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Financial Deregulation and the Globalization of Capital Markets

Eugene L. Versluysen

Rapid financial deregulation and the globalization of capital markets have led to dangerous financial volatility that could have a destabilizing impact on major economies. To reduce this volatility, new regulation may be needed.

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World Development Report

Financial deregulation in recent years has vastly increased the ability of financial markets to allocate international capital efficiently. It has also sparked explosive growth in financial transactions and resulted in a restructured, more competitive, and less costly financial services industry.

But deregulation has proceeded so rapidly that the volume of purely financial transactions now greatly exceeds that of transactions driven by international trade in goods and services. Financial activity is now "delinked" from other factor markets and increasingly driven by speculation for short-term profits rather than by broader economic activity.

This new pattern has led to growing economic uncertainty and instability. Markets now run around the clock and respond so rapidly that there is a growing danger of chain reactions that could precipitate global market failures.

Deregulation has also made the conduct of national monetary policy more difficult and the monitoring of markets more complex. For the

United States, deregulation has increased the ability to borrow abroad, thus contributing to fiscal laxity. In that country, there is a need for a single regulatory agency to coordinate the supervision of related financial activities -- to lessen the risk of compounded market failures.

Some countries, such as England, have moved to strengthen the capitalization of banks and securities firms. Others (Canada, France, Italy, and Spain) are making progress. But there is acute need for improvement in the United States, where many large banks are undercapitalized in relation to their exposure on LDC loans.

Regulators in the major trading nations need to address the possibility of a full-scale breakdown of the financial system.

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**Financial Deregulation and the Globalization
of Capital Markets:
A Stabilizing Force of a
Conduit of Volatility and Uncertainty?**

by
Eugene L. Vershlysen

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1. INTRODUCTION

Financial markets are a prime example of an economic activity where regulation and controls are likely to induce distortions and inefficiency, rather than promote efficiency. Left to themselves, these markets can adjust rapidly and flexibly to new conditions. They trade fungible assets. With today's minimal transaction costs--partly as a result of improved communication and computer technology--and increased liquidity, asset fungibility prevails on a global scale, even regardless of the currency of denomination. In this environment price changes are swift, affect all assets, and spread across borders. These price responses to changing conditions can also rapidly restore market equilibrium.

However, the financial services industry is but one segment of any economy. It is also the one where trust, expectations and confidence play a greater role, and have a more immediate impact in influencing actions and reactions than in other sectors of the economy. The principal purpose of regulating financial activities has, therefore, been to preserve trust in the fiduciary role of financial agents. It has also served to subordinate financial markets to broader economic policy objectives--for instance, interest-rate and credit controls to serve monetary policy; capital controls to stabilize exchange rates. Finally, regulation and controls have aimed to reduce the feedback of financial volatility on other factor markets.

During the late 1970s and early 1980s, concern grew in industrial countries about public sector encroachment on economic activities, especially on private endeavors. That concern was broadly based. It found its intellectual underpinning in the theories of liberal classical economists of the 18th and 19th centuries. It also promoted a free-market reformist stance among governments and policy makers in the leading industrial countries.

This led to deregulation of a broad range of economic activities. But nowhere has deregulation been more pronounced and rapid than in financial markets.

The ensuing liberalization of financial activities and rapid pace of innovation have stimulated competition and have already generated substantial efficiency gains: capital markets have become more liquid; the cost of financial intermediation has fallen; new risk minimization techniques have improved the scope for active asset and liability management; in a number of countries financial institutions have been able to strengthen their capitalization and increase their ability to withstand risks.

But recent changes in the world's capital markets can also carry significant economic and financial costs. To cite but two examples at this point, first, the involvement of commercial banks in securitized lending has led to several instances of excessive off-balance sheet risks that could mortgage the banks' future solvency. Secondly, heightened international financial volatility and the increasing substitutability of financial assets for money complicate the implementation of monetary policy.

At a more general level, one of the most worrisome consequences of deregulation is the progressive delinking of financial markets from other sectors of the economy: in most industrial countries the financial services industry is growing faster than the rest of the economy and the volume of purely financial transactions now literally dwarfs trade-driven financial flows. For other sectors of the economy this magnifies the risk of destabilization that is induced by volatility in financial markets. As another facet of the same problem, the persisting turbulence in financial markets since October 1987 also shows that distortions in slower-moving factor markets can have an immediate--and sometimes barely controllable--feedback on highly responsive financial markets.

This suggests that certain financial reforms may have been too rapid, if not excessive, as they have outpaced changes in the goods and labor markets of major economies. Further structural reforms and deregulation, to improve the functioning of the latter two sectors are therefore needed. Failing such reforms, distortions in the slower adjusting real sectors of major economies could be magnified by the rapid pace of change and adjustment in financial markets. This could have a destabilizing effect on the economies concerned. For the same reason, if rigidities in the real economy cannot be dealt with effectively, there may be cause to reconsider the validity of further financial deregulation.

Against this broad background, this paper examines the principal objectives and results to-date of financial deregulation and international integration, culminating in the emergence of a truly 'global' capital market. Recent innovations of financial techniques and instruments, and their impact on the financial services industry are reviewed in detail. The paper concludes by addressing the effect of changes in financial markets on economic activity in general and on the stability of the international financial system.

The paper is organized in four sections. Following this introduction, section 2 traces the origins of financial deregulation and innovation to the growth of the euromarkets and the internationalization of banking and finance during the 1960s and 1970s. Section 3 reviews the range and objectives of financial deregulation, in the context of the post-1980 shift in economic policies in industrial countries. Section 4 provides a summary of recent regulatory changes and of the most important new financial techniques and instruments. It also analyzes their impact on the financial services industry. Section 5 concludes with an assessment of the broader

macroeconomic implications of these changes. The main focus of the paper is on debt securities. Changes in equity markets are addressed only indirectly, where they are germane to the discussion.

2. THE ORIGINS OF FINANCIAL DEREGULATION AND INNOVATION

The initial thrust for financial deregulation and innovation can be traced to two major changes in foreign exchange markets, respectively the return to external convertibility in the 1950s and the adoption of floating exchange rates in the early 1970s. Both changes were instrumental to the development of the eurocurrency market and set in motion the metamorphosis of international banking.

The return to external convertibility

The return of external convertibility in Europe in 1958 was a major breakthrough for the expansion of foreign currency business by commercial banks.^{1/} It enabled them to accept deposits and make loans in foreign currencies on a larger scale than had been possible under the EPU mechanism. As the volume of that business grew, an active interbank market for dollars and other foreign currencies came into being: the eurocurrency market.

At first, outflows of public funds (military expenditure and grants) and private capital from the United States were the main source of

^{1/} From June 1950 to December 1958 foreign exchange transactions in Europe were governed by the OEEC's (OECD's predecessor) European Payment Union, which essentially operated on a basis of bilateral settlements between the central banks of member countries. On 12/27/58, the EPU was terminated by decision of the OEEC Council and replaced by the European Monetary Agreement. The latter provided for multilateral settlements in dollars and thus marked the return to full convertibility in Europe (BIS Annual Reports, 1958/59, p. 202 & 1963/64, p. 127).

eurodollars--dollars owned by non-US residents.^{2/} London's 'City', which offered a sophisticated financial infrastructure and a long tradition of international finance, became the main center for eurocurrency business.

Both the supply and use of eurodollars expanded rapidly. Being strictly 'offshore', eurodollar deposits fell outside the direct jurisdiction of US monetary authorities. To depositors this offered the advantage of market interest rates, unfettered by the interest-rate ceilings of US Regulation Q.^{3/} Higher rates gradually attracted central bank reserves and working dollar balances from major non-US corporations. Later, as the eurocurrency market had reached maturity, it became a magnet for surplus funds of high-income oil exporters, following the first oil shock of 1974.

The demand for eurodollars--and later, for other eurocurrencies--was equally buoyant. The initial impetus for the full development of long-term debt instruments in eurocurrencies--eurobonds--was provided by the reintroduction of capital controls in the major industrial countries. Such

2/ o Market lore gives the term 'eurodollar' a surprising origin: in the late 1950s, Banque Commerciale pour l'Europe du Nord (BCEN), a wholly-owned French subsidiary of the Soviet Foreign Trade Bank, became a financial innovator by placing some of the USSR's dollar holdings with banks located outside the United States. As BCEN's telex answerback was 'Eurobanque', its dollar deposits became known as 'eurodollars'.

o Given the dollar's role as the principal international trade, settlement and investment currency, it also dominates the eurocurrency market.

o The term 'eurocurrencies' is used generically, regardless of their geographical location.

3/ Regulation Q set ceilings on time and saving deposit rates and, until 1978, prevented any interest payment on checking accounts. These interest rate ceilings were increased over time and the grip of Reg. Q was progressively diluted. From 1972 onwards, negotiable order of withdrawal (NOW) accounts were introduced. In 1978 regulations were further amended to permit commercial banks to make automatic transfers from savings accounts to demand deposits. (BIS Annual Report, 1978/79, p. 59.) Finally, in 1980, the US Congress passed the Depository Institutions Deregulation Act that provided for a gradual phasing out of interest ceilings. (The Washington Post, 1/10/88, p. C4.)

controls became widespread in the 1960s, when the initial post-war move to liberalize capital flows was temporarily reversed by major countries in an effort to reduce tensions in the foreign exchange markets and salvage the Bretton Woods adjustable parity grid.^{4/} As US multinational corporations expanded their activities, eurobonds were the only easily accessible source of long-term funds. They were subsequently adopted by a number of European governments^{5/} and major non-US corporations. As new types of bonds (floating-rate notes, bonds with detachable equity warrants, convertible bonds) gained acceptance, corporate financing and asset management by major institutional and private investors also became more sophisticated.

