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INTERNATIONAL BANKING AND FINANCIAL MARKET DEVELOPMENTS

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Statistical annex
New: Maturity information on domestic and international debt securities (Tables 17A–B).

List of recent BIS publications

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I. Overview of global financial developments: Markets turn cautiously optimistic

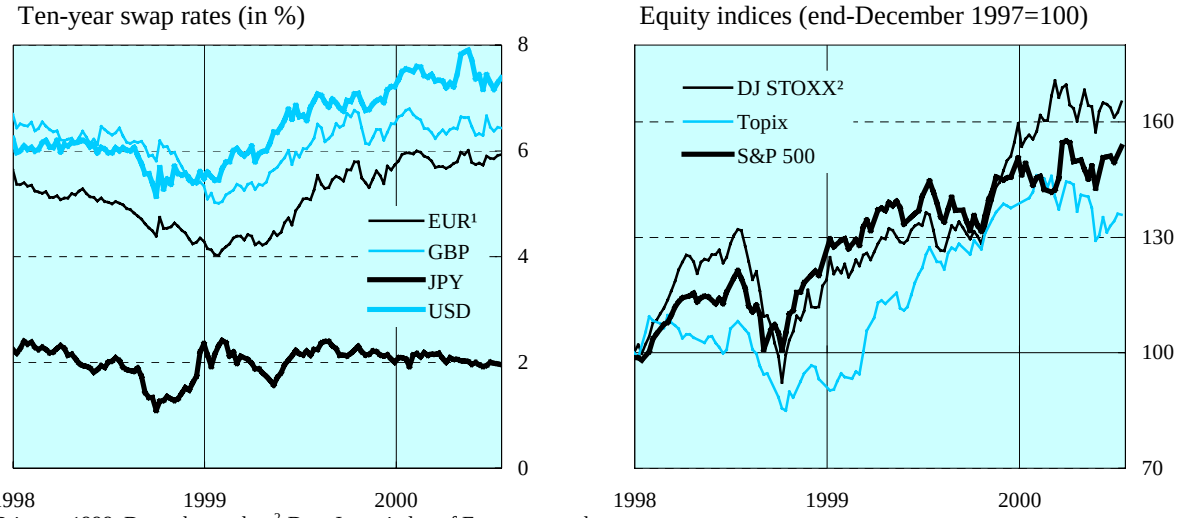
The uncertainty that pervaded financial markets in the early months of 2000 shifted to cautious optimism towards mid-year. Financial market participants around the world continued to focus on the US economy and what the Federal Reserve might do to keep inflation in check. In April and May, fears of a prolonged period of monetary tightening and a possible hard landing contributed to equity market declines in the United States and Europe, a further widening of swap and credit spreads and a general aversion to risk (Graphs I.1 and I.2). In June, US stock markets led a rally in global equity and fixed income markets on signs that were interpreted as weakening the case for further tightening by the Fed. The swing in sentiment turned on a few data releases that suggested US economic growth was slowing to a more sustainable pace.

Shifts and uncertainties in macroeconomic expectations in recent months seemingly exerted more pronounced effects on stock markets than before, most notably in the United States. In contrast to historical experience, on several occasions changes in expectations about the near-term course of US interest rates had a significant impact on equity markets but a muted impact on fixed income markets. Moreover, price declines and increases in volatility in equity markets appeared to have a greater influence on credit spreads than in the past. This latter link between credit and equity markets seemed to arise in part from a growing use of an approach to estimating credit risk based on treating equity as an option on a firm's assets. Widespread use of such an approach could potentially increase the sensitivity of credit spreads to a sharp correction in equity prices, if such an adjustment were to occur.

Graph I.1

Global fixed income and equity markets

Weekly averages

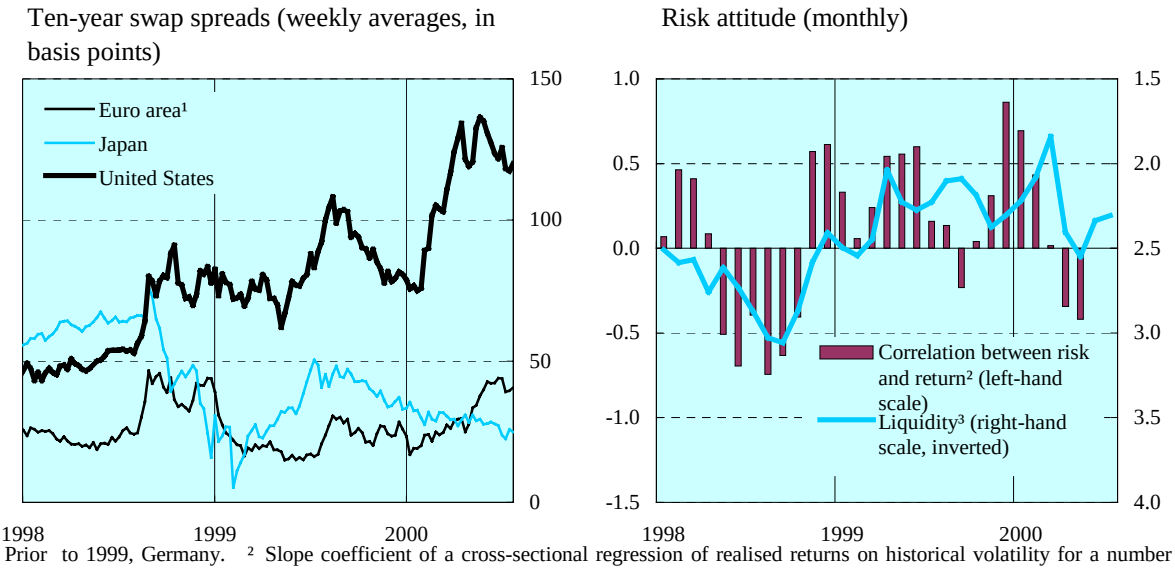


¹ Prior to 1999, Deutsche mark. ² Dow Jones index of European stocks.

Sources: Datastream; national data.

Graph I.2

Indicators of liquidity and risk attitude



¹ Prior to 1999, Germany. ² Slope coefficient of a cross-sectional regression of realised returns on historical volatility for a number of asset classes. A rise in the coefficient indicates greater tolerance for risk; a decline indicates more risk aversion. ³ GDP-weighted average of overnight real rates in the eurocurrency market for the US dollar, yen, euro and sterling.

Sources: Datastream; BIS calculations.

Unsettled conditions in US and European credit markets contributed to greater reliance on short-term, floating rate and yen-denominated issues in the international debt securities market during the *second quarter* of 2000. Net issuance amounted to $265 billion, a slight increase over the previous quarter but substantially below net issuance in the same quarter a year earlier. Issuance by US housing agencies and developing countries slowed markedly between the first and second quarters. However, the subdued activity of these borrowers was more than offset by strong issuance by corporate borrowers, particularly telecommunications firms in Europe.

Securities issuance by European telecoms helped to refinance large bridge loans taken out in the first quarter of 2000 to support mergers, acquisitions and bids for third-generation mobile phone licences. Such loans contributed to a spectacular surge in cross-border bank lending in the *first quarter*, to $404 billion from $117 billion in the final quarter of 1999. Indeed, new bank loans eclipsed net securities issuance for the first time since the fourth quarter of 1997 (Graph I.3). Lending activity was driven by interbank transactions, with a substantial amount of funds being rechannelled to Europe through various banking centres. Lending to non-bank borrowers also strengthened, and net lending to Asian borrowers turned positive for the first time since mid-1997.

Central bank watching absorbs the markets

Financial markets in recent months were more sensitive than usual to prospective actions by central banks. The future path of monetary policy in the United States, the possibility of intervention to support the euro and talk of ending the zero interest rate policy in Japan all preoccupied market participants during the period under review.

The strength of the US economy, and the monetary policy tightening that would be required to maintain price stability should such strength continue, remained a key focus of market attention. In April and May, evidence of continued strong growth raised expectations of further interest rate increases, which in turn heightened concern about an eventual hard landing. Stock and bond prices fell in response. Price declines were greatest on the Nasdaq and other technology-focused equity markets, which had earlier turned bearish on concerns about the high valuations of internet and other "new economy" stocks (see the June 2000 issue of the *BIS Quarterly Review*).

Market participants appeared to anticipate the Federal Reserve's decision in May to raise its target for the federal funds rate by 50 basis points (Graph I.4). But rather than reassuring markets that the Fed would be able to engineer a soft landing, the relatively aggressive move initially confirmed market fears of further increases to come. Towards the end of May, expectations shifted to a more favourable outlook, following the release of data indicating a possible slowdown in growth. This resulted in a significant narrowing of the spread between the two-year swap yield and the policy rate (Graph I.4). The subsequent rally was short-lived, however, dampened by concerns about earnings and economic indicators that presented a more mixed picture of the risks to growth.

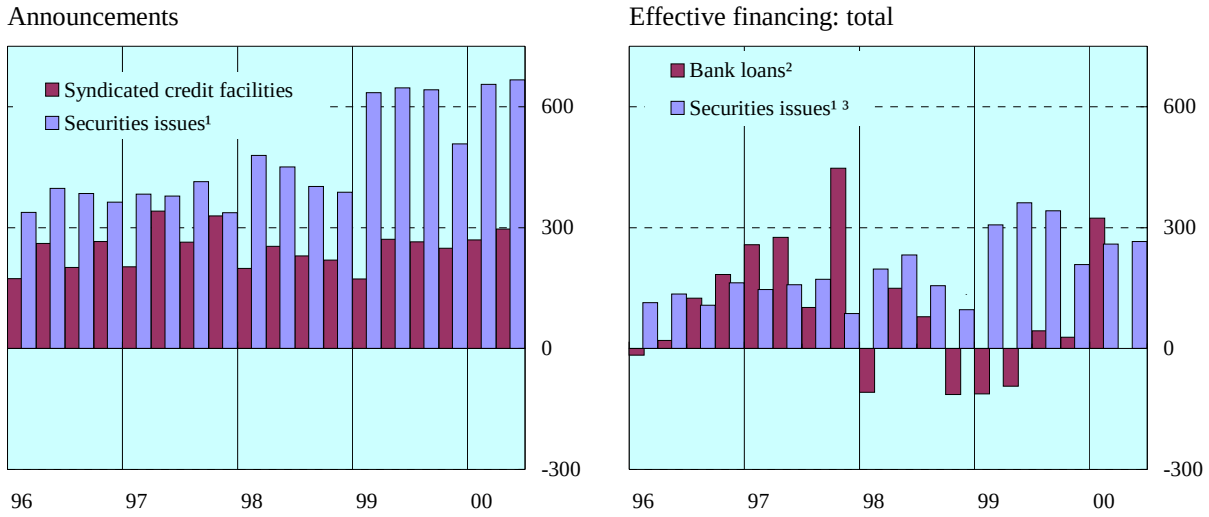
In the period under review, stock markets often reacted more promptly and forcefully than bond markets to significant data releases. In the past, bond markets had tended to be the first to reflect macroeconomic developments with implications for monetary policy, and equity markets to respond to movements in the yield curve. But with bond markets beset with liquidity problems, equity markets have increasingly been reacting in their own right rather than taking their signals from bond markets. For example, following the release on 14 April of stronger than expected inflation figures for the United States, US equity markets fell precipitously (the Dow Jones Industrial Average and the S&P 500 both fell by nearly 6%, and the Nasdaq by almost 10%), whereas fixed income markets remained largely unchanged. In the week ending 2 June, US stock markets posted impressive gains, with the Nasdaq rising 19%, in response to weaker than expected home sales, non-farm payrolls and other macroeconomic news. By contrast, the rally in bond markets during that week was not especially remarkable.

In the euro area, central bank watching was motivated largely by concerns about the currency. During April and May, the euro continued to weaken against the US dollar and the yen (Graph I.5). Although the currency depreciated relatively rapidly in early May, at one point falling below $0.89, market conditions remained orderly: for example, there were no marked swings in risk reversals (Graph I.5). Nevertheless, the weakness of the euro, coupled with remarks by European leaders about the risks posed by an undervalued currency, fuelled discussion about the prospect of intervention to support the currency. Towards the end of May, however, signs of slower growth in the United States and strong economic indicators for the euro area supported a turnaround, and by mid-June the euro was 7% higher than its early May trough.

Graph I.3

Activity in cross-border bank loans and securities markets

In billions of US dollars

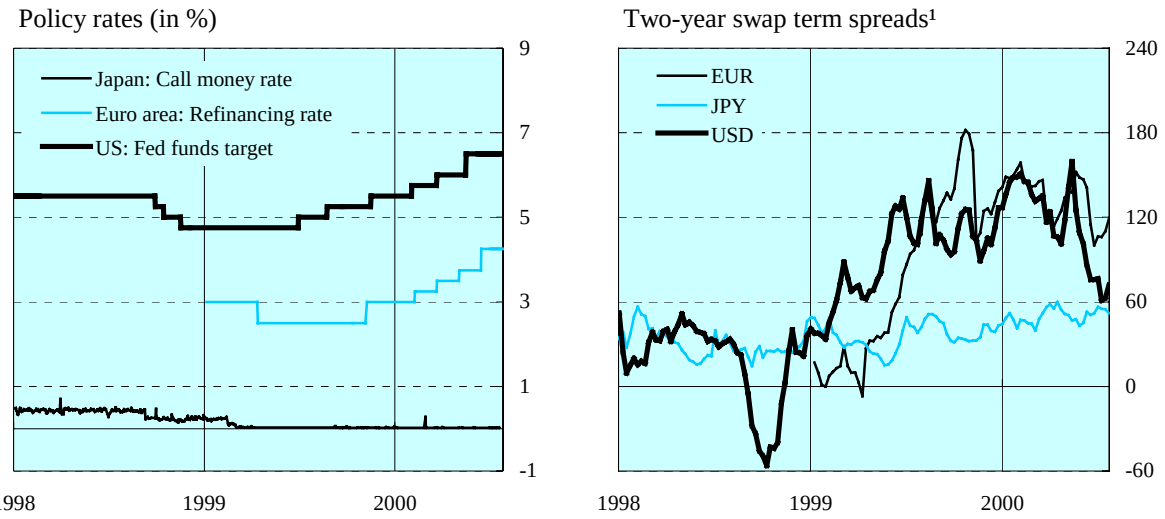


¹ Includes both money market instruments and long-term bonds and notes. ² Exchange rate adjusted changes in gross cross-border bank loans. Data for bank loans are available only up to 2000 Q1. ³ Gross issues minus repayments.

Sources: Bank of England; Capital DATA; Euroclear; International Securities Market Association (ISMA); Thomson Financial Securities Data; national data; BIS.

Graph I.4

Policy rates and term premia



¹ Over the policy rate. Weekly averages, in basis points.

Sources: Datastream; national data.

Although the June rebound appeared to break the trend of a steadily declining euro, the currency's rise faltered soon after it began. The Eurosystem cited the impact of the euro's depreciation on import prices as one of the reasons for further tightening its policy stance in early June. Even though the 50 basis point rise in interest rates exceeded expectations, the move had little impact on the exchange rate, in part because it only brought forward increases that markets had expected for later in the year.

In Japan, market participants began to consider the possibility of a near-term end to the zero interest rate policy. With the economy showing some signs of improvement, the deflationary concerns that prompted the introduction of the zero interest rate policy in February 1999 subsided, and the focus turned to conditions for raising rates. Indications of a recovery and talk of an end to the zero interest rate policy contributed to the strength of the yen in the second quarter. Since the early part of 2000, risk reversals have shown a consistent bias in favour of the yen against the dollar (Graph I.5). Nevertheless, bond market participants evidently were not concerned that an early monetary tightening would augur a series of interest rate increases, as Japanese bond and swap yields remained relatively stable during the period under review (Graphs I.1 and I.4)[1]. Japanese stock markets also languished in the second quarter.

Have credit spreads become linked to equity markets?

Credit spreads continued to widen during the second quarter of 2000, especially for high-yield debt (Graph I.6). Spreads were affected by investors' general aversion to risk (Graph I.2) as well as uncertainty about the course of monetary policy and the economy. Moreover, movements in equity markets appear to have been transmitted more directly to bond pricing in secondary markets than in the past, particularly in the US market.

In the United States, rising default rates on junk bonds helped to depress corporate debt prices. Such debt prices were also affected by concerns that some companies, especially "old economy" firms, might buy back their equity in large amounts in an effort to support their stock price and finance these

[1] The Bank of Japan terminated its zero interest rate policy on 11 August (outside of the period under review), raising its target for the overnight call rate to 0.25%. There was little immediate reaction in markets to the move.

repurchases by issuing more debt. In the event, such leveraging behaviour did not materialise, apparently because credit spreads had widened and few investors were willing to provide the financing.

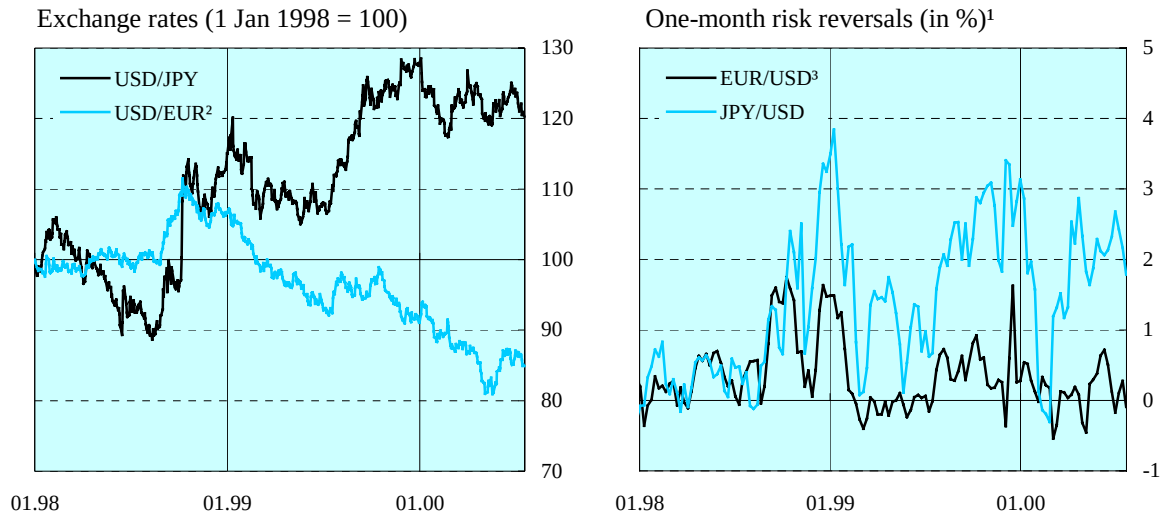
In European markets, auctions of third-generation mobile phone licences contributed to the widening of corporate credit spreads. Spreads were put under pressure not only by the prospect of unusually large borrowing by telecommunications firms needing to finance their bids and new projects, but also by expected reductions in governments' borrowing requirements and hence in new bond supply, owing to revenues from such auctions. Wider spreads did not deter borrowing activity, with corporate bond issuance more than doubling between the first and second quarters. European corporations were especially active in the yen market, driving net issuance of yen-denominated bonds to its highest level since the mid-1990s.

