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Overview: growth concerns take centre stage

The period from early June to late August saw investors shift their attention from the funding problems of European sovereigns to the diverse global growth outlook and the implications for asset prices. In the early part of the period, improved access to funding for a number of European sovereigns and the reduced uncertainty following the release of the EU bank stress tests contributed to lower risk premia for most sovereigns and larger banks. Credit spreads declined and equity prices rose across the globe. Bank equity prices also responded favourably to a series of national and international regulatory announcements.

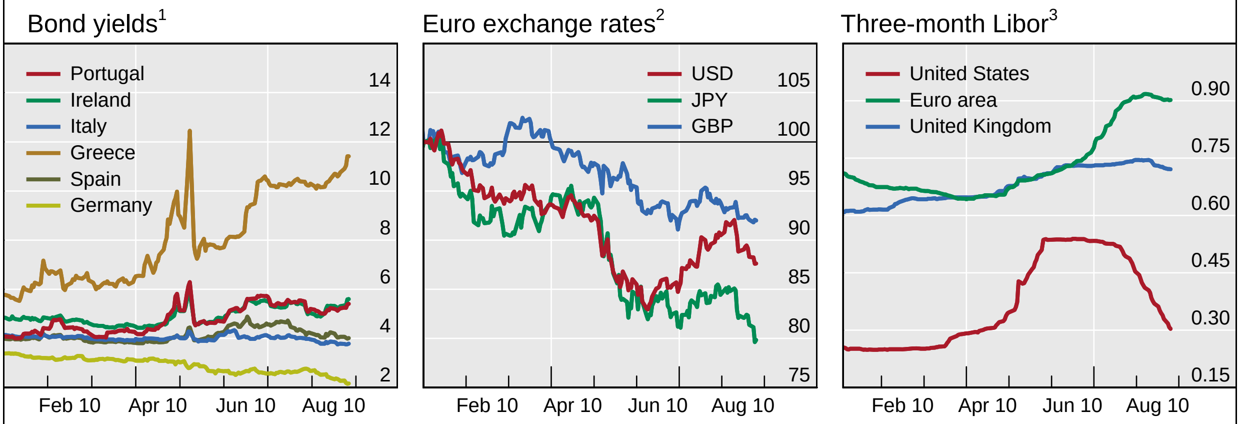
Starting in late July, increasing evidence of economic weakness in the United States led to lower inflation expectations and falling bond yields. During August, the decline in yields accelerated and equity prices fell as evidence of slower growth in a number of advanced economies mounted.

These developments contrasted with continued strong albeit somewhat lower economic growth in China, as well as in a number of Asian and Latin American economies. Inflationary pressures in faster-growing emerging economies, accompanied by rising asset prices, led some central banks to tighten policies. With higher interest rates, capital inflows rose and currencies appreciated.

Euro sovereign funding concerns subside

Euro area sovereign bond markets stabilised during the period. Yields on euro sovereign bonds declined from June to August for all countries except Greece, Ireland and Portugal (Graph 1, left-hand panel). A similar pattern was seen in credit default swap (CDS) spreads. Overall, access to market funding improved, with several governments issuing bonds. Over this period, the ECB's purchases of euro sovereign bonds also subsided. During June and July, the euro recovered against major currencies (Graph 1, centre panel) and European equity markets regained some of their previous losses. Having declined through June and July, yields rose for Greece, Ireland and Portugal from early August onwards. In Ireland, larger than expected losses at a government-supported bank increased government borrowing expectations. The euro declined against other major currencies over the second half of August.

Euro area sovereign spreads, exchange rates and money market rates



[1] Ten-year government bond yields, in per cent. [2] 1 January 2010 = 100. [3] In per cent.

Source: Bloomberg.

