BANK FOR INTERNATIONAL SETTLEMENTS

Monetary and Economic Department

INTERNATIONAL BANKING AND FINANCIAL MARKET DEVELOPMENTS

Basle

May 1997

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The present publication is also available on the BIS World Wide Web site (http://www.bis.org).

ISSN 1012-9979
Published also in French, German and Italian.

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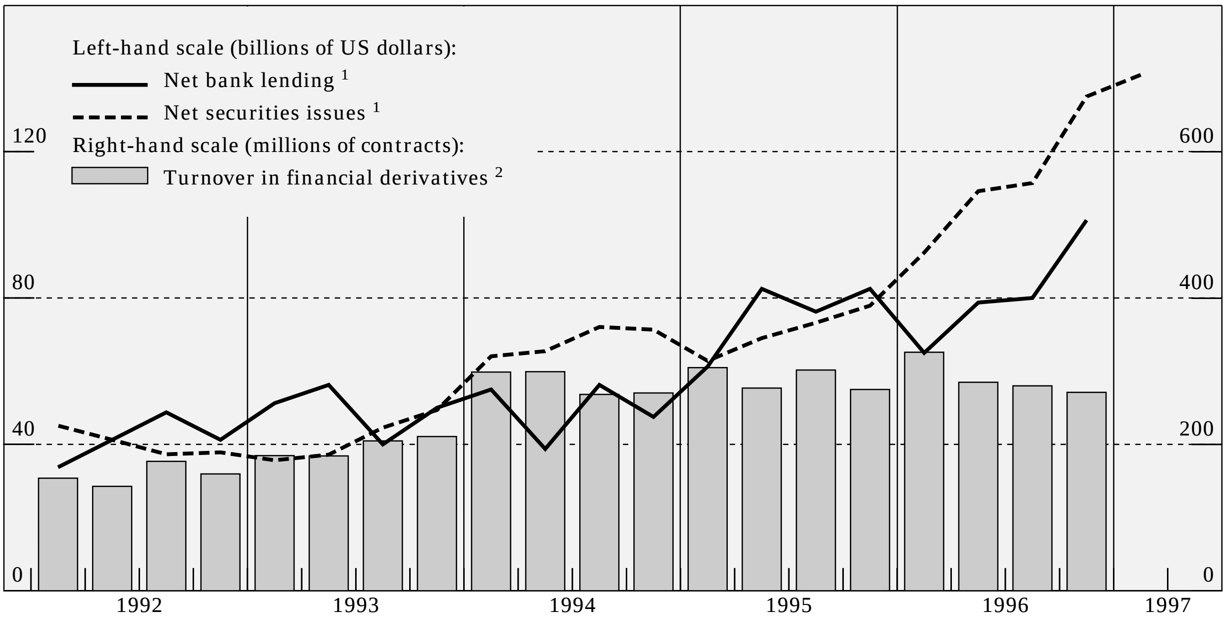
I

OVERVIEW OF RECENT INTERNATIONAL BANKING AND FINANCIAL MARKET DEVELOPMENTS

In the first quarter of 1997, questions raised about the process of European economic and monetary union (EMU) and increasingly widespread expectations - subsequently fulfilled - of a rise in US official interest rates challenged the mood of optimism which had hitherto prevailed in world financial markets. Indeed, equity and bond prices in most major countries retreated from their peaks, the convergence of yields between the core and peripheral segments of fixed income markets within major currency blocs was reversed and the strengthening of the dollar against the yen and the Deutsche mark was interrupted. However, the disruption proved shorter-lived and less abrupt than in early 1994. The increase in volatility rapidly ran its course, the US dollar soon recouped its losses against the yen (though not against the Deutsche mark in view of a more cautious stance in the markets as regards EMU) and risk premia in high-yielding market segments tended to stabilise at levels only slightly above their earlier lows, suggesting an orderly adjustment to new market conditions.

Developments in the international securities markets show that, on balance, the ongoing search for yields and the related process of international portfolio diversification were not fundamentally called into question. Thus, other factors seem to have played a greater role in shaping recent market activity. First, while some concerns about the timing of and participation in EMU may have temporarily shifted activity in favour of the Deutsche mark and sterling, innovative instruments reflecting the structural convergence of European debt markets supported issuance in continental European currencies and ECUs. Secondly, while the anticipated and actual monetary tightening in the United States prompted a reassessment by international investors of the risk profile of their portfolios, the temporary widening of spreads on high-yielding instruments and the overall decline in issuance

Total international financing

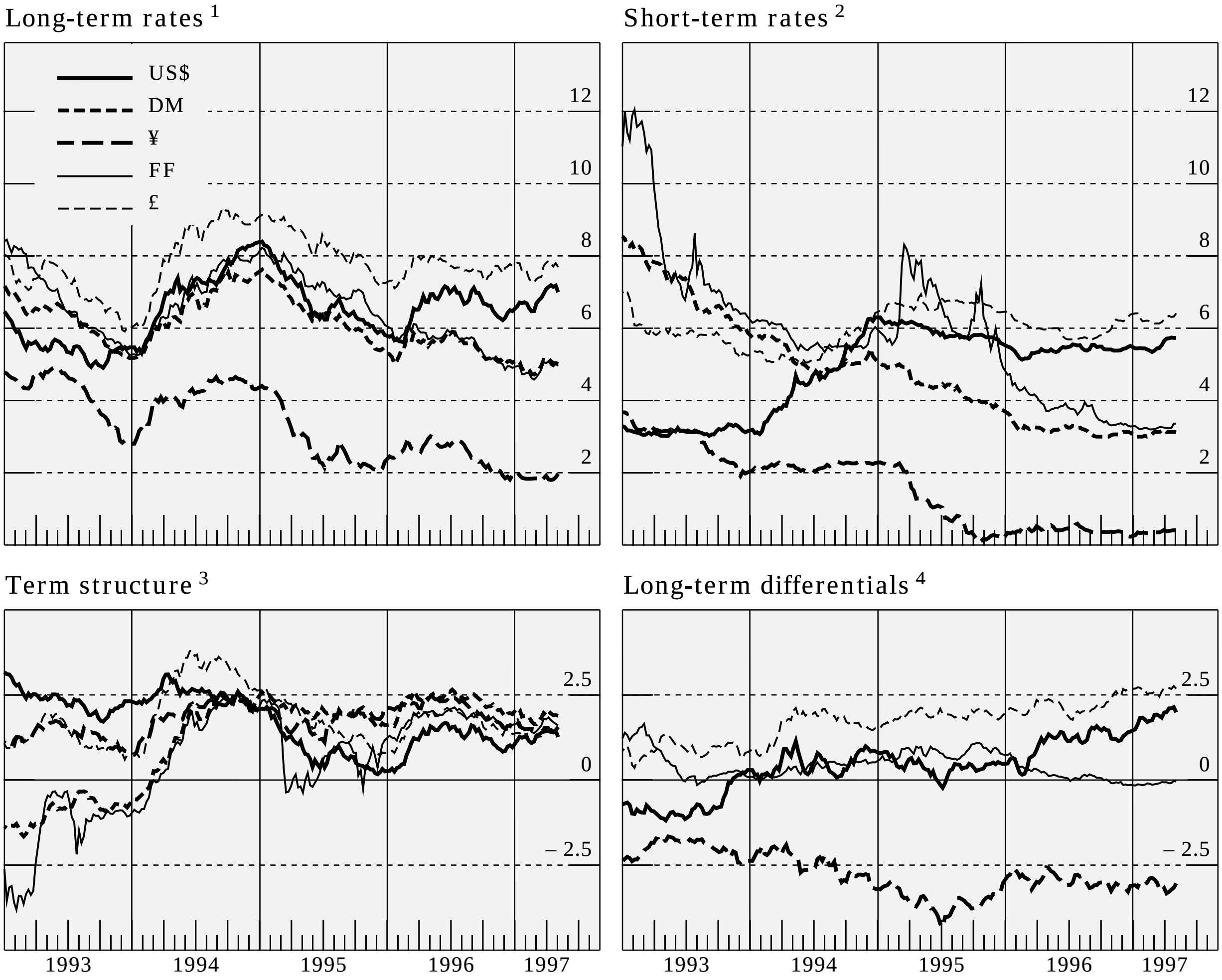


[1] Four-quarter moving averages. [2] Financial derivatives traded on organised exchanges.

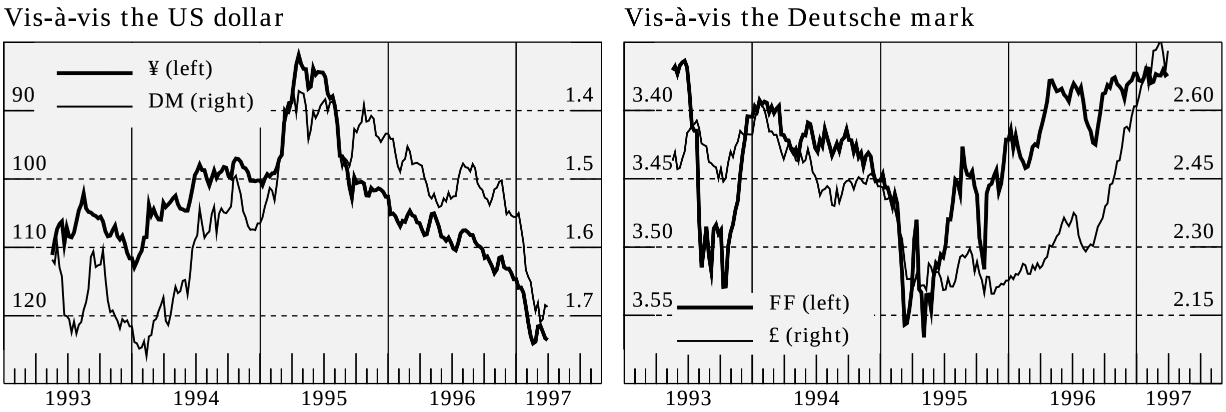
Sources: Bank of England, Euroclear, Euromoney, Futures Industry Association, International Financing Review (IFR), International Securities Market Association (ISMA), national data and BIS.

International long and short-term interest rates

Weekly averages, in percentages and percentage points



Bilateral exchange rates



[1] Yields in annual terms on the basis of five-year interest rate swaps. [2] Three-month euromarket interest rates.
[3] Long-term rates minus short-term rates. [4] Vis-à-vis German long-term rates.
Source: BIS.

by emerging market borrowers also reflected local factors. Thirdly, despite the temporary weakness of the dollar, international investment demand for dollar paper was sustained, with the decline in the issuance of certain high-yielding securities, such as subordinated bonds, being due in large measure to US domestic factors (such as a rise in loan delinquencies and the anticipated closing of tax loopholes). Finally, changing market conditions were rapidly incorporated into trading strategies and instruments, as evidenced by the shift from convergence to divergence plays in European fixed income markets, the greater use of spread trading across single yield curves and the larger number of volatility-related transactions in currency and equity products, especially through options.

In the main, ample liquidity continued to support activity in the international financial markets in the first quarter of 1997. At the same time, the evidence available points to deeper underlying changes in the world financial system at large. In particular, the more systematic use of collateralisation, the consolidation already achieved within the global financial industry and the improvement in economic and financial fundamentals in most regions may in turn help to explain why markets were able to absorb the recent shocks without undue strains. Moreover, in contrast to 1994, the recent tightening by the US Federal Reserve was largely anticipated, with the monetary stance previously less accommodating. On the other hand, doubts remain as to whether the recent market correction has fully run its course. The persistence of large cross-border investment flows driven by wide interest rate differentials between assets in dollars and in other major currencies continues to expose markets to the risk of an unexpected turnaround in underlying conditions. Furthermore, the unusually long US economic expansion raises the question of whether the pricing of some transactions has given sufficient consideration to credit risk over the full business cycle. Although new credit risk management techniques are being explored, these remain at an early stage of development, which means that actual risk exposure vis-à-vis certain counterparties or collateral may not be properly assessed. Issues related to the practical implementation of EMU are creating new sources of uncertainty, with potentially far-reaching implications for the world financial industry. In addition, given the variety of actors now involved in cash and derivatives markets and the broad range of products available, the existence of excessive leverage in some market segments cannot be excluded. Finally, the sizable losses faced by a large UK-based investment bank on its options positions are once again raising the question of the adequacy of internal risk control systems. When viewed in relation to greater official reliance on market forces than on rigid supervisory prescriptions, these developments should put a premium on more prudent behaviour by market participants.

