I. Building a stable future

Pessimism has become tiresome, so optimism is gaining a foothold. But has the pessimism born of the slow recovery from the financial crisis been superseded by events? Is the optimism justified? Today, various facts support a new attitude. Growth in emerging market economies is robust, and recovery looks to be on a self-sustaining path in the countries that were at the centre of the 2007–09 crisis. Yet the remaining challenges are enormous – towering debt, global imbalances, extremely low interest rates, unfinished regulatory reform, and financial statistics still too weak to illuminate emerging national and international stresses.

Crisis-related expansions of sovereign debt have worsened what were already unsustainable fiscal policy trajectories, and private sector debt remains too high. The result is that, today, policymakers and households have virtually no room for manoeuvre. All financial crises, especially those generated by a credit-fuelled property price boom, leave long-lasting wreckage. But we must guard against policies that would slow the inevitable adjustment. The sooner that advanced economies abandon the leverage-led growth that precipitated the Great Recession, the sooner they will shed the destabilising debt accumulated during the last decade and return to sustainable growth. The time for public and private consolidation is now.

The ongoing global integration of financial markets and financial systems continues to deliver large, tangible economic benefits. But the gains come with risks that require proper management. Aggregate supply and demand seem to be roughly balanced on a global scale. But having declined during the crisis, current account balances are increasing again. That means domestic demand is too high in some countries and too low in others. And while current account imbalances could disappear smoothly and harmlessly, the danger is that they will continue to grow and stoke demands for protectionist measures. It is here that international cooperation and coordination of policy are both most needed and most lacking.

But net flows of capital are not the only challenge; gross flows matter too, and they are staggeringly large. A sudden reversal of such flows could wreak havoc with asset prices, interest rates, and even the prices of goods and services in countries at both ends of the flows. Moreover, international flows make rapid credit growth possible even in the absence of domestic saving. The persistence of unusually low interest rates has played a role in encouraging and facilitating these flows.

Many of the challenges facing us today are a direct consequence of a third consecutive year of extremely accommodative financial conditions. Near zero interest rates in the core advanced economies increasingly risk a reprise of the distortions they were originally designed to combat. Surging growth made emerging market economies the initial focus of concern as inflation began rising nearly two years ago. But now, with the arrival of sharper price increases for food, energy and other commodities, inflation has become a global concern.

The logical conclusion is that, at the global level, current monetary policy settings are inconsistent with price stability.

The progress in financial regulation over the past year represents an enormous achievement. International agreements were reached on stronger capital requirements and new liquidity standards for banks, and implementation has started. But work continues on large challenges that still remain. We need to ensure that systemically important financial institutions can withstand the next big shock when it inevitably comes. We need to build improved resolution regimes within jurisdictions and create agreements across them. And we need to continue building a regulatory perimeter that is sufficiently robust and extensive to encompass every institution that acts like a bank.

Obviously, we also need to ensure universal acceptance of the new regulatory framework being put in place. Investors and financial institutions must understand and accept that the financial landscape has changed and that they need to adapt their behaviour accordingly. The ongoing challenge for regulators and other policymakers is to make the rules incentive compatible – that is, to guarantee that decision-makers in financial institutions find that it is in their own interest to act in a manner that reduces the risk of systemic collapse.

Finally, monitoring financial activity and anticipating stresses require better and more complete data on markets and institutions than we now have. Agreeing on the most practical solutions for these data gaps and quickly implementing them is also essential to the preservation of financial stability.

These challenges – high public and private debt, global imbalances, the risks of continued extreme monetary accommodation, the unfinished financial reform agenda and gaps in financial data – are the subjects of the economic chapters in this year's Annual Report. To set the stage, we first briefly survey the past year's financial and economic events and then summarise the chapters to come.

The year in retrospect

Two developments dominated the economic and financial landscape over the past year: growing confidence that the recovery had become self-sustaining; and continued reverberations of the sovereign debt problems facing a few countries on the periphery of the euro area.

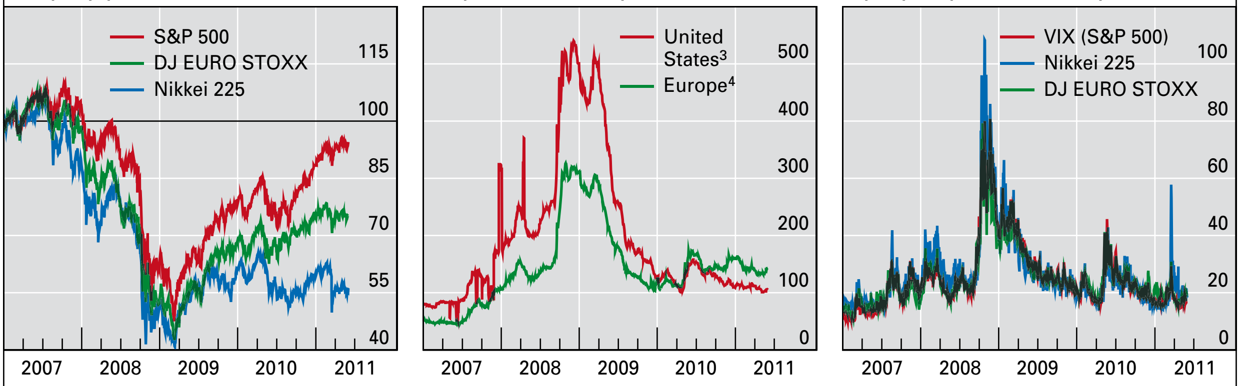
Recovery in advanced economies

Throughout much of 2010, the recovery of the major advanced economies followed a somewhat stumbling path. Weak macroeconomic data, in combination with the unfolding of euro area fiscal problems, prompted fears that growth would stall and possibly even reverse. In response, major central banks delayed policy normalisation and provided stimulus by creating or extending extraordinary measures.

