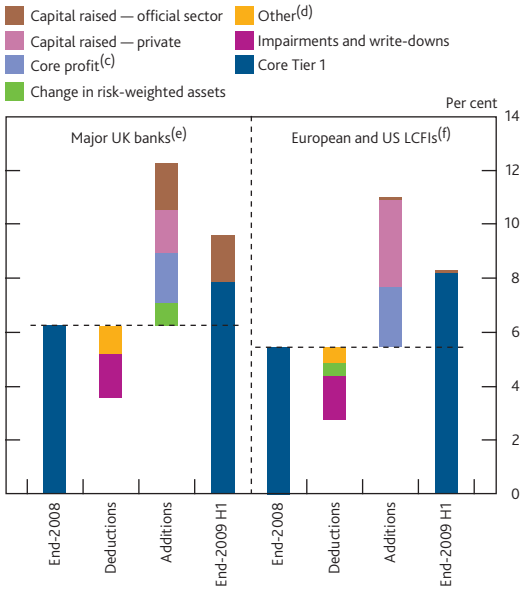
2 Financial system stability

The global financial system is more stable than six months ago. Improvements in financial markets and the economic outlook have boosted trading profits and contained loan losses at financial institutions. Banks have raised further capital, both privately and through additional public sector support. And as concerns over solvency have eased, banks have been able to access longer-term funding markets, reducing their reliance on short-term wholesale funding.

Notwithstanding recent progress, many banks internationally still have high levels of leverage and unbalanced funding structures. In the United Kingdom, banks need to extend the term of their funding, while also repaying public sector support over the next three years. They are also likely to need to raise core equity levels further to meet eventual new regulatory rules. To meet these challenges, while providing adequate finance to support the recovery from recession, banks could usefully take advantage of currently favourable conditions through issuance in private markets and retention of profits to build capital.

Chart 2.1 Core Tier 1 capital ratios in 2009 H1[(a)(b)]



Sources: Published accounts and Bank calculations.

(a) Includes significant completed or announced capital raising, asset disposals and buybacks/exchanges since 2009 H1.
(b) Average core Tier 1 capital, defined as common shareholders' equity adjusted for goodwill and intangibles and regulatory deductions. Excludes contingent capital. For UK banks, includes B shares.
(c) Based on pre-provision profit adjusted for one-off items, including write-downs and credit valuation adjustments on own debt.
(d) Includes foreign exchange translation impact and tax.
(e) Excludes Northern Rock.
(f) Excludes Goldman Sachs and Morgan Stanley.

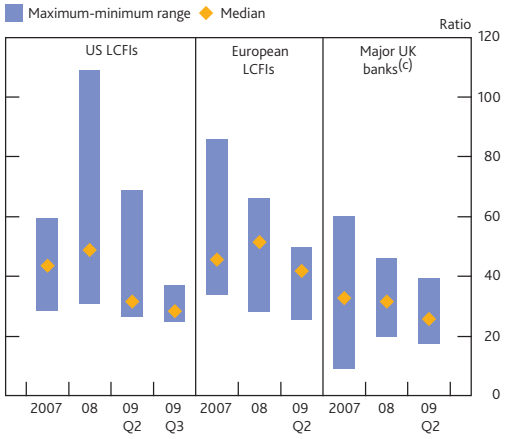
The resilience of the global banking system has improved.
Globally, the banking system is more stable than six months ago. Concerns over banks' solvency have fallen. The rally in financial markets has boosted banks' profitability significantly, while the improved economic outlook has reduced concerns about potential future losses. Banks have also raised further capital through equity issuance. As confidence in banks and financial markets has returned, funding conditions have also improved.

Capital in the banking system has increased...
Large global banks(1) have raised their core Tier 1 capital ratios by around 2.7 percentage points in aggregate over 2009 to date, despite further write-downs and loan impairments (**Chart 2.1**). Banks' capital raising has improved their ability to weather stress from higher future impairments.

In total, banks internationally have raised nearly US$1.5 trillion of new capital since the start of the crisis, over a third of which has been temporary capital provided by governments. That compares with US$1.7 trillion of reported write-downs and

(1) The term large global banks here comprises two peer groups: the major UK banks group and the LCFIs group. Membership of the major UK banks group is based on the provision of customer services in the United Kingdom, regardless of the country of ownership. The following financial groups, in alphabetical order, are currently members: Banco Santander, Bank of Ireland, Barclays, Britannia, Co-operative Financial Services, HSBC, Lloyds Banking Group, National Australia Bank, Nationwide, Northern Rock and RBS. The LCFIs include the world's largest banks that carry out a diverse and complex range of activities in major financial centres. The group of LCFIs is identified currently as: Bank of America, Barclays, BNP Paribas, Citigroup, Credit Suisse, Deutsche Bank, Goldman Sachs, HSBC, JPMorgan Chase & Co., Morgan Stanley, RBS, Société Générale and UBS.

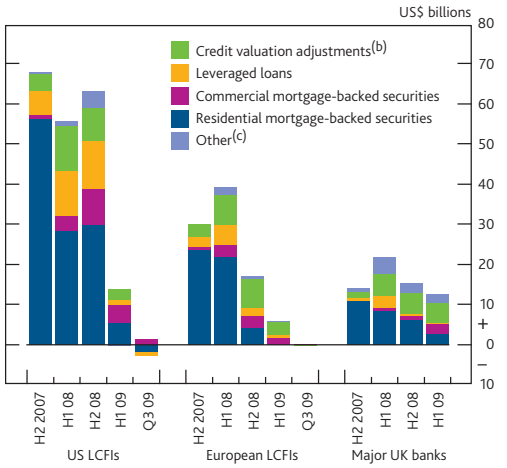
Chart 2.2 Major UK banks' and LCFIs' leverage ratios[a][b]



Sources: Published accounts and Bank calculations.

(a) Assets adjusted on a best-efforts basis to achieve comparability between institutions reporting under US GAAP and IFRS. Derivatives netted in line with US GAAP rules. Off balance sheet vehicles included in line with IFRS rules.
(b) Assets adjusted for cash items, deferred tax assets and goodwill and intangibles. For some firms, changes in exchange rates have impacted foreign currency assets, but this cannot be adjusted for. Capital excludes Tier 2 instruments, preference shares, hybrids and goodwill and intangibles.
(c) Excludes Northern Rock.

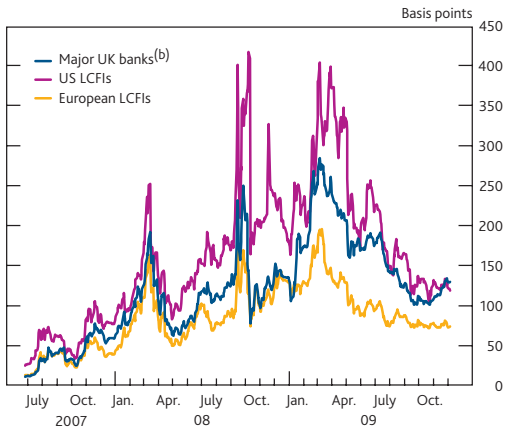
Chart 2.3 Major UK banks' and LCFIs' write-downs[a]



Sources: Published accounts and Bank calculations.

(a) Includes write-downs due to mark-to-market adjustments on trading book positions where details disclosed by firms.
(b) On exposures to monolines and others.
(c) Other includes SIVs and other ABS write-downs.

Chart 2.4 Major UK banks' and LCFIs' credit default swap premia[a]



Sources: Markit Group Limited, Thomson Datastream, published accounts and Bank calculations.

(a) Asset-weighted average five-year premia.
(b) Excludes Co-operative Financial Services.

credit losses to date. A number of major institutions in the United States and continental Europe have begun to repay public sector capital.

Bank leverage has fallen across the large global banks (**Chart 2.2**). Median leverage across the banks is now around 32 times capital, having fallen from around 37 times at the start of the crisis. Improvements primarily reflect capital raising. But all banking sectors have also reduced assets, including lending to customers: US LCFIs have reduced lending by 6%, and European LCFIs by 2%.

...as banks globally have improved profitability.

Strong profitability has been a key contributor to banks' capital raising. Pre-tax net income for the large global banks for 2009 H1 amounted to US$200 billion, compared with US$56 billion for the whole of 2008. As discussed in Box 4, over half of those revenues derived from non-interest income, in particular from activities in fixed income, commodities, currency and equity markets within investment banking. Write-downs have also fallen sharply: the large global banks reported US$30 billion of write-downs in 2009 H1, compared with US$210 billion in 2008 (**Chart 2.3**). These revenues have helped offset losses in commercial banking, where provisions on both household and corporate debt have continued to rise.

