

# The Bank of Korea's policy response to the global financial crisis

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## 1. The impact of the global financial crisis on the Korean economy

Following the collapse of Lehman Brothers in September 2008, the financial and foreign exchange markets in Korea were thrown into turmoil. The real economy also shrank rapidly under the impact of the international financial market unrest and worldwide recession.

The Korean won (KRW) plummeted against major currencies because of the outflow of foreigners' investment funds and the deterioration of foreign currency borrowing conditions for domestic banks. As worries about credit risk mounted, credit crunches emerged in the financial markets.

The Korean won fell by 28.0% against the US dollar (from KRW/USD 1,089.0 at end-August 2008 to KRW/USD 1,513.0 on 24 November 2008), and the credit default swap premium marked a six-fold surge (from 116 basis points (bp) at end-August 2008 to 675 bp on 27 October 2008).

The credit spread on corporate bonds widened almost threefold,<sup>2</sup> and stock prices on the Korean stock price index (KOSPI) fell by 36.3% (from 1,474.2 at end-August 2008 to 938.8 on 24 October 2008).

The scale of the increase in small- and medium-sized enterprise (SME) loans shrank to a fifth of its previous level (from KRW 10.3 trillion in Q3 2008 to KRW 2.2 trillion in Q4 2008).

Domestic economic activity shrank by its greatest percentage since the 1997–98 foreign currency crisis (Q1 1998, –7.8%) as GDP growth registered a decrease of 5.1% in the fourth quarter of 2008 owing to the steep fall in exports and the sharp contraction of domestic demand. There was also a large-scale increase in unemployment (from 3.1% in August 2008 to 4.0% in March 2009).

## 2. The Bank of Korea's policy response

### Reduction of the base rate

The Bank of Korea (BoK) lowered its base rate<sup>3</sup> on six occasions between October 2008 and February 2009, by 3.25 percentage points altogether from 5.25% to 2.00%, the lowest level since the policy rate target began to be announced in May 1999.

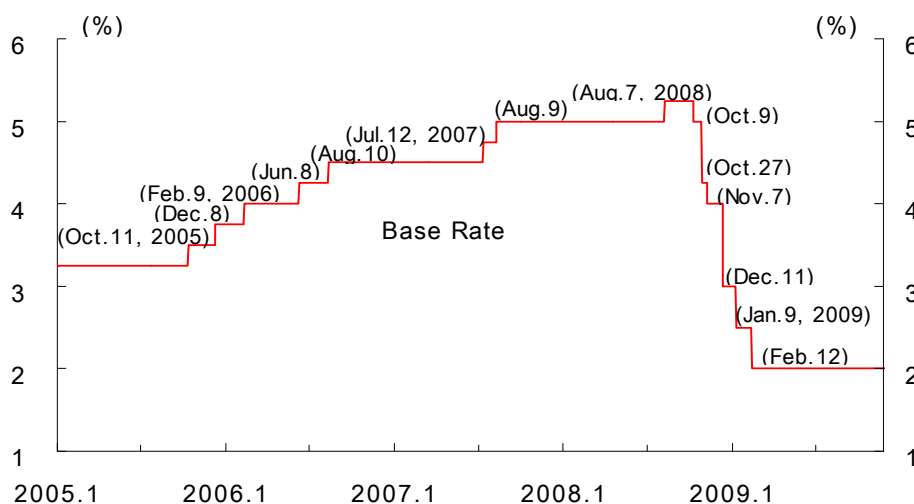
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<sup>2</sup> Corporate bond (AA–, three-year) yields – treasury bond (three-year) yields: from 157 bp at end-August 2008 to 465 bp on 9 December 2008.

<sup>3</sup> The base rate, ie the policy rate which the Monetary Policy Committee decides on every month, is the reference rate applied in transactions between the BoK and counterpart financial institutions such as repurchase transactions and liquidity adjustment loans and deposits.

Figure 1  
The Bank of Korea base rate<sup>1</sup>



<sup>1</sup> The overnight call rate target, until February 2008.

Source: Bank of Korea.