Graph 1

As euro sovereign markets improved …

Greece, Spain, Portugal and Ireland all passed crucial tests of their ability to issue bonds despite negative rating actions. Greek debt came under renewed pressure in mid-June after Moody's downgraded it to non-investment grade, resulting in its exclusion from key benchmark bond indices. Despite this, Greece returned to the primary markets in mid-July. This renewed bond market access was interpreted as a positive response to Greece's progress on key reforms in the face of public opposition. Despite being placed on watch for downgrade by Moody's, Spain held successful auctions in mid-June, and returned with another sale several weeks later. Portugal and Ireland also issued bonds on the day following downgrades of their debt. On 4 August the European Financial Stability Facility (EFSF) became fully operational, increasing investor confidence by providing an additional source of support. The EFSF was set up by the 16 euro area countries to provide a funding backstop should a member state find itself in financial difficulties, but did not issue any bonds.

… the ECB began unwinding liquidity support

The improved market conditions in euro area bond markets from mid-June to late July allowed central banks to begin to reduce their involvement in financial markets. In mid-June the Swiss National Bank stopped intervening in foreign exchange markets to slow the appreciation of the Swiss franc. From mid-June onwards, the ECB slowed its pace of government bond purchases and began unwinding its extraordinary liquidity operations. It reduced the size of its weekly purchases of government bonds via the Securities Market Programme and on 1 July its one-year longer-term refinancing operation became due and was not replaced. At the end of July, the ECB revised its collateral framework, increasing haircuts on lower-rated private sector securities. The gradual normalisation of ECB liquidity provision was partly reflected in the steady rise of the three-month Euribor rate (the rate at which banks lend to each other in euros) from early June to mid-August. Over the same period the equivalent US dollar rate declined, while the UK rate remained virtually unchanged (Graph 1, right-hand panel).

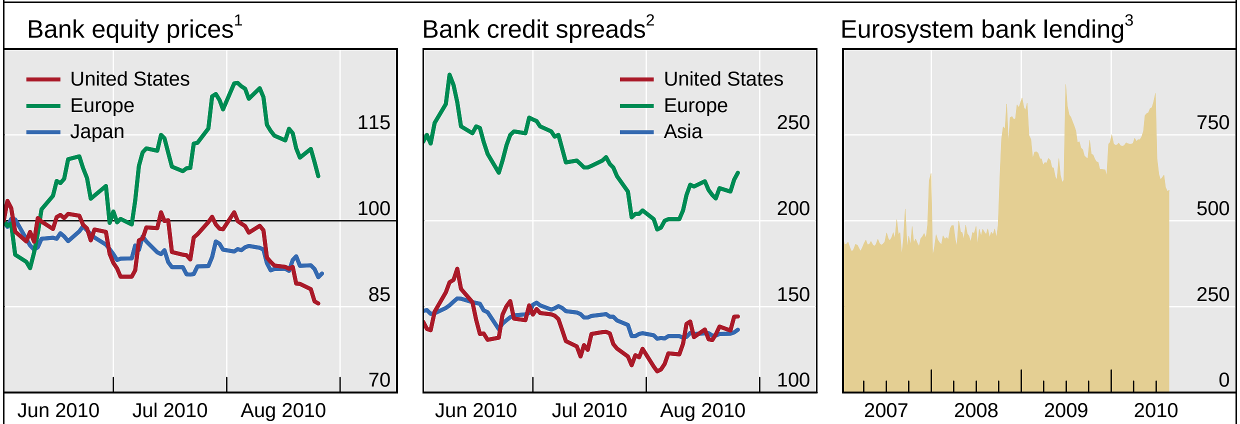
European bank stress tests increase transparency

Bank stress test results published

Investors' perceptions of the European banking system received a boost on Friday 23 July following the publication of stress tests for EU and Swiss banks. The EU bank stress test results provided much welcome transparency on the sovereign holdings of leading European banks, as well as a consistent set of disclosures about their balance sheets (see box). This enhanced transparency reassured investors. The Monday following the release saw a 2% rise in European banks' share prices and a 10–15 basis point decrease in their CDS spreads (Graph 2, left-hand and centre panels). Greater confidence in European banks also contributed to lower sovereign risk premia and improved conditions in European money markets, with ECB loans to Eurosystem banks declining (Graph 2, right-hand panel).

