Furthermore, many financial institutions did not aggregate and manage the risks related to subprime mortgages including investing in financial products (e.g. ABS and CDO), providing liquidity facilities, exposing to counterparty risk and taking reputational risk in their sponsored structured investment vehicles. As these institutions were not aware of the high concentration of the risks of subprime mortgages, it led to a series of losses in the wake of the crisis

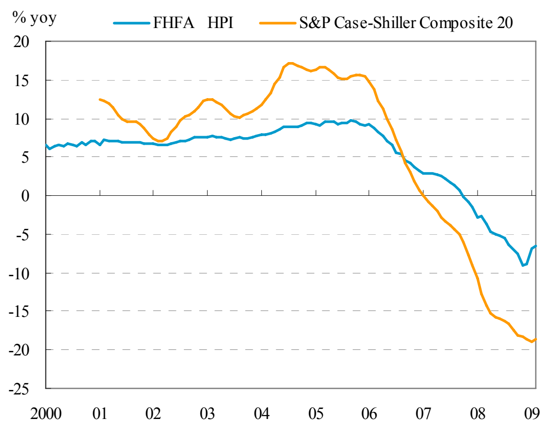
Fair value accounting and Basel II led to pro-cyclical operations by financial institutions

Fair value accounting and Basel II have a procyclicality effect on the economy. When the economy booms, the fair value of assets increases, the leverage ratios of financial institutions decline and the capital adequacy ratios rise. Thus, financial institutions are able to borrow more funds to amplify their assets, producing a positive feedback loop and making the economy much more prosperous. In contrast, when the economy enters a downturn, banks tighten their asset holdings, leading to a much more distressed economy. Such procyclicality increases operating pressure of financial institutions in a downturn and financial system instability.

2.2 Impact on global finance and economy

The financial crisis originating from industrialized countries caused severe impacts on their economies and financial systems. It spilled over to emerging and developing economies and formed a global financial and economic calamity. In the financial sector, financial institutions suffered huge losses, non-performing loan ratios continued to climb, credit spreads remained at high levels, and stock markets fluctuated sharply. In the real sector, economies entered deep recessions, consumer confidence plummeted, unemployment rates climbed, and deflation risks elevated.

Chart 2.1 Annual growth rates across house price indices in the US

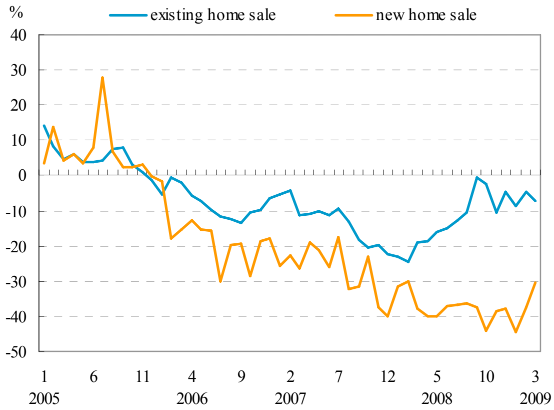


Sources: Federal Housing Finance Agency and S&P.

Housing market weakened and both prices and volumes declined

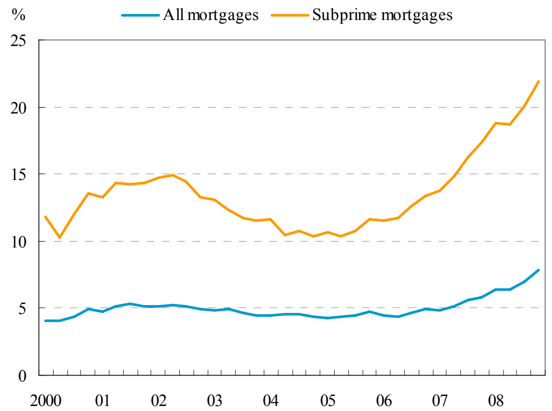
Easy monetary policy in the US between 2001 and 2004, combined with the housing boom and the myth that house prices would not fall, as well as substantially loosened credit conditions by mortgage lending institutions, caused a surge in house prices. However, the housing market began to show signs of weakness as early as 2006. Chart 2.1 shows that the annual growth rates across house price indices in the US declined noticeably from 2006, and turned to negative growth from 2007 onwards. Chart 2.2 shows that the annual growth rates of new and existing home sales in the US started to trend downward from December 2005, of which the growth rate of new home sales declined continuously to hit -48.2% in January 2009 compared with the same month the previous year. Nevertheless, it is worth noting that the annual growth rates of both US house price indices and home sales improved slightly from January 2009 onwards.

