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CHAPTER 6

Impact of Institutional Structure on Financial Innovation and Risk Sharing: A Comparison of the United States, Germany and Japan

by Franklin Allen

One of the most interesting episodes in recent economic history has been the spectacular growth of many Asian countries during the last three decades. This high performing group includes Japan, which has one of the most advanced economies in the world, the Four Tigers (Hong Kong, Korea, Singapore and Taiwan), and the Newly Industrializing Economies of Indonesia, Malaysia and Thailand. A World Bank report published in 1993 discusses a number of factors that contributed to this success. Two of the crucial ones are macroeconomic stability, and an effective and secure bank-based financial system.

The most important macroeconomic factors were low inflation rates and competitive exchange rates, which appear to have been achieved through prudent fiscal policies. The financial systems in these countries were mainly bank-based. Governments intervened to ensure the soundness of institutions, to encourage savings and to channel funds to sectors where investment was regarded as important.

There were a number of other important factors identified in the World Bank report. Competition among exporting firms was encouraged by explicit contests for rights to export, with success being determined by the ability to compete in the world market. Good education systems provided a relative abundance of skilled workers. Price distortions were limited so that wages and interest rates reflected the scarcities of labor and capital. Domestic firms were open to the adoption of foreign technology. The bias against agriculture was limited. As a result, the sector continued to generate jobs and was not a source of displaced workers; rather laborers were attracted into manufacturing industries.

The success of the high performing group of East Asian economies in recent years contrasts with the experience of Latin America and the Caribbean. In the 1960s and 1970s, both groups of economies did well. According to Edwards (1995), between 1965 and 1980 Latin America and the Caribbean grew at a real annual rate of 6.0 percent, which was only slightly behind that of the East Asian countries of 7.2

percent (Edwards, 1995, Table 1-2, p. 4). However, since the early 1980s the Latin American countries have stagnated while the East Asian countries have continued to do well.

The earlier growth in Latin America and the Caribbean was achieved through policies that were significantly different from those of the East Asian countries. The Latin American and Caribbean development strategies were based on a high degree of protectionism and inward-looking policies, government-led industrialization, and broad intervention by governments in all aspects of economic life. This heavy state involvement was not built on a solid fiscal base. A significant proportion of government expenditures in many countries was provided through seigniorage. For example, 17.7 percent of Brazil's government revenue for the period 1971-1982 was provided by expanding the monetary base (Edwards, 1995, Table 4-4, p. 83). The comparable figure for Mexico during the same period was 21.2 percent. The practice of financing deficits through seigniorage led to high inflation rates and severe macroeconomic instability.

The high level of inflation became the focus of the financial system, and the traditional roles of allocating resources, sharing risks and corporate governance were to a large extent abrogated. For example, Brazil developed one of the most effective systems for clearing checks in the world. At the same time, raising investment funds became very difficult.

As a result of the problems of the 1980s, a new consensus is emerging in many Latin American countries. The need for macroeconomic stability and the desirability of outward looking policies is beginning to be recognized. One crucial issue that remains to be addressed is the type of financial system that should be adopted. Should the bank-based Asian model with a major degree of government intervention be emulated, or should the U.S. financial markets system be used as a model? The purpose of this chapter is to address this issue.

In the following section, the historical development of financial systems in the United States, Germany and Japan are considered. Next, an informal theoretical framework for comparing these three models is developed. Finally, the implications of this analysis are applied to identify the key structural elements for financial systems in Latin America and the Caribbean.

A Comparison of the United States, Germany and Japan

Allen and Gale (1995) characterize two extreme forms of financial systems. One is loosely modeled on the U.S. financial system and is referred to as "market-based." The other is loosely modeled on the German system and is referred to as "bank-based." Japan represents a third type of system where the government has played a more extensive role than in the other two. It might be termed as "government-influenced." In order to see which elements of these systems the countries of Latin America and the Caribbean might find it useful to adopt, it is helpful to look at the historical

development of each.

Financial crises in the form of banking panics and stock market bubbles have had an important influence on the development of financial systems in all these countries. Banking panics were endemic to most countries prior to the twentieth century. The development of a concentrated banking sector and central banking practices designed to increase liquidity in times of crisis (in particular by the Bank of England) in the nineteenth century meant that in most countries, banking panics did not become a severe problem. However, in the United States, which did not have a central bank until relatively late, and in Japan, which started its financial development only recently, these problems persisted into the twentieth century.

