

Technology and e-finance in Japan

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1. Introduction

Rapid progress in information and communication technology (ICT) is an important factor changing the financial sector in many countries. Although its effects are visible in many industries, for several reasons they are particularly strong in finance. Financial services are intangible; progress in ICT has drastically reduced the cost of providing them and is a driving force for structural change in conjunction with globalisation and deregulation.

This paper studies recent developments in Japan and examines the underlying economic reasons. It examines two of the most notable areas where e-finance is posing a challenge to incumbents; e-brokering and e-banking. It concentrates on theoretical considerations as these services are in their infancy and data are scarce.

An important feature of e-finance in Japan is the active entry of new firms in addition to e-services being offered by existing financial firms. This active entry reflects differences in the cost structure and corporate organisation between e-banks and traditional banks. The new entrants have resulted in the e-finance industry encompassing a wide variety of participants, from traditional financial companies to manufacturing firms and retail stores, from large corporations to small venture capitalists, and from indigenous firms to subsidiaries of overseas firms. This diverse participation may play an important role in reshuffling the structure of the entire financial services industry. It may lead to some "unbundling", where integrated financial services under a single financial supermarket are spread to a range of specialised providers. It may also cause a fusion between financial institutions, retailers, internet information services and the like. Economies of scope between e-finance and other services may encourage further entry of firms from other sectors.

2. Low-cost operation and structural change: e-brokering

Low operating costs are an important influence on both the performance of e-finance providers and the structure of the finance industry. A good example is the rapid expansion in internet-based securities broking ("e-brokering") in Japan in recent years. Not only large incumbent securities houses but also new firms are attracting a lot of broking business on the internet and achieving significant market share. The traditional brokerage industry in Japan was heavily regulated. Incumbent firms charged high fees for their labour-intensive activity. Deregulation of brokerage fees provided good opportunities for e-brokers to expand as they were able to offer very low fees. When brokerage fees are large, it requires a large price movement before a trade becomes profitable, even for a canny investor who correctly predicts the direction. Large price fluctuations are by their nature uncommon. By contrast, when fees are small, profits can be made from much smaller, and more common, price fluctuations, allowing more frequent participation of retail customers.

E-brokers enabled small investors to enter the market. Not only did they charge lower fees, the e-brokers were willing to deal in smaller quantities and at more convenient times (more than two-thirds of their transactions occur after 5 pm). While traditional brokers only provided research and information to their large customers, e-brokers use the internet to give small investors access to a similar range of information.

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Some e-broking firms encouraged small investors to take stakes in them. For example, when a Japanese e-broker, Monex, made its IPO, it made the minimum purchase size very small. Whereas usually the minimum size is very high due to regulations (¥12 million, about €110,000), Monex found a way to split the shares so that the minimum purchase size was under €500. It then used its internet site to market its stock, which it allocated to small investors by a computerised lottery. This was the first time many small investors participated in an IPO.

While incumbent brokerage firms can offer e-broking services, these would risk “cannibalising” their traditional retail business. It is worth noting, however, that the increasing use of e-broking does not necessarily imply high profits for the e-brokers. Competition is squeezing fees and the huge investment needed in sophisticated systems may make it hard for them to achieve high profit margins.

3. Economies of scope in e-banking: the entry of retailers

Many e-banks have recently been established in Japan. As with e-brokers, many entrants from other industries are offering e-banking services and e-banks offer a similar low-cost 24-hour service. Low costs, including both fees and time, are particularly important as customers access banks more frequently than securities markets. There are various kinds of e-banking services; transactions accounts with low fees, savings deposits offering higher interest and loans charging lower interest. This section only discusses e-banking by retailers.

E-banking must be backed up by some branch services for activities such as easy access to cash. This is especially important in Japan, where the amount of cash per capita is among the highest in the world (Table 1). Retail stores are well placed to provide a counter for such basic banking transactions. One of the interesting features of e-banking offered by retailers is that they may be able to offer 100% reserve deposits (ie the corresponding bank assets are all safe and liquid) as they do not make loans.

Table 1
Currency per capita (end-2000)

	Currency (€equivalent)
Japan	4,571
Switzerland	3,460
United States	2,095
Hong Kong	1,855
Germany	1,734
Netherlands	1,181
Australia	837
France	835
Finland	644

Source: International Monetary Fund (2001).

Japan's largest retail group, Ito-Yokado, established its e-banking arm in October 2001. It owns Seven-Eleven Japan, a chain of around 10,000 very small convenience stores open 24 hours every day with a highly sophisticated information network based on point-of-sale data but low-paid staff. Seven-Eleven, which is already the largest retail chain in terms of sales and profits, is expanding its branch network further. Offering basic banking services such as cashing and transfers not only provides an additional source of revenue for each outlet but the customer data captured at the point of sale can be used to support other retail activities.² The use of a smartcard at stores, allied with a

² An example of such synergy is that Seven-Eleven operates an internet book store. The books can be delivered to customers' homes but more than 90% of customers prefer to pick them up at a local store.

loyalty scheme and internet access to e-banking, allows the creation of a detailed databank on each customer's transaction patterns and financial position, which can be used for targeted marketing by Ito-Yokado itself or, subject to meeting privacy requirements, sold to other firms.

4. Unbundling of banking business and e-finance

Commercial banks dominate the Japanese financial system. Bank deposits and postal savings accounts together account for about 60% of financial assets held by the household and corporate sector. Commercial banks perform many functions such as deposit-taking, lending, consulting and research. Deregulation and the development of information networks are eroding banks' franchise value in favour of a network of specialised financial institutions which are forming a new financial system.

One lesson from the bursting of the bubble economy was that a financial system centred on commercial banks cannot spread financial risks effectively. Fierce international competition also promotes this reform as traditional full-service banks cannot maintain their profitability.

Progress in ICT promotes this unbundling in the financial system, as it does with the industrial structure in other sectors. Easy and low-cost access to the financial market through e-banking fits well with this decentralised market model.

5. E-finance and private money

The use of ICT for various financial services paves the way for new forms of private money. Hayek (1976) presented an intriguing discussion of the possibilities for competition among private monies and its effect on the performance of the economy.³ Section 3 above mentioned the importance of a possible 100% reserve bank. Such a bank should not be subject to bank runs as its deposits would be totally backed by safe assets. Alternatively these new financial institutions could be structured as a unit trust, which again would not be subject to runs. This could imply a different style of supervision and regulation than for conventional banks.

Retail stores may issue a smartcard to customers that can be used as e-money. Customers can accumulate value in this card by transfer from their e-bank account and then spend it in retail stores. A possible analogy with these new monies created by private firms is gift coupons issued by retail stores. There is no link between this type of "new money" and the monetary base.

References

- Hayek, F (1976): *The Denationalisation of Money*.
International Monetary Fund (2001): *International Financial Statistics*, October.

³ For a review of modern discussions of e-money, see the paper by Hawkins in this volume.