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INTERNATIONAL BANKING AND FINANCIAL MARKET DEVELOPMENTS

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C O N T E N T S

INTRODUCTION*

This commentary on recent developments in international banking, securities and global derivatives markets is based on partial information available for the fourth quarter of 1996 and on more detailed banking data for the third quarter. It is divided into four parts. Part I provides an overview of the main underlying trends that appear to have emerged in recent months in international financial markets. Part II deals with the international banking market, using information on syndicated loan facilities for the fourth quarter of 1996 and the more detailed BIS international banking statistics, which are available up to end-September. Part III reviews developments in international securities markets in the fourth quarter of 1996 and discusses in an appendix some of the conceptual issues involved in classifying international bonds. Finally, Part IV outlines the main features of recent developments in derivatives, both those traded on exchanges, for which comprehensive up-to-date statistics are available, and over-the-counter instruments.

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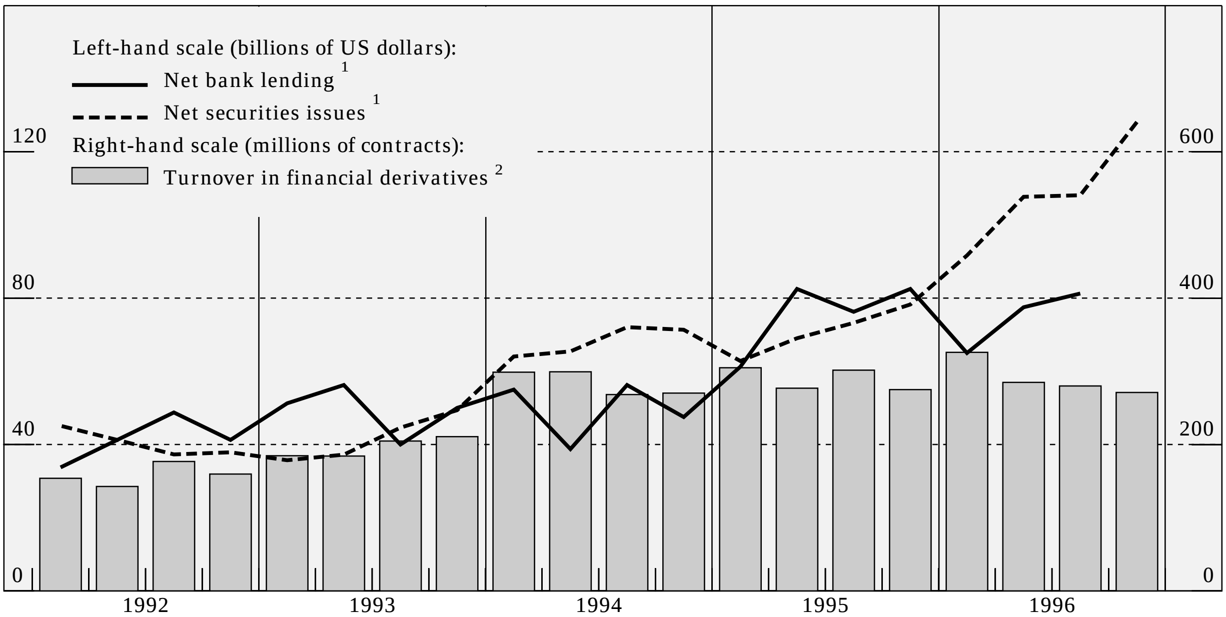
I

OVERVIEW OF RECENT INTERNATIONAL BANKING AND FINANCIAL MARKET DEVELOPMENTS

Ample liquidity, subdued inflation, widespread efforts at fiscal consolidation and further progress towards European economic and monetary union (EMU) combined to create a favourable climate in the international financial markets during the fourth quarter of 1996. Indeed, with the limited scope existing for a further substantial reduction in interest rates in the major fixed income markets, investors' search for higher returns led to a broadening in the focus of activity to include more "exotic" sectors in terms of currencies, signatures and instruments. In testing new products and exploring new niches, investors showed a willingness to take greater market and credit risks. Financial institutions remained particularly active, diversifying their funding sources, restructuring their balance sheets and raising capital on an unprecedented scale through increasingly complex instruments. When seen in relation to the more moderate pace of expansion of net international bank credit recorded last year, the growing buoyancy of securities issuance by financial intermediaries may have represented more a shift in the structure of risk management, both on and off-balance-sheet, than a genuine increase in the financing of the "real" economy.

Total international financing

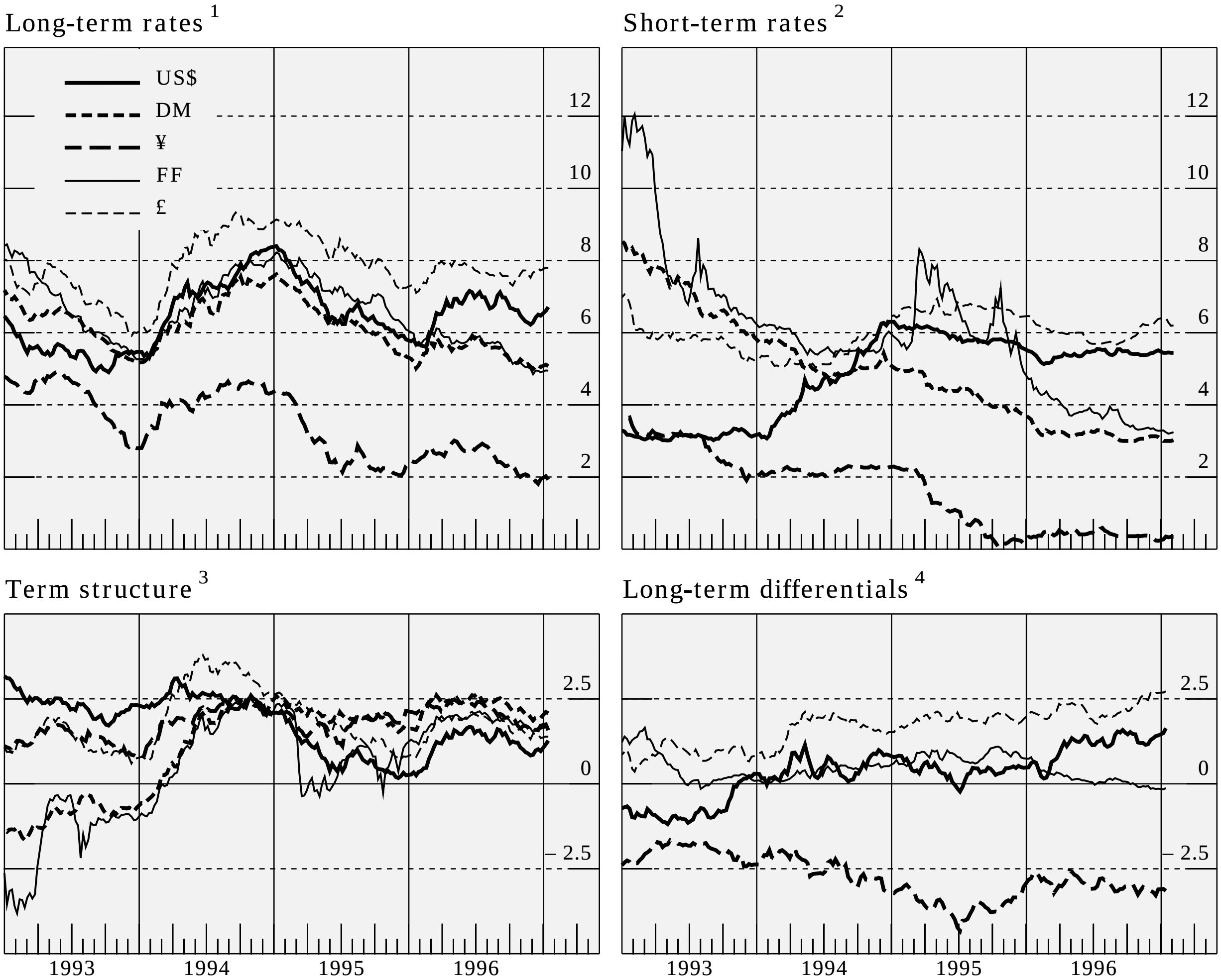


[1] Four-quarter moving averages. [2] Financial derivatives traded on organised exchanges.
Sources: Bank of England, Euroclear, Euromoney, Futures Industry Association, International Financing Review (IFR), International Securities Market Association (ISMA), national data and BIS.

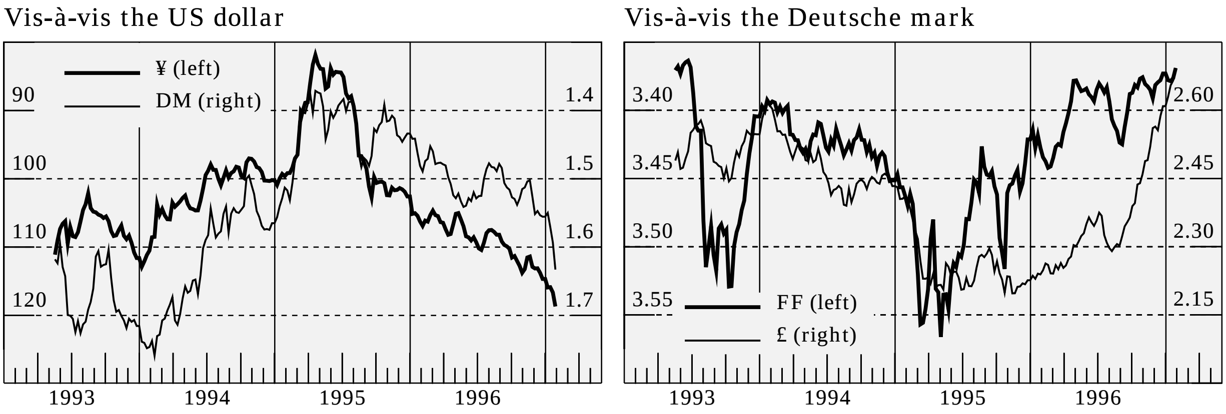
The international securities markets were at the centre of these developments. Thus, even after excluding repayments of maturing issues, new debt issuance broke all previous records in the fourth quarter, with a total of $163.6 billion. While the fund-raising activity of financial institutions accounted for two-thirds of this amount, international investors' search for higher yields increased their willingness to move down the credit spectrum and lengthen duration, opening new financing and refinancing opportunities for a broadening range of borrowers. The accompanying reduction in risk premia, in turn, boosted the demand for securities involving the repackaging of assets and/or the use of derivative features. Indeed, most new issues in the international securities markets during the period under review incorporated one or both of these elements.

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.

There was on the other hand a further decline in the aggregate turnover of exchange-traded financial derivative contracts monitored by the BIS. This occurred despite the multiplication of initiatives by organised exchanges aiming to address the challenge created by the introduction of the single European currency and to counter the relentless growth of over-the-counter (OTC) business. Overall, however, investors' appetite for enhanced returns appears to have been satisfied more by securities offering derivative features than by stand-alone OTC instruments. Thus, while the return to favour of structured securities in the international markets suggests on balance greater risk-taking, recent developments in derivatives markets seem to imply that the surge in securities transactions was accompanied by a lower degree of leverage than in earlier episodes of market buoyancy. However, questions remain as to whether the risk and return characteristics of complex structures, as well as the liquidity of the underlying assets, have been properly assessed by investors. Furthermore, the boosting of securities transactions involving financial intermediaries, inter alia to exploit regulatory or fiscal gaps, may have broader implications for the international financial system which are not yet fully understood.

Activity in the market for syndicated bank loans during the fourth quarter also points to ample global liquidity, with concerns being expressed by some regulators about prevailing lending terms. However, more detailed international banking data now available for the third quarter show that actual net bank credit, which excludes undrawn facilities and refinancing of maturing loans, continued to lag considerably behind the expansion of securities markets. In addition to the retreat of Japanese banks from the market, banking activity in the third quarter was dampened by the sharp cutback in credit flows to some large emerging market countries in Asia. At the same time, the international banking market continued to accommodate shifts in the portfolio preferences of customers, with on-balance-sheet data providing only a partial view of banks' active involvement in securities and derivatives transactions worldwide.

Estimated net financing in international markets[1]

In billions of US dollars

Components of net international financing	1994	1995		1996				Stocks at end-Sept. 1996
	Year	Year	Q4	Q1	Q2	Q3	Q4	
Total international[2] bank claims[3]	275.1	644.0	52.0	107.1	52.1	203.8	..	9,502.0
minus: interbank redepositing	85.1	314.0	2.0	22.1	-67.9	133.8	..	4,602.0
A = Net international bank lending[3]..........	**190.0**	**330.0**	**50.0**	**85.0**	**120.0**	**70.0**	**..**	**4,900.0**
B = Net euronote placements	**140.2**	**192.4**	**45.9**	**56.6**	**75.6**	**48.0**	**84.9**	**757.0**
Completed international bond issues[4]	373.6	360.2	103.8	127.4	134.9	124.9	154.3	
minus: redemptions and repurchases[4]	228.4	239.6	66.2	74.5	72.1	71.9	75.6	
C = Net international bond financing[4]	**145.2**	**120.6**	**37.7**	**52.9**	**62.8**	**53.0**	**78.7**	**2,307.6**
D = Total international financing[5]	**475.4**	**643.0**	**133.5**	**194.5**	**258.4**	**171.0**	**..**	**7,964.7**
minus: double-counting[6]	60.4	113.0	8.5	64.5	28.4	46.0	..	1,254.7
E = Total net international financing	**415.0**	**530.0**	**125.0**	**130.0**	**230.0**	**125.0**	**..**	**6,710.0**

[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.

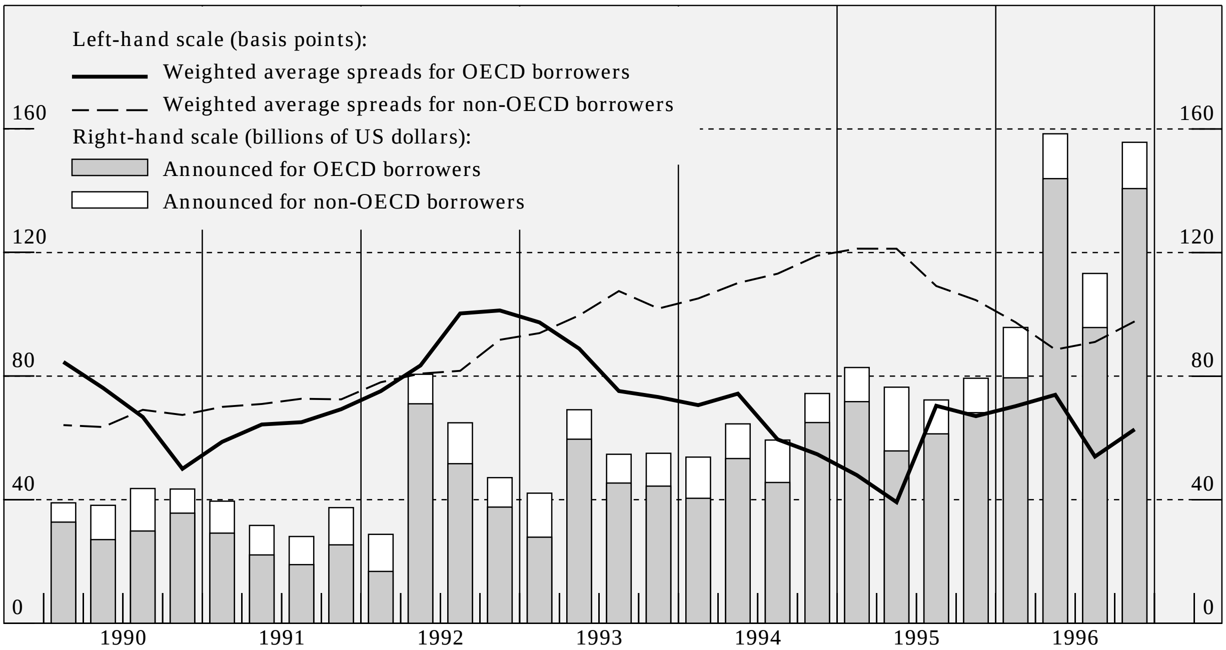
II

THE INTERNATIONAL BANKING MARKET

Main features

Activity in the syndicated loan market continued to be buoyant in the *fourth quarter* of 1996, with new announcements amounting to \$155.7 billion compared with a figure revised sharply upwards to \$113.6 billion in the third.[1] For 1996 as a whole, announcements increased by 69%, to \$523.7 billion. Borrowers from the United States accounted for the bulk of new credits extended during the fourth quarter (\$96.5 billion), followed by entities from the United Kingdom (\$14.9 billion) and Canada (\$6.5 billion). The favourable terms granted to creditworthy industrial sector borrowers reportedly encouraged several of them to return to the market following long absences. At the same time, financing activity by emerging market borrowers continued to proceed at a strong pace. With \$4 billion worth of new loans (and a similar amount of international bonds), Korean entities profited from the country's entry into the OECD. Borrowers from other countries that have recently joined the OECD (such as the Czech Republic and Poland) also benefited from more favourable pricing.