In contrast to spreads on high-yield corporate debt, spreads on developing country debt continued to trend downwards up to mid-year (Graph I.6). Notwithstanding the general trend, the spread between the EMBI+ and the 10-year swap rate widened noticeably in May, owing to concerns about future US interest rate increases. Those countries with heavy external borrowing requirements, such as Argentina, were particularly affected by the temporary widening of spreads. This contributed to a marked slowdown in issuance by developing countries during the second quarter (see Section II.2).

One of the striking developments in fixed income markets in recent months has been the apparent emergence of a new link between credit and equity markets. In particular, a widening of credit spreads has tended to follow price declines and increases in volatility in equity markets. This phenomenon seems to have stemmed from an increasingly widespread use by fixed income dealers and institutional investors of an option-based approach to estimating credit risk. The approach, first proposed by Robert Merton in 1973 but widely applied only recently, derives a firm's asset value, leverage and likelihood of default from the market value and volatility of its equity.[2] The approach relies on the idea that information about a firm's prospects would be reflected first in the stock market.

Graph I.5

Exchange rate indicators



¹ Weekly averages. A negative value indicates a bias towards dollar strength. ² Prior to 1999, the ECU. ³ Prior to 1999, USD/DEM.

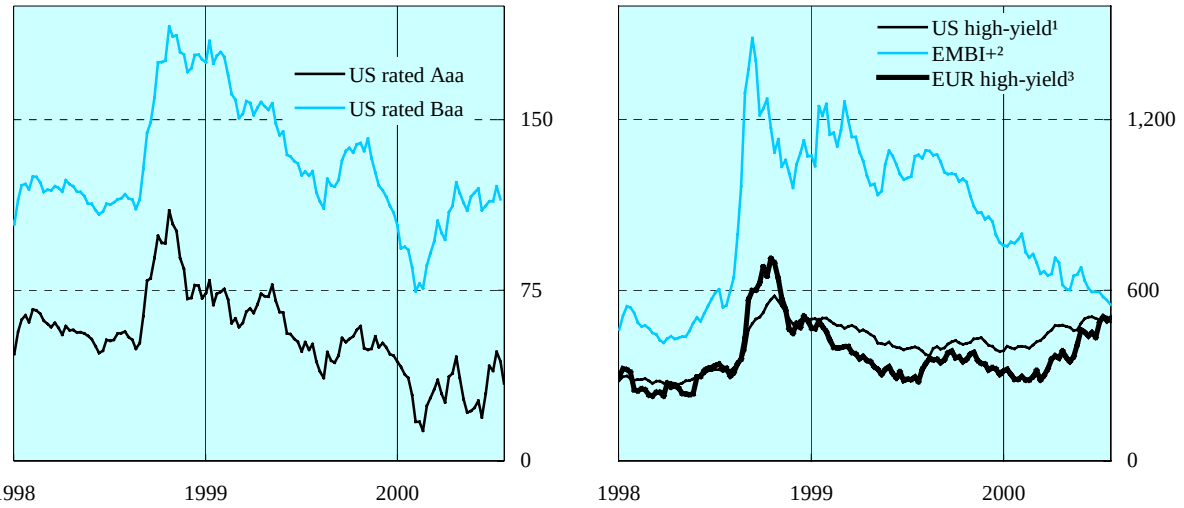
Source: Reuters.

[2] The seminal paper by Merton (1973) is "Rational theory of option pricing," *Bell Journal of Economics and Management Science*, 4, pp 141-83.

Graph I.6

Credit spreads over 10-year swap rates

Weekly averages, in basis points



¹ Merrill Lynch US High Yield Master II. ² JP Morgan's Emerging Market Bond Index (EMBI+) spread over 10-year US swap rate. ³ Euro/ECU denominated Merrill Lynch high-yield bond index.

Sources: Bloomberg; Datastream, national data.

Recent trends in stock and bond markets have been roughly consistent with such an approach. For example, the volatility implied by options on the S&P 100 rose from 23% to 31% between early February and early June, while the index itself rose only marginally. During this period, the spread between Baa-rated debt and US Treasuries widened by 65 basis points, which is approximately in line with what the option-based approach to estimating credit risk would predict. If such an approach were to become more widely used, swings in sentiment in equity markets could have significant repercussions in credit markets.

Liquidity factors drive up US and European swap spreads

Spreads between US interest rate swap and Treasury yields remained at exceptionally high levels in the second quarter, following their sharp run-up in the early part of 2000 (Graph I.2). Spreads between European swap and government yields also widened, with UK swap spreads reaching US levels and euro area spreads nearly doubling, although still far below US and UK spreads. This marked rise reflected a recognition of new liquidity risks, arising from diminishing supplies of government debt. The importance of government debt issuance as an explanation for the widening of swap spreads is supported by developments in Japan, where supplies of government debt remain plentiful and swap spreads remain low and stable.

In US fixed income markets, difficulties in obtaining long-term Treasuries have led to specials – or sharp price increases – several times a month ever since the announcement by the US Treasury in early February of its strategy for buying back debt. While the buyback strategy seems to have been effective in arbitraging deviations from the yield curve (Graph I.7), Treasuries also seem to have become more vulnerable to liquidity shocks than in the past. On a risk-adjusted basis, therefore, swaps have arguably become a more attractive instrument than Treasuries for hedging and positioning. This led investors in agency and corporate bonds to turn to the swaps market in April and May to hedge their positions, fearing possible tightening actions by the Federal Reserve. Increased activity put pressure on swap spreads, with the spread for 10-year swaps rising from approximately 75 basis points in January to 120 basis points in June. In the past, such spread behaviour might have indicated a deterioration in the

credit quality of intermediaries. However, market participants at present see little counterparty risk in the swaps market.

In European swaps markets, similar forces were at work. Swap spreads widened when market participants began to consider seriously the reductions in government debt issuance implied by the revenues raised through auctions of telecommunications licences. The United Kingdom was the first country to auction third-generation mobile phone licences, and the amount that it raised – £22.5 billion – prompted analysts and investors to revise upwards their estimates of the revenues that similar auctions by other European countries might generate. Uncertainty about the near-term course of European interest rates put added pressure on European swap spreads

International bank lending surges but developing country borrowers stay away

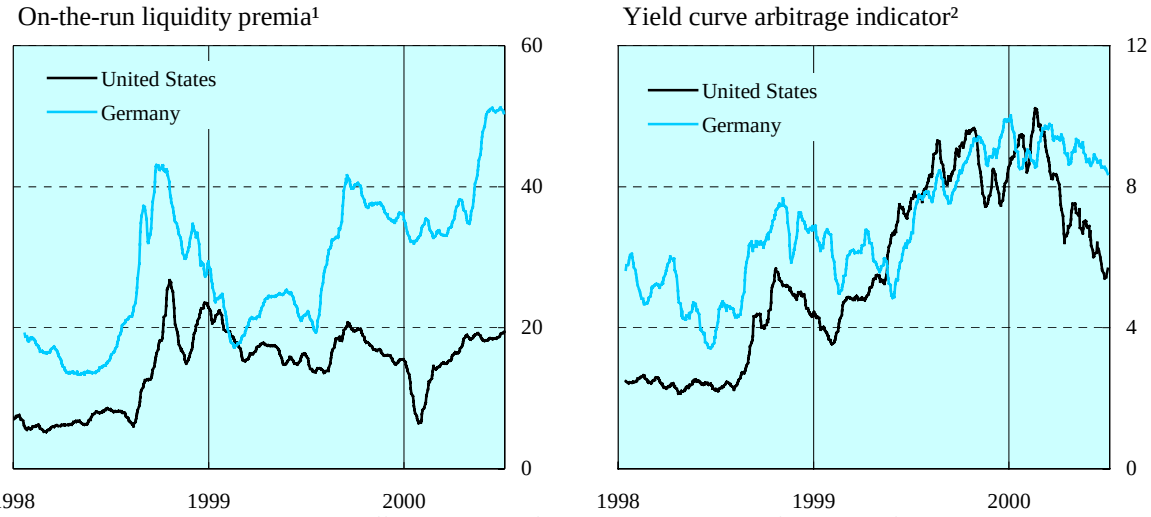
The most recent data reported to the BIS show a resurgence in the international banking market in the first quarter of 2000, driven by cross-border interbank transactions. Strong demand by the telecommunications sector in Europe for financing for mergers, acquisitions and bids for third-generation mobile phone licences appears to have set in train a movement of funds from various banking centres around the world to Europe. This rechannelling process caused lending flows between banks in developed countries to surge to $321 billion during the first quarter, the highest level of activity seen in the interbank market since the fourth quarter of 1997. A portion of these funds was onlent to non-bank borrowers, resulting in a near tripling of loans to non-bank borrowers in developed countries to $65 billion.

The resurgence of the international banking market did not, however, extend to developing country borrowers. Securities markets continued to be by far the most important source of debt finance for developing countries (Graph I.8). In the first quarter of 2000, international banks further reduced their

Graph I.7

Liquidity in government bond markets

In basis points; 10-day moving averages



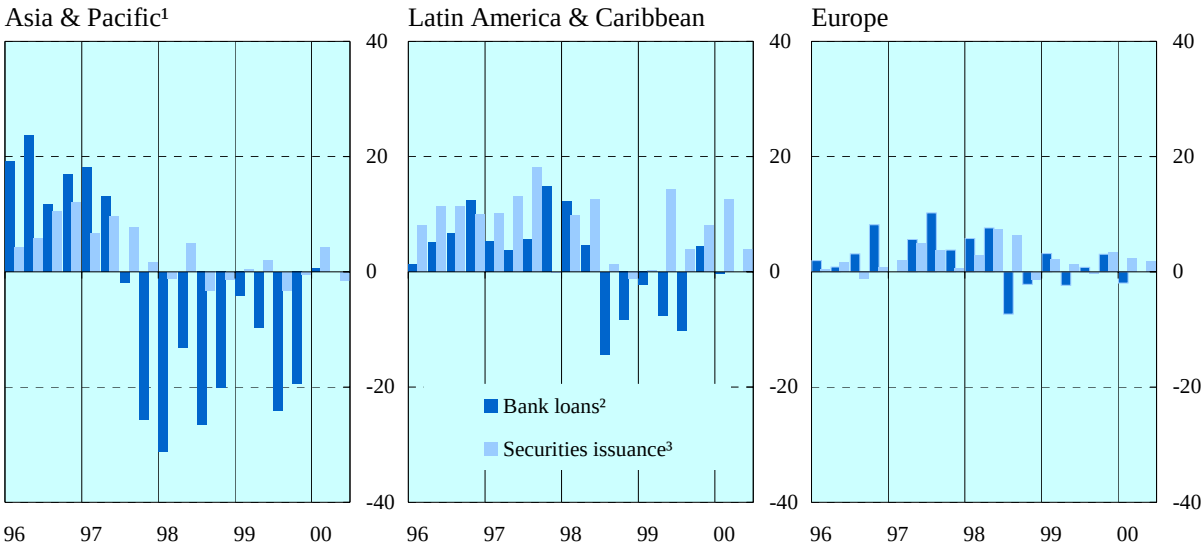
¹ For the United States, 30-year on-the-run/off-the-run spread; for Germany, Kreditanstalt für Wiederaufbau/10-year government bond spread. ² Standard deviation of static spreads of all bonds over a zero coupon yield curve (excluding callable bonds).

Sources: Datastream; BIS calculations.

Graph I.8

International bank and securities financing in developing countries

In billions of US dollars



[1] Excluding Hong Kong and Singapore. [2] Exchange rate adjusted changes in claims of BIS reporting banks. Data on bank borrowing are not yet available for the second quarter of 2000. [3] Net issues of international money market instruments, bonds and notes.

Sources: Bank of England; Capital DATA; Euroclear; ISMA; Thomson Financial Securities Data; national data; BIS.

overall exposure to developing countries, albeit at a slower pace than in 1998-99. Their investment in securities – at $7 billion, the largest flows since mid-1997 – was more than offset by a $9 billion reduction in loans. Much of this reduction was due to a decline in lending by US banks to Middle East borrowers. In Latin America new loans roughly offset repayments, while in Asia bank lending turned slightly positive after 10 consecutive quarters of repayments. Korea was the largest developing country borrower in Asia in the first quarter, while for most other Asian countries repayments continued to exceed new loans.

Global developments in real estate prices

Asset prices play a prominent role in the course of the business cycle. Indeed, it may be argued that the boom-bust nature of asset prices exacerbates the business cycle by both fuelling the upswing and magnifying the downswing. Asset prices influence aggregate demand directly through the wealth effect on consumption and indirectly via the impact on the balance sheets of households, corporations and financial intermediaries. Price movements that improve balance sheets enhance the borrowing capacity of households and corporations: price upswings are in fact often associated with rapid credit growth. Subsequent price declines can then lead to widespread defaults, reductions in collateral values and cutbacks in lending by financial intermediaries.

The sustainability of soaring asset prices and the risks of a subsequent collapse are therefore important issues for policymakers. Recently much attention has been focused on the high valuations of global equity markets.[①] Yet real property prices have also registered significant gains over the last few years in many countries. Historically, it is in fact the extensive use of real estate as collateral that has been the main source of losses for banks. During the last decade, for instance, booms and busts in real estate, accompanied by rapid credit expansion and subsequent cutbacks, played a prominent role in the banking crises of the Nordic countries and Japan, and more recently in Asia.[②] Such roller-coaster price movements also led to significant credit losses in Australia, the United Kingdom and the United States at the turn of the 1990s. While residential property prices may play a more prominent role in aggregate consumption, commercial property prices have been the more significant source of credit losses.

In recent years, gains in residential property prices have been quite substantial in some markets. While inflation-adjusted house prices rose by 9% between 1995 and 1999 in the United States, increases exceeded 25% in Denmark, Finland, Norway, Sweden, the Netherlands and the United Kingdom. Ireland had an even stronger housing market, with inflation-adjusted prices rising by 76% over the same period. Exceptions to the upward trend were the German, Italian, Japanese and Swiss markets, where inflation-adjusted prices declined by 8%, 9%, 12% and 13% respectively.

In the case of commercial real estate – traditionally the more volatile market – the data indicate even stronger gains.[③] Price increases in excess of 40% were recorded in Amsterdam, Stockholm and major cities in the United States over the last four years, while prices in Madrid doubled. The largest increases were recorded in Dublin, where inflation-adjusted commercial real estate prices rose by more than 170% between 1995 and 1999. In contrast, the Tokyo market registered a significant price decline.

The recent similarity of real estate price movements across markets follows in some cases very different price histories. In the Nordic countries, Italy, Spain and the United Kingdom, housing prices fell substantially during part of the 1990s. Consequently, in these countries and Japan real house prices are still below previously scaled peaks. In contrast, the Belgian, Dutch and Irish housing markets suffered no major downturn during the 1990s. Thus the steady gains posted over the last decade have taken real house prices to all-time highs. The cross-country performance of commercial real estate has been more uniform over the last decade and a half. Almost all cities covered experienced a sharp run-up in prices during the later part of the 1980s followed by an equally sharp price reversal. As a result, inflation-adjusted prices of commercial real estate remain substantially below values attained at the end of the 1980s. Important exceptions are the Amsterdam, Dublin and US markets. Commercial property in major US cities gained 60% from the price trough, indicating that the boom in equity markets is starting to be reflected in property prices. In Japan, prices have not recovered since the bursting of the bubble at the turn of the 1990s.

While statistical analysis shows that the strength of the economy has tended to be a driving factor in recent gains in property prices, the analysis also points to a number of cases where the difference between private credit growth and GDP growth has been an important factor as well. In the case of commercial real estate in particular, cross-country differences in credit growth consistently help explain the international dispersion of asset price performance even after accounting for the effects of economic growth. The commercial property booms in

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① See, for example, the 1999-2000 BIS Annual Report. ② See the 1992-93 and 1996-97 BIS Annual Reports and C E V Borio, N Kennedy and S Prowse (1994), *Exploring aggregate asset price fluctuations across countries: measurement, determinants and monetary policy implications*, BIS Economic Papers No. 40 (April). ③ With the exception of the United States, the data apply only to major cities and are thus not as comprehensive as the national housing price data.

Box Table I.1

Nominal and inflation-adjusted real estate prices

	Nominal prices				Inflation-adjusted prices			
	1996	**1997**	**1998**	**1999**	**1996**	**1997**	**1998**	**1999**
	Indices, 1995 = 100							
	Residential property prices							
United States	104	107	113	120	100	102	106	109
Japan[1]	98	97	93	90	98	95	91	88
Germany	100	97	96	97	98	94	92	92
France	101	102	105	106	100	99	102	102
Italy	97	92	94	99	95	89	89	91
United Kingdom	104	113	126	139	101	106	115	126
Canada	100	103	101	105	98	100	97	99
Spain	102	103	108	120	99	98	101	109
Netherlands	109	121	132	154	107	115	124	141
Australia	101	105	113	121	99	103	109	115
Switzerland	94	90	89	89	94	89	88	87
Belgium	104	109	114	122	102	105	110	115
Sweden	101	107	118	129	101	106	118	127
Denmark	111	123	135	143	108	118	127	131
Norway	108	118	129	142	107	113	121	129
Finland	105	124	137	149	104	120	132	141
Ireland	112	131	161	191	110	127	152	176
	Commercial property prices: major cities[2]							
United States	110	127	153	175	106	120	144	159
Tokyo[1]	87	80	72	64	86	78	70	63
Frankfurt	100	100	108	123	99	97	104	117
Paris	93	98	114	122	92	95	110	116
Milan	91	88	111	125	89	85	105	116
London	105	115	118	130	103	108	108	117
Toronto[3]	92	96	110	120	90	93	106	113
Madrid	119	128	183	225	115	122	172	205
Amsterdam	108	117	143	167	106	112	134	153
Sydney	105	112	116	117	103	110	113	112
Zurich	91	88	85	90	91	87	84	87
Brussels	106	109	109	118	104	106	105	111
Stockholm	106	126	143	144	106	125	143	142
Copenhagen	100	111	116	130	98	106	109	118
Oslo	107	121	111	121	105	117	104	111
Helsinki	102	105	115	125	101	102	111	118
Dublin	119	151	215	294	117	146	203	271

[1] Land prices. [2] Except for the United States. [3] Price index for offices in Ontario.

Note: 1999 data for Belgian residential property prices are preliminary.

