

## 1. Overview: emerging markets soar to historical highs

Asset prices in emerging markets rallied to record highs early in the new year. Foreign investors snapped up emerging market bonds and equities, pushing indicators of valuations towards and in some cases beyond the upper end of their historical range. The steady improvement in many countries' fundamentals contributed to investors' enthusiasm for emerging market assets. Investors' heightened appetite for risk also appeared to be an important factor behind the rally.

In the major markets, investors were less exuberant. They seemed uncomfortable with current valuations in equity and corporate bond markets but at the same time uncertain in which direction to take a position. In the United States, interest rates, oil prices and corporate earnings all weighed on equity prices. In Japan, seemingly idiosyncratic events had market-wide repercussions, bringing a temporary halt in January to the rally on the Tokyo exchange. Shareholder-friendly actions such as leveraged buyouts continued to loom over corporate debt markets, but corporate spreads remained stable near their cyclical lows despite such event risk.

In government bond and swap markets, yields advanced despite mixed news on the economy as traders expected monetary policy to tighten further in the United States and Europe. In Japan, market participants expected the policy of quantitative easing to be abandoned earlier than previously anticipated as inflation rates turned positive.

### Emerging markets rally on foreign inflows

Asset prices across emerging markets soared early in the new year. Bonds, equities and currencies all rallied strongly in January and February (Graph 1.1). This came on top of already impressive gains in 2005 and in many cases drove valuations close to or above their historical highs.

Equities posted the largest gains. Almost all emerging equity markets had recorded double digit increases in 2005, led by Egypt, Colombia and Saudi Arabia, where prices had more than doubled. In many markets the rally accelerated in January before pausing in February. Asian equity markets were relative laggards, increasing by only about 4% in local currency terms over the first eight weeks of 2006, in contrast to 20% and 13% gains in eastern Europe

Emerging market  
equity prices  
soar ...

and Latin America, respectively. Asian equity prices, especially those in markets dominated by technology firms, dropped sharply on 18 January, following Intel's announcement of weaker than expected sales and a sell-off in Tokyo (see below), although they subsequently recovered.

For US dollar-based investors, gains on local currency investments in emerging markets were amplified by exchange rate movements. Emerging market currencies appreciated by more than 2% against the US dollar over the first eight weeks of 2006. Moreover, central banks in several countries continued to accumulate foreign exchange reserves, suggesting that the appreciation would have been even stronger in the absence of intervention.

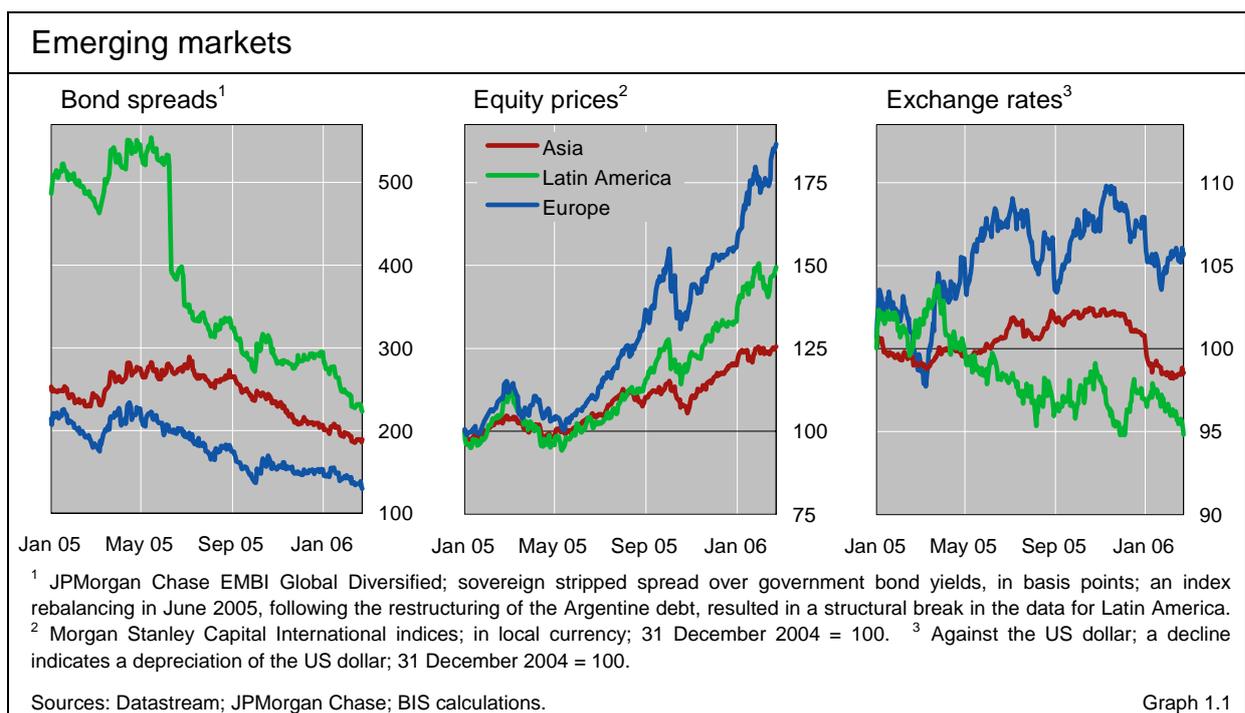
In international bond markets, the reduction in spreads was concentrated on bonds with the highest yields, continuing the trend evident for the past few years. Spreads on dollar-denominated bonds issued by Latin American borrowers tightened by 70 basis points over the first eight weeks of 2006, compared to around 20 basis points for European and Asian issuers. Spreads did widen on occasion, such as on 12 January when uncertainty about the US economic outlook contributed to a flight to quality. However, such sell-offs were short-lived and spreads quickly tightened again.

... and bond spreads tighten

The rally in emerging markets was driven in large part by massive inflows of foreign capital. The Institute of International Finance estimates that net portfolio equity flows approached \$60 billion in 2005, well above levels seen in previous years (Graph 1.2). Debt inflows exceeded \$160 billion, including substantial investment in local currency debt. Available data suggest that foreign investors continued to channel substantial amounts to emerging markets in the early part of 2006.