Chart 2.2 Annual growth rates of new and existing home sales in the US



Source: Bloomberg.

Chart 2.3 Non-performing loan ratios of US banking institutions' mortgages



Source: Bloomberg.

Financial institutions suffered serious losses and financial markets sank into chaos

Financial institutions incurred huge losses

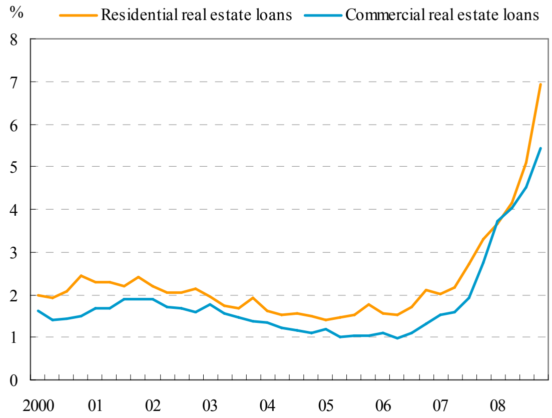
The shock of the subprime debacle not only pushed up the non-performing loan ratios of financial institutions (Chart 2.3 & 2.4) and made them tighten their credit standards[4] (Chart 2.5), but also spilled over to the securitized assets backed by mortgages because of the operating model of funding from securitization. A lack of confidence and a sell-off of assets

[4] The credit standards of financial institutions in the US were somewhat relaxed from January 2009.

caused asset prices to drop precipitously. Additionally, financial institutions incurred huge losses due to the stop loss mechanism and fair value accounting principles. The uncertainty of the severity of losses further pressed market confidence and resulted in credit strains where liquidity hoarding prevailed and banks short of liquidity found it difficult to get funding. Financial institutions were faced with severe liquidity and credit risks.

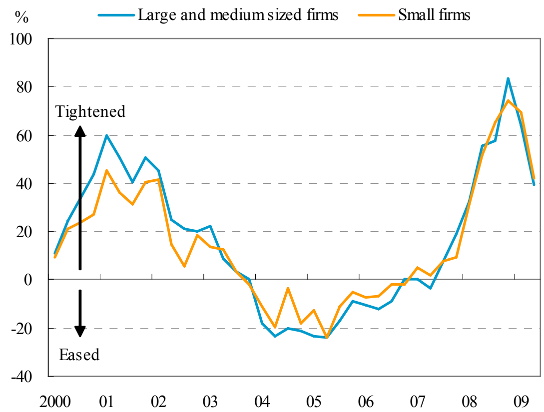
The International Monetary Fund (IMF) continued to raise the loss estimates suffered by global investors who held US-originated assets. It estimated the loss at about US$2.7 trillion[5] in April 2009. Several large US international financial institutions unable to withstand the huge losses, such as Bear Sterns, Merrill Lynch, Citigroup and AIG Group, sought support from the Fed or the US Treasury for emergency funding, bailouts or merger with other institutions. Some investment banks, such as Goldman Sachs and Morgan Stanley, applied to transform into bank holding companies. Some financial giants collapsed and filed for bankruptcy, most notably Lehman Brothers.

Chart 2.4 Non-performing loan ratios of US commercial banks



Note: Non-performing loans refer to loans with delinquent payment of interest and principle for over three months.
Source: Fed.

