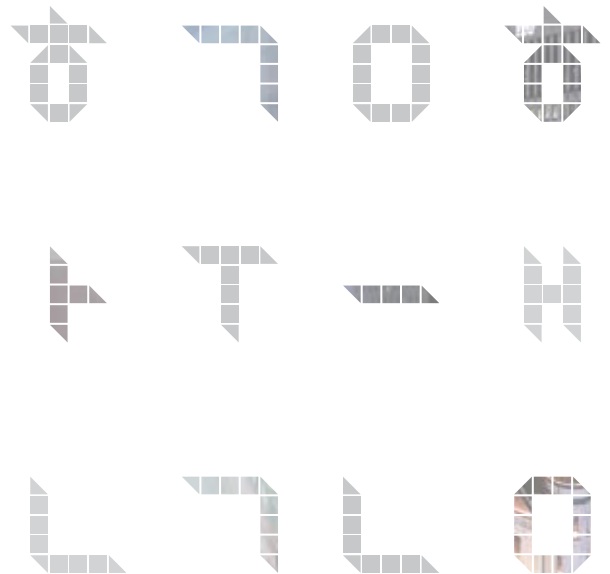


# Monetary Policy in Korea



2017



THE BANK OF KOREA



# Monetary Policy in Korea

2017





## Foreword

The Bank of Korea conducts monetary policy so as to maintain price stability over a medium-term horizon, while paying attention to financial stability. To this end, the Bank has implemented inflation targeting as its framework for monetary policy, and has monitored financial stability conditions on a regular basis.

Since the 2012 revision of *Monetary Policy in Korea*, the Bank of Korea expanded its accommodative monetary stance up to the first half of 2016 in response to economic sluggishness and higher downward pressure on prices, and maintained its accommodative stance in consideration of financial stability and support for the recovery of economic growth since the second half of 2016.

In addition, the Bank of Korea has endeavored to enhance the effectiveness of monetary policy, while heightening the central bank transparency and accountability. In 2016, the Bank's method of setting the inflation target changed from a target range to a target point. A new mechanism for additional accountability was also introduced: in cases where the actual rate of inflation deviates from the target by more than a certain margin for a certain period, a detailed explanation is to be provided regarding the reasons for that deviation, its inflation forecasts, and monetary policy direction for achieving the target. The Bank also announced the *General Principles of Monetary Policy Operation* in order to maintain consistency in its monetary policy communications and to improve public understanding of the Bank's policy implementation. Furthermore, the operational framework for Monetary Policy Board meetings was reformed to reduce the annual number of sessions held to determine

## Foreword

the monetary policy direction, from 12 to 8 meetings a year from 2017 onward, with the other four meetings to be dedicated to the issue of financial stability.

This edition of *Monetary Policy in Korea* incorporates revisions and additions reflecting the changes in monetary policy operation to date, as well as improvements in the relevant policy frameworks.

It is my hope that this book will be helpful for readers who are interested in the monetary policy of Korea. I would also like to express my sincere gratitude to all those who have made invaluable efforts for the publication of this book.

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# I

## Objectives of Monetary Policy





# I Objectives of Monetary Policy

The Bank of Korea regards price stability as the most important objective of its monetary policy, in accordance with the Bank of Korea Act,<sup>1)</sup> which stipulates price stability as the founding purpose of the Bank. This reflects the awareness that price stability is critical in achieving stable and sustainable economic growth. In fact, periods of price instability witnessed the occurrence of diverse adverse effects such as overall contraction of economic activities, distortions of resource distribution, and uncertainties about people's livelihoods.

In consideration of inflation persistence and the time lag of the effects of monetary policy, it is desirable to pursue price stability from a medium- to long-term perspective rather than from a short-term perspective. Accordingly, the Bank of Korea sets a medium-term inflation target while comprehensively considering economic variables such as past inflation changes, and economic trends and forecasts at home and abroad, and strives to achieve such targets. The Bank also endeavors to ensure that inflation expectations<sup>2)</sup> remain stable, in the awareness that they have a significant impact on actual inflation as they are reflected in the price and wage decisions of economic agents.

In the wake of the global financial crisis, there was a widespread recognition that the stability of the financial system is critical to achieving price stability. This led to the introduction of certain measures, primarily in advanced nations, to strengthen the central bank's role in financial stability.<sup>3)</sup> In response to this worldwide trend, the

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1) Article 1 (Purpose) of the Bank of Korea Act stipulates that "The purpose of this Act shall be to establish the Bank of Korea and to contribute to the sound development of the national economy by pursuing price stability through the formulation and implementation of efficient monetary and credit policies."

2) Various methods are used to measure inflation expectations, because there is no direct way to observe them. Inflation expectations are generally measured through a survey-based method in Korea. The Bank of Korea conducts surveys on forecasts of consumer price inflation among the general public (monthly) and economic experts (quarterly).

argument was put forward in Korea, specifically in the National Assembly and academia,<sup>4)</sup> that the institutional foundation of the Bank of Korea needed to be consolidated to empower it to take more active measures to prevent another financial crisis, and to maintain the stability of the financial system. Although the Bank of Korea had previously performed a financial stability role to some extent as the lender of last resort, the claim that the Bank of Korea should strengthen its role in financial stability became more persuasive as the financial crisis exposed the limitations of the current legal and institutional framework in monitoring risk factors in the financial system and devising policy countermeasures. Consequently, the 2011 revision to the Bank of Korea Act specifies that the Bank of Korea shall pay attention to financial stability in carrying out its monetary and credit policies, and requires the Bank to compile an assessment report on macro-financial stability conditions at least twice every year to submit it to the National Assembly.<sup>5)</sup>

Under this brief, the Bank of Korea conducts monetary and credit policies to maintain price stability from a medium-term perspective while paying close attention to financial stability.

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3) For instance, the UK enacted the Financial Services Act in 2012, separating the Financial Services Authority into two institutions: the Prudential Regulation Authority and the Financial Conduct Authority, responsible for regulating the soundness of financial institutions and their financial conduct, respectively. In addition, the Financial Policy Committee was newly established in the Bank of England and made responsible for macroprudential policy, as a way to enhance the central bank's financial stability function.

4) Jung et al. (2009) argued that financial stability needed to be specified in the Bank of Korea Act as one of the policy objectives to be pursued by the Bank.

5) The Bank of Korea has submitted the *Financial Stability Report* to the National Assembly twice every year since April 2012.

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# II

## Monetary Policy Framework





# II Monetary Policy Framework

Central banks operate monetary policy by firstly setting standard indices in order to stabilize prices. These indices consist of nominal variables considered to be closely linked to price stability, which are called nominal anchors. By its establishment and utilization of these nominal anchors, the central bank will be in a position to achieve price stability from two perspectives. First, when it maintains the nominal anchor at certain levels and the corresponding economic variables fluctuate within a certain range around them, then inflation expectations are accordingly anchored. In addition, nominal anchor reduce the possibilities of time inconsistency caused by central bank's arbitrary policy operation, thereby increasing the possibility of price stability in the long run.

A nominal anchor is determined based on the economic structure and the extent of the development of financial markets, and the main nominal anchors include the exchange rate, money supply, and inflation. Accordingly, monetary policy regimes are classified as exchange rate targeting, monetary targeting, and inflation targeting. From 1957, the Bank of Korea implemented monetary policy with money supply as a nominal anchor and, according to changing circumstances in the financial markets, the monetary indicator was shifted from M1 to M2 to MCT. However, as the effectiveness of monetary indicators was weakened by financial innovation and the revision of the Bank of Korea Act in 1997 stipulated price stability as the purpose of establishment of the Bank of Korea, the Bank introduced an inflation targeting regime, as an alternative to monetary targeting, which it has since continued to operate.



## 1

## History

Due to the Korean War having broken out straight after the establishment of the Bank of Korea in June 1950, the Bank strove to support the smooth operation of the wartime economy and to curb inflation, by way of providing war expenses, restricting lending to financial institutions and implementing emergency currency exchange measures. Even after the Armistice was signed, the Bank of Korea continued to focus on curbing inflation in implementing its policy. Notably, following the entry into effect of the General Banking Act in 1954, the Bank of Korea reordered financial institutions' capital operations and lending management in order to promote the effective operation of financial funds and ensure the stability of monetary value.

The monetary policy framework in Korea began to take a systematic form in 1957 with the creation of the Financial Stabilization Program. The program sought to hold down the deep seated inflation which had been caused by dramatic changes in the social and economic environments, and fiscal laxity since the foundation of the Republic of Korea. Under the program, a supply ceiling for money (M1) was set on either an annual or a quarterly basis; a ceiling was determined for each sector, i.e. the fiscal, private, overseas and other sectors; and money supply was implemented only within the ceilings. With the outbreak of the May 16th political upheaval in 1961, the program was suspended in 1961 and 1962. However, as the new government implemented its first Five-year Economic Development Plan, inflation accelerated and the foreign exchange reserves began to dry up, posing a threat to economic stability. Under these circumstances, the Financial Stabilization Program was revived in 1963 in close association with US financial assistance to Korea.

Then in March 1965, Korea signed a Stand-by Credit Agreement with the IMF in order to finance the chronic balance of payments deficit. In accordance with the Agreement, Korea had to set a specific target for the leading monetary indicator in

consultation with the Fund. The monetary indicator chosen shifted from the initial M1 to the central bank's net domestic assets (1966–first half of 1969), reserve money (second half of 1969), domestic credit of financial institutions (1970–1982), and to net domestic credit (1983–1986).

The Financial Stabilization Program was formulated and implemented based on these indicators.<sup>1)</sup> From 1976 when signs of an improvement in the balance of payments began to emerge, Korea set and publicly announced an M1 growth target independently of the Agreement with the IMF. Due to irregular movements of M1, however, the gap between the actual figures and the target widened. Thus from 1979, M2 was substituted for M1 as the leading monetary indicator, and the monetary policy framework took on the characteristics of a fully-fledged monetary targeting regime.

Korea maintained monetary targeting up until the mid-1990s, even though many countries had abandoned it in the 1980s, with the relationship between monetary aggregates and inflation starting to break down. This was because interest rate deregulation commenced relatively late in Korea compared to the advanced countries and, accordingly, financial innovation, which curtails the effectiveness of a monetary targeting regime, occurred at a slow pace. M2 still continued to maintain a close relationship with prices, and in general it stayed within its target range, thanks to the appropriate conduct of monetary policy by the Bank of Korea.<sup>2)</sup>

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1) The IMF standby credit was suspended during 1978–1979 when Korea's balance of payments improved before being resumed in 1980. Thanks to a shift in the balance of payments to surplus in the latter half of the 1980s, all remaining borrowings from the IMF were fully redeemed in 1988.

2) M2 did not achieve its target level on some occasions, for example, the Second Oil Shock in the early 1980s and the expanded money supply through the foreign sector in the late 1980s. Notably, in the late 1980s, the current account registered a large-scale surplus, fuelled by the so-called three-lows (low oil prices, low interest rates and low dollar or strong yen in international financial markets). As the economy showed a stable pattern of movements beginning from 1991, however, monetary growth stayed by and large within its target range.

Table II-1

## M2 growth in Korea – target and actual figures

(%)

	Target	Actual figures	Computation
1979	25	24.6	based on year-end
80	20 (25)	27.0	"
81	25	25.2	"
82	20–22 (25)	27.0	"
83	18–20 (15)	14.7	based on average December balance
84	11–13	8.9	"
85	9.5	13.9	"
86	12–14 (16–18)	17.4	"
87	15–18	22.5	"
88	15–18	18.8	based on average annual balance
89	15–18	18.4	"
90	15–19	21.2	"
91	17–19	18.3	based on average December balance
92	18.5	18.6	"
93	13–17	17.3	"
94	14–17	17.6	"
95	12–16	13.7	"
96	11.5–15.5	17.8	"

Note: Figures in parentheses are revised target figures.

Source: Bank of Korea

The money supply target was set based on the European Community (EC) method.<sup>3)</sup> This method draws on the theoretical foundation of equation of exchange formulated by Irving Fisher as  $MV=PT$  (where M stands for money; V for velocity; P for the price level; and T for transactions). In other words, the Bank of Korea determined the money supply target, considering a number of expected economic conditions including economic growth, the rate of price increases, and changes in money velocity.

With the reorganization of the trust account system in April 1996, Korea's leading monetary indicator, M2, began to show unstable movements. The money-in-trust products that commercial banks handled tended to expand sharply compared to other products. This expansion was attributable to banks' irregular operation of trust account products.<sup>4)</sup> The products were originally supposed to be long-term and

3) The method was called the EC method since the EC's Council recommended its adoption by all of its member countries in 1972.

4) In the ten years from 1986 to 1995, deposits placed with commercial banks' trust accounts increased 33 times whereas there was only a six-fold expansion in deposits placed in regular bank accounts.

performance-related. But they often had short maturities and low penalty charges for cancellation prior to maturity, and they were handled as if they were a fixed interest rate product. Furthermore, since the money-in-trust products were not subject to reserve requirements, their yields were higher than those of other bank products. In view of this situation, the government reorganized the trust account system as a whole to restore the original function of money-in-trust. It extended the minimum maturity, raised the penalty charge for cancellation prior to maturity, and prohibited the handling of non-specific money-in-trust products, which had exhibited a sharply rising trend.

Accordingly, the pace of the upward trend of money-in-trust products decelerated greatly. Meanwhile, a sizable amount of the funds withdrawn from the money-in-trust products flowed into banks' time & savings deposits, consequently pushing up the growth rate of M2, which includes such deposits, after May 1996. More specifically, M2 growth showed a gradual increase from 14% in the first quarter of 1996 to 15.3% in May and 16.2% in June. Eventually, it rose to 18.3% in the fourth quarter of the year, well above the upper bound of the 1996 target range (11.5–15.5%) set by the Bank of Korea. In sum, although the Bank of Korea did not alter its monetary policy stance, monetary growth rose sharply, affected by the realignment of the financial system. This could mislead the general public into believing that the Bank was implementing an excessively accommodative monetary policy.

**Table II-2** Scale of increase in money-in-trust and time & savings deposits before and after the reorganization of the trust system

(billions of won)

	May 95–Mar. 96 (A)	May 96–Mar. 97 (B)	B–A
Money-in-trust	38,851.2	19,082.2	-19,769.0
Time & Savings Deposits	14,347.7	25,511.0	11,163.3

Source: Bank of Korea

Under the circumstances, the Bank of Korea began to emphasize MCT as a new monetary indicator that counteracted the effects arising from flows of funds between financial assets. MCT included M2, certificates of deposit (CDs), and money-in-trust, and unlike M2, MCT was not affected, when funds flowed from money-in-trust to time & savings deposits. An examination of the time-series data of MCT proved that MCT satisfied the conditions<sup>5)</sup> necessary for a leading monetary indicator.

From 1997, the Bank of Korea introduced a dual monetary targeting system, using M2 and MCT as the target indicators, and set the M2 growth target (average December balance basis) at 14–19% and MCT growth target at 15–20%. In fact, the Bank placed more emphasis on MCT than on M2. Before long, however, another financial system realignment made MCT less useful. As a part of its realignment of the reserve requirement system undertaken in February 1997, the Bank of Korea imposed a 2% reserve requirement on CDs. Consequently, yields on CDs fell and at maturity CDs were redeemed on a large scale rather than being rolled over. Funds withdrawn from CDs flowed into cover bills that emerged as a new investment instrument following the scrapping of their issuance cap.<sup>6)</sup> This subsequently brought about a sharp decline in MCT growth. Cover bills, which had increased by only 236 billion won from February to April 1996, expanded by 5,508 billion won from February to April 1997. Meanwhile, CDs shifted from a 2 trillion won increase to a 2 trillion won decrease during the same period. In consequence, MCT growth, having accelerated to 19% during December 1996, dropped to 17.7% in March 1997 and 15.6% in May, approaching the lower bound of the growth target. Although the Bank did not change its monetary policy stance, the leading monetary indicator decreased very sharply as if the Bank of Korea were implementing an austere monetary policy.

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5) ① Stable relationship with real economic variables (nominal GDP and prices), ② high degree of controllability through reserve money manipulation, ③ exogeneity.

6) Previously, the ceiling on cover bills issuance was 50% of the amount of bank's discount performance of commercial and trade bills during the previous month. As of February 17, 1997, however the ceiling was scrapped and banks were able to issue cover bills up to their total holdings of bills outstanding.

Table II-3

### Changes in CDs and cover bills before and after the imposition of reserve requirements on CDs

(billions of won)

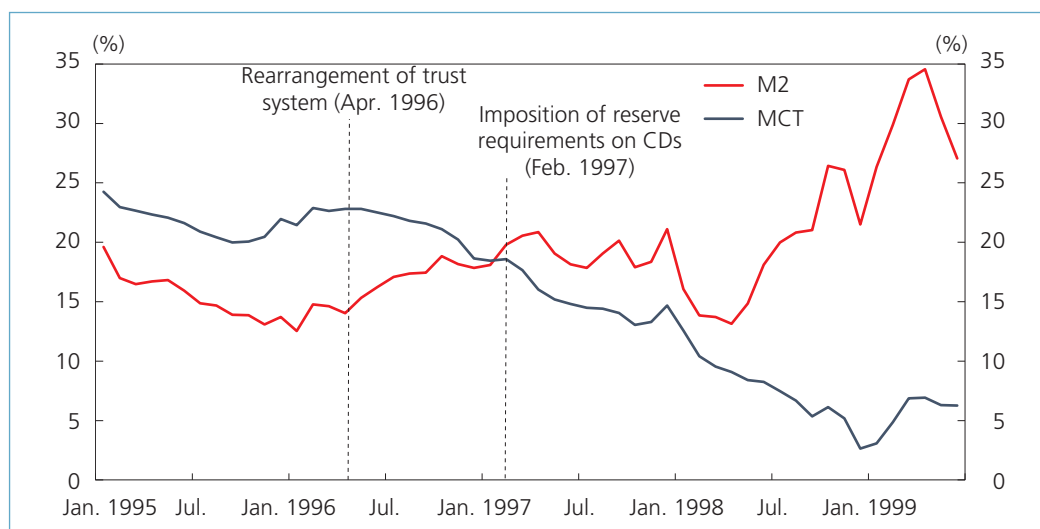
	Feb.–Apr. 96 (A)	Feb.–Apr. 97 (B)	B–A
CDs	1,984.5	-2,053.9	-4,038.4
Cover Bills	236.0	5,507.8	5,271.8

Source: Bank of Korea

Most advanced countries have experienced a similar phenomenon whereby the leading monetary indicator shows unstable movements when associated systems are rearranged, or financial innovation takes place, and its relationship with the final objective breaks down. Like other countries, the Bank of Korea then changed its leading monetary indicator, shifting from M2 to MCT, which covers a much broader range. But it soon had to decide whether it should maintain the entire system of monetary targeting, whose effectiveness had been cast into doubt.

