

## Overview: markets anticipate an orderly slowdown

While at times sending mixed signals, markets appeared to be largely optimistic about global economic prospects and the likelihood of a soft landing for the US economy. Prices of risky assets increased in most markets from September to late November. In contrast, government bond yields struggled to find direction as investors reacted to conflicting news about growth prospects and the outlook for monetary policy, in particular in the United States.

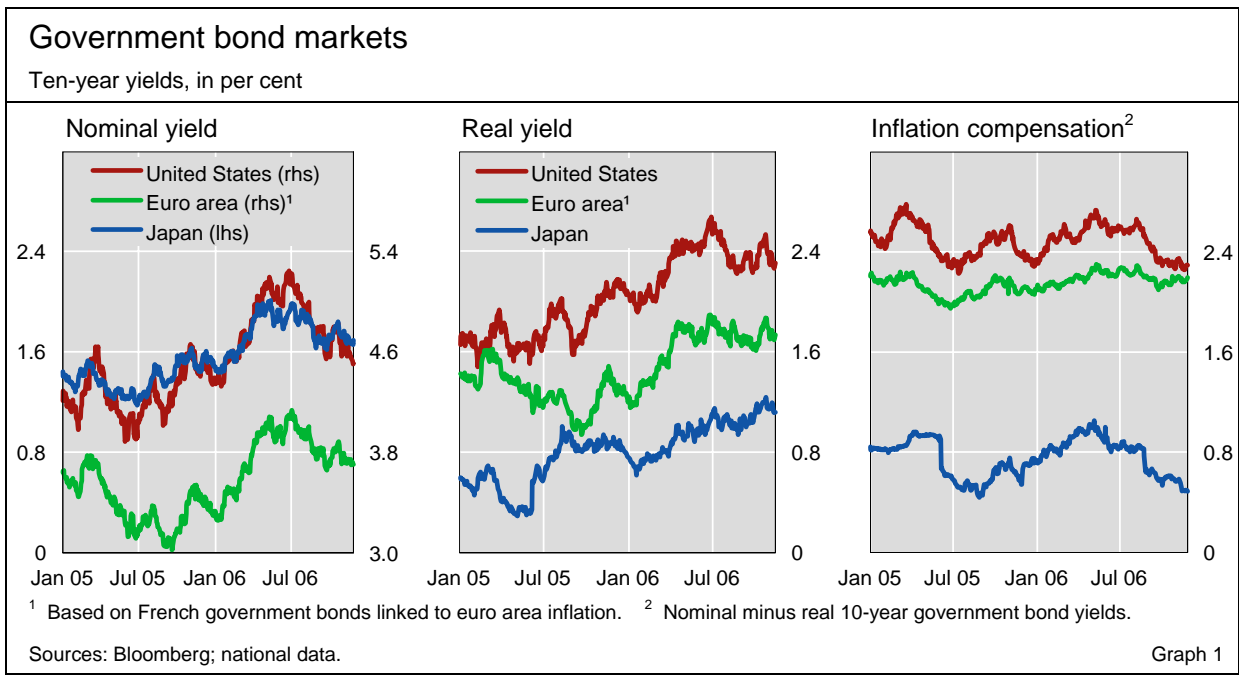
This general confidence could also be discerned in the behaviour of a number of other market indicators. In mid-November, implied volatilities in bond and stock markets reached their lowest levels in years, while measures of risk appetite showed that the retrenchment by investors after the sell-off in May and June had been largely reversed. Not even events such as the reported \$6 billion loss by a large hedge fund or several instances of political instability in emerging markets in September seemed to dent investors' confidence.

The overall positive sentiment among market participants was briefly tested in late November, when sharp movements in the foreign exchange market and a string of data surprises led to abrupt declines in many risky asset prices. While losses in many markets were subsequently largely recouped, implied equity market volatilities at end-November remained above earlier levels, albeit low by historical standards.

### Bond yields struggle to find direction

Following a period of falling yields in the government bond markets of the United States, the euro area and Japan, long-term interest rates seemed to bottom out in September 2006, and have since remained within a range. At end-November, the US 10-year yield stood at 4.5%, around 20 basis points lower than at the end of August, while the corresponding euro area and Japanese yields were little changed during the same period, standing at 3.7% and 1.7%, respectively (Graph 1, left-hand panel). With short-term policy rates unchanged, the fall in US long-term bond yields translated into a steeper inversion of the US yield curve. Meanwhile, the euro area yield curve remained flat, while the Japanese curve continued to display an upward slope. The fall in US nominal yields was almost fully reflected in lower break-even inflation rates, with real yields little changed despite some volatility during the period (Graph 1, centre and right-hand panels). In Japan, the stability of nominal

A steeper inversion  
of the US yield  
curve



yields masked a rise in real long-term interest rates and an offsetting fall in break-even inflation, while euro area real yields and break-even rates both remained generally stable.

As had been the case for much of the year, the outlook for global growth and monetary policy played a key role for short-term interest rates as well as long-term bond yields. This was particularly evident in the US market, where economic data releases alternately seemed to provide support for the view that policy rates would be eased relatively quickly and for the perception that the Federal Reserve would remain on hold for a prolonged period. The fed funds futures curve, which at the end of August had been sharply downward-sloping, shifted up considerably in the second half of October, with bond yields rising in parallel, on the heels of favourable employment news (Graph 2, left-hand panel). Renewed downward pressure on fed funds futures rates and bond yields ensued after the FOMC interest rate decision on 25 October, which left policy rates unchanged. While the decision was widely expected, the accompanying statement was less hawkish than anticipated by many investors.

