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I. Overview of developments: Signs of a slowdown cast a shadow over markets

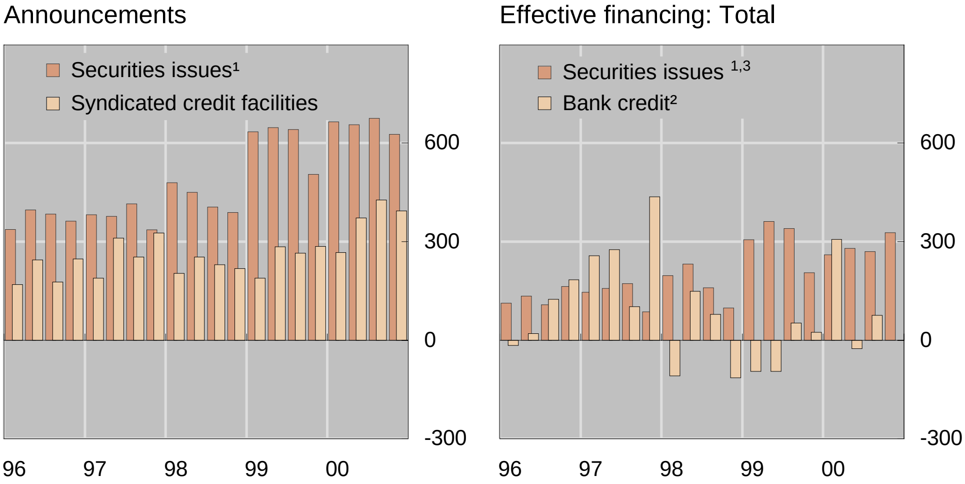
During the fourth quarter of 2000, investors' expectations of a slowing global economy contributed to a downward shift in yield curves, a widening of credit spreads and further declines in already weak equity markets. Market attention focused on the United States, where macroeconomic data reinforced the view that a slowdown was likely in the first half of 2001. Profit warnings and credit downgrades also weighed heavily on the equity and debt markets and signalled problems of excessive leverage in the corporate sector. Even the normally stable commercial paper markets experienced unusually wide and volatile credit spreads.

Market movements also revealed the extent to which the US outlook led to a re-evaluation of growth prospects in other regions. An appreciation of the euro suggested that investors viewed the European economy as likely to maintain momentum, although a downward shift in the euro swaps curve also indicated a potential exposure to the impact of a US slowdown. A depreciation of the yen and a decline in the Tokyo stock market reflected perceptions of a return to weaker growth in Japan. Divergent sovereign spreads corresponded to distinctions investors made in their judgments about the outlook for the emerging economies, with some countries seen as facing severe challenges and others as experiencing an uneven but persistent recovery from recent crises.

Markets in general turned around in January 2001. A surprise 50 basis point reduction in the Federal Reserve's target for the federal funds rate on 3 January, followed by a further 50 basis point cut on 31 January, buoyed both the equity and bond markets, at least temporarily. A steepening of yield curves, a strong initial rally in equity markets and a narrowing of credit spreads all suggested that market participants expected any slowdown to be relatively brief. The easing of market conditions revived debt issuance by low-rated borrowers and emerging economies. However, equity markets gave up many of their gains in February, amidst new evidence of weakness in the earnings of technology firms.

Despite the adverse market conditions, cross-border financing through the international securities and credit markets remained strong in the fourth

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 cross-border bank loans. Data for bank loans are available only up to 2000 Q3. [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.1

quarter (Graph I.1). Both banks and bond investors, however, showed a preference for higher-rated borrowers. There was a decline in net international securities issuance by non-financial corporations, particularly those from the United States, but government agencies and financial institutions continued to be active issuers. Overall net issuance by developing countries fell sharply as broad indices of emerging market credit spreads rose. Yet among these borrowers as well, both credit spreads and the ability to access markets varied significantly between higher- and lower-quality issuers.

Yield curves and exchange rates move to reflect a changing outlook

US data point to a slowdown ...

After several months when markets reflected uncertainty over the near-term course of the US economy, a series of data releases in November and December served to convince market participants that the economy would slow significantly from its rapid growth rates of the last few years. The weak numbers culminated in the National Association of Purchasing Management (NAPM) survey announced on 2 January 2001, which suggested a sluggishness in industrial activity. Later figures indicated an annualised GDP growth rate of 1.4% in the fourth quarter of 2000.

... but the yield curve suggests it will be short-lived ...

Movements in the US dollar swaps yield curve signified shifting views as to the likely depth and length of the slowdown. The mounting evidence of economic weakness and anticipations of policy easing led to parallel downward shifts in the curve in November and December. A relatively flat curve during this period suggested expectations of an extended slowdown. After the cut in the federal funds target rate from 6.5% to 6% on 3 January, a steep slope beyond the two-year maturity indicated a new perception that the slowdown would be of relatively short duration (Graph I.2). A sharp dip near the short end of the curve incorporated a forecast of up to 100 basis points of Fed easing by the third quarter of 2001.

