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CREDIT CARDS AND DEBIT CARDS
IN THE UNITED STATES AND JAPAN

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CREDIT CARDS AND DEBIT CARDS IN THE UNITED STATES AND JAPAN

*Ronald J. Mann**

TABLE OF CONTENTS

I.	The Institutional Precursors of Credit Cards and Debit Cards	8
A.	<i>Banking Powers</i>	8
	1. <i>Historical Patterns</i>	8
	2. <i>Theoretical Explanations</i>	12
B.	<i>Telecommunications Costs</i>	16
C.	<i>Economies of Scale</i>	17
II.	Credit Cards in the United States and Japan	19
A.	<i>Usage in the United States and Japan</i>	19
	1. <i>Describing the Transactions</i>	19

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2.	<i>Explaining the Differences</i>	26
	(a) <i>The Disempowered-Bank Hypothesis</i>	27
	(b) <i>Other Explanations</i>	34
	<i>CAUTIOUS CONSUMERS</i>	34
	<i>LIMITED CONSUMER-PROTECTION LAWS</i>	39
B.	<i>The Costs of the System</i>	41
	1. <i>Fraud Rates</i>	41
	2. <i>Discount Rates and Cardholder Fees</i>	48
III.	<i>Debit Cards in the United States and Japan</i>	57
	A. <i>Usage in the United States and Japan</i>	58
	1. <i>Describing the Transactions</i>	58
	2. <i>Explaining the Differences</i>	60
	A. <i>The Costs of the System</i>	63
	1. <i>Fraud Rates</i>	63
	2. <i>Discount Rates</i>	66
IV.	<i>Conclusion</i>	69

Abstract

This article is an exploration in the tradition of new institutional economics of the possibility that institutional conditions have a significant role in determining the success of credit cards and debit cards. The article examines differences in credit-card and debit-card usage between the United States and Japan. Although I do not doubt that social and psychological factors have some significance, I contend that three institutional factors also have useful explanatory power: the freedom of banks to enter the industry; low telecommunication costs, and the size of the market.

The article provides a detailed description of card usage in the two countries, relying on government statistics and the results of a series of interviews with industry executives in both countries. Generally, credit cards in Japan are used for a smaller share of transactions, with a higher average amount, and with less borrowing per transaction. The costs to merchants that take the cards and the rates of fraud also are noticeably higher in Japan than in the United States. The article argues that the difference in usage is attributable primarily to regulations that largely excluded banks and their affiliates from credit-card lending until 1992. For whatever reason, it is clear that the credit card as it exists in Japan is not nearly so useful a product as the credit card in the United States. That explains the smaller rate of usage and the lower borrowing rates. Also, it is to be expected that Japanese consumers would use cash for smaller transactions for which American consumers would use credit cards (which explains the higher average-transaction size in Japan). The article concludes that the differences in discount rates and fraud rates are more likely to be transient, but attributable to a combination of factors, including the comparatively small payment-card market and high telecommunication costs, both of which have hampered the sophistication of responses to fraudulent transactions.

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

CREDIT CARDS AND DEBIT CARDS IN THE UNITED STATES AND JAPAN

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.¹ And this is not a static phenomenon; among other things, the share of debits cards² in those transactions, though still relatively small, is rising rapidly.³ That pattern of use is not, however, typical of other countries. Even in some highly industrialized nations, consumers use cards to pay for purchases much less frequently. Statistics from the Bank of International Settlements, for example, suggest about 60 card-based payment transactions per person per year in the United States, but

¹ See *Consumer Payment Systems*, NILSON REP., Dec. 2000 (Issue 729) [hereinafter *1999 U.S. Payment Systems Data*], at 1, 6. I rely throughout this paper on the *Nilson Report* for statistics regarding the 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 are removed from the bank account automatically a few days after the transaction, where a credit card would lead to removal of funds only at the end of the month when (if) the cardholder pays the bill. For a general introductory discussion of debit cards, see RONALD J. MANN, *PAYMENT SYSTEMS AND OTHER FINANCIAL TRANSACTIONS* 141-46 (1999).

³ See *Credit & Debit Cards*, NILSON REP., Nov. 2000 (Issue 726) [hereinafter *1999 US Card Data*], at 1, 7 (reporting 6.4 billion U.S. debit-card purchase transactions in 1999, for a total of \$231 billion); *1999 U.S. Payment Systems Data*, *supra* note 1, at 1, 6 (reporting that debit cards were used for 6.1% of 1999 consumer purchases, representing 4.7% of the dollar amount of consumer purchases); see also *Visa and MasterCard – US 1998*, NILSON REP., Apr. 1999 (Issue 689), at 1, 5-7 (showing growth of Visa and MasterCard debit transactions from 400 million in 1994 to 2.9 billion in 1998).

only 4 such transactions per person per year in Japan.⁴ Similarly, no more than half of American cardholders pay their bills each month, which means that about half of American cardholders borrow on their cards each month; in Japan, by contrast, borrowing appears in only about one-tenth of credit-card transactions.⁵

The reasons for the 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, in this country at least, leading scholars associate the credit card with an embarrassingly high rate of consumer bankruptcy – generally the highest of any industrialized country.⁶ Third, there is good reason to believe that wide use of credit cards is inversely related to a nation's savings rate. If, as some scholars argue, credit-card usage *causes* the decline in savings,⁷ then policies that foster credit-card usage are relevant to those aspects of macroeconomic planning that are affected by savings rates. Thus, concerned policymakers should welcome an enhanced understanding

⁴ See Bank for International Settlements, Committee on Payment and Settlement Systems, *Retail Payments in Selected Countries: A Comparative Study* 23 chart 5 (Sept. 1999), available at <http://www.bis.org> [hereinafter BIS, *Comparative Payments Study*].

⁵ For details, see *infra* pp. 19-25.

⁶ See, e.g., TERESA A. SULLIVAN, ELIZABETH WARREN & JAY LAWRENCE WESTBROOK, *THE FRAGILE MIDDLE CLASS: AMERICANS IN DEBT* ch. 4 (2000) (detailed data and analysis of the relation between the credit-card industry and consumer bankruptcy in the United States). The view is supported by analysis from government experts as well. See also Diane Ellis, *The Effect of Consumer Interest Rate Deregulation on Credit Card Volumes, Charge-offs, and the Personal Bankruptcy Rate*, BANK TRENDS 98-05 (FDIC, Division of Insurance, March 1998).

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

of the institutional factors that motivate the use of cards in general or the use of cards as a borrowing device in particular.

At the outset, it is natural to wonder whether there is something about payment cards that is uniquely attractive to certain types of consumer personalities. 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.⁸ Although there doubtless is some truth to that sort of psycho-social explanation, those kinds of factors necessarily are so vague that it is difficult to use them in any predictable way.⁹ The purpose of this paper is to explore the

⁸ See MANNING, *supra* note 7, at 301 (attributing limited credit-card usage in Japan to fear of “American-style debt”). Although it is difficult to provide objective support for such a phenomenon, recent surveys of Japanese voters do suggest widespread discomfort with the use of credit cards. For example, one 1991 survey of 2,000 voters by Yomiuri Shimbun found 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 2,000 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 I discuss the relevance of the relatively high Japanese savings rates *infra* pp. 34-38. The other most commonly mentioned factor is the perception that Americans fear to carry cash because of crime while Japanese are willing to carry cash because of the low rate of crime in Japan. I do not discuss that factor because of a combination of its intractability and my skepticism. Whatever statistical analysis might show about the comparative rate of muggings in downtown Tokyo and the downtown areas of the largest cities in the United States, 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 even a perception of a substantial risk of mugging seems most unlikely. For data comparing U.S. and Japanese willingness to use and carry cash, see *infra* note 15.

relevance of more objective aspects of the legal and economic institutions that exist in a particular country. Thus, whatever the relevance of social and psychological factors, I think it is clear that institutional factors can explain a surprisingly large part of the differences in the use of credit and debit cards in different countries.

As with any analysis of complex and interconnected phenomena, the power of the analysis depends in important ways on the boundaries of the system that is selected for analysis.¹⁰ Accordingly, because the selection of boundaries for the system to be analyzed necessarily is arbitrary, it nevertheless is important to be clear at the outset as to exactly what this paper attempts to analyze: the system by which consumers in a country use cards to make payments for their retail purchases. Thus, although the system for providing consumer credit obviously is closely related to that system,¹¹ I treat the system for consumer credit as part of the background environment (out of which the payment-card system develops) rather than an integral part of the payment-card system itself. Similarly, although the push of globalization – and the global payment-card brands – makes the boundaries of a particular country

Another reader suggested to me the possibility that gender differences might explain some of the difference. If men and women have differing preferences for cash and credit cards – perhaps because of differing levels of concern about crime, perhaps 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.

¹⁰ See, e.g., Lynn M. LoPucki, *The Systems Approach to Law*, 82 CORNELL L. REV. 479, 497-502 (1997).

¹¹ 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, e.g., *infra* pp. 50-51.

less important than they were in earlier decades,¹² I operate in this article on the assumption that national boundaries continue to matter in important ways.

Working from that perspective, this article suggests that three institutional factors have general explanatory power. Although a variety of other institutional considerations might have some relevance,¹³ I argue that the three central factors associated with the success of credit and debit cards are:

¹² See generally THOMAS L. FRIEDMAN, *THE LEXUS AND THE OLIVE TREE* (1999).

¹³ 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 ASSOCIATION, *PAYMENT SYSTEMS IN JAPAN 3* (2000) (reporting that checks are used for only 5% of Japanese non-cash 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, France, the United Kingdom, and the United States 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 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 both to 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*, in 37 *EXPLORATIONS IN ECONOMIC HISTORY* 121, 125-32 (2000). To my knowledge, Japanese scholars have not yet fully explained the Japanese experience, although Professor Tomotaka Fujita currently is examining the topic. See e-mail from Tomotaka

- 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)
- Low telecommunication costs (because low telecommunication costs foster an effective anti-fraud system)
- The size of the national retail economy (because of economies of scale in the rapid implementation of technological advances)

Although I hope eventually to study the development of card-based payment systems in other countries, for now I have studied only the United States and Japan. As this article explains, a comparison of those two countries shows how each of those factors has supported a speedier and more successful adoption of card-based payment systems in the United States than in Japan. To put it more specifically, I argue that the limited use of payment cards in Japan is related in important ways to historical exclusion of banks from the industry, to Japan's unusually high telecommunication costs, and to the relatively small size (at least in comparison to the United States) of its payment-card market.¹⁴ The first part of the article briefly discusses those factors and analyzes their relation to the success of card-based payment systems.

Fujita, Associate Professor, Faculty of Law, University of Tokyo, to Ronald J. Mann (Nov. 7, 2000).

¹⁴ The third factor in this case 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 first two factors. My point is that the smallness of the market (caused in this case by the other two factors) itself limits the system's ability to develop and grow. In other countries that would have small payment-card markets even if cards were used universally, that factor should have independent significance.

The second part of the article compares the role of credit cards in the two countries. It starts by comparing the patterns of usage. The primary topic of interest is the limited use of credit in the Japanese credit-card industry, which I attribute to the history of bank regulation in Japan. The article then considers the effectiveness of the Japanese system, which has relatively high costs and also experiences relatively large losses to fraud. I argue that the high costs are related to the lack of credit usage by Japanese consumers (because Japanese card issuers earn minimal income from interest) and that the fraud losses are caused by high telecommunications costs.

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,¹⁵ it seems unlikely to garner a significant role in Japanese commerce.

