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November 1998

INTERNATIONAL BANKING AND FINANCIAL MARKET DEVELOPMENTS

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STATISTICAL ANNEX

New: Data on consolidated international claims of BIS reporting banks (Annex Tables 9A and B) and on international equity issues (Annex Table 18).

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I

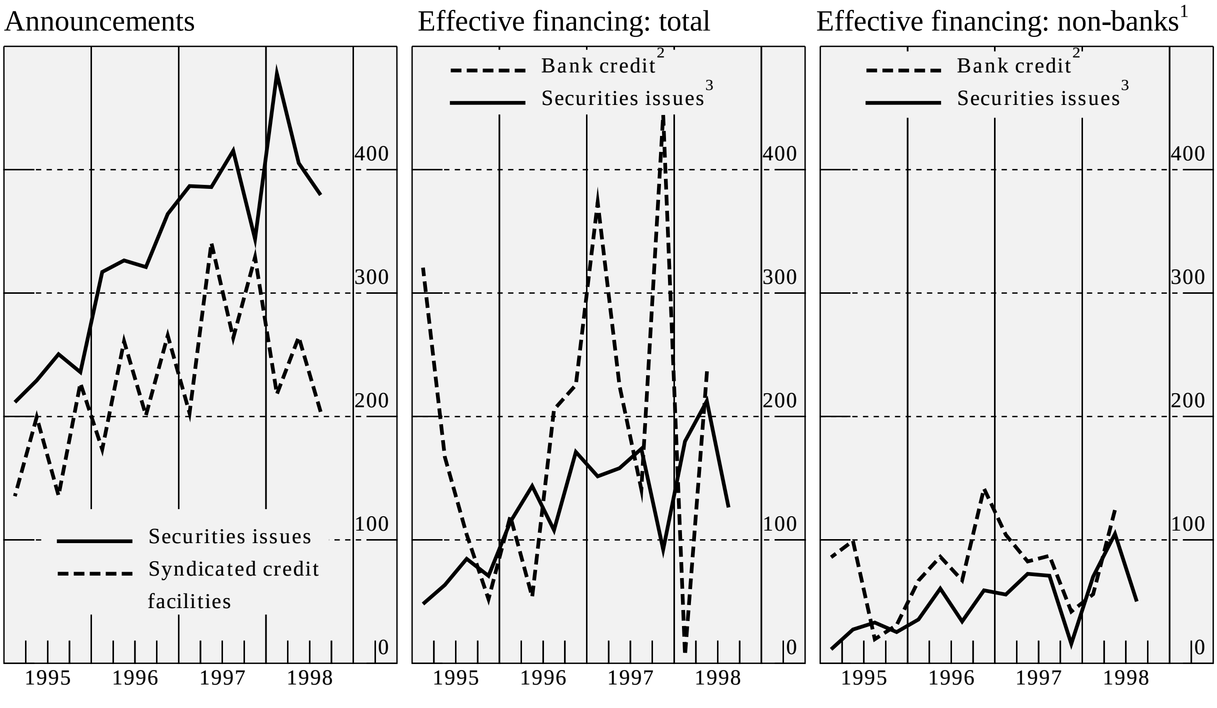
OVERVIEW OF RECENT INTERNATIONAL BANKING AND FINANCIAL MARKET DEVELOPMENTS

The turmoil that had emerged in the developing world assumed global dimensions in the third quarter of 1998. Against a backdrop of severe banking problems in Asia, the decision by the Russian authorities on 17th August to float the rouble and declare a moratorium on some of the country's debt triggered a massive flight towards safety and a broad tiering of spreads according to credit quality. The crisis also led to a rush to liquidity, as illustrated by a sharp widening of liquidity premia between benchmarks and other government debt instruments. The unwinding of large and highly leveraged exposures added to price volatility, as evidenced by the swings seen in the yen/dollar exchange rate and in the yields on major government bonds. Towards the end of the quarter, fears of a systemic disruption prompted the US monetary authorities to sponsor the recapitalisation of a major hedge fund and contributed to the decision to lower official interest rates.

Developments in the international securities markets during this period illustrated investors' growing aversion to risk. Demand dried up for all but the most highly rated names while primary market activity contracted for the second consecutive quarter. Similarly, activity in derivatives markets suggested a preference for the safety of exchange-traded transactions, whereas concerns about counterparty risk hampered business in swaps and credit-related products. Indeed, shifts in market liquidity from OTC to exchange-traded interest rate instruments accentuated demand and supply imbalances in underlying markets, which was particularly evident in the case of German government

Activity in international bank credit and securities markets

In billions of US dollars

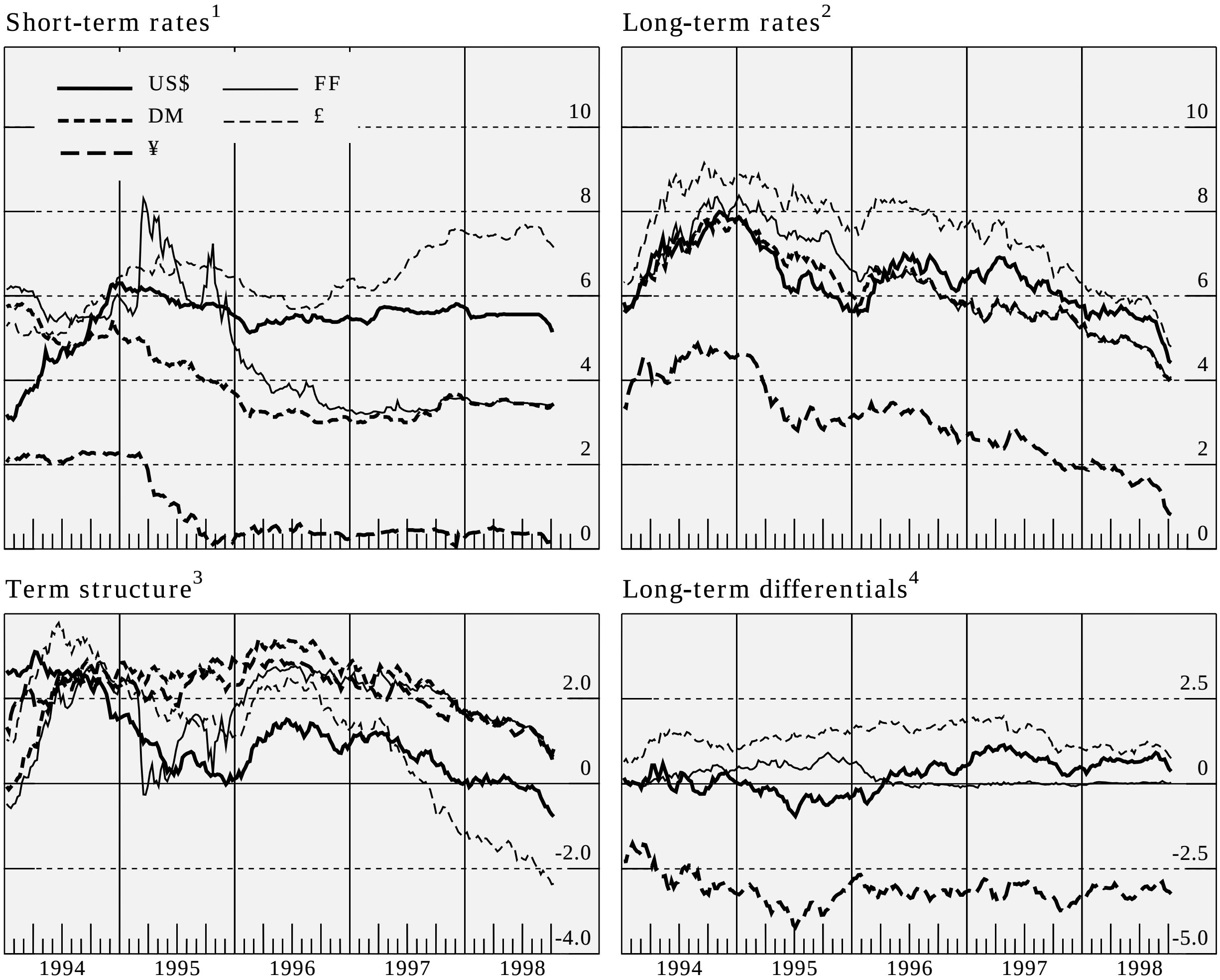


[1] Excluding non-bank financial institutions. [2] Exchange-rate-adjusted changes in gross international bank claims. [3] Gross issues minus repayments.

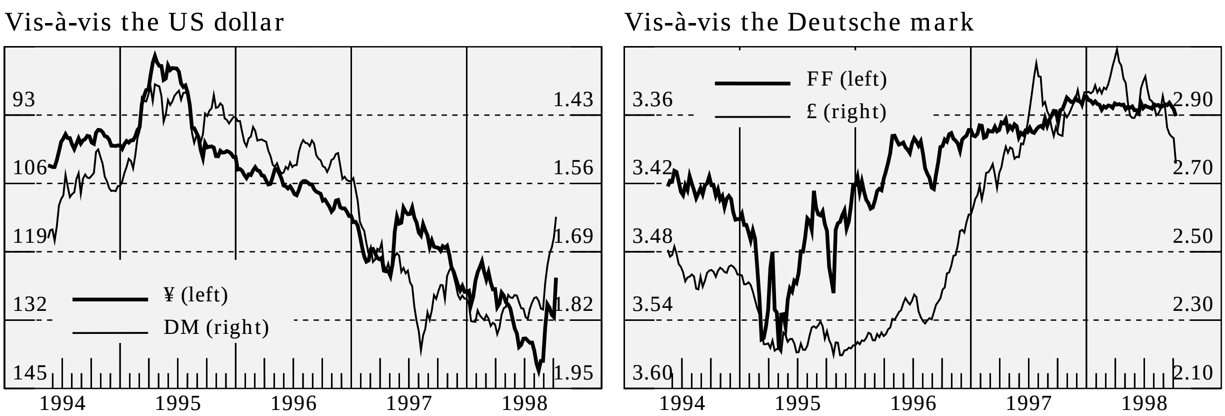
Sources: Bank of England, Euroclear, Euromoney, International Financing Review (IFR), International Securities Market Association (ISMA), national data and BIS.

International short and long-term interest rates

Weekly averages, in percentages and percentage points



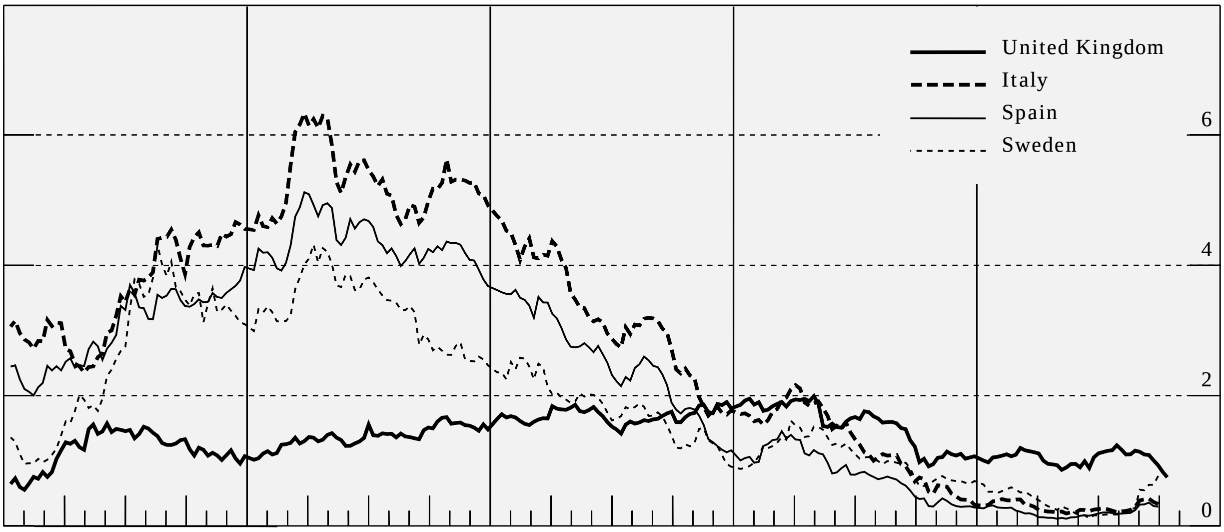
Bilateral exchange rates



[1] Three-month euromarket interest rates. [2] Yields in annual terms on the basis of ten-year benchmark government bonds. [3] Long-term rates minus short-term rates. [4] Vis-à-vis German long-term rates.

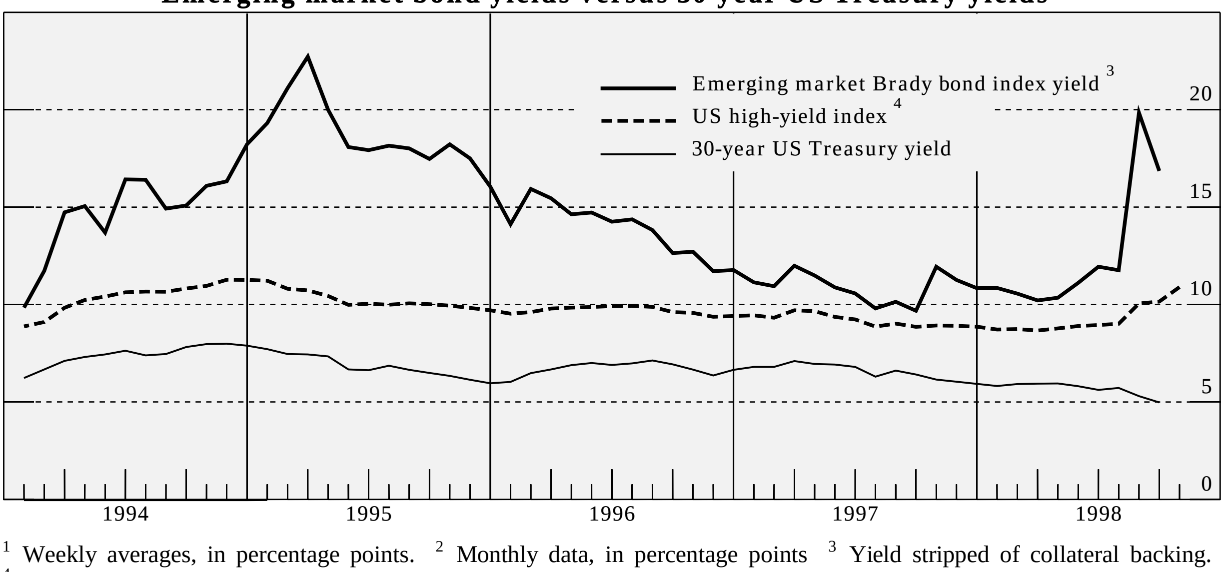
Sources: Datastream, national data and BIS.

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



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

Emerging market 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. [4] Sub-investment-grade corporate bond yield.

Sources: Datastream, JP Morgan, Merrill Lynch, national data and BIS.

Estimated net financing in international markets[1]

In billions of US dollars

Components of net international financing	1996	1997			1998			Stocks at end-June 1998
	Year	Year	Q3	Q4	Q1	Q2	Q3	
Total international[2] bank claims[3]	604.1	1,182.8	140.9	443.4	6.4	236.7	..	10,491.5
minus: interbank redepositing	184.1	717.8	45.9	378.4	-58.6	126.7	..	5,101.5
A = Net international bank claims[3]	**420.0**	**465.0**	**95.0**	**65.0**	**65.0**	**110.0**	**..**	**5,390.0**
B = Net money market instruments	**41.1**	**19.8**	**9.8**	**-2.4**	**10.7**	**1.4**	**7.8**	**194.2**
Total completed bond and note issues	860.4	1,016.6	279.2	231.9	294.0	301.3	243.4	..
minus: redemptions and repurchases	364.2	460.8	115.3	137.3	124.8	90.1	124.9	..
C = Net bond and note financing	**496.3**	**555.8**	**164.0**	**94.6**	**169.1**	**211.2**	**118.5**	**3,657.3**
D = Total international financing[4]	**957.4**	**1,040.6**	**268.8**	**157.2**	**244.9**	**322.6**	**..**	**9,241.5**
minus: double-counting[5]	187.4	210.6	73.8	22.2	84.9	87.6	..	1,371.5
E = Total net international financing	**770.0**	**830.0**	**195.0**	**135.0**	**160.0**	**235.0**	**..**	**7,870.0**

[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] Including holdings of securities. [4] A + B + C. [5] International bonds purchased or issued by the reporting banks, to the extent that they are taken into account in item A.

bond futures contracts. Meanwhile, the wild swings recorded in foreign exchange markets in the third quarter seem to have boosted demand for currency options.

In the international banking market, the general tightening of lending conditions dampened overall loan syndication activity in the third quarter. At the same time, detailed BIS international banking data for the second quarter of 1998 show that BIS reporting banks substantially withdrew from emerging markets and stepped up their purchases of marketable paper in the G-10 countries during the period. Commercial banks have become increasingly important players in securities markets worldwide in recent years. To the extent that securities holdings are recorded in banks’ trading books, this tendency for internationally active banks to securitise their claims and to rely more heavily on securities issues for their funding could have important implications for global financial intermediation. Some observers have expressed concerns that extreme aversion of investors to risk and an associated drying-up of financing through capital markets could have a negative impact on the real economy.

The Russian decisions mentioned above can be seen as part of a series of mutually reinforcing events which have highlighted a number of deficiencies in the world financial system. For instance, the massive unwinding of leveraged positions has served as a painful reminder that linkages between markets have become highly complex and opaque. Recent events have also underscored the inadequacy of models in coping with abrupt shifts in market liquidity and provided another illustration of the increasing convergence in the behaviour of banks and other categories of market participants. It is now broadly acknowledged that national and sectoral regulatory oversight has significant shortcomings in view of the globalisation of markets. The Basle Committee on Banking Supervision has announced a wide-ranging review of the Capital Accord to take account of evolving financial practices. Finding the appropriate balance between market discipline, regulatory standards and supervisory practices in a way which enhances the effectiveness of market discipline and minimises moral hazard will be a challenging task.