In October 2010, the Bank of Japan announced a ¥5 trillion programme to purchase a variety of assets in an effort to lower risk premia and raise asset prices. A month later, the US Federal Reserve began a second round of Treasury bond purchases – the large-scale asset purchase programme commonly known

Asset prices in selected advanced economies

Equity prices[1] | Corporate bond spreads[2] | Equity implied volatility[5]



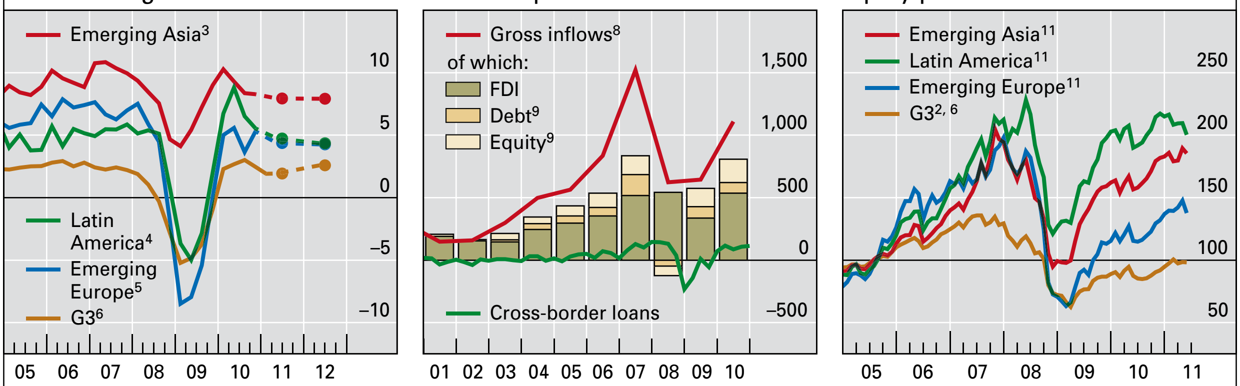
[1] January 2007 average = 100. [2] Indices of investment grade bonds, in basis points. [3] JPMorgan US Liquid Index (JULI). [4] Morgan Aggregate Index Europe (MAGGIE). [5] Volatility implied by the price of at-the-money call option contracts on stock market indices, in per cent.

Sources: Bloomberg; Datastream; JPMorgan Chase. Graph I.1

as QE2 – with the intention of adding $600 billion to its holdings by June 2011. Anticipating the Federal Reserve's move, markets had begun bidding up US stock and bond prices long before the early-November announcement. The passage by the US Congress of a further $858 billion stimulus bill in December reinforced the positive market tone. More broadly, an increasingly steady stream of good economic news contributed to the brightening expectations, the rising prices of risky assets and the lowering of implied volatility in Europe, Japan and the United States (Graph I.1).

The divergence of advanced and emerging market economies

Real GDP growth[1, 2] | Private capital inflows[7] | Equity prices[10]



[1] Quarterly year-on-year changes in real GDP, in per cent. Each dot in 2011 and 2012 represents the latest consensus forecast for the full year. [2] Weighted averages of the economies listed based on 2005 GDP and PPP exchange rates. [3] China, India, Indonesia, Korea, Malaysia and Thailand. [4] Argentina, Brazil, Chile, Mexico and Peru. [5] The Czech Republic, Hungary, Poland, Russia and Turkey. [6] The United States, the euro area and Japan. [7] Sum of 23 major emerging market economies, in billions of US dollars. [8] For 2010, estimates from IMF, *World Economic Outlook*, April 2011. Because of data limitations, data may include official flows. [9] Portfolio investment; breakdown for 2010 based on BIS estimates. [10] Monthly averages of daily indices, in local currency terms; 2005 average = 100. [11] MSCI regional indices.

Sources: IMF; © Consensus Economics; Datastream; MSCI; national data; BIS estimates. Graph I.2

The devastating earthquake and tsunami in Japan in early March 2011 captured world attention but only temporarily dented optimism. As we write, the resulting supply disruptions do not appear serious enough to impede steady global growth.

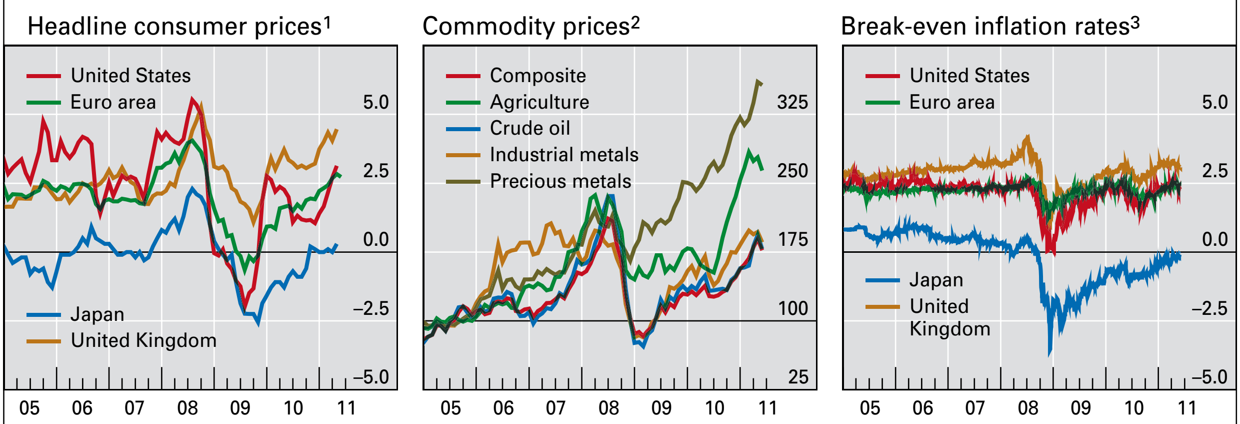
Activity remained strong in major emerging market economies (Graph I.2, left-hand panel). Mindful of the unevenness of the global recovery, investors continued to shift their portfolios towards emerging markets (centre panel), where equity prices outpaced those in advanced economies (right-hand panel). Differential performance persisted until early 2011, when concerns about overheating and inflation, combined with geopolitical worries linked to unrest in the Middle East and North Africa, prompted a retreat from some emerging markets.

While much of the increase in asset prices in the past year reflected improving fundamentals, changing attitudes played a role as well. Market participants had been gradually resuming their willingness to take on risk, as we would expect in the early stages of a cyclical upturn. A related development was the resurgence of financial innovation, with strong growth in new instruments and vehicles such as synthetic exchange-traded funds, commodity-linked notes and commodity-based hedge funds. At one level, the return of innovation is a positive sign. But the arrival of new products with risks untested by market stress vividly brings back memories of the lead-up to the financial crisis. The revival of risk-taking and innovation therefore poses an important challenge for authorities tasked with maintaining financial stability.