Estimated net financing in international markets[1]

In billions of US dollars

Components of net international financing	**1995**	**1996**					**1997**	**Stocks at end-Dec. 1996**
	Year	**Year**	**Q1**	**Q2**	**Q3**	**Q4**	**Q1**	
Total international[2] bank claims[3]	644.0	577.9	115.4	50.1	204.7	207.6	..	9,645.5
minus: interbank redepositing	314.0	172.9	30.4	-74.9	144.7	72.6	..	4,630.5
A = Net international bank lending[3]..........	**330.0**	**405.0**	**85.0**	**125.0**	**60.0**	**135.0**	..	**5,015.0**
B = Net euronote placements	**192.4**	**265.0**	**56.5**	**75.6**	**48.0**	**84.9**	**83.0**	**834.1**
Completed international bond issues[4]	358.7	569.2	131.9	138.0	132.1	167.2	134.9	
minus: redemptions and repurchases[4]	239.6	294.1	74.5	72.1	72.0	75.4	80.2	
C = Net international bond financing[4]	**119.2**	**275.1**	**57.3**	**65.9**	**60.1**	**91.7**	**54.6**	**2,391.8**
D = Total international financing[5]	**641.6**	**945.1**	**198.9**	**266.5**	**168.2**	**311.6**	..	**8,240.9**
minus: double-counting[6]	111.6	200.1	63.9	31.5	53.2	51.6	..	1,310.9
E = Total net international financing	**530.0**	**745.0**	**135.0**	**235.0**	**115.0**	**260.0**	..	**6,930.0**

[1] Changes in amounts outstanding excluding exchange rate valuation effects for banking data and euronote placements; flow data for bond financing. [2] Cross-border claims in all currencies plus local claims in foreign currency. [3] See notes to Table 1 of the statistical annex. [4] Excluding bonds issued under EMTN programmes, which are included in item B. [5] A + B + C. [6] International securities purchased or issued by the reporting banks, to the extent that they are taken into account in item A.

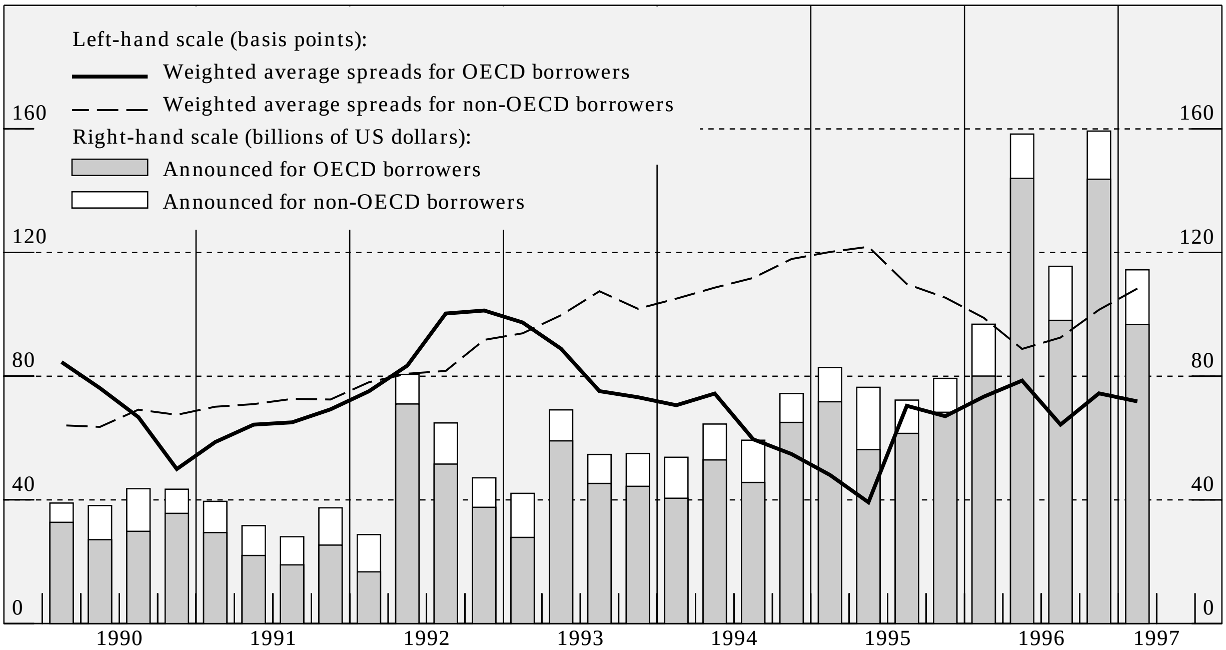
II

THE INTERNATIONAL BANKING MARKET

Main features

Activity in the international syndicated loan market remained buoyant in the *first quarter of 1997*, with new announcements amounting to $114.4 billion, significantly above the figure for the same period of 1996. Borrowers from the United States continued to account for the bulk of the new credits ($71.7 billion), followed by entities from the United Kingdom ($11.6 billion). The ample availability of loanable funds entailed a further erosion of spread differentials between prime and non-prime borrowers, encouraging refinancing at lower margins and the entry into the market of new borrowers. There was a further increase in the volume of transactions related to mergers and acquisitions, but also a growing proportion of project-related structures, spreading from Asia to the Middle East and Eastern Europe in particular. Of note was a $2.5 billion jumbo loan launched for a Russian gas pipeline project which provided for repayment based on gas export receivables. Greater emphasis on such high-margin structures appears to reflect growing resistance by some groups of lenders to participating in low-spread facilities for prime borrowers. Growing involvement by institutional investors and investment banks (especially in structured financing) added to competitive pressures and to the tendency for arrangements to cross over between bank loans and securities. Among new hybrid structures, one particular innovation involved a ¥73.4 billion refinancing facility for a US entertainment company arranged through an offshore vehicle and extending over ten years by means of periodic auctions of loan participations. Mention may also be made of a large leveraged buyout facility launched in separate tranches to accommodate the specific needs of banks and institutional investors. Ongoing efforts to securitise loans, to promote secondary market trading and

Announced facilities in the international syndicated credit market and weighted average spreads *



* Four-quarter moving average of spreads over LIBOR on US dollar credits.

Sources: Bank of England, Euromoney and BIS.

to develop tools for the management of credit risk (see the final section) as well as mergers between commercial and investment banking concerns provide other illustrations of this growing integration between market segments.

Detailed international banking statistics available for the *fourth quarter of 1996* confirm earlier evidence of the growing dichotomy between the stagnation of interbank business and the buoyancy of transactions with non-bank (both financial and non-financial) customers. Whereas interbank activity across and within reporting financial centres had been temporarily spurred in the third quarter by seasonal factors, the share of that component in total international banking assets continued to decline in the fourth. Indeed, the decrease in total interbank positions in recent quarters masks an even sharper fall in the importance of traditional short-term interbank credit lines as a result of the growing use of repurchase agreements (repos) within the interbank market itself. The increasing popularity of repos compared with outright lending and interbank deposits reflects in part greater credit risk awareness and the funding difficulties experienced by certain banking groups. It is also related to longer-term underlying factors, such as capital requirements and the development of cross-market collateralisation procedures and of standardised documentation.

There was a further expansion in direct business with the non-bank sector inside the reporting area, which reflected both banks' lending against securities and their own purchases of securities such as US Treasury paper, which is the most actively used collateral in secured lending. The fact that reporting banks' lending to the non-bank sector inside the reporting area continued to exceed borrowing from it by a wide margin suggests that the international banking market was a net supplier of cash to other purchasers of securities worldwide. There was, at the same time, a further increase in banking flows to both bank and non-bank entities located outside the reporting area. These included a high proportion of securities purchases and direct credit to the non-bank sector, which indirectly provides another example of the broadening of the repo market, in terms of both counterparties and collateral.

Main features of international lending by BIS reporting banks[1]

In billions of US dollars

Components of international bank lending	**1995**	**1996**	**1995**	**1996**				**Stocks at end-Dec. 1996**
	Year	**Year**	**Q4**	**Q1**	**Q2**	**Q3**	**Q4**	
Claims on outside-area countries	**120.8**	**123.8**	**31.9**	**21.1**	**27.9**	**34.5**	**40.4**	**1,115.6**
Claims on inside-area countries	**506.5**	**449.5**	**31.2**	**84.7**	**17.6**	**172.5**	**174.8**	**8,291.7**
Claims on non-banks	189.5	305.4	18.1	52.0	81.7	58.6	113.0	2,666.6
Banks' borrowing for local onlending[2]	3.0	-28.7	11.2	2.2	10.8	-30.8	-10.9	994.6
Interbank redepositing	314.0	172.9	2.0	30.4	-74.9	144.7	72.6	4,630.5
Unallocated	**16.7**	**4.5**	**-11.1**	**9.7**	**4.7**	**-2.3**	**-7.5**	**238.1**
Gross international bank lending	**644.0**	**577.9**	**52.0**	**115.4**	**50.1**	**204.7**	**207.6**	**9,645.5**
Net international bank lending[3]	**330.0**	**405.0**	**50.0**	**85.0**	**125.0**	**60.0**	**135.0**	**5,015.0**
Memorandum item: Syndicated credits[4] ..	**310.8**	**530.0**	**79.3**	**96.8**	**158.3**	**115.6**	**159.3**	

[1] Changes in amounts outstanding excluding exchange rate valuation effects. [2] Estimates of international borrowing by reporting banks, either directly in domestic currency or in foreign currency, for the purpose of local onlending in domestic currency (see also notes to Table 1 of the statistical annex). [3] Defined as total international claims of reporting banks minus interbank redepositing. [4] Announced new facilities.

Currency composition of international bank lending[1]

In billions of US dollars

Currencies	1995	1996	1995	1996				Stocks at end-Dec. 1996
	Year	Year	Q4	Q1	Q2	Q3	Q4	
Banks in industrial reporting countries ...	**519.3**	**545.7**	**45.5**	**119.8**	**59.5**	**177.9**	**188.4**	**7,753.9**
US dollar	115.7	130.9	1.1	7.9	-32.5	74.7	80.9	3,337.1
Deutsche mark	14.3	109.5	10.1	52.8	4.9	15.9	35.9	1,166.1
Yen	175.8	57.5	60.7	-17.9	18.1	3.7	53.5	895.0
Italian lira	39.9	100.4	5.3	10.4	41.2	3.4	45.4	363.4
French franc	50.2	0.1	-12.0	-8.1	0.4	24.5	-16.7	335.9
Pound sterling	8.7	31.9	-5.8	4.9	-6.0	13.0	20.1	323.4
Swiss franc	-4.6	14.0	-19.1	12.4	9.6	-4.6	-3.5	275.5
ECU	-20.4	-26.5	-14.7	-0.3	-11.1	-2.9	-12.2	165.7
Other and unallocated[2]	139.7	127.9	19.9	57.7	34.9	50.2	-15.0	891.8
Banks in other reporting countries[3]	**124.7**	**32.2**	**6.5**	**-4.4**	**-9.4**	**26.8**	**19.2**	**1,891.6**

[1] Changes in amounts outstanding excluding exchange rate valuation effects. [2] Including all non-dollar positions of banks in the United States, for which no currency breakdown is available. [3] No currency breakdown is available.

International banking activity during the fourth quarter of 1996 was also influenced by short-term swings in positions denominated in a variety of currencies. There was, in particular, a large volume of international bank lending denominated in dollars, Italian lire, Deutsche marks and sterling, which mirrored the heavy purchases of securities issued in these currencies. There was, in contrast, some repayment of bank credit denominated in French francs and guilders, while the ECU banking market continued to contract.

Business with countries inside the reporting area

Activity in the *interbank market* within the reporting area in the fourth quarter was subject to a number of opposing influences. In particular, the overall stability in the international assets of Japanese banking offices located in industrial reporting countries (as reported in Annex Table 7)[1] conceals two opposite developments, namely a further decline in claims on unaffiliated banks, on the one hand, and an increase in claims on related offices, on the other. While the latter movement may have been due to the temporary funding requirements of Japanese banks' foreign affiliates, the former stands in sharp contrast with the tendency last year for such groups as German and US banks to increase their presence in the international interbank market and, at the same time, to rely less heavily on their inter-office networks (see the box on the next page).

Within the sharp increase in outstanding international claims on the *non-bank sector* inside the reporting area ($113 billion), there was a continuing strong rise in claims on the US non-bank sector ($25.9 billion, including a large proportion of US securities), as well as a surge in claims on entities located in the United Kingdom ($38.5 billion), the Netherlands Antilles ($15.5 billion) and the Cayman Islands ($11.7 billion). While representing in part banks' purchases of eurobonds, which are increasingly used as collateral in repo transactions, the rise in such positions involving London and the Caribbean centres also reflected the supply of cash by reporting banks to investors domiciled in these centres to finance their international purchases of debt securities and equities. The fact that reporting banks' borrowing from the non-bank sector inside the reporting area amounted to a mere

[1] Positions booked in offshore centres are excluded for lack of an adequate breakdown.