Figure II-1

### Changes in M2 and MCT growth



Source: Bank of Korea

Consequently, the Bank of Korea came to consider the introduction of inflation targeting as an alternative to monetary targeting from the mid-1990s. Inflation targeting was officially adopted in accordance with the revised Bank of Korea Act, which came into effect on April 1, 1998. The Act stipulated that the Bank of Korea should determine the annual inflation target in consultation with the government and make this target public. In accordance with this, the Bank set the 1998 inflation target at  $9.0\% \pm 1\%p$  based on consumer price inflation. In fact, however, it also followed the method of monetary operation recommended by the IMF as a part of the conditionality attached to IMF credits.

The latter method was a form of monetary targeting in which a supply ceiling for reserve money was set as an indicative limit in proportion to the appropriate rate of M3 growth. First, based on the EC method, an appropriate rate of M3 growth was computed taking into account the GDP growth rate, the inflation target and money velocity; then the amount of reserve money was set, based on the M3 money multiplier. The supply channels of reserve money were divided into net international reserves (NIR)<sup>7)</sup> and net domestic assets (NDA).<sup>8)</sup> After the lower limit of the target range for NIR was determined, NDA, which represented the reserve money target less NIR, was managed as the upper bound of the target range. The management of the lower bound of NIR was undertaken to maintain international reserves above a certain level while that of the upper bound of NDA sought to limit the domestic supply of money so as to achieve economic stability within a short period. This was the monetary management method customarily applied when the IMF carried out stabilization programs.

Every quarter, the IMF and the Bank of Korea consulted together and set these targets while keeping them under constant review. As foreign reserves grew rapidly, bolstered by a current account surplus, NIR stayed above the lower limit

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7) The Bank of Korea's disposable foreign reserves [total foreign reserves less foreign currency deposits placed in overseas branches of domestic banks] – external debts.

8) Reserve money – NIR

recommended by the IMF, and domestic credit also remained within its target range, largely because of high interest rates. Meanwhile, it was agreed during the fourth quarter consultation with the IMF in October 1998 that the indicative limit of reserve money should be removed. Thus only indicative target ranges for NIR and NDA continued to be recommended from 1999 until September 2000, when Korea graduated from the IMF's tutelage.

Table II-4

**Status of the IMF monetary program**

		Lower limit of NIR (billions of dollars)	Upper limit of NDA (billions of won)
end of Dec. 1998	agreed	23.7	-5,170
	performance	31.2	-19,857
end of Mar. 1999	agreed	31.8	-17,341
	performance	39.2	-28,548
end of Jun. 1999	agreed	40.3	-25,787
	performance	48.4	-36,646
end of Sep. 1999	agreed	55.2	-42,540
	performance	58.5	-45,361
end of Dec. 1999	agreed	62.4	-47,917
	performance	67.0	-51,913
end of Sep. 2000	agreed	84.0	-71,794
	performance	86.5	-77,111

Source: Bank of Korea

From 1999, it was no longer necessary to consult with the IMF concerning the appropriate level of M3. Even so, the Bank of Korea set an average growth target for M3 of 13–14% alongside the inflation target. This was because the financial markets could have been thrown into confusion if the monetary targeting that had been utilized during the previous 30 years were to be scrapped all at once. In addition, considering the fact that inflation expectations were still affected by monetary indicators, it was judged desirable to lower them through the announcement of an appropriate growth rate for M3. It was also intended that both systems should be employed during the period of transition until inflation targeting took root.

For the year 2000, a target for M3 growth of 7–10% was established along with the inflation target, but from 2001 onwards its rate of growth was not taken as an



intermediate target but as a monitoring variable. Accordingly, even in cases where the M3 growth rate exceeded the surveillance range, there was less need to respond immediately in comparison to when it had been used as an intermediate target. This indicated that Korea's monetary policy framework had successfully completed the transition to inflation targeting. This was further underlined with the use of M3<sup>9)</sup> growth solely as an information variable, with no monitoring range being set for it from 2003 onwards.

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9) From June 2006 the components of M3 were rearranged and it was revised as Lf (financial institution liquidity).

## 2

## Current Monetary Policy Framework : Inflation Targeting

At present, the Bank of Korea employs inflation targeting<sup>10)</sup> as its monetary policy framework and sets an explicit inflation target on a three-year basis in consultation with the government. Accordingly, the Bank of Korea conducts monetary policy to achieve the convergence of the actual rate of inflation on the inflation target, and in this process, the Bank strives to anchor inflation expectations to the target rate, since expectations significantly influence pricing decisions concerning wages and costs of goods and services. To this end, the Bank of Korea determines its policy rate (the Bank of Korea Base Rate) and maintains the overnight call rate closely aligned with the policy rate using its policy instruments.

## (1) Establishment of Price Stability Targets

### Target Indicator

In the early stage of inflation targeting in Korea, i.e. during 1998 and 1999, the rate of increase in the Consumer Price Index (CPI) was used as the target indicator. This was mainly because of its familiarity to the general public. It was also considered that if another indicator were used, it could lead to public confusion in that the government also announced a forecast for rises in CPI in consultation with the IMF.

After a series of exhaustive studies on matters concerning the compilation of core

10) Under Article 6 (Setting of the Operational Direction for Monetary and Credit Policies) of the present Bank of Korea Act.

(1) The Bank of Korea shall set a price stability target in consultation with the government,

(2) The Bank of Korea shall set and publish the operational direction for monetary and credit policies every year, and

(3) The Bank of Korea shall do the best to achieve the price stability target as provided for in Clause (1).

inflation,<sup>11)</sup> this was adopted as the target indicator in 2000. Then the issue became that of which items should be excluded from the CPI to calculate core inflation. Following in-depth discussions, it was decided that those items whose prices were subject to very large short-lived shifts that resulted from unexpected external shocks regardless of the movements of other prices should be excluded from the CPI. Specifically, the items excluded consisted of certain non-grain agricultural products, whose prices are greatly affected by weather conditions, harvests and so forth. Also excluded were petroleum products, whose prices are likely to fluctuate depending on changes in international oil prices. This core inflation index was viewed as the most desirable indicator for the operation of monetary policy, since it represents the basic trend of changes in prices rather than wide short-term swings.

Core inflation is less subject than consumer price inflation to short-term volatility and it reacts sensitively to the adjustment of the policy rate. It does, however, suffer from the weakness of being estranged from the day-to-day life of the general public in that it excludes the prices of agricultural products and oil-based fuels that constitute major items in the cost of living. Besides this, most countries that have adopted inflation targeting employ the CPI as their target indicator and if the Bank of Korea had persisted with core inflation despite the government's use of the CPI as its price indicator in planning the management of the economy, this could have led to popular confusion in judging price levels. Taking all these points into overall consideration, the Bank of Korea shifted back to the CPI as its target indicator from 2007.

## Inflation Target Level

The Bank of Korea sets the inflation target at an appropriate level, based on price forecasts, taking into overall consideration domestic and overseas economic conditions

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11) Core inflation, or underlying inflation, is not a standardized concept but refers to the basic rate of inflation represented by the rate of price increases, after excluding the price volatility of items subject to generally unexpected temporary external shocks (such as surges in oil prices, abnormal weather conditions, and institutional changes).

and the status of the financial markets.

During 1998, the first year of the new inflation target regime, the target was set at  $9.0\% \pm 1\%p$ , relatively high in terms of the rate of increase in the CPI (on a year-on-year basis) reflecting the sharp depreciation of the won following the outbreak of the currency crisis. Afterwards, it was adjusted downward to  $3.0\% \pm 1\%p$  in 1999 as prices stabilized. In 2000 when the inflation target indicator was altered, the target was set at  $2.5\% \pm 1\%p$  in terms of core inflation and  $3.0\% \pm 1\%p$  for each year from 2001 to 2003. For the period of 2004–2006 when the shift was made to a medium-term inflation targeting system, it was established as a range of 2.5–3.5% (annual average basis of the three years in terms of the rate of increase in the CPI) while the scale of the tolerated change within the target range was reduced from the previous two percentage points to one percentage point in order to minimize price volatility and build the foundation for medium- and long-term price stability. For the period 2007–2009 when the CPI was reintroduced as the inflation target indicator, the medium-term inflation target was set at  $3.0\% \pm 0.5\%p$ <sup>12)</sup> in terms of the rate of increase in the CPI. From 2010 to 2012, it was set at  $3.0\% \pm 1\%p$  and the scale of the tolerated change was enlarged to a range of two percentage points, in order to secure the scope to determine the policy direction from a medium- and long-term perspective, based on fundamental price trends under increased uncertainty concerning price levels in the aftermath of the financial crisis. In the meantime, the inflation target for the next three years (2013–2015) was set at 2.5–3.5%,<sup>13)</sup> the target range having been narrowed by one percentage point in order to reflect the trend of price stability resulting from less inflationary pressure on the demand side and increase the accountability of monetary policy. The inflation target for the period from 2016 to 2018 was set at 2% in

12) The inflation target for 2004–2006 was expressed as a target range rather than as a midpoint as previously, but a target range midpoint was restored for the period of 2007–2009, to specify the tolerated target range of fluctuations. This change allowed the public to better understand the policy intentions of the Bank of Korea, as well as enabling the Bank of Korea to bring about a smoother convergence of public inflation expectations with the targeted level.

13) The inflation target was established as a form of a target range without a midpoint, taking into consideration that there were uncertainties in determining an appropriate inflation target, even though appropriate conditions had been in place for lowering inflation expectations due to anticipation of a decreased level of global inflationary pressure since 2013.

consideration of structural changes in the Korean economy.<sup>14)</sup> The method of setting the target changed from a target range to a target point, with the aim of explicitly conveying the policy intention and achieving stability in inflation expectations. A new mechanism for additional accountability was also introduced to provide specific reasons in cases where the actual rate of inflation deviates from the target by more than a certain margin.<sup>15)</sup>

The actual rate of inflation in terms of the CPI registered 7.5% in 1998 and 0.8% in 1999, in both cases below the lower bound of the annual inflation target range as the exchange rate, wages and other production cost factors were more stable than had been expected. The rate of core inflation, which became the targeted index of the inflation target from 2000, was held generally stable within its target range. For the years of 2004–2006 when there was a shift to a medium-term targeting system, the annual average rate of core inflation remained at a level of 2.3%, slightly below the lower bound of its target range. This was because prices continued on a downwardly stable trend from 2005 onwards thanks to the weakness of the demand pressures and the appreciation of the Korean won. On the other hand, as seen from 2007 when the CPI was reintroduced as the inflation target indicator, the period from 2007 to 2009 showed that prices rose by an annual average of 3.3% within the inflation target range, but from December 2007 through April 2009, they exceeded the upper bound of the acceptable range of the inflation target in the aftermath of soaring international oil prices and the depreciation of the Korean won triggered by the global financial crisis. Despite the sharp rise in the prices of agricultural products in 2010, the inflation rate stood at its target midpoint of 3.0%, but in 2011 it was driven above the upper bound

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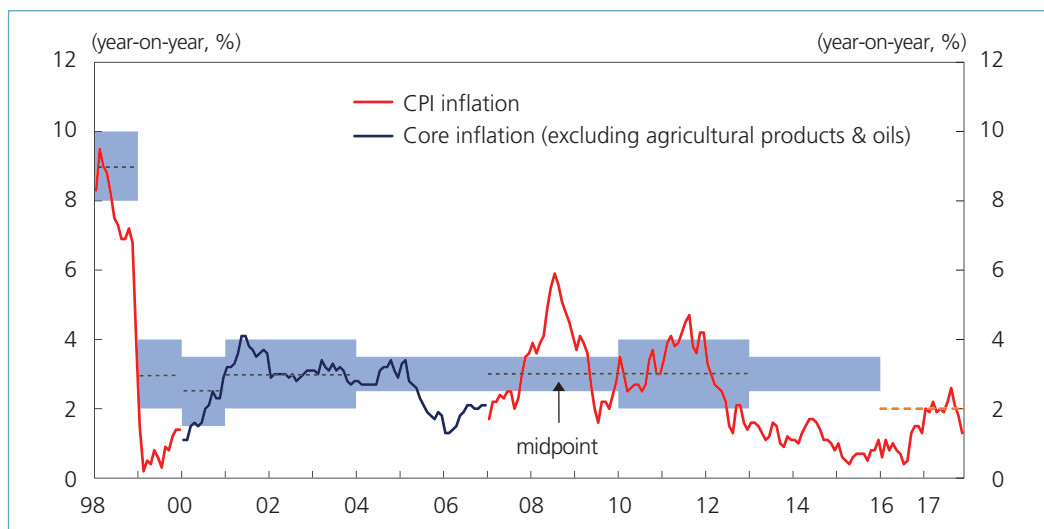
14) A comprehensive range of relevant features were considered, as follows: the underlying inflation rate was analyzed to have dropped to 2% around 2012 due to economic structural changes in the aftermath of the financial crisis; the optimal inflation rate—which refers to the level at which the economy is stable, while achieving continuous growth and maximizing efficiency—was estimated at around 2%; and prices were forecast to remain on a gradual upward trend for some time.

15) If the rate of increase in the CPI exceeds  $\pm 0.5\%$  for six consecutive months, the Governor of the Bank of Korea is required to explain (such as through a press conference) the reasons why the actual inflation rate deviated from the target, the forecast path of CPI, and the direction for monetary and credit policies to attain the goal of price stability. If the deviation from the target by more than  $\pm 0.5\%$  subsequently continues, the Governor is responsible for providing further explanations every three months.

of the target range to stand at 4.0%, due to supply-side factors such as the sharp rise in international oil prices, coupled with demand-side pressure. From the beginning of 2012, however, the inflation rate quickly stabilized at below 2%, the lower bound of the target range, thanks to several factors, including the slowdown in the domestic economy and stable prices for both international raw materials and for agricultural, fishery, and livestock products. In 2013, the rate of increase in the CPI remained below the lower limit of the target range due to supply-side factors, such as a decline in the prices of agricultural and petroleum products, combined with a fall in prices affected by free childcare and school meals programs. In 2014, CPI inflation continued to hover below the target range under expanded downward supply-side pressure and prolonged downward demand-side pressure caused by factors such as delayed recovery in the domestic economy. From 2015 to 2016, the rate of increase in the CPI inflation remained around 1%, far below the lower limit of the inflation target range. This was partly due to the continuation of sluggish demand, but mainly due to a decline in international oil prices.

Figure II-2

## Inflation target and actual inflation



Note: The shaded area indicates the medium-term inflation target range, and the orange dotted line indicates the medium-term inflation target set for 2016 onwards.

Source: Bank of Korea

## Target Horizon

From 1998 until 2003, the Bank of Korea consulted with the government to determine the inflation target for the following year, to be announced along with the annual proclamation of the monetary policy direction at the start of the year.<sup>16)</sup> However, annual inflation targeting of this kind has had some problems.

First, there is a considerable time lag until monetary policy affects prices. When a central bank changes its policy rate, it takes around six to twenty-four months to have an effect. Suppose, for example, the time lag of policy transmission is twelve months. In this case, if the target achievement period is set for one year, it would be theoretically difficult to implement monetary policy to achieve the target in the year concerned since the current round of policy determination does not influence target achievement for the current year. To take this problem into account, the time horizon for target achievement should be longer.

Second, there is a considerable degree of uncertainty surrounding price conditions. Prices in a small open economy such as Korea's are greatly affected by factors beyond domestic control such as changes in exchange rates and international raw material prices including oil. If inflation targets are pitched at different levels each year in line with the emergence of these factors, public confidence in the consistency of monetary policy naturally weakens. Therefore, it is desirable to propose a target to be maintained by the central bank for some years ahead, helping give it scope to operate policy on a consistent and long-term basis despite price fluctuations that depend on uncertain factors.

In order to make up for shortcomings in the method of setting an annual target every year in its inflation targeting, the Bank of Korea had, since 2000, set a medium-term

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16) Under Article 6 (Setting of the Operational Direction for Monetary and Credit Policies) of the Bank of Korea Act (entry into force in April 1998)

(1) The Bank of Korea shall, in consultations with the Government, set the price stabilization target annually, and establish and publish the operational plan on monetary and credit policy including the former.

(2) The Bank of Korea shall do its best to meet the price stabilization target referred to in Clause (1).

target, announcing that it would strive to hold core inflation at the 2.5% level. This level was set considering that the inflation targets of other advanced countries that operated inflation targeting generally cluster around the level of 2–2.5%. From 2003, the medium-term inflation target changed from 2.5% to 2.5–3.5% to allow the operation of monetary policy in a more flexible manner.

But because this medium-term inflation target was only a declaration that lacked binding force, there was a limit to the extent to which it could resolve fundamentally the problems presented by the annual inflation targeting regime. Inevitably the question of whether the inflation target was being attained was couched simply in terms of the legally stipulated annual target rather than the medium-term target. The interest of the general public and the press focused on whether this annual target was achieved. The conduct of monetary policy was also liable to face problems because of differences in the policy response called for by each of the two inflation targets when both an annual and a medium-term target were set up, and confusion could arise among the general public in seeking to grasp the intention of the central bank's policies. Subsequently the medium-term target was adjusted from 2.5% to a range of 2.5–3.5% in 2003 but, although this declaration of intent was introduced to make up for the shortcomings of the annual targeting system, it failed to produce the hoped-for results and remained largely nominative in character, lacking binding force.