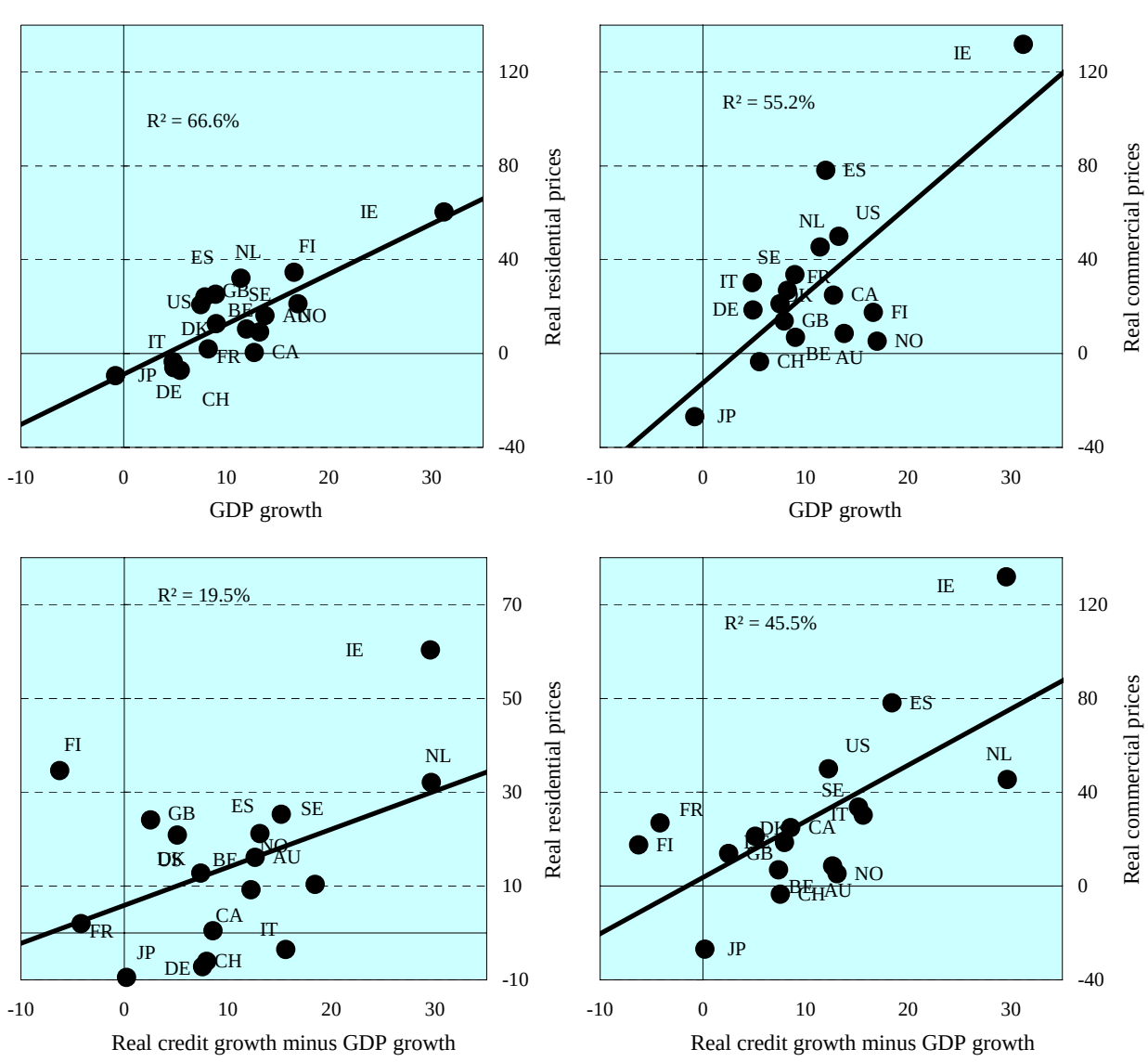
Sources: Frank Russell Canada Limited; Investment Property Databank; Jones Lang LaSalle; Ministère de l'Équipement, des Transports et du Logement; Nomisma; Office of Federal Housing Enterprise Oversight; OPAK; Sadolin & Albæk; Wüest & Partner; other private real estate associations; national data.

Dublin, Madrid and major US cities, for example, have been accompanied by private credit growth that has far outpaced that of the underlying national economies (Box Graph I.1). In the case of residential real estate, credit growth has little systematic influence on the cross-country differences in performance. Indeed, even the spectacular gains in the Irish residential market appear to be in line with GDP growth.

In fact, credit growth significantly in excess of GDP growth has been a rather widespread phenomenon. Various institutional developments have eased credit conditions in general and those on property lending in particular. In the United States, for example, the Federal National Mortgage Association ("Fannie Mae") and Federal Home Loan Mortgage Corporation ("Freddie Mac"), with the benefit of implicit interest rate subsidies arising from

Box Graph I.1

Real estate prices, GDP and credit growth, 1996-99[1]



[1] For all variables, percentage change over three years. Credit variables are based on BIS estimates of total credit to the private sector.
[2] For the United States, nationwide index; for other countries, major cities.

Sources: Jones Lang LaSalle; Sadolin & Albaek; Investment Property Databank; OPAK; Frank Russell Canada Limited; Wüest & Partner; IMF; national data.

investors' beliefs about government backing, have dramatically expanded their support for home purchases. In Europe, flourishing securitisation added strength to the commercial real estate market. Total European issuance last year set a record at just over $7.5 billion. In Ireland, new entry has sharply raised competition in the mortgage market and led to a significant relaxation of terms on real estate financing.

In some countries, the rapid increase in credit, especially to such cyclically sensitive sectors as commercial real estate, has elicited public expressions of concern. Supervisory authorities, most notably in France and Spain, have warned about such credit while pointing to banks' comparatively low levels of provisioning at this point in the cycle. Experience indicates that, at least in those countries where price increases have been particularly rapid and prices are beyond or close to previous peaks, developments warrant close monitoring.

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II. Highlights of international financing

1. The international banking market

The first quarter of 2000 saw extraordinarily intense activity in the international banking market. The activity was driven by interbank transactions, which served to rechannel funds to non-bank borrowers in Europe. As a result, banks more than doubled their cross-border loans to the non-bank sector in developed countries. Banks continued to purchase international securities at a somewhat slower rate than that established during 1999. Also, lending in all European currencies was up by 11%, while there was limited growth in yen positions because Japanese banks continued to unwind lending from overseas branches. Repayments from developing countries appear to have bottomed out, with some resumption of new lending to Asia.

Table II.1.1

Main features of cross-border claims of BIS reporting banks[1]

In billions of US dollars

	1998	1999					2000	Stocks at end-March 2000
	Year	Year	Q1	Q2	Q3	Q4	Q1	
Claims on developed countries	**564.7**	**438.1**	**90.3**	**60.0**	**193.0**	**94.7**	**446.9**	**7,820.7**
of which: intra-euro 11	*296.7*	*250.2*	*131.9*	*35.0*	*84.7*	*– 1.3*	*107.1*	*1,570.7*
Interbank loans	285.9	23.3	– 18.3	– 83.4	126.4	– 1.5	321.4	4,710.7
Loans to non-banks	21.5	100.7	5.9	67.2	2.9	24.8	65.4	1,399.7
Securities[2]	257.4	314.1	102.7	76.2	63.7	71.4	60.1	1,710.3
Claims on offshore centres	**–172.3**	**–105.4**	**– 69.1**	**– 44.7**	**– 26.4**	**34.8**	**– 50.4**	**1,158.1**
Interbank loans	–166.7	–140.3	– 78.1	– 51.7	– 47.2	36.6	– 62.3	804.0
Loans to non-banks	– 26.7	6.7	2.6	1.0	12.7	– 9.6	2.4	227.3
Securities[2]	21.1	28.2	6.4	5.9	8.1	7.8	9.5	126.8
Claims on developing countries[3]	**– 78.9**	**– 60.5**	**– 5.5**	**– 21.1**	**– 31.2**	**– 2.7**	**– 2.2**	**915.6**
Interbank loans	– 63.6	– 57.6	– 10.4	– 20.4	– 22.5	– 4.3	6.8	372.7
Loans to non-banks	– 8.9	– 9.5	4.6	– 3.3	– 8.8	– 2.0	– 15.7	411.3
Securities[2]	– 6.5	6.5	0.2	2.7	0.0	3.6	6.7	131.6
Unallocated	**– 33.9**	**– 31.2**	**– 2.5**	**– 5.5**	**– 13.6**	**– 9.5**	**9.7**	**199.6**
Total	**279.5**	**241.0**	**13.2**	**– 11.4**	**121.8**	**117.4**	**403.9**	**10,094.2**
Interbank loans	31.9	–224.8	–113.4	–156.0	37.7	6.9	269.5	5,958.1
Loans to non-banks	– 26.7	90.1	1.0	62.2	6.1	20.8	53.6	2,069.5
Securities[2]	274.3	375.7	125.6	82.4	78.0	89.7	80.8	2,066.6
Memorandum item:								
Syndicated credits[4]	*902.0*	*957.1*	*172.5*	*271.1*	*264.3*	*249.2*	*269.2*	

[1] Changes in amounts outstanding excluding exchange rate valuation effects. [2] Partly estimated. The data include other assets, which account for less than 5% of the total claims outstanding. [3] Including eastern European countries. [4] Announced new facilities.

Interbank activity surges as the market rechannels funds to Europe

The most striking development in the international banking market in the first quarter of 2000 was a surge in cross-border interbank lending within the developed countries. The sum of these lending flows rose to $321 billion, the largest such amount since the fourth quarter of 1997. The main impetus for the surge appears to have been a strong demand for financing by borrowers in Europe, particularly by telecommunications firms. To meet this demand, international banks rechannelled funds through various banking centres around the world, in the process causing interbank balance sheets to expand sharply. This surge in activity resembled the multiplier process observed in 1997, when the growth in interbank activity was driven by an effort to recycle large repayment flows from borrowers in Asia during the financial crisis in that region.

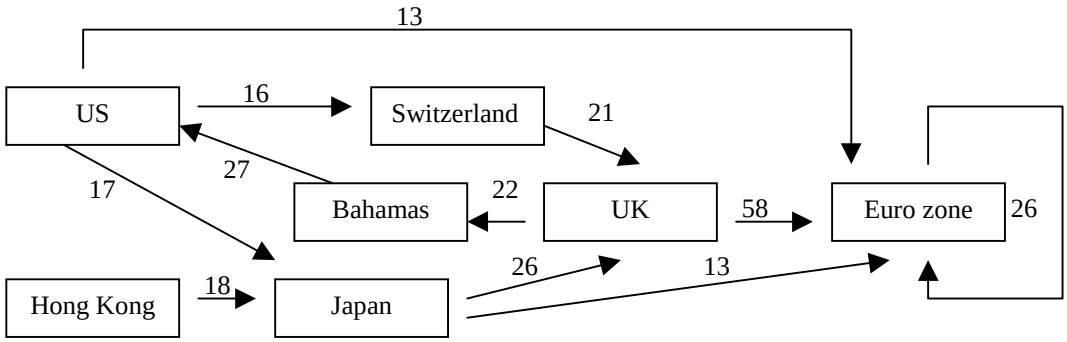
Taking into account both assets and liabilities, the largest net interbank flows during the recent quarter involved banking centres in the United States, Switzerland, Hong Kong, Japan and the United Kingdom. Interbank funds appear to have been raised in New York and Hong Kong, passed on to Zurich and Tokyo and pooled in London, although not necessarily in that sequence. Euro area banking centres were able to draw heavily on these funds. The major net changes in interbank claims are illustrated in Graph II.1.1. With each cross-border transaction adding to outstanding positions, the rechannelling process led to an aggregate increase in interbank assets amounting to about five times the increase in international loans to non-banks in this quarter.[3]

Some of the interbank fund-raising took the form of a winding-down of short-term inter-office claims on offshore centres by banks in the United States and Japan. In particular, US banks received large repayments from their own offices in the Bahamas, which more than accounted for a $20 billion decrease in claims on the offshore centre. At the same time, a $25 billion contraction in claims on Hong Kong and an $11 billion fall in claims on Singapore were largely due to the further unwinding of Japanese banks' "yen impact" loans, ie yen funds lent to companies resident in Japan, but channelled via Japanese banks' overseas branches[4].

Graph II.1.1

Major net interbank flows in 2000 Q1[1]

In billions of US dollars



[1] Only includes the largest net flows into and out of the country or region. For example, a flow of $13 billion from the United States to the euro zone implies that banks in the United States added $13 billion in claims (net of liabilities) to banks in the euro area.

[3] Gross increases in interbank asset stocks can exceed net increases by further substantial amounts, since banks will build up additional liability and asset positions as they parcel up and distribute wholesale funds to banks in other reporting countries until all funds have been placed with non-bank borrowers.

[4] See Bank of Japan, *Quarterly Bulletin* (May 2000), p 176.

New developments in the banking statistics

In this quarter, there are some changes in the content and presentation of the locational banking statistics. Firstly, the reporting population has been expanded: Australia's and Portugal's locational data have been incorporated from the fourth quarter of 1997 onwards, increasing the coverage of BIS banking data by about 1% of reported assets.[1] Furthermore, the locational data reclassified by the nationality of the head office of the reporting banks now include submissions from Australia and Portugal (from end-1997 onwards), the Cayman Islands (from end-1999) and Bahrain (from the first quarter of 2000).

Secondly, the layout of Table 1 in the statistical annex has changed: the regional concept of the "BIS reporting area" is no longer used to classify external assets and liabilities. Due to an expansion in the number of countries reporting to the BIS, data in this classification would be difficult to compare over time. Instead, asset and liability exposures are now broken down by major instrument: loans and deposits, holdings of securities and other assets on the assets side and loans and deposits, own issues of securities and other liabilities on the liabilities side.

Thirdly, the country classification of the banking statistics has been revised slightly in several annex tables. For example, successor republics to the former Soviet Union located in Asia are now classified under developing countries in Asia and no longer under Europe.

[1] The published banking flows have been adjusted to eliminate distortions that would result if flows were computed including the increases in stocks due to additional reporting banks.

More generally, a small part of the rise in interbank flows may have reflected business that had been deferred to guard against possible Y2K disruptions. A similar dip and recovery after the millennium change can be seen in the turnover data on major exchange-traded short-term interest rate futures (Graph II.3.2), which are used actively by banks to hedge borrowing and lending requirements in the interbank market. The same shift was also evident in net international bond issues (Graph II.2.1).

Lending to non-bank borrowers strengthens

International banks employed the funds made available through the interbank market and slowed down their investment in securities somewhat to support renewed lending to non-bank borrowers in developed countries. Cross-border loans to these borrowers reached $65 billion in the first quarter of 2000, much of the money going to borrowers in the United States, the euro area and the United Kingdom. Non-bank residents in the United States received $33 billion, in the euro area $29 billion and in the United Kingdom $8 billion. Cross-border investments in securities totalled $60 billion, the lowest level since the third quarter of 1998.

Banks in the United Kingdom were the largest providers of direct cross-border credit to non-bank borrowers in developed countries. These banks provided $24 billion in loans and $12 billion in securities investments to borrowers in the United States, $6 billion in loans to borrowers in Japan, a further $5 billion to the Netherlands and $4 billion in securities investments to borrowers in Italy.

Syndicated loans for mergers and acquisitions by telecommunications firms appear to account for a significant part of such lending flows. The two largest international lending deals signed in the first quarter were a €30 billion facility to support the takeover of Germany's Mannesmann AG by the United Kingdom's Vodafone Airtouch and a €13 billion facility to finance the acquisition of Germany's E-Plus by the Netherlands' KPN. The lending upswing in Europe also reflected stronger economic growth and booming house prices especially in Ireland, the Netherlands, Finland and Portugal, where banks may have drawn from the international market to finance domestic lending.

Syndicated credits in the second quarter of 2000

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With $297 billion of announced new facilities, the second quarter of 2000 was the most active for international syndicated credits since 1997. While the increase on the previous quarter was 10%, the second quarter has typically been a strong quarter, and adjusting for this seasonality would convert the quarterly change into a 29% drop. After a record amount of deals to finance mergers and acquisitions in the first quarter, the second quarter saw an almost 50% decline in such business. Nonetheless, the telecommunications sector, where many of the mergers took place, continued to account for some of the biggest transactions.

Developed countries made up nearly 90% of total new facilities, with US and British borrowers getting the lion's share. The largest deal was a £16 billion commercial paper backup facility for British Telecom. Seven large US banks and securities firms also borrowed at least $2 billion each. Outside the developed countries, the most notable hub of activity was Hong Kong, where borrowers obtained a total of $14 billion, including $9 billion to finance the acquisition by Pacific Century CyberWorks of a majority stake in Hong Kong Telecom from parent company Cable & Wireless of the UK. Figures from Capital Data Loanware indicate that in the first half of the year there were about $40 billion worth of revolving international syndicated loans[①] geared, at least partially, to support the planned purchases by telecommunications companies of third-generation mobile phone licences auctioned off by various European governments. They included a €30 billion credit arranged for France Telecom, some of which helped it pay for Orange's UMTS (Universal Mobile Telecommunications System) licence as it acquired that company.

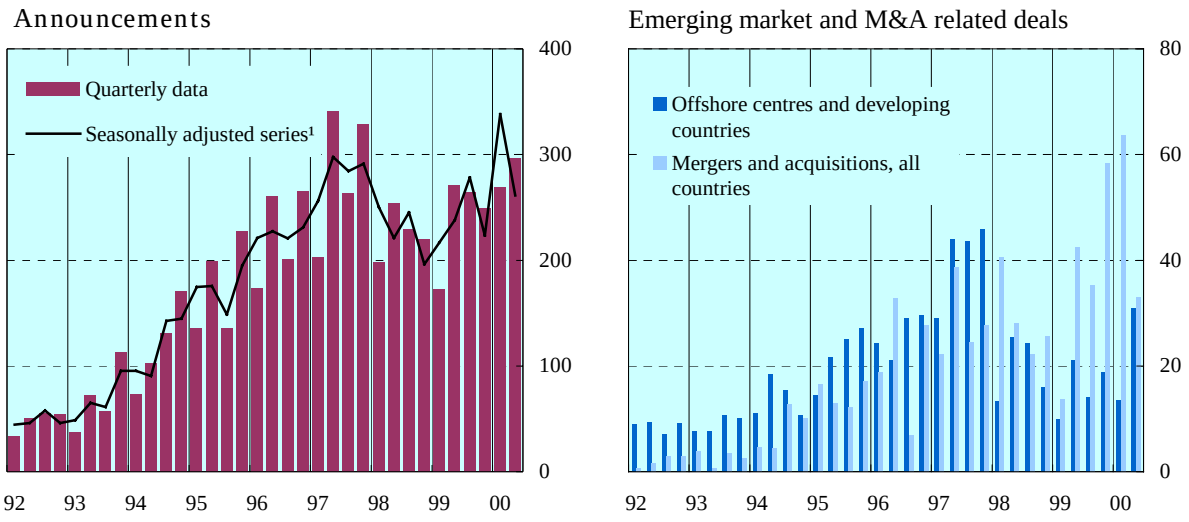
Developing countries accounted for only 5% of total activity. The largest such facilities were a $1.5 billion refinancing package in two tranches for the South African Reserve Bank and a $600 million term loan to finance the expansion of a petrochemical plant for Arabian PetroChemical Co of Saudi Arabia.