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.

While the proportion of acquisition-related transactions increased from 18% to 23%, a number of loans were put in place as back-stop facilities for the issuance of commercial paper and asset-backed securities, including a \$2.5 billion loan to support a \$5.1 billion securitisation based on UK-originated corporate loans. Project financing remained significant, with several such loans forming part of larger packages involving securities issues. Although market sources reported that the high level of market liquidity and improvements in credit quality had driven margins to new lows, this was not immediately apparent from the available data, perhaps reflecting the entry of lower-rated borrowers. Thus, while average margins for developing country entities continued their slight upward

[1] Announced credits are often subject to substantial revisions going back several quarters at the end of the year.

trend, there was an upward blip in the spreads charged to industrial country borrowers. Nevertheless, concerns were expressed by some regulators. US bank supervisors, in particular, made renewed calls for caution in the dollar loan market, noting that the pricing of some transactions did not appropriately reflect risks. They also questioned some of the non-price aspects of lending such as the longer maturities of loans and the more liberal financial covenants, as well as some of the syndication practices. They warned that the strong expansion of high-yield loans - particularly non-rated ones - could lead to an overall erosion of loan quality.

Detailed international banking statistics available for the *third quarter* show a rebound in gross lending, mainly on account of seasonal factors, but a marked slowdown in the volume of new credit net of interbank redepositing. Whereas the retreat of Japanese banks and more cautious lending to Asian countries dampened activity, there was continuing expansion in business related to repurchase agreements (repos) and buoyant lending to some smaller developed countries outside the reporting area. The growing use of repos in recent years[2] has allowed participation in the international money market by a broader spectrum of players and improved opportunities for banks' funding and lending activity. No direct statistical evidence on the international repo market is available; however, the continuing strong build-up of positions vis-à-vis the non-bank sector located in major financial centres and of banks' securities holdings suggests a further expansion of this particular segment of the international market. The growing intertwining of market segments is not limited to cash transactions but also extends to derivatives, where repos can be used to hedge interest rate exposure in swaps, one of the most buoyant sectors of derivatives markets.

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

In billions of US dollars

Components of international bank lending	**1994**	**1995**		**1996**				**Stocks at end-Sept. 1996**
	Year	**Year**	**Q3**	**Q4**	**Q1**	**Q2**	**Q3**	
Claims on outside-area countries	**36.6**	**120.9**	**32.9**	**31.9**	**20.8**	**28.1**	**34.7**	**1,080.0**
Claims on inside-area countries	**228.3**	**506.5**	**62.0**	**31.2**	**78.0**	**20.9**	**171.4**	**8,179.5**
Claims on non-banks	-49.2	189.6	2.7	18.2	49.6	84.5	48.5	2,562.8
Banks' borrowing for local onlending[2]	192.4	2.9	10.0	11.0	6.3	4.4	-10.9	1,014.7
Interbank redepositing	85.1	314.0	49.4	2.0	22.1	-67.9	133.8	4,602.0
Unallocated	**10.1**	**16.7**	**9.5**	**-11.1**	**8.3**	**3.0**	**-2.3**	**242.4**
Gross international bank lending	**275.1**	**644.0**	**104.4**	**52.0**	**107.1**	**52.1**	**203.8**	**9,502.0**
Net international bank lending[3]	**190.0**	**330.0**	**55.0**	**50.0**	**85.0**	**120.0**	**70.0**	**4,900.0**
Memorandum item: Syndicated credits[4]	**252.0**	**310.8**	**72.3**	**79.3**	**95.8**	**158.7**	**113.6**	

[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.

The brisk pace of lending to outside-area countries masked a sharp cutback in credit flows to Asia. This confirms evidence already apparent towards the end of the second quarter of a loss of momentum of short-term capital flows to some of the main emerging economies in the region. Pronounced falls were recorded in lending to Korea and Thailand, the two major bank debtors, and with a high proportion of short-term debt. While earlier efforts by the national authorities to reduce

[2] For a brief assessment of the importance of repurchase agreements (repos) in the international financial market, see the previous issue of this publication, pp. 20-24.

reliance on such funds may have begun to bear fruit, other factors, such as a reassessment of lenders' strategies in the face of recent economic developments in those countries, may have accelerated the movement. There was, as a result, a rebalancing of external debt financing in the developing world, with increased international securities issuance by lesser-known Asian names and greater recourse to bank credit by the corporate sector in Latin America.

International banking activity during the third quarter of 1996 was also influenced by a number of specific events. One was the renewed acceleration in the retreat of Japanese banks from other major financial centres. Another was the emergence of strains in the foreign exchange and securities markets during the summer. While the former hindered growth in yen business, lending in dollars benefited from increased interest in that currency. In the case of the French franc, the growth in bank lending was largely related to repo transactions. By contrast, fading investor interest in Swiss franc and ECU assets led to a contraction of outstanding positions in these two sectors. Meanwhile, cross-border bank credit in lire was affected by a temporary waning of interest on the part of foreign investors in lira-denominated securities and therefore of hedging-related borrowing demand from Italian banks.

Currency composition of international bank lending[1]

In billions of US dollars

Currencies	1994	1995			1996			Stocks at end-Sept. 1996
	Year	Year	Q3	Q4	Q1	Q2	Q3	
Banks in industrial reporting countries ...	**99.2**	**519.3**	**91.4**	**45.5**	**119.8**	**59.6**	**177.1**	**7,627.4**
US dollar	135.3	115.7	14.5	1.0	7.9	-32.4	79.0	3,260.7
Deutsche mark	-27.7	14.3	-13.7	10.0	52.8	4.9	12.8	1,147.8
Yen	48.1	175.8	66.8	60.7	-17.9	18.1	3.8	875.2
French franc	-41.2	50.2	10.9	-12.0	-8.1	0.4	23.2	355.7
Italian lira	11.6	39.9	15.2	5.3	10.4	41.2	3.0	317.8
Swiss franc	-7.0	-4.6	3.8	-19.1	12.4	9.6	-4.6	299.4
Pound sterling	11.5	8.7	-19.5	-5.8	4.9	-6.0	13.2	279.0
ECU	-27.8	-20.4	-19.8	-14.7	-0.3	-11.1	-3.4	177.9
Other and unallocated[2]	-3.7	139.8	33.1	20.1	57.6	34.7	50.1	913.9
Banks in other reporting countries[3]	**175.9**	**124.7**	**13.0**	**6.5**	**-12.7**	**-7.5**	**26.8**	**1,874.5**

[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.

Business with countries inside the reporting area

The retrenchment of Japanese banks in the third quarter of 1996 tended to depress activity in the *interbank market* within the reporting area. However, this was more than offset by a number of expansionary influences, including the usual seasonal rebound in activity, speculative demand for weakening currencies and repo-related transactions. Of note in this respect was the nearly $40 billion of net securities purchases by banks. The fact that such a build-up occurred in parallel with a temporary setback in the currency and bond markets suggests that international banks' trading in securities tended to have a stabilising influence. For example, a large volume of repo transactions involving the French banking system was undertaken in parallel with sales of French franc securities by foreigners.

Outstanding claims on the *non-bank sector* within the reporting area also partly mirrored banks' transactions in securities in the third quarter. Thus, the strong growth recorded in claims on the US non-bank sector was largely accounted for by foreign banks' accumulation of US Treasury paper, the main collateral instrument used in the euromarket. A similar reasoning applies to the (considerably smaller) rise reported in claims on the German non-bank sector. On the liabilities side of reporting banks' balance sheets, the US non-bank sector was the major single source of non-bank funds. This suggests that purchases of US Treasury paper by eurobanks were partly funded from the US market itself. Although such transactions are mutually offsetting in the capital account of the balance of payments, they may have important repercussions on interest rates, involving shifts in instruments and therefore in the balance between supply and demand within each market segment.

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		
	Q3	Q4	Q1	Q2	Q3	Q3	Q4	Q1	Q2	Q3
Total assets	**24.0**	**31.5**	**33.9**	**72.5**	**47.6**					
Canada	-1.4	-1.9	-0.8	1.0	0.9	6.8	9.0	5.1	8.8	11.0
France	-1.3	-1.1	-3.2	4.6	0.5	20.7	14.0	21.9	17.8	17.2
Germany	7.2	2.8	4.5	3.8	4.7	50.6	88.3	55.7	38.4	30.7
Italy	4.1	-0.1	0.7	4.7	-3.2	-10.6	16.9	5.8	0.7	-0.8
Japan	-10.1	9.5	-10.9	0.0	1.2	52.7	88.7	-83.1	62.3	-21.2
United Kingdom	3.6	3.1	3.8	12.5	3.1	10.4	10.1	20.4	12.0	8.8
United States	19.6	-7.0	24.9	13.8	30.6	69.8	51.7	30.2	73.0	57.9
Other countries ...	2.3	26.2	14.9	32.1	9.8					
Total liabilities	**21.4**	**9.9**	**59.0**	**31.3**	**17.4**					
Canada	-1.2	-0.7	0.2	2.8	-0.1	6.4	5.9	0.3	4.8	2.9
France	1.3	-0.4	9.0	-2.2	2.2	12.3	29.1	-22.4	-10.3	-6.4
Germany	-7.7	-13.2	3.2	0.8	-8.0	12.1	83.3	-3.0	11.4	11.8
Italy	-1.2	-4.3	8.5	-0.2	0.2	-0.4	43.0	-26.2	14.8	-7.6
Japan	3.0	0.0	6.3	5.6	-1.0	50.1	116.8	7.8	63.9	-51.9
United Kingdom	1.3	5.8	5.5	4.0	2.0	17.2	27.0	26.1	21.2	17.3
United States	11.6	7.4	8.4	-2.4	15.0	73.2	68.9	76.7	49.8	55.8
Other countries ...	14.3	15.3	17.9	22.9	7.1					

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

Business with countries outside the reporting area

International bank lending to outside-area countries accelerated further in the third quarter of 1996, from $28.1 billion in the second quarter to $34.7 billion. However, the buoyancy of overall lending conceals a shift away from Asia and in favour of other regions. There was in particular a strong rebound in bank lending to smaller developed countries (from virtually nil to $8.9 billion), more than accounted for by Australia ($5.6 billion), Greece ($2.9 billion) and Turkey ($1.4 billion). In the case of Turkey, this was accompanied by some repatriation of foreign deposits by the domestic banking system. Issuance of foreign currency bonds by the Turkish Treasury was the main underlying factor; these were targeted at domestic banks in order to reduce dependence on short-term capital.

Most notable, however, was the near-halving of new credit extended to emerging markets in Asia (see also Annex Tables 5A and 5B). As mentioned above, there was a sharp cutback in the cases of Korea (from $7.4 billion to $3 billion) and Thailand (from $4.1 billion to $1 billion), the largest bank debtors outside the reporting area.[3] Record current account deficits and weakening domestic credit growth were the main dampening factors. The drying-up of banking funds may have been responsible for the decision by the Thai authorities in October to postpone plans to further curb foreign currency borrowing through the Bangkok International Banking Facility. There was also a slowdown in bank lending to China, Malaysia and the Philippines, albeit in the last two cases to levels which remained above the quarterly average for 1995. High domestic interest rates and strong economic growth in Malaysia and the Philippines continued to attract foreign funds on a significant scale. Standing against this general slowdown, credit flows to Indonesia gathered further momentum to reach $2.4 billion, despite measures taken in June and September to discourage short-term capital inflows attracted by the persistence of high domestic interest rates.

Banks' business with countries outside the reporting area*

In billions of US dollars

Outside-area country groups	1994	1995		1996			Stocks at end-Sept. 1996
	Year	Year	Q3	Q4	Q1	Q2	Q3	
Total assets	**36.6**	**120.9**	**32.9**	**31.9**	**20.8**	**28.1**	**34.7**	**1,080.0**
Developed countries	-1.3	26.0	6.3	4.9	3.7	0.5	8.9	202.0
Eastern Europe	-13.0	3.3	1.5	0.6	2.7	0.3	1.9	89.6
Developing countries	51.0	91.5	25.1	26.5	14.5	27.3	24.0	788.5
Latin America	2.0	16.4	5.8	9.0	0.2	4.0	5.6	255.6
Middle East	3.1	-7.5	-2.3	-3.4	-4.0	0.5	5.5	74.6
Africa	-2.0	-3.7	-0.4	-0.4	-0.8	-0.3	-0.5	34.7
Asia	47.8	86.3	21.9	21.2	19.1	23.2	13.3	423.6
Total liabilities	**74.6**	**96.4**	**37.6**	**11.4**	**29.2**	**28.3**	**8.7**	**956.1**
Developed countries	22.4	20.3	15.7	-5.8	5.2	6.3	5.1	187.9
Eastern Europe	2.0	9.2	3.7	2.7	-0.7	-0.1	-0.4	45.0
Developing countries	50.1	66.9	18.2	14.5	24.7	22.1	4.0	723.1
Latin America	21.0	43.0	18.4	8.9	3.5	18.0	2.2	225.0
Middle East	2.9	8.1	-6.6	-2.2	9.2	-3.2	3.5	211.4
Africa	3.3	-1.2	-1.1	-0.6	-0.1	2.0	-0.1	42.2
Asia	22.9	17.0	7.5	8.4	12.0	5.3	-1.6	244.4

* Changes in amounts outstanding excluding exchange rate valuation effects.

