Financial Institutions Center

The Future of the Japanese Financial System

by
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Anthony M. Santomero
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The Working Paper Series is made possible by a generous grant from the Alfred P. Sloan Foundation
Abstract: The purpose of this paper is to consider the strengths and weaknesses of the Japanese financial system and to propose possible changes for the future. The apparent reversal in opinions on the effectiveness of the Japanese and US financial systems in recent years suggests a long term view should be taken. All financial systems have problems in the short term and it is important not to put too much weight on these. Section 2 briefly considers the historical development and the current differences between the Japanese and US financial systems. Section 3 considers the functions of a financial system and how the Japanese and US systems have performed these functions. Suggestions for reforms for Japan are outlined in Section 4 and Section 5 contains concluding remarks.
1. Introduction

During the 1980's the Japanese financial system was widely regarded as a model to be emulated both by developed countries and emerging economies. The strength of Japanese firms in international markets was at least partially attributed to its financial system. Japan had one of the highest savings rates in the world and ultimately these funds were transformed into effective investments by Japanese firms. It was believed that the main bank system whereby firms were closely monitored by at least one major bank ensured the funds were invested profitably for the long term and were not wasted. If problems were encountered by a firm the main bank would discipline management where necessary and provide the funds needed to see the company through difficult times unless liquidation was thought to be necessary. The Japanese stock market reflected perceptions of the strength of Japanese industry by rising to very high levels in terms of measures such as price to earnings ratios, book to value ratios or any other conceivable measure.

In contrast, the US financial system was perceived during this period to be at least partly responsible for the difficulties US firms were experiencing. The takeover mechanism which was apparently performing the same monitoring role as the main bank system in Japan did not appear to be that effective in preventing wasteful investment. Jensen (1993; p. 858) gives the example of GM which he argued had an opportunity loss of over $100 billion in its R&D and capital expenditure program during the period 1980 to 1990. He points out that its expenditures were more than enough to pay for the entire equity value of Toyota and Honda which in 1985 equaled $21.5 billion. The high degree of ownership of shares by mutual funds, pension funds and other institutional investors was thought by a number of commentators (see, e.g., Porter (1992)) to lead to an excessive focus on short term results at the expense of long term profitability. This short term focus meant that US firms were
unable to compete with long term oriented Japanese firms. The Savings and Loan Debacle of the early and mid 1980's and the 1987 stock market crash were other symptoms of the weakness of the US financial system.

By the middle of the 1990's these perceptions of the Japanese and US financial systems had apparently been reversed. The profitability of Japanese companies had fallen to very low levels. With hindsight it does not appear the main bank system did a particularly good job in ensuring funds were invested effectively. What in retrospect was perceived as a "bubble" in Japanese stock and land prices had burst and there had been a dramatic fall in asset values. This collapse in asset values and the financial weakness of Japanese firms placed Japanese banks and insurance companies under strain. In the US a recession in the early 1990's was short lived. The restructuring and downsizing that this prompted led to significant increases in competitiveness and profitability. US firms once again began to be very competitive internationally. Stock market prices rose to all time highs. The flexibility of the US financial system and discipline imposed by the market for corporate control were thought to be at least partially responsible for this success.

The purpose of the current paper is to consider the strengths and weaknesses of the Japanese financial system and to propose possible changes for the future. The apparent reversal in opinions on the effectiveness of the Japanese and US financial systems in recent years suggests a long term view should be taken. All financial systems have problems in the short term and it is important not to put too much weight on these. Section 2 briefly considers the historical development and the current differences between the Japanese and US financial systems. Section 3 considers the functions of a financial system and how the Japanese and US systems have performed these functions.
Suggestions for reforms for Japan are outlined in Section 4 and Section 5 contains concluding remarks.


This section gives a brief history of each country's system in order to outline the influences of various factors on the development of each. This will serve as a background for considering the future of the Japanese financial system and whether the factors that have been important in the two countries in the past will be relevant for Japan in the future.

Japan

After the Meiji restoration in 1868 the Japanese government sought to establish a modern industrialized economy. As part of this strategy, western types of financial institutions were introduced. Entry into the banking industry was easy and there was little government regulation during this early phase. One important innovation introduced by the government early on, however, was the *yucho* or the Postal Savings System. Over the years this became an important savings vehicle for many households. Banking panics occurred three times in the 1920's; in 1920, 1923 and most seriously in 1927. A new banking law which went into effect in January 1928 was introduced to correct this problem. The Ministry of Finance (MOF) was responsible for administering the new law and this was the start of the heavy influence that they have had since then. In order to reduce the large number of banks that existed the principle of "one bank in one prefecture" in which banks were given a monopoly in a limited area was adopted. The necessary reduction in the number of banks was achieved through mergers and public funds were used to facilitate this process. The government thus
began to become directly involved in the financial system before the start of the war with China and the US.