The release of the Basel Committee's modified capital and liquidity proposals on Monday 26 July led to a further rise in bank stock prices in the days that followed. Investors welcomed the cautious approach taken by regulators. Recognising that there is no precedent for a global liquidity standard, regulators are proceeding cautiously with the implementation and working to ensure a prudent but proportionate calibration. The Committee also announced that the net stable funding ratio will be subject to an observation period and become a minimum standard on 1 January 2018. It also made adjustments to the treatment of minority interests, investments in financials and mortgage servicing rights to address unintended consequences of the December 2009 initial proposal and to ensure a more balanced, but still conservative, definition of capital. The positive reactions to the bank stress test results and the Basel Committee's modified proposals was supported by a string of positive earnings announcements from European banks. Bank CDS premia decreased, with the iTraxx Europe Senior Financials index declining by 14.5% by the end of the week. In the weeks that followed, the primary markets reopened for business, with financial institutions – notably Spanish banks – issuing both covered and unsecured bonds.

Bank equity prices and credit spreads



[1] S&P 500, DJ EURO STOXX and TOPIX; in local currency; 1 June 2010 = 100. [2] Equally weighted average senior five-year CDS spreads for the banking sector. [3] Eurosystem lending to banks, in billions of euros.

Sources: Bloomberg; Datastream; I/B/E/S; JPMorgan Chase; Markit. Graph 2

EU bank stress tests: good for transparency

Michael Davies and Michael R King

The EU bank stress tests were designed to assess the resilience of the EU banking system to a range of adverse economic and financial market shocks. They were conducted by the Committee of European Banking Supervisors (CEBS), together with the ECB, European Commission and national supervisors. The tests covered 91 banks from 20 EU member states representing about 65% of EU banking assets and at least 50% of assets in each respective member state. Spain had the greatest coverage, with 27 banks participating, covering almost 100% of banking assets. Results at both an EU aggregate and individual banking group level were released on Friday 23 July after the close of European trading. The same day, the Swiss bank regulator FINMA also announced that the two largest Swiss banks had passed their stress tests.

The EU bank stress tests examined three macroeconomic scenarios over the two years ending December 2011: (i) a benchmark scenario reflecting the EU economic outlook of 1.0% GDP growth in 2010 and 1.7% in 2011; (ii) an adverse scenario where aggregate GDP dips 3% below the EU forecast over the two-year period; and (iii) the adverse scenario combined with a sovereign shock. The sovereign shock was modelled as an upward shift in the government yield curve in all EU countries, with additional country-specific increases in long-term government bond yields. The authorities provided a common set of macroeconomic variables across each scenario for each EU member state, the United States and the rest of the world. To pass the test, banks needed to maintain a Tier 1 capital ratio greater than 6% under each of the scenarios (vs the regulatory minimum of 4%).

Most of the banks easily passed the stress tests, with the EU aggregate Tier 1 ratio under the toughest scenario falling from 10.3% at end-2009 to 9.2% by the end of 2011. Under this scenario, aggregate loan impairment losses were €473 billion over the two years, trading losses were €26 billion, and the sovereign shock added €67 billion of losses. Banks' expected operating income over the two-year forecast almost exactly offset these losses.

Seven banks did not maintain a 6% Tier 1 capital ratio, and need to raise a combined €3.5 billion of capital. Another 20 banks had capital ratios between 6% and 7%. The banks with a capital shortfall were five Spanish savings banks ("cajas") (needing €1.8 billion), Hypo Real Estate of Germany (€1.2 billion) and Agricultural Bank of Greece (€0.2 billion). Authorities are working with these banks to raise their capital ratios or restructure them. Backstop facilities had already been put in place in some countries ahead of the release of the stress test results, while authorities in others have announced that government funds are available if needed.

Critics of the exercise argued the stress tests were not demanding enough. The tests did not consider the impact of a euro sovereign default, so they did not stress the prices of government bonds held in banking books (the vast bulk of banks' holdings). The tests also focused on existing Tier 1 capital ratios, rather than the more demanding core Tier 1 ratios, although the difference between measures is only important is some countries. Despite these criticisms, the market welcomed the greater transparency provided by the tests, particularly the consistent data on individual banks' holdings of EU sovereign bonds.