The international lending activity of major nationality groups of reporting banks in 1996

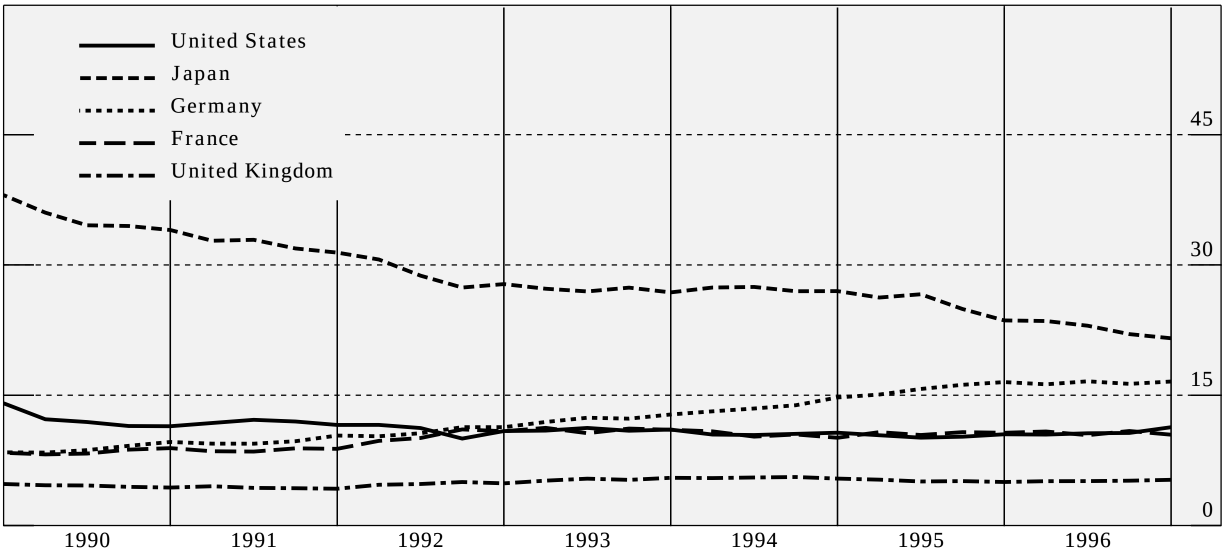
A breakdown of international banking assets by nationality of reporting banks shows a further drop in the share of Japanese banks last year, with the 3 percentage point decline bringing their weight to a 13-year low of 22%. At that level, however, they continued to rank first, ahead of banks from Germany (17%), the United States and France (11% each). There was surprisingly little movement in the relative importance of these other groups, as the most significant gain (of 1 percentage point) was made by Swiss banks, which now rank fifth in terms of market share (with 8%) after French banks but ahead of Italian banks and UK banks (5% each). Since 1990, the only major changes in the relative positions of the five major groups were the opposite shifts in the share of Japanese banks (with a 12 percentage point loss) and German banks (with a 7 percentage point gain).

The reasons for the reduced importance of Japanese banks since the early 1990s and their further retrenchment last year are well known. Following an aggressive international expansion in the second half of the 1980s, Japanese banks began to reassess their international borrowing and lending strategy. The main underlying factors were the implementation of the new capital adequacy ratio requirements and the progressive dismantling of restrictions on the domestic financial system, which increased the incentives to improve profitability. The process was accentuated more recently by the weakness of domestic credit demand, the poor performance of the Japanese equity market, which lowered the value of the latent reserves included in Japanese banks' core capital, and growing concerns about their creditworthiness, with the emergence of a premium on their borrowing in the international interbank market.

With respect to other major banking groups, the limited change in their relative importance last year seems to contradict evidence of important divergences in strategies, restructuring and consolidation among financial systems. The contradiction is, however, more apparent than real. First, as part of banks' strategies to rationalise, there has been a general reassessment of their foreign presence, with a refocusing in favour of domestic books and greater concentration in London. Secondly, the lead taken by banks from the English-speaking countries in restructuring and developing off-balance-sheet activities, such as securities underwriting and risk management services, has given them a competitive edge. Thirdly, rationalisation in the industry has allowed the most active in this area, such as US, German and Dutch banks, to economise on their cross-border internal networks. Finally, shifts in the preference of international investors in the foreign exchange and securities markets have given rise to important compensatory flows involving the national banking systems of the issuing currency countries, irrespective of their international competitiveness.

The nationality structure of international bank lending *

Percentage shares, at end of period



* Cross-border claims and local claims in foreign currency of banks located in industrial reporting countries.

Source: BIS.

Banks' business with non-bank entities inside the reporting area[1]

In billions of US dollars

Country of residence of non-bank customers	Cross-border positions					Memorandum item: Domestic bank credit and money[2]				
	1995	1996				1995	1996			
	Q4	Q1	Q2	Q3	Q4	Q4	Q1	Q2	Q3	Q4
Total assets	**31.5**	**35.7**	**70.3**	**57.8**	**78.3**					
Canada	-1.9	-0.6	0.9	0.4	-1.1	9.0	5.1	8.8	11.0	10.4
France	-1.1	-3.2	4.5	0.9	0.0	14.0	22.6	17.2	14.7	-1.5
Germany	2.8	4.5	3.3	8.9	4.5	88.3	55.7	38.4	30.7	95.0
Italy	-0.1	0.7	4.7	-2.4	4.4	16.9	3.8	6.0	-4.3	21.0
Japan	9.5	-10.8	-0.1	1.7	4.1	88.7	-83.1	62.3	-21.2	116.0
United Kingdom	3.1	3.9	12.5	4.1	8.0	10.1	21.2	12.6	8.8	-7.1
United States	-7.0	25.2	13.5	32.2	25.9	51.7	30.2	73.0	62.0	82.7
Other countries ...	26.2	16.0	31.0	12.0	32.5					
Total liabilities	**9.9**	**59.8**	**32.6**	**21.2**	**16.3**					
Canada	-0.7	0.2	2.8	-0.2	1.6	5.8	0.2	4.8	2.9	10.8
France	-0.4	9.0	-2.2	2.2	-1.8	26.0	-18.2	-11.5	-6.1	4.8
Germany	-13.2	3.2	0.8	-8.0	2.1	83.3	-3.0	11.4	11.8	92.0
Italy	-4.3	8.5	-0.3	0.3	-3.8	34.7	-40.4	4.5	9.2	45.9
Japan	0.0	6.3	6.0	-1.3	1.8	116.8	7.8	63.9	-51.9	134.8
United Kingdom	5.8	5.9	3.6	2.0	2.3	27.0	26.1	21.2	18.8	27.4
United States	7.4	8.3	-2.2	19.3	15.4	73.4	80.1	56.4	60.6	132.9
Other countries ...	15.3	18.4	24.1	6.9	-1.3					

[1] Changes in amounts outstanding excluding exchange rate valuation effects. [2] For Japan, M2+CDs; for the United Kingdom, M4; for other countries, M3.

$29.4 billion provides another illustration of the role played by the international banking market in funding international investors' purchases of securities worldwide. This figure was largely accounted for by borrowing from the United Kingdom and the United States.

Business with countries outside the reporting area

The growth of claims on outside-area countries accelerated further in the fourth quarter of 1996, reaching a new record of $40.4 billion. This brought the total for the year as a whole to an all-time high of $123.8 billion, compared with $120.8 billion in 1995 (see Annex Tables 5A and 5B). Whereas the figures in 1995 had been somewhat artificially boosted by attempts on the part of certain lending groups to enhance their presence in Asia, especially in Thailand, expansion last year was more broadly spread among countries and regions. It occurred, moreover, against the background of a surge in international securities issuance by Asian emerging market names as well as a slowdown in economic growth and wide external deficits. Strains and consolidation in some local banking systems may also have acted to dampen banking flows, leading to some shift away from interbank funding towards direct lending to non-bank entities. This movement was particularly pronounced in the fourth quarter, with 55% of the increase in reporting banks' claims on outside-area countries directly involving non-bank entities. At the same time, large-scale inflows of short-term funds to exploit arbitrage opportunities between domestic and foreign interest rates appear to have persisted in a number of countries (Brazil and Indonesia in particular) during the fourth quarter.

International banking flows to Asian countries recovered somewhat, following a sharp setback in the third quarter, but remained, at $16.5 billion, well below the average of earlier periods. Restrictive measures on capital imports and the persistence of a large current account deficit despite slower economic growth affected bank lending to Thailand ($1 billion), whereas inflows to Korea rebounded strongly (from $3.2 billion to $7.3 billion). In the case of Korea, the positive impact of new OECD membership, which boosted syndicated loans to local residents, appears to have more than offset the emergence towards the year-end of a less favourable domestic economic and financial environment. There were also sizable flows of banking funds into Indonesia and the Philippines, where the persistence of high nominal interest rates may have maintained the incentives for interest rate arbitrage.

Banks' business with countries outside the reporting area*

In billions of US dollars

Outside-area country groups	1995	1996	1995	1996				Stocks at end-Dec. 1996
	Year	Year	Q4	Q1	Q2	Q3	Q4	
Total assets	**120.8**	**123.8**	**31.9**	**21.1**	**27.9**	**34.5**	**40.4**	**1,115.6**
Developed countries	26.0	21.2	4.9	3.8	0.6	8.7	8.1	208.8
Eastern Europe	3.3	10.9	0.6	2.7	0.2	1.5	6.4	94.7
Developing countries	91.5	91.8	26.4	14.6	27.0	24.4	25.8	812.2
Latin America	16.4	21.8	9.0	0.3	3.7	5.7	12.1	267.3
Middle East	-7.5	0.0	-3.4	-4.0	0.5	5.5	-2.0	72.4
Africa	-3.7	-2.4	-0.4	-0.8	-0.3	-0.4	-0.9	33.6
Asia	86.3	72.3	21.2	19.1	23.2	13.6	16.5	438.9
Total liabilities	**96.4**	**93.7**	**11.4**	**29.4**	**28.0**	**8.6**	**27.7**	**983.3**
Developed countries	20.3	18.5	-5.8	5.2	6.3	5.1	1.9	189.5
Eastern Europe	9.2	2.7	2.7	-0.7	-0.1	-0.4	3.8	48.7
Developing countries	66.9	72.5	14.5	24.8	21.8	3.9	21.9	745.1
Latin America	43.0	23.0	8.9	3.7	17.7	2.1	-0.5	224.2
Middle East	8.1	16.6	-2.2	9.2	-3.2	3.6	7.1	219.0
Africa	-1.2	2.7	-0.6	-0.1	2.0	-0.1	0.8	43.2
Asia	17.0	30.3	8.4	12.0	5.3	-1.6	14.6	258.6

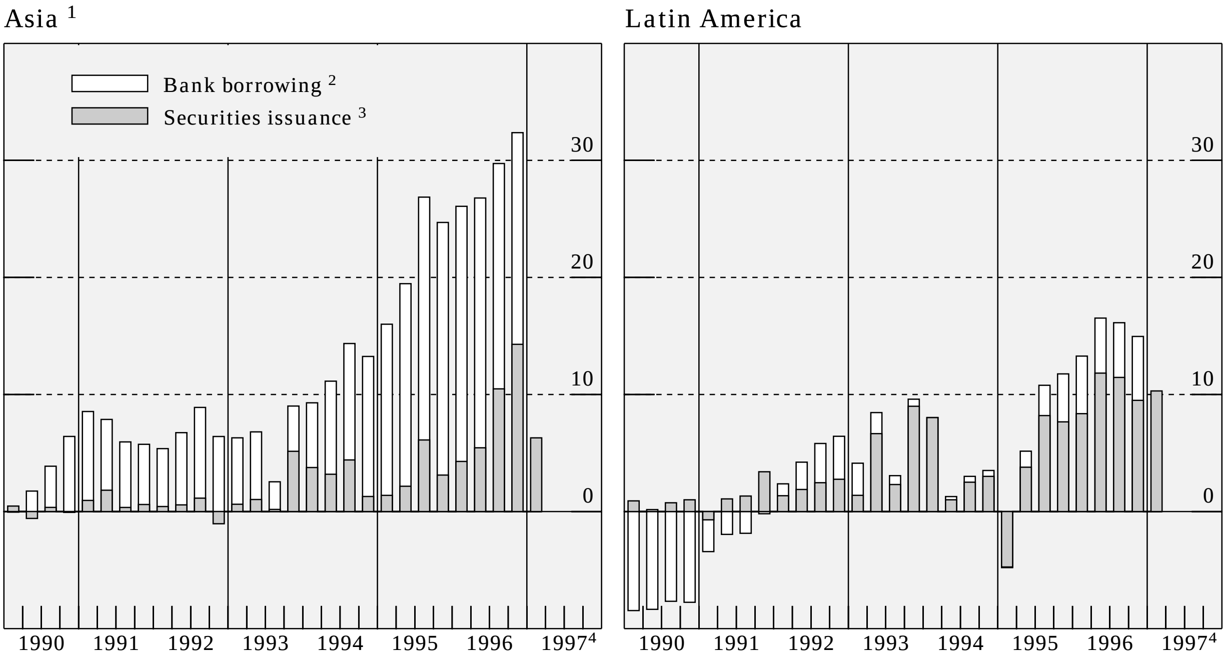
* Changes in amounts outstanding excluding exchange rate valuation effects.

