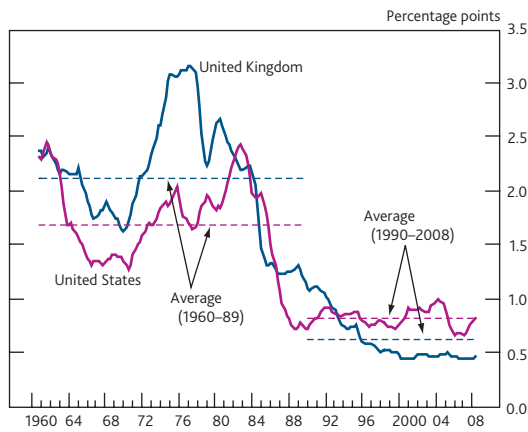
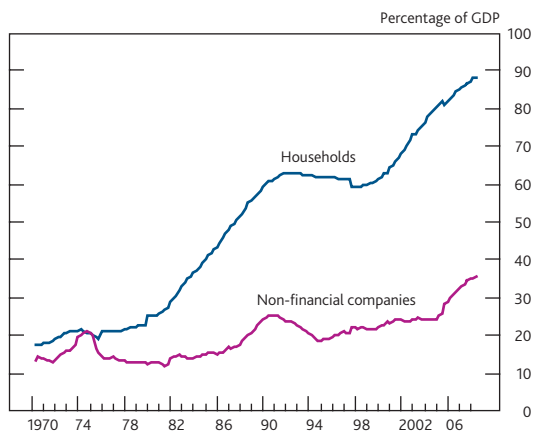


Chart 1.1 Volatility of real GDP growth^(a)

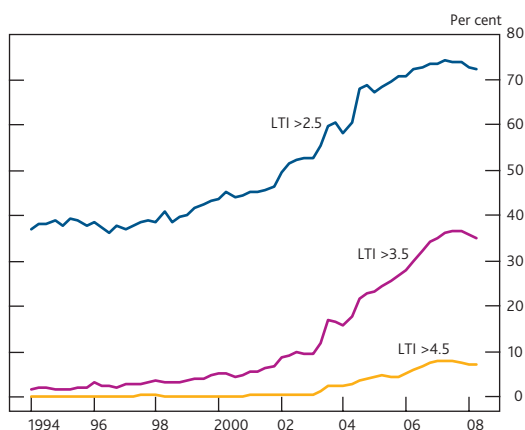
Sources: ONS, Thomson Datastream and Bank calculations.

(a) Five-year rolling average of annualised volatility of quarter-on-quarter growth rate. 2008 data are to Q2.

Chart 1.2 Bank lending to households and non-financial companies in the United Kingdom^(a)

Sources: Bank of England, Thomson Datastream and Bank calculations.

(a) Data include the value of loans that have been securitised.

Chart 1.3 Loan to income ratios for house purchases in the United Kingdom^{(a)(b)}

Sources: FSA, Survey of Mortgage Lenders and University of Essex.

(a) Chart shows the proportion of mortgages with loan to income ratios greater than 2.5, 3.5 and 4.5.

(b) FSA data are used from 2005 Q2 onwards. The back-run has been constructed using the changes in the series from the Survey of Mortgage Lenders data set.

1 An extended global credit boom

Rising savings and global imbalances...

Over the past year, financial market participants have been struggling to manage vulnerabilities that are the legacy of a prolonged spell of balance sheet expansion. The seeds of this boom can be traced back to the development of financial and trade imbalances among the major economies over the past decade, as discussed in previous *Reports*. Increased borrowing in a number of developed countries was in part financed with inflows of foreign capital, leading to greater integration in international capital markets. The counterpart was growing current account surpluses in oil-exporting countries and in some Asian economies, which reached around US\$1 trillion in 2007. The latter developed as national saving increased in the wake of the 1997–98 currency crises in that region.

...led to low interest rates and a rise in borrowing...

High savings in Asia contributed to low global long-term real interest rates. Cheap exports from China and elsewhere in Asia, along with growth in world trade, contributed to falls in inflation in a number of developed countries. Nominal short-term interest rates were reduced to very low levels. At the same time, economic conditions remained stable by historic standards, a period described by some as the 'Great Moderation' (Chart 1.1).

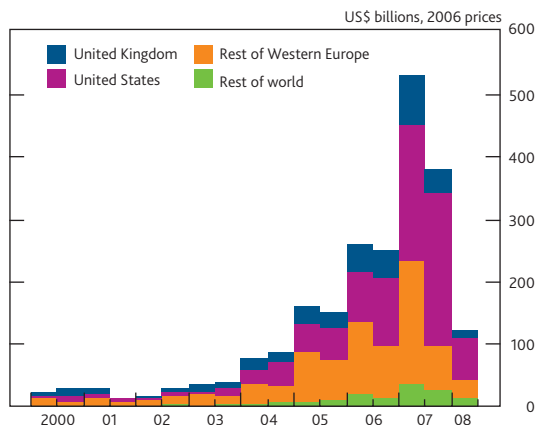
Benign economic conditions helped anchor expectations of continued stability. This, along with rising asset prices and low global real interest rates, boosted the demand for and supply of credit in a number of developed economies. Household and corporate borrowing rose rapidly, including in the United Kingdom (Chart 1.2). Over time, banks took on progressively more credit risk by lending to, for example, households with high loan to income (LTI) ratios (Chart 1.3), leveraged buyout firms (Chart 1.4) and, in the United States, to the sub-prime sector.

