The evolutionary process under way in world finance is characterized by three simultaneous developments. First, the financial markets are becoming increasingly globalized. Second, old kinds of debt are being made into new kinds of securities. Third, the distinction between banks and brokers is breaking down. Each of these developments will have a profound influence on everybody involved in the financing business, including the Federal Reserve.

**Globalization of financial markets**

The process of globalization has been taking place for some time. U.S. banks developed worldwide branch networks in the 1960s and 1970s for loans, payments, clearings, and foreign exchange trading. U.S. securities firms also began to build up their operations abroad, starting in the 1970s at first in London, while the Eurobond market, but then into other markets, including now Tokyo. Foreign firms expanded into the United States, first the banks and later on the securities houses.

Trading in individual markets has globalized, in the 1970s, foreign exchange became a 24-hour market, with the major banks dealing with each other each day through their offices in the markets in the Far East (Tokyo, Hong Kong, Singapore), the Middle East (once Beirut, now Bahrain), then Europe (London, Frankfurt, Zurich), and finally, the United States (New York for interbank trading and Chicago for futures trading).

In the 1980s, the market in U.S. government securities has moved virtually to a 24-hour basis. Foreign investors have bought substantial amounts of Treasury bills, notes, and bonds, and many prefer to trade during their working hours rather than during ours. Primary dealers of U.S. government securities have opened offices in London, Tokyo, and other places to accommodate...
such trading. Foreign firms have geared up for this trading by establishing primary dealerships in the United States.

The stock markets also have opened up, although not in an extended time frame for individual markets. Instead, companies are listing their stocks on different exchanges around the world. For example, some 50 non-Japanese firms have listed on the Tokyo Stock Exchange and this number is likely to double over the year ahead as Japanese investors focus increasingly on foreign stocks. The flow goes both ways. U.S. investors in Japanese stocks are frequently prepared to stay up late at night to gain a minute-by-minute report on the market in Tokyo.

Financial futures markets also are spreading around the world, with market acronyms such as Liffe for London and SIMEX in Singapore. Instruments traded include government bonds, foreign exchange, stock market indexes, and the whole array of traditional products such as foodstuffs and metals. In Japan, the authorities have considered futures and options to be highly speculative—and thereby dangerous—and are moving slowly to allow such trading. A futures contract on Japanese government bonds, introduced in Tokyo last year, has been a huge success. In 1987, the Japanese government is expected to lift the ban on Japanese trading in U.S. financial futures. Japan's major institutional investors hold billions of dollars of U.S. government securities and are eager to develop the means to hedge their portfolios should they want to.

Globalization is an ongoing process. The London markets are in the first stages of the so-called 'Big Bang,' in which the trading of both equities and gilt-edged securities has been revamped into a much more streamlined, modern, and competitive structure. Foreign firms have been allowed to participate fully in those markets. In Tokyo, the process of opening the market has gone more slowly. U.S. banks have gained increasing access to domestic financing mechanisms in Japan. Non-Japanese securities houses are now becoming members of the Tokyo Stock Exchange. Under pressure from the United States, the process of liberalization in Japan is bound to continue.

International finance is a Darwinian world—survival will go to the fittest—and most financial firms are coming to the conclusion that to survive as a force in any one of the world's leading financial markets, a firm must have a significant presence in all of them.

As with institutions in other countries, the Big Four Japanese securities firms (Nikko, Nomura, Daiwa, and Yamaichi) have adopted a global strategy. The companies are still based in Japan, of course, but they have built up their offices in New York and London so that they have three profit centers with trading and distribution capability in Japan, Western Europe, and the United States. The Big Four have increased the capital of their subsidiaries and have hired local people for many key positions. American and foreign firms are doing the same in Tokyo, hiring Japanese staff for key positions.