In the 1930's financial markets and particularly the issue of shares played a relatively important role in the funding of industry. In the period 1931-40, shares provided 31.7% of funds, bonds 4.3%, loans from private financial institutions 27.3% and retained earnings 37.0%. After the war the proportion provided by shares was much smaller, of the order of 5-10% while the proportion provided by institutions and retained earnings increased substantially.²

During the early stage of wartime control from 1937 to 1941, The Temporary Law of Fund Adjustment of 1937 extended government involvement even further. The authorities' permission was required for all firms above a certain size to increase their equity base or merge. Perhaps more importantly the law controlled loans to firms which were categorized as "favored", "permitted" or "proscribed". Major banks belonging to the Zaibatsu groups resisted this government control because they did not want to concentrate their loans to (favored) munitions companies which they regarded as a poor risk. The government moved to counter this resistance and gradually introduced a system of central control of financial resources with the Bank of Japan playing a pivotal role. This process culminated in the Munitions Companies Designated Financial Institutions System in January 1944 under which each munitions company was assigned a major bank to take care of the firm's financial needs. According to Teranishi (1994) and Hoshi, Kashyap and Loveman (1994) the relationships initiated during the war subsequently developed into the postwar "main bank" system.

The adjustment in the financial system after the war inevitably involved government intervention in deciding which assets and which liabilities could be written off by financial institutions. The need to reconstruct the economy also led to substantial government involvement. The
government became directly involved in allocating funds to industry through the foundation of the Reconstruction Financing Bank (RFB) in 1947. It allocated credit to the industries which it perceived to be crucial to Japan’s postwar construction. These included coal mining, electric power, iron and steel and marine shipping. In 1951 the RFB’s role was assumed by the Japan Development Bank (JDB). This bank continued to lend to the same key industries as the RFB. After 1960 its role was extended to support the government's industrial policy. Horiuchi (1995) argues that most of the direct allocation of funds was to industries such as coal mining, agriculture, forestry and fisheries, and marine transportation. These were not in the vanguard of Japan's industrial development. The JDB became involved in lending for the industrial policy promoted by the Ministry for International Trade and Industry (MITI). Although they succeeded in supporting some winners such as numerically controlled machine tools they also rejected many others such as requests for support from Toyota and Sony.

The funds used by the RFB, JDB and other quasi-government institutions to a large extent came from the postal savings system. This was able to raise large amounts of funds because of its extensive branch system, the security implied by its implicit government guarantee and various tax and other advantages. It therefore constituted a key part of government intervention in the allocation of resources.

One of the main problems the banking system faced after the war was the issue of maturity transformation. Firms needed long term funds so that they could invest and grow without continually worrying about short term factors. Investors, particularly households, wanted safe and liquid deposits. To help overcome this problem the Law of Long-Term Credit Banks was introduced in
1952. This allowed some special banks to raise funds by issuing long term debentures rather than taking short term deposits. These banks were then able to lend long term.

As discussed above, the wartime system of credit allocation established a close relationship between firms and banks. This together with the other post war developments described above led to the development of the main bank system. The main characteristics of this system are the long-term relationship between a bank and its client firm, the holding of both debt and equity by the bank and the active intervention of the bank should its client become financially distressed. It has been widely argued that this main bank relationship ensures the bank acts as a delegated monitor and helps to overcome the agency problem between managers and the firm.

In addition to directly intervening in the allocation of capital through the RFB and JDB, the government also intervened in the financial system by holding interest rates at low levels during the 1950's and 1960's. This had a number of effects including the provision of rents to banks. These rents helped ensure the solvency of banks and contributed to the stability of the financial system.

The General Headquarters of the Allied Occupation (GHQ) wanted Japan to develop US style securities markets which focused on long term lending with banks undertaking short term lending. However, as a practical matter implementing this plan when a well-established banking system was already in place was very difficult. In fact until the late 1980's access to the bond markets for most Japanese firms, including large ones, was very limited. The reason was that only secured bonds could be issued and by law only banks could manage collateral. This allowed banks to charge large fees and made the use of the bond markets expensive for firms (see Ramseyer (1994)).

Although before 1927 Japan had a quite unrestricted financial system, the desire for stability following the 1927 financial crisis, then the needs of war time production and finally postwar
reconstruction led to a financial system with heavy government involvement. Up until the 1970's banks and, in particular, the main bank system provided a good method of allocating resources to industries where the basic technology had been developed in the US and Western Europe. The Japanese financial system did not hinder and may have been at least partially responsible for the spectacular performance of the Japanese economy from the 1950's to the 1970's. The effectiveness of the direct allocation of resources by the government through the RFB, JDB and other institutions is widely disputed. Whatever the position taken on this, the majority of funds were provided not by government-controlled banks such as the JDB but by private banks. Although the government did try to affect the private sector's allocation of funds there is not much evidence that they succeeded in altering what would have happened anyway except in a few instances such as coal mining and shipbuilding.