Inflation pressures prompt revisions to monetary policy expectations

In major advanced economies, where economic slack dampened upward pressure on consumer prices for some time, inflation expectations started a gradual rise. Along with dwindling slack, a surge in prices for food, energy and other commodities added substantially to near-term inflation pressures for much of the past year (Graph I.3, left-hand and centre panels). The

Inflationary pressures

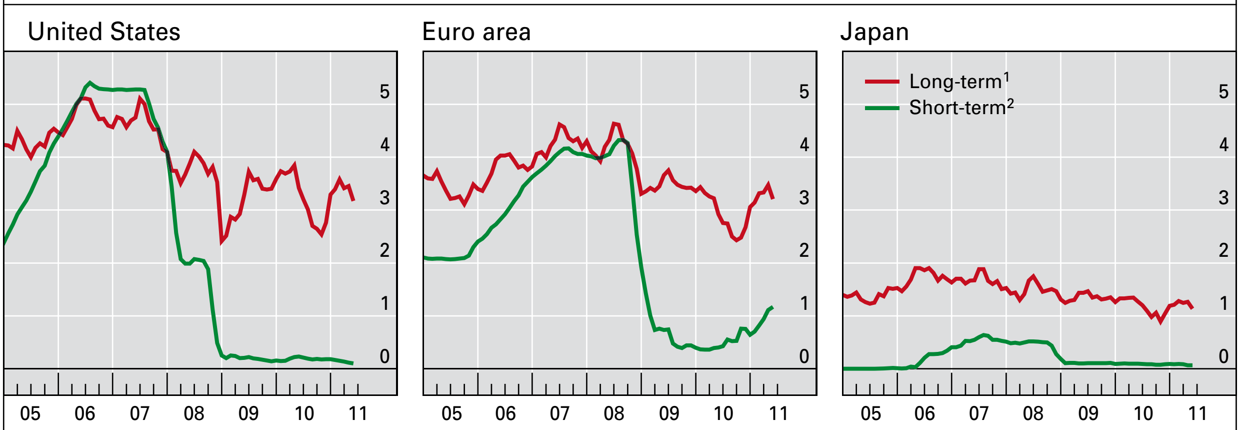


[1] Year-on-year changes, in per cent. [2] S&P Goldman Sachs Commodity Index; monthly averages of daily data, 2005 average = 100. [3] The yield on the 10-year nominal government bond less the yield on the 10-year inflation-indexed government bond, in per cent.

Sources: Bloomberg; Datastream; national data. Graph I.3

Interest rates

In per cent



[1] Ten-year government bond yields (for the euro area, German bund). [2] Three-month overnight index swap (OIS) rates.

Sources: Bloomberg; national data. Graph I.4

significant food price increases reflected weather-related declines in global supply combined with strong demand coming from global growth. For several commodities, low inventories exacerbated upward price pressures, while increased investor interest in commodities as an asset class may also have played a role. Moreover, political unrest in the Middle East and North Africa during the first quarter of 2011 led to concerns of possible supply disruptions, contributing to especially sharp oil price increases.

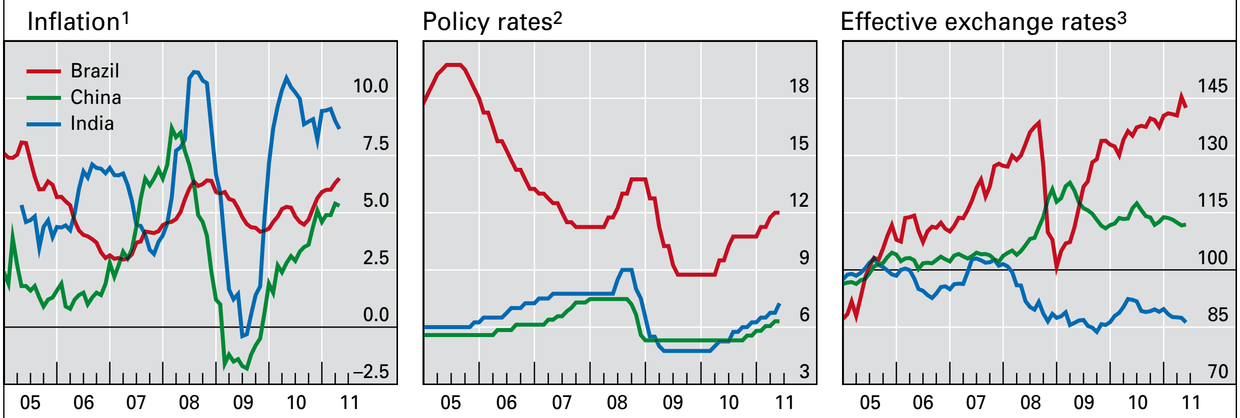
Against this background, 10-year break-even inflation rates in major advanced economies gradually started to climb in mid-2010 (Graph I.3, right-hand panel). Much of the rise, however, was the result of quickly increasing *near-term* inflation compensation (expected inflation and inflation risk premia). But despite the obvious near-term price pressures, break-even inflation expectations at distant horizons remained relatively stable, suggesting that central banks' long-term credibility was intact, at least for the time being.

But controlling inflation in the long term will require policy tightening. And with short-term inflation up, that means a quicker normalisation of policy rates. Expectations that short-term interest rates would rise contributed to the increase in long-term bond yields seen until early 2011 (Graph I.4).

The move among major advanced economies to tighten monetary policy came first in Europe in early 2011. Commodity price increases had helped lift consumer price inflation in the euro area to 2.7% in March, well above the ECB's definition of price stability (close to, but below, 2%). In response, and citing further upside risks to the outlook, the ECB raised policy rates by 25 basis points in April 2011. In the United Kingdom, CPI inflation had exceeded the Bank of England's 2% target since December 2009, reaching a peak of 4.5% in April 2011 (in part due to a VAT increase). As yet, there has been no move by the Monetary Policy Committee, but one wonders how long its current policy can be sustained.

In emerging market economies, inflationary pressures were increasing as well. Brisk economic growth combined with a relatively high weight on food

Selected emerging market economies: inflation, policy rates and exchange rates



[1] Year-on-year changes in consumer prices, in per cent. For India, wholesale prices. [2] For Brazil, target SELIC overnight rate; for China, one-year working capital; for India, repo rate; in per cent. [3] BIS-calculated nominal effective exchange rates; 2005 average = 100; an increase indicates an appreciation.

