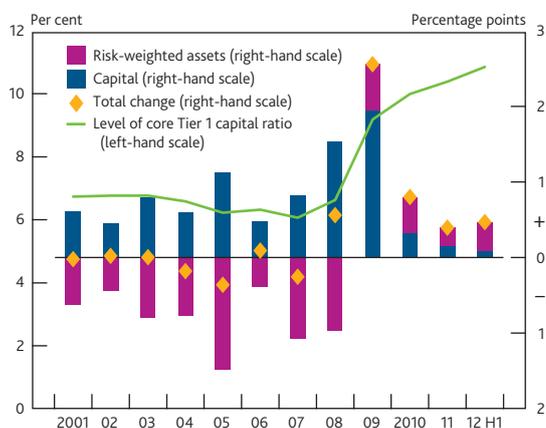


2 Short-term risks to financial stability

The outlook for financial stability has improved a little since the previous *Report*. But UK banks remain highly sensitive to developments in the euro area. There are some signs of overvaluation of assets on UK banks' balance sheets. Prospects for building capital through retained earnings appear generally limited and capital issuance has been weak. This could undermine banks' capacity to supply credit effectively, which may aggravate credit risks currently contained by forbearance.

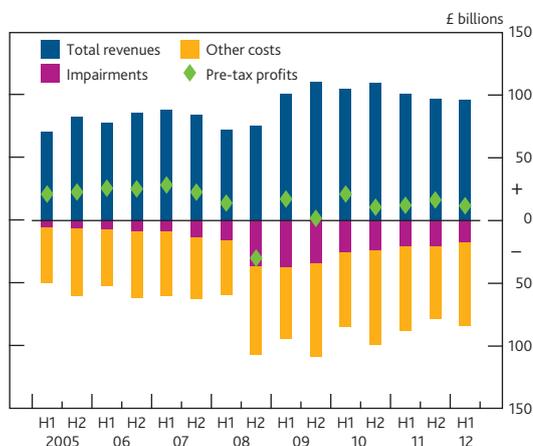
Chart 2.1 Contributions to the change in major UK banks' core Tier 1 capital ratios^(a)



Sources: Bank of England, published accounts and Bank calculations.

(a) As Co-operative Banking Group, Nationwide and Virgin Money have not yet reported their 2012 H1 results, their end-2011 results have been used for 2012 H1.

Chart 2.2 Major UK banks' revenues, costs and profits^{(a)(b)}



Sources: Bank of England, published accounts and Bank calculations.

(a) As Co-operative Banking Group, Nationwide and Virgin Money have not yet reported their 2012 H1 results, their end-2011 results have been used for 2012 H1.

(b) Costs related to the mis-selling of PPI are included within other costs.

Despite some improvement in financial market sentiment, short-term risks to financial stability remain significant. This section examines the resilience of the UK banking sector in the face of those risks and banks' response to stressed conditions.

2.1 Banks' resilience to stress

While some measures of resilience have continued to improve...

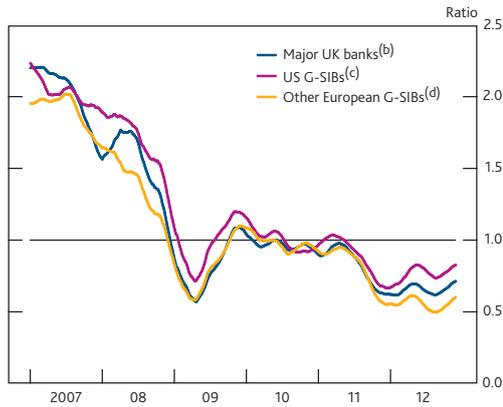
Some measures of major UK banks'⁽¹⁾ resilience have improved, although the pace of this improvement generally has slowed. The aggregate core Tier 1 capital ratio rose to 10.8% in the first half of the year, from 10.4% at end-2011 (Chart 2.1). This was due both to an increase in capital and a fall in risk-weighted assets. Leverage, a measure of resilience that does not use weights or models to calibrate risks, remained at its recent lower level. But leverage has not fallen significantly since 2009, when capital levels rose materially.

...profitability has been subdued...

The major UK banks reported pre-tax profits of around £12 billion in 2012 H1, an annual decrease of £0.4 billion (3%) (Chart 2.2). Profits were affected by low net interest margins, accounting adjustments on the value of own debt and costs for conduct redress. Net interest income was £48 billion in 2012 H1 — £2 billion less than 2011 H1. Banks reported that this reflected relatively high wholesale and retail funding costs, and subdued core lending growth. Net trading income fell by around £2.5 billion, driven by debt valuation adjustments. To date, the five largest UK banks have made provisions of £11.1 billion to cover expected compensation for mis-selling payment protection insurance (PPI) and £0.7 billion for mis-selling interest rate swaps to small and medium-sized enterprises (SMEs). Further provisions of around £1.2 billion have been made in relation to Libor issues and lapses in anti-money laundering controls.

(1) Unless otherwise noted, 'major UK banks' refers to: Banco Santander, Bank of Ireland, Barclays, Co-operative Banking Group, HSBC, Lloyds Banking Group (LBG), National Australia Bank, Nationwide, Royal Bank of Scotland (RBS) and Virgin Money.

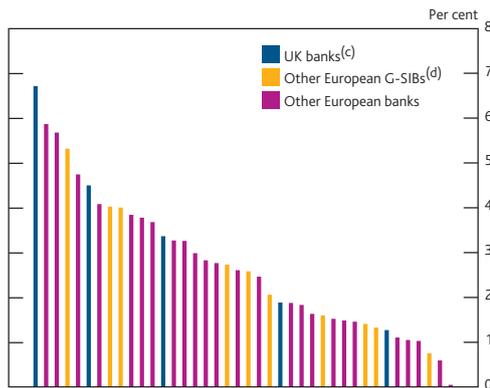
Chart 2.3 Major UK banks' and G-SIBs' price to book ratios^(a)



Sources: Thomson Reuters Datastream and Bank calculations.

- (a) Simple averages of the ratios in each peer group are used. The chart plots the three-month rolling average.
 (b) Excludes Britannia, Co-operative Banking Group, Nationwide and Northern Rock (from end-2007).
 (c) Bank of America, Bank of New York Mellon, Citigroup, Goldman Sachs, JPMorgan, Morgan Stanley, State Street and Wells Fargo.
 (d) BBVA, BNP Paribas, Credit Suisse Group, Deutsche Bank, Nordea Bank, Société Générale, UBS and UniCredit. For Groupe Cr dit Agricole and Groupe BPCE the traded entities Cr dit Agricole SA and Natixis are used respectively.

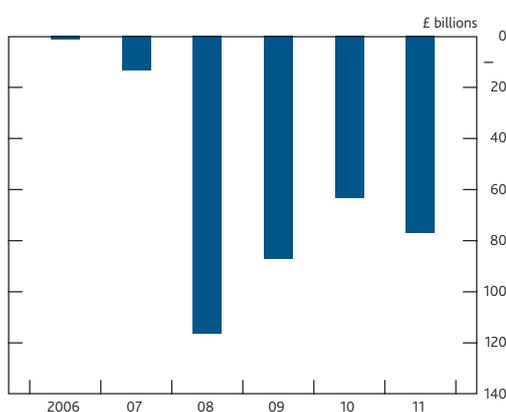
Chart 2.4 European banks' market-based capital ratios^{(a)(b)}



Sources: Bank of England, Bloomberg, SNL Financial, Thomson Reuters Datastream and Bank calculations.

- (a) Calculated as market capitalisation divided by total assets. Total assets data use the most recent period for which data are available.
 (b) Sample comprises the top 40 listed banks in Europe by total assets, excluding Allied Irish and ING Group.
 (c) Banco Santander, Barclays, HSBC, LBG and RBS.
 (d) See footnote (d) in Chart 2.3.

Chart 2.5 The difference between the book and fair value of customer loans over time^(a)



Sources: Bank of England, published accounts and Bank calculations.

- (a) Barclays, HSBC, LBG and RBS.