Over the weeks prior to the release of the EU stress test results, bank stocks outperformed the broader market indices and bank CDS spreads narrowed, possibly in anticipation of a positive outcome. The immediate market reaction after the release of the official results was positive, with European banks' share prices rising by 2% and their CDS spreads decreasing by 10 to 15 basis points on the first trading day after their release. Over the subsequent weeks, the rise in bank stocks and narrowing of CDS spreads continued, although the stress test effect cannot be distinguished from the response to the Basel Committee's updated capital and liquidity reform package. Also, a number of banks released positive earnings over this period. Access to market funding reportedly improved for the largest banks following the release. Consistent with this, bond issuance from European banks has increased, most notably for the biggest Spanish banks. But anecdotal reports suggest that medium-sized and smaller banks are still facing difficult financing conditions.

Asset prices reflect lower expected US growth

US economy slows down …

In the period from June to late August a string of weaker than expected macroeconomic releases combined with a change in outlook from the Federal Reserve convinced market participants that the US economy was slowing down. This view, reinforced by a series of Federal Reserve speeches and testimony, resulted in lower long-run government bond yields, partly reflecting a lowering of inflation expectations.

… causing Treasury yields to decline …

The change in outlook for US growth led investors to postpone the expected timing for the normalisation of monetary conditions, while fostering market expectations about possible further "quantitative easing". Federal Reserve Chairman Bernanke's testimony to Congress in late July, FOMC meeting minutes and Fed speeches were taken to mean that any normalisation of monetary conditions would be delayed further. The Federal Reserve also lowered its growth forecast following a string of disappointing US macroeconomic releases. The central bank's decision on 10 August to delay reducing the size of its balance sheet by reinvesting funds generated by its mortgage portfolio into US Treasuries helped reinforce investors' expectations of continued low policy rates. Following this announcement, prices of federal funds futures declined, implying that any policy rate increases would be likely to occur in the second half of 2011 or early 2012 (Graph 3, left-hand panel).

… and expected inflation to fall

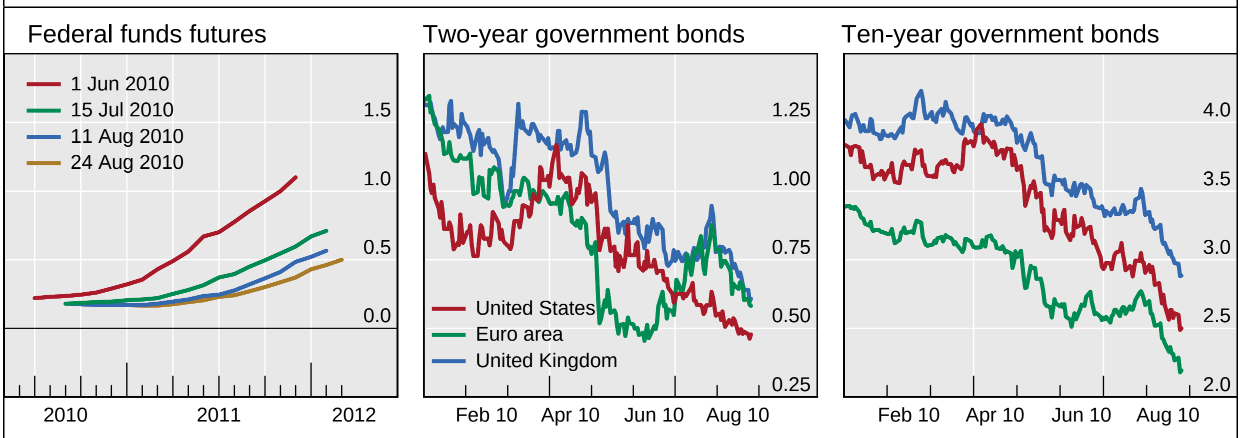
The shape of the US yield curve reflected the changed growth outlook. Yields on two-year US Treasuries recorded an all-time low around 0.50% (Graph 3, centre panel). The 10-year rate fell below 2.5% – a level last seen during December 2008 – despite market expectations of greater US borrowing needs to finance increased fiscal deficits (Graph 3, right-hand panel). This decline in long-term Treasury yields is consistent with lower expected inflation. Inflation swaps implied a break-even inflation rate of around 1.7% for the next 10 years, down from 2% in late May (Graph 4, left-hand panel).