Massive inflows of foreign capital

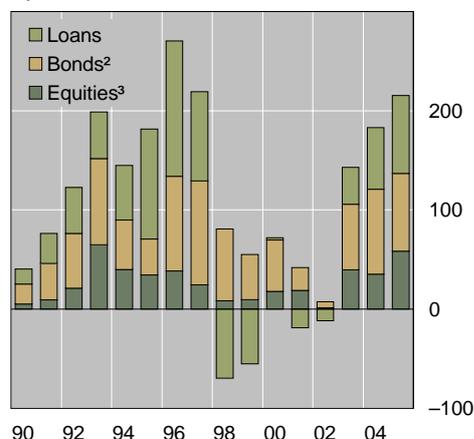
Investors' enthusiasm for emerging market assets stemmed in part from perceptions about the strength of fundamentals. Improvements in recent years in external positions, financial systems and fiscal and monetary policies have



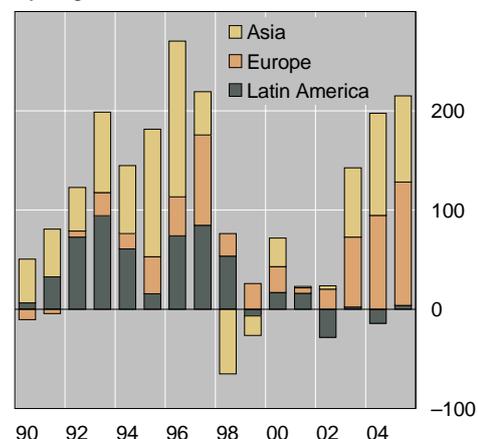
## Private capital flows to emerging markets

In billions of constant 2005 US dollars<sup>1</sup>

By instrument



By region



<sup>1</sup> Nominal amounts are converted to constant dollars using the US GDP deflator. <sup>2</sup> Non-bank lending. <sup>3</sup> Excluding foreign direct investment.

Sources: IIF; national data; BIS calculations.

Graph 1.2

made many emerging markets more resilient to shocks, thereby reducing the risks associated with emerging market investments. Indeed, in 2005, sovereign rating upgrades by Moody's outnumbered downgrades by a ratio of about 3:1. Symbolic of the changed fortunes of emerging markets, Brazil and Argentina in December 2005 used part of their rapidly accumulating foreign exchange reserves to repay in full loans from the IMF totalling \$25 billion.

Nevertheless, investor demand for emerging market assets seems stronger than can be explained by the improvement in fundamentals alone; investors' appetite for risk appears to be just as important a factor. In early 2006, sovereign spreads were tighter than ever before, yet sovereign credit quality was not as high as it once had been. The centre panel of Graph 1.3 plots the spread of JPMorgan's EMBI Global Diversified against Standard & Poor's rating of the sovereigns comprising the index, where the credit ratings are averaged using the same weights as applied to the spreads. The index closed at 197 basis points on 24 February, about 100 basis points below the previous record low reached in mid-1997, around the onset of the Asian financial crisis. By comparison, the weighted average credit rating of issuers in early 2006 was still slightly below its mid-1997 level.

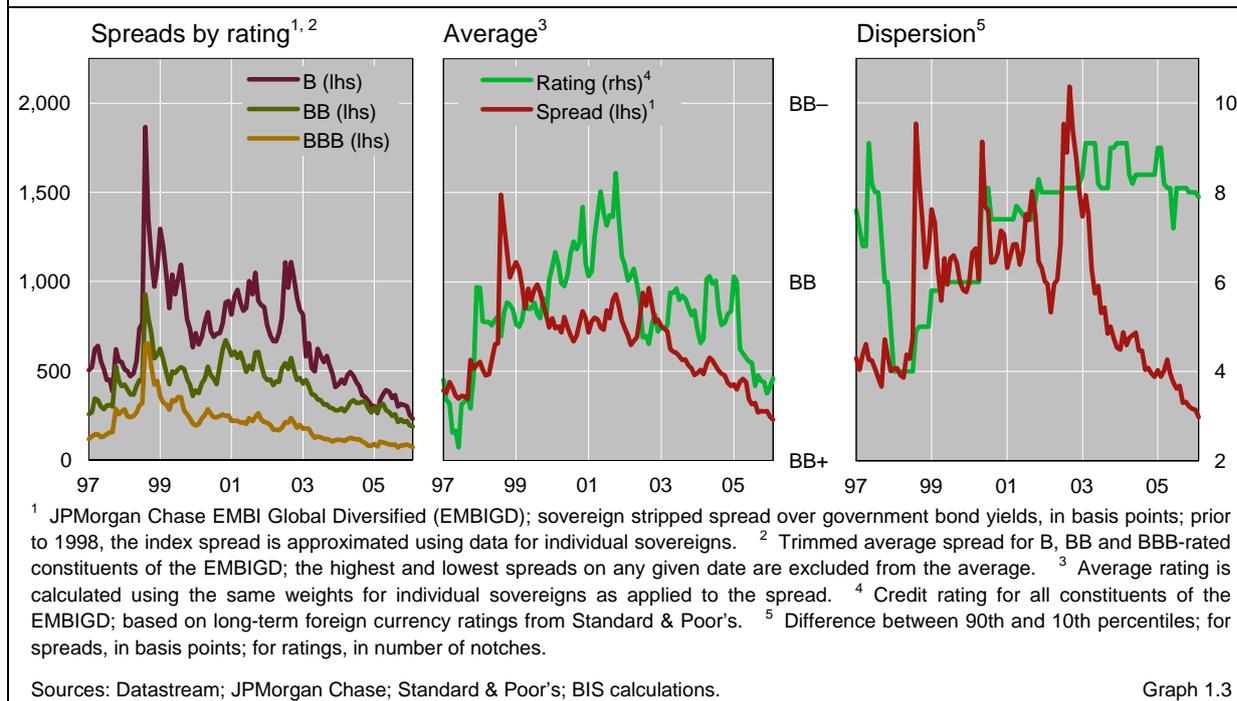
The decline in the average rating of sovereigns between 1997 and 2006 is illustrative of the improvement in lower-rated borrowers' access to international debt securities markets. For example, Ecuador, rated only Caa1 by Moody's and CCC+ by Standard & Poor's, raised \$650 million in the international bond market in late 2005 (see "The international debt securities market" on page 31). This better access seems in turn to reflect investors' willingness to take on additional risk in their search for higher nominal yields.