Most recently, Barclays, LBG and RBS have used excess liquidity to repay term debt, which provided a small boost to margins and profits. Barclays bought back £1.6 billion of debt, LBG £8.5 billion and RBS £4.2 billion. Senior unsecured debt spreads fell as a result. As these spreads have continued to fall it has become more expensive for banks to repay their own debt, potentially limiting any future benefits from this source.

...and market prices suggest continued uncertainty over banks' book values...

The market value of major UK banks' shareholders' equity (their net assets) remains, on average, around two thirds of the book value (Chart 2.3). A similar picture exists across other European and US banks. Consistent with this, the market capitalisation of most European banks is low relative to their total assets (Chart 2.4). There may be several reasons for this (see Box 2 of the June 2012 Report). Investors may be uncertain about the value of banks' net assets and of underlying asset risks. Low market values may also reflect weak or uncertain future profits, or high equity risk premia (Section 1). The contribution of each factor is not entirely independent, and will vary by bank.

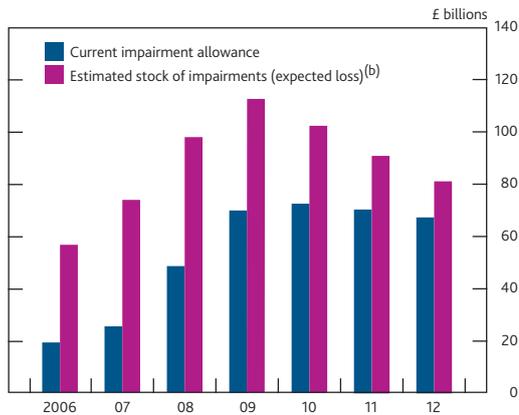
...possibly reflecting asset valuation concerns...

Overvalued assets explain part of this discount. In June 2012 the market value of the four largest UK banks' equity was around £90 billion less than the book value. This magnitude is similar to the difference between banks' own estimates of the fair value of their loans and their book value at end-2011 (Chart 2.5). Prior to the crisis, there was little difference between these values. But since 2007, the fair value of UK banks' loans has fallen significantly below the book value.

The fair value of loans should reflect the present value of expected cash flows. For example, expected credit losses, over and above current provisions or losses priced into loans, reduce the fair value of loans below their book value. Other factors, such as low policy rates, may reduce the economic profitability of loans. But banks disclose limited information about how they calculate these fair values. As such, the precise source of the low fair values for UK banks' loans is not entirely clear.

Expected future losses on loans may be underrecognised by current provisions. Incurred loss accounting rules mean that provisions can only be made where there is evidence that current or imminent impairment will reduce the present value of loans. As such, banks have limited ability to fully provision for expected losses. By delaying the recognition of losses, the incurred loss approach can lead to an overstatement of asset values. This overstatement may be especially large in the current environment, where low interest rates and forbearance practices have helped keep default rates low.

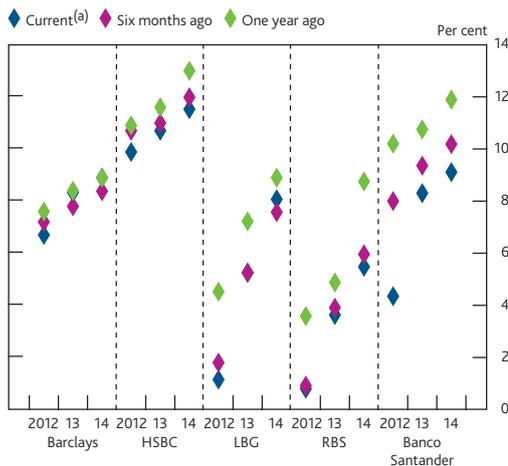
Chart 2.6 UK banks' provisions and estimated provisions under expected loss accounting^(a)



Sources: Bank of England, BBA Statistical Abstract, FSA regulatory returns, published accounts and Bank calculations.

(a) Bank of Scotland, Barclays, Halifax, HBOS, HSBC, LBG, Lloyds TSB, NatWest and RBS.
 (b) The estimated stock of impairments under expected loss accounting is assumed to be equal to expected losses over the residual maturity of banks' loan books. Expected losses are calculated based on the assumption that the annualised write-off rate observed at each year-end will trend back to historic norms (based on the 1990–2010 period) over the residual maturity of banks' loan books.

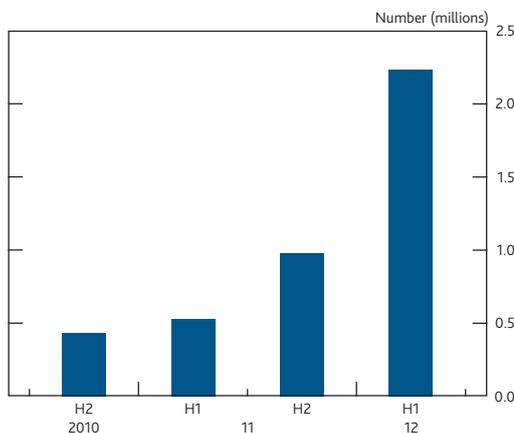
Chart 2.7 Analysts' consensus forecasts of major UK banks' return on equity



Sources: Bloomberg and Bank calculations.

(a) To ensure consistency, current estimates are as at the week commencing 12 November 2012.

Chart 2.8 Number of PPI-related complaints^(a)



Source: FSA.

(a) Financial services firms' reported number of complaints which were not resolved by the end of the business day following their receipt.

More forward-looking measures of expected losses deviate substantially from incurred loss provisions. **Chart 2.6** illustrates how provisions might have evolved under a very simple expected loss approach. In each year, banks are assumed to hold provisions for lifetime loan losses based on the assumption that write-off rates gradually return to their long-run rate. Expected loss provisions exceed the actual stock of provisions because they incorporate both backward and forward-looking elements. This simple experiment would have resulted in UK banks holding around £50 billion of extra provisions leading into the crisis and needing to increase provisions by less as the crisis broke.

There are other signs that expected future losses are greater than current provisions. For example, the ratio of provisions to forborne retail loans disclosed by UK banks are lower than coverage ratios — the ratio of provisions to non-performing loans — for UK banks' other loans. And UK banks' coverage ratios against some non-performing private sector loans in vulnerable euro-area countries are lower than those of some local banks. This variation may partly reflect differences in underlying loan quality between banks. But as an illustration, and assuming comparable loan quality, the four largest UK banks might require up to £15 billion of extra provisions to raise coverage ratios on these loans to more prudent levels. Large losses might also result from UK banks' commercial real estate (CRE) lending. The high LTV ratio of many of these loans, coupled with material refinancing needs, make these exposures susceptible to future losses.

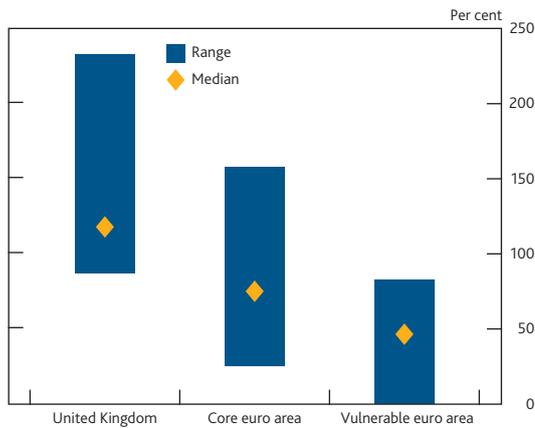
A further source of concern relates to the valuation of UK banks' fair-valued assets and liabilities, including in the trading book. These values could deviate significantly from the prudent value that might be realised if the assets were sold, particularly in times of stress. Moreover, evidence from the FSA's prudent valuation exercises indicate that approaches to the valuation of some trading book assets and liabilities vary greatly between banks.

...and poor prospects for future profitability...

Forecasts of the major UK banks' return on equity were revised down during 2012, particularly for banks with the lowest projected returns (**Chart 2.7**). Total revenues have fallen in each half-year period since 2010 H2 (**Chart 2.2**). In part, this reflects deleveraging by some banks. But revenues may be constrained further if weak global growth persists (Section 3).