To this end, when the Bank of Korea Act was revised in August 2003, legal provision was made<sup>17)</sup> for the establishment of a “medium-term inflation target” to replace the “annual inflation target” and, from 2004 onwards, the annual inflation targeting system underwent a transition to a medium-term inflation targeting regime. In consideration of the time-lag in the transmission of monetary policy, the examples of foreign countries and a general recognition of what constitutes the medium term, the period of the achievement of this target was set at three years and judgment as to whether the target was attained was based on an average of the annual inflation rates

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17) The words “every year” were deleted in the revised Bank of Korea Act in 2003.



over the three years.

However, under an inflation targeting regime that assesses whether the target is achieved based on the average inflation rate over the particular period during which the target was applied, as the evaluation of policy operation is made after the end of the target achievement period, this disrupts the continuity of monetary policy featuring the alternation of implementation → evaluation → implementation. In particular, as the end of the target achievement period approaches, the policy time horizon becomes shorter, which makes it difficult to implement forward-looking monetary policies in the medium term. To compensate for this problem, the system was restructured in 2010 to check price trends on a regular basis from a medium-term perspective, instead of determining at the end of the period whether the target had been attained. Accordingly, the Bank of Korea published the *Inflation Report* examining the operation of inflation targeting every year (December), and from 2013, it increased the frequency of its publication to twice a year (January and July), while providing more detailed and analytical information to make clear the medium-term character of the inflation targeting regime. Since 2016, the Bank of Korea has carried out periodic reviews and explanations of the operation of the inflation targeting regime in the *Monetary Policy Report* (while discontinuing the *Inflation Report*), a statutory report to be submitted to the National Assembly.<sup>18)</sup> The publication frequency increased from semiannual to quarterly.

## (2) Operation of Interest Rate-oriented Monetary Policy

Under the monetary aggregate targeting regime in force up until 1997, monetary policy was operated making use of an intermediate monetary growth target and employing reserve money as the operating target to attain it. Specifically, under the assumption of a stable multiplier relationship between reserve money and the money

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<sup>18)</sup> The *Inflation Report* changed its Korean title in 2014.

supply, monetary policy was operated by converting the monetary target into the amount of reserve money and achieving the required amount through open market operations. As has been described above, however, as the chosen monetary aggregate gradually lost its effectiveness as an intermediate target, the Bank of Korea, in tandem with the introduction of an inflation targeting regime following the foreign currency crisis, shifted to an interest rate-oriented monetary policy; the Bank set its policy rate at a certain level and operated monetary policy with a focus on attaining this level. Accordingly, the Bank of Korea employed the call rate target as its policy rate from the introduction of the inflation targeting regime, and since 2008, this has been changed to the Bank of Korea Base Rate.

## The Establishment and Operation of Call Rate Target

Following Korea's receipt of an initial standby credit<sup>19)</sup> from the IMF in early December 1997, the Bank of Korea induced a dramatic hike in the call rate, acting in close consultation with the Fund, paying attention to the role of interest rates as a means of bringing stability to the foreign exchange market. The Bank of Korea raised the interest rate offered in its open market operations and pushed up the overnight call rate to the upper limit of 25% specified in the Enforcement Decree of the Interest Restriction Act. Subsequently, when the upper limit of interest rates was adjusted upwards to 40%, the overnight call rate rose above 30%. Accordingly, both yields on corporate bonds and banks' lending & deposit rates registered sharp increases. As a period of high interest rates had arrived, their movements attracted much closer popular attention. Although not explicitly stating so, the Bank of Korea made it clear that it would operate monetary policy with a focus on interest rates, unlike its still existing monetary policy framework, as it began to present the operational direction of interest rates in its *The Direction of Monetary Policy for the*

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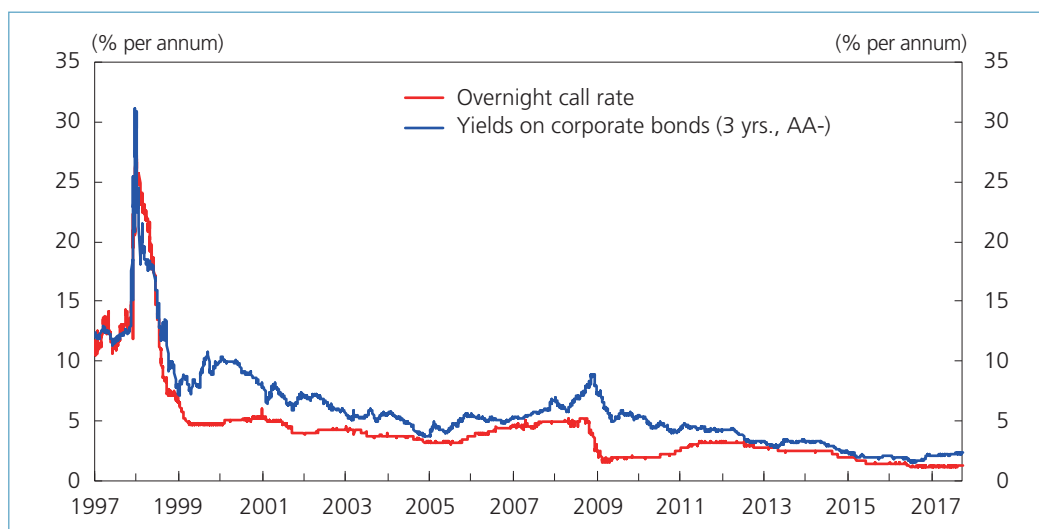
19) Standby credit refers to financial assistance by the IMF for its members to resolve a temporary liquidity shortage.

Quarter from July 1998.<sup>20)</sup>

As the domestic foreign exchange market quickly regained stability, the Bank of Korea progressively eased its tight monetary policy. As a result, the overnight call rate and other interest rates showed simultaneous declines. The reduction of the call rate target on September 30, 1998 was the first instance of the Bank's making use of the interest rate as its official operating target. To revive the subdued real economy and to ease the severe credit crunch, the Bank announced that it would cut the interest rate<sup>21)</sup> offered in its open market operations to the 7% level from the previous 8.1%, in keeping with the interest rate reductions announced by the central banks of the US and other advanced nations. This was viewed as a fundamentally new departure in that a specific interest rate target was announced. Taking into account the fact that the overnight call rate closely tracks the rate applied in open market operations, this measure represented a big step toward a monetary policy regime employing the overnight call rate as its operating target.

Figure II-3

## Interest rates following the currency crisis



Source: Bank of Korea

20) "...During the third quarter, the downward stability of interest rates will be pursued insofar as this does not detract from the stability of the foreign exchange market..." (July 3, 1998)

21) This interest rate serves as the standard for repo (RPs) transactions and the issuance of monetary stabilization bonds in open market operations.

From early 1999, the position of the overnight call rate was consolidated as the operating target of monetary policy. More stress began to be placed on the level of the overnight call rate in the *Monetary Policy Direction*, the text of which was decided at the monthly policy-setting meeting of the Monetary Policy Board. Furthermore, a specific figure for the overnight call rate began to be suggested as a target from May 1999 onwards. Hitherto, a vague expression such as “the downward stability of the call rate is to be induced” had normally been employed. However, a clearer statement that “the call rate will be stably operated at around the present level”<sup>22)</sup> was made at the Monetary Policy Board Meeting in May 1999. That statement meant that the call rate target was set at 4.75%, because the call rate had been moving at around the 4.75% level. Subsequently, as the degree of adjustment of the call rate target was explicitly announced, a method of operating monetary policy in which the call rate target is established as the policy rate and monetary policy is operated with a focus on this became firmly entrenched. Therefore, the call rate target functioned as the policy rate up until the time when it was replaced by the Bank of Korea Base Rate in January 2008.

## Shift to the Bank of Korea Base Rate

Call rate targeting, under which a target level was set each month, greatly contributed to the stabilization of the macroeconomy even when considering the unstable relationship between monetary aggregates and the real economy, by allowing the Bank of Korea to stabilize prices and underpin the economic recovery. In particular, compared to the past when monetary policy was operated based on monetary aggregates, the introduction of the call rate target framework widened the scope for the flexible adjustment of liquidity, and this served as an institutional

22) “In view of the fact that the effects of policy of the downward stabilization of interest rates, pursued as part of the efforts for the recovery of the real economy, are becoming evident, the overnight call rate needs to be operated at the current level and the pace of real economy recovery should also be closely watched.” (May 7, 1999)

foundation to enable the Bank of Korea to actively respond to financial tensions such as the Daewoo scandal and the credit card debacle.

However, once the call rate became adopted as the operating target, it stayed virtually fixed at the target level set by the Bank of Korea regardless of liquidity or supply-and-demand conditions in the reserve market, and thereby its function of funds allocation was greatly weakened. This constraint on the variability of the call rate—used as the market rate for ultra short-term loans—led short-term fund transactions to be excessively concentrated in the call market, thereby detracting from the development of other short-term financial markets, including the repurchase agreement (RP) market. The consequence was a restriction of the seamless working of the monetary policy transmission channel running from the adjustment of the policy rate to the real economy through the adjustment of long-term interest rates.

In order to address the problems associated with its existing system of monetary policy operation, including this drawback of call rate targeting, the Bank of Korea reorganized the system,<sup>23)</sup> changing its policy rate from the Call Rate Target to the Bank of Korea Base Rate, and began to operate monetary policy within the new framework from March 2008. The Base Rate is the reference rate applied in transactions such as RPs between the Bank of Korea and its financial institution counterparts, functioning both as the fixed rate for its sales of securities to absorb excess liquidity and as the minimum tender rate for its purchases to provide liquidity. Nevertheless, as the call rate continues to serve as the market interest rate that is the point of departure for the transmission channel of monetary policy, the Bank still makes efforts to prevent the call rate from deviating greatly from the level of the Base Rate.<sup>24)</sup>

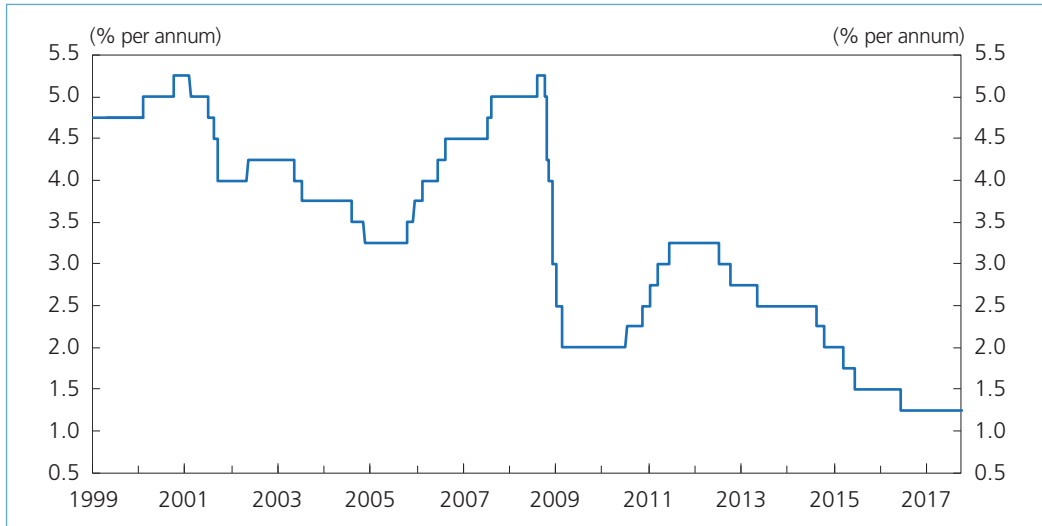
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23) The restructuring of the monetary policy operating framework not only heightened the market character of the call rate, but also took into consideration the fact that the existing reserve system together with the lending and deposit facilities of the Bank of Korea retained the basic framework of the previous monetary targeting regime, meaning that neither could operate properly under an orientation toward interest rates.

24) The reason the Bank of Korea finds it rational to maintain the transaction rate of 7-day RPs at levels close to the overnight call rate is that the credit risk of an unsecured call transaction is offset by the duration risk of a secured RP transaction.

Figure II-4

Policy rate<sup>1)</sup> adjustments since 1999



Note: 1) Changed from the former Call Rate Target to the Bank of Korea Base Rate from March 2008 onwards.  
 Source: Bank of Korea



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# III

## Implementation of Monetary Policy







# III

## Implementation of Monetary Policy

### 1

### Monetary Policy Decision-making

The Monetary Policy Board, the supreme policy-setting body of the Bank of Korea, deliberates and decides Korean monetary policy at the highest level. As explained in Chapter II, the inflation target is set every three years by the Board in consultation with the government, and in principle, the policy rate, or the Base Rate, is decided eight times a year at the meetings of the Board.

### Composition and Operation of the Monetary Policy Board

It is the general practice that authority and accountability regarding monetary policy decision-making are granted to a committee comprising a number of members, rather than to anyone individual.<sup>1)</sup> Examples are the Federal Open Market Committee (FOMC) of the US Federal Reserve, the Governing Council of the European Central Bank, the Monetary Policy Committee (MPC) of the Bank of England, and the Policy Board of the Bank of Japan.

The policy setting body of the Bank of Korea before April 1998 was the Monetary Board,<sup>2)</sup> which was made up of the Minister of Finance and Economy and the Governor of the Bank of Korea *ex-officio* plus seven appointed members. This

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1) Considering that monetary policy is a macroeconomic policy that widely influences the economy, the committee system, where individuals with various forms of expertise and experience participate in the decision-making process, can reduce errors and enhance the efficacy of policies through the members' information sharing and mutual learning (BIS, 2009).

2) It was formerly referred to as the "Monetary Policy Board" in accordance with the Bank of Korea Act enacted in May 1950, and then the "Monetary Board" due to the revision of the same Act in May 1962.

composition made it difficult for the central bank to carry out its monetary policy independently. Above all, since the Minister of Finance and Economy served as the chairman, most decisions on policy matters were greatly influenced by the Ministry of Finance and Economy. Furthermore, of the seven appointed members, five were selected on government recommendation,<sup>3)</sup> which also acted to restrict the Monetary Board's independence in setting policy.

Under the revised Bank of Korea Act that came into force in April 1998, however, there were considerable changes in the composition of the policy-setting body. Its name was changed to the Monetary Policy Board with the word "operation" being omitted from the Korean version of its name (directly translated as the Monetary Policy Operation Board), which had given the impression that it was a passive agent, and the Governor of the Bank of Korea took over chairmanship of the Board. The number of members making up the Board was reduced to seven, and as part of efforts to lessen governmental influence, the number of members recommended by the government was reduced to two among the six recommended members.<sup>4)</sup> Members who had been previously able to serve part-time, were now required to serve full time so as to heighten policy accountability and expertise. Following these changes, the Monetary Policy Board acquired the institutional foundation to determine monetary policy in a much more independent and neutral manner, than in the past. Furthermore, under the revision of the Bank of Korea Act in September 2003 (entry into effect, January 2004), the Senior Deputy Governor of the Bank additionally came to participate as an *ex-officio* member of the Monetary Policy Board,<sup>5)</sup> thereby enhancing

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3) One member was appointed on the recommendation of the Minister of Finance and Economy, two on that of the Minister of Agriculture, Forestry and Fisheries and two on that of the Minister of Trade, Industry and Energy.

4) The Governor of the Bank of Korea, the Minister of Finance-Economy (current Ministry of Strategy and Finance), the Chairman of the Financial Supervisory Commission (current Financial Services Commission), the Chairman of the Korea Chamber of Commerce and Industry, the Chairman of the Korea Securities Dealers Association and the Chairman of the Korea Federation of Banks each recommend one member of the Monetary Policy Board.

5) It is generally the case in major countries that the senior deputy governor participates as an *ex-officio* member in the highest decision-making body. Notably, in the US, the UK, Japan, Canada and other advanced countries, between two to five senior executives of the central bank, including senior deputy governor, serve as members of the supreme decision-making organ. The revision of the Bank of Korea Act in September 2003 kept the membership of the Monetary Policy Board unchanged at seven members, with the addition of the Senior Deputy Governor of the Bank and exclusion of the member previously recommended by the Korea Securities Dealer Federation.

the independence of the Bank of Korea. The members of the Board are appointed by the President and serve terms of four years.<sup>6)</sup>

A regular meeting takes place on the Thursday of the second and fourth weeks of each month, with exceptions only for unavoidable reasons. An exceptional meeting is called if the chairman deems it necessary or it is requested by at least two members. For such meetings, the agenda is drawn up by the chairman or at least two members, and the decisions made at the meeting are adopted through a simple majority with at least five members attending<sup>7)</sup> unless otherwise specified.<sup>8)</sup>

## Decision-making Process of Monetary Policy

The decision-making process of the Monetary Policy Board, for example, in its decision of the Base Rate, is as follows. The meeting to determine the direction of monetary policy, mainly setting the Base Rate, was held on the Thursday of the second week of each month until 2016, and is scheduled to be hosted eight times a year from 2017.<sup>9)</sup> Although the date of a meeting may be changed according to circumstances,<sup>10)</sup> the annual schedule for the Board's policy-setting meetings is set and released in advance, thereby minimizing market uncertainties concerning the day of the decision of the Base Rate. The monetary policy direction is made public without delay.

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6) Nevertheless the term of the Senior Deputy Governor of the Bank of Korea is three years.

7) Previously, in the event of a tied vote, the chair had casting vote, but this was removed in the revision of the Bank of Korea Act in December 1997.

8) At least four members are required to be present for emergency credit to banking institutions and credit to for-profit enterprises (Articles 65 and 80 of the Bank of Korea Act); at least five for the decision on a matter whose reconsideration was requested by the Minister of Strategy and Finance (Article 92 of the Bank of Korea Act).

9) In principle, the meeting to determine the direction of monetary policy is held on the Thursday of the second week in January, April, July, and October to coincide with the announcement of the economic forecast, while the remaining four meetings are held on the Thursday of the fourth week in February, May, August, and November, months in which economic forecasts are not announced, in order to ensure an appropriate time horizon for the monetary policy decision.

