BANK OF ENGLAND

Financial Stability Report Summary

October 2008 | Issue No. 24

In recent weeks, the global banking system has arguably undergone its biggest episode of instability since the start of World War I. This instability was rooted in weaknesses within the financial system that developed during an extended credit boom: rapid balance sheet expansion; the creation of assets whose liquidity and credit quality were uncertain in less benign conditions; and vulnerabilities in funding structures.

Following a year of severe stress in the banking system, growing evidence emerged over the summer of a slowdown in the economy and further bank losses. That heightened fears of a further adverse spiral of falling asset prices, tighter credit conditions and slower economic growth. Failures of some institutions were followed by severe dislocation in the global interbank funding network. That, in turn, led to acute strains in banking systems internationally and in the United Kingdom.

On 8 October, the UK authorities announced a set of system-wide measures that addressed in size and at source perceived weaknesses in banks' capital and funding structures. The package supports capital raising to strengthen banks' resilience and offers assurance about banks' liquidity positions. Other countries have subsequently announced measures with similar underlying principles. Early signs suggest these measures have helped underpin the banking system.

But risks in the financial system clearly remain. Over time, against the backdrop of an economic downturn, banks will need to adjust their balance sheets and funding models, weaning themselves off current exceptional levels of official sector support. Recapitalisation should ease this adjustment, but lending growth will take time to recover. As the system stabilises, a fundamental rethink will be needed of how to address systemic risks, both through improved regulatory frameworks and developing new macroprudential policies to dampen the credit cycle.

This *Report* sets out:

— An analysis of developments that culminated in the turmoil of recent months.

— The reasons for the exceptional measures taken by the UK authorities and those in other countries.

— The Bank's view on the short-term prospects for the financial system and on the medium-term reforms necessary to address systemic risks.

Key vulnerabilities in the financial system:

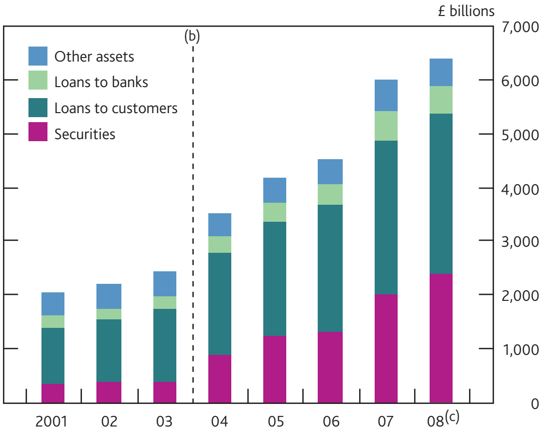
- Heightened uncertainty about the value of banks' asset portfolios, as macroeconomic and counterparty risk rose.
- Undercapitalisation of banks following a prolonged period of underpricing of risk and balance sheet expansion, which led to an erosion of confidence in the banking system (pages 26–29).
- Banks' high structural dependence on wholesale funding markets, the impaired functioning of which led to rising rollover risk (pages 7–9).
- Underappreciated interconnections between firms in the global financial system arising from funding models and globalisation of asset exposures.

Measures taken and required:

- Government-supported recapitalisation of the banking system, including direct investment of public funds (Box 5, page 31).
- Direct injection of additional liquidity via various expanded central bank operations (Box 5, page 31).
- A temporary guarantee of new short and medium-term debt issuance for institutions raising sufficient capital (page 30).
- Over the medium term, an adjustment by some banks of their funding structures to refinance large-scale government interventions and to develop more sustainable funding models (pages 36–40).
- A fundamental rethink of safeguards against systemic risk, both through existing regulatory frameworks and new countercyclical policies (pages 41–45).

This document provides a short, visual guide to the analysis within the *Report*. It is also available on the Bank's website at **www.bankofengland.co.uk/publications/fsr/2008/fsrsum0810.pdf**.

