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FINANCIAL INNOVATION AND ITS
IMPLICATIONS FOR THE JAPANESE
FINANCIAL SYSTEM**

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Let me begin by looking at the semantic aspect of the term "innovation". In general, innovation implies something new or progressive brought about by technological invention and/or ingenious ideas. As you know, Joseph Schumpeter used the word in this sense, relating it to the dynamism of an economy. "Financial innovation" shares this connotation: it has been furthered by technological progress in data processing and telecommunications; and it has contributed to dynamic developments in financial markets in the United States, the United Kingdom, Japan and some other countries (including in the Euro-currency markets) since the mid-1970s.

However, financial innovation is quite distinct from innovation in most other fields (for example in production) as regards its causes and its implications for economic policy. Firstly, financial innovations emerged in many countries as a means of breaking through existing regulations or commercial banks' cartel agreements which had prevented an underlying demand in the economy from being satisfied by conventional methods. In many cases, therefore, innovations were initiated by financial institutions other than commercial banks. In other words, they were born as "bastards" rather than "legitimate sons". In the United States, money-market mutual funds and cash management accounts were introduced by non-bank financial intermediaries, and NOW accounts by mutual savings banks in New England, at a time when interest rates on small-sum bank deposits were regulated. Quasi-interstate banking was carried on in the United States by finance companies and consumer credit companies, when formal interstate banking was still restricted.

Secondly, once a certain financial innovation had emerged in a financial system, competition between the innovators and conventional banks played an important rôle in accelerating the pace of its evolution. Money-market certificates and money-market deposit accounts were invented by commercial banks in the United States, to meet competition from non-bank banks. In cases where regulations on conventional banking activities provided the impetus for financial innovation, a process of deregulation was necessary in order to enable the "legitimate sons" to recover their competitiveness. The phasing-out of regulation Q in the US Monetary Control Act of 1980 was a good example. If innovative banking activities were constrained by cartel-like agreements among commercial banks, financial

innovation weakened the effectiveness of the cartel, and consequently corrected "delinquency" among the "legitimate sons". In this way, financial innovation is closely related to economic policy at every stage of its evolution.

The process of financial innovation in Japan

In Japan the process of financial innovation has been linked to several sets of regulations, two of which I should like to mention here: interest rate ceilings and the compartmentalisation of the financial system. Most interest rates were regulated prior to the mid-1970s. On the bank lending side, the short-term and long-term prime lending rates were de jure or de facto linked to the official discount rate and yields on bank debentures respectively. However, in the second half of the 1970s, when the corporate sector's borrowing requirement declined as expectations for medium-term growth were revised downwards and there was a consequent slowdown of business investment, these formal linkages came under pressure. Implicit interest rates started to fluctuate, reflecting credit conditions in the market, without there being explicit changes in contract rates. Various techniques, such as the adjustment of compensation balances and the manipulation of credit ratings or loan maturities, became increasingly popular in the loan markets. It is perhaps just a semantic quibble whether these developments should be termed innovation or circumvention. The important point here is that certain techniques developed as a way round conventional market procedures in order to satisfy an underlying demand.

On the banks' liabilities side, innovation was more obvious. There were rigid interest rate ceilings on all types of bank deposits prior to the late 1970s. Although there had been several ways of giving depositors implicit interest rates in the form of free overdraft facilities and free seasonal gifts, the effective deposit rates were significantly lower than prevailing market rates. Here pressure emerged for financial innovation. One of the most successful innovations in the mid-1970s was the Gensaki transaction, which is a "repo" transaction in government bonds and bank debentures managed by securities firms (similar to US investment banks). Gensaki transactions expanded particularly sharply in 1973 and

1974, when the Japanese economy experienced hyperinflation. As this market grew rapidly, commercial banks sought to recover their competitiveness vis-à-vis non-bank financial institutions. Certificates of deposit (CDs) were first issued with free-market rates in 1979 following a deregulation measure taken in order to put the "legitimate sons" on an equal footing with the innovators. Since then, the process of financial innovation consisting in offering financial instruments with higher yields and greater marketability has been accelerated by intensified competition between banks and non-bank financial intermediaries.

In order to explain this acceleration process, I must mention another important regulation which has also been associated closely with a stimulus for financial innovation: the compartmentalisation of the Japanese financial system. Many types of financial intermediaries have existed since the 1950s, each endowed by law with separate functions and special advantages. For instance, there has been a strict demarcation between commercial banking and investment banking in Japan, as in the United States. There has also been a distinction between commercial banks, which are supposed to be engaged in financial intermediation at the short-term end, and long-term credit banks, which provide long-term credit with long-term funding. Trust banking is carried out by a special type of institution which also takes part in financial intermediation at the longer end but in a different form from that of long-term credit banks.

It is not difficult to see that such a compartmentalised system is sustainable only if the monetary authorities in return can ensure fair opportunities for each of the compartments. This is, however, no easy task when monetary conditions are undergoing rapid change. Commercial banks are the custodians of the public's financial wealth and the linchpin of a country's payment system, so their activities are subject to stricter regulation in many countries. This at times had tended to put burdens on their shoulders, limiting their scope for establishing a niche in expanding profitable business fields. In Japan such a burden was the commercial banks' obligation to underwrite mounting issues of government bonds in the mid-1970s. Since the yields on these bonds were set unattractively low by the Ministry of Finance in an attempt to minimise its funding cost, the banks' profitability tended to be impaired. Also, strict regulations on banks' portfolios put strains on their asset management. When an underlying

demand for marketable instruments emerged, therefore, banks were unable to capture that demand. The fact that non-bank banks have been front runners in financial innovation should probably be set against this background. In addition to Gensake transactions, securities firms started to offer a financial instrument similar to US money-market funds in 1980. Long-term credit banks and trust banks also introduced high-yield deposit-type instruments in 1981. It was not until 1983 that commercial banks substantially recovered their competitiveness as limitations on their sales of government bonds to their customers were significantly relaxed. The deregulation of several areas of commercial banks' foreign currency business also contributed to the strengthening of their competitiveness. A further consequence of the deregulation of commercial banking, by the way, is that the distinction between commercial banks and other financial institutions has recently become blurred.