II

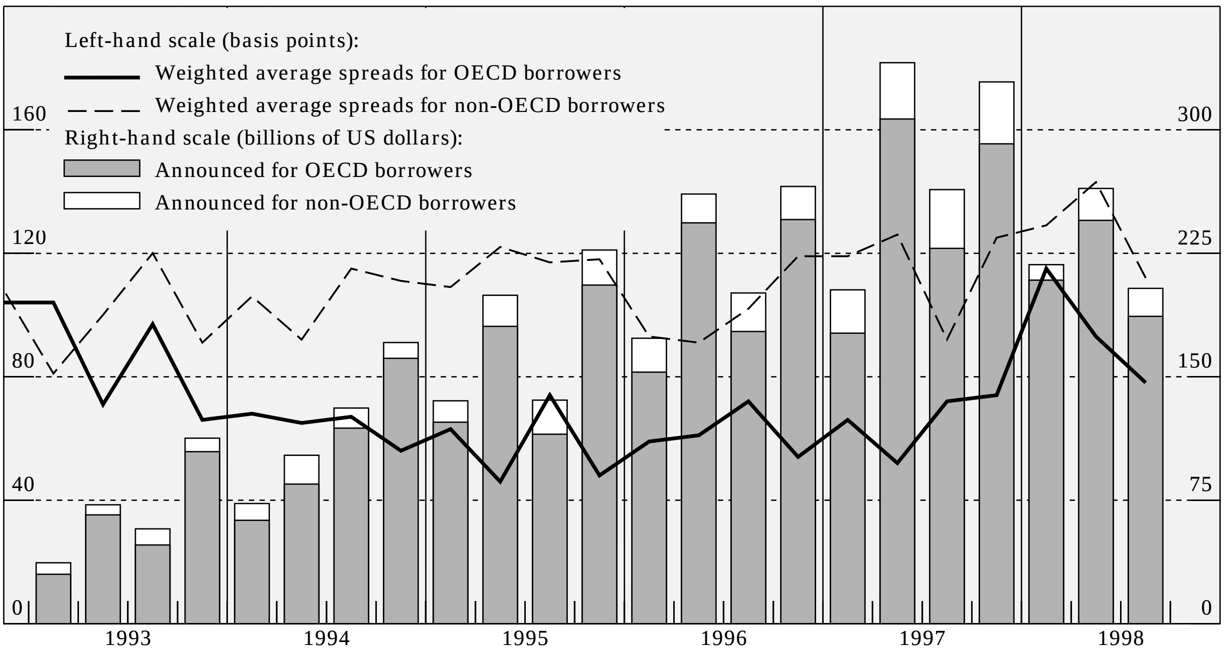
THE INTERNATIONAL BANKING MARKET

Overview

The volume of international syndicated loan facilities declined in the *third quarter of 1998* (by 23% to $204 billion) as borrowers were confronted with a less favourable environment. Earlier in the year, the withdrawal of Japanese banks and the consolidation taking place within the European banking industry had already reduced the pool of lenders and created some pricing uncertainty. The announcement by the Russian authorities on 17th August of a moratorium on some of the country's debt brought new activity for emerging market names to a near-halt and led to greater selectiveness for other borrowers. There was growing reluctance on the part of banks to accept less favourable returns than those obtained by institutional investors for comparable assets. This was reflected in a lower volume of arrangements for leveraged buyouts and a corresponding decline in average margins over Libor (see the graph). The increasing use of clauses allowing arrangers to modify the pricing and structure of facilities during syndication also accentuated the convergence of practices with those in securities markets.

Contrary to market expectations, detailed data now available for the *second quarter of 1998* show a strong rebound in the growth of banks' international claims, from $6 billion in the first quarter to $237 billion (10% on an annual basis). This occurred despite a further reduction in banks' exposure to outside-area countries. One important support to overall activity was the pause in the retreat of Japanese banks. Their reported international claims declined only by $23 billion, following a record fall of $256 billion in the first quarter (see Annex Table 8). A temporary easing of the "Japan premium" (the margin charged to Japanese banks in the international interbank market), some respite following the accounting term at end-March and ample liquidity supplied by the central bank were the

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



* Spreads over Libor on US dollar credits.

Sources: Euromoney and BIS.

Main features of the international claims of BIS reporting banks[1]

In billions of US dollars

Components	1996	1997				1998		Stocks at end-
	Year	Year	Q2	Q3	Q4	Q1	Q2	June 1998
Claims on outside-area countries	**141.4**	**99.1**	**34.0**	**25.8**	**-2.6**	**-2.1**	**-7.2**	**1,193.2**
Claims on inside-area countries	**446.2**	**1,092.3**	**172.9**	**148.8**	**457.9**	**8.4**	**243.9**	**9,065.6**
Claims on non-banks	302.2	242.2	54.9	80.0	25.5	45.5	108.5	2,885.1
Banks' borrowing for local onlending[2]	-40.1	132.3	8.1	22.9	54.0	21.6	8.7	1,079.0
Interbank redepositing	184.1	717.8	109.9	45.9	378.4	-58.6	126.7	5,101.5
Unallocated	**16.4**	**-8.5**	**18.0**	**-33.6**	**-11.9**	**0.1**	**0.0**	**232.7**
Gross international bank claims	**604.1**	**1,182.8**	**224.9**	**140.9**	**443.4**	**6.4**	**236.7**	**10,491.5**
Net international bank claims[3]	**420.0**	**465.0**	**115.0**	**95.0**	**65.0**	**65.0**	**110.0**	**5,390.0**
Memorandum item: Syndicated credits[4]	**900.9**	**1,136.3**	**340.8**	**263.7**	**329.1**	**218.1**	**264.4**	

[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.

main underlying influences. While continuing to reduce their presence in the international interbank market, Japanese banks added to their holdings of foreign securities in the period under review.

A second contributing factor was the further progress in the globalisation of certain continental European banking groups, most notably German, Swiss and Dutch institutions. Growth was especially significant in the case of German banks, which are now challenging the predominance of Japanese banks in the market, with shares in reported international banking claims of 17% and 19% respectively (see also Annex Table 8). Whereas in the past the role of German banks was largely driven by the export of domestic currency funds, the recent gain has mainly involved securities, Italian government bonds in particular.

There was, therefore, a continuation of the trend among reporting banks to increase the proportion of marketable paper in their international assets. Thus, at the end of June 1998, securities accounted for 41% of the cross-border claims of banks located in industrial countries on non-bank entities.[1] The tendency for internationally active banks to securitise their balance sheets could have important implications for global financial intermediation. Indeed, it might impair the ability of banks to fulfil their traditional role of stabilising financial flows in periods of financial volatility or liquidity contraction.

Business with countries inside the reporting area

Almost 70% of the $101 billion increase in banks' cross-border claims on the non-bank sector located inside the reporting area in the second quarter of 1998 was accounted for by securities transactions.[2] Within their overall business with such non-bank entities, reporting banks built up their

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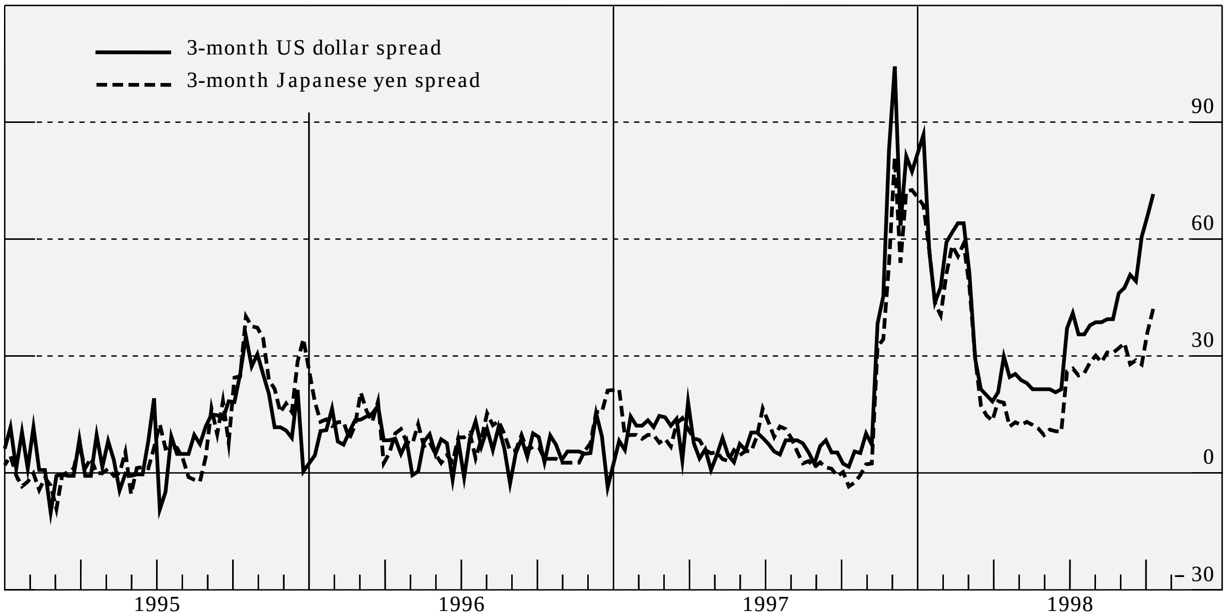
[1] The figures exclude the securities holdings of banks in the United States which do not provide such data.

[2] Separate data on banks' external loans are shown in Annex Tables 7A (vis-à-vis all sectors) and 7B (vis-à-vis the non-bank sector). Subtracting figures of Annex Table 7B from those of Table 6B gives the volume of securities holdings (including a small quantity of equities) issued by non-bank entities.

Differentials in US dollar and Japanese yen interbank interest rates between Tokyo and London*

Weekly data, in basis points



* Tokyo interbank offered rate minus London interbank offered rate.

Sources: Reuters and BIS.

portfolio of US paper (by $13 billion to $275 billion) and also bought large amounts of Italian securities (up by $21 billion to $137 billion). The announcement in May of the countries participating in EMU as from 1st January 1999 may have added to the willingness of foreign banks to purchase Italian securities.[3] However, to the extent that such large securities holdings are recorded in banks' trading books, the potential for disruption in the event of new major financial shocks may have increased.

On the liabilities side of reporting banks' international balance sheet, there was limited direct supply of cross-border deposits from the non-bank sector inside the reporting area ($33 billion). Combined with some withdrawal of official foreign exchange holdings from outside-area countries (see the next section), this created a significant funding gap for reporting banks. It implied, therefore, a heavier reliance on domestic sources of funds and on the issuance of international securities. Commercial banks from European countries and the United States have tapped the international securities market on a large scale in recent years. This strategy has probably given them more leeway in accommodating large swings in investor preferences and in interbank market liquidity. To the extent that some of these issues qualify as capital under prudential rules (which is the case for subordinated debt), they may also have facilitated banks' entry into new business areas.

Business with countries outside the reporting area

In the second quarter of 1998, reporting banks' total outstanding claims on outside-area countries contracted for the third consecutive quarter (by $7 billion). Whereas the decline in the earlier part of the year was heavily focused on emerging economies in Asia, the most recent retreat

3 Recent data suggest that, in spite of the greater preference of international investors for Deutsche mark paper in the third quarter, there was no noticeable shift away from Italian bonds. Such evidence also points to the role of liquidity factors, in particular the limited supply of certain government instruments, in the widening of spreads between German and Italian government paper in the third quarter.

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]				
	1997			1998		1997			1998	
	Q2	Q3	Q4	Q1	Q2	Q2	Q3	Q4	Q1	Q2
Total assets	**76.4**	**86.4**	**27.5**	**23.1**	**100.8**					
Canada	2.5	0.4	0.0	2.8	6.1	13.1	19.3	11.1	2.1	3.2
France	-0.7	2.2	10.9	10.9	3.4	24.9	14.0	17.3	19.7	29.5
Germany	0.0	13.0	11.9	-3.4	12.5	26.3	39.0	49.3	55.9	38.3
Italy	4.1	11.6	3.5	21.1	28.8	5.8	-9.4	22.0	0.5	8.6
Japan	28.4	-20.7	-3.8	-58.3	-22.5	33.3	-30.6	137.2	-112.7	71.3
United Kingdom	14.3	9.5	-7.6	8.7	-1.4	13.4	6.7	3.9	15.3	16.1
United States	6.5	42.0	10.5	18.2	43.3	119.1	48.6	154.1	85.0	68.2
Other countries	21.3	28.4	2.1	23.1	30.6					
Total liabilities	**36.7**	**7.1**	**39.1**	**73.0**	**33.7**					
Canada	1.6	-2.2	-0.2	0.0	2.3	0.2	6.1	11.9	-6.8	7.1
France	0.5	-5.9	2.5	3.8	-7.8	8.3	2.8	17.5	7.7	12.2
Germany	-6.8	-3.0	-11.1	21.0	2.7	8.1	-1.0	60.0	-20.0	10.2
Italy	-1.5	3.3	1.8	1.5	-4.6	16.9	3.8	34.2	-6.8	20.1
Japan	-2.3	-1.9	0.9	4.4	-2.0	65.6	-42.1	194.5	-57.7	50.2
United Kingdom	4.1	6.0	-1.6	6.8	3.0	27.5	-36.8	26.3	32.8	19.3
United States	28.3	-16.0	20.3	-8.2	18.7	64.5	120.8	169.2	154.7	87.1
Other countries	12.8	26.8	26.5	43.7	21.4					

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

encompassed a broader range of countries and regions (see Annex Tables 6). Countries affected included major debtors in Latin America as well as some developed countries such as Australia and Greece. There were, however, important exceptions to the overall pattern. Thus, Russia and Turkey continued to attract foreign banking funds, notably through the maintenance of high domestic interest rates, while lending to Middle Eastern and Central European borrowers remained buoyant.

In Asia, there were further reductions in banks' outstanding claims on Indonesia ($4 billion), Korea ($4.2 billion), Malaysia ($1.5 billion) and Thailand ($5.3 billion). This occurred despite the tendency for exchange rates to stabilise in some countries (Korea and Thailand) but against the backdrop of renewed global financial turbulence. The parallel $3.3 billion decline in claims on China should also be seen in this context, although the movement may have been accentuated by the slowdown of economic growth in China and some shift in local borrowing away from the dollar following the easing of domestic interest rates.[4] The Philippines was the only major debtor country in the region to attract new international banking funds in the period under review ($0.8 billion). Investors' confidence in the country's fiscal policy and trade performance facilitated foreign borrowing aimed at replenishing its foreign exchange reserves.

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[4] In July, the Chinese authorities announced measures to tighten foreign exchange controls. Under the new rules, effective from 1st August, the People's Bank of China said it might ban from the foreign exchange settlement business any financial institution linked repeatedly to irregularities in the currency market. In late September, the country announced stringent new foreign exchange regulations. A circular by the State Council imposed restrictions on local authorities' foreign debt issuance and on their provision of financial guarantees to foreign-funded projects. Chinese companies were also ordered to repatriate immediately their foreign exchange holdings overseas, were forbidden to prepay imports and were required to seek permission from the State Administration of Foreign Exchange before making early repayments of foreign currency loans.

Banks' business with countries outside the reporting area*

In billions of US dollars

Country groups	1996	1997				1998		Stocks at end-June 1998
	Year	Year	Q2	Q3	Q4	Q1	Q2	
Total assets	**141.4**	**99.1**	**34.0**	**25.8**	**-2.6**	**-2.1**	**-7.2**	**1,193.2**
Developed countries	22.8	25.2	8.8	7.8	4.4	9.5	2.1	220.2
Eastern Europe	10.8	18.5	3.3	8.3	2.6	6.5	4.2	115.5
Developing countries	107.9	55.4	21.9	9.7	-9.6	-18.1	-13.5	857.5
Latin America	28.5	34.6	5.8	10.7	10.2	15.6	-0.2	321.4
Middle East	-0.1	10.5	-0.6	0.3	7.2	-0.9	5.8	85.2
Africa	-0.4	2.7	0.9	0.7	0.3	1.0	-1.6	57.0
Asia	79.8	7.6	15.8	-2.0	-27.4	-33.8	-17.6	393.9
Total liabilities	**101.8**	**77.9**	**27.9**	**8.8**	**9.1**	**25.4**	**2.4**	**1,070.5**
Developed countries	23.2	18.2	8.5	5.1	-1.5	-1.0	5.7	200.8
Eastern Europe	2.9	9.4	4.2	4.3	-3.3	-2.8	2.1	54.9
Developing countries	75.8	50.3	15.2	-0.6	13.9	29.2	-5.4	814.8
Latin America	26.9	24.3	19.2	1.5	-2.5	17.7	-9.3	258.3
Middle East	17.1	-5.9	-6.0	-5.6	0.2	2.9	-0.6	211.8
Africa	2.9	7.1	3.4	2.0	-1.1	1.2	-0.1	55.5
Asia	28.9	24.8	-1.4	1.5	17.4	7.3	4.7	289.3

* Changes in amounts outstanding excluding exchange rate valuation effects.

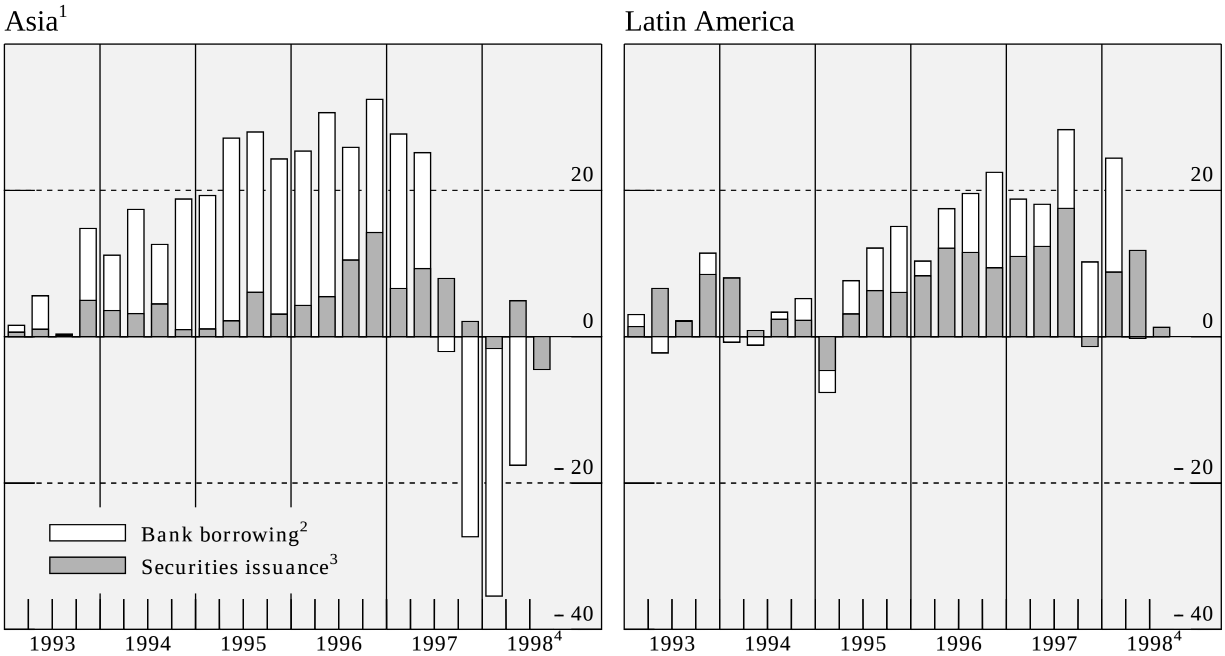
Meanwhile, new bank lending to Latin American countries ground to a halt. In particular, international bank credit to Brazilian borrowers dried up, following a record increase in outstanding claims in the first quarter ($9.6 billion). With renewed contagion from the Asian crisis, the lowering of domestic interest rates may have further weakened the incentive for capital inflows. In addition, it appears that purchases of dollar-indexed securities by Brazilian banks, which had been financed by foreign borrowing, were partly reversed during this period. Sizable inflows on that account had boosted the country's foreign exchange reserves to a peak of $73 billion in April. Reserve losses thereafter were probably responsible for the $8 billion fall recorded in reporting banks' own liabilities to Brazil for the second quarter as a whole (see Annex Table 6A, page 17).[5] Reporting banks were also net sellers of Brazilian debt securities, as part of a more general sell-off of securities issued by Latin American signatures, albeit on a smaller scale than during the last quarter of 1997. When seen in relation to the sharp rise recorded in the risk premia of such instruments in the third quarter (see the graph on page 20), this development suggests an early withdrawal by reporting banks from Latin America. At the same time, the limited movement in Argentine and Mexican non-bank deposits with reporting banks (Annex Table 7B) shows that there was no large-scale capital flight from these countries in the period under review. Contagion also appears to have spread to Africa, where bank exposure was trimmed by $1.6 billion (with Algeria, Côte d'Ivoire and Kenya being the most affected).

