RETAIL BANKING: SANWA BANK
Gaining and Sustaining Long-term Advantage
Through Information Technology
Working Paper 170

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RETAIL BANKING: SANWA BANK

Gaining and Sustaining Long-term Advantage

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SOFTWARE AS A TOOL OF COMPETITIVE ADVANTAGE:
RETAIL BANKING

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Introduction: Objective of this Study

This retail banking case study of Sanwa Bank was completed under a three-year research grant from the Sloan Foundation. The project's purpose is to examine in a series of case studies how US and Japanese firms who are recognized leaders in using information technology\(^1\) to achieve long-term sustainable advantage have organized and managed this process. While each case is complete in itself, each is part of this larger study.\(^2\) Research on Citibank as the counterpart case to Sanwa is underway.

This retail banking case together with other cases\(^2\) support an initial research hypothesis that leading software users in the US and Japan are very sophisticated in the ways they have integrated software into their management strategies and use it to institutionalize organizational strengths and capture tacit knowledge on an iterative basis. In Japan this strategy has involved heavy reliance on customized and semi-customized software (Rapp 1995) but is changing towards a more selective use of package software managed via customized systems. In turn, US firms, such as Merck, who have often relied more on packaged software, are doing more customization, especially for systems

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\(^1\) In this paper and for the purposes of the study software, information technology (IT) and systems are generally used interchangeably. In addition, when referring to the firm as a whole, the text will use "it", but when referring to management, "they" will be used.

\(^2\) The industries and firms examined are food retailing (Ito-Yokado and H. Botta), semiconductor (NEC and AMD), pharmaceuticals (Takeda and Merck), retail banking (Sanwa and Citibank), investment banking (Nomura and Credit Suisse First Boston), life insurance (Meiji and USAA), auto (Toyota), steel (mini-mills and integrated mills, Nippon Steel, Tokyo Steel and Nucor), and apparel retailing (Satan and Federated). These industries and cases were selected based, the advice and research of specific industry centers funded by the Sloan Foundation. These are the computer and software center at Stanford, the semiconductor and software centers at Berkeley, the financial services center at Wharton (University of Pennsylvania), the pharmaceutical and auto centers at MIT, the steel project at Carnegie-Mellon and the food services project at the University of Minnesota. The case writer and the research team for this case thus wish to express their appreciation to the Alfred P. Sloan Foundation for making this work possible and to the Sloan industry centers for their invaluable assistance. They especially appreciate the time and guidance given by the center for research on financial services at Wharton as well as the retail banking group at Sanwa. However, the views and interpretations expressed in this case are strictly those of the author and do not represent those of Sanwa or its management.
needed to integrate software packages into something more closely linked with its
business strategies, markets, and organizational structure. Thus, coming from different
directions, there appears to be some convergence in approach by these leading software
users. The cases thus confirm what some other analysts have hypothesized; a coherent
business strategy is a necessary condition for a successful information technology
strategy (Wold and Shriver 1993). These strategic links for Sanwa are presented in the
following case.  

This case along with the other cases also illustrates that the implementation and
design of each company’s software and software strategy is unique to its competitive
situation, industry and strategic objectives. These factors influence how they choose

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1 This refers to cases for which interviews have been completed. See footnote 3.
2 These and other summary results are presented in another Center on Japanese Economy and Business working
paper: William V. Rapp, “Gaining and Sustaining Long-term Advantage Through Information Technology: The
Emergence of Controlled Production,” December 1998. Also see: William V. Rapp, “Gaining and Sustaining Long-
term Advantage Using Information Technology: Emergence of Controlled Production,” Best Papers Proceedings,
3 All the cases are being written with a strategic focus. That is, they examine each firm’s IT strategy as opposed to
what specific software or IT systems it is using. In this sense the cases illustrate how IT is used to improve
competitiveness rather than on what specific software a firm is using. The latter is only generally used to illustrate
and explain the former. This emphasis was not specified when the project was initiated but has evolved as the research
has progressed. There are three major reasons the case studies have become focused in this way. The first is because at a
very detailed level all these firms have unique software and information systems due to the way they weave their
organizations with packaged and custom software. There is thus little other organizations could learn if each case just
explained the detailed IT system or systems for each firm. In addition, the cases would be very long and would
quickly drown the reader in data since IT pervades virtually all aspects of these very large corporations. This became
quite apparent at an early stage in the research when we tried to develop IT organization charts for Takeda, Merck
and NEC. The second is that at a very general level, differences in each firm’s IT system can be almost trivial since there are
only a limited number of operating system options, e.g. IBM mainframes, Unix workstations, and Windows or MAC
based PCs. Third, information technology changes very rapidly and thus each firm is constantly upgrading and
evolving its systems. So detailed descriptions of each IT system would rapidly become obsolete. For these reasons,
focusing the cases on strategic principles has developed as the best way to explain to readers something they could
use and apply in their own situations. This has been confirmed when we have presented the material in different
forums as the discussants have commented favorably on the approach. Equally importantly, in our interviews and
conversations with management, this is where they have wanted to focus their responses. That is, as the various cases
illustrate, these firms manage their IT decision-making by following a set of strategic principles integrated with their
view of their competitive environments. This is similar to Nelson and Winter’s (1982) rules and routines for other
kinds of management decisions and innovations, and illustrates these firms’ evolutionary approach to IT use and
development. Their basic reasons for this appear to incorporate the points just noted above, i.e. the uniqueness of
their systems, their limited operating system options, and IT’s rapid technical change. Based on what we have learned,
therefore, it is these firms’ strategic approaches, including the concept of controlled production explained later, that
between packaged and customized software options for achieving specific goals and how they measure their success. Indeed, as part of their strategic integration, Sanwa and the other leading software users interviewed have linked their software strategies with their overall management goals through clear mission statements that explicitly note the importance of information technology to firm success.

They have coupled this view with active CIO (Chief Information Officer) and IT (information technology) support group participation in the firm's business and decision making structure. Thus, for firms such as Sanwa, the totally independent MIS department is a thing of the past. This may be one reason why outsourcing for them has not been a real option, though their relatively successful business performance is not based solely on software. Rather, as described below, software is an integral element of their overall management strategy and plays a key role in serving corporate goals such as enhancing productivity, improving account management or strengthening customer relations. Thus these systems must be coupled with an appropriate approach to marketing, customer service, and new product development reflecting Sanwa's clear understanding of their business, their industry and the firm's competitive strengths within this context. This clear business vision, especially of the Life Cycle Model described below, has enabled management to select, develop and use the software they believe is required for each retail banking function and to integrate these into a total support system for the bank's operations to achieve corporate objectives. Since this vision impacts other corporate decisions, Sanwa also has good human resource and

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seem to have the widest applicability and to offer other firms the most potential insights without becoming dined in how to use IT to improve competitiveness. The strategy described here, though, only applies to retail banking.
financial characteristics compared to other Japanese banks (Appendices I & II on Retail Strategy & Operations as well as Firm & Industry Data).