Sources: Bloomberg; national data; BIS. Graph I.5

and commodities in consumer price indices generated price increases – modest in Brazil, but significant in both China and India (Graph I.5, left-hand panel). In response, authorities continued to take gradual steps to tighten monetary conditions. The People's Bank of China raised both its policy interest rate and its reserve requirement a number of times. The Reserve Bank of India and the Central Bank of Brazil also continued to tighten (Graph I.5, centre panel). Still, real interest rates remained low or even negative in a number of emerging market economies.

With interest rates rising in emerging markets and at or close to record lows in advanced economies, investors shifted their portfolios towards the assets with higher returns. They did that in part by increasing their carry trade positions in emerging market fixed income instruments. Funded at very low interest rates in currencies such as the US dollar and Swiss franc, these positions are bets that the high interest rate differential will more than compensate for possible countervailing moves in exchange rates.

The shift of funding has two potentially damaging effects. First, by exerting upward pressure on exchange rates in the emerging market economies receiving the capital flows, it makes their exports less competitive and puts a brake on their growth. For economies that are overheating, this currency appreciation is part of the natural equilibrating process. Second, large gross cross-border financial flows can fuel unsustainable credit expansions and asset price booms. What begins as a response to strong fundamentals can become a serious threat to financial stability.

To resist, or at least slow, the nominal appreciation of their currencies, several countries have been accumulating additional foreign currency reserves. Some also introduced or increased taxes on foreigners investing in their domestic currency markets: Brazil, which has seen strong currency appreciation (Graph I.5, right-hand panel), raised its transaction tax on foreign fixed income investments. Thailand removed tax breaks for foreign investors on domestic bonds. Korea renewed a tax on foreign investors' returns on government bond investments.

Lingering fiscal policy concerns in the euro area

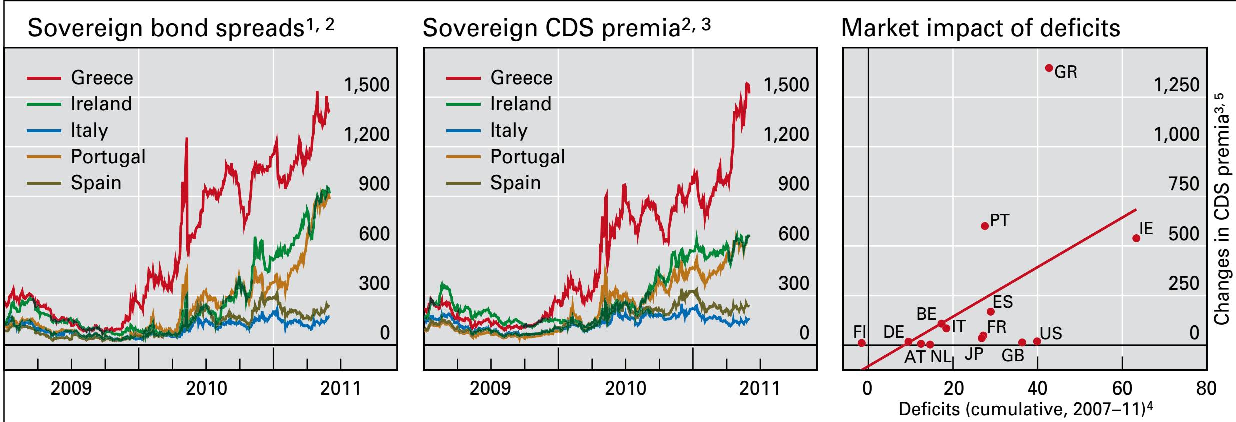
For a number of countries on the periphery of the euro area, concern about the fiscal situation, which had initially surfaced in late 2009, intensified and then lingered throughout the past year. As a result of initial policy actions, peripheral country sovereign bond yields and credit default swap (CDS) spreads receded from their May 2010 peaks. But, shortly thereafter, they began a steady rise (Graph I.6). As the situation in Ireland deteriorated in November, spreads climbed further there, as well as in Greece, Portugal and Spain.

Another factor driving up euro area credit spreads in late 2010 was the October agreement between the governments of France and Germany – with subsequent support from the rest of the European Union – making it possible to impose losses on holders of sovereign bonds should a government be unable to service its debt. Faced with soaring credit spreads, finance ministers in several European countries later reiterated their position that such burden-sharing would apply only to bonds issued after 2013. That declaration, together with the later announcement of a support package for Ireland and continued ECB bond purchases, brought temporary calm.

As 2011 began, credit spreads on euro area sovereigns rose once again. But the news was not all bad. Some fiscal austerity measures were announced, and the European Financial Stability Facility (EFSF) successfully launched its first issue of EU bonds in January.

Although the EFSF is scheduled to close down in mid-2013, its function of supporting troubled EU sovereigns will be taken up by a successor, the European Stability Mechanism (ESM). Euro area heads of state or government

Fiscal challenges in euro area countries



AT = Austria; BE = Belgium; DE = Germany; ES = Spain; FI = Finland; FR = France; GB = United Kingdom; GR = Greece; IE = Ireland; IT = Italy; JP = Japan; NL = Netherlands; PT = Portugal; US = United States.

[1] Five-year nominal yield over five-year nominal German bund yield. [2] In basis points. [3] Five-year on-the-run CDS spreads. [4] Cumulative government deficits as a percentage of GDP for 2007–11 (for 2010–11, estimates and forecasts). [5] Change in sovereign CDS premium between 26 October 2009 and 31 May 2011, in basis points.

Sources: OECD, *Economic Outlook*; Bloomberg; JPMorgan Chase; Markit; BIS calculations. Graph I.6

agreed on some key features of the ESM in early March, when they also adopted a Pact for the Euro, which, among other things, will require euro area states to put the fiscal rules of the EU Stability and Growth Pact into national legislation. Despite this progress, doubts remained about the near-term effectiveness of the agreed facilities and, because of funding questions, about the longer-term adequacy of the ESM.

The crisis deepened in April 2011 when Portugal became the third euro area country to request EU assistance after its government failed to receive domestic support for planned austerity measures and was forced to resign. With negotiations on the support package dragging on, and popular backlashes erupting in several countries, investor sentiment deteriorated further, and the relentless upward trend of credit spreads of crisis-hit countries continued into the second quarter. As a result, the financing burden was seen to be quickly spiralling out of control in Greece, with Portugal and Ireland not far behind. While inflation is one way out of this bind, it is ruled out by an independent ECB set on maintaining price stability. That leaves only two options, neither of which is very appealing. The first is restructuring. But the fallout from a partial default on outstanding sovereign debt would be extremely difficult to control, especially given the losses banks might sustain. The second is mutualisation, in which other euro area countries pick up the tab for those in trouble. The first option would be hard to manage; the second would be hard to sell to an already sceptical European electorate.

