Box II-1

Global financial crisis deepens

The beginning of the global financial crisis can be traced to the burst of the US housing bubble as the weaknesses and extravagance embedded in the sub-prime mortgage market came to the fore. Defaults on sub-prime mortgages rose sharply, leading credit rating agencies to lower their ratings of sub-prime related mortgage products in the summer of 2007. Banks on both sides of the Atlantic sustained losses as a result. UK mortgage lender Northern Rock was the first institution to experience liquidity problems and subsequently sought assistance from the British government. News of Northern Rock's difficulties leaked out, and there was a run on the bank in September 2007, which ultimately led to its nationalisation the following February.

The run on Northern Rock was the first on a British bank since the mid-eighteenth century and the first major run on a Western banking institution since the early 1970s. The risk of runs on finan cial institutions has grown substantially as a result of increased financial vulnerabilities. In order to reduce the likelihood of such an occurrence, many governments have declared publicly that they will guarantee deposit balances in commercial banks far beyond statutory deposit insurance requirements.

In the US, investment bank Bear Stearns was the first major casualty. Bear Stearns had developed a severe liquidity problem, which was resolved when JP Morgan Chase took over the bank in March 2008 with assistance from the US Federal Reserve Bank. The rationale behind the Fed's assistance was the systemic importance of Bear Stearns and the grave repercussions for the securities markets if the bank's assets should suddenly be sold off.

The financial system's problems were not limited to excessive sub-prime lending, however. Abundant liquidity, historically low interest rates, and substantial flow of capital to the US and other countries stimulated growing risk appetite, rising indebtedness, and the development of complex and non-transparent structured products (for further information on the origins of the US sub-prime crisis, see Box II-1 in *Monetary Bulletin* 2008/1).

The unrest in the financial markets intensified during the summer of 2008. Real estate prices continued to fall, and GDP growth slowed down in the US and elsewhere. This compounded the uncertainty surrounding financial institutions' ability to withstand a challenging economic climate. Investors and creditors lost confidence in certain firms, which made it difficult for those firms to finance their activities. Listed companies' share prices began to fall. The US government-guaranteed mortgage lenders Fannie Mae (Federal National Mortgage Association, FNMA) and Freddie Mac (Federal Home Loan Mortgage Corporation, FHLMC), the investment bank Lehman Brothers, and American International Group (AIG), the largest insurer in the US, were among those worst affected.

Early in 2008, there were growing concerns over payment difficulties at Fannie Mae and Freddie Mac, which own a substantial portion of the unsecured mortgages in the United States and had limited equity to support their operations. In an attempt to prevent the housing market slump from deepening, the US Federal Reserve Bank tried to rescue the two mortgage lenders in mid-July, in part by granting them access to low-interest loans on terms similar to those received by commercial banks and by removing the prohibition on Treasury Department purchases of stock in Government-Sponsored Enterprises (GSEs). But the plan did not yield the expected results. Investors' fears that the companies would go bankrupt escalated, and concerns intensified about a domino effect on the financial institutions and corporations worldwide that had invested in their bond issues. By September the situation was so dire that the US government took over the operations, assets, and liabilities of both mortgage lenders.

The next companies to be severely affected were Lehman Brothers and AIG. Like the mortgage lenders, they were large and deeply embedded in the American financial market. The initial attempts to solve their problems through the involvement of private investors proved unsuccessful. In Lehman's case, public sector assistance was not an option, either, as the company did not have sufficient collateral to ensure that a loan from the Federal Reserve would be repaid. In spite of Lehman's size, rather than making an attempt to rescue it, the government opted to face the consequences of its demise on financial stability. On the other hand, insolvency at AIG was considered likely to make a substantial negative impact on global financial stability and US economic developments. AIG is a large issuer of credit default swaps, and had it gone bankrupt, numerous financial institutions would have been forced to raise large amounts of capital, which would have proven difficult in the current economic climate. Thus it was decided in mid-September to grant AIG a loan in order to save it from bankruptcy.

The effects of Lehman's collapse, the difficulties at AIG, and growing concerns about GDP growth in the US and elsewhere exacerbated the unrest in the global financial markets. Share prices plummeted. Widespread withdrawals from the largest money market funds in the US closed off yet another source of liquidity for financial institutions. Short-term borrowing costs soared, and credit market liquidity dried up. But the consequences were not long in coming. Assets were sold off at garage sale prices, interest premia shot up to unprecedented levels, and CDS spreads hit record highs. Interbank lending virtually stopped, and investment banks, whose high debt ratio makes them particularly sensitive to tight credit markets, had serious problems. The reduced flow of capital to households and businesses as a result of the financial crisis and the financial institutions' liquidity problems makes a profound negative impact on the real economy, thereby dampening GDP growth still further.

The problems spread quickly. As Lehman Brothers headed for bankruptcy, the outlook was poor for another investment bank, Merrill Lynch. It was clear that bankruptcy at Lehman would greatly affect Merrill Lynch. Ultimately, Bank of America took over Merrill Lynch and saved it from collapse. Thereafter, the remaining investment banks on Wall Street – Goldman Sachs and Morgan Stanley – applied for commercial banking licences and were approved by the US Federal Reserve Bank. This enabled the two banks to receive regular deposits and placed them under the surveillance of the Fed, as other US commercial banks are.