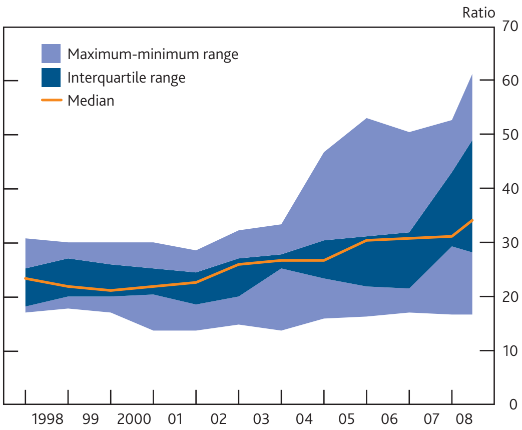
Major UK banks' assets[(a)]



Sources: BankScope published by Bureau van Dijk Electronic Publishing, published accounts and Bank calculations.
(a) Excludes Nationwide due to lack of interim data.
(b) IFRS break.
(c) 2008 H1.

Benign international macroeconomic conditions contributed to an extended global credit boom, with financial institutions, including UK banks, rapidly expanding their balance sheets (pages 7–9)...

Major UK banks' leverage ratio[(a)(b)]

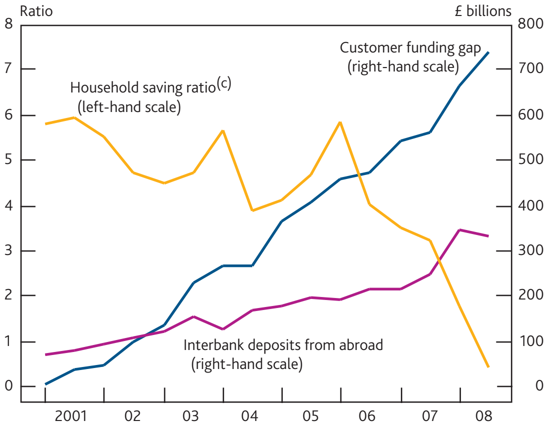


Sources: Published accounts and Bank calculations.
(a) Leverage ratio defined as total assets divided by total equity excluding minority interest.
(b) Excludes Nationwide due to lack of interim data.

...accompanied by sharp increases in banks' leverage...

...as financial innovation and a search for yield encouraged risk taking and risk distribution across borders, increasing connections across financial systems...

Major UK banks' customer funding gap,[(a)] household saving ratio and foreign interbank deposits[(b)]

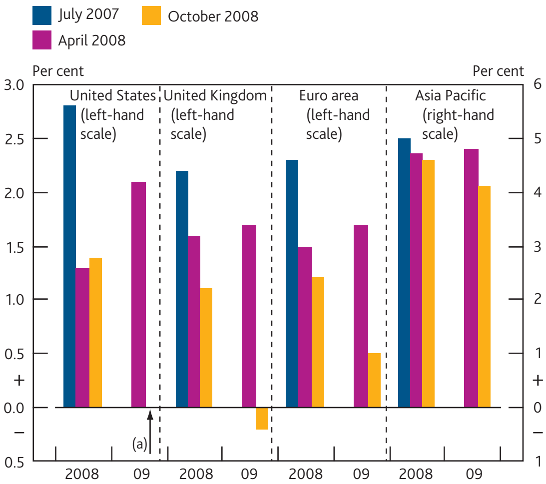


Sources: Bank of England, Dealogic, ONS, published accounts and Bank calculations.
(a) Customer funding gap is customer lending less customer funding, where customer refers to all non-bank borrowers and depositors.
(b) Data exclude Nationwide.
(c) UK household savings as a percentage of post-tax income.

...with lending increasingly financed from wholesale funding, often from overseas.

Given a weakening of asset quality and funding structures, banks in the United Kingdom and internationally were vulnerable to credit and liquidity risks.

International GDP growth forecasts



Source: Consensus Economics Inc.
(a) October 2008 forecast of US GDP growth in 2009 was zero.