In the middle of the 1960's the Japanese government wanted to gain international recognition by, for example, joining the OECD. In order to do this they needed to relax their regulation of the financial system. Over the years for a variety of reasons this relaxation continued and gathered pace. In the mid 1970's the government started issuing bonds on a large scale. This led to a deregulation of the secondary market for government bonds and eventually to a deregulation of the corporate bond market. In the early 1980's foreign exchange controls were eased and this allowed large Japanese firms to start using the Euromarkets in an extensive way. This competition forced Japanese banks to offer better terms in the domestic markets to these firms. Eventually the domestic bond market was deregulated and it became much easier for firms to issue unsecured bonds. At the same time main bank relationships came under heavy strain and at least for large firms the system has begun to break down as they are increasingly able to rely on financial markets to raise funds.
The move of firms towards raising funds in financial markets during the 1980's meant that many banks' traditional business of lending to firms decreased. Instead they increased their lending to real estate development companies and to non-bank financial intermediaries such as the jusen which in turn lent for real estate speculation, and to industrial companies for their financial and real estate speculation. During the late 1980's real estate prices and share prices rose spectacularly. Eventually in 1990 the bubble burst and both land and stock market prices plummeted. This collapse in prices has put the banking sector under considerable strain in the 1990's. The most obvious symptom of the problem is the jusen debacle and the debate on whether public money should be used, and if so how much, to help resolve this problem (see Yoshitomi (1996) for an account of this).

Another major change which has exacerbated the financial position of banks is the significant fall in the profitability of large Japanese companies. Ide (1996) reports that between March 1973 and March 1993, the average after-tax margin for firms in the NRI 350 fell from 1.7 percent to 1.0 percent, recurring profit margin from 3.2 percent to 2.2 percent, operating margin from 4.8 percent to 2.2 percent and return on equity from 11.9 percent to 3.8 percent.

As mentioned above one of the traditional strengths of the Japanese economy has been its high savings rate. Individuals have invested these savings in a variety of instruments. Bank accounts, life insurance policies and post office savings accounts have taken a significant proportion of these investments. Relatively little has been invested in the stock market. After the war there was a radical redistribution of stock away from the zaibatsu families to the government and in turn to the general public. When this transfer was complete in 1949 over almost 70 percent of stock was owned by individuals. This share has steadily fallen to recent levels of twenty percent or so. Figure 1 shows the fall that has occurred in the last few decades. As Figure 2 demonstrates this fall in individual
ownership has mainly been offset by an increase in the holdings of financial institutions, which primarily consists of banks and insurance companies, and business corporations. Investment trusts, or the equivalent of mutual funds in the US, have if anything fallen in size. This can at least partially be explained by the terrible performance of these funds. In a careful study of mutual fund performance Cai, Chen and Yamada (1996) found that between January 1981 and December 1992, the average rate of return of 800 open-type mutual funds was 1.74 percent per annum while that of the market was 9.28 percent per annum. Regardless of the benchmarks and performance measures employed they find strong evidence of underperformance in Japanese mutual funds.

*United States*

The US has rather a different banking history than most other industrialized countries. As Roe (1994) and others have documented the reasons for this are largely due to a different political history. Alexander Hamilton was influenced by British experience with the Bank of England and after the revolution advocated a large federally chartered bank with branches all over the country. This led to the foundation of the First Bank of the United States [1791-1811] and later the Second Bank of the United States [1816-1836]. However, there was considerable distrust of the concentration of power these institutions represented. In a report on the Second Bank, John Quincy Adams wrote "Power for good, is power for evil, even in the hands of Omnipotence." The controversy came to head in the debate on the rechartering of Second Bank in 1832. Although the bill was passed by Congress it was vetoed by President Jackson and the veto was not overturned. Since then there has been a strong bias toward decentralization of the banking system and an aversion to powerful institutions of any kind.
Throughout the nineteenth century the US banking system was highly fragmented and unlike European industrializing countries the US failed to develop nationwide banks with extensive branch networks. Prior to the Civil War, states were free to regulate their own banking systems and there was no national system. Many states adopted a "free banking" system which allowed free entry. There were serious banking panics in 1837 and 1857 and both were followed by depressions and significant economic disruption.

The advent of the Civil War in 1861 and the need to finance it significantly changed the role of the Federal Government in the financial system. The National Bank Acts of 1863 and 1864 set up a national banking system. They granted limited powers to banks. In particular, the 1864 Act was interpreted as confining each to a single location. When the question of whether banks could hold equity arose, the Supreme Court ruled that since the 1864 Act had not specifically granted this right they could not.

The creation of the National Banking system did not prevent the problem of panics and the associated economic disruption and depressions. There were panics in 1873, 1884, 1893 and 1907. After the crisis of 1907, a European banker summed up European frustration with the inefficiencies of the US banking system by declaring the US was "a great financial nuisance." Finally, in 1913 the Federal Reserve System was created.