Transactions are bigger than ever. The average facility size has risen steadily since 1992, when the BIS began compiling the statistics, and has stepped up in 2000, reaching a record of $426 million in the most recent quarter. The average number of fund providers has remained constant at around 10, suggesting that individual syndicate members are providing larger amounts, at least initially. Meanwhile, the share of "club deals", which are not widely advertised to the market but reserved for a limited number of insiders, has grown from 4% of the total in 1993 to 6% in the first half of 2000.

Box Graph II.1.1

Announced facilities in the international syndicated credit market

In billions of US dollars



¹ US Census Board X11 Arima seasonal adjustment process (multiplicative method).

Sources: Capital DATA; BIS.

① Note that these facilities are not yet included in Table 10 of the statistical annex, which classifies the facilities based on the signing date. These credits have been confirmed as funded, but not signed, during the first half of 2000.

Table II.1.2

Banks' claims on developing countries[1]

In billions of US dollars

	1998	1999					2000	Stocks at end-March 2000
	Year	Year	Q1	Q2	Q3	Q4	Q1	
Total claims	**–78.9**	**–60.5**	**– 5.5**	**–21.1**	**–31.2**	**– 2.7**	**– 2.2**	**915.6**
Africa & Middle East	21.8	1.9	– 2.0	– 3.7	2.2	5.4	– 6.7	153.9
Saudi Arabia	6.4	2.0	– 0.5	– 0.4	2.0	0.9	– 1.3	25.1
South Africa	– 0.6	– 1.0	1.2	0.0	– 1.5	– 0.6	– 0.3	17.9
Asia & Pacific	–96.6	–54.3	– 4.2	– 8.1	–24.4	–17.6	2.4	317.4
China	–10.3	–16.0	– 2.6	– 0.4	– 7.3	– 5.7	0.1	66.6
Indonesia	–14.1	– 6.2	0.8	– 2.1	– 3.7	– 1.1	– 1.5	44.4
Korea	–32.9	– 5.1	2.1	– 0.2	– 1.3	– 5.8	5.6	75.0
Malaysia	– 6.7	– 4.1	– 0.2	– 0.8	– 1.5	– 1.5	0.3	20.2
Philippines	– 0.8	0.5	0.0	1.0	– 1.8	1.2	– 0.7	16.3
Thailand	–28.9	–17.2	– 5.3	– 2.7	– 5.8	– 3.5	– 0.4	35.4
Europe	3.8	8.0	3.2	– 2.1	2.0	4.8	– 0.1	161.3
Russia	– 6.1	– 8.1	– 3.6	– 1.5	– 1.7	– 1.4	– 1.4	41.4
Turkey	2.8	6.6	2.8	1.1	1.4	1.3	2.5	41.0
Latin America & Caribbean	– 8.0	–16.1	– 2.6	– 7.2	–11.0	4.7	2.2	283.0
Argentina	0.6	0.6	1.5	– 0.1	– 2.0	1.1	– 1.8	46.3
Brazil	–10.2	– 8.7	– 6.2	– 3.2	– 3.3	4.0	2.0	88.6
Chile	– 0.4	– 1.7	0.3	– 0.8	– 1.0	– 0.2	0.7	19.1
Mexico	0.4	– 4.2	0.0	– 1.5	– 1.7	– 1.0	– 1.3	59.6

[1] Including eastern Europe. Changes in amounts outstanding excluding exchange rate valuation effects.

Repayments from developing countries bottom out

Repayments from emerging markets appear to have bottomed out in the first quarter (Table II.1.2). These repayments had averaged $15 billion a quarter in 1999 and were down to $2.2 billion in the more recent quarter. In fact, there was a small resumption of lending to Asia, following 10 consecutive quarters of repayments. The fall in claims on developing countries was more than accounted for by a $6.7 billion reduction on Africa and the Middle East, most of which was due to a reduction in US positions on the Middle East. There was some new bank credit to Latin America, while exposures vis-à-vis developing countries in Europe remained relatively unchanged.

Borrowers in *Asia* in aggregate received net new lending of $2.4 billion. Following a large repayment in the fourth quarter of 1999, South Korea borrowed $5.6 billion from international banks, reflecting trade credit for booming imports. The BIS consolidated banking statistics show that Korean short-term debt to international banks has been rising again (to $39 billion or 58% of claims outstanding) after shrinking to $30 billion at end-1998. This ratio is higher than the average for Asian countries (Table II.I.3), but it is still far below the peak of $71 billion at June 1997 (68% of claims outstanding). Moreover, South Korea's foreign exchange reserves of about $80 billion in the first quarter of 2000 comfortably exceeded these short-term claims.[5] In contrast, the biggest net reductions in banks' claims were reported vis-à-vis Indonesia ($1.5 billion) and India ($1.1 billion).

Bank claims on *Latin America and the Caribbean* increased by $2.2 billion, with borrowers in the region continuing to rely more heavily on securities issuance than on bank loans (Graph I.8). Strong

[5] A comprehensive analysis of external liquidity would need to take developments in other liability and asset positions into account.

GDP growth in Brazil was reflected in about $1.2 billion of external borrowing by the banking sector.[6] Chile, the only other major Latin American borrower in the first quarter, attracted $0.7 billion of fresh credit. Borrowers in Argentina and Mexico repaid funds: $1.8 billion and $1.3 billion respectively.

There was a marginal cutback in lending in aggregate to developing countries in *Europe* during the first quarter. However, within the region, bank credit to Turkey increased by $2.5 billion while that to Russia fell by $1.4 billion. Turkey's borrowing was mostly short-term and reflected a generally improved economic context supported by high privatisation receipts and an IMF-sponsored economic stabilisation package. Meanwhile, international banks continued to reduce their exposure to Russian banks, while a modest amount of Russian non-bank international securities was purchased by UK banks. In February, Russia reached an agreement in principle with its London Club of commercial creditors to restructure its Soviet-era debt.

Lending shifts towards European currencies

The strong expansion of the interbank market was reflected in a 11% increase in lending in the euro, pound sterling and Swiss franc (Table II.1.4).[7] Intra-euro 11 transactions in euros also grew strongly, by 8%. Lending in US dollars and yen increased by only 3%, but relative to a very large base in the case of the dollar. Japanese banks continued to unwind "yen impact" loans, so that lending by banks in London and Frankfurt accounted for most of the increase in yen positions. Noteworthy once again was the small increase in the use of other and unallocated currencies, suggesting that international banks are perhaps limiting their exchange rate and liquidity exposure in more exotic currencies.

Table II.1.3

Maturity breakdown of cross-border claims outstanding by residence of borrower

Percentage shares of amounts outstanding in 2000 Q1

	Developed countries	Offshore centres	Developing countries			
			Africa & Middle East	Asia & Pacific	Europe	Latin America & Caribbean
Up to and including one year	57.2	51.2	54.3	46.9	40.5	48.3
Over one year and up to two years	2.8	9.1	7.0	7.7	8.0	6.9
Over two years	20.4	27.5	33.9	29.4	42.7	35.9
Unallocated	19.7	12.2	4.8	16.0	8.8	8.8
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**

Source: BIS consolidated banking statistics.

[6] Excluding a participation investment of a Dutch bank in a Brazilian bank.

[7] The data on foreign currency lending cover banks' foreign currency positions with residents as well as cross-border positions that involve a foreign currency for either lender or borrower. Hence, the reported flows exclude cross-border transactions in euros between residents of the euro area.

Table II.1.4

Composition of foreign currency bank lending[1]

In billions of US dollars

	1998	1999					2000	Stocks at end-March 2000
	Year	Year	Q1	Q2	Q3	Q4	Q1	
US dollar	88.4	22.8	−112.1	17.1	26.9	90.9	122.5	4,648.1
Euro[2]	137.1	228.8	153.1	8.8	91.2	− 24.3	180.0	1,759.1
Japanese yen	− 37.2	−217.2	−147.2	− 74.9	− 26.1	31.0	28.1	950.1
Pound sterling	51.6	18.7	22.0	6.1	8.0	− 17.4	52.2	516.5
Swiss franc	23.5	37.5	22.6	− 0.1	15.3	− 0.3	34.7	342.8
Other and unallocated	−153.7	− 98.3	..	− 8.8	− 53.5	2.7	8.2	1,860.5
Total	**109.7**	**− 7.7**	**−100.1**	**− 51.8**	**61.8**	**82.6**	**425.7**	**10,077.1**
Memorandum item: Cross-border domestic currency intra-euro 11 positions	*160.7*	*286.3*	*142.2*	*48.9*	*87.8*	*7.3*	*103.9*	*1,292.7*

[1] Changes in amounts outstanding excluding exchange rate valuation effects. The data on foreign currency lending cover banks' foreign currency positions with residents as well as cross-border positions that involve a foreign currency for either lender or borrower. Hence, the data exclude cross-border transactions in euros between residents of the euro area. [2] For 1998, data relate to five euro legacy currencies (BEF, DEM, FRF, ITL and NLG) and the ECU, which were reported separately. Changes for 1999 Q1 are adjusted on an estimated basis to exclude the data for six euro legacy currencies (ATS, ESP, FIM, IEP, LUF and PTE) that were previously not reported separately but included under "Other and unallocated".

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2. The international debt securities market

Net issuance of international debt securities totalled $265.5 billion in the second quarter of 2000, a slight increase over the previous quarter but 27% below the same quarter a year earlier (Table II.2.1). The somewhat slower pace of issuance in the first half of 2000 relative to 1999 may have reflected the unsettled environment in the financial markets of the developed economies, which were characterised by turbulent equity valuations and high and volatile credit spreads (see overview). During the quarter, heightened uncertainty about the near-term course of US and European interest rates contributed

Table II.2.1

Main features of net issuance in international debt securities markets

In billions of US dollars

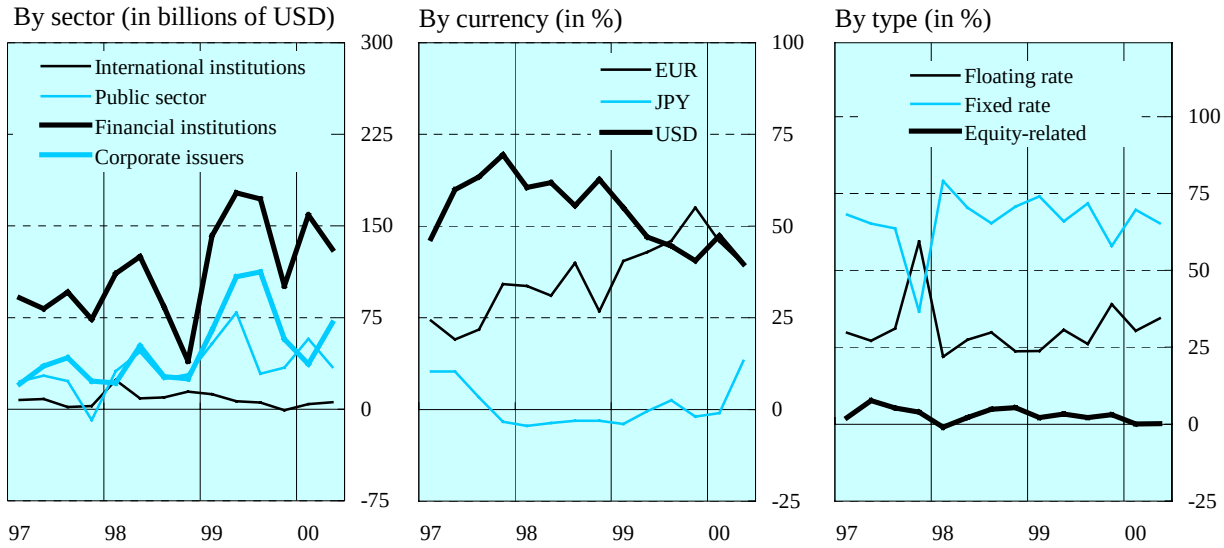
	1998	1999	1999			2000		Stocks at end-June 2000
	Year	Year	Q2	Q3	Q4	Q1	Q2	
Total net issues	**681.4**	**1,219.1**	**361.9**	**341.6**	**208.6**	**258.9**	**265.5**	**5,752.5**
Money market instruments[1]	10.2	66.4	– 8.5	22.6	17.3	1.2	23.4	272.9
Bonds and notes[1]	671.2	1,152.7	370.5	319.0	191.4	257.7	242.0	5,479.6
Floating rate issues	173.4	336.2	113.7	83.1	74.7	78.1	83.4	1,369.2
Straight fixed rate issues	492.0	851.8	235.9	251.5	128.1	180.8	181.5	4,152.8
Equity-related issues	16.0	31.1	12.4	7.0	5.9	0.1	0.5	230.5
Developed countries	573.7	1,140.0	332.6	331.1	194.6	231.9	253.4	4,857.1
Euro area	*210.9*	*494.0*	*144.3*	*137.4*	*96.0*	*114.0*	*135.9*	*1,938.5*
Japan	*– 17.4*	*2.7*	*2.4*	*7.0*	*– 6.7*	*– 13.2*	*– 2.7*	*314.2*
United States	*280.0*	*481.8*	*139.4*	*131.5*	*82.1*	*87.1*	*84.0*	*1,468.8*
Offshore centres	10.7	13.5	0.4	2.8	3.1	1.2	3.4	67.3
Developing countries	41.4	41.0	22.3	2.0	12.2	21.6	2.5	450.3
International institutions	55.7	24.7	6.7	5.7	– 1.3	4.1	6.2	377.8
US dollar	410.7	545.2	171.6	141.8	75.4	122.8	108.4	2,741.3
Euro[2]	223.8	574.6	152.5	164.8	118.9	113.7	106.2	1,707.8
Yen	– 26.8	– 7.2	– 1.8	8.1	– 1.6	– 2.0	33.0	552.7
Other currencies	73.7	106.4	39.7	26.9	15.9	24.5	17.9	750.7
Private sector	503.3	1,000.2	274.9	307.8	176.2	193.1	223.2	4,242.3
Financial institutions[3]	*370.1*	*648.5*	*165.3*	*194.1*	*118.0*	*157.6*	*145.4*	*2,808.6*
Corporate issuers	*133.2*	*351.7*	*109.6*	*113.7*	*58.2*	*35.5*	*77.8*	*1,433.7*
Public sector[4]	122.4	194.2	80.4	28.2	33.7	61.7	36.1	1,132.4
Central government	*36.4*	*36.0*	*21.4*	*– 3.1*	*10.7*	*14.5*	*10.1*	*477.8*
State agencies and other	*86.0*	*158.2*	*59.0*	*31.3*	*23.0*	*47.2*	*26.0*	*654.6*

[1] Excluding notes issued by non-residents in the domestic market. [2] For 1998, total of predecessor currencies. [3] Commercial banks and other financial institutions. [4] Excluding international institutions.

Sources: Bank of England; Capital DATA; Euroclear; ISMA; Thomson Financial Securities Data; BIS.

Graph II.2.1

Net issues of international bonds and notes by sector, currency and type



Sources: Bank of England; Capital DATA; Euroclear; ISMA; Thomson Financial Securities Data; BIS.

to a greater reliance on short-term, floating rate and yen-denominated issues. Although the risky environment contributed to a slowdown in issuance by borrowers in developing countries, other groups of borrowers, such as telecommunications companies in developed countries, stepped up their activity.

Corporate issuance doubles as activity by banks and state agencies slows

Non-financial corporations more than doubled their net debt issuance in the second quarter to $78 billion, compared with $36 billion in the first (Table II.2.1, Graph II.2.1). Announced issues of bonds and notes by these borrowers rose to a record $140 billion, a 54% increase over the first quarter. Telecommunications companies and firms involved in mergers and takeovers were especially active. One of the largest borrowers was Deutsche Telekom, which announced a $14.6 billion package comprising eight separate bond issues (denominated in four currencies) on 27 June and $16.7 billion of bond and note issues during the quarter as a whole. Other large issuers included France Telecom ($5.9 billion in announced issues during the quarter), WorldCom ($5 billion), Unilever ($3.2 billion) and Vivendi ($1.9 billion).

By contrast, financial institutions and state agencies, which had been at the forefront of new issuance activity in the first quarter, reduced their activity in the second. The US government-sponsored enterprises adopted a relatively cautious funding strategy, amid market uncertainty over the prospects for legislation affecting their status. While the Federal National Mortgage Association ("Fannie Mae") and the Federal Home Loan Mortgage Corporation ("Freddie Mac") each issued roughly $22 billion in international bonds and notes on a gross basis in the first quarter, in the second their announced issuance fell to $16 billion and $12 billion respectively.

Among private sector financial institutions, much of the decline in net issuance can be accounted for by German banks. These institutions cut their net issuance from $45 billion in the first quarter to $34 billion in the second, reflecting a slowdown in the Pfandbrief market after several quarters of very rapid growth. While the current pause may primarily reflect the width of global credit spreads, German issuers have also started to experience competition from similar structures that have been developed in other European countries over the past few years. In Luxembourg, for example, net issuance by resident financial institutions with headquarters outside that country totalled $2.8 billion, indicating a

growing role for Luxembourg-based special purpose vehicles (SPVs) in the securitisation of assets originated elsewhere in Europe.

Revival of the yen as a vehicle for borrowing

After several quarters in which the amount of newly issued international debt securities denominated in yen more or less matched repayments, the second quarter of 2000 witnessed $33 billion in net issuance (Table II.2.2). The most active borrowers tended to be from Europe, particularly Germany ($10.4 billion in net issuance), the United Kingdom ($8.4 billion) and the Netherlands ($4.1 billion). As in the international bond market more broadly, telecommunications firms such as Deutsche Telekom and British Telecom were especially prominent. Most of the new yen bond and note issues – $67 billion out of $78 billion in gross terms – employed fixed rather than floating rate structures.

While yen interest rates have been below those of other major currencies for some time, turbulence in dollar and euro credit spreads in recent months has increased the attractiveness of the relatively more stable yen market. The surge in yen issuance has also reflected heightened investor interest, both among Japanese investors seeking an alternative to low-yielding government debt and among international investors tracking global bond benchmarks that have become increasingly weighted towards yen-denominated issues.

The increase in yen-denominated borrowing was accompanied by reduced issuance in both the dollar and the euro (Graph II.2.1). Net issuance in the two currencies was virtually identical, at $108 billion and $106 billion respectively, though announcements of new dollar bonds and notes exceeded those in the euro ($187 billion compared to $150 billion) because of the need to refinance a greater amount of maturing dollar-denominated debt (Table II.2.3).