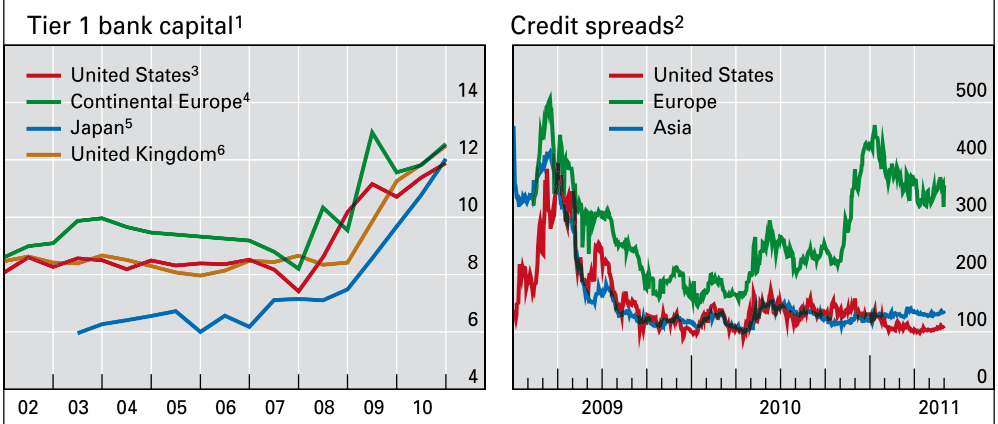
Fiscal policy elsewhere

While investor distrust forced European politicians to act repeatedly over the past year, fiscal imbalances in other countries, including the United States, the United Kingdom and Japan, had little market impact (Graph I.6, right-hand panel). Nonetheless, recognising the risks associated with waiting, the UK government that took office in May 2010 announced a range of austerity measures. Rating agencies provided further confirmation of the fiscal dangers facing major advanced sovereigns. In January 2011, Standard & Poor's (S&P) downgraded the credit rating of Japan, and over subsequent months Moody's, S&P and Fitch lowered their outlook for Japan's rating from "stable" to "negative", partly as a result of the prospective costs associated with the March earthquake and tsunami. In April 2011, S&P cut its long-term outlook for US sovereign debt for the first time (also from stable to negative), indicating a higher risk that the United States could lose its AAA rating unless its finances are put on a sounder footing.

Banks' balance sheets improve but remain vulnerable

Balance sheets of financial firms continued to improve in advanced economies (Graph I.7, left-hand panel). Rising asset prices and a steep yield curve helped banks generate outsize profits over much of the past year. Lower loan loss provisions contributed as well. However, while bank CDS spreads remained stable in the United States and in Asia, they rose in Europe to levels not seen since 2009 on worries about exposures to the troubled sovereign debt of the euro area periphery (Graph I.7, right-hand panel). The greatest increase in

Bank capital ratios and credit spreads



[1] Average ratio of Tier 1 capital to risk-weighted assets for banks named in each group; ratio weighted by asset size of banks; in per cent. [2] Equally weighted average senior five-year CDS spreads for the banking sector, in basis points. [3] Bank of America, Citigroup, JPMorgan Chase, Wachovia Corporation (to Q2 2008) and Wells Fargo. [4] Banco Santander, BNP Paribas, Commerzbank, Credit Suisse, Deutsche Bank, UBS and UniCredit. [5] Mitsubishi UFJ Financial Group, Mizuho Financial Group and Sumitomo Mitsui Financial Group. [6] Barclays, HSBC and Lloyds TSB Group.

Sources: Bloomberg; JPMorgan Chase. Graph I.7

spreads was for banks in the countries facing the toughest fiscal challenges. But the rise in spreads also affected banks in the core euro area, highlighting the close relationship between fiscal and financial stability: valuation losses on bonds issued by sovereigns in fiscal difficulty reduce the creditworthiness of the banks holding them and lower the amount of collateral they can borrow against.

Following the May 2009 US example, the European Union conducted stress tests to assess the resilience of the EU banking system to a range of adverse economic and financial market shocks. (Swiss regulators conducted a simultaneous test.) The EU results, released in July 2010, showed that only seven of 91 banks tested required additional capital (a combined €3.5 billion).

Initially, financial markets took a positive view of the announcements. Sovereign credit spreads fell and conditions in European money markets improved. But reaction turned negative as sceptical analysts complained that the tests had not been demanding enough. Critics were vindicated when several Irish banks were forced to seek government support only a few months after having received a clean bill of health, thus triggering the Irish sovereign debt crisis. A new stress test in early 2011 showed that the Irish banks would require an additional €24 billion in capital, which would push the total Irish government injection to at least €70 billion.

In the United States, a Federal Reserve assessment of the 19 largest US banks showed that they had made significant progress in bolstering their capital positions over the two years of the crisis, adding more than $300 billion in equity between end-2008 and end-2010. Declared healthy, the US banks were then freed from restrictions on dividend payouts and share buybacks. Several banks immediately announced tens of billions of dollars of increases in such capital expenditures.

The year in prospect

Given the key role of finance in real economic growth, a robust financial environment is a prerequisite for a stable economic future. If we are to create and nurture that financial environment, we must shift public and private finances onto a sustainable path, reduce the large current account balances and gross financial flows arising from international activity, and ensure medium-term price stability. Creating a durable financial environment also requires that we finish regulatory reform and fill key gaps in the currently available data that hinder our ability to detect emerging stresses in financial markets, institutions and instruments.

Fiscal challenges

In the aftermath of the Great Recession, public debt levels have increased dramatically, particularly in mature economies. As previously discussed, in the peripheral euro area countries, the fiscal problems have already sapped investor confidence to the point where sovereign borrowing costs have soared beyond sustainable levels. For well over a year, European policymakers have been scrambling to put together short-term fixes for the hardest-hit countries while debating how to design a viable and credible long-term solution. They need to finish the job, once and for all.

