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PROGRAM ON INTERNATIONAL FINANCIAL SYSTEMS, HARVARD LAW SCHOOL
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LIFE CYCLE MODELS, THE BIG BANG AND
JAPANESE FINANCIAL INSTITUTIONS' 
EMERGING SOFTWARE STRATEGIES

Sustaining Advantage Through Information Technology*

By

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Introduction:

This short paper is based on interviews and research on retail banking and life insurance undertaken as part of a larger study comparing Japanese and US firms' use of software in several industries, supported by a three year grant from the Sloan Foundation. Its purpose has been to examine through case studies how US and Japanese firms who are recognized leaders in using information technology to achieve a sustainable advantage have organized and managed this.\(^1\) The observations that follow are mostly derived from the preliminary results of cases being prepared on Meiji Life Insurance and Sanwa Bank.

These cases together with others\(^2\) support a basic research hypothesis that while Japan is competitively behind in producing most software, especially packaged software, some Japanese firms including those noted above are very sophisticated software users. They have integrated software into their management strategies and are using it to institutionalize organizational strengths and capture tacit knowledge on an iterative basis. Previously, this strategy involved heavy reliance on customized and semi-customized software, but this is changing towards a more selective use of package software managed via customized systems, including customized middleware.

These cases thus confirm what some other analysts have hypothesized, that a coherent business strategy is a necessary condition for a successful information technology strategy (Wold and Shriver 1993). However, contrary to what such analysts might have expected, these successful business and information strategies have not led to a change in corporate cultures. Rather, the software and information technology strategies pursued by these firms have codified and institutionalized their existing cultures, core competencies and organizational structures. Further, strategies and cultures have been positively oriented towards using technology to improve product or service development and delivery. This is clearly demonstrated in implementing the life cycle model strategies discussed below.

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\(^1\) Industries and firms being examined are: food retailing (Ito-Yokado and H. Butts), semiconductors (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), autos (Toyota) steel (Nippon Steel, Tokyo Steel, Nucor) and apparel retailing (not yet decided).

\(^2\) This refers to interviews completed in 1997 and beginning of 1998. Ibid. The case studies are based on interviews by the project team on software's use and integration into management strategies to improve competitiveness, augmenting existing data collected on industry dynamics, firm organization and management strategy. Also, data was gathered from outside sources and firms or organizations, including those who cooperated with an earlier Japanese software project (Rapp 1995). Finally, US and Japanese companies were selected based on their being perceived as successfully using software in a key role in their competitive strategies. These competitive benefits were generally confirmed by further research.
In this approach, they appear to reject reengineering or any major corporate reorganization. Similarly, they have elected to retain control over software purchasing and development and have avoided outsourcing except for certain low technology, low priority tasks such as payroll because of the perceived benefits of controlling the integration and use of software and information technology in their basic business and organization. Further, the cases indicate for these financial institutions industry-specific vertical application software is increasing as they develop and integrate information systems specific to their industry and competitive situation. They thus confirm another research hypothesis that some firms consciously and successfully use software to pursue competitive advantage. Again, this is seen in the life cycle model strategies pursued by Meiji and Sanwa.

Life Cycle Model:

While implementation and design of each company’s software and software strategy appears unique to each firm and its competitive situation, industry and strategic objectives, there is some commonality among the two Japanese financial institutions as they prepare for the Big Bang under which financial service firms will be able to compete across industry segments. In turn, this has influenced how they choose between packaged and customized software options for achieving specific goals and how they measure their success. The primary strategic driver in this regard at the retail level is an evolving customer life cycle concept.

That is, as these major firms plan to compete across industry segments, they are interested in how they can deliver a different and new set of financial products to their existing customer base as well as how they can retain and expand that base over the long term so new competitors cannot take it away. They also want to build sustainable competitive barriers based on their core competencies between their customers and the emerging wider competition to maintain profitability and avoid excessive competition.