Table II.2.2

Net issuance of international debt securities by currency and region[1]

In billions of US dollars

		1998[2]	1999	1999			2000	
		Year	Year	Q2	Q3	Q4	Q1	Q2
Europe	US dollar	77.6	55.3	25.3	11.8	0.3	32.9	35.6
	Euro	170.7	491.7	132.3	142.3	102.2	99.9	92.6
	Yen	– 9.1	6.2	2.2	7.9	2.5	3.4	32.2
	Other currencies	42.0	77.7	24.2	20.5	12.0	19.5	14.6
North America	US dollar	262.1	435.4	124.0	117.8	72.9	68.6	63.3
	Euro	32.6	45.6	12.1	14.2	7.4	9.1	8.6
	Yen	– 4.1	– 1.3	– 0.5	0.7	0.3	5.1	4.6
	Other currencies	14.6	15.1	11.2	1.8	2.5	2.3	0.8
Others	US dollar	71.0	54.5	22.3	12.2	2.1	21.3	9.4
	Euro	20.6	37.3	8.1	8.3	9.3	4.7	5.0
	Yen	– 13.7	– 12.1	– 3.5	– 0.5	– 4.3	– 10.6	– 3.8
	Other currencies	17.0	13.6	4.3	4.6	1.4	2.6	2.5
Total	US dollar	410.7	545.2	171.6	141.8	75.4	122.8	108.4
	Euro	223.8	574.6	152.5	164.8	118.9	113.7	106.2
	Yen	– 26.8	– 7.2	– 1.8	8.1	– 1.6	– 2.0	33.0
	Other currencies	73.7	106.4	39.7	26.9	15.9	24.5	17.9

[1] Based on the nationality of the borrower. [2] For the euro, total of predecessor currencies.

Sources: Bank of England; Capital DATA; Euroclear; ISMA; Thomson Financial Securities Data; BIS.

Table II.2.3

Gross issuance in the international bond and note markets

In billions of US dollars

	1998	1999	1999			2000	
	Year	Year	Q2	Q3	Q4	Q1	Q2
Total announced issues	**1,186.7**	**1,772.3**	**491.1**	**464.7**	**355.0**	**462.2**	**462.8**
Floating rate issues	292.5	488.0	147.3	124.7	104.8	118.5	151.2
Straight fixed rate issues	847.2	1,232.2	325.5	332.3	237.5	332.3	303.0
Equity-related issues[1]	47.1	52.1	18.3	7.7	12.6	11.4	8.6
US dollar	603.1	775.4	222.6	200.0	132.0	190.1	186.9
Euro	335.4[2]	680.3	186.6	179.1	142.2	169.2	150.4
Yen	75.2	118.9	25.6	37.5	36.7	49.2	78.5
Other currencies	173.1	197.7	56.3	48.0	44.2	53.7	47.1
Private sector	857.6	1,377.1	376.2	380.3	282.3	345.5	372.6
Financial institutions[3]	*595.5*	*900.6*	*238.2*	*243.0*	*187.3*	*254.1*	*232.3*
Corporate issuers	*262.1*	*476.5*	*138.0*	*137.4*	*95.0*	*91.4*	*140.4*
Public sector	227.7	317.4	96.6	66.6	57.7	97.0	69.9
Central government	*96.9*	*94.2*	*26.0*	*17.3*	*17.1*	*27.3*	*16.6*
State agencies and other	*130.8*	*223.3*	*70.6*	*49.3*	*40.6*	*69.7*	*53.3*
International institutions	101.4	77.8	18.3	17.7	14.9	19.7	20.3
Completed issues	**1,190.8**	**1,776.7**	**491.3**	**461.4**	**390.3**	**446.3**	**430.6**
Repayments	**519.6**	**624.0**	**120.9**	**142.4**	**198.9**	**188.6**	**188.6**

[1] Convertible bonds and bonds with equity warrants. [2] Total of predecessor currencies. [3] Commercial banks and other financial institutions.

Sources: Bank of England; Capital DATA; Euroclear; ISMA; Thomson Financial Securities Data; BIS.

Move to floating rate and short-term issues

Another reflection of the recent uncertainty surrounding interest rate prospects for the dollar and the euro has been the increased use of short-term issuance and floating rate securities (Graph II.2.1). In the US dollar market, floating rate issues rose to 25% of net issuance in the second quarter, compared with 24% in the first quarter and 20% in 1999. For the euro-denominated market, floating rate issues were 45% of the total in the second quarter, compared with 39% in the first quarter and 36% last year. Net issuance of money market instruments was also unusually high in the quarter, reaching about 10% of the total in both the dollar and the euro. Volatile swap spreads, which increase the effective cost to borrowers of using swaps to modify the interest rate exposure represented by a given debt issue, seem to have induced borrowers to take steps to reduce their duration risk directly by choosing floating rate structures.

Issuance by developing countries declines

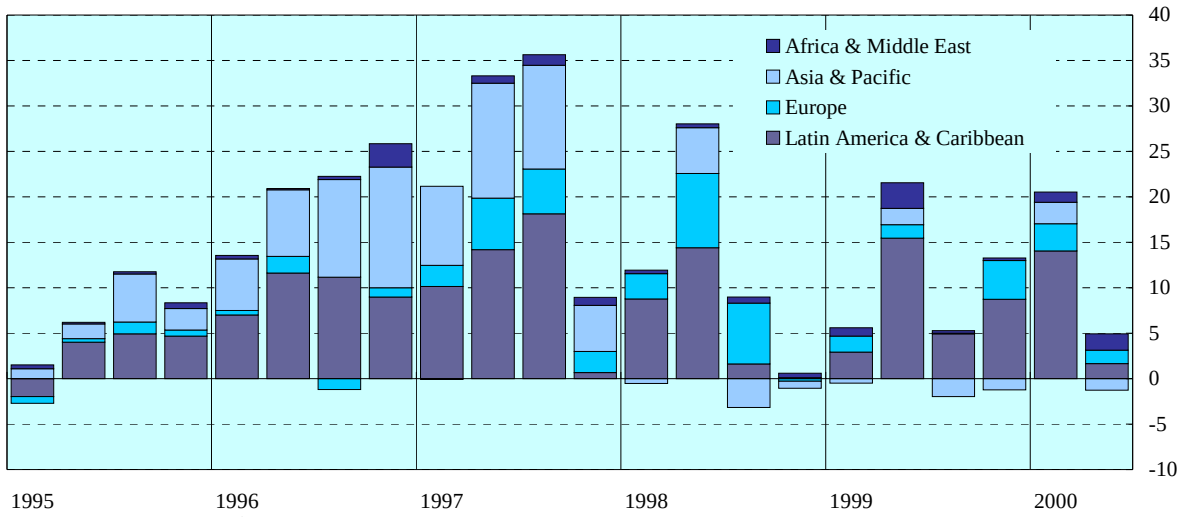
After a burst of borrowing in the first quarter, net issuance by developing countries slowed in the second, with completed new issues of $19 billion only narrowly exceeding some $16.5 billion in repayments (Graph II.2.2). Previously active borrowers such as Mexico and Brazil became net repayers of debt. One exception to this pattern was Argentina, which issued $2.8 billion in net terms, most of it denominated in euros but including a ¥60 billion four-year bond in the samurai market.

The slowdown in developing country issuance occurred despite generally favourable macroeconomic conditions in most, though not all, of the large borrowing countries and an overall fall in spreads on

Graph II.2.2

Net international bond and note issuance of developing countries by region [1]

In billions of US dollars



[1] Based on the nationality of the borrower.

Sources: Bank of England; Capital DATA; Euroclear; ISMA; Thomson Financial Securities Data; BIS.

emerging market debt. However, spreads widened briefly in May amid the uncertainty over US monetary policy, leading to a pause in issuance by emerging market borrowers. Some governments have nevertheless been able to take advantage of narrower spreads by refinancing existing debt, for such purposes as replacing Brady issues with eurobonds. Early debt repayments by emerging economy borrowers, mostly in Latin America, totalled $2.4 billion in the first quarter and $1.7 billion in the second. It is likely that the need for new overseas borrowing by developing countries remains low, given the large amount raised on global capital markets in previous quarters and the persistence of trade surpluses in several countries, especially in Asia.

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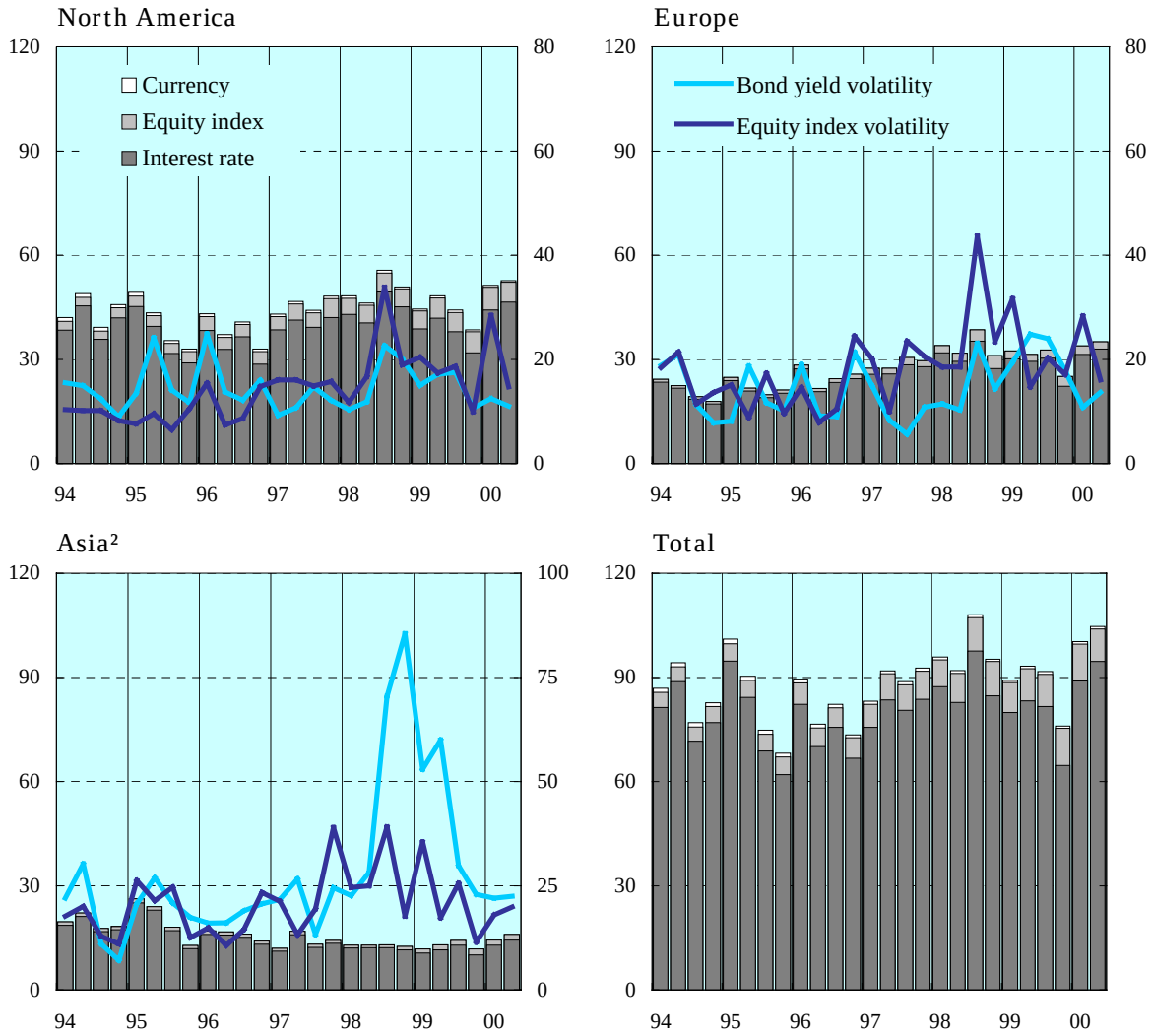
3. Derivatives markets

After declining in 1999, turnover in exchange-traded derivatives markets recovered strongly in the first half of 2000. The introduction of the euro and concerns about liquidity ahead of the transition to the new millennium had contributed to the reduction in activity last year (see the box at the end of this section), and with these factors no longer playing a role, turnover in the second quarter reached the

Graph II.3.1

Turnover of exchange-traded options and futures and bond yield and equity index volatilities[1]

Quarterly data, in trillions of US dollars (left-hand scale) and percentages (right-hand scale)



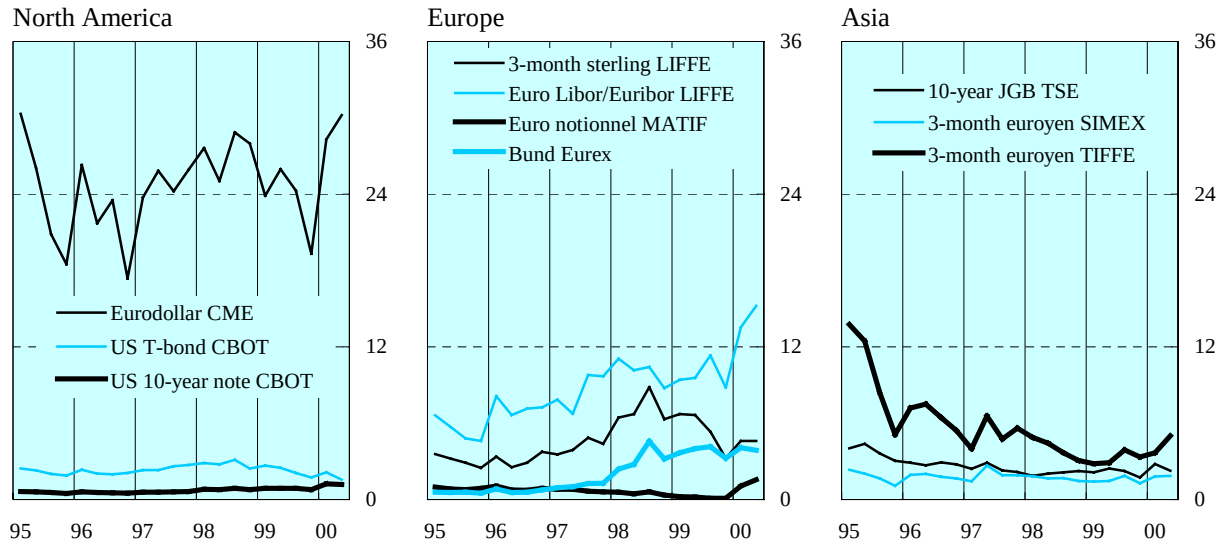
[1] Annualised standard deviation of daily percentage changes in 10-year government bond yields and equity indices of US, German and Japanese markets for North America, Europe and Asia respectively. [2] Including Australia and New Zealand.

Sources: FOW TRADEdata; Futures Industry Association; BIS.

Graph II.3.2

Turnover of major interest rate futures

Quarterly data, in trillions of US dollars



Sources: FOW TRADEdata; Futures Industry Association; BIS.

highest level since the record-breaking third quarter of 1998. Noteworthy developments in the second quarter included the continued decline in the turnover of contracts on US Treasury bonds and the further recovery of futures trading on French government bonds.

Exchange-traded instruments: contrasting trends in a context of slower market expansion

Activity in exchange-traded derivatives markets expanded further in the second quarter of 2000, albeit at a slower pace than in the first quarter. The dollar value of turnover rose by 4%, to $104.6 trillion.[8] This was the second most active quarter ever after the third quarter of 1998, when turnover had reached $107.5 trillion. Interest rate instruments expanded by 6%, while equity index and currency contracts declined by 11% and 12% respectively. Growth was more pronounced in Asia, in part owing to a significant rebound in the turnover of some equity index contracts and the further rapid expansion of activity on some recently established futures exchanges.

One of the most notable developments in the quarter was the contrasting trend seen in the turnover of contracts on US government bonds. While activity on all US Treasury instruments declined during the review period, a longer-term analysis shows that turnover on 30-year US Treasury bonds (the "long bond") has followed a downward trend since mid-1998, to the benefit of the 10-year Treasury note contract. This pattern of activity follows that seen in the underlying market. The emergence of fiscal surpluses in the United States has translated into reduced overall issuance of Treasuries, while efforts by the US Treasury to reduce the average duration of government debt have led to a proportionately sharper reduction in long-term issues. The correspondingly lower volume of secondary market transactions has had a negative impact on market liquidity in both the cash and exchange-traded derivatives markets. As a result, traders have shifted part of their hedging activity to the swaps market (see overview).

[8] The analysis is based on the dollar value of trading in fixed income, currency and equity index contracts. Value-based reporting reduces the impact on the aggregate figures of fluctuations in the turnover of small contracts and removes the distortions resulting from sudden changes in the unit value of contracts. However, such reporting has not yet been extended to commodity contracts or to options on single equities.

At the same time, the shrinking supply of US government debt has encouraged large issuers to introduce alternative trading benchmarks. This was reflected in March in the introduction by the CBOT and the CME of contracts on the debt securities of US government-sponsored financing agencies. Activity on such instruments has expanded rapidly, with the CBOT taking the lead.

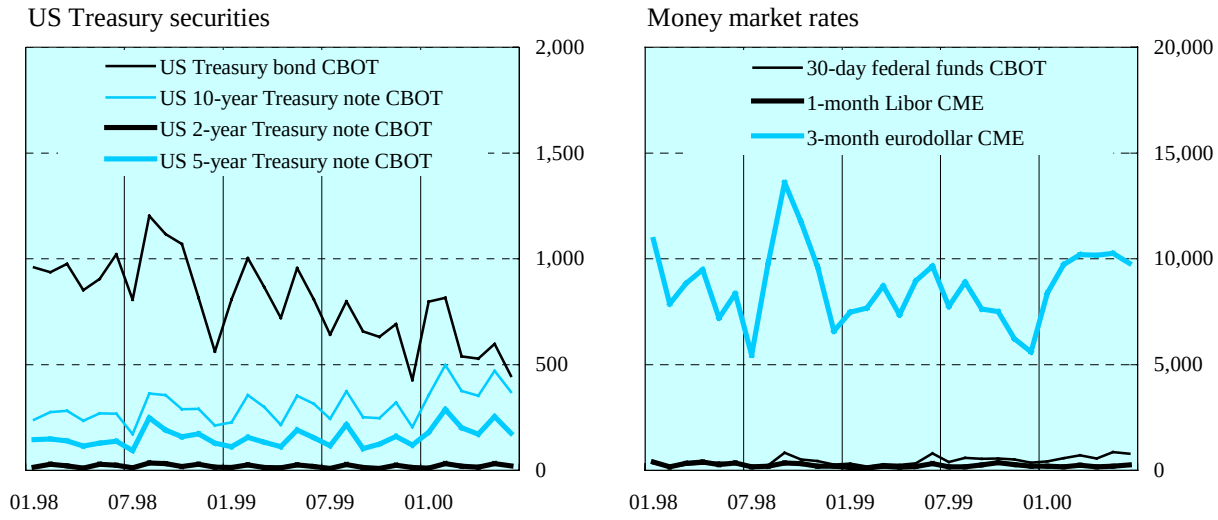
Another noteworthy development was the further recovery of futures trading on French government bonds (the notionnel) on the MATIF. The main factor in this rebound appears to have been the establishment of a market-making scheme by French banks active on the MATIF. Another contributory element was the temporary reappearance of arbitrage opportunities between French and German government bond yields in the wake of a widening of yield spreads between those assets. The turnover of futures contracts on French government bonds has nearly caught up with that on US Treasury bonds (almost $1.6 trillion), although it remains well below that on German government bonds ($4 trillion). Moreover, the trading of options on French government bonds has remained stagnant, and there were few open positions, showing that intraday activity continues to dominate.