Additional costs for conduct redress may also weaken profits. While UK banks have already made large provisions for conduct redress, further charges may be incurred if they have underestimated the scale of fines, claims and litigation costs, which can be difficult to quantify. For instance, since end-2011 the five largest UK banks have increased PPI-related provisions by 70%. And the number of new PPI-related complaints in

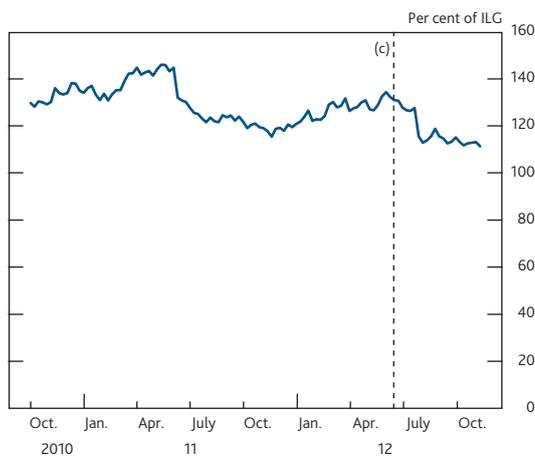
Chart 2.9 Liquid assets as a proportion of stressed outflows by banking sector^{(a)(b)(c)}



Sources: Liquidatum and Bank calculations.

- (a) Models a three-month market-wide stress, assuming severe, but plausible, retail, wholesale and bank deposit outflows and issuance.
 (b) Includes four UK banks, ten core euro-area banks and eleven other euro-area banks.
 (c) Estimated liquid assets are calculated by summing stable funding sources, which include unsecured bank and wholesale funding, retail deposits, debt in issue and equity, minus illiquid assets, which are defined as total assets less the sum of securities, cash, insurance assets, reverse repos and derivatives. The difference between these two is assumed to be funds invested in liquid assets.

Chart 2.10 Aggregate liquid asset holdings of UK banks as a percentage of FSA Individual Liquidity Guidance (ILG)^{(a)(b)}



Sources: FSA and Bank calculations.

- (a) UK 'defined liquidity groups' for Barclays, HSBC, LBG, Nationwide, RBS and Santander as designated by the FSA for liquidity regulation purposes.
 (b) Liquid asset holdings for this purpose exclude pre-positioned collateral at the Bank of England's Discount Window Facility in order for the data to be comparable across time.
 (c) June 2012 Report.

2012 H1 was more than double those received in 2011 H2 (Chart 2.8). Some external analysts have suggested that major UK banks may incur a further £4 billion to £10 billion of unrecognised PPI and Libor-related costs.

...though short-term funding risks have reduced.

The impact of Moody's review of banks with global capital markets operations was limited for UK banks. This was because downgrades were in some cases lower than expected. Guidance provided before the announcement also allowed UK banks to mitigate the impact.

At the time of the previous Report, major UK banks' holdings of highly liquid assets⁽¹⁾ were well in excess of regulatory guidance. Improved access to central bank facilities has reduced further the need to self-insure. The four largest UK banks appear well placed to withstand a liquidity shock relative to international peers, as illustrated by a simple stress-test experiment using data published by banks. The stress test models a three-month market wide stress, assuming severe, but plausible, retail, wholesale and bank deposit outflows and issuance. Chart 2.9 suggests that some vulnerable euro-area banks may not have sufficient liquid assets in this scenario — although they may have access to central bank liquidity facilities, which this scenario does not take into account. By contrast, the major UK banks appear resilient to this stress. These results are broadly consistent with the April 2012 Basel III monitoring exercise, which found that 40% of banks had a Liquidity Coverage Ratio below 75%.

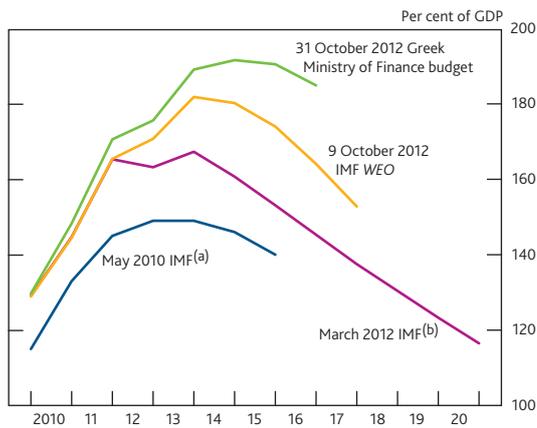
The largest six UK banks' holdings of highly liquid assets have fallen relative to FSA guidance since the previous Report (Chart 2.10). Recent regulatory changes, following an FPC recommendation in June, have reduced the need for banks to hold large liquid asset buffers. In particular, the FPC recommended that the FSA adjust its liquidity guidance and make clear to banks that they are free to use their liquid asset buffers in times of stress. This could allow banks to use funding that has been supporting liquid assets to boost lending to households and corporates.

2.2 Risks from the global environment

Risks from the euro area remain...

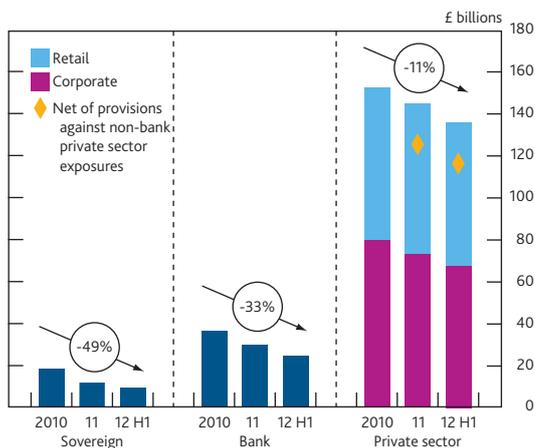
Despite recent policy actions, the euro-area sovereign debt crisis remains the most immediate and material risk to financial stability. Market contacts have cited a number of potential triggers that could escalate this risk. Forecasts for Greek public debt outturns have continued to worsen since the announcement of the IMF programme in 2010 — for instance, the most recent Greek budget contained a further upward

(1) Central bank reserves and unencumbered holdings of highly rated government securities. A more detailed definition can be found in the FSA Handbook, available at <http://fsahandbook.info/FSA/html/handbook/BIPRU/12/7>.

Chart 2.11 Forecasts of Greek public debt to GDP ratios

Sources: Greek Ministry of Finance budget and IMF.

- (a) Projections at the time of approval of the first Greek support programme.
 (b) Projections at the time of approval of the second Greek support programme.

Chart 2.12 Evolution of UK banks' gross exposures to vulnerable euro-area countries^{(a)(b)}

Sources: Bank of England, published accounts and Bank calculations.

- (a) Barclays, HSBC, LBG and RBS.
 (b) Includes on balance sheet exposures as disclosed by banks according to counterparties' country of origin. Where possible exposures are gross of impairment provisions but net of collateral and netting arrangements.

revision compared to the October 2012 *World Economic Outlook (WEO)* (Chart 2.11). Social unrest in one or more vulnerable euro-area countries could jeopardise further fiscal austerity measures. And capital flight from vulnerable euro-area banks could undermine confidence in the viability of those banks (Box 1).

...despite reductions in exposures to vulnerable sovereigns and banks...

In common with international peers, UK-owned banks have continued to reduce their exposures to vulnerable euro-area countries (Chart 2.12 and Box 1). Gross exposures to vulnerable sovereigns declined to less than £10 billion at end-June 2012, from around £12 billion at end-2011 (Table 2.A). And exposures to banks in vulnerable euro-area countries fell from £30 billion to £25 billion over the same period.

...non-bank private sector exposures are material...

But in aggregate, the major UK banks retain material exposures to non-bank private sector borrowers, namely households and corporates, in these countries. Total exposures were around £135 billion (65% of core Tier 1 capital), mainly reflecting exposures in Ireland for LBG and RBS, and in Italy, Portugal and Spain for Barclays. The illiquid and long-term nature of many of these exposures mean they have fallen more slowly than those to sovereigns and banks (Chart 2.12).

The major UK banks are likely to remain highly exposed to the non-bank private sectors in these countries for some time, unless they sell loans or businesses. While that would provide more certainty about asset values, it would also crystallise any losses. Crédit Agricole's recent disposal of Emporiki Bank, its Greek subsidiary, is one illustration. Crédit Agricole is expected to take a €2 billion loss as a result, on top of €9 billion in write-downs, capital injections and acquisition costs over the past six years.