### Expansion of liquidity supply

The BoK supplied liquidity totalling KRW 18.5 trillion (equivalent to around 28.5% of reserve money as of end-2008) by means of open market operations to ensure the seamless circulation of funds in the money and bond markets. In addition, by way of support for the setting up of a Bond Market Stabilisation Fund capitalised at KRW 5 trillion, the BoK provided KRW 2.8 trillion.

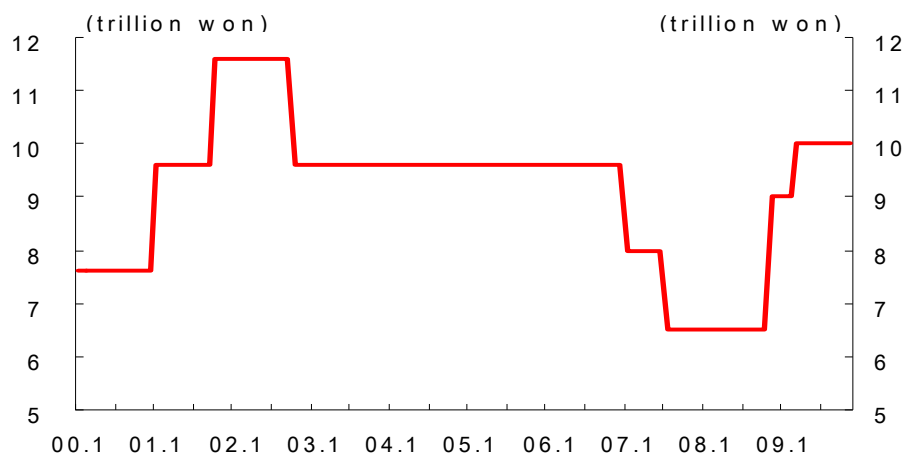
The BoK included bank debentures and certain government agency bonds as the securities eligible for use in open market operations, which originally included only treasury bonds, government-guaranteed bonds and monetary stabilisation bonds. The eligible counterparties for repurchase (RP) operations were also extended from the previous focus on banks (19 banks and two securities companies) to include an additional 12 securities companies.

### Support for the expansion of banks' credit supply capacity

To facilitate the supply of credit through banks, the BoK took various measures, such as raising its aggregate credit ceiling, paying banks' interest on their required reserve deposits, and helping banks to build up their capital.

Figure 2

### Adjustment of the aggregate credit ceiling



Source: Bank of Korea.

To increase the incentives for banks to lend to SMEs, the aggregate credit ceiling was raised by more than 50% (from KRW 6.5 trillion in November 2008 to KRW 10 trillion in March 2009). In order to help banks expand their credit supply by raising their BIS capital adequacy ratios, the BoK paid them one-off interest of KRW 0.5 trillion on their required reserve deposits. The BoK also provided KRW 3.3 trillion for the formation of a KRW 4 trillion Bank Recapitalisation Fund. This fund supported the enhancement of banks' equity capital through the purchase of related subordinated debt and hybrid bonds.

#### Actions taken to stabilise the foreign exchange market

The BoK undertook timely and effective actions to contain foreign exchange market unrest at an early stage and avoid it escalating into a foreign exchange crisis.

The BoK entered into a USD 30 billion swap arrangement with the US Federal Reserve and a 180 billion yuan/KRW 38 trillion swap arrangement<sup>4</sup> with the People's Bank of China. The BoK also expanded the ceiling of an existing currency arrangement with the Bank of Japan from USD 3 billion equivalent to USD 20 billion equivalent.<sup>5</sup>

<sup>4</sup> This is separate from the existing currency swap arrangement already entered into under the framework of the Chiang Mai Initiative (CMI).

<sup>5</sup> Apart from the currency swap arrangement within the framework of the CMI, the BoK and the Bank of Japan also entered into a bilateral won-yen currency swap for a non-crisis situation, the ceiling of which was expanded in December 2008.

Table 1

**Currency swap arrangements between the BoK and other central banks**

	<b>US Federal Reserve</b>	<b>People's Bank of China</b>	<b>Bank of Japan</b>
Ceiling	USD 30 billion	180 billion yuan	USD 20 billion equivalent
Date of announcement	30 October 2008	12 December 2008	12 December 2008
Expiry date	1 February 2010 <sup>1</sup>	3 years	1 February 2010 <sup>2</sup>

<sup>1</sup> The original expiry date was set at 30 April 2009, but the term of the swap arrangement was extended by six months (3 February 2009) and by a further three months (26 June). <sup>2</sup> The original expiry date was set at 30 April 2009, but the term of the swap arrangement was extended by six months (31 March 2009) and by a further three months (16 October).