A further recovery of new lending, from $4 billion to $5.6 billion, characterised bank credit relations with Latin America. There was in particular a $2.5 billion increase in outstanding claims on Mexico, following a sizable reduction in the preceding six months. Restructuring of the local banking system encouraged Mexican companies to access the international banking market directly on a larger scale. Heavy government refinancing of official debt in the international securities market also created opportunities for the non-bank sector to borrow from foreign banks. In Argentina, similarly, borrowing by the private sector in the face of government refinancing of debt through international bonds was mainly responsible for the $1 billion rise in reporting banks' claims on the country. In contrast to Mexico, the bulk of the new funds were channelled through the interbank market, perhaps reflecting improving confidence in the local banking system. At the same time, banking flows to Brazil showed signs of abating, as exchange rate uncertainty reduced the incentive

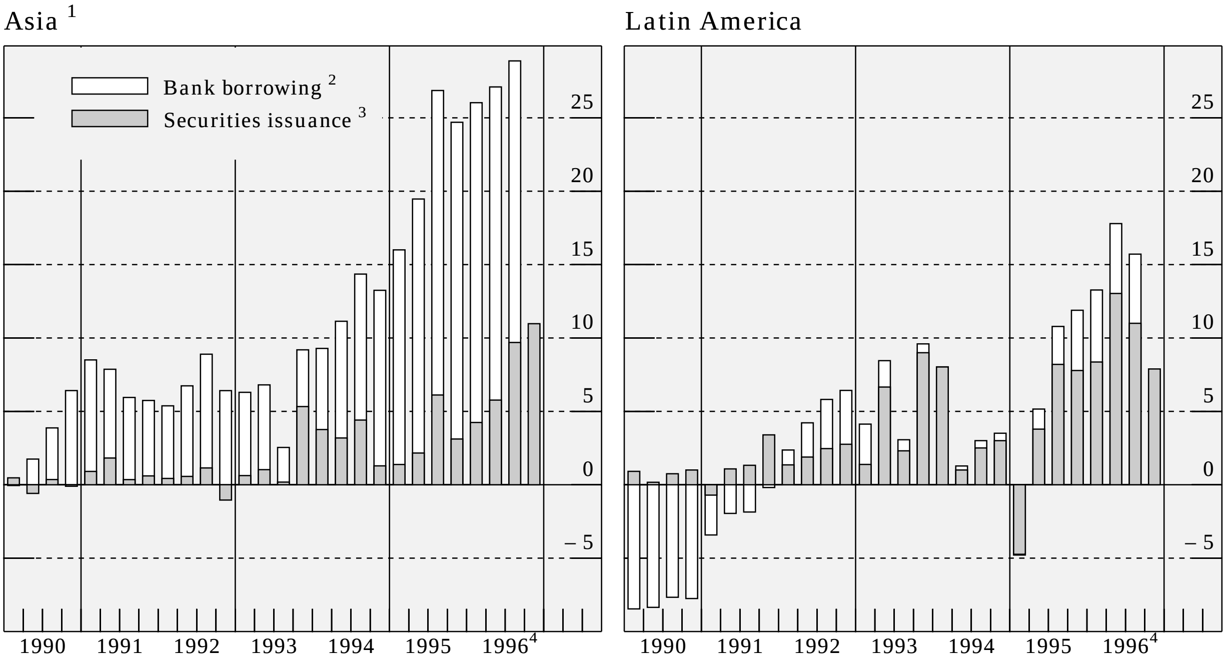
3 However, banking debt statistics are somewhat inflated by the high volume of funds channelled by reporting banks to other countries via local affiliates. This is a particularly important factor in the case of Thailand, where competition to gain a local banking licence has induced a number of foreign banks to channel funds to other related offices (including their own head offices) via their affiliates located in the country.

for interest rate arbitrage and prompted the authorities to announce in November measures easing restrictions on foreign currency inflows.

When comparing developments in Asia and Latin America, one noteworthy feature of the third quarter of 1996 was the opposite shifts which took place in their respective relationship with the international banking and securities markets (see the graph below). Whereas Asian countries somewhat reduced their reliance on short-term banking funds, private sector borrowers in Latin America appear to have diversified away from the international securities markets in favour of bank loans. At the same time, official policies in Asia aimed at discouraging short-term capital inflows and the growing receptiveness of international bond investors to emerging market borrowers benefited lesser-known Asian names. Funding diversification is becoming important in the case of Asian countries in view of the high proportion of outstanding short-term debt (up to 70% of the total outstanding external banking debt in the case of Korea and Thailand) which will have to be refinanced in the near future. In Latin America, some crowding-out of the private sector by the public sector in the international securities markets was a major recent influence. Structural factors included constraints on local banking systems imposed by financial restructuring.

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 fourth quarter of 1996.
Sources: Bank of England, Euroclear, Euromoney, IFR, ISMA, national data and BIS.

Elsewhere outside the reporting area, the main feature was the resumption of bank lending to Middle Eastern countries ($5.5 billion). The rise in crude oil prices eased the financial pressures on oil producers and triggered a recovery in regional banking activity. Saudi Arabia and the United Arab Emirates were the main recipients of the new funds. There was also a slight rebound in the case of Eastern Europe. This was due to an acceleration in bank lending to entities located in the Russian Federation ($1.1 billion), although developments recorded on the liabilities side of reporting banks' balance sheets show a full rechannelling abroad of the banking inflows in the form of interbank deposits. There was, by contrast, an absolute contraction in outstanding exposures to Poland, which partly reflected the recent measures taken by the authorities to stem short-term capital imports. This was accompanied by some repatriation of capital through the unwinding of credit lines extended by the local banking system to reporting banks. At the same time, Hungary resumed net borrowing from foreign banks, following repayments in preceding quarters.

Structural and regulatory developments

In December, several banks operating in Europe announced the forthcoming launch of the "Loan Market Association", aiming to promote secondary market trading of sub-investment-grade corporate and sovereign bank loans. The group will focus initially on the development of standard documentation, settlement and operational procedures for the trading of par loans, but coverage might eventually be broadened to include non-performing assets. This initiative follows the establishment at the beginning of the year in the United States of the "Loan Syndication and Trading Association", which also reflects a general tendency to enhance the liquidity of international banking assets. The proposal made in December by an association of Japanese banks for the voluntary implementation by March 1998 of mark-to-market accounting rules for major domestic banks, if adopted, should also facilitate banks' active management of risk exposure. However, the launch in October by one major provider of financial information of a foreign exchange trading service targeted at institutional investors serves as a reminder that non-banks are increasingly competing in traditional areas of banking.

III

THE INTERNATIONAL SECURITIES MARKETS

Main features

At $163.6 billion, total net new issuance of international debt securities broke all previous records in the fourth quarter of 1996. This brought the rate of growth in the stock of such debt outstanding for 1996 as a whole to 18% (up from 13% in 1995) and year-end figures to $3,199.7 billion. All the major ingredients fuelling issuance earlier in the year were again present in the fourth quarter. These included investors' search for yields in a context of ample liquidity, the appearance of new actors, the further development of securitisation outside the United States, a high volume of maturing securities and the greater flexibility and diversity of available techniques and structures compared with domestic markets. Attempts by international investors to obtain enhanced returns led the market to move down the credit spectrum and explore new market niches. There was, as a result, an increase in the number of currencies used (with the first issues denominated in Argentine pesos, Croatian kunas and Icelandic krónur) and in the proportion of structured deals. Indeed, the bulk of international securities launched in the fourth quarter of 1996 involved either some form of asset repackaging or the use of derivative features.

Main features of international securities issues[1]

In billions of US dollars

Instrument, country of residence, currency and type of issuer	1995	1996	1995	1996				Stocks at end-Dec. 1996
	Year	Year	Q4	Q1	Q2	Q3	Q4	
Total net issues	**313.0**	**512.4**	**83.5**	**109.4**	**138.4**	**101.0**	**163.6**	**3,199.7**
International bonds	120.6	247.4	37.7	52.9	62.8	53.0	78.7	2,365.6
Euronotes	192.4	265.0	45.9	56.6	75.6	48.0	84.9	834.1
of which: *bonds issued under EMTN programmes*	*59.9*	*158.2*	*16.1*	*46.6*	*43.1*	*30.5*	*38.1*	*311.8*
Developed countries	231.5	341.1	60.0	79.1	91.3	68.7	102.1	2,402.1
Europe[2]	*170.1*	*210.4*	*44.0*	*46.9*	*55.3*	*39.5*	*68.7*	*1,457.7*
Japan	*-27.3*	*-17.7*	*-3.2*	*-3.4*	*-2.6*	*-3.9*	*-7.8*	*203.6*
United States	*65.0*	*129.8*	*17.0*	*32.7*	*34.7*	*25.1*	*37.4*	*434.7*
Canada	*10.6*	*5.3*	*-0.2*	*0.4*	*1.1*	*1.4*	*2.4*	*182.8*
Offshore centres	38.2	70.5	9.4	14.6	18.9	9.2	27.7	252.0
Other countries	27.4	74.8	11.0	12.7	19.9	19.8	22.4	225.0
International institutions	15.8	26.0	3.1	3.0	8.3	3.4	11.4	320.6
US dollar	74.5	222.9	25.2	43.8	74.9	35.9	68.4	1,207.1
Yen	108.3	82.9	22.8	15.2	24.3	24.2	19.2	519.3
Deutsche mark	55.9	57.6	15.8	21.7	9.9	11.5	14.6	350.6
Other currencies	74.2	148.9	19.7	28.8	29.3	29.5	61.3	1,122.6
Financial institutions[3]	183.2	329.2	49.0	74.7	77.3	68.8	108.3	1,333.8
Public sector[4]	91.4	134.3	14.1	23.6	37.5	25.7	47.5	1,078.9
Corporate issuers	38.4	49.0	20.4	11.2	23.5	6.6	7.7	786.9

[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.

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

Investors' growing appetite for high-yielding instruments since the beginning of 1995 has been associated with a process of convergence between the "peripheral" and "core" segments of fixed income markets within major currency blocks (see the graphs on the following page). Thus, there was a further extension of rallies in "peripheral" markets linked to the Deutsche mark or to the US dollar in the fourth quarter. In some cases, however, the return to favour of currencies proved a more important determinant than the performance of fixed income markets. This was the case in particular with the sterling segment, where, in spite of a rise in short and long-term rates, strong international demand for sterling assets led issuance to more than double. Similarly, the less favourable climate seen in US fixed income markets towards the end of the quarter was not sufficient to offset the impact of sustained international demand for US dollar assets. By contrast, in the yen segment, the weakness of the currency and the low level of domestic interest rates discouraged investment demand. This, however, did not result in a much lower volume of new issues owing to the continuing large number of dual-currency deals launched on the Samurai market.

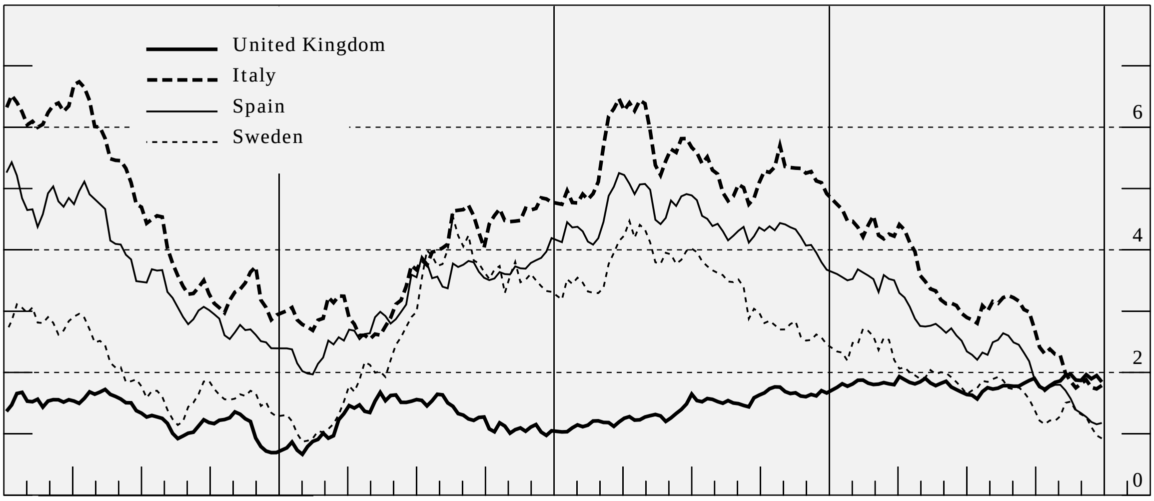
With respect to techniques and structures, asset-backed securities (ABSs) gained further in popularity in the international market-place, with 37% of total net new international bond issues in the fourth quarter and 34% for the year (against 12% in 1995). There was in particular a $5.1 billion transaction securitising a pool of corporate loans originated by a UK bank and a series of repackagings involving the outstanding debt of Eastern European and Latin American borrowers. While offering investors higher returns than assets of comparable credit standing, ABSs provide financial institutions with new opportunities for restructuring balance sheets, economising on capital and maximising income.[4] In the core currency markets, the limited possibilities for further capital gains through lower interest rates encouraged institutional investors to seek higher yields through the purchase of longer-maturity issues, which was most striking in the area of emerging market debt, as well as zero coupon bonds.

The pervasive use of derivative features on a widening array of debt issues provided another illustration of investors' relentless search for higher returns. For example, a large number of subordinated issues launched by financial institutions offered attractive margins over benchmark rates in exchange for various optional elements and/or equity-like features. These options (such as calls and step-ups) were often resold by underwriters in the secondary market in order to reduce borrowers' cost of funds. The originators of these structures made ongoing attempts at enticing investors through the progressive incorporation of more complex features and an ever finer distinction between debt and equity characteristics. This culminated in December in the introduction of a preference share issue incorporating call, step-up, perpetual and non-cumulative clauses. Aside from their derivative features, many of these capital-raising instruments offer a number of additional benefits to both issuers and investors. For issuing banks, they provide an opportunity to exploit discrepancies between the tax and regulatory treatment of capital. For investing banks an important incentive is their low risk weighting for capital adequacy purposes, although this is somewhat offset by higher market and credit risks.

The popularity of ABSs and subordinated debt issues was reflected in the record volume of net new issuance by banks and other financial institutions, which accounted for two-thirds of total market growth. ABSs were also responsible for the further gain in the relative importance of non-bank financial entities within that group. Institutions based in the United States, the United Kingdom, Germany and the Netherlands were predominant. Meanwhile, borrowing by public sector entities reached a new peak, while activity by non-financial corporate borrowers remained modest. At the same time, the market opened up to new borrowers from the developing world and Eastern Europe. Most outstanding was the surge in net issuance by Asian names, which, at $14.3 billion, exceeded by

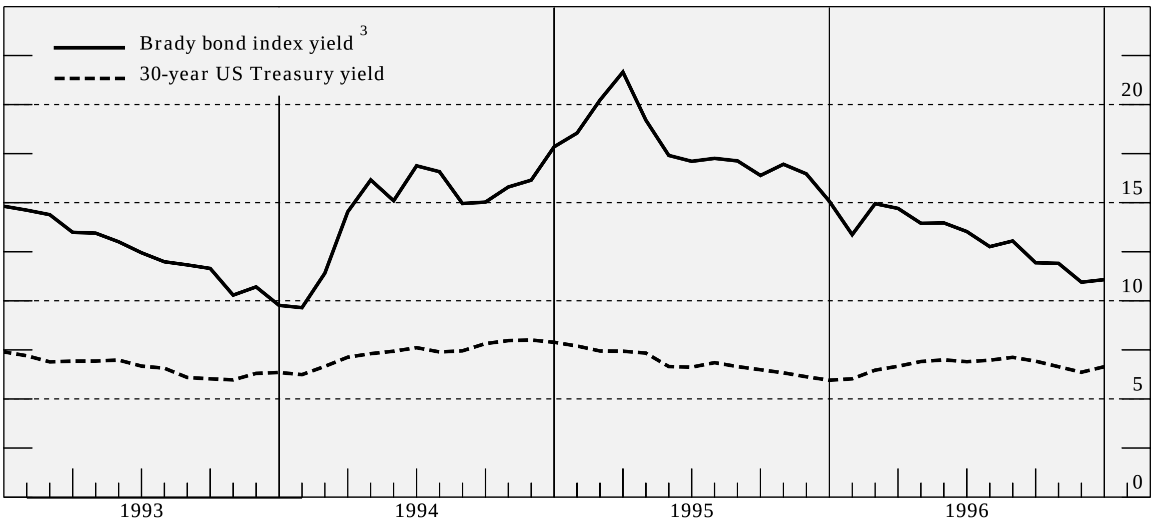
[4] For a more detailed analysis, see S. Jeanneau, "The Market for International Asset-Backed Securities", in the November 1996 issue of this commentary, pp. 36-46.