In contrast, the weakening of oil prices did not hamper lending activity in the Middle East. A significant volume of syndicated loan facilities was arranged for Saudi oil companies in the second quarter, while Egyptian banks responded to rising domestic demand for foreign currencies by drawing on their credit lines with foreign banks.

5 In August, Brazil adopted a series of measures to attract capital inflows. The minimum maturity of new international bond issues was reduced to one year from two years. The investment ceiling on foreign borrowing to purchase dollar-indexed securities under the "63 Caipira" rule was removed. The Government also eliminated a tax on foreign fixed income investment and waived a tax on international loans used to finance foreign direct investment.

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. [3] Net issues of international money market instruments, bonds and notes. [4] Data on bank borrowing are not yet available for the third quarter of 1998.

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

Similarly, growing financial strains in Russia did not prevent reporting banks from raising their exposure to Central and Eastern Europe, including to Russia itself (with an increase of $2.7 billion, following one of $3.3 billion in the first quarter). There were two major factors behind the continuing flow of banking funds to Russia in the quarter to end-June. One was the granting of officially supported long-term credits by continental European banking groups. The other was the purchase of Russian government securities by internationally active banks, which provides further evidence of the persistence of bank financing to the country until the outbreak of the crisis in the third quarter. Overall, other countries in the region do not appear to have been subject to significant contagion in the period under review. In particular, Hungary, Poland and Slovakia retained access to the international market, recording further inflows of banking funds. The main exception was Bulgaria prior to its agreement with the IMF in August for an economic programme supported by external financing.

Structural and regulatory developments

In July of this year, the Committee on Payment and Settlement Systems (CPSS) released a report assessing progress since the G-10 central banks' launched in 1996 a concerted strategy for reducing the systemic risks associated with the settlement of foreign exchange transactions.[6] The report acknowledged significant advances by many major market participants in reducing foreign exchange settlement risk, by industry groups in developing bilateral and multilateral netting services and by central banks in improving wholesale payment networks and promoting cooperation. In order to maintain momentum, the CPSS will continue to promote this three-pronged strategy, with a key element being ongoing cooperation with existing and prospective private sector groups that plan to provide risk-reducing multicurrency services. The G-10 central bank Governors have also invited the

6 See "Reducing Foreign Exchange Settlement Risk: a Progress Report", Committee on Payment and Settlement Systems of the Central Banks of the Group of Ten Countries, Basle, July 1998.

Basle Committee on Banking Supervision (the Basle Committee) to develop international supervisory guidance for banks on the prudential management and control of forex settlement risk.

In September, the Basle Committee released a package of three papers dealing with risk management and transparency in the banking industry. The first paper[7] proposes a framework for internal control systems, setting out 13 principles covering the essential elements of a sound internal control system.[8] The principles are intended to be of general application and the Basle Committee recommends that supervisory authorities use them in their own monitoring of banks' internal control structures. The second document[9] focuses on operational risk management in banking. It makes public the results of recent interviews with major banks in the G-10 countries showing that the awareness of senior management has increased but that most banks are only in the early stages of developing a framework in this area. The Basle Committee will encourage banks to share with supervisors the development of new techniques to identify, measure, manage and control operational risk. The third document provides guidelines to banks and supervisors for the public disclosure of information in financial reports.[10] Specifically, the paper strongly recommends that banks address six broad areas (financial performance, financial position, risk management strategies and practices, risk exposures, accounting policies and basic corporate governance) in their financial reports and other disclosures to the public. The recommendations contained in the paper complement the Basle Core Principles issued in September 1997, which outline the basic requirements for supervisory systems. The paper notes that supervisors' priority in less developed financial systems would be to establish a comprehensive supervisory reporting system. The Basle Committee intends to build on these recommendations by following up with more detailed guidance.

Also in September, the Chairman of the Basle Committee announced at a London conference on credit risk modelling that the Committee would conduct a review of the 1988 Capital Accord.[11] He noted that the standardised quantitative approach to capital adequacy had been challenged in recent years by financial innovation. In particular, the development of credit risk modelling and related derivatives had acted as a catalyst for a rethinking of the theory and practice of credit risk management. At the same time, the relatively simple approach of the existing capital adequacy framework had created the potential for distorted incentives and regulatory arbitrage. Securitisation, for example, had allowed banks to assume greater risks without having to face a corresponding increase in their capital requirements. He added that the risk profile of banks had changed to such an extent that strong supervision and market discipline (with an emphasis on transparency and disclosure) had to become important complements to capital regulation. Moreover, the range of institutions involved in international banking had spread beyond the reach of the Capital Accord. This made it necessary both to extend the supervisory process to countries outside the G-10 and to open up dialogue with supervisors in other key financial industries.

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7 See "Framework for Internal Control Systems in Banking Organisations", Basle Committee on Banking Supervision, Basle, September 1998.

8 Recent losses have shown that integrated aggregate risk measurement systems are not sufficient by themselves to permit the overall capture, management and control of trading risks. Effective risk control requires more detailed forms of risk measurement that are adapted to individual risk positions as well as limits.

9 See "Operational Risk Management", Basle Committee on Banking Supervision, Basle, September 1998.

10 See "Enhancing Bank Transparency", Basle Committee on Banking Supervision, Basle, September 1998.

11 See "Issues for the Basle Accord", William J. McDonough, Chairman, Basle Committee on Banking Supervision, London, September 1998.

Capital control and global financial reform

As the emerging market crisis took on global dimensions in the summer of 1998, a vigorous debate began on the merits of capital controls. The decision by the Malaysian authorities on 1st September to re-establish restrictions on foreign transactions involving the national currency① raised the question of how countries should best protect themselves from the volatility of short-term capital flows. Whereas earlier discussions on these issues had often been biased by ideological considerations, there has more recently been a greater willingness to re-examine the hypothesis that unfettered international capital flows are optimal.

It is increasingly acknowledged that a certain number of prerequisites need to be fulfilled before countries liberalise their capital accounts. Prime among these are robust banking systems, adequate financial supervisory and regulatory standards, and transparent rules and practices. A premature opening could expose the domestic economy to volatile capital inflows that exceed its absorption capacities. It is also increasingly recognised that preference should first be given to direct investment, followed by portfolio and other long-term capital investment, in the sequencing of capital market liberalisation.

It is therefore in the area of short-term capital flows that the debate has become the most controversial. Controls on outflows are generally rejected on the grounds that they have often proved ineffective in preventing capital flight (perhaps even contributing to it), while discouraging all types of inflows. Moreover, there has been growing support for some form of restrictions on short-term capital inflows. A number of countries have introduced such measures in the past. Chile, which established in 1991 a one-year compulsory deposit at the central bank for all non-equity inflows, is the example most often cited.② Such restrictions can be considered an implicit form of taxation and, as such, are not inconsistent with a commitment to capital account convertibility. However, their short-term benefits should be balanced against their long-term costs, which include higher borrowing rates, administrative requirements and competitive distortions. They also involve the difficult task of differentiating between types of flows, and especially between speculative flows on the one hand, and trade financing and long-term investment on the other. Finally, they may reduce the incentive for building up adequate regulation and a sound financial system.

One might therefore conclude that the challenge of limiting dependence on short-term external borrowing can be better met by supervisory arrangements. However, prudential regulation covers a wide spectrum of systems, ranging from an oversight of institutions' risk management systems to administrative measures (including quantitative ceilings on positions and indirect taxation, such as reserve requirements). Indeed, beyond the Basle Core Principles,③ it can be argued that selective compulsory reserve requirements imposed on commercial banks can be justified on prudential grounds in countries which have not yet been fully integrated into the world financial system.

In recent years, there has been growing interest in international standards and mechanisms designed to accompany countries in this process. While these require greater transparency on the part of countries, a similar commitment on the lending side should not be overlooked. Indeed, the recent crisis has revealed important weaknesses in the risk management systems of intermediaries and in financial disclosure. It has also brought to the fore structural deficiencies in the world financial system itself. In particular, regulatory oversight seems to have lagged the globalisation of markets and advances in technology, and a clearly defined international framework for handling financial crises is lacking.

Unfortunately, longer-term efforts to resolve such issues have been superseded by events. Following the decision by the Russian authorities to float the rouble and declare a partial debt moratorium in August, financial turbulence threatened to reach systemic dimensions. This prompted official actions, which included the recapitalisation of a major hedge fund and discussions on a contingent support package for Brazil. Since restoring overall market confidence has become critical at this stage, further unilateral decisions, such as rigid foreign exchange controls and moratoria, would have detrimental effects. They might heighten market concerns about a more generalised resort to controls, prompting a withdrawal from all emerging markets. Such unilateral decisions would also add to the difficulty of coordinating a fair sharing of costs. They might, therefore, delay an orderly resolution of the present crisis, on which the future shape of the global financial system will depend.

① Among the country's new measures, limits were imposed on the amount of foreign exchange that residents could carry abroad, offshore holdings of the currency had to be repatriated within one month and domestic banks were forbidden to provide ringgits to foreign banks. ② The non-interest-bearing reserve requirement was cut in June 1998 from 30% to 10% in order to offset the recent rise in the risk premia on dollar borrowing by Chilean companies. ③ See "Core Principles for Effective Supervision", Basle Committee on Banking Supervision, Basle, September 1997. The document established a set of 25 principles intended to serve as a basic reference for supervisory and other public authorities worldwide in the supervision of all the banks within their jurisdiction. The Principles are minimum requirements and it is recognised that in many cases they may need to be complemented to address particular conditions and risks in local financial systems.

Appendix: The yen/dollar exchange rate and fluctuations in Asia-Pacific currencies[12]

The impending introduction of the euro has led to an intensification of efforts to map the currencies of the world into groupings centred on the major currencies. One such effort concluded in 1995 that a “dollar zone, far from breaking up since the collapse of the Bretton Woods system, ... encompasses the American continent, Asia (except Japan), the Persian Gulf, Australia and New Zealand”.[13] Kawai and Akiyama estimated that 47% of world GDP in 1990-96 was produced in the dollar area (less than half of that in the United States itself), 33% in the future euro area (including the United Kingdom) and 18% in the yen area (essentially Japan).[14] Recently some analysts have spoken of the “break-up of the dollar bloc in Eastern Asia”,[15] which could, by Kawai and Akiyama’s measure, move 7% of world GDP away from the dollar area.

One approach to this mapping is to measure the response of a currency’s dollar exchange rate to a given change in the mark/dollar or yen/dollar rate using regression analysis (see the graph). For example, if a decline in the exchange rate of the yen against the US dollar were accompanied by a proportional decline in the US dollar rate of the Singapore dollar, this might suggest that the Singapore dollar belongs to the yen area. Another approach is to examine the currency composition of foreign exchange turnover.[16] Into early 1997, it could be said that “The role of the yen as an international currency is limited even in Asia, where most currencies tend to share no more than 10% of its movements against the dollar. Foreign exchange turnover data in emerging markets confirm the limited role of the yen and show much higher shares of dollar trading in Asia.”[17] At the turn of the year 1998, the currency map was shifting. But although the co-movement of Asian currencies with the yen had increased somewhat in 1997, it was still possible to conclude that “the role of the yen is limited for all the currencies …, including the Asian currencies.”[18]

Revisiting the evidence five months before the introduction of the euro, there are signs of a stronger association between yen/dollar movements and other dollar exchange rates in the Asia-Pacific region. That is, the responsiveness to day-to-day fluctuations of the yen/dollar exchange rate of some currencies in the region has become much larger over the past year (see the graph). A number of currencies, including the Australian dollar, the New Zealand dollar, the Singapore dollar, the Thai baht, the Malaysian ringgit and the Philippine peso regularly share half or more of the fluctuations of the yen against the dollar. The Korean won and the new Taiwan dollar responded in a similar way for a time, but more recently have shown a reduced sensitivity. The sensitivity of the Hong Kong dollar one-year forward rate to changes in the yen/dollar exchange rate increased around October 1997. Since the end of April 1998, however, the Hong Kong dollar has returned to tracking the US dollar more closely. In August 1998, the sensitivity of the Australian dollar declined, as it did not share the yen’s strength,[19] while the Malaysian authorities opted for capital controls and a peg to the dollar.

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12 This appendix was contributed by Gabriele Galati of the Monetary and Economic Department of the BIS and Robert N. McCauley of the BIS Representative Office for Asia and the Pacific.

13 Fabienne Ilzkovitz (1995): “Recent Developments in the International Use of Currencies: Towards a Tripolar Regime?” in ECU Institute, ed., *International Currency Competition and the Future Role of the Single European Currency,* p. 93.

14 Masahiro Kawai and Shigeru Akiyama (1997): “Empirical Analyses of Exchange Rate Arrangements: Changing Influences of the World’s Major Currencies”. Paper presented to the NBER-TCER-CEPR Trilateral Conference on the *International Monetary Regime in the 21st Century*, Tokyo, 19th-20th December, Table 5A.

15 Brendan Brown (1998): “The New Five-Currency World”, in Tokyo-Mitsubishi International plc, *Market Perspectives,* Spring, pp. 15-17.

16 It should be noted that the evidence of contemporary movement cannot resolve the question of what is causing what, or indeed whether both exchange rates are responding to a third factor.

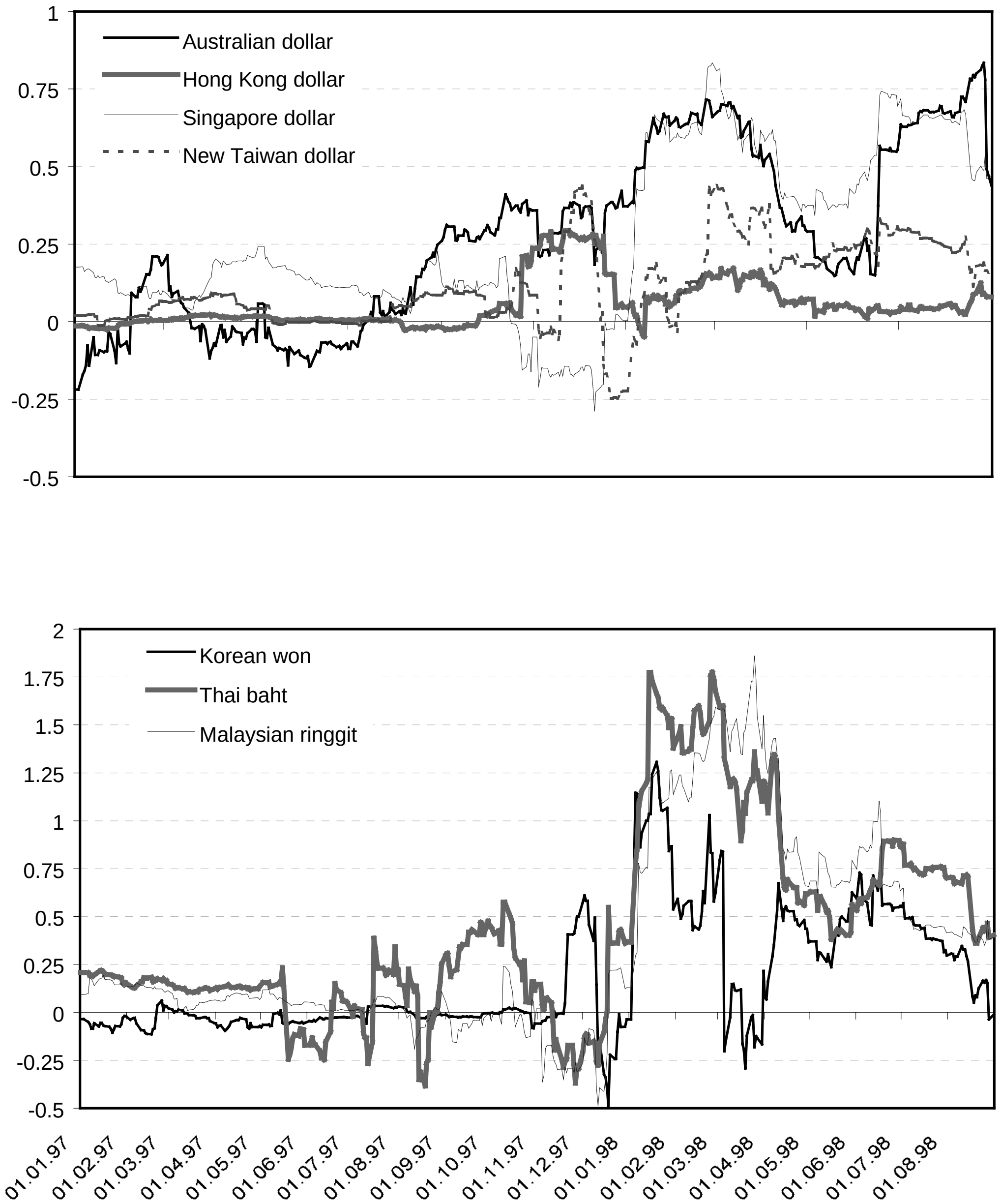
17 Bank for International Settlements (1997): *67th Annual Report*, p. 95.