… though its steepness also reflects mortgage hedging

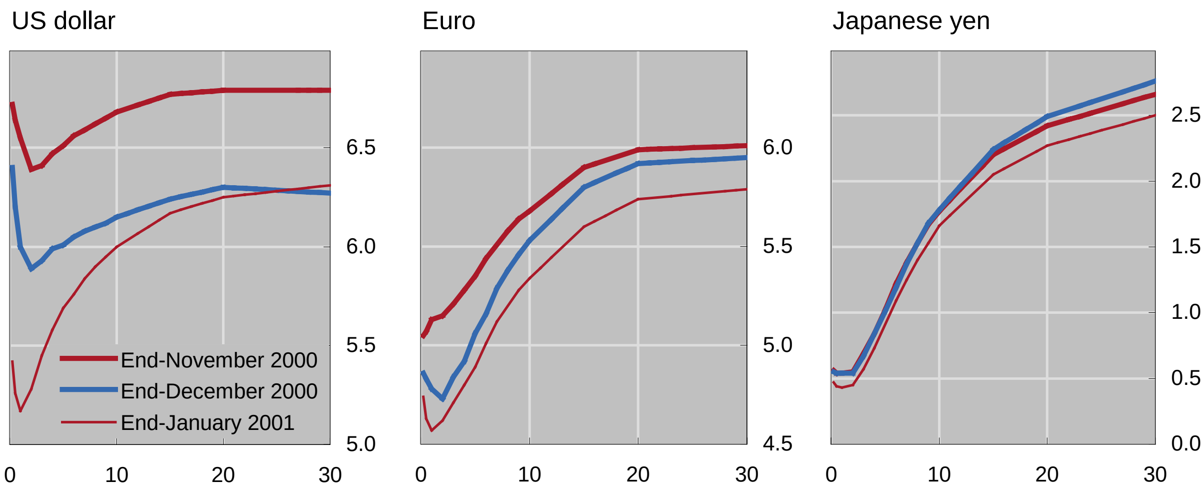
Besides the economic and monetary policy outlook, another factor influencing the shape of the US dollar yield curve was the shortening of the effective duration of mortgage portfolios and the accompanying change in dealers' hedge positions. As in other recent episodes of declining interest rates, an increase in mortgage refinancing activity reduced the effective duration of securities that are constituted from streams of mortgage repayments. Dealers responded by adjusting the duration of the positions with which they had hedged their inventories of mortgage-backed securities. Whereas previously dealers might have effected this adjustment through shifts in short positions in US Treasury securities, the lack of liquidity in the Treasury market led them to perform these operations in the swaps market. This contributed to the steepness of the swaps yield curve in the two-year to five-year range and the flattening of the curve for longer maturities. It may also have helped to keep swap spreads low, at a time when other credit spreads were increasing (see below).

Yields also decline in the euro area …

Markets also priced expectations of lower short-term rates into the euro-denominated swaps curve, even though the Eurosystem did not reverse its tightening moves of the first half of 2000. The euro curve shifted down about half as much as the US curve. Declining oil prices (Graph I.3) and the strengthening of the euro were thought to have reduced the danger that the Eurosystem would exceed its stated inflation objective in the coming year. Expectations of lower rates seemed to derive less from the direct impact of a US slowdown on European net exports, which was expected to be limited, than from the potential impact of faltering US growth on investment returns and

Yield curves for swaps at different dates

In percentages



Source: Bloomberg.

Graph I.2

business confidence in Europe reflecting, among other things, the recent large number of European acquisitions of US companies. Nonetheless, future policy moves were expected to be measured given the essentially steady growth forecast and declining unemployment in the euro area.

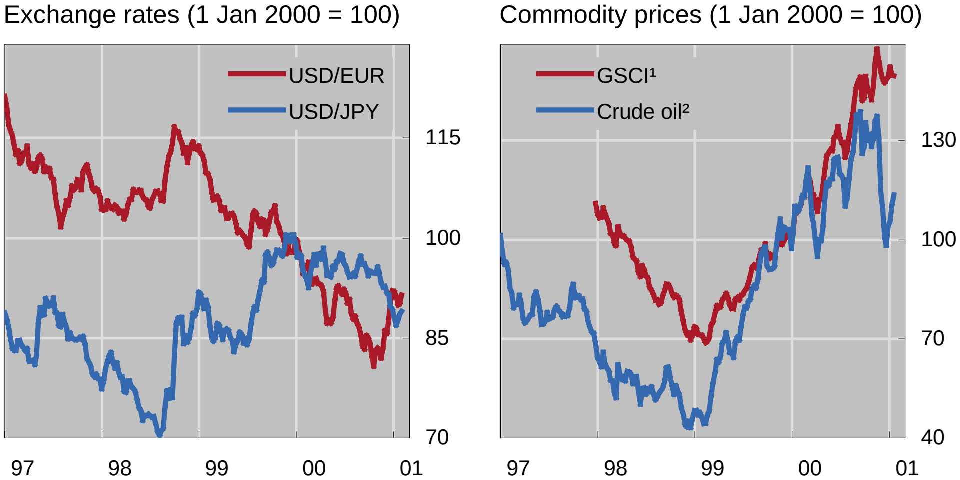
… and, to a limited extent, in Japan

In Japan, the yen swaps curve shifted down only slightly, reflecting the fact that interest rates were already very low. A flattening of the yen curve towards the long end suggested a judgment by market participants that prospects for a sustained recovery had receded, given the slow pace of structural reforms and continued weaknesses in the banking sector. There were concerns that a slowdown in the United States would hurt demand for Japanese exports and business investment in technology, at a time when the impact of earlier fiscal packages on domestic demand was seen to be fading. Concerns were also expressed at the consequences of a fall in the stock market for Japanese banks, many of which were thought to carry substantial exposures to equity price movements on their balance sheets.

The evolving growth outlook of the three leading economic zones was reflected in their currencies, with the euro rallying strongly against the US dollar from early November into the new year and the Japanese yen weakening against both the euro and the dollar in December and the first half of January (Graph I.3). The euro's rally was accompanied by increased net issuance of euro-denominated securities, confirming a pattern observed in previous quarters whereby issuance is concentrated in relatively strong currencies (see "The international debt securities market" on pages 25-30).