Yet Sanwa does share some common themes with other leading software users too, such as the creation of large proprietary interactive databases that promote automatic feedback between various stages and/or players in the service development, delivery and consumption process. Their ability to use IT to economize on traditional delivery systems while extending and expanding their customer base are also common to other leading software users. In addition, they are able organizationally and competitively to build beneficial feedback cycles or loops that increase productivity in areas as different as customer service, geographic coverage, and product availability while reducing cycle times and improving the production and delivery of services to the customer. Better cycle times reduce costs and improve business forecasts since they need to cover a shorter time period. Customer satisfaction is enhanced through more timely delivery. Thus, software inputs are critical factors in Sanwa’s and other leading users’ overall business strategies with strong positive competitive results for doing it well and potentially negative implications for competitors.

An important consideration in this respect is the possible emergence of a new strategic production paradigm, “controlled production”, in which Sanwa may be participating. Just as mass production dramatically improved on craft production through economies of scale using standardized products and lean production improved on mass production through making production more continuous and tying it more closely to actual demand, “controlled” production seems to significantly improve productivity
through monitoring, controlling and linking every aspect of producing and delivering a product or service, including after sales service and repair.

Such controlled production (CP) is only possible by actively using information technology and software systems to continuously monitor and control functions that had previously formed a rather automatic system response to changes in expected or actual consumer demand. This may be why such firms’ skillful use of information technology is seen by themselves and industry analysts as important to their business success. But this is only true when it is integrated with their business from both an operation and organization standpoint, reflecting their overall business strategy and clarity of competitive vision. Therefore, at Sanwa the software and systems development people are part of the decision making structure within the retail division while the system itself is an integral part of the way they organize, deliver and support their retail business from product development through to forecasting and market intelligence. This sequence is particularly critical in retail banking where the demand and supply for particular products or services shifts according to age, job status and other demographic variables.

Therefore, Seagate Technology may be correct for Sanwa too when they state in their 1997 Annual Report “We are experiencing a new industrial revolution, one more powerful than any before it. In this emerging digital world of the Third Millennium, the new currency will be information. How we harness it will mean the difference between success and failure, between having competitive advantage and being an also-ran.”

In Sanwa’s case, as with the other leading software users examined, the key to using software successfully is to develop a mix of packaged and customized software
that supports the firm’s business strategies and differentiates it from competitors.

However, management has not tried to adapt the organizational structure to the software used. Further from their perspective, functional and market gains have justified the additional expense incurred in customizing certain systems, including the related costs of integrating customized and packaged software into a single information system. This is done by assessing the possible business uses of software organizationally and operationally, especially its role in enhancing their core competencies or particular retail banking functions. They reject the view that information systems are generic products best developed by outside vendors who can achieve low cost through economies of scale and who can more easily afford to invest in the latest technologies.6

In undertaking this and the other case studies in order to assess the importance for each firm of the kinds of issues noted above, the project team sought to answer certain key questions while still recognizing firm, country and industry differences.

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6 Sawa and the other cases have been developed using a common methodology that examines cross-national pairs of firms in key industries. In principle, each pair of case studies focuses on a Japanese and American firm in an industry where software is a significant and successful input into competitive performance. The firms examined are ones recognized by the Sloan industry centers and by their industry as ones using software successfully. To develop these “best-practice” studies, we combined analysis of existing research results with questionnaires and direct interviews. Further, to relate these materials to previous work as well as the expertise located in each industry center, we held working meetings with each center. In addition, we coupled new questionnaires with the materials used in the previous study to either update or obtain a questionnaire similar to the one used in the 1993-95 research (Rapp 1995). This method enabled us to relate each candidate and industry to earlier results. We also worked with the industry centers to develop a set of questions that specifically relate to a firm’s business strategy and software’s role within that. Some questions address issues that appear relatively general across industries such as inventory control. Others such as managing the IC manufacturing process are more specific to a particular industry. The focus has been to establish the firm’s perception of its industry and its competitive position as well as its advantage in developing and using a software strategy. The team also contacted customers, competitors, and industry analysts to determine whether competitive benefits or impacts perceived by the firm were recognized outside the organization. These sources provided additional data on measures of competitiveness as well as industry strategies and structure. The case studies are thus based on extensive interviews by the project team on software’s use and integration into management strategies to improve competitiveness in specific industries, augmenting existing data on industry dynamics, firm organizational structure and management strategy collected from the Sloan industry centers. In addition, we gathered data from outside sources and firms or organizations with which we worked in the earlier project. Finally, the US and Japanese companies in each industry that were selected on the basis of being perceived as successfully using software in a key role in their competitive strategies. In fact, each saw their use of software in this exact manner while these competitive benefits were generally confirmed after further research.
These have been explained in the summary paper referenced in footnote 3. We have set them forth in Appendix I as well where Sanwa’s profile is presented based on our interviews and other research. Readers who wish to assess for themselves the way Sanwa’s strategies and approaches to using information technology address these issues may wish to review this summary prior to reading the case. For others it may represent a useful outline.  

Introduction to Case

The case begins by placing Japan’s banking industry in a competitive context and then examines the governmental policies and economic factors affecting Japanese retail banking markets. As one of Japan’s leading city banks, Sanwa’s evolution and current business strategies are an integral part of this development. For example, retail loans account for about 10% of total consolidated assets (Sanwa 1998a). At the same time, its organizational structure and software product choices help one to understand the company’s use and demand for software. The study concludes by examining Sanwa’s use of information technology as a tool to create competitive advantage in retail banking. The last section summarizes the findings and identifies other potential strategic benefits. However, to appreciate the role of information technology within Sanwa’s retail banking

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7 The questions are broken into the following categories: General Management and Corporate Strategy, Industry Related Issues, Competition, Country Related Issues, IT Strategy, IT Operations, Human Resources and Organization, Various Metrics such as Inventory Control, Cycle Times and Cost Reduction, and finally some Conclusions and Results. They cover a range of issues from direct use of software to achieve competitive advantage, to corporate strategy, to criteria for selecting software, to industry economics, to measures of success, to organizational integration, to beneficial loops, to training and institutional dynamics, and finally to inter-industry comparisons. These are summarized for Sanwa in Appendix I.

8 Approximately Yen 5.5 trillion is divided roughly 80% for housing and 20% for other loans (Sanwa 1998a).
group, some important industry market and economic characteristics need to be
explained first.

The Industry Context: Retail Banking in Japan

In their 1997 review of the Japanese City banks (Morita and Ogawa 1997),
Salomon Brothers could only lament these banks' gloomy prospects as they had in their
1996 review (Ogawa 1996). Similarly, the senior-banking analyst at Nikko Securities
(Sasajima 1997) commented that "there were no bright spots in Japanese banking," a
view shared by a senior manager at Moody's Investor Services' Tokyo office. Indeed, as
a result of the collapse of Japan's Economic Bubble that had propelled Japanese stock
and real estate prices to ethereal levels in the late 1980s (Rapp 1997), banks have
predictably been facing major defaults on their loan portfolios. This is especially true of
loans collateralized by real estate and securities (K. Ogawa 1998). This has resulted in
massive loan write-offs in 1998/99 and more recently substantial inputs of government
capital.