In the market for equity index contracts, the second most important category after the fixed income segment, the sharp drop of most major indices in April was accompanied by a rise in volatility and a high level of turnover. However, with trading in North America and Europe contracting sharply in May and June, overall activity dropped relative to the first quarter. The rather slow expansion of the largest equity index contracts in North America and Europe probably reflects their inadequacy in dealing with the risks of particular companies or sectors subject to sharp market swings, particularly given investors' difficulty in evaluating "new economy" stocks. In contrast, equity-related business in Asia was more sustained. Although the reshuffling of the Nikkei 225 index seems to have briefly disrupted trading in related contracts,[9] this was more than offset by the rebound of turnover on the Osaka Stock Exchange and the further rapid expansion of activity in recently introduced futures contracts on the Korea Stock Exchange.

Graph II.3.3

Turnover of US futures contracts

Quarterly, in billions of US dollars



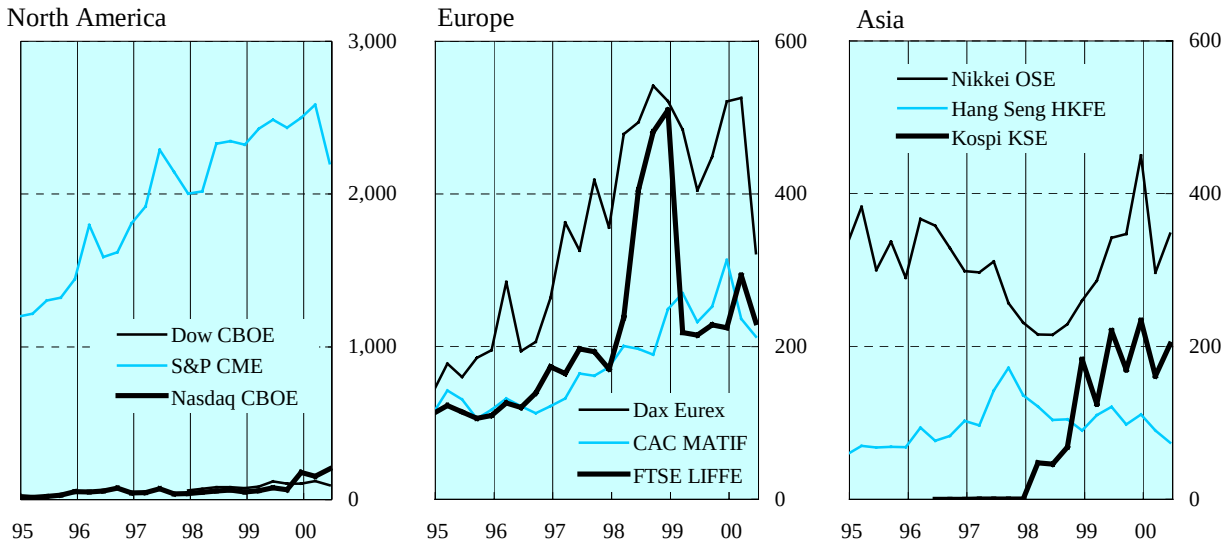
Sources: FOW TRADEdata; Futures Industry Association.

[9] In April the Nikkei 225 index was updated by the replacement of 30 "old economy" shares with 30 "new economy" ones.

Graph II.3.4

Turnover of major equity futures

Quarterly data, in billions of US dollars



Sources: Futures Industry Association; FOW TRADEdata.

Derivatives exchanges continued to explore new business areas, such as the trading and clearing of cash market securities and OTC contracts. For example, Eurex announced that it would establish a company for the electronic trading of fixed income securities, and NYMEX that it would launch a subsidiary to trade swaps on physical commodities. Meanwhile, LIFFE, which is positioning itself as an information technology company, announced that it had formed a joint venture with two US venture capital firms to create new derivatives markets for non-financial products, such as telecommunication bandwidth, semiconductors or natural gas.

Derivatives markets in 1999

Robert Scott

Organised exchanges

The year 1999 witnessed the first reduction in overall exchange-traded derivatives activity since 1996, down from a turnover of $390 trillion in 1998 to $350 trillion. The decline was widespread across regions. North America registered the largest decrease with a 12% drop, followed by Europe and Asia with contractions of 10% and 1% respectively. The overall decline was due to a 12% reduction in trading of interest rate derivatives. Stock index derivatives trading rose substantially, while foreign exchange trading remained flat.

Two main factors contributed to the drop in interest rate volumes. First, the introduction of the euro induced a pause in trading in the first quarter as some market participants waited for consolidation in European interest rate instruments, while the disappearance of intra-European currency movements made related currency products redundant. Second, Y2K liquidity concerns led market participants to scale down trading in contracts with maturities spanning the year-end. Concerns about some institutions' readiness to handle potential computer problems had boosted the cost of short-term financing. This increase and the unwillingness of some market participants to undertake Y2K risks led to a reduction in the trading volume for most large short-term interest rate contracts. The millennium spread (see the June 1999 issue of the *BIS Quarterly Review*) reflected the extent of concerns, particularly in the short-term interest rate futures and options markets. In contrast to the decline in the turnover of interest rate derivatives, equity index derivatives business increased markedly. This was largely due to the increase in both index values and volatility, particularly in the fourth quarter of 1999.

The introduction of the euro and mergers between several exchanges produced a polarisation in exchange-traded derivatives markets in Europe. LIFFE gained in short-term contracts, while Eurex increased its share of long-term interest rate contracts. These gains were at the expense of MATIF, which saw volumes on its Pibor and 10-year notionnel contract continue their declining trend (although the latter contract has experienced a recovery this year). The eurodollar contract traded on the CME maintained its hold as the most actively traded contract in the world in value terms, but nonetheless experienced a contraction in 1999. In Asia, the major equity index contracts enjoyed a strong rebound in activity. This coincided with a recovery in the level of Asian equity indices and a sharp increase in activity on a new exchange in Korea.

The OTC market

In contrast to turnover in exchange-traded derivatives, the notional amounts of OTC contracts outstanding grew in 1999 in spite of the consolidation resulting from European monetary union. The introduction of the euro took its toll on foreign exchange derivatives, reducing the stock of euro-denominated foreign exchange instruments by almost 40%. In contrast to foreign exchange contracts, the stock of euro-denominated interest rate products outstanding increased substantially in 1999.

Box Table II.3.1

Financial derivative instruments traded on organised exchanges

Turnover in notional amounts, in trillions of US dollars

Instruments	1993	1994	1995	1996	1997	1998	1999
Interest rate futures	177.3	271.9	266.4	253.6	274.8	296.6	263.8
On short-term instruments	138.9	222.4	218.2	204.9	223.4	241.4	213.5
On long-term instruments	38.5	49.6	48.2	48.7	51.4	55.2	50.3
Interest rate options	32.8	46.7	43.3	41.0	48.6	55.8	45.6
Currency futures	2.8	3.3	3.2	2.6	2.7	2.5	2.6
Currency options	1.4	1.4	1.3	1.3	0.9	0.5	0.3
Stock market index futures	7.1	9.4	10.6	12.9	16.4	19.6	21.7
Stock market index options	6.3	8.0	9.3	10.2	13.1	14.7	16.1
Total	**227.8**	**340.7**	**334.2**	**321.7**	**356.4**	**389.7**	**350.1**
In North America	113.1	175.9	161.1	153.9	182.0	200.9	175.4
In Europe	61.4	83.9	87.5	100.1	114.9	133.9	121.5
In Asia	53.0	77.8	81.1	63.8	56.3	51.4	50.7
Other	0.4	3.2	4.6	3.9	3.2	3.5	2.4

Box Table II.3.2

Markets for selected financial derivative instruments

Notional amounts outstanding at year-end, in billions of US dollars

Instruments	1993	1994	1995	1996	1997	1998	1999
Exchange-traded instruments	**7,775.7**	**8,897.7**	**9,282.8**	**10,018.1**	**12,402.9**	**13,931.7**	**13,521.6**
Interest rate futures	4,960.4	5,807.6	5,876.2	5,978.8	7,580.8	8,019.9	7,913.9
Interest rate options	2,362.4	2,623.6	2,741.8	3,277.8	3,639.8	4,623.5	3,755.5
Currency futures	34.7	40.4	33.8	37.7	42.3	31.7	36.7
Currency options	75.6	55.6	120.4	133.1	118.6	49.2	22.4
Stock market index futures	110.0	127.7	172.4	195.8	211.4	290.7	334.3
Stock market index options	232.5	242.8	338.3	394.9	810.0	916.8	1,458.8
OTC instruments[1]	***8,474.6***	***11,303.2***	***17,712.6***	***25,453.1***	***29,035.0***	**80,317.0**	**88,201.0**
Interest rate swaps	*6,177.3*	*8,815.6*	*12,810.7*	*19,170.9*	*22,291.3*	36,262.0	43,936.0
Interest rate options	*1,397.6*	*1,572.8*	*3,704.5*	*4,722.6*	*4,920.1*	7,997.0	9,380.0
Currency swaps	*899.6*	*914.8*	*1,197.4*	*1,559.6*	*1,823.6*	2,253.0	2,444.0
Currency options						3,695.0	2,307.0
Other instruments and adjustments[2]						30,110.0	30,134.0

[1] Data for 1993-97 collected by ISDA. Data for 1998-99 from BIS regular OTC derivatives statistics. [2] FRAs, foreign exchange forwards and swaps, equity and commodity instruments, and estimates for less than complete coverage.

Market participants increased their usage of interest rate products because of the growth of the European swaps market and a substantial rise in corporate bond issuance for which swaps are used to hedge interest payments.

The commodities-based derivatives markets in general experienced an upswing in notional amounts outstanding. The increase coincided with a broad-based recovery in commodity prices. In 1999 episodes of high volatility in the gold market contributed to the 34% increase in gold contracts outstanding.

Total gross market values of foreign exchange and interest rate contracts declined in 1999. In contrast, the gross market values of equity contracts rose considerably owing in large part to the increase in volatility in the fourth quarter of 1999 and the growing popularity of index-linked equity products. Gross credit exposures (ie gross market values adjusted for bilateral netting agreements) also fell substantially, suggesting the market turmoil that followed the Russian debt moratorium led market participants to conduct significant offsetting transactions.

Box Table II.3.3

Gross market values and credit exposure

In billions of US dollars

	Total contracts	Foreign exchange	Interest rate	Equity	Commodity	Other[1]
Gross market values						
end-1998	3,231	786	1,675	236	43	492
end-1999	2,813	662	1,304	359	59	429
Gross credit exposure[2]						
end-1998	1,329					
end-1999	1,023					

[1] Estimates for less than complete coverage. [2] Gross market values after taking into account legally enforceable bilateral netting agreements.

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III. Special feature: The co-movement of US stock markets and the dollar

The relationship between US stock markets and the dollar has been the subject of increased interest recently. In part, this interest reflects the view that portfolio flows may have exerted an important influence on recent movements of the major exchange rates (BIS (2000)). Indeed, while fixed income securities still account for the bulk of cross-border financial transactions, equities markets are playing an increasing role in such transactions. In 1995, cross-border transactions in bonds into and out of the United States amounted to 110% of US GDP, more than five times the corresponding ratio for equity flows. In 1999, cross-border transactions in bonds rose to 126% of US GDP, while transactions in equities tripled and reached 75% of US GDP. From a policy point of view, the interest in this topic reflects in part concerns about the current high valuation of the US stock market and the consequent global deflationary impact should the dollar fall along with that market.

The co-movement of returns on US stock markets and the dollar along with other related statistics are reported in Table III.1. The first four rows show correlations between the Dow Jones Industrial Average and four other equity indices, the broader S&P 500, the technology-heavy Nasdaq, the German Dax and the Japanese Nikkei. The next row reports correlation coefficients for the nominal effective exchange rate (EER)[10] of the dollar and the Dow Jones. All these correlations are based on equity and currency market returns, measured as log differences.[11] The next two rows show the correlations of the differential returns between the Dow Jones and the Nikkei and Dax and the corresponding yen/dollar and Deutsche mark (euro)/dollar currency returns. The correlation coefficients are reported for daily, weekly, monthly and quarterly frequencies for the sample period January 1983 to May 2000. The next three rows report correlations between bilateral equity flows and the corresponding currency returns for the United States, Japan and the euro area, computed with monthly data. Finally, the table presents correlation coefficients of equity and currency volatilities based on daily returns.

Two results stand out. First, stock market indices are generally highly and positively correlated at all frequencies both within a country and, albeit to a lesser extent, across countries. Second, there is little evidence of a robust significant correlation between stock market indices and the major exchange rates.[12] The correlation coefficient for the Dow Jones index and the nominal effective dollar rate is positive but very small and not statistically significant. In other words, during the period 1983-2000, rising US stock markets have been associated on average with only very small dollar appreciations. A similar result holds for the co-movement of the return on the Dow Jones relative to the Nikkei and

[10] The results presented in this note are almost identical if real rather than nominal exchange rates are used.

[11] We use log differences because we are interested in the correlation of returns rather than levels. From a statistical point of view, log differentials are appropriate as they are stationary, whereas levels have a unit root according to augmented Dickey-Fuller tests. Moreover, Johansen's cointegration tests suggest that stock market indices and the nominal effective dollar exchange rate (or the yen/dollar and mark (euro)/dollar rates) are not cointegrated.

[12] The result is in contrast with the finding that, in recent years, stock markets in emerging market countries and the dollar exchange rate of the domestic currency have moved together quite strongly (BIS (2000)).

Table III.1

Correlation coefficients, January 1983-May 2000

	Daily	Weekly	Monthly	Quarterly
Between equity indices				
Dow Jones and S&P	0.96**	0.95**	0.94**	0.94**
Dow Jones and Nasdaq	0.66**	0.71**	0.68**	0.63**
Dow Jones and Dax	0.27**	0.43**	0.52**	0.55**
Dow Jones and Nikkei	0.10**	0.32**	0.37**	0.33**
Between equity and currency markets				
Dow Jones and EER	0.03	0.04	0.04	0.11
Dow Jones-Nikkei and JPY/USD	0.04*	0.07*	0.08	0.11
Dow Jones-Dax and DEM/USD	– 0.17**	– 0.15**	– 0.25**	– 0.22*
Between flows and currencies				
JP-US equity flows and JPY/USD			0.04	
US-EU equity flows and DEM/USD			0.05	
JP-EU equity flows and JPY/DEM			– 0.26	
Between equity and currency volatilities				
Dow Jones and EER***			0.17*	
Dow Jones-Nikkei and JPY/USD***			0.24**	
Dow Jones-Dax and DEM/USD***			0.20**	

Note: * and ** mean statistically significant at the 5% and 1% level respectively. Long-term interest rate differentials are computed as United States-Japan and United States-Germany respectively. The sample period for the three bottom rows is January 1988-January 2000, January 1995-January 2000 and January 1997-January 2000, respectively. *** means historical volatilities computed as annualised standard deviations of daily log differentials over calendar months.

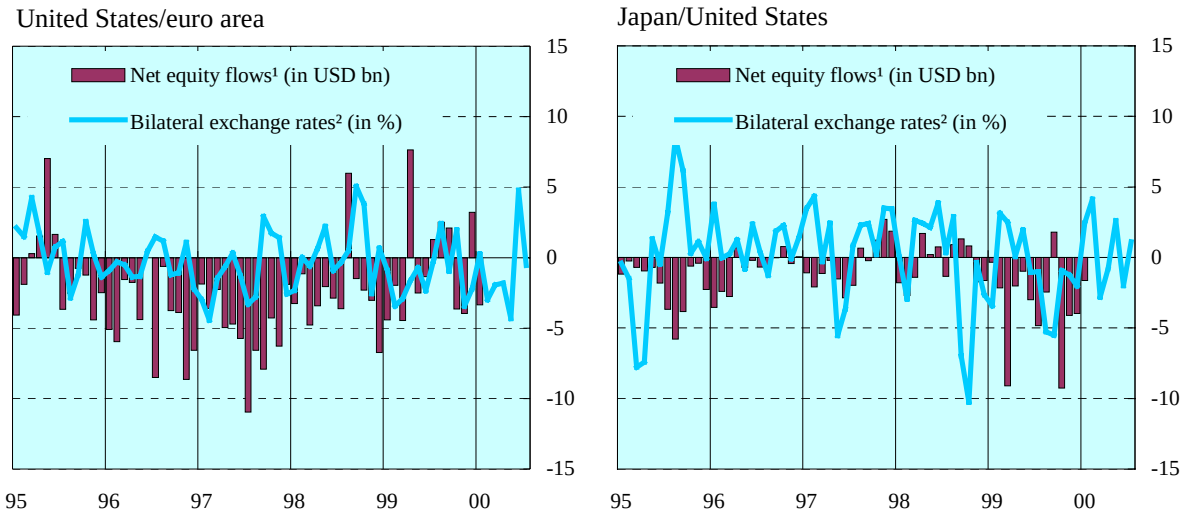
Sources: National data; BIS.

percentage changes of the bilateral yen/dollar rate. The correlation coefficients are positive but small and statistically significant only at daily and weekly frequencies. By contrast, the correlation between the return on the Dow Jones relative to the Dax and mark/dollar movements is negative and statistically significant. This means that on average rising US stock markets relative to the German stock market have been associated with a declining dollar.

The weak average association between stock market returns and exchange rate movements is consistent with the fact that, over a long horizon, international portfolio equity flows have not been correlated with exchange rate movements (see Graph III.1 and Table III.1).

Graph III.1

Portfolio equity flows and exchange rates between the three major economies



¹ A positive value indicates a net flow, in the right-hand panel, into the United States, and in the left-hand panel, into the euro area (defined as Germany, France, the Netherlands and Luxembourg). ² Monthly percentage changes. Shown as USD/EUR and JPY/USD respectively.

Sources: Japanese Ministry of Finance; US Treasury; national data

While the statistical relationship between returns on US stock markets and changes in the value of the dollar seems weak, Table III.1 indicates a much higher correlation between the volatility of returns on US equity prices and the volatility of dollar exchange rates. On average, a 1% increase in US stock market volatility is accompanied by a 0.2% increase in the volatility of the dollar. This finding suggests that even though price movements in equity and foreign exchange markets are not closely related, there is some link between the volatility of these markets. To the extent that volatility may be related to market liquidity, one possible interpretation of this finding is that changes in liquidity are correlated across markets.