Even after controlling for the rating of the issuer, spreads in early 2006 were at historical lows. The left-hand panel of Graph 1.3 plots the average spread of B, BB and BBB-rated sovereigns, after excluding the highest and

The level and dispersion of spreads reach historical lows ...

## Emerging market bond spreads and credit ratings

At month-end



lowest spreads. In each rating category, the average spread in February 2006 was well below its mid-2005 level and even below the previous record lows reached in 1997.

In addition to the low level, the limited dispersion of bond spreads is equally suggestive of high appetite for country risk. The right-hand panel of Graph 1.3 plots the difference between the 90th and 10th percentile spreads and credit ratings for the thirty-odd sovereigns comprising the EMBI Global Diversified. In early 2006, sovereign spreads clustered together more closely than ever before. This raises questions about whether investors are discriminating sufficiently among borrowers. In fact, sovereign ratings remained widely dispersed, implying that there were important differences in the creditworthiness of the borrowers in the index.

... suggesting high appetite for country risk ...

To summarise, comparisons of emerging market spreads across time and with credit ratings suggest that investors' appetite for risk has helped to drive spreads to their current low levels. To be sure, such comparisons have their shortcomings. Credit ratings tend to be lagging indicators of creditworthiness, and the rating agencies may have changed their criteria over time, for example by giving greater consideration to liquidity risk and financial system strength after the Asian financial crisis. Also, the maturity and other characteristics of the index change over time. Nevertheless, to the extent that investors may have underpriced country risk, emerging markets could be vulnerable to a repricing.

... and increasing emerging markets' vulnerability to a repricing

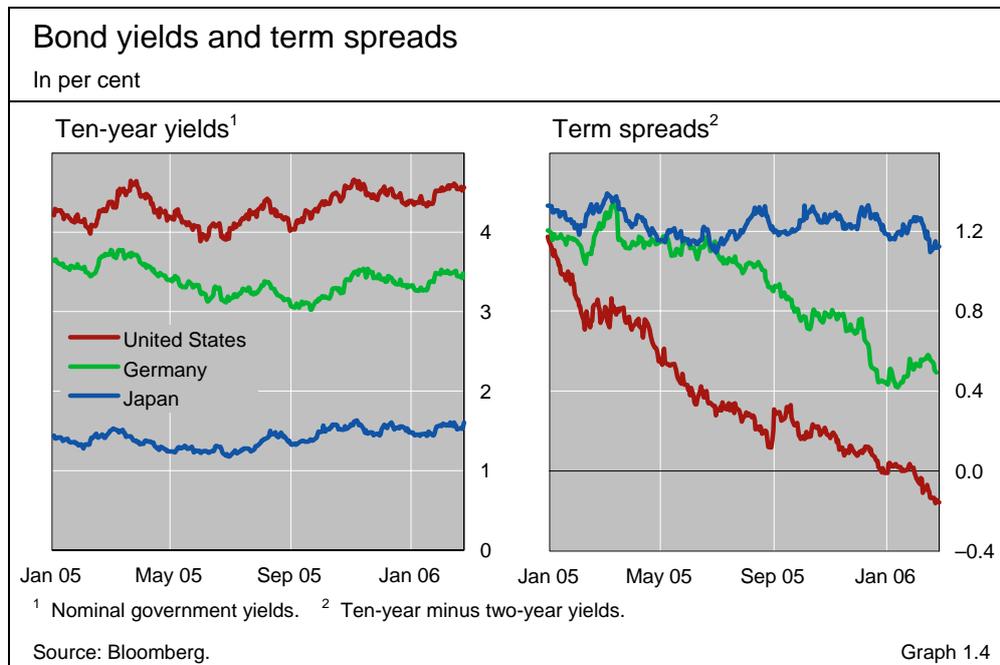
## Expectations of tighter monetary policy

Long-term yields in the major markets remained unusually low into the new year, despite increases in policy rates in the United States and the euro area. Although in recent months 10-year government yields have stayed above the lows reached in the summer of 2005, they have yet to surpass the highs reached in June 2004, prior to the first rate hike by the US Federal Reserve. On 24 February, the 10-year US Treasury yield stood at 4.6%, the yield on German bunds at 3.5% and the yield on 10-year Japanese government bonds at 1.6% (Graph 1.4).