Conflicting news on US growth prospects

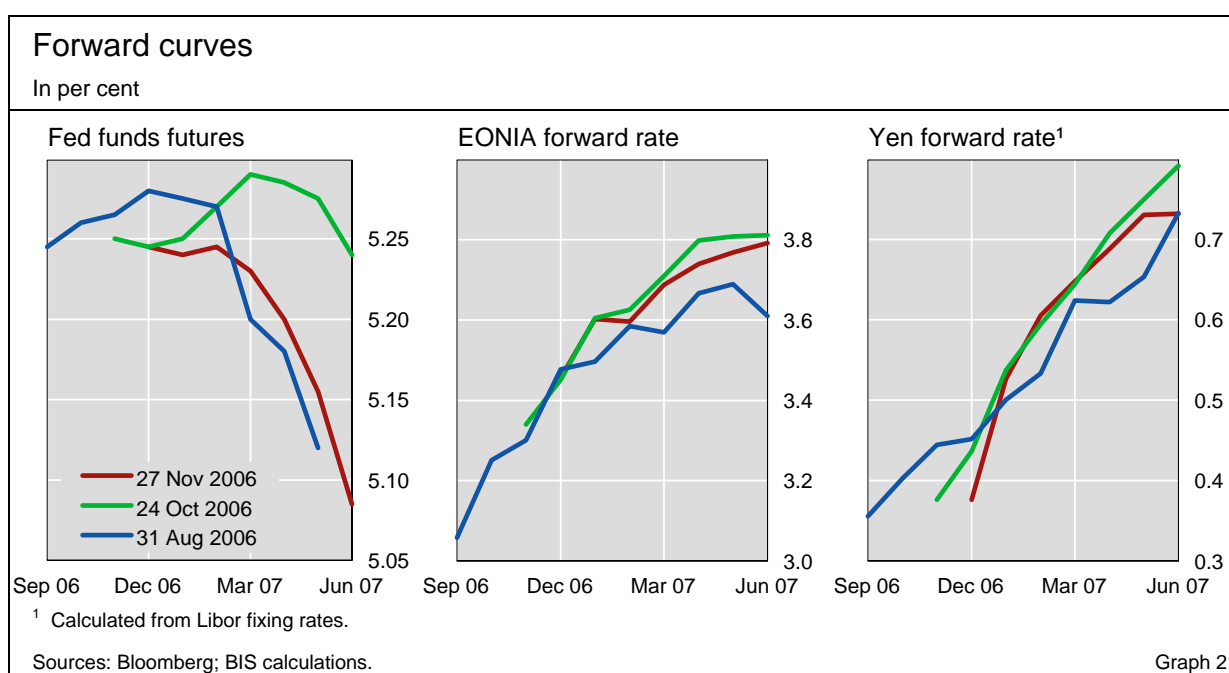
Real US long-term yields on index-linked bonds experienced a similar roller-coaster ride in September–November, as investors continuously reassessed the likelihood of a severe economic slowdown in the United States. The sharp downswing in the housing market, in particular, fuelled concerns that the US economy might be heading for a recession. The inversion of the yield curve – traditionally a reliable indicator of a forthcoming recession – appeared to support this view. Data revealing slower than expected third quarter GDP growth and weakening consumer confidence added to this. However, other signs seemed to favour the view that the US economy would experience a soft landing, ie gradually slow down without entering a recession. Contributing to this perception was the apparently limited fallout of the housing slump on consumption and consumer confidence. Moreover, declining oil prices, a booming stock market and a strong corporate sector were expected to provide

vital support for the economy if the situation in the housing market were to deteriorate further. In line with this, though survey expectations for 2007 GDP growth continued to be revised downwards, they remained well above recession territory (Graph 3, left-hand panel).

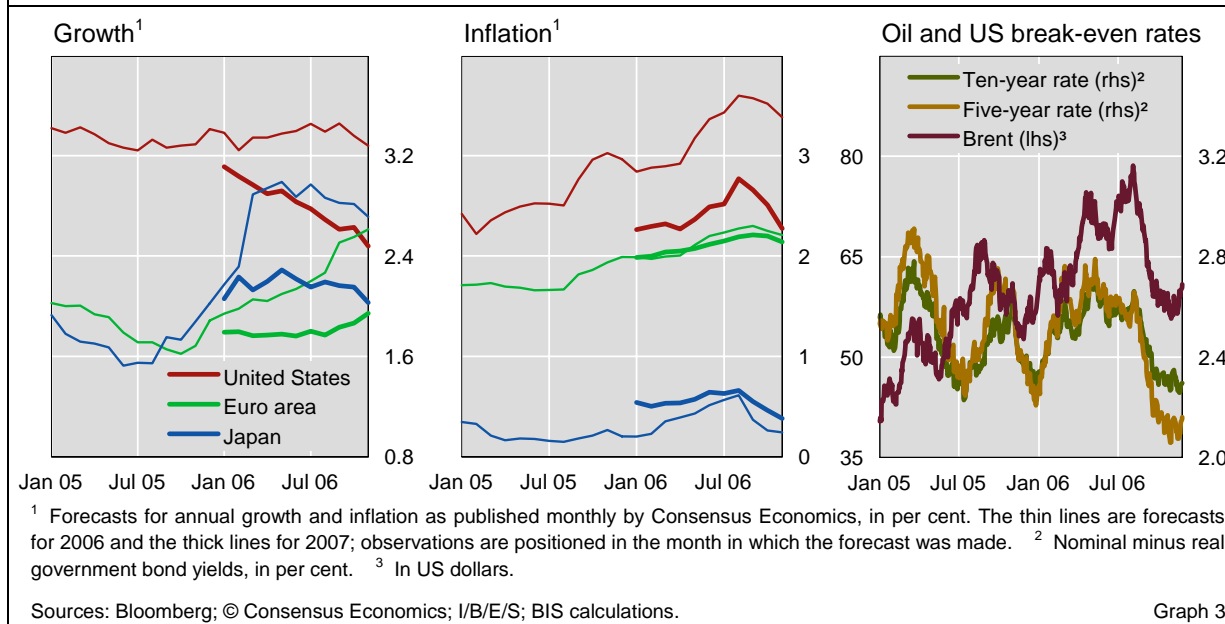
EONIA forward rates rise as euro area growth prospects brighten

In the euro area, long-term real yields were little changed between end-August and end-November while the implied EONIA forward rate curve shifted slightly upwards. The rise in euro area forward rates took place in an environment of positive data surprises that led market economists to upgrade their expectations for 2007 GDP growth (Graph 3, left-hand panel). Second quarter euro area GDP growth, at 2.7% year-on-year, exceeded investor expectations, and a string of data releases showed that the German economy, in particular, displayed surprising strength. The upbeat picture was to some extent balanced by concerns that growth in 2007 could be dampened by a number of factors, including the planned German VAT increase, expected fiscal consolidation in a number of euro area countries and lagging effects of past ECB rate hikes. Figures released in early November showing that the French economy had unexpectedly experienced zero growth in the third quarter, and that euro area GDP at the same time had grown at a slower pace than anticipated, were seen as a warning sign of possible negative growth surprises to come, although they, too, only had a minor impact on yields.