In approaching this strategic problem, they currently envision their customers as having an evolving and growing set of financial needs that change over their lives. When they are young and starting to work, their need is likely to be for credit cards and consumer related financial products. When they marry, they need debt products such as mortgages for an apartment which expands to a house and life insurance as they have children. Then there are savings products for college, weddings and retirement. The question is how to track, market and deliver these products in a timely manner as well as to assure their development evolves in a way responsive to changes in lifestyles and technology. Further, an important issue is how valuable on a discounted basis the typical consumer is and how easily a firm can retain them throughout the cycle. Further, what is the appropriate time to start marketing, how much investment should be made per potential customer and what is the most effective way to both market and deliver a specific product or service?

The consensus among the two firms is that given Japan’s geographic compactness and relatively limited labor mobility, the appropriate time to begin life cycle marketing is just after
students have graduated and entered the permanent labor force. This is because Japanese consumers have a great deal of loyalty and these firms are nationwide. Thus consumers have little reason to shift providers as they pursue their careers. At the same time, it is relatively expensive to service customers at this stage given the traditional labor intensive approach used by most financial service firms. For this reason, Sanwa and Meiji use information technology to solve the traditionally high service cost problem while still initiating the relationship just after graduation. They then track the likely evolutionary demand for new or expanded products on a continual and individualized basis.

Meiji Life for example has developed their own life cycle model which they deliver through a new software delivery system via a network of laptops carried by their 45,000 agents. It is dependent for its success on both the agent and the customer easily understanding the information presented. Therefore, the software is a simple NT Japanese language based system. In turn, the laptops are able to receive and send information to Meiji's network servers and mainframes that use heavily customized systems. This software strategy is linked with their overall management goals through a clear mission statement that explicitly notes the importance of information technology to the firm's success not only in retaining existing customers but in developing new business. Since individual life insurance products account for about 80% of profits even though only about half of life insurance in force, this approach has a clear basis in their business, industry and firm's competitive strengths. This vision is what enables them to select, develop and use the type of software they require for each function and to then integrate these into a total support system for their operations to achieve their corporate objectives. For instance, Meiji noted that as a direct result of its new system, it expects to substantially reduce paper and storage costs by reducing the number and size of its branches as well as the copies of each document it must retain. Its ability to retrieve documents and respond to claims is faster too, improving customer satisfaction. Further, the software reminds agents of important dates like birthdays and anniversaries when client contact is important. It also signals the need for a product such as a college or wedding fund, thus providing consistency in product marketing and delivery.

In this way, Meiji has used customized software to link packaged or other system software together and adapt it to its organizational structure. It has not tried to adapt the organizational structure to the software. Given this perspective, both functional and market gains are considered to justify the additional expense of customization, including the costs of integrating customized and packaged software into a single system where consistency, reliability and repetition are important elements. This is true of Sanwa as well. Both noted extensive outsourcing would surrender these benefits since they feel systems service companies have an incentive to develop increasingly standardised products to improve their operational efficiencies. Outsourcing also puts the firm one step removed from the market, and they question the outside firm's knowledge of their industry or organization and thus their ability to design and integrate the software to their basic business to enhance their competitive position. Given their clarity of vision, this seems a legitimate concern.
Given the current grim outlook for city banks, Sanwa is under even greater pressure to successfully and efficiently develop and implement their life cycle model. This is because only retail banking appears to offer attractive and relatively secure returns. Japan's continued economic weakness has limited domestic loan demand, and large corporations are not borrowing from banks since they can borrow directly more cheaply. Therefore like their US counterparts banks have turned to retail banking to develop new and more profitable business. However, with all large city banks facing the same business and economic environment, it is hardly surprising most have sought similar solutions. So competition from all city banks is intense, and competition will swell as other firms join the fray after the Big Bang. The strategic problem in retail banking is therefore how to differentiate one's product and services from other providers and even more importantly how to create a lasting competitive edge given Japan's highly regulated and competitive environment. Yet despite these conditions, Sanwa Bank has apparently developed a successful long term retail strategy where information technology plays a critical role.