Swap spread turns negative

During the final week of July, the fixed rate paid on a 10-year interest rate swap fell below the yield on 10-year US Treasuries, leading to a negative swap spread for the second time this year (Graph 4, centre panel). Swap rates are

Monetary policy expectations

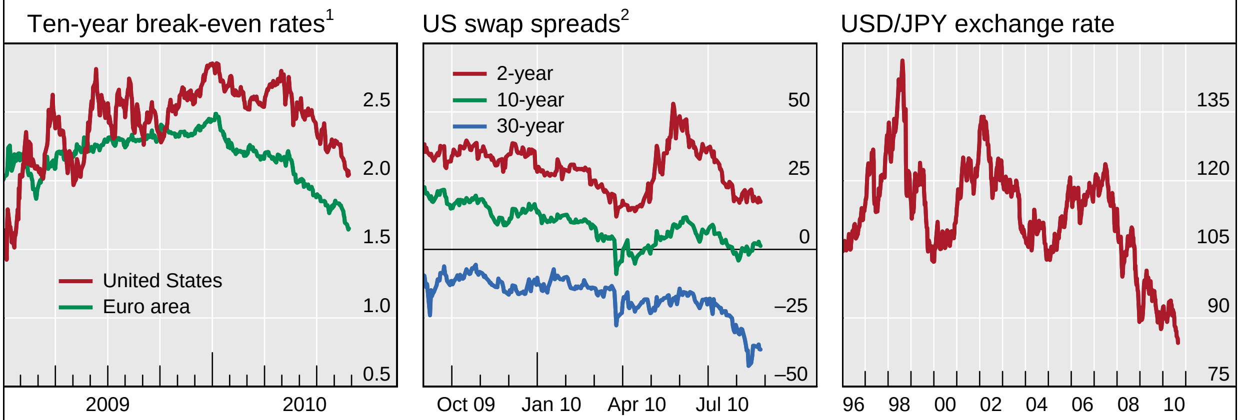
In per cent



Sources: Bloomberg; BIS calculations.

Graph 3

Inflation expectations, US swap spreads and USD/JPY exchange rate



[1] From inflation swaps, in per cent. [2] US dollar fixed rate swap rate minus equivalent US Treasury yield, in basis points.

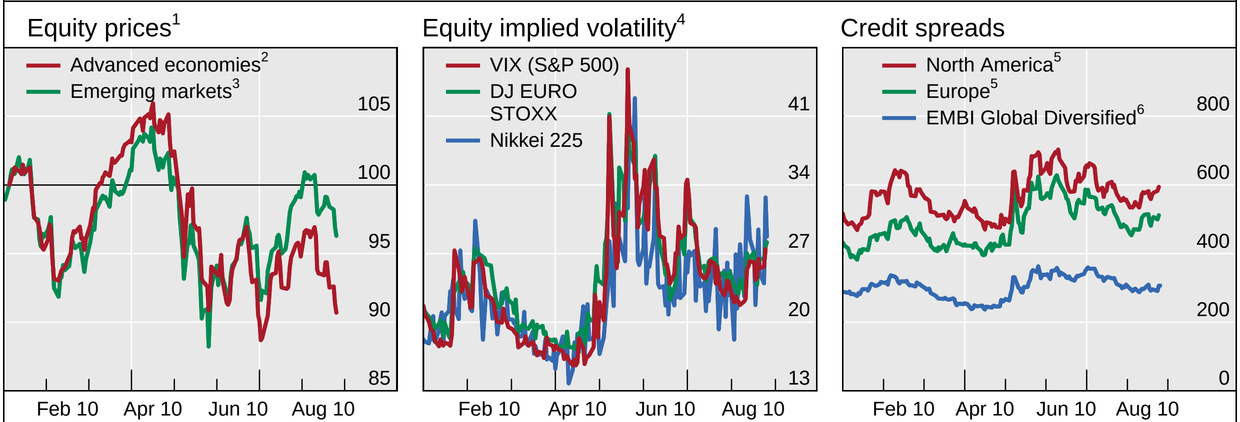
Sources: Bloomberg; BIS calculations. Graph 4