¹⁵ A 1998 survey of 2,000 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. For other related data from Japan, 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”); *see also id.* at 16 (discussing typical ATM policy permitting withdrawal of ¥2,000,000 per day (about \$18,000), some 40 times the typical United States limit); *Gov’t, Banks Keen To Lower Debit Card Limits*, NIHON KEIZAI SHIMBUN, Jan. 18, 2001 [hereinafter *Lower Debit Card Limits*] (reporting plans to lower the limit to ¥500,000). The difference in the amount of cash in the hands of consumers

I. THE INSTITUTIONAL PRECURSORS OF CREDIT CARDS AND DEBIT CARDS

Because the ultimate goal of this research is to develop a general understanding of the institutional factors that support and retard the growth of card-based payment systems, it is important to start by offering a general description of the institutional precursors identified in my work in the United States and Japan. My analysis focuses on three particular institutional factors that in my view affect the development and growth of card-based payment systems: the breadth of banking powers, the level of telecommunication costs, and the size of the retail economy.

A. *Banking Powers*

The first and most important of those factors is a regulatory climate that permits free participation by banks in the credit-card industry. As the discussion below suggests, my theoretical basis for that claim is not overwhelming: there is no obvious reason why non-depository institutions cannot successfully deploy card-based payment products. To be sure, they have a significant disadvantage in promulgating debit cards – because only depository institutions have immediate access to the accounts against which debit-card payments are made. But no such difficulty bars participation by non-depository institutions in the credit-card industry. 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, first offering a brief summary of the historical patterns.

1. *Historical Patterns*

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 Japanese currency supply held in other countries.

As others have explained, the credit-card market as it exists in the United States today developed in the late 1960's and 1970's out of a relatively small earlier market for payment cards exemplified by American Express, Diners Club, and Carte Blanche in the early 1960's.¹⁶ 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.¹⁷

The general-purpose credit card – and the high rate of borrowing that makes that card profitable – did not develop until the 1970's and 1980's, and when it did develop it came largely from efforts by American banks (primarily Bank of America in California).¹⁸ 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 cost it staggering sums of money.¹⁹ 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

¹⁶ See, e.g., DAVID EVANS & RICHARD SCHMALENSEE, *PAYING WITH PLASTIC: THE DIGITAL REVOLUTION IN BUYING AND BORROWING* 61-84 (1999).

¹⁷ See EVANS & SCHMALENSEE, *supra* note 16, 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.

¹⁸ See EVANS & SCHMALENSEE, *supra* note 16, at 65-69.

¹⁹ See EVANS & SCHMALENSEE, *supra* note 16, at 75 (discussing heavy losses incurred by American Express in its attempts to enter the credit-card market).

affiliates in the credit-card market. The precise reason for the exclusion is not entirely clear. Mark Ramseyer and Frances Rosenbluth argue that the exclusion generally was designed to protect smaller credit companies that would have suffered from competition with the banks.²⁰ At least in part, however, it seems also to have been designed to protect retailers as well.²¹ In any event, for whatever reason, banks (but not their affiliates) were entirely barred from issuing credit cards until 1982.²² Not until 1992 were banks or

²⁰ See J. MARK RAMSEYER & FRANCES MCCALL ROSENBLUTH, *JAPAN'S POLITICAL MARKETPLACE* 55-57 (1993). Although it would be natural to think that limiting the ability of banks to provide credit to consumers would harm retailers (by limiting sales), the regulation in part seems to have been designed specifically to benefit retailers. In particular, among the prime beneficiaries of the regulation were the *senmonten kai*, finance companies operated by associations of small retailers. For sources discussing the need to protect small retailers, see *Kurejitto Sangyô Bukai, Kappu Hanbai Shingikai* [The Credit Industry Committee in the Installment Sales Council], *Kurejitto Sangyô no Kongo no Arikatani tsuite* [Interim Report: The Desirable Future of the Credit Industry] (1990) [hereinafter *Report on the Future of the Credit Industry*] (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).

²¹ The distinction is a fine one, because among the most prominent of the smaller finance companies affected by the regulation were the *senmonten kai*, finance companies operated by associations of small retailers. For sources discussing the need to protect small retailers, see *Report on the Future of the Credit Industry*, *supra* note 20 (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).

²² Under the *Ginkôhō* [Banking Law] of 1927, Law No. 21 of 1927, there was no express bar of credit-card services, but administrative guidance excluded banks from that business. See GENDAI GINKÔHÔ TORIHIKIHÔ [THE CURRENT BANKING LAW] 68 (Kinyûzaiseijijyûkenkyûkai, Ichirô Katô & Shôzô Yoshihara eds. 1987) [hereinafter GENDAI GINKÔHÔ TORIHIKIHÔ]; Arthur J. Alexander, *Consumer Credit in Japan Since the Bubble Economy's End*, JAPAN ECONOMIC INSTITUTE REPORT, June 20, 1977 (No. 23), at 9, available at <http://www.jei.org/Archive/JEIR97/9723f.html>. The *Ginkôhō* [Banking Law] of 1981, Law No. 59 of 1981, did not specifically authorize the credit-card

their affiliates permitted to issue cards that allowed revolving credit.²³ And not until 2001 will Japanese banks and their affiliates be permitted to issue cards that include a variety of other borrowing options typical of the industry.²⁴

business, but it did permit banks to engage in “business ancillary to banking.” Ginkôhō [Banking Law] of 1981, Art. 10.2. That language was construed to include the credit-card business. See GENDAI GINKÔHÔ TORIHIKIHO, *supra*, at 686; YOSHIKI KOYAMA, GINKÔHÔ [BANKING LAW] 241 (Ôkurazaimukyôkai 1992).

²³ Again, no specific statute barred revolving credit, but, based on the sentiments expressed in a resolution accompanying a statute that amended the Installment Sales Law, the government did not permit bank-affiliated entities to register to offer revolving credit or other forms of kappu. For the resolution itself, see Kappu Hanbaihō no Ichibu wo Kaiseisuru Hōritsuanni Taisuru Futai Ketsugi [Supplementary Resolution Amending Installment Sales Law] (May 10, 1984) [hereinafter Supplementary Installment Sales Law Resolution]. For discussion of its significance to later policy, see KINYŪ IT KENKYŪKAI [STUDY GROUP REGARDING INFORMATION TECHNOLOGY IN FINANCIAL SERVICES], DEBITTO KÂDO KAKUMEI [THE REVOLUTION IN DEBIT CARDS] 53-54 (Takarajimasha 2000) [hereinafter THE REVOLUTION IN JAPANESE DEBIT CARDS]; *Dai Ippen Kurejitto Sangyō no Jittai [Part I: The History and Current Situation of Credit Industries]*, in KUREJITTO TORIHIKI JITSUMUZENSHO [CREDIT TRANSACTION GUIDANCE] 110 (Daichihōki 1991) [hereinafter CREDIT TRANSACTION GUIDANCE].

²⁴ The government ultimately decided, notwithstanding the sentiments expressed in the Supplementary Installment Sales Law Resolution, *supra* note 23, to permit bank-affiliated card issuers to allow non-revolving forms of kappu based on recommendations in *Report on the Future of the Credit Industry*, *supra* note 20 (which had called for the government to permit bank-affiliated companies to enter the revolving-credit business by 1992). 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 (Zaishōhōsha 2000); THE REVOLUTION IN JAPANESE DEBIT CARDS, *supra* note 23, 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 Kyōsūsuru Kadai e no Torikumi ni Kansuru Hōkoku [Interim Report: The Way To Solve Structural Limitations*

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.²⁵ Second, during the eight years since banks have entered that market, the usages in Japan have begun to move (albeit slowly) to bring Japanese usage closer to the American pattern.²⁶ When compared with the United States experience, those features of the Japanese pattern provide considerable circumstantial evidence regarding the significance of untrammelled bank participation in credit-card markets.

2. *Theoretical Explanations*

The biggest difficulty is in explaining precisely why non-depository 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, 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

in Credit Cards and a Program for Solving Common Problems in Credit Industries] (1998).

²⁵ See *infra* pp. 21-25 (discussing the limited success of Japanese credit cards).

²⁶ See *infra* pp. 27-28.

extraordinarily risky in the early days when the modern credit-card business model was developed.²⁷

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 depositary customers, it is plausible to think that other types of financial institutions without such information advantages might have been cautious (or unsuccessful) in pushing into the area. Of course, it seems unlikely that the informational advantage would have great relevance in the modern market. In the current information-rich environment, it is no longer the case that the depositary relation is the only – or even the best – reliable source of information about the creditworthiness of a potential credit-cardholder. Accordingly, any advantage that banks might have held when the system developed should have dissipated over time.

The second explanation builds on the difficulty of the credit-card industry in its early days. From that perspective, the credit card began not as a profitable line of business, but rather as a costly service that banks provided as a convenience to attract customers.²⁸ Given the limited ability of banks in the 1960's and 1970's to

²⁷ See, e.g., EVANS & SCHMALENSSEE, *supra* note 16, at 68-69 (discussing large losses in the early days of the credit-card industry incurred by, among others, Wells Fargo, Bankers Trust, and Citibank); *id.* at 75 (discussing heavy losses incurred by American Express in its attempt to enter the credit-card market); MANNING, *supra* note 7, at 84-86 (discussing heavy losses incurred by Chase Manhattan and Bank of America); MANNING, *supra* note 7, at 89-91 (discussing \$100 million of losses by Citibank in the 1970's 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).

²⁸ See MANNING, *supra* note 7, at 89-91 (characterizing credit cards before the 1980's as "loss leader[s that] helped to cultivate customer loyalty and attract new clients").

compete on price,²⁹ 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.³⁰ After decades of practice, however, the industry developed sufficient expertise to earn considerable profits from credit-card lending.³¹ 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 non-depositary 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.³² But they showed no capacity to generate those borrowing in the early days of the industry, before banks developed and popularized the credit-card model.³³

²⁹ See, e.g., MARCIA STIGUM, *THE MONEY MARKET* 968-69 (3rd ed. 1990) (discussing the importance to the market of the limitations on bank-deposit interest imposed by the Federal Reserve's Regulation Q).

³⁰ See MANNING, *supra* note 7, at 84-85 (explaining that the first large-scale use of a universal bank credit card resulted from a mailing by Bank of America of 60,000 unsolicited credit cards to its depositary customers).

³¹ Cf. Alexander, *supra* note 22, at 10-12 (arguing that Japanese banks are handicapped in credit-card lending because they have not had sufficient experience to develop expertise at individual risk assessment).

³² At the end of 1999, the ratio of outstanding receivables to total annual purchase volume for United States store cards was 81%, which compares favorably to the analogous ratios for MasterCard's (73%), Visa (57%), Discover (53%), and American Express (23%). {The ratios for Visa and MasterCard are calculated from *1999 US Card Data*, *supra* note 3, at 7. The ratios for American Express and Discover are calculated based on year-2000 results published at *Amex Results – U.S.*, NILSON REP., Jan. 2001 (Issue 732), at 1, 7 and *Discover Card Results*, NILSON REP., Jan. 2001 (Issue 732), at 1, 7.} For a discussion of historical trends of that ratio, see *infra* note 52.

³³ See EVANS & SCHMALENSEE, *supra* note 16, at 61-62 (discussing in-house cards in the early days of the industry); GEORGE RITZER, *EXPRESSING*

It also is true that much of the credit-card market in the United States has been taken over by “monoline” banks, which generally have no depositary relation with their customers. Thus, as of 1995, only 16% 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.³⁴ But those banks appeared quite late in the development of the credit-card market in the United States.³⁵ And they depend for their success on the economies of scale in sophisticated analysis – “credit-scoring” – of the individuals to whom they issue cards.³⁶ 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.³⁷

* * * * *

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

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).

