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A RAND NOTE

The Development and Structure of Consumer Credit in Japan

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June 1989

Published by The RAND Corporation
1700 Main Street, P.O. Box 2138, Santa Monica, CA 90406-2138

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N-2902

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PREFACE

The study on which this Note is based is part of the research program in international economic policy within RAND's National Security Research Division.

Statistical Limitations. Statistics to support this analysis were available, for the most part, through 1987. Limited data through 1988 permitted the identification of significant recent developments in the banking sector, but the general conclusions rest on the 1987 cutoff date. Because of the inevitable evolution of institutions and markets, the authors have attempted to seek out fundamental issues that lie behind the ever-shifting aspects of current data.

Definition of Terms. Japanese statistics and usage make a distinction between "sales credit" and "personal finance." "Sales credit" applies to loans or contracts granted to facilitate particular purchases. "Personal finance" refers to loans of money directly to consumers, and is not tied to a specific purchase. The term "consumer credit" will be used in a more generic sense to cover both meanings.

Sales credit is often broken down into two types: installment credit and revolving credit. Installment credit usually involves a contract between the consumer and a retailer or finance company in which the number of payment periods and payment amounts are explicitly specified. In revolving credit, repayment schemes are more flexible; customers are usually given the option of paying their bills in full within approximately one month without the addition of any finance charge, or of paying at least a specified minimum amount and carrying over the remaining balance to the next period with interest charges applied to the unpaid balance. Installment credit and revolving credit are both forms of extended credit.

Monthly settlement accounts are forms of credit that must be repaid within a period of about one month; so-called "travel and entertainment" credit cards (such as American Express cards) fall into this category in the United States. Interest is not generally charged to such accounts, but fees may be paid by a retailer on each transaction and the cardholder often is charged a fixed annual amount.

Research Approach. The authors approached the subject from several different paths to enable them to compensate for the deficiencies in one approach by the strengths of another. The research combined the following elements: (1) interviews with a dozen firms and organizations representing the major actors in the Japanese consumer credit sector; (2) interviews with Japanese government officials in the ministries with regulatory or supervisory responsibilities--the Ministry of Finance (MOF) and the Ministry of International Trade and Industry (MITI); (3) collection and analysis of Japanese data; (4) collection and analysis of U.S. data for comparative purposes; (5) review of business magazines and newspapers; and (6) review of scholarly journals and research reports.

The business press supplied historical context and background to support our interviews. The articles on consumer credit in the academic literature furnished an analytical structure that helped to organize the concrete details and anecdotes gained from the interviews. The interviews, however, were essential to gaining an understanding of a complex subject; the knowledge and expertise of many people in Japanese industry and government were critical to this study.

SUMMARY

Overview. The primary goals of this study are to describe and analyze the development, structure, and regulation of consumer credit in Japan, and to identify significant laws, regulations, or ministerial guidance that may restrict consumer credit markets and constrain the behavior of Japanese households. Interest in consumer credit stems from the presumed links between credit and household saving, and between saving and the current account trade balance. A secondary goal of the study therefore, is to assess the links between household credit and saving.

The inflation-adjusted value of outstanding consumer credit has grown at an annual rate of 10.5 percent from 1967 to 1987, but in the past decade, credit has penetrated much more deeply throughout the population and the economy. By 1987, 110 million credit cards circulated compared to less than 20 million a decade earlier, and the ratio of consumer debt to disposable income climbed from 6.5 percent to 15 percent.

Participants and Structure. The principal participants in the consumer credit market include: banks; consumer loan companies (*sarakin*) specializing in small, unsecured loans to individuals; sales finance companies (*shinpan*), which grant sales credit for specific purchases; and retail establishments and their credit subsidiaries.

The market share of the personal finance companies grew rapidly from the mid-1970s to 1983, when new interest rates ceilings and Ministry of Finance (MOF) guidance sharply curtailed their operations. Their market share, which grew from 4 to 14 percent, subsequently declined to less than 7 percent. The sales finance companies became the dominant credit institution with explosive growth through 1985 when they achieved a 27 percent market share. Since then, their share has fallen victim to competition from banks, whose consumer lending doubled from 1986 to 1988. Bank credit is now more than 25 percent of the market. The share of retail credit has fallen steadily over the past decade from almost one-third of all consumer credit in 1976 to 14 percent in 1987.

The large financial companies (especially banks), which are able to raise funds efficiently and cheaply in the money markets or through deposits, are now dominating Japanese consumer credit. Economies of scale in transactions processing, telecommunications, software, and information also have influenced this trend. The banking sector is now the leading player in the market.

Credit card sales have grown by almost 14 percent annually from 1976 to 1987. However, the outstanding stock of credit card debt actually fell from 15.3 percent of total sales credit to 13 percent, largely because of a drop in the average maturity of credit card debt from four to three months, primarily because of the rising importance of bank credit card debt, which has an average maturity of only 1.5 months.

Regulation and Control. For 30 years, from the end of World War II until the late 1970s, law, regulation, and ministerial guidance tightly controlled the Japanese financial sector. Interest rates, lending policies, industry structure, and financial products were governed by a network of policy instruments whose aim was to encourage exports and household saving, and to channel these savings to industrial reconstruction and investment. By the mid-1970s, a slowdown in industrial investment and other domestic pressures stimulated a gradual deregulation of the Japanese financial system. Consumer credit had also been subject to a variety of regulations that affected the volume and structure of credit markets: for example, an interest rate ceiling made most consumer lending unprofitable, and MOF guidance discouraged such loans.

Two laws currently have observable consequences for the structure of the consumer credit market: (1) a law imposing interest ceilings on personal loan company lending; and (2) a ban on banks offering extended credit for purchases. Although the ceiling on consumer finance companies affected the volume of lending when it first went into effect in 1983, competition from other lenders subsequently drove down interest rates to levels below the legal limits; current evidence suggests that the ceilings are not now binding contracts.

The "Installment Sales Law" regulates extended sales credit. The law assigns oversight responsibility to the Ministry for International Trade and Industry (MITI), specifying that small and medium sales finance companies must be protected. MITI interpretations of the law and of Diet debate ban banks and other financial companies from providing extended sales credit; bank credit cards thus cannot be used in the purchase of goods except under a monthly settlement repayment method. Both MITI and MOF are exploring ways to deregulate this part of the credit market, with banks seeking greater freedom in providing sales credit and the sales finance companies fighting deregulation through vigorous lobbying in MITI, the Diet, and the ruling Liberal Democratic Party. Banks have attempted to get around the regulatory restriction by promoting "card loans" that allow borrowers to obtain cash through automatic teller machines and repay the amounts over an extended period; this cash can then be used to make desired purchases. Banks have also developed direct lending to households to finance larger transactions such as automobiles and education. Elimination of the regulatory barrier would not likely have a major effect on aggregate consumer credit, primarily because consumers already have easy access to credit of all kinds from many different types of institutions, but deregulation would increase the competition between banks and sales finance companies, perhaps reduce borrowing costs, and probably increase the banks market share.

Future Trends. The combined effects of reduced industrial demand for investment funds and financial deregulation allowed the consumer credit market to expand in scale and economic importance since the mid-1970s. This market is now moving toward a new unconstrained equilibrium. We used the life cycle model of household behavior and a thirty-year old approach to analyzing the U.S. credit market to predict an equilibrium ratio of Japanese consumer credit to disposable income. Japanese data from the 1976-1986 period suggest that the stock of outstanding credit will grow to approximately 22 percent of disposable income, which is roughly equal to the U.S. value. Japanese households should reach the equilibrium level some time before 1995.

Credit and Saving. Theoretical analyses of a simplified economic model suggest that there are no long-term effects of the level of consumer credit on saving and consumption, although during a period of adjustment the saving rate may be depressed by the rate of increase of outstanding credit. Analysis of more complex models leaves the relationship more ambiguous, with outcomes determined by a mix of motivations and processes. Empirical studies of this link find little or no evidence of an effect of credit on expenditures. We estimate that during the Japanese period of adjustment to a new equilibrium (roughly from the mid-1970s to the early 1990s), Japanese saving as a proportion of disposable income is reduced by approximately 0.8 percentage points, although this figure is at best an educated guess.

Conclusions. The development of Japanese consumer credit is one of the results of the transformation of the Japanese economy, which became evident in the mid-1970s. The past decade has set the stage for a structural reconfiguration of credit markets in which the banking sector is now the key player. Consolidation is likely to reduce the number of peripheral players because of the growing importance of efficiency in transactions processing and the acquisition and management of funds. Both the growth of the market and its structural development are occurring independently of government policy, although government can influence the detailed shape of the final outcomes.

The growth and development of Japanese consumer credit marks another step in the maturation of the Japanese economy.

ACKNOWLEDGEMENTS

This study could not have been completed without the cooperation, knowledge, and time provided by the many people we interviewed in Japanese government and industry. We gratefully acknowledge their contributions.

Also, our RAND colleague and reviewer John Nachbar identified analytical errors, clarified our meanings, and suggested organizational revisions to help improve an earlier draft. His thorough critique made a substantial contribution to the shape of this Note.

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I. INTRODUCTION AND OVERVIEW

Research Questions and Organization of this Note. Our interest in Japanese consumer credit stems from the presumed links between credit and household saving, and between saving and the current-account trade balance. Many economists view the large Japanese current-account trade surplus as arising in large part from "excessive" household saving. Therefore, the forces promoting or impeding the development of consumer credit and the possible effects of credit on the allocation of disposable income between consumption and saving form an important part of the understanding of the trade picture.

The research on which this Note is based had primary and secondary goals. The primary goals were to describe and analyze the development, structure, and regulation of consumer credit in Japan, and to identify significant laws, regulations, or ministerial guidance that may restrict consumer credit markets and constrain the behavior of Japanese households. In order to accomplish these goals, it is necessary to understand the structure of the market: the players, the services they offer, the forces shaping the structure, and the way in which the structure is changing. In addition to elucidating the details of the market, it is also necessary to consider the broader forces acting on the aggregate relationship between household debt and income, whether that relationship is changing, and the economic implications of such changes. It is the combination of the structural development patterns of the consumer credit market and the aggregate demand and supply of credit that governs the overall development of household consumer credit.

A secondary goal of the study was to assess the links between household credit and saving. Although we do not arrive at final and definitive conclusions on this complex subject, we review some relevant theoretical notions and empirical evidence in order to better inform our consideration of the relationship between credit and trade balances.

These goals suggest a logic for the structure of this Note. We first describe the actors in the credit market. We are then able to consider the question of regulation and whether it may have affected the different players and the development of the supply of credit as a whole. Once we have an appreciation of regulation on the growth of credit, we look at the relationship between aggregate credit and income. Finally, and somewhat independently of the preceding analyses, we consider the effects of consumer credit on consumption and saving. But to begin with, we start with an overview of credit developments over the past several decades.

Overview of Post-War Developments. Post-World War II Japanese economic reconstruction and growth was financed largely by household savings. The savings of the business sector--generated by retained earnings and depreciation allowances--were insufficient to finance the enormous investment undertaken to support the development of a modern industrial economy. The government, through its tax and regulatory policy, encouraged high levels of household saving, a banking industry focus on industry, and a government budget balance or surplus, which could itself be lent or given to industry. Industry's voracious appetite for investment absorbed this huge volume of household and government saving.

An accounting identity equates an economy's net saving (gross saving minus investment) to its external current-account trade balance.[1] From 1950 until around 1975, the sum of the net saving of the household, business, and government sectors was in rough balance with saving equal to investment--thus yielding an overall balance in foreign trade. (The trends in sectoral net balances are shown in Fig. 1.)[2] This balance began to erode in the 1970s when industry's investment fell from its post-war reconstruction levels; simultaneously, inflation, produced by the increase in petroleum prices, eroded the real value of household

[1]The supporting data for this analysis are taken from Edward J. Lincoln, *Japan: Facing Economic Maturity*, The Brookings Institution, Washington, D.C., 1988, Table 3-1 (p. 72) and Table 3-2 (pp. 76-77).

[2]Tables providing data shown in the figures are included in the appendix.

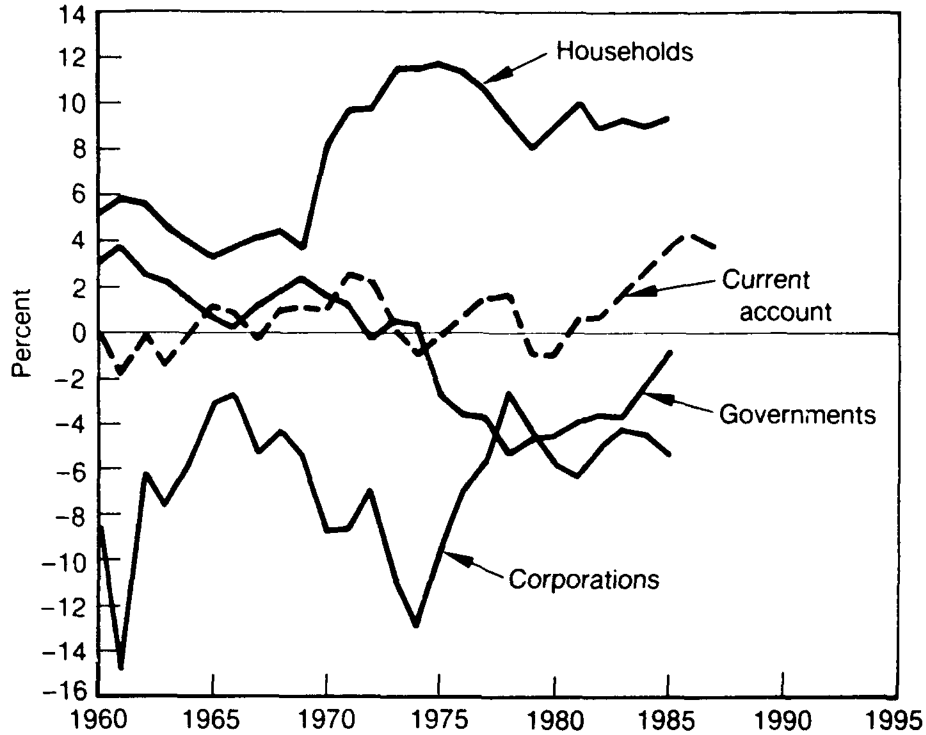

Fig. 1--Japan's saving-investment balance by sector, and current account balance

stocks of savings, which were not indexed to the price level. Households increased their saving rates to maintain their desired savings stock and to guard against a more uncertain future.[3] The government's surplus turned to deficit as a result of the post-oil crisis recession of 1974, but its demand for increased funds was more than offset by the declining demand from industry. The result of these shifts in the supply and demand for saving was a positive sum of net saving in the economy in all but two years since 1976, and a consequent surplus in the trade accounts--a surplus that grew to more than four percent of GNP in 1986. This trend has been reinforced by government sector budgets that have moved from deficits (amounting to more than 6 percent of GNP in 1977) to a position of near balance in 1986.