Yield differentials over long-term German government bonds [1]



Yield differentials over long-term US government bonds [1]

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

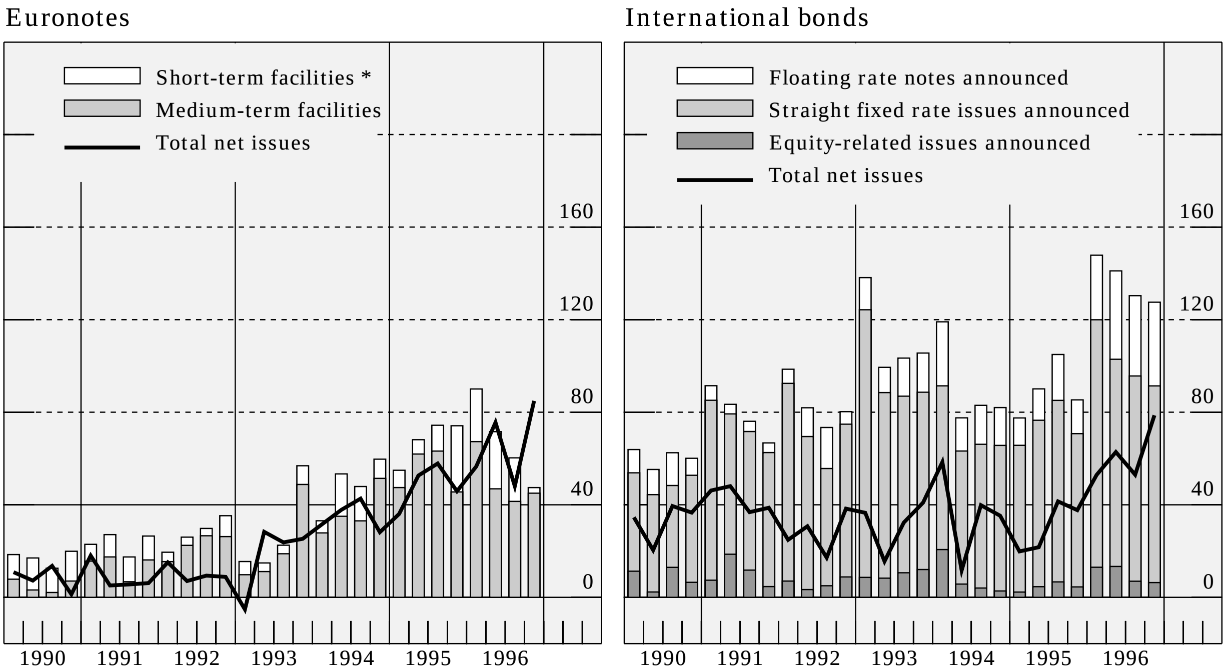


[1] Weekly averages, in percentage points. [2] Monthly data, in percentage points. [3] Yield stripped of collateral backing.

Sources: Datastream and Salomon Brothers Inc.

The international securities markets

In billions of US dollars



* Including euro-commercial paper facilities.

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

a significant margin the $7.4 billion worth of securities issued by Latin American borrowers (see Annex Table 9). Another illustration of greater market opening was the first forays made by some of the successor republics to the former Soviet Union, the Russian Federation and Kasakhstan in particular. In addition to investors' search for higher yields through the acceptance of greater market and credit risks, international demand for emerging market paper was fuelled by the further development of institutional portfolio diversification (particularly in Asia), increased European retail interest, improving credit quality, better financial data disclosure and the more widespread availability of hedging instruments. In such a favourable environment, several sovereign borrowers from emerging markets launched issues in anticipation of needs in order to reduce refinancing risk through an extension of maturities, to diversify their investor bases, to develop more comprehensive yield curves or to open the market for their corporate borrowers.

These recent developments raise at least three important issues. Firstly, with recent international debt issues incorporating increasingly complex derivative features, it can be asked whether the associated risk and return characteristics are adequately appreciated by investors. The difficulties faced by rating agencies in evaluating such structures and the reduced market liquidity of the underlying issues provide some indication of the extent of the problems involved. Secondly, the large number of issues exploiting the discrepancies arising from differences in the treatment of capital for regulatory and tax purposes may have created inefficiencies in the global allocation of capital. Thirdly, the build-up of positions resulting from the strong fund-raising activity of financial institutions and the interpenetration of securities and derivatives markets have considerably reduced market transparency. This is likely to have made some of the traditional monetary and debt aggregates less relevant in assessing real-side developments.

The euronote market

Euronote programmes were once again the preferred vehicle for issuance in the international securities market during the fourth quarter. They allow the introduction of tailor-made instruments that can often better capture the arbitrage opportunities existing between cash and derivatives markets than in the stand-alone international bond market. Such programmes are likely to prove increasingly useful to borrowers attempting to develop market recognition. Flexibility in exploiting tax or regulatory loopholes and in designing structured or asset-backed securities crossing over currency and market segments represents another comparative advantage of the euronote market. Although details on drawings under euronote facilities are generally not available, the recording of a large fraction of private placements now done through programmes undoubtedly constitutes an improvement in the statistical coverage of activity in the international securities market.

Within the euronote market, there was a recovery in the use of short-term paper, encompassing a large variety of structures (from asset-backed ECP to more complex and less liquid instruments) and currencies. Transactions by the authorities of a few countries (e.g. Belgium and Hong Kong) were also significant. Although the short-term euronote segment now stands at more than $170 billion in terms of amounts outstanding, its size still pales in comparison with the deeper US CP market ($765 billion). The slower development of the short-term euromarket segment than of the US market in recent years could perhaps be explained by its lower degree of liquidity, a characteristic judged to be essential by the managers of large money market funds. However, short-term instruments are more suitable for issues denominated in emerging market currencies, which often lack domestic medium or long-term benchmarks.

The international bond market

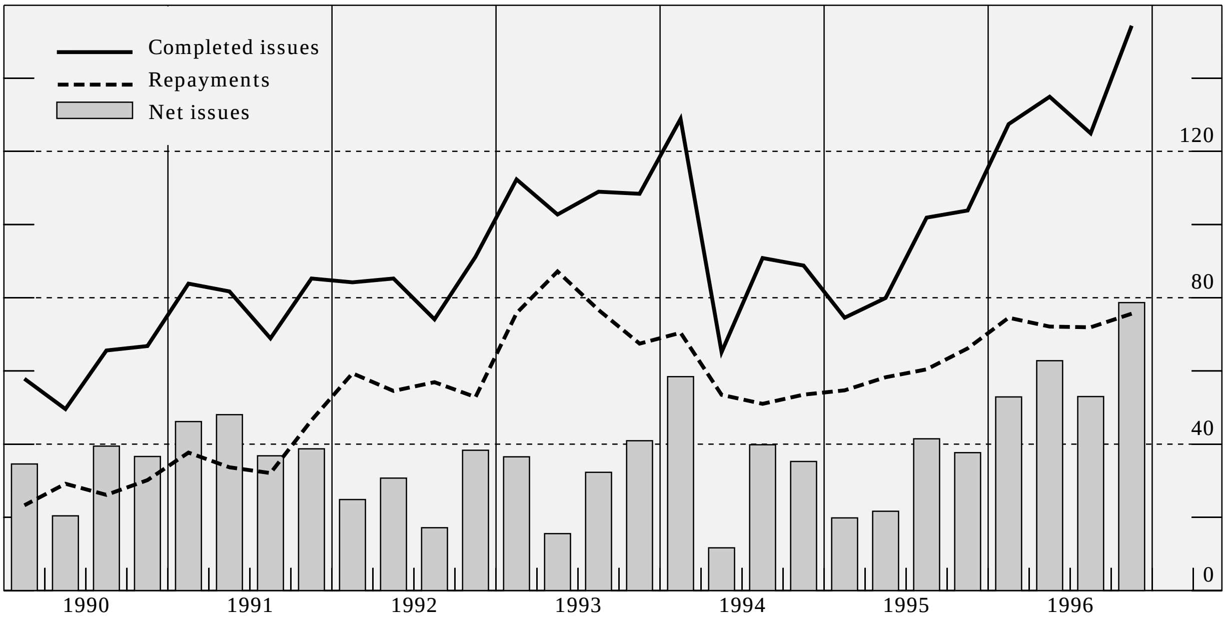
Data on stand-alone international bonds help to provide a further insight into developments in the international securities markets during the fourth quarter of 1996. According to preliminary data, announcements of new international bonds declined marginally in the fourth quarter of 1996, to $127.5 billion. However, if bond issues made under the umbrella of euronote programmes are included, total issuance rose from $159.7 billion to $173.6 billion.[5] The addition of bonds made on a stand-alone basis and those issued under euronote facilities shows that there was a dramatic expansion of activity in the international bond market in 1996, with the volume of new announcements increasing by almost 70% to $722.7 billion. One notable feature of the fourth quarter was the sizable volume of scheduled and early redemptions ($75.6 billion). While dollar-denominated debt continued to account for the highest proportion of repayments (38%), and thus provided additional support to issuance in that currency, there was some increase in repayments denominated in yen and Swiss francs (with respectively 15% and 10% of the total). When seen in relation to the loss of momentum of gross issuance in Swiss francs and, in contrast, the surge in the use of sterling and other, smaller currencies, this suggests that reflows into the market may have accentuated these shifts between currency segments.

The search by investors for higher yields was also illustrated by a further extension of the average maturity of new issues (see the graph on page 18). This was particularly striking in the case of emerging market borrowers, with several issues extending to 30 years and one to 100 years. However, the decline in the average size of transactions in most of the major currency sectors reflected either some hesitation by borrowers in approaching the market for large amounts or the early completion of borrowing programmes. At $23.3 billion, the volume of global bond offerings was

[5] Although bonds issued under the umbrella of euronote programmes account for only 12% of the total stock of international bonds outstanding, this proportion is increasing rapidly, amounting to one-third of net new issuance in the fourth quarter of 1996.

Activity in the international bond market

In billions of US dollars



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

substantially lower than in the first half of 1996, although still almost three times higher than the quarterly average for 1995. Another illustration of continuing market uncertainty was the strong pace of issuance of floating rate notes (see the separate sections below). The weak performance of several Asian equity markets constrained the extent of financing through equity-linked instruments.

The high volume of primary market activity combined with strong revenues generated by corporate financing continued to support the profitability of intermediaries. In spite of highly competitive market conditions, lead managers were reported to have been taking a more cautious attitude in the pricing of transactions. US-based investment banks reached a dominant position in the underwriting league tables during 1996, with their share of business boosted by US dollar issues, in particular asset-backed securities. The erosion in the ranking of Japanese firms in the league tables reflects partly the lower volume of yen business relative to 1995. However, Japanese dealers were attempting to diversify out of their home market by expanding offshore business with foreigners, by participating more frequently in global offerings and by developing the investment base for more complex instruments such as dual-currency bonds.

Straight fixed rate issues. Announcements of straight fixed rate issues continued to proceed at a steady pace in the fourth quarter ($85 billion). Despite the heavy supply of issues, spreads over benchmarks continued to tighten. The US dollar once again accounted for the largest market share (38%), with active participation by emerging market borrowers, including for large individual transactions. Some of these, such as a $1.9 billion multi-tranche issue for a Malaysian state-owned oil producer and a $1.2 billion deal for a Qatari natural gas producer, illustrated the growing importance of the market for project financing. At the same time, a number of countries, such as Russia (with a $1 billion eurobond) and other successor republics to the former Soviet Union, tapped the market for the first time. Expanded use of global bonds by emerging market issuers was also evidenced by a $1 billion issue for Argentina and a $750 million issue for Brazil.

Main features of the international bond market[1]

In billions of US dollars

Instruments, currencies and type of issuer	1995 Year	1996 Year	1995 Q4	1996 Q1	1996 Q2	1996 Q3	1996 Q4
Announced issues	**357.9**	**546.8**	**85.3**	**147.8**	**141.1**	**130.4**	**127.5**
Straight fixed rate issues	280.0	370.2	66.2	107.0	89.5	88.7	85.0
Floating rate notes	59.8	136.9	14.6	27.9	38.2	34.7	36.2
Equity-related issues[2]	18.1	39.7	4.5	13.0	13.4	7.0	6.4
US dollar	118.5	250.1	30.6	63.1	67.5	61.8	57.7
Yen	76.5	60.1	17.1	13.6	15.4	16.0	15.1
Deutsche mark	55.5	65.5	14.4	24.4	14.6	17.4	9.1
Other currencies	107.5	171.1	23.2	46.7	43.6	35.1	45.7
Financial institutions[3]	158.4	273.4	38.2	76.1	65.0	60.6	71.8
Public sector[4]	114.4	150.2	23.0	41.4	33.2	44.2	31.4
Corporate issuers	85.1	123.2	24.2	30.4	42.8	25.6	24.4
Completed issues	**360.2**	**541.6**	**103.8**	**127.4**	**134.9**	**124.9**	**154.3**
Repayments	**239.6**	**294.2**	**66.2**	**74.5**	**72.1**	**71.9**	**75.6**
Memorandum item: **Bonds announced under EMTN programmes**	**70.6**	**175.9**	**21.7**	**54.9**	**45.6**	**29.3**	**46.1**

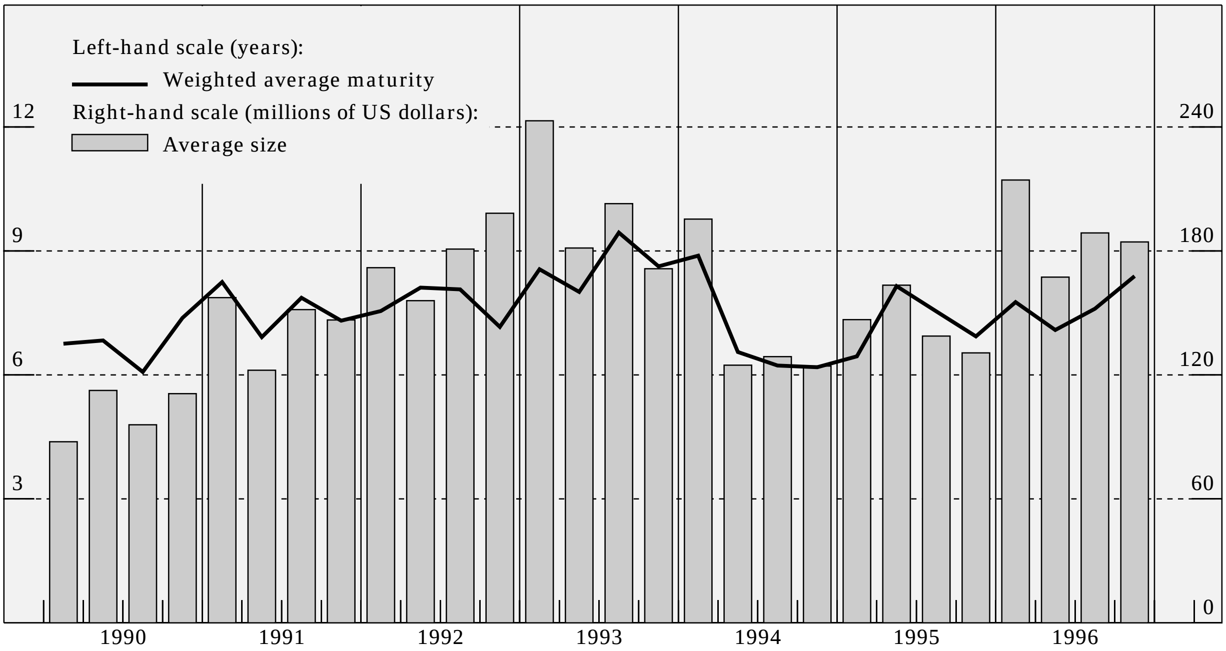
[1] Excluding bonds issued under EMTN programmes, which are considered as euronote issues. [2] Convertible bonds and bonds with equity warrants. [3] Commercial banks and other financial institutions. [4] Governments, state agencies and international institutions.