Further, because the banks were permitted under BIS guidelines to count 45% of
their appreciated equity portfolios as part of their capital structure, the collapse of
Japan's stock market has sharply reduced the banks' capital at the same time that it has
increased their loan losses. This situation has meant that as they have realized some of
their remaining stock and other asset appreciation to cover loan losses, their actual
reserves have been significantly diminished. Indeed, as of September 1998, latent stock
profits for Japan's City Banks were a negative Yen 1.1 trillion as against remaining non-
performing and restructured loans of Yen 12.3 trillion and loan loss reserves of Yen 7.2

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trillion (Choy 1999). In addition, since the banks have only begun to fully recognize their losses and actual bad loans could easily be more than twice currently recognized levels, many analysts feel at least another two years is required to reflate their balance sheets (Choy 1999). Their prospects therefore continue to appear quite dim.\(^9\)

Summarizing recent performance, Japan’s city banks’ operating profits for the year ended March 1997 declined by 23.2% due to a decrease in net interest margins. There was no domestic loan growth, and bonds appreciated little as interest rates were at basement levels.

Because this basic situation continued for the years ending March 1998 and 1999, the city banks’ operating profits declined more. Further, the writing-off of “disclosed” problem loans may take more time. So the total loan problem could continue another three to five years for some banks. As these problem loans must be carried at a negative spread, they act as a drag on earnings and the recovery in the banks’ balance sheets. A further earnings drag comes from the stocks which have been sold and repurchased to cover loan losses because they are not paying dividends sufficient to cover their carrying costs in terms of the interest paid on deposits. Therefore, recovery in the banks’ capital base other than through recent and future government capital injections still seems well in the future.

When their US counterparts faced similar problems due to the S&L crisis of the mid-80s, the Fed also pursued a low interest rate policy to help the banks reflate their balance sheets, and the Resolution Trust Company bought problem loans and took over

\(^9\) As of March 1998, Sanwa’s loan loss reserves were Yen 1.0 trillion and net latent stock profits were Yen 332 billion against problem loans of Yen 1.3 trillion (Sanwa 1998). But on 9/30/99, they were 0.9 trillion Yen and minus
failing institutions. There was also considerable industry consolidation, and dramatic downsizing accompanied this restructuring. However, Japan is currently unable to pursue several of these options.

First, the Bank of Japan has lowered rates as much as they can, almost to zero. Also, because they started from very low levels, they are facing political pressures from savers who have seen their interest income on deposits fall dramatically. The Fed had the luxury of coming down from higher rates. Second, Japanese taxpayers until recently refused to support a bailout of the banks’ excessive loan policies. So the Japanese equivalent of the RTC, the CCPC, is funded by bank loans (Packer 1998), and government support until the recent capital injections has been limited to the normal tax relief resulting from loan losses. Further, even this relief has been limited as many banks continued to report profits despite their deteriorating loan portfolios (Cargill 1998). Therefore, the eventual resolution of the problem is very much dependent on expanding bank earnings. Finally, though there have been several mergers between stronger and weaker banks, real consolidation has been severely limited by Japan’s permanent employment system. That is, despite the mergers, over the past three years, there has been little reduction in S, G&A. Indeed, it has risen slightly due to a sevenfold increase in deposit insurance premiums. (See Appendix II on Firm and Industry data as well as Smart Money 1999.)

Exacerbating these problems is continued economic weakness which limits domestic loan demand as does the fact that large Japanese corporations are not borrowing from banks since they can borrow directly on their own credit more cheaply.

(los) 24 billion Yen respectively against problem loans of 1.4 trillion Yen (1998a).
(K. Ogawa 1998). Thus, it is hardly surprising that like their US counterparts they have turned to high growth overseas markets, derivatives, and retail banking to develop new and more profitable business. However, with all large city banks facing the same business and economic environment, most have sought similar solutions, and their expansion into Asia only accentuated their problems due to the Asian Financial Crisis (Cargill 1998). Therefore, the strategic problem in retail banking as in the other areas is how to differentiate one’s product and services from other banks, how to avoid more credit problems and most importantly how to create a lasting competitive edge given Japan’s highly regulated banking environment.

Historically, of course, most Japanese City banks have grown and developed as corporate banks. Indeed, this was a conscious government policy after the Second World War in which households were seen as sources of savings to be channeled to a rapidly growing industrial sector (Ueda 1998). Indeed, banks and bank managers were judged on their ability to grow deposits (Rapp 1997). It was only in the 1970s as the oil crises and Nixon shock led to a substantial decline in economic growth rates that Japanese city banks began to explore retail banking as an opportunity, often sending trainees to the US to study US retail banks. Their interest in retail banking in turn was boosted by the financial liberalization of the 1980s which allowed large Japanese corporations to raise funds directly in the global financial markets and accelerated the decline in corporate lending (Rapp 1997, Ogawa, K. 1998 and Patrick 1997). It was at this time that several Japanese city banks acquired and expanded retail operations in California such as Sumitomo Bank of California, Bank of Tokyo which combined its California First with
Union Bank, Mitsubishi Bank which bought Bank of California, as well as Tokai, Mitsui and Sanwa.

Nevertheless, it was not easy for the City Banks to shift gears from corporate lending not only because of inexperience but because many promising areas of potential retail expansion were restricted due to the continued compartmentalization of Japanese finance (Rapp 1997 and Horiuchi 1998). This has only recently begun to change with the prospects of the “Big Bang” (Horiuchi 1998 and K. Ogawa 1998). Previously, they could not expand into money management, which required a trust bank license, nor could they even issue credit cards because MITI and the finance companies controlled this activity. Only recently have they been able to issue real credit cards rather than cash debit cards so that credit cards and consumer credit can emerge as an important area of expansion and development. With respect to home mortgages, origination and bundling of mortgages has had no supporting secondary market, and the government’s housing loan program is a direct competitor rather than a supporter as in the US. With the coming of Japan’s “Big Bang”, however, many of these restrictions will disappear and new competitive opportunities will develop (Choy 1999). This is both a benefit and risk for Sanwa and the other City Banks. It is a benefit because of the new markets into which they can expand and the new services they can offer. It is a risk due to the influx of many powerful new competitors.

Sanwa Bank’s Retail Banking Strategy

Within this economic and competitive context, Sanwa’s retail banking strategy is dependent on three basic aspects of their business: 1) their retail banking infrastructure,
including branches and information network; 2) their retail marketing strategy; and 3) their evaluation of the Japanese people's lifestyle or pattern of personal development.

Though very difficult, they make a particular effort to manage and analyze the statistical data related to the last two aspects in order to differentiate their products and services from competitors and retain these customers on a long term basis.