Exchange rates and commodity prices

Weekly averages



[1] Goldman Sachs Commodity Index. [2] Unweighted average of the price of Dubai Fateh, UK Brent and West Texas Intermediate.

Sources: Bloomberg; Standard and Poor's DRI; national data. Graph I.3

Profit warnings depress equity markets

Weaker earnings cause stock prices to fall in the technology sector …

The correction in global equity markets that had begun in April gathered pace in the fourth quarter (Graph I.4). The declines tended to be led by the technology sector, where a succession of negative profit warnings, weak sales figures and downgrades by analysts of bellwether stocks continued to depress market valuations. In October, such technology firms as AT&T, Cisco and Lucent warned about disappointing profits. In November, unexpectedly weak sales by a leading internet toy retailer served to reduce the company's market capitalisation by half. The Nasdaq 100 fell 34% during the quarter. As has often been the case in recent quarters, the technology sectors of European markets declined with the US market, the Euro Neuer Markt index falling 45% and the FTSE TechMARK 100 retreating by 32%.[1] Nevertheless, price/earnings ratios in these markets remained substantially above historical levels. While market valuations adjusted to the fall in recent earnings, the persistence of high price/earnings ratios suggested that market participants expected high growth rates of earnings to resume in the near future.

… and the broader market

Broader markets were also affected by the steadily worsening outlook for corporate earnings. The fourth quarter saw 744 US companies announce negative profit warnings and only 161 announce positive ones. The Standard & Poor's 500 index registered a decline of 8% during the quarter, while the Dow Jones STOXX 50 index of large European companies was down by 5% and the Japanese TOPIX index fell 13%. One consequence of the equity market turbulence was an increase in the turnover of equity derivatives, as market participants sought to protect themselves against increased volatility (see the discussion of global derivatives markets on pages 33-36).

Equity offerings slow …

The poor performance of equity markets in the fourth quarter, and particularly the losses in high-tech shares, led to a significant slowdown in initial public offering (IPO) activity in the United States. However, this was not clearly the case in other major markets (Graph I.5). International equity issues (both initial and seasoned offerings) also remained steady in the fourth quarter. A few companies had borrowed heavily with the intention of later using the equity markets to raise funds for the repayment of their debt. The difficult market conditions prevented these offerings from materialising, in some cases leaving banks with unintended exposures.

… as markets react to economic news …

As was the case for most of 2000, the technology sector of the US equity market reacted forcefully to news about macroeconomic conditions. Some of the sharpest declines in the Nasdaq index took place on release days for the non-farm payrolls and NAPM numbers in October and December. At the same time, participants in the US Treasury market tended to respond more to anticipated flows from investors getting in and out of the equity market than to

[1] The recent tendency for similar sectors to move together across equity markets is documented for the euro area in the box "Market practice ahead of institutional structures in pricing euro area equities", on pages 13-14.

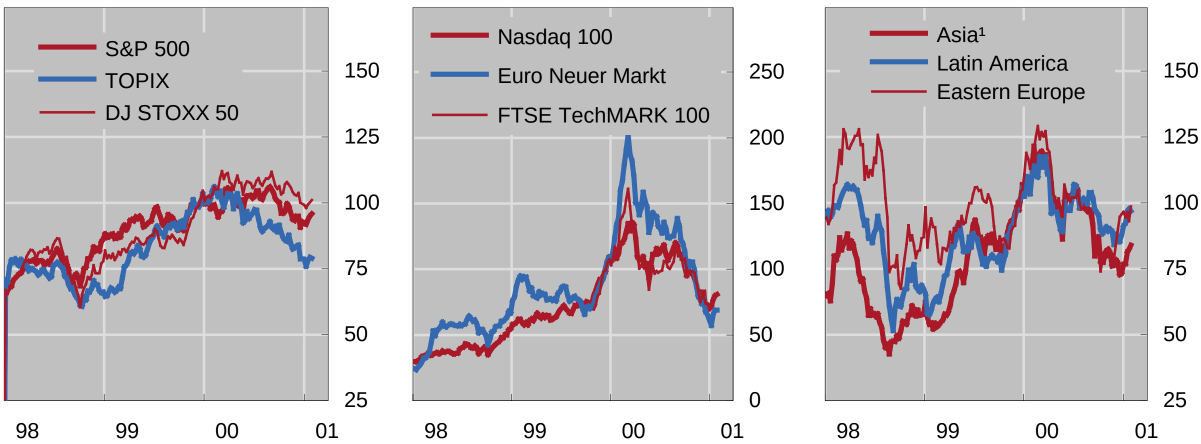
the implications of macroeconomic developments for the yield curve. On the day of the Fed's surprise policy rate cut, for example, five-year and 10-year Treasury yields actually rose, as investors unwound safe haven positions to reinvest in the stock market. The yields fell only the next day to reflect the revised policy expectations.