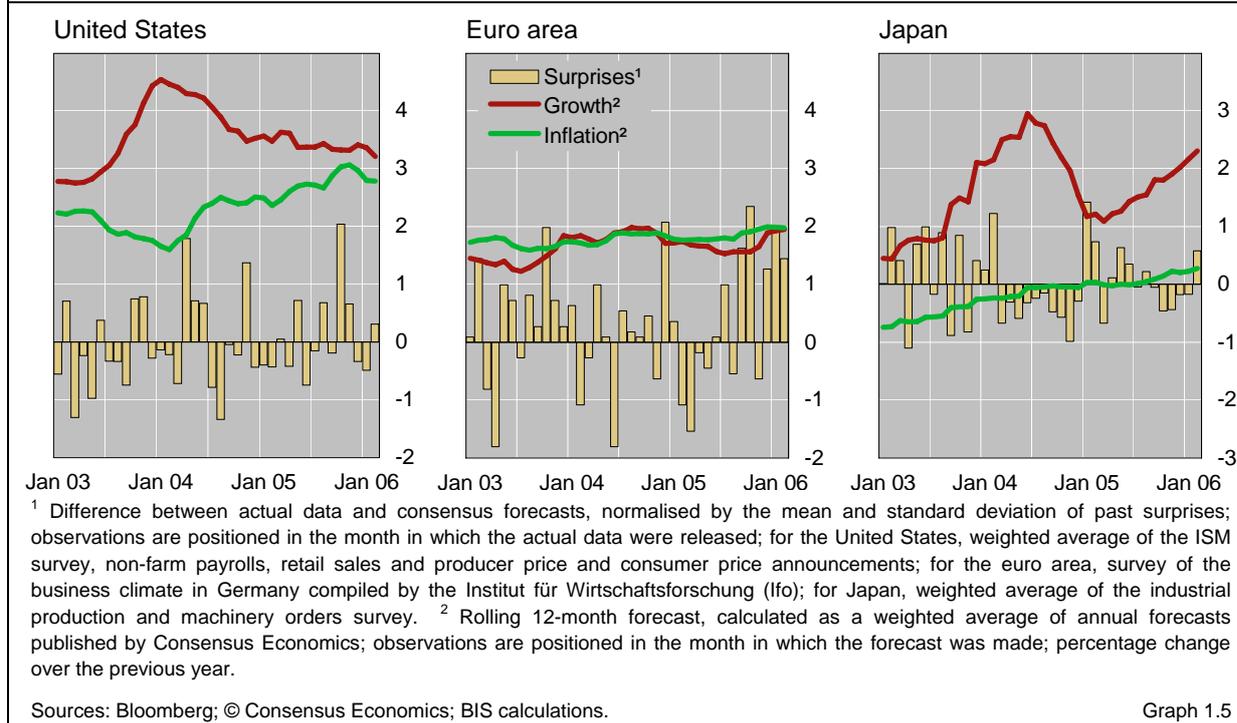
Yield curves flatten  
in late 2005

Yield curves continued to flatten in the final months of 2005. Declining inflationary pressures and a less upbeat outlook for growth in the United States led to a decline in the yields of 10-year Treasuries of roughly a quarter of a percentage point. In the euro area and Japan, government bond yields closely followed the US lead despite improved growth expectations (Graph 1.5). As long-term yields declined, short-term rates in the United States and the euro area edged upwards following rate increases by the Federal Reserve and the ECB. As a consequence, the widely watched spread between 10-year and two-year US Treasuries turned negative. The euro yield curve also flattened, but low policy rates prevented it from inverting.

In the past, an inversion of the yield curve had tended to predict an imminent recession, but this time market participants appeared to be more relaxed about the outlook for growth. Instead, low yields on long-term bonds were attributed primarily to a decline in the term premium, reflecting a lower inflation risk premium, and to strong purchases of Treasuries by foreign investors and pension funds.



## Macroeconomic news



Yields on the benchmark 10-year Treasury note reached their lowest point at 4.3% ahead of the CPI release on 18 January. Although core inflation came in as expected, this marked the beginning of an upward trend in US yields. Yields were supported by a string of positive news about economic activity in early February, which caused market participants to revise their expectations concerning the future path of policy rates. At the time of writing, they appeared to expect the Federal Reserve to raise rates to around 5% by mid-2006, with a slight possibility of easing towards the end of the year.

Dollar yields rise in early 2006 on revised expectations about monetary policy

On 9 February, the US Treasury reintroduced 30-year bonds, whose issuance had been discontinued in 2001. The auction revealed a high demand for the long bond, which was reflected in a yield slightly below that of the on-the-run 10-year note. Also, the share of indirect bidders was larger than anticipated, suggesting high demand by US institutional and foreign investors. An inversion of the very long end of the yield curve has also been observed in a number of other countries, most prominently the United Kingdom. It appears to be due mainly to a high demand for very long bonds by pension funds rather than an expected decline in trend growth several decades ahead (see box on page 7). Several governments have begun to take advantage of these favourable terms and issued bonds with maturities of up to 50 years.

In the euro area, yields closely followed the US market during the second half of January and rose by approximately one quarter of a percentage point to 3.5%. As in the United States, high issuance of government paper may have contributed to the increase in yields, although the effect is difficult to quantify. In February, yields were quite volatile, as releases showing lower than expected fourth quarter growth in Germany and France alternated with more

Euro yields follow dollar yields

## Pension funds and the decline in long-term yields

The persistence of low long-term nominal yields in an environment of robust economic growth has puzzled many market participants and observers. Yields have been especially low at maturities beyond 10 years. One explanation sometimes offered is that demand from institutional investors, in particular pension funds, is exerting downward pressure at the very long end of the yield curve. This possibly reflects a feedback effect, whereby low interest rates encourage still more bond purchases by institutional investors. This box examines how such a feedback mechanism appears to operate in the United Kingdom – where ultra-long-term yields are extremely low – and the degree to which it might be present in other markets.

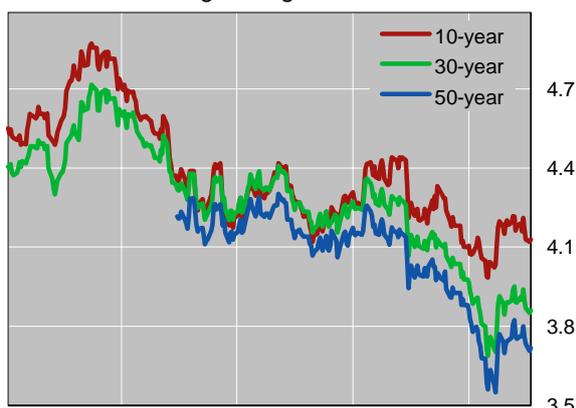
In the United Kingdom, 30-year government bonds (gilts) have for years traded at yields below those of 10-year paper, and 50-year gilts at even lower yields (see the left-hand panel of the graph below). It is commonly acknowledged that efforts by pension funds to reduce existing mismatches between the duration of their assets and that of their liabilities, through purchases of ultra-long-term bonds, have contributed to the fall in yields. But as yields have declined, pension funds' liabilities have risen, increasing further the demand for long-dated paper and triggering further declines in yields.

This feedback effect has been particularly pronounced in the gilt market for two reasons. First, UK Minimum Funding Requirement (MFR) Regulations and financial reporting rules specify that market yields are to be used to compute the present value of future pension benefits, thereby making pension funds' liabilities very sensitive to changes in yields.<sup>Ⓞ</sup> Second, companies prefer to minimise fluctuations in the funded position of their pension plans because of the requirement that funding levels be reported on their balance sheets. Market participants, and in consequence companies, have in recent years become especially sensitive to the potential costs of underfunded plans, after companies experienced large losses on their equity portfolios in the early 2000s just when their liabilities were being boosted by the combination of an ageing workforce and increasing life expectancy. One way UK companies have sought to reduce the volatility of their pension plans' funding levels is to shift from equities into long-term bonds. Another way is by shifting away from defined benefit pension plans and towards defined contribution plans.

