *supra* note 18, 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%) than American Express (78%). (The shares are calculated from the data for Japanese issuers in HARNER, *supra* note 82, at 132-33, and from the data for American Express in EVANS & SCHMALENSEE, *supra* note 18, at 165.)

158. See *supra* note 151 and accompanying text (discussing American Express discount fees).



Table 2  
Sources of Revenue of United States and  
Japanese Credit Card Issuers<sup>159</sup>

	Visa & MasterCard (United States)	American Express	All Card Issuers (Japan)	Bank- Affiliated Issuers (Japan)
Typical Discount Rate	1.8%	2.75%	3%	3%
Interest	88%	15%	23%	14%
Merchant/ Interchange Fees	10%	66%	51%	49%
Card Fees	2%	19%	26%	37%

To be sure, the discount rates do appear to be cognizably 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 forty percent), but there are such a large number of competitors of significant size that the market is relatively competitive,<sup>160</sup> in the sense that there is extensive *intra*brand competition, notwithstanding the limited *inter*brand competition.<sup>161</sup> And even if American Express is the only way for a

159. The table is based on information from the sources identified at *supra* note 157.

160. The market shares drop off rapidly after First Data: the second largest acquirer, National Processing, has a thirteen percent share. But the number of significant players is impressive. In 1999 the top eighty-seven companies processed more than one million dollars of transactions per week. See 1999 *U.S. Acquisition Data*, *supra* note 50, at 9.

161. My sanguine views about the competitiveness of the industry are in some tension with the views of my government, which has instituted a major antitrust enforcement proceeding against Visa and MasterCard, generally arguing that they have colluded to hinder competition



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.<sup>162</sup>

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 twenty-five.<sup>163</sup> Thus, for each of those systems, the merchant faces a single system operator with which it must reach an agreement.<sup>164</sup> It should be no surprise if the charges in that market were higher than they are in the United States.<sup>165</sup>

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

---

and innovation in the American card industry. For an overview of the case and links to significant filings, see Antitrust Div., U.S. Dep't of Justice, *Antitrust Case Filing*: United States v. Visa U.S.A., Inc., at <http://www.usdoj.gov/atr/cases/indx57.htm>. For a vigorous and scholarly rebuttal of the government's claims, see Zywicki, *supra* note 31, 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.

162. See EVANS & SCHMALENSSEE, *supra* note 18, at 169-73, 185-97 (discussing pressure on American Express merchant fees arising from the lower fees charged by Visa and MasterCard).

163. See Anonymous Interview Two, *supra* note 70.

164. 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.

165. 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 (a) 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 (b) the likely profit from new sales that would be gained by accepting cards. See EVANS & SCHMALENSSEE, *supra* note 18, at 121-27. Because the limited penetration of cards in Japan means that (b) is likely to be lower in Japan than it is in the United States, a Japanese merchant's benefit from accepting a card is lower than the benefit to a corresponding American merchant; that lower benefit would tend to push discount rates downward. 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. Giving the cross-cutting effects of those factors, it is, at best, difficult to predict that Japanese discount rates would be higher or lower than American rates. The point of the text is only that there are some market-structure reasons that could explain the observation of slightly higher rates.

of those networks.<sup>166</sup> 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.<sup>167</sup>

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 information technology, 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 American system.<sup>168</sup> That explanation does not necessarily suggest a long-term difference, but it does support a pattern in which Japanese rates tended to lag above slowly decreasing American rates. Although the information that 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 American patterns.<sup>169</sup> Thus, although the fraud problems discussed above suggest that the rates should never be precisely

---

166. See Anonymous Interview Three, *supra* note 70.

167. See *supra* note 162. 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 United States 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 Four, *supra* note 88; Anonymous Interview Seven, *supra* note 136.

168. Another reason for the smaller size of the system is Japan's relatively restrictive market for credit information. American 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). 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 (discussing the nascent state of Japanese business credit scoring); see also *supra* note 97 (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 165)—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 Two, *supra* note 70; Anonymous Interview Three, *supra* note 70. 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) (transcript on file with author) [hereinafter Confrey Interview].

169. See, e.g., CREDIT INDUSTRY WHITE PAPER, *supra* note 90, at 14-15; Anonymous Interview Three, *supra* note 70; Anonymous Interview Four, *supra* note 88; Anonymous Interview Five, *supra* note 88; Anonymous Interview Six, *supra* note 130.

equal, it seems unlikely that they will be substantially higher in the long term.

\* \* \* \* \*

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.