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

In spite of somewhat unfavourable interest rate expectations and persistent currency weakness, yen-denominated issuance declined only moderately. Strong Japanese retail investor demand for dual-currency bonds continued to support the market for foreign borrowers in Japan (the Samurai market). Dual-currency bonds offer investors yen-denominated coupons but repayments in other currencies (such as US or Australian dollars) and give issuers access to attractive sub-LIBOR funding through swaps. By contrast, issuance in the euroyen segment continued to be subdued, owing partly to unfavourable interest rate swap rates but perhaps more importantly to negligible Japanese issuance following the recent liberalisation of the domestic market. The greater freedom given to pension funds to invest in other types of foreign securities (in particular through EMTNs) probably also accounts for the more limited activity in that sector. The movement by international investors away from Deutsche mark bonds was reflected in a reduction in the share of that currency (from 14% to 10%), but there were nevertheless pockets of demand for high-yielding bonds, as illustrated by the positive reception given to a number of emerging market issues equal to or in excess of DM 500 million, including a 30-year Argentine deal that was the longest issue made by an emerging market country outside the US dollar segment. A few issues also repackaged outstanding Latin American and Eastern European sovereign issues. A DM 1 billion issue highlighted the continued offshore expansion of the German Pfandbrief market, while Spain attempted to benefit from the lack of recent high-quality issues in the DM market by launching a DM 2 billion transaction. Further progress in the transition to EMU helped to depress the value of the Swiss franc and thus negatively affected issuance in that currency.

The resurgence of the sterling market was largely based on improved swap opportunities and strong continental European retail demand following the sharp appreciation of the currency. However, save for mortgage-backed issues, most deals were made at the short end of the maturity spectrum. The Italian lira segment was very active in anticipation of the re-entry of the currency into the ERM. Aside from the market rally which took place during the quarter (with government bond yields moving below those on UK government bonds) one of the most notable developments was the launch of $2 billion worth of long-term zero coupon issues. Demand for such issues originated largely from Italian retail investors seeking to eliminate reinvestment risk or to benefit from the leverage inherent in such instruments.[6] Meanwhile, the French franc market benefited indirectly from the high volume of redemptions of formerly tax-exempt money market accounts.

Average size and maturity of announced straight fixed rate international bond issues



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

Floating rate notes (FRNs). Uncertainty with respect to the evolution of interest rates in some key countries and the strong liquidity position of financial intermediaries continued to provide favourable ground for FRN issuance, with total announcements increasing slightly to $36.2 billion. The US dollar again accounted for the bulk of announcements (63%), while the share of issues denominated in sterling more than quadrupled (to 23%). At the same time, financial institutions reinforced their dominant position (from 67% to 81% of issues). In the sector for sovereign FRNs, there was only one major issue ($2 billion) from CADES, the state agency established to finance the French social security system. Sovereign issuance now accounts for a significantly lower share of activity than in the early days of the market. The recovery of the FRN market seen since the early 1990s has also been accompanied by fundamental changes in the types of instrument offered, with virtually all new issues now encompassing some kind of derivative feature.

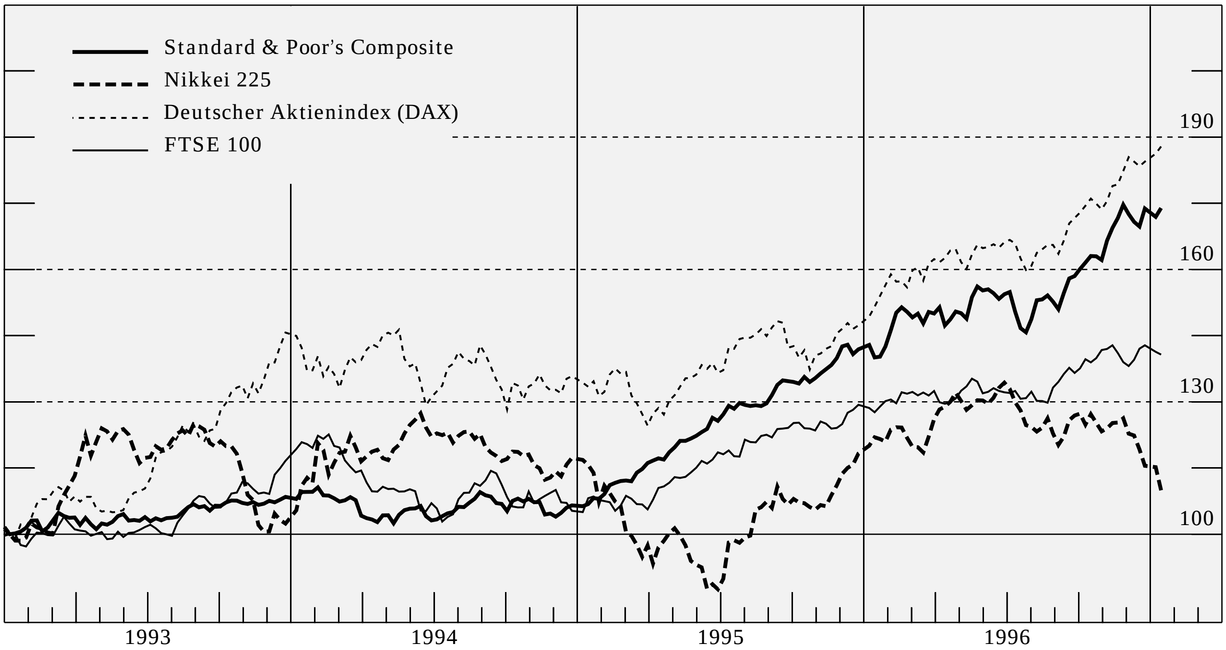
Strong demand for higher-yielding paper appears to have been one of the key factors driving the bustling primary market for asset-backed securities and subordinated issues in the fourth quarter of 1996. As a result, 56% of announced FRNs were launched by securitisation vehicles based largely in the United States and the United Kingdom. Several of these transactions were in excess of $1 billion, including the aforementioned $5.1 billion global multi-tranche structure securitising UK-originated corporate loans. Originators introduced deals considered to be innovative in the international market, such as a large sterling issue securitising rental income from former UK state properties and a number of acquisition-related transactions. The asset-backed market saw a broadening of its issuer base, with, for example, the first deal for an Argentine bank. A few transactions also repackaged Latin American and Eastern European dollar-denominated bonds through

6 Zero coupon issues were also launched in a few other currencies, including the pound sterling and the Deutsche mark.

special-purpose vehicles for resale into other currency segments. Aside from securitisation vehicles, commercial and investment banks from a broad range of countries launched another 36% of issues. Much of the fund-raising by banks was composed of subordinated issues incorporating ever more complex derivative features. While subordinated funds were often used to capitalise banks' trading books or to finance acquisitions, in the case of several US-based institutions such issues aimed at exploiting differences between current regulatory and tax treatments.

Equity market developments

Weekly averages (2nd January 1993 = 100)



Source: Datastream.

Equity-related bonds. Gross issuance in the equity-related sector remained subdued in the fourth quarter ($6.4 billion). While equity markets in North America and Europe reached new record levels during the period under review, developments were often significantly less favourable in several of the Asian markets - including Japan, Korea, and Thailand - where the bulk of issuers have recently been located (with 77% of issues in the period under review). The most significant was a convertible deal of ¥210 billion (equivalent to $1.9 billion) for the offshore subsidiary of a large Japanese bank. Another notable transaction was a convertible issue introduced by the financing subsidiary of a German bank, with conversion into the shares of another company. Meanwhile, at $1 billion, issuance of bonds with equity warrants attached remained lethargic. The low level of activity in this market segment is in sharp contrast with developments in the markets for international equities and warrants, where new issues have expanded strongly in recent years (see the section on over-the-counter derivatives markets).

Structural and regulatory developments

In December, the Bank of England published a consultative paper on the extension of its money market activities to include gilt repos and a greater number of counterparties. The amendments being proposed are consistent with the direction and spirit of the proposals currently under discussion at the European Monetary Institute. In the same month, the Deutsche Bundesbank announced that, from January 1997, it would exempt from minimum reserve requirements all liabilities vis-à-vis non-banks and banks abroad related to securities repurchase agreements with a maturity of up to one year.

In November, the Japanese Prime Minister released a five-year plan aimed at bolstering the Tokyo-based financial market and at bringing its supervisory, accounting, legal and tax systems into greater conformity with world standards. The "Big Bang" initiative proposed a concrete plan of action, starting with the elimination of existing restrictions on foreign exchange transactions (currently restricted to authorised foreign exchange banks). The package includes, inter alia, provisions to remove the protectionist walls between banks, securities houses and insurance companies and to reduce the barriers between various groups of commercial banks. In view of these forthcoming changes, the Ministry of Finance is considering the establishment of a certification system requiring Japanese corporate borrowers to certify the non-resident status of investors in their international issues, while it was decided to suspend the decision to make such investors subject to withholding tax.

Appendix: What is left of the traditional distinction between eurobonds, foreign bonds and domestic bonds?

Traditional classification

By analogy with its international banking statistics, the BIS has traditionally classified bonds issued worldwide on the basis of three major characteristics: the location of the transaction; the currency of issuance (domestic vs. foreign); and the residence status (or, alternatively, nationality) of issuers. Accordingly, eurobonds comprise all foreign currency issues by residents and non-residents of a given country, while foreign bonds consist of domestic currency issues launched by non-residents. The sum of the two categories is defined as international as opposed to domestic bonds. This classification is illustrated in the diagram below. Global issues, which are launched simultaneously in the domestic market and the euromarket, are in principle allocated in proportion to the markets in which they are issued.

	Bond issues	
	By residents	**By non-residents**
In domestic currency	A	B
In foreign currency	C	D

A = domestic bonds; B = traditional foreign bonds; C + D = eurobonds; B + C + D = international bonds.

However, there are at least three reasons why this classification has never been entirely satisfactory. Firstly, in contrast to the international banking data, for which lending and depositing refer to the same institution (the "eurobank"), bond issuance can be seen from the point of view of two different entities: *the borrower or the investor*. In using somewhat arbitrarily the borrower's perspective to classify bonds, some inconsistencies may emerge. For example, a bond issued in the US market by a non-US resident would be treated as a US foreign bond (or "Yankee" bond), irrespective of whether the subscribers were US or non-US residents. Similarly, domestic paper may be purchased by non-residents, for whom it therefore represents a foreign bond.

Secondly, *restrictions on eurobond issues in certain currencies imposed by the home-country authorities* (that is, on issuance in the respective currency outside the national borders) have made eurobond issuance (in a narrow sense as defined above) virtually impossible in these currencies. Although such restrictions are being progressively dismantled, they are still in force in a number of major financial centres, including in Germany and Switzerland. Since the rules and practices applied to resident or non-resident issues targeted to foreign investors on the German markets are similar to those of eurodollar bonds (see the next section), such DM-denominated issues have generally been included under eurobonds for statistical purposes, which runs counter to the classification described above. In contrast, Swiss franc issues by non-residents are classified as foreign bonds, being subject to some domestic regulations and tax provisions.

Thirdly, *the issuing market*, as defined by the location of the intermediaries arranging the deal, may cover varying types of markets for listing, issuing, trading and clearing bonds. One outstanding example of this can be found in the United Kingdom, where sterling issues which are explicitly exempted from the various domestic restrictions and requirements (including taxation, as explained in the following section) are treated as eurobonds, even if they are issued by UK residents on the London market. This differentiation is again implicitly based on the assumption that such "euro-issues" will be placed essentially with non-UK investors. From that perspective, therefore, eurobond issues represent over-the-counter instruments offered outside the framework of the local regulatory set-up. This means in particular that trading and settlement are not handled by the domestic systems (even though the bonds may be listed in London) but are effected through one of the two international clearing houses, Euroclear or Cedel (see the next section).[7]

Therefore, while the broad principles of classification set out in the introductory paragraph are generally sufficient in the case of foreign currency issues (as eurobonds, being by definition targeted primarily to international investors, except for some ECU-denominated bonds), *the domestic or international nature of the investor base* needs to be explicitly taken into account in the case of domestic currency issues. This refined definition, which is shown in the following diagram, makes it possible to include under eurobonds those domestic and foreign issues that are denominated in domestic currency but specifically targeted to international investors. It also allows for the growing tendency in 1996 for issuers in emerging markets to raise foreign capital through domestic currency bonds placed locally but purchased primarily by international investors. Under this rule, global bonds, which are targeted to both domestic and international investors, are considered separately. This broader definition is consistent with that used by two of the major private suppliers of eurobond data, Euromoney Publications and IFR Securities Data.[8]

Targeted to:	**Bond issues in domestic currency**	
	By resident issuers	**By non-resident issuers**
resident investors	domestic	foreign
non-resident investors	euro	euro

The composition of the group of intermediaries/underwriters arranging the deal[9] is often taken as a first approximation in determining the domestic or international nature of the investment base. The implicit assumption is that an international syndicate is more likely to place issues with non-resident investors. However, this criterion appears less and less relevant. Domestic bond issuance has increasingly been opened to foreign financial institutions, either directly or through their local subsidiaries. The recent wave of mergers and acquisitions in the financial industry has further complicated the task of identifying domestic or foreign intermediaries.

From a separate market infrastructure ...

A more relevant consideration for classifying bonds in relation to their targeted investors has been the *regulatory/fiscal/legal environment*. In the past, the most important distinguishing feature of eurobonds has been the *absence of withholding tax* and of any registration requirement owing to their *bearer status*.[10] This has allowed market participants to develop over the years a whole infrastructure for issuing, trading and clearing bonds outside the framework of the local fiscal and regulatory arrangements.[11] This eurobond infrastructure has come to include: (i) issuance on a gross basis (that is, exempt from withholding tax) and in bearer form; (ii) specific methods of issuance, trading and clearing; and (iii) more technical features, such as conventions for calculating accrued interest and yields and syndication procedures. The main traditional distinguishing features of the

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7 These two organisations also act as custodians for most eurobonds: this means that a substantial proportion of such bonds is held with them as depository, with transfer of ownership recorded in their own books exclusively.

8 In its reporting system, the BIS integrates both data sources through a process of data reconciliation to allow for gaps and overlaps between the two.

9 The syndicate is considered international, and therefore the issue a euro-issue, if it includes at least one non-domestic institution.

10 That is, no record is kept by the issuer or the paying agent of the identity of the final holders of the bonds, in contrast to registered bonds.

11 For an account of the main factors underlying the development of the eurobond market see Richard Benzie, "The Development of the International Bond Market", *BIS Economic Papers*, No. 32, Basle, January 1992.

three broad categories of bonds issued worldwide are summarised below (the features of global bonds vary between currencies; see the next section).