Meanwhile, claims on Latin American countries rose by $12.1 billion, partly as a result of a marked recovery of flows into Brazil (from $1.2 billion to $4 billion). Thus, despite the significant decline in domestic real interest rates, the incentive for interest rate arbitrage appears to have persisted in Brazil. There was, similarly, an acceleration in bank lending to entities located in Argentina (from $1 billion to $1.8 billion), where the economic recovery gained further momentum, as well as to Colombia and Chile, where tight monetary policies may have encouraged short-term capital inflows. Standing against this general pattern, the recent upturn in banking flows to Mexico showed signs of faltering. However, this may conceal a recovery in the latter part of the quarter, when a more restrictive monetary policy helped to stabilise the exchange rate. Other dampening factors in the case of Mexico possibly included repayment of banking debt incurred in earlier periods, following heavy issuance of international securities.

Elsewhere outside the reporting area, bank credit to Eastern Europe gathered pace, with sizable interest-rate-induced inflows into the Czech and Slovak Republics and the Russian Federation. The strong rise in reporting banks' claims on the last country ($3.1 billion) was in part the result of

International bank and securities financing in Asia and Latin America

In billions of US dollars



[1] Excluding Hong Kong, Japan and Singapore. [2] Exchange-rate-adjusted changes in BIS reporting banks' claims vis-à-vis Asian and Latin American countries (four-quarter moving average). [3] Net issues of euronotes and international bonds. [4] Data on bank borrowing are not yet available for the first quarter of 1997.

Sources: Bank of England, Euroclear, Euromoney, IFR, ISMA, national data and BIS.

continuing foreign currency credit to the domestic banking system, in spite of the additional reserve requirements introduced on such accounts. However, interbank credit flows to Russia appear to have been rechannelled abroad in the form of deposits placed in foreign financial centres. Finally, the outstanding claims of BIS reporting banks on the group of developed countries outside the reporting area continued to grow at a brisk pace, with strong inflows to Greece, South Africa and Turkey being partly related to interest rate arbitrage.

Structural and regulatory developments

Official and market-led initiatives taken during the first quarter of 1997 gave additional impetus to the growing integration of banking and other segments of the global financial industry.[2] On the official side, mention may be made of new measures aimed at broadening the reach of repo markets in a number of countries. Thus, the Bank of France announced in February the abolition of reserve requirements on repo transactions. A similar decision adopted by the Bundesbank in December 1996 has induced some relocation of activity from London to Frankfurt. Also in February, the Bank of England proposed, as part of measures to broaden its money market procedures, an extension of the instruments used in its money market operations, to include gilt repos, and of the counterparties allowed to participate.[3] Following the removal of the stamp duty on repo transactions by the Swiss authorities earlier in the year, Swiss banks announced in March the establishment of a repo market in Swiss francs. However, the 35% withholding tax will continue to apply to non-bank entities conducting such transactions.

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[2] For a description of similar measures taken in the fourth quarter of 1996, see the last issue of this commentary.

[3] See: "Reform of the Bank of England's operations in the sterling money markets", Bank of England, London, February 1997.

On the market side, ongoing efforts to improve the measurement, management and trading of credit risk received further support from the introduction by one major US bank, with the backing of several other major commercial banks active in the international markets, of a model for measuring credit risk. The model is based on the probability of default affecting a particular credit or pool of credits. It applies in effect the value-at-risk concept successfully tested in the area of market risk and aims at providing a tool for the establishment of benchmarks for the measurement of credit risk. If generalised, this model could facilitate the pricing of credit instruments, including credit derivatives, and therefore the trading of such risk. A number of recent developments have raised the sensitivity of market participants to the active management of credit risk, including the broadening range of borrowers accessing the international financial market, the rapid growth of securitisation and the forthcoming introduction of the single European currency (with cross-currency risk being replaced by credit risk considerations). The greater involvement of investment banks in loan syndication and trading may have also contributed to this evolution.

This new initiative is likely to intensify the debate about the relative merits of standard rules and internal models for assessing capital adequacy requirements. Reliance on historical data in the analysis of risks, even using increasingly sophisticated and integrated models, is not sufficient to ensure adequate risk management. This point appears particularly relevant in the current context of strong competition and low intermediation margins. Indeed, recent bank losses have underlined the need for more consistent and better identification of risks by lending institutions. To address the issue, the Bank of England submitted in March a consultative paper proposing a new supervisory framework for UK-incorporated banks.[4] Its objective is to establish a more flexible official risk assessment process which relies on the examination of the overall business risk profile of an institution and of its internal control measures. Under this proposed framework, the intensity and the amount of supervisory action (such as higher capital ratios and amendments to control systems) will be adjusted according to the perceived degree of risk being taken by the institutions reviewed.

Lastly, in January the Basle Committee on Banking Supervision released a consultative paper containing a set of principles for the management of interest rate risk.[5] Whereas the supervisory capital requirements will, as from end-1997, cover interest rate risk in the trading activities of banks, the consultative paper sets out principles of more general application for banks' management of interest rate risk, irrespective of whether positions are part of trading or non-trading activities. The principles also emphasise the need for a comprehensive risk management approach by banks to identify, measure, monitor and control interest rate exposures, subject to board and senior management oversight. These principles underlie standards to be used by national supervisory authorities for evaluating how well banks manage interest rate risk.

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[4] See: "A Risk Based Approach to Supervision - A Consultative Paper by the Bank of England", Bank of England, London, March 1997.

[5] See: "Principles for the Management of Interest Rate Risk", Basle Committee on Banking Supervision, Basle, January 1997.

III

THE INTERNATIONAL SECURITIES MARKETS

Main features

In the first quarter of 1997, total announcements of bonds issued both on a stand-alone basis and under medium-term euronote facilities amounted to $206.4 billion, a level only marginally lower than the all-time high reached in the first quarter of 1996. However, after excluding the reflows stemming from a near-record volume of repayments, but, at the same time, including other forms of borrowing made under euronote facilities (such as euro-commercial and other short-term paper), net new issuance of international securities was, at $137.6 billion, comparable to the quarterly average for 1996. Whereas issuance by continental European entities proceeded at a strong pace, US and UK-based financial institutions reduced their recourse to the market and Asian borrowers scaled back their fund-raising activities sharply.

Main features of international securities issues[1]

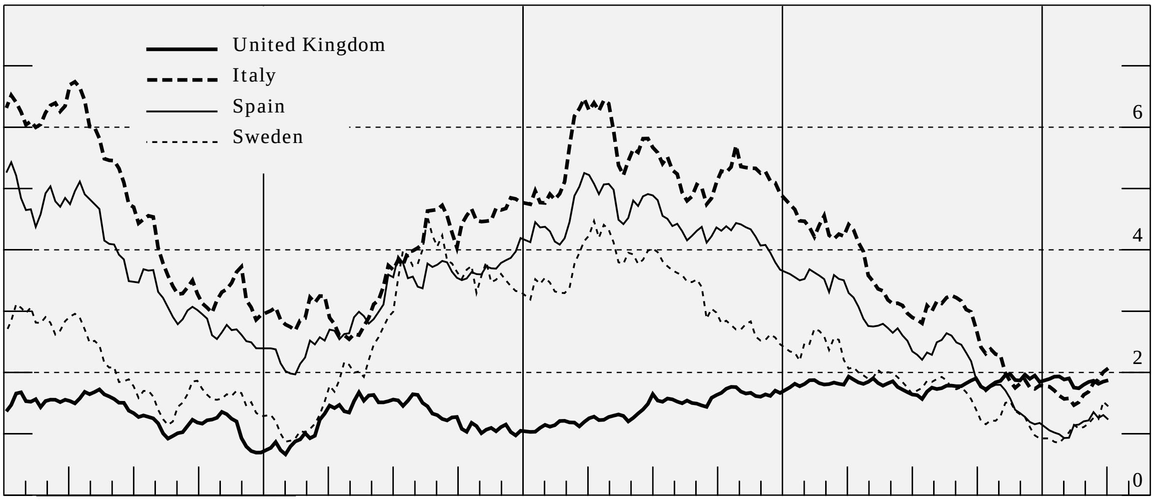
In billions of US dollars

Instrument, country of residence, currency and type of issuer	1995	1996					1997	Stocks at end-March 1997
	Year	Year	Q1	Q2	Q3	Q4	Q1	
Total net issues	**311.6**	**540.1**	**113.8**	**141.5**	**108.2**	**176.6**	**137.6**	**3,240.7**
Short-term euronotes	17.4	41.1	9.0	17.5	-3.9	18.5	7.1	174.9
Medium-term notes (EMTNs)	175.0	223.9	47.5	58.1	51.9	66.4	75.9	711.9
of which: *bonds issued under EMTN programmes*	*61.3*	*199.2*	*47.2*	*51.1*	*45.3*	*55.6*	*52.6*	*392.7*
Stand-alone international bonds	119.2	275.1	57.3	65.9	60.1	91.7	54.6	2,354.0
Developed countries	230.5	361.5	83.2	96.9	74.4	107.1	90.9	2,419.9
Europe[2]	*169.9*	*210.0*	*48.8*	*57.8*	*39.1*	*64.3*	*63.1*	*1,449.6*
Japan	*-27.3*	*-17.5*	*-3.4*	*-2.6*	*-3.7*	*-7.8*	*-7.1*	*188.4*
United States	*64.2*	*145.7*	*34.5*	*37.3*	*30.5*	*43.3*	*25.3*	*466.8*
Canada	*10.6*	*9.2*	*0.4*	*1.5*	*2.3*	*5.0*	*4.4*	*188.3*
Offshore centres	38.4	73.7	14.4	18.4	9.8	31.1	20.1	266.8
Other countries	27.3	79.9	12.8	18.4	21.1	27.7	18.1	243.2
International institutions	15.4	24.9	3.5	7.8	2.8	10.8	8.4	310.8
US dollar	74.1	262.1	47.5	81.6	46.6	86.5	55.5	1,301.4
Yen	108.4	81.2	15.4	22.4	24.5	19.0	14.2	499.5
Deutsche mark	55.1	54.9	22.0	9.7	10.6	12.6	14.0	335.6
Other currencies	74.0	141.9	29.0	27.9	26.4	58.5	54.0	1,104.2
Financial institutions[3]	179.9	342.6	77.9	78.1	72.5	114.1	88.4	1,381.5
Public sector[4]	98.7	123.6	22.1	35.1	24.3	42.1	32.1	1,062.5
Corporate issuers	33.1	73.9	13.8	28.3	11.4	20.3	17.1	796.7
Memorandum item: Total announced international bonds[5]	**428.5**	**792.4**	**208.0**	**198.2**	**182.3**	**203.9**	**206.4**	

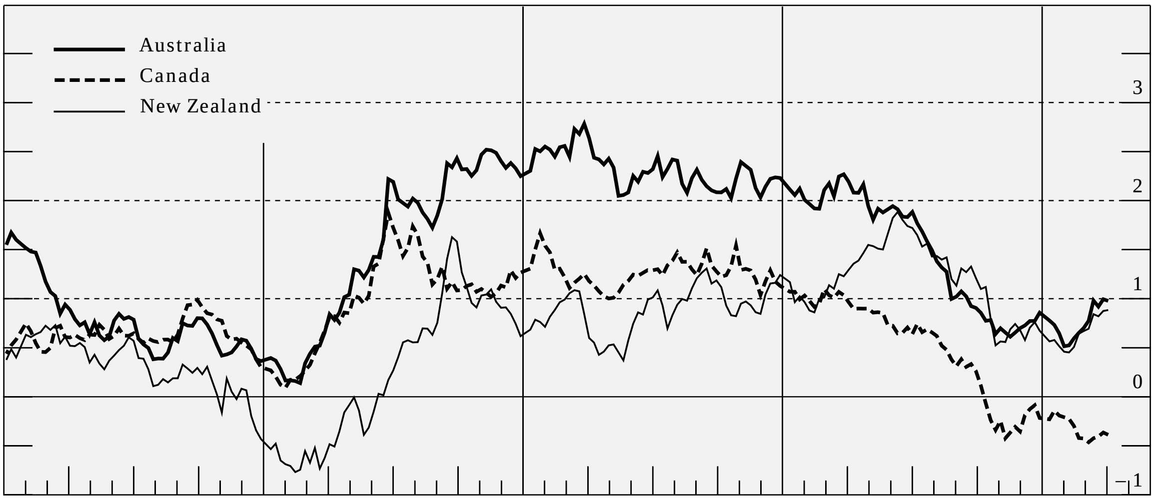
[1] International bonds and euronotes. Flow data for international bonds; for euronotes, changes in amounts outstanding excluding exchange rate valuation effects. [2] Excluding Eastern Europe. [3] Commercial banks and other financial institutions. [4] Governments, state agencies and international institutions. [5] Including bonds issued under EMTN programmes.