Old types of debt into new kinds of securities

The second major development under way in world finance is that old kinds of debt are being made into new kinds of securities. Twenty years ago, banks handled most of the short and medium-term financing around the world. But several things happened. One was that banks lost their ability to attract low-cost funds from depositors on favorable terms through demand deposits or passbook savings. Banks now must compete for funds with a wide range of institutions at market rates. Another factor was that borrowers developed the means to obtain funds directly from lenders, such as through commercial paper marketed by securities houses rather than by banks. A third factor was that banks got caught
in a series of loan loss experiences—on LDC’s, on petroleum, on agriculture, and on real estate. The relief for some of these bad loan situations has been to securitize the loans, creating a primary or secondary market. For example, there is now an active market among banks in participations on LDC debt with discounts on the original loan values which fluctuate with the fortunes of each country. Some firms, again brokerage houses, publish regular quotation sheets of these country-by-country discounts.

The list of other kinds of new securities is very long: mortgage-backed securities of all sorts, floating-rate versus fixed rate, zero coupon and low price, versus high coupon and high price, along with every conceivable kind of call, convertibility, or indexing feature. Each of these innovations has a justification in terms of the borrower’s or the lender’s needs, but some are recognized by many market participants as new-fangled gimmicks.

Banks and securities houses are under pressure to be innovative. Each firm, to differentiate itself from the others, is forced to come up with something new and different as often as possible—new ideas, new products, new wrinkles on old products. Mathematicians or economists with a mathematical bent are being recruited to develop these products. These people are popularly called “rocket scientists” in view of the vast amount of numbers they must deal with. High tech is becoming as important to financial firms as it is to manufacturing.

From these innovative efforts, programmed trading—an exercise which pits computer against computer—was developed in the stock market. Programmed trading has made money for firms here, and some of the same firms are trying to develop the same techniques in the Tokyo and London stock markets.

Occasionally one of these new products fizzles out. Early this year, for example, in the Eurobond market, someone offered a floating rate note, that is, an instrument on which the coupon is adjusted to market rates every six months, but which has no final maturity at all. In effect it would be a perpetuity; you could trade it tomorrow or hold it forever. For the borrower, this was a great idea: he never has to repay, and the securities were priced to give a favorable yield since they were based on a six-month rate of interest. The lenders, however, were not so sure, given that there is a long time between six months and eternity on a credit. So the houses that tried to sell these notes found them difficult to move and suffered substantial losses.

Even mortgage-backed securities proved to be a nightmare to some firms. Earlier this year, when homeowners took advantage of the decline in long-term interest rates to refinance their mortgages, the firms which packaged the mortgages into securities were caught in the middle as high-yield portions of the packages were being liquidated.

**Distinctions between banks and brokers**

The third major development I wish to discuss with you today is the diminishing distinctions among different kinds of financial firms. Every financial firm wants to be in the most profitable product line and have the flexibility to shift to another, more promising, product line. In the United States, the Glass-Steagall Act separates commercial banks from investment banks. Japan has a similar provision, Article 65 of the Securities and Exchange Act, separating the two kinds of banking activities. In recent years, commercial banking in the world has not been as profitable as it was, while some kinds of investment banking have been extremely profitable. As a result, commercial banks in the United States and Japan have sought to break down the barriers established by Glass-Steagall and Article 65 to engage in investment banking activities. Some of the big banks in New York are even threatening...
to give up their banking charters so as to fully qualify as investment banks.

At the same time, investment banks have been encroaching into areas of activity that were traditionally the preserve of the banks. One of the biggest moves, in my opinion, was into money market mutual funds, which drew billions of dollars away from banks in the late 1970s and early 1980s until banks were allowed to offer money market deposit accounts to their customers. In addition, investment banks moved into commercial paper, which drew corporate borrowers away from banks to the securities houses that issued the paper. Also, investment banks are now extremely active in foreign exchange.

In the international sphere, there are two assaults on the Glass-Steagall and Article 65 barriers. One assault is being made directly by U.S. and Japanese firms in the two markets. Thus, Merrill Lynch has proposed that it open a branch of its London banking subsidiary in Tokyo, which would put Merrill Lynch—an investment bank par excellence—in the banking business in Tokyo, something which Japanese investment banks cannot do. Chase Manhattan has also pressed to have its capital markets subsidiary open a branch in Tokyo to trade securities, something which Japanese commercial banks cannot do. Sumitomo Bank, one of Japan’s premium commercial banks, has just made a major investment in Goldman Sachs, another excellent U.S. investment bank; the Federal Reserve Board stripped the deal of any joint venture characteristics, however, leaving it as a passive investment. More recently, the Industrial Bank of Japan purchased Aubrey Lanston, a primary dealer in U.S. government securities through its Schroder Bank subsidiary in New York.