The organization of the Federal Reserve System differed from that of a traditional central bank like the Bank of England in that it was much more regionalized and decision making power was not very centralized. During the years after its creation it did not develop the ability to prevent banking panics. In 1933 there was another major banking panic which led to the closing of banks for an extended period just after Roosevelt took office. The problems faced by the banking system led to
the Glass-Steagall Act of 1933 which introduced deposit insurance and required the separation of commercial and investment banking operations. The Banking Act of 1935 extended the powers of the Federal Reserve System and changed the way it operated. These reforms finally eliminated the occurrence of banking panics. This was almost seventy years after the Bank of England had eliminated panics in the UK and some time after most other European countries had achieved this type of stability.

The Civil War in the US helped to develop New York's markets. In addition, the prohibition on banks holding equity that the National Bank Act of 1864 was interpreted to have and the general weakness of the banking system helped to strengthen the role of financial markets. During the First World War the part played by the New York markets in financing all parties but particularly the British and the French ensured that New York supplanted London as the leading financial center. During the four years leading up to 1917, the US went from being a net debtor of between $3 billion and $4 billion to a net creditor of $5 billion. Great Britain had taken many centuries to achieve a similar position.

The Great Crash of 1929 had a significant impact on the US financial system. Unlike the financial panic of 1927 in Japan the ultimate effect was to strengthen markets and weaken banks. Although the Crash led to the creation of the SEC and the regulation of financial markets, it also resulted in the Glass-Steagall Act which together with continuing support for restrictions on interstate banking ensured that banks were restricted even more than markets. It can also be argued that the creation of the SEC helped to ensure the integrity of markets.

Since the war there has been extensive financial innovation accelerating in the 1970's and 1980's which has helped to strengthen the market orientation of the US system. This includes the
introduction of new financial products, such as various mortgage backed securities and other
securitized assets, as well as derivative instruments such as swaps and complex options. These have
all had a virtual explosion in volume. At the same time new exchanges for financial futures, options
and other derivative securities have appeared and become major markets.

Households have used a variety of instruments to accumulate wealth. As in Japan, the
proportion of equity owned directly by households has fallen steadily over the years. However, unlike
Japan much of this has been transferred into indirect holdings through pension and mutual funds.
Figure 3 shows the proportion owned by individuals and Figure 4 shows how the institutional share
has changed. It can be seen that the share of pension funds and mutual funds has to a large degree
replaced individual holdings. Unlike Japan where the move has been towards banks and insurance
companies that do not mark their assets to the market, in the US the move has been towards
institutions that do this. Thus the fall in individual participation has not been accompanied by a
change in how risk is borne which is the case in Japan.

Two events occurred in the US in the 1980's which were similar to what happened in Japan.
The first was the S&L crisis. Government guarantees ensured S&L's a ready supply of cheap funds.
When charter values fell S&L's found it worthwhile to speculate in real estate in Texas and the
southwest and there was a bubble. The eventual crash led to severe problems which cost the
government hundreds of billions of dollars. The second problem was the 1987 stock market crash.
Here the value of stocks fell by a third in a single day. Unlike the Japanese crash they recovered fairly
quickly and there was no effect on the real economy.

Discussion
The sketches of the two countries financial systems above demonstrate the very different ways in which the two have developed. Although Japan started out with a fairly unregulated system where markets played a significant role the system came to be dominated by the government in the period leading up to and after the war. In recent years there has been deregulation and a move towards markets.

Traditionally, the US financial system had little government involvement. It was one of the last developed countries to have a central bank and it was not until the 1930's that banking panics were eliminated. The Great Crash of 1929 led to regulation of the financial system. In contrast to Japan where intervention during this period increased the importance of banks the effect of government intervention in the US was to increase the importance of markets. In recent years international influences have led Japan to deregulate significantly and markets have steadily become more important. This means that the US experience is of relevance to Japan in deciding on the future of its system.

Figure 5 provides a comparison of the holdings of stocks in 1993. At this time the ratio of the value of market capitalization of equity as a percentage of GDP was about the same at around 80%. It can be seen from Figure 5 that the way in which this equity is held is substantially different in the two countries. Although individuals hold the largest share in Japan it is still only half what individuals hold in the US. Another major share is held by non-financial firms in Japan. This consists of cross-holdings of shares. In contrast, in the US there is no corresponding category as cross-holdings of shares are very limited. Banks and other financial institutions hold a major proportion of equity in Japan. The Glass-Steagall Act means that the holdings of corresponding institutions in the US is much smaller. The last major holder of equity in Japan is insurance companies. In the US
these have never been major holders of equity because for many years state regulations prevented this (see Roe (1994)). The final difference between the two countries is the proportion held by mutual funds and pension funds. In Japan these institutions hold only 4% together whereas in the US 37% is held by them. The proportion held by foreigners is about the same in the two countries.

3. Functions of a Financial System

Although there is not universal agreement on the exact role a financial system should play many would agree that the following five functions are desirable.