Source: Bank of Korea.

The BoK provided a total of USD 26.6 billion in foreign currency liquidity to banks experiencing difficulties in raising overseas funding. Approximately USD 10 billion from the BoK's foreign reserves was provided to the swap market by way of competitive auction. In addition, a cumulative USD 16.4 billion was supplied through the competitive auction loan facility using the proceeds of currency swaps with the US Federal Reserve.

Besides these programmes, the BoK introduced the Foreign Currency Loans Secured by Export Bills Purchased scheme in order to provide incentives for banks to be active in handling trade financing for SMEs.

Table 2

**Bank of Korea foreign currency liquidity supply**

(in USD billions)

	<b>Plan</b>	<b>Supply</b>	<b>Period (numbers)</b>
Competitive auction Swap facility	10	10.3	21 October to 16 December 2008 (7 occasions)
Competitive auction Loan facility	30 <sup>1</sup>	16.3	2 December 2008 to 20 January 2009 (5 occasions)
Foreign currency loans secured by export bills	10	0.2	10 December 2008 to 25 February 2009 (7 occasions)
Total	50	26.8	

<sup>1</sup> The ceiling for the swap arrangement between the BoK and the US Federal Reserve.

Source: Bank of Korea.

### 3. The current Korean economic situation

#### Financial and foreign exchange markets

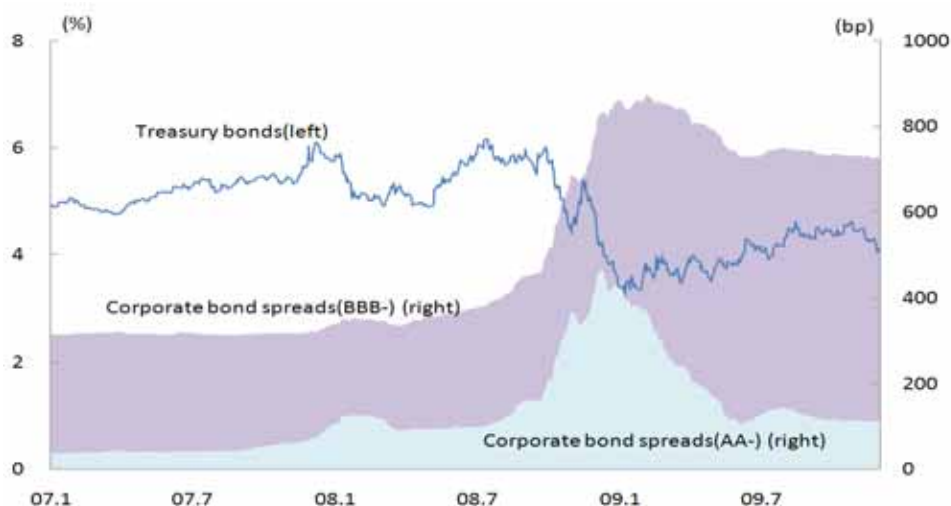
Since Q2 2009 the Korean financial and foreign markets have been quickly regaining stability, while a progressively more pronounced recovery trend has also been apparent in the real sector.

With the waning of credit risk fears, the spread<sup>6</sup> between high quality (at least A rated) corporate bonds and treasury bonds has narrowed to its level prior to the collapse of Lehman Brothers.

However, the credit spreads<sup>7</sup> on sub-investment grade corporate bonds (BBB and lower) still remain at a high level, so the situation of credit differentiation persists.

Figure 3

#### Bond yields and credit spreads



<sup>1)</sup> Compared to treasury bonds (3-year).

Source: Bank of Korea; Koscom Corp.