18 See Part V of the February 1998 issue of this commentary, pp. 34-37.

19 According to one analyst, the “AUD and NZD are decoupling from the JPY” (Paul Meggyesi, “FX Outlook”, Deutsche Bank Research, Global Forex Strategy, 28th August 1998, p. 5).

Asia-Pacific currencies and yen/dollar movements

Sensitivities with respect to yen/dollar changes



Note: The elasticity of a currency X with respect to yen/dollar changes is estimated by regressing (the percentage change of) the X/dollar spot exchange rate (in the case of the Hong Kong dollar, the one-year forward rate) on a constant and (the percentage change of) the yen/dollar exchange rate. Elasticities are estimated with daily data over rolling windows of 40 days.
Sources: Bank of Japan, Datastream and BIS calculations.

Thus, one observes a broad, but by no means uniform, increase in the sensitivity of Asia-Pacific currencies to movements in the yen. Whether the increase will be sustained, or whether it will wear off as it did in 1985, remains to be seen. Turning to the evidence from the currency composition of foreign exchange turnover, the data raise a question as to the persistence of the change in behaviour. While April 1996 data showed scant trading of yen against Asia-Pacific currencies, data from October 1997 suggest little growth in their trading against the yen to parallel the observed change in the exchange rate sensitivities. On this evidence, the euro is arriving against a background of an unsettled currency configuration in the Asia-Pacific region.

III

THE INTERNATIONAL SECURITIES MARKETS

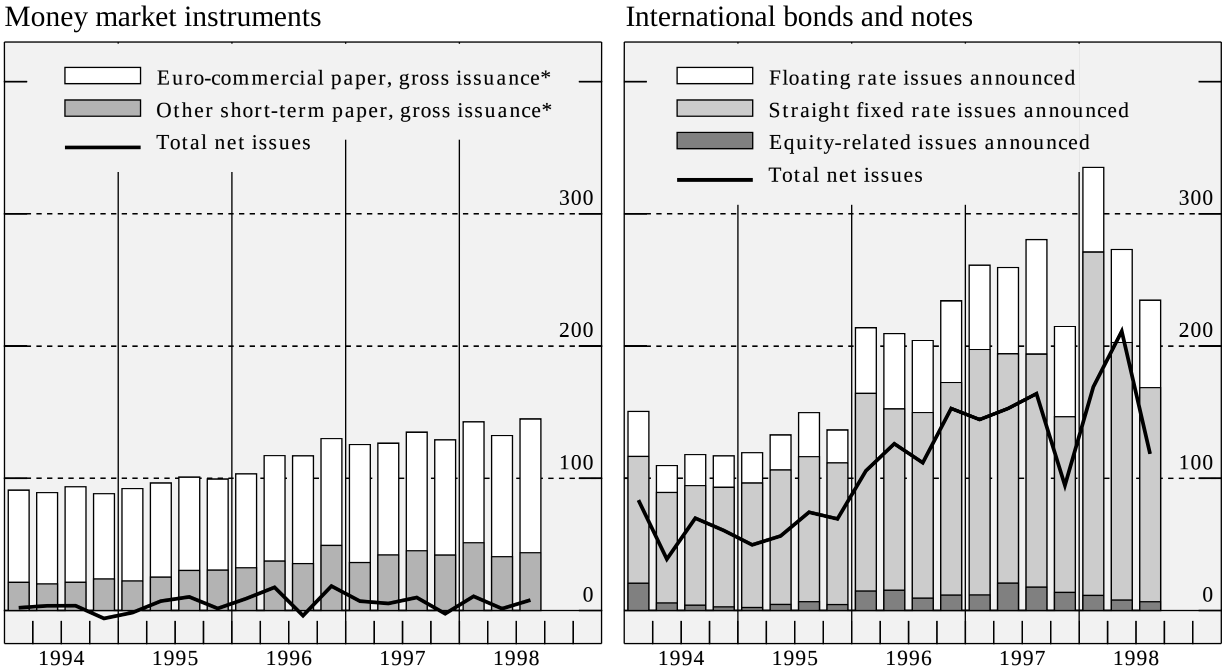
Overview

There was a further contraction of gross international debt issuance in the third quarter of 1998, while the increase in repayments meant that net issuance nearly halved (see the tables on pages 17 and 19). Market conditions had regained some stability in July, but the Russian announcement in August and the near-collapse of a large US hedge fund in September created a massive flight to quality and liquidity. The withdrawal of bank loans to leveraged investors and the increase in margin requirements on positions that were rolled over led to a reversal of investment strategies, particularly those associated with "yen carry" transactions.[20] Market volatility reached historically high levels, credit tiering was magnified, bid/ask spreads widened dramatically and secondary market trading plunged for all but the most liquid issues. The primary market was also effectively closed to all but the most highly rated issuers, and then only on repriced terms.

The sharp drop in government benchmark yields to historical lows failed to translate into an easing of credit conditions since it was more than offset by a widespread rise in the yields of other securities.[21] While the heightened risk aversion of investors tightened conditions in the capital markets, banks also reviewed their lending standards. Indeed, the widening of risk premia in the bond

The international debt securities markets

In billions of US dollars



* Excludes issues redeemed in the same quarter.

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

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20 Borrowing at low yen interest rates for investment in higher-yielding instruments (largely dollar-denominated).

21 As an illustration of the flight to liquidity, investors in US Treasury securities favoured "on-the-run" issues, while investors in European securities focused on a narrow range of German government securities to the detriment of other highly rated government bonds.

Main features of international debt securities issues[1]

In billions of US dollars

Instruments, currencies, nationality and type of issuer	1996	1997		1998				Stocks at end-Sept. 1998
	Year	Year	Q3	Q4	Q1	Q2	Q3	
Total net issues	**537.4**	**575.6**	**173.8**	**92.2**	**179.9**	**212.6**	**126.3**	**4,090.1**
Money market instruments[2]	41.1	19.8	9.8	-2.4	10.7	1.4	7.8	205.6
Bonds and notes[2]	496.3	555.8	164.0	94.6	169.1	211.2	118.5	3,884.5
Developed countries	411.0	450.8	132.9	83.4	145.1	167.7	113.6	3,306.3
Europe[3]	*243.5*	*259.2*	*69.7*	*52.4*	*93.6*	*89.0*	*60.3*	*1,969.4*
Japan	*16.1*	*-0.8*	*6.8*	*-9.0*	*-6.4*	*-9.7*	*-5.0*	*292.7*
United States	*131.8*	*177.8*	*54.7*	*44.2*	*49.0*	*80.2*	*52.0*	*739.7*
Canada	*8.8*	*10.1*	*2.2*	*-0.8*	*5.9*	*7.1*	*3.7*	*200.3*
Offshore centres	16.6	14.9	5.3	0.2	1.7	4.3	1.8	57.0
Other countries	88.0	89.2	33.6	5.2	8.9	28.0	2.3	370.6
International institutions	21.8	20.7	2.0	3.4	24.2	12.6	8.6	356.2
US dollar	262.1	333.5	109.0	58.2	103.0	125.2	65.7	1,857.0
Yen	84.8	34.1	7.5	-1.2	-7.7	-9.3	-6.0	419.8
Euro area currencies	136.0	139.9	39.2	34.1	61.9	67.7	55.6	1,139.0
Other currencies	54.5	68.1	18.2	1.1	22.6	28.9	11.0	674.3
Financial institutions[4]	348.4	360.7	102.9	76.4	109.7	107.7	76.2	1,922.5
Public sector[5]	118.2	89.0	27.6	-5.3	54.0	62.6	36.5	1,219.1
Corporate issuers	70.9	125.9	43.4	21.1	16.3	42.3	13.5	948.5

[1] Flow data for international bonds; for money market instruments and notes, changes in amounts outstanding excluding exchange rate valuation effects. [2] Excluding notes issued by non-residents in the domestic market. [3] Excluding Eastern Europe. [4] Commercial banks and other financial institutions. [5] Governments, state agencies and international institutions.

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

markets and the fall in equity markets created fears of a "credit crunch".[22] However, it remains to be seen whether the shift in focus from return maximisation to capital preservation reflects a long-term and fundamental repricing of risk or a reaction to excessively easy credit conditions in earlier periods.

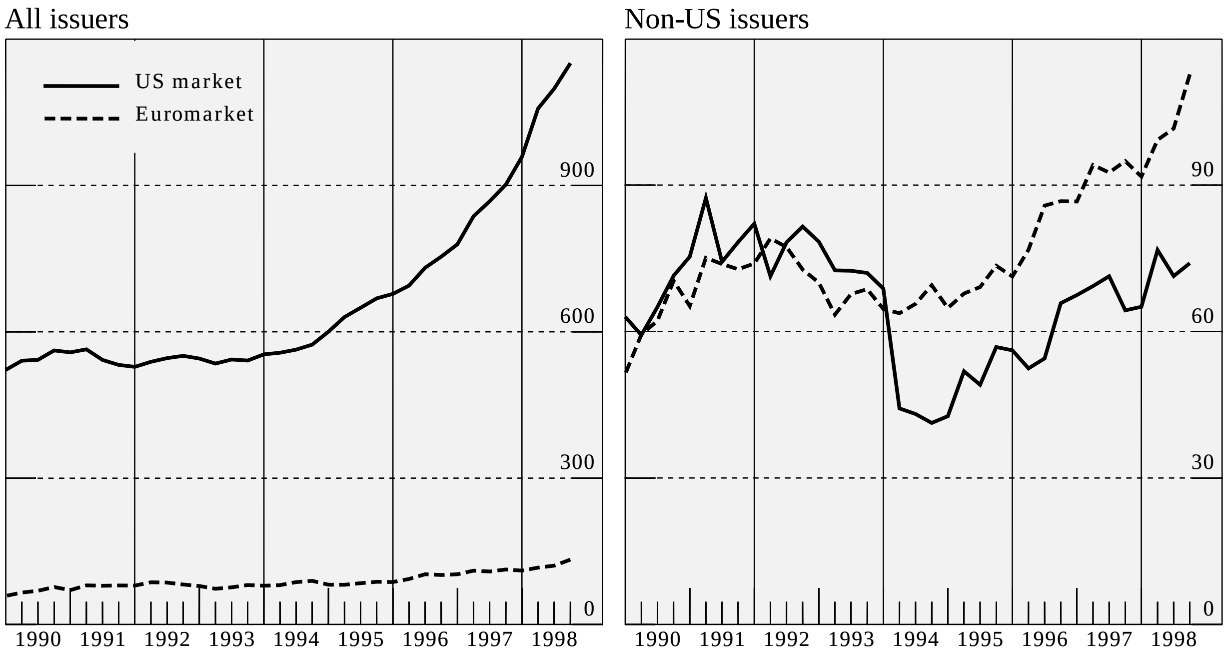
Money market instruments

Net issuance of euro-commercial paper (ECP) and other short-term euronotes proceeded at a healthy pace, with the stock of paper outstanding rising (by $11.4 billion to $206 billion). Unsettled conditions in the longer-term segment of securities markets appear to have induced borrowers to raise their recourse to short-term financing instruments. In spite of growing concerns about exposure to lower-rated names or leveraged investors, financial institutions from industrialised countries raised $6.6 billion. By contrast, there was a contraction in the stock of paper issued by emerging market entities (-$2.5 billion), following a slight increase in the previous quarter. Market participants reported that a number of European governments were considering the introduction of ECP. Such programmes would offer greater flexibility than traditional short-term funding instruments, an important consideration in the competition for funds ahead of the introduction of EMU. For example, Belgium signed a new Treasury bill programme that will achieve funding diversification through the issuance of paper in Belgian francs, euros and other OECD currencies.

[22] Traditionally defined as an inability or reluctance of banks to extend credit owing to regulatory impediments or weakness in their capital structure.

Commercial paper outstanding

In billions of US dollars



Sources: Federal Reserve Board, Euroclear and BIS.

Longer-term international securities

In the longer-term segment of the international securities markets, the reduction in the volume of gross issues (to $235 billion) was accompanied by an increase in repayments (to $125 billion), leading to a near halving of net financing (to $119 billion from $211 billion). For the first nine months of the year, however, both gross and net issues were larger than in the same period of 1997. A return to more stable conditions in the fourth quarter could thus lead to a new record volume of business in 1998.

The turbulence in financial markets had some subtle repercussions on market activity. For instance, despite widespread market reports of strong demand for floating rate issues, the market share of these structures increased only marginally. This owed as much to anticipations of monetary policy easing in the major countries after the Russian decisions as to concerns about credit risk (since financial institutions are the major players in this market segment). At the same time, the preference of investors for liquidity was met through some sizable issues. However, with underwriters being reluctant to carry large inventories of securities, prime borrowers were often encouraged to offer fungible additions to outstanding securities. There was also an increase in arbitrage-related issuance of small notes though medium-term note programmes. As a result, there was a further decline in the average size of issues from the high level of the first quarter.

Investment banks were sharply affected by the market reversal. The lower volume of new securities issues, the drying-up of merger and acquisition financing, lower secondary market trading and losses in proprietary operations all combined to affect their profitability. However, US underwriters appear to have further strengthened their competitive position through their leading involvement in the management of state agency and supranational paper.

Type and nationality of issuers. The quarter began on a fairly positive note with a reasonable volume of swap-related business as large borrowers benefited from a widening of swap spreads to launch a number of substantial issues in US dollars and European currencies. European financial institutions were very active, achieving attractive sub-Libor funding through the sale of structured securities (see the paragraph on equity-linked issuance below). The Russian moratorium in August dramatically soured market conditions. With the flight to quality and liquidity affecting

Main features of the international bond and note markets

In billions of US dollars

Instruments, currencies and type of issuer	1996	1997			1998		
	Year	Year	Q3	Q4	Q1	Q2	Q3
Announced issues	**861.5**	**1,015.8**	**280.5**	**214.7**	**335.1**	**273.0**	**234.7**
Floating rate issues	222.5	283.8	86.5	68.2	63.9	70.2	66.2
Straight fixed rate issues	587.9	668.0	176.3	132.8	259.7	194.9	161.9
Equity-related issues[1]	51.1	63.9	17.7	13.7	11.5	7.9	6.6
US dollar	391.8	517.4	150.5	109.4	154.6	143.6	115.3
Yen	134.9	129.8	35.4	26.6	19.7	12.8	17.2
Euro area currencies	212.2	221.8	59.7	51.8	105.2	76.8	65.6
Other currencies	122.6	146.8	34.9	26.9	55.5	39.8	36.6
Financial institutions[2]	453.7	539.1	153.9	118.3	168.6	134.3	117.5
Public sector[3]	211.8	225.2	55.5	41.2	109.2	77.1	80.2
Corporate issuers	195.9	251.5	71.0	55.2	57.3	61.5	37.0
Completed issues	**860.4**	**1,016.6**	**279.2**	**231.9**	**294.0**	**301.3**	**243.4**
Repayments	**364.2**	**460.8**	**115.3**	**137.3**	**124.8**	**90.1**	**124.9**

[1] Convertible bonds and bonds with equity warrants. [2] Commercial banks and other financial institutions. [3] Governments, state agencies and international institutions.

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

virtually all asset classes, the extreme volatility of swap and new issue spreads curbed primary market activity. Swap margins over benchmark rates widened to their highest levels since the early 1990s (on concerns about counterparty risk), but the parallel rise in other credit spreads meant that only the best-rated issuers could exploit arbitrage opportunities. The recovery of issuance in September was accompanied by a shift in investor demand to AAA-rated securities (particularly from US state agencies and supranational entities). Investor demand was, however, somewhat less buoyant for highly rated issuers of asset-backed securities, perhaps owing to worries about the performance of underlying assets or the financial solidity of securitisation structures. Similarly, concerns about the strength of financial institutions and caution about non-financial entities had a negative impact on the fund-raising activities of the private sector.

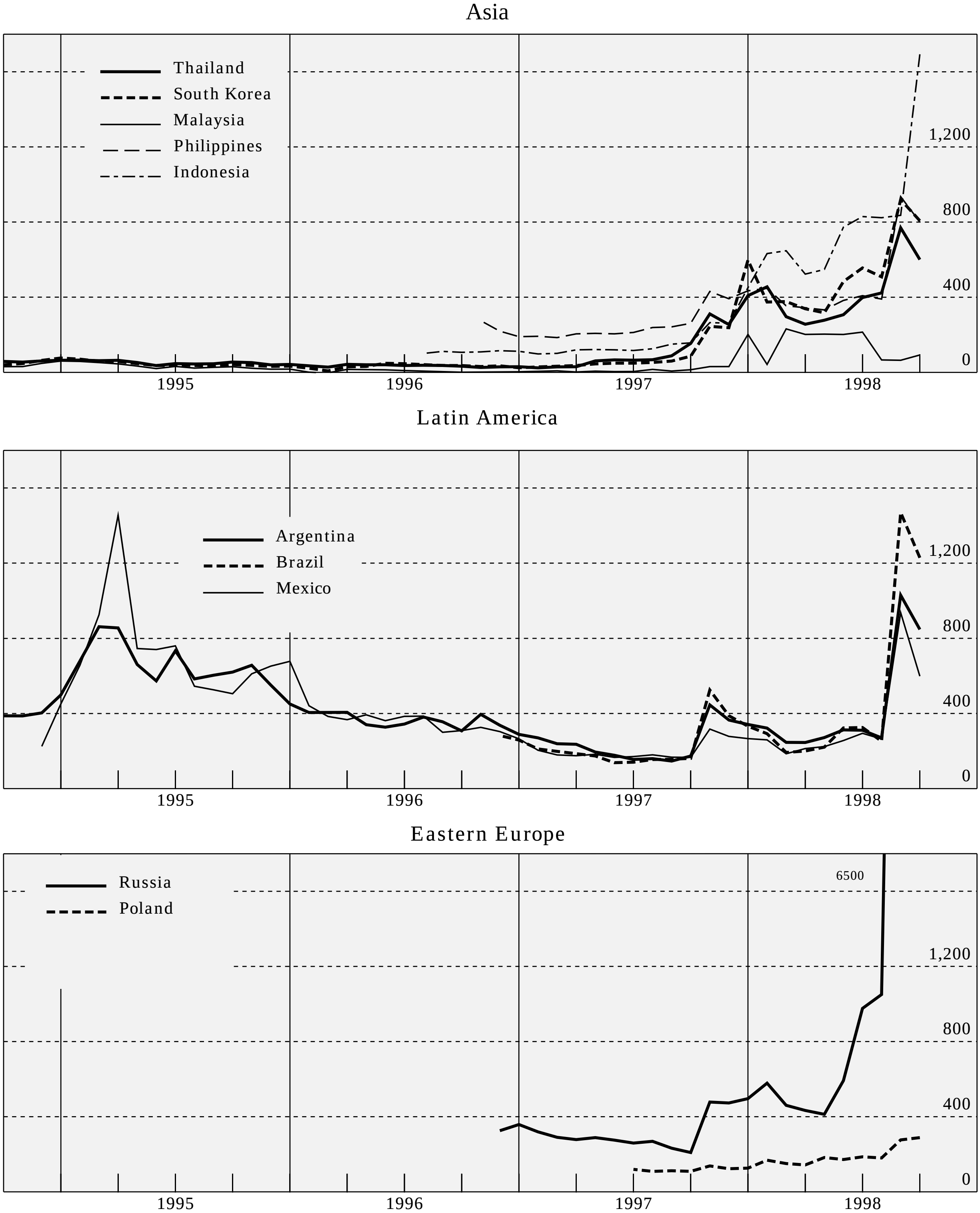
Following a promising start in July, when Russia and Latin American sovereign borrowers conducted several transactions (albeit on terms that were less favourable than those achieved in the second quarter), emerging market borrowers bore the brunt of investors' flight to safety, with issues declining by almost 50% (to $14.9 billion). Russia's moratorium was followed by a dramatic increase in secondary market spreads.[23] This increase was most pronounced for Russia, but Latin American countries, which had been spared the worst effects of the "Asian" crisis in late 1997/early 1998, were also caught by the mass exodus from emerging markets. However, while spreads on Asian countries stabilised at lower levels than those on Latin American entities, those on Central European countries remained well below.