### III. DEBIT CARDS IN THE UNITED STATES AND JAPAN

Of course, credit cards 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.<sup>170</sup> 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,<sup>171</sup> with the result that funds for transactions that use the card are withdrawn from the account in one to two business days.<sup>172</sup> 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 online connection: the merchant does not accept the card for payment until the merchant

---

170. See *infra* notes 174-77 and accompanying text.

171. See MANN, *supra* note 2, at 141-46.

172. See *id.* at 144-46 (discussing United States 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 Kādo Mākettingu Kenkyūkai [SOCIETY FOR THE STUDY OF CARD MARKETING], DEBITTO KĀDO DŌNYŪ KATSUYŌ NO TEBIKI Q & A [Q & A 100, INFORMATION ABOUT DEBIT CARDS] question 27 (1999) [hereinafter DEBIT CARD Q & A]; Nihon Debitto Kādo Torihiki Suishin Kyōgikai Hōmu Iinkai [Legal Committee, Japan Debit Card Promotion Association], *Debitto Kādo no Shikumi Oyobi Sono Hōteki Wakugumi no Gaiyō* (1) [*The Structure and Legal Framework of J-Debit* (1)], 1573 KINYŪ HŌMU 12, 13-14 (2000).

can verify with the issuer that the issuer will remove funds from the cardholder's account to pay for the transaction.<sup>173</sup>

The discussion of debit cards proceeds along the same lines as the discussion of credit cards. This part 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 six percent of all retail payment transactions.<sup>174</sup> 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 to retail purchase transactions, the debit card in 1999 was used in about thirty-two percent of all card-based transactions.<sup>175</sup> Even though the debit card transactions tend to be relatively small (about \$36, as opposed to \$76 for the average retail credit card transaction),<sup>176</sup> they still accounted for fifteen 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).<sup>177</sup>

In contrast, the Japanese debit card system (J-Debit) is used much more rarely. Specifically, J-Debit cards were used in December 2000 for just over 500,000 transactions, significantly less than one percent of all card-based transactions.<sup>178</sup> It is interesting that the average debit card transaction—contrary to usage in the United

---

173. See MANN, *supra* note 2, at 144-46 (discussing United States collection practices). For Japanese practices, see Model Cardholder Agreement [hereinafter J-Debit Cardholder Agreement], art. 2, reprinted in Nihon Debito Kādo Suishin Kyōgikai Hōmu Iinkai [The Legal Committee of Japan Debit Card Promotion Association], *Debito Kādo no Shikumi Oyobi Sono Hōteki Wakugumi no Gaiyō* (5) [The Structure and Legal Framework of J-Debit (5)], 1583 KIN'YŪ HŌMU 48-53 (2000).

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

175. See 1999 U.S. Card Data, *supra* note 54, at 1, 5.

176. See *supra* note 54 and accompanying text.

177. See 1999 U.S. Card Data, *supra* note 54, at 6.

178. 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*] (last visited May 1, 2000).

States—is significantly larger than the average credit card transaction: about ¥45,000 for the debit card transaction (about \$400), as compared to ¥25,000 for the average credit card transaction (about \$230).<sup>179</sup>

The ¥45,000 figure is somewhat misleading, however, because it reflects a relatively small number of large securities transactions. News reports from *Nihon Keizai Shimbun* suggest that securities transactions averaging ¥1,000,000 (about \$90,000) are about one-third of all J-Debit transactions.<sup>180</sup> Even if that figure seems exaggerated, it is clear that the securities transactions are large and pull the average transaction size up significantly.<sup>181</sup> Another large component of the transactions are relatively large transactions at electronics stores, doubtless driven by merchant desire to save money on credit card transaction fees<sup>182</sup> as well as their desire to mitigate the risk of fraud.<sup>183</sup> But even putting those unusually large transactions to one side, the average transaction would be in the range of ¥24,000 (about \$220),<sup>184</sup> much larger than the average American debit card transaction.

179. See *J-Debit Home Page*, *supra* note 178. 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 American 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 \$450) to a low in September 2000 of 41,230 (about \$370).

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

181. The only published data from J-Debit (which covers March 2000, the first month of the full-scale system) suggests that securities transactions amount to only 1.5% of the transactions, and that the average amount of those transactions was ¥822,400 (about \$7,500). See *Nihon Debito Kādo Suishin Kyōgikai* [Japan Debit Card Promotion Association], *Dai ni Fēzu Honkaku Tenkai kara 1 Kagetu Debito Kādo no Riyō ga Ōhaba Appu* [The Number of Payments Through J-Debit Has Significantly Risen Since the Start of the 2nd Phase], CARDWAVE, June 2000, at 52 [hereinafter *J-Debit Transaction Breakdown Statistics*].

182. 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 208-09 and accompanying text.

183. 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 transaction on credit cards at their store and a desire to limit their potential exposure in those transactions. See *supra* note 138 (discussing problems with credit card fraud at electronics stores). J-Debit statistics from March 2000 report that transactions at electronics stores were thirty-four percent of all transactions and that they had an average amount of ¥53,100 (about \$480). See *J-Debit Transaction Breakdown Statistics*, *supra* note 181, at 52.