As regards the issuance of corporate bonds, although only top paper could be issued immediately after the failure of Lehman Brothers, there has recently been a substantial increase in the issuance of subprime corporate bonds.<sup>8</sup>

Stock prices (KOSPI) rose sharply from March 2009 onwards amid increasing anticipation of a recovery of business activity and foreigners' sustained, large-scale net purchase position. Consequently, KOSPI registered its highest level for the year to date of 1,719 points on

<sup>6</sup> Corporate bonds (AA-, 3-year) yields – treasury bonds (3-year) yields: from 157 bp at end-August 2008 to 465 bp on 9 December 2008 and 111 bp at end-November 2009.

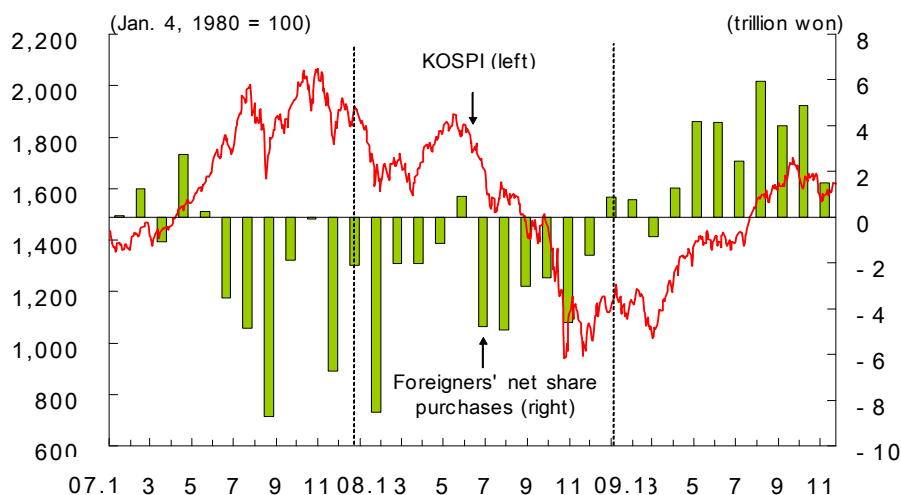
<sup>7</sup> Corporate bonds (BBB-, 3-year) yields – treasury bonds (3-year) yields: from 450 bp at end-August 2008 to 876 bp on 4 February 2009 and 726 bp at end-November 2009.

<sup>8</sup> Weight of subprime corporate bonds: from 0.2% in December 2008 to 14.0% in August 2009 to 20.3% in September 2009 and 32.5% in October 2009.

22 September 2009. In recent weeks, wide fluctuations have persisted under the burden of the sharp rise that occurred within a short period of time.

Foreign investors' net purchases reached KRW 30.2 trillion from March to November 2009. As a result, the foreign share in total Korean stock market capitalisation moved higher than prior to the collapse of Lehman Brothers (from 28.9% at end-August 2008 to 25.7% on 14 April 2009 and to 30.5% at end-November 2009).

Figure 4  
KOSPI and foreigners' net share purchases



Source: Korea Exchange.

The extent to which Korean stock prices have recovered lost ground (115.2%) stands at a high level compared with global markets (MSCI Global: 70.2%) and emerging markets (MSCI EM: 99.4%).