In Japan, the 10-year nominal bond yield remained broadly stable between end-August and end-November, as a result of a rising real yield and an offsetting drop in the break-even inflation rate. These developments took place in an environment where official data releases painted a mixed picture with respect to economic activity, and where survey forecasts for growth next year were slightly downgraded in September and October. The Japanese forward short-term interest rate curve changed little as investors seemed to maintain their wait-and-see position with respect to the Bank of Japan's next move (Graph 2, right-hand panel). Comments in early November by the



## Macroeconomic outlook, oil price and break-even inflation



Governor of the Bank of Japan, which were interpreted as suggesting the possibility of a second rate hike before the end of the year, had little impact on short-term interest rates. Unexpectedly strong third quarter GDP figures released in mid-November were seen as a favourable sign by investors, and resulted in rising Japanese interest rates on the day of the release.

The sharp fall in oil prices in September and October seemed to play a key role for developments in break-even inflation rates in major markets. This was perhaps particularly evident in the case of the United States. As expected, the effect of declining oil prices was especially pronounced at short- to medium-term horizons: the five-year US break-even inflation rate fell by almost 50 basis points from mid-August, when oil prices peaked and began their rapid slide (Graph 3, right-hand panel). Some effect of the decline in oil prices was also seen in US and Japanese 10-year break-even rates, but less in euro area 10-year break-even rates. However, shorter-maturity euro area rates fell considerably: the five-year break-even rate declined by almost 20 basis points between mid-August and end-November.

Apart from oil prices, the decline in US and Japanese break-even rates seemed to reflect perceptions among investors that price pressures would ease more generally. In the case of the United States, the Federal Reserve's series of past rate hikes and the gradual slowdown of the economy were increasingly seen as restraining consumer price increases. Incoming data largely supported this view, with headline inflation figures surprising on the downside. Core inflation measures displayed less downward momentum, however, indicating that underlying inflationary pressures persisted. Surveys released in September, October and November indicated that expectations for US CPI inflation in 2007 had been revised downwards, reversing the direction that such revisions had taken during most of 2006 (Graph 3, centre panel). In Japan, the fall in break-even inflation appeared to partly reflect continued adjustments of

Break-even rates decline as oil prices fall ...

... and price pressures ease

inflation expectations among investors, following the downward revision of Japan's CPI statistics in late August.

## Strong profits boost equity markets

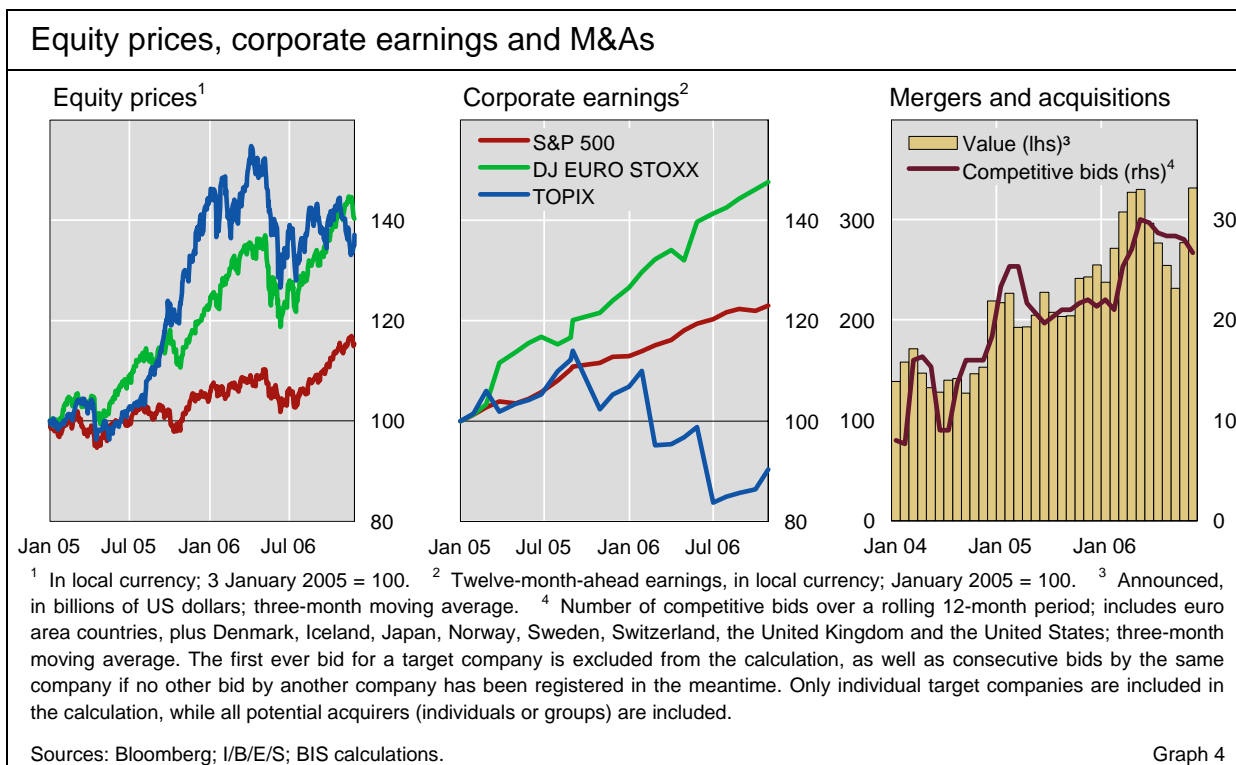
The ups and downs in the bond market bore little relation to developments in equities, which rallied in most countries during the summer and autumn. By the end of November, the EURO STOXX had increased by almost 20% from its trough in June 2006, after the spring sell-off, while the S&P 500 had gained 13% (Graph 4, left-hand panel). The Japanese market put in a more mixed performance: equity prices fluctuated widely during the period under review, and remained well below their peak prior to the sell-off.