Implications for the financial system

Now let us move on to the implications of financial innovation for a financial system. Here I should like to talk briefly about three subjects: the efficiency of the financial system, its soundness and its responsiveness to monetary policy. In order to stimulate discussion afterwards, I shall preface each item with a question.

My first question is: does financial innovation enhance the efficiency of the financial system? My tentative answer is yes. If efficiency is measured in terms of the cost of financial intermediation, any financial innovation which reduces margins between bank lending and deposit rates contributes, by definition, to an improvement in efficiency. Japanese financial innovation, has, in fact, had this effect. In addition to improving the "operational efficiency" of the system, it has enhanced its "allocative efficiency". Broadening the range of available financial instruments with respect to interest rates, maturity, credit risk, market risk, etc. has contributed to a decline in the risk of a mismatch between the demand for and supply of financial assets and to the reduction of search cost.

However, there are several more yardsticks for the efficiency of the system, measured against which the positive effect of financial

innovation seems to me less certain than in the two cases mentioned above. One is the dynamic, or timewise, allocation of resources. Does the interest rate on the newly developed financial instruments properly reflect the time preference of rational market participants? There is a possibility that, although the interest rate movement is unimpeded by interest rate ceilings, they are distorted by the regulation of other types of financial activities. In addition to such a theoretical question, scepticism is voiced from a "physiocratic" standpoint, as expressed by James Tobin last summer. "We are throwing more and more resources into financial activities remote from production of goods and services, into activities that generate high private rewards disproportionate to social productivity." (James Tobin, "On the efficiency of the financial system", Lloyds Bank Review, July 1984.)

My second question is: does financial innovation generate conditions tending to stabilise or destabilise the financial system? The answer depends on the type of innovation. Where innovation takes place so as to enable innovators to circumvent prudential regulation, it appears almost by definition to disrupt the sound financial system. On the other hand, there may be instances where innovation strengthens the competitiveness of prudently managed banks and thus contributes to the improvement of the entire system. The market rates on CDs issued by sound banks usually include a lower risk premium than financial assets issued by riskier institutions, whereas there is no such differentiation in conventional deposit rates subject to interest rate ceilings. Moreover, financial innovation that gives an advantage to institutions which are subject to prudential control by the authorities and/or have access to the discount window may help the system to be less susceptible to a run. Japanese experience shows that there has, in fact, been a mixture of stabilising and destabilising elements in the process of financial innovation.

My final question is: does financial innovation tend to increase or decrease the effectiveness of monetary policy? The answer here is again a mixed one. Until the early 1970s Japanese monetary policy was partly conducted through credit rationing. Financial innovation in the 1970s, however, made credit allocation more dependent on price movements, reducing the importance of credit rationing. This is, incidentally, the

other side of the improvement of the system's allocative efficiency. In addition, as financial innovation gave banks opportunities for efficient liability management, for example by issuing CDs, banks may have felt a less pressing need to adjust their lending to changes in their liquidity position caused by central-bank market operations. On the other hand, financial innovation may tend to increase the interest rate elasticity of business outlays owing to the increased opportunity for financial investment, and it may decrease the interest rate elasticity of money demand as the non-bank sector becomes able to reduce its cash holdings to the minimum required for working balances. These two changes will strengthen the responsiveness of the economy to a given change in monetary policy. There is evidence that the interest rate elasticity of business outlays has actually increased in Japan since the early 1970s, but the extent to which this should be attributed to financial innovation is not certain. To sum up these factors, some increasing and others decreasing the effectiveness of monetary policy, is no easy task. I must admit here that I am not sure about the net effect of financial innovation in Japan, let alone of financial innovation in general. One thing which is clear is that if financial innovation develops rapidly, it will be difficult for a central bank to make an appropriate assessment of monetary aggregates and to monitor conventional transmission channels of monetary policy.

Concluding remarks

Instead of making formal concluding remarks, I should like to express my judgemental view of the tasks of a central bank with respect to financial innovation. Once financial innovation gains momentum, it is extremely hard to stop it, let alone to reverse the trend. Reregulation seems to me to be futile, given that financial innovation has evolved as a reflection of underlying demand in the financial markets. Moreover, once a certain innovation emerges, it makes a potential demand apparent. Hence, political pressure would be added to market pressure if the central bank tried to resist the apparent demand. From a technical viewpoint, too, we must accept that there is no legal provision that can effectively check growing market pressure. Where there is a demand, a way is bound to be found to satisfy it. Another consideration to be borne in mind is that too much regulation tends to stifle an efficient and dynamic financial system.

Provided that financial innovations continue, it will be fitting for central banks to anticipate likely developments in the markets rather than merely to react to past developments. To judge by Japanese experience at least, passive action tends to be a "band-aid" treatment. Since financial innovation in many cases has a bearing on the entire framework of the financial system, the central bank's policy should be formulated with this in mind. Specific actions appropriate for individual central banks, of course, will vary depending on the specific forces behind financial innovation in their respective countries.

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