Sources: Bank of England, Euroclear, Euromoney, IFR, ISMA and BIS.

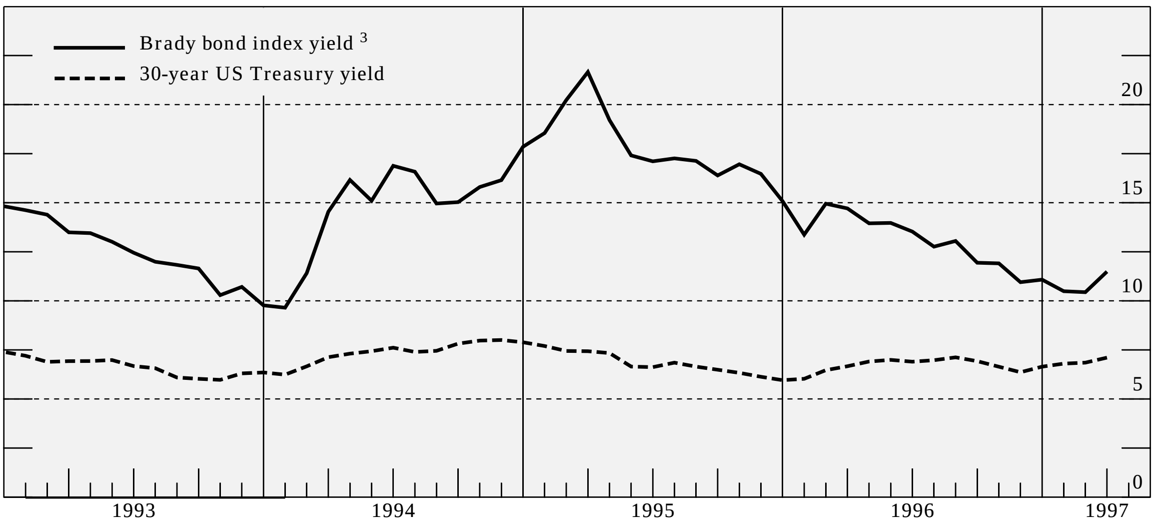
Yield differentials vis-à-vis long-term German government bonds [1]



Yield differentials vis-à-vis long-term US government bonds [1]



Brady bond yields versus 30-year US Treasury yields [2]



[1] Weekly averages, in percentage points. [2] Monthly data, in percentage points. [3] Yield stripped of collateral backing.

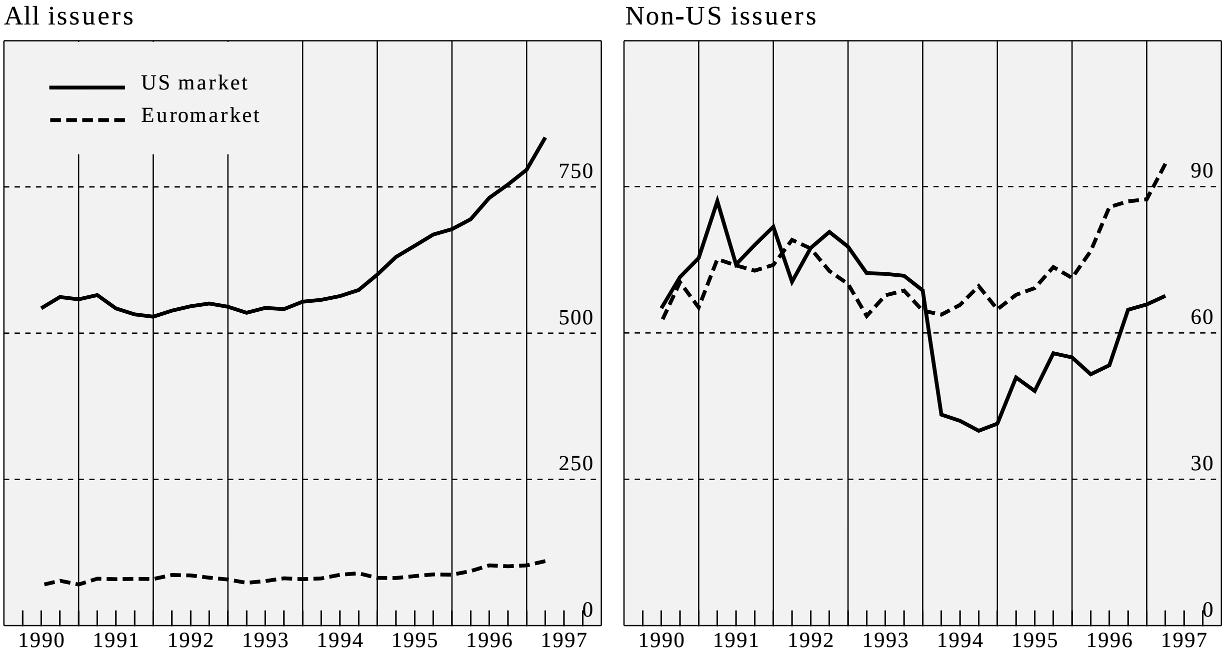
Sources: Datastream and Salomon Brothers Inc.

The generally favourable climate existing in fixed income markets in the early part of the quarter led to extremely buoyant issuance in January and to a continuation of several of the trends identified in 1996. Thus, the search for higher yields once again induced investors to move down the credit spectrum and explore new market niches. However, conditions began to deteriorate in February, with renewed fears that the introduction of the single European currency might be delayed or that some countries might not be able to join from the beginning. Comments by the Chairman of the US Federal Reserve hinting at the need for a pre-emptive increase in interest rates created additional concerns. Yield spreads relative to benchmarks widened on a broad range of lower-rated or junior debt instruments. The price of debt securities issued by highly rated European entities also faced downward pressures, although this was most pronounced in the case of Mediterranean country borrowers. Moreover, the upward trend in most equity markets was reversed. These developments had a negative impact on issuance, forcing lower-rated borrowers to offer more favourable terms to investors or to delay planned flotations.

Nevertheless, the fact that the aggregate volume of activity remained comparable to the quarterly average for 1996 suggests that expansionary forces were sufficiently powerful to offset the impact of market turbulence. These include the ongoing development of securitisation and portfolio diversification, with the search for higher returns in a context of ample global liquidity helping to attract new classes of investors and issuers to the international market-place. The receptiveness of investors to lesser-known or lower-rated entities was particularly evident in February and March, when, even in the face of less auspicious market conditions, sovereign borrowers such as Oman, Panama and Russia were able to launch international bonds. Moreover, several issues from emerging market borrowers were again heavily oversubscribed. At the same time, issuance remained highly concentrated, with borrowers from only seven countries accounting for more than three-quarters of the $19.6 billion raised on a net basis by emerging market names during the quarter.

Commercial paper outstanding

In billions of US dollars



Sources: Federal Reserve Bank of New York, Euroclear and BIS.

Short-term euronotes

In the market for euro-commercial paper (ECP) and other short-term euronotes, there was a fall of total net new issuance from $18.5 billion in the fourth quarter of 1996 to $7.1 billion. This was due to repayments of bridging debt contracted by some public sector and financial entities before the close of 1996 and included in the "other short-term euronotes" category, whereas the stock of ECP outstanding increased. In contrast to earlier comparable episodes of market growth, new issuance of ECP was broadly spread among countries and borrowers. Moreover, although its size and growth still pale in comparison with the US CP market, with a ratio of 1 to 8, non-US issuers continued to display a preference for ECP over US paper. Expansion in the period under review was supported, inter alia, by more accommodating regulatory and fiscal treatment (with, in particular, the exemption of such issues from withholding tax in Ireland) and increasing participation by US money market funds. Further liberalisation measures and, more generally, the prospect of a unified pan-European CP market are likely to render the ECP market even more competitive vis-à-vis its US counterpart. This could in turn further enhance demand from European institutional investors and attract a wider range of US and non-US borrowers willing to diversify out of the US market.

Longer-term international securities issues

In the longer-term segments of the international securities markets, a number of influences might have accounted for the apparent contrast between the reported behaviour of international fund managers and actual primary bond market activity. Surveys released in the course of the quarter revealed that high nominal interest rates and EMU-related concerns had encouraged international investors to increase their exposures to US dollar, Deutsche mark and sterling paper, but that fears of further rises in interest rates in those market segments had led to a reduction in duration and to a move into defensive instruments such as floating rate paper. However, actual data show that, while there was indeed a marked increase in announced Deutsche mark and sterling issues, this was not so for US dollar bonds. On the one hand, demand from international investors for dollar assets helped sustain eurodollar flotations, with several large benchmark issues being introduced by US agencies or sovereign borrowers. On the other hand, the prospect of higher US interest rates hit foreign issuance in the US domestic market (i.e. Yankee bonds), which contracted sharply from the record of the previous quarter. There was also a sizable drop in dollar-denominated asset-backed securities (ABSs), owing to concerns arising from record losses on consumer loans and the negative impact of rising interest rates on mortgage origination. At the same time, with Japanese investors shifting their purchases of foreign securities away from straight euroyen and dual-currency Samurai issues towards US dollar and sterling bonds, total yen-denominated issuance contracted.

Nor did primary market activity in continental European currencies seem to reflect the "flight to quality" also evident in dealers' surveys. For example, although issuance in Deutsche marks jumped appreciably, new launches in ECUs and Spanish pesetas also increased, while business in French francs and Italian lire declined only modestly. This was due in part to the emergence of bond issues (for a value of $10.4 billion) making explicit provision for redenomination into the single European currency at the start of EMU. Such "parallel" or "euro-tributary" bonds were issued by sovereign, supranational and highly rated corporate borrowers either in separate European currencies (mostly in Deutsche marks, French francs and Dutch guilders) or, for the first time, specifically in euros.[6] The scarcity of ECU benchmarks meant that euro-denominated issues received a highly positive response, leading to an increase in the size of some issues during syndication. Several transactions also encompassed a fungibility clause to enhance liquidity. For example, Austria introduced a French franc bond that will be exchangeable at the option of investors into an outstanding benchmark Austrian Bund issue with the same coupon and maturity. The European Investment Bank and a major German industrial concern also launched issues in several currencies, with similar coupons and maturities, to be merged upon conversion into large euro-denominated

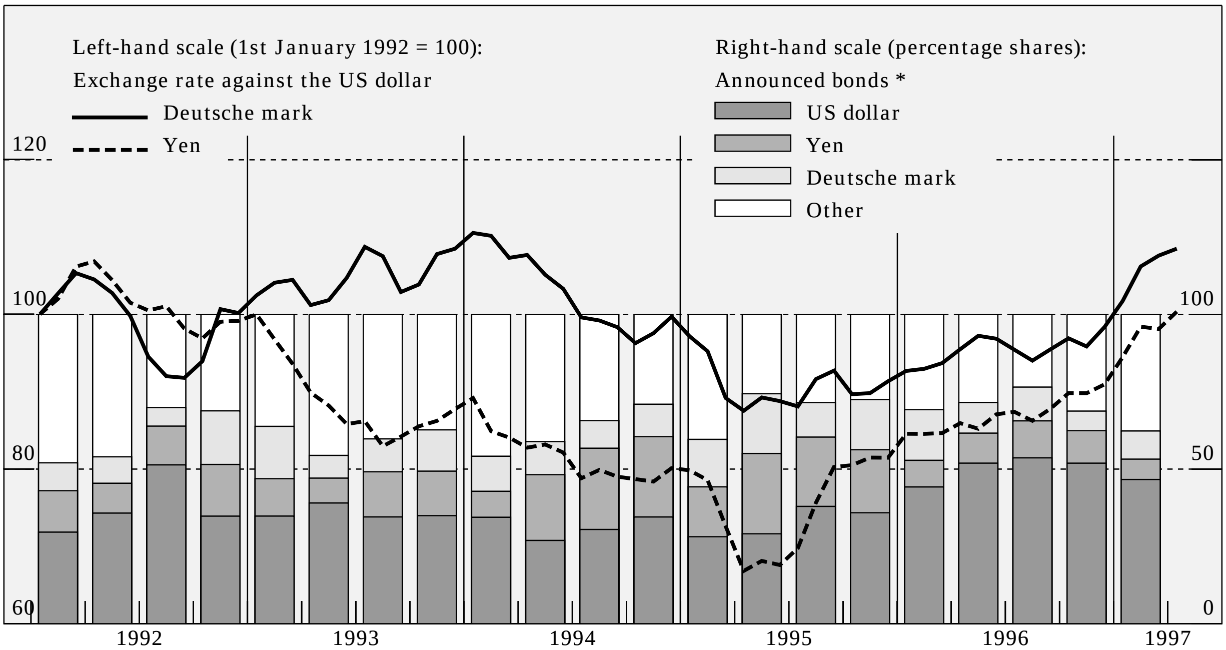
[6] Buyers of euro-denominated bonds are making payments in ECUs and will receive interest payments in that currency until conversion into euros (on a one-to-one basis) takes place.

issues. These instruments, which have given additional impetus to the convergence of interest rates in the core European countries, are precursors to the creation of a full-fledged bond market in euros. Growing recourse to such issues might as a by-product lead to renewed expansion of the ECU market but also to a fragmentation of the international bond market denominated in European currencies to the extent that non-fungible issues will become relatively less liquid.