Chart 2.5 Credit standards of US financial institutions



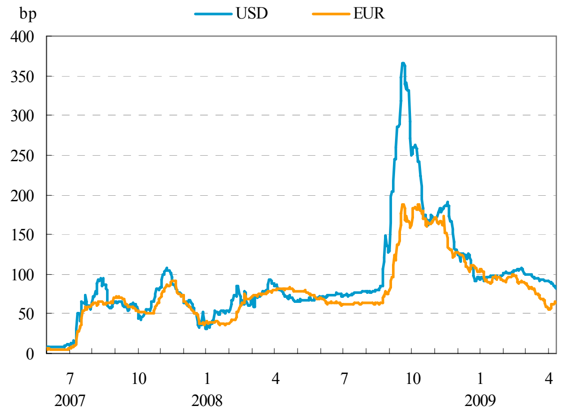
Source: Fed, "Senior Loan Officer Opinion Survey on Bank Lending Practices".

[5] The IMF revised upward the estimated losses of US-related assets several times, from an amount of US$945 billion dollars in April 2008 to US$1.4 trillion in October 2008, to US$2.2 trillion in January 2009, and to 2.7 trillion in April 2009. If added with the losses of European- and Japanese-related assets, then the IMF-estimated losses in April 2009 would reach US$4.1 trillion.

Financial markets lapsed into chaos

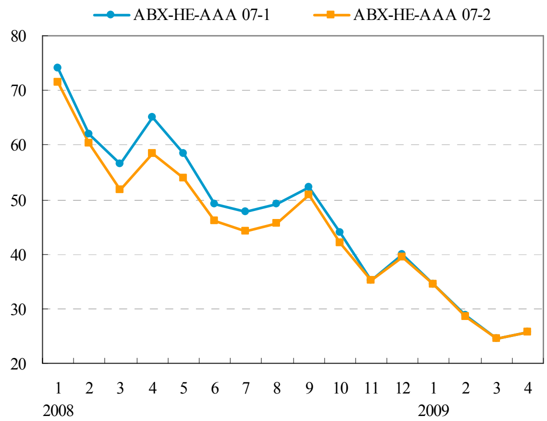
The availability of funds tightened, leading to a rise in interest rates, especially short-term rates. Chart 2.6 shows that the gap between the three-month LIBOR rate and three-month overnight index swaps (OIS) rate widened sharply in the wake of the occurrence of the financial crisis in August 2007, and reached a peak of 366 bps on 11 October 2008. Although the gap between the two rates was lower than 100 bps from March 2009 onwards, it was still higher than the level prior to the financial crisis. The asset-backed securities index (ABX) also noticeably declined, indicating that the value of relevant assets shrank and the risks elevated (Chart 2.7). Moreover, the financial crisis made the scale of US financial markets contract significantly; for example, the ABCP outstanding balances atrophied from an amount of US$1,210 billion in July 2007 to a mere US$610 billion in April 2009 (Chart 2.8).

Chart 2.6 Three-month spreads between LIBOR and OIS



Source: Bloomberg.

Chart 2.7 Movements of the ABX Indices



Source: Bloomberg.

The financial crisis also resulted in sharp stock market fluctuations. Chart 2.9 shows that the indices of the stock markets in the US, Japan, Europe and emerging Asian countries all declined until mid-March 2009.

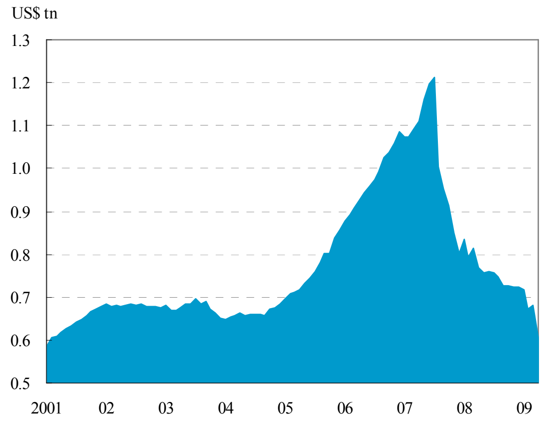
The economy receded seriously and deflation risk elevated

The economy receded seriously

The subsequent repercussions of the financial crisis caused a serious global recession. Chart 2.10 shows that the economies of the US, UK, Japan and Europe started to manifest negative growth in the third or fourth quarter of 2008. Accordingly, the IMF constantly adjusted downward its estimates of economic growth. In April 2009, it forecasted global economic growth for 2009 would be -1.3%, sliding drastically from the pre-crisis 5.2% recorded for 2007. Economic growth in the US was forecasted to sharply drop to -2.8% for 2009 from 2.0% for 2007.