Dramatic examples of bubbles have not occurred as frequently as banking panics, but when they have occurred, they have had a significant effect on the development of financial systems. Both the South Sea Bubble in England in 1720 and the Mississippi Bubble in France at about the same time led to severe skepticism about the role of markets. In both cases stock prices rose dramatically and then collapsed in a very short period of time. Many people had borrowed to invest in these stocks during the rise, and with the collapse were forced into default. The resulting bankruptcies had an effect on the real economies and caused a disruption in economic activity. The English experience also had an effect on the United States which, at the time, was subject to British law. The French experience affected Germany because many German bankers were educated in France.

In England, the South Sea Act, which was passed in response to the South Sea Bubble, made it very difficult for firms to raise money in the capital markets. It was not until the heavy needs for capital for the railways spurred the repeal of the act that private capital markets were allowed to develop. France's experience with the Mississippi Bubble profoundly affected the subsequent development of the stock market and banks in Continental Europe. After the collapse, an official bourse was set up to allow for the regulation of the market in company shares. The advent of the French Revolution led to the closing of the bourse and the suppression of public companies. The bourse did subsequently reopen, but markets for company securities did not develop significantly throughout the nineteenth and twentieth centuries until fairly recently.

Although banking panics appear to have been eliminated, the U.S. stock market crash of 1987 and the early 1990s suggest that they remain very much problems of the present.

The United States

The characterization of the United States as a market-based system is, of course, a simplification. While banks have historically played an important role in the U.S. economy, and continue to do so today, the U.S. banking industry is significantly different from that of 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 American 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" (Timberlake, 1978, p. 9). The controversy came to a head in 1832 during the debate on the rechartering of the Second Bank. 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. The resulting weakness of banks, compared to banks in other countries, has contributed to the development of sophisticated financial markets.

Throughout the nineteenth century the U.S. banking system was highly fragmented. Unlike other industrializing countries, the U.S. failed to develop nationwide banks with extensive branch networks. Prior to the Civil War there was no national system; states were free to regulate their own banking systems. Many states adopted a "free banking" system which allowed free entry. There were serious banking panics in 1837 and 1857, which 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 that 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 panics and associated economic disruptions 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 U.S. banking system by declaring that the U.S. was "a great financial nuisance." Finally in 1913, the Federal Reserve System was created.

The Federal Reserve System differed from traditional central banks, like the Bank of England, in its regional organization and decentralized decisionmaking. During the years immediately after its creation, it did not develop the ability to prevent banking panics. A major crisis in 1933 led to the closing of banks for an extended period just after Franklin D. Roosevelt took office. The problems faced by the banking system led to the enactment of 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 banking panics almost seventy years later than in the United Kingdom.

Just as wars between England and France in the eighteenth century led to the development of the London capital markets, the U.S. Civil War helped develop New York's markets. In addition, because of the banking system's weakness and the ban on bank equity holding, stemming from the National Bank Act of 1864, the role of financial markets was strengthened. As a result of the role it played in financing the war effort, New York supplanted London as the world's leading financial markets center during the first World War.

The great crash of 1929, like the South Sea and Mississippi Bubbles two centuries before, promoted the development of U.S. financial markets, increased their importance, and led to the creation of the Securities and Exchange Commission (SEC) and the regulation of financial markets. The Glass-Steagall Act, together with continuing support for restrictions on interstate banking, ensured that banks were restricted even more. It can also be argued that the creation of the SEC helped ensure the integrity of the markets. Continued financial innovation in terms of the introduction of organized options and financial futures markets has helped to strengthen the market orientation of the U.S. financial system.

Although the crash of 1987 was of greater magnitude than that of 1929, it did not have a significant effect on the real economy. Nevertheless, it does illustrate that crises can still occur in financial markets even though banking panics appear to have been eliminated.