Similarly, although market sources reported a shortening of duration in several currency sectors, such a development was generally not evident in the aggregate data. In the US dollar market, the proportion of issues with maturities of five years and less decreased (from 53% to 46%) and the average maturity was further boosted by several long-dated issues for emerging market borrowers (see the graph on page 17). These issues included 100-year bonds launched on the Yankee market by an Indian industrial firm and a Chilean electricity utility, which were respectively the third century issue by an Asian corporate sector entity and the first such issue launched by a Latin American borrower. The strong reception given to them by investors might have been related to the anticipated repeal by the US authorities of the tax relief given to US issuers of bonds with maturities in excess of 40 years. A comparable development took place in the sterling market, with a reduction in the share of issues at five years or less (from 42% to 32%) and the introduction of subordinated bonds and asset-backed deals having long stated maturities (such as a £0.9 billion ABS issued with a maturity of more than 60 years).

The large number of issues already launched by emerging market borrowers in January meant that the market turbulence which developed thereafter failed to have an appreciable impact on activity for the quarter as a whole. Anticipating further increases in US interest rates and facing heavy repayments in 1997, Argentina and Mexico conducted important refinancing operations in the early part of the quarter. Borrowers from Latin America have been particularly eager to lengthen the maturity of their external debt in order to reduce the refinancing risks represented by speculative capital flows. Issuance by Asian borrowers contracted more sharply, owing partly to a less enthusiastic response from international investors. Concerns about the health of financial systems in

International bond issuance and US dollar exchange rate development



* Excluding bonds issued under EMTN programmes.

Sources: Bank of England, Euroclear, Euromoney, IFR, ISMA and BIS.

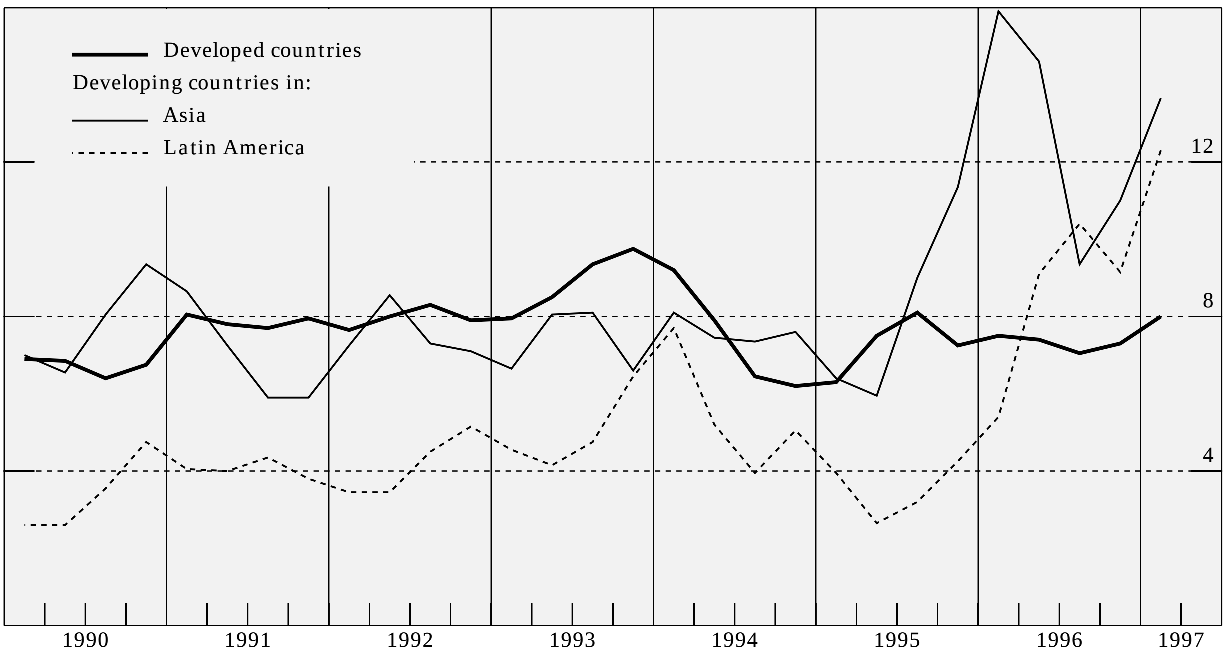
the region were aggravated during the course of the quarter by the default of a Thai property developer on a eurobond issue and that of a Korean steel producer on bank loans. Meanwhile, financing conducted by Eastern European borrowers proceeded at a steady pace. Another noteworthy trend in the area of development finance was the sharp expansion in the use of emerging market currencies. The difficulty in accessing high-yielding domestic bond markets explains in part the attractiveness of eurobonds denominated in the currencies of those countries, as illustrated by the rapid development of issuance in currencies that have only recently found international acceptance.

Looking at aggregate activity on an announcements basis, the higher volume of fixed rate bond issues in the first quarter of the year more than offset reductions in the floating rate and equity-related segments, leaving total issuance slightly higher than in the previous quarter. Although reduced business in the ABS segment depressed underlying activity in "global" bonds (since a large proportion of ABSs are launched under such structures), the expansion of the global bond concept to new currency sectors (such as sterling) and to borrowers in the developing world (such as Colombia, Panama and the Philippines), as well as greater use of the international market by US agencies, led to a rebound in issuance. The market for Asian issues (listed in Hong Kong and Singapore as well as on European exchanges) also expanded with a few large transactions.

Straight fixed rate issues. Announcements of straight fixed rate issues set a new record in the first quarter of the year. Activity in the dollar and sterling markets was enhanced by favourable interest rate differentials, as well as, in the case of the eurodollar market, attractive swap opportunities and reinvestment demand due to redemptions. Commercial banks were the largest users of the dollar market, with, in particular, a sharp increase in the fund-raising activity of German institutions. Improving confidence in Latin American borrowers and buoyant demand for higher-yielding issues encouraged countries such as Argentina, Colombia and Mexico to launch large and long-dated global issues. Sterling was the second most active currency segment, with a record volume of transactions. Noteworthy was a £1.25 billion issue for a US agency that represented the first major global transaction in that currency. The Deutsche mark sector benefited somewhat from the move to quality that appeared in February and, as in the dollar market, demand for higher-yielding securities was

Weighted average maturity of announced straight fixed rate international bond issues *

In years



* Two-quarter moving average.

Sources: Bank of England, Euroclear, Euromoney, IFR, ISMA and BIS.

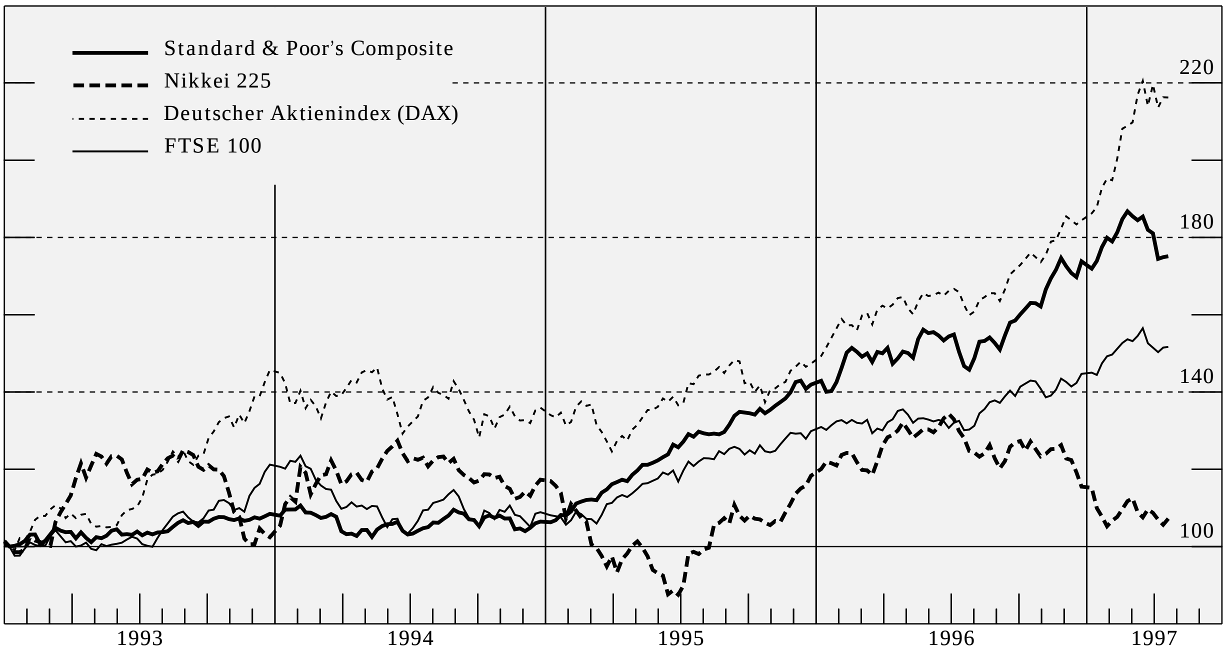
much in evidence. While several Latin American sovereign borrowers and Russia introduced notably large issues, repackagings based on underlying emerging market paper proved popular, as did a few long-term zero coupon issues. Activity in yen dropped by almost 40% because of Japanese investors' reduced interest in euroyen and dual-currency Samurai bonds. There was also a shift within the dual-currency segment from issues linking principal repayment to the Australian and New Zealand dollars to those tied to the US dollar and sterling. Finally, apart from the sizable number of issues denominated in or convertible into euros, one of the most striking developments was the expansion in emerging market currencies such as the Czech koruna and the rand. The appetite of investors for double-digit coupons and favourable swap opportunities enabled borrowers to obtain deep sub-LIBOR funding. While the bulk of such issues had very short maturities, one zero coupon rand bond carried a maturity of 30 years. With payment at a fraction of face value, long-term zero coupon issues create significant leverage opportunities.

Floating rate notes (FRNs). Widespread anticipations of interest rate increases in the US dollar and sterling markets and the strong liquidity position of financial intermediaries continued to provide underlying demand for FRNs during the first quarter of 1997. Although some issuers were reported to have switched into fixed rate instruments, most of the reduction in activity resulted from the slackening in the issuance of ABSs denominated in sterling and, to a lesser extent, dollars. This reduction was partly offset by stronger issuance by banks of subordinated bonds, including several perpetual issues. While some structured FRNs offered plays on the evolution of European yields, one borrower launched a two-tranche "parallel" bond issue in French francs and ECUs, with the option to exchange the notes into euros.

Equity-related issues. With issuance by US and Japanese-based borrowers nearly drying up, gross issuance in the equity-related sector contracted sharply. The drop in Japanese equity markets dragged down the prices of a large number of convertibles close to levels at which price protection was extinguished, triggering additional selling pressures by investors. The lack of issuing opportunities in the convertible market led Japanese banks to seek alternative sources of funds. The main exception to the general trend was the launch by a large German bank of a $1.3 billion issue

Equity market developments

Weekly averages (2nd January 1993 = 100)



Source: Datastream.

convertible into its holdings in an important industrial concern and a further small increase in issuance of US dollar convertibles by Hong Kong entities. Lastly, supranational borrowers introduced a few innovative Italian lira issues offering no interest payments but redemption prices linked to the performance of the Italian stock market.

Structural and regulatory developments

In March, the Committee on Payment and Settlement Systems of the Group of Ten central banks, the International Organization of Securities Commissions (IOSCO) and a group of securities systems operators released a jointly prepared disclosure framework designed to help market participants improve their understanding of risk exposures in securities settlement systems.[7] The document, in effect a questionnaire covering key aspects of how securities systems work, encourages operators to provide a full description of their systems, including their operating rules, membership arrangements, relationships with other organisations, operational risks and risk control policies. Operators are urged to complete the document, make it available to other market participants and send it to the BIS and IOSCO, which will make the information available internationally.

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7 See "Disclosure Framework for Securities Settlement Systems", CPSS/IOSCO Working Group on Disclosure by Securities Settlement Systems, Basle and Montreal, November 1996.