The fiscal woes of a number of euro area countries resulted in eye-popping jumps in their sovereign bond yields and CDS spreads. Yet, as noted, other mature sovereigns with record high fiscal deficits and outsize levels of public debt have not seen any market effects (at least none that are clearly linked to their deteriorating fiscal conditions). Three factors that may be playing a role in the market's seemingly inconsistent treatment of fiscal stress across countries are differences in the distribution of debt between the public and private sectors, differences in the fraction of the countries' sovereign debt that is held by foreigners and whether countries have an independent currency. Countries with lower private debt have more capacity to repay their public debt. And when public debt is held by domestic residents, there may be a greater willingness to repay. In addition, having an independent currency and monetary policy also seems to play a role, as this provides policymakers with greater flexibility.

Nevertheless, either you enjoy the confidence of the markets or you don't. Therefore, a loss of confidence in the ability and willingness of a sovereign to repay its debt is more likely to be characterised by a sudden change in sentiment than by a gradual evolution. This means that governments that put off addressing their fiscal problems run a risk of being punished both suddenly and harshly. And if that day comes, experience teaches us that the fiscal consolidation measures needed to regain the confidence of investors will be substantially larger, more difficult and more painful than they would have been.

As discussed in Chapter II, fiscal authorities must take swift and credible action to bring debt levels down to sustainable levels. This requires taking short-term measures to reduce deficits in the aftermath of a costly recession while addressing longer-term challenges arising from structural imbalances.

In many countries, the structural task involves facing up to the fact that, with their populations ageing, promised pension schemes and social benefits are simply too costly to sustain.[1]

The fiscal challenge is made all the more difficult by the fact that simply returning to the pre-crisis fiscal stance will not be enough. This is true for at least two reasons. First, fiscal positions preceding the financial crisis were made to look unrealistically rosy by the tax revenues arising from unsustainable credit and asset price booms. And second, cyclical surpluses need to be built up as buffers that can be used for stabilisation in the future. Since the government acts like an insurance company, it needs a reserve fund. This means that running a cyclical balance, in which budget surpluses in booms neutralise budget deficits in recessions, is not good enough.

What about the risk that aggressive austerity measures could prove counterproductive, choking off economic growth? In advanced economies, where the recovery appears now to be self-sustaining, this risk is much smaller than it was a year ago. (In most emerging market economies, it is almost non-existent.) But more importantly, in a number of cases the long-run fiscal outlook has not improved, at least not enough. The unavoidable conclusion is that the biggest risk is "doing too little too late" rather than "doing too much too soon".

Private sector balance sheet challenges

Financial stability also requires adjustment to household, financial and non-financial firm balance sheets. Private sector debt remains high in both the United States and Europe, where, as Chapter II argues, maintaining or regaining market confidence requires continued deleveraging.

At the centre of the financial crisis was an unsustainable, debt-driven residential and commercial real estate boom in a number of countries, most prominently the United States. The result was a large stock of household debt, which has not yet fallen enough, and shaky commercial mortgages. Together, these cast a dark shadow over both the financial and real economies in a number of countries.

Troubled financial institutions have made progress in cleaning up their balance sheets. But, again, there is work left to do. They have been valuing impaired assets at more realistic levels, discouraging evergreening of loans, retaining earnings and raising capital in the financial markets. But at the same time as ultra-low interest rates have given banks the breathing space to take the necessary actions, they have weakened incentives to pursue the clean-up. With the time for policy normalisation fast approaching, financial institutions need to quickly finish what they have started. The fact that the financial system has been building up significant interest rate risk as rock-bottom policy rates have persisted underscores the need for urgency.

Apart from balance sheet difficulties, the private sector faces structural problems that will take time to solve. Growth during the pre-crisis years was heavily weighted towards finance and construction. In a number of countries,

1 See S Cecchetti, M Mohanty and F Zampolli, "The future of public debt: prospects and implications", *BIS Working Papers*, no 300, March 2010.

these sectors grew disproportionately to the rest of the economy and now have to shrink. Like most adjustments, it will be painful in the short run. Not only will this reallocation impose suffering on the people who worked and invested in those sectors, it will weigh on aggregate growth and public revenues as well.

Emerging market economies managed to escape the worst of the crisis, but many now run the risk of building up imbalances very similar to those seen in advanced economies in the lead-up to the crisis. For example, property prices in a number of emerging market economies are advancing at staggeringly rapid rates, and private sector indebtedness is rising fast. Emerging market policymakers should recognise that the lessons from the financial crisis do not apply only to advanced economies.

International imbalances

After a brief, crisis-induced hiatus, global imbalances in financial flows – both net and gross – have returned, creating vulnerabilities and complicating policymaking at all levels. Current account surpluses and deficits are generating large net flows of capital. But a country with large net inflows risks financial instability if its financial sector cannot allocate the new capital efficiently; and it is vulnerable to a sharp and damaging depreciation of its currency if the inflow reverses.

Cross-border flows spur growth and development, benefiting everyone. The flows can have harmful side effects, but impeding them or the cross-border financial integration that facilitates them is not the solution. Instead, their benefits should be protected and the side effects targeted by making structural domestic adjustments, improving international policy coordination and strengthening the financial stability framework.

What we need are policies in deficit countries to encourage saving and policies in surplus countries to encourage consumption. And although not enough by themselves, changes in real exchange rates are also essential; however, major countries resist real exchange rate adjustment. As argued in Chapter III, the policy gridlock must be broken by international coordination that would distribute the burden of adjustment across major surplus and deficit countries. Without such cooperation, the outsize current account imbalances, the large net financial flows they generate and the resulting vulnerabilities will continue to grow.

Large gross financial flows, dangerously obscured by the long-standing concern over current account imbalances, are also creating vulnerabilities. In recent years, these flows have generated enormous gross positions on balance sheets across the globe, in some cases in the absence of any net flows. The financial crisis showed us that the build-up of gross investment positions can lead to substantial currency, liquidity and other mismatches that can propagate and magnify shocks, creating damaging volatility in the international financial system. Moreover, gross international flows make rapid credit growth possible, eliminating the domestic savings restriction that would otherwise temper credit expansions.

As discussed in Chapter III, the principal defence against the risks posed by large gross flows is a set of macroeconomic policies that promote monetary stability and fiscal sustainability. Regulatory and macroprudential measures play a secondary role, while, as a last resort under extraordinary conditions, capital controls can serve as a stopgap measure.