1. Provide stability.

2. Ensure effective corporate governance.

3. Allocate resources across industries efficiently.

4. Facilitate development of new industries.

The effectiveness of the Japanese and US financial systems is fulfilling some of these functions has varied significantly. Each will be discussed in turn.

1. Provide stability

As the historical sketches in the previous section indicate the intervention of governments in the financial systems of both countries was intimately related to a desire for stability. The Japanese government became involved after the banking panic of 1927. In the US it was the desire to prevent banking panics that led to the creation of the Federal Reserve System and the Great Crash of 1929 that led to government involvement in the securities markets. Japan and the US are not unusual in
this respect. In most countries intervention has come about as the result of a financial crisis. These crises can be divided into two categories:

(i) Crashes following bubbles in stock market or real estate values.

(ii) Banking panics.

There has been considerable debate over the years on whether bubbles and subsequent crashes in asset values can occur. One view is that markets are efficient and bubbles do not occur. Asset prices are always equal to the discounted stream of their payoffs or in other words to their fundamental value. Any change in price must be due to a change in expected payoffs or discount rates. In an important paper, Tirole (1982) provided a theoretical underpinning for this view. He showed that in finite horizon models with perfect markets and symmetric information asset prices cannot deviate from discounted payoffs. The basic argument he made was that with a discrete and finite number of points in time a bubble would never get started because of backward induction. To see this let the final date in the economy be T. Then at date T-1 an agent would not buy the asset at a price above the discounted value of its payoff at T because he would incur a loss if he did so. A similar argument holds for date T-2, T-3 and so on. Hence at any point in time the price of an asset must be equal to its discounted payoffs.6

The problem with the efficient markets view of asset prices that bubbles cannot occur and crashes are caused by changes in information or discount rates is that it is difficult to reconcile with actual crashes such as the end of the Japanese bubble in 1990. Stock market prices roughly halved in the space of a few months but during this time there was little apparent new information and no dramatic changes in discount rates. In the 1987 stock market crash in the US, prices fell on average
by about a third in a single day when there was very little news about economic fundamentals consistent with a drastic change in expected payoffs and discount rates if anything fell.

There have been at least two alternative approaches to providing a theoretical model of how bubbles and crashes might occur. The first is to abandon the standard neoclassical assumption of rational behavior. This approach has a long history and is exemplified by Kindleberger (1978). A more recent example is Shiller (1984) who models stock prices as being subject to "fads". Another is DeLong, Shleifer, Summers and Waldmann (1990) who assume that some traders continue to hold beliefs even after it is clear these are rejected by the data. These irrational traders are consistently overly optimistic (or overly pessimistic) and take larger positions than they would if they were rational. This means they bear more risk than is optimal but their wealth is not driven to zero. They therefore persistently cause stock prices to deviate from their fundamentals.

The second approach to explaining bubbles and crashes is to maintain the standard neoclassical assumption of rational behavior but to relax the assumption of perfect markets and symmetric information. Allen and Gorton (1993) and Allen, Morris and Postlewaite (1993) have developed models of bubbles and crashes of this type. The reason that bubbles and crashes occur in these models is because of asymmetric information and agency problems. To illustrate the idea consider a real estate market where purchases are financed by borrowing. If the price of land goes up the speculators will make a profit but if the price goes down their loss is limited because they can default on the loan. As a result of this asymmetry they will be prepared to pay a price above the discounted (expected) payoff and so bubbles can occur. Why would anybody be prepared to lend to such speculative borrowers? If there is asymmetric information about the nature of the assets the
borrower is investing in, then speculative borrowers and borrowers able to identify profitable investments may be indistinguishable to lenders.

A similar argument can be made in the context of the stock market. Even when funds are not directly borrowed and the value of the assets are marked to market, as for example with mutual funds, the rewards managers receive are skewed in the same way. If the investment is successful they are rewarded whereas if they are unsuccessful there is a lower limit to the amount they can be penalized. They obtain benefits from upside returns but don't bear any losses if returns are low. This means they will be prepared to buy stocks even if they are priced above the discounted (expected) payoff. Investors will be prepared to lend funds if they cannot distinguish this type of speculator and good managers investing in underpriced stocks.

Thus bubbles and crashes can occur in real estate and stock markets even if all investors are rational because of market imperfections. As will be seen in the next section this view of bubbles and crashes has very different policy implications than a view based on investor irrationality.

The second type of crisis that has caused governments to intervene in financial systems is banking panics. If investors perceive that the value of a bank's assets have fallen below the level of their liabilities then there can be a panic where all depositors attempt to withdraw simultaneously. Clearly bubbles and crashes can lead to banking panics. Panics can also of course occur if asset prices fall because new information about discounted payoffs arrives or discount rates rise or, in other words, if the fundametals deteriorate.