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[3]The ratio of household saving to disposable income fell back to the pre-oil crisis level by 1983. It is not clear why household net saving as a proportion of GNP did not also fall.

Although the net-saving/trade-balance accounting relationship merely describes rather than explains economic behavior, household saving has often been singled out as a key explanatory variable of the Japanese current account surplus in the 1980s.[4] According to this view, industry investment is determined by economic growth, and government deficits and surpluses by economic cycles of recession and recovery.[5] With business and government balances determined by long-run exogenous factors, household decisions on the allocation of disposable income between consumption and saving, and especially the high saving rates prevailing since the mid-1970s, became the driving force behind the Japanese trade imbalances.

Liberalization and deregulation of the financial sector in Japan has been proceeding for more than a decade. The household sector, though, has been the last to be involved in this process. Nevertheless, the financial pressures resulting from the major changes in sectoral supply and demand for funds have brought about substantial shifts in the availability of financial resources. For ten years, households have expanded their use of credit under the double impetus of deregulation and increased availability, and are moving toward an equilibrium that is still probably a decade in the future. The growth of consumer credit is part of the dramatic refashioning of Japanese financial markets as they adjust to altered market forces arising from the end of the post-war economic recovery.

Consumer Credit Trends. The value of outstanding consumer credit in Japan grew at an annual rate of 14 percent from 1976 to 1987 in nominal terms, at a 10.5 percent rate after adjusting for inflation, and 7.6 percent as a ratio to household disposable income. (See Fig. 2 for

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[4]Alternative interpretations of this relationship and empirical tests of the household saving link to the foreign trade balance are treated in Kazuo Sato, "The Role of the IS Balance and Its Macroeconomic Implications: The Case of Japan," *Journal of the Japanese and International Economics*, Vol. 2, No. 3, September 1988.

[5]An important element in this analysis is the assumption that the structure of government taxes and expenditures is stable. Of course, this structure could also be changed, so that over the long run the government balance is not exogenous.

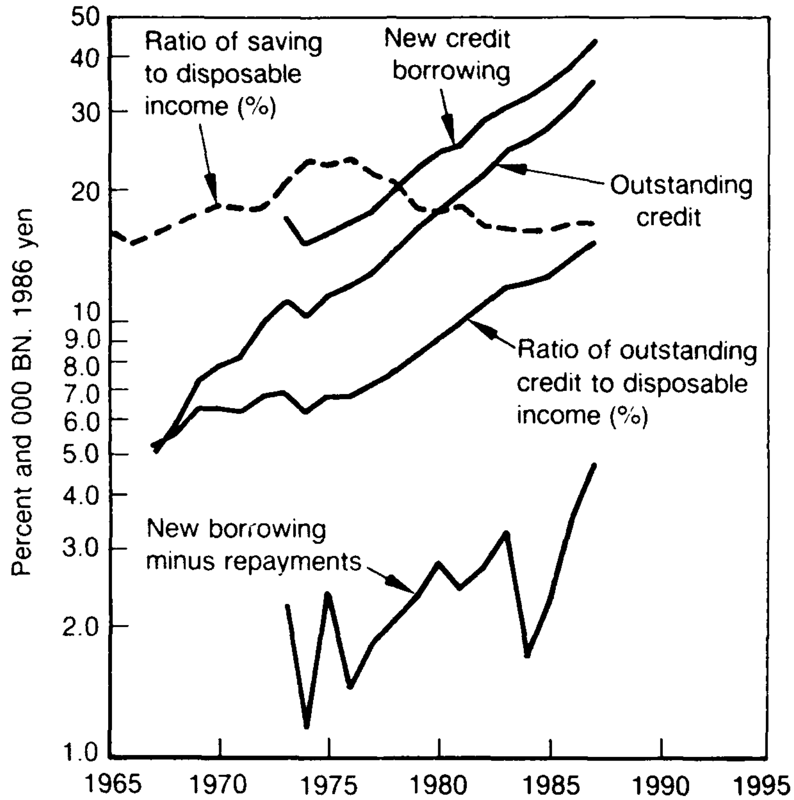

Fig. 2--Japanese household credit and saving

trends in consumer credit and saving.) It would be a mistake, though, to assert that this phenomenon had no roots; in the period 1967-1976, the real growth of the stock of consumer credit increased at about the same pace as in the following decade, at 10.4 percent annually. The real difference in the periods is that more recently credit has outpaced the trend in income and penetrated much more deeply throughout the population and the economy. By 1987, for example, 110 million credit cards were in circulation compared to fewer than 20 million a decade earlier, with more than one out of two Japanese people over 18 years old possessing at least one card.

Housing loans have grown at a similar pace. The real value of households' holdings of mortgages grew by 9.7 percent annually from 1976 to 1987, and the ratio to disposable income doubled over this period from 16.3 percent to 34.1 percent.[6]

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[6]Data on consumer credit and housing loans come from the Japan

Household saving as a ratio to disposable income (also shown in Fig. 2) clearly demonstrates the sharp jump in saving in the 1970s noted earlier, and the gradual decline to pre-oil shock levels over the next ten years.[7] The behavior of the saving rate appears to be independent of the movement of consumer credit and housing loans. We shall return to this relationship in the final section of this Note.

Consumer Information Sources

In 1984, the facilities in Japan for checking the credit history, income, and other personal characteristics of individuals for credit screening purposes was virtually undeveloped. Although a few organizations operated in the field, their information was sparse, the separate organizations were poorly linked to each other, and the computer and teleprocessing equipment was relatively primitive. Almost every article and interview on consumer credit highlighted this deficiency. However, the burgeoning market created pressure for credit information and within a very short time three interlinked organizations were in full-scale operation.

Credit information on individuals must be shared among diverse users to maximize its usefulness and operational effectiveness. Information on an individual's overdue loan at one bank should be available to other banks as well as to money lenders, sales finance companies, and other grantors of consumer credit. Because cooperation in the provision and use of such information is beneficial to all participants, industry associations have promoted the cooperative development of credit information networks, with the encouragement of the Japanese government.

Consumer Credit Industry Association. Consistent time series on aggregate consumer credit are available from 1967 to 1987; detailed sub-categories are consistent from 1976. A major redefinition and changes in information collection procedures render earlier information inconsistent with the new series. Housing loan data were obtained from the same source and are the most comprehensive data on household borrowing from both private and government lenders. This time series is only available back to 1976.

[7]Fig. 2 shows the ratio of saving to disposable income, whereas Fig. 1 plotted the ratio of net saving (saving minus investment) to GNP.

Three major credit information bureaus now exist under the aegis of the principal industry associations: the Federation of Bankers Associations representing the banks, other financial institutions, loan guarantee companies, and mortgage lenders; the Federation of Credit Bureaus of Japan acting for the sarakin; and the Japan Consumer Credit Industry Association with membership drawn from sales finance companies, department stores, retailers, credit card companies, and finance companies affiliated with automobile and appliance manufacturers. We will describe the last organization as an example of the rapid growth of this capability.

The Credit Information Corporation was formally established in September 1984 in a merger of the electric appliance manufacturers credit information institutions and other small credit bureaus belonging to the Consumer Credit Industry Association. This merger occurred following MITI'S advice and guidance on the necessity of consolidating and expanding this function. Business started seven months later, in April 1985, with the assistance of MITI and the computer suppliers, and the advice of the leading U.S. company in the credit information field. Development was said to be smooth, with no major startup problems. Inquiries initially ran at about 1.7 million per month; this volume has now grown to 6 million. Information is held on about 35 million individuals. Negative information only (overdue debts, bankruptcy) is shared with the other major information bureaus. Negotiations on more extensive sharing of information are ongoing, and greater unification of the network is likely in the future.

Our interviews with major credit companies indicated that information is no longer the problem it was only four years ago. The clear need, government urging, a working U.S. model on which to base designs, and the availability of computers and telecommunications, allowed the development of this capability in a relatively brief period.

Table 1

JAPANESE BANK LENDING TO INDIVIDUALS, SELECTED YEARS
(percent of total outstanding loans)

	All Loans to Individuals				Installment Loans to Individuals			
	City Banks	Regional Banks	Sogo Banks	Shinkin Banks	City Banks	Regional Banks	Sogo Banks	Shinkin Banks
1975	7.7	10.5	13.4	16.0	NA	NA	NA	NA
1978	10.2	14.6	16.5	21.7	0.4	1.1	1.1	1.5
1986	11.1	12.6	18.9	21.3	0.6	1.1	4.2	2.5
1988	15.7	14.3	22.1	22.8	2.3	2.6	7.8	4.3

NOTES: NA = not available. The source for total lending of banks and lending to individuals is the table "Outstanding Loans and Discounts of All Banks by Industry;" consumer credit of banks is taken from the table "Housing Credit and Consumer Credit (Installment Repayments) Part B, Funds for Purchasing of Consumer Goods and Services;" both found in *Japan Statistical Yearbook*, Prime Minister's Office, various years.

pressures operating on the city banks also affected their smaller country cousins.

The regional banks typically had a somewhat stronger focus on individual banking than had the city banks; in 1975, they put out 10.5 percent of their loans to individuals, a figure which rose to 14.6 percent in 1978, and then receded to 12.6 percent by 1986. Throughout this period, a stable proportion of just over 1 percent of their loans went to consumer credit (excluding housing). This share is considerably greater than the 0.5 percent going to consumer credit from the city banks.

Two obstacles restricted easy bank entry into the household market. (1) Consumer credit information was inadequate to support a vigorous expansion. (We shall treat the development of credit information in greater detail, below.) And (2), banks lacked the managerial and organizational infrastructure to engage in retail lending. Procedures, personnel training, computer processing software, branch office structure, and unfamiliarity with the market acted as barriers to quick expansion. Also, certain mental blinders had a retarding effect on management decisions. For example, Japanese banks have prided themselves on keeping their losses from bad debts close to zero. In the period of high industry demand for funds, banks could do this by careful screening of customers. The president of Fuji Bank admitted recently that fear of bad debts had kept banks from vigorously exploiting the consumer market. He called for an "awareness revolution", in which "a bank must be prepared to take a certain amount of losses".[1] However, know-how on screening borrowers and methods for loan recovery were undeveloped, and Fuji Bank had a "bitter experience" with its first venture into aggressively marketing automobile loans. Despite this setback, Fuji is placing its "first priority on the retail field of individuals and smaller businesses."[2]

One relatively painless method for the city banks to move into retailing credit to individuals was through the promotion of credit cards. The development of the necessary infrastructure could be placed in the hands of the experienced credit card companies such as JCB (Japan Credit Bureau), Visa, or Mastercard. Computer facilities, communications links, software, point-of-sale devices, personnel, screening of borrowers, and all the other investment necessary to conduct millions of transactions would not have to be the banks' responsibility. Credit cards also accomplished the task of reaching a very large number of potential users with less inconvenience to a borrower than was faced by applying for a personal loan from a local bank branch.

The chief impediment to banks in their promotion of credit cards is that Japanese law is interpreted as not permitting banks to offer extended credit on purchases made with credit cards. Bank-issued cards are monthly settlement cards, whereas the law authorizes credit cards issued by stores or by consumer credit companies to provide for

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[1]Fuji Bank's Bold New Strategy", *Tokyo Business Today*, April 1988, p. 12.

[2]"Banks Look to Domestic Market," *Tokyo Business Today*, March 1988, p. 22.

revolving credit. This distinction is one of the few laws affecting the growth of credit and will be discussed in greater detail below.

Despite banks' inability to charge interest on credit-card financed purchases, they have promoted "card loans", in which consumers can withdraw cash from automatic teller machines up to a previously established line of credit. Since such loans are not directly associated with a specific purchase, banks are free to collect interest on them and to offer extended periods of repayment. The banks are also looking to the future when they expect current restrictions to be removed; at such time, they will be in a position to capitalize immediately on their millions of previously issued cards and on the credit experience gained by their clientele. In addition, banks--and the entire financial community--see credit cards as camouflage enabling them to avoid the Japanese antipathy toward personal debt. Personal use of a credit card, especially if the balance is paid off monthly, is portrayed as a convenience--not an instrument of debt. But as more people hold cards, use them, and become familiar with the process, the banks expect that increasing numbers of consumers will gradually begin to use their cards for installment purchases, for card loans, and for other kinds of borrowing. Moreover, the banks are planning to build on this card-based experience to enable them to participate more broadly in other areas of consumer credit. As we will see below, this indeed is what is now happening.