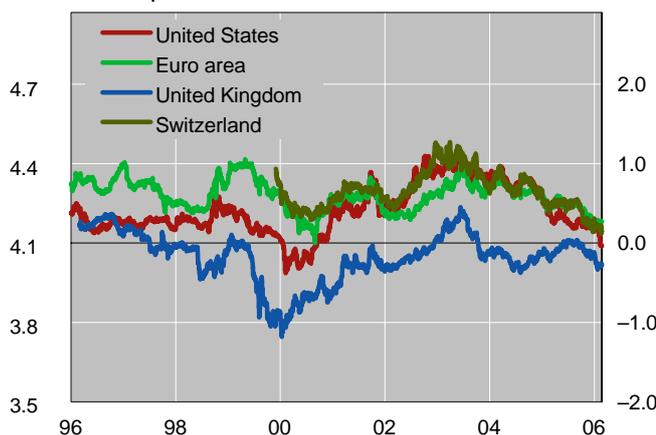
### Government bond yields and term spreads

In per cent

Yields on UK long-term gilts



Term spreads<sup>1</sup>



Jan 05 Apr 05 Jul 05 Oct 05 Jan 06

<sup>1</sup> Thirty- minus 10-year yield.

Source: Bloomberg.

<sup>Ⓞ</sup> The MFR Regulations use bond yields to discount benefits to be paid to current pensioners, and a weighted average of bond and equity yields for benefits of active workers close to retirement. The accounting standard FRS 17 prescribes the use of bond yields to discount benefits irrespective of the current status of the claimant.

In a number of markets outside the United Kingdom, ultra-long-term yields are also very low. Thirty-year government bond yields are close to or slightly below 10-year yields in the United States, the euro area and Switzerland (see the right-hand panel of the graph on the previous page). Are feedback effects also important in these markets? Some of the elements present in the United Kingdom are present in other countries, such as minimum funding requirements. However, other elements tend to moderate the short-term impact of interest rates on reported funding levels. For example, in the Netherlands, funding requirements are more stringent than in the United Kingdom. Yet, higher funding levels and the use of an interest rate fixed by statute rather than market yields to discount pension liabilities have so far permitted Dutch pension funds to operate with a relatively low asset duration of approximately six years (which roughly corresponds to the average duration of the euro area government bond market). In the United States, many corporate pension schemes are underfunded and future benefits are discounted using market rates. However, some smoothing of rates is allowed when valuing balance sheet assets and liabilities. Looking forward, differences between the UK and other systems may narrow, at least if proposals in the Netherlands and the United States that include a greater reliance on (unsmoothed) market rates to discount future benefit payments are implemented. It is possible that pension funds in these countries have already altered their behaviour in anticipation of some of these changes.

One way to reduce the importance of feedback effects is to increase the supply of long-term and ultra-long-term bonds, which can create countervailing pressures on the long end of the yield curve. Already governments and corporations have responded to the low level of long-term yields by increasing their issuance of 30- and 50-year bonds. However, there are limits to how much long-term debt governments and corporations can issue if they want to keep a balanced maturity structure of their liabilities.

positive news on industrial production and confidence. Yields on the benchmark 10-year Bundesanleihe declined by almost 10 basis points on 9 and into 10 February, but recovered most of their losses later on the 10th after speeches by ECB Governing Council members drew attention to the inflationary risks associated with high oil prices and credit growth. Market participants took this as a sign that the ECB would raise the minimum bid rate to 2.5% at the Council meeting on 2 March and further later in the year.

Yields on 10-year Japanese government bonds (JGBs) increased to 1.6% in mid-February on expectations that deflation had finally been overcome. Yields jumped by 4 basis points on 27 January after consumer price inflation moved more firmly into positive territory. They also rose on 10 February, after the Governor of the Bank of Japan indicated that inflation data would factor more prominently into future discussions of the appropriate policy stance. In the past, the Bank of Japan had indicated that a sustainable increase in consumer prices was a precondition for abandoning the policy of quantitative easing, although such a shift would not necessarily entail raising interest rates. At the time of writing, market participants seemed to expect quantitative easing to be abandoned early in the second quarter of 2006, although they believed that policy rates might remain low for some time to come.

Yen yields rise on signs of an end to deflation

The impact of an anticipated policy shift on yields was in part offset by downward pressure from safe haven flows owing to sharp price movements in the stock market. For instance, yields on 10-year JGBs declined markedly on 13 February, as equities fell on concerns about high valuations. These countervailing influences on yields were also reflected in a rise in the implied volatility of options on JGB futures in January and February, although it remained far below the levels seen in 2004.

## Trading system in Tokyo comes under strain

Equity prices in the major markets had a lacklustre start to the new year. After rallying in the final quarter of 2005, markets struggled to find direction in the early part of 2006, dropping sharply on some days, only to recover their losses on subsequent days. In the eight weeks to 24 February, the S&P 500 was up 3% and the TOPIX was unchanged (Graph 1.6). The DJ EURO STOXX eventually found some momentum, rising 8%.