... but stabilise after the Fed's rate cut

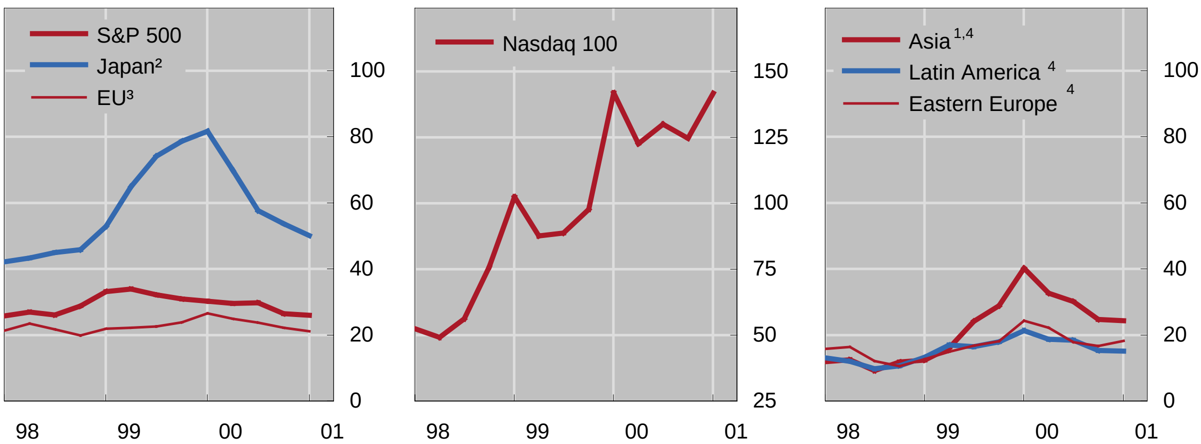
Equity markets seemed to regain confidence after the Fed's rate cut on 3 January. In its single largest daily gain ever, the Nasdaq 100 rose 19% on the day of the cut. The index swung wildly for several days, but then began a steady rise, finishing 11% higher over the month. The S&P 500 jumped 5% on the day of the cut and rose 3% for the month as a whole. The European exchanges followed a similar pattern of initial volatility followed by a steady upswing, though the Japanese market was essentially flat. Just as the technology sectors had led the market's decline in 2000, they were at the head of the January rally. Emerging equity markets, particularly in Taiwan and

Stock market indicators

Equity indices (weekly averages; end-December 1999 = 100)



Price/earnings ratios (quarterly averages)

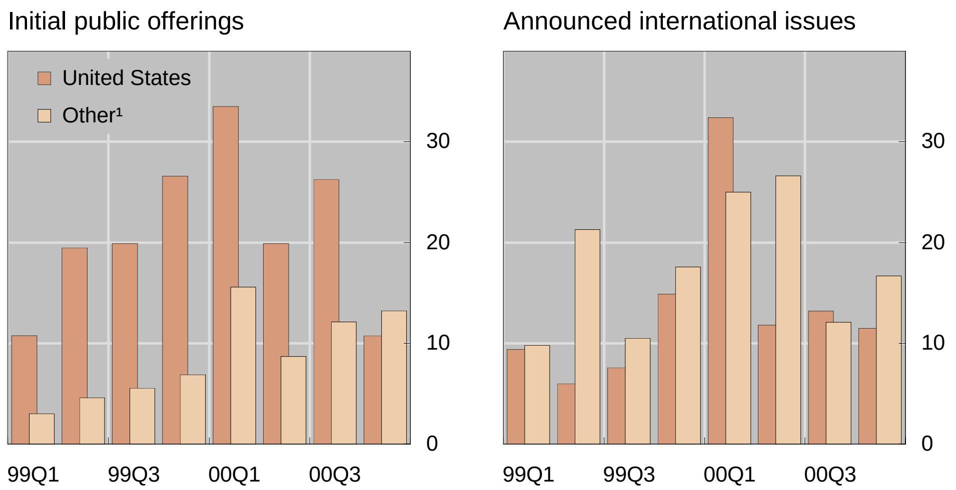


[1] Excluding Japan. [2] P/E ratio of total market index (Datastream calculated). [3] Weighted average of the major EU countries. [4] IFC investable indices.

Sources: Bloomberg; Datastream; IFC; national data. Graph I.4

Equity issues for selected countries

In billions of US dollars



[1] Germany, Japan and the United Kingdom.

Sources: Bloomberg; Capital DATA; BIS. Graph I.5

Korea, broadly tracked technology stock indices in the industrial countries, with a sharp fourth quarter decline followed by a rally at the beginning of 2001. Further reductions in earnings forecasts in the technology sector led global equity markets to give up many of these gains in early February.