Germany

Unlike Britain and France, Germany was politically fragmented during most of the nineteenth century. As a result, its financial system did not develop until relatively late. When it did, it was heavily influenced by the French system. Prior to its unification in 1871, Germany was made up of at least 30 principalities, republics and kingdoms. These ranged in size from cities like Frankfurt to large states such as Prussia. At the beginning of the nineteenth century there were at least four major financial centers in Germany: Frankfurt, Cologne, Hamburg and Berlin. The most important financial institutions at this time were family-dominated private banks: the Rothschilds in Frankfurt, the Oppenheims in Cologne, Heime and Warburg in Hamburg and Bleichröder in Berlin.

Joint stock banks were not introduced to Germany until the middle of the nineteenth century when the Schaffhausen'schen Bank was created in Prussia in 1848 with wide powers. Building on this model, a wave of bank formation ensued from 1850-1857. Although halted by a financial crisis in 1857, a second wave of bank formations took place between 1866 and 1873, spurred by the unification of the country and the creation of a single currency. Many of the German bankers of this period had spent time in France and were influenced by the French experience with the *Crédit Mobilier*.

In 1838, Jacques Laffitte, a former governor of the Bank of France, founded the Caisse Générale du Commerce et de l'Industrie. Its purpose was to lend long-term to industry. It failed in 1848, a year after Laffitte's death, but the idea was resurrected by the Pereire brothers with the support of Louis Napoleon. In 1852, shortly after Louis Napoleon became emperor of the Second Empire, the brothers opened the Crédit Mobilier, which played a large part in financing French railways and other public works. Cameron (1961) has emphasized that it served as the prototype for industrial banks in Germany and the rest of Europe.

The Dresdener Bank, one of the major German banks, was specifically set up to pursue industrial lending. Other banks such as the Commerz Bank of Hamburg and the Deutsche Bank of Berlin were set up to help provide finance for foreign trade but soon turned to financing industry when they found it difficult to challenge British and French dominance in this area.

German financial markets were undeveloped at this time relative to those in Britain. Joint stock companies were rare in Germany prior to 1850. The markets that did exist, primarily in Frankfurt and Berlin, were mostly for various forms of government debt, for loans to princes, towns and foreign states. The financial market in Berlin did play some role in financing German railways, but this did not develop into extensive financing of industry.

Links between banks and industry which developed into the "Hausbank" system grew substantially during this period. Banks were represented on the boards of companies and industrialists held seats on the boards of banks. This interlinkage was widespread but not universal. Some firms, like Thyssen and Stinnes in the iron and steel industry, and some industries, such as chemicals, avoided this type of involvement. Most firms though, relied primarily on bank financing and internal finance. Presumably the existence of cartels in many industries (which were legal at this time) enhanced the profitability of firms and made internal finance that much easier.

From the second wave of bank formation around the time of unification until the beginning of the twentieth century, German banks formed national networks just as they did in England and France. If anything, this process went somewhat more quickly in Germany.

The great industrial banks were not the only ones that developed during the nineteenth century. The Landschaften (land companies) were created as mortgage banks in Prussia in the first decades of the century. Cooperative banks were set up around the middle of the century to provide rural credit for peasants and to help small shopkeepers and tradesmen. These institutions have formed a significant part of the German banking system ever since.

Considerable disruption was caused by the Allied attempt to break up the large German banks at the end of the Second World War. These attempts were not successful in the long run. The different units reunited after the end of the occupation and the links between big banks and industry, as well as the role played by financial markets in government debt financing, soon resumed. However, the isolation of Berlin meant that the financial center shifted from Berlin to Frankfurt.

As a result, the German financial system is now dominated by banks, and the banking industry is relatively concentrated. Banks that are operated in the public interest, such as the Landschaften and cooperative banks, as well as profit maximizing banks play an important role. Banks have little competition from financial markets, which are relatively unimportant. Households have access to a narrow range of investment vehicles. Banks are heavily involved in the control of industry and form long-term relationships with firms. There is little publicly available information about firms and there is no active market for corporate control.

Japan'

The German and Japanese financial systems are often mentioned together as having typical bank-based financial systems when contrasted with U.S. style market-based systems. In fact, the historical development of the two countries' financial systems and the role of the government have been significantly different. In Germany, the Hausbank system developed in the private sector, whereas in Japan the government was instrumental in the development of the main bank system.