IV

DERIVATIVES MARKETS[8]

Main features

In spite of a slight increase in transactions on organised exchanges, the bulk of derivatives business continued to take place in the over-the-counter (OTC) market. While the two markets remain complementary, the relative importance of exchanges could decline further owing to advances in risk management techniques and to some inherent advantages of OTC instruments. For example, the growing recourse to bilateral netting and collateralisation has brought credit risk under better control, thereby reducing the need for centralised clearing mechanisms. At the same time, standardisation, for so long a strength of exchange-traded instruments, might have become a liability in the area of financial products given the complexity of cash flows and pricing techniques.

Exchange-traded instruments

Following three consecutive quarters of contraction, the aggregate turnover of exchange-traded financial contracts monitored by the BIS expanded by 7%, to about 300 million contracts, in the first quarter of 1997. While activity was higher in the interest rates and currency categories, a small reduction was reported for stock index contracts. The increase was more pronounced in the area of interest rate products (+11%), where several exchanges posted new trading records. Although the volatility of US dollar interest rates remained fairly subdued, growing anticipations of US monetary policy tightening appear to have prompted a strong pick-up of hedging-related interest rate transactions on North American exchanges (+22%). Meanwhile, uncertainty with respect to EMU boosted trades involving German and some higher-yielding European interest rates (+12%). In Japan, the low absolute level of interest rates may have continued to limit the recourse made to hedging instruments. The temporary weakness of equity markets generally supported activity in equity-related transactions. The decrease in the reported totals for European equity trading reflected largely the redefinition of contracts on the MEFF in Madrid. There was, however, a significant expansion of equity-related instruments in a few emerging market centres, most notably Brazil and South Africa. As in earlier periods, the trading of options on single equities continued to grow more rapidly than that of major stock market indices.[9] Activity in some index-linked contracts has been hampered by the higher costs resulting from the gradual increase in margin requirements as well as the higher risks created by wider daily trading ranges. Currency transactions recovered further (+3%), albeit from a low base. Overall, while the CBOT remained the most active exchange in the world, a new quarterly record of activity on LIFFE enabled that exchange to move into second position, overtaking the CBOE and the CME (see the graph on page 22). At the same time, significant growth in the DTB's traditional and recently introduced interest rate and equity products further accentuated that exchange's lead over the MATIF. Trading on European exchanges now represents 41% of global activity, compared with 39% for US exchanges and 9% for Pacific Rim centres.

Competition in exchange-traded markets remained intense during the period under review. This reflected a variety of factors, the most important being the forthcoming introduction of the single European currency and the relentless expansion of OTC markets. In response, exchanges once again sought to maintain or improve market share through the introduction of new contracts and the multiplication of trading links. Pressures to reduce costs encouraged the establishment of joint clearing facilities and mergers with counterparts in the cash market. At the same time, there was

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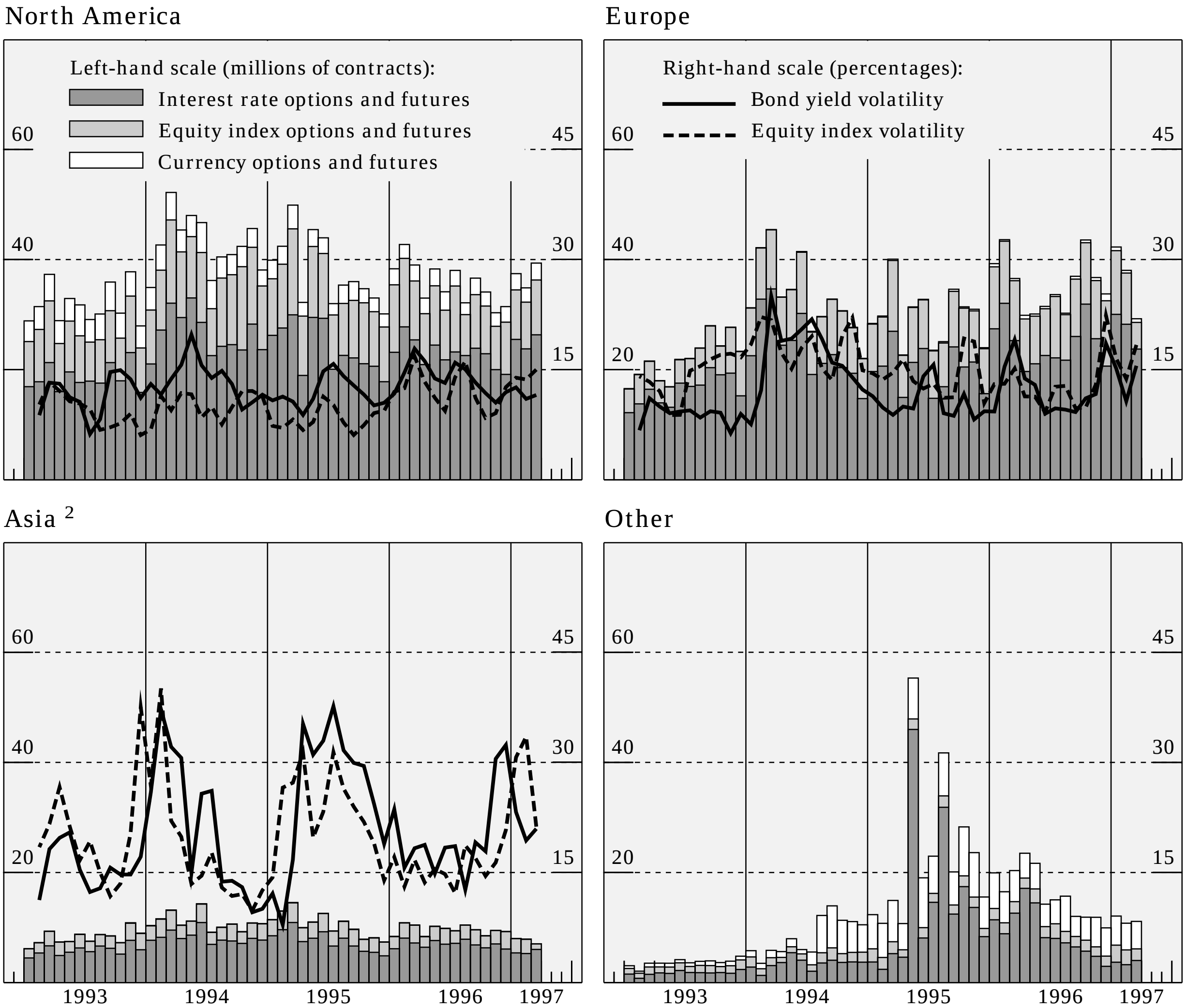
[8] The full names of the exchanges referred to in this section are listed on page 26.

[9] The Futures Industry Association now includes the trading of options on single equities taking place outside the United States in its survey of global market activity. Such business is not yet fully included in the BIS data.

Turnover of derivative financial instruments traded on organised exchanges and bond yield and equity index volatilities [1]



[1] Average rolling standard deviation of 20 previous daily percentage changes in benchmark yields and equity indices of US, German and Japanese markets for North America, Europe and Asia respectively. [2] Including Australia and New Zealand.
Sources: Datastream, Futures Industry Association and BIS.

growing evidence that the recent popularity of electronic trading systems was leading exchanges based primarily on the open outcry concept to fundamentally reconsider the benefits offered by electronic trading facilities. However, these developments are raising important issues concerning the relative merits of multilateral versus bilateral and of pit versus electronic systems (see the box on page 23).

In Europe, the thrust of initiatives taken by the three major exchanges focused on the capture of Deutsche mark interest rate business.[10] Thus, in March, the MATIF announced the introduction of four spread contracts against German government bond rates.[11] Such trades are more commonly conducted in the OTC market, but the exchange is aiming to attract interest by offering low costs and extended trading through Globex. Activity should initially be driven by EMU-related

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[10] Among other initiatives, in March the MATIF extended trading hours on its interest rate contracts and reduced some clearing fees; in January the DTB introduced a contract on the Deutsche mark/dollar rate, the first currency option traded on a German exchange, and in March it lowered margin requirements on its contracts.

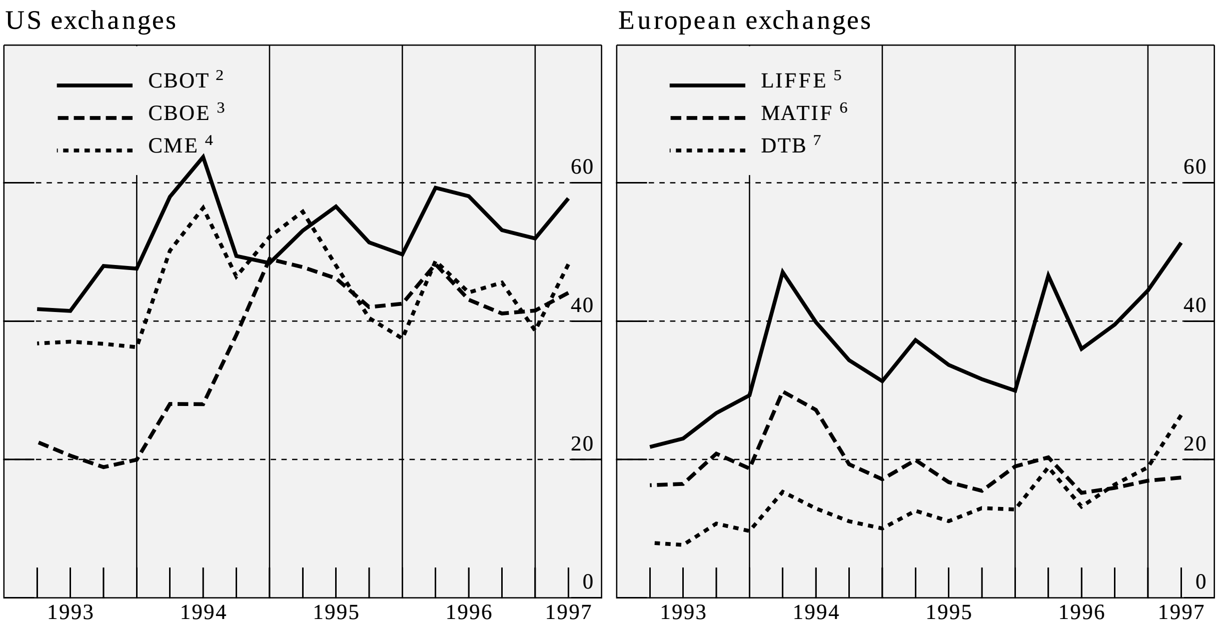
[11] Such transactions are also available in different versions on the MEFF and on the CBOT (on US Treasury instruments).

uncertainty, but the exchange hopes to retain business in the longer term since liquidity and risk premia will continue to exert an influence even after the advent of EMU. The MATIF also announced a plan for floor trading of contracts on medium-term German government bonds, which are already actively traded on the DTB's electronic system. Following a commitment by the German authorities to increase their issuance of short-maturity government bonds, the DTB introduced in March a new futures contract on short-term bonds and announced a switch of its contracts to the euro upon implementation of the single currency. With contracts in one-month and three-month euromark rates available since November and January respectively, the DTB now offers the widest variety of instruments across the German yield curve. LIFFE contributed to this show of strength by adding new delivery months to its euromark contracts (as well as its eurolira contracts) and extending trading hours to bring them into line with opening hours in continental Europe. It also announced a forthcoming relaunch of its medium-term German bond contract.

Smaller European exchanges responded in very different ways to the challenge created by EMU, with initiatives which included the introduction by the MEFF of money market yield curve and strip facilities on peseta interest rates, the announcement of plans by FINEX Europe to double the number of its currency contracts to strengthen its leading position in European currency derivatives, and the expected launch by the EOE of a new facility for the clearing not only of standardised but also of more highly customised OTC transactions. The expansion of business in Eastern European products was also notable, with the introduction by the MICEX in February of futures on the US dollar and on rouble-denominated Russian Government Treasury bills and the launch by ÖTOB in March of contracts based on its Hungarian Stock Index. The growing competitive threat from the major trading centres encouraged the smaller European market-places to focus on equity trading, an area they expect to be less affected by the introduction of the single European currency, and to consolidate through mergers and links. Thus, in January, the CSE and the FUTOP merged their cash and derivatives operations and, in March, the OM and the SSE undertook discussions on a similar merger. In the same month the OM, OMLX and OSL established a real-time trading and clearing link

Derivatives turnover on major US and European exchanges [1]

In millions of contracts, quarterly data



[1] Includes all types of derivative instruments traded on exchanges (i.e. including commodity products).
[2] Chicago Board of Trade. [3] Chicago Board Options Exchange. [4] Chicago Mercantile Exchange. [5] London International Financial Futures and Options Exchange. [6] Marché à Terme International de France. [7] Deutsche Terminbörse.
Sources: Futures Industry Association and BIS.