Leverage contributes to wider corporate spreads

As investors worry about leverage, credit spreads widen …

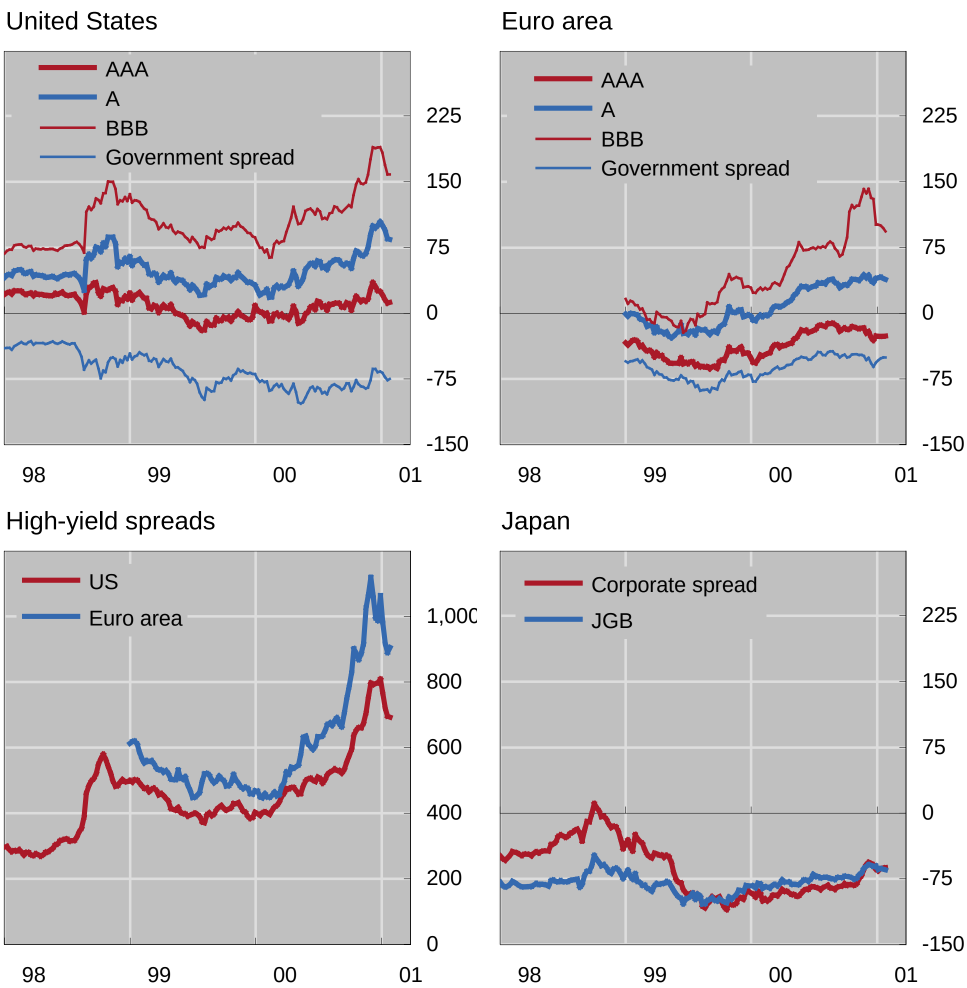
The signs of an economic downturn in the United States led to a sharp widening of credit spreads on several debt classes in the closing months of 2000 (Graph I.6). Having financed a substantial expansion in corporate borrowing, bond investors appeared to become increasingly concerned about excessive leverage. These concerns came to the fore when doubts emerged about the sustainability of corporate earnings growth. While spreads had started to widen with turbulence in the stock market during the spring, the widening trend in the autumn was especially pronounced. The deterioration in the economic outlook towards the end of the year not only reinforced investors' scepticism about the leverage-driven strategies of telecommunications companies but also raised concerns about other companies that had borrowed heavily. Sector-specific problems, such as the difficulties faced by electrical utilities in California, reminded investors that even apparently safe credits can be subject to sharp changes of fortune.

… especially on high-yield bonds …

The widening of corporate spreads in the fourth quarter showed a clear tiering of credit risks. Spreads on high-yield instruments rose the most. As measured by the Merrill Lynch US High Yield Master Index, spreads of high-yield US dollar instruments over swap rates rose from roughly 530 basis points at the beginning of September to nearly 800 basis points by year-end. Spreads

Corporate and government bond spreads[1]

In basis points



[1] Weekly averages of Merrill Lynch bond index yields against 10-year swap rates.

Sources: Bloomberg; Merrill Lynch. Graph I.6

on a comparable euro-denominated index widened from 670 to almost 1,000 basis points over the same period, spurred by the default of Esprit Telecom on 15 December. Spreads did not widen as much on investment grade issues. Those on US dollar BBB-rated bonds increased by about 70 basis points, while those on AAA-rated bonds rose only slightly. A similar tiering pattern held in the euro-denominated market, where spreads had already risen sharply earlier in the year and stabilised at historically high levels over the summer.

… but also on lower-rated investment grade credits …

Concerns about corporate credit quality also beset the market for commercial paper (CP). In part, these concerns reflected a shift by some borrowers towards the short-term money markets (documented below for the international debt securities market) at a time when banks were unwilling to increase their credit exposures. The fourth quarter also saw rating agencies downgrade the debt of Xerox, a major CP issuer, forcing it to draw on its backup line from banks, which were reportedly reluctant to take on the

… and commercial paper

exposure. In January, two large California power utilities defaulted on their CP issues.

While an end-of-year widening of the yield gap between the highest-rated (A1/P1) and less highly rated (A2/P2) US dollar issues has been common in recent years, the fourth quarter witnessed an unusually large increase (Graph I.7). The gap was briefly wider than those seen in the aftermath of the Russian debt moratorium and LTCM episode of 1998 and in the run-up to the millennium changeover in 1999 (when interbank interest rates had risen even more sharply than CP rates).

The Fed's rate cut and the subsequent equity market rally led to a narrowing of both high-yield and investment grade spreads during January 2001, albeit to levels that were still very wide by historical standards. After falling to previous levels in early January, commercial paper spreads rose again towards the end of that month, as investor nervousness about lower-quality borrowers continued.