Main traditional distinguishing features of world bond markets

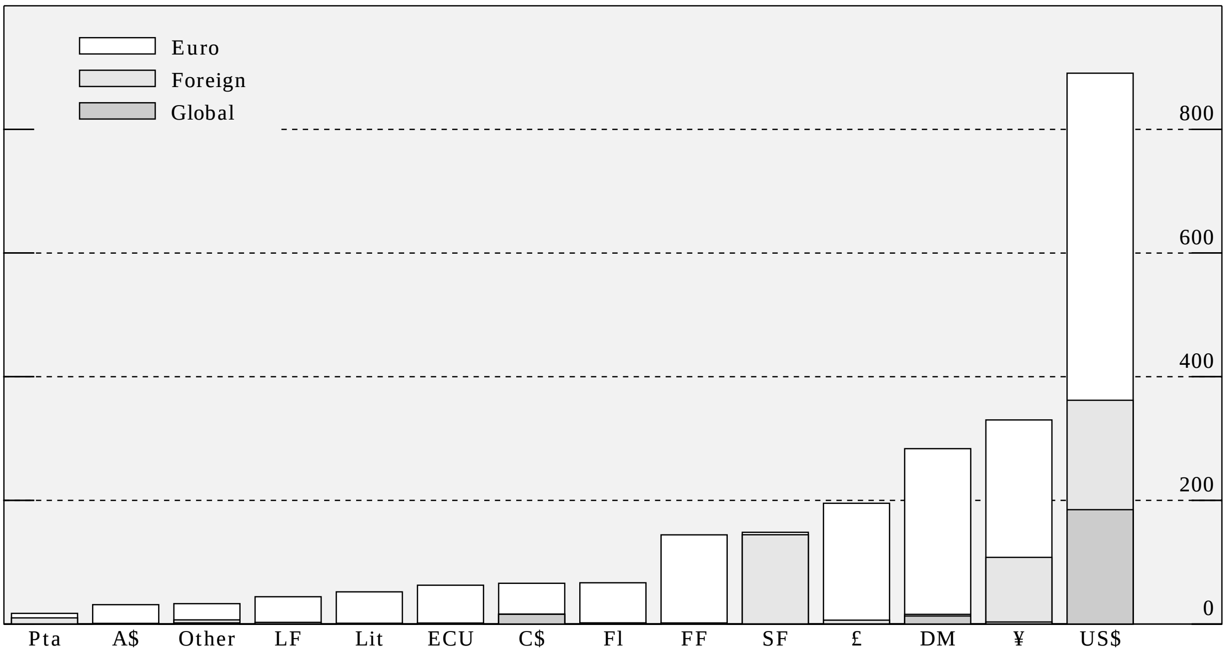
	Euro	**Foreign**	**Domestic**
Withholding tax	No	Yes	Yes
Form	Bearer	Bearer/Registered	Registered
Issuing method	International syndicate	Domestic syndicate	Direct, auction or syndicate
Listing	London or Luxembourg	Local stock exchange	Local stock exchange*
Trading	OTC	OTC/local stock exchange	OTC/local stock exchange
Settlement	Euroclear/Cedel	Local	Local

* Except for government paper, which may be traded over the counter.

In all these three respects, however, there has been a trend towards convergence worldwide. This has been the case in particular in the areas of taxation and form of issuance, with a widespread tendency towards removing withholding taxes and the development of eurobonds in currencies for which bearer form is also a standard feature on the domestic market (such as the Deutsche mark). Competition from euromarket issuance has often been critical in the dismantling of withholding tax regimes in the major countries, especially in the recent period of large government borrowing requirements and therefore competition between countries to attract foreign capital. Moreover, with the growth of institutional investment, the role played by tax exemption and anonymity has been reduced, even though these two features remain important for tax avoiders and for investors from countries which have not concluded the relevant double taxation agreement or who find it cumbersome to reclaim the tax when such agreement exists.

Structure of the international bond market at end-1996

In billions of US dollars



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

Similarly, other features which have been associated with eurobond conventions and trading practices are no longer specific to the euromarket, as convergence has taken place in these areas as well. Thus, although a large proportion of domestic paper is traded and cleared through domestic exchanges and/or clearing systems, over-the-counter trading and clearing through the international clearing houses are no longer limited to eurobonds. In fact, domestic paper currently accounts for the largest share of trading through both Euroclear and Cedel. Convergence has also encompassed more specific rules and practices, such as settlement lags (which were reduced from seven to three days in the eurobond market in 1995 and now compare favourably with a range of one to five days in major domestic markets) and the frequency of coupon payments (annual for fixed rates, semi-annual for floating rates). While conventions may continue to differ for these and other features, such as the calculation of accrued interest and yields, such differences are now no greater between euromarket and domestic issues than are differences between individual domestic markets.

... to local impediments to full market integration

Only a limited set of residual regulatory features prevent complete substitutability between euro-, foreign and domestic markets. Since these features vary widely across currencies, the classification of bonds must be undertaken on an individual currency basis. For instance, the need for dollar-denominated domestic and foreign bonds to be registered with the US Securities and Exchange Commission means that, aside from more technical features such as accrued interest and yield calculations, eurodollar bonds can in principle be separated from foreign (or Yankee) and domestic bonds.[12] A registration requirement, coupled with withholding tax, is also a key criterion in the case of the Australian dollar, sterling, the yen, the Italian lira, the Belgian franc and the Spanish peseta. Informal restrictions on issuance and trading provide additional means of distinguishing between euro-, foreign and domestic bonds in the case of the yen and the French franc. In certain currencies, the restriction to domestic borrowers and/or investors extends to the euromarket. In the case of the Swiss franc this involves a near-complete prohibition of offshore issuance, as already mentioned. Finally, while all DM-denominated issues have to be launched in Germany by a syndicate which includes a German-based institution (including local subsidiaries of foreign institutions), international and domestic bonds can still be distinguished by the composition of the syndicate.[13]

Therefore, the underlying criterion for classification remains whether issues are primarily targeted to domestic or foreign investors (or both in the case of global bonds), as explicitly allowed for in the local regulatory (and tax) set-up.[14] While the least controversial, this regulation-based currency-by-currency approach to market classification still presents a number of deficiencies. Firstly, as mentioned in the preceding paragraph, regulations cover informal arrangements, which are not always easy to pinpoint. Secondly, such regulatory impediments are part of a process of evolution towards a level playing-field, which may entail shifts between market segments over time. Thirdly, in the particular case of global bonds, the euro and domestic tranches are made compatible by attaching certain domestic features to the euro-component. In the case of the US dollar, the main currency of denomination of global bonds, this implies that both the domestic and euro-components are in registered form.

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12 However, two regulatory changes were introduced in the United States in 1990 with respect to foreign securities. Regulation S clarifies the conditions under which sales of such securities outside the United States do not come under the SEC registration requirement. Rule 144a exempts "qualified buyers" from the obligation to hold privately placed securities for at least two years.

13 Even though as a result of the German withholding tax these DM-denominated international bonds are often placed with German residents via Luxembourg-based investment entities.

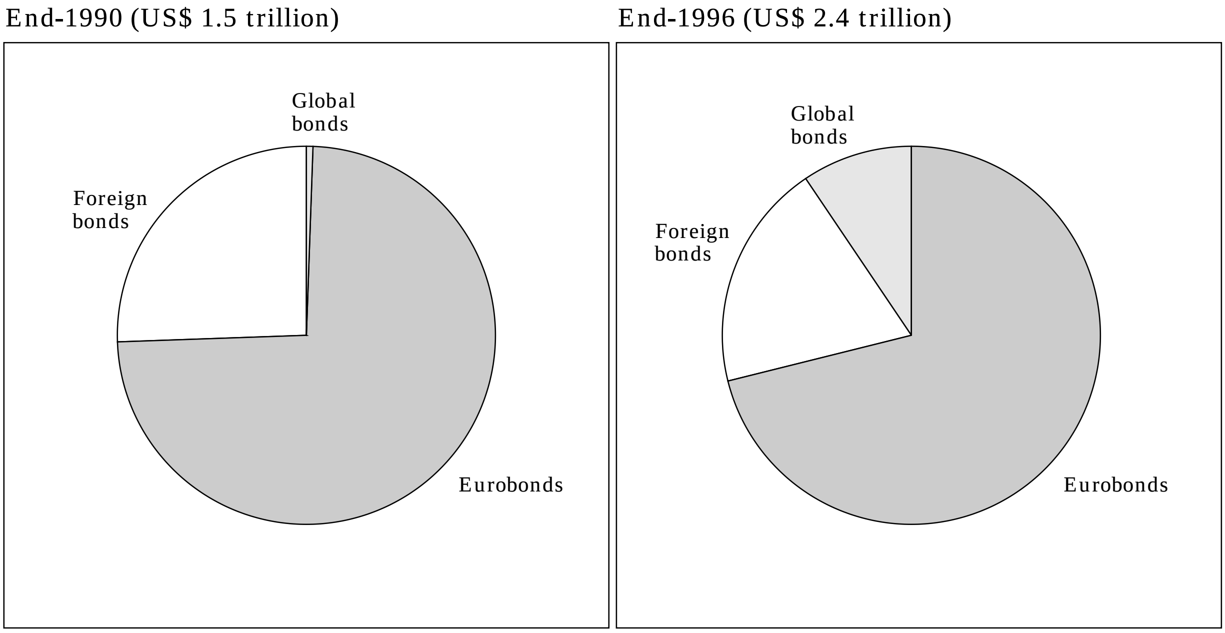
14 This generally takes the form of restrictions on access to the international market by domestic investors through outright prohibition, "lock-up periods" for resale to domestic investors or selective authorisation.

How relevant are the data on eurobonds?

The critical issue is whether these regulatory impediments, combined with specific market conventions and practices, are sufficient to entail price differences within individual currency segments of the world bond market. Empirical research[15] suggests that substitutability between domestic and international bonds in terms of (primary and secondary market) prices has increased significantly in recent years. For the major currencies used in the euromarket, it is no longer possible to differentiate between markets on this account. Admittedly, the experience with global bonds and ECU-denominated bonds (with some issued on the international market and others more specifically targeted to domestic markets) shows that segregation between markets remains effective in terms of placement. However, this is not inconsistent with pricing arbitrage, which can take place either through offshore investment vehicles or derivatives.

At the same time, because arbitrage can take place between individual eurocurrency segments without regulatory impediments, the eurobond market will continue in the foreseeable future to be at the centre of world financial trends. Thus, changes in the preferences of investors and borrowers worldwide can best be assessed by considering the characteristics of eurobonds, both at the macro level (such as currency or type of issuance) and at the level of individual issues (pricing, maturity, etc.). In the area of innovation, the spectacular growth of eurobonds issued within the framework of euro-medium-term note programmes over the last few years[16] illustrates the lead taken by the market in introducing new products. More recently, the development of international asset-backed securities shows how the eurobond market can contribute to the spreading of new techniques.[17] In the process, it has increased its share of the world bond market, rendering its statistical recording a necessary complement to domestic data reporting systems.

Structure of the international bond market



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

15 See Richard Benzie, op.cit. pp. 45-51.

16 About 10% of all international bonds outstanding have been issued within the framework of EMTN programmes and the proportion is rising rapidly.

17 See S. Jeanneau, "The Market for International Asset-Backed Securities", in the November 1996 issue of this commentary, pp. 36-46.

IV

DERIVATIVES MARKETS[18]

Exchange-traded instruments

The aggregate turnover of exchange-traded financial contracts monitored by the BIS registered a third consecutive decline in the fourth quarter of 1996 (by 3%, to 271.2 million transactions). While the fall in business was particularly pronounced in the United States (by 10%, to 94.8 million), aggregate activity elsewhere was subdued (expanding by a mere 1%, to 176.4 million). There was also some divergence between the three market risk categories. Thus, turnover in interest rate instruments decreased by 5%, that of stock index contracts remained stable and currency transactions recovered by 5%, albeit from a low base.

The historically low level of volatility of US short-term interest rates dragged down interest rate business in the United States, while European activity was boosted by doubts expressed by monetary officials early in the quarter about the ability of some countries to join EMU at an early stage. Renewed interest by international investors in sterling assets and a rise in UK base rates also boosted activity in interest rate contracts denominated in that currency. By contrast, there was a marked contraction in Brazilian interest rate business and activity in yen-denominated interest rate contracts remained subdued. Traders of equity indices met the exuberance of markets in North America and Europe with varied responses. In the United States, business was briefly fuelled in December by official comments on the state of equity markets but otherwise activity declined substantially for the quarter as a whole.[19] In Europe, business was up slightly following a year-end spurt of activity resulting partly from greater demand for German equity contracts. In Japan, downward pressures in equity markets and concerns about the state of some Japanese banks also boosted activity at the end of the quarter. In the area of currency contracts, expansion was narrowly based, taking place largely in dollar/real contracts traded in Brazil. There was also a moderate pick-up of activity in CME contracts involving the US dollar against some European currencies, the Australian and Canadian dollars and the Mexican peso.

For the year as a whole, turnover was, at 1,162.3 million contracts, barely higher than in 1995.[20] While interest rate transactions increased by 4%, equity and currency instruments declined by 1% and 19% respectively. With all of the increase in interest rate and stock index business taking place in Europe, US exchanges continued to lose market share, accounting for 36% of global activity in 1996, compared with 39% in 1995. However, taking into account all contracts traded on exchanges (both financial and non-financial as well as options on single equities), the top US exchanges were not all confronted with declining activity. For example, the lower volume of long-term interest rate business on the CBOT was largely offset by buoyant business in commodity contracts, enabling that exchange to expand and remain the most active in the world. By contrast, greater activity in some commodity and currency contracts traded on the CME was not sufficient to offset a sharp drop in short-term interest rate business. LIFFE maintained its lead in Europe and strongly challenged the supremacy of the Chicago exchanges, with a sharp expansion in interest rate business. At the same time, the DTB nearly overtook the MATIF as the second most important exchange in Europe. In Japan turnover remained lethargic, while in Brazil interest rate and currency business declined sharply.

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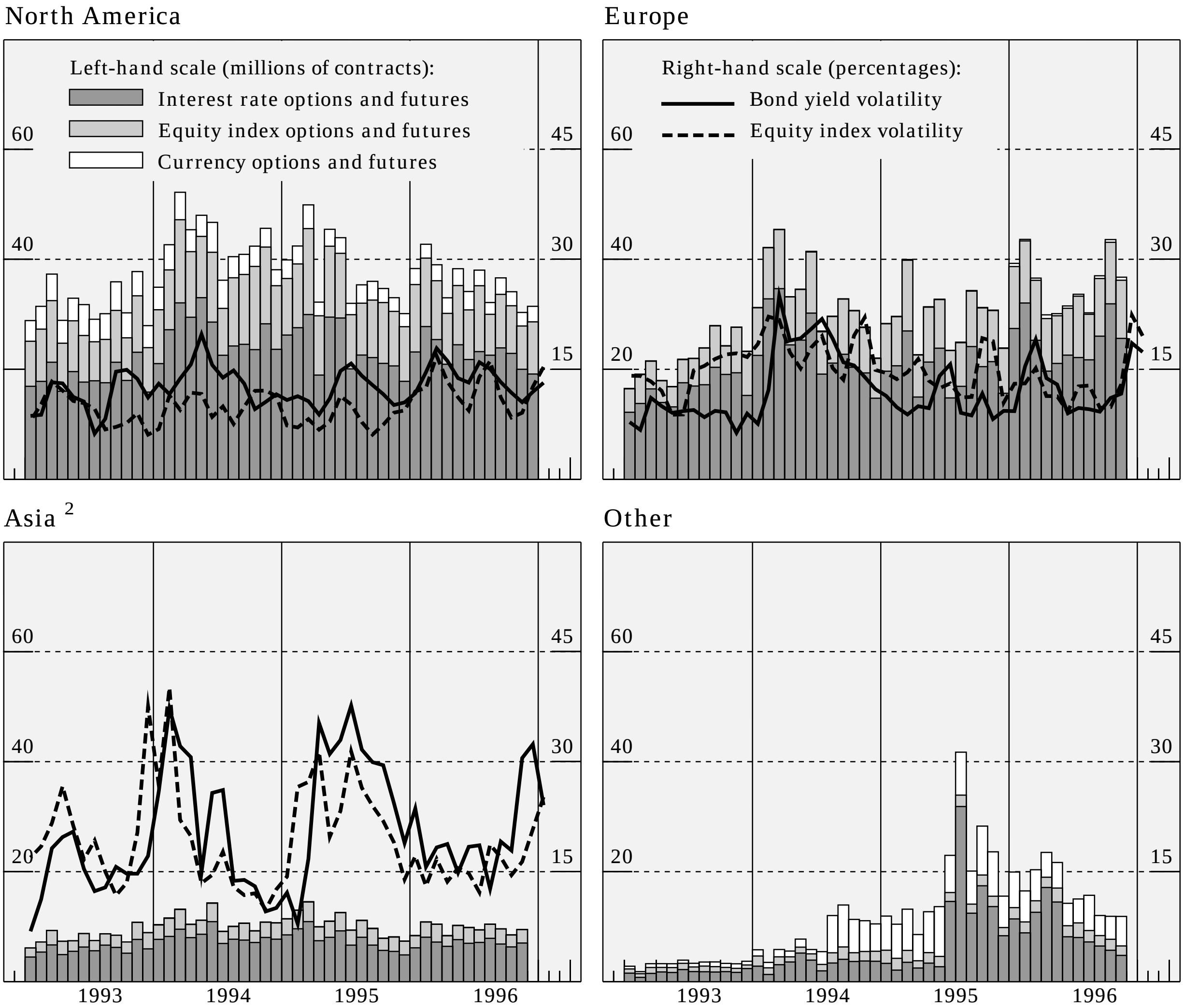
[18] The full names of the various exchanges referred to in this section are listed on page 35.