typically higher than Treasury yields as the floating payments are based on bank borrowing rates, such as Libor, that contain credit risk. Prior to March of this year, the 10-year US swap spread had never been negative, although the 30-year spread had been negative for some time. The negative 10-year swap spread may reflect hedging related to US corporate bond issuance, which rose sharply in July. Low long-term interest rates have made it attractive for investment grade borrowers to issue 10-year fixed rate bonds and convert them into floating rate liabilities by receiving the fixed rate on a 10-year swap. Market commentary suggests that banks in particular may have been quick to take advantage of this opportunity.

US dollar weakens

In the two months that followed the 9 June release of the Federal Reserve's report on regional economic conditions (the Beige Book), which pointed to subdued economic growth, the US dollar depreciated against all major currencies. Most notably, it reached a 15-year low against the Japanese

Equity prices and credit spreads



[1] 4 January 2010 = 100. [2] Average of S&P 500, DJ EURO STOXX, TOPIX and FTSE 100 indices. [3] Average of Asian, European and Latin American emerging market equity indices. [4] Volatility implied by the price of at-the-money call option contracts on stock market indices, in per cent. [5] Five-year on-the-run credit default swap (CDS) mid-spreads on sub-investment grade (CDX High Yield; iTraxx Crossover) quality, in basis points. [6] Stripped spreads, in basis points.

Sources: Bloomberg; Datastream; BIS calculations. Graph 5 yen (Graph 4, right-hand panel). The rapid appreciation of the yen against the US dollar led Japanese authorities to express their concerns over the currency's strength and the possible negative impact on Japanese exports.

Corporate bonds outperform as investor caution remains

Bonds outperform equities ...

Increasing growth concerns led investors to remain cautious. Nevertheless, prices rose in both equity and corporate bond markets in response to the improved conditions in euro sovereign debt markets, positive US and European corporate earnings announcements and greater clarity on the regulatory agenda (Graph 5, left-hand panel). Equity volatility also declined (Graph 5, centre panel). Given the significant drops earlier in the year, however, North American and European equity markets remained flat or below their levels at the beginning of the year. In contrast, there were gains for some Latin American markets and large losses for Chinese, Japanese and Australian markets.

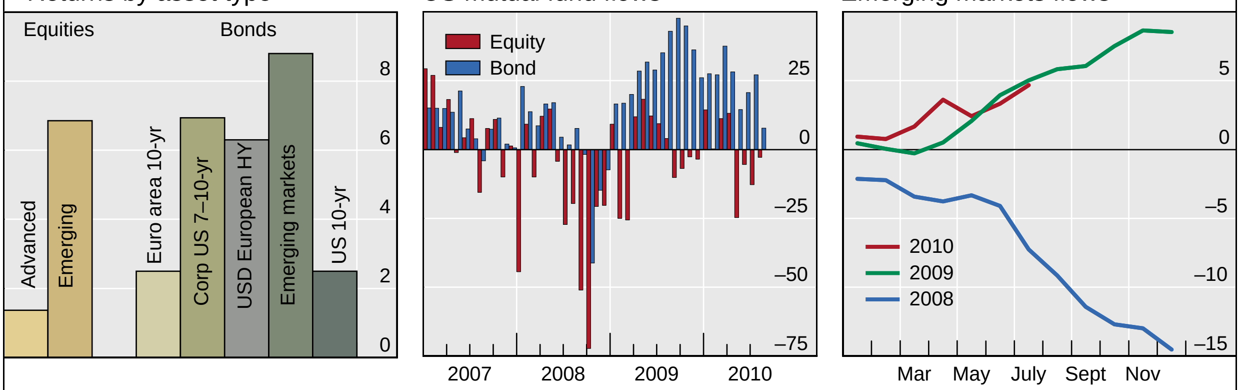
... as funds flow to emerging markets

Despite unchanged credit spreads (Graph 5, right-hand panel), both investment grade and high-yield corporate bonds generated large returns due to falling risk-free rates (Graph 6, left-hand panel). The superior performance of bond markets relative to equity markets was mirrored in global investment flows. In the United States, large outflows from equity mutual funds from May to July were offset by large inflows to bond mutual funds (Graph 6, centre panel). These inflows picked up again during July.