184. See *J-Debit Transaction Breakdown Statistics*, *supra* note 181, at 52 (recalculating the figure).

## 2. Explaining the Differences

As with credit cards, the Japanese system differs from the American 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.<sup>185</sup>

But that explanation seems incomplete. The credit card system faces similar differences, but it has had a substantial presence in Japan for decades. The debit card system was only introduced, however, 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 recently<sup>186</sup> that some further explanation seems appropriate.

The first point must be that the American debit card, albeit successful, has not itself been in use for very long. Although they first were designed in the 1960s,<sup>187</sup> debit cards gained a significant market share only in the mid 1990s.<sup>188</sup> The key event was a fall in the cost of PIN-pad point-of-sale terminals that made it practicable for merchants to purchase the terminals.<sup>189</sup> 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 will ever develop as successfully as the debit card in the United States. The basic problem is that neither of the two main market functions that the debit card serves in the United States are as promising in Japan as they are in the United States. First, speaking as an American debit cardholder, one of the primary roles of the American debit card is to accommodate the relatively limited willingness of American consumers to carry cash.<sup>190</sup> To the extent they

---

185. See *supra* text accompanying note 98 (articulating a similar explanation for the relatively large size of Japanese credit card transactions).

186. 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 ASS'N, *supra* note 13, at 19.

187. 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).

188. See EVANS & SCHMALENSEE, *supra* note 18, at 298-300.

189. See *id.* at 306-15.

190. See *supra* note 16.

have a rational reason to use a debit card in preference to a credit card, American consumers use a debit card because it limits the frequency with which they must go to an ATM machine or bank to obtain cash. Indeed, for many of us, the debit card itself 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.<sup>191</sup> 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 American consumers and also can obtain much larger amounts of cash at each trip to an automated teller.<sup>192</sup> 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.<sup>193</sup> 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,<sup>194</sup> 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 of borrowing as the American 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.

---

191. Because debit cards are so much cheaper for merchants than credit cards (*compare* Table 2 *supra*, with *infra* notes 207-08 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 aside 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.

192. *See supra* note 16.

193. *See* RITZER, *supra* note 37, at 182.

194. *See supra* notes 64-71 and accompanying text.



## 1. Fraud Rates

On the issue of fraud, the Japanese system might not be perfect, but it seems to be much safer than the American system. A large share (more than two-thirds by value) of American transactions use the PIN-less<sup>195</sup> Visa and MasterCard debit products.<sup>196</sup> For those cards, the fraud losses seem to be about the same as they are for regular credit cards (six cents per hundred dollars).<sup>197</sup> For conventional PIN-based debit cards, however, the fraud rate is much smaller, about a twentieth as big (0.3 cents per hundred dollars).<sup>198</sup>

In the J-Debit system, by contrast, all transactions are PIN-based.<sup>199</sup> Thus, you would expect the fraud rate to be somewhere near the American fraud rate of only 0.3 cents per hundred dollars. And early results suggest that fraud is not yet a serious problem.<sup>200</sup> 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-number transmissions because all ATM machines 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 that access the bank's computers over an open network.<sup>201</sup> It is thus the first occasion at which the use of encryption has been crucial to the safety of the system. Still, although it is necessarily difficult to evaluate the security of the system from the outside, the available

---

195. Traditional debit cards require entry of a personal identification number ("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 a general discussion of this trend, see MANN, *supra* note 2, at 143-46.

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

197. See 1999 U.S. Fraud Data, *supra* note 123, at 4 (aggregating fraud rates for credit cards and PIN-less cards).

198. See *id.*

199. See J-Debit Cardholder Agreement, *supra* note 173, art. 2.

200. As of January 2001, J-Debit still reports no claims of unauthorized transactions in its system. See *Debit Card Usage Exceeds 100 Bln Yen in Jan-Oct*, NIHON KEIZAI SHIMBUN, Nov. 13, 2000 [hereinafter *Debit Card Usage*] (offering no reports of fraudulent transactions as of October 2000), available at <http://www.nni.nikkei.co.jp>; *Lower Debit Card Limits*, *supra* note 16 (same as of January 2001).

201. 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*, prepared for the 1999 International Workshop on Practice and Theory in Public Key Cryptography (Mar. 1999) (on file with author) (discussing historical use of leased lines for ATM-card transactions in Japan).

information suggests that J-Debit is conscious of the need for reliable encryption.<sup>202</sup>

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.<sup>203</sup> If a significant number of debit cards are stolen, that could become something of a problem. Still, that seems such an easy problem to fix that it is difficult to believe that the system operators would allow it to become a significant problem. For example, a system in which banks assign the PINs (as often happens in the United States) would solve much of the problem immediately.<sup>204</sup> On the other hand, it is not nearly so clear how system operators can assuage the strong consumer perception that the system is unsafe.<sup>205</sup>

Yet the United States systems that have used PINs for years have experienced very low rates of losses as 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.<sup>206</sup> It seems surprising, but

---

202. 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 Iwashita, *supra* note 201, at 1 (discussing use of DES encryption for United States PIN transmissions); Japan Settlement Information Center, at <http://www.jpsic.co.jp/servis2.html> (last visited May 1, 2000).