The records of Japan and the US in terms of achieving financial stability are clearly mixed. It can be argued that neither country has succeeded in avoiding bubbles and crashes in either real
estate or stocks. The experience of the late 1980's and early 1990's demonstrate this for Japan and the S&L crisis and the 1987 stock market crash illustrate it for the US.

Although government involvement has been effective in terms of eliminating banking panics in both countries it can be argued that this has only been achieved at some cost. In order to eliminate panics the government needs to guarantee the stability of financial institutions. This guarantee is dangerous because it exacerbates the agency problem discussed above in the context of bubbles and crashes. The fact that the government is ultimately bearing the risk means that financial institutions are much more prone to take risks. The bubbles in real estate in particular may have been much worse than they would have been without government intervention.

The data in Figure 5 indicates that the Japanese financial system may be somewhat more prone to instability than the US financial system. The reason is that in Japan banks and insurance companies hold about 40% of the market. Their liabilities, however, are to a large extent fixed. Other things equal volatility in the stock market is therefore likely to cause significant problems in the stability of these institutions. To deal with this problem the institutions may hold large reserves and be able to deal with the risk in this way but without such reserves they will be quite unstable.7

In contrast in the US a much smaller proportion of the equity is held by institutions with fixed liabilities. Banks and insurance companies only hold 9%. Mutual funds don't have fixed liabilities, their assets are marked to the market. Many pension funds also have assets that are marked to the market. Hence the amount of risk born by intermediaries is relatively limited.

Possible reforms for the Japanese financial system to try and ensure that episodes such as the bubble of the 1980's and crash of the early 1990's are discussed in further detail in the next section.
At this point it is sufficient to note the much greater extent to which intermediaries holding equity have fixed liabilities in Japan compared to the US.

2. *Ensure effective corporate governance.*

Much of the debate comparing the Japanese and US financial systems has focused on the differences in corporate governance between the two countries. The standard argument is that effective corporate governance in Japan has historically been provided by the main bank system. As discussed above the main characteristics of this system are the long-term relationship between a bank and its client firm, the holding of both debt and equity by the bank and the active intervention of the bank should its client become financially distressed. The main bank takes the responsibility from the group of lenders to ensure the firm is run effectively and funds are used efficiently. In the US, it is usually argued that the corresponding mechanism ensuring firms are effectively run is the market for corporate control. Takeovers and acquisitions provide a mechanism for disciplining managements that squander resources.

Views on the effectiveness of these two mechanisms over the years is mixed. Aoki and Patrick (1994) contains a number of studies suggesting the effectiveness of the main bank system at least until recently has been high. A dissenting view is contained in a paper by Ramseyer (1994) who suggests that the traditional emphasis in the literature on the importance of this system in achieving effective corporate governance is too strong. He argues that if the system really worked in the way described explicit contracts should be used much more than they are in practice. The fact that they are not suggests that the main bank system does not work in the way usually described.
The evidence on the effectiveness of the market for corporate control in ensuring US firms are run efficiently is also mixed. A large number of studies have indicated that takeovers in the 1970's and 1980's increased shareholder wealth substantially. Jensen (1993) gives the total increase in value of target firms from 1976-1990 as $750 billion. However, a number of studies using accounting data, such as Ravenscraft and Scherer (1987) and Herman and Lowenstein (1988) have found little evidence that operating performance improves after mergers. An exception is Healy, Palepu and Ruback (1992) who do find some increases in asset productivities after mergers but overall the evidence suggests increases in efficiency are limited or do not occur. Shleifer and Summers (1988) have suggested that one possible reason for the increase in stock value is not improved efficiency but the ability for new owners to break implicit contracts with workers, suppliers and other stakeholders.

It may therefore be that the importance of the main bank system in Japan and the market for corporate control in the US has been overemphasized. An alternative possibility is that internal mechanisms for control such as the board of directors have been fairly effective. Competitive product markets may also have had a similar effect. In any case, in the long run it seems that Japanese and US firms have both been in the forefront of internationally competitive firms which suggests that corporate governance has been reasonably effective in both countries.

3. **Allocate resources across industries efficiently.**

As Section 2 indicates one of the differences between Japan and the US concerning the allocation of resources across different sectors is the degree of government involvement. In Japan
the government has been involved in the allocation of funds across sectors. In the US this has been left almost entirely to market forces.

After the war the Japanese government allocated funds directly using the RFB and then subsequently the JDB. Funds from the postal savings system were to a large extent used as the source of funds for these institutions. The effectiveness of this intervention has been hotly debated with some arguing it was effective and others that it was not. During the 1980’s when Japanese firms were extremely competitive internationally and American firms were not, it was widely suggested that the US should adopt similar types of schemes to rejuvenate its manufacturing industry, particularly its automobile manufacturers. With the rise in competitiveness of US firms in the 1990’s and the fall in the competitiveness of Japanese firms calls for adoption of this type of scheme have fallen.