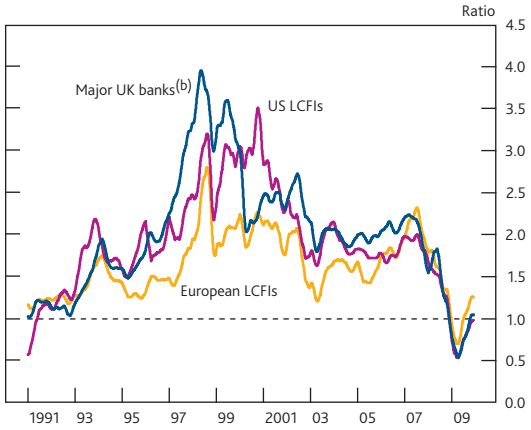
Sentiment towards global banks has improved...

As capital levels have increased, sentiment towards banks has improved. Globally, banks' credit default swap (CDS) premia have continued to fall — by 45 basis points on average for large global banks since the June 2009 *Report* and by 140 basis points since the high in March — consistent with a fall in the perceived probability of default (**Chart 2.4**). Spreads between large global banks' subordinated Tier 2 and senior debt instruments have reduced since the June 2009 *Report* — by 59% for sterling debt, 43% for euro debt and 13% for dollar debt — indicating greater confidence in the sufficiency of Tier 1 ratios. Price to book ratios have risen back above one as confidence in the quality of assets and the prospects for profitability have improved (**Chart 2.5**). And equity prices have risen, with US and European LCFIs' market values rising by 15% and 9% respectively.

...as banks have started to address weaknesses in their funding structures.

Greater confidence in institutions' resilience as capital has been raised has led to a recovery in bank funding markets over the past six months. In money markets, short-term spreads are now close to pre-crisis levels, although significant differences persist across institutions. Unguaranteed senior debt issuance has held up reasonably well, particularly in continental Europe where US$151 billion has been issued during 2009 so far (80% of issuance in 2008). In the United States, US$63 billion has been issued in 2009 so far (50% of 2008 issuance) (**Chart 2.6**).

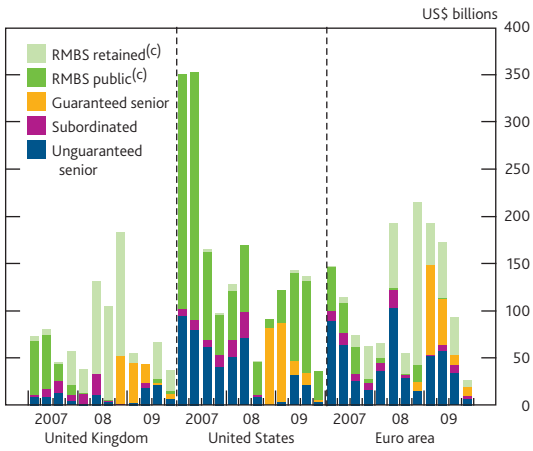
Chart 2.5 Major UK banks' and LCFIs' price to book ratios[a]



Sources: Bloomberg, Thomson Datastream and Bank calculations.

(a) Chart shows the ratio of share price to book value per share. Simple averages of the ratios in each peer group are used. The chart plots the three-month rolling average.
(b) Excludes Nationwide and Britannia.

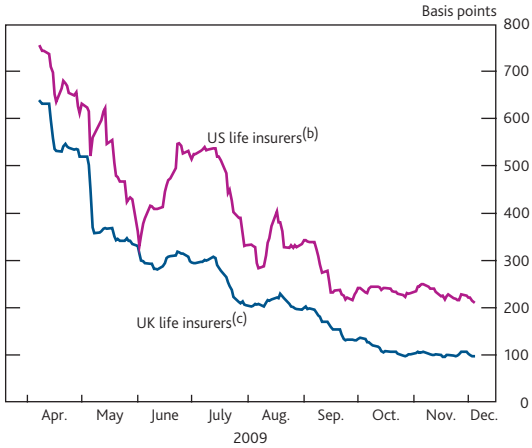
Chart 2.6 UK, US and euro-area debt issuance[a][b]



Source: Dealogic.

(a) Issuance with a value greater than US$500 million equivalent and original maturity greater than one year.
(b) Data for 2009 Q4 include October issuance only.
(c) Classified as RMBS where more than 50% of the underlying assets are residential mortgages. 'Retained' issues are not sold to the market by the originator, issuer or bookrunner.

Chart 2.7 UK and US life insurance companies' credit default swap premia[a]



Source: Markit Group Limited.

(a) Weighted by total assets.
(b) US life insurers peer group includes Hartford, Metlife, Principle Life and Prudential US.
(c) UK life insurers peer group includes Aviva, Legal & General and Prudential.

Other financial institutions have become more profitable…

Conditions at other key financial institutions have improved. CDS premia for UK and US life insurance companies have fallen significantly since June (**Chart 2.7**), reflecting the boost to their solvency from rising asset prices. Hedge fund returns have also picked up, with an average quarterly return of 4.8% in 2009. Many strategies are close to their previously recorded peak values. Capital outflows from hedge funds have virtually ceased (**Chart 2.8**) and the total level of assets under management increased in 2009 Q3 due to strong investment performance.

…although some sectors remain under strain.

Money market mutual funds, which saw a large increase in assets under management up until December 2008, have suffered a withdrawal of deposits. As **Chart 2.9** shows, however, these outflows have largely been from government-only funds. Prime funds, which invest in bank debt, asset-backed commercial paper (ABCP) and corporate commercial paper, stabilised quickly after the announcement of the US Government guarantee of these funds in September 2008. They continue to invest in bank liabilities, including through deposits and repos.

Monolines remain under pressure, primarily from ongoing losses in the US housing market. In November, Ambac announced it had come to an agreement with creditors to settle just over US$5 billion of credit protection contracts. FGIC, a smaller monoline insurer, was forced to stop paying claims after it breached its regulatory capital levels in November 2009.

Consistent with those global trends, UK banks are better capitalised…

Mirroring global developments, conditions at UK banks are also much improved. Since the June 2009 *Report*, core Tier 1 ratios have increased by 2.2 percentage points. The sector's aggregate core Tier 1 capital ratio now stands at 9.6% of risk-weighted assets, well above pre-crisis levels (**Chart 2.10**), although still below levels seen historically (see Section 3). Median leverage across the UK banking sector fell from around 32 times capital to around 26 times capital between end-2008 and 2009 H1.

This improvement is largely due to £52.2 billion of new capital having been raised since the June 2009 *Report*. That takes capital raised since the start of the crisis to £127 billion. In addition, contingent capital will prospectively add up to £16.5 billion to the sector's core Tier 1 capital if losses erode core capital levels below 5% for the relevant institutions. UK banks' balance sheets have also reduced, by 16%, including a reduction in lending to customers of 7% (**Chart 2.11**).

The UK Government has continued to provide capital, where needed, to support financial institutions. Since the start of the

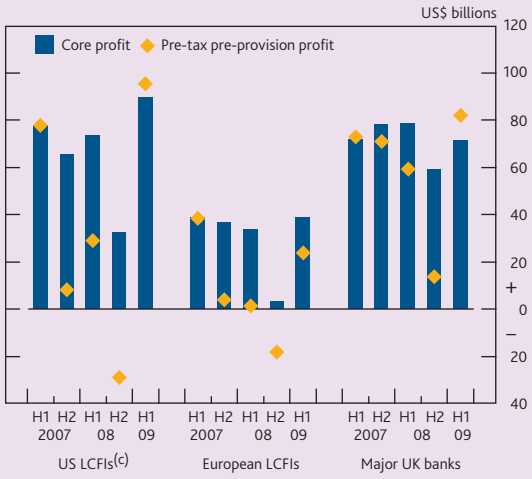
Box 4
Sources of bank profits

Over 2009 H1, large global banks reported pre-tax pre-provision profits of US$200 billion, compared with US$56 billion during 2008. A key factor in this improvement in profitability was the reduced overhang from legacy problem assets. For example, write-downs on trading book assets, which were a significant factor in the losses reported in 2008, have fallen significantly. Large global banks reported write-downs on trading book assets of US$30 billion over 2009 H1, compared with over US$210 billion during 2008. In the third quarter, several banks reported write-backs on exposures (**Chart 2.3**).

At the same time, banks have begun to report losses related to fair-value adjustments on their own liabilities, as credit spreads have narrowed. For example, the large global banks reported US$57 billion gains as credit spreads widened, of which 50% have since been reversed. While market participants have typically looked through this source of gains and losses, it has still had an impact on the volatility of reported earnings. And banks still have problem loans on their balance sheets. Provisions reduced large global banks' pre-tax profit by US$135 billion in 2009 H1. Loan coverage ratios have fallen (**Chart 2.25**), indicating that further provisions are likely in the future.