In the money market for eurodollars and other eurocurrencies, the foreign branches and subsidiaries of large US banks were initially the main net takers of funds. Interbank deposits of eurodollars served to supplement their domestic deposit base in the United States.^{6/} But, as the pool of eurocurrency deposits grew in size and reduced the banks' refinancing risks, maturity transformation--using short-term deposits to fund long-term loans--became widespread and revolutionized eurobanking.

Floating-rate eurodollar loans became commonplace. Priced at a spread over the bank's own cost of funds--LIBOR--these loans eliminated the

^{4/} J.A.Frankel, "The Yen/Dollar Agreement: Liberalizing Japanese Capital Markets", Institute for International Economics, Washington D.C., December 1984, p.19.

^{5/} Belgium and local authorities the United Kingdom were among the first sovereign issuers of eurobonds.

^{6/} The interbank deposit market is used by commercial banks to fine tune their liquidity positions: deposits are offered when liquidity is excessive; they are bid when it is insufficient. The London Interbank Offered Rate (LIBOR) remains the principal benchmark for interbank deposits in various eurocurrencies, ranging from overnight to up to 2 years or longer. Three- and six-month deposits are the most actively traded.

lenders' interest-rate risk. Large-size loans of \$100 million or more that exceeded any given bank's lending capacity, could be arranged by consortiums of several banks and through syndication with smaller banks: each syndicate member funded its participation in the same interbank market, at the same reference cost. As is well documented, the quantum leap in the volume of consortium lending came after the first oil shock, through the recycling of OPEC's surplus funds to developing countries.

As later experience would show, lower refinancing and interest-rate risks in this fast growing market made commercial banks accept considerable repayment risks. The banks' limited expertise in assessing sovereign credit risks at that time partly explains that attitude.

The adoption of floating exchange rates

After 1973, the adoption of floating exchange rates for the major currencies also spurred innovation and deregulation. It encouraged commercial banks to turn foreign-exchange trading into a separate profit center: volatile exchange rates offered unprecedented arbitrage opportunities between eurodeposits and forward exchange markets. Foreign exchange trading became an integral part of euromarket activities.^{7/} As trading expanded and gained in sophistication, the need for more flexible accounting and supervisory rules rapidly became apparent.

^{7/} Interest differential between deposits of similar maturities in two given currencies are normally equal to the forward exchange premium or discount of those currencies relative to one another. However, discrepancies between these respective spreads often occur through market volatility. This generates arbitrage opportunities. For example, the annualized three-month forward discount of dollars against deutschemark can be lower than the yield premium of three-month eurodollar deposits over three-month euro-DM. In such a situation it is cheaper for a bank that needs a three-month dollar deposit to buy these dollars with DM in the spot market and to reverse this purchase in the three-month forward market. Of course, the arbitrage itself gradually reestablishes the equilibrium between forward markets and interest spreads.

Subsidiary determinants of deregulation

Other developments in financial markets during the 1960s and 1970s hastened the pace of innovation and the need for deregulation. The international expansion of commercial banking, the emergence of offshore banking centers & technological progress in data processing and communications stand out as key factors.

The momentum for international expansion by major commercial banks was provided by the internationalization of production and trade by multinational corporations. As leading US banks--and, later on, Japanese and European banks--aimed to provide global coverage to their multinational clients, they established large international networks of branches and subsidiaries. In highly protected and regulated domestic financial markets, they enjoyed considerable competitive advantages--captive MNC clients, lower-cost funding in eurodollars and syndication of eurocurrency loans to developing countries--over the smaller local banks. These numerous foreign outlets were also able to promote eurocurrency funding and foreign exchange management with the governments and corporations in the host countries. The influx of foreign banks was a catalyst for innovation in those countries. It also emphasized the need for greater freedom of action for domestic institutions, lest they be relegated to a marginal role.

The creation of offshore banking centers was promoted by the governments of a number of developing countries to modernize their domestic banking systems. These centers started to proliferate during the 1970s in the Far East (Hong Kong, Singapore), the Middle East (Bahrain, Dubai) and the Western Hemisphere (Cayman Islands, Bahamas, Panama). In order to attract subsidiaries of leading international commercial banks, these new centers

offered minimal regulatory constraints and favorable tax regimes.^{8/} This put central banks in the main financial centers under pressure to adopt more flexible and coordinated supervisory rules, to prevent an exodus of eurocurrency business from their own markets.

Last, but not least, communication and data processing techniques progressed in leaps and bounds during the 1970s. This enabled financial institutions to access or disseminate financial information and market prices instantly between distant locations. Quasi perfect information, available at the same time to all market participants, shortened the time needed for decision making and made it easier to manage diversified asset portfolios in rapidly changing markets. It also boosted efficiency and liquidity in the growing secondary market for eurobonds: dealers could carry larger bond inventories and trade more actively on an international scale. In turn, greater liquidity boosted investor demand for eurobonds and stimulated their use by major borrowers.

In summary, the progressive integration of capital markets worldwide and the present trend of accelerated financial innovation are mainly the product of systemic and institutional changes that started in the 1960s and gathered momentum during the next decade. By the late 1970s, the dividing lines between individual capital markets were already becoming quite blurred, as a result of the integration of the major economies and through the

^{8/} Although it isn't an 'offshore center' as such, Luxembourg offers comparable benefits to banks--and investors--in terms of low-cost financial transactions and favorable tax treatment. Moreover, Luxembourg's position predates that of the newer offshore banking centers. Given its special position within the EEC (in 1987, Luxembourg Ville, the country's capital counted some 111 different banks) Luxembourg's financial prominence may, in fact, be strengthened after the introduction of the EEC's 'single market' in 1992.

internationalization of capital flows and financial activities in the euromarkets.

In that environment several factors altered the problems faced by central banks and other regulatory agencies and created a need for a more flexible regulatory stance apparent. These factors include the rapid pace of financial innovation in the euromarkets, international expansion and competition by major commercial banks that straddled international and domestic, and the increasing mobility of capital.

3. THE RANGE AND OBJECTIVES OF FINANCIAL DEREGULATION:

The late 1970s and early 1980s were marked by fundamental changes in the macroeconomic policies of industrial countries. To counteract rising inflation and widening budget deficits, the governments in these countries resorted to strict anti-inflationary monetary control and, except in the United States, budgetary consolidation. In the United States and United Kingdom the new economic policies included a commitment to curb the role of the public sector in the economy and loosen its regulatory grip on private enterprise. This involved far-reaching reforms and liberalization of major sectors of their economies, including the financial services industry. Other European countries and Japan progressively followed suit.

To a certain extent, financial reforms served to support the implementation of the new macroeconomic policies. For instance, curbing inflation and inflationary expectations required that money-market rates--and even central-bank lending rates--be able to adjust more freely to market conditions, to make monetary restraint more effective. Interest-rate controls were lifted to achieve this. Similarly, after 1981, rising budget deficits and fiscal laxity in the United States, and the continuing need for large government debt financing in other major industrial countries made deregulation and innovation desirable to make markets for government debt more efficient, so as to accommodate public sector financing needs and reduce its cost.

At the same time, the rapidly changing economic environment--particularly the acceleration of inflation and the volatility of exchange rates and interest rates--stimulated financial innovation: new types of securities and risk hedging techniques were developed, to minimize the impact of financial uncertainty on investors and financial intermediaries.

The scope of deregulation and its interaction with financial innovation

Broadly speaking, financial deregulation consists in lifting or reducing obstacles to the provision of financial services, or to the creation of assets and flows for which there is a proven economic need. Deregulation has therefore focused on (i) eliminating remaining controls or restrictions on international capital flows and interest rates, to improve the allocation of capital; (ii) despecializing financial institutions; (iii) improving the functioning of securities markets; (iv) increasing the transparency of financial transactions; (v) harmonizing and simplifying standards of prudential supervision across markets.

Experience gained in the euromarkets became the model for domestic financial deregulation, as it aimed to replicate the efficiency and flexibility of these markets. The process of change that started in the late 1970s has been complex. At the outset more flexible regulation encouraged the introduction of new techniques and instruments. More recently these new financial tools have started to stretch the regulatory framework itself and are likely to propell a new wave of deregulation. This trend is again clearest in the United States, where the validity of retaining the Glass-Steagall Act is now being questioned.^{9/}

The elimination of capital controls

Capital controls--also called exchange controls--restrict inflows or outflows of funds. They can operate in blanket fashion or be selective, for example by restricting access to borrowings in a given market only to low-risk

^{9/} Legislation drafted by the Senate Banking Committee--and approved by the Senate in March 1988--is currently being reviewed by House Committees. If passed, the new legislation would enable banks and securities firms to compete directly in each others' businesses. The Washington Post, April 24, 1988, pp. H.1-7.

sovereign and corporate risks and to MDIs.^{10/} In countries such as Japan, Germany and Switzerland a major purpose of capital controls had been to prevent the internationalization of their currencies, by restricting their use for lending and investing in the eurocurrency markets. In such circumstances the regulatory "cordon sanitaire" isolates interest rates in domestic markets from international pressures, and capital controls can, among others, preserve greater autonomy for domestic monetary policy.