US equities rally despite reduced growth forecasts ...

In contrast to the euro area and Japan, where equity prices largely mirrored changes in the outlook for economic growth, equities rallied in the United States in the face of declining growth forecasts. Admittedly, stock prices in the United States were not insensitive to macroeconomic data releases, but there were signs that traders were putting less weight on such information as time progressed. For example, the S&P 500 fell by almost 1% in the two hours following the announcement of a larger than expected decline in US industrial production on 17 October, whereas two weeks later it dropped by only one third of a percentage point after a release indicating that non-farm productivity increased at a much lower and unit labour costs at a far higher pace than expected by analysts.

... as corporate earnings remain strong

In general, US equities took consolation from the fact that the slowing of GDP growth had a much smaller effect on corporate profits than previously expected (Graph 4, centre panel). Although stock analysts cut their earnings forecasts for US corporates by a small amount in October, higher than usual



surprises in third quarter profits led them to increase their predictions in the following month.

Strong merger and acquisition (M&A) activity continued to support equity prices, too. The volume of announced takeovers reverted to its previous high (Graph 4, right-hand panel), after pausing during the summer. The M&A boom was in part due to a number of very large deals by private equity funds. A bid by Blackstone Group for the US-based commercial real estate firm Equity Office Property Trust in mid-November could become the largest leveraged buyout ever if the transaction is completed. The number of competitive bids, ie rival bids for the same target, declined in the United States but remained near its previous level in Europe and Japan. Competitive bids presumably have a larger impact on stock prices than uncontested bids.

Support from M&A activity

In contrast to other advanced markets, Japanese equities did not fully recover their losses of the early summer, when analysts had sharply cut their earnings forecasts. While most sectors in Japan lagged their US and euro area peers, the underperformance was largest for financial stocks, which in late November traded at prices 30% below their peak in May. Bank stocks in particular are viewed by many market participants as investments which are very sensitive to cyclical economic conditions. They therefore profited disproportionately from high economic growth earlier this year, but also fell more than other sectors when questions about the sustainability of such growth figures emerged. This high sensitivity to macroeconomic conditions became apparent once again on 14 November, when the stocks of Japanese banks rose by more than 3%, almost twice as much as the market as a whole, after the announcement of higher than expected third quarter GDP figures. However, these gains evaporated within a week when a large bank revealed lower than expected profits for the second quarter of the financial year.

Weak bank stocks contribute to underperformance of Japanese equities

## Structured product issuance drives down CDS spreads

Corporate credit markets in the United States and Europe were less buoyant than equity markets during the summer and autumn. Bond spreads tightened but, with the exception of euro-denominated high-yield debt, generally remained above levels seen prior to the May–June sell-off (Graph 5). Spreads on credit default swaps (CDSs) declined more than bond spreads, mainly as a result of market pressure from issuers of structured instruments.

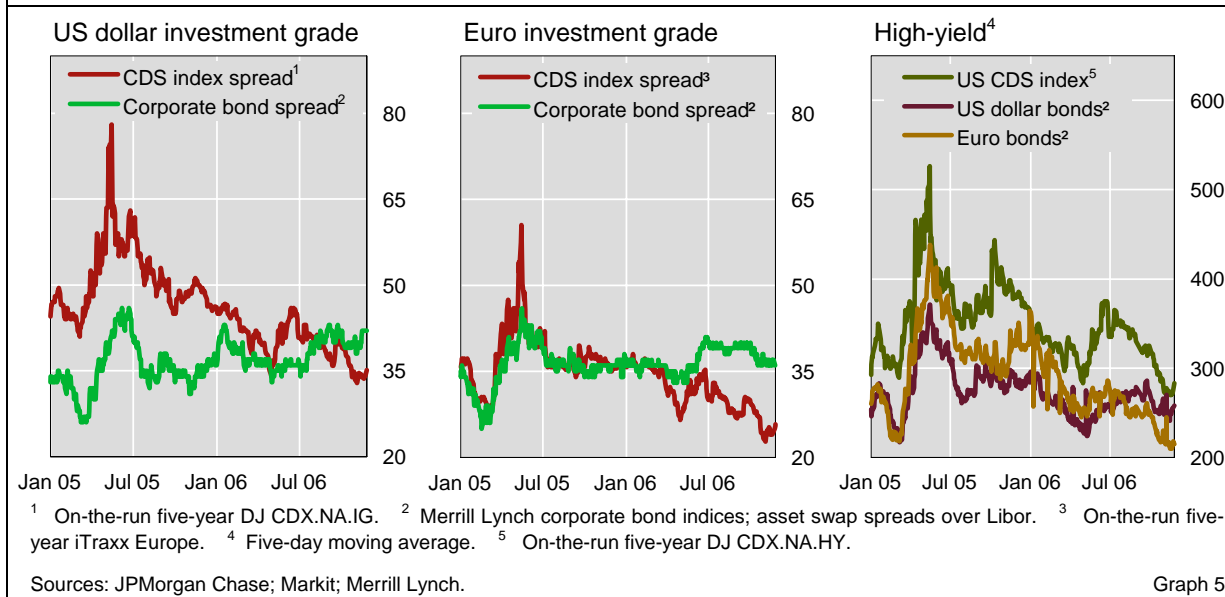
Corporate bond spreads narrow ...

The limited decline in corporate bond spreads was, at least in part, in line with strong fundamentals. As mentioned above, the outlook for corporate profits continued to improve in the euro area and remained stable in the United States, which could explain why spreads on European corporates tightened more than those on US firms. The strength of the corporate sector was also reflected in the number of defaults, which according to Standard & Poor's remained, in the third quarter, at their lowest level since 1997. And although both Moody's and S&P continued to expect the number of defaults to rise, they revised further downwards their default rate forecasts (Graph 6, left-hand panel).