The weak average correlation between the US stock market and the dollar does not depend on which segment of the market is considered. Table III.2 suggests that the correlation between stock market

Table III.2

Correlation coefficients for sectors, February 1991-May 2000

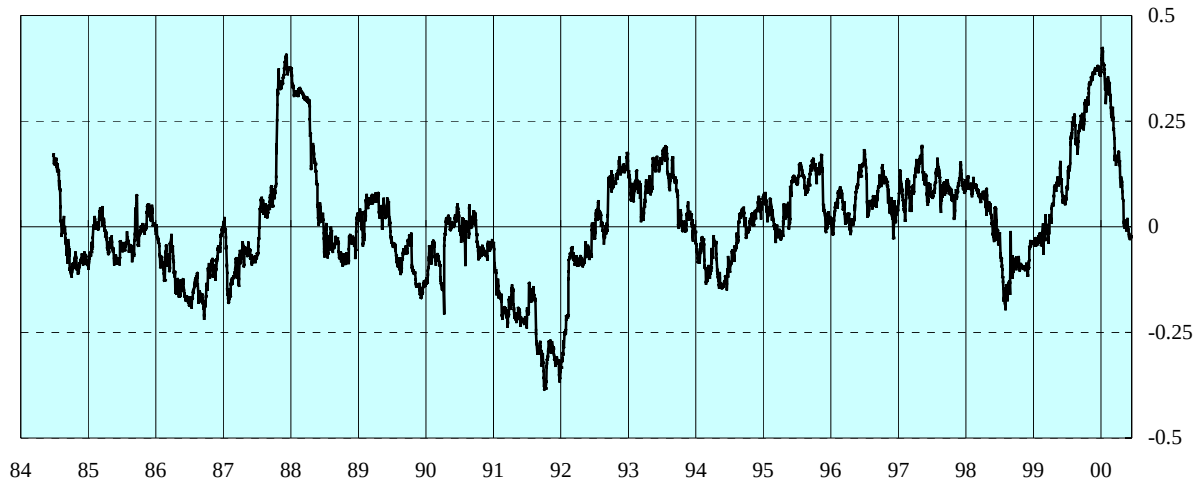
S&P	Banks	Biotech	Capital goods	Chemical	Consumer cyclicals	Electronics
0.06	0.04	0.04	0.07	0.00	0.07	0.00
Energy	**Gold mining**	**Insurance**	**Manufacturing**	**Oil**	**Semiconductors**	**Steel**
– 0.01	– 0.09	0.09	0.04	– 0.01	0.04	– 0.01

Note: Coefficient of correlation with nominal effective exchange rate computed with daily data.

Sources: Standard & Poor's DRI; BIS.

Graph III.2

Rolling correlation coefficients for the Dow Jones and the dollar[1]



[1] Rolling correlation (six-month window) of daily stock market and nominal effective exchange rate log differences.

Sources: National data; BIS

returns and the dollar is fairly uniform among different sectors of the US economy.[13] The correlation coefficients for different components of the S&P 500 index and the nominal effective dollar rate are quite close to the statistic for the S&P 500 as a whole and small in absolute value.

In 1999, market commentary repeatedly focused on the view that US stock markets and the dollar were moving more closely together than in the past. Graph III.2 confirms that the correlation of the Dow Jones index and the nominal effective dollar rate was much higher in 1999 than in previous years. In the second half of the year, the correlation coefficient rose to almost 50% before declining sharply in early January 2000, when jitters in US stock markets were accompanied by a strong dollar. Over the last two decades, there have been only two other episodes in which the correlation coefficient for US stock markets and the dollar was high in absolute value, but the coefficients were of opposite sign. The first episode occurred around the October 1987 stock market crash, when falling equity prices were accompanied by a weakening dollar. The second took place in autumn 1991 and was characterised by a strong and negative co-movement, as US stock markets rallied while the dollar depreciated.

In summary, the results presented in this note do not support the idea that US stock markets and the dollar move together in a robust fashion. At the same time, as evidenced by rising correlations in the more recent period and some historical episodes, a contemporaneous sharp movement in US equity markets and the dollar cannot be ruled out. In other words, although movements in stock and currency markets tend to be related, the nature of the relationship changes over time. This is not surprising, given that the correlation could be driven by factors whose influence changes over time. For example, although the US stock market and the dollar may at times respond similarly to news about economic growth or to changes in market sentiment, there are also times when they react differently.

Reference

BIS (2000): Bank for International Settlements, *70th Annual Report*.

[13] The shorter sample period used in Table III.2 is dictated by the availability of disaggregated data on stock market prices.

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IV. Special feature: Foreign currency deposits of firms and individuals with banks in China

In principle, an economy with capital controls can maintain a stable exchange rate and set domestic interest rates independently. In practice, enforcement of capital controls is never easy and some leakage can be expected. Thus, a certain amount of capital flight can be the unwanted side effect of low domestic interest rates in the presence of imperfect capital controls. China's recent experience, which has combined a stable exchange rate, capital controls and falling domestic interest rates in relation to dollar interest rates, highlights an unappreciated means to limit this unwanted side effect. In China, foreign currency accounts are allowed within the system of capital controls. These serve to keep foreign exchange in the domestic banking system, in effect domesticating capital flight.

In this section, we analyse foreign currency deposits in the Chinese banking system. Their growth appears to reflect the disappearance of the yield premium on renminbi deposits relative to foreign currency deposit rates in China in the course of 1998 and the subsequent rise in the yield premium on US dollar deposits. The scale of foreign currency deposits suggests that the Chinese banking system is, in this respect at least, more open than has generally been recognised.

The monetary background

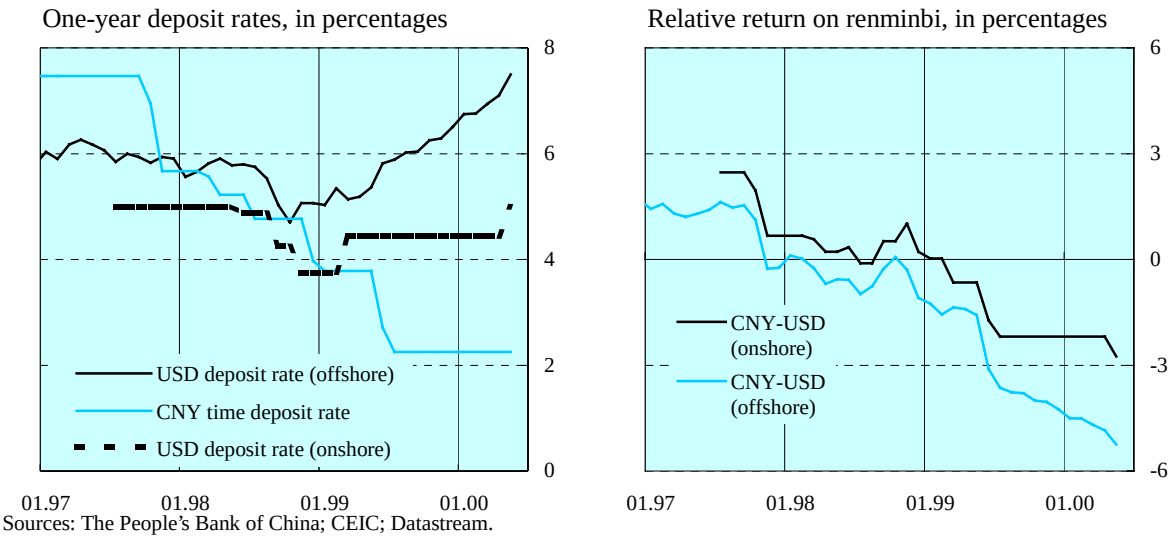
The stability of the renminbi's exchange rate against the dollar, together with the depreciation in the currencies of many of its trading partners in the course of the East Asian crisis of 1997-98, led to a substantial effective appreciation of the renminbi in that period. This external pressure for lower prices in China was reinforced by domestic factors, including good harvests and overcapacity in the production of many manufactured goods. These external and internal forces resulted not only in a decline in China's rate of inflation from the uncomfortably high levels of the early 1990s but also in actual price falls. These have lasted 33 months, if measured by the retail price index; the consumer price index has roughly stabilised after 22 months of decline. Over time, in conjunction with the recovery of trading partners' currencies, falling domestic prices have helped restore the renminbi's real effective exchange rate to pre-crisis levels. The Chinese monetary authorities responded to these price trends by reducing renminbi interest rates. When the Asian crisis struck, borrowing rates on renminbi loans stood at 10%; by the end of 1998, they had been brought down in six steps to below 7%. In parallel with the reduction of lending rates, the renminbi deposit rate was cut from about 7½% to 5% by mid-1998, where it was maintained for some time before being lowered further to 2¼% by late 1999 (Graph IV.1).

The changing relationship between renminbi and dollar deposit rates

These interest rate changes, through their effects on the relative returns on renminbi and dollar deposits, posed challenges for the Chinese authorities (Graph IV.1). On the one hand, during 1997-98 the authorities seemed concerned at the prospect of renminbi rates falling below domestic (or onshore) dollar rates, which might have induced shifts out of the renminbi. On the other hand, they seemed concerned at the prospect of domestic dollar rates falling too far below international (or offshore)

Graph IV.1

Renminbi and US dollar deposit rates



Sources: The People's Bank of China; CEIC; Datastream.

dollar rates, which might have induced shifts out of the country. Thus the pause in the decline in renminbi interest rates in the middle of 1998 occurred against the backdrop not only of extremely strained regional markets but also of a convergence of renminbi and dollar yields in China. The decline in US policy rates after Russia's default and the LTCM debacle permitted dollar rates in China to be reduced, reintroducing a premium for domestic renminbi yields over domestic dollar yields. The further declines in renminbi rates up to the end of 1998 again eliminated this premium.

Thus, by the end of 1998, the authorities appeared to have accepted renminbi and foreign currency deposits offering much the same yields to domestic depositors. And given the possibility of a depreciation of the renminbi, interest rate parity rendered foreign currency deposits quite attractive, as indicated by the amounts involved (see below).

In 1999, the Chinese authorities went a step further and let renminbi yields fall well below dollar yields. As offshore dollar rates rebounded after the Federal Reserve stopped lowering its federal funds target, offshore dollar yields came to exceed their onshore counterparts by 1%. In March, onshore dollar yields were boosted to a level well above yields on renminbi. In mid-year, renminbi interest rates were cut again, which left dollar yields in China still further above renminbi yields. In September, rates on Hong Kong and Canadian dollar deposits in China, but not US dollar deposits, were raised again. Thus, after pausing in 1998 as renminbi rates came into line with dollar rates, the authorities pushed renminbi yields substantially lower than dollar yields in 1999. In late May 2000, with the Bank of China leading and other banks following suit, domestic dollar yields were raised again to 5%.

As of July 2000, the one-year renminbi deposit rate in China, at 2.25%, was more than 500 basis points below its offshore US dollar counterpart and 275 basis points below its onshore US dollar competitor. However, these comparisons overstate the gap for two reasons. The offshore rate is Libid, which is a wholesale rate, while term deposit rates for one-year deposits at HSBC in Hong Kong range 60-120 basis points below Libid, depending on the size of the deposit (≥$1 million down to ≥$2,000). Within China, the imposition of a 20% tax on interest received on both renminbi and foreign currency accounts from November 1999, a measure intended to boost consumption, leaves the after-tax gap between renminbi and dollar yields somewhat narrower.

As mentioned above, a key feature of the administered pricing of foreign currency accounts in China is the prevention of too wide a gap between onshore dollar rates in China and offshore (eurodollar) rates. Thus, in July 2000, the 5% yield on one-year deposits in China was below, but not too far below, one-year dollar Libid rates of 7%; as noted, the latter is a wholesale rate available only on large deposits.

Onshore dollar yields set reasonably in line with international yields apparently serve to keep foreign exchange in the Chinese banking system.

The response: the build-up of foreign currency deposits in the Chinese banking system

An early indication of the scale of foreign currency bank deposits in China was the substantial sum reported by the Bank of China, which is the leading bank for foreign exchange in China.[14] Its 1998 Annual Report disclosed that the bank had some $44.0 billion in foreign currency liabilities in its domestic banking book, up 23.2% from $35.7 billion in 1997.

More recently, the People's Bank of China has begun regularly to disclose the sum of foreign currency deposits and lending in the banking system (Graph IV.2). These deposits grew by 22% in the year to end-May 2000, a rate well above that of the M2 measure of the money supply. The latest figure shows a continuation of the rapid growth; reported foreign exchange deposits stood at $113.7 billion at end-June 2000.

We have used the annual reports of the big four state-owned commercial banks to estimate the cross-sectional distribution of foreign currency accounts in the Chinese banking system at end-1998. Figures reported in the annual reports of the Bank of China, the Industrial and Commercial Bank of China, the China Construction Bank and the Agricultural Bank of China, along with plausible assumptions about the remainder of the banking system, imply US dollar and other foreign currency deposits with banks in China of Rmb 735 billion ($90 billion) by the end of 1998 (Table IV.1).

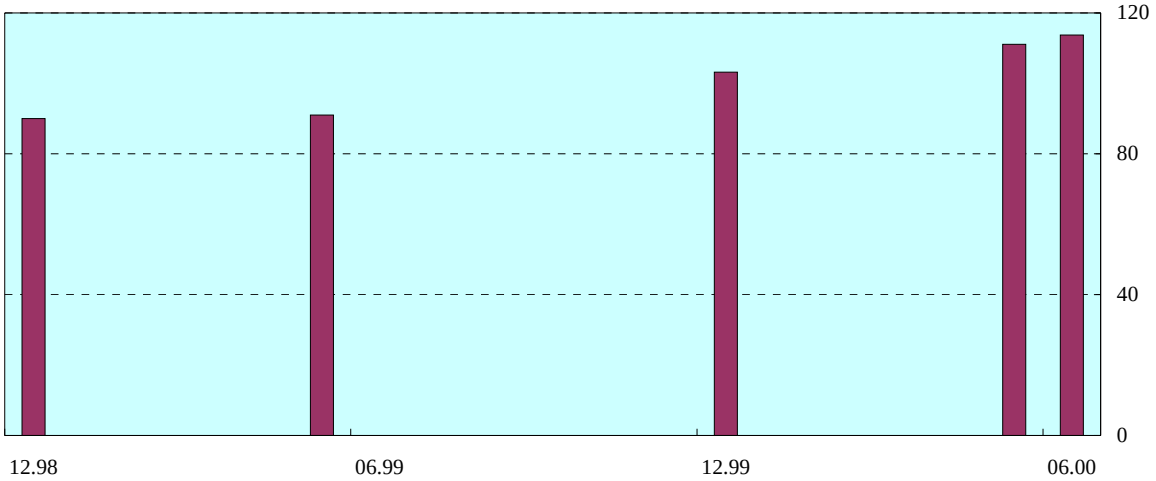
The financial openness of the Chinese economy

Using these data on foreign currency deposits in banks in China and data on Chinese non-banks' deposits in BIS area banks, measures of the financial openness of the Chinese economy in both absolute and percentage terms can be compared to that of industrialised countries. One measure of the internationalisation of portfolios is the sum of non-banks' holdings of eurocurrency deposits, that is

Graph IV.2

Foreign currency deposits with banks in China

In billions of US dollars



Sources: The People's Bank of China; authors' estimates (December 1998).

[14] This bank has 60% of the market according to Andrew Browne; see "China's banks face foreign challenge", *Reuters*, 13 January 2000 at 09:35.

Table IV.1

Estimated foreign currency deposits in China

End-1998

	Total deposits (Rmb billions)	Foreign currency deposits (Rmb billions)	Foreign currency deposits as a % of total deposits
State-owned commercial banks			
Bank of China[1]	1,082	357	33.0
Industrial and Commercial Bank of China[2]	2,632	125	4.7
China Construction Bank[3]	709	24	3.4
Agricultural Bank of China[4]	1,366	37	2.7
Other deposit money banks[5]	**917**	**61**[6]	**6.7**[7]
Urban and rural cooperatives and finance companies	**1,957**	**131**[8]	**6.7**[7]
Total	**8,663**	**735**	**8.5**

[1] Bank of China, *Annual Report* 1998, p 11. [2] Industrial and Commercial Bank of China, *Annual Report* 1998, pp 8 and 41. [3] China Construction Bank, *Annual Report* 1998, p 17. [4] Agricultural Bank of China, *Annual Report* 1998, p 16. [5] Excluding deposits with urban and rural cooperatives and finance companies. [6] Estimated by applying 6.7% to deposits with other deposit money banks. [7] The weighted average of the Industrial and Commercial Bank of China, the China Construction Bank and the Agricultural Bank of China is 4.0%; including the Bank of China, it is 9.4%; 6.7% is the average of the two ratios. [8] Estimated by applying 6.7% to deposits with urban and rural cooperatives and finance companies.

holdings of foreign currency deposits, whether in banks located within the country or abroad.[15] At almost $1.3 trillion, these amount to about 7% of broad money in the euro area and the rest of the Group of Ten.[16] Thus, a comparison of the currency composition of Chinese residents' holdings of bank deposits with the composition of deposits in other countries suggests a relatively open economy, financially speaking. Table IV.2 shows resident holdings of foreign currency deposits, whether inside a given country or outside its borders. A striking observation is that the estimated absolute scale of foreign currency deposits in the domestic Chinese banking system surpasses that of every G10 country save the United Kingdom and Switzerland.

The table shows as a memorandum item in the last column the sum of these deposits in relation to a broad monetary aggregate. As regards the share of foreign currency holdings, that of residents of the Chinese mainland is substantial. Outliers aside, including two international banking centres each with a population of 7 million (Switzerland and Hong Kong), and a country that hosts the headquarters of the treasuries of many multinationals (the Netherlands), China's position does not differ much from that of the major industrial countries. On this basis, at least, its openness is slightly greater than that of Germany, France or Italy, and noticeably greater than that of the United States or Japan. While a comparison of China with other emerging economies is beyond the scope of this section, it should not be presumed that China's openness on this measure is low by emerging market standards. Emerging market economies with histories of high inflation, Argentina for instance, may have higher shares of foreign currency deposits than does China. Other countries, such as Korea, have lower shares.

15 See BIS, *Guide to the BIS Statistics on International Banking* (Basel, 1995), Table I-C-1.

16 Of which, foreign currency deposits at *domestic* banks amount to about $0.5 trillion in the BIS reporting area (see Annex Table 4B). Even within the ambit of the BIS reporting area, however, these domestic deposit data are incomplete insofar as the United States, Japan, Hong Kong and Singapore do not report data. In the case of the two larger countries, the penetration of foreign currency accounts is generally thought to be quite limited, which is why the authorities there have not collected deposit data broken down by currency to date. In the case of Hong Kong and Singapore, however, holdings of foreign currency accounts by domestic residents are probably substantial in relation to monetary aggregates. Nevertheless, a breakdown by the residence of holders of such accounts is not available.