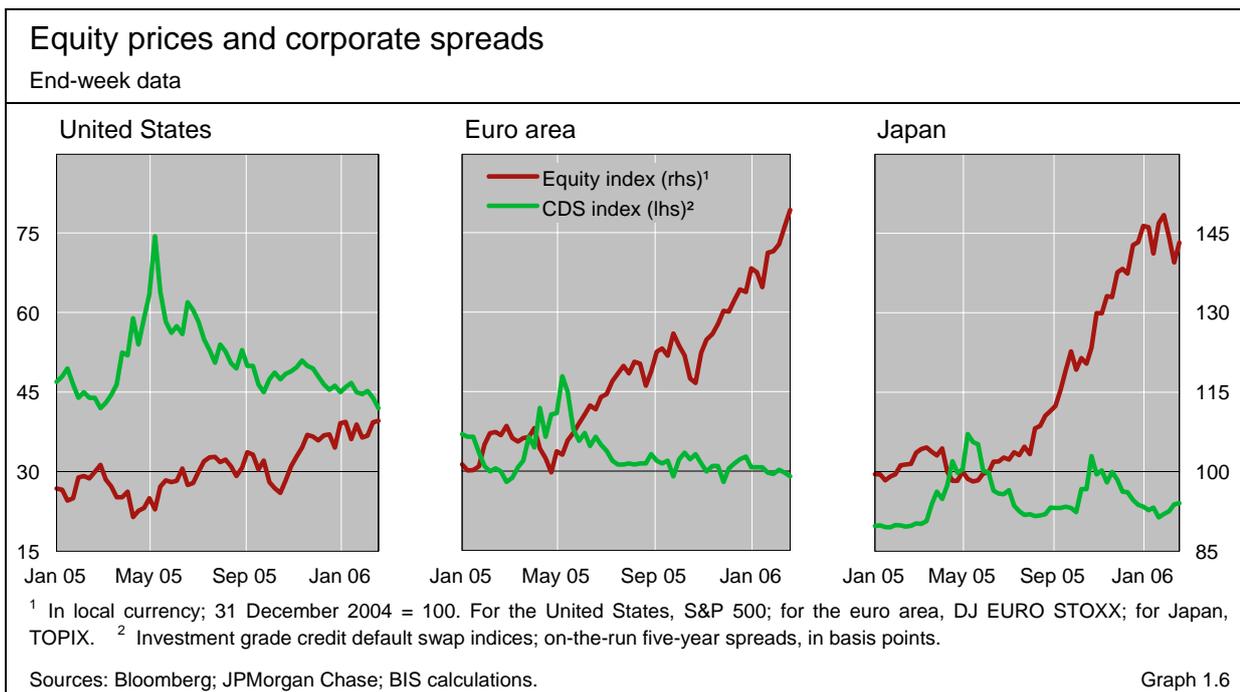
Uncertainty about earnings weighs on equities ...

Uncertainty about the outlook for corporate profits initially put downward pressure on prices. The 15% increase in oil prices between mid-December and mid-January contributed to this uncertainty, as did disappointing earnings reports from several prominent companies, including Yahoo!, Intel, Citigroup and General Electric. Investors' loss of confidence culminated in a 1.8% drop in the S&P 500 on 20 January, the largest daily decline since 2003. Many other markets fell in tandem with the S&P 500, although not as sharply.

Notwithstanding greater uncertainty, investors on balance remained optimistic about the prospects for the corporate sector, especially in Europe. Since mid-2005, analysts have raised their earnings forecasts for an increasing number of European companies (Graph 1.7). In the United States, the number of companies whose earnings forecasts were raised is no longer trending upwards, but nor is it declining. This helped to put a floor under equity prices.

... but implied volatility stays low

With the exception of Japan, the volatility in major equity markets in January and February did not result in much of an increase in implied volatility (Graph 1.8). Implied volatility remained close to its historical low, in the United States especially. Investors apparently viewed events during the period as temporary shocks and not as portents of a future increase in volatility. Moreover, indicators of risk appetite derived from the prices of equity index options suggest little change in investors' willingness to take on equity risk (Graph 1.8).



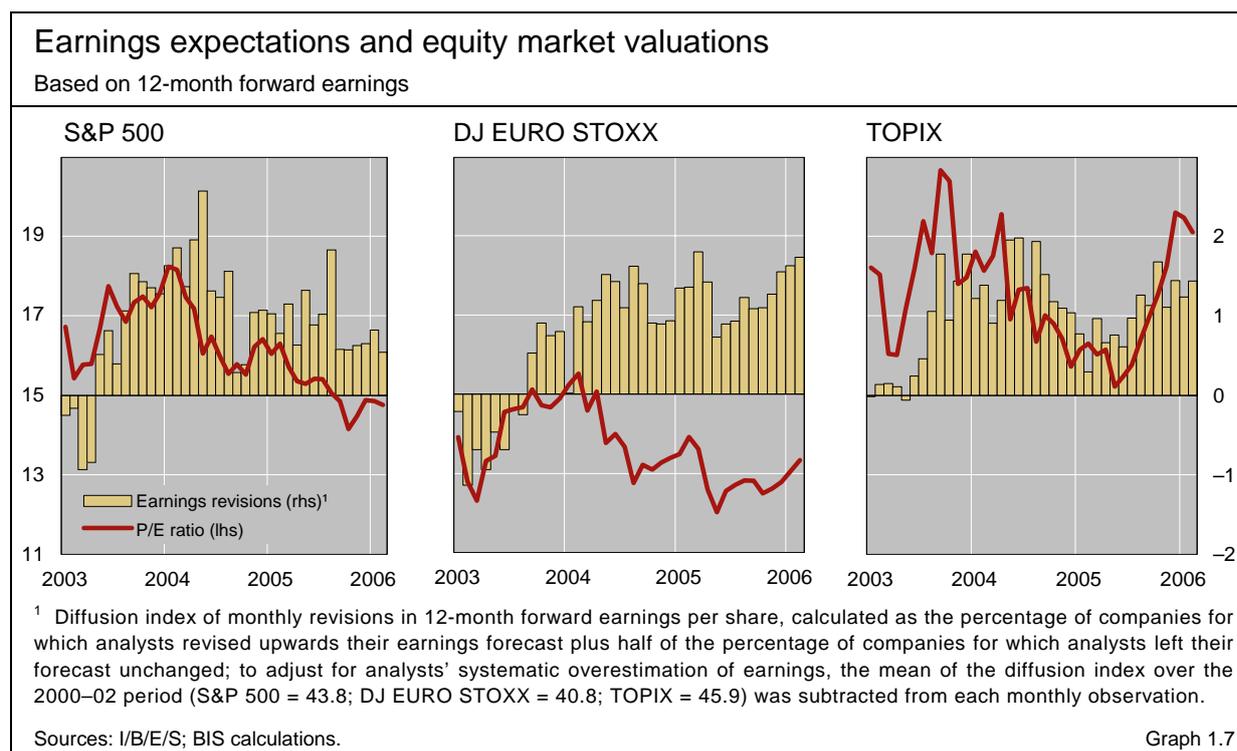
On the Tokyo Stock Exchange, volatility was amplified in January by disruptions to the normal functioning of the market. Allegations of securities fraud at the internet company Livedoor led to a sharp drop in the TOPIX in mid-January. When the sell-off began on 17 January, it was initially limited to the company under investigation; between the open and the midday break, the TOPIX in fact rose. However, in the afternoon of 17 January the sell-off spread to all Japanese companies, including blue chips such as Toyota, and the TOPIX ended the day down 2.3%. Selling pressure intensified the next day, and at one point the TOPIX was down almost 6%. The market rebounded towards the close on 18 January, ending the day down 3.5%.