Mutual Banks and Credit Associations. The 70 mutual loan and savings banks (*sogo* banks) and more than 450 credit associations (*shinkin* banks) were both originally mutual credit organizations, owned by their depositors. The sogo banks, however, became corporate institutions in the early 1950s. These institutions have filled the gap at the smaller end of the market left by the city and regional banks' concentration on the larger customers. Their extensive branch structure at the regional level gives them good access to local business and consumers; in 1986, the sogo banks had 4313 branches, shinkin banks had 7355, and the city and regional banks had 3210 and 7022 respectively. The sogo and shinkin banks have devoted more of their resources toward consumers over the years than have the commercial banks. In 1988, sogo bank loans to individuals were 22 percent of their total loans outstanding, up somewhat from 16.5 percent ten years earlier. Almost 8 percent of their loans were in consumer credit. The shinkin banks over the past ten years have had over 20 percent of their loans to individuals, but only 1.5-2.5 percent in consumer credit, per se. This proportion, however, almost doubled in 1988.

With the incursions of the large city and regional banks into the customary preserves of the local institutions, the financial health of the latter has been called into question. When, in 1986, Sumitomo Bank took over the ailing Heiwa Mutual Bank, one of the reasons cited for Sumitomo's interest was the extensive branch structure of the sogo bank and its good relations with the consumer market.

Industry observers and Finance Ministry officials are predicting that more such mergers are likely to occur in the next several years, with the sogo banks disappearing as a distinct class. MOF has authorized sogo bank conversion to ordinary bank status in 1989. In face-to-face competition with the city and regional banks, some kind of consolidation is likely to occur.[3] Should this take place, the financial power of the commercial banks will become more closely allied with the branch structure and retail banking experience of the sogo banks, to the benefit of consumer finance.

An example of such a trend was the 1987 agreement in which Citibank and Tokyo Sogo planned to cooperate in offering personal financial services. Citibank will provide retail banking know-how to Tokyo Sogo and receive support in its credit card operations.[4] Tokyo Sogo also joined with JCB and 88 shinkin credit associations to issue credit cards; this move represents an expansion from Tokyo Sogo's former exclusive link with Mastercard's Million card and the credit association's issuing of Visa cards.[5]

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[3]"Sogo Banks Conversion", *Japan Economic Journal* (special survey "Tokyo Financial Markets"), Winter 1988, p., 14.

[4]"Tokyo Sogo to Aid Citibank Card Service, Receive Retail Banking Expertise", *Japan Economic Journal*, April 11, 1987, p. 2.

[5]"JCB to tie up for credit card business," *Japan Economic Journal*, October 29, 1988.

Consumer Loan Companies (Sarakin)

Consumer loan companies provide direct loans to individuals. They are also called consumer finance companies, moneylenders, *sarakin* (from the combination of the Japanese words for "salaryman finance"), and--in some instances--loan sharks. The industry is bifurcated into one group consisting of thousands of small companies and another group of a few trillion-yen giants.

In the early 1980s, the total number of sarakin was estimated at 220,000. Most of these were small, single-office companies with less than 15 million yen (around $50,000) in capital. They offered small loans on little more than the borrower's signature, and often charged annual interest rates up to the legal maximum of 109.5 percent (0.3 percent per business day). Collection methods were "vigorous" and 3000 companies were said by the police to have ties with gangsters (*yakuza*).[6] In contrast, the largest four companies had outstanding loans measured in the hundreds of billion yen, held hundreds of thousands of individual accounts, and operated hundreds of branches. These financial giants received much of their funds from the city banks. For example, the main supplier of the fourth largest, Lake, was the Long-Term Credit Bank.

When the scale of outstanding consumer credit passed the five-trillion yen level in the 1970s, the sarakin were well placed to take advantage of the expanding market with offices in every neighborhood and access to funding. The sarakin share of consumer credit rapidly swelled from about 4 percent in 1975 to 13 percent in 1982. In 1982 itself, the big-five companies more than doubled the number of branches and accounts, and increased their outstanding loans by more than 2.5 times.[7]

This growth brought with it a social problem that swept into the public's--and the politicians'--consciousness: a large number of suicides and disappearances related to the inability to repay personal loans. In 1984, the National Police Agency counted more than one

[6] Steve Dawson and Lewis Freitas, "U.S. Finance Companies in Japan," *Credit*, July-August 1979.

[7] "Large Consumer Financing Firms Lendings Top Y1 Trillion", *Japan Economic Journal*, October 19, 1983, p. 3.

thousand sarakin-linked suicides and almost 10,000 people who had disappeared, presumably fleeing creditors.[8]

The policy to deal with this social problem took two forms. In the late 1970s, the Ministry of Finance (MOF) invited a number of foreign consumer loan companies to establish their business in Japan. The motivation behind this move was to bring competition and know-how into the market, to clean up the lending and collection practices, to attract more respectable banks and other Japanese companies into entering the consumer credit market through the force of example, and to drive out the more unsavory companies through the pressure of competition-induced lower interest rates. This policy was only partially successful as the dozen U.S. companies found it difficult to break into the Japanese markets because of financing problems and their inability to quickly develop a branch office structure. Nevertheless, they were apparently able to force the interest rates of the major companies to below 50 percent.

The second branch of the MOF policy was to restrict interest rates by law. This approach was demanded by the Diet, whose members called for measures to deal with what they felt to be a scandalous situation. This law, which took effect in 1983, required sarakin to register with the government; it also phased in interest ceilings, beginning with 73 percent in 1983 and falling to 54.75 percent by 1986. With this ceiling, the number of registered sarakin fell from the earlier figure of 220,000 to 33,000. The volume of bad loans resulting from the customarily scanty screening process and the crude collection system apparently imposed costs on the smaller companies that were not abnormally profitable at the old high rates.

The thin profit margins of the consumer finance industry are now forcing greater attention to cost reduction in both funds acquisition and operations. Even the biggest lender, Takefuji, was only able to earn 1.8 percent in net profits on its outstanding loans in the boom year of 1983; since then, competition from other types of lenders has produced even more pressure on profits.[9]

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[8] Susan Chira, "Japan Credit System in Flux", *The New York Times*, January 28, 1985, Sec. D, p. 8.

[9] "The Hunting of the Shark," *The Economist*, June 23, 1984, p. 78.

Under the new interest rate regime, the larger loan companies found it necessary to establish a cooperative credit information center, which grew to include more than 3,700 participating members. By 1987, competition from other lending institutions had driven down the loan rate to a below-ceiling 40 percent, and many of the remaining inefficient companies were losing money at this market rate.

The MOF has also used "guidance" to influence the consumer loan market by suggesting lending guidelines of 3 million yen per person (about $12,500 in 1985) and encouraging banks not to lend to sarakin engaging in unacceptable lending or collection practices. Such guidance produced an overreaction on the part of the banks, which withdrew support from a number of their customers, including the larger, more respectable firms. The second and fourth largest sarakin, Promise and Lake, neared bankruptcy or faced "management crisis" in 1984-85. Promise was rescued by a new group of banks that put in their own managers and shut 165 branch offices. Lake found an infusion of funds from Security Pacific, the ninth largest U.S. commercial bank, which acquired more than a 51 percent share in the firm.[10] The tenth largest company, Yatagai Credit, actually went bankrupt.

Since the peak year of 1982, the share of consumer credit held by the sarakin has steadily fallen. While the rest of the market was expanding, the consumer finance companies faced an absolute decline after 1983, with a 23 percent fall in outstanding loans in 1984.

The sarakin were part of the traditional world of personal finance in Japan. As borrowing has emerged as a more open, accepted activity promoted by the leading financial institutions and the government, the old, unsavory image of the moneylenders has handicapped it in this new market. In the United States, personal loan companies evolved into financial companies with broader business interests, including sales financing. It is not clear whether regulation or competition will permit this expansion in Japan.

[10] "Secpac to Buy Interest in Lake Sarakin", *Japan Economic Journal*, December 11, 1984.

Sales Credit Institutions

Banks and consumer loan companies lend money directly to individuals to provide a general stock of credit. Although many of these loans are secured by a house or a new automobile, and indeed the loan may have been granted to enable such a purchase, technically the purchase and the loan are separate transactions. Sales credit, in contrast, is granted expressly for specific purchases.

A considerable variety of institutions provide credit related to the purchase of goods and service. The most important of these is the specialized sales finance company (*shinpan*). Others include department stores specializing in installment sales, finance companies associated with the manufacturers of consumer durables such as automobiles and appliances, cooperatives of small retail stores that provide the same basic services as the independent shinpan companies, and the credit arms of large retail organizations.

Sales Finance Companies (Shinpan). There are close to 130 sales finance companies. Most of these are small, local organizations supporting regional businesses. About 35 are national in scope, and these are dominated by Nippon Shinpan and Orient Finance, both of which have written more than 2,000 million yen (approximately $14 bn) of new contracts annually in recent years.[11]

The shinpan companies began their modern development in the post-war period by providing third party credit services to stores that had neither the inclination nor the resources to operate their own credit facilities. An early form of credit, still somewhat current, was in the form of coupons issued by the sales finance company to a consumer, in exchange for a contract in which the consumer promised to pay back the face value of the coupons plus interest in installments; these coupons could then be used as cash in designated stores.

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[11] In 19[illegible]9, Nippon Shinpan was broken into several independent companies in an anti-monopoly move. Orient was one of the new companies; it is now comparable in size to its former parent.

In a typical installment sale financed by a sales finance company, the consumer purchases a product or service and signs an installment contract with the retailer promising to repay the principal and interest in specified amounts over a stipulated time period. This contract is then sold to the finance company at a discount. The retailer immediately receives the purchase amount; the finance company receives the installment payments from the consumer and is responsible for collection. Several variations around this basic theme complicate the details, but not the main concept. The purchaser can write a contract directly with the finance company instead of with the retailer; the finance company may immediately borrow from a bank on the basis of the installment contract and repay the bank as payments flow in from the individual; the retailer may provide a guarantee on the contract, thus reducing the risk to the finance company or bank; the finance company may guarantee the contract, with the retailer selling the contract directly to a bank; there may be two contracts written: one between the consumer and the retailer, and the other between the consumer and the finance company.

The essential contribution of the sales finance company is its specialization in providing credit for consumer purchases. Because of specialization and scale efficiencies, it can earn profits on transactions processing, debt collection, credit guarantees, and--most importantly--lending money. This allows the retailer to specialize in merchandising, while providing the convenience and service of credit.

Installment purchases tended to be used in the past by lower income buyers. In an attempt to move up-market and to tap the credit demands of higher income consumers, the shinpan companies are directing their growth strategies to credit cards and to direct lending to individuals. Credit cards possess several technical advantages over individual installment contracts written for each item purchased: with credit cards, purchases are consolidated into a single account and many small purchases can be conveniently merged; the primary creditworthiness check is made only once--on application for a credit card; and repayment is more flexible. In addition, credit cards provide access to many more stores and facilities than just those offering installment sales; and the growing number of consumers carrying credit cards are a rich potential for additional financial services. A reflection of this marketing strategy is the transformation of Nippon Shinpan into the largest credit card issuer in Japan, with 14 million card holders. About 60 percent of these cards are issued on behalf of 400 other companies and organizations, including regional groups of retailers, department store chains, associations of specialty shops, and "affinity" organizations such as social clubs; in short, organizations that want to offer credit card services, but that have neither the technical nor financial capability to do it profitably themselves.

With the participation of the sales finance companies in the great growth in consumer credit in the past decade, they found themselves in possession of certain valuable resources: credit information on individuals; transaction processing capabilities; and access to financial markets with the strength of major borrowers. These resources allowed them to move into direct lending to individuals through the use of cash advances on credit cards, mortgages, and personal loans. In addition, with their information base, their development of credit screening techniques, and administration and collection experience, the sales finance companies could offer guarantees to other financial companies (e.g. insurance companies and banks) on consumer credit. Under guarantee schemes, other financial companies actually supply the funds for the consumer credit; the sales finance companies guarantee repayment by reimbursing overdue or uncollected payments to their client financial companies--for a fee--while being responsible for collection and processing activities.

A breakdown of Nippon Shinpan's gross revenues (before expenses and taxes) by type of business reflects these trends: in 1987, credit cards generated almost 10 percent of the company's revenues, the traditional installment loans accounted for almost one-third, income from guarantee fees provided 17 percent, and direct loans to individuals 30 percent.[12]

[12]Nippon Shinpan, *Annual Report 1987*, p. 6.

The Nippon Shinpan data allow us to unbundle the prices charged for the different financial services that are provided by the company. (See Table 2). We consider here three types of services: (1) the risk-free lending of funds; (2) the processing of transactions; and (3) risk-taking through the insuring or guaranteeing of bad debt, including collection costs. All of these services are provided singly, or in combination, by the company.