...and provisions made to date may not be adequate.

If banks retain these exposures, future losses will depend on the adequacy of current provisions. UK banks currently have provisions of £19 billion against private sector exposures in the most vulnerable euro-area countries, primarily Ireland (Table 2.A). But, as discussed above, in some cases coverage ratios are lower than some local banks. While that could reflect differences in underlying asset quality, it might also indicate a less prudent approach to provisioning.

Further losses on these portfolios are possible, for instance if corporates in vulnerable euro-area countries come under increasing stress. Profits are not sufficient to cover debt interest payments for an increasingly large proportion of companies in Spain and Italy. This measure of corporate health would worsen if profits are squeezed further. In September, the overall proportion of doubtful loans in Spain

Table 2.A UK banks' exposures to selected euro-area countries^{(a)(b)(c)}

£ billions (as at 2012 H1)

	Sovereigns	Banks	Non-bank private sector	Total	Provisions ^(d)	Per cent of core Tier 1 Total less provisions
Greece	0	0	4	4	0	2
Ireland	2	10	63	75	16	28
Italy	4	4	25	33	1	15
Spain	2	9	36	48	2	22
Portugal	1	1	9	11	1	5
Total vulnerable Europe	10	25	136	170	19	72
Belgium	6	4	2	12		
France	35	61	58	155		
Germany	117	28	45	190		
Netherlands	68	6	42	116		
Other European countries	227	100	147	474		

Sources: Bank of England, published accounts and Bank calculations.

- (a) Barclays, HSBC, LBG and RBS.
 (b) For Greece, Ireland, Italy, Portugal and Spain data are from published accounts and include on balance sheet exposures as disclosed by banks according to counterparties' country of origin. Where possible exposures are gross of impairment provisions but net of collateral and netting arrangements.
 (c) For Belgium, France, Germany and the Netherlands data are from Bank of England, and include exposures on a consolidated banking group basis, gross of provisions. Exposures include balances with non-residents. Derivative exposures are not included.
 (d) Non-bank private sector provisions. Not available in aggregate for Belgium, France, Germany or the Netherlands.

increased to 10.7% and the unemployment rate rose above 25%.

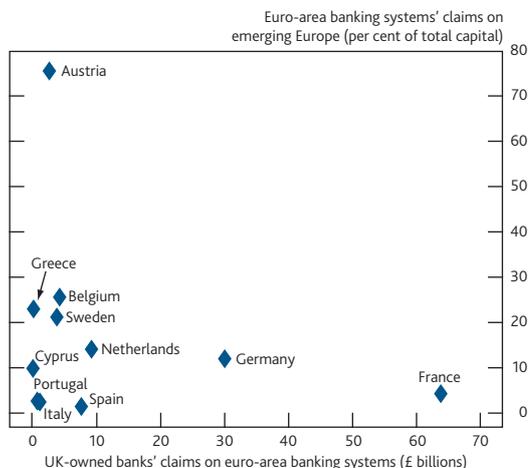
Further sources of risk arise from UK banks' exposures to core banking systems...

The major UK banks also remain exposed to banking systems with large exposures to vulnerable euro-area countries (Table 2.A). For example, French and German banking systems have gross exposures to vulnerable euro-area countries accounting for 160% and 105% of their aggregate tangible equity. UK banks' exposures to these systems have fallen by £28 billion and £6 billion respectively since end-June 2011, and potential losses from these sources are partly mitigated by collateral. Moreover, these include exposures to central counterparties. Nonetheless, there are potentially large indirect impacts through funding and wider financial markets that could occur should French or German banks come under stress.

...and the impact of any euro redenomination.

In addition to potential direct credit losses, the impact on the major UK banks would be larger if a country left the euro area and loans made in the exiting country were redenominated. The magnitude of losses would depend on the scale of the depreciation and whether loans were backed with local liabilities that were also subject to redenomination.

In order to manage this risk, UK and overseas banks have sought to match local assets and liabilities. For example, Barclays has sought to reduce its redenomination risk by attracting corporate deposits in Spain and reducing corporate lending in Spain and Portugal. But substantial mismatches remain for some banks. Some banks headquartered in Belgium, France and Germany look particularly exposed, based on end-2011 BIS data, as their local assets are not well hedged by local liabilities. Many banks are seeking to hedge these exposures further.

Chart 2.13 European banking systems' exposures to emerging Europe^{(a)(b)}

Sources: Bank of England, BIS, ECB and Bank calculations.

- (a) All data are as at end-June 2012. BIS data are converted from US dollars into sterling using the end-June exchange rate.
 (b) X-axis shows consolidated ultimate risk basis foreign claims by UK-owned banks on the banking systems of selected euro-area countries. Y-axis shows cross-border claims by selected euro-area banking systems on all sectors of Bulgaria, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, Slovakia and Slovenia as a percentage of euro-area banking systems' capital and reserves.

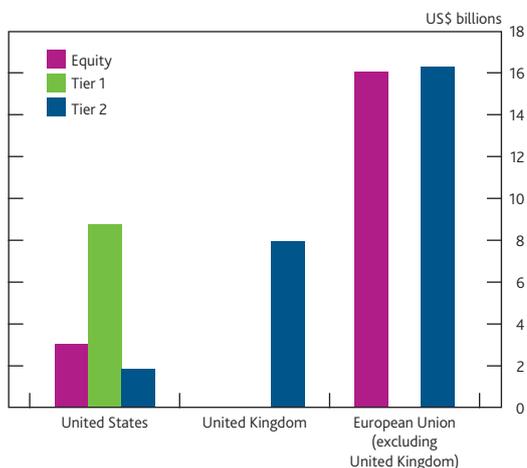
Risks from the spillover to emerging Europe...

UK banks could also be affected by an escalation of the crisis to include emerging Europe. The region has close trade links to the euro area and is highly dependent on credit provided by some euro-area banks. Direct exposures of the major UK banks to emerging European countries are negligible at 0.5% of major UK banks' total assets. And exposures to those banking systems that are heavily exposed to the region, such as those of Austria and Greece, are also small (Chart 2.13). Nevertheless, a crisis in emerging Europe might trigger broader contagion effects involving an increase in risk aversion.

...and from other advanced economies appear to be contained for now.

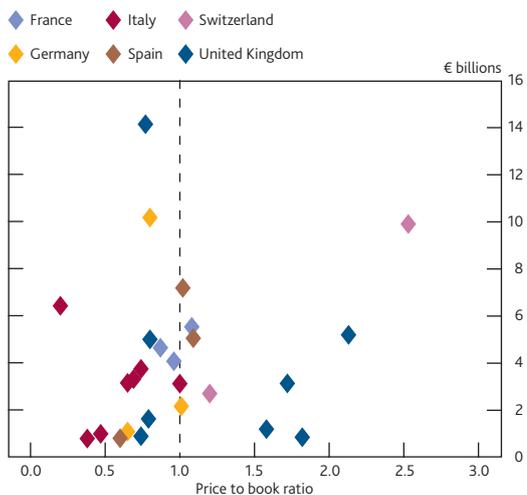
Risks from the US financial sector, to which the major UK banks are heavily exposed, appear to have reduced. US banks' CDS premia have fallen, reflecting increased

Chart 2.14 Gross capital issuance by banking sector in 2012



Sources: Dealogic and Bank calculations.

Chart 2.15 European banks' equity issuance since 2008(a)(b)



Sources: Dealogic, Thomson Reuters Datastream and Bank calculations.

(a) Data show the deal value of selected equity issuances by European banks, and the price to book ratio at the time of announcement.
 (b) Data exclude equity issuance with a deal value below €500 million, and those involving government intervention on a best-efforts basis.

resilience and a continued improvement in banks' balance sheets. Property prices have also recovered with the S&P/Case-Shiller price index for September showing a modest annual rise. And delinquency rates on residential mortgages have fallen, but remain sufficiently high (at 10%) that an economic slowdown could have severe consequences for the banking sector.