Brief sell-off in Tokyo after investigations into an internet company ...

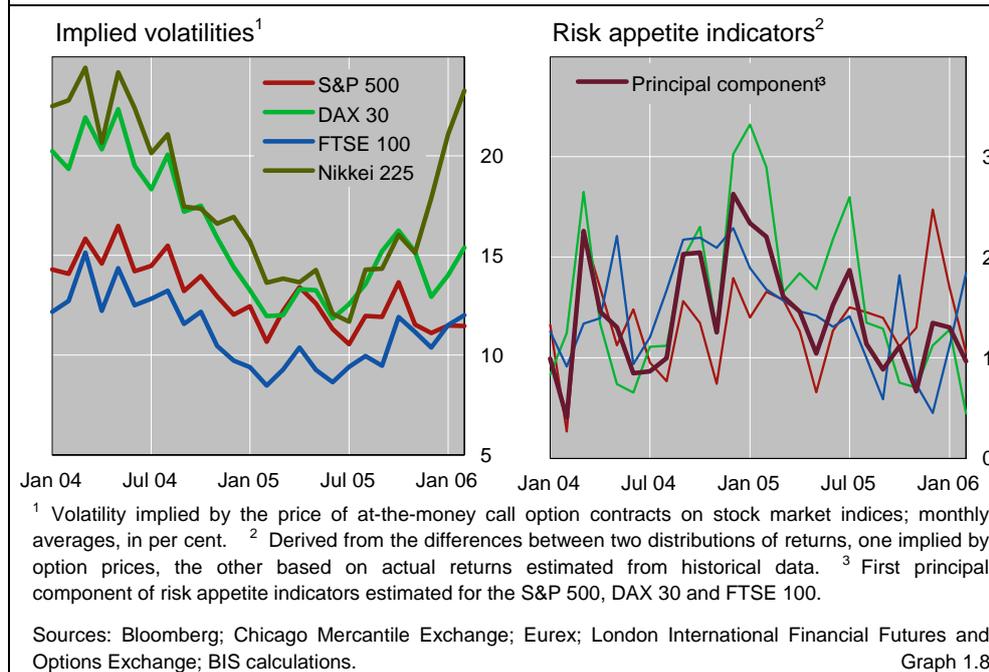
One explanation for why a seemingly idiosyncratic shock had market-wide repercussions was that high valuations had sensitised investors to any negative news. The 40% run-up in the TOPIX in the second half of 2005 had greatly outpaced the increase in forecast earnings. As a result, the price/earnings multiple for the TOPIX rose from about 15 in June 2005 to almost 20 by the end of the year (Graph 1.7). Owing to such high valuations, investors became increasingly uncertain about the future direction of the TOPIX, as reflected in the upward trend in implied volatility (Graph 1.8).

... as investors grow nervous about high valuations

Margin calls also appeared to exacerbate the sell-off in Tokyo. After the allegations, liquidity in Livedoor's shares evaporated; there were no buyers at the price determined by the exchange's limit on daily price changes. A number of leveraged investors thus sold other assets to meet their brokers' minimum collateral requirements. The resulting surge in sell orders, coupled with an increase in buy orders from investors attracted to the market by the sharp price decline, was more than the TSE's trading system could handle. In consequence, the exchange closed early on 18 January for the first time in its history. The possibility of an early closing may have contributed to the sell-off,



## Volatility and risk appetite in equity markets



as investors reportedly rushed to place orders before the close. Nevertheless, the events surrounding Livedoor had only a short-lived impact on investors' optimism, and the Tokyo market rallied to new highs in late January.

Japanese equity prices were eventually reined in partly by the possibility that the Bank of Japan might end its quantitative easing policy sooner than previously expected. In the week after the monetary policy meeting of 8–9 February, the TOPIX fell by 3% as senior central bank officials expressed confidence in the outlook for the economy and inflation.

## Corporate borrowing accelerates

Rapid pace of mergers and acquisitions ...

In credit markets, event risk, in the form of shareholder-friendly actions, continued to loom large. In recent months there has been no let-up in the rapid pace of mergers and acquisitions (M&As), including leveraged buyouts (LBOs). Acquisitions totalling \$3.2 trillion were announced in 2005, up almost 30% from 2004 and the highest level since 2000 (Graph 1.9). More worryingly for credit investors, LBOs in 2005 reached their highest level since the buyout frenzy in the late 1980s – a frenzy which contributed to a sharp increase in corporate defaults soon afterwards. Furthermore, in contrast to the 1980s, the recent increase in LBO activity was not limited to the United States. Indeed, more than half of all deals involved firms outside the United States, mainly in Europe but also in Asia.

Partly as a result of the spate of acquisitions, corporate borrowing has accelerated in recent quarters. In the United States, net new borrowing by non-financial corporations rose to its highest level in four years (Graph 1.10). In Europe, bank lending to non-financial corporations rose by about 8% between

end-2004 and end-2005, although bond issuance remained subdued. In Japan, repayments exceeded new borrowing by the smallest margin in a decade.

The acceleration in M&A activity and corporate borrowing has had a relatively benign impact on corporate financing conditions to date. To be sure, events in the first half of 2005 had dampened somewhat investors' appetite for credit risk, in particular for US credit risk, and had contributed to a widening of corporate spreads from their cyclical lows (Graph 1.6). Nevertheless, investors' willingness to take on credit risk remained high, and in the early weeks of 2006 corporate bond and credit default swap spreads traded within a narrow range not far above their cyclical lows.