The price of the service comprising the insuring and collecting of bad debts is approximated by credit guarantee fees. Fees earned on guaranteeing the loans made by other companies were 2.4 percent of the covered loans.[13]

Charges for processing credit card transactions were about 5 percent of the transaction amount, according to our interviews and the trade press. We can therefore calculate an approximate price for the

Table 2

FINANCIAL RESULTS, NIPPON SHINPAN

	Gross Revenue by Sector (bn yen)	Outstanding Credit, Year-end (bn yen)		Gross Price Earned on Financial Services[a]
	1987	1987	1986	(%)
Credit cards	22.9	160.0	139.6	15.3
Installment loans	75.5	811.2	763.6	9.6
Guarantees	40.4	1783.3	1637.5	2.4
Loans	68.4	685.5	574.9	10.9
Other	26.6	-----	----	---

SOURCE: Nippon Shinpan, *Annual Report 1987*, pp. 38-39.

[a]Equal to ratio of gross revenue to the average value of outstanding credit at the end of the year 1986 and 1987.

[13]The "price" of each service is defined as the annual revenue generated by each service divided by the average outstanding amount covered by the service (estimated as the average of the year-end figures of the preceding and current years).

risk-free lending of funds by subtracting the 5 percent processing charge and the 2.4 percent bad debt guarantee fee from the gross 15.3 percent revenues earned on outstanding credit card debt. This calculation produces an estimated rate of return on lending of about 8 percent.

The other forms of lending by Nippon Shinpan yielded annual revenues of 9.6 percent on the average outstanding installment credit, and 10.9 percent on personal loans. Subtracting out the 2.4 percent guarantee fee from these loans generates estimated prices of capital of 8.5 and 7.2 percent. The three estimates of capital prices are thus approximately 7.2 percent on personal loans, 8.0 percent on credit cards, and 8.5 percent on installment loans. In 1987, the long-term lending rate averaged 5.7 percent and the average interest on loans and discount of all banks was about 5.0 percent. Nippon Shinpan thus appeared to be able to obtain a healthy rate spread in its retail lending activities.

With increased competition in the credit card field, a major strategic goal of Nippon Shinpan is to reduce processing costs, streamline operations, improve the quality of new loans, and provide better on-line service. According to our interviews, people in the industry expect competition to drive down the fees charged to retailers closer to the rates prevailing in the U.S. of 2.5-4.0 percent.[14] Operating efficiency and the cost of funds are likely, therefore, to become more important in the consumer credit market in the years ahead. The smaller sales finance companies, which are now protected by regulation from the encroachment of banks, are not likely to be able to stand up to the market pressures from companies in their own industry sector.

[14]Transactions fees (or "merchant discounts") in the United States vary according to the volume of transactions, efficiency of credit card issuer, and competition. In 1983, fees varied from 2.5 percent for retailers with annual sales over $100 million, to 4.1 percent for retailers with sales less than $100 thousand. The average fee was 3.1 percent. U.S., Board of Governors of the Federal Reserve System, *Credit Cards in the U.S. Economy: Their Impact on Costs, Prices, and Retail Sales*, July 27, 1983, pp. 55-56.

Installment Department Stores. There are approximately 160 installment department stores specializing in granting credit to their shoppers, mainly as a means of promoting sales.[15] However, the biggest of these stores, the Marui chain of department stores, has made credit into a profit-making activity of its own. In a 1980s shift in strategy, Marui was successful in reorienting its clientele from a lower income, working class shopper to a younger, credit-using customer. In early 1988, Marui had issued 9.6 million credit cards.[16] Its annual pretax profits growth rate of 17 percent from 1982 to 1986 was based on a formula of easy credit and merchandise that was appealing and affordable to the young consumer. In 1986, 83 percent of sales were to customers in their twenties.[17] With nearly 70 percent of its sales made on credit, interest income was 12 percent of total earnings.[18]

Marui's example, however, runs counter to the general trend of department store credit, which has declined as a proportion of total credit from 8.0 percent in 1976 to 5.8 percent in 1986. Except for a handful of giant retailers, the credit operations of installment department stores and smaller retailers are becoming uncompetitive in the maturing credit market.

Other Sales Credit Institutions. The other kinds of institutions financing sales credit are affiliated in one way or another with the retail business itself. Manufacturers of higher-priced consumer durables copied the examples of the United States automobile and appliance companies in establishing credit organizations to support sales of their products. However, their share of total consumer credit was never very large, and their importance has declined in the past decade as other financial institutions have competed for their niche of the market. For example, the share of automobile manufactures fell from

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[15] Takeshi Sato, "Consumer Credit Comes of Age", *Fuji Bank Bulletin*, April 1981, p. 65.

[16] "Credit Cards," *Japan Economic Review, 1988,* p. 231.

[17] James Leung, "Japanese Retailers Courting the Young and Affluent by Pushing Credit Cards," *The Asian Wall Street Journal*, February 23, 1987, p. 6.

[18] "Marui Co.," *Japan Economic Journal*, July 19, 1986, p. 22.

3.8 percent of the total in 1976 to 1.1 percent ten years later, with the absolute value of loans falling along with their market share.

Retailers of all product types offering credit have similarly lost market share of consumer credit in this same period. Car dealers fell from 11.6 percent to 2.1 percent; department stores from 8.0 percent to 5.9 percent; small retailers from 6.3 percent to 5.5 percent; and the finance arms of appliance manufacturers from 5.2 percent to 3.2 percent.

Similarly, sales credit organizations formed as cooperatives among local associations of small retailers have also lost ground with the general expansion of the credit market.

Small retailers in Japan, in general, have not favored the expansion of universal credit cards or other broad-based credit schemes. They believe that a store card or other arrangement that limits the customer to their own store, or cooperative, or region, ties the customer more closely to patronizing their store. Universal credit, in contrast, would allow the shopper to have equivalent access to any store. These retailers explicitly reject the alternative possibility that the very large number of individuals with universal credit cards could find it more convenient to shop in a store accepting such cards than in those offering only in-house credit.

Other Consumer Credit Organizations

With the decline in industrial investment as a proportion of total business activity, companies that were customarily heavy borrowers began to find themselves with excess financial reserves. Many companies in the late 1970s and early 1980s began to review the possibilities of using their liquid assets for external as well as internal investments. This refocusing of investment behavior was reinforced by a perception arising among some companies that the long-run relationships that had been carefully developed and nurtured between banks and businesses were perhaps accompanied by higher prices for financial services than would be available in a more competitive, cost-conscious market. Rather than simply depositing these excess financial assets in banks, companies actively searched for higher rates of return outside the banking sector, and consumer credit looked like a profitable field.[19]

[19]This observation raises a perplexing question: Why do the companies with "excess" liquidity not disburse the funds in higher

One of the largest non-financial entrants into consumer credit is the Seibu retail group. Seibu, which operates some 60,000 retail outlets, including department stores, specialty shops, supermarkets, and restaurants, began its financial activities in 1975 when it founded a joint venture with Sears Roebuck to engage in the life insurance business. Seibu gradually expanded its financial activities, including consumer credit services. These latter were consolidated into the Seibu Credit Company, which has issued 5.5 million of its Seibu Saison Credit Cards, entered into agreements with Visa and Mastercard for joint international credit cards. It created a tie-up with New York's Chemical Bank to construct an international credit network and to establish access to two of the largest cash dispenser services in North America, and has promoted the use of cash loans in Japan. The company has also moved into credit guarantees, home mortgages, and financial services to the rest of the Seibu group.

Other kinds of companies entered the consumer credit field with a variety of motivations. Mitsui, the second largest trading company, used its cash flow to move into financial services, and formed a joint venture with Security Pacific's Japanese consumer finance company to provide consumer and commercial loans.[20] Also, several of the large life insurance companies have entered into the credit card business as a means to invest part of their enormous stock of liquid assets.[21] American Express credit cards have been issued by Nomura Securities. And the largest "savings bank" in Japan, the Ministry of Posts and Telecommunications, has announced a plan to initiate personal card loans in 1989 through its 22,000 post offices.[22]

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dividends? The dividend payout rate in Japan is substantially lower than in the U.S. Differences between corporate and individual tax rates have been offered as one explanation, but the matter seeems to be broader than a tax issue and remains only partially explained.

[20]"Security Pacific to Sell 50% of Unit to Mitsui", *The Wall Street Journal*, March 19, 1987, p. 26.

[21]"Life Insurers Expand Credit Card Business," *Japan Economic Journal*, September 3, 1988.

[22]"Post Offices to Start Personal Loans in 1989", *Japan Economic Journal*, October 29, 1988.

III. THE CHANGING STRUCTURE OF THE JAPANESE CONSUMER CREDIT MARKET

Changes in Market Shares of Lenders

We have already alluded in the last section to changes in the market share of the different participants in Japanese consumer credit. In Fig. 4, we plot these shares over time. The personal finance companies (*sarakin*) share clearly shows the effects of MOF policy: the interest rate ceiling imposed in 1983; the subsequent withdrawal from the market of thousands of lenders; and the tightening of bank credit to that sector. The sarakin share of outstanding loans more than tripled from 4 to 14 percent in only six years, and then fell by more than half in the next four years. The sales finance companies (*shinpan*) became the dominant consumer credit institution with explosive growth

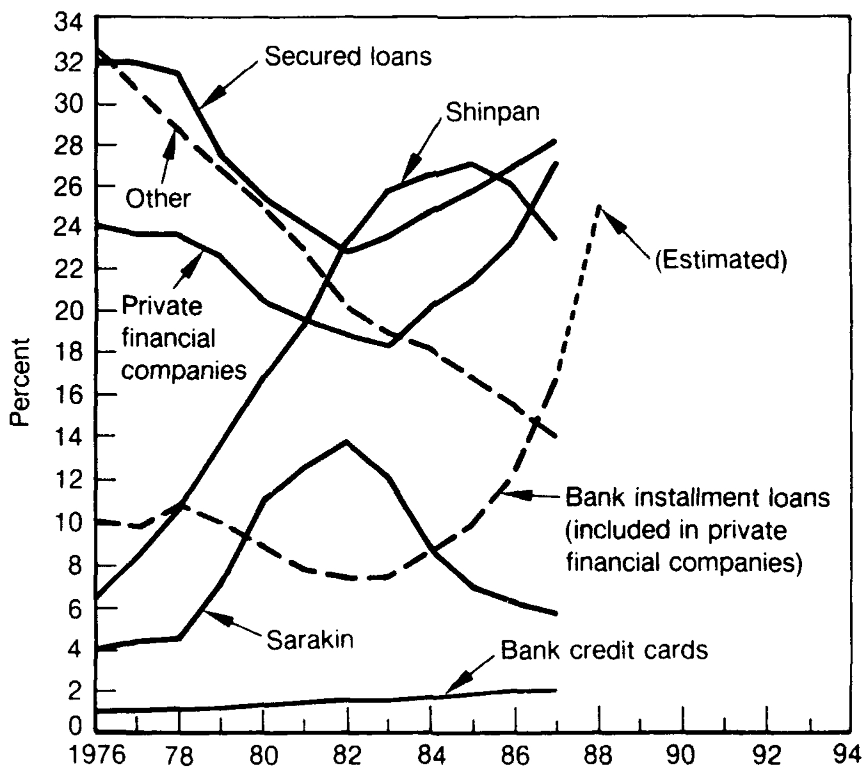

Fig. 4--Market shares by sector of Japanese consumer credit market

throughout the period, reaching a peak 27 percent market share in 1985; since then, they have lost share to the surging banks.

The share of "private financial companies," which includes commercial banks and other depository institutions, insurance companies, and certain financial subsidiaries of non-financial companies, largely follows the movement of banks' consumer loans. The relative decline of the "private financial companies" through 1983 was the reverse side of the growth of the shinpan and sarakin companies. The recent upturn in the market share of banks and other financial companies reflects their strategy of focusing on consumers. The most recent data (available only for banks) through 1988, show that bank consumer lending has more than doubled since 1986. If total consumer credit grew from 1987 to 1988 at the same rate that it grew in the preceding two years (14 percent per year), then bank installment credit now has more than a 25 percent market share (as shown by the dotted line in Fig. 4).

"Secured loans" in Fig. 4 comprises loans with collateral based on time deposits or postal savings. Such loans have been a means to convert these tied-up assets into a more liquid form by offering consumers the convenience of credit card or other loans, up to a given percentage of their deposits.

The "Other" category is primarily credit offered by retail establishments or the credit affiliates of automobile and appliance manufacturers. As discussed in the previous section, this portion of consumer lending has fallen steadily, from a total of almost one-third of all consumer credit in 1976 to 14 percent in 1987.

These figures show that the large financial companies (especially banks), which are able to raise funds efficiently and cheaply in the money markets or through deposits, are coming to dominate Japanese consumer credit. Economies of scale in transactions processing, which requires substantial investment in computers, teleprocessing equipment, and software, also helped to reduce the contributions of the smaller operators. If our projected market share of banks for 1988 is near the actual level, the banking sector is now the leading player on the Japanese consumer credit scene.

We can compare this picture of the structure of the Japanese market to that prevailing in the United States. Commercial banks (equivalent to the city and regional banks in Japan) in the U.S. have dominated consumer credit for twenty years with a 40-50 percent market share. Other banking institutions (savings and loans, credit unions, etc.) have risen gradually to a recent 22 percent share. Thus, depository institutions of all kinds in the U.S. hold one-half to two-thirds of all consumer credit, as compared to the Japanese situation in which private financial companies (including banks) had gained only 25 percent of the market by 1986. Finance companies in the U.S. (both personal finance and sales credit companies) gradually declined in importance as the banking sector grew. As in Japan, credit issued by retailers has steadily fallen--from 15 percent in 1965 to 7 percent in 1987.

Although the past structure in Japan was substantially different from the United States, the pressure of economic forces is creating a converging pattern, with a market dominated by the larger sales credit companies, banks, and other strong financial companies. Retail credit, small-loan moneylending, and smaller sales credit companies are likely to face a difficult future.