³⁴ See EVANS & SCHMALENSEE, *supra* note 16, at 208-09.

³⁵ See, e.g., EVANS & SCHMALENSEE, *supra* note 16, at 12 (discussing the rise of monoline banks in the early 1990’s).

³⁶ See Jane Tanner, *Investing: Everyday Plastic, Spun into Gold*, N.Y. TIMES, Sept. 17, 2000, available at <http://www.nytimes.com> (discussing underwriting techniques of monoline banks); Miriam Kreinin Souccar, *Providian Pitch Spurs Fear of Credit Data Poaching*, AM. BANKER, Dec. 6, 1999, at 1, available at 1999 WL 21145379 (same).

³⁷ 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 58 (reporting estimates of the rate of borrowing in shinpan kaisha transactions).

United States in the absence of the profitable and information-generating depositary relationship between banks and potential cardholders.³⁸

B. Telecommunications Costs

Another important factor 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 anti-fraud 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),³⁹ that process starts with a swiping of the card at the merchant's counter. The terminal at which the card is swiped transmits to the issuer not only the card number, but also additional information on the magnetic stripe (which helps to demonstrate the authenticity of the card) and information about the transaction (that helps the issuer to assess the likelihood that the cardholder is in fact engaged in the transaction).⁴⁰

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.⁴¹ The

³⁸ For illustration of that point by comparison between Japanese and American issuers, see *infra* pp. 50-51.

³⁹ See *Smart Card Economics*, NILSON REP., Sept. 2000 (Issue 724), at 1, 5 (reporting that over 95% of U.S. Visa and MasterCard transactions are authorized in real time, a higher rate than in any other country).

⁴⁰ For a basic description of that process, see MANN, *supra* note 2, at 111-12.

⁴¹ See *Smart Card Economics*, *supra* note 39, 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

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.⁴² Among other things, those costs typically include charges on a per-call and per-minute basis that are relatively unusual in Western countries.⁴³ All other things being equal, those high costs should pose an obstacle to effective prevention of fraudulent transactions.

C. 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

and merchant account processing are cheaper than anywhere else in the world.”).

⁴² See, e.g., RICHARD KATZ, JAPAN: THE SYSTEM THAT SOURED 35 (1998) (discussing reasons for relatively high telecommunications costs in Japan); Mark Magnier, *Japan's Big Hang-Up*, LOS ANGELES TIMES, June 4, 2000, at C1, available at 2000 WL 2247206 (arguing that Japanese telephone interconnection charges are about 4 times those in the U.S. and Britain and 2.5 times those in France and Sweden); *Japanese Government Panel Urges End to NTT Stranglehold*, AGENCE FRANCE-PRESSE, Aug. 17, 2000, available at 2000 WL 24691668 (noting that local charges in Japan (for which NTT has a monopoly) have risen by 13 percent since 1985, while long-distance charges (for which NTT faces competition) have fallen by 78%).

⁴³ Akiko Kashiwagi, *Criticism of NTT Mounts as Japan's Internet Era Stalls*, INTERNATIONAL HERALD TRIBUNE, Jan. 11, 2001, available at <http://www.newsonjapan.com> (discussing NTT's practice of charging by the call and minute for telephone calls in Japan).

issuance of the cards (discussed above), but also in the processing of transactions.⁴⁴ 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.⁴⁵ Thus, all other things being equal, marginally larger countries should be able to deploy more sophisticated technology more rapidly than marginally smaller countries.⁴⁶ 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.⁴⁷

⁴⁴ See, e.g., MANNING, *supra* note 7, at 85, 87 (discussing research and development that led to technological advances making it easier for credit-card operations to become profitable). Some evidence of this appears in the increasing concentration of the various sectors of the credit-card market. For example, in the market for acquiring and processing credit-card transactions, First Data had a 44% 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., 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., 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 only 51%. Twenty years ago in 1980, the top fifty card issuers controlled less than 60% of the market in 1980. See MANNING, *supra* note 7, at 298; *Superportfolios*, NILSON REPORT, Feb. 2001, at 1, 6-7 (Issue 733).

⁴⁵ See RITZER, *supra* note 33, at 42-43 (discussing economies of scale in the U.S. credit-card industry).

⁴⁶ 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.

⁴⁷ As discussed in the introduction, the analysis assumes that national borders still matter in the development of payment systems. That is, of course, an assumption that weakens with the rise of globalization.

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.

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 1998 for 14 billion transactions worth almost \$1.1 trillion dollars, about \$76 per transaction.⁴⁸ Department of Commerce statistics indicate that in 1998 credit cards were used in about 18% of all transactions, for about 23% of the value paid in all American consumer payment transactions.⁴⁹ For the most part, those transactions were conducted as revolving-credit transactions.⁵⁰ Under American practices, that

⁴⁸ See 1999 US Card Data, *supra* note 3, at 7.

⁴⁹ See 1999 U.S. Payment Systems Data, *supra* note 1, at 1, 6. The credit-card's share of retail purchase transactions doubtless is even higher, because the share that credit cards have for non-retail payment transactions surely is lower (close to zero) than the share that they have for retail payment transactions. Cash, by the way, was used in 44% of all U.S. payment transactions, but those transactions had an average amount of only \$20.08, totaling less than 19% of the total dollar transaction volume. See *id.*

⁵⁰ 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 14% share of the American market. See 1999 US Card Data, *supra* note 3, at 1, 5. Even on 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

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.⁵¹ 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.⁵² The payments that they do make are made for the most part by writing a check and mailing it to the issuer.

for Japan, in which the issuer receives funds on the payment date through a debit transfer from the cardholder's account. *See infra* notes 61-64 and accompanying text.

⁵¹ *See* MANNING, *supra* note 7, at 352 n.57; RITZER, *supra* note 33, at 95-96. The perception that those options are too lenient has motivated congressional efforts to require various remedies designed to ensure consumer awareness of the length of time repayment would take at the minimum payment rates. *See* Dean Anason, *LaFalce Sees Compromise as Reform's Best Hope*, AM. BANKER, Apr. 29, 1999, at 3, available at 1999 WL 6034812 (discussing possible disclosure requirements); Dean Anason, *Bankruptcy Bill Is Getting Last-Minute Tweaks*, AM. BANKER, Sept. 10, 1999, at 2 (same); Michelle Heller, *Bankruptcy Reform on the Hill's Fast Track*, AM. BANKER, Feb. 7, 2001, at 1, 4 (same).

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

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),⁵³ credit cards accounted for only 10% of the value of payment transactions.⁵⁴ Industry statistics indicate only ¥20.76 trillion (\$190 billion) of credit-card transactions in 1999, about 7% of the ¥300 trillion (\$2.7 trillion) of Japanese consumer spending that year.⁵⁵ That reflects purchases of about \$1,500 per capita, compared to about \$3,500 per capita in the United States.⁵⁶ 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).⁵⁷

note 3, at 1, 7 (data from which the 1999 figure is calculated); *Credit Cards in the U.S.*, NILSON REP., Dec. 2000 (Issue 730), at 1, 5 (reporting the 2000 figure).

⁵³ See *supra* notes 13 & 15.

⁵⁴ See JAPANESE BANKERS ASSOCIATION, *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.

⁵⁵ See *NIKKEI Share Survey 100: Credit Cards*, NIKKEI INDUSTRIAL DAILY, Aug. 3, 2000 <<http://www.nni.nikkei.co.jp/AC/TNKS/Search/Nni20000803DTWNS096.html>> [hereinafter *NIKKEI 1999 Credit-Card Data*].

⁵⁶ The \$3,500 figure is calculated from the data *supra* in the text accompanying note 48. See *supra* note 4 and accompanying text (reporting 4 card transactions per person per year in Japan compared to more than 60 in the United States).

⁵⁷ I base that estimate on 1997 statistics from the Bank for International Settlements, which show 720 million transactions for a total of ¥17.8 trillion (\$160 billion). Bank for International Settlements, Committee on Payment and Settlement Systems, *Statistics on Payment Systems in the Group of Ten Countries* 56 tbls. 12, 13 (Feb. 2000), available at <http://www.bis.org>

Perhaps the most striking feature of the Japanese transactions is the limited extent to which they involve credit. The overwhelming majority – 80% or more – of Japanese credit-card transactions are settled by “*ikkai barai*” (which means something like “payment in one cycle”).⁵⁸ Under *ikkai barai*, the consumer agrees (at the point

[hereinafter BIS, *1998 Payments Statistics*]. Although the table is not explicit on that point, I believe that it includes only credit-card use for purchase activity, because the total transaction value is similar to statistics published by the Japan Consumer Credit Industry Association (JCIA). JCIA statistics show a total of ¥ 19 trillion (\$170 billion) in Japanese credit-card shopping transactions for 1998. NIHON NO SHÔHISHA SHINYÔ TÔKEI [JAPAN CONSUMER CREDIT INDUSTRY ASSOCIATION, CONSUMER CREDIT STATISTICS OF JAPAN] 33 (2000) [hereinafter JCIA ANNUAL STATISTICS].

Cash advances and other finance activity are not relevant to my research, but currently account for about one quarter of Japanese credit-card activity. See *Credit Card Use Grows Despite Debit Card Acceptance*, NIKKEI FIN. DAILY, June 14, 2000, <<http://www.nni.nikkei.co.jp/AC/TNKS/Search/Nni20000614D13JKN09.html>> (reporting that ¥ 419.2 billion (\$3.8 billion) out of ¥ 1.73 trillion (\$15 billion) of April 2000 credit-card transactions were for cash advances and other non-purchase activity).

⁵⁸ 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 *nikkai barai* (payment in two installments) and bonus payment (repayment out of the cardholder's bi-annual bonus). *Kappu* includes revolving credit and installment plans that are *both* three or more payments *and* two or more months. See KAPPU HANBAIHÔ [INSTALLMENT SALES LAW], Law No. 159 of 1961, art. 2(3). For the industry as a whole, data from the Japan Consumer Credit Industry Association shows that *kappu* transactions as of 1998 were only 12.7% of all transactions, and only 3.3% of transactions at bank-affiliated card issuers. See JCIA ANNUAL STATISTICS, *supra* note 57, at 33.

Although I have been unable to locate published data that provides a specific breakdown of *ikkai barai*, the data seem to be widely available to participants in the industry. For a more specific breakdown (to estimate the large market share for *ikkai barai*), I rely on unpublished data provided to me at five different interviews, as follows:

Industry-Wide: The only estimate I received of industry-wide usage of ikkai barai stated that 87% of transaction value in the credit-card industry is settled by ikkai barai. See Anonymous Interview One, Tokyo (Oct. 11, 2000) [hereinafter Anonymous Interview One].

Shinpan Kaisha: As for transactions using cards issued by shinpan kaisha, executives at the shinpan kaisha that I interviewed stated that 80% of the transaction value at their particular company is paid by ikkai barai, and that only 2.5% is paid by revolving credit. Anonymous Interview Two, Tokyo (Sept. 19, 2000) [hereinafter Anonymous Interview Two].

Bank-Affiliated Issuers: For bank-affiliated issuers, I received an estimate of usage at all bank-affiliated issuers, as well as specific data from the portfolios of two of the bank-affiliated issuers that I interviewed. The general industry estimate suggested that 85-90% of bank-card transaction value normally is handled by ikkai barai, and that the share of revolving credit varies in the range of 3-5% of transaction value. Anonymous Interview Three, Tokyo (Sept. 22 & Oct. 10, 2000) [hereinafter Anonymous Interview Three].