Adjusting for these factors and for other one-off items including asset disposals, **Chart A** gives an indication of banks' core earnings. On this measure, aggregate pre-tax, pre-provision profit for large global banks was around US$200 billion in 2009 H1 and US$280 billion over the whole of 2008. The recent return to core profitability is less marked than reported profit would suggest, as indeed was the decline in profits in 2007 and 2008.

Chart A Major UK banks' and LCFIs' pre-tax pre-provision and core profits(a)(b)

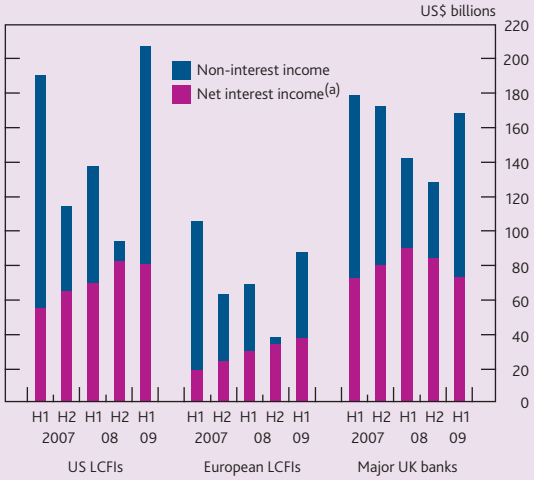


Sources: Published accounts and Bank calculations.

(a) Pre-tax pre-provision profit (PTPPP) is the sum of net interest income, non-interest income and exceptional items, less operating expenses.
(b) 'Core profits' are PTPPP adjusted for one-off items, including write-downs and credit valuation adjustments on own debt.
(c) Excludes Lehman Brothers.

The contribution of net interest income to banks' revenues was little changed between 2008 H2 and 2009 H1 (**Chart B**). Margins on new lending have increased as banks' funding costs have fallen (**Chart 2.13**), but the impact on revenues has been tempered by weakness in lending volumes.

Chart B Major UK banks' and LCFIs' net interest and non-interest income



Sources: Published accounts and Bank calculations.

(a) Net interest income pre-provisions.

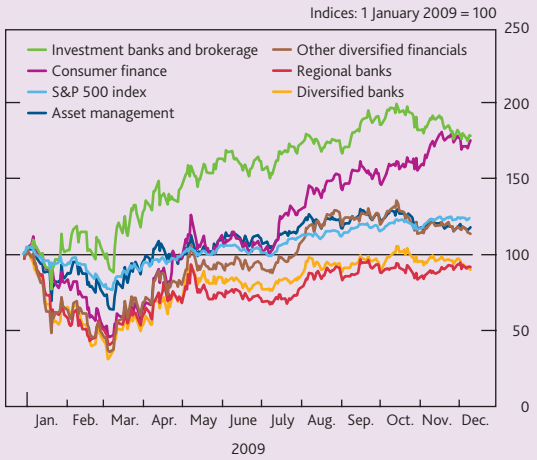
Non-interest income increased markedly over the same period, contributing approximately 60% to global banks' revenues in 2009 H1, compared with 36% in 2008. One component of this was investment banking activity. In the United States, investment banks' equity prices have risen 79% since the start of 2009, compared with 22% for the S&P 500 (**Chart C**).

Investment banking revenues have been driven by income from activities in fixed income, currency, commodity and equity markets (**Chart D**). 'Flow-related' income from market-making increased, as bid-ask spreads widened (**Chart 1.8**) against a backdrop of lower competition, investor risk appetite returning and volatility remaining high (**Chart E**).

Underwriting revenues also increased, benefiting from the recovery in capital markets, which made it easier for firms to raise long-term finance and which led to strong equity and corporate bond issuance (**Chart E**). Advisory revenues were the only segment not to increase.

There are questions, however, over the sustainability of these investment banking revenues. Market analysts have suggested that increased bid-ask spreads were at least partly explained

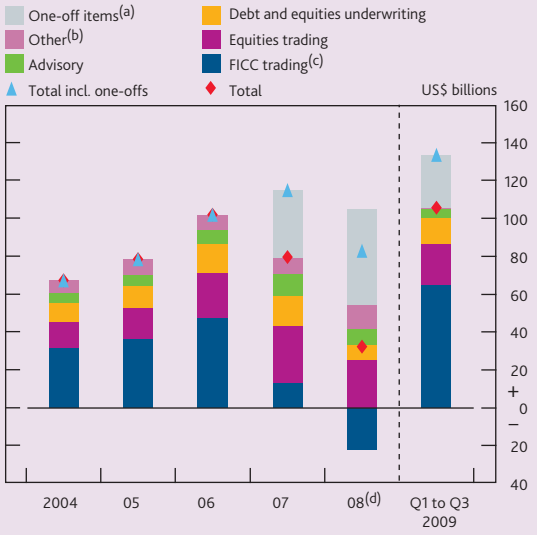
Chart C S&P 500 financials index(a)



Sources: Bloomberg and Bank calculations.

(a) Sub-indices of the S&P 500 index. Goldman Sachs and Morgan Stanley are constituents of the 'Investment banks and brokers' sub-index. Bank of America, Citigroup and JPMorgan are constituents of 'Other diversified financials'.

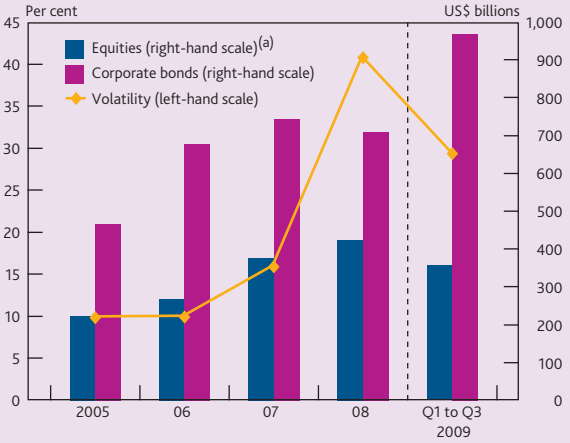
Chart D Decomposition of US LCFIs' investment banking revenues



Sources: Published accounts and Bank calculations.

(a) Impact of trading book write-downs.
(b) Other includes prime brokerage and securities services.
(c) FICC includes fixed income, currency and commodities.
(d) Revenues adjusted to reflect change in reporting cycle for US securities houses.

Chart E Equity and corporate bond issuance and equity market volatility

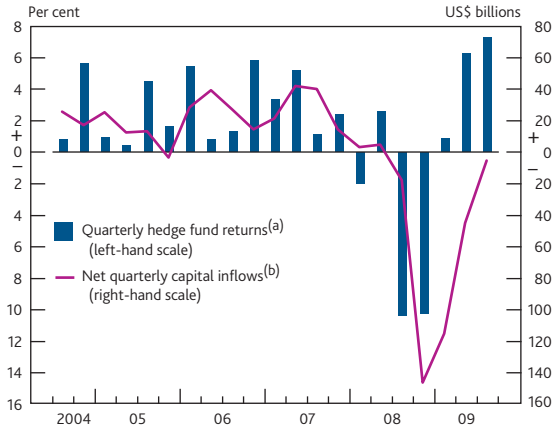


Sources: Bank of England, Chicago Board Options Exchange, Dealogic, ECB, Federal Reserve and Bank calculations.

(a) Includes domestic issuance in all currencies.

by the reduction in the number of active market makers during the crisis. Spreads have already started to narrow, as competitors increase their activities (**Chart 1.8**). Additionally, regulatory initiatives, such as moves to transfer clearing to central clearing counterparties, may also lower revenues.

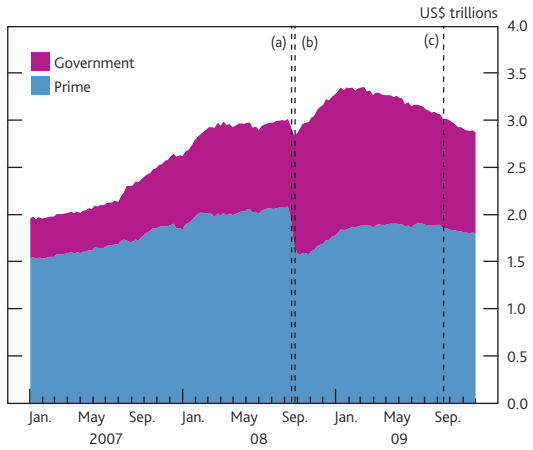
Chart 2.8 Hedge fund returns and net capital inflows



Sources: Bloomberg, CSFB/Tremont, Lipper TASS (a Reuters Company) and Bank calculations.

(a) CSFB/Tremont aggregate hedge fund index.
(b) Lipper TASS total net flows.