Given the high degree of international mobility of capital in eurocurrency markets, capital controls had become increasingly difficult to maintain during the 1970s. Their progressive elimination was instrumental for the integration of domestic and international money and capital markets, and for the full determination of interest rates by market forces. This also improved efficiency in the international allocation of capital.

The extent of liberalization of cross-border capital flows has varied among countries. Except during the 1960s and early 1970s, the United States has traditionally been the most liberal and, until the early 1980s--when the US external deficit started to spiral--it was the largest capital exporter and creditor nation. In Europe, the United Kingdom, Germany, the Netherlands and Switzerland gradually reduced capital controls and liberalized market access for foreign borrowers in the 1970s. Japan, where the domestic capital market had remained fully separated from the international markets until the early 1970s, followed suit in stages. A major breakthrough in that country was the

^{10/} Given its sovereign shareholders, the IBRD has always enjoyed privileged market access in industrial countries and in certain other capital markets, even when all other foreign borrowers were excluded from borrowing in those countries.

abolition, in 1980, of the Foreign Exchange and Foreign Trade Law.^{11/} That step permitted borrowings by Japanese residents in other markets and made access to the Japanese capital market easier for nonresidents.

After 1982, the increasing disparity of international payment balances among the largest industrial countries became a catalyst for the elimination of remaining capital controls. As their current-account surpluses reached unprecedented levels, Japan and Germany liberalized market access for foreign borrowers for exchange-rate management, to ease upward pressures on their currencies. An early example of the effectiveness of liberal market access in that context had been set by the United Kingdom. UK exchange controls were abolished in 1979 to offset upward pressures on sterling, as the country moved into current-account surplus as a result of oil exports.^{12/}

As Japan and Germany became major capital exporters and external creditors, there was an added benefit in eliminating capital controls. Had such controls still been in place, their respective central banks--rather than private investors--would have had to accumulate intolerably large foreign

11/ "Changes in the Organization and Regulation of Capital Markets"; BIS, March 1987, p.121.

12/ BIS, op.cit., March 1987, pp.194-5

- Borrowings by non-residents in a given domestic capital market are often used to finance investments or the purchase of goods and services outside the country whose currency was used. In that case, conversion of the borrowed currency increases its supply in foreign exchange markets and can hold down its value. The same holds for outward investments by residents that require purchases of foreign currencies.

currency reserves. This would have required large-scale sterilization to counteract the resulting increases in the domestic money supply.^{13/}

For the United States, which has a huge external deficit and negative domestic saving-investment balance and is highly dependent on capital inflows from abroad, the benefits of free cross-border capital flows are also evident. If the US authorities were to constrain capital outflows, the country's access to foreign savings would be jeopardized by investor fears that funds invested in the United States could not be re-exported in the future.

Despecializing financial institutions

To make financial markets more efficient, deregulation has had to tackle the principal causes of inefficiency and rigidity, namely the segmentation of activities among specialized agents and institutions, entry barriers for foreign institutions, and the cartel behavior of the domestic banks. This required that a freer rein be given to foreign banks and securities firms to compete in domestic markets, and that existing financial institutions be despecialized where necessary, in order to stimulate competition.

^{13/} In Japan the dismantling of remaining capital controls only took place from early 1984 onwards, after the recommendations of the "Yen-dollar Working Group" were adopted. That working group was the framework for bilateral U.S.-Japanese negotiations during 1983-84. These negotiations were launched by Ronald Reagan and Prime Minister Nakasone at their Tokyo summit meeting of November 1983, at a time when economic friction between the two countries--essentially the US contention that the undervalued Yen was the prime cause of mounting US trade deficits--threatened to get out of hand. The underlying rationale of the working group's recommendations was that the elimination of Japanese capital controls and the internationalization of the Yen would cause that currency to appreciate against the dollar and would, in due course, correct bilateral trade imbalances between these two countries. (J.A. Frankel, op.cit. pp. 2-4) However, the internationalization of the Yen has proceeded more slowly than was intended by the working group, and the initial effect of the abolition of capital controls in Japan was to stimulate an inflow of funds and depreciation of the Yen, rather than the opposite.

Examples abound. In countries such as the Netherlands, Germany and Switzerland, where the capital market is dominated by universal banks that straddle credit and securities markets, competition was stimulated by easing entry barriers for, and giving greater freedom of action to, foreign banks and securities houses. For example, in the first two countries local subsidiaries of foreign banks are now commonly included in underwriting syndicates for domestic bond issues. They can also provide a full range of retail and wholesale financial services.

In the United States and Japan, by contrast, banking and underwriting are still separated by law. But the reach of these legal barriers is being eroded. A number of US commercial banks have obtained permission to underwrite commercial paper, municipal bonds and asset-backed securities--such as mortgage-backed bonds. The underwriting of corporate bond and equity issues, however, remains prohibited for US banks. An oddity of the present system is that foreign banks that entered the US before 1978 benefit from certain grandfather clauses that permit them to underwrite securities. They thus enjoy greater flexibility than their US counterparts.^{14/}

London's Big Bang of October 27, 1986, is a prime example of sweeping despecialization. New rules that took effect on that day formally abolished all restrictions on the ownership of members of the London Stock Exchange, opened up membership of the Exchange, and eliminated the Exchange's long

^{14/} In the United States, the Glass-Steagall Act of 1933 separates the activities of US banks and securities firms, and the former are precluded from underwriting securities. Given that, after World War 2, Japan's financial system was largely modeled on that of the US, Article 65 of Japanese banking law is comparable to the Glass-Steagall Act. It is likely to be amended or repealed only if the US takes a lead. (Morgan Guaranty Trust, World Financial Markets, 12/86, p.7, and Federal Reserve Bank of New York, Quarterly Review, Volume 12 No 1, Spring 1987, pp. 4-5.)

standing division between jobbers (market makers) and stockbrokers (retail agents, acting on behalf of clients).

Improving the functioning of bond markets

With few exceptions--Switzerland is the main exception--the central government is the largest borrower in the domestic money and capital markets of industrial countries. In highly regulated and illiquid markets, the sheer size of these borrowings pushes up interest rates and crowds out private borrowings. This was the case in most industrial countries, where government debt financing had become rigidly structured. Issues of government bonds usually involved established--and protected--underwriting syndicates, set underwriting commissions; and fixed allotments to syndicate members, based on their respective market shares. Moreover, in many countries, purchases of new government bonds by institutional investors and commercial banks were governed by compulsory coefficients, as part of the investors' statutory reserves. Although these methods invariably ensured the prompt placement of new government bond issues, they also made these bonds highly illiquid assets. For instance, in the extreme case of Japan, until 1977 financial institutions were not allowed to sell their holdings of government bonds, except to the central bank.^{15/}

In the early 1980s, rising public-sector borrowing requirements in most industrial countries created a need for greater depth and efficiency of domestic markets for government debt. These improvements were needed to limit crowding out through feed-back on interest rates and, if possible, reduce the governments' own financing costs. Improvements have taken place on three

^{15/} This total embargo on secondary-market dealing in government bonds was designed to keep the yield on new issues below prevailing market rates. (BIS, March 1987, p. 119.)

fronts: new issuing techniques; more efficient secondary-markets; more flexible rules for ownership and trading of government bonds.

Innovative issuing techniques for government bonds were designed to attract a wider spectrum of investors by means of new debt instruments, more flexible underwriting arrangements, and new issue yields that were in line with prevailing secondary market rates.

In the United States, the huge size of borrowings by the US Treasury and federal agencies had already resulted in flexible and sophisticated issuing techniques, involving regular auctions of Treasury bonds and notes. Changes in that country therefore remained minimal. This stands in contrast with other industrial countries. Examples of recent innovations include: the adoption of US-type auctions in several markets; partly-paid and index-linked bonds in the UK; extendible (i.e. renewable) and zero-coupon Treasury bonds in France; short-term Treasury certificates in Italy; single maturity "bullet" issues in the Netherlands; longer maturities of up to 30 years in Germany. In the United Kingdom, where the Bank of England has normally taken up most new issues of Treasury stock (gilts), the market was broadened by allowing gilt dealers to participate in the Treasury's tenders.^{16/}

Changes in the secondary markets for government bonds were equally significant. Again, the United States has generally set the pace and served as model for other countries. In the United States the practice of "repackaging" existing US Treasury and agency issues has become commonplace. It consists in changing the original characteristics of an existing bond. Its primary aim is to stimulate demand by a broader range of domestic and foreign investors and, thereby, improve the liquidity of government debt. In the

^{16/} BIS, March 1987, p. xvii.

early 1980s, repackaging became one of Wall Street's major new products and growth areas. One of the more innovative forms of repackaging involves the physical separation of bonds and coupons (coupon stripping). Each is then sold separately as a zero-coupon security.^{17/} Most leading New York investment banks have launched their own versions of stripped Treasury bonds--often using catchy acronyms, such as CATS, STRIPS and TIGERS. These are listed at the New York Stock Exchange. In fact, coupon stripping has become so commonplace that the US Treasury is now issuing "strippable" bonds. So far, though, it has not issued zero-coupon bonds in its own right.