A shock to the nascent US recovery could stem from failure by the US Congress to agree remedial action to tackle the 'fiscal cliff' — tax increases and spending cuts worth US\$600 billion, or 4% of GDP, that are scheduled to take effect automatically in 2013. According to estimates by the US Congressional Budget Office, the resulting fiscal tightening would put the US economy back into recession. Section 3 discusses the medium-term risks posed to the major UK banks by developments in Asia and other advanced economies.

2.3 Banks' response to stress

This section discusses major UK banks' responses to stress and how these might affect financial stability through their influence on different sectors of the economy.

The major UK banks have not sought external capital...

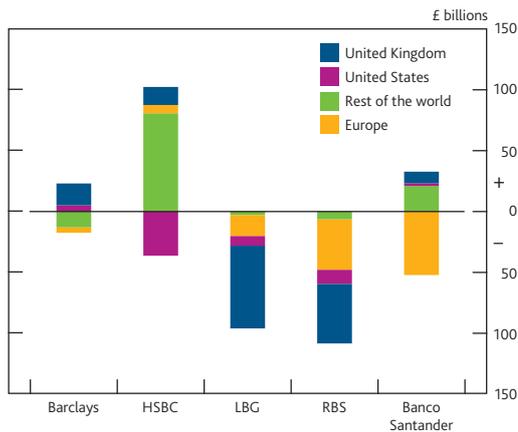
With subdued prospects for profitability, banks are unlikely to build resilience through retaining earnings. They could instead raise external capital. In practice, however, the major UK banks have raised little capital so far in 2012 (Chart 2.14). In November 2012 however, Barclays issued a US\$3 billion contingent capital note, which would trigger a full and permanent write-down in the event that Barclays' transitional common equity Tier 1 capital ratio fell below 7%. This was the first contingent capital issuance by a UK bank since 2009.

In contrast, other banks in Europe and in the United States have raised large amounts of capital in 2012. In Europe, this was driven by the European Banking Authority's (EBA) 2012 bank recapitalisation exercise (Section 1). The UK banks already had core Tier 1 capital ratios above the 9% ratio in this exercise, so were not required to raise capital.

Since the early stages of the financial crisis, large amounts of equity have been issued by banks. In many instances this took place when market values were below book values (Chart 2.15). For instance, in March 2009 HSBC undertook a record £12.5 billion rights issue and in October 2010 Deutsche Bank raised €10.2 billion, both at a price to book ratio of around 0.8. This suggests low bank valuations are not of themselves an obstacle to issuing equity.

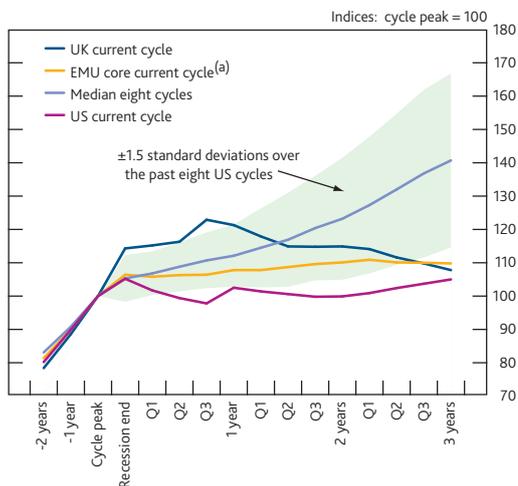
...instead relying on deleveraging...

Recent increases in UK banks' capital ratios have instead relied heavily on reductions in risk-weighted assets, especially for less

Chart 2.16 Change in loans by region since 2009^(a)

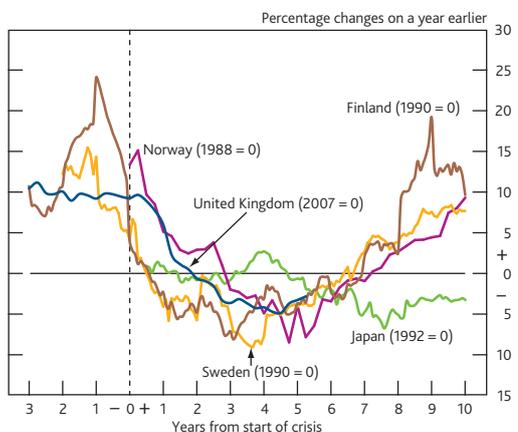
Sources: Published accounts and Bank calculations.

(a) Chart shows the change in lending to households and PNFCs between end-2009 and June 2012. Changes include write-offs, impairments, loan sales and acquisitions and the effect of exchange rate movements and so are not directly comparable to net lending data.

Chart 2.17 Credit growth in previous cycles

Source: IMF *Global Financial Stability Report* (October 2012).

(a) Includes Austria, Belgium, Finland, France, Germany and the Netherlands.

Chart 2.18 Real lending growth rates^{(a)(b)}

Sources: Bank of England, central bank financial stability reports, Thomson Reuters Datastream and Bank calculations.

(a) Finland and Japan series represent bank lending, UK series represents monetary financial institution lending and all other series represent financial institution lending.
(b) Lending to households and PNFCs except for Sweden which covers lending to households only.

resilient banks (**Chart 2.1**). For instance, the non-core disposal plans of LBG and RBS are ahead of schedule and targets for 2012 have been raised. Since 2008, these banks have shed £383 billion of assets. Though remaining planned asset sales may be more difficult, market contacts suggest that strong demand from hedge funds and private equity buyers should support further progress.

Further deleveraging of core portfolios could weigh on credit growth (**Chart 2.16**). According to the IMF, credit growth in the United Kingdom, the United States and core euro-area countries has been weaker than in the past eight US credit cycles (**Chart 2.17**).

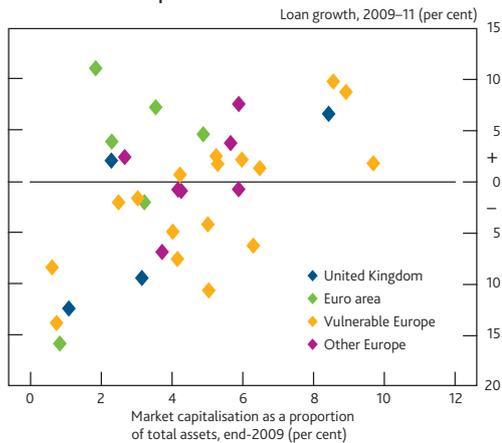
...and continue to forbear in the hope that conditions improve...

The low interest rate environment, combined with weak growth and high household and corporate debt levels, creates incentives for banks to forbear on loans, by temporarily providing borrowers with flexibility to meet their obligations during periods of distress. If provisioned for prudently, forbearance can be positive for financial stability and economic activity. For example, by reducing foreclosures, forbearance can benefit both banks and customers, preventing sales of assets that might otherwise depress prices. But inadequate and opaque provisioning of loans may mask underlying risks and heighten uncertainty about profit and capital positions. It may also impair the flow of new lending by misallocating capital to unprofitable lending and deferring necessary restructuring. As Japan's experience illustrates, over the medium term this can weigh on economic growth and, in turn, banks' resilience. Box 2 explores what lessons can be drawn from Japan in more detail.

Prolonged low growth and policy rates could strengthen banks' incentives to forbear to avoid realising losses, and make forbearance strategies less successful. **Chart 2.18** highlights the difference in recovery of credit in Sweden, where banks were recapitalised and disclosed losses, and Japan, where forbearance was widespread and lasting. Sweden was also boosted by positive external factors, and returned to positive real credit growth six years after its crisis, whereas credit was still falling in Japan a decade after its crisis.

EU supervisors have identified signs of widespread forbearance throughout Europe. The EBA has tried to gauge its nature and extent, though this has proved challenging in the absence of common definitions. The EBA's initial analysis highlighted the limited rise in arrears on CRE loans, in spite of their sensitivity to the economic cycle, as an indication that this sector might have been subject to significant forbearance by European banks. The EBA also found evidence of forbearance on residential mortgages, where average provisioning levels did not increase significantly in the two years to 2011, despite rising arrears.