203. See *Debit Cards Getting Ready*, *supra* note 152, at 15 ("Critics also warn that personal identification codes can be stolen while being punched in at the store.").

204. It would be plausible to expect that Japanese system operators would have less concern than American operators because the Japanese system places the risk of loss from unauthorized transactions on cardholders, while the American legal system requires the issuers to bear that risk. Compare *Aoki v. K.K. Fujibank*, 1369 KIN'YŪ HŌMU 6, 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 (2000), Electronic Funds Transfer Act of 1978 § 909 (limiting liability of debit cardholder for unauthorized United States transactions to fifty dollars, unless the cardholder fails to report either the theft of the card or unauthorized transactions that appear on the cardholder's statement), and Regulation E, 12 C.F.R. § 205.6 (2002) (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.

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

206. Cf. *Kono v. Otsuyama*, 1048 HANREI HANREI JIHŌ 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).

there appear 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 its bank of the theft. For me, the lesson of that experience is that Japan's entirely PIN-based system should be quite secure.

## 2. Discount Rates

Despite the relatively robust antifraud protections, the Japanese system currently is considerably more expensive for the participants in the transactions than the American system. Although rates differ considerably from merchant to merchant, a typical merchant would pay at least ¥50 on a ¥5,000 transaction.<sup>207</sup> In the United States, a grocery store with a similar transaction probably would pay the equivalent of ¥15-20 (about 15-20 cents).<sup>208</sup>

Although the fee for now is higher than the analogous fee in the United States, it seems unlikely to be a substantial problem. For one thing, even though the fee is higher than the analogous United States fee, it still is lower than the fee for any competing Japanese payment system.<sup>209</sup> Moreover, the rates have not yet stabilized during

---

207. See DEBIT CARD Q & A, *supra* note 172, question 54 (explaining that the discount rate varies based on negotiations between the acquiring bank and the merchant, and that it typically ranges from one to three 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 154 (discussing relation between merchant discount fees and interchange fees in the credit card context). In the J-Debit system, the interchange fee currently is one percent, with a floor of three yen and a ceiling of ¥100. See *supra* note 154.

208. 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. (HSN Consultants, Inc., Oxnard, CA), 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 forty cents. See David Breitkopf, *Visa to Raise Debit Fee Cited in Wal-Mart Case*, AM. BANKER, July 12, 2001, at 1, available at 2001 WL 3912754.

209. The fee is cognizably lower than the fee for a bank transfer, the other common method of noncash consumer payment in Japan. See *supra* note 89 (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> (describing fees for Tokyo-Mitsubishi Bank); <http://www.fujibank.co.jp/jis/fb/service/tesuuryou.html> (describing 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 American merchants but have not stopped the rapid spread of use of the cards. See Lisa Fickenschier, *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 short life of the system; one observer suggested that the rates are lower now than they were in the initial months of the system.<sup>210</sup>

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 whole country and each merchant needs access to that network from only a single bank.<sup>211</sup> That is the same many-acquirers/few-networks pattern that United States merchants face when they want access to credit card networks.<sup>212</sup> 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.<sup>213</sup>

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.<sup>214</sup> 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 lower rates for the service than its competitors, it is highly likely to obtain a substantial share of the market.<sup>215</sup> Thus, it seems unlikely that high system costs will pose an obstacle to the success of the system.

\* \* \* \* \*

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 (a) the more secure authorization makes the transactions safer (at least

---

the PIN-less debit card products issued by MasterCard and Visa members), *available at* 1999 WL 6033366.

210. See Anonymous Interview Eight, in Tokyo, Japan (Sept. 28, 2000) [hereinafter Anonymous Interview Eight].

211. See *id.*

212. See *supra* notes 160-61 and accompanying text.

213. See Anonymous Interview Eight, *supra* note 210.

214. See HARNER, *supra* note 82, at 142-43.

215. 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 fifty-four percent of the merchants in the J-Debit program).

compared to credit card transactions), and (b) the funds are removed from the account much more rapidly. Neither of those differences benefit 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.<sup>216</sup>

#### IV. CONCLUSION

The basic message of this Article is a simple one: institutions matter. Financial systems that develop in one country cannot be transplanted without change to other countries that 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 that 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 that use them.

---

216. See *supra* note 187 and accompanying text.