In the United Kingdom the number of market makers for gilts has been increased and now includes a number of foreign dealers. In Canada stripping of government bonds along the US model has been introduced by major security dealers. In the case of Japan, where the issue and trade of government bonds had been subject to greater restrictions than in other countries, these restrictions were lifted in stages between 1977 and 1985, and there now is an active secondary market for Japanese government bonds. This has brought the yield on new issues in line with prevailing market yields.

Finally, the easing of existing restrictions on the ownership and trading of government bonds complements changes in the secondary markets for these securities. Like the latter changes, more flexible ownership and

^{17/} As their name indicates, zero-coupon bonds carry no interest coupons. They are sold at a discount from face value, such that the yield to the investor is provided by the difference between the original discount and the redemption value of par. The main attraction of 'zeros' is twofold. As they produce no current income, but only accrued interest, they can, in some tax regimes, provide income deferral. Secondly, they protect investors against the reinvestment risk: whereas earnings on coupon bonds will be reinvested at the prevailing market rate (that can be significantly lower than the original yield of the bond), interest accruals on zeros cannot, by definition, be reinvested and are computed on the basis of a fixed discount rate over the entire life of the bond.

trading rules serve to make these bond issues more liquid. Again in the case of Japan, where foreign ownership of yen bonds was prohibited until May 1981, such limitations no longer exist. In other countries, including the United States and Germany, reforms have generally consisted in providing more favorable tax treatment to foreign investors in domestic bonds--for example, by eliminating withholding taxes on interest paid on such bonds, so as to increase their attractiveness to foreign investors--and in opening the underwriting and secondary trading of government bonds to foreign financial institutions.

Increasing the transparency of financial transactions

In markets for publicly offered securities, investor access to information pertaining to their prospective investments is more limited than that of professional intermediaries. Investors can therefore be protected by the compulsory disclosure of financial data and other relevant information relating to the issuers of securities. Disclosure rules, as provided for example in issue prospectuses, have long been a major aspect of capital market regulation.

Given the increasing use of publicly issued and traded securities--securitization--the need for transparency has increased. In other words, an increase in the level of micro regulation can pave the way for broader market liberalization and innovation. In the United States disclosure rules are governed by the S.E.C. As in most aspects of financial regulation, other markets and countries have based their own disclosure rules on the US example. For instance, although there is no legal requirement to do so,

eurobond issues normally have prospectuses that closely resemble those used in the United States.^{18/}

Another facet of transparency is the "rating" of borrowers. This involves the classification of securities by credit risk--the lower the risk, the higher the rating. The practice of credit rating evolved in the United States.^{19/} In recent years rating has become widely used in the eurobond market and in some domestic markets. For example, Japan established domestic rating agencies in 1986, to support the growth of its securities market.

Credit rating is provided by independent agencies. All ratings are reviewed periodically and revised--upwards or downwards--if needed. Individual borrowers are ranked by quality, based on a review of their balance sheets, relative market positions, soundness of management, and past payment records. The highest rating (AAA) is only attainable by borrowers of exceptional financial soundness. In some cases, individual debt securities are rated separately. This is often the case where the borrower itself has not been rated in the market where those securities are issued and placed. The advantage for investors is obvious, as rating provides an easy reference of the quality of a borrower and its debt. This reduces the information on asymmetry between investors and financial agents.

Harmonizing the standards of prudential supervision

The harmonization of prudential standards has a dual purpose. In domestic markets despecialization and increased competition among financial

^{18/} In most capital markets the offer for sale of eurobonds is treated de jure as a private placement--i.e., as distinct from a public offering for which disclosure rules are mandatory.

^{19/} Moody's and Standard and Poors are the two major US rating agencies. Their techniques and credit criteria are broadly similar. Their ratings of individual borrowers and their securities seldom differ from one another.

institutions has created a need for a "level playing field", meaning that equal regulation and supervision should apply to all institutions engaged in similar activities, regardless of their nationality (e.g. branches of foreign banks) or generic category (e.g. bank or security dealer). Thus, to harmonize supervisory rules improves competition by making it more equal. However, much remains to be done in this area. In many countries security dealers and commercial banks are answerable to different agencies--for example, in the United States, these are respectively the S.E.C. for investment banks, and the Federal Reserve and the Comptroller of the Currency for commercial banks. Prudential standards often differ among these agencies, mostly to the banks' disadvantage.^{20/}

In the realm of international markets, the need for equal standards stems from different circumstances. As discussed in the previous section, lax supervision and regulation had been among the main attractions of the smaller offshore financial centers. This became a source of concern for bank regulators in the major markets: a weak link in the supervisory chain could drive the banks' more risky ventures to branches or subsidiaries located at the point of minimal control in such offshore centers and, thereby, endanger the stability of the entire international banking system. Thus, more flexible rules and uniform regulations in leading domestic financial centers, could help recapture some of the business and that had migrated offshore.

Similar concerns led to the promulgation of laws permitting the creation of International Banking Facilities (IBFs) in established financial centers, such as New York and Tokyo. For domestic financial institutions, IBF

^{20/} For example, in the United States securities firms that offer banking services such as money-market accounts have far less rigid capital and reserve requirements than commercial banks.

subsidiaries offer the advantage of being offshore from a regulatory perspective, thus segregated from the host domestic market. In practical terms this means that eurocurrency business can be transacted "on shore", without the need for foreign subsidiaries. From the host countries' point of view, IBFs offer the benefit of making eurocurrency business accessible to a broader range of--mostly smaller and less diversified-- financial institutions, which builds up the importance of the financial centers concerned. For instance, in the United States the expectation that US based IBFs would eventually reduce London's prominence as a eurobanking center was a major consideration in promoting the needed legislation. In fact, the United Kingdom was the precursor in this area. The legal separation of eurocurrency business from domestic financial activities in the City (of London) amounts to de jure IBFs, albeit without the name.

4. RECENT CHANGES IN DOMESTIC AND INTERNATIONAL CAPITAL MARKETS

Financial deregulation and innovation of recent years have revolutionized the financial services industry, led to an explosive growth in the volume of purely financial transactions, and vastly increased the efficiency of financial markets and their responsiveness to changes in economic conditions.

The globalization of financial activities has become one of the most visible results of these recent changes. The elimination of most capital controls has led to the emergence of a truly global capital market that provides continuous, 24-hour trading, where activity shifts between financial centers according to time zones. Other recent changes in the financial arena have had equally important consequences. They include: (i) the blurring of divisions between domestic and international markets; (ii) the increasing sophistication of risk hedging; (iii) the securitization of debt; (iv) lower costs for financial services; and (v) restructuring and concentration of financial intermediaries.

The pace of change is uneven

The extent of regulatory changes and the pace of financial innovation remain uneven among OECD countries. The United States and United Kingdom already enjoyed the most flexible markets prior to 1980. They still remain in the vanguard today. But, as already illustrated, Japan has also adopted major reforms to liberalize its capital market. However, changes in that country were not entirely voluntary: the deregulation of financial activities and interest rates, the internationalization of the yen, and the more favorable treatment for foreign financial institutions were only introduced in stages after the Spring of 1984. These steps were the outcome of US pressures in the the Yen-Dollar Working Group. Moreover, a number of regulations remain in

place in Japan^{21/}, and have yet to be eliminated. The more accomodating stance of MOF--Japan's powerful Ministry of Finance--in recent years also reflects Japan's new prominence as a leading financial power and world's largest international creditor.^{22/}

Paradoxically, if Japan were to maintain the present pace of deregulation and allow interest rates to be fully market-determined, yield spreads between yen and dollar assets would be likely to narrow. This would put further downward pressure on the dollar, intensify the need for defensive interest-rate increases in the United States, and could precipitate a domestic recession in that country. The task of correcting payment imbalances among the leading industrial countries would also become infinitely more complex.

By contrast, financial liberalization is still lagging and patchy in the EC and in other European countries. Admittedly the Netherlands has traditionally had an open capital market and the Dutch authorities' regulatory stance has become even more flexible in recent years. Similarly, the German authorities have made major strides and France has made considerable progress in modernizing what used to be a relatively archaic banking and financial system. But much progress is needed in other EC members. For example,

^{21/} Remaining barriers--and protections--between specialized financial institutions (such as between banks and securities houses, and between trust banks, regional banks, and mutual S&Ls--"sogo" banks) remain in place, particularly as to how each category of banks can conduct its funding. The Banker, January 1988, p. 49.

^{22/} Japanese financial institutions have become the most powerful players in the euromarkets and are the major foreign presence in several domestic markets. Through the combination of exchange-rate effects and of the country's position as the main external creditor, Japan now counts seven among the world's ten largest commercial banks. (The Banker, July 1987, p.91.) These have completely displaced US money center banks from their former dominant positions. In late 1986, Japanese banks held over \$1 trillion in international assets, or about one-third of the world total. At that time, the sahere of US banks had dropped to only 20 percent of such assets. (World Economic Survey 1987, United Nations, 1987, p.83.)

Belgium still operates a dual exchange-rate system and has burdensome withholding taxes that discourage purchases of Belgian securities by nonresidents. In the same vein, Italy has recently reintroduced capital controls that curtail resident purchases of foreign securities. Taking the EC as a whole, the full abolition of capital controls and financial deregulation may continue to progress quite slowly until the introduction of the single market for goods and services in 1992.

It is also noticeable that, despite attempts to reduce divisions between offshore and domestic markets, the euromarkets have continued to expand faster than their domestic counterparts. They remain the most innovative and dynamic sector of the global capital market. Surprisingly too the dollar is still a key lending and investment currency despite its weakness.