The basic information infrastructure for the retail banking division is controlled from Sanwa's headquarters in Otemachi and a central concern here is to use IT to control costs since the bank is very conscious of the expense of delivering a service to a particular market segment. Sanwa's strategic approach to this business problem has been to develop a matrix and identify different customer groups and their different banking needs according to their current lifestyle (Sanwa 1998). In turn, they closely analyze the costs and returns via the 2 major ways of delivering products or services. The first is the traditional way through full service branches, each with its own sales force. This is typical of other Japanese banks as well. The second approach is electronically via the telephone, the Internet, ATMs, credit cards, mail, etc. The traditional way is very expensive, particularly relative to the potential returns from certain new market segments such as young people just starting their careers. Yet, Sanwa recognizes it is very important to capture these people as customers since this segment is the fastest growing retail banking market in Japan. In addition, as these individuals progress through their lives, their economic needs and earning power will grow, and they will become more and more profitable customers.

Competing for high net worth individuals is another segment that includes competitors such as Citibank whose current target customer is the individual or family
with at least Yen 300 million in assets. However, while Sanwa is looking at forming a private banking capability, it is just in the process of developing one through the affiliation with Toyo Trust described below along with the purchase of Yamaichi's Trust Company. Rather, they are focusing on the people they can reach electronically and through direct marketing campaigns such as the mail-in account-opening program they promoted in 1996 through 800 fast food shops in Tokyo and Osaka where their branches are concentrated.

To people in their twenties and thirties Sanwa offers a particular set of products such as ATMs, credit cards, etc. while to those in their forties and fifties who have married, they want to expand their loans for housing, weddings, and education. In the case of mortgages, they think the market is big enough that they can compete through supplementing the loans available from the Housing Bureau. In fact this has been an expanding area for many banks as mortgage loans rose by 10% in 1996 and 5.4% in 1997 (Appendix II) and 80% of Sanwa's current consumer loans are housing related (Sanwa 1998a). For those entering retirement or who are wealthy, they will offer products such as funds management and private banking. In effect as people's banking and credit needs change, the Bank's retail marketing strategy will change with them. But for this strategy to be effective, the bank must gather and manage a wide range of information about their client base so they can offer these products in a personal and timely way. This approach has parallels with Meiji Life's new system for their life insurance representatives, indicating that at least two leading software users in Japanese financial services are pursuing similar strategies to deal with both the existing competition and the effects of future deregulation, i.e. the "Big Bang".
Making the strategy work therefore requires Sanwa to efficiently track its large and growing customer base in terms of individual needs and to then deliver products to that base efficiently and profitably. Thus, the bank needs low cost delivery into each segment. As noted above, Sanwa spends considerable effort in evaluating costs and believes it is very good at implementing such a strategy. Further, they recognize this has become even more important as Japan’s “Big Bang” has gotten underway in 1999. This is because increased competition will decrease revenues further while increasing marketing costs. At the same time, it has become very important to target the first time customer. However, the big City Banks cannot afford to do this via the “face-to-face” banking typical of the traditional large full service branches with their tellers and calling officers, and so far there has been no movement to smaller or scaled-down branches.

In any case, Sanwa’s approach has been to increase direct banking by mail, phone and Internet as well as the number of automated or unmanned branches. They call this “direct-to-consumer” banking (Sanwa 1998). As part of this strategy, they are also experimenting with PC banking. They and some of the other big banks are working with NTT on this, and it will allow the deposit and transfer of money via PC. In the meanwhile in February 1998 they were the first to offer a 24-hour telephone banking service accessible globally as well as Internet access (Sanwa 1998). They have also found this approach ties into their idea of people of different ages having different financial needs. That is, they have found younger customers are busier and more technologically sophisticated. So they prefer the longer hours and greater flexibility of Sanwa’s automated branches whose ATMs are now available 24 hours a-day including Saturdays and Sundays, the first bank to do so (Choy 1999 and Sanwa 1998). This is
because these customers often cannot come to a branch during business hours of 9:00 AM - 3:00 PM.

Still, through direct marketing and electronic means, Sanwa has found it can build a structure that will support a long-term banking relationship. It is not clear how Sanwa takes the revenues or profits from this prospective long term relationship into account in determining the profitability of adding a new customer versus the cost of servicing and supporting that customer. Nevertheless, they believe such new customers are basically somewhat profitable from the beginning, based on the size of their accounts, their credit card usage and the low cost of electronic support. However, Sanwa is presently analyzing this assumption in more detail and expects to refine it by type of customer over time. This indicates they recognize that strategically using software information and information technology is a dynamic and continuous process. In addition, it is one that not only improves product delivery but lowers costs. For example, having developed a method to measure the profitability of each structure and service by customer segment, the retail division' management now knows that automated or "unmanned" branches with "full-service" ATMs cost 1/5th that of a "manned" full service branch. They estimate that PC banking will be even cheaper at 1/8th to 1/10th the cost of a regular teller. Both delivery systems are of course available for longer hours at little additional cost.

They also know that they have been able to improve products and services such as cash access compared to delivery in the branches. They have a scoring model that helps them evaluate this for each customer segment, and they use customer surveys as part of this continuous evaluation process. This has resulted in increased share among
the bank's targeted customers, i.e. those in their 20s and 30s, in areas where they have opened automated branches through direct mail. Given the low cost of these branches, this business has been profitable for them while also building their relationship-banking base. Thus they see their strategy of adding some 700 of these branches in Osaka and Tokyo to their 360 regular or full service branches as having been very successful in terms of both the bank's current and long-term strategic retail banking goals. In addition, ATMs and automated branches are system intensive and are thus subject to user base economics (Rapp May 1997) in that each additional user reduces the cost of delivery to others by spreading the fixed systems costs over more and more users. Success in this area is subject to a beneficial loop of increasing returns and greater profits. A clear indication of the benefits to the bank of this strategy is its recent announcement that it will be closing 50% of its regular full-service branches compared to only around 12% for their major competitors. This will give Sanwa tremendous cost and operating profit advantages at a time when bank earnings and capital are under great pressure (Smart Money 1999).

Interestingly, the banking analyst at Nikko did not recognize this beneficial loop as he used the traditional measure of the number and size of the deposits that were added by each new customer instead of looking at the whole relationship including credit card usage and the low cost of delivery. For example, given that these branches are one-fifth the cost of a full service branch, only one-fifth the deposit or relationship size is needed to justify the investment. The low marginal cost of servicing each account is another plus. That is, full service ATMs that can personally deliver many services are also only 1/5th the cost of a teller and are very far advanced since Sanwa began this unmanned
ATM strategy in 1989. It therefore now has over 1000 branches throughout Japan, more than any other bank, with the benefits in terms of trimming its full service branches noted above. (Their regular branches of course all have “Quick Lobbies” so that they combine some of the convenience and efficiency features of the unmanned branches as well.)