These risks crystallised as the macroeconomic outlook weakened and housing markets deteriorated in several countries (page 10)…

Mark-to-market losses on selected financial assets[a][b]

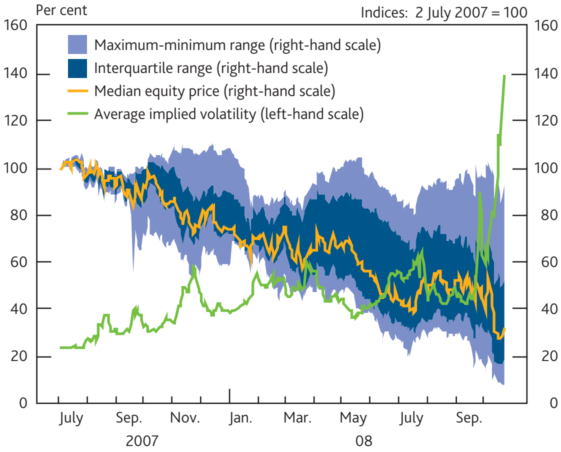
	Outstanding amounts	Losses: Apr. 2008 *Report*	Losses: Oct. 2008 *Report*
United Kingdom (£ billions)			
Prime residential mortgage-backed securities	193	8.2	17.4
Non-conforming residential mortgage-backed securities	39	2.2	7.7
Commercial mortgage-backed securities	33	3.1	4.4
Investment-grade corporate bonds	450	46.2	86.5
High-yield corporate bonds	15	3.0	6.6
Total		**62.7**	**122.6**
United States (US$ billions)			
Home equity loan asset-backed securities (ABS)[c]	757	255.0	309.9
Home equity loan ABS collateralised debt obligations (CDOs)[c][d]	421	236.0	277.0
Commercial mortgage-backed securities	700	79.8	97.2
Collateralised loan obligations	340	12.2	46.2
Investment-grade corporate bonds	3,308	79.7	600.1
High-yield corporate bonds	692	76.0	246.8
Total		**738.8**	**1,577.3**
Euro area (€ billions)			
Residential mortgage-backed securities[e]	387	21.5	38.9
Commercial mortgage-backed securities[e]	34	2.8	4.1
Collateralised loan obligations	103	6.8	22.8
Investment-grade corporate bonds	5,324	283.8	642.9
High-yield corporate bonds	175	29.1	75.9
Total		**344.1**	**784.6**

Source: Bank calculations.
(a) Estimated loss of market value since January 2007, except for US collateralised loan obligations which are losses since May 2007.
(b) Data to close of business on 20 October 2008.
(c) 2005 H1 to 2007 H2 vintages. The home equity loan asset class is comprised mainly of US sub-prime mortgages, but it also includes, for example, other mortgages with high loan to value ratios. Home equity loans are of lower credit quality than US Alt-A and prime residential mortgages.
(d) High-grade and mezzanine ABS CDOs, excluding CDO-squareds.
(e) Germany, Ireland, Italy, Netherlands, Portugal and Spain.

…translating into further, more broadly based, losses on many institutions' asset portfolios…

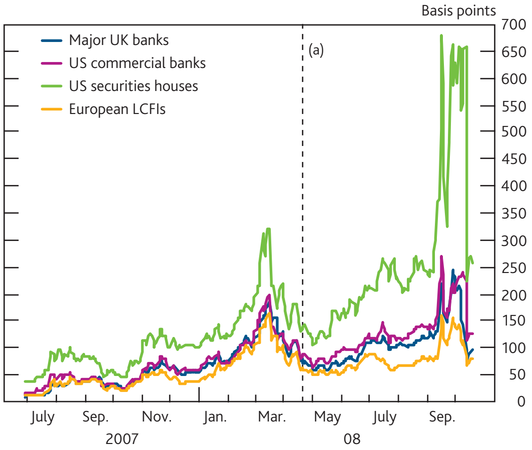
…and increasing uncertainty about future potential losses on lending. For example, estimated mark-to-market losses have more than doubled since the previous *Report*, and now total some US$2.8 trillion (Box 1, page 14).