The first specific bank-affiliated issuer data indicated that its 1999 transactions produced 87.4% ikkai barai, 4.5% nikai barai, 3.5% bonus payment (repayment out of the cardholder's bi-annual bonus), and 4.6% revolving credit. See Anonymous Interview Four, Tokyo (Oct. 17, 2000) [hereinafter Anonymous Interview Four]. The second specific bank-affiliated issuer data was for 1999, and indicated a 90% share for ikkai barai, 3% for nikkai barai, 2% for bonus payments, and 5% for revolving credit. See Anonymous Interview Five, Tokyo (Oct. 12, 2000) [hereinafter Anonymous Interview Five].

It is natural to expect that the shares of ikkai barai and revolving credit for bank-affiliated issuers are slightly higher than they are for other issuers, because banks and their affiliates cannot yet offer extended specified payment options such as "*sankai barai*" (payment in three months) or "*jukai barai*" (payment in ten months). Those options (barred to banks) amounted to about 10% of the transactions at the shinpan kaisha. See Anonymous Interview Two, *supra*. Those differing percentages may begin to converge soon, because the other options will be permitted to bank-affiliated issuers starting in 2001. See generally *supra* note 24 and accompanying text (discussing termination of restrictions on non-revolving kappu products by bank affiliates).

of purchase) that the transaction will be paid to the issuer in full on the next monthly payment date.⁵⁹

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.⁶⁰ 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 not only to a general commitment to pay in one month – analogous 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.⁶¹ Because the cardholder at the point of purchase already has given the issuer access to a specified amount of funds in a specified account, the transaction resembles much more closely an American debit-card transaction than an American credit-card transaction.⁶²

⁵⁹ See JCB Card Rules and Regulations arts. 8, 9(1) (undated) [copy on file with author] [hereinafter JCB Cardholder's Agreement] (providing for calculation of charges as of the 15th day of each month, mailing of a statement showing those charges, and a bank transfer to pay the charges on the 10th day of the following month).

⁶⁰ See *supra* note 13.

⁶¹ See JCB Cardholder's Agreement, *supra* note 59, art. 9(1) (establishing payment cycles that end on the 15th day of each month, with payments transferred on the 10th day of the succeeding month).

⁶² This method of paying credit-card bills is not unique to Japan. My discussion with European students suggests that it is common in Europe as well. That may reflect the similarity of continental Europe to Japan in that neither has checks as a substantial consumer payment system. See *supra* note 13.

After the end of each payment cycle, the issuer sends the cardholder a statement summarizing the charges.⁶³ 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.⁶⁴ 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.⁶⁵ Thus, the 80% (or greater) 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 12% per annum.⁶⁶

⁶³ See JCB Cardholder's Agreement, *supra* note 59, art. 8 (providing for a statement sent by ordinary mail describing all charges made by the 15th day of each calendar month).

⁶⁴ See JCB Cardholder's Agreement, *supra* note 59, 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 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 JCB Cardholder's Agreement, *supra* note 59, art. 9(1) (granting permission for the bank transfer); Anonymous Interview Two, *supra* note 58. 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, *supra* note 58.

⁶⁵ See Anonymous Interview Two, *supra* note 58. 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 27, at 101-04 (analyzing the competitive reasons that have led the American market to that pattern).

⁶⁶ Because rates vary considerably even within a single issuer's portfolio, and because the pattern of rates an issuer charges is highly

TABLE 1
SUMMARY COMPARISON OF
JAPANESE AND U.S. CREDIT-CARD USAGE

	U.S.	JAPAN
PURCHASES PER CAPITA	\$3,500	\$1,500
SHARE OF CONSUMER SPENDING	21%	5%
SHARE OF NON-CASH PAYMENTS	26%	10%
MEAN TRANSACTION AMOUNT	\$76	\$225
SHARE OF BORROWING	50%	10%

2. Explaining the Differences

The foregoing section suggests three salient differences between Japanese and United States use of credit cards: the transactions in Japan are less common, larger, and less often involve significant borrowing (by which I mean borrowing that results in the payment of interest to the card issuer). Each of those differences, I believe, is best attributed to differences in the institutional precursors discussed in Part I. Two of those factors 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

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.

telecommunication costs that are among the highest of any developed nation. Both of those factors contribute to higher costs that should make the systems less competitive than their counterparts in the United States.

In my view, however, the costs that plausibly can be attributed to those factors cannot explain the identified differences: the limited usage of cards, the large size of the transactions, or the limited amount of borrowing. To the extent institutional factors can explain those differences, the limited powers of Japanese banks is the best explanation. Accordingly, I defer discussion of the relevance of telecommunication costs and economies of scale to the next section.⁶⁷ In this section I compare the explanatory power of the disempowered-bank hypothesis to several potential alternate 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 almost doubled between 1994 and 1998 (from 362.8 million transactions to 720.7 million transactions).⁶⁸ Second, because the amount of the transactions rose by only about 40% (from ¥ 12.5 trillion (\$110 billion) to ¥ 17.8 trillion (\$160 billion), the average transaction decreased by about 28% (from almost ¥ 34,500 (\$315) to just under ¥ 25,000 (\$225)).⁶⁹ Third, the gross amount of borrowing is increasing rapidly (by 28% in the last four years).⁷⁰ Also, the share

⁶⁷ See *infra* section II(B).

⁶⁸ See BIS, *1998 Payments Statistics*, *supra* note 57, at 56 (tbl. 12).

⁶⁹ See BIS, *1998 Payments Statistics*, *supra* note 57, at 56 (tbl. 13).

⁷⁰ See JCIA ANNUAL STATISTICS, *supra* note 57, at 49-50 (comparing 1994 to 1998). For comparison, the total amount of kappu from 1990 to 1994 actually decreased slightly, before beginning to rise in 1994, as bank participation began to have a significant effect on the market.

of borrowing transactions (“kappu”) among bank-affiliated credit-card transactions is growing with particular rapidity (by 120% in the last four years).⁷¹

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 – but the significant rates of change on all three parameters certainly 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 U.S. and Japanese credit-card markets. The most obvious candidate is the one discussed above, the general opening of the credit-card market to bank-affiliated issuers in 1992.⁷²

One way to look at the Japanese card market – with its *ikkai barai*-dominated payment structure – is to view it as just starting to move beyond the payment cards that populated the American market in the 1950’s and 1960’s. It is not a coincidence that the credit card first introduced in Japan (in 1960)⁷³ is said to have been modeled

⁷¹ See JCIA ANNUAL STATISTICS, *supra* note 57, at 49-50. Because revolving credit is the only form of *kappu* currently permitted to bank-affiliated issuers, see *supra* note 58, 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, *supra* note 58. Another bank-affiliated issuer emphasized that revolving-credit usage is particularly increasing among its younger card users. See Anonymous Interview Six, Tokyo (Oct. 31, 2000) [hereinafter Anonymous Interview Six].

⁷² To be sure, the rates of change are quite slow, and borrowing is still less common on bank credit cards than it is on the credit cards of other consumer lenders. But that seems fairly attributable to the complexity of experience involved in a successful credit-card operation, experience that it took decades for American lenders and Japanese lenders to acquire. See *supra* note 31.

⁷³ See CREDIT TRANSACTION GUIDANCE, *supra* note 23, at 108

directly on the American Express and Diner's Club payment cards.⁷⁴ Without banks in the marketplace, the industry has for the most part been static since that time: the products available to consumers have not been sufficiently attractive to produce the consumer receptiveness to borrowing evident from the United States transaction data.⁷⁵ Thus, Japanese banks have quite a respectable market share of credit-card transactions (about 49%) of Japanese credit-card shopping.⁷⁶ But the share of borrowing transactions was much smaller: bank-affiliated issuers had only 13% of the extended borrowing ("kappu") done by credit cards.⁷⁷

The most obvious explanation for those poor results is the general lack of success of revolving credit: the product on which

⁷⁴ See CREDIT TRANSACTION GUIDANCE, *supra* note 23, at 108; Anonymous Interview Three, *supra* note 58.

⁷⁵ The limited success of banks in the credit-card system surely is related not only to the particular limitations on credit-card activities, but also in a general way to the limited attention that banks in Japan have devoted to consumer finance. See STEPHEN M. HARMER, JAPAN'S FINANCIAL REVOLUTION AND HOW AMERICAN FIRMS ARE PROFITING 37 (2000) ("[W]hile banks in the United States quickly reoriented themselves to the consumer finance market when corporate lending spreads narrowed, Japanese banks never made the transition."). Even now, notwithstanding the financial pressures that have confronted the Japanese banking industry in the late 1990's, it is not clear that Japanese banks have turned whole-heartedly to consumer finance. See HARMER, *supra*, 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. 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.

⁷⁶ See JCIA ANNUAL STATISTICS, *supra* note 57, at 68. Retailers generally account for another 29% and shinpan kaisha for 17%. See *id.*

⁷⁷ See JCIA ANNUAL STATISTICS, *supra* note 57, at 49-50.

American banks have built their large credit-card receivables.⁷⁸ 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 10% per month, perhaps 10,000 yen per month).⁷⁹ 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.⁸⁰ Many of my interviews suggested a practical explanation for the cumbersome design; executives argued that it is much less practical for the check-less Japanese cardholder to make the odd-amount monthly payments than it is for the American cardholder that normally pays by check.⁸¹ 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.⁸² But the

⁷⁸ See *supra* note 58 (estimating revolving credit in the Japanese credit-card market).

⁷⁹ See CREDIT TRANSACTION GUIDANCE, *supra* note 23, at 6493 (describing the typical schedules for repayment of revolving credit from JCB); Anonymous Interview Three, *supra* note 58.

⁸⁰ 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 Americans from the social cost of borrowing”).

⁸¹ See Anonymous Interview Four, *supra* note 58; Anonymous Interview Five, *supra* note 58. The plausibility of that explanation as a causative force is undermined 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 85-89 and accompanying text.

⁸² 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

plausibility 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 non-bank 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.⁸³ My best answer is the one suggested above, that banks are 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 depository 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

bank transfers, see JAPANESE BANKERS ASSOCIATION, *supra* note 13, at 3 (data indicating that bank transfers are used for 85% of non-cash 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 85-89 and accompanying text.

⁸³ *See* KUREJITTO SANGYÔ HAKUSHO [*White Paper on Credit Industry*], GEKKAN SHÔHISHA SHINYÔ [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 58.

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.⁸⁴ 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.⁸⁵ The identity of the issuer – a consumer finance company not affiliated with any depository institution – suggests that the same developments in information technology that foster successful credit-card lending by American monoline banks – with no depository relations with their customers – have shown the way to similar products in Japan.⁸⁶

As you would expect based on the American market experience, the product seems to be successful, at least initially, in attracting customers; the company has issued more than 500,000 cards in the first 18 months of the program (more than a third of them to customers with no previous relationship with the lender).⁸⁷ For present purposes, the most important thing about the program is that those customers are selecting revolving credit for a staggering (for Japan) 91% of their purchases.⁸⁸ The company's underwriting

⁸⁴ See HARMER, *supra* note 75, at 135-36 (discussing such a card).

⁸⁵ 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 (American Express). Although that might have much the same practical effect, it is still relatively cumbersome.

⁸⁶ See *supra* notes 32-37 (suggesting that depository relations are irrelevant to the successful marketing of modern credit-card products); see also Naomi Tanaka, *Toyota Cruises into Consumer Finance*, NIKKEI WEEKLY, Feb. 26, 2001, at 14 (discussing plans for Toyota to issue a credit card starting in April of 2001).

⁸⁷ See Anonymous Interview One, *supra* note 58.