... on the back of strong corporate profits

## Corporate credit markets

In basis points



High-yield bonds outperformed investment grade debt on both sides of the Atlantic. This may partly be explained by the higher sensitivity of lower-rated borrowers' spreads to rising equity prices and declining volatility. Another factor that may have contributed to the underperformance of investment grade bonds was concerns about leveraged buyout (LBO) and M&A risk, as highly capitalised firms are often more attractive targets for LBOs than corporations that already carry large amounts of debt. According to calculations by investment banks, the five largest LBOs of public companies in 2006 resulted in losses of around \$2 billion for the owners of bonds in these companies. More generally, S&P reported that the average debt/cash flow ratio for companies acquired by private equity firms reached a record high of 5.4 in 2006. Meanwhile, the private equity industry continued to raise record amounts of funding to finance acquisitions and the releveraging of the US corporate sector through share repurchases increased further.

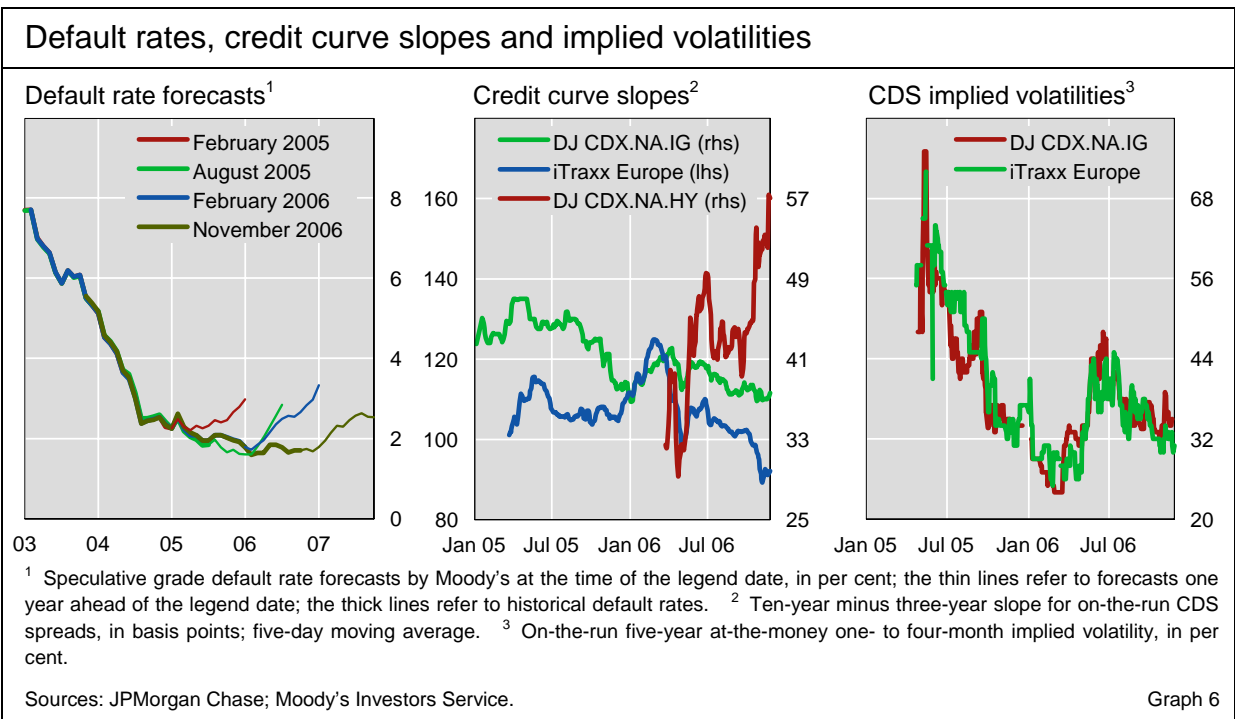
LBO risk remains a concern

Some warning signs

Notwithstanding the apparently strong fundamentals, a closer look at the available data reveals some possible warning signs. First, although the slope of the credit curve over the past few months remained relatively stable for US investment grade debt and declined for corresponding euro debt, the slope of the US high-yield curve actually increased sharply (Graph 6, centre panel). This could be a sign of heightened concern for the credit outlook of low-rated debt in the longer run relative to the near term. Second, implied volatilities on CDS index options did not fully recover after the sell-off in May–June, possibly indicating increased uncertainty about short-run developments in credit spreads (Graph 6, right-hand panel).

CDS spreads fall ...

In recent months CDS spreads have tended to fall more than corporate bond spreads (Graph 5). The benchmark US five-year investment grade CDS index (DJ CDX.NA.IG) fell to the lowest level for the year in early November 2006, at just below 35 basis points, while the corresponding iTraxx Europe



index fell below 25 basis points. High-yield CDS spreads also dropped faster than the corresponding cash spreads. As a consequence, the CDS-cash basis, ie the difference between CDS spreads and comparable corporate bond spreads, moved deeper into negative territory.

This widening of the negative basis seemed largely to reflect a surge in issuance of synthetic collateralised debt obligations (CDOs) and other structured credit products (Graph 7, left-hand panel). Synthetic CDOs replicate cash flow CDOs using CDSs, and thereby provide credit protection without the need to acquire cash assets. Strong issuance of synthetic CDOs is associated with high volumes of credit protection selling, thereby exerting downward pressure on CDS spreads. In the third quarter of 2006, global CDO market issuance reached a new high for the fourth quarter in a row, with synthetic CDOs accounting for an increasing share (Graph 7, left-hand panel).