One of the surprising developments was the extent of activity carried out by Russia just ahead of that country's moratorium. An important element was the temporary improvement in

[23] For example, the spreads on some Russian dollar-denominated bonds rose to more than 6,000 basis points over US Treasuries, the widest ever recorded on an emerging market instrument. The JP Morgan index of emerging market debt widened to more than 1,800 basis points, marginally lower than the spread of about 1,900 basis points seen at the height of the Mexican financial crisis in early 1995.

Average spread of US dollar sovereign international bonds over ten-year US Treasury bonds

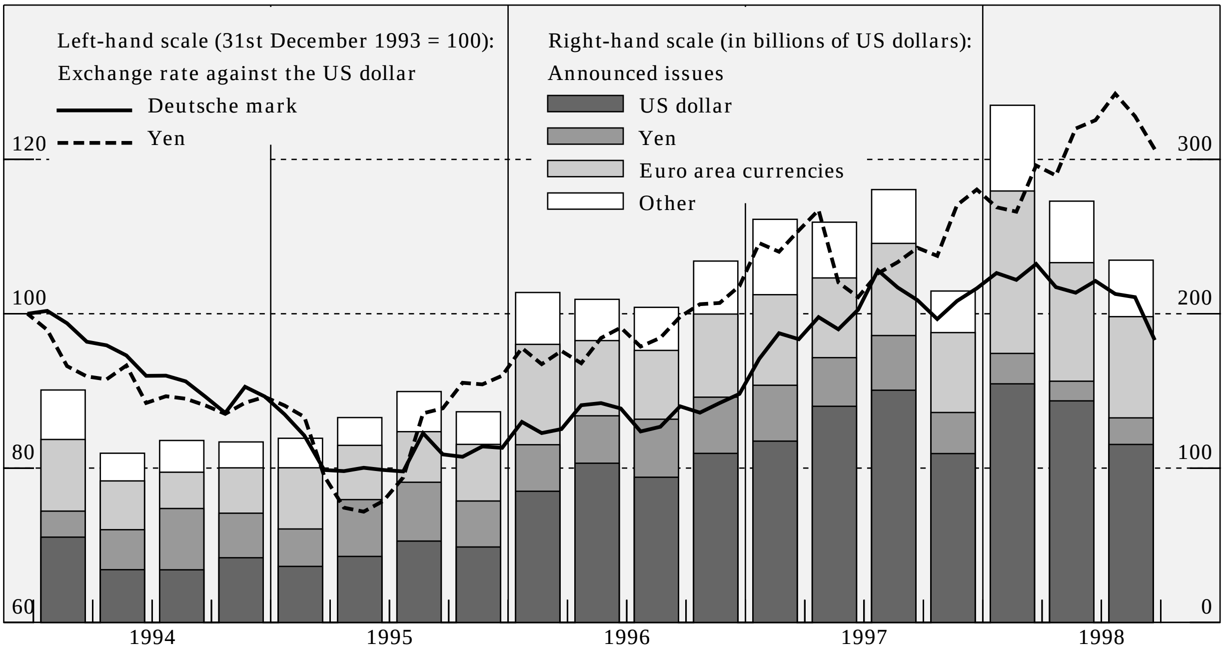
In basis points



Source: Bloomberg.

confidence that followed the signing of an agreement with the IMF. Thus, in July, Russia successfully conducted an exchange of domestic Treasury bills for seven-year and 20-year eurodollar bonds worth $6.4 billion. Although the issues were priced at high premia over benchmark securities,

International bond and note issuance and the US dollar exchange rate



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

the operation was deemed to have been worthwhile by the country since it reduced its immediate debt servicing commitments. Other emerging market countries, such as Argentina and Ukraine, were also able to tap the international market before the Russian moratorium. Moreover, the market for "high-yielding" securities witnessed some activity, with issues by UK and Turkish telecommunications companies. Investor demand for new emerging securities dried up thereafter. India and Lebanon were the two main exceptions with issues that reflected special factors. The lack of access to international securities markets will significantly complicate the external debt management of developing countries. Countries that have greatly depended on such funding and have heavy amortisation schedules will have to seek alternative sources such as domestic securities (in countries where such markets exist), syndicated loans or official assistance.[24] Another possibility would be the issuance of securities backed by hard currency collateral or by guarantees from multilateral institutions.[25]

Currency of issuance. The market turmoil did not result in a dramatic alteration of the currency composition of issues. Although conflicting influences meant that the share of the US dollar declined slightly (to 49% from 53%),[26] the heavy volume of repayments of eurodollar paper provided support to issuance. Business was also maintained by growing recourse to the dollar market by US agencies and intense end-quarter activity by supranational borrowers. The share of euro area currencies was stable (at 28%), with issuance generally less affected by the turbulence gripping financial markets. Interestingly, issuance denominated in ECUs/euros was steadier and slightly larger than that in Deutsche marks (with a new quarterly record of $24.6 billion, compared with $24 billion in the German currency). The composite nature of the ECU/euro might have protected it against some

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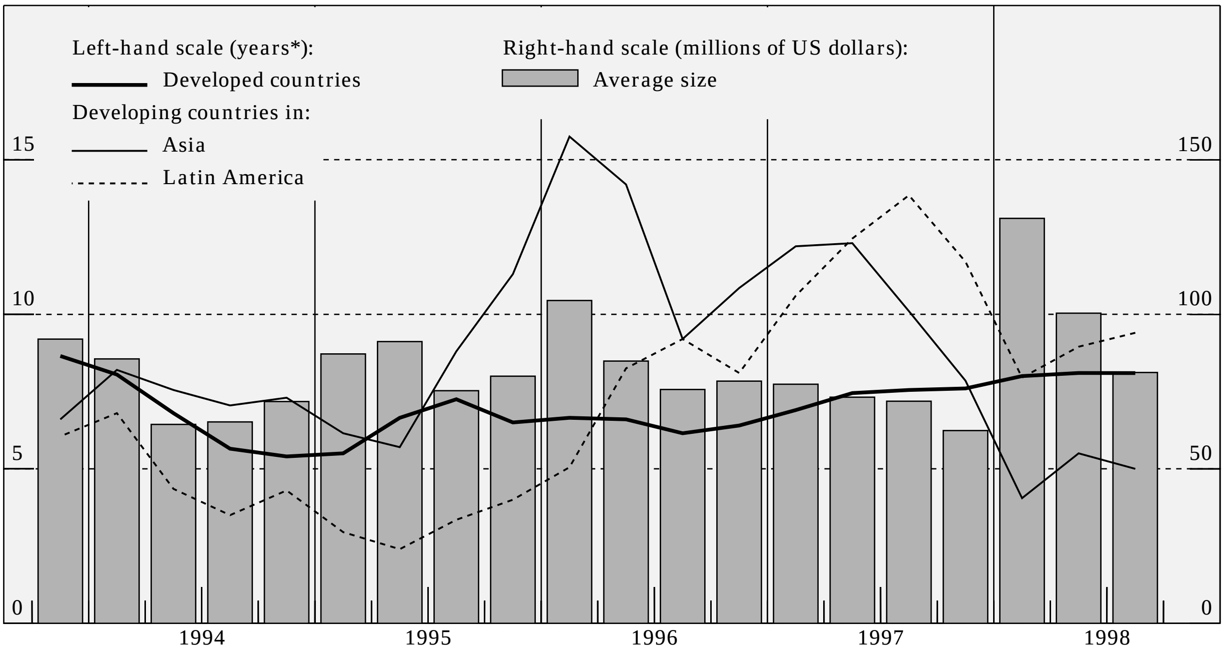
24 For example, Argentina was reported to have been negotiating a $6 billion facility with multilateral lenders.

25 For example, the Electricity Generating Authority of Thailand announced the forthcoming introduction of a $300 million ten-year issue which included an innovative guarantee by the World Bank covering payment of principal and partial payment of interest.

26 The global crisis initially benefited the US currency, but sentiment turned negative on growing concerns about Latin America, the slide of US equity markets, the reversal of short yen/long dollar leveraged positions, the sale of US assets by weak banking groups and expectations of an economic slowdown in the United States.

Average size and maturity of announced straight fixed rate international bonds and notes



* Two-quarter moving average weighted by size.

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

of the cross-currents affecting the Deutsche mark, but portfolio rebalancing by investors away from existing European currency instruments probably exerted a strong influence. The forthcoming introduction of EMU seems to have led investors to abandon the distinction between core and peripheral European markets. State agencies and supranational borrowers took advantage of the UK Government's decision to reduce the sale of gilts and the sharp end-quarter widening of swap spreads to introduce a substantial volume of sterling-denominated securities. There was a mild recovery of yen-denominated issues, following three consecutive quarterly declines. While Japanese securitisation vehicles accounted for a significant share of new yen business, the upturn in the yen also encouraged greater issuance of small notes by a broad range of financial intermediaries through medium-term note programmes.

Type of issues. Issuance of *straight fixed rate bonds and notes* declined by 17% in the third quarter (to $162 billion). Conditions were reasonably favourable at the beginning of the quarter, but the increase in market volatility reduced demand for fixed rate products thereafter. Highly rated issuers nevertheless managed to find a receptive market. US agencies capitalised on the reduced supply of US Treasury paper, investors' flight to quality and growing European interest in agency paper by launching an unprecedented volume of issues ($33 billion). In spite of less attractive new issue margins, the widening of swap spreads enabled them to achieve funding rates that were close to those achieved under more normal market conditions. Of note, FNMA introduced a $7 billion five-year bond, the largest single-tranche issue ever launched in the euromarkets. Meanwhile, issuers of Pfandbriefe pursued their international expansion, with the largest issue ever introduced in either the domestic or international markets (DM 5 billion). European sovereign and supranational borrowers were also active through fungible issues in a variety of European currencies as well as the dollar.

The quarter was also characterised by several innovative issues. Thus, in July, French utility Electricité de France (EDF) issued securities that bridged the gap between domestic debentures

Deleveraging and its impact on financial markets

The contagion that followed the Russian moratorium had dramatic repercussions for global financial markets. While leveraged investors had already begun a slow process of retrenchment since the onset of the Asian crisis, the Russian announcement acted as a catalyst for a sharp market reversal. The need to cover losses in the most affected market segments and the sudden increase in margin calls from lenders forced investors to liquidate a wide range of assets and investment strategies. Thus, contagion spread rapidly from Russian securities to other emerging market securities and then to the assets of industrial countries. The losses revealed by Long-Term Capital Management (LTCM) as well as by other hedge funds and the proprietary trading desks of some major banks added to the contagion. The crisis, which had originally begun in the emerging market world, then assumed a global character.

The episode has also had broader macroeconomic repercussions. For example, the reversal of outstanding yen carry transactions amplified volatility in the foreign exchange and securities markets. The resulting sale of US dollar denominated assets and repayment of yen loans was reported to have been one of the major factors in the sharp reversal of the US dollar/yen rate, the drying-up of liquidity in non-benchmark securities and the sharp price swings in major government securities markets.

and eurobonds.[27] The ECU/Euro 1 billion issue, listed in Amsterdam, Frankfurt and Paris, will be transacted through domestic and international clearers and will pay (to non-residents) coupons that are free of withholding tax. In August, the Japan Development Bank introduced a yen-denominated issue that included rolling put options in order to overcome investors' concerns about the state of the country's banking sector.

The slowdown in the issuance of *floating rate notes* was less pronounced than that in the fixed rate segment in the third quarter of 1998, with issues declining by only 6% (to $66.2 billion). The climate of uncertainty generated investor interest in floating rate structures, but the negative perception of financial sector debt and asset-backed issues constrained issuance by financial sector entities.[28] In spite of the less favourable climate, several European banks chose to proceed with planned securitisation transactions. The largest German bank introduced its first issue of collateralised loan obligations (CLOs), equivalent to $2.4 billion, backed by more than 5,000 corporate loans. At the same time, a large Swiss bank launched a $2.3 billion instalment of its corporate loan securitisation programme. The bank transferred the credit risk of the underlying loans through an issuing structure involving the use of credit default swaps. European banks have come under strong pressure to improve return on equity and, as a result, the securitisation of corporate loans is increasingly being used as a means of improving capital efficiency.

In the third quarter of 1998, the issuance of *equity-linked bonds* moderated for the fifth consecutive quarter (to $6.6 billion). Declining equity markets and high volatility curtailed issuance in that market segment. Although several borrowers cancelled planned issues, some notable deals were introduced. For example, in August, the financial arm of a large US utility challenged the market by launching the largest convertible issue ever ($3.2 billion), permitting the issuer to unwind its stake in a UK utility by enabling investors to exchange the securities into shares in the utility. The Greek Government also introduced a novel structure, an ECU/Euro 500 million issue that will be convertible into the shares of companies targeted for privatisation. The paucity of standard equity-linked transactions belies the extent of activity in the equity-related market since a growing number of issues are synthetically structured. For example, intermediaries have introduced a variety of bonds linked to stock market indices or have offered guaranteed products incorporating fixed income and equity option elements. Reverse convertible issues were also popular before the stock market rout.[29]

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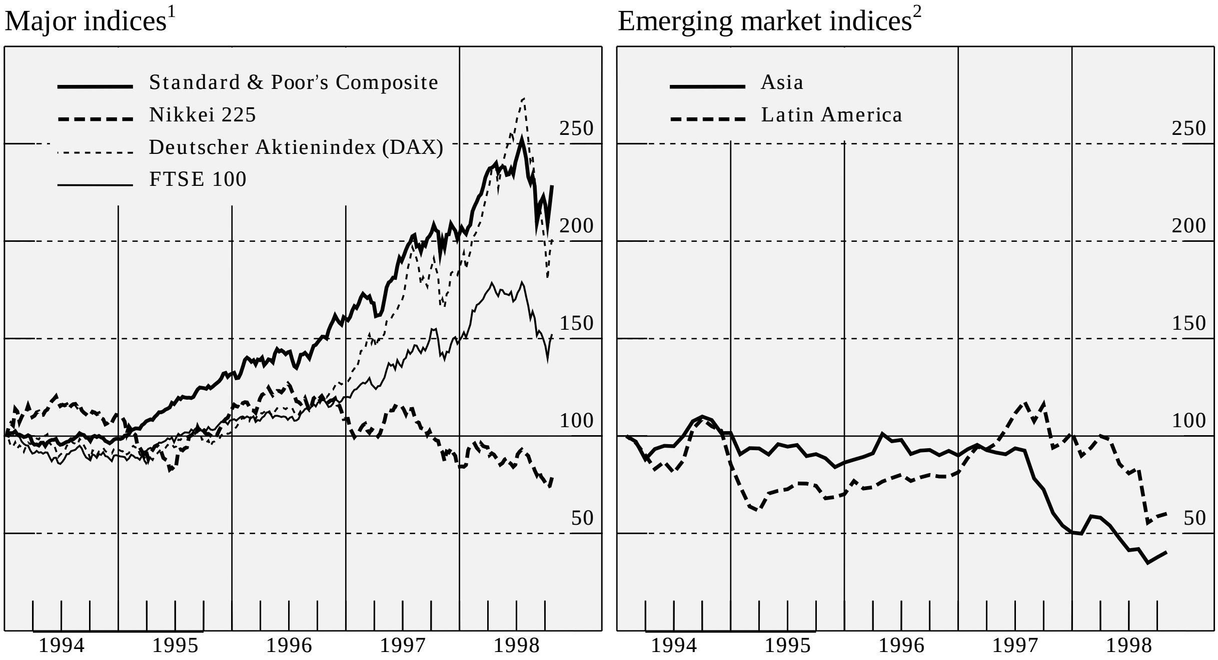
[27] The issue capitalised on the authorities' decision to designate a special class of French investors as qualified institutional investors.

[28] The Russian crisis and the difficulties of LTCM led to a massive disposal of financial sector and high-margin securities.

[29] These retail-targeted issues were generally launched by financial institutions in order to obtain attractive floating rate funding through the use of swaps and the secondary market sale of options. The transactions had short maturities and above market coupons, but enabled the borrowers to pay either the stated principal or fixed amount of shares in a designated blue chip stock. The arbitrage arose from the fact that investors had sold cheap options to the borrowers.

Equity market developments

(3rd January 1994 = 100)



[1] Weekly averages. [2] In US dollar terms.

Sources: International Finance Corporation (IFC) and BIS.

According to partial data on market activity, the volume of business in *mortgage and other asset-backed securities* declined by 32% (to $22 billion). Although there was no widespread deterioration in the credit quality of the underlying collateral, the market was nevertheless affected by volatility and broad credit tiering in fixed income markets. News that a Japanese leasing company had sought bankruptcy protections may have created concerns for holders of asset-backed securities issued by that company.[30] Much of the activity in this market segment has been driven by banks' attempts to reduce regulatory capital charges.[31]

Structural and regulatory developments

In late July, the Swiss Exchange (SWX) launched the first fully automated screen-based trading and clearing system for eurobonds. The system began its operations with 250 dollar-denominated bonds and plans to expand into euro-denominated securities after the launch of the single European currency. The initiative forms part of the exchange's strategy to counter growing competition from other European market-places.[32] Meanwhile, the International Securities Market Association (ISMA) and the London Clearing House (LCH) signed an agreement to launch a competing trading platform in mid-1999. Under the COREDEAL system, dealers would be able to trade leading eurobonds on a fully automated round-the-clock system. The system would also enable financial institutions to "cross-margin" their cash market positions (integrate their separate exposures

30 Although the securities were issued by a bankruptcy-remote securitisation vehicle, investors might face early repayment in the event of an early termination of the vehicle.