⁸⁸ See Anonymous Interview One, *supra* note 58.

appears to rely heavily on a credit-scoring model, an approach that seems to resemble closely the models used by American issuers.⁸⁹ The use of that technology is particularly surprising given the relatively limited availability in the Japanese consumer-finance industry of consumer financial information.⁹⁰

⁸⁹ See Anonymous Interview One, *supra* note 58.

⁹⁰ 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 70 million entries and that it received less than 20 million requests for information during 1998. See Personal Credit Information Center <<http://www.zenginkyo.or.jp/en/pcic/pcic.htm>> (visited Nov. 13, 2000). One likely reason for the limited information is that lenders must have the customer's consent to submit information to that center. See *id.*

Efforts to rely on the kind of credit-scoring models that 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 generally is shared only within each sector (consumer-finance companies, *shinpan kaisha*, and banks). The only information that currently is shared industrywide is information about specific defaults. See *id.* Plans for more complete sharing of information are ongoing. See *Kokyaku Shinyô Jyôhō 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. On the other hand, the government at the same time is likely in the near future to enact privacy legislation that would restrict information sharing. See W.A. Lee, *U.S. Banks Urged to Meet E.U. Data Rules*, AM. BANKER, Oct. 24, 2000, at 1, 10 (reporting Japanese promulgation of a draft privacy directive similar to the European directive); *Jyôhō Tsûshin Senryaku Honbu* [Committee on IT Strategy Headquarters], *Kojin Jyôhō Kihon Hôsei ni Kansuru Taikô* [Consulting Report on Protecting Privacy] <<http://www.kantei.go.jp/jp/it/privacy/houseika/taikouan/1011taikou.htm>> (Oct. 11, 2000) (discussing plans to enact *Kojin Jyôhō Kihonhō* [Law Regarding the Protection of Privacy]). Given the relatively limited availability of information, it is impossible at this point to evaluate the effectiveness of that particular credit-scoring model: if it is properly designed, it would be a bold stroke of technological expertise; if not, it could be a cover that supports excessively risky

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 (about three times as large as) 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 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.⁹¹

In sum, the 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) Other Explanations

CAUTIOUS CONSUMERS.—The most obvious alternate explanation is the simplest, but also the least satisfying: Japanese cardholders by nature are more cautious, and averse to borrowing, than American consumers. Thus, you 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

lending. Only the vagaries of a downturn in economic growth can provide a definitive assessment.

⁹¹ See *supra* note 15 (discussing survey results regarding the amount of cash typically carried by Japanese).

higher predilection to save of the individual Japanese consumer.⁹² 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 system⁹³ (which might deter consumer lending).

That theory has several salient empirical difficulties. The first is the empirical fact that the size Japanese consumer-credit market does not in fact support the notion that Japanese consumers have a significantly higher aversion to borrowing. Indeed, if anything, the Japanese market is slightly larger per capita than the American consumer credit market. The American consumer credit market is now in the range of \$1.2 trillion (about \$4,400 per capita).⁹⁴ The Japanese market seems to be about ¥ 76 trillion (about

⁹² The American rate for some time hovered around 10%, 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, available at <http://www.asahi.com/english/asahi/0810/asahi081002.html> (visited Aug. 11, 2000) (reporting that Japanese working households save about 28.5% of their income (up from 20.9% in 1983), with Sheldon Garon, *Fashioning a Culture of Thrift: Promoting Saving in Twentieth-Century Japan* (unpublished 2000 manuscript) (reporting that the Japanese rate has leveled off around 13 percent). All reports indicate, however, that the rate is higher in Japan than it is in the United States.

⁹³ See *supra* note 90 (discussing that system).

⁹⁴ See *Federal Reserve Statistical Release G.19 (Consumer Credit)* (Jan. 8, 2001), available at <http://www.federalreserve.gov/releases/G19/Current/g19.pdf>; SULLIVAN, WARREN & WESTBROOK, *supra* note 6, at 258.

\$5,500 per person).⁹⁵ Thus, although it seems plausible that there are distinctively Japanese cultural constraints on consumer borrowing, it is not at all clear to me that those constraints operate any more effectively than the analogous American constraints.⁹⁶

Another problem is that it is not at all clear that the Japanese consumer-bankruptcy system is harsher in any cognizable way than the American system.⁹⁷ 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 1999.⁹⁸ 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.⁹⁹

⁹⁵ JCIA ANNUAL STATISTICS, *supra* note 57, at 30; *see also* Alexander, *supra* note 22, at 6 (presenting data illustrating that Japan since 1990 has had a higher ratio of consumer credit to disposable income than the United States).

⁹⁶ For discussion of the condemnation American culture holds for those who rely on borrowing to support spending beyond their income, see MANNING, *supra* note 7, at 2-3 (discussing the “nonmonetary price of debt”).

⁹⁷ For information on the Japanese consumer bankruptcy system, I am grateful to Professor Kent Anderson at Hokkaido University.

⁹⁸ 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 1990’s).

⁹⁹ *See* Administrative Office of the United States Courts, Bankruptcy Filings Down in Calendar Year 2000 (Feb. 23, 2001 news release) [copy 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, 2001 WL 3909819 (same). The American rate also has

The basic problem 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 because a higher percentage of its people save more, but still to have a similar amount of average consumer credit. For example, that could be true if either a higher percentage of Japanese non-savers use substantial amounts of consumer credit or if those Japanese non-savers who do use consumer credit use (on the average) more than the borrowers in the United States. I have not located any data that 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.

Although those empirical difficulties strike me as powerful, it doubtless would be an exaggeration to deny the existence of a Japanese preference for savings. Even as a theoretical matter, however, it is difficult to grant that phenomenon a causative effect on Japanese credit-card usage. First, although some scholars think that the higher savings rate reflects a special aspect of the Japanese personality,¹⁰⁰ others attribute it to other institutional features of the Japanese economy. For example, some scholars think the higher rate

been dropping for the last few years, which also undermines any effort to put great significance in the difference between that rate and the Japanese rate.

¹⁰⁰ And not necessarily a native aspect of the personality. See SHELDON GARON, *THE STATE IN EVERYDAY LIFE* 153-57, 171-77 (1997) (discussing government efforts to popularize thrift and savings in Japan after World War II); Sheldon Garon, *Luxury Is the Enemy: Mobilizing Savings and Popularizing Thrift in Wartime Japan*, 26 J. JAPANESE STUD. 41 (2000) (discussing government efforts to popularize thrift and savings in Japan during World War II); Garon, *supra* note 92 (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* (unpublished 2000 manuscript) [copy on file with author] (discussing empirical research indicating that savings education alters the habits of those subjected to it).

of savings is caused by the Japanese system for intergenerational transfers of wealth,¹⁰¹ while others view it (even now) as an artifact of Japan's stage of industrial development.¹⁰² 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.¹⁰³

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 done in the United States,¹⁰⁴ I am not aware of similar scholarship

¹⁰¹ For a thorough but ultimately inconclusive attempt to explain that phenomenon, see FUMIO HAYASHI, *UNDERSTANDING SAVINGS* ch. 11 (1997).

¹⁰² Richard Katz argues that consumers in the aggregate save more at earlier stages of Japanese development and thus that the post-WWII data suggesting higher savings by Japanese consumers is caused by Japan's place at an earlier stage in the development process during those years. See KATZ, *supra* note 42, at 141-42, 199-206.

¹⁰³ Assuming that the return on saved assets is less than the interest charges associated with consumer borrowing, it is arguably irrational for consumers with savings to borrow. Thus, the higher rate of savings in Japan might support a lower rate of borrowing – because fewer individuals would rationally borrow. It seems clear, however, that in both countries individuals with savings do borrow despite the interest charges that could be avoided by liquidating saved assets. Thus, that explanation seems incomplete.

¹⁰⁴ See, e.g., MANNING, *supra* note 7, at 101-24 (discussing the “cognitive connect” between income and current spending, and how its force diminished during the passage of the 20th century).

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 and that very little of it involves credit cards. 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.

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 TILA § 170, which generally preserves the right of American cardholders to present against the issuer any defense to payment that they would have against the merchant.¹⁰⁵ The parallel Japanese statute at first glance seems to provide the same protection, but it is limited to transactions that involve extended borrowing (*kappu*).¹⁰⁶ Because those transactions are a relatively small share of the Japanese credit-card industry,¹⁰⁷ 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.¹⁰⁸ 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.

¹⁰⁵ See generally MANN, *supra* note 2, at 125-38 (discussing those protections).

¹⁰⁶ Articles 30-4 & 30-5 of the Installment Sales Law of 1961, KAPPU HANBAIHÔ [Installment Sales Law], Law No. 159 of 1961; see also *supra* note 58 (discussing the definition of “*kappu*”).

¹⁰⁷ About 12.7% of 1998 transaction value. See JCIA ANNUAL STATISTICS, *supra* note 57, at 64.

¹⁰⁸ See TILA § 170(a); MANN, *supra* note 2, at 118 (discussing that aspect of TILA).

Again, because there has been no significant change in those laws in the last decade, the legal differences cannot explain the observed pattern.¹⁰⁹ More broadly, however, my impressions based on 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 with the protection that it is unlikely to be a significant motivation in their willingness to use credit cards.¹¹⁰ Furthermore, even if Japanese cardholders were aware of the limited formal statutory protection, it seems unlikely that they would be troubled, because informal government pressure has resulted in a system in which card issuers provide insurance that covers substantially all of the risk of loss from unauthorized transactions.¹¹¹

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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, or from fear of losses from stolen cards, but those factors cannot explain the changes in the market that have

¹⁰⁹ For minor revisions in 1999, see Hômon Hanbai tô Kansuru Hôritsu Oyobi Kappu Hanbaihô no Ichibu wo Kaisei Suru Hôritsu [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) <<http://www.miti.go.jp/english/report/data/gCD1101e.html>> (describing the purpose of the revisions).

¹¹⁰ See Telephone Interview with Michael Butts, CreditCard.com (Oct. 15, 1999) (transcript at 1) [transcript on file with author] (discussing rarity of claims under TILA § 170); Telephone Interview with Steven Klebe, Vice President, Payment Industry Alliances, CyberSource Corporation (Oct. 19, 1999) [hereinafter Klebe Interview] [transcript on file with author] (transcript at 6) (same).

¹¹¹ See *infra* note 119 (discussing the insurance).

occurred during recent years.¹¹² 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 principal reason that the Japanese credit-card industry looks so different from the U.S. one is that the exclusion of banks from the market hindered the development of products that would attract consumer use and borrowing. The system also has 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 seem to be 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 unauthorized transactions? On that point, the raw data suggests that Japan has a problem. Specifically, the fraud rate in the United States is about 0.06% (six cents per \$100).¹¹³ In Japan, by contrast, the

¹¹² One change that has occurred in recent years is the increased concentration of the retail-store market. I do believe that supports the growth of the credit-card market, but its effect seems to be much smaller than the effect of bank participation. For discussion of that effect, see *infra* note 152.