10) Article 9 (2) of the Bank of Korea Act limits the change of the day for the meeting by prescribing, "If the day designated for a regular meeting falls on a legal holiday or it is deemed that unavoidable circumstances exist, the Monetary Policy Board shall meet on the day preceding the designated day, or on the day decided at its previous meeting."

A week before the monthly meeting to decide the Base Rate is held, board members and those involved in major departments of the Bank of Korea have an informal meeting to review the economic situation; on the day before the meeting, a meeting takes place to report economic trends under the auspices of the Monetary Policy Board. At that time, each department briefs the board members on economic and financial conditions at home and abroad, and they then discuss these issues in depth. Unless there is an extraordinary situation, the policy-setting meeting takes place at nine in the morning; the Base Rate is determined after considering various factors, including domestic prices, markets conditions, financial and foreign exchange markets, and the trends of the global economy; and a statement is drawn up on the monetary policy direction. After the meeting, a press release of the statement is made available and the Governor of the Bank of Korea holds a press conference to explain the details and the background to the decision. The minutes detailing the discussion at the meeting are made public after a certain length of time (currently set at two weeks).

## **Considerations in Monetary Policy Decision-making**

In the process of making decisions on monetary policies, the Monetary Policy Board comprehensively takes into account economic circumstances at home and abroad. The Bank of Korea's purpose is stipulated as being contributive to the sound development of the national economy by striving for price stability through formulation and implementation of monetary policy while paying close attention to financial stability. Therefore, in setting the Base Rate, it is important to judge the potential effect on the financial sector as well as the real economy in terms of, for example, prices and economic growth, from a change in the interest rate and the scale of any such change. However, this is by no means easy to assess accurately, since monetary policy is transmitted through various channels and has a time lag involved. The Monetary Policy Board bears in mind the uncertainties associated in policy transmission channels as well as changes in external conditions such as the international oil prices

when deliberating monetary policy, making decisions largely based upon these following considerations.

First, it should accurately forecast the potential effects of changes in various conditions at home and abroad on inflation from a medium-term perspective. To this end, an econometric model is initially employed. If such a model, composed of numerous variables and equations, is used, it allows influences on prices to be calculated with relative ease. But the problem lies in the credibility of the model. Estimations of econometric models based on past data do not accurately reflect changes in the economic structure, which is subject to constant variation over time. In addition, because the patterns of the past do not necessarily repeat themselves in the present where numerous uncertainties exist, it is difficult to be confident in the figures generated by such a model. Hence, to make up for these shortcomings, central banks use various indicators that signal inflationary pressures, rather than being wholly dependent on econometric models. The Bank of Korea also utilizes primary data that are considered to be closely linked to future inflation as well as many other indicators compiled by processing statistics.<sup>11)</sup> This is dubbed the “look-at-everything approach” where as many indicators as possible are used to measure inflationary pressure.

Second, if expected inflation is projected to exceed the target level but the real or financial sectors face problems such as supply shocks, excessive uncertainty, or risks to financial stability, the central bank should decide whether it will adjust interest rates solely for the sake of price stability. Most central banks operate inflation targeting in a flexible manner in consideration of achieving other economic policy objectives as well, so long as the achievement of the inflation target in the medium term is not hindered. Therefore, if prices are expected to exceed the target range in the short term, amid a combination of an economic slowdown, financial market unrest and expansion of financial imbalances, the central bank will face difficulties in selecting the appropriate policy direction. Faced with such a situation, the central bank, as an

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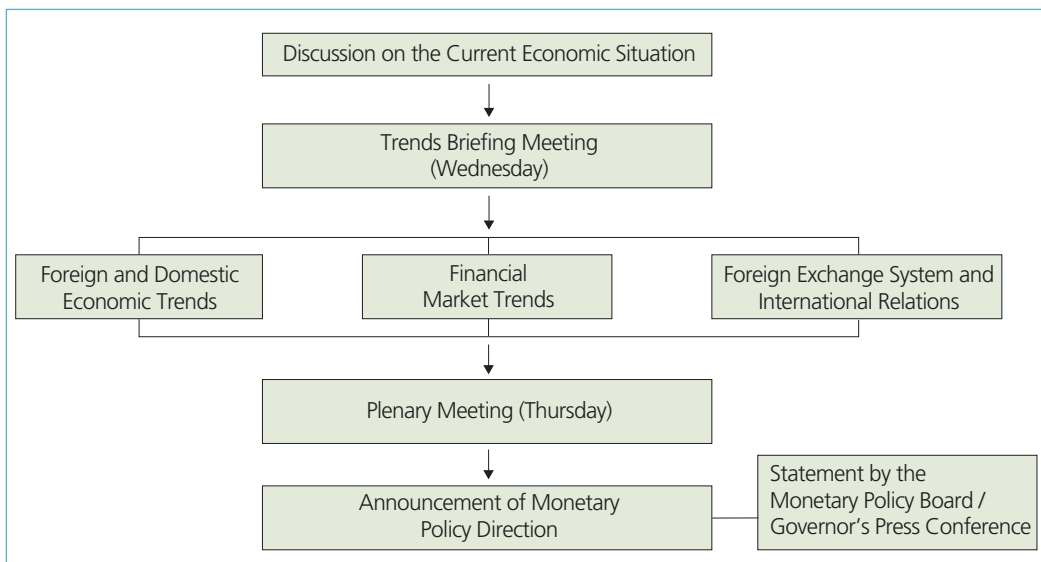
11) These include the Financial Conditions Index, real money gap ratio, GDP gap ratio, unemployment rate gap, spreads between long- and short-term interest rates, and surveys of inflation expectations.

organization responsible for implementing policy by adjusting the policy rate, must determine the monetary policy deemed to be most beneficial to the national economy in consideration of the overall situation in the short term, while viewing price stability as the top priority from the medium-term perspective.<sup>12)</sup>

Third, once it decides to adjust the policy rate, the central bank should determine the scale of the adjustment. For this, the econometric model is also employed to calculate the appropriate scale, but unless there are special circumstances, such as a crisis situation, most central banks prefer a gradual approach. From the beginning of the 1990s, the US Federal Reserve adjusted the policy rate in quarter of a percentage point steps, termed Greenspan’s babysteps, after the then chairman of the Federal Reserve. However, the policy rate may be adjusted in one broad stroke in special circumstances such as a financial crisis. For example, the US Federal Reserve lowered the policy rate by 0.5 percentage points or more several times during the global financial crisis of 2008.<sup>13)</sup>

Figure III-1

**Base Rate decision-making process by the Monetary Policy Board**



12) Appropriately, this approach is referred to as a “balanced approach” (FOMC, 2012), in which determining the policy direction depends wholly on the central bank’s judgement of the economic situation.

13) The Bank of Korea also cut the Base Rate by one percentage point in December 2008.

Reference  
III-1

## Background of the Reform of the Operational Framework for Monetary Policy Board Meetings

The Bank of Korea announced a plan to improve the operating framework for the Monetary Policy Board meetings through the publication of the *2016 Monetary Policy Direction* in December 2015. Among a total of 24 regular sessions, the plan reduced the annual number of sessions held to determine the monetary policy direction from twelve to eight meetings from 2017, with the other four meetings to be replaced by discussions on financial stability. This measure aims to enhance the effectiveness of monetary policy decisions, while establishing an institutional framework for the Monetary Policy Board to deal with issues regarding financial stability at the regular sessions. In particular, the reduction of monetary policy decision meetings to eight per year was decided based on the following background.

First, the Bank of Korea strove to enhance the effectiveness of monetary policy by solidifying the institutional foundation for implementing monetary policy from a more long-term and future-oriented perspective, in consideration of the time lag of its effects. The real economic factors such as business conditions and prices that generally serve as major considerations in determining monetary policy change gradually, and there exists a significant time lag between the implementation of policy and its actual effects on the real economy. In addition, the previous system of holding monthly meetings resulted in unnecessary policy expectations as the financial markets overreacted to fluctuations of monthly economic indicators.

Second, the meeting to determine the direction of monetary policy was timed to coincide with the announcement of the economic forecast (Jan., Apr., Jul., and Oct.) and its interim check (Feb., May, Aug., and Nov.) so as to put in place the conditions for the consistent implementation of monetary policy based on economic outlooks and their interim checks. More specifically, the Bank aimed to determine the monetary policy direction in a data-dependent way by confirming the transmission effects of monetary policy based on economic forecasts through an interim check, while sharing the economic forecasts and the results of the interim check with economic agents as a means of improving the predictability and transparency of monetary policy.

Lastly, the Bank sought to adjust the meeting schedule to coincide with those of major



central banks so that changes in economic conditions at home and abroad could be systematically considered in the monetary policy decision-making process. Some major central banks, including the European Central Bank and the Bank of England, had reduced the number of meetings to eight a year in line with the US Federal Reserve. Given that holding the meeting eight times a year had become an international trend and that Korea is a small open economy, it was necessary for the Bank of Korea to give due consideration to other nations' decisions on monetary policy directions when implementing its own policy.

**Annual number of monetary policy decision meetings in major central banks**

Annual number of meetings	Countries
4 times	Switzerland, China
6 times	Sweden, Norway, India, Malaysia, South Africa
8 times	US, Euro Area, Japan, UK, Canada, New Zealand, Czech Republic, Iceland, Russia, Brazil, Mexico, Thailand, Turkey, Philippines, Israel
12 times	Hungary, Chile, Colombia, Peru, Indonesia

Note: As of September 2017

## 2

**Instruments of Monetary Policy**

The monetary policy instruments that can be used by central banks are largely divided into those for indirect and direct adjustment. Indirect adjustment instruments, which are market-friendly in that they correspond to the spontaneous movements of the market, include open market operations, lending and deposit facilities and reserve requirements. Direct adjustment instruments are employed under the regulatory powers granted to the authorities, rather than by making use of the market mechanism. The setting of commercial banks' deposit and lending rates and the control of the scale of their lending fall into this category.

From the time of its establishment in 1950, the Bank of Korea was legally endowed with indirect adjustment instruments, but in practice it long had to rely on direct regulatory instruments because direct regulation was more effective in adjusting the money supply in a situation in which the financial markets remained underdeveloped and there was chronic excess demand for funds. In this respect, direct regulation was to some extent inevitable.

From the early 1980s, however, as the scale of the Korean economy expanded and its structure became even more complex, there was a growing need for it to operate on the basis of the market principle. Accordingly, a wide-ranging easing of regulations was undertaken, and the operation of policy on the basis of the market mechanism began to take hold. In this vein, the gradual deregulation of interest rates was pursued along with the securing of greater managerial independence for financial institutions, while monetary policy shifted to a reliance on indirect adjustment instruments. In the late 1980s, as money supply expanded through the foreign sector following the shift of the current account into surplus, orthodox monetary policy instruments, including open market operations, lending facilities and reserve requirements came to be widely used to sterilize the monetary expansion. In particular, the revised Bank of Korea Act,

which came into effect in April 1998, stipulates<sup>14)</sup> that the Bank is basically duty-bound to implement monetary policy in a market-friendly manner. At the present time, the Bank of Korea relies on indirect adjustment instruments in implementing monetary policy.

## (1) Open Market Operations

Open market operations are the policy instrument through which central banks purchase or sell securities including government and public bonds with financial institution counterparts in open markets such as money or bond markets, and accordingly change these counterparts' funding conditions, thereby adjusting reserve money stock<sup>15)</sup> or the short-term interest rate.<sup>16)</sup>

Financial institutions buy and hold bonds with the intention of operating their funds. If a financial institution needs to convert bonds into cash to meet withdrawal demands from its customers, it has to sell them in the financial market to secure liquidity. Since the cash balance of the counterpart who purchases the bonds is reduced by the same amount, however, the amount of liquidity in the entire financial institutions remains unchanged. Where there is a flight to liquidity due to the financial market instability or where banks as a whole are suffering from a shortage of reserves, a financial institution attempting to sell bonds for liquidity will find no willing takers. Under these conditions, since the supply of liquidity does not meet the demand for it, the central bank supplies fresh liquidity by purchasing bonds in the financial markets. On the contrary, in a situation in which the demand for bonds exceeds their supply, the central bank absorbs the excess liquidity by selling bonds in the financial markets. In

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14) Article 4 (2) of The Bank of Korea Act stipulates that, in implementing monetary and credit policies, the Bank of Korea shall emphasize the market mechanism.

15) Reserve money is the sum of banknotes and coins in the hands of consumers and businesses (currency in circulation), which represent the central bank's monetary liability, plus the reserves held by financial institutions.

16) In general, this refers to the interest rate on overnight funds transmission among financial institutions.

this way, the central bank buys and sells bonds in the open markets to control market liquidity.

Generally when the central bank increases liquidity supply, financial institutions use the increased liquidity for making loans to companies or households, leading to an increase in money supply through the multiplier process and thus putting downward pressure on interest rates.

Open market operations emerged as a major instrument of monetary policy in the 20th century. Particularly since the 1980s, as financial liberalization and innovation facilitated the development of financial markets, many countries adopted open market operations as their main monetary policy instrument.

However, open market operations do not allow the central bank to meet its targets for both the reserve money<sup>17)</sup> and the very short-term (overnight) interest rate simultaneously. In other words, only one of the two targets can be met through open market operations.<sup>18)</sup> Currently, the Bank of Korea and central banks in major advanced countries use these open market operations as their main monetary policy instrument and adjust the amount of reserve money (high-powered money) so that the overnight call interest rate can approach its policy rate target.

## History

Open market operations in Korea were launched with the first issuance of Monetary Stabilization Bonds (MSBs) in November 1961. Operations involving buying and selling of government and public bonds with bank counterparts became possible from February 1969 following the enactment of the *Regulations on Transactions of Government-Issued or Government-Guaranteed Securities* by the Bank of Korea

17) Specifically, reserve money target refers to the reserves supply.

18) For example, when the central bank sets and attempts to meet a reserve money target (specifically, a reserves supply target), changes in banks' demand for reserves may occur due to reasons such as unexpected changes in bank deposits, thereby necessitating a change in interest rates. In contrast, if the central bank seeks to keep the very short-term interest rate constant, it has to adjust reserves supply if there is a change in the demand for reserves by financial institutions.

(Decision of the Monetary Board on February 20, 1969); non-bank financial institutions were included as counterparts eligible for these operations from 1977, when the methods of open market operations were divided into RPs and outright transactions. From 1986, in order to absorb excess liquidity supplied through the foreign sector following the shift of the current account into surplus, open market operations began to be used on a substantial scale.

Since the early 1990s, the system has been improved so that open market operations based on market principles have taken firm root. In March 1993, a competitive tender method was introduced for transactions of government and public bonds under RPs which had formerly been conducted by compulsory assignment. This move was intended to pave the way for open market operations based on prevailing market interest rates. From February 1997, the bonds that failed to attract successful bids at auctions for sales of RPs or issuance of MSBs were no longer allocated by direct sale to financial institutions. With this, the conversion of open market operations to fully competitive bidding was effectively completed. With the inauguration of electronic bidding through BOK-Wire, the Bank of Korea's RTGS (Real Time Gross Settlement) system, in August 1997, open market operations based on the market mechanism became firmly established.

Since the 2000s, efforts have been made to relieve the burden of roll-over and the accumulation of MSBs and make open market operation system more market-friendly and efficient. For example, a regular timetable<sup>19)</sup> was instituted for the auction of MSBs based on maturity;<sup>20)</sup> the minimum bid price and minimum successful bid price were adjusted upwards, reflecting common transaction practice in the bond market;

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19) MSBs have been issued on a regular basis since January 2003. The types of MSBs issued regularly and issuance schedules have subsequently been changed several times according to policy objectives. To strengthen the role of MSB rate as the short-term benchmark rate, 91-day MSBs have been issued every week and 182-day MSBs in the first and third week of every month since September 2010. Meanwhile, 2-year MSBs (long-term MSBs) are issued in the first and third week of every month; and 1-year MSBs (also long-term MSBs) are issued in the second and fourth week of every month.

20) In June 2002, the minimum amount of bids and successful bids for competitive auctions of MSBs were adjusted upward from 100 million won to 5 billion won. In August 2004, they were adjusted upward again to 10 billion won.

and the subscription, fungible issue, and early redemption<sup>21)</sup> of MSBs were introduced. Meanwhile, the method of conducting RP transactions with financial institutions was changed from the borrowing and lending of funds using securities as collateral to the buying and selling of securities.<sup>22)</sup> With the reform of the monetary policy operational framework in March 2008, RP transactions came to be undertaken on a regular basis and fixed-rated tenders were introduced.

In the 2010s, the Bank of Korea has improved the way it conducts open market operations in order to enhance the transparency and effectiveness of the tool. In October 2010, alongside the existing compulsory deposit requirement, a market-friendly system of competitive bidding was adopted for deposits with the Bank of Korea's Monetary Stabilization Account (MSA). In December 2011, securities lending & borrowing and intraday RP systems were introduced, which strengthened the role of open market operations for financial stability. Since June 2014, mortgage backed securities (MBSs) issued by the Korea Housing-Finance Corporation have been included in the securities eligible for open market operations as a means to improve the structure of household debt by stimulating the mortgage securitization market. In April 2015, the margin requirement ratio<sup>23)</sup> applied to RP purchases was differentiated based on the type of security eligible and the remaining maturity, in order to better reflect the market price risk of the securities eligible. In January 2016, the criteria for selecting the financial institution counterparts for open market operations were specified and made public in the *Rules for Open Market Operations*, thus improving the transparency in the selection of financial institution counterparts. Since May of the same year, the schedule for the issuance of MSBs has been

21) The subscription to MSBs and the fungible issue of 2-year MSBs were introduced in June 2009. The fungible issue of 1-year MSBs was also adopted in June 2010. To reduce the maturity concentration of 2-year MSBs issued under the fungible issue system, a system of redemption prior to maturity was introduced.

22) This change was introduced in April 2006. By allowing RP buyers to freely dispose of the securities within the maturity period, it sought to encourage financial institutions to conduct RP transactions with the central bank, boost the liquidity of RPs and arbitrage transactions, and eventually vitalize RP markets and bond markets.