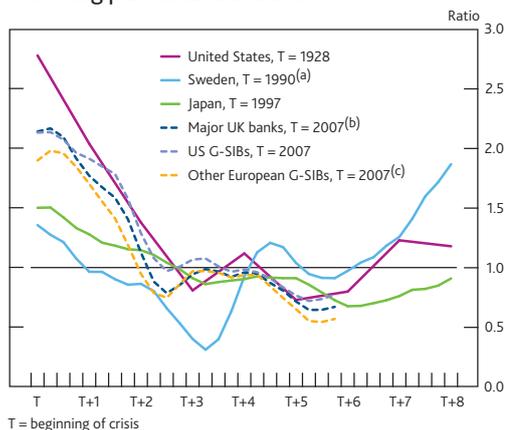
Chart 2.19 Bank loan growth versus market-based measures of capital^(a)



Sources: Bank of England, Bloomberg, SNL Financial, Thomson Reuters Datastream and Bank calculations.

(a) Sample comprises of the largest listed banks in Europe by total assets, excluding those banks that underwent a takeover during the period.

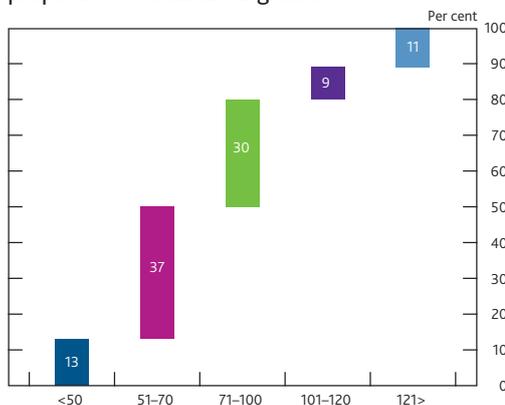
Chart 2.20 Price to book ratios of banking sectors following past financial crises



Sources: Calomiris, C W and Wilson, B (2004), 'Bank capital and portfolio management: the 1930s 'capital crunch' and the scramble to shed risk', *Journal of Business*, Vol. 77, No. 3, pages 421-55, Thomson Reuters Datastream and Bank calculations.

(a) Svenska Handelsbanken and SEB.
 (b) Excludes Britannia, Co-operative Banking Group, Nationwide and Northern Rock (from end-2007).
 (c) See footnote (d) in Chart 2.3.

Chart 2.21 Loan to value ratios of UK CRE exposures by proportion of outstanding debt^{(a)(b)}



Sources: De Montfort University and Bank calculations.

(a) Responses were received from organisations holding approximately £190 billion of outstanding debt.
 (b) The chart shows an estimation of the proportion of the outstanding debt that had a current loan to value ratio falling within the brackets given.

...which could ultimately lead to renewed weakness in credit supply...

Perceptions of widespread forbearance may have contributed to doubts about the valuation of assets, as reflected in banks' low market capitalisation. Banks with the lowest market-based measures of capital have tended to be those with lower loan growth (Chart 2.19). Past financial crises also support this view. For example, following Sweden's financial crisis in 1990 the banking sector's price to book ratio fell below 0.4 but rebounded relatively quickly (Chart 2.20). Eight years after the start of its crisis, the Japanese banking sector's price to book ratio was below one.

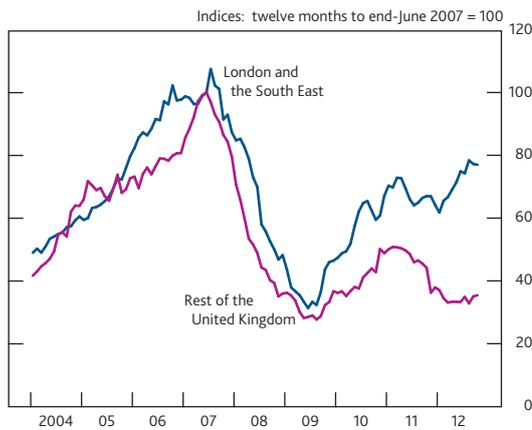
...adding pressure to sectoral balance sheets such as commercial real estate lending...

A further tightening in credit conditions could lead to a deterioration in the more vulnerable parts of major UK banks' loan books, such as CRE. These loans represent just under a half of all UK corporate lending and accounted for a large proportion of the major UK banks' losses on UK lending during the crisis. And these loans remain susceptible to further losses, given high LTV ratios and the large quantity of loans due to be refinanced (Chart 2.21). Furthermore, as individual exposures can be very large, deterioration in credit quality could affect significantly the resilience of smaller institutions such as building societies, some of which have been active in this market.

An FSA study indicated that around a third of British CRE loans by value have been subject to forbearance. The UK market provides contrasting evidence of the effectiveness of this strategy. The market has broadly separated into a liquid market for 'prime' property, the majority of which is located in London and the South East, and an illiquid market for 'secondary' property (Chart 2.22). While forbearance on loans secured on prime property has been vindicated by the recovery in market prices, forbearance on loans secured on secondary property has so far not. Yields are high and rising (Chart 2.23). And the lack of credit availability and concerns about a structural reduction in demand for some commercial property may restrict any recovery in secondary property prices.

Forbearance and low interest rates may also help explain why corporate insolvencies have been so low in the United Kingdom. The corporate insolvencies rate was around 0.9% at end-2012 Q3, compared with a peak of 3.6% in the early 1990s (Chart 2.24). Given the large build-up of debt before the financial crisis (Chart 2.25), a larger rise in insolvencies might have been expected. Furthermore, data from companies' accounts suggest that the proportion of companies making a loss has picked up sharply, from around 20% in the early 2000s to around 30% at the height of the crisis, before moderating slightly since. Recent survey evidence from R3, a trade body of insolvency practitioners,

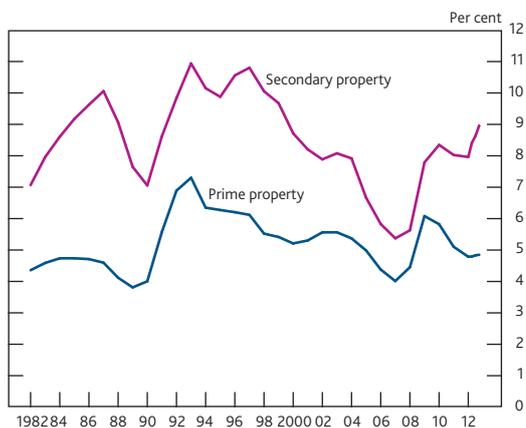
Chart 2.22 UK commercial real estate transaction volumes^{(a)(b)}



Sources: The Property Archive and Bank calculations.

- (a) Calculated on a rolling twelve-month basis.
 (b) The figures are subject to rounding and future amendments.

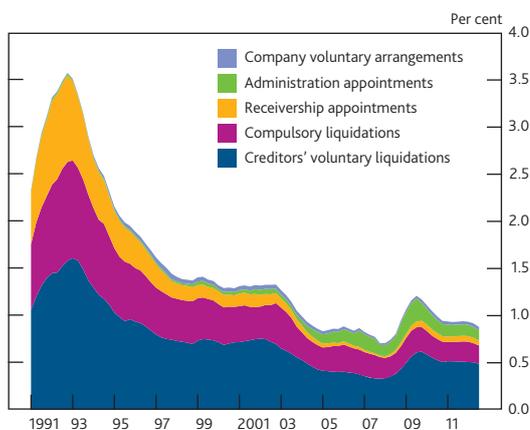
Chart 2.23 Commercial real estate yields^(a)



Sources: Investment Property Databank and Bank calculations.

- (a) Prime and secondary property yields shown are the top and bottom quartiles of commercial real estate yields respectively.

Chart 2.24 Corporate insolvency rates for England and Wales^{(a)(b)(c)}



Sources: The Insolvency Service and Bank calculations.

- (a) Rate is the number of corporate insolvency proceedings in England and Wales over the past four quarters divided by the average number of UK companies in England and Wales on the Companies' House Active Register over that period.
 (b) A single company may be subject to more than one type of insolvency proceeding.
 (c) The Enterprise Act 2002 introduced revisions to corporate administration procedures and came into force on 15 September 2003. Since then a number of administrations have been converted into creditors' voluntary liquidations. The data in the chart are not adjusted for this as they do not represent a new company entering an insolvency procedure for the first time.

found that 8% of UK companies 'are only able to pay the interest on their debts but not reduce the debt itself' and 'in the event of a rise in interest rates, they would be unable to afford to repay their debts at all'.