In addition, the retail management’s approach is a dynamic process in that they are constantly adding to the number of functions and services that the unmanned branches can handle as well as expanding the hours during which these services are available (Sanwa 1998). This is part of the constant strategic upgrading and development of the bank’s IT and retail banking delivery system that has allowed it to increasingly shift away from regular full-service branches. The basic decision criterion in this respect has been to replace people by machines, to diversify the delivery system, and to reduce costs, all through extending the use of electronic money. However, management always keeps in mind all their customers’ needs so those customers do not feel alienated by the shift in delivery structures. The use of the debit card is a clear illustration of this since this will be a prepaid cash card when it arrives. Though this already exists in some forms, such as the Pachinko Card and the NTT phone card, this will extend its use more widely. Similarly, it is developing the capability to manage and sell investment trusts, which will appeal to their older clients planning for college, weddings, and retirement (Sanwa 1998).

The benefits to Sanwa and its 17 million retail clients (Sanwa 1999) of this tailoring of services/products, and their delivery by age and family circumstance for each market segment should grow as the effects of the “Big Bang” accelerate. Part of this strategy will also involve greater co-operation with affiliates such as Toyo Trust (Choy...
1999). The two banks plan to "create a company to market a Japanese version of 401(k) pension plans as well as share ATM networks and jointly run multifunctional branches. Toyo Trust will merge with Sanwa Trust & Banking Co., Ltd. And absorb Sanwa's custody operations. Sanwa Bank will take over Toyo Trust's overseas loan business" (Choy 1999). This has necessitated working out ways to deliver joint products and share in the profits. Another example is the proposed "cash card" mentioned above. The emergence of one-bank holding companies may further facilitate this process since if Sanwa puts various related entities under a single corporate umbrella, the holding company structure may allow them to work more closely together.

**Information Technology Infrastructure**

Sanwa's base information system is a typical Japanese "three-tier" mainframe system similar to most other Japanese banks (Rapp 1995). The mainframes manage a series of servers that in turn manage the PCs, ATMs and Workstations (Sanwa 1998). In turn, they have developed their own software, largely because it is a real time on-line system that must be totally integrated with their own business operations. When they go outside the bank such as with credit and cash cards, they must only interface with NTT Data who represents the actual interface with the VISA and MasterCard networks. NTT Data controls and manages those relationships for all the Japanese banks. So Sanwa is not involved except in setting up and managing the protocol interfaces with the mainframes that handle customer accounts.

In terms of communicating with its ATMs and within the bank, it uses its own leased lines with the public system as a back up. The capacity is sufficient for this
purpose. In terms of communicating with other banks or lenders for credit purposes, there are three basic databases to which Sanwa has access, though presently this is only for negative information. That is, the databases are only allowed to transmit information when a problem exists. Therefore, the banks, including Sanwa, have no way of measuring total credit exposure in order to anticipate when a problem might develop. These systems are the Shinyo Joho System or All Bank Information system, the Credit Card information system and the Sarakin or CCB system. These systems have been separated primarily due to reluctance by their users to share information as well as some turf issues between the MOF and MITI. However, because of the recently depressed economic environment, there has been a growing recognition of the need for various lenders to avoid heavy debt situations and to share information. Thus, there is some work to integrate the three. But to successfully use this information to actually reduce credit problems among retail customers will in turn involve integrating data bases and credit management skills, including the development of credit profiles such as those developed and used by US banks and credit card companies over the last 10 years.

Customers, Culture and Strategic Organization

In many ways Sanwa’s approach to introducing an automated delivery structure is more customer oriented in terms of their basic strategy than a US bank’s, though over time it may arrive at an even more automated system. That is, just because something is cheaper and technically feasible, the bank has not tried to force it if the customers want something else. Rather it has developed and promoted what it believes is demanded by each customer segment these systems are designed to serve, either currently or over the
customer’s life cycle. Sanwa has thus integrated the clients into its strategic delivery system and has formalized this in its Consumer Direct Banking Center (Sanwa 1998).

In addition, its human resource (HR) policies are more aligned than their US counterparts (Harker 1997) in that those segments that demand automation are getting it, while those that demand customer service in terms of teller contact and cross selling are getting that. Permanent employment is probably a plus here since the bank has excess personnel it can allocate to these tasks. Also, in both the US and Japan, phone use defines customer behavior and is difficult to change. Thus, US banks appear to be pursuing an uphill strategic effort in getting customers to change to use more telephonic and automated delivery systems (Harker 1997). However, the Japanese banks by going more with the flow, are only using telephonic means to reach those who feel most comfortable with this medium, i.e. younger Japanese customers. In essence Sanwa has found it easier to align its delivery and HR systems with its customers rather than try to get the customers to align themselves with the bank’s cost driven strategy. The former approach takes additional revenues or net return over time into consideration whereas the latter does not. From a strategic perspective, the former should be more user-friendly, successful and profitable over time.10

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10 At a meeting at Columbia in September 1997, Wharton Professor Harker who is leading a large project on retail banking and software systems explained that the results of his investigation of the retail function at large US commercial banks demonstrated the need to align HR with strategy. But in fact most US banks do not. For example, he noted if a bank is using college graduates, then it should expect inputs into the system from which it will get benefits. However, if a system is well established, and the bank does not expect employees to manage it, such as cross-selling, then it should be less demanding of educational requirements, though this is not usually the case. The process Harker’s team used to establish this research result was mapping IT and management process across parallel functions, such as opening an account, a CD, changing an address, etc., etc. From this, they found efficiency matters in terms of both cost and customer perception. In addition, consistency was key to such efficiency and customer perception, but is dependent on who controls the system. If it is the person adding value, the customer comes first; if it is the person managing MIS, then system cost per unit predominates.
However, as was explained in the introduction, for firms in the best practice sample, these two perceptions and functions are more integrated. So system costs are balanced against customer value and revenues. Thus at Samwa there is someone who controls the whole retail process, including the related systems. To the extent this is not true at other banks, those banks will be at a competitive disadvantage. Maintaining such a balance, though, means constantly understanding how and why something is being done. Indeed, Harker indicated it was critical for firms to think about how and why they did things so they could understand the reasons why and could then make rational choices concerning business systems. This is obvious from the case studies such as Samwa since such understanding allows the "best-practice firms" to make IT and software choices for rationally explainable business reasons. When this is not true for competitors, they will suffer. Harker also pointed out that the best performers involved customers as part of the process, i.e. the total business process. Simplistically, this means it does not pay to offer checking accounts if people only want money market accounts. Therefore, if as a bank you want customers to use a particular service delivery channel, it should be one that serves the customer’s needs and interests.

In fact what has happened in the U.S. is that as finance channels have expanded customers have used new channels but have not stopped using the old ones. Thus anticipated cost reductions have not occurred. Interestingly, Samwa’s approach has avoided this problem as they have not tried to change the behavior patterns of old or current customers. Rather they have designed packages of services and delivery systems through their ATMs and branches to reach a different and new customer segment for which these services are specifically targeted. Their pre-selection and targeting of services by customer group thus largely solves the problem which US retail banks have yet to solve.