Gradual policy normalisation with diversity

Lower growth in advanced economies and historically low government bond yields increased investor demand for assets with higher expected returns in leading emerging market economies. The increased investor interest can be seen in surveys as well as data on investment flows. After experiencing large outflows in 2008, emerging market equity and bond funds saw large inflows in 2009 and the first half of 2010 (Graph 6, right-hand panel). Since the start of June, emerging market bonds have been one of the best performing assets

Bonds outperform as investors remain cautious



[1] As of 1 June 2010. [2] In billions of US dollars. [3] Cumulative mutual fund flows to emerging markets, in billions of US dollars.

Sources: EPFR; Investment Company Institute; JPMorgan. Graph 6

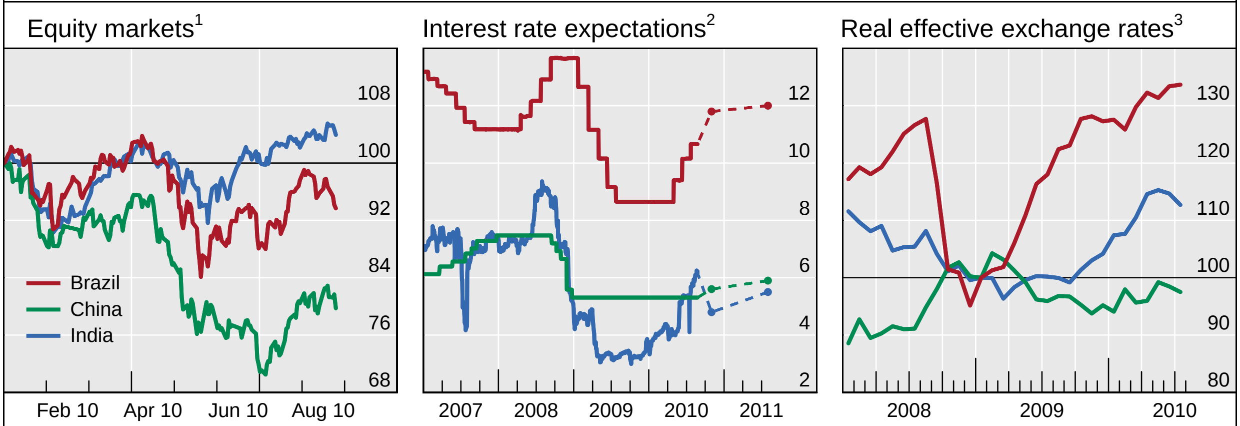
(Graph 6, left-hand panel). Bond and equity markets in Brazil, China and India, as well as Southeast Asia, which had declined in response to the higher volatility and increased risk aversion during the euro sovereign debt crisis, rebounded by 10% or more (Graph 7, left-hand panel). Sovereign CDS spreads for these countries declined, and their exchange rates appreciated (Graph 7, right-hand panel).

Fast-growing economies tighten …

These asset price movements reflected investor expectations that major emerging economies would continue to experience high growth rates, despite domestic policy tightening and slower growth in advanced economies. On the monetary policy side, central banks in fast-growing economies sought to restrain inflationary pressures and rising asset prices through a combination of monetary policy rate hikes, exchange rate appreciation and macroprudential measures (Graph 7, centre panel). Consensus forecasts of inflation, which began to decline in July, suggested that market participants regarded the policy tightening as working.