23) The margin requirement ratio for RP transactions is estimated by dividing the market price of the securities eligible, as of the business day of the RP transactions, by the purchase price. As of the end of September 2017, a 100% ratio is applied for sales of RPs, while a ratio between 102 and 110% is applied to RP purchases, depending on the type of securities eligible and remaining maturity.

announced on a monthly basis to improve the predictability of MSB issuance for market participants.

## Current System and Operation

### (Framework of Open Market Operations)

The aim of the Bank of Korea's open market operations is to keep the call rate<sup>24)</sup> from deviating sharply from the Base Rate set by the Monetary Policy Board. The call rate is significantly affected by the amount of bank reserves, because banks attempt to deal with the shortage or surplus of reserves through the call market, where short-term funds are traded (typically overnight loans). Therefore, in order to achieve the goal of open market operations, the shortage or excess of bank reserves must be identified and appropriately resolved.

The demand for reserves is equivalent to the required reserves<sup>25)</sup> that a bank has to hold for a certain period. The required amount is calculated every month based on a bank's liabilities subject to reserve requirements, and the bank must hold it from the Thursday of the second week of the following month to the Wednesday of the second week of the month after that. The supply of reserves takes place through various sectors and varies on a daily basis. Taxes levied by the government on taxpayers are paid using cash or bank deposits. In such cases, funds are transferred to the government account from the accounts at the Bank of Korea opened by commercial banks for the purpose of depositing reserves, etc., and therefore bank reserves are commensurately reduced. Conversely, if the government makes a payment to a private contractor for a construction project, the paid funds are transferred from the

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24) Specifically, this refers to the unsecured overnight call rate.

25) Reserves consist of required reserves and surplus reserves. Required reserves are the amount of money that banks must hold under the Bank of Korea Act. Surplus reserves are the amount of money that banks maintain in excess of required reserves for various reasons (e.g. for payments or against uncertainties). Although the Bank of Korea Act provides for interest payments on reserves, they are usually not remunerated except in special cases (such as a crisis). Therefore, most banks try to minimize their amount of surplus reserves.

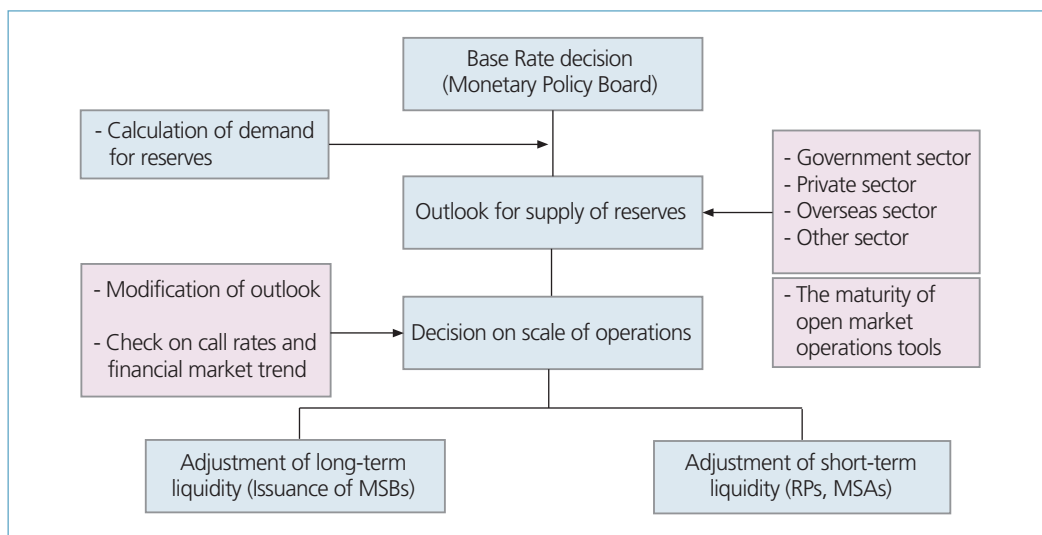
government account to the private contractor's bank account, and in consequence, bank reserves increase. When the Bank of Korea pays Korean won for the purchase of US dollars from commercial banks, reserves are supplied. Likewise, when the Bank extends loans to banks, reserves also increase.

If the supply of reserves far exceeds the demand for reserves, banks will try to operate their non-profit surplus reserves (actual reserves minus required reserves) on the call market, leading to a large supply of call money and downward pressure on call rates. In contrast, if actual reserves fall short of required reserves, banks will borrow more money from the call market, leading to upward pressure on call rates.

The Bank of Korea predicts the supply of reserves by reflecting various factors affecting reserves, compares it with the demand for reserves, and calculates the amount of reserve surplus or deficit. If a deficit is expected, the Bank of Korea will inject liquidity, and if a surplus is expected, it will absorb liquidity. In this way, it conducts open market operations so that call rates do not deviate significantly from the Base Rate.

Figure III-2

## Process of open market operations





## (Operation Instruments)

The main instruments of open market operations include the issuance of MSBs, transactions of securities, and deposits with the MSA.

MSBs, issued only by the Bank of Korea, originated as a major tool of monetary policy during the period when there was an insufficient volume of the government and public bonds that are essential for open market operations. These central bank obligations have relatively long maturities, and once issued, they are not, in principle, redeemable prior to maturity. Thus, they are used as a major structural adjustment tool with long-lasting policy effects. A ceiling on the issuance of MSBs is set by the Monetary Policy Board every quarter. By maturity, there are 13 types<sup>26)</sup> of MSBs varying from 14-day MSBs to 2-year MSBs. Currently, however, only 91-day, 182-day, 1-year, and 2-year MSBs are issued regularly through competitive bidding. The fungible issue<sup>27)</sup> period for 1-year and 2-year MSBs is one month and two months, respectively, and subscription is held once a month. Twice in every odd month (Jan., Mar., May etc.), 2-year MSBs with remaining maturities of 3, 5, 7, and 9 months are repurchased by the Bank of Korea before maturity in order to ease maturity concentration and boost liquidity.

Securities transactions are used to supply or withdraw funds by buying or selling government and public bonds. Securities eligible are confined to government bonds, government-guaranteed bonds, MSBs, and MBSs issued by the Korea Housing-Finance Corporation in consideration of the efficiency of open market operations and the credit risk of the relevant securities. However, if necessary, those bonds specifically determined by the Monetary Policy Board can be included.

26) MSBs comprise discount bonds and coupon bonds. Discount bonds include 14-day, 28-day, 63-day, 91-day, 140-day, 182-day, 364-day, 371-day, 392-day, and 546-day bonds, while coupon bonds include 1-year, 1.5-year, and 2-year bonds.

27) In the fungible issue system, the same issue terms and conditions (e.g. coupon rate and maturity) are applied to all the bonds issued during a certain period, and thus they are regarded as the same bond. In respect of Government bonds, the fungible issue periods for 3-year, 5-year and 10-year bonds are six months (however, one year is used for 10-year inflation-indexed government bonds) and those for 20-year and 30-year bonds are one year.

Table III-1

**Securities eligible in open market operations**

Outright transactions	RP Transactions
Government bonds Government-guaranteed bonds	Government bonds, Government-guaranteed bonds, MSBs, <sup>1)</sup> and MBSs issued by the Korea Housing-Finance Corporation

Note: 1) Limited to RPs

Securities transactions consist of outright transactions<sup>28)</sup> and RP transactions. Designed to absorb liquidity, outright sales have found little use since they have the same effect as the issuance of MSBs. Outright purchases are not frequently used to supply liquidity, because market liquidity is generally in surplus. Hence outright purchases are utilized only when there is a need to secure Government bonds for RP sales or to stabilize the financial market.

Accordingly, most securities transactions are RP transactions. In RP transactions, the Bank of Korea sells (or buys) its Government bonds to financial institutions and repurchases (or resells) them upon maturity, so it can absorb (or supply) funds until the end of the maturity date. The longest RP maturity is 91 days, but the majority of RP transactions involve 7-day RPs, whose interest rate is the Base Rate of the Bank of Korea. Since the reserve maintenance period was lengthened from half a month to a month from 2012, 14-day RPs have occasionally been used. Meanwhile, if the Bank of Korea lacks sufficient Government bonds for the RPs that it needs to sell, it may borrow<sup>29)</sup> them from financial institutions.

The Monetary Stabilization Account (MSA), a term-based deposit facility, is one of the open market operation instruments that the Bank of Korea uses to control short-term liquidity. In normal times, the Bank of Korea accepts deposits from financial

28) This refers to transactions of direct sales or purchases of securities by the Bank of Korea in the open market, which are referred to as "outright sales and purchases" in order to differentiate them from RPs.

29) Securities lending and borrowing by the Bank of Korea has been allowed since the amendment of the Bank of Korea Act on December 17, 2011. Ordinarily, the central bank uses this method to borrow Government bonds from financial institutions for the sale of RPs. However, it can also use the method to make loans to financial institutions having difficulty in raising funds such as in the case of a bond market contraction owing to a financial crisis. In this case, the central bank lends Government bonds, which usually have good liquidity, against the security of risky bonds, etc. held by financial institutions.

institutions in a process of market-friendly competitive bidding. However, it can also oblige financial institutions to make deposits with the MSA in exceptional situations, including rapid credit expansion. The maturity period of deposits with the account is less than 91 days, but the Bank of Korea largely accepts deposits to the MSA with a maturity less than 1 month<sup>30)</sup> such as 28-day deposits, in order to ensure the flexible operation of funds by financial institutions. Early withdrawal of MSA deposits are restricted,<sup>31)</sup> and the amount deposited is not regarded as reserves.

Table III-2

Instruments of open market operations

		Method of operation	Securities eligible
Long-term adjustment	Withdrawal	Issuance of long-term MSBs	–
	Supply	Repurchases of MSBs with long-term remaining maturities	–
Short-term adjustment	Withdrawal	Sales of RPs	Government bonds, government-guaranteed bonds, and MBSs issued by the Korea Housing-Finance Corporation, held by the Bank of Korea,
		Attraction of MSA deposits	–
		Issuance of short-term MSBs	–
	Supply	Purchases of RPs	Government bonds, government-guaranteed bonds, MSBs and MBSs issued by the Korea Housing-Finance Corporation, held by institution counterparts
		Repurchase of MSBs with short-term remaining maturities	–

The outstanding MSBs balance was 176.7 trillion won on the average basis in 2016. Of this amount, 2-year MSBs accounted for 70.6%; 1-year MSBs, 18.2%; 182-days MSBs, 4.1%; and 91-days MSBs, 7.1%. During the same period, outstanding RP sales

30) This practice is related to the fact that the deposits in the MSA with a more than 1-month maturity are not included in the won currency liquidity ratio (=current assets with a remaining maturity of less than 1 month/current liabilities x 100).

31) Early termination of an MSA deposits is allowed only for cases deemed unavoidable by the Governor of the Bank of Korea. As such, MSA deposits have less liquidity than MSBs, which can be sold in the secondary market.

stood at 13.8 trillion won, and the average balance of the MSA recorded 11.8 trillion won.

**Table III-3 Performance by instrument of open market operations**

(average balance basis, trillions of won)

		2013	2014	2015	2016
Outstanding MSBs		163.1	171.8	182.5	176.7
RPs	Sales	15.2	16.0	17.4	13.8
	Purchases	0.0	0.0	0.0	0.0
Balance of MSAs		11.4	12.6	14.0	11.8

Source: Bank of Korea

### (Operational Method)

The Bank of Korea conducts most of its open market operations through public offerings,<sup>32)</sup> and if necessary, it also makes bilateral transactions with individual financial institutions.

The public offerings are divided into subscriptions and competitive auctions. When the Bank of Korea undertakes securities transactions or issues/repurchases MSBs, it allocates the securities or MSBs among institutional bidders according to their bidding amount by applying a fixed interest rate set by the Bank. This method is called subscription. Meanwhile, in a competitive auction, the central bank allocates securities, etc. according to bid rates. The subscription method is used for regular subscriptions to MSBs<sup>33)</sup> and the sale of 7-day RPs, while the competitive auction method is used for other types of operations.

In a competitive auction, there are two methods for determining interest rates for transactions; the single rate method (Dutch method) and multiple rate method

32) A series of procedures, including bidding announcement, implementation of bidding, notification of successful bids and fund settlement, are carried out through the online computer network established between the Bank of Korea and its trading counterparts.

33) Using this subscription method, the Bank of Korea issues 1-year and 2-year MSBs once a month (typically, the last Friday of a month).

(conventional method). The former applies the highest rate among those offered by successful bidders, while the latter applies the rate that each bidder offers. The Bank of Korea uses the single rate method to absorb liquidity and the multiple rate method to supply liquidity. For instance, to absorb liquidity, if the Bank of Korea issues MSBs or sells RPs through a competitive auction, any financial institution that offers the lowest rate (or the highest price) will be at the top of the allocation order. Subsequently the highest successful bid rate is applied to all successful bidders. In contrast, if the Bank of Korea seeks to supply liquidity by repurchasing MSBs before maturity or buying RPs in a competitive auction, the financial institution that offers the highest rate (or the lowest price) will be at the top of the allocation order. The bid rate that each successful bidder offers will become a successful bid rate—in other words, successful bid rates will vary among successful bidders. Meanwhile, if the bid rate of more than two successful bidders is the same, the amount allocated will be in proportion to the amount bid for (at that price).

Other than public offerings, the Bank of Korea can repurchase MSBs prior to maturity or sell/lend securities to specific financial institutions through bilateral transactions. However, the use of bilateral transactions is limited to some exceptional cases: for example, to support a financial institution suffering liquidity problems, or to conduct an intraday RP transaction to help address a temporary shortage of settlement funds.

### (Eligible Financial Institution Counterparts)

Once every year, the Bank of Korea selects its financial institution counterparts<sup>34)</sup> for transactions—such as MSB transactions and securities selling and buying/lending and borrowing—based on its selection criteria that take into consideration the efficiency of

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34) The selection of financial institution counterparts has to be made based on comprehensive considerations—for example, whether it is better to have various financial institutions participate or whether just maintain a special relationship with certain market makers so as to boost market development and reduce the risk potentially faced by the central bank.

open market operations and the asset and financial soundness of applying financial institutions. As of September 2017, there are 31 financial institution counterparts. Specifically by operational instrument, there are 20 financial institution counterparts (8 domestic banks, 2 foreign bank branches, and 10 securities companies) for MSB transactions and outright transactions for securities; 23 institution counterparts for RP transactions, including 13 domestic banks that are eligible for MSA deposits; and 9 institution counterparts, including 5 domestic banks, for securities lending and borrowing.

## (2) Lending and Deposit Facilities

Lending and deposit facilities are operated by central banks to control the supply and demand for funds by extending loans to or receiving deposits from individual financial institutions. Central banks' lending and deposit facilities first took the form of a system of commercial bill rediscounts, before developing into liquidity adjustment loans and standing facilities, and they still assume a critical function in implementing monetary policy as a means of injecting liquidity into the financial market and serving as the lender of last resort.

For some time after its adoption, the central bank's rediscount system of commercial bills was utilized by banks as a means to raise general operational funds from the central bank. With the development of the financial market, however, the system gradually faded, and liquidity adjustment loans were later introduced as more emphasis began to be placed upon the function of interest rate disclosure, to notify the markets of changes in the central bank's monetary policy stance. After a series of systemic changes, central banks of most major countries introduced standing facilities as a policy instrument in order to rein in the excessive volatility of money market interest rates, while implementing interest rate-oriented monetary policy operational framework to enhance the market character of the money market rates. Under the

standing facilities, liquidity is supplied and absorbed without limit within a certain margin around the policy rate, thereby determining the upper and lower limits of the overnight call rate, which contributes to the formation of money market interest rates.

Meanwhile, the central bank's lending facilities supply financial institutions with the liquidity required for lending. This function, however, has gradually declined in conjunction with the development of the financial market, and is not used much in advanced countries. The central bank's lending facilities also function as the lender of last resort. That is, in the event of individual financial institutions facing temporary fund shortages, the central bank swiftly provides them the required funds to contain the spread of financial unrest at an early stage. In addition, the lending facilities contribute to smooth payments and settlements. For example, intraday overdrafts provide real-time support to cover temporary fund shortages suffered by financial institutions during the course of a day, thereby ensuring the smooth settlement of payments and the stable operation of the payment and settlement system, which makes up an essential element of the financial infrastructure.

## History

During the period of rapid economic growth, the lending facilities of the Bank of Korea were used as a means of policy financing to support particular industries, rather than as a tool for liquidity adjustment. In other words, when banks provided financial support for a strategic industry amid the chronic excess demand for funds, the Bank of Korea refinanced a certain ratio (30–60%) of the funds extended at rates lower than market interest rates. This system led to an oversupply of liquidity, bringing about inflation. It also made it difficult for the Bank's lending facilities to play an active role as an instrument of monetary policy, because interest rates stayed at a low level for long periods and the amount of lending was decided irrespective of its policy intentions. Furthermore, as the Bank absorbed excessive liquidity by issuing MSBs, an overhang of MSBs resulted.

Table III-4

## Loans of the Bank of Korea until 1993

(billions of won)

Year-end	Rediscounts of commercial bills	Loans against bills				General loans	Total
		Trade financing	Agriculture, fisheries and livestock	Defense industry	Other bills		
1980	297.4	1,291.3	121.1	16.7	267.4	451.0	2,445.0
1985	1,320.8	2,039.2	173.6	6.3	67.9	5,463.2	9,071.0
1990	3,819.6	891.9	348.2	6.3	0.4	5,968.4	11,034.8
1993	5,178.1	1,054.9	507.8	5.8	1.1	9,170.2	15,917.8

Source: Bank of Korea

As the deregulation of interest rates and financial market openness progressed rapidly from the early 1990s, management of the money supply using indirect methods of adjustment based on market principles emerged as an important task. The Bank of Korea completely reorganized its lending facilities in March 1994, by reducing policy financing and strengthening its function of management of the money supply. To summarize the changes, an ACCL (Aggregate Credit Ceiling Loan) system was introduced and the rediscounts of commercial bills, trade financing, and loans for the production of basic materials and parts were incorporated into this system. Most policy funds, meanwhile, were either shifted over onto the fiscal budget or were discontinued. The ACCL, under which the Bank of Korea sets a ceiling on its overall refinancing provided to banks, is meaningful in that it is not a system of automatic rediscounts. Thus, the Bank of Korea was able to take the lead in determining the amount of the credit supplied in the form of ACCL and the objects eligible for refinancing. This represented a large step forward from the Bank's previous practice of passively supplying funds.