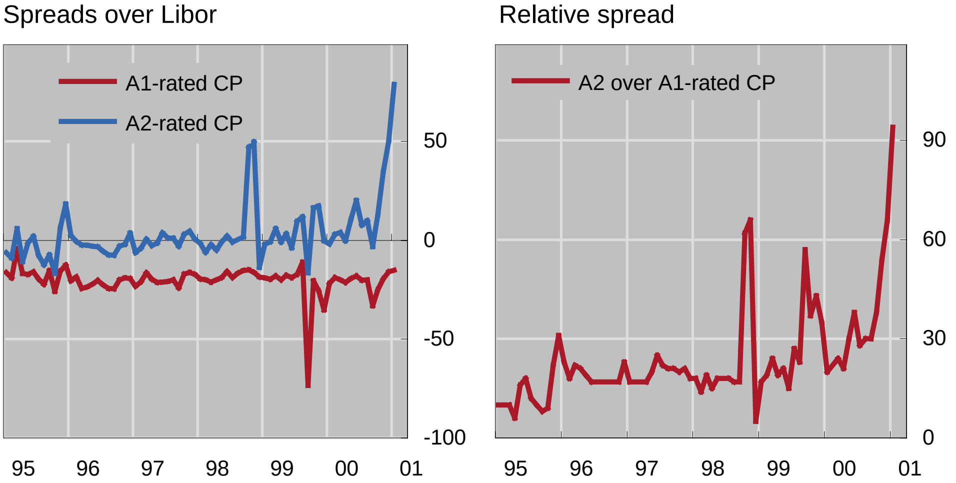
Net issuance of bonds slows

The wide spreads contributed to a slowdown in net issuance on the international debt securities market by entities based in the United States and the developing economies, particularly of long-term fixed rate bonds. Overall net issuance still rose because of increased activity by banks in the money market and by European borrowers and international institutions in the bond market. In January, issuance by US and emerging market entities began to revive, encouraged by narrower spreads and the more optimistic tone in these markets following the Fed's rate cut. The high-yield market saw an especially sharp resumption of issuance, with B+/B2-rated Charter Communications raising $1.75 billion on the US domestic market on 5 January.

While the deterioration in perceived corporate credit quality at the end of 2000 had its greatest impact on credit spreads in debt securities markets, there

US commercial paper spreads[1]

In basis points

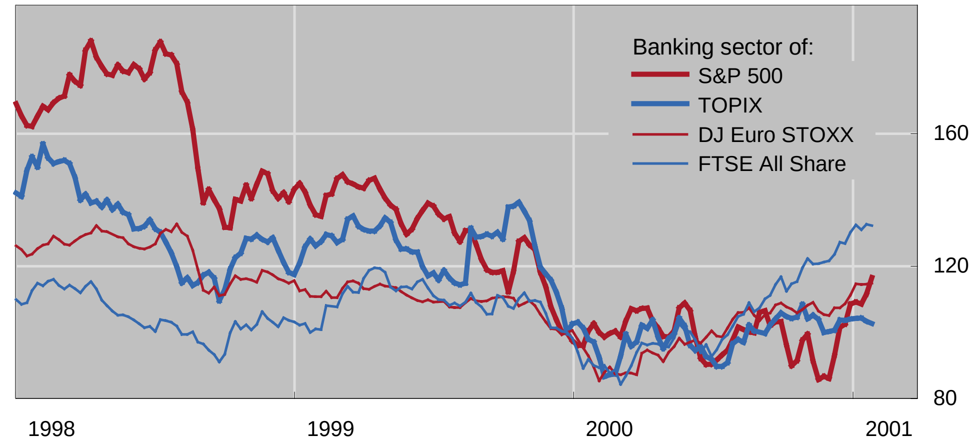


[1] 90-day CP rate and Libor.

Source: Bloomberg.

Graph I.7

Equity indices of the banking sector
Ratio to broad equity indices; weekly averages, end-December 1999 = 100



Sources: Datastream; national data. Graph I.8

were some concerns that increased credit risk would eventually spill over to the banking sector. Several banks, especially in Europe, were thought to be excessively exposed to the telecommunications industry (see the discussion of the syndicated loan market on page 20). On top of this, it was anticipated that lower-rated borrowers unable to raise funds on the turbulent CP market might soon start to draw on their backup credit lines with banks, leading to a further increase in the riskiness of bank portfolios. Such backup lines have grown strongly in recent years: in 2000, banks arranged $92.4 billion of international syndicated credit facilities to support CP programmes, compared with $59 billion in 1999 and an annual average of $42 billion in 1992-98.

Concerns emerge about the banking sector …

Judging the extent of these perceived risks is not straightforward. But a look at market valuations of the banking sector in the advanced economies during the past year would suggest that these risks were not seen as that significant (Graph I.8). Indeed, banks' stocks in the United Kingdom outperformed other UK equities in 2000, while those in the United States, Japan and the euro area essentially tracked the wider market. However, it should be noted that banking sectors had previously tended to underperform broader markets, and that the broad equity indices themselves declined substantially during 2000.

… but bank equity valuations track broader markets

Emerging market debt issuance slows amidst divergent performance

The outlook for growth in the emerging economies was clouded during the fourth quarter by worries about the impact of weaker US demand on exports and investment flows. In addition, financial instability in Argentina and Turkey offered a reminder that recoveries in many countries remained fragile and subject to possible reversals in market confidence. The wider credit spreads in the corporate credit markets spilled over to emerging market sovereign debt. Even so, investors were careful to make distinctions across countries according to their perceived credit quality (Graph I.9). While the spread of the broad