Changes in the Varieties of Credit

We examined above the shifting market shares of different lenders of consumer credit. We now review the credit market from the perspective of different categories of credit. We shall consider several broad categories: sales credit and personal finance; credit card and non-credit card sales credit; and secured and unsecured personal finance.

Sales Credit and Personal Finance: The shares of the outstanding amounts of these two types of consumer credit remained stable from 1976 to 1987. Sales credit maintained about a 40 percent share, with personal finance hovering around 60 percent. In terms of new borrowing, however, sales credit fell from 56 percent to 46 percent of total new consumer borrowing. The difference between the market shares of outstanding credit and new borrowing arises from changes in the average life of the debt.[1] Briefly stated, the market share of outstanding sales credit remained steady as a result of two offsetting factors, a fall in new borrowing and a lengthening of average debt maturity.

The relationship between outstanding debt and new borrowing is based on the difference between the stocks of debt in two periods and the flows represented by new borrowing and repayments.

$$D(t) = D(t-1) + B(t) - R(t),$$

where D(t) is the stock of debt in year t, D(t-1) is the stock in year t-1, B(t) is new borrowing, and R(t) is repayments. We define the average life (L) or maturity of the outstanding stock of debt as the number of periods it would take to reduce the debt to zero if repayment continued at the current rate:[2] $L(t-1) = D(t-1)/R(t)$. Japanese data sources provide time series for the year-end stocks and for new borrowings. We can use the available information to estimate values for L:

$$L(t-1) = \frac{D(t-1)}{B(t) - D(t) + D(t-1)}.$$

Consequently:

$$D(t) = D(t-1) - \frac{D(t-1) + B(t).}{L(t-1)}$$

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[1]The algebraic analysis relates the outstanding *stock* of credit to the average life of the debt, whereas the discussion refers to *market share*. Somewhat more complex algebra would show that the same results hold for market shares as is shown for the absolute levels of stocks.

[2]This formulation is equivalent to an assumption of straight-line amortization of the debt with yearly additions to the stock of debt possessing the same rate of amortization as the stock itself.

The value of outstanding debt will therefore rise as the average life or maturity of the debt increases.

Applying the above reasoning to the case of sales credit, we found that the market share of outstanding debt held steady while the share of new borrowing fell, because the average life of the debt increased from about five months in 1976 to eight months ten years later. The life of personal finance debt remained at about one year throughout this period.

Credit Card and Other Sales Credit: The number of credit cards now held by the Japanese is more than 110 million. Credit card sales grew by 13.6 percent annually from 1976-1987. However, despite this rapid growth in transactions (new borrowing), the outstanding stock of credit card debt fell from 15.3 percent of total sales credit to 11.2 percent in 1986 (rising somewhat in 1987 to 13 percent). The explanation for this relative decline was a drop in the average maturity of credit card debt from four months to three months. More people were using credit cards, but an increasing proportion of these transactions were being paid off in the month following the transaction.

Part of the explanation for the fall in credit card debt maturity was the rising importance of bank credit cards. Banks doubled their share of outstanding credit card debt from 10.5 percent to 20 percent, while their share of new borrowing expanded from 24 percent to 42 percent.[3] Despite this rapid growth, regulations banning banks from offering extended sales credit limited the average maturity on this debt to less than 1.5 months, compared to about four months for non-bank credit card debt. The increasing use of bank credit cards therefore pulled down the average maturity of all card debt. This decline

[3]We can only speculate on the causes of the expanding share of bank credit cards, since the restrictions on using them for extended credit would presumably make them inferior to cards issued by other types of lenders. Bank credit cards may be more convenient to users because they are tied to the banks in which households maintain their savings. Also, bank credit cards may be more usable because of their links to national and global companies such as Visa.

occurred despite the fact that new credit card borrowing to finance purchases grew from 25 to 35 percent of all credit sales transactions.

Secured and Unsecured Loans: About 40 percent of all personal loans to individuals in Japan are backed by deposits held at the institutions granting the loans. Such secured loans are often used to gain access to funds tied up in fixed term instruments.

The Ministry of Posts and Telecommunications (MPT), for example, in an attempt to maintain the popularity of its Post Office savings accounts in the face of competition from private banks, actively promoted the concept of borrowing on the collateral of the massive amount of household savings tied up in these accounts. Despite growth rates of more than 15 percent, though, such loans only account for about 3 percent of all personal loans.

Unsecured personal loans by banks are a key element in the financial sector's current strategy for aggressively moving into the consumer credit market. The outstanding value of unsecured personal loans (by all financial companies) grew by more than 17 percent per year from 1976 to 1987, and the rate of new borrowing grew even faster at 19 percent. Consequently, the contribution of unsecured loans to total personal loans rose from about 50 percent to 60 percent over the period. In contrast to the short lifetimes of credit card transactions, the average maturity of bank consumer loans has grown to about two years as banks created more innovative approaches toward lending to households.

IV. REGULATORY CONSTRAINTS ON JAPANESE CONSUMER CREDIT

Regulatory Overview

Regulations on consumer credit can have two kinds of effects: (1) they can influence the aggregate volume of credit; or (2) they can affect the structure of the credit market through their restrictions on who can lend and who can borrow. The aggregate credit volume would be affected by regulations applied to all lenders on such things as interest rate ceilings, lending growth rates, or personal borrowing criteria. Policies from 1945 through the mid-1970s largely reflected economy-wide controls.

The structure of the credit market depends on regulations applied to specific classes of lenders or borrowers. This is the situation that now exists. However, so long as some avenues of lending and borrowing remain relatively unconstrained, regulations with institutional specificity should affect the total volume of credit by only small amounts. For example, if banks cannot offer sales credit but shinpan companies are not so constrained and have unhindered access to capital markets, consumers can obtain as much sales credit as they desire from the authorized class of lenders, at perhaps some slight inconvenience. The current situation is one of specific regulatory constraints but no discernible non-market restrictions on the aggregate growth of consumer credit.

For 30 years, from the end of the World War II until the latter half of the 1970s, law, regulation, and ministerial guidance tightly controlled the behavior of the Japanese financial sector. Interest rates, lending policies, industry structure, and the development of new financial products were governed by a network of closely monitored policy instruments. The chief aim of this control was to encourage exports and household savings, and to transfer these savings to industrial reconstruction and investment. By the mid-1970s, inflation, government deficits, and international economic and political pressures produced a gradual deregulation of the Japanese financial system. The household sector, however, was the last to benefit from the removal of restraints. This is most evident in the continuation of non-market administration of interest rates on small deposits. Consumer credit, too, was subject to a variety of regulations that interfered with the activities of lenders and borrowers and affected the volume and structure of credit markets. Loan interest rate ceilings made most consumer lending unprofitable, and MOF guidance (backed by powerful official control of the growth of bank credit) discouraged loans to consumers.

By the mid-1970s, however, the MOF came to recognize that the growth of industrial demand for investment funds would not be sustained at the earlier postwar pace. The Ministry subsequently encouraged banks and other financial companies to enter into retail lending to households. As part of this strategy, it invited several U.S. banks with strong retail experience into the Japanese market to provide example and stimulus to the conservative Japanese banking community. It also removed a number of technical impediments to consumer lending by altering or clarifying regulations on interest rate ceilings and on the kinds of organizations that could make consumer loans.

Two laws currently have observable consequences for the structure of the consumer credit market: (1) a law imposing interest ceilings on lending by consumer finance companies; and (2) a ban on banks offering extended credit for purchases.

Restrictions on Sarakin

As related in preceding sections, the 1983 reduction of the permitted ceiling on personal loans by moneylenders from 109 percent to 54 percent caused the number of moneylenders to fall from more than 200,000 to around 30,000. Finance Ministry guidance also instructed banks to refrain from lending to unscrupulous finance companies, which further reduced the finance companies' capability to participate as fully in the consumer credit market as they had in the previous five years. The 50 percent fall in market share in subsequent years can be linked directly to the legal and administrative consequences of the government policy.

The personal finance companies, however, may not have been able to withstand the competition of the well-funded banks, shinpan companies, and other large financial service companies over the long run. The moneylenders, even the largest, had an old-fashioned, unsavory image among the new class of borrowers--young people, women, and professionals--and they did not possess easy access to large numbers of increasingly affluent consumers. Their one advantage was geographic location; offices existed in most towns, villages, and neighborhoods. This advantage, though, was vitiated by the growth of credit cards, cash machines, and card loans. Even without legal ceilings, competition from other financial institutions would likely have driven down market interest rates to levels below the old legal limits; current evidence suggests that even the new lower legal ceilings are not binding. We can conclude, therefore, that interest ceilings and ministerial guidance had a clear effect on sarakin lending from 1983 to perhaps 1986; after that period, the continuing influence of the legal restraints is less certain.

Restrictions on Extended Sales Credit

The "Installment Sales Law" regulates installment credit and revolving credit in Japan. This law, which assigns to MITI administrative responsibility for extended sales credit, specifies in its first article: "in the management of this law, the safety and prosperity of small and medium businesses that practice installment sales must be protected." Diet resolutions put forward during amendment debates have further stipulated that small and medium size sales finance companies require protection particularly from banks' use of revolving credit to finance sales. Although the law itself does not explicitly call for such a prohibition on bank activity, MITI interpretation and guidance under the Diet stipulations have kept banks and other financial companies from providing universal extended sales credit. Bank credit cards cannot be used in the purchase of goods except under a monthly settlement repayment method. Also, credit cards issued by a financial company such as Seibu Credit can only support extended credit on sales within the company itself. A Seibu-issued Visa card is a monthly settlement card when used in outside establishments.

Members of the banking community argue that a strict legal analysis of installment sales contracts shows them to be similar to bank loans and therefore open to bank usage. However, they also recognize the force of the political situation and accept MITI's responsibility for solving the political problem.

MITI officials are somewhat embarrassed by the position in which they find themselves; much of their policy orientation in recent years has been toward the deregulation and privatization of markets, which has often engaged them in strenuous political contests with other government agencies (for example, with the Ministry of Posts and Telecommunications over the deregulation of telecommunications). In the case of consumer credit, MITI officials find themselves in the politically-required stance of supporting market restrictions. However, MITI officials say that deregulation will have to occur for consumer convenience and for greater efficiency through competition. Their problem is the tactical one of bringing this about. How soon this will happen is open to argument: our interviewees predicted periods of from one year, to five years, to a vague "eventually."

First steps in deregulation have involved negotiations between MITI and MOF. To help prepare their positions, each ministry has given the problem to an expert committee. MITI's council is expected to produce a consumer credit "vision of the future" to educate the companies and their political supporters. The Finance Ministry's Financial Systems Research Committee has already recommended the extension of revolving credit to banks.[1]

The shape of a compromise to this problem will probably share many of the elements in typical Japanese solutions to problems involving winners and losers. First, the absolute losers will somehow be compensated. In this case, the parties at most risk are the small finance companies and the regional credit cooperatives organized by

[1]"Ministries Debate Revolving Credit," *Japan Economic Journal*, July 18, 1987, p. 2.

small retailers. These will likely be taken over by the large shinpans so that the current owners and shareholders are adequately compensated. The second class of "losers," but only because they will face more competition, are the large shinpans themselves. They would be partly rewarded by absorbing the market share of their former smaller competitors, but they will still face the threat of the banks, which possess an advantage not currently available to shinpans: access to direct sources of funds through deposits (shinpans are prohibited by MOF from raising funds through selling bonds or commercial paper in the money markets). A compromise could therefore involve MOF allowing the shinpans direct money-raising privileges while MITI permits banks to offer extended sales credit. Apparently, neither of these moves would require legislation since present restrictions flow from interpretation of laws rather than from the laws themselves.[2]

Would elimination of the ban on banks issuing revolving sales credit increase the total amount of consumer borrowing? To the degree that such a change increases the convenience or reduces the transactions costs to consumers and retailers, it could increase outstanding credit by a small amount. It would not likely have a major effect, primarily for the reason that consumers already have easy access to credit of all kinds from many different types of institutions. Bank issuance of sales credit, though, would increase the competition between banks and sales finance companies, perhaps reduce costs, and probably increase the banks' share of the consumer credit market.

[2] It must be emphasized that the above scenario is our own illustration of the form that a compromise could take and does not reflect either official or unofficial government views or those of industry.

V. THE AGGREGATE GROWTH OF JAPANESE CONSUMER CREDIT

How high will Japanese consumer credit grow? To address this question, it is necessary to consider two basic issues: (1) the availability of credit; and (2) the life cycle model of income and consumption.

Credit Availability. We date the unregulated growth of aggregate consumer credit roughly to the mid-1970s. Before that period, government regulation, ministerial guidance, and industrial demand drew funds from households and directed them to industry. After the mid-1970s, industrial demand fell and government policy changed direction. If only industrial demand had fallen, but government had continued to limit consumer credit and make it unprofitable, then credit growth would have been held to the regulated limits. On the other hand, if regulatory constraints had been eliminated, but industrial demand had not fallen, consumers would have entered the credit markets and bid some amount of funds away from industry, driving up interest rates. Consumer credit growth would then have been bound by market forces. We suspect that the double effect of the fall of industrial demand and the relaxation of regulation essentially allowed households' use of credit to be limited only by their demand, as determined by exogenously determined interest rates, disposable income, household wealth, and demographics.