Major UK banks' equity price dispersion and implied volatility



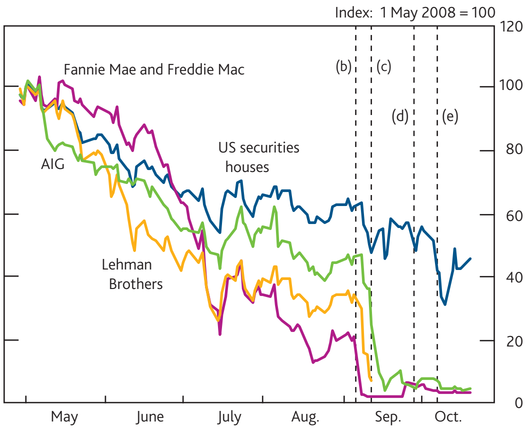
Sources: Bloomberg and Bank calculations.
See FSR Chart 4.2 for details.

Major UK banks' and LCFIs' credit default swap premia



Sources: Markit Group Limited, Thomson Datastream, published accounts and Bank calculations.
(a) April 2008 *Report*.
See FSR Chart 3.1 for details.

Equity prices of distressed institutions[(a)]



Sources: Bloomberg and Bank calculations.
(a) Data to close of business on 20 October 2008.
(b) Fannie Mae and Freddie Mac taken into conservatorship.
(c) Lehman Brothers Holdings files for Chapter 11 bankruptcy protection.
(d) Benelux, Icelandic and UK governments nationalise or take stakes in banks.
(e) UK authorities announce comprehensive package of measures.

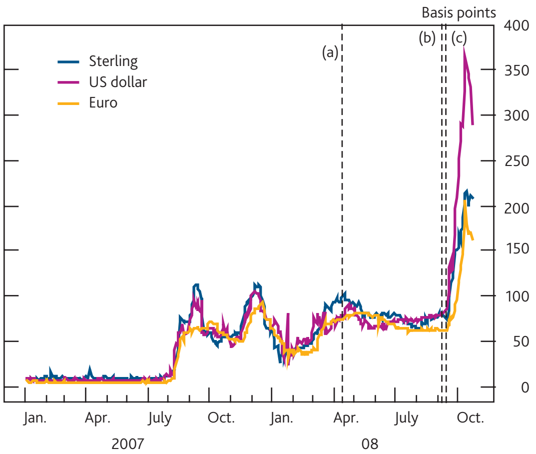
As a result, uncertainty about the value of banks' assets rose sharply, reflected in abrupt increases in banks' equity price volatility (page 26)…

…while high leverage prompted questions about financial firms' capital adequacy and funding (pages 17–19)…

…raising concerns about the viability of some institutions…

…which was heightened by severe institutional distress, including at Fannie Mae, Freddie Mac and Lehman Brothers in the United States, Bradford & Bingley in the United Kingdom and Hypo Real Estate in Germany…

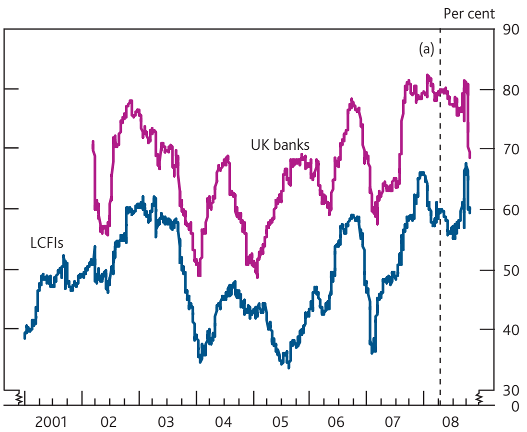
Three-month interbank rates relative to expected policy rates



Sources: Bloomberg and Bank calculations.
(a) April 2008 *Report*.
(b) Fannie Mae and Freddie Mac taken into conservatorship.
(c) Lehman Brothers Holdings files for Chapter 11 bankruptcy protection.
See FSR Chart 3.3 for details.