Further, Samwa’s approach and structure effectively maps revenue expectations both currently and over the customer life cycle against delivery cost and service expectations. This is another problem whose solution has so far eluded many U.S. banks. U.S. banks’ expansion of branches and ATMs has not only not decreased costs but has not brought in additional customers or revenues. Conversely, Samwa’s targeted market segmentation approach has done all of this by matching customer demands with a dedicated delivery system.

In the new paradigm, automation clearly makes sense due to Samwa’s segmentation and life cycle strategies, which are valid in a Japanese context. Nationwide banks and the low mobility of labor compared to the U.S., means once a bank has a customer it can usually retain them. This approach appears similar to American Express’ active solicitation of college students. Harker also cited the effect of what seem to be different goals for Japanese and U.S. banks. U.S. banks want to optimize return on risk adjusted assets. This is a financial or balance sheet management goal and is consistent with Moody’s comments that Japanese banks need to learn how to manage risk in their asset portfolios. (This is somewhat reflected in Samwa’s 1994 Annual Report as well.) However, from an historical standpoint, Japanese banks do not have much experience at this kind of management since during most of the postwar period they lent to very large firms, collateralized by assets appreciating due to inflation.

In addition, banks did not really expect repayment, i.e. the loans were evergreen. The emphasis was therefore on gathering deposits to make loans that were seen as inherently riskless. All this changed in the 1980s as large companies financed themselves directly in the market and banks were forced to shift to riskier borrowers and to really rely on the collateralized assets which impeded with the collapse of the Bubble (Horuchi 1998 and K. Ozawa 1998). That is, the banks have suffered from a huge systemic collapse due to a major change in national asset allocations rather than from bad loan-by-loan analysis. Conversely, US banks have had to concentrate on cash flow and balance sheet management since in the 1970s and 80s as they faced the issue of dis-intermediation and growing capital requirements while asset inflation was never as great as in Japan. However, Samwa’s new global risk management committee and risk assessment procedures (Samwa 1998) indicate they recognize loan losses as a critical strategic problem that must be addressed on a consistent and long term basis, especially as their business develops globally and moves beyond traditional Japanese customers.

Nevertheless, Japanese banks are presently emphasizing current operating earnings per employee as a critical goal and indicator of efficiency as well as operating expenses as a percent of operating revenues (Samwa 1997 and 1998). Such measures put a natural focus on automation that complements Samwa’s segmentation strategy for the market. Further, given the strategic alignment problems noted by Harker for U.S. banks in delivering retail services, Samwa’s approach may be even more appropriate. Also, given Japan’s currently very low cost of capital and the relatively high cost personnel in financial services, especially in terms of the permanent employment system, heavy emphasis on automation may be appropriate given factor cost allocation too.

Samwa has studied each segment or customer group and knows what each customer is looking for in banking and other financial services. Further, it monitors these groups and keeps information in service delivery loops so when an event is coming, it can solicit the related business on a targeted basis, e.g. college loans when child gets to be that age. This is built into the life cycle concept and the matching of services with customer profiles. It also means mailings and other direct marketing efforts are more specific to customers’ needs and thus have a greater chance of success than the generalized shotgun approach used by most U.S. banks. Further, being able to do this efficiently and know the revenues generated by a new marketing effort will cover the cash outflow is important in an environment where
Summary

Due to Big Bang pressures, the decline in corporate lending and the entrance of all Japanese City Banks into retail banking, Sanwa has been forced to develop a retail banking approach that will differentiate it from other banks as well as new competitors such as life insurance and securities companies. Their strategy has emphasized automated branches to deliver an expanding range of services related to their life cycle model of customers' requirements which is analogous to that used by Meiji Life. To differentiate their strategy from competitors, Sanwa's management depends on three basic elements 1) the bank's retail banking infrastructure, including branches and IT network; 2) their retail marketing strategy; and 3) management's evaluation of customers' patterns of personal development throughout their lives. Though difficult, Sanwa makes a special effort to manage and analyze data related to the last two. This is because it envisions their customers as having an evolving and growing set of financial needs that change during their lives. When the customers are young and starting to work, their needs are likely to be for credit cards and consumer related financial products. When they marry, they will need debt products such as mortgages for an apartment that expands to a house and life insurance as they have children. Then there are savings products for college, weddings and retirement. The key to the bank's success in

lions are being written off or restructured so their balance sheet contribution to cash flow is deteriorating. Therefore, from a long term perspective, it would seem a bank needs a management and strategic mix of both operating efficiency, where Sanwa appears to be ahead of most U.S. banks, and balance sheet risk management efficiency where the Americans may be ahead. In essence, integrated service delivery is only viable if the information delivery needed to support that service and related products is also integrated and is strategically aligned with business goals and objectives. Consistent with this dictum, Sanwa's adds functions over time to the basic automated delivery structure both as this is technically feasible and is demanded by the customer segments these systems are designed to serve, either currently or over the life cycle. Thus Sanwa is very customer oriented in terms of its IT strategy because it has integrated it into its strategic delivery system. In addition, their HR policies are aligned too in that those segments demanding automation are getting it while those demanding customer service in terms of teller contact and
implementing this strategy is tracking, marketing and delivering these products on a
timely basis. The bank must also assure product development evolves in a way
responsive to changes in lifestyle and technology. These factors require the bank
determines how valuable on a discounted basis a particular type of consumer is and how
easily the bank can retain them throughout the cycle. In addition, the system must signal
the appropriate time to start marketing, how much investment should be made per
customer and what is the most effective way to both market and deliver a special product
or service?

To address these and related strategic issues, Sanwa has developed a matrix
identifying different customer groups and their banking needs according to lifestyle. It
cross matches this with a set of products for which it carefully controls costs. The
primary target is young people just starting their careers who are the fastest growing
retail banking market segment in Japan with the greatest long-term potential. However,
their are expensive to service via traditional branch banking but can be efficiently
serviced electronically via automated branches, telephone and the Internet. Still, Sanwa’s
approach appeals to this market segment’s greater acceptance of technology and then
follows them as they progress through their lives, their earning power grows and their
financial needs expand. It does this by offering them new products tailored to their
changing financial needs.

Furthermore, by getting them acquainted with automated banking at an early date
and by constantly increasing the number and quality of services offered through its
automated branches that are much cheaper to open and maintain, Sanwa hopes to
improve customer contact, reduce customer migration and keep costs low. By targeting
and reinforcing the technological bias of this group, they are thus using IT to influence
customer behavior, tie them to Sanwa on an interactive basis, and grow an increasingly
profitable customer segment. But for the strategy to work, Sanwa must gather and
manage a range of information about this client base so they can offer products in a
personal and timely way while constantly improving the efficiency and user appeal of
their systems.