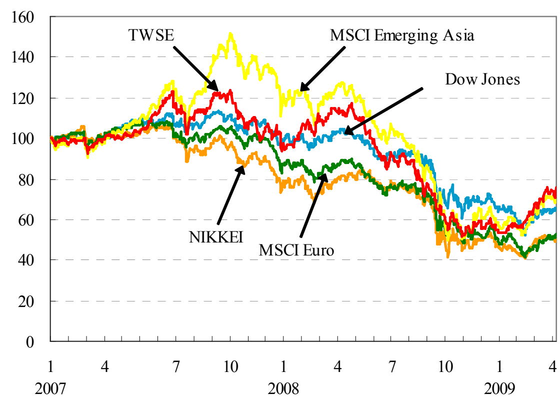
As the economies of most emerging and developing countries are mainly export-driven, their economic growth was also adversely affected due to the spill-over effects of the economic recessions in industrialized countries. The IMF forecasted the economic growth rates of these economies would sharply drop to 1.6% for 2009 from 8.3% for 2007.

Chart 2.8 Outstanding balances of US ABCP



Source: Fed.

Chart 2.9 Trend of global major stock indices



Note: 2007/1/2=100.
Source: Bloomberg.

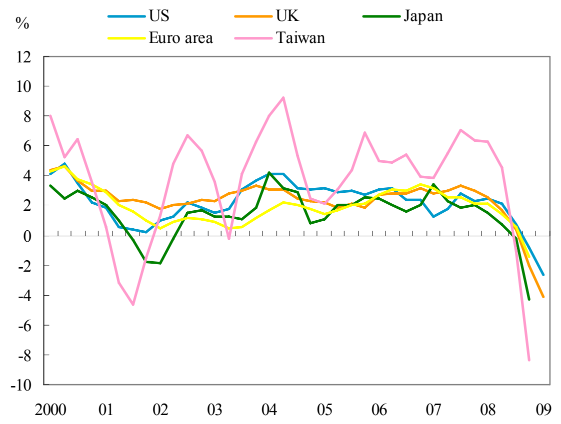
Consumer confidence waned

The lack of confidence is one of the key factors aggravating and prolonging the financial crisis. Many governments have implemented policies to restore confidence. Regretfully, confidence has been slow to return while many uncertainties remain. The consumer confidence indices surveyed by the University of Michigan and the Conference Board revealed that consumer confidence continued to dive, and the index surveyed by the latter was nearly half of that by the former. This showed extreme pessimism about the economic prospects (Chart 2.11). A similar phenomenon of downcast consumer confidence ailed the UK and Germany. In the UK, the consumer confidence index slid to a level of -35 in February 2009 from -7 in January 2007, while the index in Germany dropped to 71 from 99 over the same period. However, except for Germany, the US and the UK showed encouraging signs indicating that their consumer confidence indices stopped falling and appeared to rebound. The indices of both the University of Michigan and the Conference Board rose to a level of 68.3 and 39.2 in April 2009, respectively, while the index for the UK went up to -27.