Monetary policy

Monetary policy challenges, already difficult, are intensifying. The great danger is that long-term inflation expectations will start to climb, and current price developments and policy stances are sending us in the wrong direction. As spare capacity dwindles, food and energy price increases are more likely to have second-round effects on inflation. And the risks to long-term inflation expectations are intensified by continued unconventional monetary policy actions, outsize central bank balance sheets in the core advanced economies and a perceived temptation to inflate away the real value of ballooning government debt.

As discussed in Chapter IV, monetary policymakers have their work cut out for them. They must find a way to normalise policy rates or risk jeopardising their hard-earned credibility as inflation fighters. As the experience of the 1970s and 1980s shows, once inflation expectations take off, a costly, protracted effort is required to rein them in. In emerging market economies, where central banks are still working to establish their anti-inflation credibility, inflationary pressures are rising and authorities face the build-up of risks linked to credit and property price booms.

Given their large-scale government bond purchases, central banks are running the risk of being seen as either working to ease sovereign debt strains or having their policies rendered ineffective by the actions of debt managers. Central banks must guard against even the hint that they are using monetary easing as an excuse to monetise public debt. Markets and the public must remain confident that central bank balance sheet policies are a means of maintaining price stability and that, with inflation threats growing, policy will be normalised very soon.

In this regard, the independence of central banks is the basis for their credibility and provides the best defence against incipient inflation threats. Indeed, the importance of central bank independence is applicable to other policy areas. In particular, it should set the standard for the organisation of macroprudential authorities (see box).

Regulatory reform

Regulatory reform is proceeding rapidly yet deliberately. The Basel Committee on Banking Supervision has agreed on a new framework for capital and liquidity standards, or Basel III, the details of which are described in Chapter V. The reforms create a stronger banking system that will be more efficient in allocating credit to the real economy while being less vulnerable to costly financial crises.

The reforms in Basel III include requirements for both a higher minimum quantity of capital and a better quality of capital to cover more risks. Further, Basel III introduces additional capital buffers that will be adjusted countercyclically to limit the amplitude of credit cycles. It also introduces liquidity standards. One lesson of the crisis was that, left to their own devices,

Central bank governance and financial stability

The recent financial crisis highlighted the need for central banks to play a role in fashioning and executing financial stability policy but raised questions about how best to organise such a function. Since central banks vary widely in their institutional settings, historical contexts and political environments, no single answer will apply. Nonetheless, the crisis provides four broad lessons that can inform efforts worldwide to enhance the financial stability function of central banks:[①]

Central banks must be involved in the formulation and execution of financial stability policy if such policy is to be effective. There are three key reasons. Financial instability can affect the macroeconomic environment, with substantial consequences for economic activity, price stability and the monetary policy transmission process. Central banks are the ultimate source of liquidity for the economy, and appropriate liquidity provision is crucial to financial stability. And central banks have a macroeconomic focus and an understanding of financial markets, institutions and infrastructures – all crucial for the exercise of a macroprudential function.

Clarity about the roles and responsibilities of all authorities involved in financial stability policy – central banks, supervisors, deposit insurers, treasuries and competition authorities – is of paramount importance for effective and rapid decision-making, for managing trade-offs and for accountability. Clarity is needed to reduce the risk of a mismatch between what the public expects and what the central bank can deliver. Knowing who is responsible for what at different stages of a crisis can aid rapid decision-making. And clarity about responsibilities and powers also helps to promote accountability. Even though it is difficult to define and operationalise financial stability concepts, attempting to achieve clarity is thus desirable. Especially for central banks with broad financial stability responsibilities, there may be merit in the public announcement of a financial stability strategy that clarifies the central bank's intentions and how it will reconcile the need to achieve multiple objectives.

The greater the responsibility afforded the central bank for emergency actions to support financial stability, the greater the central bank's risk-bearing capacity will need to be and/or the more robust the mechanisms for transferring financial losses to the treasury. The point at which the treasury takes over responsibility for financial risks, and the mechanisms by which it does so, should be clearly stated.

Central bank accountability for monetary policy actions is now heavily based on transparency. For the most part, transparency will also be needed for financial stability functions. Disclosure of financial stability decision-making and reasoning is therefore essential, though delay in disclosing some elements of the decisions may be necessary if immediate disclosure risks triggering destabilising behaviour.

Under any financial stability mandate, the central bank will need appropriate tools, authorities and safeguards. When the central bank has macroprudential policy responsibilities, it must have either tools that it can use autonomously or the means to prompt or even require action by other authorities that have the power to take appropriate action.

To discharge such mandates, central banks also need access to a wide range of information, including on the quality of collateral, the solvency of institutions seeking liquidity support, the state of systemically important institutions, and the interconnections between institutions, markets and systems. This may require extensive information-sharing between agencies. The power to obtain information directly from financial firms through the legal authority to call for reports and to conduct on-site inspections may be needed.

Central banks' financial stability mandates and governance arrangements need to be compatible with their monetary policy responsibilities. In order to conduct monetary policy successfully, decisions affecting monetary conditions should be made independently by the central bank, which also means that it should have control over its balance sheet.

Where several agencies have related responsibilities for macroprudential policy, inter-agency councils may be useful. Such councils may serve as forums for the exchange of information and advice or for joint decision-making. In the former case, transparency of recommendations and comply-or-explain requirements may reduce the risk that consultation will be perfunctory. In the latter case, the decision-making arrangements need to be clearly specified. In both cases, the design of procedures for making decisions should pay careful attention to the capacity of each authority to discharge its separate and independent duties.

[①] See *Central bank governance and financial stability*, report prepared by a Central Bank Governance Forum study group chaired by Stefan Ingves, 2011.

Four recent examples of new institutional arrangements for macroprudential policy illustrate the different approaches that can be taken in different institutional settings. In Malaysia, a new decision-making board with financial stability responsibilities was created within the central bank in 2009. In the United Kingdom, an interim Financial Policy Committee has been created at the Bank of England pending new legislation. Its purpose is to focus on the macroprudential dimension of financial stability policy – including the use of microprudential policy instruments for overall system stability purposes. In both these cases, the new decision-making bodies reside within the central bank. In contrast, in the new arrangements in the European Union and the United States, inter-agency bodies are responsible for macroprudential policy coordination and decision-making – the European Systemic Risk Board (ESRB) and, in the United States, the Financial Stability Oversight Council (FSOC). Nonetheless, the central banks have the majority of votes in the ESRB and have the prime role in providing it with analysis. In the United States, the FSOC decides whether an institution is systemic, but the Federal Reserve, as the supervisor of systemically important entities, takes the lead in setting heightened regulatory standards for such entities. In all four examples just discussed, the mandates of the macroprudential bodies do not extend to monetary policy; the central banks retain their independent objectives and full ability to make interest rate decisions.

banks and other financial intermediaries will maintain woefully inadequate liquidity buffers. Under Basel III, financial institutions will have to hold sufficient liquidity to be able to weather a variety of shocks.