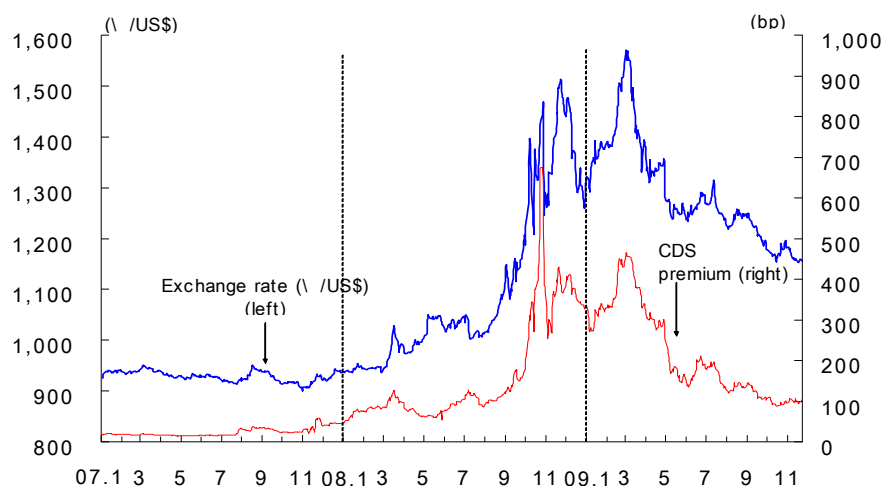
Table 3  
Stock prices

	End-August 2008	Lowest point after the crisis <sup>1</sup>	End-November 2009 <sup>2</sup>	Recovery ratio <sup>3</sup>
Korea KOSPI	1,474.2	938.7 (-36.3)	1,555.6 (+65.7)	115.2
MSCI Global	1,344.9	688.6 (-48.8)	1,149.0 (+66.9)	70.2
MSCI EM	956.3	454.3 (-52.5)	953.1 (+109.8)	99.4

<sup>1</sup> ( ) represents the rate of recovery of the level at end-August 2008 (%). <sup>2</sup> ( ) represents the percentage increase compared to the lowest point. <sup>3</sup> (end-November 2009 – the lowest point after the start of the crisis)/(end-August 2008 – the lowest point after the start of the crisis).

In the foreign exchange market, the Korean won has appreciated against major currencies thanks to the continuing current account surpluses (cumulative surplus February–October 2009, USD 37.3 billion) and to the net inflows of foreign portfolio investment funds. There has also been a marked improvement in foreign currency borrowing conditions for domestic banks.

Figure 5  
Exchange rate and CDS premium<sup>1</sup>



<sup>1</sup> Foreign Exchange Stabilisation Fund bonds, 5-year maturity.

Source: Korea Money Brokerage Corp; Bloomberg.

The credit default swap (CDS) premium<sup>9</sup> now stands at a lower level than prior to the collapse of Lehman Brothers, marking 106 bp as of end-November 2009.

The Korean won traded at 1,162.8 won to the US dollar as of end-November 2009. This represented a 35.0% appreciation of the Korean won against the US dollar from its lowest point (2 March 2009, 1,570.3 KRW/USD) following the collapse of Lehman Brothers, but it has not yet returned to the level prior to the onset of the crisis (end-August 2008, 1,089.0 KRW/USD).

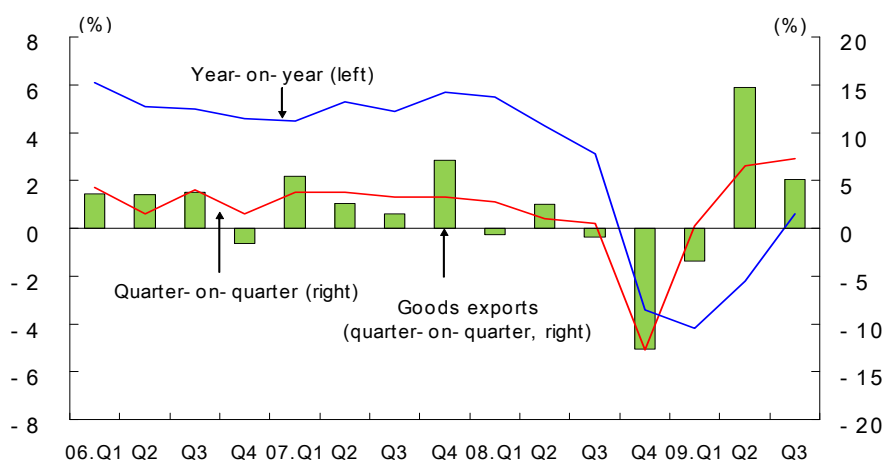
Similarly, domestic banks' foreign currency borrowing conditions have greatly improved, as rollovers of borrowings are proceeding smoothly and premium interest rates are steadily declining. Consequently, the foreign currency liquidity support provided to them by the BoK has been consistently redeemed.

### Real economy and prices

In the real economy, the GDP growth rate was 2.6% (quarter-on-quarter) for Q2 2009, and rose even higher, reaching 3.2% in Q3 2009 thanks to the continued recovery of exports and a constant increase in domestic consumption.

<sup>9</sup> It stood at 116 bp at end-August 2008, compared to 675 bp on 27 October 2008 and 106 bp on 30 November 2009.