Emerging market spreads also widen …

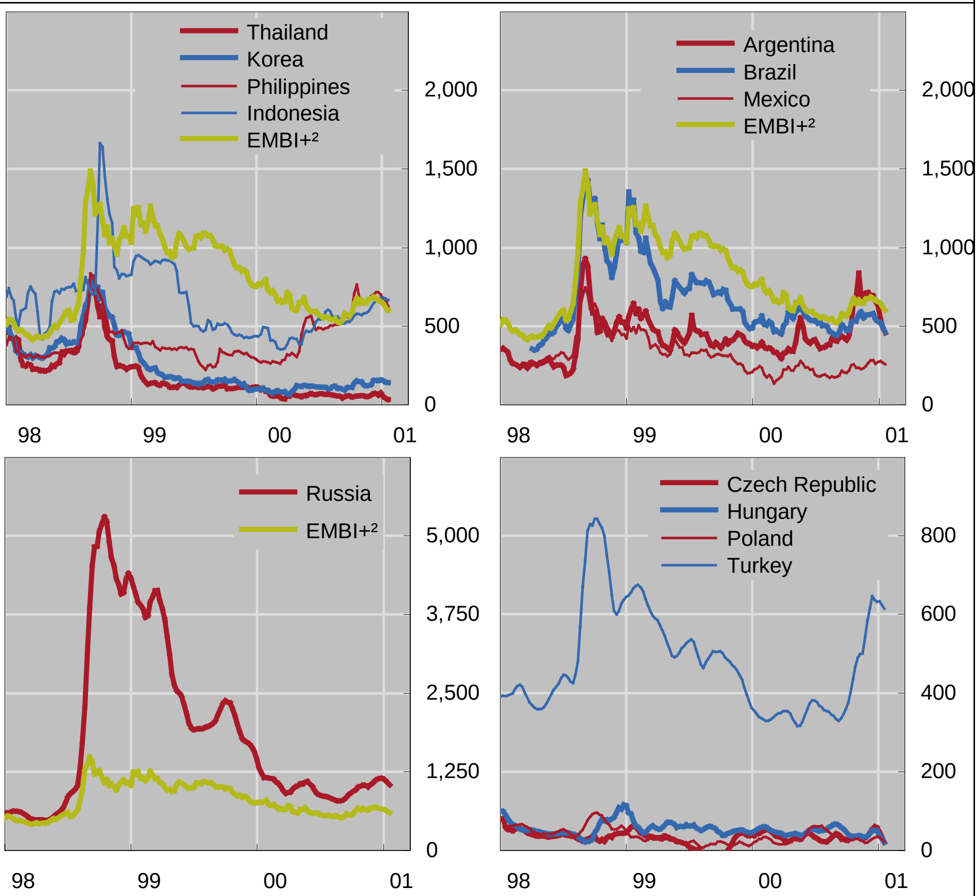
... but investors make distinctions across borrowers

EMBI+ index over comparable US dollar swaps widened from 560 basis points in October to 680 basis points at year-end, spreads on large borrowers such as Mexico, Brazil, Thailand and Korea were little changed. Central European sovereign spreads remained low, reflecting satisfactory economic performance and continued progress towards the eventual eastward expansion of the European Union.

Investors moved swiftly to reprice the debt of countries facing specific challenges. Spreads doubled on Argentine debt when doubts emerged about the government's ability to carry out needed fiscal reforms. Turkey faced financial turbulence when funding problems at a fast-growing local bank triggered broader concerns about the stability of the financial system. The two countries had been among the leading borrowers on the international banking market in the third quarter (see "The international banking market" on pages 15-22). In both cases, an IMF support package averted a more serious crisis and provided a breathing space for longer-term restructuring. Other countries facing reduced access to international capital markets included

Spreads of US dollar sovereign bonds over US swap rates

Weekly averages,[1] in basis points

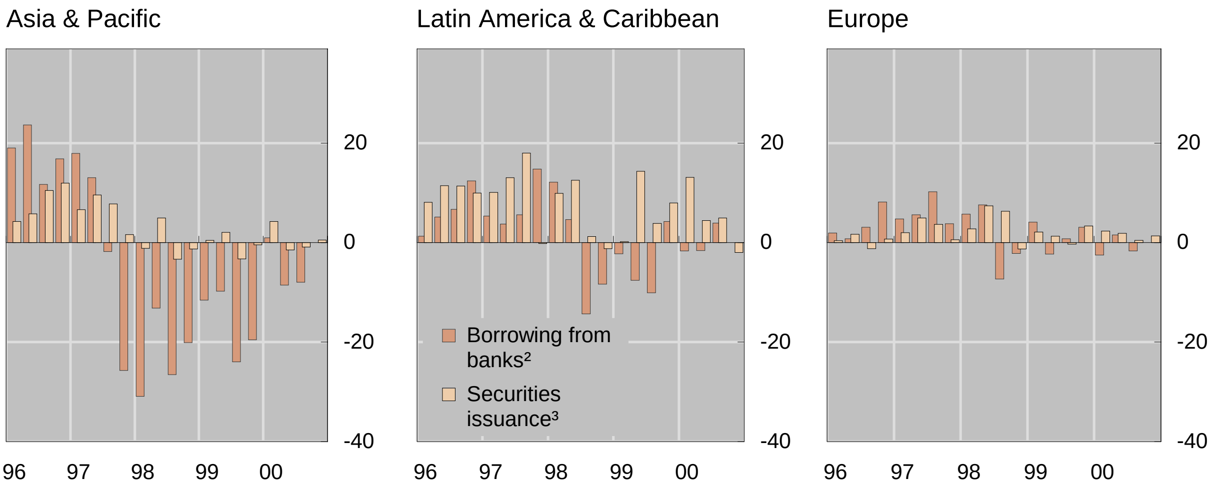


[1] 10-year swap rates. For the bottom right-hand panel, four-week moving averages. [2] JP Morgan's Emerging Market Bond Index (EMBI+) spread over 10-year US swap rate.

Sources: Bloomberg; Datastream. Graph I.9

International bank and securities financing in developing countries[1]

In billions of US dollars



[1] See Annex Table 9 for a list of the countries included in each region. [2] Exchange rate adjusted changes in cross-border loans of BIS reporting banks. Data on bank lending are not yet available for the fourth 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. Graph I.10

Indonesia and the Philippines, both of which were beset by political difficulties, although the change of government in the Philippines in late January subsequently contributed to an improved outlook for that country's debt.