The divisions between domestic and international markets are blurred

The progressive elimination of capital controls has made access to domestic capital markets easier for major sovereign borrowers and nonresident corporations. In the case of the US dollar, pound Sterling, Yen and Dutch guilder, a point has been reached where the traditional distinctions between offshore and domestic markets--namely, the distinction between foreign bonds and eurobonds--has been virtually eliminated. These developments also stimulated cross-fertilization of instruments and techniques between these markets and become the major channel for financial innovation.

Foreign bonds are bonds issued by non-residents. They often have unusual names: Samurai bonds in Japan; Yankee bonds in the United States; Bulldog issues in the United Kingdom. Although eurobonds are by far the largest international bond market, the issue volume of foreign bonds has grown substantially in recent years, from \$21 billion in 1981 to \$39 billion in

1986.^{23/} The most active foreign bond markets are in the United States, Germany, Switzerland and, most recently, Japan. Switzerland continues to enjoy a special position in this market sector. Despite its very small domestic capital market, it remains the most important primary market for new issues of foreign bonds, as well as the largest market for the placement of eurobonds and foreign bonds issued in other currencies.^{24/} Corporate issues are dominated by Japanese borrowers, for whom the SwF is a preferred currency. The high volume of their borrowings in that currency has contributed to its prominence in foreign bond issues. For its part, the World Bank remains the largest single issuer of SwF foreign bonds.

Given that prime quality sovereign and corporate borrowers have almost equal access to euromarkets and foreign issues, the decision to proceed in either sector is usually governed by cost considerations, issue formalities, or the wish to reach certain groups of investors. Total issue costs--the sum of issue yield, commissions and other costs--can vary greatly between euro and foreign markets. Whereas offering yields on eurobonds are sometimes higher, due to the greater volatility of interest rates in that market, fees and commissions for eurobonds are generally lower and more competitive than for foreign issues.

^{23/} Over the same period, eurobond issues increased from \$ 32 billion to \$189 billion. World Financial Markets, Morgan Guaranty Trust, NYC, June 1984, p.13 and March 1988, p.20.

^{24/} Switzerland accounts for about 60 percent of all foreign bonds issued in 1986. (World Financial Markets, Morgan Guaranty, March 1988, p. 20.) The country's unique position in international capital markets can be explained by its strict banking secrecy law. This stands in contrast with the Swiss authorities' strong opposition to the internationalization of the Swiss franc. The latter accounts for the total absence of euro-SwF bond issues. However, strict regulation of the underwriting syndicates, fee structures, timing and amounts of foreign bonds denominated in Swiss francs have been progressively relaxed in recent years.

Issue formalities in eurobond markets are not subject to domestic regulations and, therefore, quite flexible. This stands in contrast with practices in domestic markets. For example, in the United States the S.E.C. imposes strict and complex registration and disclosure requirements for new security offerings. These formalities can be time-consuming and costly for infrequent borrowers.^{25/}

Targeting specific investors is also important in determining the choice of market given that certain capital controls persist. For example, only three countries--the United States, Japan and the Netherlands--have their currencies represented in both eurobonds and foreign bonds.^{26/} Yet, the first two still maintain restrictions on the placement with resident investors of eurobonds in their respective currencies.^{27/} Thus, if a borrower wants to improve direct placement with domestic investors in these two countries eurobonds are less effective, regardless of cost considerations.

Improved hedging techniques and risk management

Treasury operations have gained from new financial techniques. Active asset and liability management through risk hedging (i.e. coverage) and

^{25/} For frequent borrowers, such as the World Bank, the S.E.C. has simplified its procedures by introducing 'shelf registration'. This enables such borrowers to file only one issue prospectus at the beginning of each year, to cover all issues during that year. The main advantage of shelf registration is that a new issue need not be held up by formalities. Thus the borrower can take advantage of favorable market conditions ('windows'), when they arise.

^{26/} Like Switzerland, Germany still restricts the internationalization of its currency and has, so far, prevented the issuing of euro-DM bonds. Both countries also require that all public offerings of bonds in their markets--by resident or foreign borrowers--be underwritten by a syndicate managed by a major domestic bank.

^{27/} These are the so-called 'lock-up clauses' that prohibit the placement with, and purchase by, domestic investors of newly issued eurodollar and euroyen bonds. Originally these clauses banned resident purchases until 180 days, but have since been reduced to 90 days.

risk transformation are among the most significant recent innovations in this field. Risk--of loss, or of opportunities foregone--is inherent in all financial decisions. A hedge reduces that risk. In its simplest form, a hedge offers protection against unforeseeable future events. For instance, if a foreign currency to be received in the future--for example as settlement of a sale of goods and services--that currency can be sold in the forward market before it is actually received. That will protect, or "cover", the creditor against the risk of devaluation of that currency. However, as a trade-off for that risk coverage, potential--speculative--gains arising from a subsequent appreciation of that same currency are automatically foregone.

More complex hedges are designed to minimize downside risks without foregoing opportunities of future gain. This explains why a good hedge--there are no perfect hedges--has to: (i) share the financial characteristics of the asset it protects; (ii) have a predictable price pattern that is the reciprocal to that of the asset concerned; and (iii) involve a minimal cash investment.

The ability to hedge certain financial risks has considerable economic importance, particularly in highly inflationary or volatile environments. Major corporations and sovereign entities--including a number of developing countries--can use hedging techniques to reduce the cost volatility or exchange rate exposure on new and existing debt. In so doing they can significantly improve their debt servicing capability. Similarly, risk hedging in asset management can noticeably improve the real return of asset portfolios.

Hedging exchange and interest-rate risks mostly involves the use of financial options and futures. Futures are distinct from cash markets. In the latter, purchases and sales of securities or foreign currencies are

settled in full, at the time of exchange. In financial futures, contract sizes and settlement dates are standardized, and purchasers only make small margin deposits, depending on variations in the price of the contract over time. In other words, a small cash investment can be highly leveraged. Financial options are different from cash or futures markets. They involve a contract between two parties (the seller, or 'writer', and buyer) that gives the right, but not the obligation, to either sell (put) or buy (call) a foreign currency or interest-rate instrument. The underlying financial instrument, however, is seldom delivered.

The theory of options and futures is extremely complex.^{28/} Put simply, they can be used in their own right as speculative instruments and are traded as such. They can also serve as financial hedges for cash transactions: a cash purchase can be hedged by the sale of an option or future: a potential loss arising from decline in the value of the underlying cash instrument will be partly compensated by the profit on the option or future--in that case covering the delivery at the (high) option or future price, by covering it with a purchase at the prevailing (lower) market price. The reverse is also true. For example, the disposal of a cash asset may be needed to generate liquid funds. If the value of that asset is expected to continue to appreciate after its sale, an option or future can be bought to capture that potential gain.

Not all applications of futures to hedging have been successful however. A good example is the use of futures in stock markets. This technique, which became known as portfolio insurance, involves the use of stock and stock index futures to hedge cash investments in equities.

^{28/} For a detailed study of the instruments described in this section, see "Recent innovations in International Banking", BIS, Basel, April 1986.

Portfolio insurance singularly failed in its objective during the crisis in stock markets in October 1987. As cash prices started to plummet, the massive unwinding of futures made those prices tumble and spill over into the cash markets. In combination with program trading, the compounding effect of collapsing stock futures precipitated the market meltdown.

Risk transformation, which is also a form of hedging, is achieved through swaps. Swaps are transactions in which two parties exchange their respective interest payments on fixed- and floating-rate debt, or exchange their respective debt service obligations on debts denominated in different currencies. In other words, swaps enable debtors to change the currency of indebtedness (foreign exchange swaps) or its interest profile--for example from fixed to variable, or vice versa (interest-rate swaps). In just a few years, swaps have grown into a multi-billion market in which commercial banks have become the main intermediaries, but also guaranteed one of the parties to the swap agreement.^{29/} The World Bank has pioneered long-term currency swaps as part of its treasury operations and annual borrowing programs and is a major factor in that growing market. The World Bank also provides technical advice on liability management and swap techniques to developing countries.

Securitization and disintermediation

Securitization had become a dominant feature of international lending. Many forms of credit are now represented by negotiable securities

^{29/} Any swap involves a 'performance risk'--that one of the parties to the agreement will not perform its obligations. Given the difficulties of arranging swaps between mutually acceptable counterparties, the intermediary banks often guarantee the performance of the lesser-rated party.

that are underwritten, rather than funded, by a financial agent.^{30/}

Securitization is mostly the domain of highly-rated corporate and sovereign borrowers, for whom direct access to money and capital markets, through the issuance of negotiable instruments--commercial paper or bonds--is usually less costly and more flexible than bank loans. It also affects traditional markets, such as housing mortgages: mortgage-backed securities are now commonplace in the United States, the United Kingdom and other countries.

Securitization has reduced the traditional function of commercial banks, as intermediaries in the saving-investment cycle. In other words, as investor funds are channelled to the borrowers directly, rather than via bank deposits, the banks are "disintermediated". The pronounced shifts in the respective volumes of international syndicated credits and bond issues in recent years illustrates this trend: in 1981, total eurocurrency credits amounted to \$133 billion, and international (foreign and euro) bond issues \$53 billion; in 1986, these totals were respectively \$93 billion and \$228 billion.