¹¹³ See *Card Fraud in the U.S. – 1999*, NILSON REPORT, June 2000 (Issue 718) [hereinafter *1999 US Fraud Data*], at 1, 4.

fraud rate is much higher, about 0.13 yen per 100 yen.¹¹⁴ Looking specifically to losses from forged cards, the Japanese rate of about 4.3 basis points is about three times the American rate of 1.3 basis points.¹¹⁵

One possibility I initially considered was that the high fraud is associated with the diminished statutory incentive for Japanese card issuers to prevent unauthorized transactions. Under the Truth-in-Lending Act, American issuers are barred by law from shifting the risk of unauthorized transactions to their cardholders¹¹⁶; Japanese issuers face no such constraint.¹¹⁷ It is possible, then, that the difference in legal treatment could lead to a lower level of care by

¹¹⁴ See *Kurejitto Ka-do Fusei Shiyô Higai no Hassei Jyôkyô* [Statistics on Losses from Unauthorized Credit-Card Transactions in Japan], GEKKAN SHÔHISHA SHINYÔ [CONSUMER CREDIT MONTHLY], 2000-5, at 7, 7 [hereinafter *Japanese Credit-Card Fraud Data*]. That rate is calculated based on ¥20.76 trillion of transactions for 1999. See *supra* note 55 and accompanying text.

¹¹⁵ The Japanese rate is calculated based on ¥9 billion of forged credit card losses, divided by the total ¥20.76 trillion of transactions for 1999, see *supra* note 55 and accompanying text. The American rate is calculated from *1999 US Fraud Data*, *supra* note 113, at 4, including losses from skimming, altered cards, and new counterfeit cards.

¹¹⁶ Truth-in-Lending Act § 133, 15 U.S.C. § 1643. That statute permits issuers to impose \$50 of liability on cardholders, but Visa and MasterCard both have generally agreed that their issuers will waive the right to pass that loss to the cardholders. See Lisa Fickensher, *Visa Shores up Web Position, Ends Fees on Theft of Card Numbers*, AM. BANKER, Feb. 22, 2000, at 1, 14 (Visa policy); <<http://www.mastercard.com/ourcards/zeroliability.html>> (MasterCard policy); see also RITZER, *supra* note 33, 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].”).

¹¹⁷ See Anonymous Interview Two, *supra* note 58; Anonymous Interview Three, *supra* note 58; Anonymous Interview Six, *supra* note 71.

the card issuer.¹¹⁸ 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 cover.¹¹⁹ Because they purchase that insurance from third-party insurers,¹²⁰ 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.

¹¹⁸ 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).

¹¹⁹ To be sure, the third-party insurance does not cover all types of unauthorized transactions. See Takayoshi Suefuji, *Kurejitto Kâdo Nyûmon* [INTRODUCTION TO CREDIT CARDS], GEKKAN SHÔHISHA SHINYÔ [CONSUMER CREDIT MONTHLY], 2000-8, at 74, 75 (describing insurance limited to theft and loss of the card). Moreover, it is limited to unauthorized transactions that occur no more than 60 days before, and no more than 60 days after, the cardholder advises the issuer of the loss. See *id.* It is possible that a few losses occur outside that window, especially if cardholders fail to examine their statements. Like the \$50 limit discussed in note 116 *supra*, however, those limitations seem to be widely ignored. Specifically, my interviews strongly suggest that issuers commonly cover losses whether the losses are covered by the insurance or not. The sole exception seems to be in cases in which the cardholder was seriously negligent in losing the card; even that possibility seems not to be commonly applied. See Anonymous Interview Two, *supra* note 58; Anonymous Interview Three, *supra* note 58; Anonymous Interview Six, *supra* note 71. 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 insurance typically provided is not adequate to provide appropriate protection to consumers. *Kâdo no Anzensei no Kakuho ni Tsuite* [To Ensure the Security of Credit Cards] (guidance sent from MITI to the Japan Consumer Credit Industry Association on July 31, 1979).

¹²⁰ The issuers normally purchase the insurance from third-party providers, but sometimes they self-insure. See Anonymous Interview Two, *supra* note 58; Anonymous Interview Three, *supra* note 58.

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.¹²¹ Similarly, the fraud problem in Japan is relatively recent; fraud losses in 1999 were 45% higher than they were just two years earlier in 1997, with 94% of the increase attributable to losses from forged cards.¹²²

It is more plausible to attribute the losses to exploitation of technical vulnerabilities in the Japanese system.¹²³ Most obviously, the Japanese system uses contemporaneous telephone authorizations much less frequently than the American system,¹²⁴ apparently

¹²¹ See *1999 US Fraud Data*, *supra* note 113, at 1, 4 (reporting drop in fraud losses from 16.1 cents to 6.0 cents per \$100).

¹²² See *Japanese Credit-Card Fraud Data*, *supra* note 114, at 12.

¹²³ The Japanese government apparently attributes the fraud losses to lax criminal laws and is responding in several ways. See *Lax Laws Made Japan Card-Forgery Haven*, NIKKEI WEEKLY, Apr. 24, 2000, at 4 (reporting plans to criminalize skimming and the possession of forged cards); *Govt to Crack down on Credit Card Crimes*, NIHON KEIZAI SHIMBUN, June 16, 2000 (same); *NPA Targets Credit Card Fraud*, JAPAN TIMES ONLINE, Oct. 6, 2000, available at <http://www.newsonjapan.com> (reporting plans for the National Police Agency to develop a system for analyzing fake credit cards to identify and locate professional card counterfeiters). As the discussion in the text suggests, I am skeptical of the significance of those legal problems.

¹²⁴ See Anonymous Interview Two, *supra* note 58. 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 39 and accompanying text (reporting 95% authorization rates for United States transactions). As a rule of thumb, it appears that until very recently many merchants were not doing contemporaneous on-line authorizations for transactions below ¥10,000 (about \$90 dollars). See Anonymous Interview One, *supra* note 58; Anonymous Interview Two, *supra* note 58; Anonymous Interview Four, *supra* note 58; Anonymous Interview Five, *supra* note 58. That ¥10,000 limit itself was implemented only in 1999, before which that floor

because of the relatively high cost of Japanese telecommunications.¹²⁵ 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.¹²⁶

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

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. *See* Anonymous Interview Five, *supra* note 58. One large bank-card issuer told me that about 30% of its transactions are not authorized because they fall below the floors. *See* Anonymous Interview Five, *supra* note 58.

¹²⁵ 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 (that is, transactions for which authorization is required by the merchant's agreement with the credit-card issuer). The interviews attribute that practice to the (not entirely implausible) view of the merchant that the cost of the authorization exceeds the potential fraud savings from the authorization. *See* Anonymous Interview Five, *supra* note 58; Anonymous Interview Seven, Tokyo (Oct. 16, 2000) [hereinafter Anonymous Interview Seven]. For example, if the telephone call costs 25 yen on a 10,000 yen transaction, it would make sense to call only if the likelihood of fraud was .25 percent, almost twice the typical Japanese fraud rate of 0.13 percent. *See supra* note 114.

¹²⁶ *See* MANN, *supra* note 2, at 113-14 (discussing the importance of contemporaneous transaction authorization).

or 2001 most department stores¹²⁷ and hotels in Japan will process transactions without any floor at all – seeking online authorizations for all transactions regardless of size.¹²⁸ 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

¹²⁷ 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 1999 in fact were relatively impervious to fraud. In the portfolio of one large credit-card issuer, department-store transactions accounted for less than 10% of 1999 fraud, although those transactions generally are 20-25% of volume. If there is a problem sector, it clearly is the electronics shop, which accounted for about 20% of 1999 fraud in the portfolio of that issuer and (based on mid-year statistics), about 33% of 2000 fraud in the portfolio of that issuer. See Anonymous Interview Four, *supra* note 58; see also Anonymous Interview Five, *supra* note 58 (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 119 (discussing problems at gasoline stations and highway-toll facilities); Anonymous Interview Four, *supra* note 58 (reporting that 10% of fraud in one large credit-card portfolio occurs at gasoline stations).

¹²⁸ See Anonymous Interview Seven, *supra* note 125.

brands.¹²⁹ Use of those brands gives the issuers access to all of the anti-fraud technology that has been effective in the United States.¹³⁰

But advances in anti-fraud technology cannot solve the problem entirely. Even contemporaneous authorizations are to some degree vulnerable to sophisticated cards created by skimmers (who obtain not only the card-account number, but also the other information on the magnetic stripe of the legitimate card). The only existing defense against those cards is the relatively vulnerable capacity of issuer-based expert computer systems to detect questionable patterns in the usage of cards.¹³¹ 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 transactions¹³² and its proximity to the locations where the most

¹²⁹ See Anonymous Interview Three, *supra* note 58. 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.

¹³⁰ 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 multi-color 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.

¹³¹ See MANN, *supra* note 2, at 111-12. *But cf.* David Breitkopf, *MasterCard Tests Device That 'Hears' Cloned Cards*, AM. BANKER, Mar. 7, 2001, at 6 (discussing an anti-fraud system that would recognize counterfeit cards based on unique fingerprint-like characteristics of each magnetic stripe, which produce detectably different sounds when the cards are swiped).

¹³² See *supra* note 125 (discussing that problem).

sophisticated card forgers seem to reside.¹³³ 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 system¹³⁴ must charge in the form of cardholder fees and discount fees¹³⁵ 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.

¹³³ 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 33, at 88 (suggesting that Hong Kong was a prime location for those facilities in the early 1990's). 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 125.

¹³⁴ 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.

¹³⁵ The discount fee is the fee that the merchant pays to its acquiring bank for each credit-card transaction. *See MANN, supra* note 2, at 115-16.

Thus, it is no surprise that the objective costs of the Japanese system seem to be significantly higher than those in the United States. First, the charges to cardholders, although no more uniform than in the United States, seem to be substantially higher. The United States charges are relatively low both because cards with no annual fees are quite common and because the frequent use of the card makes the fee per transaction very low (probably only a few pennies at most).¹³⁶ – 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.¹³⁷

Because of the wide variations in cardholder fees, my information on that topic is not particularly firm. The differences in the charges to merchants, however, are obvious and widely known within the industry. 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-a-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 percent.¹³⁸ Although it is difficult to get specific

¹³⁶ See EVANS & SCHMALENSSEE, *supra* note 16, at 165 (American credit-card issuers derive only 2% of their income from annual fees); see *supra* note 4 and accompanying text (discussing the relative frequency of American card use).

¹³⁷ See HARMER, *supra* note 75, at 132-33 (reporting data indicating that, excluding revenue from cashing commissions, 26% of credit-card industry revenue (37% 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 ¥ 1500 (a little less than \$15).

¹³⁸ See EVANS & SCHMALENSSEE, *supra* note 16, at 169-72 (discussing American Express discount fees).

information, the discount rates in Japan seem to be somewhat higher. Published sources suggest that rates often are above 5%,¹³⁹ but in fact rates seem to be quite a bit lower. Based on my interviews, my impression is that a typical rate is more commonly in the vicinity of 3-3.5%.¹⁴⁰

That difference seems much too large to be explained solely by the difference in fraud rates: the rate of fraud losses in Japan exceeds the United States rate by less than one-tenth of one percent of the gross amount of transactions,¹⁴¹ 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.¹⁴² 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.¹⁴³ 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

¹³⁹ See *Would-Be Net Banks Jockey for Position*, NIKKEI WEEKLY, May 8, 2000, at 12 (reporting discount rates of over 5%); *Debit Cards Getting Ready for Big Time*, NIKKEI WEEKLY, Feb. 28, 2000 [hereinafter *Debit Cards Getting Ready*], at 15 (reporting credit-card discount rates of 3-7%).

¹⁴⁰ Because of the highly proprietary character of discount fees, it does not seem appropriate to identify the specific bases for my impressions with regard to the United States or Japan.

¹⁴¹ See *supra* notes 113-115 and accompanying text (discussing fraud rates of 13 basis points in Japan and 6 in the United States).

¹⁴² 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 135.

¹⁴³ See EVANS & SCHMALENSEE, *supra* note 16, at 165.

have only recently been permitted to extend revolving credit.¹⁴⁴ 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.¹⁴⁵ 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.¹⁴⁶ Because American Express faces the same lack of interest income that Japanese issuers do, its discount rates provide a more appropriate benchmark for comparison.