Some borrowers turn to syndicated loans

As spreads widened and uncertainty grew about the global outlook, issuance declined sharply for virtually all emerging market borrowers in the fourth quarter (Graph I.10). Some borrowers turned to the syndicated loan market, which saw $34 billion of new facilities, mostly to borrowers considered better credit risks. Other potential borrowers, such as many of the Asian economies, had little need for international financing because of their ability to maintain current account surpluses. In January 2001, capital markets were again more willing to accept emerging market debt, in part because the Fed's rate cuts led to renewed interest in higher-yielding investments. Brazil and other countries successfully brought several large issues to market in the first weeks of the new year, while Argentina exchanged some $5 billion of short-term debt for longer-term bonds in early February. Reflecting the improved climate, the EMBI+ spread over swap rates fell to 590 basis points by the end of January.

Market practice ahead of institutional structures in pricing euro area equities

Country versus sector effects

Kostas Tsatsaronis

The establishment of a unified equity trading infrastructure in Europe remains an elusive objective for the region's organised stock exchanges. Stubborn national institutional structures and local interests have thwarted repeated efforts to create a harmonised trading environment. The recent unravelling of the proposed merger between the London Stock Exchange and the Deutsche Börse is a case in point. In contrast, demand by market participants for such an environment has intensified with the advent of the euro. In the months before the introduction of the single currency the majority of institutional investors, investment banks and asset managers started to disband their country desks and organise equity analysis and trading operations on an area-wide basis along sectoral lines.

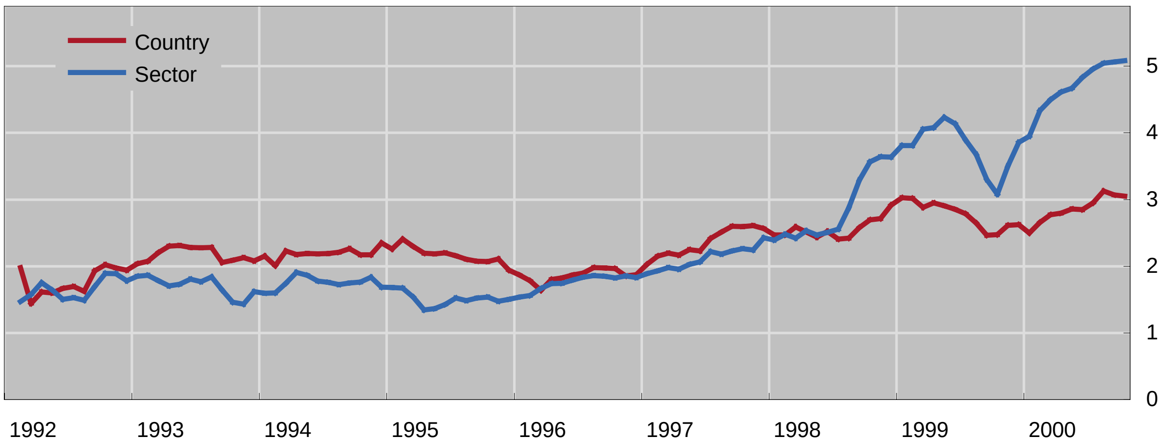
This reorganisation reflects the impact of economic developments that brought about a reduction in the relative importance of country-specific macroeconomic factors affecting euro area equity prices. The trend towards economic integration within the European Union has proceeded gradually since the 1960s as trade barriers have been lifted and cross-border commercial activity has continuously expanded. The introduction of the single currency boosted this process by eliminating the exchange rate risk across the EMU economies. In addition, the creation of the Eurosystem has established a fully unified monetary policy stance across these economies while the provisions of the Maastricht Treaty promote the cohesion of fiscal policies.

As economic conditions have become more synchronised across countries, the pricing of equity risk focuses increasingly on factors that are specific to industrial sectors from a pan-European perspective. Recent surveys of market participants indicate that about 75% of managers of European equities currently believe in the superiority of portfolio allocation strategies based on industrial sectors, while only 10% of managers think that country factors are still dominant. Indicative of the importance of the euro in ushering in this shift is the fact that these proportions were 20% and 50% respectively as recently as 1997.

The graph provides evidence of this shift in the relative weight of country and sector factors for the pricing of equity risk. The monthly stock price returns for a number of the largest euro area firms are decomposed into an aggregate market risk component, country-specific effects, industrial sector specific effects and an idiosyncratic risk component.[1] The firms are those of the FTSE Eurotop

Average country and sector effects in European equities: 1992-2000

Excess return in percentage points



Sources: Datastream; BIS calculations.

[1] The decomposition is based on a regression technique described in S L Heston and K G Rouwenhorst, "Does industrial structure explain the benefits of international diversification?", *Journal of Financial Economics*, vol 36, no 1, August 1994, and K G Rouwenhorst, "European equity markets and the EMU", *Financial Analysts Journal*, May/June 1999.

300 index from nine euro area countries, and are grouped into 10 sectors based on the FTSE classification system. By construction, the estimated country and sector effects can be interpreted as the excess return that one could achieve by investing in a balanced portfolio with a "tilt" towards the specific country or sector, as compared to the return to a portfolio invested in each country and sector in proportion to their market capitalisation. The graph plots measures of total country and sector impact on returns, which are calculated as the market capitalisation weighted averages of the absolute individual country and sector factor loadings respectively. The graph shows that the combined effect of sectoral factors came to outweigh the impact of country factors in the few months before the formal introduction of the single currency, and its importance has been increasing over the course of the last two years.

This evidence highlights the importance of streamlining the process of equity trading in the euro area, which is currently characterised by legal, institutional and technical structures based on national markets. Asset managers eager to pursue investment strategies on an area-wide basis are currently obliged to confront a variety of market practices and conventions and deal with the idiosyncrasies of a multitude of trade execution and settlement systems because the national exchanges remain the natural trading environments for individual stocks. In this context, the institutional infrastructure seems to be lagging behind the invisible hand of the market in their evolutionary dialectic.