[19] It is important to note, however, that the inclusion in reported data of options on single equities would have produced somewhat different results. For example, data available for US exchanges show that the trading of such options continued to outpace activity in equity indices in 1996, with an increase in the volume of transactions of 14%. Transactions in other segments of the equity derivatives markets (such as warrants) also provide evidence of buoyant activity (see the section on activity in over-the-counter markets).

[20] Excluding options on single equities.

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.

Competition in exchange-traded markets was once again intense during the period under review. There is growing evidence that the prospective introduction of the single European currency is acting as a catalyst for a broad-based restructuring of worldwide exchange-traded business. Indeed, ongoing competition from OTC markets and weaker expansion or even stagnation in interest rate and currency-related business in several established market-places has prompted a refocusing of competitive strategies that extends well beyond the countries expected to form part of the forthcoming single currency area. While the response of exchanges has so far been varied, several elements can be identified both within given geographical areas and across them.

In Europe, a great deal of effort has been expended by exchanges in presenting a coherent strategy to face the challenge created by EMU. Measures taken during the quarter include the announcement of products which would be denominated in euros ahead of or upon the introduction of the single currency, the further development of regional trading agreements and the initiation of new intercontinental links. These various initiatives, which are likely to have far-reaching implications for the structure of exchange-traded activity, are reviewed in greater detail in the box on pages 29-30. Pressures to reduce trading costs and rationalise services were also apparent in Europe in the fourth quarter, with moves to establish a number of regional or local partnerships. For instance, the DTB and

SOFFEX agreed on a common platform for the trading of derivatives and the integration of their respective trading and clearing systems.[21] In addition, discussions aimed at merging cash and derivatives markets took place in several countries. For example, OM, the Stockholm Stock Exchange and the Swedish stock clearing and settlement organisation discussed ways of deepening mutual cooperation (including the possibility of a full-fledged merger), while the EOE and the Amsterdam Stock Exchange finalised negotiations concerning a merger in early 1997.

In the United States, exchanges also introduced measures designed to counter the loss of business that could result from EMU. However, the bulk of innovation, in terms of new instruments and services, was aimed at boosting competitiveness in the face of the relentless growth of the OTC markets. Among the major new interest rate products, mention may be made of the launch by the CBOT in October of its Yield Curve Spread (YCS) futures and options allowing users to trade the yield differentials between ten combinations of two, three, five, ten and 30-year "on-the-run" Treasury paper. With this product the exchange hopes to attract some of the business currently conducted in the swaps market. Meanwhile, the CME was reportedly working on the introduction of options on two-year eurodollar futures series (or "bundles") to enable users to easily replicate swaption positions. There was a similar tendency in the area of equity contracts, with the listing by the AMEX and the CBOE in October of flex options on the single shares of some of the most actively traded US companies. Such instruments had hitherto been available on indices only. The CBOE also further extended its lead in the markets for warrants and structured products, with the listing in November of bear warrants on the S&P index. Apart from the establishment of trading links with European exchanges, US exchanges began to consider adjustments enabling them to reposition themselves ahead of EMU. Thus, in the area of currency contracts, the PHLX considered adopting euro-denominated options (both standardised and customised) as well as options on European currencies that will not initially participate in EMU. US exchanges pursued further their expansion into emerging market products. For example, objections from the Taiwanese authorities did not prevent the CME and the PSE from launching contracts on Taiwanese equity indices in January.[22] The CME's contract was the first Asian product listed by the exchange (on GLOBEX) and stole a march on a contract to be launched later this year jointly by the Taiwan Stock Exchange and the CBOT. Lastly, some US exchanges introduced contracts based on the depository receipts of Latin American companies.

There also appears to have been some reconsideration by US exchanges of the benefits offered by electronic trading. Such mechanisms no longer seem to be treated only as mere supplements to open outcry but as an integral part of new trading mechanisms linking exchange-traded, cash and OTC markets. The measure which attracted the most attention was the announcement by the CBOT of a strategic alliance with two inter-dealer brokers for the trading of a wide range of cash and derivative instruments. If approved, the facility will start to operate sometime in the first half of 1997, with the electronic trading of US Treasuries, overnight dollar rolls, repos and basis trades. The proposed system is seen as offering the following advantages. Firstly, it should facilitate access by smaller CBOT members to wholesale markets. Secondly, by centralising clearing, settlement and cross-margining for derivative and cash products, it should provide CBOT members with significant cost savings and a reduction in counterparty risk. Thirdly, it should contribute to a better integration of open outcry, voice broking and electronic systems. Finally, the facility would provide the CBOT with a platform to trade and clear more complex OTC transactions in the future. Meanwhile, the CME announced in October that 11 major financial institutions had agreed to become members of Depository Trust Co. (DTC), a facility for the management of swap collateral due to begin operation sometime in the first half of 1997. The CME's new subsidiary would share some of

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[21] Following a recent similar agreement with its Norwegian counterpart, OM Gruppen of Sweden also decided to set up a common electronic platform with SOM of Finland.

[22] In the same month, SIMEX also introduced contracts on a Taiwanese index.

European economic and monetary union and exchange-traded markets

In Europe, the breadth of innovations during the period under review related to the prospective introduction of the single European currency was impressive. In December, a working party of the MATIF published the exchange's strategy for dealing with EMU, the main element of which includes the introduction of a wide range of products based on the single European currency. A key underlying feature is the transfer of liquidity from its existing instruments to the planned euro-denominated contracts. The first step in this direction would be the conversion in April 1998 of the existing PIBOR contract into euros, followed by the introduction of new one-month and five-year contracts in euros, and possibly a 30-year contract. The short-term contract would be based on an average of interbank rates (a "EURIBOR") collected from a panel of 20 to 30 banks within the currency area and would have a face value of 1 million euros. The existing ten-year contract, the "notionnel", might also be converted to a face value of 100,000 euros. The working party said that if the new ten-year euro contract remained based on a single government issuer, the current ten-year ECU bond futures could evolve into a multiple-issuer contract in euros, perhaps based on instruments of lower credit quality. In December, the exchange also implemented a new specification for the "notionnel", with a lower coupon matching that on LIFFE's Bund contract and a longer maturity of deliverable bonds in order to reduce the trading overlap with its proposed five-year euro contract and compete better with existing Deutsche mark instruments.

At the same time, other major European exchanges moved to establish as wide a range of interest rate instruments on existing national currencies as possible ahead of EMU. In October, LIFFE extended its basis trading facility to include futures on gilts and Italian government bonds and relaunched its electronic options trading system, APT Plus.* The system, which had been suspended soon after its introduction in January 1996 as a result of technical difficulties, enables LIFFE's members to trade German government bond options electronically for one and a half hours after the end of floor trading. In November, LIFFE and the DTB both launched one-month euromark contracts. In December the DTB announced that it would introduce in the first quarter of 1997 a two-year futures contract on German government bonds, and listed in January a three-month DM LIBOR contract. In December LIFFE also announced that it would enhance trading opportunities on its competing three-month euromark contract by introducing monthly expiries (in contrast to the current quarterly cycle) and listing four additional quarterly delivery months extending up to four years.

Given that equity contracts will be less affected by the advent of the single currency, exchanges attempted to cushion any potentially negative impact of EMU by accelerating the listing of equity products. Thus, the DTB, the ÖTOB and the MONEP, among others, launched new equity options, while the OMLX introduced a ground-breaking futures contract based on the volatility of selected European equity indices. The recent experience of the EOE and SOFFEX with equity products shows that market-places can thrive on a narrow range of products if they enjoy a close relationship with market participants and local stock exchanges. A similar observation applies to currency contracts, in which, despite lacklustre global activity, the Dublin-based FINEX has lately seen expanding activity.

The most spectacular set of initiatives was perhaps the development of new trading alliances. In November, the MATIF signed an agreement with the CME for the trading of its interest rate contracts on the CME's floor. Although the "notionnel" contracts would be the first to be traded sometime in 1997, the agreement would eventually apply to any instruments of one year or more denominated in any European currency, including the ECU and the euro. In the same month, LIFFE said that it would allow CME members to trade its three-month euromark contracts,

* See the August 1995 issue of this commentary for details.

Volumes on open outcry (O/O) and out-of-hours (O/H) trading systems

In millions of contracts

Year	CBOT		CME		LIFFE		MATIF		NYMEX		SYDNEY		COMEX	
	O/O	O/H	O/O	O/H	O/O	O/H	O/O	O/H	O/O	O/H	O/O	O/H	O/O	O/H
1995	207.8	2.9	180.5	1.3	128.7	4.2	65.2	5.9	53.7	1.0	23.2	2.4	18.8	0.0
1996	217.9	4.5	175.0	2.0	162.6	5.3	61.8	6.5	55.4	1.1	22.4	3.1	19.2	0.1

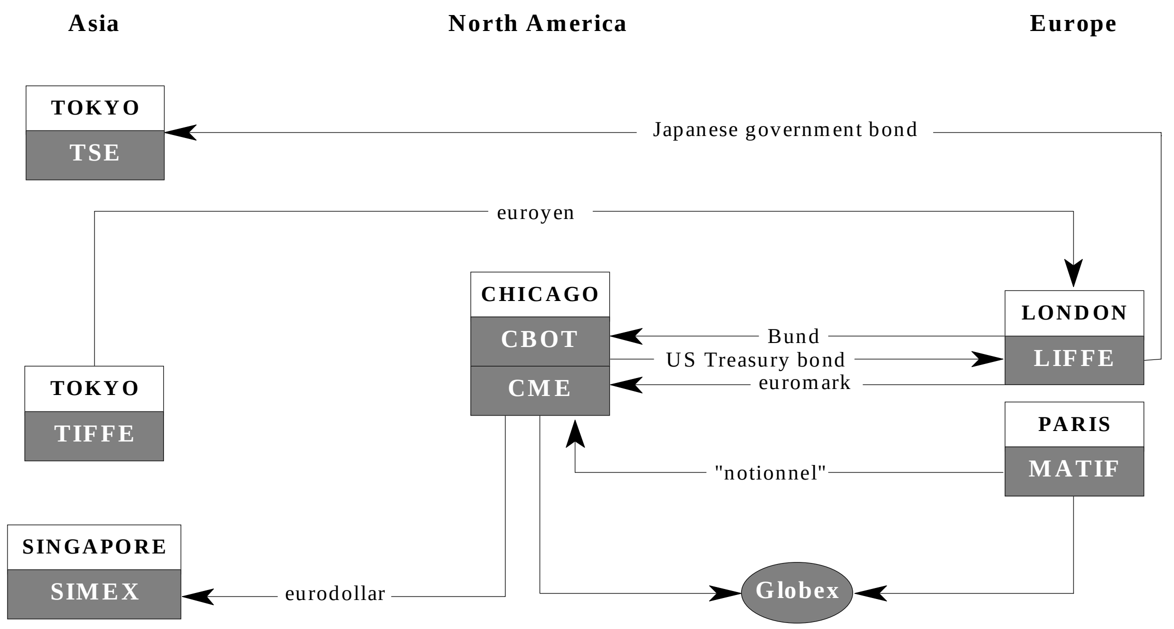
Sources: CBOT, FIA and BIS.

the most liquid short-term instruments in Europe, which will be converted into euros upon the implementation of EMU. Meanwhile, the CBOT and LIFFE announced an amendment to their previous linkage agreement whereby the UK exchange will allow CBOT members to trade all its euro-denominated products from 1999. Some of the trading links adopted by the major exchanges are illustrated in the diagram below.

These developments - in particular trading links based on revolving open outcry arrangements - may have far-reaching implications for the global exchange-traded market. For example, one of the side-effects of exchange-to-exchange arrangements is that they may reduce the relevance of global electronic out-of-hours systems. There has been some expansion of trading on such systems in recent years (see the table above), but most of the activity has taken place on domestic instruments. The MATIF had stated as early as November 1996 that if volumes on the CME's floor exceeded that on Globex, participation in the latter system would be discontinued (in January 1997 it announced that it would end its participation in Globex). For exchanges, cross-border links could help them expand their investor base, although much would also depend on the type of arrangements concluded. For instance, with the CME specialising in short-term contracts and the CBOT largely dominating the long-term segment, the listing of long-term contracts would represent a major innovation for the former.

For its part, the DTB once again eschewed the establishment of trading links, preferring to further expand its remote access facilities. Of note was the installation in October of the first such access points in the United States and a reported plan to allow remote participants to become direct DTB clearing members. An agreement was also reached to install DTB terminals at the CME to enable trading of the DAX stock index futures contract there. This strategy presupposes an extension of business hours, as illustrated by the exchange's decision in November to extend trading from 17:30 to 19:00 (local time). Lastly, increased competitiveness ahead of EMU was behind the announcement by the two Frankfurt-based stock and derivatives exchanges that they would exempt European securities houses based outside Germany from communication fees.

Trading links on interest rate contracts on major exchanges



Sources: Option Finance and BIS.

the features of a clearing house for futures, recording new transactions, accepting collateral in US dollars and a number of other currencies, monitoring daily credit exposures by means of a mark-to-market process and redistributing collateral as needed through a single transaction for each member. By permitting a more efficient management of collateral, it should help participants economise on credit lines with other financial intermediaries. However, unlike a futures clearing house, the DTC will not guarantee or clear transactions.

Over-the-counter (OTC) instruments

Anecdotal evidence suggests that activity in the swap market continued at a sustained pace in the last three months of 1996. In the US dollar swaps segment, in spite of a temporary jump in swap spreads at the beginning of the quarter, heavy issuance of fixed rate securities kept spreads at historically low levels. The flatness of the yield curve and generally low volatility reportedly dampened interest rate business, but there was a steady flow of issuance-related transactions by borrowers wanting to lock in at current interest rates and of cross-currency swaps directly or indirectly involving the US dollar. Dealers also took advantage of brief periods of higher volatility to underwrite new issues with optional elements for resale in the secondary market (see Part III). Some market sources reported that corporate demand for exotic OTC products continued to be modest, offering as a likely explanation the proposed US Financial Accounting Standards Board (FASB) rules on hedge accounting and end-users' better ability to replicate complex hedging strategies through the combined use of simpler instruments.