It is necessary to introduce a cautionary note at this point. The growth rate of real consumer credit had been fairly constant since the 1960s. Why do we say that the expansion dates to the 1970s? We base our judgment on the following evidence: the industrial and regulatory changes noted above; the increased burden of consumer borrowing on the banking industry; and the volume of borrowing relative to disposable income. In 1965, lending to households was a tiny proportion of the total financial flows in the economy: total outstanding credit was only about 2-3 percent of the loans of the banking industry.[1] From 1965 to

1975, the economy as a whole was growing at such a high rate that the rapid rise in real consumer borrowing in that period was only slightly greater than the total growth of the banking community; by the mid-1970s, the ratio of consumer credit to all banking sector loans had risen to barely 5 percent. This ratio, however, had climbed to 9 percent in 1987, and preliminary estimates suggest that it exceeded 10 percent in 1988. In the earlier period, households had to scurry for crumbs falling from industry's financial feast; more recently, consumers have become a significant share of the banking business.

The same pattern repeats itself when consumer debt is compared to household disposable income. From 1965 to 1975, the ratio of outstanding consumer debt to disposable income hovered between 4.5 and 6.5 percent. This ratio more than doubled in the next decade, rising to 15 percent. Our interpretation of this increase in the amount of debt that households demonstrated that they were willing to incur is that they would have borrowed more in the 1960s, but were constrained from such expansion by regulation and industrial demand. With the removal of such market and non-market constraints, households moved into debt in a pattern consistent with life cycle behavior.

The Life Cycle Model of Household Behavior. Household income typically rises from initially low levels as workers gain experience and increase their productivity. Income then reaches a peak during the prime working years; as workers grow older, their work activity levels fall until retirement, when it ceases altogether. Consumption needs, however, follow a quite different pattern. Demands are high during the early household formation and family development phases, fall somewhat when children move out of the household, and decline still further in old age. The life cycle model asserts that people recognize these patterns and attempt to even out their lifetime consumption and meet

[1] Although banks were not the primary direct lenders to individuals, they supplied most of the funds available for such lending because the other consumer lending institutions (shinpans, etc.) could not raise funds directly from deposits, but had to go to the banking community for their source of funds. ("Banks" include city, regional, trust, and long-term credit banks, mutual banks, and credit associations.)

their varying needs by borrowing in the early phase, repaying these loans and then saving in the prime earning years, and drawing down the savings in retirement.

This model has certain implications for household borrowing behavior. If regulatory constraints restricting borrowing opportunities were suddenly removed, not all households would indulge in a credit binge. Retired workers would not engage in other than short-term borrowing because they would have little future income with which to pay off their loans. Prime-aged earners, concerned about their future retirement savings, would also have little incentive to build up large debts. Young households, though, with their whole life cycle before them, would be able to take full advantage of the new opportunities. This upward adjustment would continue for a number of years as additional adult cohorts entered the newly deregulated market. But once an entire life cycle of households had completed this adjustment process, the household ratio of debt to income would tend to stablize at a higher level than before deregulation with little additional pressure for long-run growth.

It is just such a pattern that we observe in the growth of U.S. consumer debt (see Fig 5). Following the removal of controls over consumer credit after World War II, U.S. consumer borrowing grew rapidly from about 4 percent of disposable income in 1946 to 20-21 percent in the mid-1960s; this ratio varied within a narrow range for the next twenty years. The 20-year span from 1945 to 1965 was the adjustment period predicted by life-cycle reasoning as new cohorts of young adults took advantage of borrowing opportunities. By 1965 a stable pattern of borrowing, saving, and repayment had evolved, disturbed mainly by the short-term influences of business cycles.

A widely quoted 1957 economic study by Alain Enthoven attempted to analyze this growth of U.S. consumer credit through the use of a simple model.[2] Enthoven's analysis suggested that extrapolation of trends could not be a reliable predictor when the economy was in the process of

[2]Alain Enthoven, "The Growth of Installment Credit and the Future of Prosperity," *The American Economic Review,* December 1957.

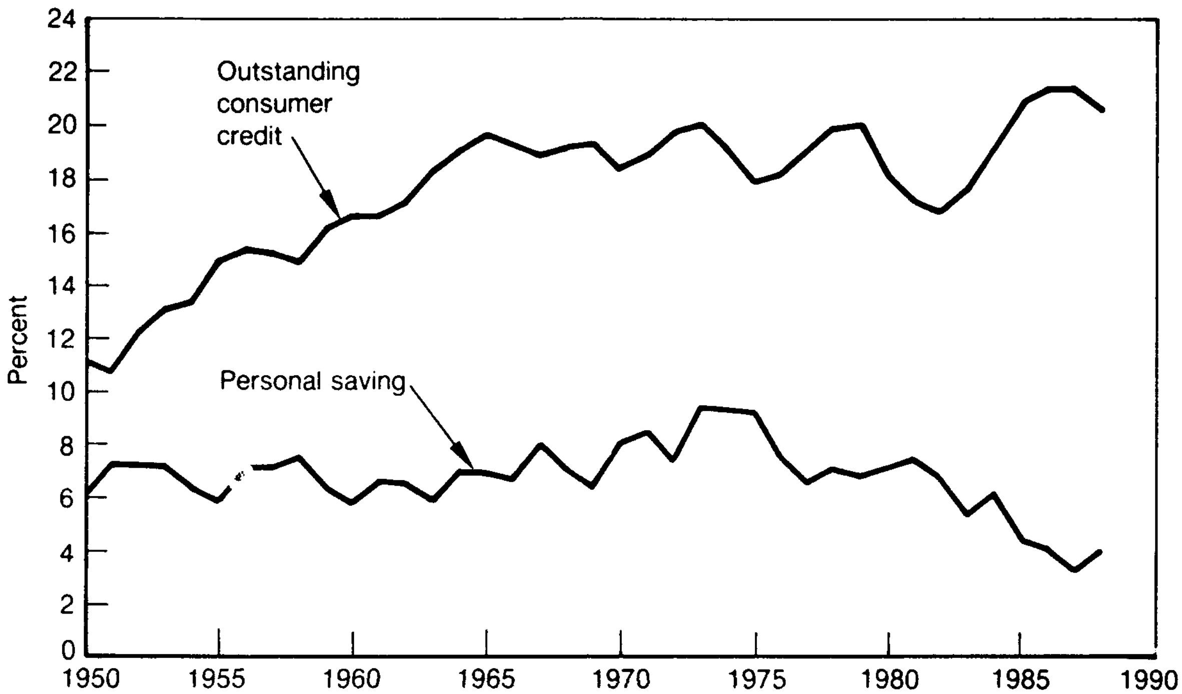

Fig. 5--United States household credit and saving
as share of personal disposable income

moving from a regulated to an unregulated environment. We can use the same approach to analyze the long-term growth of Japanese consumer credit.

The model relates desired new borrowing to a fixed proportion of annual income, Y. Outstanding debt in year t, D(t), is then the value of debt in the preceding year, D(t-1), plus new borrowing, B(t), minus repayments, R(t):

$$D(t) = D(t-1) + B(t) - R(t),$$
$$B(t) = bY(t).$$

By assuming that the rate of repayment of outstanding loans is constant and that income grows at a steady rate, Enthoven derived an expression for the current value of outstanding debt:

$$D(t) = \frac{a\ (1 + r)}{r}\ Y(0)[(1+r)^{t}-1]+D(0)$$

where r is the annual growth rate of income over the t years between the base year and the current period, and "a" is a constant that depends on the observable quantities of D(t), income growth (r), and on base year values of income and debt, Y(0) and D(0).[3]

This simple model assumes a constant growth rate of income, a constant ratio of new borrowing to income, and a constant rate of repayment of outstanding loans. Despite these limitations, several authors who have applied Enthoven's model to later periods in order to calculate theoretical limits to D/Y have found a relatively tight fit over the years, with the actual ratio approaching the theoretical limit in the late 1960s, after which the two moved closely together. We also used this model to predict the U.S. 1965-1975 ratio of D/Y by applying a value of "a" estimated frcm 1950-1955 borrowing and income levels, combined with the actual growth rate of disposable income in the 1965-1975 period of 8.9 percent; this calculation produced a limit value of D/Y of 0.190, which can be compared to the average level of 0.203 in the 1965-1975 decade.

We can use this same approach to estimate a limit on Japanese consumer credit as a proportion of disposable income. If we consider the period of 1976-1986 as one of relatively unconstrained household behavior, a period when new borrowing decisions were essentially in equilibrium, we obtain a predicted limit of D/Y of 0.22, assuming that the period's growth rate of disposable income of 6.25 percent continues.

The current rates of borrowing, debt repayment, and economic growth imply that Japan's outstanding debt to income relationship is below the equilibrium, steady-state value. Although these calculations can only be viewed as suggestive, they do suggest that Japanese consumer credit as a proportion of disposable income can still grow by perhaps 30 to 50

[3]The constant "a" is algebraically equal to:

$$a = \frac{[D(t) - D(0)]\ r}{(1+r)\ [Y(0)(1+r)^{t} - 1]}$$

percent, which would place it in the same range as U.S. experience. This simple model, though, assumes that many important variables will remain constant. Sharp changes in financial conditions, growth rates, or demographics would require reconsideration of these estimates.

A possible stimulus to consumer borrowing in past years is associated with the rapid growth of the Japanese economy. Expected income growth beyond the "normal" rate attributable to individual age and experience, under the assumptions of the life-cycle hypothesis, could result in a greater willingness to incur debt during the earlier years of employment with the prospect of repayment out of a larger income in later years. However, a contrary argument, often made to explain the high Japanese saving rate, states that economic growth will lead to greater saving since investment in a growth economy will yield higher returns than if growth were slow. Both of these possibilities may be true, with the net effect depending on the specific nature of the motivation to save.

The life-cycle model of consumption and income predicts that households will attempt to level out their pattern of consumption during a lifetime in which expected income growth and the demands for household expenditures are out of phase. During the early household formation phase, while debt is being incurred, the saving rate will fall and consumption will rise. Later, when household demands have declined and incomes are higher, the debt will be repaid and saving will increase during the repayment period. At the aggregate level, therefore, household saving may be negatively influenced by the proportion of families in the household formation age groups.

Demographic trends involving rapid increases in the rate of household formations will favor higher credit. However, the percent of households in the 20-44 years age group--those with the highest ratio of debt to income--has fallen in Japan from 62.5 percent in 1970 to 52.3 percent in 1985. Demographics therefore cannot account for recent Japanese borrowing behavior. In the United States, in contrast, this age group rose from 51 percent to 56.4 percent over the same 25-year period.[4]

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[4]Dorothy B. Christelow, "Converging Household Debt Ratios of Four Industrial Countries," *Federal Reserve Bank of New York Quarterly Review*, Winter 1987-88, p. 39.

Finally, we note that learning on both sides of the market could induce greater borrowing. On the lenders' side, the development of a retail lending infrastructure including personal credit information, screening techniques, transactions processing hardware and software, and economies of scale have reduced the real costs and increased the convenience of credit. Consumers have learned how to make use of this convenience, reducing their demands for cash balances, using credit to bridge short-term gaps between expenditures and income, and adapting to the life-cycle hypothesis in a manner that artfully avoids the Japanese cultural stigma against debt.

We may therefore cautiously conclude that consumer credit in Japan has been positively affected by removal of legal and habitual restrictions on household borrowing, increased availability of funds, expected growth in personal income, and learning effects that have reduced the costs (real and psychological) and increased the convenience of borrowing.

VI. CONSUMER CREDIT AND CONSUMPTION

One source of interest in Japanese consumer credit arises from the presumed positive relationship between credit and the allocation of personal disposable income to consumption. This presumptive relationship has gained currency more through the power of assertion than through serious analysis or empirical research.[1] Indeed, the opposite belief has also been put forth, that "elevated debt levels operate as a *constraint* on spending by deflecting an increasing part of household income flows into the servicing of debt rather than into current consumption."[2]

The basic question that we ask is whether consumer credit affects the timing, composition, or amount of personal consumption. Our tentative answer, based on simple analytics and a review of a sparse empirical literature, is that credit shifts consumption earlier in time, perhaps stimulates the purchase of consumer durables, and in the long run probably has little impact on aggregate consumption.

Simple Analytics of Credit and Consumption

We begin by considering two households: the first saves a portion of its income until it has accumulated enough to make a desired purchase; the second borrows money from outside the household sector to make the purchase without waiting to build up a sufficient stock of savings, and then pays back the loan in regular installments.[3] These two households are shown in Table 3, which is designed to illuminate the

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[1]A textbook on consumer credit, for example, jumbles a basket full of concepts together in this paean to credit: "Consumer credit, which has been an instrument in raising our material standard of living, affording a host of consumer satisfactions and resulting in the creation of utility, cannot be regarded as anything but productive." Cole, op cit, p. 9.

[2]Charles A. Luckett and James D. August, "The Growth of Consumer Debt," *Federal Reserve Bulletin*, June 1985, p. 392.