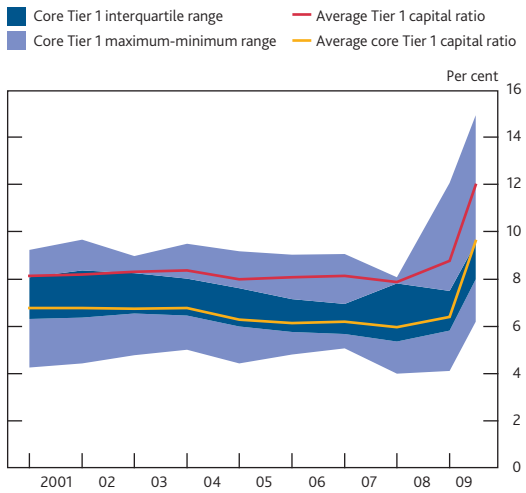
Chart 2.9 Money market mutual funds' total assets under management



Source: Moneyfundanalyzer.com.

(a) Lehman Brothers Holdings files for Chapter 11 bankruptcy protection.
(b) US guarantee scheme begins.
(c) US guarantee scheme ends.

Chart 2.10 Major UK banks' capital ratios(a)(b)(c)



Sources: Dealogic, published accounts and Bank calculations.

(a) Excludes Northern Rock and Britannia.
(b) Core Tier 1 capital is defined as common shareholders' equity and UK B shares adjusted for goodwill and intangibles and regulatory deductions.
(c) Based on second-quarter interim management statements, including significant completed or announced capital raising since 2009 H1.

crisis, it has injected £66 billion of capital, around a half of the total raised, nearly all of which has been provided to the Royal Bank of Scotland (RBS) and Lloyds Banking Group (LBG). Around £31 billion of that has been provided since June in the context of the Asset Protection Scheme (APS) and LBG's recent rights issue. The APS protects RBS against losses on £282 billion of assets, particularly loans, consumer finance and commercial real estate. The £40 billion of commercial real estate assets protected represent 20% of the major UK banks' exposures to this sector. Overall, RBS's participation in the APS accounts for £141 billion of the sector-wide reduction in risk-weighted assets of £316 billion since end-2008.

...partly reflecting a pickup in profitability.

Profits have contributed to capital raising by UK banks. UK banks' aggregate pre-tax, pre-provision profits were £54 billion in 2009 H1, compared with £38 billion over the whole of 2008. Non-interest income accounted for a significant share of gross income (**Chart 2.12**), reflecting the profitability of flow trading activities at the largest banks and other fee-earning services. Some banks also benefited from one-off items such as write-backs on trading assets as asset prices have risen. Net interest income was boosted by low interest costs in short-term wholesale funding markets and by increasing spreads on some forms of lending. **Chart 2.13** shows one representation of how the price of new lending can be decomposed, although the precise breakdown will vary across banks, particularly in terms of how they choose to fund new loans. But loan losses rose sharply, with household and private non-financial corporation (PNFC) write-offs increasing (**Chart 2.14**), although market-implied losses on UK banks' banking books — an indicator of future write-offs — have fallen as asset prices have recovered.

Market sentiment towards UK banks has improved...

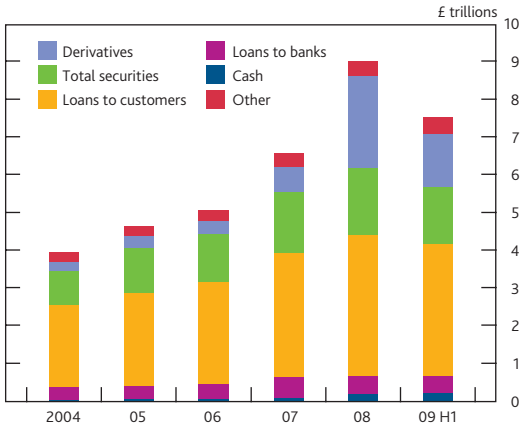
Market perceptions of UK banks' strength have improved. The perceived risk of holding senior bank debt has fallen, with the major UK banks' CDS premia down by close to 31% since the June 2009 *Report*. The implied cost of senior bank debt and Tier 1 and Tier 2 capital issuance has declined by around 20% (**Chart 2.15**). Major UK banks' market capitalisation has risen on average by a third since the June 2009 *Report*.

...easing funding concerns.

As risk perceptions have fallen, UK banks have been able to access private funding markets to a greater extent and on improved terms (**Chart 2.16**). Longer-term debt markets have begun to reopen for UK banks, with around £32 billion of unguaranteed senior debt issued to date in 2009 — around three times issuance over the same period in 2008. But primary subordinated debt markets remain closed and RMBS issuance has been limited.

These developments have allowed banks to improve their funding structures. Reliance on funding with a maturity of less

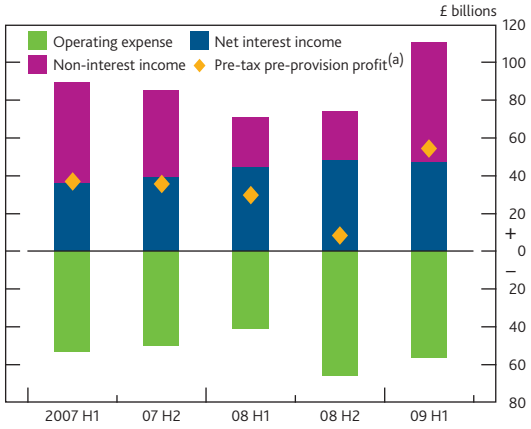
Chart 2.11 Major UK banks' total assets[a]



Sources: Published accounts and Bank calculations.

(a) Banco Santander's derivatives are included within total securities.

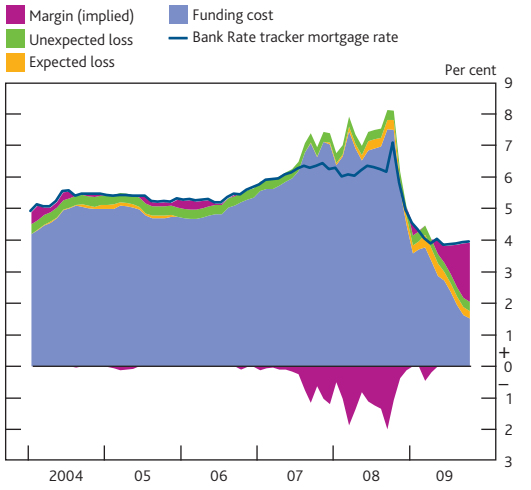
Chart 2.12 Major UK banks' pre-tax pre-provision profits



Sources: Published accounts and Bank calculations.

(a) Pre-tax pre-provision profit is the sum of net interest income, non-interest income and exceptional items, less operating expenses. For the purposes of this chart, exceptional items are included within operating expenses or non-interest income.

Chart 2.13 Decomposition of new Bank Rate tracker mortgage rates of major UK banks[a]



Source: Bank of England.

(a) Funding cost calculated as the three-month Libor rate plus an average of the five-year CDS spread of the major UK banks, weighted by the volume of lending for each bank. Expected loss is estimated as the product of the probability of default and the loss given default on 75% LTV mortgages. Unexpected loss is computed as the amount of extra capital set out in Basel regulations (3% for 75% LTV mortgages) multiplied by the average cost of equity over the risk-free rate (assumed to be 10%). Implied margin calculated as the residual between mortgage rate and costs. The decomposition does not take account of operating costs, which may be substantial.

than one week had reduced to 9% of unsecured wholesale funding by October 2009, from 15% at end-2008. UK banks' aggregate customer funding gap (the difference between customer loans and customer deposits — one measure of funding risk) fell to £610 billion, or 18% of loans in 2009 H1, down from £842 billion at end-2008 — the lowest it has been since 2003 (**Chart 2.17**). And banks are now holding more liquid assets as potential insurance against a loss of short-term wholesale funding.

Looking ahead, financial institutions will need to adjust balance sheets further…

Notwithstanding these positive developments, global financial institutions' balance sheets remain stretched. Banks' leverage ratios remain high by historical standards. And significant funding fragilities persist, with banks still dependent on short-term wholesale funding.

…including the funding structures of some UK banks.

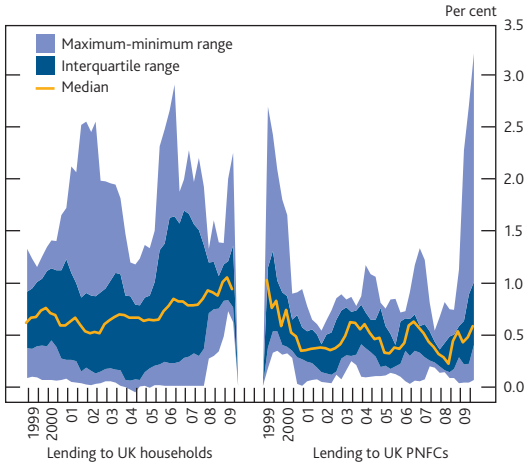
UK banks' funding structures need to adjust further to meet this challenge. The FSA's recent policy statement on liquidity regulation[1] suggested that the sector as a whole may need to acquire up to £600 billion of additional high-quality assets, at a potential cost of up to 150 basis points (£9 billion) per annum.