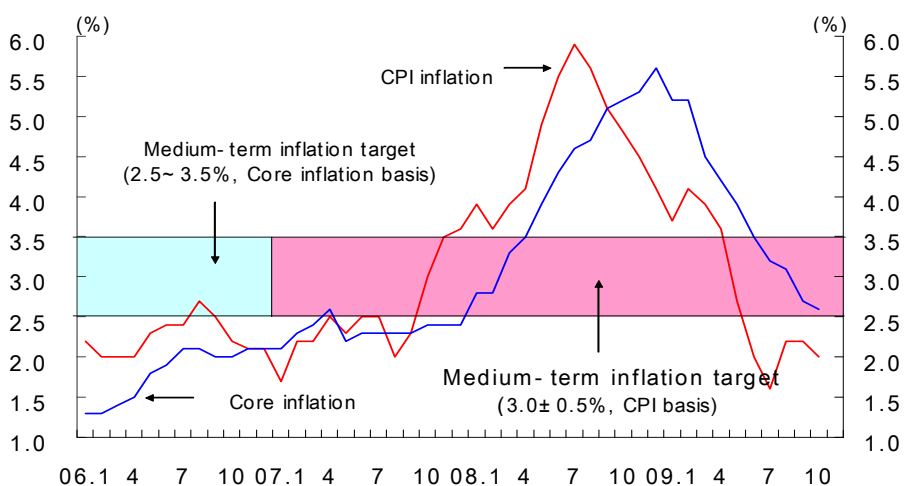
Figure 6  
GDP growth rate



Source: Bank of Korea.

The rate of consumer price increases remained stable within the inflation target range (2.5–3.5%), as demand-side pressures were weak owing to the economic downturn, and international oil prices remained lower than in the previous year.

Figure 7  
CPI and core inflation



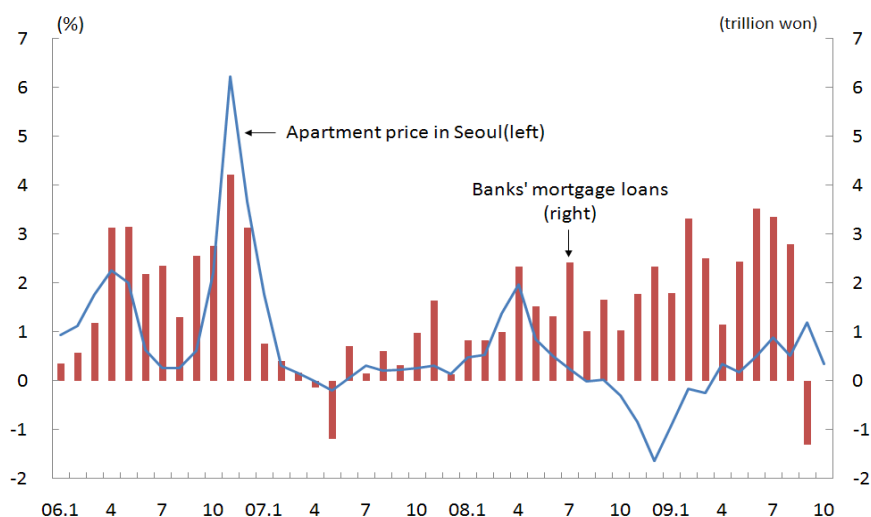
Source: Bank of Korea.

House prices regained an upward trend from April 2009, having fallen only slightly in spite of the financial crisis. House prices in major developed nations such as the United States and the United Kingdom fell by 20–30% compared to their peak levels, and their downward trend has persisted or exhibited only a very slight uptick. In contrast, house prices in Korea shifted to an upward trend after marking a decline of 2.1%. As of end-October 2009, the prices of apartments for reconstruction in the three Gangnam districts in Seoul were hovering above their September 2008 pre-Lehman Brothers levels.



Recently, however, the rise in house prices appears to have faltered somewhat, due to the prudential regulation of financial institutions by the government, including the extended application of debt-to-income (DTI) regulations.

Figure 8  
House prices<sup>1</sup> and mortgage loans<sup>1, 2</sup>



<sup>1</sup> Compared with the previous month. <sup>2</sup> On the basis of commercial and specialised banks.

Source: Bank of Korea; Kookmin Bank.