[3]We assume here that the product is consumed in the period in which it is purchased. If it were a consumer durable, there would be no important effect on the analytics except that consumption would be more spread out and the household would show an additional asset on its balance sheet.

issue of whether households that save and then spend will save more in total than households that spend and then save. Household A (the savers) builds up its assets through saving and makes a large purchase in the fourth period. The borrowing household (household B), in contrast, immediately makes the large purchase with consumer credit and incurs a debt (negative assets) to the non-household sector of the economy; it then pays off this debt over the subsequent three periods. It is clear from the example that the lifetime consumption of both households is equal. The flow of saving that builds up in a bank account is identical to the flow used to reduce indebtedness. For households with identical income streams, lifetime consumption will equal lifetime income if the households leave no legacy of debt or wealth.[4]

This model can be complicated in several dimensions. We can consider an overlapping-generations model where households in their prime earning years lend to younger households and are repaid during their retirement years. With overlapping generations in an economy with stable incomes, stable population, and no bequests, the flow of savings from the household sector to the rest of the economy will fall during the period of adjustment to the new permissive borrowing environment.[5] When borrowing equilibrium is attained (that is, when all new adult cohorts have had the opportunity to engage in consumption borrowing), the original savings flow will be resumed; in the meantime, however, the capital stock of the economy will have been permanently lowered by the same amount as the consumption loans of the younger generations. These results do not differ qualitatively from the first model illustrated in

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[4]We omit here the additions to and subtractions from income of interest payments received and paid by savers and borrowers, respectively. In monetary terms, the saving household will consume somewhat more than the borrowers; but in utility terms (assuming maximizing behavior and unfettered markets), the two households cannot be distinguished from each other.

[5]We assume that prior to the availability of consumer credit, the only device that consumers can use to even out household consumption over the life-cycle is saving in the prime years and dissaving in retirement.

Table 3

CONSUMPTION AND SAVING FLOW IN SAVING AND BORROWING HOUSEHOLDS

		Household A "Savers"			Household B "Borrowers"		
Time period	Disposable income	Consumption	Saving	Assets	Consumption	Saving	Assets
1	100	80	20	20	160	-60	-60
2	100	80	20	40	80	20	-40
3	100	80	20	60	80	20	-20
4	100	160	-60	0	80	20	0
5	100	80	20	20	160	-60	-60
6	100	80	20	40	80	20	-40
7	100	80	20	60	80	20	-20
8	100	160	-60	0	80	20	0
9	100	80	20	20	160	-60	-60
10	100	80	20	40	80	20	-40
11	100	80	20	60	80	20	-20
12	100	160	-60	0	80	20	0

Table 3, although the decrement to the capital stock will be larger in the overlapping generations model.

If the model is further complicated by allowing growing income, shifting demographic trends, and bequests (i.e. positive savings or debt remaining at the end of one's life), theory does not produce simple results; much depends on empirical values of such relationships as the link between income growth rates and saving rates, which is the resultant of both positive and negative forces.

We can conclude that the relationship between consumer credit, consumption, and saving can be quite complex, although simple models based on highly restrictive assumptions suggest that permanent links are absent and that any effects will be temporary. However, consumer credit will have certain other effects on economic behavior that are somewhat more predictable.

By facilitating access to larger sources of financial assets than may be available in a timely manner through saving, credit permits earlier purchases of larger, "lumpier" goods. The word "timely" is important because many products are desirable only if used at a specific time or period. For example, many household appliances are most useful during those periods when children are living at home; a larger refrigerator will not have as much value 20 years later when incomes are larger but children are grown and no longer members of the household. Credit availability is therefore likely to shift demand toward higher-value products, and in particular toward consumer durables.

Certain other economic forces can reinforce this tendency toward increased demand for consumer durables. Analyses of the demand for classes of products as a function of income show that, with rising income, time becomes more valuable and the demand for services rises as a substitute for one's own self-production--especially in the home. Since wage rates typically rise faster than the price of capital goods, households are motivated to substitute household capital--consumer durables--for personal services. We thus see a concatenation of circumstances leading to the increased demand for consumer durables wherein rising income makes them more desirable and credit makes it possible to purchase such items now, rather than later.

Other Possible Links Between Credit and Economic Behavior

Several arguments assert a positive relationship between consumer credit and various types of economic behavior. These arguments, though, are often contradictory and superficial. We repeat them here for cautionary purposes and to advise close scrutiny of these and other arguments, especially when they are not supported by adequate tests.

The availability of credit that makes large purchases feasible without a stock of savings has been suggested as a stimulant to greater work effort and especially to higher rates of female labor force participation.[6] A variant of this view states that consumers often

[6] E. Miller, "Consumer Credit and Economic Growth," in Board of Governors of the Federal Reserve, *Consumer Installment Credit*, Part II, Vol. 1, 1957.

agree to installment payments that are too large to be met out of their current incomes; the household consequently searches for additional sources of income through moonlighting, greater work effort, or employment of additional family members.[7] In both of these views, consumption and income are stimulated by credit availability, but saving is also increased out of the higher income generated by the additional effort; changes in the rate of saving could be either positive or negative.

According to another theory, in the absence of a contractual repayment requirement, households are undisciplined in their spending and saving behavior; without a repayment obligation, consumers are unlikely to save enough to make large purchases. Credit availability, therefore, promotes the purchase of more expensive items and more consumption than would be possible with a more casual approach to purchase decisions. Although this argument intends to assert a positive relationship between credit and consumption, in reality, it argues for an effect of credit on the *composition* of spending, with a shift toward more expensive items. Credit could also lead to *more* saving as the repayment of the credit would be larger than the original saving without the incurred debt.

Consumer credit could have broad economic effects through its influence on the structure of industry. One study has suggested that consumer credit stimulated aggregate economic growth in the 1950s by increasing the relative importance of consumer durable goods industries, which had more rapid increases in productivity and greater economies of scale than other industries. Growth therefore occurred, according to this argument, from the changing weights of sectoral shares in the economy.[8]

Finally, we consider the possibility that the availability of credit reduces the precautionary and transactions demand for liquid assets, and hence reduces the flow of saving that is then needed to accumulate the smaller stock of assets. The precautionary demand could

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[7]Cole, *op. cit.*, p. 8.
[8]Miller, *op. cit.*

fall because a convenient source of credit would enable a consumer to obtain funds easily to meet unexpected demands and emergencies. Credit could reduce the transactions demand for money because the funds required for a single, predictable monthly payment need only be held in a liquid form for a short period of time. As the demand for liquid assets falls, monetary velocity would rise, and consumption would be stimulated (if the economy were not operating at full capacity). An empirical study of this effect does indeed show that credit usage substantially reduces the value of household demand-deposits. Average balances held per dollar of credit card payments are less than one-tenth of those held for other transactions.[9] These effects of credit on increased monetary velocity could be expected to increase demand--if the monetary authorities did not react to the rise in velocity. There is little reason to believe, though, that velocity growth brought about by the changing structure of financial markets would not produce compensating adjustments by central banks. Also, possible relationship between the increased velocity resulting from the lower demand for money and aggregate consumption and saving rates was not examined.

Empirical Studies on the Effect of Credit on Consumption

One study of Japanese saving decisions bears indirectly on the question of credit availability and saving. Horioka has looked at the motivation for saving for future h .ing purchases and for several other goals such as education and marriage. His empirical findings are consistent with the simple models sketched out above. He finds that "the unavailability (or availability) of housing loans is not a cause of the importance of house-related saving. The reason is that housing loan repayments are also a form of saving, meaning that even if the amount of prepurchase saving decreases due to the increasing availability of housing loans, there will be a commensurate increase in the amount of post-purchase saving in the form of housing loan repayments....Precisely

[9]Kenneth J. White, "The Effect of Bank Credit Cards on the Household Transaction Demand for Money," *The Journal of Money, Credit, and Banking*, February 1976, p. 58.

this type of change in the composition of housing-related saving is now occurring in Japan."[10] Horioka's results for housing were comparable to his earlier findings on educational and marriage expenses. All three motives were found to be of considerable importance at the level of the individual household, "but unimportant from the point of view of the household sector as a whole because the rather considerable (gross) saving for these motives is offset by a comparable or greater amount of dissaving for these same motives... which underscores the importance of taking account of the fact that some households are saving for a given motive while other households are dissaving for the same motive."[11]

Few studies have examined empirically the direct relationship between credit and consumption or saving. Several studies that have attempted to probe this relationship have suffered from unresolved issues arising from simultaneous equation problems (for example, higher levels of credit could stimulate added expenditures, but increased demand could lead consumers to increase their use of credit.)[12] Another problem arises in studies on the effects of government controls; a common approach has been to determine whether controls and regulations are associated with reduced rates of credit usage, while assuming (without direct statistical examination) that any credit reductions are tied to subsequent reductions in consumption.[13]

These deficiencies were explicitly recognized in a study that examined the effect of U.S. credit controls on expenditures during two periods (1948-1949 and 1950-1952) and that also critically reviewed other published works on the same subject.[14] The authors estimated separate equations for automobiles and for other consumer durables to

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[10]Charles Yuji Horioka, "Saving for Housing Purchase in Japan," *Journal of the Japanese and International Economies,* Vol. 2, No. 3, September 1988, p. 372.

[11]*Ibid,* pp. 382-3.

[12]See, for example, Donald Humphrey, "Installment Credit and Business Cycles," in Board of Governors of the Federal Reserve System, *Consumer Installment Credit*, Part II, Vol. I, 1967.

[13]Many of these studies are referenced in: Michael J. Hamburger and Burton Zwick, "Installment Credit Controls, Consumer Expenditures and the Allocation of Real Resources," *The Journal of Finance*, December 1977.

[14]Hamburger and Zwick, *op. cit.*, p. 1560.

predict expenditures during the period of credit controls. For both types of products, the values of the prediction errors were no greater during the periods of control than during other periods. After testing several other methods to identify effects of credit control on expenditures, the authors concluded that installment credit "had no significant effect on the level of consumer durable expenditures."[15] Although controls do effectively reduce the volume of credit, "purchasers manage to maintain their level of expenditures by reducing savings or obtaining alternative forms of credit."[16] A critical review of the available literature yielded similar conclusions: "While there appears to be a clear indication that controls influence the quantity of credit extended, we find little, or no, evidence of an effect on expenditures."[17]

The U.S. Federal Reserve has attempted to determine the links between credit card usage and changes in a household's total spending. It commissioned a special survey of households and surveyed the analytical literature on the subject. The household survey "did not indicate any especially strong connection between credit card usage and household spending, a result consistent with the findings of other surveys."[18] Citing one of the few microeconomic studies on this issue, the Federal Reserve report noted "a maximum possible reduction in the saving rate of 0.3 percentage points during 1978 that might be associated with credit cards."[19] The report also surveyed evidence for possible effects on consumption of several other factors associated with credit: transactions cost differences among different means of payment; competition arising from offering credit; and changes in the velocity of money. In summary, it found that "no demand-related or other effects

[15] *Ibid.*, p. 1562.

[16] *Ibid.*, p. 1564.

[17] *Ibid.*, p. 1565.

[18] Board of Governors of the Federal Reserve System, *Credit Cards in the U.S. Economy: Their Impact on Costs, Prices, and Retail Sales*, Washington, July 27, 1983, p. 24.

[19] *Ibid*, p. 30, citing: Edward B. Montgomery, *Tests of Alternative Explanations of the Decline in the Personal Saving Rate.* (Ph.D. Dissertation, Harvard University, 1982), p. 26.

are discernible on the levels of output or prices...and the impact of credit cards on the aggregate saving rate is also apparently quite small."[20]

Possible Effect of Consumer Credit on Japanese Saving

Simple analytics suggest that saving may be reduced during a period of adjustment to a new equilibrium when consumer credit shifts from one level to another. We have noted that such a period began in Japan in the mid-1970s, and is likely to continue until the proportion of consumer credit to disposable income reaches a level somewhat greater than twenty percent. At present rates of growth, this equilibrium level will be reached sometime between 1990 and 1995.

From 1977 to 1987, the ratio of consumer credit to disposable income increased from 7.1 percent to 15.0 percent, or by roughly 0.8 percentage points per year. During the period of adjustment, the rate of saving would therefore have been depressed by roughly the same amount--0.8 percentage points. Thus, in 1986-1987, when the saving rate was actually 16.6 percent, it would have been approximately 17.4 percent if consumer credit had been in equilibrium.

The U.S. experienced a growth of consumer credit (as a proportion of disposable income) in the 15 years from 1950 to 1965 of about 0.6 percentage point per year. The average U.S. saving rate during this period was 6.8 percent; over the next five years, from 1966 to 1970, the U.S. saving rate rose to an average value of 7.3 percent, an increase of about the same magnitude as the earlier growth rate of consumer credit. Although this association between the cessation of the growth of consumer credit and the increase in saving rate does not demonstrate cause and effect, and other things are not being taken into account, the movement in saving was in the expected direction and of an approximately similar magnitude.

From this analysis, we may conclude that Japanese saving will increase somewhat in the 1990s as consumer credit reaches levels desired

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[20] *Ibid*, p. 68.

by households in an environment unconstrained by regulation and aggregate controls.

VII. CONCLUSION: THE EFFECTS OF JAPANESE GOVERNMENT REGULATION ON CONSUMER CREDIT AND SAVING

The principal effect of government policy and regulation on consumer credit in Japan has been to modify behavior influenced primarily by powerful economic forces. Major structural changes in the Japanese economy after the mid-1970s created enormous shifts in the use of savings among the business, government, and household sectors. Financial institutions sought new outlets in hitherto underdeveloped markets for their accumulating funds. Government policy, particularly that of the Ministry of Finance, was able to anticipate these trends in some cases, whereas in others it lagged the rapidly changing market developments. Early encouragement of banks to enter into consumer lending is an example of government being ahead of the market; a lagging policy is demonstrated by the continued protection of small finance companies.

Our main conclusion is that regulation has not been a key force in either promoting or blocking change. The tidal forces generated by corporate investment falling from 27 percent of GNP in the early 1970s to 16 percent 15 years later were sufficient to open up flows in new directions. Government could help shape and modify these flows, but could neither have stemmed the torrent nor compelled a comparable transformation in the absence of the underlying currents. Government policy can play a facilitating or restraining role; it can influence the distribution of gains and losses, but it did not produce by itself the developments of the scale witnessed in the past decade.