Data available on corporate loan forbearance outside the CRE sector are limited. Around a third of leveraged loans — mainly debt associated with private equity deals — have been subject to forbearance. Survey evidence from R3 showed that 2% of large businesses were entering into negotiations with creditors, though the figure for small firms was far greater, at around 8%–10%. Drawing firm conclusions from this survey is difficult due to the small sample size and single data point.

Forbearance can help more viable companies recover from a temporary period of weak demand. But the longer it continues, the more likely it is to be concentrated on weaker companies with less ability to invest and innovate. This might divert credit from potentially more productive companies, for example new business start-ups. The number of company births dropped in 2009 and remained low in 2010, according to data from the Inter-Departmental Business Register.

...and while there are fewer obvious indicators of distress in household lending...

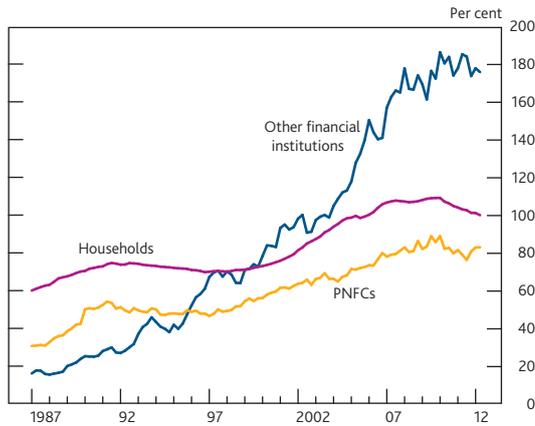
On the surface, indicators of distress in the UK residential mortgage market have been modest. Write-off, repossession and arrears rates have continued to fall from crisis highs. But market contacts suggest a continued distrust of risk-weighted assets, as discussed in more detail in Section 3. Some contacts have noted that very low risk weights have been assigned to some UK banks' residential mortgage exposures. If conditions were to worsen and expose latent distress among households, then banks may take losses over and above the capital allocated to absorb unexpected losses.

...some areas of vulnerability remain.

The 2012 survey carried out for the Bank by NMG Consulting provides evidence that some households may struggle to make debt payments in the future. Around two in five households have become more uncertain about their future incomes over the past year. And over one tenth reported feeling 'very concerned' about their debt levels, with a further third 'somewhat concerned' (Chart 2.26). The proportion of households reporting that they have entered a debt solution (other than insolvency) to resolve financial difficulties increased from 3.3% to 5.1% over the past survey year. Furthermore, around 6% of households had sought help from family or relatives and 14% reported using savings or other assets to help meet their financial commitments.

There is some evidence that, despite these efforts, repayment problems are simply being deferred. The FSA has calculated that more than 40% of the United Kingdom's outstanding residential mortgages are interest-only. Moody's estimates

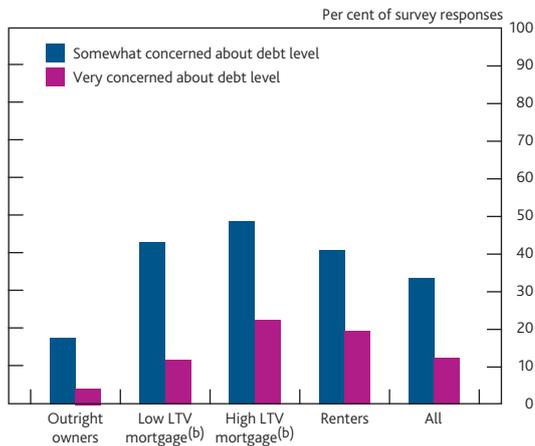
Chart 2.25 Sectoral debt to GDP ratios in the United Kingdom^(a)



Sources: ONS and Bank calculations.

(a) Sectoral gross debt as a percentage of four-quarter moving average of GDP.

Chart 2.26 Households' concerns about debt^(a)



Sources: NMG Consulting and Bank calculations.

(a) Responses to the question 'How concerned are you about your current level of debt?'.
 (b) High and low LTV mortgagors are defined here as households with a mortgage above or below a 75% LTV ratio, respectively.

that in some regions the proportion is more than half. Risks from interest-only mortgages typically crystallise when the capital element has to be repaid, many years after the mortgage has been taken out. The rating agency has estimated that an interest-only mortgage is about 1.5 times more likely to fall into arrears than a loan where the principal is being repaid. According to the FSA's *Mortgage Market Review*, interest-only mortgages at higher LTV bands perform worse than repayment mortgages, as borrowers are more likely to have opted for an interest-only mortgage for affordability reasons. The FSA considers that as many as 75% of interest-only mortgages made when house prices reached their peak in 2007 had no repayment strategy other than the sale of the home.

An FSA study found that 5% to 8% of UK mortgages are subject to forbearance. One form of this is the conversion of repayment mortgages to interest-only mortgages, either permanently or temporarily. This accounted for around a third of forbearance. Section 3 considers the prospects for household debt and house prices in the medium term.

Box 2

Financial policy in Japan's 'lost decade'

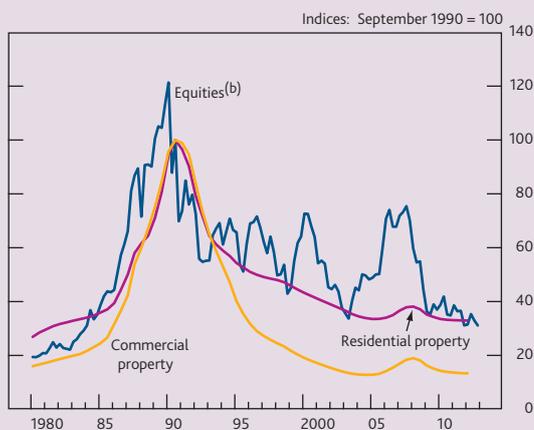
Japan underwent a period of financial sector distress in the early 1990s, followed by a full-blown banking crisis in 1997. This box examines the events that led to the Japanese crisis and its subsequent 'lost decade', the measures taken by the Japanese authorities in response and the lessons that can be drawn for the current financial crisis.

The Japanese financial crisis

Pre-crisis environment

During the second half of the 1980s, Japan experienced a macroeconomic boom on the back of expansionary monetary policy. At the same time, the gradual liberalisation of capital markets increased competition in corporate loan markets, squeezing banks' profit margins. As a result, banks started expanding lending to SMEs and to the real estate sector, while increasing their exposures to equity markets, helping to fuel property and equity price booms (Chart A). During the 1980s, bank lending to small and medium-sized firms in the non-financial corporate sector reached post-1950s' highs (Chart B).⁽¹⁾

Chart A Japanese asset prices^(a)



Sources: Thomson Reuters Datastream and Bank calculations.

- (a) Property price indices reflect values in six largest cities.
(b) TOPIX.

Crash, *jusen* problems, and crisis

In 1990, the stock market collapsed. This was followed by a period of falling property prices, which fell by between 60% and 80% in the subsequent decade (Chart A). This plunged the *jusen* — private non-bank financial firms dedicated to mortgage and real estate lending — into severe financial difficulty.

In 1991, around 40% of the *jusen*'s outstanding loans were estimated to be non-performing. Four years later, after limited deleveraging, this was estimated to have risen to around 75%.

Chart B Bank loans relative to total assets in non-financial corporate sector by firm size^(a)



Sources: Japanese Ministry of Finance and Bank calculations.

- (a) Non-financial corporate sector excludes financial and insurance sectors. Large, medium and small refer to firms with shareholder capital of at least ¥1 billion, ¥100 million–¥1 billion, and ¥10 million–¥100 million respectively.

The *jusen* were eventually liquidated in 1995. The resulting losses were mostly absorbed by the banks and agricultural co-operatives that had provided funding to the *jusen*, but some of them were borne by taxpayers.⁽²⁾ The earlier failed attempts at restructuring the *jusen* based on optimistic forecasts of land prices depleted the public's goodwill towards large taxpayer-funded rescues, however, making publicly funded recapitalisation of banks in subsequent years politically difficult for successive governments.⁽³⁾

The crisis became systemic in the autumn of 1997, with the failure of a securities firm, Sanyo Securities. That triggered a period of severe disruption in the interbank market, which in turn generated the first major bank failure in post-war Japan when Hokkaido Tokushoku was shut out of interbank markets. Further failures followed, including one of the four major broker-dealers after rumours of large off balance sheet losses.