Interestingly, this approach avoids the problem that has impacted some U.S.
banks when they have unsuccessfully tried to change existing client behavior to force the
customer to use electronic systems. Rather, Sanwa’s view is to match products and
delivery systems with the targeted customer segment. In this way they stay truly
customer oriented since the bank continues to serve traditional clients through its branch
network. In sum, Sanwa has studied each segment and knows what products and services
those customers want and how they want them delivered. It uses IT to monitor these and
keep the information in service delivery loops so when a customer event occurs it can
solicit related business. This reinforces customer acceptance of the life cycle approach
and builds the basis for Sanwa’s own success in this important business segment. Since
this segment is less volatile and lower risk than traditional business lending or other new
banking growth areas such as derivatives or Asia, this will also help to reestablish their
earnings and capital base. Given current economic conditions, these developments are
very critical for their competitive position compared to other Japanese City Banks. This
is one reason why several analysts rate them among the three big City Banks most likely
to emerge from the current crisis and the “Big Bang” as leaders in Japanese finance
(Smart Money 1999).

APPENDIX I

Summary Answers to Questions for Sanwa – Retail Strategy & Operations

<table>
<thead>
<tr>
<th>General Management and Corporate Strategy</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Has the firm integrated software into their retail management strategy, including using it to institutionalize organizational strengths and capture tacit knowledge on an iterative basis?</td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>Has the firm succeeded solely on the basis of its software strategy?</td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>Does the firm believe some customized software and its close organizational integration enables the company to capture and perpetuate on a more consistent basis certain tacit knowledge and unique corporate features, i.e. core competencies, that account for its continued success in the marketplace with reliability and repetition of important elements in their thinking?</td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>Is the firm’s software strategy successful because it is a well managed company that introduces software innovation when it serves corporate goals for enhancing productivity or customer relations within its industry?</td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>Does the firm generally meet established criteria as a quality organization such as: effective organizational self assessment, use of project and especially cross functional teams, improving quality outcomes through reducing uncertainty, rapidly diffusing learning throughout the organization including the use of software and information technology, effective implementation of organizational and technical change, facilitating change via evolution rather than revolution or reengineering(^\text{\textsuperscript{1}}), emphasizing participatory management, having process excellence, using value added analysis, actively doing benchmarking, constant organizational improvement, commitment to concrete realistic goals, effectively managing a dynamic iterative experimental process through goal setting, training and constant improvement?</td>
<td>?</td>
<td></td>
</tr>
</tbody>
</table>

\(^{1}\) MIT Systems Dynamics Group in a September 1997 presentation estimated that 70% of reengineering efforts fail.
consultation?

Does the firm plan in detail for operational excellence including the contribution of software and information technology to the allocation of resources?

Do their planning systems enable management to make better business, operating and resource allocation decisions, including those related to software and IT, with a link to resource valuation techniques?

Do they focus on a small number of priorities, usually three or fewer, with a well defined, cascaded system reaching from the commitment of senior management to the department level with associated metrics?

Is the firm a “high performance” workplace for services?

Is there a heavy emphasis on improving process through using software?

Industry Related

Are industry economics and competitive dynamics an important strategic driver for the firm and for its use of software and information technology in that it has been adapted to the firm’s particular industry and competitive situation?

Do industry paradoxes exist such as: declining stock prices, manufacturing improvements that create product improvement difficulties, or employees’ active product use that retards improvements?

Competition

Is software a significant and successful input into the firm’s competitive performance?

Does the firm explicitly and consciously perceive the implications of their software strategies and use on their competitiveness and business success?

Are there direct links between their software strategies and overall management goals? X

Do customers, affiliates, competitors, industry analysts, government officials, industry associations and suppliers perceive the competitive benefits or impact of the firm’s use of information technology? ?

Has the firm gained first mover advantages through successfully introducing software related innovations? X

IT Strategy

Is firm a sophisticated software user that consciously designs and implements a software strategy to achieve competitive advantage? X

Does the firm utilize several types of software input alone or in combination to achieve competitive advantage? X

Does the firm’s system work to rapidly uncover barriers to implementation, including using new or improved software, while generating cross-functional and hierarchical consensus so measured goals can be achieved? X

Is leadership at different levels actively involved in driving software planning, assessment and deployment with regular progress reviews that link plans, goals, benchmarks, metrics, milestones, resources and responsibilities? X

Does the system allow for flexibility and innovation as well as change and individual efforts provided they meet goal, planning and metric criteria? X

Is there a clear vision making project and new product software selection straightforward and closely related to strategic goals and processes? X

Does this software strategy involve a conscious and clearly defined reliance on customized and semi-customized software in addition to packaged software with specific criteria and goals for selecting each type, and do they have ways to measure this so that the firm knows customized software achieves functional or market gains that justify the additional expense, including related costs of integrating No
customized and non-customized software into a single information system?

Does the firm use option valuation methods to manage uncertain and random outcomes since this appears to be at the software implementation frontiers even among very well managed companies? X Visa, YesCard, etc.

Does their strategy include increased use, development and integration of industry and company specific vertical application software and embedded software in its production and delivery processes to improve competitiveness?

If the firm has an embedded software strategy, is this integrated or interactive with their other software and overall business strategy in ways affecting production, product design or service that improve quality and costs long term?

Do they favor increased outsourcing of software design and development?

Does the firm believe large-scale outsourcing by many US companies assumes those firms’ information systems development need not be integrated with their business organization and that they view their information systems as generic products best developed by outside vendors who can achieve low cost through economies of scale? That is, do they feel these firms’ approach focuses on the cost side of software and that these firms do not see differences among the systems used by their competitors?

Do they in turn believe this is a mistake by their competitors that gives them a long-term and sustainable competitive advantage over such companies because they believe outsourcing surrenders a firm’s strategic software options since systems service companies have an incentive to develop increasingly standardized products and are one step removed from the company’s customers and business?

Has the firm established a software strategy that is open and interactive with its customers and/or suppliers?

Has this enabled it to capture information or cost competitive externalities?

IT Operations
Do participants own goals and are then committed to implementation strategies? x

Does the firm embed software into its production and delivery processes and what are its competitive market implications? x

Is software technology tied to high speed telecommunications technology, allowing the firm to track, receive and deliver shipments or services directly or on-line without further handling or processing? x

Does it manage the potential risks of extensive use of software or open systems? ?

Do they work to ensure consistency and reduce programming errors? x

Is informal interaction a key aspect of planning and implementation? x

Is the firm’s system institutionalized and self-reinforcing with good communication and consensus building while software and IT play a role, including preventing retrospective justification or target reduction? ?

Human Resource and Organizational Issues

Does the firm pay close attention to systems training and organizational integration for all employees, reducing errors through improved consistency and staffing efficiencies across the firm since software can confound even routine operations? x

Does certain software require special HR competencies or education? x

Does the firm try to change human behavior to use software? x

Parameter Metrics such as Inventory, Cycle Times and Cost Reduction

Are goals or targets tightly linked to regularly reviewed metrics with inputs coming from all levels that are often cross-functional affecting large parts of the organization, e.g. cycle times, timely delivery, and customer satisfaction? x
Does the firm have standard agreed ways to explicitly organize or manage this software selection process?  