Banks will be able to reduce this cost by taking offsetting action to extend the maturity of the liabilities side of their balance sheets. The UK banking sector's customer funding gap remains high by historical standards and above that of a number of other banking sectors, including those in Canada, Japan and the United States (**Chart 2.18**). As a consequence, some UK banks continue to rely on wholesale markets to finance a sizable proportion of their illiquid lending activities. Around a half of UK banks' aggregate wholesale funding is of less than six months' maturity.

Over £1 trillion of UK banks' term liabilities mature over the next five years (**Chart 2.19**). Unguaranteed market funding, including maturing and callable securitisations, accounts for nearly £750 billion. In addition, banks face the withdrawal of extraordinary public sector support. Over £178 billion of high-quality collateral has been provided through the Special Liquidity Scheme (SLS) and £134 billion of guarantees have been issued under the Credit Guarantee Scheme (CGS). SLS lending will mature by end-2012, the same year in which the majority of CGS guarantees expire. The final maturity of the CGS remains 2014, although HM Treasury recently announced that the Scheme would remain open for a further two months.

(1) See FSA (2009), 'Strengthening liquidity standards', *Consultation Paper 09/16*.

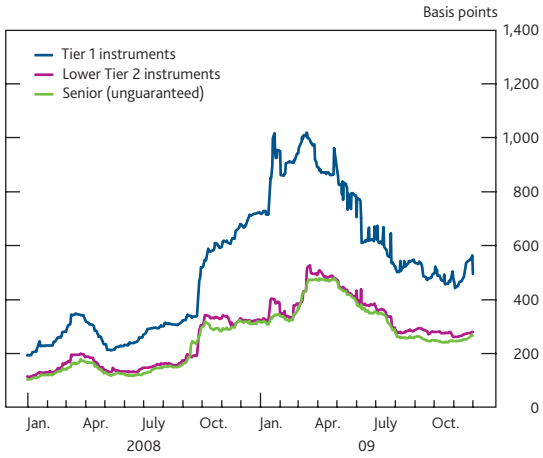
Chart 2.14 Major UK banks' write-offs[a][b]



Sources: Bank of England and Bank calculations.

(a) Write-off ratios — all currency, calculated as a trailing four-quarter ratio.
(b) Major UK banks' exposures to households and corporates comprise 13% and 5% of their aggregate balance sheets respectively (see **Chart 2.27**).

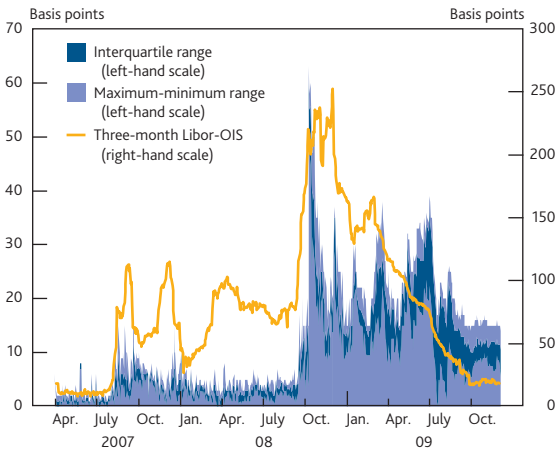
Chart 2.15 Major UK banks' cost of wholesale funding[a]



Source: JPMorgan Chase & Co.

(a) Calculated using the average of the current spread to asset swaps of instruments issued by Barclays, HSBC, Lloyds Banking Group and RBS.

Chart 2.16 Major UK banks' Libor spreads



Sources: Bloomberg, British Bankers' Association and Bank calculations.

Banks recognise the importance of developing various strategies for addressing these challenges…

Market participants recognise these funding risks. Respondents to the Bank's latest *Systemic Risk Survey* viewed funding and liquidity as one of the most challenging risks to manage as a firm (see **Table 2.A**).

…including attracting more retail funding…

One way to reduce funding vulnerabilities is increased use of retail funding. If household and corporate customer deposits were to grow at 10% per annum (close to pre-crisis rates) and lending at 4%–5% a year, the major UK banks' customer funding gap would be eliminated over the next four years or so. Banks are seeking to attract retail inflows by increasing deposit rates: retail bonds now pay around 200 basis points above the risk-free rate, compared to a sub-zero spread in 2005 (**Chart 2.20**). But despite higher household savings ratios, since June household deposit flows to UK banks have increased by only £6 billion. Retail funds have instead tended to flow to alternative retail saving products, such as unit trusts and individual savings accounts, with net monthly inflows to unit trusts rising to nearly £3 billion in November (**Chart 2.21**).

…and long-term wholesale funding…

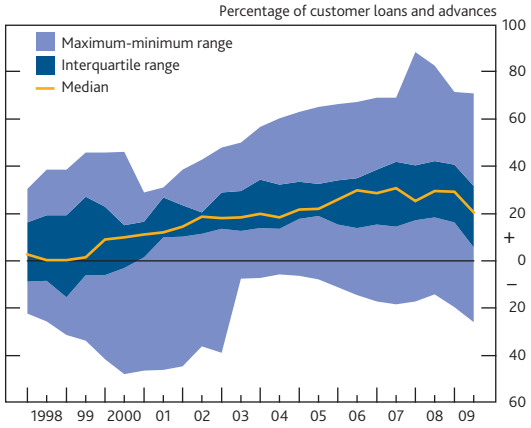
Another element of banks' funding strategy is to improve the maturity profile of their borrowing. On the basis of current yields, the cost to UK banks of transitioning to 2006 maturity profiles would be around £5 billion per annum. To be effective, such a strategy will require a substantial pickup in unguaranteed debt issuance from current levels, and a recovery in securitisation markets. Box 1 discusses developments in securitisation markets. Reopening these markets, using a more robust contractual structure, is a priority.

…although extending the term of their liabilities will be challenging.

Impairment of bank funding markets partly reflects continued problems facing some key buyers of bank short and medium-term paper. Prime money market mutual funds have in the past provided significant amounts of dollar funding to UK banks, both directly via the purchase of bank paper and indirectly through their investment in bank-sponsored conduit commercial paper. The Securities and Exchange Commission's (SEC) recently proposed rule changes, which come into effect in the first half of 2010, will require the funds to reduce the weighted average maturity of their portfolios and to maintain a higher proportion of liquid assets. While this will improve the liquidity of funds' assets, it may also reduce still further the maturity of the deposits they provide to banks.

Securities lending programmes were also significant providers of funding to the financial sector pre-crisis. But activity has halved to around US$2 trillion since May 2008 (**Chart 2.22**),

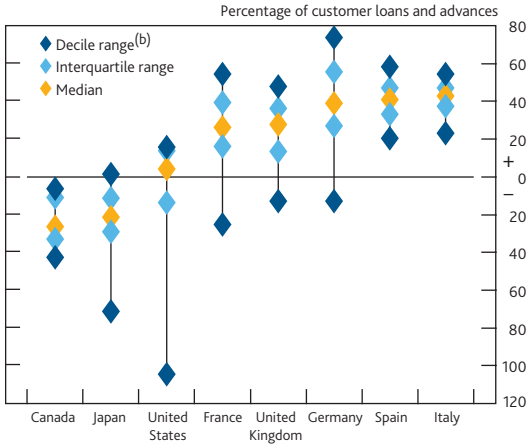
Chart 2.17 Major UK banks' customer funding gap[a][b]



Sources: Dealogic, published accounts and Bank calculations.

(a) Customer funding gap is customer loans less customer deposits, where customer refers to all non-bank borrowers and depositors.
(b) Chart differs from version published in the October 2008 *Report* due to the extension of the major UK banks' peer group, effective from end-2004.

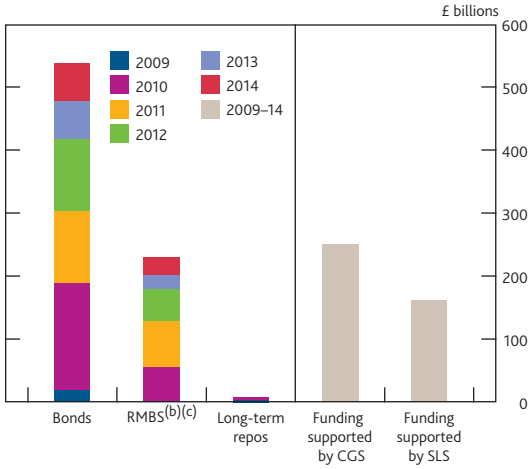
Chart 2.18 International comparison of customer funding gaps[a]



Sources: Bankscope published by Bureau van Dijk Electronic Publishing and Bank calculations.