...inducing a 'search for yield' in financial markets...

As discussed in previous *Reports*, apparent reductions in macroeconomic uncertainty and strong competitive pressures to maintain returns encouraged investors and financial firms to take on ever greater risk. Financial market liquidity rose steadily (Chart 1.5) and asset prices increased sharply (Chart 1.6), reflecting a 'search for yield'. This was further evident in lower discrimination between instruments of differing credit quality and the development of a wave of ever more complex financial instruments employing leverage to generate higher returns. This enabled banks increasingly to package and distribute assets internationally.

...a greater dependence on wholesale and overseas funding...

Although falling saving ratios in the United Kingdom and some other developed economies constrained retail deposit funding,

Chart 1.4 Real leveraged buyout loan issuance^(a)

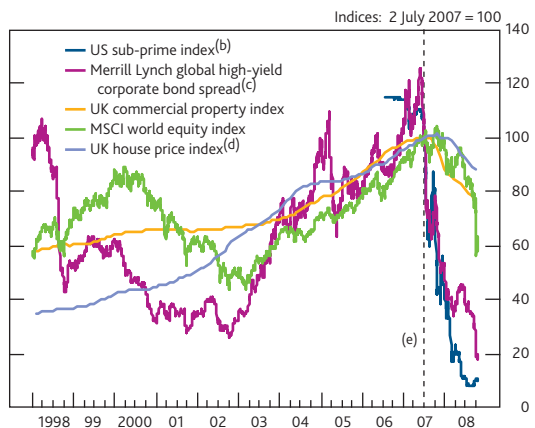
Sources: Dealogic, US Bureau of Economic Analysis and Bank calculations.

(a) Bi-annual syndicated lending deflated by US GDP deflator. Data include refinancing of leveraged buyouts and dividend recapitalisation — a loan taken out to pay dividends.

Chart 1.5 Financial market liquidity^(a)

Sources: Bank of England, Bloomberg, Chicago Board Options Exchange, Debt Management Office, London Stock Exchange, Merrill Lynch, Thomson Datastream and Bank calculations.

(a) The liquidity index shows the number of standard deviations from the mean. It is a simple unweighted average of nine liquidity measures, normalised on the period 1999–2004. The series shown is an exponentially weighted moving average. The indicator is more reliable after 1997 as it is based on a greater number of underlying measures. The recent fall in the indicator is largely due to a sharp decline in the interbank market liquidity measure.

Chart 1.6 Selected asset prices^(a)

Sources: Halifax, IPD, JPMorgan Chase & Co., Merrill Lynch, Nationwide, Thomson Datastream and Bank calculations.

(a) Data to close of business on 20 October 2008.
 (b) Sub-prime series is the A-rated 2006, H2 vintage ABX.HE index.
 (c) Series inverted.
 (d) Average of Halifax and Nationwide house price indices.
 (e) Dashed line shows start of July 2007.

UK banks were able to expand lending by tapping funds from international wholesale markets. In 2001, UK customer lending was comparable to customer deposits. But by 2008 H1, the surplus of lending over deposits — the customer funding gap — was £700 billion (Chart 1.7). Much of this funding was ultimately sourced overseas. In particular, the United States acted as an intermediary, attracting capital inflows from the rest of the world and exporting these funds to other countries. Chart 1.7 shows that foreign interbank deposits rose from 2001, supporting a rise in the customer funding gap.

...and a rapid expansion in banks' balance sheets.

These developments led to a near tripling in the value of large complex financial institutions' (LCFIs)⁽¹⁾ assets between 2001 and 2007. In the United Kingdom, the major banks'⁽²⁾ balance sheets rose by a similar proportion (Chart 1.8). This growth was driven by a rapid rise in trading book activity and lending, leading to sharp increases in leverage ratios — assets relative to equity — at some banks (Chart 1.9). The relatively low risk weighting of some assets meant, however, that regulatory capital ratios remained broadly flat over the period.

Moreover, this growth in bank balance sheets understated the broader expansion in risk-taking. Many financial institutions exploited strong demand for yield from elsewhere in the financial system — including among conduits and structured investment vehicles — to generate higher profitability. As discussed in the April 2007 Report, this led to a decline in the quality of credit risk assessment in the system and a high dependence on sustained market liquidity. A by-product of the development of this 'originate and distribute' business model was a significant increase in interconnectedness internationally, both within the banking system and between banks and other financial institutions.