Does the firm have agreed ways to measure and evaluate success in using software to promote objectives such as lower costs, credit card usage, market share, product development times, or system support?  

Are IT costs balanced against overall long-term productivity or revenue gains?  

Does the firm have methods to ensure increased customization costs result in lower costs downstream so that developing and using customized software makes sense?  

Has the firm created large interactive databases to allow automatic feedback between stages or players in the production and delivery process? And are these databases constantly being refined and updated on an interactive basis with actual performance results in a real time global environment? What are the competitive and metric impacts of this? such as reducing inventory costs and wastage while improving the quality of customer service?  

Has the firm used software to create beneficial feedback cycles that increase productivity, reduce cycle times and errors, and integrate product and delivery?  

Do other firms or analysts have alternative measures of competitiveness or views on the appropriate industry strategy?  

Has the firm achieved better than industry growth, superior delivery, improved control, reduced down-time or changeover problems, reduced product or process errors, fewer complaints, an improved product development process, and/or any other definite and measurable progress relative to competitors?  

Do the firm’s metrics go beyond financial to areas like customer satisfaction, operational performance, and human resources?  

Does their evaluation system apply to new product development and significant projects as well as to continuous operations?
Summary and Conclusions

Conclusions and Results

Can you summarize a mission statement on the role and impact of software as a tool of competitive advantage for this firm in this industry? x

Is it consistent with the strategies identified as successful or appropriate in the existing competitiveness research from Sloan's industry study center? Some x

Are there important business or IT situations that require further research? x

Are intellectual property issues important in explaining the successful and sustainable use of software to achieve competitive advantage? x

Are beneficial cost impacts generally an important consequence of this firm's successful software strategy? x

Does this company fit a profile where software seems most likely to contribute to enhanced competitiveness? ?

Based on this study is the market for vertical application and embedded software growing? Not Say

Since Japanese competitors normally do not outsource, do Japanese firms see themselves as benefiting from this US trend? x

Does this leading Japanese firm assign positive value to improved integration and enhanced control through selective customization? x

Do general measures such as decreased costs, as evidenced by reduced account servicing expenses, reflect the benefits of a successful software strategy? x

Are the benefits of a successful software strategy also reflected in specific industry standards such as an expanded customer base? x

Does this leading IT user have explicit criteria for selecting package versus customized software and for semi-customizing software packages? x
Do this firm closely integrate or couple their software and business strategies beyond mere alignment?  

Do they closely integrate their organizational and HR policies with their software systems?  

Have they reorganized to use software and information technology?  

Has their software codified or built on existing organizational strengths or core competencies, including HR alignment with their business and IT strategies?  

Have they embraced and integrated information technology as part of their business strategies and core competencies?  

Is their MIS function integrated with the rest of retail banking in terms of organization and decision making?

**APPENDIX II**

**SOME FIRM AND INDUSTRY DATA**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Loans and Bills Discounted</td>
<td>36.4</td>
<td>37.5</td>
<td>35.2</td>
<td>36.9</td>
<td>34.4</td>
</tr>
<tr>
<td>Other Assets</td>
<td>19.3</td>
<td>18.0</td>
<td>21.8</td>
<td>20.3</td>
<td>20.6</td>
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<tr>
<td>Total Assets</td>
<td>55.7</td>
<td>55.5</td>
<td>57.0</td>
<td>57.2</td>
<td>55.0</td>
</tr>
<tr>
<td>Loan Related Reserves</td>
<td>0.6</td>
<td>0.6</td>
<td>1.0</td>
<td>0.7</td>
<td>1.0</td>
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<tr>
<td>Equity</td>
<td>1.9</td>
<td>1.9</td>
<td>1.8</td>
<td>1.9</td>
<td>1.8</td>
</tr>
<tr>
<td>Total Liabilities</td>
<td>55.7</td>
<td>55.5</td>
<td>57.0</td>
<td>57.2</td>
<td>55.0</td>
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<tr>
<td>Total Income</td>
<td>3.4</td>
<td>3.3</td>
<td>2.8</td>
<td>1.4</td>
<td>1.3</td>
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<tr>
<td>Interest Income</td>
<td>2.7</td>
<td>2.5</td>
<td>2.2</td>
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<tr>
<td>Interest Expense</td>
<td>2.0</td>
<td>1.9</td>
<td>1.6</td>
<td>0.8</td>
<td>0.7</td>
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<tr>
<td>Total Expenses (excluding LL)</td>
<td>3.4</td>
<td>3.1</td>
<td>2.7</td>
<td>1.28</td>
<td>1.06</td>
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<tr>
<td>Net Income before LL</td>
<td>0.0</td>
<td>0.2</td>
<td>0.1</td>
<td>0.12</td>
<td>0.24</td>
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<td>Description</td>
<td>Value1</td>
<td>Value2</td>
<td>Value3</td>
<td>Value4</td>
<td>Value5</td>
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<td>--------</td>
<td>--------</td>
<td>--------</td>
<td>--------</td>
<td>--------</td>
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<tr>
<td>Loan Losses (LL)</td>
<td>0.2</td>
<td>0.1</td>
<td>0.4</td>
<td>0.1</td>
<td>0.2</td>
</tr>
<tr>
<td>Net Income after LL and before tax</td>
<td>0.2</td>
<td>0.1</td>
<td>(0.3)</td>
<td>0.02</td>
<td>0.04</td>
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## Industry Data

<table>
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<tr>
<th>Bank</th>
<th>FY 1996 (Yen billions)</th>
<th>Operating Revenue</th>
<th>%Δ</th>
<th>Operating Profit</th>
<th>%Δ</th>
<th>Recurring Profit</th>
<th>%Δ</th>
<th>Net Income</th>
<th>%Δ</th>
<th>Net Income</th>
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<tbody>
<tr>
<td>Dai-ichi Kangyo</td>
<td>2122.7</td>
<td>(23.2)</td>
<td></td>
<td>391.3</td>
<td>(24.6)</td>
<td>(349.9)</td>
<td></td>
<td>NM</td>
<td></td>
<td>(353.9)</td>
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<tr>
<td>Hokkaido Takushoku</td>
<td>370.1</td>
<td>3.3</td>
<td>55.0</td>
<td>(9.5)</td>
<td>1.0</td>
<td>NM</td>
<td></td>
<td>6.1</td>
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<td>Sakura</td>
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<td>281.7</td>
<td>(15.5)</td>
<td>59.9</td>
<td>NM</td>
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<td>BOT/Mitsubishi</td>
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<td>525.4</td>
<td>(18.5)</td>
<td>94.8</td>
<td></td>
<td>(58.2)</td>
<td>43.8</td>
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<tr>
<td>Fuji</td>
<td>2620.7</td>
<td>(12.4)</td>
<td></td>
<td>327.1</td>
<td>(29.9)</td>
<td>31.3</td>
<td></td>
<td>NM</td>
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