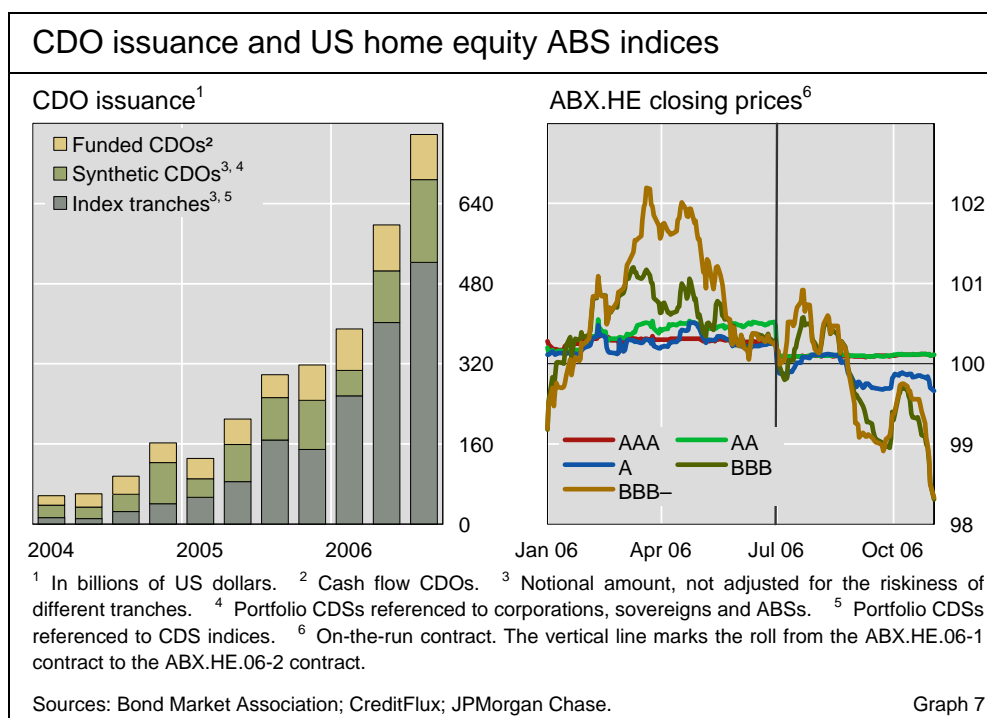
... driven by high issuance of synthetic CDOs ...

New structured products, such as constant proportion debt obligations (CPDOs), may have added to the downward pressure on CDS spreads. A CPDO is a product with a AAA rating that earns a high spread above Libor through leveraged exposure to credit default indices. Because these products are highly leveraged, they involve considerable amounts of credit protection selling. Market estimates suggest that although only around \$2 billion of CPDO issuance has taken place thus far in notional terms, this corresponds to around \$30 billion of index credit protection. Moreover, banks seem to have been selling index credit protection ahead of planned CPDO issuance, thereby adding to the pressure on spreads.

... and other structured products

The rapid cooldown of the US housing market seemed to have little impact on most US mortgage-backed security (MBS) spreads. This was so despite a steady increase in the proportion of mortgage loans to non-prime borrowers in the underlying collateral of such securities. However, a somewhat different picture emerged from the pricing of ABX.HE, a recently introduced group of

MBSs weather US housing slowdown ...



... but again some warning signs

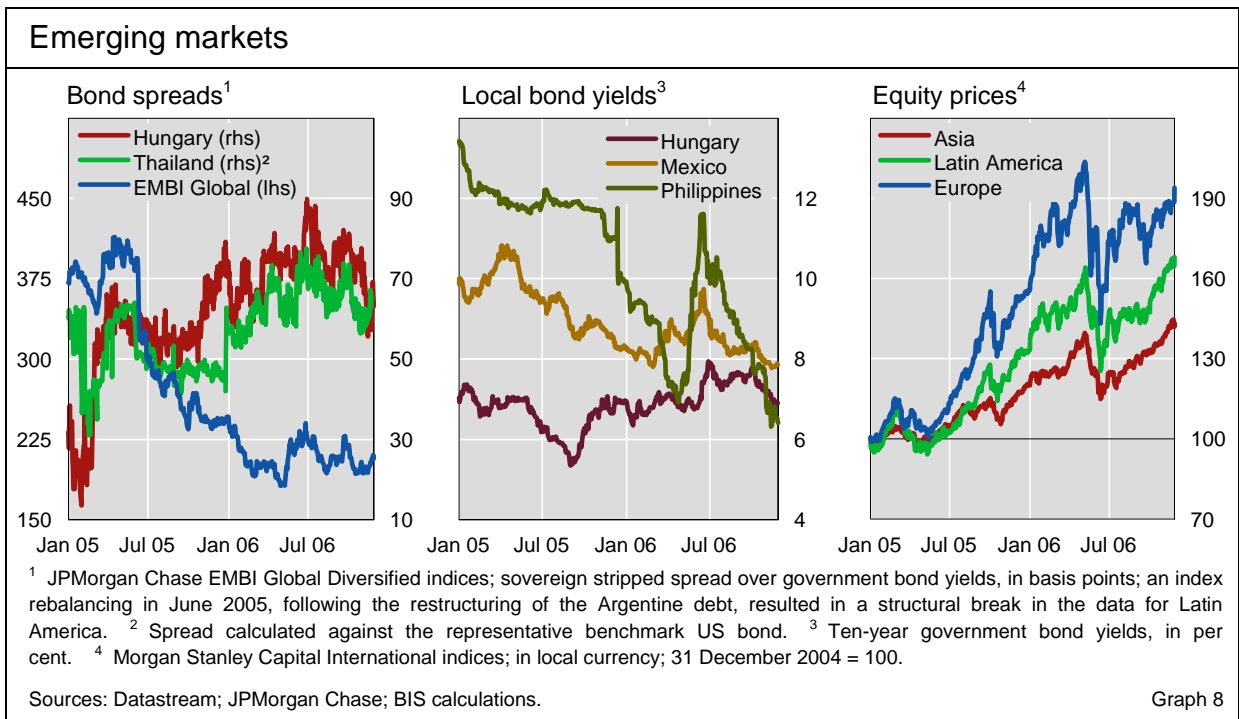
synthetic indices of US home equity asset-backed securities (ABSs). The ABX.HE indices replicate cash flows of tranches of US subprime home equity securitisations. In the past three months, the prices of the lowest-rated ABX indices fell considerably, suggesting a heightened perception of risk associated with home loans to borrowers with blemished credit histories (Graph 7, right-hand panel).

### Renewed optimism in emerging markets

Spreads on emerging market debt tightened and equity prices increased during the autumn (Graph 8). Changes in the outlook for the US economy appeared to have a larger impact on asset prices in emerging markets than local events. Even in the case of the generalised widening of spreads in mid-September, it was not clear to what extent this was driven by local events, such as the coup in Thailand and riots in Hungary, or by news on US economic activity. Market commentary at the time gave a large weight to the latter. This view is also supported by the fact that domestic currency debt and equities were generally little affected by the sell-off in debt markets and that spreads quickly reverted to previous levels following favourable economic news from the United States later in the month.