Issues raised by the development of trading links

Apart from initiatives primarily focused on EMU, the most significant developments in the first quarter centred around new trading links and, in particular, the issue of multilateral versus bilateral and of pit versus electronic trading arrangements. The future of Globex, the multilateral electronic trading system operated by Reuters, was put into serious doubt by the decision taken in January by the MATIF to leave the system by the end of April 1998. The exchange will replace after-hours trading on Globex by trading on the Paris Bourse's NSC system, enabling members to trade both equities and related derivatives on the same screen. The NSC system has an open architecture that is adaptable to a variety of user interfaces, making it more appealing than the current Globex system. In the wake of this move, the CME announced its withdrawal from the current version of Globex, proposing instead an agreement stipulating that, together with the NYMEX, it would embrace the NSC system in the second half of 1998 in exchange for the adoption by the Paris entities of the US-designed trade-processing software Clearing 21. These developments prompted Reuters to announce that it would terminate the system, although the exchanges will probably retain the Globex name for the revamped joint facility.

At the same time, surging growth in after-hours electronic trading on the CBOT created pressures on the exchange to renegotiate the open outcry linkage agreement it had reached with LIFFE in 1994. The initial arrangement restricted the trading hours of Project A, the CBOT's after-hours electronic trading system, in order to prevent it from overlapping with LIFFE's US Treasury bond trading session; a similar restriction also existed on the trading of LIFFE's German government bond contracts on its Automated Pit Trading (APT) system. However, the popularity of Project A led traders to seek a removal of these restrictions. Users of the electronic system have argued that the CBOT's evening floor trading session is more costly than what can be achieved on Project A, while floor traders fear that their position could be endangered if computerisation was introduced on a wider scale. In March, the members of the two exchanges voted to remove the restrictions on after-hours trading systems and to provide remedies if "inequitable" trading levels were to emerge on either exchange. The CBOT/LIFFE link is due to begin operation in May and, for the first time, will permit simultaneous pit and electronic trading. In spite of the concerns voiced by open outcry traders, this development might provide arbitrage opportunities and contribute to increased liquidity. In a related initiative, the CME and the DTB agreed in January on the installation of DTB terminals on the CME floor. The terminals will enable DTB members at the CME to trade the DTB's stock index futures contract. DTB terminals have also been installed at a small number of financial institutions elsewhere in the United States. The links should create opportunities to trade the US, German and Japanese equity markets simultaneously.

These developments are indicative of a structural shift in the industry as a whole. Stagnation in established products, the associated pressures to reduce operating costs, the need for exchanges to extend their reach beyond their regular trading hours and the growing threat represented by the parallel development of trading systems by financial information vendors all mean that open outcry exchanges are increasingly willing to make concessions to electronic forms of trading. Thus, while traditional exchanges have been aggressively promoting open outcry, they have also surrounded themselves with new technology. Some exchanges have even started to trade the same types of contract on different systems. For example, LIFFE trades German government bond options on APT after regular hours but also trades Japanese government bond contracts electronically during standard hours. In this context, the demise of Globex and its replacement by bilateral links does not necessarily signify the death of multilateral trading. Globex was designed to facilitate cross-border after-hours trading and to provide a standardised trading tool that could be accessed by exchanges around the world. Instead, exchanges have preferred to develop their own after-hours systems because this gives them more flexibility and better governance. Although trading across time zones remains thin, exchanges believe that the process of globalisation will eventually lead to greater activity. Pressures to reduce trading costs mean, however, that markets now face the need to standardise after-hours systems and clearing capabilities. Thus, in spite of the difficulties faced by Globex, multilateral trading may reappear in a different guise.

for equity derivatives which will enable investors to access any of the equity products offered on any of the participating exchanges. While mergers are aimed at improving the cost-efficiency of trading and clearing mechanisms, links are also regarded as an effective means of expanding the audience of smaller exchanges. Such initiatives were, however, not limited to smaller exchanges, as illustrated by the establishment of a joint subsidiary by the MATIF and SBF to manage and expand equity business on the MATIF. The SBF will be the leading partner and will take over the trading of the CAC 40 index contract in the spring of this year. (Other initiatives in this area - as well as the various issues they raise - are covered in the box above.)

Turning to listing activity in other parts of the world, US exchanges continued their push into emerging market instruments. In January, the CME began to trade its first Asian products (on Globex rather than on its trading floor) with futures based on the Dow Jones Taiwan Stock Index. Competition to list Asian products was illustrated by the fact that on the following day the SIMEX began trading on a different index, while the PSE launched options on the same index as the CME. In March, the CME also began to trade contracts on short-term Mexican interest rates. In February, in an attempt to boost its currency business, the PHLX began to trade its so-called 3-D options on the yen/dollar rate. Being settled in US dollars, such options obviate the need for credit lines in foreign currency and therefore remove an obstacle to retail participation in the US currency derivatives market. As in Europe, pressures to reduce the cost of trading and clearing were also in evidence in the United States. For example, in March the clearing organisations representing all US futures exchanges signed a letter of intent to introduce facilities enabling firms to settle trades in a single transaction through common banking accounts. There was renewed listing activity in Asia, with the introduction by the TSE of serial options on the Japanese government bond contract and the planned introduction of options on individual stocks. In March, the Taiwanese Parliament legalised the trading of futures contracts. Finally, in Latin America, the two main Brazilian derivatives exchanges merged their operations in order to better withstand international competition.

Over-the-counter instruments

Preliminary data on activity in the swap and OTC interest rate markets during 1996 were released by the International Swaps and Derivatives Association (ISDA) in March 1997. They showed that, in spite of some slowdown in the growth of new transactions, activity remained brisk. The total stock of outstanding contracts at end-year rose by 37% over the end-1995 figure, to $24.3 trillion. This compares with an expansion of 8% in the outstanding stock of exchange-traded financial derivatives. Meanwhile, data published by the US Office of the Comptroller of the Currency for 1996 painted a picture of sustained growth in the US market, with an 18% increase in the combined stock of exchange-traded and OTC contracts held by commercial banks in that country. Anecdotal evidence for the first quarter of 1997 suggests a sustained expansion in all three major areas of risk management, namely interest rates, currencies and equities.[12]

While activity in currency and equity products was stimulated by the increase in market volatility, interest rate products, and swaps in particular, continued to benefit from a number of favourable influences, including arbitrage opportunities with the repo market and spread trading across yield curves, which appear to have more than compensated for the subdued level of volatility in this market segment. However, the anticipation of policy tightening by the Federal Reserve was not reflected in a rush by US dollar borrowers to lock in at current conditions, perhaps because such a move had already been widely discounted. Meanwhile, generally tight swap spreads over benchmark rates limited somewhat the opportunities for fixed to floating swap-driven issuance in US dollars. In Europe, intermediaries implemented convergence strategies in the early part of the quarter, while the emergence of doubts concerning EMU thereafter stimulated divergence trades, as well as transactions providing for low-cost protection in the event of a delay to EMU and "convergence neutral" trades based on spreads on single yield curves. In Japan, the end of the fiscal year was reported to have led to the unwinding of a number of long positions by Japanese banks. More generally, market participants noted growing interest in asset swaps involving long-maturity bonds of Mediterranean and emerging market countries, as well as in structures allowing for spread trading between various bond indices. In the particular area of interest rate options, there was strong demand for complex products, such as low-cost or conditional premium options and interest rate caps or floors that could be put on or taken off at will. Market participants noted that products that were considered exotic a few years ago (such as range and barrier options) are now commonplace. Finally, while few new and truly innovative products were introduced, intermediaries began to market overnight indexed swaps in sterling, which

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[12] Although new products are being tested in the area of credit risk, the market is still in its infancy, with initiatives being taken to measure and trade such risk. See also Part II above, page 11.

offer protection against overnight rate volatility, bringing the UK market into line with other major markets. The introduction of government and corporate issues indexed to the inflation rate in the United States also led intermediaries to develop instruments permitting the swapping of the consumer price index against LIBOR.

In the area of currency products, renewed volatility was the main underlying force. The weakening of the yen against the dollar and sharp movements in the exchange rates of some Asian developing countries supported cross-currency swaps. In the market for currency options, the strength of the US dollar created demand for calls on the US currency. Rising volatility in the most active parities towards the end of the quarter led intermediaries and end-users to adjust their trading strategies. Range trades, which enable users to play on volatility but with less risk than strangles or straddles (since the loss is limited to the premium paid rather than being open-ended), continued to be popular, but there was greater demand for directional instruments, with intermediaries often combining elements of plain vanilla and range options to lower trading costs. A similar rationale led intermediaries to launch average rate and basket options. Finally, business in equity-related products was reported to have expanded considerably in the first quarter of 1997, with the volatility of the underlyings offering favourable ground for intermediaries to issue calls and puts in line with rapidly changing market conditions. Issues covered a wide variety of indices, selections of shares and individual stocks, reflecting investors' growing interest in equity products. Some exotic structures were designed to offer greater leverage but for lower premiums than plain vanilla instruments. European shares remained the most widely used underlyings for new issues.

Structural and regulatory developments

In January, the Governors of the G-10 central banks approved for implementation from end-June 1998 a proposal by the Euro-currency Standing Committee for the regular collection of market statistics on derivatives markets. The reporting framework will cover the notional amounts and gross market values outstanding of broad categories of foreign exchange, interest rate, equity and commodity-based OTC derivative instruments. It will also include derivatives-related credit exposures before and after netting arrangements. The data will be compiled by national central banks and published by the BIS, initially on a semi-annual basis. The reporting framework is closely related to the "Framework for Supervisory Information about the Derivatives Activities of Banks and Securities Firms", released jointly by the Basle Committee on Banking Supervision and the Technical Committee of IOSCO in May 1995. Whereas the supervisors' framework will apply to all institutions for which they have regulatory responsibility, regular derivatives reporting will be conducted with a limited number of large dealers.

In February, the US Securities and Exchange Commission (SEC) adopted rules also aimed at enhancing the disclosure of derivatives positions. The rules require publicly listed companies to adopt one of three quantitative disclosure methods for publication in their annual reports, namely a tabular presentation of fair value information, a sensitivity analysis of potential future losses or a disclosure of value-at-risk.[13] In the spring, a US congressional subcommittee began to examine proposed amendments to the Commodity Exchange Act, the law regulating futures trading. The proposed changes would allow exchanges to offer professional market participants products that would be exempt from oversight by the Commodity Futures Trading Commission (in contrast to those offered to retail participants). Given that much of the activity on exchanges is conducted between professionals, this would reduce the regulatory burden involved in launching new contracts, thus enabling exchanges to respond more flexibly to market developments. This should be set against the possibility that the proposed changes might give the CFTC the right to regulate OTC foreign exchange transactions with (so far undefined) retail counterparties. It is important to note, however, that the final outcome of the legislative process might differ significantly from the original proposals.

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13 However, some legislators expressed discomfort at the new rules, arguing that they would discourage companies from making proper use of derivatives to manage their risks.

In March, the authorities of Brazil, Denmark, Hungary, Malaysia, Portugal and Sweden signed the Declaration on Cooperation and Supervision of International Futures Exchanges and Clearing Organisations. The declaration, adopted in March 1996, instituted a multilateral mechanism for the sharing of information on a bilateral basis between participating market authorities. The objective of the accord is to help prevent systemic disruptions by identifying key triggering events. The occurrence of such events would lead to the sharing of information concerning the financial resources or positions of an exchange's member.

ABBREVIATIONS USED FOR EXCHANGES

CBOE	Chicago Board Options Exchange
CBOT	Chicago Board of Trade
CME	Chicago Mercantile Exchange
CSE	Copenhagen Stock Exchange
DTB	Deutsche Terminbörse (Frankfurt)
EOE	European Options Exchange - Optiebeurs (Amsterdam)
FINEX	Financial Instrument Exchange (Dublin)
FUTOP	FUTOP Clearing Centre (CSE)
LIFFE	London International Financial Futures and Options Exchange
MATIF	Marché à Terme International de France
MEFF	Mercado de Futuros Financieros (Barcelona/Madrid)
MICEX	The Moscow Interbank Currency Exchange
NYMEX	New York Mercantile Exchange
OM	Optionsmarknad Stockholm AB
OMLX	The London Securities and Derivatives Exchange
OSL	Oslo Stock Exchange
ÖTOB	Austrian Futures and Options Exchange (Vienna)
PHLX	Philadelphia Stock Exchange
PSE	Pacific Stock Exchange (San Francisco)
SBF	Société des Bourses Françaises
SIMEX	Singapore International Monetary Exchange
SSE	Stockholm Stock Exchange Ltd.
TSE	Tokyo Stock Exchange