#### 4. Assessment of the Bank of Korea's policy response

The steps taken by the BoK following the collapse of Lehman Brothers in September 2008 are considered to have played a very important role in stabilising the financial and foreign exchange markets and are accelerating the recovery of business activity.

In terms of timeliness, the BoK contributed to bringing a prompt halt to the spread of financial instability by putting in place the majority of its countermeasures immediately after the onset of the crisis. In particular, considering that the fiscal expansion policies could only fully come into effect from the beginning of 2009, the monetary policy response in the immediate aftermath of the crisis is thought to have played a vital role in lessening the impact on the economy. The foreign currency liquidity supply schemes worked as a firewall, preventing the worsening overseas funding conditions from evolving into a currency crisis, and contributed to Korea maintaining its international credibility. For example, international credit rating agencies, such as Standard & Poors, unanimously endorsed the BoK's and the government's<sup>10</sup> foreign currency liquidity supply measures as swift and adequate immediately after their announcement (17–21 October 2008) and maintained their current sovereign ratings for Korea.

<sup>10</sup> The government (Foreign Exchange Stabilisation Fund) also announced its own foreign currency liquidity supply measures amounting to USD 10 billion through swap trading, USD 14 billion through competitive auction loans, and USD 11 billion through support for trade finance, totalling USD 35 billion altogether. An additional USD 27.4 billion was supplied through the Export-Import Bank of Korea.

In terms of policy responses, advanced economy central banks have employed a wide array of unconventional measures. However, the BoK sought to minimise any negative side effects principally by making use of conventional policy instruments, such as the reduction of interest rates and the expansion of liquidity by means of loans and open market operations.

Efforts were also directed as far as possible in employing these conventional policy instruments in order to prevent them from becoming deeply entrenched. The expansion of liquidity, which was supplied principally through the purchase of long-term RPs (up to a 91-day maturity), has been withdrawn seamlessly at the maturity. Similarly, the extension of the securities eligible for use in open market operations was subject to a sunset clause.

The entry into currency swap agreements with the central banks of several major countries including the United States was extremely useful, not just in terms of resolving the foreign currency liquidity shortage problem but also in restoring investor confidence at home and abroad. The establishment of the currency swap arrangements themselves actually had a positive announcement effect in stabilising the financial market, as price variables have shown rapid recoveries, not just in Korea but also in countries experiencing similar financial unrest. The importance of international cooperation has been underlined through the response to the global shock of the financial crisis.

## **5. Future policy tasks**

First, the simple interest rate policy and the unconventional measures taken as part of the response to the crisis need to be unwound step by step. If the stance of financial easing is unwound too rapidly, there is a concern that it could hamper the recovery of activity, and if it is not possible to shift to a pre-emptive policy stance, there is a high risk of asset bubbles and inflation. Pursuing exit strategies incrementally with appropriate timing while keeping an eye on the extent of the improvement in, and sustainability of, global financial and economic circumstances would therefore be the preferable course of action. It is also vital to strengthen communication efforts such as adequate advanced signalling to economic agents in order to minimise adverse impacts.

Second, monetary policy should take account of the expansion of credit and movements in asset prices in order to avoid a repetition of the financial crisis. In setting the policy rate, aside from the focus on prices and growth, greater attention should be given to credit conditions and movements of asset price variables such as real estate and share prices.

Third, international cooperation should be strengthened in order to counter the risk of the spread of advanced country economic unrest to emerging market countries and the risk of a sudden stop. For the Korean economy, foreign exchange market stability has improved greatly compared to the situation prevailing in 1997 during the foreign currency crisis, helped by the stability-oriented focus of macroeconomic policies and the building up of foreign exchange reserves. However, additional efforts are still required in view of the capital exodus and the foreign exchange market unrest experienced following the collapse of Lehman Brothers.

In particular, considering today's financial environment in which capital movement between countries has greatly expanded because of the globalisation of finance and economic activity, it is important to strengthen international policy cooperation with regard to the regulation of capital movements to overcome the problem of "original sin"<sup>10</sup> of emerging market countries.

Given that advanced country capital flows can heighten the volatility of financial markets and the real economies of emerging market countries, discussions concerning the regulation of advanced countries' hedge funds and the international regulation of both multinational financial institutions and the supervisory system should be expanded to incorporate the opinions of emerging market countries.