Securitization has also affected commercial banks in other ways. First, much of their quality business was lost to the securities markets. The risk element of their loan portfolios has increased as a result, as they now comprise a large proportion of marginal credits. This is particularly true for many US money-center banks. In the 1960s and 70s their business strategies emphasized asset growth and international lending to sovereign borrowers (many of them developing countries) and multinational corporations. In recent years the best multinational and sovereign credits

^{30/} Note that this trend was partly reversed in 1987: the total volume of bond issues declined for the first time since 1982, falling to \$177 billion, while the volume of eurocurrency credits increased to \$123 billion. (Morgan Guaranty, June 1984, pp. 13-15, January 1988, p. 20.)

have flocked to the capital markets; the marginal and bad credits remain in the banks' loan portfolios.^{31/}

A second consequence is that, to make up for lost income, many banks have started to compete head-on with securities firms through new forms of short-term or revolving securitized credits, such as Note Issuance Facilities (NIFs) and Revolving Underwriting Facilities (RUFs). Put simply, NIFs and RUFs involve issues of bearer securities that are backed up by underwriting commitments from commercial banks. Thus, if the primary market for that paper dries up, the bank is committed to provide a credit in an amount equal to that of the intended issue.

The main problem is that lack of experience in risk evaluation and excessive competition in this business have, in many instances, led to unrealistically low commitment fees that do not fully reflect the contingent risk of having to provide large credit facilities. Indeed, by definition, the banks' underwriting commitments can only be called on if the issuer no longer enjoys market access, in other words, in periods when liquidity is scarce and could also affect the banks themselves.

Finally, for longer maturities, the temporary dominance of floating-rate notes (FRNs) in the international bond markets--from 1981 to 1985, the share of FRNs in total international credits grew from 5.5 to 24 percent^{32/--} has involved commercial banks in the international securities markets, as issuers and investors. Several banks incurred substantial losses on their

^{31/} However, in countries such as the Netherlands and Germany, where universal banks already dominated the securities markets as underwriters, the impact of disintermediation has been diluted: the shift to securitization simply meant that a greater share of these banks' profits was generated by underwriting, without affecting total earnings.

^{32/} Over the same period, the share of syndicated eurocurrency bank loans declined from 68 percent to 9 percent. (BIS, April 1986, p. 130.)

large inventories of FRNs, when that market literally collapsed in late 1986.

The risks inherent in securitization are not one-sided, however, and can also affect borrowers. Securitization and the globalization of the financial market have increased the mobility of financial assets, and introduced a direct link between interest rates and foreign exchange rates, as institutional investors are able to arbitrage large blocks asset between various currencies. Massive shifts in asset preferences can rapidly spread across markets. For instance, in late 1987, the weakness of the dollar depressed the price of eurodollar bonds--the market for which is now practically non-existent--and pushed long-term dollar interest rates higher. For major borrowers that have come to rely heavily on securitized debt, this can endanger the refinancing of maturing debt in the preferred currency or maturity. Similarly, after the FRN market collapsed in 1986, several banks had to postpone indefinitely planned issues of long-term FRNs that were intended to increase their base capital.^{33/}

Securitization has also had other implications that transcend the narrow confines of capital markets. First, given that securitization embraces the entire maturity range, from short term (commercial paper) to long term (bonds), the traditional divisions between money and capital markets have been eroded. As is pointed out below, this has profound implications for the conduct of monetary policy. A second case is the widespread use of "junk bonds" in the United States to finance a large number of leveraged buyouts. In many instances these buyouts--by so-called corporate raiders--were followed

^{33/} Issues of long-term FRNs, with maturities of 30 years or longer could, in some cases, be treated as capital stock by commercial banks. As a result that practice became widespread, especially in the United Kingdom.

by the break up of the corporations that had been purchased, to repay the debt that had been accumulated to finance the purchase. Rather than improving US competitiveness, these buyouts have mostly created a more precarious corporate environment and caused instability of employment.

Intensified competition and lower costs of financial intermediation

The breadth of recent changes has intensified competition between commercial banks and securities firms. This has had visible benefits. The costs of financial intermediation, and transaction costs generally, have fallen significantly. In several markets, cost reductions have been formalized by the abolition of minimum brokerage fees and underwriting commissions: they were abolished in 1975 in New York, and in 1986 in London.^{34/} In the United States, this led to the establishment of "discount brokers". In other major capital markets, such as Switzerland and Japan, underwriting commissions for bond issues were reduced by respectively one eighth and one quarter percent in 1986, thereby reducing the total cost of launching bond issues in those markets.

Lower issuing costs obviously have stimulated securitization and increased the supply of tradeable securities. At the same time, lower transaction costs in secondary markets have improved the fluidity and liquidity of financial assets. This has, among others, influenced investment strategies by shortening their time horizon. For example, even traditionally conservative institutional investors now tend to turn over their asset

^{34/} One of the main purposes of London's 'Big Bang' of October 1986 was the abolition of standard fees for financial services. Of course, improved communication and data processing techniques were instrumental in reducing transaction costs and operating expenses. This too made lower intermediation fees possible.

portfolios rapidly and often trade, rather than hold, long-term investments, to take advantage of short-term gains.

Unfortunately, intensified competition among financial agents has also had less desirable effects. Active trading of long-term assets can intensify their price volatility. Secondly, the combination of lower commissions and extremely generous remuneration packages for financial professionals has created a need for large transactions and high turnover, to ensure profitability. In extreme cases, this has led brokers and professional asset managers now to resort to "portfolio churning"--i.e. generating forced turnover, regardless of underlying price trends--to generate fee income and commissions, and justify their high incomes.

Concentration and restructuring in financial markets

In financial markets, as in most other industries, deregulation and greater competition have triggered a pattern of successive, but contradictory trends. In a first stage more flexible market rules attract new participants and lead to product diversification. But as competition intensifies, margin cutting and increased risk taking eliminate marginal players. A phase of concentration and restructuring usually follows as the more marginal firms are either taken over, or cease their activities.

This trend has been most pronounced in anglo-saxon countries, where financial deregulation is more advanced. For example, in Canada and the United Kingdom, where there is no legal division between commercial banking and underwriting, past restrictions on the ownership or control of securities firms have been lifted or relaxed, often with the explicit purpose of strengthening their capital base. A case in point is the change of the province of Ontario Securities Law in 1987. Large Canadian brokerage firms

have now gained from takeovers by Canadian banks and from large injections of equity capital by new US shareholders.

The 'City' in London provides an interesting example of the cycle of expansion-restructuring in the financial services industry. In preparation for Big Bang, UK clearing banks and several major foreign banks strengthened their market positions by absorbing a number of merchant banks and members of the London Stock Exchange. During the same period, UK and foreign banks, and securities houses began to extend the range of their activities in euromarkets and domestic trading. New markets for Euro Commercial Paper (ECP) and Euroequities were growing rapidly. They attracted new underwriters,^{35/} market makers and traders. In the domestic arena, primary dealing in gilts was opened to several new British and foreign houses. Since the stockmarket crash of October 1987 the City has moved into a consolidation phase that has partly reversed the previous expansion. The UK clearers and many merchant banks are now retrenching: a number of them have pulled out of eurobond underwriting, equity trading and gilts. Leading US securities firms like Salomon Bros., Shearson Lehman and Goldman Sachs are also scaling down their activities and shedding staff in the City. Several US and other foreign banks have followed suit, and are closing their London offices.

In the United States the banking industry is also undergoing profound changes following the relaxation of barriers on interstate retail banking. As a result, the balance of power is shifting from the money-center banks to smaller and less well-known regional banks.

^{35/} Although the Glass-Steagall Act bars US commercial banks from securities underwriting in the United States, their foreign subsidiaries are not bound by these restrictions, unless similar rules exist in the host country. Their London subsidiaries are major factors in underwriting and managing eurobond issues, as well as ECB and Euroequities.

Money-center banks, most of which are located in New York City, have traditionally dominated US banking. As noted earlier, during the 1970s they focused on asset growth, rather than profitability. Global lending to prestige clients, such as MNCs and developing countries were their prime targets, and innovation and large international branch networks became their hallmarks. Yet, in the US domestic market, deposit taking and retail business were severely circumscribed by the McFadden Act of 1927.^{36/} Until 1985, when the Supreme Court abolished all federal restrictions on interstate retail banking, banks were not permitted to have out-of-state branches or to conduct out of state retail banking, such as deposit taking and consumer credit. To fund their expanding loan portfolios the largest banks therefore had to rely on costly interbank funds from the domestic and eurocurrency markets--hence their name 'money-center banks'. Moreover, the elimination of interest-rate controls, the introduction of new types of interest-bearing checking accounts, and direct competition from nonbank checkable accounts, such as money market accounts, had increased the cost of domestic retail deposits and brought the banks' direct funding costs in line with money-market interest rates.

^{36/} The McFadden Act that prevented inter-state banking accounts for the uniquely fragmented structure of US banking, with close to 14,000 individual banks. To add to the banks' difficulties, state laws compounded the effects of the Act by restricting intra-state retail banking. California was the only exception, and allowed state-wide multi-branch retail banking. In most other states local laws restricted retail banking to the point of often allowing only one office per bank. Following the Supreme Court ruling of 1985, state legislatures, not the federal government, can determine the criteria for accepting out-of-state banks. The scene is changing rapidly, as many states are introducing more flexible rules. Only six states still bar all interstate banking. Others have established reciprocal rules to accept banks from other states. only if those states reciprocate privileges for their own banks. Others still have abolished all restrictions or have also passed laws that will relax rules after specific dates. (For a more detailed discussion. (The Economist, 3/26/88; International Banking Survey, pp.21-22.)