4. Facilitate development of new industries.

The final function of a financial system is to provide funds for new industries. Although quantitatively the amount of funds used by startups is small relative to the amount of funds used in existing industries the economic significance of developing new industries is high. Over time as technologies change some industries die and new ones are born. Even though initially the startups may be small eventually some will become large and important. Without the initial start up phase new industries will not develop.

One of the weaknesses of the Japanese system is its lack of a significant venture capital sector. Traditionally, Japan has excelled in existing industries such as automobiles and steel and has not developed totally new industries. It has played a "catchup" game. In contrast the US has an excellent history of developing new industries. Since the war, hardware and software for computers and
biotechnology have all been developed. The venture capital industry and the active markets have certainly been an important factor in this development. Allen (1993) has suggested that this advantage that the US has had is due to it being a financial market rather than intermediary based system.

4. Reforms for the Japanese Financial System

This section focuses on some of the weaknesses of the Japanese financial system and makes some suggestions for changes going forward. The changes are considered under the five functions identified above.

1. Provide stability

As discussed in Section 3 there are two aspects to providing stability. The first is preventing bubbles and the second is preventing panics. We shall consider each in turn.

Perhaps the major problem facing the Japanese financial system is to ensure that in the future there is not a repetition of the bubble of the late 1980's in the real estate and stock markets. In order to do this it is necessary to take a position on what caused the bubble. As discussed above, one theory of bubbles is that it is due to irrational behavior on the part of investors. In this case the apparent solution to the problem is to stop using markets to price and allocate assets and instead have the government intervene to much a higher degree than in the past and effectively take the market's place.
The second possibility is that the bubble was caused by asymmetric information and agency problems. In this case preventing a reoccurrence means designing regulations which minimize the possibilities for speculation. Bubbles occur in this view because of borrowing to finance asset purchases. If asset prices rise large amounts of money are made by the borrower but if asset prices fall the losses are borne by lender. As a result borrowers will be willing to bid up asset prices to high levels because they are only concerned with good outcomes. There are two reasons lenders may be willing to provide funds. The first is asymmetric information. Lenders may not be able to distinguish between borrowers who are speculators and those who are good prospects. The second is government intervention. Because of a desire to prevent panics governments may provide implicit or explicit guarantees to lenders even when they provide funds for speculators. The way to prevent bubbles in asset prices when asymmetric information and agency problems are the cause is to limit government guarantees to lenders and also to limit the amount of debt that can be used to finance assets. Margin rules do this to some extent in the stock market. It is important to introduce similar rules for real estate. Limitations should be put on the amount of real estate purchases that can be financed with debt. If lenders are willing to provide funds because of asymmetric information about borrower type then it is difficult to do anything about this because they already have good incentives to find the best information possible. However, if they are willing to lend because of government guarantees then these should be severely restricted or eliminated.

It is difficult to definitively distinguish between bubbles caused by irrational behavior and bubbles caused by debt financed speculation. My own belief is that the primary origin of the bubble in Japan in the 1980's was speculation in the real estate market. Because corporations own so much land this naturally was also reflected in stock prices. There clearly was a great deal of debt financed
real estate speculation in Japan and much of this was financed with funds provided by institutions with implicit or explicit guarantees.

The second aspect of providing stability is the prevention of panics. These can occur when banks and other intermediaries have fixed liabilities and risky assets. When depositors perceive the value of the assets may fall below the liabilities there may be a panic. Such panics can be prevented by government guarantees but these may be costly. As pointed out in Section 3, one of the features of Japan's financial system is that there are a large number of intermediaries with fixed liabilities and risky assets but relatively few intermediaries such as mutual funds and pension funds which pass through risk to investors. At least part of the reason for this is presumably the dismal performance of Japanese mutual funds. As mentioned in Section 2, Cai, Chen and Yamada (1996) fund that between the beginning of 1981 and the end of 1982 Japanese mutual funds gave holders a return of 1.74 percent at a time when the stock market rose 9.28 percent. The mutual fund industry in Japan needs to be reformed so that this performance is improved. This will encourage more passing through of risk and reduce the possibility of panics. One way of reforming the industry is to allow entry by foreign funds and encourage competition between them and Japanese funds. Another is to encourage index funds which track broad indices.

2. *Ensure effective corporate governance.*

One of the major problems facing Japanese industry currently is the fall in profitability mentioned in Section 2. This contrasts with the US where profitability has been improving. It is possible that the decline is at least partly due to the reduction in importance in the main bank system as large companies raise more of their finance in markets. If this is the case is it necessary for Japan
to introduce a more active market for corporate control to ensure profitability is raised higher levels again?

As outlined in Section 3, views on the effectiveness of the main bank system and the market for corporate control in ensuring effective corporate governance are mixed. Introducing a market for corporate control in Japan would arguably not do much good and might do a lot of harm. Japanese corporations have a whole nexus of implicit contracts of which lifetime employment is probably the most important. Relationships between firms and their suppliers are also important. Shleifer and Summers (1988) argument that increases in stock value from takeovers may be due to the ability to break implicit contracts rather than from efficiency gains is therefore of particular relevance. The introduction of a market for corporate control may result in large profit opportunities for raiders but nevertheless may lower welfare.