...leading to extreme strains in the global interbank funding network...

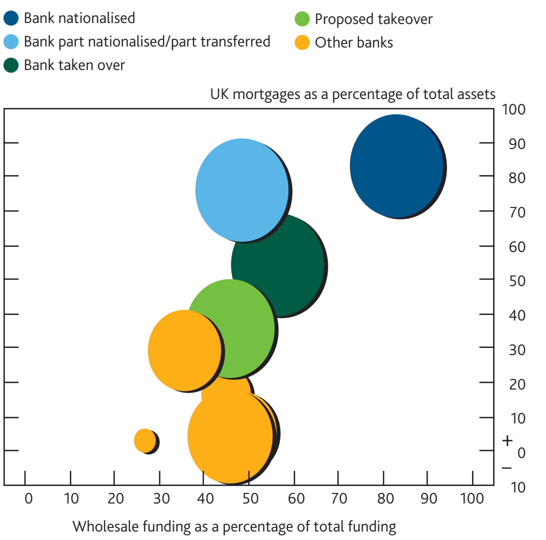
Comovement between financial institutions' equity returns



Sources: Bank of England, Bloomberg and Bank calculations.
(a) April 2008 *Report*.
See FSR Chart 4.3 for details.

...and highly correlated risks across financial systems (page 26)...

Major UK banks' equity prices, mortgage lending and wholesale funding dependency(a)



Sources: Bloomberg, published accounts and Bank calculations.
(a) The size of the circles is proportional to the extent of equity price falls since 2 July 2007.
See FSR Chart 4.9 for details.

...especially for banks dependent on wholesale funding.

As some banks sold assets or reduced credit, an adverse cycle of falling asset prices and weakening economic prospects began to develop. Pressures on banks' funding and concerns about their solvency spread system-wide (pages 27, 29).

Announced capital raising commitments from UK financial institutions

	Current Tier 1 capital: ratio (per cent)	Institution's capital raising commitments (£ billions): common shares	preference shares	other	dividend effect	Total	New Tier 1 capital ratio following capital raising (per cent)
Barclays	9.1	3.6	3.0	1.5	2.0	10.1	>11.0
HBOS	8.6	8.5	3.0	0.0	0.0	11.5	12.0
HSBC	8.8	0.75	0.0	0.0	0.0	0.75	8.8
Lloyds TSB	8.6	4.5	1.0	0.0	0.0	5.5	12.1
Combined Lloyds TSB and HBOS		13.0	4.0	0.0	0.0	17.0	
Nationwide	9.7			0.5		0.5	10.3
RBS	9.1	15.0	5.0	0.0	2.0	22.0	12.1–13.1
Abbey/ Alliance & Leicester	Circa 8	1.0	0.0	0.0	0.0	1.0	Raised by 1.25
Total						51.4	

Sources: Press releases, published accounts and Bank calculations.
See FSR Table 1 on page 32 for details.

On 8 October, the UK authorities announced a package of measures that support capital raising at banks and offer assurance about banks' liquidity positions (Box 5, page 31)…

…with similar measures subsequently adopted in a number of other countries.