This series of events was also a turning point in the history of American banking, as it marked the end of a 75-year era of investment banking on Wall Street. In recent years, Wall Street investment banks have generated handsome returns, but their performance has deteriorated rapidly following the credit crunch. After the rescue of Bear Stearns and Merrill Lynch and the fall of Lehman Brothers in September, genuine doubts about the business model of American investment banks came to the surface. Investors appear to have lost faith in investment banks' ability to withstand shocks, as their indebtedness exceeds that of commercial banks and they do not benefit from the cushion provided by regular deposits.

At the end of September, yet another US banking giant went bankrupt: Washington Mutual. Massive withdrawals in September created a staggering liquidity shortage, and the regulatory authorities declared the bank insolvent. The collapse of Washington Mutual, one of the nation's largest sub-prime lenders, was the largest commercial bank failure in US history. Claimants suffered severe losses.

The financial crisis has not been limited to American financial institutions, however. Banks and financial companies all over Europe have experienced serious problems. Risk premia have risen, and in some countries house prices have fallen in line with slowing output growth and shrinking credit supply. It has been difficult for financial firms to obtain capital, and assets are illiquid and must be sold at depressed prices. Fears of a wave of bankruptcies such as that in the US have compounded concerns about the position of numerous financial companies, with severely negative consequences for the financial markets. The problem has been addressed with acquisitions and mergers in many parts of Europe.

After having taken over Northern Rock, the British government acted as an intermediary in Lloyds TSB's emergency takeover of HBOS. In addition, Bradford & Bingley, one of the UK's largest mortgage lenders, was nationalised when market conditions proved too difficult. Hypo Real Estate, Germany's second-largest lender, was granted a government loan to avert bankruptcy. Belgium's largest bank, Fortis, was saved from collapse when the Belgian government acquired a 49% stake in the Belgian part of the bank, the Dutch government acquired a similar holding in the Dutch part, and the Luxembourgian authorities granted a loan to Fortis in Luxembourg. Various other financial undertakings in Europe have faced difficulties as well, including companies in France and Denmark.

Government action plans

Central banks in numerous countries have responded swiftly and injected liquidity into the market by various means. The US Federal Reserve has increased the supply of money in circulation in order to counteract the liquidity crunch and has lowered its federal funds rate in response to the economic slump. The Fed has announced various new plans to inject short- and long-term liquidity into the financial system and offset the illiquidity in the conventional markets. It has also attempted to revive the credit markets; for example, by providing temporary guarantees on money market funds and by purchasing reliable corporate and bank bonds.

The Federal Reserve Bank's monetary measures, both conventional and unconventional, and its takeover of large financial institutions have not yet sufficed to guarantee the stability of the financial system, however. Further government action has proven necessary. At the beginning of October, the US Congress approved a legislative bill establishing a fund to assist the banking system. The bill authorises the government to use up to 700 billion US dollars to purchase troubled assets from banks and to purchase shares without voting rights in financial companies.

Initially, it was the British government that took the initiative in early October by resolving to intervene more decisively in the financial crisis. Euro area countries then did likewise, followed by the United States. The British government announced that it had decided to purchase preferred shares in British banks for 50 billion pounds sterling in order to prevent further financial market declines in the UK. The banks that fall under the government's rescue plan are the Royal Bank of Scotland, Barclays, and Nationwide Building Society. In addition to purchasing preferred shares, the Bank of England intends to lend the banks 200 billion pounds sterling in accordance with a special liquidity scheme. Euro area countries have also intervened in their financial markets. The German government plans to provide substantial capital in the form of bank guarantees, particularly in the interbank market, in the hope that the government guarantees will enable the banks to raise additional capital in the market, thus obviating the need for further assistance. Some 80 billion euros will be invested in financial companies that have not been able to acquire funding elsewhere. The French government has declared repeatedly that no French bank will be allowed to become insolvent. The French have established two funds: one for government guarantees on the interbank market, and the other to assist distressed financial institutions by allowing the government to purchase shares in them. While rescue packages have been announced by most countries in the euro area, their scope and capitalisation vary. The most common action involves government pledges to guarantee deposits. Many countries have also pledged temporary government guarantees on new loans taken by their banks, including interbank loans. In addition, the Spanish government decided to purchase assets from banks in Spain, thereby expanding their lending capacity. Moreover, in a co-ordinated action, the central banks in the United States, the United Kingdom, the EU, Canada, Switzerland, and Sweden lowered their policy interest rates by 0.5% in early October.

The roots of the problems facing the world's financial systems lie in the risk that accumulated over a prolonged period of low interest rates and abundant liquidity. As in most earlier financial crises, these conditions gradually eroded the confidence of investors and the general public in the strength of financial institutions and markets. Some countries were more vulnerable than others. The first step in solving the problem is to rekindle sufficient faith in financial institutions. This is a difficult task, not least due to the imminent recession in Western countries. The economic contraction began before the upheaval in the capital markets reached the levels of the past few weeks. The US housing market remains one of the chief reasons for the fragility of the real economy and the overall financial system. Growth in private consumption, investment, and the labour market has slowed considerably; therefore, it will take the credit markets quite a while to come to life again. Waning GDP growth in most economies means that exports will not provide the support that they did previously. However, falling oil, commodity, and food prices will bolster individuals' purchasing power.