**Table III-5** Reorganization of the Bank of Korea's rediscount system  
(March 15, 1994)

Before	After
<ul style="list-style-type: none"> <li>- Rediscounts of commercial bills</li> <li>- Trade financing</li> <li>- Loans for the production of basic materials and parts</li> <li>- Funds for small and medium-sized enterprises (SMEs) in the provinces</li> </ul>	<ul style="list-style-type: none"> <li>Absorbed by the newly introduced Aggregate Credit Ceiling Loan system</li> <li>- Rediscounts of commercial bills, trade financing, and loans for the production of basic materials and parts, operated within the Aggregate Credit Ceiling quotas for individual financial institutions</li> <li>- Funds for SMEs in the provinces operated within the quotas set for the Bank of Korea regional branches</li> </ul>
<ul style="list-style-type: none"> <li>- Loans to meet temporary shortages of funds</li> <li>- Loans for agriculture, fisheries and livestock</li> </ul>	<ul style="list-style-type: none"> <li>Operated as before</li> <li>Gradually transferred to the fiscal budget</li> </ul>
<ul style="list-style-type: none"> <li>- Equipment funds for export industries</li> <li>- Funds for the technology development of SMEs, equipment funds for pollution prevention for SMEs, procurement loan facilities for enterprises buying goods manufactured by SMEs</li> <li>- Loans for the defence industry</li> <li>- Funds for liquidity adjustment</li> <li>- Loans whose fresh extension was discontinued: industrial structural adjustment funds, funds for energy-saving equipment, and industrial rationalization funds</li> <li>- Funds for management stabilization of investment trust companies</li> </ul>	<ul style="list-style-type: none"> <li>Discontinued</li> <li>Reviewed every 6 months for rollover</li> </ul>

The ACCL system was recognized as a transitional stage in the evolution of the central bank's lending facilities from its former function of policy financing to the sole function of liquidity adjustment. The ability of the Bank of Korea to set the ceiling represented a step toward advanced lending practices. However, as allocation criteria were linked to commercial banks' lending to SMEs and lending rates were lower than market interest rates, the new system does not represent a complete departure from previous policy financing arrangements. Rather, the measure accounted for the fact that preferential support for SMEs could not be rolled back all at once under the

financial and economic conditions prevailing at the time in Korea. Thus, until the Asian currency crisis, the medium- and long-term goal of the Bank of Korea in regard to its lending facilities was to normalize its function by gradually ratcheting down the ACCL and adjusting interest rates on provided credit to a realistic level. However, subsequent deterioration of the domestic economy and financial market conditions necessitated approaching the achievement of this goal from a more long-term perspective. The ACCL was used extensively as a means to overcome large-scale issues of the domestic economy and liquidity, as well as credit crunches resulting from financial and economic events in Korea and abroad, such as the 1997 currency crisis, the September 11 incident in the United States, and the 2008 global financial crisis, thus resulting in an increase in the volume of the loans.

The reorganization of the ACCL in April 2013 covered target sectors, support ceilings, and loan interest rates. In December of the same year, its title ACCL was changed to the Bank Intermediated Lending Support Facility.<sup>35)</sup> The new system is no longer divided into a ceiling for individual financial institutions and a ceiling for the Bank of Korea regional branches, but has instead been reorganized into five individual programs categorized by target areas: trade financing, credit loans, small-scale business owners, high-tech start-ups, and regional SMEs. In addition, the ceilings are now adjusted as the situation requires, which represents a radical departure from the previous policy of regular quarterly adjustments.

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35) The name Aggregate Credit Ceiling Loans emphasized that the Bank of Korea plays a leading role in determining banks' borrowing ceilings in advance to avoid the difficulties in managing the money supply experienced under the previous monetary targeting regime. However, the transition to the interest rate-oriented monetary policy operational framework significantly weakened this original purpose. The name Bank Intermediated Lending Support Facility refers to a central bank lending system aimed at strengthening the financial intermediation role of banks in sectors suffering from a lack of credit.

**Table III-6** Content of reorganization of Aggregate Credit Ceiling Loans

	Previous	Revised
Title	Aggregate Credit Ceiling Loans	Bank Intermediated Lending Support Facility
Composition	<Ceiling for financial institutions> <ul style="list-style-type: none"> <li>• Ceiling for trade financing</li> <li>• Ceiling for credit loans</li> <li>• Ceiling for small-scale business owners</li> <li>• Ceiling for high-tech start-ups</li> </ul> <Ceiling for regional branches of the Bank of Korea>	<ul style="list-style-type: none"> <li>• Support program for trade financing</li> <li>• Support program for credit loans</li> <li>• Support program for small-scale business owners</li> <li>• Support program for high-tech start-ups</li> <li>• Support program for regional SMEs</li> </ul>
Method of determining the ceilings	Adjustment on a quarterly basis	Adjustment as necessary

Besides the ACCL, the Bank of Korea also introduced Liquidity Adjustment Loans in June 2000 to stabilize the financial market by providing prompt access to funds for applicant banks facing temporary shortages of liquidity. Another purpose of the loans was to enable the central bank to publicly signal its monetary policy stance to the financial markets through the flexible adjustment of lending rates, as is the norm in advanced countries. Lending performance was, however, conspicuously weak because financial institutions sought to avoid borrowings in fear of a reduction of their credit standing through a stigma effect. In September 2000, Intraday Overdrafts were adopted to provide financial support to banks experiencing short-lived shortages of funds for payment-settlements within the course of the day.

From March 2008, as part of the reform of the monetary policy operational framework, the Bank of Korea introduced new Liquidity Adjustment Loans and Deposits on the model of major countries' standing facilities with adjustments for conditions in Korea. The object of their adoption was to heighten the stability of money market interest rates and secure a further policy tool available in the event of a financial crisis. Meanwhile, Loans to Meet Temporary Shortages of Funds and the former Liquidity Adjustment Loans, whose functions duplicate those of the new facilities, were abolished.

## Current System and Operation

The Bank of Korea's credit operations with financial institutions<sup>36)</sup> are subdivided into rediscounts on bills, loans against securities collateral, and loans against assets as temporarily acceptable collateral pursuant to Articles 64 and 65 of the Bank of Korea Act. In addition, when severe impediments, such as credit contraction, to obtaining funds from financial institutions arise, or are strongly likely to arise, the Bank of Korea may, upon the approval of at least four members of the Monetary Policy Board, render credit to any for-profit, non-bank financial institutions.

In the meantime, the Bank of Korea may accept and hold deposits from financial institutions pursuant to Article 54 of the Bank of Korea Act, and pursuant to Articles 79 and 82, it may accept deposits from judicial persons other than financial institutions in cases determined by the Monetary Policy Board.

As provided for under this legislation, the lending and deposit facilities of the Bank of Korea available to financial institutions consist of the Bank Intermediated Lending Support Facility, Intraday Overdrafts, Liquidity Adjustment Loans and Deposits, and Special Loans. In addition, the Bank of Korea operates current deposits for the acceptance of reserves as well as settlement accounts for transactions between financial institutions.

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36) Under Article 11 (Scope of Financial Institutions) of the Bank of Korea Act

(1) The term "financial institutions" in this Act means banks referred to in Article 2 of the Banking Act and bank holding companies referred to in the Financial Holding Companies Act.

(2) Deleted.

(3) Insurance companies and companies which engage exclusively in mutual savings bank business or in trust business shall not be deemed financial institutions.

Table III-7 The Bank of Korea's lending and deposit facilities<sup>1)</sup>

Category	Function	Ceiling	Rates	Maturity
Bank Intermediated Lending Support Facility	Inducing banks to expand loans to small and medium-sized firms	25 trillion won	0.5–0.75% per annum	One month
Liquidity Adjustment Loans and Deposits	Constraining excessive volatility of money market interest rates by enabling financial institutions to borrow shortage funds from the central bank or deposit surplus funds at an interest rate level within a certain margin above or below the Base Rate	–	The Bank of Korea Base Rate $\pm 100\text{bp}$ <sup>2)</sup>	Overnight
Intraday Overdrafts	Supporting banks facing temporary shortages of funds for payment and settlement in the course of a day	–	Yield on three year Government bonds – call rate (lowest interest rate is 0%) <sup>3)</sup>	Close of the business day
Special Loans	Extension of loans as the lender of last resort	Determined in each case		

Notes: 1) As of September 2017

2) When the Bank of Korea's Base Rate is below 1%, the interest rate for Liquidity Adjustment Loans is set at double the Base Rate, and Liquidity Adjustment Deposits apply the minimum rate of 0%.

3) The Bank of Korea collects interest on each business day by applying an interest rate equivalent to the spread between the three-year Government bond yield and the call rate (unsecured overnight rate) on loans exceeding 25% of a financial institution's equity capital. The Bank does not collect interest on loans that do not exceed 25% of the institution's capital.

### (Bank Intermediated Lending Support Facility)

The Bank Intermediated Lending Support Facility is a lending system operated by the Bank of Korea to support financial institutions' lending to SMEs. While the Bank of Korea's interest rate policy affects the economy evenly and as a whole, the Bank Intermediated Lending Support Facility has the advantage of making monetary policy more effective since it enhances the credit channel by ensuring the allocation of funds to more productive sectors. The Bank of Korea provides low-interest rate funds, within certain ceilings, to financial institutions based on their performances in extending loans to SMEs. The Monetary Policy Board may adjust the ceilings<sup>37)</sup> and

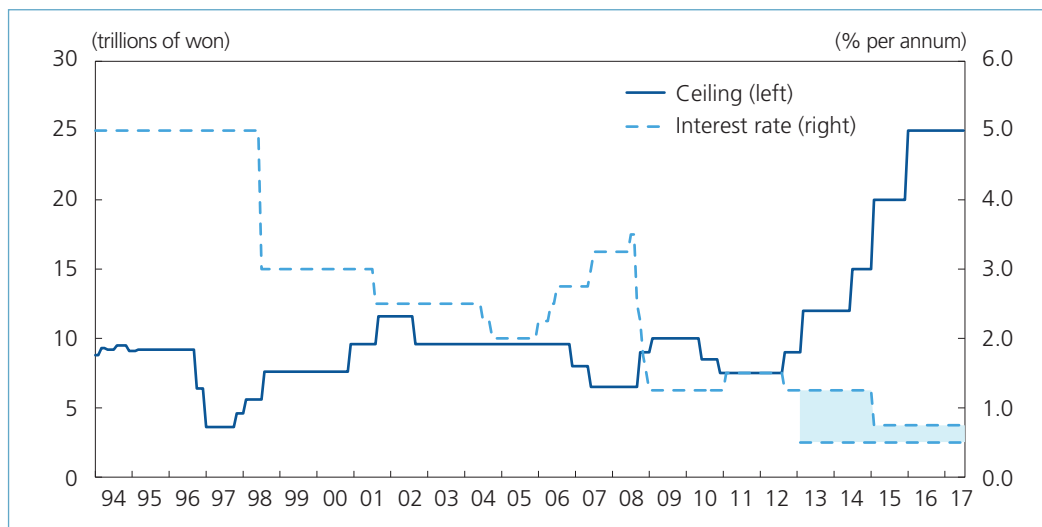
37) The ceilings under the Bank Intermediated Lending Support Facility are categorized as follows: the ceiling on individual lending programs, the retained ceiling, and the total ceiling, an aggregate of the aforementioned ceilings.

interest rates on this facility at any time as necessary, in consideration of factors such as economic and financial circumstances and the funding conditions of SMEs.

Since the reorganization of the ACCL system into the Bank Intermediated Lending Support Facility, the total ceiling under the latter has continued to expand, reaching 25 trillion won as of September 2017. The interest rate on loans has also gradually decreased to the level of 0.50–0.75% as of September 2017. The expansion was due to the fact that the Bank of Korea aggressively utilized this lending support program as a supplement to the Base Rate, with the aim of strengthening the recovery and growth potential of the Korean economy.

Figure III-3

### Ceiling and interest rates on Bank Intermediated Lending Support Facility<sup>1)</sup>



Note: 1) ACCL was changed to the Bank Intermediated Lending Support Facility in December 2013

Source: Bank of Korea

The composition of the Bank Intermediated Lending Support Facility has been adjusted as necessary according to changes in the demands of policy. In September 2014, the Bank of Korea established a new support program for facilities investment to encourage SMEs to invest in facilities, and also created a special support category within the support program for regional SMEs in order to increase support for local companies

in depressed sectors. In April 2015, the Bank abolished the support program for credit loans, while expanding the eligibility for the support program for facilities investment to include medium-sized companies, so as to promote their investment in facilities. In March 2016, in an effort to boost the launch of start-ups, the existing support program for high-tech start-ups was expanded into a program for not only high-tech start-ups, but also other forms of start-up SMEs. In August 2017, the support program for start-ups was changed to a new growth and job creation support program to discover new drivers of growth and create job opportunities, and the Bank abolished the support program for facilities investment<sup>38)</sup> of which temporary program had reached the scheduled date for its expiration. The Bank also established a program to stabilize lending to SMEs, with the aim of reinforcing its countercyclical function and increasing the effectiveness of its monetary policy. Thus, as of September 2017, the Bank Intermediated Lending Support Facility comprises five support programs categorized by objective (trade financing, new growth and job creation, and loan stabilization for SMEs) and recipient (small-scale business owners and regional SMEs).

Table III-8

**Ceiling and interest rates of  
Bank Intermediated Lending Support Facility<sup>1)</sup>**

(trillions of won, % per annum)

Program	Ceiling	Interest Rate	Objectives
Trade financing	1.5	0.50	Support for export financing
New growth and job creation	6.0	0.50	Support for high-tech start-ups
Small-scale business owners	0.5	0.50	Alleviate high-interest burden of small-scale business owners in financial difficulties
Stabilization of lending to SMEs	11.0	0.50–0.75 <sup>2)</sup>	Alleviate volatility in lending to SMEs
Regional SMEs	5.9	0.75	Support for regional SMEs
Total	25.0 <sup>3)</sup>	–	

Notes: 1) As of September 2017

2) The outstanding balance of the facility investment program, which expired with no new additional loans, applies the rate that stood at the end of its operation.

3) Includes the retained ceiling (0.1 trillion won)

38) No new loans were available under the facility investment support program once the operation period expired in August 2017.

The characteristics of individual programs are as follows. First, the trade financing program is designed to provide the export financing needed by SMEs to obtain raw materials and manufacture products. The program ceiling is set at 1.5 trillion won, and the interest rate at 0.5% per annum as of September 2017. The program for new growth and job creation aims to stimulate the Korean economy by promoting the launch of start-ups. Under this program, the Bank of Korea helps banks to lend operating funds to SMEs that have been established within 7 years and that possess outstanding technologies or contribute to the discovery of new drivers for growth and job creation. The ceiling for this program is set at 6 trillion won and the interest rate at 0.5% per annum. The program for small-scale business owners is designed to provide the financially vulnerable with greater access to financing. To this end, the Bank of Korea provides support to financial institutions in line with their performances in setting lower interest rates on loans to small-scale business owners with low credit scores and revenue. The ceiling for this program is set at 0.5 trillion won and the interest rate at 0.5% per annum. The support program for regional SMEs focuses on specialized industries suited for regional economic conditions based on the three categories of strategic, special and general support sectors. The ceiling for this program is set at 5.9 trillion won and the interest rate at 0.75% per annum. The loan stabilization program for SMEs intends to alleviate volatility in lending to SMEs and enhance the effectiveness of monetary policy through the smooth functioning of the credit channel. Under this program, the Bank of Korea initiates the lending process when the supply of credit to SMEs, along with their financial conditions reflecting such supply, is deemed to be inadequate. The program ceiling is set at 11 trillion won.



## (Liquidity Adjustment Loans and Deposits)

Together with the realignment of the monetary policy operational framework from March 7, 2008, Liquidity Adjustment Loans and Deposits were adopted with modifications corresponding to the domestic situation from the standing facilities of central banks of major countries including the Bank of England and the ECB. Liquidity Adjustment Loans allow financial institutions to borrow from the Bank of Korea to obtain their overnight liquidity requirements, and Liquidity Adjustment Deposits allow banks to freely deposit their surplus funds with the Bank of Korea. Liquidity Adjustment Loans and Deposits contain the volatility of money market interest rates within a certain range as Liquidity Adjustment Loan and Deposit rates set the upper and lower bounds of money market interest rates.

The operational method of Liquidity Adjustment Loans and Deposits was improved in 2009 and 2011. In February 2009, it became possible for the maturity of Liquidity Adjustment Loans to be extended by up to one month so as to allow them to be used flexibly as a tool for stabilizing the financial market, and the restrictions for interest rate adjustment were eased so that they can be decreased/increased to the level of the Bank of Korea's Base Rate. In 2011, as the amended Bank of Korea Act changed the reserve maintenance period of financial institutions from a half-monthly to a monthly basis, the Bank of Korea adjusted the interest rates of Liquidity Adjustment Loans and Deposits on the last business day of the reserve maintenance period to the same level as on other business days, in order to discourage financial institutions from delaying the adjustment of reserve overs or shorts until the last business day of the reserve maintenance period.<sup>39)</sup> This measure was designed to prepare against the possibility of violent fluctuations in the overnight call rate arising from significantly increased amounts of fund excesses or deficits to be adjusted around the last business day of the maintenance period, although it was also expected to allow financial institutions to

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<sup>39)</sup> Before the system was reformed, a rate of Base Rate  $\pm 0.5\%$  had been applied on the last business day of reserve requirements, while Base Rate  $\pm 1.0\%$  on other business days.

increase flexibility and autonomy in terms of their fund management.