Major UK banks' CDS spreads[(a)]

Credit default swap spreads (basis points)[(b)]

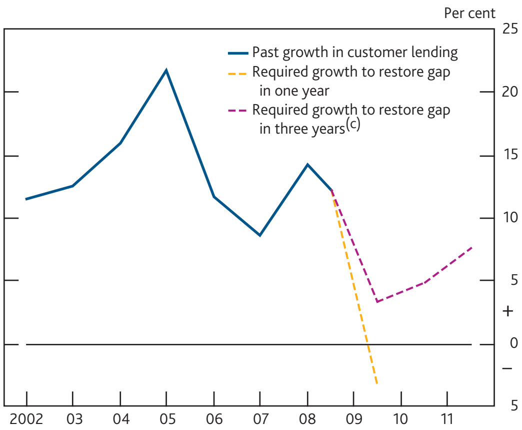
	April 2008 *Report*	Prior to support package[(c)]	October 2008 *Report*
Barclays	99	196	101
HBOS	175	264	102
Lloyds TSB	73	146	80
RBS	113	291	103
HSBC	78	98	65
Nationwide	211	292	103

Sources: Thomson Datastream and Bank calculations.
(a) Data to close of business on 20 October 2008.
(b) Five-year senior credit default swaps.
(c) Last closing price before UK Government's announcement of financial support package.

The government-supported recapitalisation has reduced default fears among UK banks significantly (page 34)…

…with signs of reduced pressures on banks' funding…

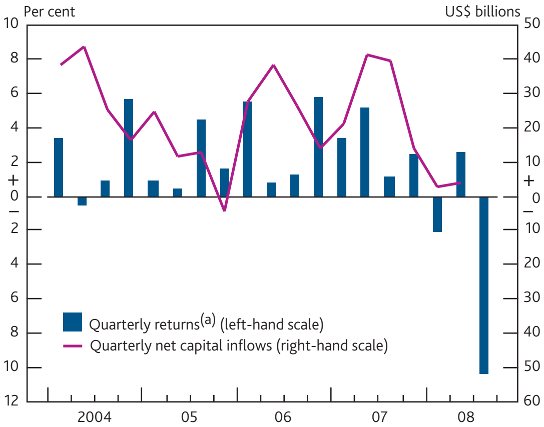
Illustrative adjustment path for customer lending to reduce customer funding gap to 2003 levels[(a)(b)]



Sources: Dealogic, published accounts and Bank calculations.
(a) Data excludes Nationwide and uses Abbey data rather than Banco Santander.
(b) Assumes major UK banks' customer deposit growth is equal to the average annual rate since 2005.
(c) Assumes 20% of the required adjustment in customer lending growth occurs in the first year, 30% in the second year, and 50% in the third year.

…which should help to support lending growth, which in the absence of the package might have contracted more rapidly.

Hedge fund returns and net capital inflows



Sources: Bloomberg, CSFB/Tremont, Lipper (a Thomson Reuters Company) and Bank calculations.
(a) CSFB/Tremont aggregate hedge fund index.

Funding pressures and falling asset prices continue to represent a risk for other parts of the financial system, such as hedge funds (pages 35–37)…

…with growing signs of stress in some emerging market economies.

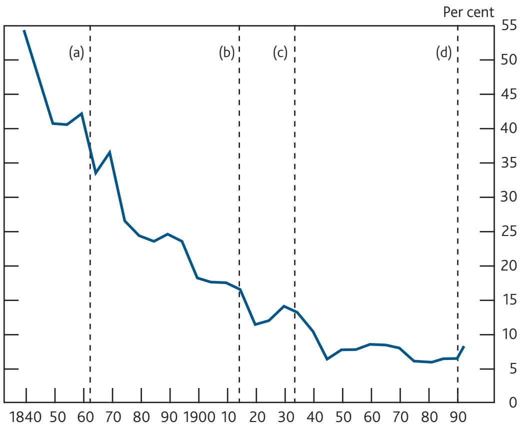
Expansion of central banks' balance sheets and availability of government guarantees on banks' wholesale funding