After the Meiji restoration in 1868, the Japanese government sought to establish a modern industrialized economy. As part of this strategy, western-style financial institutions were introduced. Entry into the banking industry was easy and there was little government regulation. Banking panics occurred three times in the 1920s: in 1920, 1923 and most seriously in 1927. A new banking law, administered by the Ministry of Finance, went into effect in January 1928 and was introduced to correct this problem. To reduce the large number of banks that existed then, the government adopted the principle of "one bank in one prefecture" giving banks a monopoly in a limited area. The necessary reduction in the number of banks was achieved through mergers, using public funds to facilitate the process. The government thus began to become directly involved in the financial system before the start of the war with China and the United States.

During the 1930s, financial markets, and particularly the issue of shares, played a relatively important role in funding industry. In the period 1931-1940, shares provided 31.7 percent of total funds, bonds 4.3 percent, loans from private financial institutions 27.3 percent and retained earnings 37.0 percent. After the war the proportion provided by shares was much smaller, of the order of 5-10 percent while the proportion provided by institutions and retained earnings increased substantially (Horiuchi, 1995, Table 2, p. 96).

During the early stage of wartime control, from 1937 to 1941, the Temporary Law of Fund Adjustment of 1937 extended government involvement 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

'This section draws heavily on Horiuchi (1995).

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 its financial needs. According to Hoshi, Kashyap and Loveman (1994), many of these relationships subsequently provided the foundations for 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. Economic reconstruction also led to substantial government involvement. The government became directly involved in allocating funds to industry through the establishment of the Reconstruction Financing Bank (RFB) in 1947, which allocated credit to industries perceived to be crucial to Japan's postwar reconstruction. 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), which continued to lend to the same key industries as the RFB. After 1960, its role was extended to support the government's industrial policy.

The General Headquarters of the Allied Occupation (GHQ) wanted Japan to develop a U.S. style securities markets which focussed 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.

The main problem the banking system faced at this time 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 Long-Term Credit Banks Law 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, 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 argued that this main bank relationship ensures that 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 to keep interest rates low during the 1950s and 1960s. This had a number of effects, including

providing rents to banks and some transfer of income from banks to industrial firms. The rents to banks helped ensure their solvency and contributed to the stability of the system.

The Japanese government thus intervened much more in the financial system than was the case in the United States or Germany. 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 numerical control machine tools), they also rejected many others, including requests for support from Toyota and Sony.

The majority of funds for investment were provided not by government-controlled banks such as the JDB, but by private banks. Although the government tried to affect the private sector's allocation of funds, there is not much evidence that it succeeded in altering what would have happened anyway, except in a few instances such as coal mining and shipbuilding.

In the middle of the 1960s, the Japanese government wanted to gain international recognition by, for example, joining the OECD. In order to do this it needed to relax its regulation of the financial system. During the years since, this relaxation has increased. Financial markets have steadily become more important as the restrictions on issuing bonds have been relaxed. At the same, time main bank relationships have come under heavy strain and the system has begun to break down as large firms are increasingly able to rely on financial markets to raise funds.

A Theoretical Framework

The outline of the development of financial systems has illustrated three very distinct types. The next step is to outline a theoretical framework for considering the properties of each. It is usually argued that financial systems have three main roles, as follows: the allocation of resources across different sectors; risk sharing; and corporate governance. Each of these will be considered in turn.

Allocation of Resources

One of the basic functions of the financial system is to channel savings from households for investment in the most productive sectors of the economy and the most productive firms. It is traditionally argued that U.S.-style market systems provide the best incentives for the efficient use of resources. In the United States, extensive regulation by the SEC ensures that firms make large amounts of information available to the public. The wide availability of information helps firms make good decisions about investments and about whether to enter an industry.

In a bank-based system such as that of Germany, information is not as readily available. Relatively few firms are listed on stock exchanges, and those that are listed are not required to release much information. It would seem that firms would be at a significant disadvantage in terms of making investment and entry decisions. However, it can be argued that a German type of financial system, where a small number of banks play a prominent role, may permit some substitute mechanisms. If banks have a large amount of information about the profitability of firms, they can use this information either directly by advising firms or indirectly when they decide whether or not to grant loans to finance investments. Although substitute mechanisms allow duplication of many market functions, there remain some apparent disadvantages to reliance on intermediaries. Most importantly, without an active stock market it may be difficult to decide on appropriate risk-adjusted discount rates.