¹⁴⁴ See HARMER, *supra* note 75, at 132-33.

¹⁴⁵ See HARMER, *supra* note 75, at 132-33. 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 16, 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 HARMER, *supra* note 75, at 132-33, and from the data for American Express in EVANS & SCHMALENSEE, *supra* note 16, at 165.}

¹⁴⁶ See *supra* note 138 and accompanying text (discussing American Express discount fees).

TABLE TWO
SOURCES OF REVENUE OF U.S. &
JAPANESE CREDIT-CARD ISSUERS

	VISA & MASTERCARD (U.S.)	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%	60%	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 40%), but there are such a large number of competitors of significant size that the market is relatively competitive,¹⁴⁷ in the sense that there is

¹⁴⁷ The market shares drop off rapidly after First Data: the second largest acquirer (Nat'l Processing) has a 13% share. But the number of significant players is impressive. In 1999 the top 87 companies processed more

extensive *intra-brand* competition notwithstanding the limited *inter-brand* competition.¹⁴⁸ And even if American Express is the sole way for a merchant to get access to *its* cardholders, history shows that the rates that American Express can charge are affected by the rates that the larger Visa and MasterCard systems charge.¹⁴⁹

In Japan, by contrast, a merchant that wishes to accept credit cards is confronted with a market featuring a large number of clearance networks with a relatively small number of potential acquirers in each market. Most merchants that accept credit cards find it necessary to make arrangements with several of the large Japanese systems, because most of those systems clear and process their own transactions: a typical merchant might accept a dozen or more different cards and some accept as many as 25.¹⁵⁰ Thus, for each of those systems, the merchant faces a single system operator with which it must reach an agreement.¹⁵¹ It should be no surprise if

than \$1 million of transactions per week. See 1999 US Acquisition Data, *supra* note 44, at 9.

¹⁴⁸ 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 and innovation in the American card industry. For an overview of the case and links to significant filings, go to <http://www.usdoj.gov/atr/cases/indx57.htm>. For a vigorous and scholarly rebuttal of the government's claims, see Zywicki, *supra* note 27, 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.

¹⁴⁹ See EVANS & SCHMALENSEE, *supra* note 16, at 169-73, 185-97 (discussing pressure on American Express merchant fees arising from the lower fees charged by Visa and MasterCard).

¹⁵⁰ See Anonymous Interview Two, *supra* note 58.

¹⁵¹ 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.

the charges in that market were higher than they are in the United States.¹⁵²

¹⁵² 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 & SCHMALENSEE, *supra* note 16, 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. Historically, Japanese law protected small retailers through a complex web of formal and informal constraints that limited competition among retailers so as to limit the growth and consolidation of retailers. See generally Frank Upham, *Privatizing Regulation: The Implementation of the Large-Scale Retail Stores Law*, in POLITICAL DYNAMICS IN CONTEMPORARY JAPAN 264 (Gary D. Allison & Yasunori Sone eds. 1993) (discussing the complex alliances among Japanese interest groups that finally led to the introduction of foreign competition and chain retail stores); Frank K. Upham, *Privatized Regulation: Japanese Regulatory Style in Comparative and International Perspective*, 20 FORDHAM L. REV. 396, 404-25 (1997) (same). As long as those constraints limited the size of the typical retailer, they lowered the profitability to any particular retailer of accepting credit cards, and thus indirectly should have lowered the market discount rate. As Mark West has pointed out to me, the rise of large chain stores and consolidation of retailers occurred at about the same time as banks were permitted entry into the credit-card market. Because that consolidation increased the average size of retailers, it increased the value to each retailer of accepting credit cards. Hence, to the extent there are fixed costs in the initial decision to accept credit cards (such as charges for an authorization terminal, see *infra* note 154), 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 seems to me at best difficult to predict that Japanese discount rates would be higher or lower than

On the other hand, that problem should be mitigated in the next few years, with the increasing tendency of all of the Japanese systems to issue cards with the Visa and MasterCard brand; cards with those brands can be cleared through any entity that is a member of those networks.¹⁵³ 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.¹⁵⁴

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 (as I have argued above),¹⁵⁵ 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.¹⁵⁶ That explanation does not

American rates. The point of the text is only that there are some market-structure reasons to explain the observation of higher rates.

¹⁵³ See Anonymous Interview Three, *supra* note 58.

¹⁵⁴ See *supra* note 149. 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 58; Anonymous Interview Seven, *supra* note 125.

¹⁵⁵ See *supra* pp. 17-18.

¹⁵⁶ 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*, forthcoming 54 VAND. L. REV. (May 2001) (discussing the mechanisms by which businesses are evaluated). That is much more difficult in Japan. See

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.¹⁵⁷ Thus, although the fraud problems discussed above suggest that the rates should never be precisely equal, it seems unlikely (taking account of limited revenue from credit transactions) that they will be substantially higher in the long term.

* * * * *

In the end, the credit-card systems of the two countries operate quite differently, in markets of different sizes with different constraints on the players, 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 many differences in the way

eCredit.Com To Start Real-Time B2B Credit Service in Japan, NIKKEI INDUSTRIAL DAILY, Nov. 1, 2000, available at <http://www.nni.nikkei.co.jp> (discussing the nascent state of Japanese business credit scoring); see also *supra* note 90 (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 152) – 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 58; Anonymous Interview Three, *supra* note 58. Such an exclusion would be almost unheard of in the United States, where the credit-card systems literally beg merchants to join and accept their cards. See Telephone Interview with Paul Confrey, Vice President, Electronic Commerce Planning and Communications, MasterCard (Nov. 10, 1999) [hereinafter Confrey Interview] [transcript on file with author] (transcript at 4).

¹⁵⁷ See, e.g., *Credit Industry White Paper*, *supra* note 83, at 14-15; Anonymous Interview Three, *supra* note 58; Anonymous Interview Four, *supra* note 58; Anonymous Interview Five, *supra* note 58; Anonymous Interview Six, *supra* note 119.

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

Credit cards, of course, are not the only card-based payment system. In the last few years, the use of debit cards has grown rapidly, especially in the United States.¹⁵⁸ 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,¹⁵⁹ with the result that funds for transactions that use the card are withdrawn from the account in one to two business days.¹⁶⁰ Most importantly, the funds are withdrawn from the account without further action by the cardholder. A corollary of that aspect of the cards is that debit-card transactions require some form of on-line connection: the merchant does not accept the card for payment until

¹⁵⁸ See *infra* notes 162-165 and accompanying text.

¹⁵⁹ See MANN, *supra* note 2, at 141-46.

¹⁶⁰ See MANN, *supra* note 40, 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 Nihon Debitto Kâdo Torihiki Suishin Kyôgikai Hômu Iinkai [Legal Committee, Japan Debit Card Promotion Association], *Debitto Kado no Shikumi Oyobi Sono Hôteki Wakugumi no Gaiyô (1)* [*The Structure and Legal Framework of J-Debit (1)*], 1573 KINYÛ HÔMU 12, 13-14 (2000); Kâdo Mâkettingu Kenkyûkai [Society for the Study of Card Marketing], *Debitto Kâdo Dônyû Katsuyô no Tebiki Q & A* [Q & A 100, Information About Debit Cards] qu. 27 (1999) [hereinafter DEBIT CARD Q & A].

the merchant can verify with the issuer that the issuer will remove funds from the cardholder's account to pay for the transaction.¹⁶¹

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 6% of all retail payment transactions.¹⁶² 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 32% of all card-based transactions.¹⁶³ Even though the debit-card transactions tend to be relatively small (about \$36, as opposed to \$76 for the average retail credit-card transaction),¹⁶⁴ they still accounted for 15% of the total transaction volume at the point of sale (with industry sources

¹⁶¹ See MANN, *supra* note 2, at 144-46 (discussing United States collection practices). For Japanese practices, see Article 2 of the model cardholder agreement [hereinafter J-Debit Cardholder Agreement] published at Nihon Debitto Ka-do Suishin Kyôgikai Hômu Iinkai [The Legal Committee of Japan Debit-Card Promotion Association], *Debitto Ka-do no Shikumi Oyobi Sono Hôteki Wakugumi no Gaiyou* (5) [*The Structure and Legal Framework of J-Debit* (5)], 1583 KIN`YÛ HÔMU 48-53 (2000) (reprinting a model cardholder agreement.).

¹⁶² See 1999 US Payment Systems Data, *supra* note 1, at 6.

¹⁶³ See 1999 US Card Data, *supra* note 3, at 1, 5.

¹⁶⁴ See *supra* note 48 and accompanying text.

estimating that they will account for one-third of that volume by 2010).¹⁶⁵

The Japanese debit-card system (J-Debit), in contrast, is used much more rarely. Specifically, J-Debit cards were used in December 2000 (the last month for which statistics are available) for just over 500,000 transactions, significantly less than one percent of all card-based transactions.¹⁶⁶ It is interesting that the average debit-card transaction – contrary to U.S. usage – is significantly larger than the average credit-card transaction: about ¥ 45,000 for the debit-card transaction (about \$400), as compared to ¥ 25,000 for the average credit-card transaction (about \$230).¹⁶⁷

The ¥ 40,000 figure is somewhat misleading, because it reflects a relatively small number of large securities transactions. News reports from *Nihon Keizai Shinbun* suggest that securities transactions averaging about ¥ 1,000,000 are about a third of all J-Debit transactions.¹⁶⁸ Even if that figure seems exaggerated, it is clear that the securities transactions are large and pull the average-transaction size up significantly.¹⁶⁹ Another large component of the

¹⁶⁵ See 1999 US Card Data, *supra* note 3, at 6.

¹⁶⁶ 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*].

¹⁶⁷ See *J-Debit Home Page*, *supra* note 166. The figure in the text is the average transaction amount over the entire year. That amount should be taken loosely, because it has varied considerably since March (when the full-scale program began), ranging from a high in June of ¥ 50,303 (\$450) to a low in September of 41,230 (\$370).

¹⁶⁸ See *Kokusai To Take Debit Cards for Securities Trades*, NIKKEI WEEKLY, July 10, 2000, at 16 (reporting that securities trades are 30% of nationwide debit-card usage and that the average transaction amount at two leading brokers (Nomura and Daiwa) is about ¥ 1,000,000).

¹⁶⁹ The only published data from J-Debit (which covers March, 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

transactions are relatively large transactions at electronics stores, doubtless driven by merchant desire to save money on credit-card transaction fees¹⁷⁰ as well as their desire to mitigate the risk of fraud.¹⁷¹ But even putting those unusually large transactions to one side, the average transaction would be in the range of ¥ 24,000 (about \$220),¹⁷² much larger than the average American debit-card transaction.

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

was ¥ 822,400. See Nihon Debitto Kâdo Suishin Kyôgikai [Japan Debit-Card Promotion Association], *Dai ni Fçzu Honkaku Tenkaikara Kagetu Debitto Kâdo no Riyâga Ôhaba Appu* [The Number of Payments Through J-Debit has Significantly Risen Since the Start of the 2nd Phase], CARDWAVE, June 2000 [hereinafter *J-Debit Transaction Breakdown Statistics*], at 52.

¹⁷⁰ 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 195-196 and accompanying text.

¹⁷¹ 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 127 (discussing problems with credit-card fraud at electronics stores). J-Debit statistics from March 2000 report that transactions at electronics stores were 34% of all transactions and that they had an average amount of ¥ 53,100. See *J-Debit Transaction Breakdown Statistics*, *supra* note 169, at 52.