By contrast, the smaller regional banks had generally followed more cautious strategies. Their exposure to LDCs remained small. Their corporate client base mostly comprised medium-size regional companies. Finally they benefited from more stable local retail deposits that were less subject to competition from money-market funds.

The diverging strategies of these two groups of banks are now highlighting the contrasts between their respective fortunes. Several money-center banks are entering a phase of declining profits and growth, and facing an uncertain future. Despite their considerably larger assets and remaining strengths, they continue to suffer large losses on their portfolios of non-performing domestic loans--for instance, farm loans and energy loans--and are caught up in debt reschedulings and write-offs of problem loans to LDCs. Their growth and profit prospects have also been affected by securitization and by the dramatic reversal of the US position, from creditor nation, to the world's largest net external debtor. In parallel with this shift, net foreign lending by US commercial banks declined from \$111 billion in 1982 to \$1 billion in 1985.^{37/} Finally, impending changes in the treatment of loan loss provisions on LDC debt could make it increasingly difficult for many major banks to comply with the Fed's guidelines on minimum equity capital.^{38/} The declining fortunes of the Bank of America, long the world largest commercial bank, provide an extreme example of this situation. Share prices and market

^{37/} United Nations, op. cit, p. 77. To cite another example, Japanese insurance companies, now the largest foreign holders of US Treasury debt, conduct their business through Japanese securities houses, whose New York subsidiaries have been admitted as primary dealers for Treasury securities.

^{38/} Under current rules, loan loss provisions--essentially the transfer of retained earnings or of capital funds into a special provision account--can be treated as base capital until they are used to write off provisioned loans. From 1992 onwards, these provisions will no longer be counted as base capital, but will have to be treated separately.

capitalization reflect the comparative weakness of most money-center banks, and have plummeted to all-time lows. Even a high performer like J P Morgan has lost its AAA rating.^{39/}

By contrast, the regional banks are building up strength and profitability. The US Supreme Court ruling on the McFadden Act was a turning point. Some of the most dynamic regional banks in New England and in Southern and Western states were able to merge across state borders, to form powerful "super regionals".^{40/} Although the asset portfolios of the super regionals are still smaller than those of the money-center banks, they are sounder. As a consequence, their shares perform well in stock markets, to the point that the market capitalization of a number of regionals now exceeds that of many large New York banks.^{41/}

If the present trend continues, significant concentration is likely to take place in the US banking industry. Indeed, current problems may lead New York banks such as Chemical, Manufacturers Hannover Trust or Chase Manhattan to seek mergers, possibly among themselves. But the growing market clout of super regionals could make some of them to bid for prestige New York names. A precedent, though not a successful one, was set by a regional bank bid for the Bank of America in 1987.

^{39/} There now isn't a single AAA-rated commercial bank in the United States.

^{40/} In fact, the Supreme Court ruling on the McFadden Act was triggered by Citicorp's challenge of a proposed merger between two New England banks. (The Economist, *ibid.*)

^{41/} The New York Times, 4/10/88, Section 3, pp. 1-6.

Admittedly, not all regional banks have fared that well, as shown by the acute crisis of large regional banks in Texas.

The global capital market

Continued improvements in communication and computing technology have also left their mark on financial markets. A stage has been reached where there is constant feed back between technological progress and innovation, and the pressure for further deregulation. On the one hand, technological breakthroughs improve the fluidity of financial markets and the international mobility of capital flows. On the other hand, the pressures of competition and the constant mutations of the financial services industry lead to further progress in financial applications of computer technology and programming.

For example, bond and foreign exchange trading have benefited from the fact that banks and brokers can constantly monitor their positions and risk exposures on a global basis. Similarly, futures and options trading, and derived hedging techniques that require complex calculations and instant decisions in highly volatile markets could not have been fully developed without sophisticated computer programs. Yet another example is "program trading", where computers activate cash or futures sales and purchases automatically by reacting to pre-programmed price thresholds.^{42/}

The combination of enhanced technology with the various other changes described above has brought about the creation of a multi-center global financial market. This market rests on three key centers--New York, London and Tokyo--whose trading hours and time zones overlap sufficiently to permit activity to remain continuous by shifting between these centers according to time zones. Major financial institutions whose office networks span the

^{42/} Computer-activated program trading played a major role in the stock-market crash of October 1987. Paradoxically, far from abating after the October crash, program trading continues, has become more aggressive and is making the US stock market more volatile than ever. (The New York Times, 5/1/88, Section 3, p. 1)

principal--and subsidiary--centers in this global market can now trade their portfolios around the clock: as one center closes, their entire trading position is passed on to another location through computer links. Similarly, institutional investors can trade their asset portfolios on a continuous basis by moving the execution of sales and purchases according to time zones.

24-hour trading undeniably improves the liquidity of financial assets, thus the efficiency of markets. But it can also increase the amplitude of price volatility. If trading is interrupted by discreet time limits--for example, trading on the New York Stock Exchange comes to a halt at 4 p.m.- price movements cannot continue after closing. However, if trading in the same asset can be moved to another location, a price trend that was started in a given market--say Tokyo--can continue in the next time zones --London or New York. This, together with the high degree of interchangeability of financial assets, regardless of currency of denomination, undoubtedly played a major role in prompting the worldwide collapse of share prices in October 1987.

5. THE BROADER ECONOMIC IMPACT OF CHANGES IN THE WORLD'S CAPITAL MARKETS

The impact of financial deregulation is now so far-reaching that it raises broader macroeconomic issues. Areas of concern include: (i) the delinking of financial activities from the rest of the economy; (ii) the risk of reacting to 'false' signals; (iii) the impact of securitization on the conduct of monetary policy; (iv) limitations in the conduct of prudential control; and (v) inducements to fiscal laxity.

The delinking of financial markets from the real sectors of the economy

A first cause for concern is that the rapid pace of change in capital markets has created a visible gap between these and other factor markets, where the pace of adjustment and reform has been much slower. International financial integration in general, and financial innovation in particular, have outpaced structural changes and reforms in the rest of the economy. Compared with the slower-moving factor markets, capital markets can react almost instantly, on a global scale to constantly changing economic signals and information.

A point has been reached where financial activities are virtually delinked from the "real" sector. Examples of this trend abound. For instance, the volume of purely financial transactions now vastly exceeds those driven by international trade in goods in services.^{43/} In other words, an increasing share of trading in financial products takes place exclusively between financial institutions and is driven by speculation and short-term profit objectives, rather than by broader economic activities. Among other

^{43/} In 1986, the average daily transaction volume on trade in goods and services was around \$5.5 billion. By comparison, dollar transactions driven by financial trading reached \$200 billion per day. In 1979, the respective figures were £5 billion and \$75 billion (see: United Nations, op. cit., p. 47).

examples of delinking, until the stock market crash of October 1987, the profitability of specialized financial institutions, such as investment banks, outpaced that of industry and commerce, and the cumulative gains in share prices exceeded those of any other financial or economic indicator. For instance, between 1982 and 1986 the cumulative real GDP growth in OECD countries was 13 percent. By comparison the world index of financial market growth increased by 130 percent over the same period.^{44/}

Although delinking and asymmetry in the rates of growth of financial services and of other sectors of the economy are not bad per se, they are a source of tensions. For example, the fact that financial decisions are often divorced from underlying developments in the real economy raises the level of economic uncertainty. The stockmarket crash of 1987 shows that such risks cannot be underestimated: on October 19 the band-wagon effect of simultaneous action by major institutional investors and feedback between the cash and futures markets precipitated the market collapse and rekindled fears of an imminent global recession.

Admittedly, the continued momentum of growth in industrial countries, and the limited impact of negative wealth effects--following the fall of share prices--have shown that those recessionary fears were largely exaggerated at the time.^{45/} However, the point remains valid that there is a need to

^{44/} Bernard Snoy: Le decouplage entre la finance et l'economie et la crise financiere d'Octobre 1987; Processed, TEC, Brussels.

While this disparity in price performances is not unique--it is a common feature of past "bull markets"--it had become more pronounced than in the past.

^{45/} The IMF has substantially revised its of real GNP growth in industrial countries. In October 1987, these were estimated at 2.4% for 1987, and 2.6% for 1988. (World Economic Outlook, IMF, October 1987, Table A2, p. 40.) In April 1988, these estimates were revised to respectively 3.1% and 2.8%. (World Economic Outlook, April 1988, Table A2, p. 112.)

complement financial deregulation with accelerated reform in the real sectors of the economy to reduce tensions that arise from the slower pace of adjustment in the latter sectors.^{46/}

Responses to false signals and economic instability

The huge daily flow of information that influences financial decisions adds to the potential for broader economic destabilization. Among that wealth of data it is often difficult to discern signals that denote changes in economic fundamentals from those that do not. Thus, financial markets are constantly exposed to the danger of precipitating chain reactions to "false" signals or to surrogate key indices--such as US monthly trade figures--that have acquired a major importance, yet are often inaccurate.