It 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 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. The information infrastructure is controlled from Nihonbashi, and a key concern is to control costs since they are very conscious of delivery cost of a service to a particular market segment. They solve this problem by developing a matrix and identifying different customer groups and their banking needs according to current lifestyle. In turn, they analyze the costs and returns via their 2 major ways of delivery. The first is traditional through full service branches, each with its own sales force. This is typical of other Japanese banks. The 2d approach is electronically via phone, Internet, ATMs, credit cards, mail, etc. The traditional way is expensive relative to returns from emerging market segments such as young people starting their careers. Yet, Sanwa recognizes it is very important to capture these customers since this is the fastest growing market in Japan. Further, as these individuals progress through their lives, their financial needs and earning power will grow, and they will become more and more profitable customers. They therefore focus on those they can reach electronically and through direct marketing campaigns in Tokyo and Osaka where their branches are concentrated.

To those in their twenties and thirties they offer 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 feel the market is big enough they can compete through supplementing loans from the Housing Bureau. Finally, to those entering retirement or who are wealthy, they offer retirement products such as funds management and private banking. As people's banking and credit needs change, the Bank's

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3 Operating profits for all city banks for the year ended March 1997 declined by 23.2% due to a decrease in net interest margins. There is no domestic loan growth, and interest rates are at basement levels.
retail marketing strategy changes with them. But for the strategy to work, Sanwa must gather and manage a range of information about their client base so they can offer these products in a personal and timely way. This approach parallels Meiji’s new system for their life insurance representatives, supporting the view that these leading Japanese software users in financial services are pursuing similar strategies to deal with both existing competition and the effects of deregulation.

As just noted, the key to making this work is to efficiently track a large and growing customer base in terms of individual needs and to then deliver products to that base efficiently and profitably. Thus, you need low cost delivery into each segment. So Sanwa spends considerable effort evaluating costs and believes they are very good at implementing this strategy. Further, they recognize it is becoming even more important as the “Big Bang” gets underway. This is because increased competition decreases revenues while increasing marketing costs. At the same time, it has become more important to target the first time customer. Since the big city banks can just not afford to do this via the “face-to-face” banking of the traditional large full service branch with their tellers and calling officers, and so far there has been no movement to smaller branches, a successful IT delivery system may become a necessary condition for long-term survival.

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 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. They have found this approach ties into their idea of different aged people having different needs too. That is, younger customers are busier and more technologically sophisticated. So they prefer the longer hours and greater flexibility of automated branches which are open until 9:00 PM as well as on Saturdays and Sundays. This is because they are often unable to come to a branch during normal business hours of 9:00 AM - 3:00 PM.

Through this direct marketing and electronic means Sanwa has built a structure which supports a long-term relationship. While it is not clear how Sanwa computes revenues or profits from such prospective long term relationships in determining the profitability of adding a new customer versus the cost of servicing and supporting them, it appears a customer is somewhat profitable from the beginning based on account size, credit card usage and low cost electronic support. However, they are currently analyzing this in more detail and expect to refine it by customer type over time. They recognize strategically using software and information technology is a dynamic and continuous process, through which one improves product delivery and lowers costs. For example, having developed a way to measure profitability of each structure and service by customer segment, they know automated or “unmanned” branches cost 1/5th “manned” full service branches while ATMs costs 1/8 to 1/10th of a teller and is available longer hours at little additional cost.
They also know they can improve products and services over time such as cash access compared to delivery in the branches. They have a scoring model which helps them evaluate this for each customer segment, and they use surveys as part of this continuous evaluation process. This has resulted in increased share among target customers, i.e. those in the 20s and 30s, in areas where they have opened automated branches through direct mail. Given these branches low cost, this business has been profitable while building their relationship base. Thus they see their strategy of adding 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 their current and long-term retail banking goals. Further, since ATMs and automated branches are systems intensive and are thus subject to user base economics (Rapp May 1995), each additional user reduces the cost of delivery to others.

Sanwa began their unmanned ATM strategy in 1989, and now have over 1000 branches throughout Japan, more than any other bank. Their regular branches all have “Quick Lobbies”. So they combine some of the convenience and efficiency features of the unmanned branches as well. This is a dynamic process in that they constantly add to the number of functions and services the unmanned branches can handle as well as expanding the hours in which these services are available. This is part of the constant upgrading and development of their IT and retail banking delivery system. The basic decision criteria are to replace people by machines, to diversify the delivery system, and to reduce costs, all through extending the use of electronic money. The use of the debit card is another example of this as will be the prepaid cash card, which already exists in forms such as phone cards.