China, for example, took several steps to reduce credit growth and normalise other policies over the recent period. On 19 June, the People's Bank of China (PBoC) announced that it would "proceed further with reform of the RMB [renminbi] exchange rate regime and to enhance the RMB exchange rate flexibility". This statement was seen by investors as marking the end to China's unofficial crisis measure of pegging the Chinese currency to the dollar. Following its announcement, the PBoC signalled that there would be no significant one-off revaluation of the renminbi by fixing the daily spot rate at the same level as prior to the announcement. The initial reaction in the non-deliverable forward (NDF) market was significant, with one-month NDF contracts implying a 6.7% appreciation against the US dollar, while one-year contracts implied a 2.7% rise. Despite the initial market expectations, by late August the renminbi had appreciated by less than 0.5% relative to the US dollar.

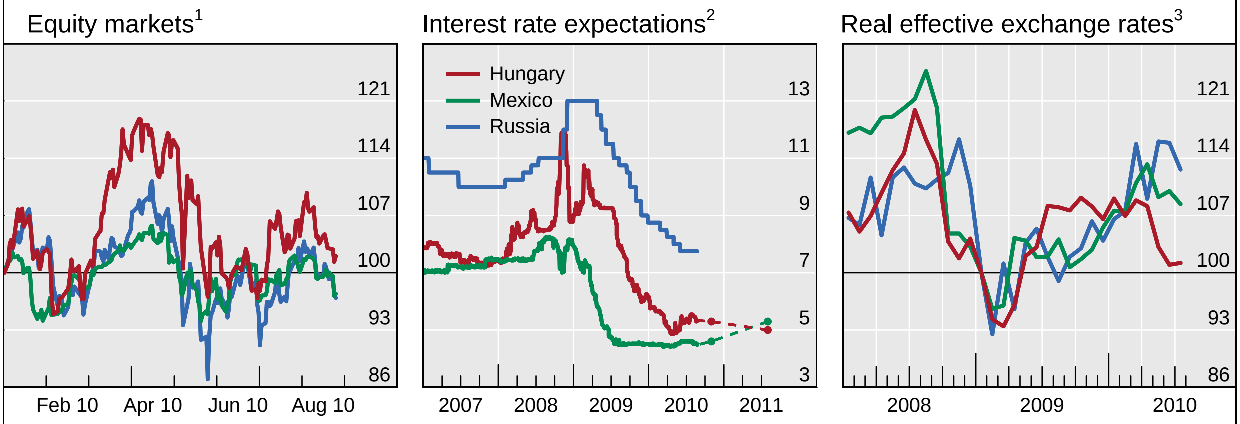
Market developments in Brazil, China and India



[1] 1 January 2010 = 100; main indices in local currency. [2] In per cent. For China, one-year lending rate; for India, 91-day Treasury bill rate; for Brazil, SELIC overnight interest rate. Dashed lines represent interest rate expectations from Consensus Economics. [3] 1 January 2009 = 100.

Sources: Bloomberg; © Consensus Economics. Graph 7

Market developments in Hungary, Mexico and Russia



[1] 1 January 2010 = 100; main indices in local currency. [2] In per cent. For Hungary, three-month Treasury bill rate; for Mexico, 28-day CETES; for Russia, refinancing rate. Dashed lines represent interest rate expectations from Consensus Economics. [3] 1 January 2009 = 100.

Sources: Bloomberg; © Consensus Economics. Graph 8

… while others lower rates

While a number of emerging markets experienced high growth and policy tightening, some in every region saw weaker growth and easier monetary conditions. Countries that cut policy rates include Mexico and Colombia in Latin America; Russia, the Czech Republic and Hungary in central and eastern Europe; and South Africa. Each of these economies faced different challenges, some domestic in origin and some external. Equity markets in Hungary, Mexico and Russia, for example, were quite volatile, rising over June and July but declining during late July and the first half of August (Graph 8, left-hand panel), as central banks lowered policy rates (Graph 8, centre panel). Expectations of weaker growth and lower interest rates contributed to a depreciation of the corresponding exchange rates (Graph 8, right-hand panel).

In Hungary's case, statements and actions by the new government contributed to the volatility in equity markets and the exchange rate. In early June, a government official suggested that a sovereign default could not be ruled out. This generated a sharp fall in the Hungarian forint and a rise in government bond yields. Adding to investors' concerns, the Hungarian government abruptly ended talks with the IMF in July over the terms of an IMF/EU loan package, holding up €4.4 billion of financing.