Little impact from political instability

The dominance of global factors may seem surprising given that September saw an unusual clustering of events indicating political instability in emerging markets, and not only in Hungary and Thailand. The relatively minor and short-lived widening in the spreads of the countries concerned indicates that market participants' confidence in the ability and willingness of sovereigns to service their external debt was hardly tested. Among the few countries to experience a protracted widening in spreads was Ecuador, where presidential elections were held on 26 November. Spreads on Ecuador's external debt



widened as oil prices began to fall in late August and shot up in September after opinion polls showed the lead of a candidate who had not ruled out an Argentine-style default should negotiations with creditors not lead to a substantial reduction of the debt burden. After some temporary tightening in October, spreads rose to more than 600 basis points after the election, even though the winning candidate had qualified his previous remarks regarding the possibility of a default.

Confidence about a soft landing for the US economy went hand in hand with the perception of sound fundamentals in many emerging markets. Consensus growth forecasts for these economies remained strong. Solid fundamentals were also reflected in stable ratings. Another sign of increased confidence in the prospects of emerging markets was the return of investors to dedicated emerging market funds. To be sure, the amounts invested in such funds remained much lower than those recorded towards the beginning of the year. Even so, the very fact that they turned positive again represented a significant change from the outflows during the summer.

Perceived fundamentals remain strong

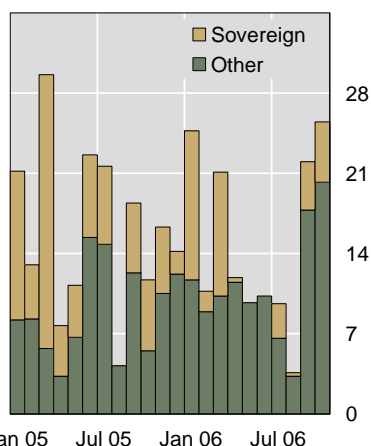
Emerging market issuers took advantage of the benign market conditions to issue more external debt and equities (Graph 9, left-hand and centre panels). Sovereign issuers returned to the international market, from which they had been virtually absent since April. However, such borrowing remained low compared to 2005, when governments had front-loaded issuance in order to lock in favourable conditions (Graph 9, right-hand panel). One reason for the low level has been the improvement in the fiscal positions of most emerging economies in recent years, which has reduced the need for more debt. Another factor has been the replacement of foreign currency by domestic currency debt by some emerging market issuers. The move towards domestic currency bonds has been particularly noticeable in Latin America, above all in Brazil and

Reduced sovereign issuance ...

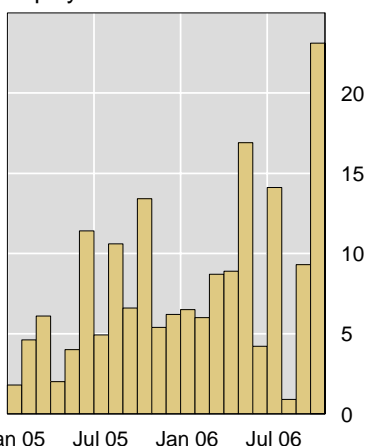
## International emerging market issuance

In billions of US dollars

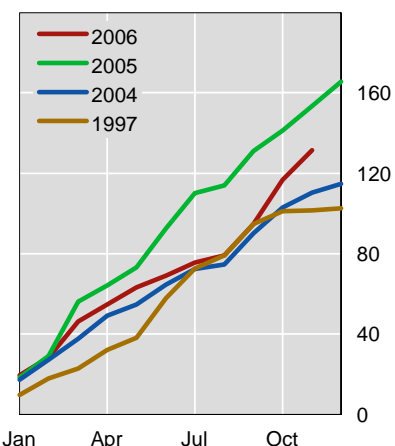
Bond issuance<sup>1</sup>



Equity issuance<sup>1</sup>



Cumulative debt issuance<sup>2</sup>



<sup>1</sup> Announced international issuance by nationality. <sup>2</sup> Announced issuance of international bonds and notes plus signings of syndicated loans.

Sources: Bloomberg; Dealogic; Euroclear; ISMA; Thomson Financial Securities Data; national authorities; BIS.

Graph 9

Mexico. Mexico extended the yield curve in the local market from 20 to 30 years after issuing a peso bond of that maturity in late October.

... contrasts with high private issuance

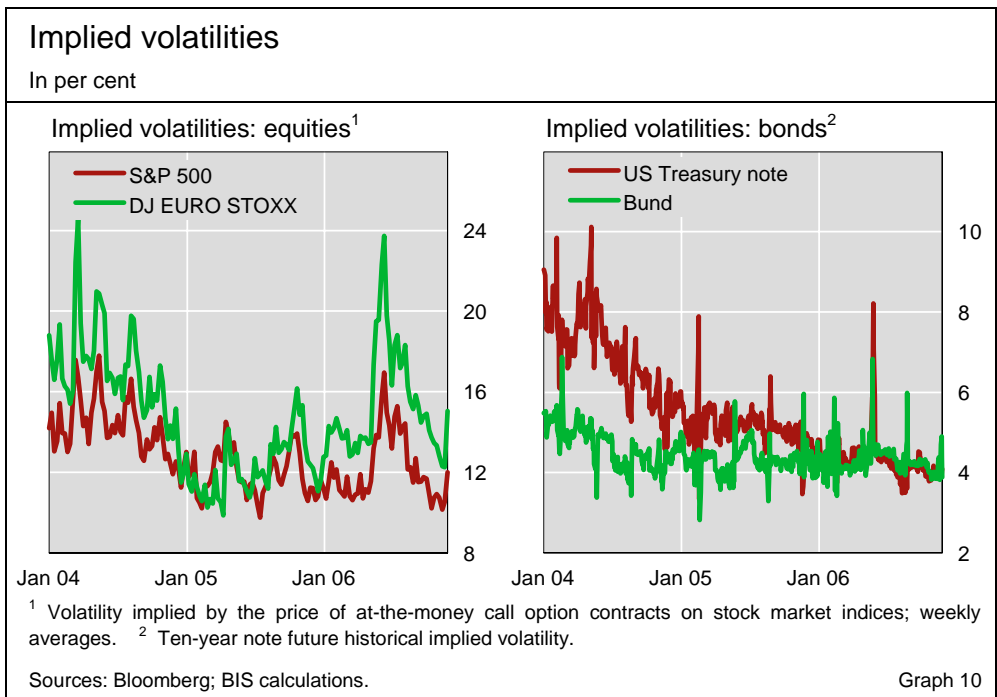
Private issuance far exceeded sovereign debt sales during the period under review as firms took advantage of the favourable financing conditions. International equity issuance by emerging market corporations reached a new high in October, when China sold shares in the Industrial and Commercial Bank of China on the Shanghai and Hong Kong stock exchanges. The issue, which was heavily oversubscribed, raised \$19 billion, making it the world's largest IPO to date.