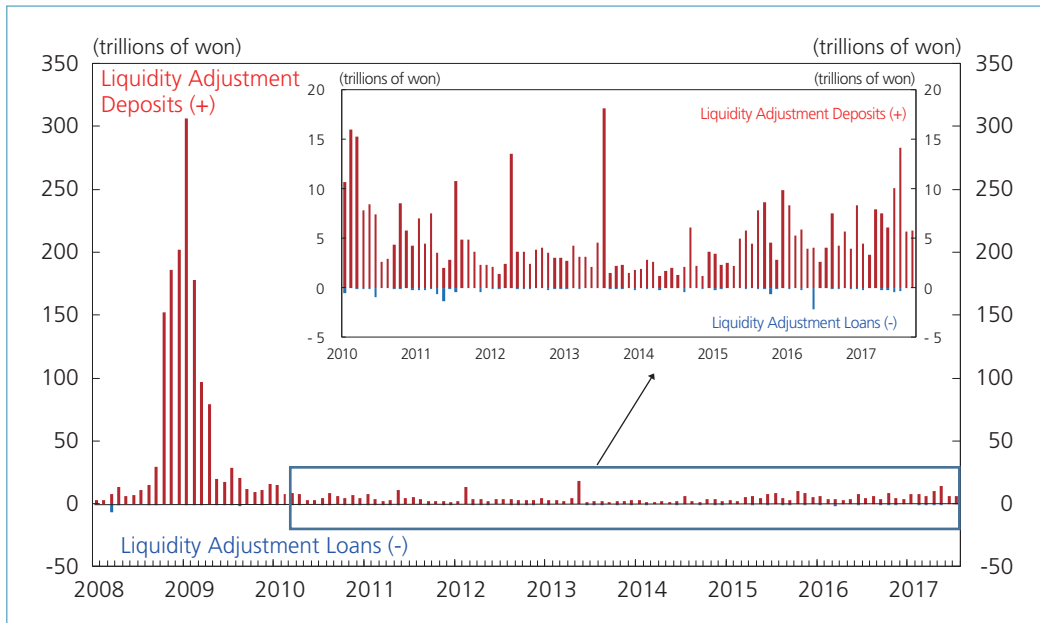
Financial institutions eligible to make use of these standing facilities are those required to hold reserves. The use of Liquidity Adjustment Loans by financial institutions whose financial soundness is weak may be restricted so that they do not become a tool for the support of troubled financial institutions. Liquidity Adjustment Loans and Deposits carry overnight maturities. But if the Monetary Policy Board recognizes that it is necessary for smooth working of the financial markets, tenor for Liquidity Adjustment Loans may be extended by up to one month. The interest rate for Liquidity Adjustment Loans is 1%p higher than the Base Rate of the Bank of Korea, and should the Base Rate be below 1%, the rate becomes twice the Base Rate. Meanwhile, the rate for Liquidity Adjustment Deposits is 1%p lower than the Base Rate, and should the Base Rate be below 1%, the lower limit becomes 0%.

The performance of Liquidity Adjustment Loans suggests that banks do not routinely access this facility even when faced with temporary fund shortages and, when it is used on intermittent occasions, this is due to their predictions as to their funding conditions going temporarily awry. This is probably because, when banks experience temporary fund shortages, it is more advantageous for them to borrow money from the call market at a low interest rate than to use the Liquidity Adjustment Loans, which impose a rate 1%p higher than the Base Rate, and also because those banks that do so risk a stigma effect from a reputation for being unable to raise funds in the financial market.

In the case of Liquidity Adjustment Deposits, it has been observed that more banks have come to prefer depositing surplus funds in the facility since credit risk intensified in the wake of global financial crisis. The crisis led to an increased volume of the Liquidity Adjustment Deposits, which exceeded 300 trillion won during March 2009 (based on the accumulated daily balances for each month) before decreasing again when the crisis subsided.

Figure III-4

## Liquidity Adjustment Loans and Deposits



## (Intraday Overdrafts)

Intraday Overdrafts were introduced in September 2000 to extend financial support to banks experiencing transient shortages of settlement funds in the course of a day. They thus serve to stimulate fund transactions between financial institutions and, as a result, between corporations using those institutions. Their adoption came about because of the increasing incidence of payment settlement being temporarily delayed, a situation that frequently occurs as the scale of settlement between financial institutions increases.

The Bank of Korea provides automatic real-time support in the form of Intraday Overdrafts within the amount of the collateral, when the payment or settlement funds required during the day exceeds the balance of the current deposits held with the Bank of Korea by individual financial institutions. During the initial adoption stage in 2000, the Bank set the ceiling on Intraday Overdrafts at the equivalent of a bank's average

current deposit balance, but raised the ceiling in July 2001 to double the previous amount before abolishing it entirely in September 2006. Subsequently, however, the Bank resolved to levy interest to deter financial institutions from excessive reliance on them. As a result, on each business day the Bank collects interest on loans exceeding 25% of a financial institution's equity capital by applying a rate equivalent to the spread between the three-year Government bond yield and the call rate (uncollateralized overnight rate). This interest rate is changed each quarter, and calculated based on the average spread between the three-year Government bond yield and the call rate during the last month of the immediately preceding quarter.

The institutions entitled to use Intraday Overdrafts are limited to financial institutions that must deposit reserves with the Bank of Korea and have joined New BOK-Wire (BOK-Wire+). If banks fail to redeem their borrowings by the close of the business day, the Bank of Korea converts Intraday Overdrafts to Liquidity Adjustment Loans. Financial institutions whose use of Liquidity Adjustment Loans is restricted may also be limited in their access to Intraday Overdrafts. As of September 2017, the daily average balance of Intraday Overdrafts stood at about 1.7 trillion won.

Table III-9

**Utilization of Intraday Overdrafts**

(based on daily average balance, billions of won)

	Dec. 2011	Dec. 2012	Dec. 2013	Dec. 2014	Dec. 2015	Dec. 2016	Sep. 2017
Nationwide commercial banks	550.8	491.0	227.3	324.7	69.8	128.8	106.2
Local banks	2.8	0.4	4.6	0.1	44.9	0.5	1.8
Specialized banks	708.0	634.9	493.8	489.9	227.0	336.3	178.6
Branches of foreign banks	482.3	780.1	655.1	724.3	647.3	789.8	784.5
Total	1,743.9	1,906.4	1,380.8	1,539.0	989.0	1,255.4	1,071.1

Source: Bank of Korea

## (Special Loans)

Special loans are those that the Bank of Korea extends as the lender of last resort in order to secure financial market stability, after obtaining special approval from the Monetary Policy Board. The Bank of Korea provided a total of 10.8 trillion won in special loans during the latter half of 1997 when the financial market was extremely unstable. These loans, extended to resolve financial institutions' liquidity shortages, differed from previous low-interest rate special loans to make up for balance sheet losses in that they were provided at market interest rates.

Viewing these special loans in detail, the Bank of Korea provided 1 trillion won in September 1997 to Korea First Bank, which was suffering a shortage of liquidity. The interest rate was 8% per annum, the level of the average cost of funds for commercial banks.<sup>40)</sup> In October 1997, the Bank also extended, through their creditor banks, a total of 1 trillion won at 8% per annum to 16 merchant banks whose credits to corporations under the Bankruptcy-Prevention Accord exceeded 50% of their equity capital. In December of that year, the financial markets faced a crisis, including the lackluster state of fund transactions through the call market following the suspension of business by 14 merchant banks and securities companies. The Bank of Korea provided 6.8 trillion won to banks at a rate one percent lower than the overnight call rate, and then 1.1 trillion won to securities companies and 0.9 trillion won to merchant banks at the overnight call rate through the Korea Securities Finance Corporation and the Korea Non-Bank Deposit Insurance Corporation, respectively. Once the financial market had largely begun to regain stability from the latter half of 1998, however, the Bank of Korea progressively called in these loans.

Meanwhile, in order to prepare against the possibility of banks' shortages of settlement funds due to the Y2K problem, the Bank of Korea put in place a Y2K

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40) Although the loan fell due in September 1998, the Bank of Korea re-extended it at the overnight call rate, taking the view that Korea First Bank, which faced the prospect of disposal to a foreign buyer, was experiencing shortages of liquidity.

Special Lending Facility for the six months from November 1999 to April 2000. However, since the much-feared Y2K problem passed without major incident, no special loans were extended under this facility. Additionally, in accordance with the government's Credit Recovery Support Program for Those Unable to Meet the Financial Expenses for Their Financial Livelihood, a special loan was extended through Korea Development Bank to the Korean Asset Management Corporation (KAMCO) to support the restructuring of debts of those receiving basic public livelihood support. The amount of the loan was 446.2 billion won and it carried an interest rate of 2% per annum with the outstanding balance being repaid at the end of 2006.

In response to the global financial crisis, the Bank of Korea subscribed 3,296.6 billion won to the Bank Recapitalization Fund in March 2009 through the Korea Development Bank, in order to facilitate an expansion of credit supply and a smooth business restructuring process by recapitalizing banks. The subscription to the Bank Recapitalization Fund was repeated in four tranches over the period between 2010 and 2013, and the total amount was collected as of March 31, 2014. Furthermore, in collaboration with the government, the Bank of Korea devised Measures to Normalize Corporate Bond Market<sup>41)</sup> in an effort to alleviate uncertainties in said market. In March 2014 and October 2015, the Bank of Korea provided the necessary liquidity under this plan for the Korea Development Bank's contribution to the Korea Credit Guarantee Fund, by providing loans and direct sales of MSBs to the Korea Development Bank. The total amount of the two loans was collected by the Bank of Korea from the Korean Development Bank on March 26, 2015 and October 14, 2016, respectively.

With regard to special loans, the amendment of the Bank of Korea Act in 2011 eased the requirements for emergency credit. This move has granted more leeway to the Bank of Korea to provide special loans for financial stability. Along with easing

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41) This plan aimed to take preemptive action to prevent difficulties in the conversion issue of corporate bonds from spreading to the overall financial market in July 2013.

requirements for emergency credit the amended Bank of Korea Act extended the scope of eligible collateral so that the Bank can perform its role as the lender of last resort in a preemptive and flexible manner should any emergency situation occur that might jeopardize financial stability. In addition, the Bank of Korea may now extend credit to for-profit enterprises even when severe impediments arise to obtaining funds, as the amended Act eased the strict requirements on specific conditions such as at times of serious monetary contraction.

**Table III-10** Amendments of Bank of Korea Act of 2011 related to Special Loans

	Before amendment	After amendment
Easing requirements for emergency credit	May handle emergency credit in the event of grave emergency situations that directly threaten the stability of currency and banks	May conduct emergency credit operations with financial institutions whose liquidity conditions have deteriorated due to imbalances between fund raising and use of funds
Easing requirements for credit to for-profit enterprises	May extend credit to for-profit enterprises at times of severe monetary contraction when financial institutions are calling in existing loans and restricting new loans	May credit to any for-profit enterprise when severe impediments arise to obtaining funds from financial institutions including a severe contraction of credit or when there is a strong likelihood of their arising

Table III-11

## Loans of the Bank of Korea (since 1994)

(billions of won)

Loan type	End of 1994	End of 1997	End of 2000	End of 2005	End of 2010	End of 2015	Sep. 2017
Bank Intermediated Lending Support Facility <sup>1)</sup>	8,832.1	4,266.4	7,360.1	9,371.7	7,936.2	15,298.3	17,426.8
New Liquidity Adjustment Loans	-	-	-	-	-	-	-
Loans to the Bank Recapitalization Fund	-	-	-	-	2,793.6	-	-
Loans under Measures to Normalize Corporate Bond Market	-	-	-	-	-	3,431.3	-
Agriculture, fisheries and livestock funds	467.7	115.5	-	-	-	-	-
Balance management loans	2,855.4	496.0	25.8	-	-	-	-
Funds to stabilize management of investment trust companies	1,300.0	-	-	-	-	-	-
Special loans to Korea First Bank	-	1,000.0	-	-	-	-	-
Special loans to merchant banks	-	1,000.0	-	-	-	-	-
Funds for financial market stabilization measures	-	5,938.9	-	-	-	-	-
Liquidity Adjustment Loans	-	-	270.0	-	-	-	-
Total	13,455.2	12,816.8	7,655.9	9,371.7	10,729.8	18,729.6	17,426.8

Note: 1) In December 2013, the name was changed from Aggregate Credit Ceiling Loans to the Bank Intermediated Lending Support Facility.

Source: Bank of Korea



### (3) Reserve Requirements

The reserve requirement system obliges financial institutions to hold a certain ratio of their liabilities subject to reserve requirements in their accounts with the central bank.

Reserve requirements are still regarded as an important monetary policy tool, although used less frequently than in the past as the monetary base-focused orientation of monetary policy has shifted to an interest rate-focused orientation around the world from the 1980s. This is ascribable to its great usefulness in that it not only ensures seamless payments and settlements among financial institutions across their checking accounts with the central bank by having them hold a certain proportion of their reserves in the accounts, but it also enhances the efficiency of interest rate policy by stabilizing short-term market rates.

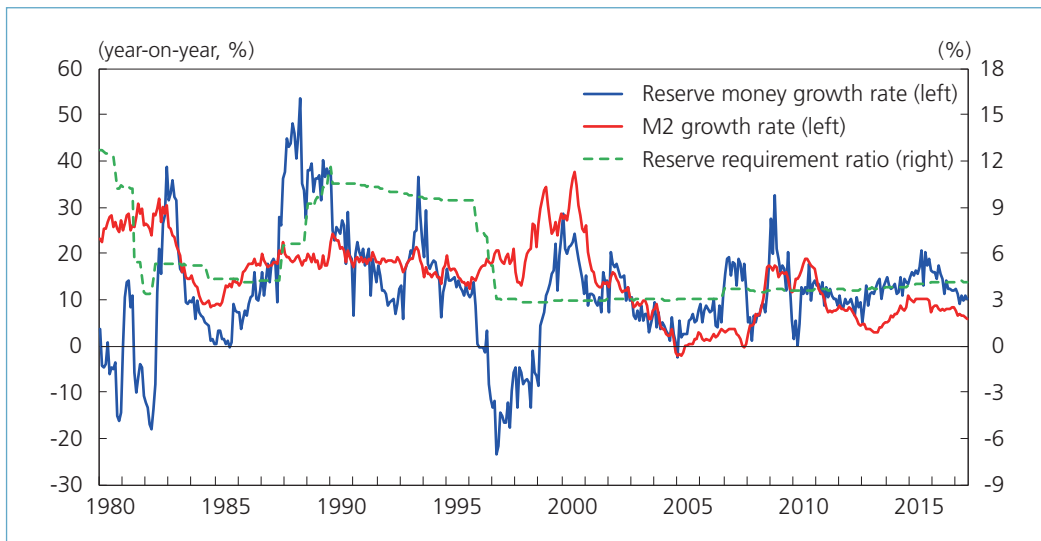
#### History

The passage of the Bank of Korea Act in 1950 introduced the reserve requirement system, although it initially played only a limited role as a supplement to direct controls. Following the September 1965 measures to promote more realistic interest rates, however, foreign capital inflows increased and exports surged rapidly, and pressures for expansion of currency issuance as a result increased. In response, the Bank of Korea raised the reserve requirement ratio sharply to absorb liquidity. On this occasion, the reserve requirements began to be used as a full-fledged monetary policy instrument.

From the mid-1980s, when the shift of current account into surplus led to monetary expansion through the foreign sector, reserve requirements were actively employed as a major instrument to control liquidity. Since the early 1990s, however, following financial liberalization and the rapid development of financial markets, open market

operations have emerged as the main monetary policy instrument, and the role of reserve requirements as a means of liquidity adjustment has declined. However, the reserve requirements still take an important place as an instrument of monetary policy. In the wake of the significant expansion of reserve liquidity in financial institutions due to inflows of foreign capital through banks' borrowing in 2006, and the subsequent expansion of the credit supply, the reserve requirement ratio was raised in December of the same year, in an effort to boost the effectiveness of interest rate policy.

**Figure III-5** Average reserve requirement ratio<sup>1)</sup> and money supply since 1980



Note: 1) Reserves/Liabilities subject to reserve requirements

In December 2011, the revision of the Bank of Korea Act allowed certain financial debentures to be included in the deposit liabilities subject to reserve requirements in specific cases. This change was made because the Bank of Korea needed to supplement its central bank function of managing liquidity, in response to the rapid credit expansion fueled by the issuance of financial debentures during the 2000s.

## Current System and Operation

The current system of reserve requirements reflects the amendment of the Bank of Korea Act in December 2011. Liabilities subject to reserve requirements include deposits and some financial debentures. Financial debentures, however, may be subject to reserve requirements only when deemed necessary by the Monetary Policy Board during periods of pronounced monetary expansion or periods when pronounced monetary expansion is expected.

The Monetary Policy Board decides the minimum ratio of reserves to be held by each financial institution within a range not exceeding 50%. However, in periods of pronounced monetary expansion, the Board can impose a marginal reserve requirement ratio of up to 100% on the excess of liabilities subject to reserve requirements over those on a specific date.

Reserve requirement ratios cannot differ among financial institutions, but can vary according to type and size of pertinent liabilities. Currently, however, different reserve requirement ratios are set out based only on the type of liabilities, not on the size, at the range of 0–7%.