	Pre-crisis	Latest
Central bank open market operations		
Board of Governors of the Federal Reserve (US$ billions)	20	343
Repurchase agreements	20	80
Term Auction Facility	–	263
European Central Bank (€ billions)	438	739
Main refinancing operations	288	292
Longer-term refinancing operations	150	447
Bank of England (£ billions)	46	104
Short-term repurchase agreements	31	0
Longer-term repurchase agreements	15	104
Collateral swaps		
Board of Governors of the Federal Reserve Term Securities Lending Facility (US$ billions)	–	198
Bank of England Special Liquidity Scheme (£ billions available)	–	200
US dollar swap lines		
Provided by Board of Governors of the Federal Reserve (US$ billions)	–	Unlimited
of which to European Central Bank (US$ billions)	–	236
of which to Bank of England (US$ billions)	–	85
Other new market-wide facilities		
Board of Governors of the Federal Reserve (US$ billions)	–	257
ABCP Money Market Mutual Fund Facility	–	123
Primary Dealer Credit Facility	–	134
Government guarantees of banks' wholesale liabilities		
United States (US$ billions)	–	1,400
Euro area (€ billions)	–	820
United Kingdom (£ billion)	–	250

Sources: Bank of England, Board of Governors of the Federal Reserve, European Central Bank and press releases.
See FSR Table 5.C for details.

Over time banks need to adjust funding structures to reduce financing vulnerabilities and to wean themselves off large-scale official support, both capital and liquidity (pages 37–39).

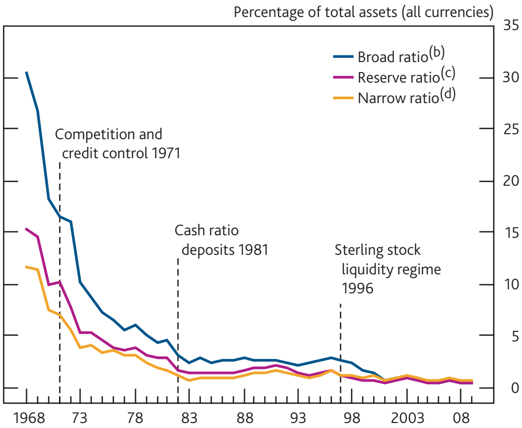
Long-run capital levels for US commercial banks 1840–1993



Source: Berger, A, Herring, R and Szegö, G (1995), 'The role of capital in financial institutions', *Journal of Banking and Finance*, pages 393–430.
(a) National Banking Act 1863.
(b) Creation of Federal Reserve 1914.
(c) Creation of Federal Deposit Insurance Corporation 1933.
(d) Implementation of Basel risk-based capital requirements 1990.
See FSR Chart 6.1 for details.

Recent events have demonstrated that banks' capital holdings, which are low by historical standards, have been insufficient to absorb systemic risks (pages 41–42).

Sterling liquid assets relative to total asset holdings of UK banking sector[a]



Source: Bank calculations.
(a) 2008 data are as of end-August 2008.
(b) Cash + Bank of England balances + money at call + eligible bills + UK gilts.
(c) Proxied by: Bank of England balances + money at call + eligible bills.
(d) Cash + Bank of England balances + eligible bills.

Holdings of liquid assets are also very low by historical standards (pages 39–40)…

…and financial firms will need to strengthen their liquidity risk management.

Key actions to improve resilience

- Macroprudential tools are needed to guard against systemic risk and to ensure banks are in a stronger position ahead of the next downturn.
- Capital levels have been too low and need to rise; and capital needs to be of sufficient quality to deliver higher levels of resilience.
- Liquidity standards have been inadequate and should be strengthened to ensure that firms are sufficiently resilient to a range of shocks.
- The current UK legal framework for depositor protection and dealing with institutions in difficulties needs to be strengthened.
- International arrangements for managing crises at cross-border financial institutions should be developed further.
- Transparency should be improved through more informative disclosure, including the provision of more information on potential future balance sheet volatility, to strengthen market discipline.
- The scope for — and potential benefits of — developing centralised infrastructures for a broad array of over-the-counter instruments should be assessed.

Over the medium term, a fundamental rethink of safeguards against systemic risk is needed, including the development of new countercyclical tools and stronger capital and liquidity regulation (pages 41–45).