### Implied volatilities at unusually low levels

Low implied volatilities ...

In an environment where considerable uncertainty seemed to remain about the direction of economic growth, inflation and monetary policy – in particular in the United States – prices of options on government bond and stock index futures implied very low levels of near-term volatility (Graph 10). This largely mirrored developments in realised volatility (Graph 11, left-hand panel). At the same time, estimated US term premia indicated that investors required almost no compensation at all for bearing risk associated with uncertainty in future inflation and real interest rates (Graph 11, centre panel). Developments in euro area bond markets displayed a similar picture. Normally, low implied volatilities and risk premia close to zero could be interpreted as indicating a very high degree of confidence among investors about the likely evolution of monetary policy and economic fundamentals. The tight spreads seen in credit markets could be interpreted in a similar way. However, given that incoming data largely failed to provide a clear picture of the direction of the US economy, a strong appetite for risk among investors is likely to have played a role in the pricing of financial assets and associated derivatives. Indeed, by early November an options-based measure for risk aversion in the equity market had largely

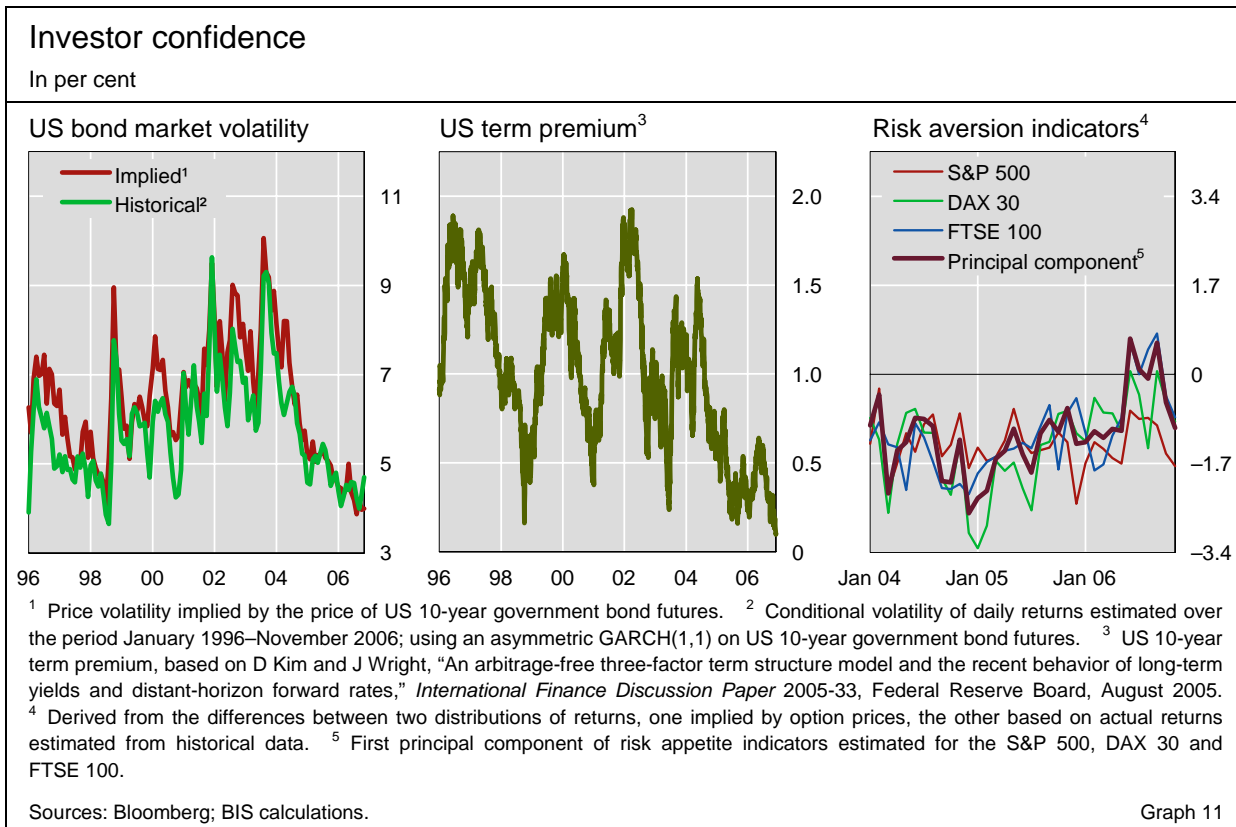
... may reflect a high appetite for risk



recovered to its level prior to the sell-off in May and June (Graph 11, right-hand panel).

In this environment, markets experienced a bout of sudden volatility after the US currency fell sharply on 24 November and in the days that followed. It was not clear what event had triggered the dollar sell-off, although one factor may have been comments by an Asian central bank concerning the impact of dollar weakness on the value of foreign reserves. Adding to the wariness of

Volatility jumps as the dollar slides



investors at the end of November were a number of surprise data releases related to the US economy, including weaker than expected new home sales and an upward revision of third quarter GDP growth. All in all, US and European equities lost a couple of percentage points in the days following 24 November, but subsequently largely recouped these losses. At the end of November, however, implied equity market volatility had not fully settled back down to the levels seen in mid-November, although it remained low by historical standards.