31 The forthcoming review of the regulatory framework will therefore probably have an impact on activity in asset-backed securities.

32 However, the existence of a Swiss stamp duty on securities transactions could hamper the development of trading, which has prompted the exchange to engage in discussions with the Swiss authorities concerning possible relief.

into one book) with those on LIFFE and the London Metal Exchange (LME). It would initially trade about 5,000 international bonds.

A number of OECD countries announced a further liberalisation of their capital markets. The Bank of Greece increased the permitted size of drachma issues by foreign borrowers: from 1st September, the allocation for each issue was increased from Dr 10 billion to Dr 30 billion ($102 million). The measure aims at accommodating the growing number of foreign institutions eager to launch drachma-denominated issues. However, the central bank will maintain its queue system. In early October, the French Ministry of Finance (MoF) harmonised the rules and fiscal treatment under which borrowers can issue domestic and international bonds denominated in French francs. Moreover, borrowers will no longer have to give the MoF a three-week advance notification of forthcoming bond issues (same-day notification will suffice).

International equities

The BIS has recently begun compiling data on the issuance of international equities (see Annex Table 18). This market encompasses the underwriting and distribution of stocks by international syndicates of securities firms or banks to investors in markets outside the issuer's domestic market. The three main types of placement are: (i) offerings of common or preferred equity in the euromarket, (ii) issues targeted at particular foreign markets, and (iii) registered stocks traded on foreign markets as domestic instruments, such as American Depository Receipts (ADRs).① As in the international bond market, "global" issues involve a combination of domestic, euro and foreign-targeted tranches. Issues are made on either a public or private placement basis. The listing and secondary market trading of international equities takes place on the domestic market of the issuer as well as on foreign markets where a listing has been secured. Because significant differences persist in regulatory, accounting and settlement standards, the trading of international equities continues to be somewhat less efficient than that of international bonds.

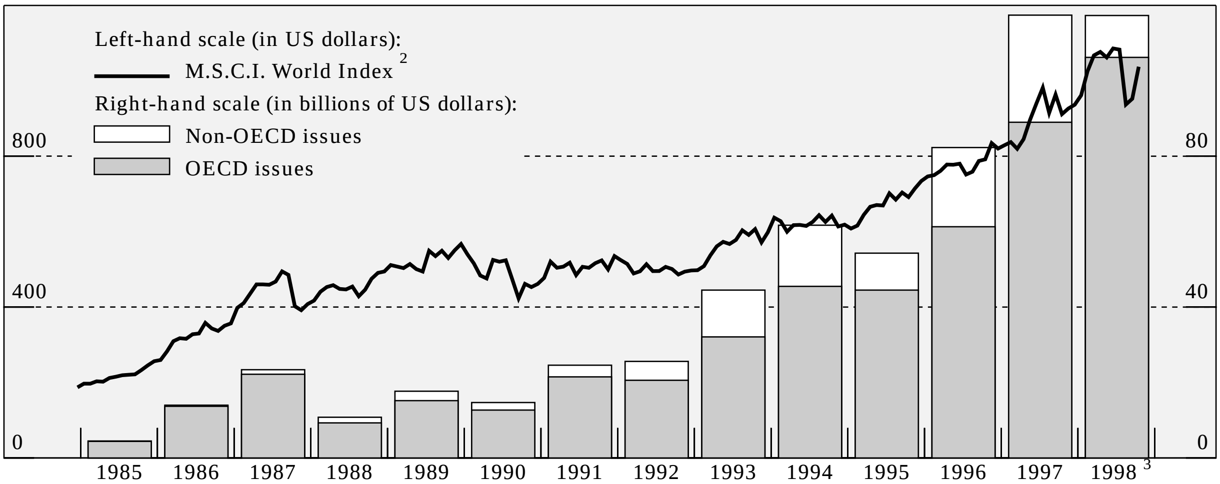
Issuance of international equities has proceeded at an uneven pace since the mid-1980s, but the acceleration of the bull market in equities after 1992 encouraged fund managers to broaden the range of their equity investment, leading to an upswing in issuance. The increase in cross-border offerings also results from a number of structural factors such as the growing international outlook of investors as well as the desire of firms to widen their shareholder base. In this context, it is important to note that many large offerings have been made to overcome the constraints imposed by the small size of domestic markets. With governments being less concerned about selling stakes in domestic companies to foreigners, privatisation issues have increasingly been made internationally. The liberalisation of the regulatory environment in which institutional investors operate, improvements in financial reporting and research, the wider availability of risk management techniques and the greater efficiency of quotation and settlement systems have also been important contributory elements. While the market has tended to concentrate on fairly large issues from recognised issuers, lesser-known entities from the developed and developing worlds had until recently also begun to find acceptance.

The settlement of transactions takes place either in the issuer's country of residence or through domestic depositories that maintain a pool of foreign stocks and settle according to local procedures or, increasingly, through international depositories such as Cedel and Euroclear (which are themselves linked to the national systems). In recent years, there has been greater attention to the need to reduce the various risks arising from delays and failures in international settlement and to improve the efficiency of settlement arrangements.

Although the emergence of turbulence in global financial markets in October 1997 had a negative impact on international equity offerings from the developing world, the record levels reached by the equity markets of industrial countries in the following months sustained activity. Indeed, issuance reached a new record in the second quarter of 1998 ($48.1 billion). The aggravation of the global financial crisis in the third quarter, the sharp drop of equity markets and the corresponding increase in their volatility sharply dampened activity thereafter. Nevertheless, business in the first three quarters of 1998 still amounted to $88 billion, compared with $76 billion in the corresponding period of last year.

① More precisely, ADRs are receipts issued by US banks certifying that they hold a foreign security on behalf of owners. They were introduced to circumvent the difficulties created by US regulatory requirements for the direct listing of foreign securities and to simplify the payment of dividends. European and Global Depository Receipts are the European and international equivalents of ADRs.

International equity offerings and equity price development[1]



[1] Includes primary and certain secondary offerings. [2] Morgan Stanley Capital International. [3] First three quarters of 1998 annualised.

Sources: Datastream, Euromoney and BIS.

IV

DERIVATIVES MARKETS

Overview

The global financial turbulence had a dramatic impact on activity in derivatives markets in the third quarter of 1998. Exchange-traded business soared as investors withdrew massively from risky assets and shifted their exposures to liquid and highly rated government bonds. This was particularly evident in the case of German government bond contracts, which were the second most heavily traded instruments in the world. Changing expectations regarding the monetary stance in Europe and North America, as well as the sharp drop in equity markets, also fuelled activity in money market and equity index contracts. While these developments were associated with a reshuffling of exchanges' relative position, the announcement of new alliances pointed to potentially profound changes in the trading landscape, encouraged by rapidly evolving technological innovation. In the over-the-counter market, further wild currency swings boosted turnover in related options. In contrast, growing concerns about counterparty risk hampered swap transactions and temporarily curtailed business in credit-related instruments. Lastly, large losses announced by banks and hedge funds during the course of the quarter led to a major reconsideration of the assumptions underlying trading models, particularly those relating to the liquidity of markets.

Exchange-traded instruments

The aggregate turnover of exchange-traded financial derivatives contracts monitored by the BIS rose by an estimated 14% in the third quarter of 1998 (to a record 366 million compared with a revised figure of 322 million in the second quarter).[33] The increase was most pronounced in equity indices (24%), where the downward pressure on stock markets in July was accentuated from mid-August by the announcement of the Russian debt moratorium. In the area of interest rate business, the massive shift of investors towards liquid and highly rated government bonds boosted turnover in related contracts (15%), while growing anticipations of global monetary easing fuelled business in short-term interest rate instruments (7%). Meanwhile, the wide fluctuations seen in the foreign exchange market were not accompanied by an upturn of activity in currency-related contracts (–6%). Although concerns about credit risk have increased the attractiveness of exchanges, the withdrawal of important market participants might dampen future expansion.

The three largest US exchanges (CBOE, CBOT and CME) achieved record volumes of activity.[34] Although the CBOT maintained its dominant position in the global rankings, the CME saw a more rapid expansion of activity owing largely to a sharp upsurge of its key short-term interest rate and equity contracts. In Europe, there were two notable developments. First, there was a further concentration of trading in DM-denominated interest rate contracts (see the graph on page 30). Second, and partly related to the preceding point, there was a dramatic increase in the volume of business conducted on Eurex Germany (formerly the DTB), which allowed that exchange to post a new trading record and overtake the CME as second busiest market-place in the world. Much of the flight to quality in Europe took place through German government bond contracts, propelling the Bund futures to second position in the interest rate category after the US Treasury bond contract.[35] Meanwhile, overall activity on LIFFE declined by 4% as increases in short-term interest rate contracts and in some equity-related products were more than offset by a broad contraction in government bond instruments. This was particularly evident in the case of the exchange's Bund contract, which dried up

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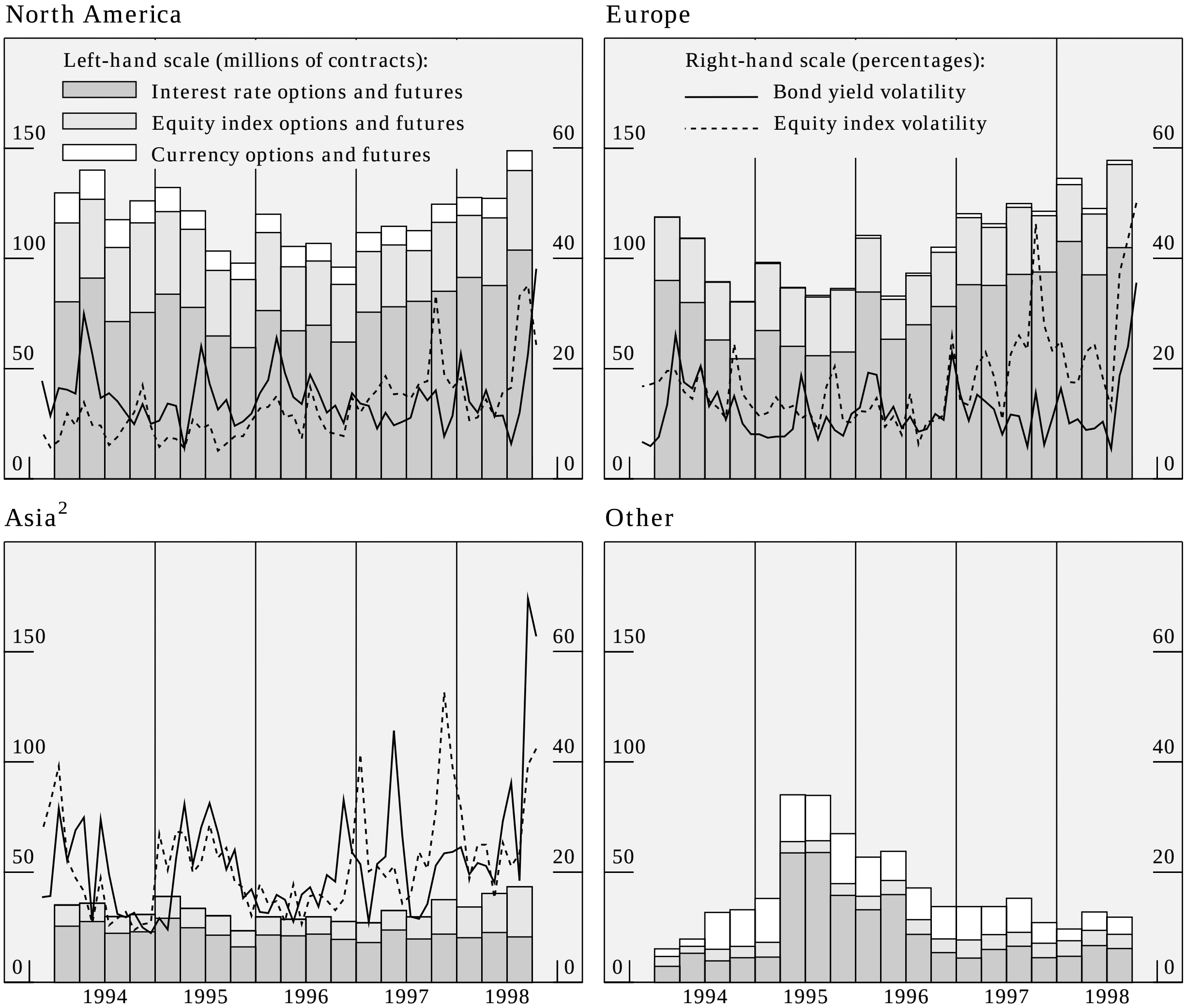
[33] Based on the number of contracts traded.

[34] Including non-financial contracts and options on single equities.

[35] The shortage of deliverable securities to meet open positions in the nearest Bund contract created a technical squeeze, which raised questions concerning its benchmark status.

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



[1] Annualised standard deviation of daily percentage changes in ten-year government bond yields and equity indices of US, German and Japanese markets for North America, Europe and Asia respectively. Data for third quarter 1998 are partly estimated. [2] Including Australia and New Zealand.

Sources: Futures Industry Association and BIS.

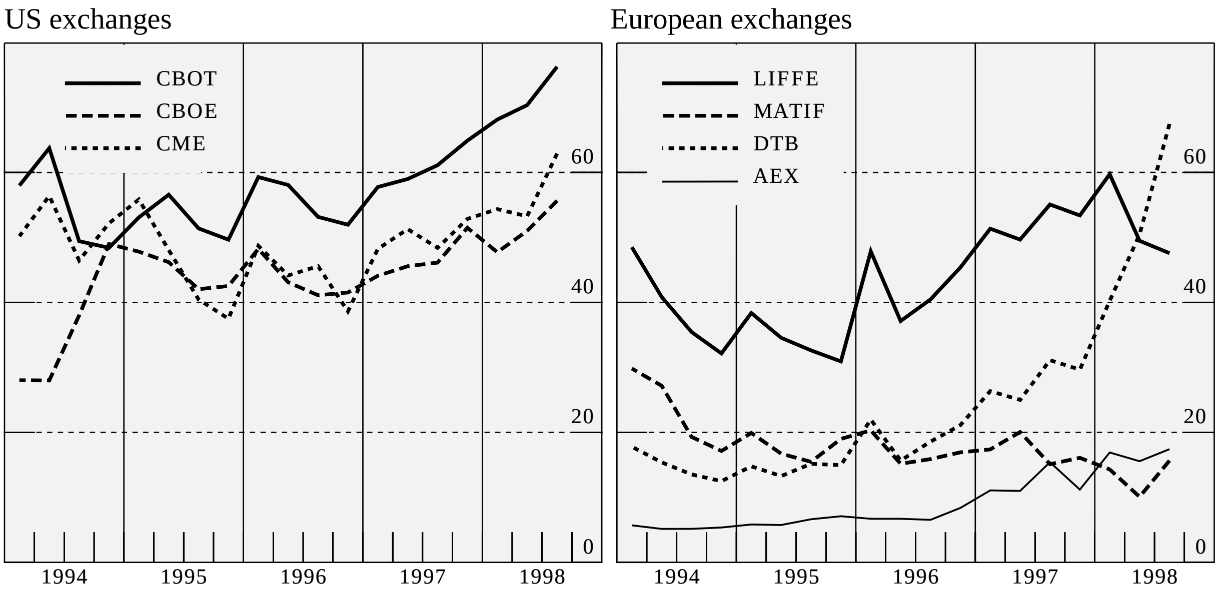
as trading migrated further to Eurex's electronic system. In contrast, there was a sharp recovery of trading on the MATIF. The squeeze in the German government bond market encouraged market participants to move to the "notionnel" and the exchange also benefited from the redenomination of stock indices. In Asia, the pattern of activity was mixed. The further decline of Japanese equity markets provided support to some Japanese stock index contracts, but the low level of yen interest rates meant that related trading remained subdued. As for business in other Asian countries, the tentative recovery of stock markets was accompanied by more active trading in equity-related products.

Exchanges continued to face intense competitive pressures in the third quarter, with consolidation ahead of EMU remaining the driving force in Europe. In early July, the DB and the LSE introduced a new element to competition by announcing a common platform for the trading of the largest European stocks.[36] If successful, the link will allow the trading of shares from any of the DB's

36 In the first stage, the exchanges have agreed to ban the cross-trading of their respective shares.

Derivatives turnover on major US and European exchanges*

In millions of contracts, quarterly data



* Includes all types of derivative instruments traded on exchanges (i.e. including commodity products and options on single equities).

Sources: Futures Industry Association, major exchanges and BIS.