(a) Shows data at end-2008 for up to 20 banks in each country. Customer funding gap is customer loans less customer deposits, where customer refers to all non-bank borrowers and depositors.
(b) Shows the range from the first to the ninth decile.

Chart 2.19 Major UK banks' maturing funding: selected wholesale liabilities[a]



Sources: Bank of England, Bloomberg, Deutsche Bank and Bank calculations.

(a) Shows the full limit for the Credit Guarantee Scheme.
(b) Shows the date at which markets expect the residential mortgage-backed securities to be called.
(c) Excludes Britannia, Co-operative Financial Services and HSBC.

severely curtailing the availability of liquidity to banks from these programmes. The risk management practices of securities lenders are coming under closer market scrutiny which is likely to shorten the maturity of funding provided to banks.

Some banks plan further asset and business sales, which would generate cash flow. But to be credible, those plans need to take account of similar actions by other banks. In crowded markets, asset disposal plans may not be achievable or only at a significant discount.

Taken together, this suggests a significant challenge for UK banks in transitioning to a robust funding structure. This transition is likely to involve some upfront costs — for example, in holding greater quantities of high-quality, liquid assets; extending the maturity of wholesale funding; and reopening securitisation markets with a sustainable investor base.

Despite these costs, these actions would remove the possibility of much higher funding costs in future if sentiment in funding markets were to worsen again. Addressing funding vulnerabilities should form part of a comprehensive funding plan by UK banks over the next few years, given their known refinancing schedule. Those plans need to be developed and implemented now, durably to remove funding risks among UK banks for the future.

Banks face higher future capital requirements…

Section 3 explains how capital ratios will need to rise further in coming years due to higher regulatory requirements. A recent consultation paper[1] by the FSA estimated that financial institutions in the United Kingdom will face an additional capital requirement of £33 billion as a consequence of changes planned to the treatment of securitisations and to capital requirements in banks' trading books. The impact would be concentrated on firms with larger trading books. It also represents an upper bound since banks are likely to adjust their balance sheets in advance of the changes.

The same FSA consultation paper also set out proposals for a narrower definition of Tier 1 capital, albeit with significant grandfathering arrangements. Work by the Basel Committee on Banking Supervision (BCBS) will lead to further definitional changes, particularly for core Tier 1 capital. Together these changes will add materially to the amount of core Tier 1 capital which banks will need to hold even to maintain current capital ratios.

While it is not yet clear by how much base capital ratios might need to increase as a consequence of the further regulatory initiatives described in Section 3, it is likely to be significant.

(1) See FSA (2009), 'Strengthening capital standards 3', *Consultation Paper 09/29*.

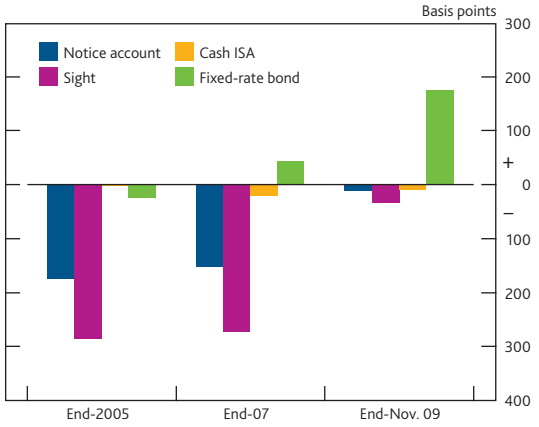
Table 2.A *Systemic Risk Survey* results: key risks to the UK financial system[a][b]

	Key risks		Risks most challenging to manage	
	Nov. 2009	May 2009	Nov. 2009	May 2009
Economic downturn	68	58	41	30
Borrower defaults	49	45	22	21
Regulatory and accounting changes	49	24	35	24
Funding and liquidity problems	35	30	30	12
Property price falls	27	18	5	3
Disruption in securities, insurance, and/or derivatives markets	24	15	16	3
Sovereign risk	24	24	3	6
Tight credit conditions	24	24	11	3
Timing of fiscal and/or monetary policy tightening	22	3	5	3
Inflation	14	9	5	0
Financial institution failure/distress	11	24	14	15

Sources: Bank of England *Systemic Risk Survey* (May 2009 and November 2009) and Bank calculations.

(a) Per cent of respondents citing each risk. Market participants were asked to list (in free format) the five risks they believed would have the greatest impact on the UK financial system if they were to materialise, as well as the three risks they would find most challenging to manage as a firm.
(b) Risks cited in the May 2009 survey have been regrouped into the categories used to describe the November 2009 data, so results differ slightly from those published in the June 2009 *Report*.

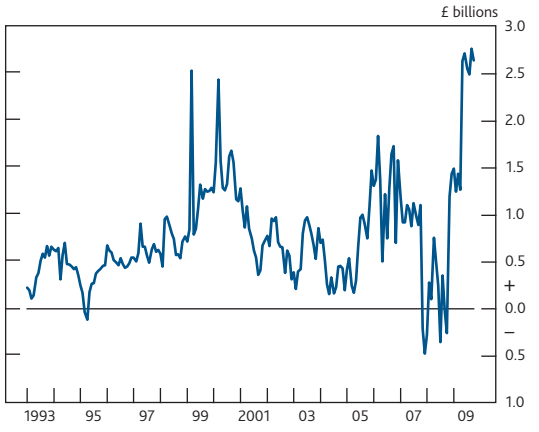
Chart 2.20 Retail deposit spreads[a]



Sources: Bank of England and Bank calculations.

(a) Spread over Bank Rate, except for fixed-rate bonds where spread is over UK one-year swap rate.

Chart 2.21 Net monthly inflows into retail unit trusts



Source: Investment Management Association.

As discussed in Box 5, in past crises around the world, banks would, on average, have needed Tier 1 ratios of between 8.5% and 13% at the start of the crisis to have maintained ratios of 8% without further capital injections. Any increase will be subject to a lengthy transition period.

Box 6 in Section 3 explains that banks may, in future, face explicit restrictions on leverage. **Chart 2.23** illustrates how a move to alternative leverage ceilings would affect global banks. For example, moving to a ceiling of 20 times capital (the limit used in Canada) would require most UK banks to cut assets or raise capital, in some cases significantly. Meeting a 20 times leverage target solely through assets would require a reduction of almost £1.5 trillion. While some of this could be achieved through a reduction in non-core trading assets, reductions in domestic lending on anything like that scale could have a negative effect on the speed of recovery which would potentially be counterproductive for the banks. This underscores the importance of attempts to build capital as an alternative means of safeguarding banks' balance sheets.

...which can be met from both external sources and profit retention.

Given the scale of these challenges, banks should take advantage of currently favourable conditions in private markets to raise fresh external capital. UK banks have raised a total of £58 billion from private markets since the start of the crisis. At £13.5 billion, LBG's recent rights issue was the largest of all time by a bank. Set against the additional capital banks may require, it seems likely that a sizable share of capital raising will need to take place through generation and retention of profits.

But significant risks to core profits remain...

There are a number of potential headwinds to building capital organically through core profits, both in the immediate future and over the longer term. Although price to book ratios have risen for banks, they remain close to one, compared with close to 2.5 pre-crisis. Recent profits were driven by investment banking activities, particularly in fixed income, commodities, currency and equity markets, which benefited from the recovery in financial markets and the widening of bid-ask spreads. These are unlikely to be sustained (see Box 4 and Section 1). In particular, bid-ask spreads, which were unusually wide in the early part of the year, are likely to narrow (**Chart 1.8**). More generally, continued reliance on such sources of income is incompatible with a transition away from reliance on volatile trading profits, which were a key source of losses during the crisis.

In addition, the June 2009 *Report* outlined how, in the past five years, returns on equity for UK banks had been driven more by increases in leverage than by returns on assets (**Chart 2.24**). Bank leverage, like household and corporate leverage, is declining. This will tend to lower banks' profitability. The

Box 5
Capital losses in past financial crises

Capital held by banks proved inadequate to absorb losses during this crisis. This box considers how much capital a sample of banks in past crises would have needed to withstand stress without external capital support. This exercise should be treated as illustrative and is not a definitive guide to the buffers banks would need to hold to withstand future crises.

Methodology

Banks from four previous crises are included in the sample: Sweden (1990–93), Finland (1990–94), Norway (1988–92) and Japan (1992–2004).(1) For each bank, Tier 1 capital in the pre-crisis year is taken from annual accounts.(2) A counterfactual path for Tier 1 capital is then calculated using (realised) retained income, but assuming no private or government capital injection. Levels of pre-crisis capital needed to avoid banks falling below specific Tier 1 capital ratios in-crisis (4%, 8% and 12%) are then calculated.