¹⁷² Calculated from *J-Debit Transaction Breakdown Statistics*, *supra* note 169, at 52.

transactions, cash is being used in Japan for the smaller transactions for which debit cards commonly are used in the United States.¹⁷³

But that explanation seems a bit incomplete. The credit-card system faces similar differences, but it has had a substantial presence in Japan for decades. The debit-card system, however was only introduced in the spring of 2000. It is so strange to see a payment system used for about a quarter of all card-based retail transactions in the United States being introduced to Japan on a general basis only this year¹⁷⁴ 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 1960's,¹⁷⁵ debit cards gained a significant market share only in the mid 1990's (just four or five years ago).¹⁷⁶ 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.¹⁷⁷ 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 that the debit card in Japan ever will develop as successfully as the debit card in the United States. The basic problem is that neither of the two main market functions that the debit card serves in the United States present

¹⁷³ See *supra* page 34 (articulating a similar explanation for the relatively large size of Japanese credit-card transactions).

¹⁷⁴ A debit-card system called Bank-POS was introduced in Japan in 1984, but remained only as a local, barely used system partly because of regulations requiring prior written agreement for the transactions. The key event for the development of J-Debit was the lifting of such restrictions in 1998. See JAPANESE BANKERS ASSOCIATION, *supra* note 13, at 19.

¹⁷⁵ 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).

¹⁷⁶ See EVANS & SCHMALENSEE, *supra* note 16, at 298-300.

¹⁷⁷ See EVANS & SCHMALENSEE, *supra* note 16, at 306-15.

market opportunities as promising in Japan as they do 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. To the extent they 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, the debit card itself for many of us 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.¹⁷⁸ 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.¹⁷⁹ 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.¹⁸⁰ But Japanese

¹⁷⁸ Because debit cards are so much cheaper for merchants than credit cards (*compare supra* Table Two (at page 52) with *infra* notes 194-195 and accompanying text), it is rational for the merchants to permit cash withdrawals, even if those withdrawals increase the fees the merchants must pay to the bank for the transaction. Setting to the side the cost to the merchant of having the cash on hand (which seems unlikely to be large enough to alter the decision significantly), that would be true until the point at which the cash withdrawals increase the total discount fee to an amount greater than the discount fee would have been for a credit-card transaction. Because PIN-based debit cards often have fixed discount fees per transaction, it makes particularly good sense for merchants that accept those cards to use “cash-back” services as a way to promote debit-card use.

¹⁷⁹ *See supra* note 15.

¹⁸⁰ *See RITZER, supra* note 33, at 182.

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,¹⁸¹ when a cardholder pays by *ikkai barai* (as the overwhelming majority of Japanese cardholders do), the funds for the transaction are removed from the bank account without further action by the cardholder. Thus, the *ikkai-barai* card does not present nearly the same temptations to borrowing as the 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.

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-less¹⁸² Visa and MasterCard debit products.¹⁸³ For those cards, the fraud losses seem to be about the same as they are for regular credit cards (six cents per hundred dollars).¹⁸⁴ For

¹⁸¹ See *supra* notes 58-65 and accompanying text.

¹⁸² 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-1990's, however, do not require use of a PIN. For general discussion, see MANN, *supra* note 2, at 143-46.

¹⁸³ See 1999 US Card Data, *supra* note 3, at 7.

¹⁸⁴ See 1999 US Fraud Data, *supra* note 113, at 4 (aggregating fraud rates for credit cards and PIN-less cards).

conventional PIN-based debit cards, however, the fraud rate is much smaller, about a twentieth as big (0.3 cents per hundred dollars).¹⁸⁵

In the J-Debit system, by contrast, all transactions are PIN-based.¹⁸⁶ 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.¹⁸⁷ 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.¹⁸⁸ It is thus the first occasion at which the use of encryption has been crucial to safety of the system. Still, although it necessarily is difficult to evaluate the security of the system from the outside, the available information suggests that J-Debit is conscious of the need for reliable encryption.¹⁸⁹

¹⁸⁵ See 1999 US Fraud Data, *supra* note 113, at 4.

¹⁸⁶ See J-Debit Cardholder Agreement, *supra* note 161, art. 2.

¹⁸⁷ As of January 2001, J-Debit still reports no claims of unauthorized transactions in its system. See *Lower Debit Card Limits*, *supra* note 15 (no reports of fraudulent transactions as of January 2001); *Debit Card Usage Exceeds 100 Bln Yen in Jan-Oct*, NIHON KEIZAI SHIMBUN, Nov. 13, 2000, available at <http://www.nni.nikkei.co.jp> [hereinafter *Debit Card Usage*] (same as of October 2000).

¹⁸⁸ I use the term "open" to describe those networks because there are places from which customers (or interlopers) can access the network that are not within the control of the financial institution. See Naoyuki Iwashita, *Business Needs for Cryptographic Technology in Japan's Financial Industry* <<http://www.imes.boj.or.jp/japanese/kouen/n9903.pdf>> (discussing historical use of leased lines for ATM-card transactions in Japan).

¹⁸⁹ It appears that J-Debit contemplates encryption of transmissions from the merchant to the clearance center by the same DES encryption used in the United States. See Japan Settlement Information Center, Ltd. <<http://www>.

Observers also worry that PINs in Japan are not as secure as PINs in the United States, relying on surveys indicating that about 1/3 of Japanese use their birthdays as their PIN numbers.¹⁹⁰ 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.¹⁹¹ On the other hand, it is not nearly so clear how system operators can assuage the strong consumer perception that the system is unsafe.¹⁹²

jpsic.co.jp/servis2.html>; Iwashita, *supra* note 188, at 1 (discussing use of DES encryption for United States PIN transmissions).

¹⁹⁰ See *Debit Cards Getting Ready*, *supra* note 139, at 15 (“Critics also warn that personal identification codes can be stolen while being punched in at the store.”).

¹⁹¹ 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'Ū HŌMU 6-8 (Sup. Ct., July 19, 1993) (upholding a provision of a Japanese ATM-card agreement, holding that absent some special circumstance a bank is not responsible when somebody other than the cardholder withdraws cash from an ATM with the authentic card and correct PIN); with 15 U.S.C. § 1693g, Electronic Funds Transfer Act § 909 (limiting liability of debit-card holder for unauthorized U.S. transactions to \$50, unless the cardholder fails to report either the theft of the card or unauthorized transactions that appear on the cardholder's statement); Regulation E, 12 CFR § 205.6 (same). But the generally superior design of the Japanese system (that is, its universal use of PINs) suggests that those legal provisions are not unduly undermining the incentive of the Japanese operators to limit fraud losses.

¹⁹² See *Only 3% of Japanese Use Debit Cards on Security Worries*, NIHON KEIZAI SHIMBUN, Dec. 22, 2000, available at <http://www.nni.nikkei.co.jp> (reporting survey indicating that 48% of respondents cited security concerns as their primary reason for not using the cards).

The fact is, the United States systems that have used PINs for years have experienced very low rates of losses compared to card systems that do not use PINs. And even those rates seem misleading, because, according to industry observers, the losses are almost entirely attributable to so-called “friendly” fraud: unauthorized transactions by individuals (spouses, children, paramours) to whom the cardholders voluntarily delivered the card and PIN.¹⁹³ It seems surprising, but 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 anti-fraud 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.¹⁹⁴ In the

¹⁹³ Compare *Kono v. Otsuyama*, 1048 HANREI HANREI JIHÔ 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).

¹⁹⁴ See DEBIT CARD Q & A, *supra* note 160, qu. 54 (explaining that the discount rate varies based on negotiations between the acquiring bank and the merchant, and that it typically ranges from 1-3%). 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 142 (discussing relation between merchant discount fees and interchange fees in the credit-card context). In the J-Debit system, the interchange fee currently is 1%, with a floor of 3 yen and a ceiling of 100 yen. See *id.*

United States, a grocery store with a similar transaction probably would pay the equivalent of ¥ 15-20 (about 15-20 cents).¹⁹⁵

Although the fee for now is higher than the analogous fees in the United States, it seems unlikely to be a substantial problem. For one thing, even though the fee is higher than the analogous U.S. fee, it still is lower than the fee for any competing Japanese payment system.¹⁹⁶ For another, the rates have not yet stabilized during 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.¹⁹⁷

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.¹⁹⁸ That is the same many-acquirers/few-networks pattern that

¹⁹⁵ See Miriam Kreinin Souccar, *Despite Merchants, Off-Line Debit Taking Off*, AM. BANKER, June 9, 1999, available at 1999 WL 6036025.

¹⁹⁶ The fee is cognizably lower than the fee for a bank transfer, the other common method of non-cash consumer payment in Japan. See *supra* note 82 (discussing Japanese use of bank transfers). {It is difficult to generalize about bank-transfer fees, because the fee structures typically have several tiers and differ from bank to bank. The cheapest fees for transfers to an account at a different bank, however, typically exceed ¥100. See <<http://www.btm.co.jp/listj/tesuu.htm>> (fees for Tokyo-Mitsubishi Bank); <<http://www.fujibank.co.jp/jis/fb/service/tesuuryou.html>> (fees for Fuji Bank).} For comparison's sake, the J-Debit fee is considerably lower than the fees that Visa and MasterCard acquirers charge in the United States for their PIN-less debit-card products. Those higher fees have disturbed American merchants, but have not stopped the rapid spread of use of the cards. See Lisa Fickensher, *Visa Hires Exec To Strengthen Relationships with Merchants*, AM. BANKER, Mar. 12, 1999, at 8 (discussing a lawsuit brought by a group of merchants including Wal-Mart and Sears, against MasterCard and Visa, challenging the rules requiring merchants to accept the PIN-less debit-card products issued by MasterCard and Visa members).

¹⁹⁷ See Anonymous Interview Eight, Tokyo (Sept. 28, 2000) [hereinafter Anonymous Interview Eight].

¹⁹⁸ See Anonymous Interview Eight, *supra* note 197.

United States merchants face when they want access to credit-card networks.¹⁹⁹ 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.²⁰⁰

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.²⁰¹ At this point, it is difficult to believe that those relationships will be sufficiently strong to permit banks to charge uncompetitive rates to related-company merchants for their debit transactions. If one bank charges significantly better rates for the service than its competitors, it is highly likely to obtain a substantial share of the market.²⁰² 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 (discussed in the next section) makes the transactions safer (at least compared to credit-card transactions); and (b) the funds are removed from the account much

¹⁹⁹ See *supra* notes 147-148 and accompanying text.

²⁰⁰ See Anonymous Interview Eight, *supra* note 197.

²⁰¹ See HARMER, *supra* note 75, at 142-43.

²⁰² See *DKB Dominates Debit Card Deals*, NIHON KEIZAI SHIMBUN, Oct. 19, 2000, at 1, 1 (reporting that Dai-Ichi Kangyo Bank has succeeded in becoming the sole or primary provider of debit-card settlement services for 54% of the merchants in the J-Debit program).

more rapidly. Neither of those differences benefits cardholders significantly, so neither is likely to push consumers toward the card rapidly. Moreover, consumer fears of losses from inadequate security (whether or not rational) could hinder the system even more.

Thus, although the system is much cheaper for the parties to transactions, much more secure, and much more accommodating to any Japanese preferences 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 may languish as a relatively minor system, as it did in the United States for so many years.²⁰³

IV. CONCLUSION

The basic message of this paper is a simple one: institutions matter. Financial systems that develop in one country cannot be transplanted without change to other countries 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 develop of payment systems that can have harmful effects on those that use them.

²⁰³ See *supra* note 175 and accompanying text.