The Japanese authorities' policy responses

The policy responses of the official sector to the prolonged banking crisis varied through time, both as the nature of the problem changed and as political circumstances shifted the appetite for public intervention.

Regulatory forbearance

The early phases of the crisis were met with regulatory forbearance. Troubled *jusen* were initially given a ten-year window to work out their problems. Banks did not disclose any information about non-performing loans (NPLs) prior to 1993 and the regulatory definition of NPLs before 1998 was lax. This allowed banks to continue rolling over loans to weak firms — known as 'evergreening' — in order to avoid recognising losses. As a result, in the run-up to the systemic phase of the banking crisis, large-scale underprovisioning against future losses was suspected among the commercial

banks. Estimates suggest that loan-loss reserves remained at between 40% and 60% of NPLs between 1992 and 1999.⁽⁴⁾

Although the regulatory definition of NPLs was tightened in 1998, the government also changed accounting rules to allow banks to choose whether to value their corporate equity and real estate holdings at market or book values. This allowed banks to choose the valuation method which most flattered their balance sheets.

Capital levels were also overstated in other ways. The use of deferred tax assets — tax deductions arising from past losses that could be offset against future profits — boosted banks' solvency positions after 1999. By 2002, around one third of reported bank capital was held in deferred tax assets. Banks and life insurance companies also provided each other with capital — a practice called 'double gearing' — weakening the solvency positions of each type of institution and increasing systemic risk.

The failure to deal with these problems in the early phases of the crisis ultimately contributed to a growing problem of credit misallocation. Private incentives for forbearance were also exacerbated by the low interest rate environment. Firms in the worst financial condition were more likely to receive additional bank credit to prevent banks from having to crystallise losses. And this 'evergreening' was most prevalent among the banks with weak capital positions that could least afford to take these losses.⁽⁵⁾ This eventually led to larger losses for banks and taxpayers as bad debts mounted. Research also suggests that the continued operation of weak firms had a negative effect on healthy firms, reducing their profit, likelihood of entry into new markets and levels of investment.⁽⁶⁾

Capital injections and nationalisation

In the early phase of the crisis, the government tried to resolve troubled institutions by encouraging healthy financial institutions to bail them out, avoiding outright failure and the use of public funds.⁽⁷⁾ The growing severity of the crisis following the autumn of 1997 led the government to decide that an injection of public capital would be necessary.

The Financial Function Stabilisation Act was passed in early 1998, making ¥30 trillion available for deposit protection and bank recapitalisation. Of this, ¥1.8 trillion was used for an initial recapitalisation. But capital was distributed without regard to asset quality, in part to reduce banks' perceived stigma from accepting public funds. The failure to gauge the size of the NPL problem meant that two major banks in receipt of public capital failed and had to be nationalised by the end of 1998.

A second recapitalisation followed in March 1999. At the time, some viewed this as a turning point. But the bad loan problem persisted and a capital shortfall soon re-emerged. Estimates suggest that the 1999 recapitalisation was at most half the size of that required to tackle banks' capital shortfalls, which would have required an additional bailout equivalent to 3% of GDP to resolve fully.

Policies to support credit

Japan did not experience a collapse in bank credit until 1997, with firms reporting easy access to bank credit during 1993–97. Evidence of a credit crunch emerged only in 1997, after the crisis became systemic (Chart C).

Chart C Japanese real GDP and domestic credit



Sources: The World Bank: World Development Indicators and Global Development Finance and Bank calculations.

(a) Deflated by the consumer prices index.

To increase credit availability the government took additional policy measures. First, the government set targets for lending to SMEs for each bank that received public funds in 1999. Second, the government introduced the Special Credit Guarantee Programme, under which the government-backed Credit Guarantee System (CGS) guaranteed 100% of bank loans to SMEs. Since approval standards were very generous,⁽⁸⁾ 43.5% of SMEs were using the CGS guarantee as of 2001, with 11.7% of outstanding SME loans being guaranteed.⁽⁹⁾ Third, the Japanese FSA clarified loan classification standards for SME loans in 2002 in order to prevent further tightening of credit conditions.⁽¹⁰⁾

While all these measures helped to support credit, research suggests that they may have delayed the resolution of banking sector problems and led to misallocation of credit. The dependence of SMEs on public loans rose sharply after 1998 and continued for a prolonged period thereafter. Together with publicly guaranteed loans, lending by public financial institutions still constituted 26% of total loans to SMEs as of 2011.⁽¹¹⁾

Lessons from the Japanese experience

A number of lessons can be drawn from the Japanese experience. The following appear particularly relevant at the current juncture:

- *The risks around forbearance* — by both banks and regulators. Periods of forbearance by banks can help to smooth the economy's response to shocks and avoid waves of costly liquidation (Box 2 of the June 2011 Report). But extended periods of forbearance, including the relaxation of regulatory discipline, can result in a worsening of credit misallocation problems, increasing eventual losses at banks.
- *The importance of resolving valuation uncertainty and prompt recapitalisation*. Detailed balance sheet inspection can help

to ensure that banks are valuing their assets accurately and are provisioning against expected losses in a timely fashion. It can also help identify where banks have insufficient capital to absorb losses and where prompt recapitalisation is needed. Sweden took this strategy, which along with a buoyant external environment, helped it to achieve a successful resolution to its banking crisis in the early 1990s (Box 3 of the June 2009 Report).

- *Credit support measures extending over long periods risk exacerbating imbalances*. Regulatory policies aimed at maintaining the flow of credit can potentially exacerbate the misallocation of capital in the economy. Such measures might smooth adjustment in the short run, but might not provide long-term solutions to the problem of rebalancing.

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- (1) See Kuttner, K and Posen, A (2001), 'The great recession: lessons for macroeconomic policy from Japan', *Brookings Papers on Economic Activity*, No. 2, pages 93–160.
 - (2) Nakaso, H (2001), 'The financial crisis in Japan during the 1990s: how the Bank of Japan responded and lessons learnt', *BIS Paper No. 6*, Bank for International Settlements.
 - (3) Hoshi, T and Kashyap, A K (2010), 'Will the US bank recapitalisation succeed? Eight lessons from Japan', *Journal of Financial Economics*, No. 97, pages 398–417; and Hoshi, T and Patrick, H (2000), 'Crisis and change in the Japanese financial system', Kluwer Academic Publishers, page 13.
 - (4) Figure 2 in Fukao, M (2002), 'Financial sector profitability and double-gearing', *NBER Working Paper No. 9368*, December.
 - (5) Peek, J and Rosengren, E (2005), 'Unnatural selection: perverse incentives and the misallocation of credit in Japan', *American Economic Review*, No. 95(4), pages 1,144–66.
 - (6) Caballero, R, Hoshi, T and Kashyap, A (2008), 'Zombie lending and depressed restructuring in Japan', *American Economic Review*, No. 98(5), pages 1,943–77.
 - (7) See page 46 in Cargill, T, Hutchison, M and Ito, T (2000), *Financial policy and central banking in Japan*, MIT Press.
 - (8) SMEs' applications for loan guarantees were approved unless they had significant negative net worth, tax delinquency, were already in default or were window-dressing balance sheets. The total guarantee limit was ¥20 trillion which was increased to ¥30 trillion in 1999 — equivalent to 6% of GDP at the time. This scheme expired in 2001 but Japan reintroduced another credit guarantee scheme in October 2008 (which was due to expire in March 2010 but was replaced by a similar successor scheme which expired a year later). Based on lessons from the past experience, approval standards were tightened under this scheme.
 - (9) National Federation of Credit Guarantee Corporations (2006), 'Credit Guarantee System in Japan 2006'.
 - (10) The SME loan classification was relaxed in November 2008, stating that restructured SME loans need not be classified as 'requiring special attention' if borrowing firms have reasonable and feasible restructuring programmes. This was further relaxed in December 2009: loans to SME borrowers that satisfied certain conditions are not treated as 'restructured loans' during the first year of restructuring.
 - (11) Bank of Japan (2012), *Financial System Report*, April.