Other forces influencing the development of consumer credit include the growth of personal income, the demand for consumer durables, and the availability of technology that allows the efficient and convenient management of billions of credit transactions.

The past decade has set the stage for a substantial structural reconfiguration of credit markets in which banks are now the key players. As consumer credit becomes more universal and competitive, consolidation is likely to reduce the number of peripheral players because of the growing importance of efficiency in transactions processing and the acquisition and management of funds. Again, this will occur regardless of government policy, although government can influence the shape of the final outcomes.

When we turn to the relationship between consumer credit and saving, the evidence is suggestive, if not conclusive. We find little reason to believe that consumer credit affects the long-run volume of consumption or saving, although one can argue that during the transition from a regulated to an unregulated environment (a period of perhaps 15-20 years), the rate of saving will be slightly depressed. Economic reasoning also suggests that the composition and life-cycle timing of consumption is a function of credit availability, with credit permitting the earlier and perhaps greater consumption of consumer durables.

In conclusion, we note that the development of consumer credit in Japan is one of the results of the transformation of the Japanese economy, which became evident in the mid-1970s. The high rates of Japanese household saving, to a large degree, appear to be independent of credit growth and influenced by other economic forces, policies, and as yet not fully understood motivations. Nevertheless, the innovation, structural development, and financial growth of Japanese consumer credit have been as dramatic as the growth of industry in the post-war period. This phenomenon marks another step in the maturation of the Japanese economy and merits close attention despite the absence of a clear link between consumption and credit.

Table A.1

JAPAN: SECTORAL SAVINGS-INVESTMENT BALANCES (% OF GNP)

	Households			Corporations			Government			Current
Year	Saving	Invest.	Net Saving	Saving	Invest.	Net Saving	Saving	Invest.	Net Saving	Account Balance
1960	11.8	6.6	5.2	16.5	24.6	-8.1	7.7	4.7	3.0	0
1961	12.0	6.1	5.9	16.5	29.9	-13.4	8.5	4.8	3.7	-1.8
1962	12.3	6.7	5.7	15.6	21.8	-6.2	8.2	5.7	2.5	0
1963	11.6	7.1	4.5	15.9	23.7	-7.8	7.5	5.3	2.2	-1.5
1964	11.2	7.3	3.9	16.0	21.9	-5.9	6.8	5.3	1.5	0
1965	11.6	8.4	3.2	15.8	19.1	-3.3	6.0	5.4	0.6	1.2
1966	11.9	8.3	3.6	17.5	20.4	-2.8	5.6	5.4	0.2	0.9
1967	13.0	8.9	4.1	18.4	23.8	-5.4	6.3	5.1	1.2	-0.3
1968	13.2	8.9	4.3	19.7	24.1	-4.4	6.9	5.1	1.8	1.0
1969	12.7	9.2	3.6	19.8	25.3	-5.5	7.5	5.0	2.5	1.2
1970	14.6	6.5	8.1	18.7	27.5	-8.8	6.8	5.1	1.7	1.0
1971	14.9	5.2	9.7	16.1	24.8	-8.7	7.0	5.8	1.2	2.5
1972	15.1	5.3	9.8	16.9	23.9	-7.0	6.2	6.3	-0.1	2.2
1973	16.9	5.4	11.5	15.4	26.2	-10.8	6.9	6.4	0.5	0
1974	19.7	8.3	11.5	10.3	23.1	-12.9	6.3	6.0	0.4	-1.0
1975	20.6	8.9	11.7	8.4	17.9	-9.5	3.3	6.0	-2.8	-0.1
1976	21.3	9.8	11.4	9.1	16.2	-7.0	2.1	5.8	-3.7	0.7
1977	20.0	9.4	10.6	9.5	15.2	-5.6	2.5	6.3	-3.8	1.5
1978	19.4	10.0	9.3	11.4	13.9	-2.5	1.5	7.0	-5.5	1.7
1979	17.3	9.2	8.1	11.7	16.1	-4.3	2.5	7.2	-4.7	-0.9
1980	17.1	8.1	9.0	11.3	17.0	-5.7	2.7	7.1	-4.4	-1.0
1981	17.3	7.3	10.0	10.6	16.9	-6.3	3.3	7.1	-3.8	0.5
1982	16.0	7.1	8.8	11.2	16.2	-4.9	3.2	6.8	-3.6	0.7
1983	15.9	6.6	9.3	11.0	15.3	-4.2	2.8	6.4	-3.7	1.8
1984	15.3	6.4	9.0	11.4	15.9	-4.5	3.9	6.0	-2.1	2.8
1985	15.0	5.6	9.4	11.8	17.2	-5.4	4.8	5.6	-0.8	3.7
1986	--	--	--	--	--	--	--	--	--	4.4
1987	--	--	--	--	--	--	--	--	--	3.6

SOURCE: Edward J. Lincoln, Japan: Facing Economic Maturity, The Brookings Institution, Washington, D.C. 1988, Tables 3-1, 3-2.

Table A.2

JAPAN: SAVINGS AND CONSUMER CREDIT
(SHARES OF DISPOSABLE INCOME)

Year	Disposable Income(DI) (1000 Bn Yen)	Ratio: Household Saving/DI (%)	Ratio: Consumer Credit/DI (%)	Ratio: Housing Loans/DI (%)
1965	222.6	15.8	--	--
1966	254.3	15.1	--	--
1967	294.2	15.6	5.2	--
1968	341.0	16.7	5.5	--
1969	396.4	17.3	6.3	--
1970	462.6	18.2	6.3	--
1971	520.6	18.0	6.2	--
1972	603.3	18.2	6.7	--
1973	749.3	20.4	6.8	--
1974	938.3	23.2	6.1	--
1975	1087.1	22.8	6.7	--
1976	1235.4	23.2	6.7	16.3
1977	1353.2	21.8	7.1	18.6
1978	1472.4	20.8	7.6	20.9
1979	1570.7	18.2	8.3	24.3
1980	1699.3	17.9	9.1	26.1
1981	1803.7	18.3	9.8	27.8
1982	1888.2	16.5	10.8	29.6
1983	1979.1	16.3	11.8	30.6
1984	2067.4	16.0	12.1	31.3
1985	2168.3	16.0	12.6	31.6
1986	2265.6	16.6	13.7	32.3
1987	2383.5	16.6	15.0	34.1

SOURCE: Consumer credit and housing loans from *Annual Reports* of the Japan Consumer Credit Association; disposable income and household saving from "Account 5, Households," *Annual Report on National Accounts*, Economic Planning Agency, Tokyo, various years.

Table A.3

U.S.: SAVING AND CONSUMER CREDIT
(SHARES OF DISPOSABLE INCOME)

	Disposable Income(DI) (Bn $)	Ratio: Personal Saving/ DI (%)	Ratio: Consumer Credit/ DI (%)	Ratio: Mortgage Credit/ DI (%)
1950	208	6.1	11.2	21.8
1951	228	7.3	10.8	22.7
1952	240	7.3	12.4	24.4
1953	255	7.2	13.2	25.6
1954	261	6.3	13.4	29.0
1955	279	5.8	15.0	31.6
1956	298	7.2	15.3	33.2
1957	314	7.2	15.2	34.3
1958	325	7.5	14.9	36.2
1959	345	6.3	16.2	38.0
1960	359	5.8	16.7	39.6
1961	374	6.6	16.7	41.4
1962	396	6.5	17.2	42.7
1963	416	5.9	18.4	44.7
1964	451	7.0	19.1	45.0
1965	487	7.0	19.7	45.3
1966	526	6.8	19.4	44.3
1967	562	8.0	19.0	44.0
1968	610	7.0	19.2	43.7
1969	657	6.4	19.3	43.1
1970	716	8.1	18.4	41.5
1971	777	8.5	18.9	42.0
1972	840	7.3	19.8	43.6
1973	950	9.4	20.1	42.9
1974	1038	9.3	19.2	42.5
1975	1143	9.2	17.9	42.2
1976	1253	7.6	18.2	43.6
1977	1379	6.6	19.1	46.6
1978	1551	7.1	19.9	48.6
1979	1729	6.8	20.1	50.3
1980	1918	7.1	18.2	50.3
1981	2128	7.5	17.2	48.8
1982	2261	6.8	16.9	47.8
1983	2428	5.5	17.7	49.4
1984	2669	6.1	19.2	50.0
1985	2841	4.5	20.9	52.4
1986	3020	4.3	21.4	56.3
1987	3210	3.8	21.4	60.0
1988[a]	3435	4.1	20.6	59.7

SOURCE: *Economic Report of the President, 1989*, Tables B-26, B75, B73.

NOTE: [a] Through 3rd quarter, 1988.

Table A.4

JAPAN: INSTALLMENT LENDING OF
BANKS AND MARKET SHARE BY TYPE OF BANK

Installment Lending Year	All Banks (Bn Yen)	City Banks (%)	Regional Banks (%)	Sogo Banks (%)	Shinkin Banks (%)
1976	832	22.3	31.1	17.9	27.6
1977	953	20.2	32.6	18.0	28.0
1978	1211	22.3	33.1	16.8	26.5
1979	1314	25.6	32.6	16.5	28.3
1980	1379	26.5	29.9	16.0	26.9
1981	1387	25.5	27.9	17.4	27.7
1982	1496	23.4	26.0	21.1	28.2
1983	1736	22.6	23.2	24.9	28.1
1984	2163	22.4	22.4	26.4	27.3
1985	2724	20.5	21.3	30.2	26.7
1985	3737	19.3	20.6	33.6	25.2
1987	5969	26.7	19.6	31.6	20.8
1988	10485	32.9	20.3	26.7	18.3

SOURCE: Table "Housing Credit and Consumer Credit (*Installment Repayments*) *Part B, Funds* for Purchasing of Consumer Goods and Services," *Japan Statistical Yearbook,* Prime Minister's Office, various years.

Table A.5

JAPAN: OUTSTANDING CONSUMER CREDIT
AND MARKET SHARE BY TYPE OF LENDER (%)

Year	Total Consumer Credit (Bn Yen)	Shinpan Cos.	Sarakin	Pvt. Financial Cos.	Bank Lending [a]	Other Financial [b]	Other [c]
1976	8237	6.5	4.0	24.2	10.1	31.9	32.5
1977	9592	8.4	4.4	23.8	9.9	31.9	30.6
1978	11209	10.7	4.5	23.7	10.8	31.4	28.7
1979	13086	13.8	7.1	22.6	10.0	27.5	27.9
1980	15516	16.7	11.0	20.5	8.9	25.5	25.1
1981	17750	19.4	12.6	19.6	7.8	24.1	22.9
1982	20303	23.2	13.7	18.8	7.4	22.7	20.1
1983	23421	25.7	12.1	18.3	7.4	23.5	19.0
1984	25118	26.6	8.7	20.2	8.6	24.7	18.2
1985	27395	27.2	7.0	21.4	9.9	25.7	16.9
1986	30943	26.1	6.3	23.3	12.1	26.9	15.5
1987	35690	23.2	5.7	27.1	16.7	28.2	13.9
1988					25.8[d]		

SOURCE: *Annual Report's,* Japan Consumer Credit Association.

NOTES: [a] Bank installment loans; included in category "Private Financial Companies"

[b] Includes post office loans, time deposit loans, pawnshops.

[c] Includes retail credit provided by retail establishments or their credit subsidiaries.

[d] Estimate based on 1988 bank installment loans and assumed growth of consumer credit of 14.0 percent from 1987 to 1988.

Table A.6

U.S.: DISTRIBUTION OF CONSUMER INSTALLMENT CREDIT BY TYPE OF HOLDER (%)

Year	Total Install-ment Credit[a] (Bn $)	Commer-cial Banks (%)	Other Banks[b] (%)	Finance Cos. (%)	Retail Estabs.[c] (%)
1965	70.9	40.9	10.3	33.7	13.8
1966	76.2	41.1	10.8	32.5	14.2
1967	79.4	41.7	11.3	31.0	14.5
1968	87.7	43.2	11.7	29.7	13.7
1969	97.1	43.7	12.4	28.7	13.7
1970	102.1	42.5	12.7	27.1	13.6
1971	111.3	46.0	13.3	25.9	12.7
1972	127.3	46.9	13.3	25.2	12.5
1973	147.4	47.1	13.3	25.4	12.3
1974	156.1	46.4	14.2	24.9	12.5
1975	162.2	48.5	15.7	22.6	11.1
1976	178.8	47.8	17.1	22.2	10.7
1977	230.8	48.7	20.4	19.5	11.5
1978	275.6	49.4	20.7	19.7	10.2
1979	311.1	48.1	19.6	22.0	10.4
1980	314.9	46.7	18.4	24.4	10.5
1981	335.7	44.0	18.6	26.8	10.6
1982	355.8	42.9	18.0	27.7	10.4
1983	396.1	43.4	20.5	26.0	10.1
1984	453.6	46.1	23.6	21.2[d]	9.2
1985	535.1	45.0	24.4	22.4	8.1
1986	571.8	45.8	23.3	23.4	7.5
1987	613.0	45.9	23.6	22.8	7.6
1988	662.0	47.8	23.4	21.5	7.3

SOURCE: *Federal Reserve Bulletin*, table on "Consumer Installment Credit," various issues.

NOTES: [a] Installment credit represents 80-82 percent of total consumer credit in the U.S.
[b] Includes credit unions, savings & loans, mutual banks.
[c] Includes gasoline credit.
[d] Definition change removed 2nd mortages from consumer credit in 1984.