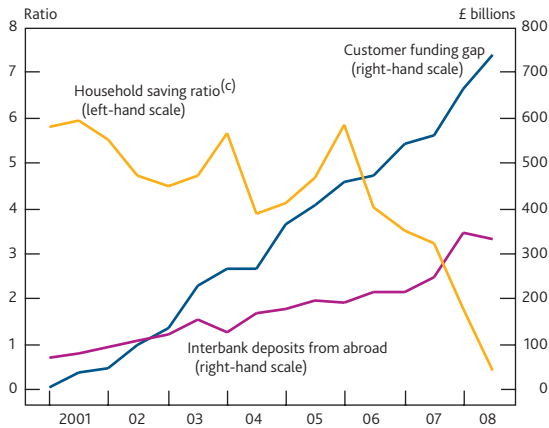
Rising sub-prime defaults ended this boom...

Previous Reports highlighted a number of these vulnerabilities. They were triggered ultimately by rising defaults on US sub-prime mortgages. Losses spilled over across global financial markets with unexpected virulence and breadth, turning the previous cycle of rising asset prices and credit quality into reverse. Securitisation markets used to distribute assets broke down as the extent of the deterioration in credit standards was revealed. Valuation uncertainty rose sharply, particularly for more complex products where informational problems were most acute, as end-investors lost confidence in

(1) LCFIs include the world's largest banks and other financial intermediaries that carry out a diverse and complex range of activities in major financial centres. For this Report, the group of LCFIs is: Bank of America, Barclays, BNP Paribas, Citi, Credit Suisse, Deutsche Bank, Goldman Sachs, HSBC, JPMorgan Chase & Co., Lehman Brothers, Merrill Lynch, Morgan Stanley, RBS, Société Générale and UBS. Lehman Brothers is included in the peer group to 15 September 2008.

(2) 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: Alliance & Leicester, Banco Santander, Barclays, Bradford & Bingley, HBOS, HSBC, Lloyds TSB, Nationwide, Northern Rock and RBS.

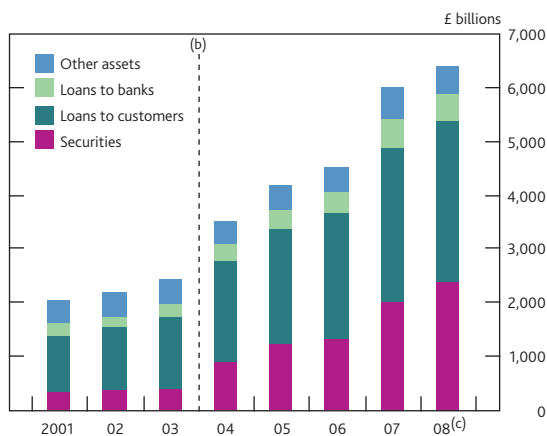
Chart 1.7 Major UK banks' customer funding gap,^(a) household saving ratio and foreign interbank deposits^(b)



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.

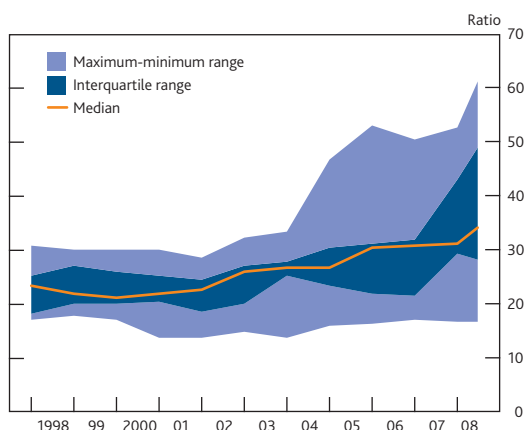
Chart 1.8 Major UK banks' assets^(a)



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.

Chart 1.9 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.

credit rating methodologies. Asset prices fell below levels that could be explained by credit fundamentals alone, as liquidity and uncertainty premia increased significantly. And opacity in the distribution of exposures across institutions added to perceptions of heightened counterparty credit risk in interbank markets.

... exposing vulnerabilities within the financial system.

Some observers expected the resulting market turmoil to be short-lived. But over time it became increasingly clear that problems within the banking system were deep seated, rooted in structural weaknesses in banks' balance sheets that had developed during the boom years. These weaknesses included:

- Inflated aggregate balance sheets, whose expansion had in many cases far outpaced growth in the real economy.
- Expansion into certain assets whose underlying value, credit quality and liquidity were uncertain — whether lending to higher-risk households and corporates or the holding of complex securities.
- Liability structures which were overly reliant on the sustained availability of wholesale funding and whose maturity was often short.
- Capital levels which, given these asset and liability structures, became in some cases low relative to underlying balance sheet risks.
- Underappreciated, but potent, interconnections between firms in the global financial system.

These structural problems laid the foundations for the sharp increase in instability in the summer, which culminated in large-scale government interventions to support financial stability during October.