The benefits of tailoring services/products, and their delivery by age and family circumstance for each market segment should get larger as the effects of the “Big Bang” accelerate. Part of the strategy will then involve greater co-operation with affiliates such as JCB and Toko Trust. They are working on ways to deliver joint products and share profits. An example is a proposed “cash card” with JCB. One bank holding companies may further facilitate this since if they put these entities under a single corporate umbrella, it may allow them to work more closely, though NTT Data controls and manages those relationships for all the Japanese banks. So Sanwa is not directly involved except in setting and managing the protocol interfaces with their mainframes that handle customer accounts.

Interestingly, Sanwa's approach has avoided the problem of some US banks in that they have not tried to changed behavior patterns of existing customers by designing a package of services and delivery systems through automated tellers and branches to reach a different, new and targeted customer segment. That is, preselection and targeting of services solves a problem US retail banks have not yet solved. Further, Sanwa's approach and structure maps revenue expectations both currently and over the customer's life cycle against cost of delivery and service expectations. This is another problem whose solution has eluded many US banks in that for them expansion of branches and ATMs has not only not decreased costs but has not brought in additional customers or revenues. Alternatively, Sanwa's targeted market segmentation approach by matching customer demands with a dedicated delivery system has done this, an approach that
seems logical and appropriate. Further, given Japanese financial services' currently very low capital costs and relatively high personnel costs, especially given the permanent employment system, heavy emphasis on automation appears appropriate in terms of factor cost allocation.

**Summary**

In sum, Sanwa has studied each segment or customer group and know what they are looking for in banking and other financial services. They monitor these groups and keep information in service delivery loops so when a certain event is coming they can solicit relate business on a targeted basis. This is similar to Meiji's approach and is built into a life cycle concept of matching services with customer profile. It means mailings and direct marketing efforts are specific to customers needs and have a greater chance of success than the general approach used by most US banks. Being able to do this efficiently and know that revenues generated by a new marketing effort will cover the cash outflow is important when many loans are being written off or restructured and the balance sheet contribution to cash flow is deteriorating. Such operating efficiency, where Sanwa appears to be ahead of most US banks should help them in improving balance sheet risk management efficiency where the American appear ahead.

Perhaps it is not surprising the Japanese are more truly customer oriented in their strat. That is, they have integrated them into their delivery system. In addition, HR policies seem to be aligned in that segments demanding automation are getting it, while those demanding custom service via teller contact and cross selling are getting that. Permanent employment may be a factor here. In both the US and Japan, phone use defines customer behavior which is difficult to change. So US banks appear to have an uphill effort in getting customers to change, i.e. use more telephonic and automated delivery systems, whereas Japanese banks appear to go more with the flow, using telephonic means to reach those who feel comfortable with this, i.e. younger customers. In essence it is easier to align delivery and HR systems with the customer than try to get the customer to align themselves with a firm's cost driven strategy. The former takes long-term revenues or net return into consideration (clear for Sanwa and Meiji) whereas the latter does not.

These firms are good at improving and managing organizational and customer complexity. To the extent this helps in managing technical complexity and developing system support this, they will be better users of IT to achieve competitive advantage than US counterparts, especially if the process takes many iterations as well as trial and error. Further, there is conflict among managers and employees in goal setting, if this can sabotage quality improvements since employees will not work to find solutions. Leading software users are very conscious of these interconnections, and Meiji and Sanwa are especially good at it. They set simple easily understood and measurable goals such as improving product development lead times, which are key to both employee commitment and success in achieving firm strategies. Long term employment helps because everyone knows each other and is committed to corporate success. So the consultative process takes less time. In addition, they have been doing it longer.
so there are experience effects too. Hopefully this situation argues for the long-term viability of leading Japanese financial service firms as they work their way through their current difficulties.

BIBLIOGRAPHY AND REFERENCES