However, the work is not finished. Significant challenges remain. Among them is the need to ensure that systemically important financial institutions (SIFIs) become, in effect, less so. This means first figuring out which institutions are systemically important and then determining the steps needed to make them sufficiently resilient. Regulators are busy working out how much additional loss absorbency global SIFIs should have. Moreover, while the Financial Stability Board (FSB) has issued recommendations for enhanced supervision of SIFIs, the details still need to be settled by national supervisors, standard setters and the FSB. This process is complicated by the existence of various types of SIFIs. For example, among SIFIs, an insurance company would probably have balance sheet risks that need to be treated differently from those faced by a bank.

Besides making SIFIs more resilient, reducing the externality they create for the financial system at large, we must devise resolution regimes for them to ensure that they can fail in an orderly way. Work is progressing on legal and policy frameworks to enhance authorities' capability to manage and resolve distressed institutions with the least possible disruption to the larger financial system.

Another key to building the foundations of a stable financial system is to extend the regulatory perimeter beyond traditional financial institutions to cover shadow banks – entities that perform maturity or liquidity transformation outside the currently regulated banking system. Shadow banks have the potential to generate substantial systemic risk because they can be highly leveraged and engage in significant amounts of maturity transformation while being closely linked to commercial banks. And, as the name suggests, the shadow banks can do all of this in ways that are less than completely transparent.

Banks – often systemically important ones – typically generate large profits by sponsoring shadow banking activities to which they have significant direct and indirect exposures, including backup lines of credit and various sorts of credit enhancements. It is exactly that linking of the banking system to the shadow banks, including explicit or implicit guarantees to the holders of shadow bank liabilities, that gives rise to some of the most pernicious financial stability risks. By comparison, mutual funds and hedge funds, although huge in terms of the money involved, pose less of a systemic risk because they are generally less leveraged and have fewer and looser ties to banks.

As we complete the preparation of the new global standards, it is essential that national authorities translate them into legislation and regulations in a timely and globally consistent manner. Financial stability will be jeopardised by any attempt to delay or weaken the agreements.

Finally, even after their implementation, the new rules, as such, will not be sufficient: rigorous enforcement by supervisors within and across national boundaries will play a key role in making sure that financial institutions comply with them.

Measuring and monitoring the threats

The crisis exposed serious shortcomings in our ability to measure financial stability vulnerabilities. As discussed in Chapter VI, regulators and supervisors need better data to improve their measurement and monitoring of systemic risk. Getting those data poses significant analytical challenges.

Currently available data have serious gaps at both the firm and market-wide level. Firm-level data available to authorities are neither detailed nor consistent enough. Market-wide data are available, but they are not well suited to risk management: they reveal systemic stress only after a shock occurs.

We must fill the data gaps as soon as possible. Resource constraints, combined with confidentiality concerns and legal obstacles, require that we set priorities: what can realistically be done, and what should have the highest priority? As expressed in Chapter VI, the highest priority should be given to improvements in two areas: firm-level data and standardised sets of data on aggregate quantities. The first of these demands a new international framework that gives supervisory authorities a complete view of the balance sheet positions of the largest financial institutions and the linkages between them. Without that framework, supervisors will lack the ability to jointly analyse the positions across banks and to detect vulnerabilities at the system level. Moreover, the data must be disseminated internationally to allow an adequate analysis of global systemic risks.

The second area of priority is updating standardised sets of aggregate financial statistics – such as for flow of funds, the balance of payments and trading platforms – to reflect the significant changes in the financial landscape over the past few decades. Updated aggregates would enhance our ability to monitor systemic vulnerabilities of both the bank and non-bank sectors. By exposing sector-level problems, better aggregates would provide a lead for uncovering stress in the firm-level data.

Lastly, the financial system will continue to evolve, not least because of business requirements, innovation and efforts by financial institutions to circumvent costly regulations. Given this fact of life, transaction-level information from data warehouses and trading platforms can assist regulators and supervisors in identifying markets or activities whose evolution needs more of their attention.

Summing up

Over the past year, the global economy has been moving towards healthy, stable, self-sustaining growth, albeit in fits and starts. Despite that good news, significant work remains to be done.

Even before the financial crisis created the need for massive stimulus, government budgets in many advanced economies were on an unsustainable path. Fiscal authorities need to act quickly and decisively before disaster strikes again. This means addressing the structural imbalances that are among the myriad causes of the crisis as well as a dangerous part of its legacy. In the countries that were at the centre of the crisis, those imbalances include the lingering indebtedness in the private sector – households as well as financial and non-financial firms – which must be cut to levels well below those seen in the middle of the last decade. Structural adjustment for those countries also means eschewing the model of leverage-led growth, a prerequisite for a rebalancing of the global economy.

Large and persistent current account imbalances continue to plague the global economy, while the immense gross financial flows coursing through the system are intensifying risks to financial stability. International cooperation and coordination is particularly needed here if we are to avoid a painfully disorderly adjustment. Nonetheless, even without coordination, deficit countries can and should encourage more saving, and surplus countries more consumption; it is vital that each country first puts its own house in order.

Central bankers have their work cut out for them as well. They confront distortions exacerbated by years of extraordinarily accommodative monetary conditions. Prime among the challenges is the increasing risk to price stability. Output gaps are closing, commodity prices have been surging, and inflation is rising around the globe. The dangers are most acute in emerging market economies, but they also extend to the core advanced economies.

On the regulatory front, where authorities have agreed to a number of important reforms, challenges remain. Systemically important financial institutions must be made more resilient. Resolution regimes must be built to manage the failure of even the largest financial firms. And the regulatory framework of the future must be such that any institution that does the work of a bank will be treated like a bank regardless of its legal form of organisation.

Finally, the crisis exposed large gaps in the data available for measuring financial vulnerabilities and systemic risk. In the short term, the key to addressing the problem is identifying the important gaps that can be most expeditiously filled, and then filling them.