... has a benign impact on corporate spreads

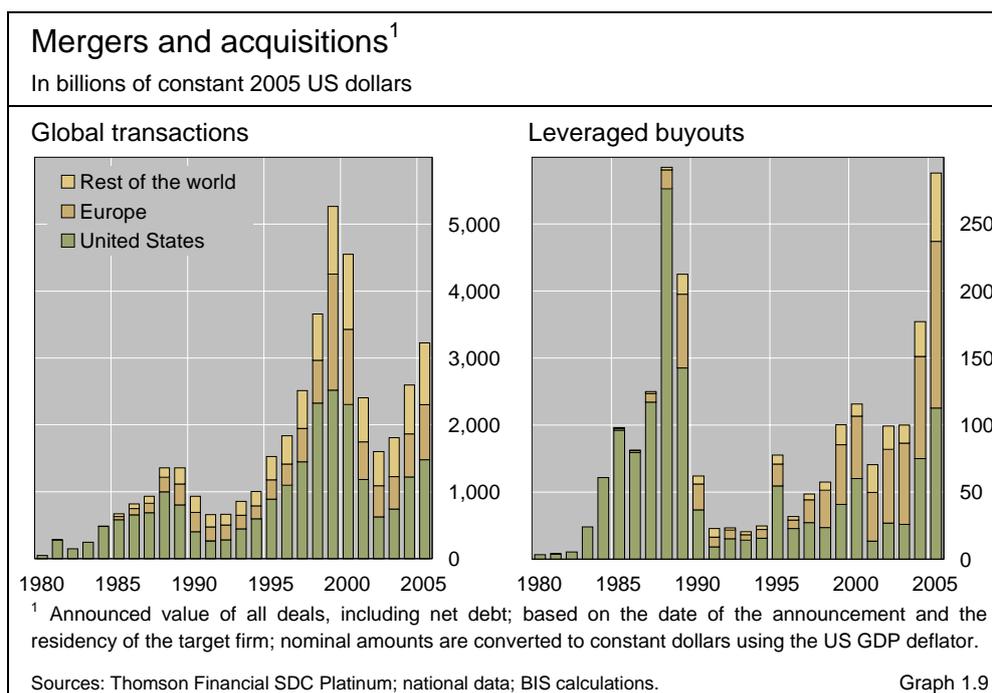
Investors' apparent confidence reflects, in part, perceptions that firms' financing activities had not noticeably undermined their creditworthiness. The pickup in borrowing was partly cyclical, driven by investment and working capital needs. In addition, it was accompanied by strong earnings growth. Moreover, some industries stand to benefit from further consolidation, especially in Europe and Japan, and so acquisitions could strengthen the financial position of companies in these industries. Furthermore, the premium over the target company's equity price in 2005 was more or less unchanged from the previous year and was well below the premium paid by companies at the peak of the last wave of deal-making. Finally, default rates stayed exceptionally low. Defaults fluctuated around 2% throughout 2005, defying most analysts' initial expectations of an increase (Graph 1.10).

Default rates stay low ...

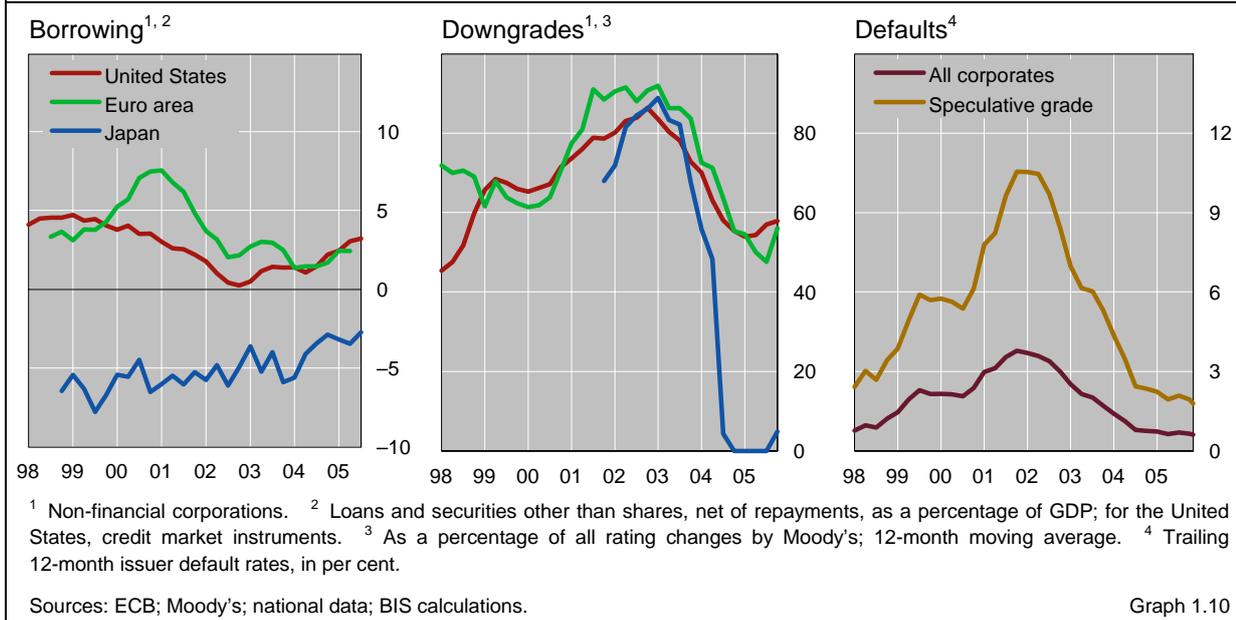
Indications of pressure on corporate credit quality are emerging, however. For example, downgrades of non-financial corporations inched upwards as a percentage of all rating actions in 2005, not only in the United States but also in Europe (Graph 1.10).

... but signs of a deterioration in credit quality are emerging

Moreover, it is possible that M&A activity will not have such benign consequences for creditworthiness going forward. Private equity funds enjoyed



## Corporate credit quality



record inflows in 2005, with two funds alone raising more than \$10 billion each. As these funds compete with companies for acquisitions, the premium paid is likely to rise. Hedge funds are also increasingly competing to take companies private, attracted by the high returns earned by private equity funds in recent years. Furthermore, the capital now available to private equity funds puts them in a better position to bid for companies previously thought to be too large to be an LBO target. Already in 2005, private equity investors concluded a handful of deals in excess of \$10 billion, including the LBO of Danish telecoms company TDC in November for \$12 billion. Finally, private equity investors have been ratcheting up leverage ratios.