Notwithstanding the substantial stock of eurocurrency deposits in China, the continuing interest rate differential between remnimbi and dollar deposits does suggest that capital controls are effective. One could perhaps view the policy of permitting foreign currency deposits as an option within a set of capital controls that might serve to capture foreign currency for the domestic banking system.[17]

Going forward, foreign currency banking in China may both offer opportunities and pose challenges to the Chinese authorities. The Chinese authorities look set to liberalise interest rates on foreign currency deposits and loans before doing so on renminbi deposits and loans. While foreign currency banking may thus present the opportunity to introduce reforms gradually and test the result, the ongoing possibility of substituting foreign currency deposits and credit for their domestic currency counterparts may constrain future choices.

Table IV.2

Foreign currency deposits and broad money in selected economies

At end-December 1999, in billions of US dollars

	Foreign currency deposits of domestic non-banks			***Memorandum items***	
	with domestic banks	**with foreign banks**	**Total**	***Broad money***[1]	***Foreign currency deposits as a % of broad money***
Euro area	106.8	417.6	524.4	*4,798.9*	*10.9*
Belgium	8.7	37.6	46.3	*237.3*	*19.5*
France	14.4	37.9	52.3	*983.9*	*5.3*
Germany	15.5	83.5	99.0	*1,447.5*	*6.8*
Italy	5.4	28.4	33.8	*556.8*	*6.1*
Netherlands	13.1	135.3	148.4	*319.9*	*46.4*
Canada	25.5	22.5[2]	48.0	*464.8*	*10.3*
Japan	99.7[3]	16.1	115.8	*6,138.9*	*1.9*
Sweden	5.7	4.9[2]	10.6	*108.8*	*9.8*
Switzerland	104.6	65.9	170.5	*300.8*	*56.7*
United Kingdom	142.1	128.6	270.7	*1,315.3*	*20.6*
United States[4]	.	137.9	137.9	*6,512.0*	*2.1*
Total euro area and other G10	**484.4**	**793.5**	**1,277.9**	***19,639.5***	***6.5***
China					
Mainland	103.2	6.4	109.6	*1,448.1*	*7.6*
Hong Kong[5]	181.7	36.6[2]	218.3	*424.8*	*51.4*

[1] For Belgium, France, Germany, Italy and the Netherlands, end-December 1998. [2] Estimated as deposits with identified currency denomination; estimate should be viewed as a minimum. [3] BIS estimate. [4] The United States does not report foreign currency deposits with domestic banks; they are thought to be small in amount. [5] Holdings of foreign currency deposits by both resident and non-resident non-banks.

Sources: National data; BIS; authors' calculations.

[17] Similarly, a duty-free store at the airport for incoming passengers is an option within the fiscal system.

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V. Structural and regulatory developments

Initiatives and reports concerning financial institutions

April

The Basel Committee on Banking Supervision (BCBS) issued a summary report on its review of standards developed by the International Accounting Standards Committee (IASC).[18] This review was undertaken at the request of the G7 finance ministers and central bank governors.[19] The BCBS reviewed the standards from the perspective of banking supervisors, confining itself to the 15 international accounting standards that have a significant effect on banks. Two standards in particular attracted the Committee's attention. First, it identified several areas where the special standard for bank disclosure (IAS 30, Disclosures in the Financial Statements of Banks and Similar Financial Institutions) could be updated to better reflect the recent evolution of market practices. Second, the BCBS devoted significant attention to the standard that covers the accounting treatment of banks' assets and liabilities (IAS 39, Financial Instruments: Recognition and Measurement). The BCBS suggested approaches that would permit banks to use the IAS 39 hedge accounting framework in ways that are more consistent with their portfolio-based risk management practice. It is worth noting that the BCBS does not believe that the time is right yet to prescribe full fair value accounting in the primary financial statements for all financial instruments. The BCBS dialogue with the IASC on IAS 39 resulted in the establishment by the IASC of a special IAS 39 Implementation Guidance Committee, in which the BCBS as well as the banking industry will be represented.

May

The BCBS published a summary of comments received on *Credit Risk Modelling: Current Practices and Applications*, a report published by its Models Task Force in April 1999.[20] The 1999 report analysed current practices and issues in credit risk modelling and assessed the potential use of credit risk models for supervisory and regulatory purposes.[21] The responses given to the Basel Committee acknowledged that the report addresses the relevant issues in a balanced manner. They also recognised

[18] See *Report to G7 Finance Ministers and Central Bank Governors on International Accounting Standards*, Basel Committee on Banking Supervision, Basel, April 2000 (available on www.bis.org).

[19] In their declaration of 30 October 1998, the G7 finance ministers and central bank governors requested the International Organization of Securities Commissions (IOSCO), the International Association of Insurance Supervisors (IAIS) and the Basel Committee to carry out a timely review of the IASC's standards.

[20] See *Summary of responses received on the report "Credit Risk Modelling: Current Practices and Applications"*, Basel Committee on Banking Supervision, Basel, May 2000 (available on www.bis.org).

[21] It concluded that credit risk modelling could result in better internal risk management, and had the potential to be used in the supervisory oversight of banking organisations. However, before a portfolio modelling approach could be used for regulatory capital requirements, regulators would have to be confident not only that models were being used to actively manage risk but also that they were conceptually sound, empirically validated and produced capital requirements that were comparable across institutions. Significant hurdles, principally concerning data availability and model validation, still needed to be cleared before these objectives could be met, and the BCBS saw difficulties in overcoming them in the timescale envisaged for amending the Capital Accord.

that data shortages make parameter estimation difficult, particularly as regards the tails of distributions, correlations and losses given default. Some respondents challenged the report on certain issues, such as validation, where it was felt that the Committee was searching for a market risk-style backtesting framework. Some respondents also took the report to indicate a wish for uniformity of outputs, arguing that this was neither achievable nor desirable. In response to the comments, the Committee stated that at this stage a robust validation process would be needed to ensure the integrity of any future internal model-based regime. On the comparability of outputs, the Committee noted the points made by respondents but mentioned that any new capital regime would need to provide a level playing field for banking organisations.

The Japanese Financial Reconstruction Commission and Financial Supervisory Agency announced a draft of the basic outline of their plans for the entry of non-financial commercial entities in the banking industry and a draft of the guidelines concerning the licensing of banks established by commercial firms for public comment. The guidelines require banking subsidiaries to: ensure independence of bank management; segregate risks stemming from the parent commercial firm; protect private information of customers; manage risks and ensure an amount of profit and capital best fitting a financial institution's balance sheet structure; and protect customers when offering internet or automated teller machine services.

Initiatives and reports concerning financial markets

May

Following an assessment of the accounting standards issued by the IASC, IOSCO recommended that its members allow multinational issuers to use IAS 30 standards (as supplemented by reconciliation, disclosure and interpretation where necessary to address outstanding substantive issues) at a national or regional level. IOSCO said that its recommendation would facilitate cross-border offerings and listings by multinational enterprises and would promote the further development of internationally accepted accounting standards.

June

The US Commodity Futures Trading Commission (CFTC) proposed a broad revision of its regulatory framework for futures markets. The proposal would replace the current "one size fits all" regulation with broad, flexible core principles, and establish three regulatory tiers: recognised futures exchanges, derivatives transactions facilities and exempt multilateral transactions facilities. The three tiers would match the degree of regulation to the varying nature of the products and the sophistication of the customers that trade in the market. The Commission is also proposing a regulatory framework for clearing organisations designed to reduce systemic risk. The proposed rules would permit clearing organisations overseen by the CFTC, US banking regulators or the Securities and Exchange Commission to clear transactions executed on exempt multilateral transactions facilities as well as bilateral transactions. In order to provide greater legal certainty to the OTC derivatives markets, the Commission proposed to expand and clarify the operation of its Part 35 Exemption for Swap Agreements.

The US Financial Accounting Standards Board (FASB) announced that its new rules on derivatives and hedge accounting would become effective for all publicly traded companies with a fiscal year ending on 15 June 2000 or after. FASB Statement No. 133 requires companies to record derivatives on their balance sheets as assets or liabilities that will be measured at fair value. Companies have to record in the income statement or in other comprehensive income any changes in the value of such instruments designated as hedges that do not closely offset changes in the value of the underlying assets. Responding to companies' comments on its draft proposals, the FASB issued FASB Statement No. 138, which makes a number of amendments to FASB Statement No. 133. These include the ability of companies to hedge the "risk-free" interest rate with either US Treasury or Libor-based benchmarks

and the use of intercompany derivatives hedges for foreign currency risk. The objective of the statement is for firms to disclose the market risk potential of derivative contracts.

Initiatives and reports concerning market infrastructure

April

The London Clearing House (LCH) and Clearnet SA, the clearing subsidiary of Paris Bourse, announced plans for the creation of a consolidated European clearing house. The new entity, which should be operational by early 2001, will be user-governed and open to all markets, systems and/or users requiring clearing services. It will use a single set of clearing and netting systems, based on Clearing 21, a technology adapted by Paris Bourse from the Chicago Mercantile Exchange's original software. According to its backers, the merged entity will be the largest central counterparty in Europe for capital, energy and commodity markets, cash and derivatives, traded on regular exchanges and/or on the OTC market. The initiative will further the current wave of consolidation between European exchanges and their securities settlement systems. This consolidation should help reduce the cost of pan-European securities trading. It should also diminish the settlement risks faced by individual firms and the financial system as a whole.

May

The second quarter witnessed several initiatives addressing the systemic, fiscal and law enforcement issues raised by offshore financial centres (OFCs).

The first of these initiatives was the publication by the Financial Stability Forum (FSF) of a set of three categories of OFCs. The assignment of OFCs[22] to the categories was based on the results of a survey of banking, insurance and securities supervisors in both onshore and offshore jurisdictions conducted by the FSF. For each OFC, respondents were asked to assess the quality of supervision and the degree to which it cooperated with other jurisdictions.

The groupings (shown in the box on the next page) were published by the Forum in the hope that OFCs will rapidly take steps to raise the quality of their supervision and cooperation. The release of the groupings follows the publication in March 2000 of a report on offshore financial activities by the Working Group on Offshore Financial Centres of the FSF.[23] The report noted that some OFCs were well supervised and cooperated with other jurisdictions. At the same time, it concluded that OFCs that were unable or unwilling to adhere to internationally accepted standards for supervision, cooperation and information-sharing created a potential systemic threat to global financial stability. Such OFCs constituted weak links in an increasingly integrated international financial system and hindered broader efforts to raise global standards of soundness and transparency.

To address the concerns posed by some OFCs, the report recommended a framework to encourage such jurisdictions to adhere to relevant international standards. The framework identifies priority standards for OFCs, recommends that the IMF take responsibility for managing the process of assessing OFCs' adherence to these standards, and proposes a menu of incentives that could be applied to encourage such adherence. The framework endorsed by the Forum outlines several steps through which OFCs can demonstrate their commitment to achieve high standards of supervision and cooperation with other authorities. These include a declaration of intent by a jurisdiction to implement relevant standards, completing self-assessments of adherence to these standards, addressing identified shortfalls, and undergoing an external assessment.

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[22] See the FSF release of 26 May 2000 (available on www.fsforum.org/Press/Home.html).

[23] The Working Group's report is available on www.fsforum.org.

Categories of offshore financial centres

Group I

The jurisdictions in this category are generally perceived as having legal infrastructures and supervisory practices, and/or a level of resources devoted to supervision and cooperation relative to the size of their financial activities, and/or a level of cooperation, that are largely of good quality and better than in other OFCs.

These jurisdictions are Hong Kong SAR, Luxembourg, Singapore and Switzerland. Dublin (Ireland), Guernsey, the Isle of Man and Jersey are also generally viewed in the same light, though continuing efforts to improve the quality of supervision and cooperation should be encouraged in these jurisdictions.

Group II

The jurisdictions in this category are generally perceived as having legal infrastructures and supervisory practices, and/or a level of resources devoted to supervision and cooperation relative to the size of their financial activities, and/or a level of cooperation that are largely of a higher quality than Group III, but lower than Group I.

These jurisdictions are Andorra, Bahrain, Barbados, Bermuda, Gibraltar, Labuan (Malaysia), Macau SAR, Malta and Monaco.

Group III

The jurisdictions in this category are generally perceived as having legal infrastructures and supervisory practices, and/or a level of resources devoted to supervision and cooperation relative to the size of their activity, and/or a level of cooperation, that are largely of a lower quality than in Group II.

These jurisdictions are Anguilla, Antigua and Barbuda, Aruba, Belize, the British Virgin Islands, the Cayman Islands, the Cook Islands, Costa Rica, Cyprus, Lebanon, Liechtenstein, the Marshall Islands, Mauritius, Nauru, the Netherlands Antilles, Niue, Panama, St Kitts and Nevis, St Lucia, St Vincent and the Grenadines, Samoa, Seychelles, the Bahamas, the Turks and Caicos Islands and Vanuatu.

The Deutsche Börse (DB) and the London Stock Exchange (LSE) announced a merger of their operations. The new entity, called iX, will pool the exchanges' business in equity and derivative instruments, with Xetra, the DB's electronic trading system, becoming the common trading platform. The two exchanges also announced that they had signed a letter of intent with Nasdaq to create a separate joint venture for growth stocks. Trading in blue-chip stocks will be conducted in London, while that in growth stocks will be based in Frankfurt. The exchanges envisage separate regulatory regimes. They will also retain their existing clearing and settlement arrangements. The merger will create the third biggest stock market by turnover after the New York Stock Exchange and the Tokyo Stock Exchange. The new entity could further expand its global market share if other European exchanges decide to join.[24]

June

The Organisation for Economic Co-operation and Development (OECD) issued a report setting out the progress made in identifying and curtailing harmful tax practices both within and outside the OECD.[25] The report identifies potentially harmful preferential regimes in OECD member countries, identifies jurisdictions meeting the criteria for being tax havens, and provides an update on work with economies outside the OECD area. The report was a first response to the 1998 ministerial mandate to curb harmful tax competition.[26]

[24] The Milan and Madrid bourses have already signed a memorandum of understanding to join iX.

[25] See *Progress in Identifying and Eliminating Harmful Tax Practices*, OECD, Paris, June 2000.

[26] See *Harmful Tax Competition*, OECD, Paris, April 1998.

After a process of self and peer reviews, the OECD identified 47 preferential tax regimes of member countries as potentially harmful. It will develop guidance to help countries determine whether their potentially harmful regimes are actually harmful in practice. OECD member countries are committed to removing the harmful features of preferential tax regimes by April 2003.

In line with the ministerial mandate on tax havens, the OECD also began a review of a number of other jurisdictions and set out to engage in a dialogue with them. The report identifies 35 jurisdictions meeting the technical criteria for being tax havens.[27] The 35 will be given the opportunity over the next 12 months to determine whether they wish to work with the OECD to eliminate harmful features of their regimes by the end of 2005. Noting that six jurisdictions (Bermuda, the Cayman Islands, Cyprus, Malta, Mauritius and San Marino) have already made a commitment to eliminate harmful tax practices, the OECD is confident that a significant number will choose this direction. The OECD is prepared to help these jurisdictions reach international tax standards but will also consider defensive measures in the case of countries choosing not to commit to eliminate harmful tax practices. The application of such measures would be based on an OECD list of uncooperative tax havens to be completed by 31 July 2001.

The Financial Action Task Force (FATF)[28] announced that it had finalised the assessment of 29 countries and territories according to a set of publicly stated criteria and identified 15 jurisdictions as non-cooperative in the fight against money laundering.[29] The report contains a brief explanation of the deficiencies identified and of the remedial actions that need to be taken to eliminate them.[30]

At its summit in Feira, Portugal, the European Union ended a three-year stalemate over the taxation of non-resident savings by agreeing to exchange information on non-residents' savings accounts. The agreement was reached after Austria and Luxembourg abandoned their objections to providing such information, requiring them to amend their banking secrecy laws.[31] The UK-led initiative will greatly improve cooperation between EU states in the fight against tax evasion and money laundering. However, its ultimate success will depend on whether other large financial centres (such as Switzerland and the United States) and offshore centres can be persuaded to join in the sharing of information. It should also be noted that the enabling legislation will require the unanimous support of all EU governments and will not be implemented before the year 2002 at the earliest. Moreover, the legislation will not take full effect for another seven years. The agreement led to the abandonment by the European Commission of an original draft directive that would have required EU countries to impose a withholding tax on interest income paid to EU citizens.

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[27] These are: Anguilla, Andorra, Antigua, Aruba, the Bahamas, Bahrain, Barbados, Belize, the British Virgin Islands, the Channel Islands of Guernsey, Sark and Alderney, the Cook Islands, Dominica, Gibraltar, Grenada, the Isle of Man, Jersey, Liberia, Liechtenstein, the Maldives, the Marshall Islands, Monaco, Montserrat, Nauru, the Netherlands Antilles, Niue, Panama, St Kitts and Nevis, St Lucia, St Vincent and the Grenadines, Seychelles, Tonga, the Turks and Caicos Islands, the US Virgin Islands, Vanuatu and Western Samoa.

[28] The FATF is an independent international body set up in 1989 for the purpose of promoting policies to combat money laundering. Its membership of 29 countries includes the major financial centres of Europe, North America and Asia. Its secretariat is located at the OECD.

[29] The countries in question are the Bahamas, the Cayman Islands, the Cook Islands, Dominica, Israel, Lebanon, Liechtenstein, the Marshall Islands, Nauru, Niue, Panama, the Philippines, Russia, St Kitts and Nevis, and St Vincent and the Grenadines.

[30] See *Financial Action Task Force on Money Laundering 1999-2000 Report*, Financial Action Task Force, OECD, June 2000.

[31] The two countries will be allowed to operate a withholding tax system during a transition period.

Chronology of major structural and regulatory developments

Month	Body	Initiative
April 2000	Basel Committee on Banking Supervision	• Releases *Report to G7 Finance Ministers and Central Bank Governors on International Accounting Standards*
	London Clearing House and Clearnet	• Announce plans for the creation of a consolidated European clearing house
May 2000	Basel Committee on Banking Supervision	• Releases *A summary of responses received on the report "Credit Risk Modelling: Current Practices and Applications"*
	International Organization of Securities Commissions	• Recommends that its members allow multinational issuers of securities to use IASC standards at national or regional level
	Financial Stability Forum	• Publishes a set of three categories of offshore financial centres based on the perceived quality of their banking supervision and international cooperation
	Deutsche Börse and London Stock Exchange	• Announce a merger of their operations
	Japanese Financial Reconstruction Commission and Financial Supervisory Agency	• Issue basic outline of plans for entry of non-financial commercial entities in the banking industry and draft of guidelines concerning the licensing of banks established by commercial firms
June 2000	US Commodity Futures Trading Commission	• Proposes a broad revision of its regulatory framework for futures markets
	US Financial Accounting Standards Board	• Publishes its final rules on derivatives and hedge accounting
	Organisation for Economic Co-operation and Development	• Releases *Progress in Identifying and Eliminating Harmful Tax Practices* identifying 35 tax havens
	Financial Action Task Force	• Identifies 15 jurisdictions it considers uncooperative in the fight against money laundering
	European Union	• Ends stalemate over the taxation of non-residents' savings through an agreement to introduce an exchange of information on non-residents' savings accounts