The Japanese financial system provides some insight into the operation of an alternative to banks and intermediaries, namely the allocation of resources to sectors by government-controlled institutions. As the discussion in the previous section showed, although this sometimes works, there are many cases where it has not. Moreover, other evidence from European countries, and in particular Eastern Europe, suggests this is not an effective means of allocating resources.

A standard assumption of traditional economic analysis is that production technologies are well known and managers are aware of the consequences of the actions they take. In traditional industries, such as agriculture, this is a reasonable assumption. In many modern, high-technology industries, it is not. An example is the biotechnology industry, where there is very little experience with the consequences of different managerial strategies.

Allen (1993) argues that bank-based systems, such as that of Germany, are much more suited to traditional industries, where there is consensus about policies; while financial market-based systems are more suited to dynamic industries where wide agreement is lacking. Stock markets provide an incentive for a wide range of people to undertake research and to check managerial actions. Some investors keep their information and views private. They buy and sell shares on the basis of this information and the profits they make compensate them for the expenses incurred in undertaking the research. Grossman and Stiglitz (1980) have shown how this information can be reflected in the firm's stock price. Firms that adopt managerial policies that are widely regarded to be good have a high stock price on average; firms which adopt policies that are thought to be bad have a low stock price on average. In addition to investors who keep their information to themselves and trade on the basis of it, there are also people who do research that is published in newsletters and distributed to clients in various other ways. This process encourages debate about how firms should be run. In general, the diversity of views and the process of debate can play an important role in checking the actions of managers. Even in industries where there are few firms and little past experience, this checking process favors consensus strategies and helps to reduce risk.

In contrast, when banks are responsible for monitoring firms, there is no equivalent to this broad-based checking process. The bank officers overseeing the loan will check what the firm managers are doing. When there is a well-established consensus concerning how the firm in question needs to be run, this monitoring by a limited number of bank officers may be adequate. In other cases, where departures are being made, monitoring by a limited number of outsiders may not be an adequate review of the activities of the firm's management. In the absence of disclosure associated with U.S. style stock markets, there is no public debate as to the appropriateness of various managerial strategies. In these circumstances, intermediaries may be a poor substitute for the market.

Risk Sharing

In addition to allocating resources between sectors, a major function of financial systems is to provide opportunities for risk sharing. Markets allow individuals to diversify portfolios, hedge idiosyncratic risks, and adjust the riskiness of portfolios to suit their risk tolerances. This can be termed *cross-sectional risk sharing*, because different individuals are exchanging risks at a given point in time. One of the important characteristics of the U.S. financial system is the enormous variety of financial products available to the average investor. The diversity of instruments and markets in the U.S. provides many opportunities for cross-sectional risk sharing.

In Germany, and until recently in Japan, the possibilities for cross-sectional risk sharing are more limited. Relatively few stocks are quoted on German stock exchanges and there are few mutual funds or other intermediaries which can provide direct ownership of stocks without high transaction costs. Trading futures and options is not a practical possibility for most investors. In short, investors have restricted opportunities to share risk cross-sectionally through markets. Most savings are in bank accounts which do not provide opportunities for hedging.

From the point of view of cross-sectional risk sharing, the U.S. model appears to offer a much richer menu of choices than the German model, and it is tempting to conclude that a market-based system provides superior risk sharing opportunities to an intermediary-based system. However, markets have their own limitations and if markets are incomplete or if participation in financial markets is incomplete, intermediaries may have some advantages in providing risk sharing or intertemporal smoothing.

When markets are incomplete or when market participation is incomplete, there may be a role for intermediaries to share risks that are too expensive to hedge through the market. However, it is not clear that investors will actually be worse off in an economy with highly developed financial markets. That is, one might expect that a larger set of alternatives, markets plus financial intermediaries, would make individuals better off than intermediaries alone. One could use markets to achieve optimal cross-sectional risk sharing and use intermediaries for other forms of risk

sharing. But this argument relies on a very broad *ceteris paribus* assumption and overlooks the fact that many other things will be different in the two economies.