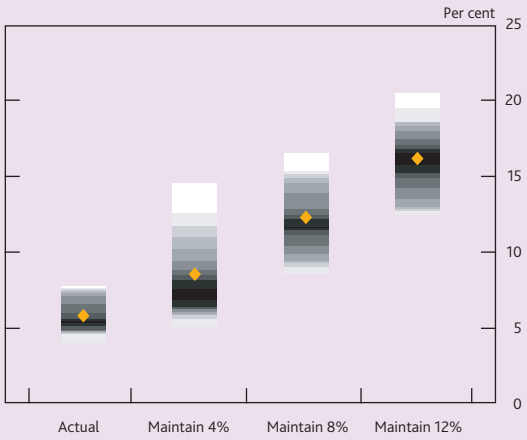
A number of simplifying assumptions are necessary to provide these estimates. For example, dividends, risk-weighted assets and retained income are all assumed to be the same as they actually were. The analysis also assumes that the size of financial shocks were identical. In practice, the scale of the crises may well have been less, and income higher, if banks in the sample had entered the crisis with higher capital ratios.

Results

On average, a pre-crisis Tier 1 capital ratio of around 8.5% would have been needed by banks in the sample to avoid going below a Tier 1 capital ratio of 4% during the crisis (**Chart A**). Minimum capital requirements are likely to be higher in the future.

A feature of this analysis is the wide variation in results across banks, shown by the distributions in **Chart A**. Banks with similar pre-crisis Tier 1 capital ratios faced different outcomes in some cases. Even if all banks in the sample had a pre-crisis capital ratio of 8.5%, 40% of the banks would still have breached the 4% Tier 1 capital ratio in-crisis. The highest pre-crisis Tier 1 capital ratio that would have been needed across the sample of banks to maintain a 4% Tier 1 capital ratio in-crisis is around 18%. This variation across banks suggests the need for flexibility in their future capital structure and potentially a higher average buffer. In principle, this could be achieved through greater use of contingent capital (see Section 3).

Chart A Pre-crisis Tier 1 capital ratios required to withstand past crises(a)(b)

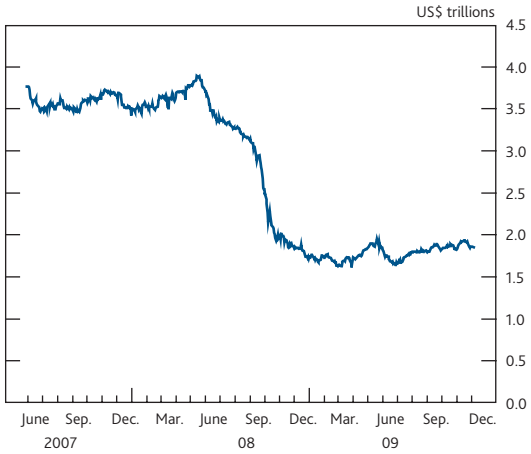


Sources: Bankscope published by Bureau van Dijk Electronic Publishing and Bank calculations.

(a) Sample of fifteen banks from Sweden, Finland, Norway and Japan.
(b) Each shaded band shows 5 percentage points of the distribution across banks between the 5th and 95th percentiles. Diamonds show means.

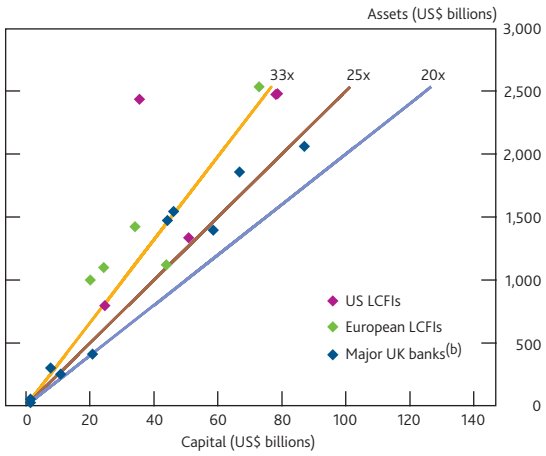
(1) The sample covers a range of banks in terms of size (ranging from 23% of total banking sector assets to 2%), pre-crisis condition (ranging from around 8% Tier 1 capital to 3%), and outcome (ranging from nationalisation to no direct government capital support).
(2) For Nordic countries the pre-crisis year is the same for all banks in each country. Because of the length of the Japanese crisis, the pre-crisis year is defined on a bank-by-bank basis for Japanese banks as the year before a bank discloses material losses.

Chart 2.22 Global securities lending activity



Source: Data Explorers.

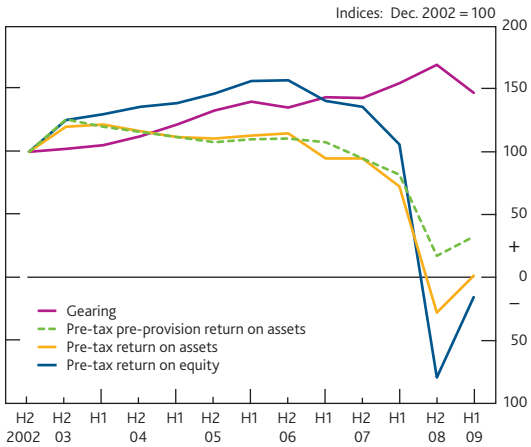
Chart 2.23 Major UK banks' and LCFIs' balance sheet composition compared to hypothetical leverage ratios[a]



Sources: Published accounts and Bank calculations.

(a) Refer to **Chart 2.2** footnotes (a) and (b), for description of adjustments to assets and capital.
(b) Excludes Northern Rock.

Chart 2.24 Major UK banks' pre-tax return on equity[a][b]



Sources: Published accounts and Bank calculations.

(a) Based on twelve-month trailing pre-tax revenues and average shareholders' equity.
(b) Each series shows an average for major UK banks, weighted by individual banks' average assets in each period.

incremental costs of improving the industry's funding structure could also pose a material headwind to the generation of profits and capital.

...including from UK domestic household exposures...

Future loan impairments could also restrict internal capital generation (**Chart 2.25**). UK banks have written off £14.3 billion of loans to households since mid-2007. There are some signs that mortgage arrears are stabilising, with a fall in the arrears rate to 1.77% in September. And new lending is more conservative, with only 9% of mortgages having LTV ratios of 90% or more, compared with close to 30% in 2008 Q1. This, combined with recent house price increases, should reduce future repossessions and losses. Partly as a consequence, most major UK banks now expect impairments to stabilise at around their current level before falling. But there remains a clear risk that arrears could rise further, either if the recovery is less strong than anticipated or when interest rates rise to more normal levels.

...exposures to UK corporates...

There appears to be a marked dispersion in the quality of lending to corporates across UK banks (**Chart 2.14**). Commercial property, which accounts for almost half of all lending to UK PNFCs, is a particular concern (as discussed in Box 3). During the first half of 2009, annualised commercial real estate impairment rates more than doubled to 6.6%. Companies' ability to sustain debt payments and to refinance existing loans is a key risk going forward.

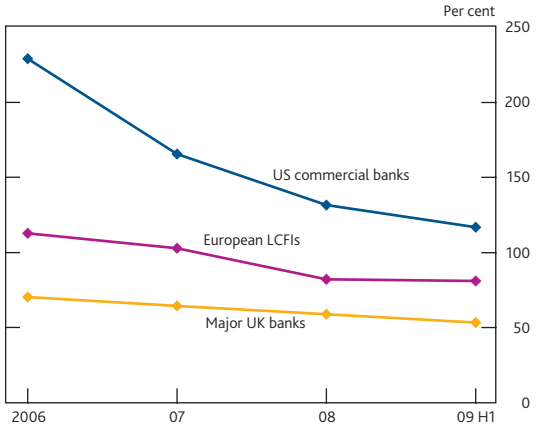
...and from international exposures.

As a counterpart to the retrenchment by foreign banks from lending to UK corporates — discussed in Box 2 — UK banks have reduced their international exposures by over £100 billion during 2009 H1. Large exposures to overseas entities have fallen from £190 billion to £110 billion (**Chart 2.26**). But UK banks remain sensitive to developments in overseas markets, as foreign claims still account for 35% of UK banks' assets (**Chart 2.27**).

As discussed in Section 1, rising default rates on residential and commercial property loans in a number of developed and emerging market financial systems represent a direct source of credit risk to UK banks. Shocks from abroad are likely to be rapidly transmitted to the United Kingdom where a large number of banks have concentrated exposures in the same markets. The risks emanating from the US private sector are perhaps of greatest concern, because more than 20% of Canadian, German, UK and Japanese banks' claims on non-resident PNFCs are on US companies (**Chart 2.28**).