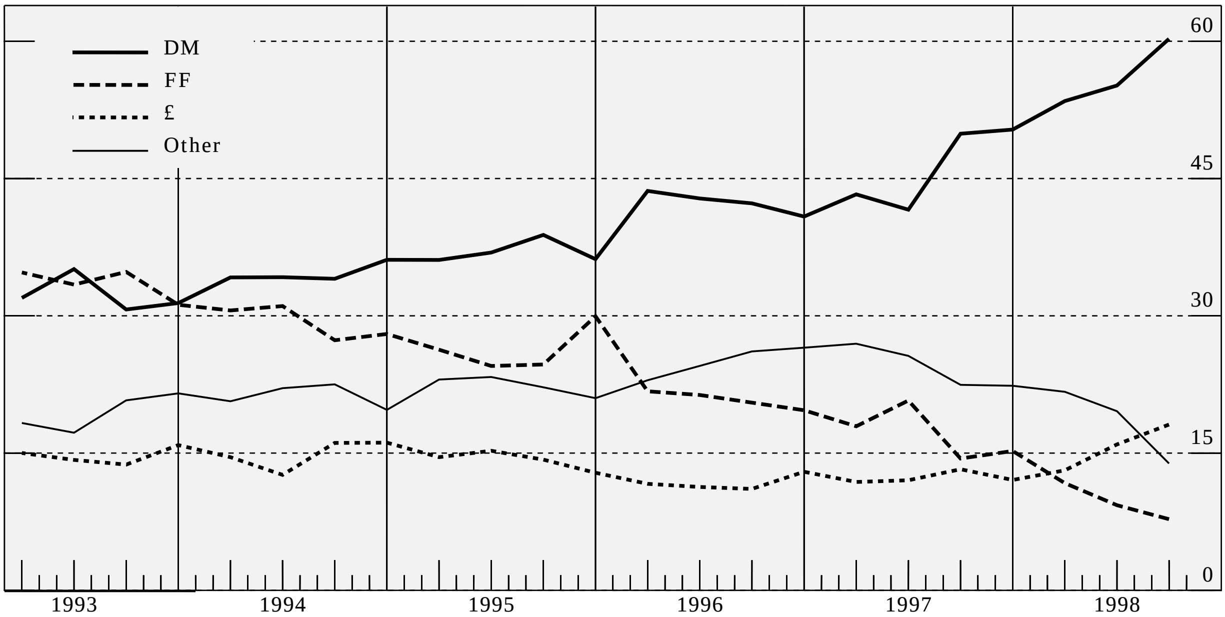
remote terminals. However, several operational issues need to be resolved, such as the selection of a single family of stock indices,[37] the introduction of common reporting requirements, listing regulations and trading conventions, the development of a common clearing and settlement system, and the harmonisation of tax and regulatory regimes. The agreement could have important implications for other alliances. For example, it has created tensions within the Euro Alliance (SBF-MATIF, DB-Eurex Germany and SWX-SOFFEX), which had agreed to build a common trading platform for derivatives and cash market securities. The technologies used to operate stock and futures exchanges are converging and exchanges that have integrated their activities are benefiting from significant cost efficiencies. A number of exchanges have already indicated their intention to join the DB/LSE platform.

Another important development during the quarter was the introduction of a plethora of contracts on short and long ECU/euro interest rates. In September both the MATIF and Eurex launched separate Euribor futures and options, with the latter exchange hedging its bets by introducing a Euro-Libor contract. Separate announcements by the two exchanges represented a departure from an earlier agreement not to introduce competing contracts denominated in euros. Despite the generous financial incentives offered to dealers supporting the new contracts, it remains to be seen whether electronic trading through Eurex and MATIF can generate sufficiently high liquidity in money market instruments to attract participants used to dealing in LIFFE’s deep market. In the long-term area, two 30-year contracts were introduced, one by the MATIF (in September) with its “E-Bond” and the other by Eurex (in early October) with its “Euro-BUXL”. The E-Bond will be based on Dutch, French and German government bonds. The exchange believes that the larger underlying will increase the contracts’ liquidity and reduce the potential for market distortions and squeezes. In contrast, Eurex chose to base its long-term contract solely on German government bonds, arguing that variations in

37 The DB and the other exchanges forming the Euro Alliance have collaborated in launching the Euro STOXX family of indices, while the LSE and the AEX have introduced the Eurotop indices.

Turnover in European interest rate derivatives by currency denomination of the underlying contract*

Percentage shares, quarterly data



* Based on the total number of short and long-term interest rate contracts traded. Data for the third quarter of 1998 are partly estimated.

Sources: Futures Industry Association and BIS.

liquidity and credit risk premia would lead to periodic changes in the bonds that are "cheapest-to-deliver". Evidence so far suggests that European government bond markets remain segmented, a factor that could impede the creation of a broad and stable deliverable multi-issuer basket.

LIFFE for its part is counting on a different strategy. It previously launched short-term ECU/euro contracts and is considering mandatory conversion into euros for the euromark and eurolira contracts. In the case of contracts on government bonds, the exchange plans to list parallel instruments that will allow investors to choose when they want to switch over to the euro. It has decided to examine the process of European yield convergence before considering the introduction of a single or multi-issuer euro-denominated contract. LIFFE also attempted to sidestep the single/multi-issuer debate by introducing in October contracts based on euro area swap rates. The "LiborFinancedBond" futures, which will initially be denominated in Deutsche marks, might be less affected by squeezes in government bond markets, thus offering an alternative to instruments based on government bond rates.[38]

In North America, the most important developments centred around the expansion of electronic trading facilities. In August, Cantor Fitzgerald and the NYBT[39] received regulatory approval for the introduction of CX, an electronic futures exchange for the trading of contracts on US Treasury securities through Cantor Fitzgerald's existing screen-based network for cash market transactions.[40] Partly in response to this and other recent initiatives, the large US exchanges confirmed their shift towards electronic trading. Thus, in September, the CBOT introduced daytime screen-based

38 In August, the exchange began to phase out open outcry with the introduction on APT of several interest rate contracts. It also brought forward the launch of LIFFE Connect, its second-generation electronic trading platform, to April 1999.

39 The NYBT was recently formed by the merger of the NYCE and the CSCE.

40 The exchange, which began its operations in September, saw modest activity in spite of its attractive fee structure. This has been attributed to delays in the installation of back-office facilities and the legal challenges mounted by competitors.

trading of interest rate products on Project A. In the same month, the CME introduced a new version of its Globex after-hours system, which is based on technology developed by the MATIF.[41]

Meanwhile, the recent trend towards consolidation of the US industry continued, although stumbling-blocks hampered the process in some cases. Thus, the CBOE and the PE agreed to merge, a move that will enable them to handle about two-thirds of US options trading on individual stocks. The alliance's lead in this area will, however, be challenged by the recent merger of AMEX, NASD and PHLX. By contrast, plans by the CBOT and the CME for a merger of their respective clearing functions collapsed. Market analysts attributed the failure to tensions resulting from competing alliances with third parties.[42]

Contract innovation in North America appeared subdued compared with that in Europe. In July, the CME launched contracts on three-month euro-Canadian dollar deposits. The ME responded to the challenge to its Canadian Bankers' Acceptance contract by expanding its business hours to match those of the CME and by introducing overnight trading on its new electronic system. Meanwhile, the AMEX introduced new structured securities. In the Asia-Pacific area, the financial turbulence dampened listing activity. SIMEX launched a contract based on an index of Singapore equities in August, but deferred the introduction of a similar contract on Malaysian equities. The HKFE launched a new Hang Seng stock index contract. Lastly, the KLSE took over the KLOFFE in order to benefit from economies of scale.

Over-the-counter instruments

Activity in the OTC market was uneven during the third quarter of 1998. Business in interest rate swaps was steady in the early part of the summer but suffered thereafter from extremely volatile conditions.[43] The popularity of credit-related instruments continued to grow, although business was also hindered by market turbulence. The wild swings in the value of the US dollar in September appear to have boosted the turnover of options on the major currency pairs, offsetting the declines seen in intra-European business and in some Asian countries. The sharp drop of major equity markets had a mixed impact on activity in equity products.

In the *interest rate swap* market, the relatively calm situation seen in July kept risk premia fairly stable. The drying-up of arbitrage opportunities in core European currencies encouraged market participants to turn to duration and yield curve plays on peripheral European markets. However, the situation subsequently changed dramatically with the Russian government's debt moratorium and the imposition of capital controls in Malaysia.[44] Widespread concerns about the credit quality of banks exposed to emerging market debt, the flight to the safety of government securities, high interest rate volatility and the curtailment of securities issuance led to the widest swap spreads since the early 1990s. Although liquidity returned to the market at the end of the third quarter, new transactions may have primarily reflected the unwinding of outstanding exposures. In the area of interest rate options, the plummeting of interest rate volatility in the early part of the quarter dampened trading. It also

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41 However, technical difficulties forced the exchange to temporarily suspend trading and revert to the original Globex system.

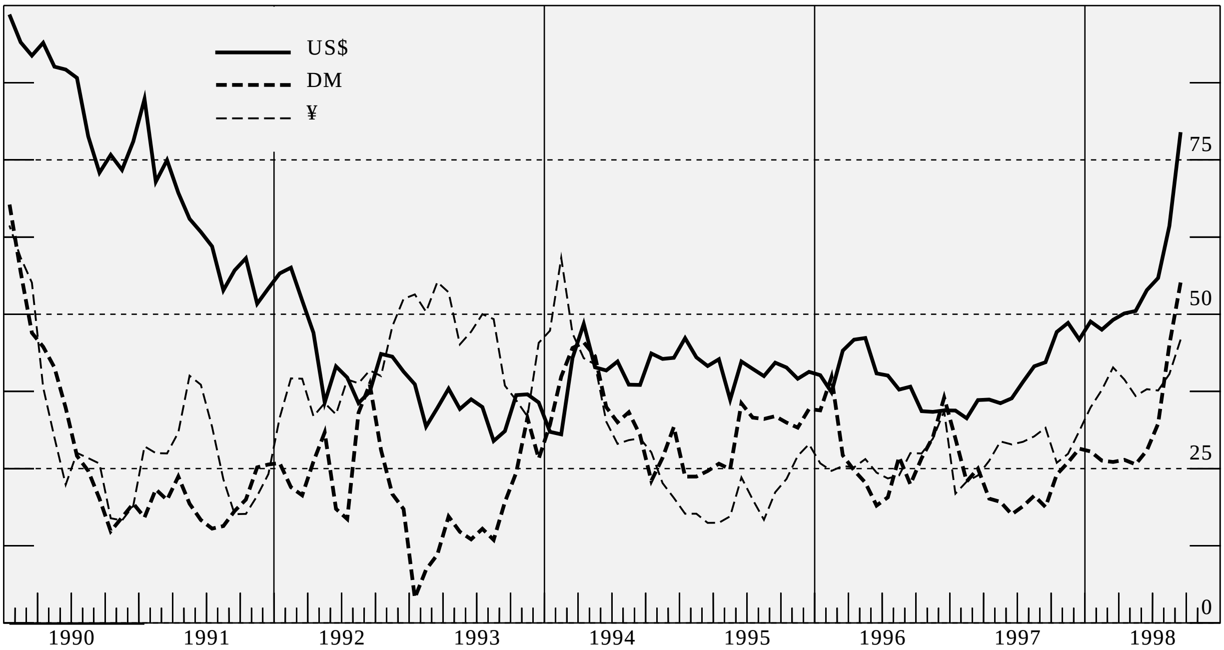
42 For example, the CBOT has concluded an alliance with Eurex whereby it will adopt Eurex's trading system in order to enable users to access both exchanges from a single computer screen. By contrast, the CME has already concluded an agreement with MATIF for the use of the latter exchange's trading system.

43 The paucity of recent data on OTC markets makes it difficult to assess the extent of overall activity. As announced earlier, the BIS has begun a regular semi-annual survey of OTC market activity. See also Part V of this commentary.

44 International banks were reported to have faced heavy losses when the Malaysian Government forced a liquidation of outstanding ringgit swaps at interest rates that were highly favourable to onshore counterparties. The imposition of Russia's debt moratorium, which prevented domestic banks from settling certain foreign currency obligations, also subjected investors to large losses on Russian rouble forwards.

Interest rate swap spreads over ten-year government bond yields

Monthly averages, in basis points



Source: Datastream.

reduced the returns offered to investors in structured products and therefore limited the opportunities to engineer new securities. The return to high volatility afterwards apparently had a mixed impact. Demand for interest rate floors was rekindled by anticipations of declines in official rates and there was a return to plays on the convergence of euro area interest rates. However, some dealers also pointed to a drying-up of structured transactions.

In the area of *cross-currency products*, following a lull in late July and most of August, the reversal of the dollar's strength was associated with a return of implied volatility to historically high levels. The unwinding of short yen/long dollar positions reportedly exacerbated that volatility. The currencies of commodity-exporting industrialised countries also came under renewed downward pressure. These developments fuelled activity in standard options, but made it difficult to hedge and market more complex instruments. Business in forwards and cross-currency swaps denominated in emerging market currencies is likely to have been subdued owing to the threat of capital controls and concerns about counterparty risk. Moreover, the high level of short-term interest rates was reflected in the high premia on non-deliverable forwards (NDFs) and therefore dampened investor demand. However, the stabilisation of certain Asian currencies created positive signs in that region. This was particularly true of Korea, where the liberalisation of the foreign exchange market encouraged companies to contemplate a return to the cross-currency swap market.

The sharp drop of global equity markets from the peak levels reached in July and the historically high levels of volatility had a mixed impact on *equity business*. In the early part of the quarter, intermediaries conducted brisk trading in long-term exotic options on European baskets. Products such as cliquets and Asian options were reported to have been attractive for investors concerned about a long-term downturn of the equity market[45] and dealers introduced warrants on

45 Cliquets allow holders to lock in equity gains. Since they are more expensive than plain vanilla call options, dealers have lowered the price at which they sell them to investors by capping the gains. For investors who dislike caps, dealers have turned to "Asian options". Such instruments have payouts that are based on the difference between the strike price and the average price of the underlying on selected dates over the life of the option. They are cheaper than vanilla call options (since the payout is lower than on a straight call) but offer downward protection.

Developments in the swap market in the second half of 1997

In August 1998, the International Swaps and Derivatives Association (ISDA) released detailed data on activity in the swap market in the second half of 1997. The data showed a sharp deceleration in activity, with the total stock of contracts at end-December 1997 rising by only 1% relative to end-June 1997, to stand at $29 trillion. While the outstanding stock of interest rate swaps rose by only 0.8%, to $22.3 trillion, currency swaps expanded by 15%, to $1.8 trillion. By contrast, interest rate option contracts monitored by ISDA (caps, floors, collars and swaptions) declined by 2%, to $4.9 trillion. However, distortions resulting from the strength of the US dollar during that period and seasonal factors meant that the underlying decline in business was less pronounced than the data would suggest. Aside from these factors, ISDA attributed the slowdown to the Asian crisis and to limited trading opportunities in Europe as the interest rates of core countries achieved a high degree of convergence.

For the year as a whole, contracts outstanding nevertheless rose by 14%. Currency swaps grew especially fast (17%), followed by interest rate swaps (16%) and interest rate options (4%). Within the interest rate swap category, US dollar contracts expanded at a very modest rate (4%). By contrast, contracts denominated in the currencies of the euro area expanded at a healthy pace (about 37%), while yen-denominated contracts declined (3%).

Derivative contracts traded over the counter[1]
Notional principal amounts, in billions of US dollars

Instruments	1991	1992	1993	1994	1995 H1	1995 H2	1996 H1	1996 H2	1997 H1	1997 H2
	New OTC contracts arranged									
Total	**2,332.9**	**3,717.0**	**5,516.9**	**8,133.4**	**4,258.5**	**6,910.8**	**8,310.0**	**9,464.4**	**13,821.8**	**8,359.0**
of which:										
Interest rate swaps	*1,621.8*	*2,822.6*	*4,104.7*	*6,240.9*	*3,428.9*	*5,269.9*	*6,520.3*	*7,157.8*	*10,792.2*	*6,274.9*
Currency swaps[2]	*328.4*	*301.9*	*295.2*	*379.3*	*153.8*	*301.3*	*374.0*	*385.0*	*463.1*	*672.3*
Interest rate options	*382.7*	*592.5*	*1,117.0*	*1,513.1*	*675.8*	*1,339.6*	*1,415.7*	*1,921.5*	*2,566.5*	*1,411.8*
	Amounts outstanding at end of period									
Total	**4,449.4**	**5,345.7**	**8,474.6**	**11,303.2**	**13,922.9**	**17,712.6**	**21,068.9**	**25,453.1**	**28,733.4**	**29,035.0**
of which:										
Interest rate swaps	*3,065.1*	*3,850.8*	*6,177.3*	*8,815.6*	*10,817.0*	*12,810.7*	*15,584.2*	*19,170.9*	*22,115.5*	*22,291.3*
Currency swaps[2]	*807.2*	*860.4*	*899.6*	*914.8*	*1,039.7*	*1,197.4*	*1,294.7*	*1,559.6*	*1,584.8*	*1,823.6*
Interest rate options	*577.1*	*634.5*	*1,397.7*	*1,572.8*	*2,066.2*	*3,704.5*	*4,190.0*	*4,722.6*	*5,033.1*	*4,920.1*

[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] Adjusted for the reporting of both currencies; including cross-currency interest rate swaps.

Source: ISDA.

recently developed European stock indices.[46] With the downturn of markets creating booming demand for put options, intermediaries launched a large volume of warrants, but the extent of investor take-up was difficult to ascertain. The decline also had important implications for guaranteed products in Europe. Hedge funds had been major suppliers of long-term equity options and their withdrawal reduced market liquidity. The higher cost of equity options lowered the returns that intermediaries could generate and, as a result, providers of such products reduced investor participation in market gains.

Lastly, the market for *credit derivatives* appears to have expanded further in the third quarter.[47] The period began with several reports of rapid growth, particularly in Asia, where credit

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[46] One innovative structure offered investors long-term participation in the best performing of several European equity indices.

[47] The most recent data from the US Office of the Comptroller of the Currency show that credit derivatives held by US commercial banks amounted to $129 billion at the end of June 1998, compared with $91 billion at the end of March. The agency reported that the amount of credit protection purchased by banks was larger than that sold.

spreads had widened significantly since last year. Concerns over the health of the Japanese financial system had already encouraged non-Japanese entities with significant exposure to Japanese banks to seek protection from US and European banks and insurance companies. The turmoil created by the Russian moratorium exacerbated concerns over the health of some banking systems, leading to the highest level of volatility ever seen in credit default instruments. Liquidity in lower-quality segments of the market reportedly dried up. A substantial volume of credit default swaps was also referenced to the sovereign debt of "peripheral" EMU countries on the widening of spreads relative to Germany. With little experience of actual defaults, the possibility of such occurrences could test the robustness of the credit derivatives market.

Structural and regulatory developments

The US Commodity Futures Trading Commission (CFTC), which is responsible for regulating commodity futures and options, announced in May a comprehensive review of its regulatory approach to the over-the-counter (OTC) derivatives market. In response, the US Treasury, the Federal Reserve Board, and the Securities and Exchange Commission (SEC) raised questions about the CFTC's jurisdiction in this area and sponsored legislation that would place a moratorium on the CFTC's ability to act. Legislation embodying a six-month moratorium was passed as part of the recent spending package. In the interim, the US Congress requested the President's Working Group on Financial Markets, comprising the Treasury, Federal Reserve, SEC, and CFTC, to study the public policy issues raised by OTC derivatives. In the wake of the financial difficulties of Long-Term Capital Management, the US Congress also requested the Working Group to examine the policy issues posed by hedge funds.

In July, the UK Financial Services Authority (FSA) released a revision of its regulatory treatment of credit derivatives, with effect from the end of September 1998.[48] The aim of the revision is to take better account of the risk-reducing properties of such instruments even though the FSA concedes that its treatment is not fully comprehensive. The new rules will allow credit default products referenced to loan assets to be eligible for trading book treatment under standardised criteria, remove the double charge on hedged positions involving credit default swaps with a maturity mismatch, and recognise the use of simple specific risk models.