More generally, the financial markets' ability to respond and adjust to constantly changing data induces interest-rate volatility. It also contributes to misalignment of exchange rates to the extent exchange-rate determination is increasingly the outcome of financial agents' responses to spurious signals. This poses the danger that attempts to correct market-induced exchange-rate misalignments through official intervention become an overriding priority that constrains other objectives of monetary policy.

Greater difficulty in the conduct of monetary policy

Short-term financial assets, such as shares in money-market funds, are now widely held by households. High liquidity--money market funds are instantly cashable--low risk profile and minimal transaction costs give these assets many of the characteristics of money, as reserves of purchasing power. This has made the demand for money unpredictable and lowered the velocity of circulation of money. The scope for monetary targeting is thereby diluted and

^{46/} World Economic Outlook, IMF, April 1978, p.6.

the effectiveness of monetary tightening is reduced, relative to the role of financial prices, such as interest rates and exchange rates.^{47/} In combination with currency misalignments, this means that exchange rates are gaining in importance as a channel for the conduct of monetary policy.

Less evident consequences for the conduct of monetary policy flow from the securitization of lending. The widespread use of short-term securities has eroded the respective functions of money markets as conduits for the investment of cash balances, and of capital markets as the principal link between savings and investments.^{48/} Secondly, the instant marketability of securitized loan assets enables banks to mobilize their loan portfolios if needed, thus to circumvent possible credit controls by creating room for new credits.

The limits of prudential control

The combination of lower commercial banks profits with the effects of disintermediation and securitization is also worrisome and raises issues of prudential control. Bank asset portfolios now show a large concentration of lesser quality credits, while the contingent liabilities they have assumed in guaranteeing swaps and as part of new techniques such as RUFs and NIFs led them to take on considerable financial risks. These risks may have outstripped the capacity of established mechanisms for prudential control, as shown by increasing difficulties in the implementation of prudential rules by bank regulators and supervisory agencies. This emphasizes the need for further strengthening of the banks' capital ratios and for the harmonization of capital-adequacy guidelines across markets.

^{47/} BIS, April 1986, p. 4.

^{48/} BIS, March 1987, p. 131.

Other areas of concern in the realm of prudential standards include the activities of 'non-bank banks', and the risk of infection in financial markets. Non-bank banks are specific to the US market. These affiliates of non financial conglomerates can conduct financial and banking activities without a banking charter. While this puts commercial banks at an obvious competitive disadvantage, it also leaves a major gap in the regulatory framework.^{49/}

The risk of financial "infection" results from the fact that, as financial institutions diversify the scope of their activities, problems in one field--for example, bond underwriting--can erode confidence in the other activities of a given institution--such as deposit taking and general solvency. At the limit this can precipitate confidence crises. The problem is that, these various activities mostly fall under the supervision of different regulatory bodies. Danger signals in one area are therefore likely to escape the attention of an agency that is only mandated to supervise other activities.

Finally, the explosion in the volume securities trading and in the pace of corporate mergers and takeovers--itself a product of securitization--has, in a number of cases, been accompanied by a breakdown of market ethics. Although recent instances of insider trading are well publicized, the point is that the task of monitoring and implementing standards of ethical market behavior has become considerably more complex than in the past.

Financial deregulation and fiscal laxity

As noted in section 3, in the early 1980s the need to accommodate large amounts of government debt financing, and the shift to an expansionary

^{49/} BIS, March 1987, p. xvi.

fiscal policy by the US government were among the catalysts for financial innovation and deregulation. Cause has now become effect: the markets' ability to absorb unprecedented amounts of debt instruments, such as US Treasury notes and bonds, has induced fiscal laxity and permitted the United States to build up its external deficits and indebtedness to unsustainable levels.

The main potential hazard of this situation lies in the unprecedented concentration of external liabilities of the US government in the portfolios of the largest Japanese life insurance companies. As discussed earlier, even traditionally conservative institutional investors have shifted to much shorter time horizons in their investment strategies. They are much more likely to trade long-term investments actively and to make major asset shifts --for instance, from shares to debt securities, or vice-versa, and between assets in various currencies--in response to price movements.

So far, Japan's MOF has cautioned these investors to exercise restraint in shifting out of US dollar assets, in response to the devaluation of the dollar. But, once institutional investors in Japan and other countries perceive that excessive currency risks can no longer justify holding large amounts of dollar assets, the consequences for the US bond market and for the value of the dollar would be serious.

Has deregulation gone too far?

This paper has argued that the rapid pace of financial liberalization during recent years has brought substantial efficiency gains. Financial markets in general have also displayed a considerable resilience to withstand shocks. That strength may, in fact, be attributable to recent reforms. For example, the restructuring of securities firms in London, prior to Big Bang

increased their capital backing and ability to absorb trading losses.^{50/} Similarly, a number of Self Regulating Organizations (SROs) have been set up in the City, to cover the various aspects of the financial services industry and a Securities Investment Board (SIB)--analogous to the US S.E.C.--was created to coordinate the various SROs.^{51/}

These are all positive and encouraging developments. However, there is also cause to argue that asymmetry in the degree of reform of real and financial markets, and the progressive delinking between these two sectors, have become a major source of excessive tensions and economic instability. This raises the question whether financial liberalization has gone too far.

The answer to this question is far from clear cut. On the one hand, progress achieved through financial liberalization points to the need to accelerate reform in the slower-moving factor markets, so as to replicate these benefits. Moreover, if progress can be made in that area, the present asymmetries and tensions will be reduced over time. On the other hand, certain aspects of recent financial reforms have given rise to specific problems that need attention--and intervention--regardless of future improvements in the functioning of the 'real' economy. The areas concerned include (i) the need for a single agency to coordinate supervision of related activities, to minimize the risk of compounded market failures; (ii) the need for further strengthening of the capital base of banks and securities firms; (iii) a full assessment of the risks resulting from securitization and other off-balance sheet items; (iv) the need to lessen systemic risks.

^{50/} N. Goodison, Chairman of the London Stock exchange, in: The Financial Times, 1/20/1988.

^{51/} BIS, March 1987, p. 198.

The need for a single regulatory agency was stressed by the Brady Commission after the October crash.

"From an economic viewpoint, what have traditionally been seen as separate markets...are in fact one market. Under ordinary circumstances, these marketplaces move sympathetically, linked by financial instruments, trading strategies, market participants and clearing and credit mechanisms.

To a large extent, the problems of mid-October (1987) can be traced to the failure of these market segments to act as one...

Because stocks, futures and options constitute one market, there must be in place a regulatory structure designed to be consistent with this economic reality.

The single agency required to coordinate cross-market issues must have broad and deep expertise in the interaction of the stock, stock option and stock index futures marketplaces, as well as in all financial markets, domestic and global. It must have broad expertise in the financial system as a whole." ^{52/}

The need for improved capitalization of financial agents is another key issue. Successful steps have already been taken to strengthen securities firms in England. Progress is also being made in Canada, France, Italy and Spain.^{53/} But the need for improvement remains acute in the United States, where many large banks are undercapitalized in relation to their outstanding

^{52/} Report of the Presidential Task Force on Market Mechanisms, Washington D.C., January 1988, Executive Summary.

^{53/} OECD, Committee on Financial Markets, CM(88)5, 2/1/88, p.8.

exposure on LDC loans and need for further provisioning. Measures are being drafted accordingly by the Fed and will be implemented in stages, by 1992.^{54/}

The question of coverage of contingent off-balance sheet risks in commercial banks is more complex. Banks have taken on underwriting risks for the refinancing of securitized loan facilities, such as RUFs and NIFs,^{55/} and have guaranteed performance risks in a large volume of interest-rate and currency swaps. In several instances risk premiums to cover the banks' underlying commitments are insufficient to compensate them for potential contingent losses.^{56/} Thus there is now a substantial financial risk that could erode the banks' future solvency. To remedy this situation will require that central banks attempt to evaluate the risks involved, determine appropriate reserves and capital ratios for these risks, and, in the extreme case, limit the banks' freedom to undertake such contingent risks beyond appropriate limits.

Finally, there is the broader question of systemic risk. Again this goes back to the October 1987 stock market crash. As pointed out in the Brady-Commission report: "the massive volume, violent price volatility, and staggering demands on clearing and credit raised the possibility of a full scale financial system breakdown".^{57/} While the unification of regulatory

^{54/} The New York Times, 2/1/88, pp. A1 and D8.

^{55/} The volume of NIFs has reached staggering proportions. During the four years from 1984 to 1987, their total was of \$104.7 billion. OECD, op. cit., Table A, p.9.

^{56/} OECD, op. cit., p.8 and BIS, April 1986, p.190.

^{57/} Brady commission, op.cit., January 1988, p.69.

standards, as discussed above, may be a satisfactory remedy^{58/}, it fails to address to broader question of whether the degree of securitization may have reached a level that is incompatible with the paramount needs of financial and economic stability. Suffice it say that current proposals to repeal the Glass-Steagal Act, and ensuing freedom for US banks to cover all aspects of the securities industry, should be interpreted with a note of caution, as they may increase these systemic risks. As put eloquently by a recent commentator on the proposal:

"The fact is that if the firewalls between banking and other product lines are whittled away, the consumers' peace of mind in terms of their accounts is at risk..."^{59/}

^{58/} OECD, op.cit. p.9.

^{59/} Paul Equale, VP for government affairs, Independent Insurance Agents of America. The New York Times, 1/3/1988, p.E1.

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