Unemployment rates trended upward

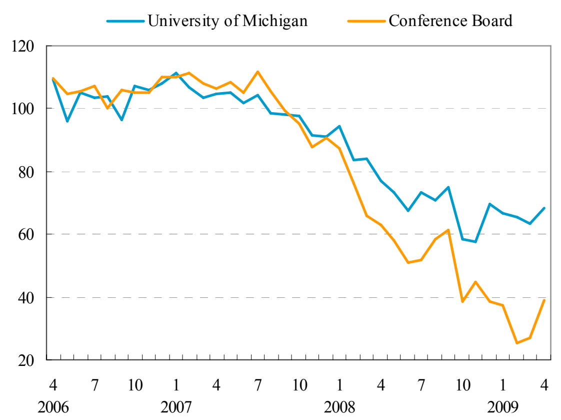
The financial crisis caused a decline in real output, leading to the most severe post-war economic recession. Under the threat of serious losses, financial institutions and corporations resorted to a series of large-scale layoffs, leading to noticeable increases in unemployment rates in various countries. Chart 2.12 shows that the unemployment rates in the advanced industrialized countries, such as the US, UK, Japan and Europe, climbed significantly after the second half of 2008, and the rates both in the US and the Euro area reached highs of more than 8% in March 2009. Emerging economies were also faced with the problem of drastic increases in unemployment. Data from the International Labor Organization indicated that the unemployed population in emerging economies in 2008 increased by 8 million people with their combined unemployment rate hitting 5.9%. The data also forecasted that the unemployed would increase by 32 million people in 2009.

Chart 2.10 Economic growth rates of various countries



Source: Bloomberg.

Chart 2.11 US consumer confidence indices



Source: Bloomberg.

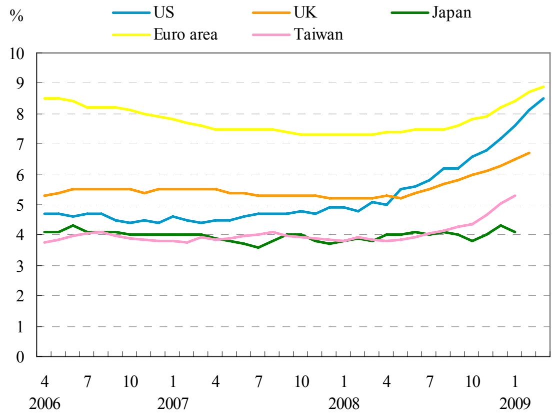
Deflation risk elevated

Gloomy consumer confidence, rising unemployment rates and severe economic recession resulted in a noticeable shrinkage of individual incomes. The annual growth rates of consumer price indices declined (Chart 2.13), and deflation risk in various countries ascended. The IMF published its forecasted data in April 2009, which showed the annual growth rate of the consumer price index for the advanced economies declined to a low of -0.2% for 2009 from 3.4% for 2008, while the rate for emerging and developing countries descended to 5.7% from 9.3%.

Monetary policy confronted with stern challenges

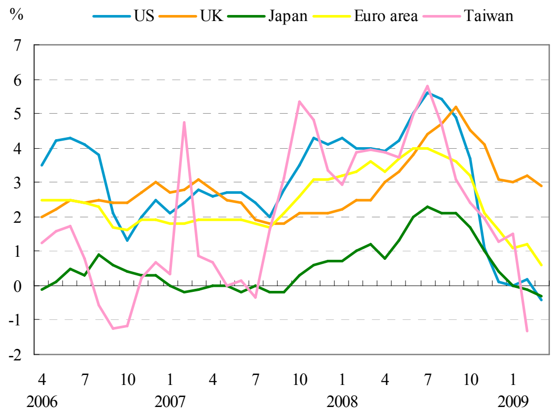
To respond to the financial crisis, the central banks in various countries not only implemented traditional monetary policies, such as lowering policy rates, but also promoted a series of emergency measures, including eased collateral requirements, numerous innovative policy tools and direct financing to non-financial institutions. This somehow reflected the limitations in the operations of traditional monetary policy and the experience that successful monetary policy operations in the past seemed to be insufficient to tackle this financial crisis. The reason behind this is that financial markets experienced structural changes in the past few decades, and the main financial intermediation in some countries (such as the US) has shifted from a bank-based into a market-based one. And banks, in order to respond to market changes, adjusted their traditional funding model of taking deposits, and adopted a securitization model or raised funds from the wholesale fund market. Whatever alterations banks adopted impacted directly on the bank-based design of the monetary policy framework and its transmission mechanism. Central banks proceeded to review the above-mentioned issues in order to be better prepared should a similar crisis occur in the future.

Chart 2.12 Unemployment rates of various countries



Source: Bloomberg.

Chart 2.13 Consumer price indices in various countries



Source: Bloomberg.