In September, the Basle Committee on Banking Supervision (the Basle Committee) and the Technical Committee of the International Organization of Securities Commissions (IOSCO) released a revised version of the supervisory information framework for the derivatives activities of banks and securities firms originally published in May 1995.[49] The revision brought the framework up to date with current practices in risk management for trading and derivatives activities, particularly with regard to market risk. The updated supervisory information framework comprises two parts. The first is a catalogue of data that the committees have identified as important for an evaluation of the risks present in trading and derivatives activities, and that supervisors may build upon as they expand their reporting systems. The second is a common minimum framework of internationally harmonised baseline information about derivatives activities (a subset of the catalogue) that the two committees recommend for supervisors. While the 1995 framework concentrated on derivatives, the 1998 update addresses more broadly the market risk exposure arising from trading in both cash and derivatives instruments. This initiative is part of continuing efforts by the Basle Committee and IOSCO to monitor the trading and derivatives activities of banks and securities firms.

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[48] The FSA and the Securities and Futures Authority also announced the adoption of harmonised rules for the assessment of capital adequacy charges for credit derivatives, whereby commercial and investment banks will receive equal capital treatment.

[49] The revision builds upon earlier work of the two committees, including the 1994 joint release of guidelines for improving the risk management of derivatives activities and guidance on risk management. In 1995, the Basle Committee and IOSCO made joint recommendations for enhancing public disclosure in this important area and these have been re-emphasised in annual survey reports since that year.

In September, the Committee on Payment and Settlement Systems (CPSS) and the Euro-currency Standing Committee (ECSC) of the central banks of the G-10 countries published a report on settlement procedures and counterparty risk management in OTC derivatives.[50] The report draws attention to three sets of issues, which concern the implications for counterparty and systemic risks of (i) delays in completing master agreements and confirming transactions; (ii) the rapidly expanding use of collateral; and (iii) the potential expansion of clearing houses for OTC derivatives. With regard to the first set of issues, the committees found there were significant backlogs of unsigned master agreements and outstanding confirmations. They noted that the practice of executing transactions before signing a master agreement and the occasional failure to confirm transactions promptly could jeopardise a dealer’s ability to perform close-out netting. With regard to the second set of issues, the report said that the use of collateral could significantly reduce counterparty credit risk, but could introduce additional risks (liquidity, legal, custody and operational) that counterparties had to manage effectively. Finally, it noted that the use of clearing houses in the OTC market had the potential to mitigate risks, but the ultimate benefit would depend upon the effectiveness of the clearing house’s risk management procedures. For each of the three issues analysed, the report puts forward recommendations for actions by market participants and national authorities that would mitigate risks to counterparties and enhance the stability of global financial markets. The document follows a previous one published in March 1997 on clearing arrangements for exchange-traded derivatives.

In August, the International Swaps and Derivatives Association (ISDA) reported that considerable progress had been made in assuring price sources and related preparations for the transition to the euro. The organisation’s report highlighted: (i) the announcement by sponsors of interbank interest rates (BBA and ACI/EBF)[51] of the bank panels that will initially quote rates; (ii) the announcement by ACI/EBF of their detailed plans to publish a Euro Over Night Index Average rate (EONIA); and (iii) the development by screen service providers of the display and location of successor rates. In September, ISDA also called attention to the 30th September deadline for signing its EMU Protocol, which amends existing derivatives contracts between signatories in anticipation of the replacement of the national currencies of euro area countries by the euro. Modifying master agreements between participating counterparties on a collective basis under the Protocol largely eliminates the need to do so through bilateral negotiations.

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[50] See: “OTC Derivatives: Settlement Procedures and Counterparty Risk Management”, Committee on Payment and Settlement Systems and Euro-currency Standing Committee of the Central Banks of the Group of Ten Countries, Basle, September 1998.

[51] BBA = British Bankers Association; ACI = Association Cambiste Internationale; EBF = European Banking Federation.

V

THE APRIL 1998 TRIENNIAL CENTRAL BANK SURVEY OF FOREIGN EXCHANGE AND DERIVATIVES MARKET ACTIVITY

On 19th October, the BIS released preliminary global turnover data from the latest Triennial Central Bank Survey of Foreign Exchange and Derivatives Market Activity in April 1998. It follows the publication of national data by participating central banks and monetary authorities on 29th September 1998. The geographical coverage of the new survey was significantly expanded (from 26 countries in 1995 to 43 countries), but, in order to reduce the reporting burden, the coverage of derivatives was limited to over-the-counter (OTC) currency and interest rate instruments. Therefore, it excludes exchange-traded business, information on which is regularly collected by the BIS from the exchanges themselves, as well as smaller OTC market segments such as equity, commodity and credit-related products. In addition, although the reporting of OTC *turnover data* for April 1998 is consistent with earlier surveys, information pertaining to *amounts outstanding* applies to end-June, rather than end-March as hitherto, and is not yet available. This change in reporting date was made to ensure consistency with the new regular reporting of consolidated derivatives market statistics in the G-10 countries, which was also introduced at end-June 1998, and preliminary data for which will be released later this year. The BIS will publish the final global results on both foreign exchange and derivatives turnover and amounts outstanding in the spring of 1999.

The global foreign exchange and over-the-counter derivatives markets[1]

(average daily turnover in billions of US dollars; notional amounts for derivatives)

Category	April 1989	April 1992	April 1995	April 1998
A. Traditional foreign exchange instruments	**590**	**820**	**1,190**	**1,490**
Spot transactions[2]	350	400	520	590
Outright forwards and forex swaps[2]	240	420	670	900
B. Other foreign exchange derivative instruments	..	..	**45**	**97**
Currency swaps	..	..	4	10
Options	..	..	41	87
Other	..	..	1	0
C. Interest rate derivative instruments	..	..	**151**	**265**
FRAs	..	..	66	74
Swaps	..	..	63	155
Options	..	..	21	36
Other	..	..	2	0
D. Total B + C	..	..	**196**	**362**
Memorandum items: exchange-traded derivatives				
Currency instruments	*13*	*14*	*17*	*12*
Interest rate instruments	*374*	*640*	*1,205*	*1,360*

[1] Adjusted for local and cross-border double-counting. [2] Includes estimates for gaps in reporting.

Sources: Futures Industry Association and various futures and options exchanges.

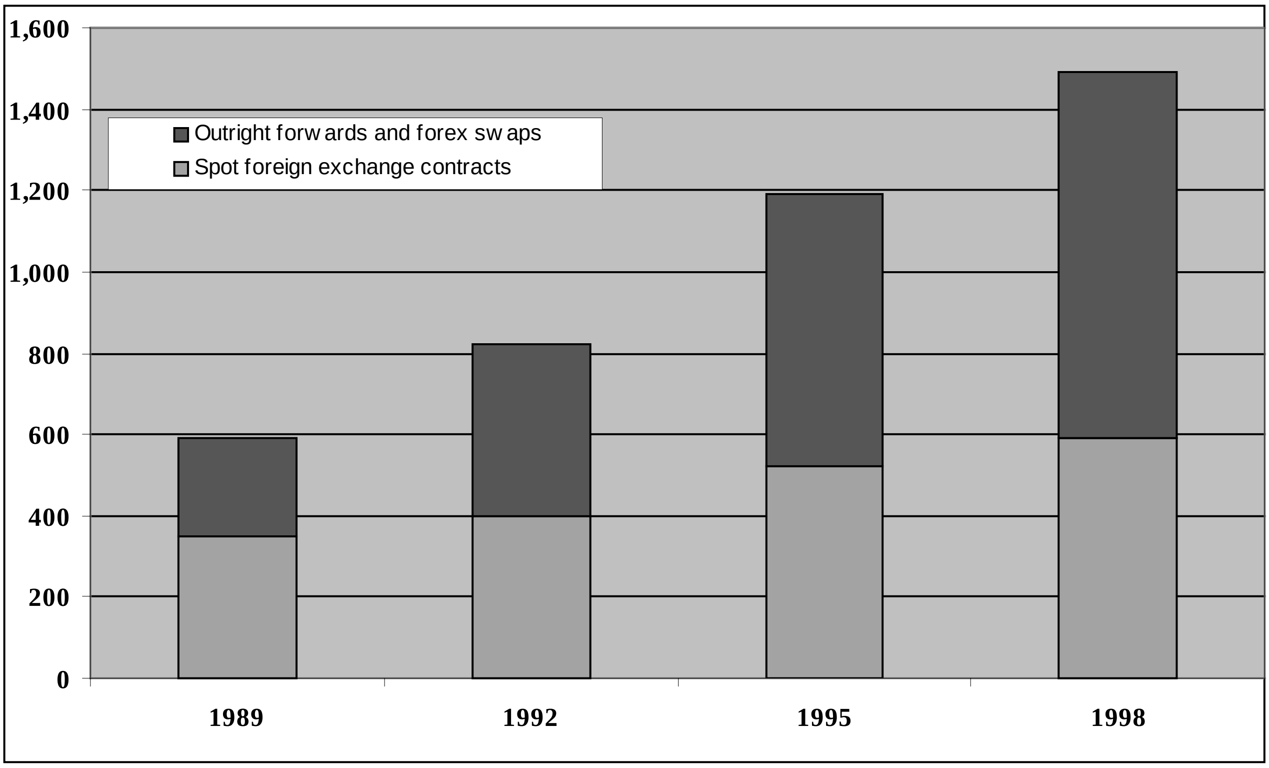
After allowing for the double-counting resulting from local and cross-border inter-dealer transactions[52] and for estimated gaps in reporting, the average daily turnover in “traditional” global foreign exchange instruments (spot transactions, outright forwards and foreign exchange swaps) can be estimated at $1,490 billion in April 1998, compared with $1,190 billion in April 1995. Although the rate of growth in other OTC foreign exchange derivative instruments (currency swaps and options) was considerably higher than in traditional ones, they remained, at $97 billion, a small fraction of overall trading. Meanwhile, the notional value of transactions in interest rate derivatives, i.e. forward rate agreements (FRAs), swaps and options, amounted to $265 billion, compared with $151 billion in 1995.

Traditional foreign exchange market

In the traditional segment of the foreign exchange market, percentage changes in turnover in the two latest three-year periods (1992-95 and 1995-98) show a considerable deceleration in the rate of expansion in current dollar terms (from 45% to 26%). Between April 1995 and April 1998, however, the dollar rebounded strongly (in particular, it appreciated by more than 50% vis-à-vis the yen, which correspondingly reduced the dollar value of yen transactions). Adjusted for differences in the dollar value of non-dollar transactions, growth accelerated from 29% to 46%. Forward instruments consolidated their leading position, pushing the share of spot turnover down further (to 40%, from 44% in 1995). Within the former group, foreign exchange swaps continued to overshadow outright forwards by a large margin. At the same time, the market continued to show a predominance of inter-dealer business (63%) and cross-border transactions (54%).

Summary of global activity in foreign exchange markets*

Average daily turnover, in billions of US dollars



* Adjusted for local and cross-border double-counting (“net-net”). Includes estimates for gaps in reporting.

[52] Data adjusted for local double-counting are referred to as “net-gross”, while those adjusted for both local and cross-border double-counting are referred to as “net-net”.

In current dollar terms, the breakdown by currency reveals another increase in the role of the dollar on one side of transactions (from 83% in April 1995 to 87%).[53] However, at constant exchange rates, the share of the dollar actually declined (to 76%). There was, in particular, a strong pick-up in yen business (from 24% to an exchange-rate-adjusted share of 29%) and in a large number of small currencies. This finding is consistent with anecdotal evidence of a wide range of investment strategies involving the yen. There was, in contrast, a reduction in currency plays between core continental European currencies (with a sharp fall in Deutsche mark/French franc turnover).

When considering, finally, the location of forex business in current dollar terms, the currency shifts seem to have benefited the United Kingdom (whose share rose from 30% to 32%). At the same time, there was a widening of the gap between the United States (which ranked second at 18% of the total) and Japan (third with a share reduced from 10% to 8%), although such relative movements partly reflect differences in exchange rate valuations between the two reporting periods.

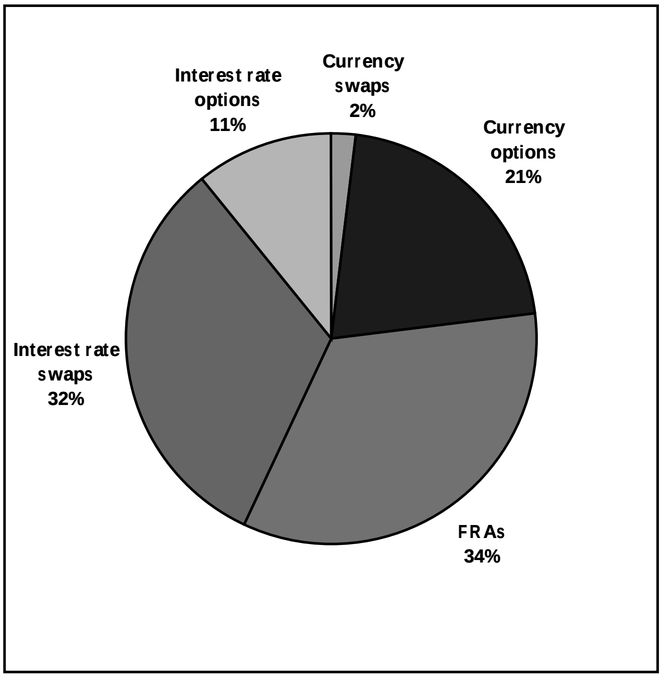
OTC derivatives market

In the OTC derivatives market (which includes other foreign exchange derivatives and all interest rate derivatives contracts), average daily turnover in April 1998 was, at $362 billion, 85% higher than in April 1995, the first period for which such data were reported. Interest rate products continued to outweigh forex instruments (accounting for 73% of total turnover), attracting a growing proportion of end-users. For its part, OTC forex business was boosted by option transactions. The currency breakdown indicates that contracts between the dollar and the yen, as well as those involving the Deutsche mark against a wide range of currencies, were the most actively traded.

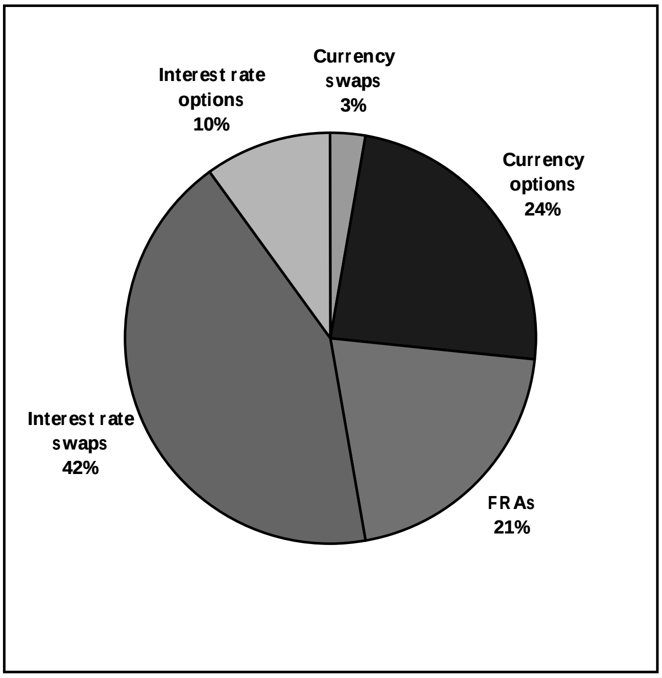
Global turnover in OTC derivative instruments*

Daily averages of notional amounts

April 1995: US$ 196 billion



April 1998: US$ 362 billion



* Excluding traditional foreign exchange instruments (outright forwards and foreign exchange swaps) and adjusted for local and cross-border double-counting ("net-net").

[53] Counting both currency sides of every foreign exchange transaction means that the currency breakdown sums to 200% of the aggregate.

Expansion in the interest rate segment of the market was driven by the growing popularity of single-currency swaps. Of note was the almost sevenfold increase in DM-denominated swaps, which often acted as counterparts to cash and derivatives transactions involving other EU currencies, as well as a proxy for the euro. The fact that the survey was conducted just before the announcement concerning the initial participation in European monetary union, which was followed by a temporary flattening of the main European swap curves and a moderation of arbitrage transactions, may have also played a role. As a result, the German currency overtook the dollar as the most important currency of denomination in swaps (with shares of 30% and 23% respectively). Meanwhile, strategies based on yen interest rates slackened, in a context of historically low levels of interest rates and reduced market volatility.

Finally, the breakdown by reporting centre shows that the share of OTC derivatives business conducted in the United Kingdom rose from 27% in 1995 to 36%, with the growing buoyancy of European currency transactions more than compensating for the more subdued pace of activity in the yen. While the United States maintains its rank as the next most important location (at 19%), France overtook Japan as number three, with Germany replacing Singapore in fifth position. The fall in the market share of Singapore (from 7% to 2%) should probably be seen in relation to the drying-up of liquidity in instruments based on the yen and a number of other Asian currencies.

ABBREVIATIONS USED FOR EXCHANGES

AEX	Amsterdam Exchanges
AMEX	American Stock Exchange
BM&F	Bolsa de Mercadorias y Futuros
CBOE	Chicago Board Options Exchange
CBOT	Chicago Board of Trade
CME	Chicago Mercantile Exchange
CSCE	Coffee, Sugar & Cocoa Exchange
CX	Cantor Exchange
DB	Deutsche Börse
DTB	Deutsche Terminbörse
FINEX	New York Cotton Exchange - Finex Division
HKFE	Hong Kong Futures Exchange
HKSE	Hong Kong Stock Exchange
ISE	Italian Stock Exchange
KLOFFE	Kuala Lumpur Options and Financial Futures Exchange
KLSE	Kuala Lumpur Stock Exchange
LIFFE	London International Financial Futures and Options Exchange
LSE	London Stock Exchange
MATIF	Marché à Terme International de France
ME	Montreal Exchange
MEFF RV	Mercado de Futuros Financieros de Renta Variable
NASD	National Association of Securities Dealers
NYBT	New York Board of Trade
NYCE	New York Cotton Exchange
NYFE	New York Futures Exchange
NYSE	New York Stock Exchange
OSE	Osaka Securities Exchange
PE	Pacific Exchange
PHLX	Philadelphia Stock Exchange
SBF	Société des Bourses Françaises
SFE	Sydney Futures Exchange
SIMEX	Singapore International Monetary Exchange
SOFFEX	Swiss Options and Financial Futures Exchange
SWX	Swiss Exchange
TSE	Tokyo Stock Exchange