In European currency instruments, a significant proportion of transactions revolved around the convergence of interest rates. Most of the activity was thought to have been based on investors' willingness to receive rates on southern European instruments and pay in Deutsche marks, while conditions in the Deutsche mark swap market once again offered favourable arbitrage opportunities across the yield curve. With the yields on French government bonds declining below those on German benchmark bonds, some trades involved the shorting of French rates against those of Germany in the expectation that French rates would return to a positive differential. In the yen sector, swap activity appears to have been driven by the issuance of dual-currency bonds. In addition to Japanese investors' search for higher yields, Japanese intermediaries took advantage of favourable rates in the basis swap market to repackage fixed rate yen assets into fixed or floating dollar securities. Brisk currency swap activity was also reported in emerging Asian currencies.

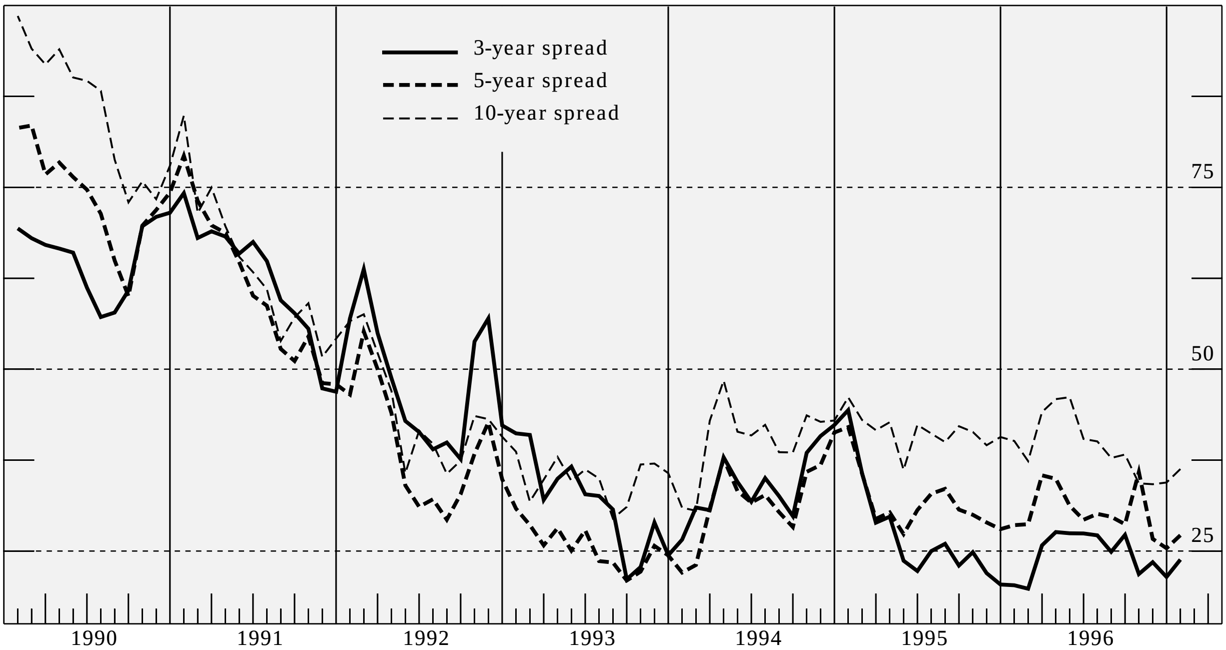
Investors' search for higher returns through greater interest rate risk spurred the use of interest rate swaps to extend duration. In addition, asset swaps and credit derivatives were used extensively to allow investors to move down the credit spectrum. However, intermediaries appear to have attempted to satisfy investor appetite for complex products more with securities offering enhanced returns than with "pure" OTC instruments. For example, in addition to the structures mentioned in Part III, large issues of index-linked notes were reported to have been launched by one of the most active intermediaries in the credit derivatives market. The drive to introduce innovative OTC products seemed to slacken; save for the further development of new types of warrants and volatility swaps, few major innovations appeared to attract the attention of market participants. The limited demand for complex swaps and options (especially in the United States) may have partly accounted for the more intense competitive conditions seen in the US dollar OTC markets, and, in particular, the further narrowing of bid/offer spreads on a number of plain vanilla instruments. At the same time, low currency volatility once again induced dealers to market a variety of currency derivatives based on trading ranges. Lastly, there was growing investor interest in options on the currencies of the less developed European countries.

New issuance of international warrants proceeded at a sustained pace, rising slightly from \$17.3 billion in the third quarter to \$17.5 billion. This brought the total for 1996 as a whole to \$83.8 billion, compared with \$161.1 billion for 1995. While instruments based on equities increased slightly during the quarter to account for almost 80% of the total, issues linked to currencies declined by 27%. The proportion of new offerings denominated in Deutsche marks and Swiss francs was stable (at 56% and 12% respectively) but that denominated in US dollars almost doubled (to 20%). Issues based on

European equities proved popular, with plain vanilla and more complex products (such as range and quattro-type warrants) reportedly attracting widespread demand from Germany. The low level of core European interest rates and strong performance of European equity markets combined

US dollar interest rate swap spreads over US Treasury yields

Monthly averages, in basis points



Source: Datastream.

with the string of recent privatisations has generated strong continental European interest in equity derivatives. In response to the proliferation of issues, the Deutsche Börse announced that, in order to enhance market efficiency, transparency and comparability between issues, it would set up a screen-based trading system for warrants in 1998. Warrants are usually of a longer maturity than exchange-traded options and are purchased by investors who are restricted to listed securities or who want to take a tailored exposure to specific markets. They are highly flexible instruments, enabling a rapid customisation of features in response to new market developments.

Structural and regulatory developments

Several market-led and official initiatives taken during the fourth quarter of 1996 provided a further illustration of the ongoing efforts aimed at improving disclosure, regulation and market infrastructure in derivatives markets. With respect to *disclosure*, the Basle Committee on Banking Supervision and the Technical Committee of the International Organization of Securities Commissions (IOSCO) published in November a joint follow-up survey on disclosure by internationally active banks and securities firms of their trading and derivatives-related activities.[23] The report notes that, compared with annual accounts published in 1994, there were further enhancements in the quantity and quality of disclosures in 1995. The report highlights the increase in the number of institutions providing quantitative information drawn from their internal value-at-risk calculations. It also states that financial institutions provided a more detailed description of accounting and valuation techniques involving cash trading and derivatives-related activities. The report points out, however, that important disparities remain with regard to the type and usefulness of the information disclosed, adding that a significant proportion of institutions continued to disclose

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[23] See "Survey of Disclosures about Trading and Derivatives Activities of Banks and Securities Firms", Basle and Montreal, November 1996.

little about such activities. These institutions are encouraged to consider the recommendations contained in the November 1995 joint report. The US General Accounting Office (GAO) also published in November a report on related issues, examining how recommendations made in May 1994 had been implemented.[24] It notes that although market participants and regulators had acted to improve the management, oversight and disclosure of risk in derivatives, further improvements were needed in risk management, internal control and corporate governance systems.

Developments in the swap market in the first half of 1996

Detailed data on swap market activity during the first half of 1996 were released in November by the International Swaps and Derivatives Association (ISDA). They showed that in spite of some slowdown in the growth of new swaps and swap-related interest rate option contracts (caps, floors, collars and swaptions) activity remained brisk, with the total stock of outstanding contracts at end-June 1996 rising by 19% relative to end-December 1995, to stand at $21.1 trillion. The stock of interest rate swaps experienced the most rapid expansion (22%), followed by interest rate options (13%) and currency swaps (8%). The survey results showed that non-US dollar interest rate swap business continued to grow more rapidly than US dollar transactions (25% versus 14%), with the Deutsche mark and the yen being particularly buoyant (48% and 33% respectively). The picture for currency swaps was somewhat different, with the yen and the US dollar expanding at rates similar to those recorded in the interest rate swap market but with the Deutsche mark contracting significantly (- 11%). In the area of interest rate options, the expansion of non-dollar contracts was more than three times as rapid as that of the US dollar segment. ISDA said that fluctuations in exchange rates over the first half of 1996 had had a negligible impact on amounts outstanding, estimated at less than 3% of the aggregate figure. Preliminary data received from a small number of countries indicate that OTC activity in the second half of 1996 continued to grow more rapidly than exchange-traded business.

Derivative contracts traded over the counter[1]

Notional principal amounts, in billions of US dollars

Instruments	1990	1991	1992	1993	1994	1995[2] H1	1995[2] H2	1996[3] H1
	New contracts arranged							
Total	**1,769.3**	**2,332.9**	**3,717.0**	**5,516.9**	**8,133.3**	**4,258.5**	**6,910.8**	**8,310.0**
of which:								
Interest rate swaps	*1,264.3*	*1,621.8*	*2,822.6*	*4,104.7*	*6,240.9*	*3,428.9*	*5,269.9*	*6,520.3*
Currency swaps[4]	*212.8*	*328.4*	*301.9*	*295.2*	*379.3*	*153.8*	*301.3*	*374.0*
	Amounts outstanding at end of period							
Total	**3,450.3**	**4,449.4**	**5,345.7**	**8,474.6**	**11,303.2**	**13,922.9**	**17,712.6**	**21,068.9**
of which:								
Interest rate swaps	*2,311.5*	*3,065.1*	*3,850.8*	*6,177.3*	*8,815.6*	*10,817.0*	*12,810.7*	*15,584.2*
Currency swaps[4]	*577.5*	*807.2*	*860.4*	*899.6*	*914.8*	*1,039.7*	*1,197.4*	*1,294.7*

[1] Data collected by ISDA only; the two sides of contracts between ISDA members are reported once only; excluding instruments such as forward foreign exchange contracts, currency options, forward interest rate agreements and equity and commodity-related derivatives. [2] Data for 1995 are not fully comparable with previous periods owing to a broadening of the reporting population. [3] Volumes for the first half of 1996 and amounts outstanding at 30th June 1996. [4] Adjusted for the reporting of both currencies; including cross-currency interest rate swaps.

Source: ISDA.

[24] See United States General Accounting Office, "Financial derivatives - actions taken or proposed since May 1994", Washington, D.C., November 1996.

In the area of *regulation*, the Basle Committee confirmed in December an amendment (released in January 1996) extending the Capital Accord of July 1988 to market risks. This amendment, which is due to come into force at the end of 1997 at the latest, allows banks to calculate their capital charges for market risk according to internal models as an alternative to the standardised measurement method.[25] Banks using internal models will be subject to a set of qualitative and quantitative standards designed to encourage further progress in risk management. The Basle Committee stated that, since the market risk package was agreed, it had conducted further research indicating that internal models would generally produce a lower capital charge than the standardised approach. It thus confirmed that the outcome of value-at-risk calculations would have to be scaled up by a multiplicative factor of three to determine the capital charge, with an additional charge (the so-called "plus factor") that would depend on the results of backtesting. At the same time, the Committee decided to keep for the time being the current provision concerning the capital charge for specific risk calculated by internal models (i.e. equivalent to at least 50% of the charge required by the standardised approach). In response to the Basle Committee's statement, a working group of the Institute of International Finance (IIF) released a report recommending that banks be allowed to use internal models for calculating specific risk, without reference to the standardised approach, subject to a set of quantitative standards.[26] The Basle Committee agreed to review the methodology for specific risk in the future, subject to evidence of further progress.

Following the issue by the US authorities in August 1996 of documents which addressed for the first time regulatory issues raised by the use of credit derivatives, the Bank of England published in November a discussion paper proposing a regulatory framework for credit derivatives. The Bank recognised that the issues raised by credit derivatives were complex but said that it would attempt to develop an approach consistent with those of the Basle Committee and the European Union for longer-established cash and derivative instruments. One of the broad principles of the proposals is that greater effectiveness in transferring risk should translate into lower capital requirements. The paper considers the regulatory approach from three major angles: instruments (those involving a pure transfer of risk and others), participants (dealers and end-users) and uses (trading or hedging). A further distinction is made between default products (such as credit default options) and non-default ones (such as total rate of return swaps). It noted that credit default products share many of the characteristics of other credit-enhancement structures such as guarantees, letters of credit, sub-participation and insurance, and as such would sit naturally alongside traditional banking instruments for regulatory purposes. By contrast, because total return swaps do not unbundle default risk from the total return on an asset, they would be more appropriately treated in a trading book framework. It therefore suggests that, for capital requirements, end-user banks might put total return swaps in their trading book and credit default products in their banking book, while dealer banks would probably seek to hold all credit derivatives in their trading book.[27] Meanwhile, ISDA indicated that it was in the process of finalising standard documentation for credit default swaps and options, including a three-tier test that could be applied to any credit event. Such a test would require the occurrence of a defined credit event, the availability of public information and data surrounding the event and the existence of a material impact of the event on the price of the reference security.[28]

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[25] See Press Statement, Basle Committee on Banking Supervision, Basle, 10th December 1996.

[26] See Report of the Institute of International Finance Working Group on Quantitative Issues - Specific Risk Capital Adequacy, Washington, December 1996.

[27] Treatment would also depend on the liquidity and ease of valuation of derivatives and underlying assets, with less liquid and easy-to-value assets generally being included in the banking book. The distinction between banking and trading book instruments is crucial since the latter generally require a lower capital cushion.

[28] According to a survey released by the British Bankers' Association, London constitutes the largest single market-place for credit derivatives, with the equivalent of over $20 billion in notional amounts outstanding, making up roughly half of the estimated world total. However, this total represents a minute fraction of the notional amount of interest rate derivatives traded on and off exchanges worldwide.

In the course of the fourth quarter, ISDA and a number of US exchanges made public their objections to the FASB's proposed mark-to-market *accounting rules* for derivatives transactions. Under the FASB draft proposals, all derivatives would have to be accounted for at market value. ISDA considers that the draft proposals do not adequately reflect the economic rationale underlying modern risk management activities and are overly complex. It feels that they are likely to increase the volatility of earnings and capital, which could lead companies to take on more risk. Exchanges are of the view that the proposed rules separating gains and losses on hedging instruments and those on underlying transactions would create distortions in financial statements and thus discourage the use of derivatives for risk management purposes. If implemented, the new rules would become effective in January 1998.

ABBREVIATIONS USED FOR EXCHANGES

AMEX	American Stock Exchange (New York)
CBOE	Chicago Board Options Exchange
CBOT	Chicago Board of Trade
CME	Chicago Mercantile Exchange
COMEX	Commodity Exchange (New York)
DTB	Deutsche Terminbörse (Frankfurt)
EOE	European Options Exchange - Optiebeurs (Amsterdam)
FINEX	Financial Instrument Exchange (Dublin)
LIFFE	London International Financial Futures and Options Exchange
MATIF	Marché à Terme International de France
MONEP	Marché des Options Négociables de Paris
NYMEX	New York Mercantile Exchange
OM	Optionsmarknad Stockholm AB
OMLX	The London Securities and Derivatives Exchange
ÖTOB	Austrian Futures and Options Exchange (Vienna)
PHLX	Philadelphia Stock Exchange
PSE	Pacific Stock Exchange (San Francisco)
SIMEX	Singapore International Monetary Exchange
SOFFEX	Swiss Options and Financial Futures Exchange (Zurich)
SOM	Finnish Securities and Derivatives Exchange (Helsinki)
TIFFE	Tokyo International Financial Futures Exchange
TSE	Tokyo Stock Exchange