Rather than introduce a market for corporate control an alternative is to strengthen the effectiveness of internal control mechanisms. One way to do this is raise the limit on the amount of equity that institutions such as banks and insurance companies can hold. Large blockholdings appear to have been an effective mechanism for ensuring effective corporate governance in Germany (see Franks and Mayer (1993)).

3. Allocate resources across industries efficiently.

The evidence on the effectiveness of Japanese government intervention in the allocation of resources across industries is mixed and there is no wide agreement on its desirability. The way in which the funds for government institutions such as the JDB have been raised is through the postal savings system. Ide (1993) points out that this is much larger in Japan accounting for about 9% of
GNP compared to at most 2-3% of GNP in other major industrialized countries. The system is able to raise such a vast amount of funds for a number of reasons. These include its extensive branch network and the various tax and other advantages that depositors are given compared to other forms of saving. Whatever the desirability of the government determining the allocation of funds it is not clear that the distortions caused by the raising of funds through this system are desirable. A reduction of the tax advantages of this type of investment may lead to an improvement in efficiency.

4. Facilitate development of new industries.

One of the weaknesses of Japan's economy relative to the US is its concentration in established industries such as automobiles, steel and so forth. It is difficult to think of new industries that have started in Japan. In contrast in the US computers and biotechnology are just two recent examples of a long line of industries which were first developed in the US. Venture capital is at least partly responsible for these success stories in the US. The development of the venture capital sector was significantly aided by the tax code in the US. Once the sector was developed it was able to continue without difficulty even when these tax advantages were reduced with the various US tax reforms in the 1980's. In order to help spur the development of a venture capital industry in Japan tax breaks of various kinds should perhaps be considered. The development of a thriving venture capital sector may significantly help the Japanese economy develop new industries.

5. Conclusions
This paper has considered the development of financial systems in Japan and the US, their current situations and developed some suggestions for changes in Japan. The main conclusions were as follows.

1. **In order to prevent bubbles limit the amount of debt that can be used in financing investment in real estate. Limit implicit and explicit government guarantees of real estate investments.**

2. **To more widely disperse risk and reduce the fragility of the banking system, encourage the development of a competitive mutual fund industry by, for example, allowing foreign competition. Encourage the development of index funds.**

3. **Do not allow a market for corporate control but try to strengthen internal governance mechanisms. One possibility is to increase limitations on the proportion of equity banks and insurance companies can hold in a single company.**

4. **Reform the postal savings system by reducing tax and other advantages.**

5. **Encourage the development of a significant venture capital sector by creating tax advantages for this kind of investment.**

One final point concerns the position of Tokyo as an international financial center. If the economies of South East Asia keep growing at recent rates there will be a huge need for capital. One
important question is which place will become the financial center for providing this capital. Tokyo is clearly the leading contender currently. Other places which would like this position include Hong Kong, Singapore and in the longer term Shanghai. One important issue for reforming the Japanese financial system concerns its effect on Tokyo's position as a major financial center. There are advantages and disadvantages of holding such a position but in general it is usually regarded as an advantage. Deregulation and growth in markets will tend to reinforce Tokyo's leadership whereas an increase in regulation and restrictions on the banking system will have the opposite effect. These factors should be carefully taken account of when reforms are undertaken.
References


Endnotes

1. Excellent accounts of the historical development of the Japanese financial system are contained in Horiuchi (1995), Teranishi (1994) and Ueda (1994) from which this section draws heavily.

2. See Horiuchi (1995), Table 2, p.96.


6. In a subsequent paper, Tirole (1985) considered infinite horizon models and showed that bubbles could exist because the backward induction argument no longer holds. However, these models do not provide a convincing explanation of the dramatic crashes which have occurred in most historical episodes of bubbles.

7. See Allen and Gale (1995) for an account of how financial systems can smooth intertemporally.
Figure 1

Japan - Individual Ownership of TSE Corporate Equity
1953-1993

Source: Tokyo Stock Exchange 1994 Fact Book
Figure 2: Japan - Selected Institutional Share 1953-1993

Source: Tokyo Stock Exchange 1994 Fact Book
United States- Selected Institutional Share
1966- 995

Source: Board of Governors of the Federal Reserve System- Flow of Funds Accounts
Figure 5

Distribution of Outstanding Corporate Equity Among Different Categories of Shareholders (1993 %)

Japan

Foreign 7%
Banks, Other Fin. Instit. 23%
Individuals 24%
Public Authorities 1%
Insurance Cos. 17%
Non-Financial 24%
Pension Funds 1%
Mutual Funds 3%

US

Foreign 5%
Insurance Cos. 5%
Individuals 49%
Pension Funcs 26%
Mutual Funds 11%