The second assault on Glass-Steagall-type barriers comes from European banks which operate without such stringent separations between commercial banking and investment banking in their countries. German banks are universal banks, and they have established capital markets subsidiaries in the United States and Japan. In Britain, there was a distinction between the major clearing banks and the merchant banks, but that has been pretty well blown away in the competitive environment leading up to the Big Bang. Many European financial institutions have developed the capability, perfectly legally, to do both commercial banking and investment banking in the United States and Japan. United States and Japanese institutions have countered by opening multipurpose activities in Europe, with brokerage houses starting up banking subsidiaries.

Looking ahead

The upshot of all this, I believe, is a further painful evolution of the international financial system. Ten years from now there will be a core of some 30 to 50 financial institutions—banks, securities houses, and perhaps insurance companies—at the center of international finance. They will be operating in New York, London, Frankfurt, Tokyo, and elsewhere, and they will be competing head-to-head to do business with the world’s major corporations and portfolio managers. They will have capabilities in equities, fixed-income, futures and options, and foreign exchange. They will retain a flavor of their original nationality—Merrill Lynch will always be bullish on America and Yamauchi will always evoke the image of Mount Fuji. But they will all employ graduates from the best universities in the United States, England, and Japan, as well as graduates from the school of hard knocks from a wide range of countries.

For private firms, the challenge is clear. Both adequate capital and disciplined management are required. International finance has increasingly become a risk business; fat commissions and fat fees are a luxury of the past. Exposures in excess of a billion dollars are commonplace now. Also commonplace are profits and losses on such
exposures amounting to tens of millions of dollars. Last May, for example, after the U.S. Treasury's refunding, the bond market dropped sharply. At one point, I calculated that the collective losses to the buyers of securities from the Treasury exceeded $1.5 billion and that a large portion of that loss was borne by the community of government securities dealers who still had substantial inventories of notes and bonds. Thus, a slight miscalculation by any firm can turn into a monumental loss, so an even more monumental cushion is needed.

Discipline is needed even more than capital. The reason why I support Glass-Steagall and Article 65 separation is based on my experience at the Fed and in the private markets; I have been impressed with the different disciplines needed in commercial banking and in investment banking. Commercial bankers are risking their depositors' money—a public trust; investment bankers are risking their partners' or shareholders' money—a private gamble. Just because investment banking has been profitable to some firms in recent years doesn't mean that profit is assured in the next few years. Investment bankers who have gone through their share of lean years know this. Commercial banks which jump into investment banking now might find that they have jumped on a bandwagon that is running very quickly downhill. Some of the biggest mistakes made by financial firms in recent years—whether banks or brokerage houses—are moves into unfamiliar areas in which their own hard-earned discipline does not help them.

For policymakers in this environment, the need will be to generate a solid flow of information on what is happening, to develop experienced people who can deal with the knotty problems which will surely occur, and to establish close working relationships among U.S. supervisory and regulatory authorities as well as between the U.S. authorities and those abroad. The Federal Reserve had done an excellent job in keeping abreast of many of these issues. I am very impressed with the amount of work that has been done on securitization and off-balance sheet risks. Also, the relationships with foreign central banks have been expanded with respect to supervisory and regulatory issues. I am concerned, however, about the ability of the Federal Reserve to train and retain experienced problem solvers in view of the wide disparity between private and public sector salaries.

More generally, I think we will need some changes in the laws to clarify the ground rules, especially with regard to the Glass-Steagall Act. The risk is that so many exceptions will be made to the existing laws—through re-interpretations of definitions, ad hoc decisions, or merely acquiescence in faits accomplis which bend the laws—that the authorities might lose influence over the financial system altogether. During my years at the Federal Reserve, most of the major international crises we had to deal with related to gold and foreign exchange questions. In the years ahead, the most serious problems for the Federal Reserve and other central banks, will be related to the central bank's role as lender of last resort.