An illustration of the differences between the two financial systems in terms of their ability to smooth risk is provided by the experience of the 1970s and 1980s. In the United States, the real value of the stock market approximately halved after the oil shock of the early 1970s and stayed at this level for the rest of the decade. Households that had invested their retirement funds in the stock market and needed to liquidate shares to pay for consumption were forced to reduce their standard of living substantially. By contrast, in the 1980s the real value of the stock market approximately doubled and the process was reversed; households whose savings were invested in the stock market were able to increase their consumption substantially. The important point is that these U.S. households bore substantial consumption risk over the two decades.

The U.S. experience can be contrasted with that of Germany over the same period. German households save for retirement and other purposes primarily in bank accounts and other debt-like instruments. Although Germany also experienced an oil shock, the value of these savings was not halved. German investors were able to consume the amount they had planned as banks drew on reserves to maintain payouts. In the 1980s there was a sustained boom in Germany as in the U.S. During this period the value of households' savings did not increase, since they were held in the form of fixed claims on the intermediaries. The intermediaries, however, were able to build up reserves. In contrast to the U.S. case, it can be argued that households did not bear as much risk because of intertemporal smoothing by intermediaries.

The interesting question is how this intertemporal smoothing can be achieved. One possibility is that it arises from intergenerational risk sharing. An intermediary can provide insurance against swings in asset prices by averaging gains and losses over time. The market cannot provide this insurance because the different "generations" in this story participate in the market at different points in time. This is an example of incomplete participation. In order for one generation to liquidate its holdings of assets, another generation must be willing to buy. The price at which this exchange takes place may introduce substantial consumption risk.

Another means by which intermediaries can achieve intertemporal smoothing is asset accumulation. A formal model is provided by Allen and Gale (1997). They contrast a market economy, in which individuals invest directly in a safe asset and a risky asset, with an intermediated economy in which a long-lived intermediary holds all the assets and offers deposit contracts to each generation. Because of the overlapping generational structure of the model, the price of the risky asset in the market economy is always low enough that its return dominates the safe asset, which is never held. As a result, each generation bears the full dividend risk on the risky asset. In the intermediated economy, on the other hand, intertemporal smoothing is provided to individual investors, who do better according to almost all welfare indicators, by accumulating reserves in the form of the safe asset. In fact, in a long-run-average sense, the intermediary can eliminate risk altogether. This is a form of

intertemporal risk pooling, analogous to the risk pooling that markets perform when they allow investors to diversify risks across many assets. However, unlike the cross-sectional risk sharing allowed by markets, intertemporal risk pooling requires the accumulation of large reserves of the safe asset. It may seem odd that holding a dominated asset can improve welfare, but this is simply a reflection of the market's mispricing of the safe asset. The market does not value the asset's contribution to future generations' welfare through risk reduction.

The importance of this example is that it shows that financial markets and intermediaries are not simply veils thrown over a fixed set of assets. They actually determine, in conjunction with other factors, the set of assets accumulated by the agents in the economy. By adopting one or another set of institutions, the economy is placed on a different trajectory, with important implications for the aggregate risks to be shared.

Corporate Governance

Manne (1965) has argued that an important aspect of U.S. style economies is the ability of different management teams to compete for the control of assets. In principle, the process of takeovers and acquisitions allows the most able teams to gain control of assets and to make investment decisions. In addition, it provides a mechanism for disciplining managements that squander the resources of their companies.

A large number of studies have indicated that takeovers in the United States in the 1970s and 1980s increased shareholder wealth substantially. Jensen (1993) gives the total increase in value of target firms from 1976-80 as \$750 billion. There has been an extensive debate as to what caused this increase in value. Some authors have found no evidence of an increase in efficiency after takeovers and mergers while others have found the reverse.

An alternative view of the market for corporate control has been provided by Mayer (1988) and Shleifer and Summers (1988). They stressed that intermediated systems allow implicit contracts and long-term relationships to be formed more easily than when hostile takeovers are possible. When contracting possibilities are incomplete, implicit contracts and long-term relationships may allow the realization of significant *ex ante* gains. For example, workers and suppliers may be willing to acquire firm specific skills and capital, whereas without an implicit contract or long-term relationship they would not be willing to do so. *Ex post*, a firm may be required to make payments to fulfill its obligations even though it is not legally required to. Banks are likely to encourage this type of arrangement *ex ante* in order to be able to share in the gains. *Ex post*, a desire to maintain their reputation will ensure that banks do not pressure firms into breaking their implicit contracts.