UK banks have £600 billion of exposures to emerging market economies (7% of total assets). The largest exposures are to emerging Asia, where the recovery looks advanced. But UK banks also have material exposures to the Middle East.

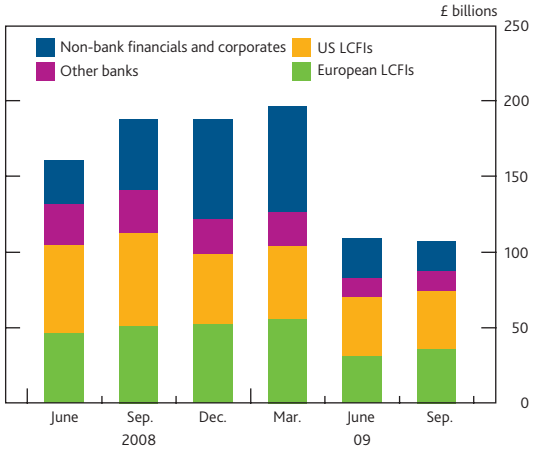
Chart 2.25 Major UK banks' and LCFIs' impaired loan coverage ratios[a][b]



Sources: Federal Reserve, published accounts and Bank calculations.

(a) Impaired loans are loans past due and in non-accrual status, restructured loans which are considered impaired and other loans for which an impairment allowance has been raised.
(b) Coverage ratio is loan loss reserves as a percentage of impaired loans.

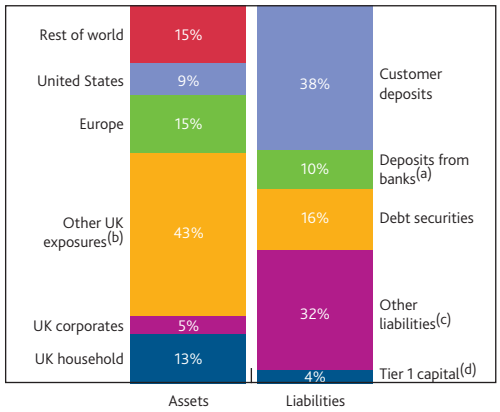
Chart 2.26 Major UK banks' international large exposures by type of counterparty[a][b]



Source: FSA regulatory returns.

(a) Based on exposures that exceed 10% of eligible capital at the end of the reporting period.
(b) Excludes Bank of Ireland.

Chart 2.27 Major UK banks' aggregate balance sheet as at 2009 H1



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

(a) Includes borrowing from major UK banks.
(b) Includes (among other items) loans to UK-resident banks and other financial corporations and holdings of UK government debt.
(c) Includes Tier 2 capital, short positions, insurance liabilities and derivative contracts with negative marked-to-market value.
(d) Assets are not risk weighted. As a percentage of risk-weighted assets, Tier 1 capital is 8%.

There are also pockets of exposure in Central and Eastern Europe. While continental European banks are most directly exposed to those economies, a currency or sovereign crisis in the region could have indirect knock-on effects on UK banks.

Profits alone may not raise capital ratios to where they need to be…

Chart 2.29 illustrates the possible impact that known changes in capital rules (to risk weights in the trading book and to securitisations) and potential profits net of distributions might be expected to have on UK banks' core Tier 1 capital ratios in coming years. Given the difficulty of predicting future profit streams, estimates are derived by assuming returns on equity of either 10% or 15% — lower than in recent years, but consistent with the derisking needed across the sector. Given these assumptions, the chart suggests that profits, by themselves, are unlikely to lift capital ratios significantly beyond current levels.

…although lower distributions of reserves will help.

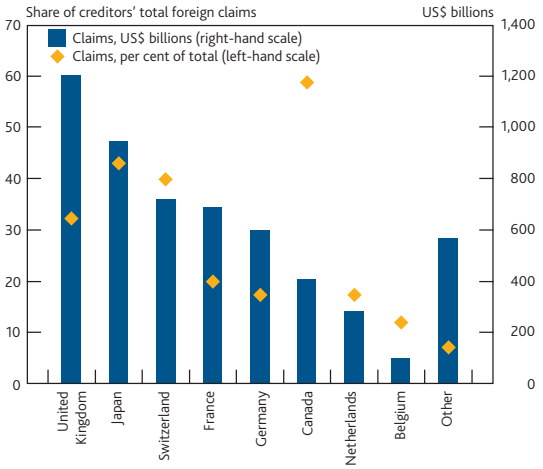
Over the period 2001 to 2006, UK banks' staff costs averaged 31% of total revenues and dividend payout rates averaged 46%. Remuneration and dividend policies are important for recruiting and retaining staff and for compensating shareholders for the risk they incur. But given the scale of the challenge facing banks in rebuilding their balance sheets, they would benefit from distributions from reserves being materially lower than in the past, or paid in a non-cash form (shares) which retains equity within the business.

To illustrate the benefits of reduced distributions from profits, a simple analysis suggests that reducing staff costs by around one tenth and dividend payout rates by around a third would allow UK banks to increase retained reserves by close to £70 billion over the next five years. This would boost core Tier 1 ratios by 100 basis points over the same period (**Chart 2.30**). In other words, relatively modest limitations in the distribution of profits would help banks to meet their medium-term regulatory capital requirements, without any adjustment in banks' domestic asset base.

This increases the importance of banks taking advantage of current conditions.

There is a risk that balance sheet reduction is instead achieved by a reduction in assets. To the extent that this is achieved through sale of trading assets, this is a positive development. But if it is achieved at the expense of domestic lending, it could undermine the recovery from recession and ripple back to banks' balance sheets through higher loan losses. There is a collective interest in maintaining lending at levels consistent with more rapid recovery from recession. It is important that banks take full advantage of favourable market conditions to build capital and liquidity, internally and externally, both to bolster confidence in the sector and enable it to resume its pivotal role in domestic credit intermediation.

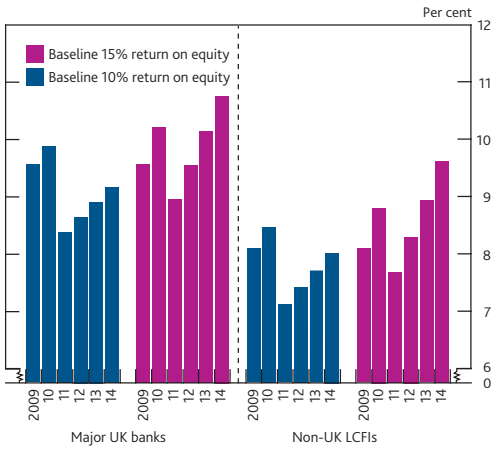
Chart 2.28 Foreign banking systems' claims on the United States[a]



Sources: BIS, Consolidated banking statistics, ultimate risk basis and Bank calculations.

(a) Other represents all other BIS-reporting countries.

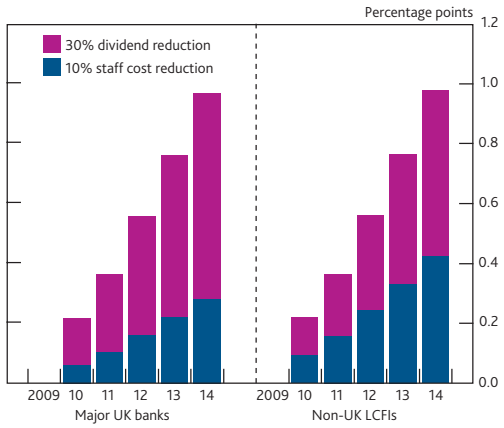
Chart 2.29 Projected core Tier 1 capital ratios with 10% and 15% return on equity[a][b][c][d]



Sources: BIS, FSA, Thomson Datastream, published accounts and Bank calculations.

(a) Excludes Britannia, Co-operative Financial Services, Nationwide and Northern Rock.
(b) Data points show end-H1 positions.
(c) Includes the estimated impact of increased capital requirements for market risk, securitisation and resecuritisation from 2011 onwards.
(d) Risk-weighted assets, excluding the impact of higher market risk, securitisation and resecuritisation risk weights, grow at 4% per annum.

Chart 2.30 Impact on core Tier 1 capital of various actions when return on equity is 10%[a][b][c]



Sources: BIS, FSA, Thomson Datastream, published accounts and Bank calculations.

(a) Excludes Britannia, Co-operative Financial Services, Nationwide and Northern Rock.
(b) Data points show end-H1 positions.
(c) Underlying staff costs are assumed to grow in line with revenues.

By deferring action because of the short-run costs of raising extra capital and long-term funding, banks would perpetuate balance sheet fragilities. This could increase the long-term costs of repair and risk setting back the recovery in the real economy. As this is in the interests of neither the banks nor the authorities, a front loading of balance sheet repair efforts would be a much more desirable transition path.