In contrast, for a firm that is listed on a stock exchange, there is an incentive for somebody to take it over and cease making the payments required under the implicit contract. Shleifer and Summers (1988) have suggested that the increase in stock value observed in the empirical studies of takeovers mentioned above could be due

to wealth transfers from employees, suppliers and others, but there appears to be little empirical evidence that this is the case.

In Germany and Japan, active markets for corporate control do not exist. Without an active market for corporate control, German and Japanese firms would at first sight appear to be at a disadvantage because of the absence of a mechanism for removing incompetent management. However, it can be argued that substitute disciplining devices are provided by concentrated share holding and cross-share holding and the power of banks to intervene. For example, Franks and Mayer (1992) found that in the largest 200 companies in Germany, 90 percent have at least one shareholder with a share of 25 percent or more of the equity. While concentrated ownership may overcome the free-rider problem, by giving owners adequate incentives to monitor, it remains to be seen whether their monitoring is effective. In both Germany and Japan, the banks' ability to hold equity and their close relationship with firms means that they have extensive powers.

The operation of the market for corporate control and the substitute mechanisms that exist in Germany and Japan are complex. The existing evidence for the superiority of either system does not appear overwhelming.

Lessons for Latin America

The United States, Germany and Japan provide a wide array of alternative features of financial systems. Designing financial systems is a complex issue and many factors need to be taken into account. However, it can perhaps be argued that the experiences of these three countries and other factors suggest five principles that should be considered when structuring financial systems of Latin American and Caribbean countries. These will be considered in turn.

- *A mixture of markets and banks is desirable.* Financial markets have an important role to play in terms of providing the information needed to allocate resources across sectors. They are also important in providing cross-sectional risk sharing. Given the diversity of Latin American and Caribbean countries, particularly in terms of income distribution, this is probably more important than the intertemporal smoothing that would be possible in the absence of markets. No modern financial system exists without banks and they will clearly continue to play an important role in Latin America and the Caribbean. Allowing both to exist will also allow competition between the two and permit the countries in the region to find the set of institutions that is appropriate for their own unique circumstances.
- *Equity, bond and other financial markets should be encouraged.* Laws and regulations which ensure the integrity of equity and bond markets should be adopted and enforced. These are a necessary prerequisite if the desirable features of markets are to be attained. In Latin America, foreign investment through

financial markets has the potential to become increasingly important. This will only happen if an adequate institutional framework is in place.

- *A concentrated universal banking system is desirable.* One aspect of the U.S. financial system which appears to work badly is the competitive nature of the banking system. Historically, this led to bank runs. In more recent times competition in the industry was at least partially responsible for the savings and loan crisis of the 1980s. Low profits means that banks have an incentive to take risks in the hope of doing well. In contrast, other countries such as Germany and Japan have not had this type of problem. Large profits ensure that the possibility of bank runs is minimized and incentives for risk taking by banks are low.
 - A concentrated universal banking system also provides incentives for corporate governance. The advantages of close long-term relationships seem substantial and it would be unfortunate for Latin American countries to lose out on these advantages.
 - *An active market for corporate control should be developed.* As pointed out in the previous section, there is no wide agreement on the superiority of a U.S. style market for corporate control or the German and Japanese substitute mechanisms allowed by a concentrated universal banking system. Allowing both will again permit Latin American countries to find the particular mix of institutions that are optimal for their circumstances.
 - *Direct government involvement should be minimal.* Japan's postwar experience illustrates that extensive government intervention can on occasion be helpful. However, even in the case of Japan it is not entirely clear how much was achieved because of intervention. A large part of Japanese success that can be attributed to the financial system is arguably due to the effectiveness of the main bank system. This arose out of the wartime government controls. However, government intervention is not essential for this type of system, as the development of the German Hausbank system illustrates.
- Another important factor is that Japan is very different from most Latin American and Caribbean countries in terms of the professionalism of its civil service. Corruption, a problem in many Latin American and Caribbean countries, is a major problem in Japan. This makes direct government intervention problematic.
- Although direct government involvement may not be desirable, this does not imply that governments should abandon the financial sector to *laissez-faire*. Even in the United States the government is heavily involved in ensuring the integrity of the financial system by regulating markets and the banking sector. A similar kind of intervention will be necessary in Latin America and the Caribbean.

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