Table III-12

Reserve requirement system<sup>1)</sup>

Classification	Key contents
■ Liabilities subject to reserve requirements	Deposit liabilities and some financial debentures
■ Financial institutions subject to reserve requirements	Banks, financial holding companies
■ Reserve requirement ratio	Differ according to type of pertinent liabilities (0–7%)
■ Method of calculating reserves	Calculation and maintenance on a monthly basis (more than 1 month deferred maintenance)
■ Method of maintaining reserves	Reserve deposits with the central bank, vault cash (up to 35% of required reserves)
■ Sanctions in the case of a shortfall in reserves	(Penalty) 1/50 of average deficiency (Ban on new lending, etc.) If the reserve shortfall continues for three consecutive periods, the ban may be continued until the minimum required reserves are met for at least one period.
■ Interest payment	Can be made, if necessary

Note: 1) As of the end of September 2017

Table III-13

Reserve requirement ratio by deposit type<sup>1)</sup>

(%)

Liabilities subject to reserve requirement	Reserve requirement ratio
■ Long-term savings for purchasing a house, property formation savings	0.0
■ Time deposits, time installment deposits, mutual installment savings for non-payment accounts, installment for home buying, CDs <sup>2)</sup>	2.0
■ Other deposits	7.0

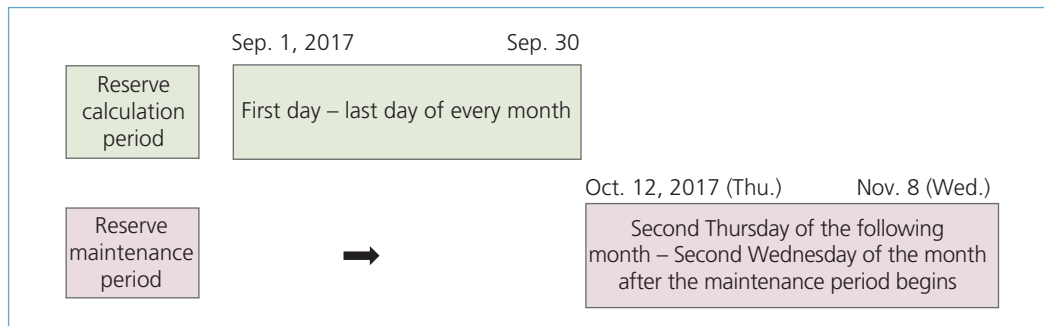
Notes: 1) As of the end of September 2017

2) CDs issued to financial institutions subject to the reserve requirement system are excluded.

As for the method of maintaining reserves, each financial institution calculates its required reserves on a monthly basis, and maintains the calculated reserves on a monthly basis after a certain period. The reserve calculation period is from the first day to the last day of every month, and the reserve maintenance period is from the Thursday of the second week of the following month to the Wednesday of the second week of the month after the following month.

Figure III-6

## Example of calculating and maintaining reserve requirements



Each financial institution must hold its reserves in its current deposit with the Bank of Korea or in its own vault cash. A financial institution is allowed to hold up to 35% of its required reserves as vault cash, the amount of which is calculated based on the amount held during the reserve calculation period.

If a financial institution fails to hold a sufficient balance to meet its reserve

requirements during the reserve maintenance period, it has to pay a penalty of 2% of the average balance of the deficiency. If its actual reserves fall short for three periods in a row, it may be forbidden to make new loans, investments, or pay dividends to shareholders until it maintains the required reserves for more than a month.

In principle, no interest payments are made on reserve deposits with the central bank. However, if necessary, reserve deposits can be remunerated as decided by the Monetary Policy Board.

## 3

**Monetary Policy Communication**

Monetary policy communication refers to a series of activities whereby central banks communicate with markets and economic agents such as households, enterprises, government and so on. The content of such communication is not limited to conveying information related to monetary policy, but also spans all the various feedback processes encompassing the market perception of the business cycle, responses of economic agents to monetary policy, and the sharing of information and opinions with the government.

The strategy for monetary policy communication involves, in broad terms, a process of deciding the combination of subjects, times and principal agents to be employed in communication with the aim of achieving monetary policy objectives. The accumulated research findings have given rise to a tacit consensus as to many aspects of the optimal central bank communication strategy, but no generally applied principles have yet emerged. So central banks around the world draw up and implement the communication strategy best suited to their particular circumstances.

Upon the extensive revision of the Bank of Korea Act at the end of 1997, the Bank of Korea switched the monetary aggregate-oriented policy operational framework to the interest rate-oriented one. With this shift in focus, building up trust with the financial markets and managing the expectations of economic agents started to take on an added importance as tasks to be handled by the Bank of Korea in striving for its policy goals. From the normative aspect, it is required that the Bank of Korea clearly demonstrate its accountability in keeping with the authority bestowed upon it so that its conduct of policy carries democratic legitimacy. In line with this, the Bank of Korea is making considerable efforts to heighten the transparency of its policies through communication as a means to foster a better understanding among economic agents regarding the formulation and implementation of monetary policy, thereby allowing them to form reasonable expectations regarding the direction of policy.

## Announcement of Targets of Monetary Policy

The Bank of Korea regards price stability as the most important objective of its monetary policy, and has adopted an inflation targeting regime as a framework for the operation of its monetary policy. The Bank consults with the government every three years to set and announce a medium-term inflation target.<sup>42)</sup> In addition, it has strengthened its accountability for the operation of inflation targeting. Until 2015, the Bank published *Inflation Report* twice a year to provide explanations on trend movements, underlying backgrounds, and forecasts with regard to inflation. From 2016, the Bank began to offer quarterly reviews and explanations of the operation of the inflation targeting regime through the *Monetary Policy Report*, a statutory report submitted to the National Assembly, instead of *Inflation Report*. Furthermore, if the CPI inflation exceeds  $\pm 0.5\%$  for six consecutive months, the Bank of Korea, through a press conference for example, to explain the reasons why the actual inflation rate deviated from the target, provides forecast path regarding future CPI growth, and lays out the monetary policy operational direction to attain the goal of price stability.

In order to maintain consistency in its communication activities concerning monetary policy and to raise public understanding of its policies, the Bank announced its *General Principles of Monetary Policy Operation* at the end of 2016. This principles specify the objectives of monetary policy set under the Bank of Korea Act, the relationships with the various factors considered in policy operation, and the basic policies employed to meet the purpose. In order to enhance transparency, predictability and effectiveness of monetary policy, the Bank will carry out its task by setting specific targets and objectives in accordance with the purpose of the Bank's establishment.

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42) Article 6 of the Bank of Korea Act (Setting the Operational Direction of Monetary and Credit Policy) (1) The Bank of Korea shall set the price stability target in consultations with the Government.

Reference  
III-2

## General Principles of Monetary Policy Operation (announced at the end of 2016)

The Bank of Korea Act stipulates the goal of monetary policy as follows: “The Bank shall contribute to the sound development of the national economy through ensuring price stability, while giving due consideration to financial stability in carrying out its monetary policy.” In order to enhance transparency, predictability and effectiveness of monetary policy, the Bank will carry out its task by setting specific targets and objectives in accordance with this goal.

- **(Inflation targeting)** The Bank of Korea maintains a flexible inflation targeting system to effectively achieve price stability, which is the primary objective of monetary policy. The inflation target is currently set at 2.0% in terms of consumer price inflation (year-on-year).
- **(Medium-term horizon)** The inflation target is meant to be achieved over a medium-term horizon, since consumer price inflation is affected not only by monetary policy but also by various other factors at home and abroad, which entail transitory and irregular impacts and the lag in monetary policy transmission.
- **(Forward-looking operation)** The Bank conducts its monetary policy in a forward-looking manner, while considering symmetrically the risks of inflation remaining persistently above or below the target. The path of convergence of inflation toward the target is assessed on overall inflation and growth outlooks as well as their uncertainties and risks, and on financial stability conditions.
- **(Flexible operation)** The Bank conducts its monetary policy to support real economic growth to the extent that this does not hinder attaining the inflation target over the medium-term.



- **(Consideration of financial stability)** In ensuring price stability over the medium-term, the Bank pays careful attention to the impact of monetary policy on financial stability.
  - **(Relationship with inflation targeting)** As persistent financial imbalance could undermine macroeconomic stability, paying due attention to financial stability in conducting monetary policy is consistent with the rationale behind flexible inflation targeting.
  - **(Examination of financial stability)** The Bank examines, assesses and announces financial stability conditions on a regular basis, to prevent excessive buildup of financial imbalances that may be brought about by monetary policy implementation.
  - **(Harmonization with macroprudential policy)** Since there are limits to maintaining financial stability solely by monetary policy that indiscretely affects the whole economy, monetary policy needs to be complemented by macroprudential policies to prevent accumulation of financial imbalance.

## Announcement of Policy Decision

The results of Monetary Policy Board meetings at the Bank of Korea are subject to public scrutiny and transparent disclosure. The Monetary Policy Board announces the statement of monetary policy direction immediately following its deliberation and decision on the direction of monetary policy, while the Governor holds a press conference to offer a detailed explanation on the policy decision and its backgrounds. Every decision on the movement of the policy rate including maintaining (or freezing) it at the previous level as well as of course changing it is subject to this procedure. This is because maintaining the policy rate at the previous level is also an important policy decision activity whose meaning needs to be clarified.

Meanwhile, the Bank of Korea has been making continuous efforts to enhance the policy signaling effect of the *Statement on Monetary Policy Direction*. First, the descriptive content of the statement has been significantly improved<sup>43)</sup> over the years following the global financial crisis. This is motivated by the growing need for the Bank of Korea to communicate more closely with economic agents to heighten the predictability and transparency of monetary policy amid growing uncertainty at home and abroad, and to avoid herd behavior among economic agents in the financial markets. Since 2010, the statement has continued to be augmented<sup>44)</sup> as a means to improve communication with economic agents. As part of its efforts to provide a detailed explanation of the background to its policy decision and to refine its signaling of the future policy direction, the Bank of Korea has improved the statement in a direction consistent with the *General Principles of Monetary Policy Operation* and in close linkage with the economic forecasts released every quarter. Therefore, the statement, issued in January, April, July, and October to coincide with the scheduled release of economic forecasts, contains statistical projections of prices and economic growth, while statements issued in other months describe possibilities for changes in previously projected developments in economic forecasts. In addition, the statement began to provide a more elaborate explanation for the Bank of Korea's future monetary policy stance.

As a means of further enhancing the transparency and signaling effect of monetary policy, in a press conference after each policy-setting meeting to set the monetary policy decision, the Bank of Korea has announced (i) whether members of the

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43) While the statement was originally confined to a descriptive function largely focused on explaining economic developments, its content was improved starting from July 2007 by adding an assessment of overall economic conditions and, if necessary, an assessment of the underlying policy stance. In a further addition, risk factors related to the domestic economy were included in statements issued from November 2007. Moreover, the statement began to incorporate the price outlook from July 2008, and the future monetary policy stance from October of that year.

44) The statement was further improved with additional content: domestic economic forecasts in January 2010, assessments of international economic conditions in April 2010, and exchange rate trends in October 2013. From July 2014, the statement also included special considerations for the future operation of monetary policy.

Monetary Policy Board had reached a unanimous decision on the policy rate, since October 2010; (ii) the number of members who had voted for or against decisions regarding the Base Rate, since May 2013; (iii) any opinions of Monetary Policy Board members dissenting from the chosen Base Rate operations, since October 2014; and (iv) the names of dissenting Board members, since January 2016.

Moreover, minutes detailing the debate by members of the Monetary Policy Board during the monetary policy-making process are released on the website of the Bank of Korea on the first Tuesday (in the case of holidays, the next business day) after two weeks have passed from the date of the meeting.<sup>45)</sup>

**Table III-14** Changes in the Statement of Monetary Policy Direction

June 2007	July 2017
<p>□ In the real economy, while exports continue to show steady growth, facilities and construction investment maintain robust paces of increase, and private consumption appears to be recovering.</p>	<p>□ The Monetary Policy Board of the Bank of Korea decided today to leave the Base Rate unchanged at 1.25% for the intermeeting period.</p> <p>□ Based on currently available information the Board considers that the global economic recovery has continued to expand. The global financial markets have shown generally stable movements, although their volatility has risen somewhat due to fluctuations in international oil prices and to changes in expectations related to the monetary policies of major countries. Looking ahead the Board sees the global economic recovery as likely to be affected by factors such as the directions of the US government's economic policies, the pace of monetary policy normalization by the US Federal Reserve, the movements toward spreading trade protectionism, and the direction of international oil prices.</p> <p>□ The Board judges that the solid trend of domestic economic growth has continued, as exports and investment have improved although the pace of increase in consumption has remained weak. On the employment front, the trend of year-on-year increase in the number of persons employed has slowed, and the employment-to-population ratio and the</p>

45) The Bank of Korea hastened the releases of the Monetary Policy Board meeting minutes. Until March 2005, the minutes had been made public by publication in *Monthly Bulletin* around two months after the Monetary Policy Board meeting. Starting from April of the same year, the minutes were made available on the Bank of Korea's website on the first Tuesday six weeks after the meeting (or the next business day after the Tuesday, if it is a holiday). Starting from September 2012, the release period was further shortened to two weeks so as to narrow the information gap between the Bank of the Korea and the markets.

<p>Meanwhile, the current account has recorded a deficit recently owing mainly to the narrowed goods account surplus and the repatriation of dividends.</p> <p>□ Consumer price inflation and core inflation both remain stable. The upward pace of real estate prices has slowed down significantly.</p> <p>□ In the financial markets, overall liquidity conditions are favorable and financial institutions' lending has increased sharply, led by loans to small and medium-sized enterprises.</p> <p>□ Taking the above economic and financial conditions into consideration, the Monetary Policy Board of the Bank of Korea decided today to maintain the call rate target (uncollateralized overnight rate) at its current level (4.50%) for the intermeeting period.</p>	<p>unemployment rate have risen. The Board sees the domestic economy as likely to continue its trend of recovery going forward, and forecasts a rate of GDP growth for this year higher than the April projection (2.6%). Exports will sustain their trend of improvement, thanks chiefly to the global economic recovery, and domestic demand activities will also recover moderately, owing to improved economic agents' sentiments.</p> <p>□ Consumer price inflation has continued at the 2% target level, in line mainly with increases in the prices of agricultural, livestock and fisheries products. Core inflation (with food and energy product prices excluded from the CPI) has stayed in the mid-1% range, and the rate of inflation expected by the general public has remained at the mid-2% level. Looking ahead the Board expects that consumer price inflation will for the time being fluctuate at around the 2% level, and for the year as a whole show the level (1.9%) projected in April. Core inflation appears likely to be in the mid- to upper-1% range.</p> <p>□ In the domestic financial markets, price variable volatility has expanded somewhat, with the Korean won-US dollar exchange rate having risen considerably, in line with changes in expectations related to the monetary policies of major countries and with increases in geopolitical risks, and long-term market interest rates having increased in concert with government bond rates in major countries. Stock prices have continued to climb, on the effects for example of the trend of solid domestic economic growth and expectations of improved performances at major companies. Household lending has sustained its high rate of increase exceeding past years' levels, although the amount of year-on-year increase has lessened somewhat. In the housing market, the trends of rising sales and leasehold deposit prices have expanded, centering around Seoul and its surrounding areas.</p> <p>□ Looking ahead, the Board will conduct monetary policy so as to ensure that the recovery of economic growth continues and consumer price inflation can be stabilized at the target level over a medium-term horizon, while paying attention to financial stability. As the inflationary pressures on the demand side are not expected to be high although the domestic economy is expected to show solid growth, the Board will maintain its stance of monetary policy accommodation. In this process it will closely monitor any changes in the monetary policies of major countries, conditions related to trade with major countries, the directions of the government's economic policies, the trend of increase in household debt, and geopolitical risks.</p>
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## Direct Communication with the Public and the National Assembly

The Bank of Korea Act stipulates that the Bank of Korea shall prepare and submit to the National Assembly both a report on the implementation of its monetary and credit policies and a report on macro-financial stability conditions at least twice every year.<sup>46)</sup>

This requirement arises in fulfilling the duty of accountability to the public under the authority bestowed upon it as the central bank responsible for price stability and for giving its attention to financial stability. As a statutory report, *Monetary Policy Report* explicitly states whether the inflation target has been achieved and the underlying rationale for this, along with specific details of monetary policy implementation and performance, and the future policy directions. From 2016, *Inflation Report*, which had previously been published twice a year, was combined into *Monetary Policy Report*, the publication of which was increased from twice to four times a year. *Financial Stability Report*,<sup>47)</sup> also a statutory report published twice a year (June and December), provides an analysis and assessment of potential risk factors inherent in the financial system as part of the implementation of macroprudential policy, and suggests policy tasks related to financial stability.<sup>48)</sup> With regard to the publication of these reports, the Governor of the Bank of Korea, upon request from the National Assembly, attends the latter's competent standing committees to provide testimony about the operational directions of monetary policy and the economic outlook. Additionally, the Bank of

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46) Under Article 96 of the Bank of Korea Act (Reports to National Assembly)

(1) The Bank of Korea shall prepare a report on the execution situations of monetary and credit policies and evaluation of conditions of macro-financial stability at least twice every year and submit it to the National Assembly.

(2) The Governor shall attend and reply when the National Assembly or any of its committees requests him to attend in connection with a report submitted pursuant to paragraph (1).

47) *Financial Stability Report* had previously been published as a voluntary report since 2003. As the revision of the Bank of Korea Act in September 2011 (effective December 2011) tasked the Bank of Korea with the duty to monitor financial stability in implementing monetary policy, the report has been submitted to the National Assembly as a statutory report since April 2012.

48) Due to growing interest and expectation among market participants regarding Financial Stability Meetings, the key agendas of the meeting have been announced in the minutes of the Monetary Policy Board meeting in March and September, with a corresponding press release issued on the day of the meeting.

Korea Act requires the publication of an *Annual Report* describing the business status of the Bank of Korea, its monetary policy, and the government's foreign exchange policy.<sup>49)</sup>

Besides these statutory reports, the Bank of Korea compiles and issues a number of additional reports and materials: the quarterly-issued *Economic Outlook*,<sup>50)</sup> which deals with the Bank's forecasts of the real economy and prices; *Payment and Settlement Systems Report*, an annual report which includes payment and settlement trends, risk management, oversight and policy responses; and *Regional Economic Report*, issued four times a year, which announces recent national and regional economic trends identified based on the monitoring results of regional economies and relevant organizations. In addition, the Bank constantly endeavors to diversify its range of information and analysis on financial and economic conditions at home and abroad through the publication of *BOK Issue Review* (quarterly), *Monthly Bulletin* (monthly), and *Global Economic Focus* (weekly).

Meanwhile, besides the Bank of Korea's communication efforts through the announcement of the policy decision and the publication of reports, the Governor and other members of the Monetary Policy Board as well as senior executive level staff of the Bank of Korea go to a great deal of effort to apprise the public of current monetary policy issues and the future policy direction by actively engaging in a range of activities including public addresses, lectures, interviews, and academic conferences. In addition, with a view to widening the understanding of experts in diverse fields and major market participants, a number of monthly meetings presided over by the Governor are held.

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49) Under Article 102 of the Bank of Korea Act (Publication of *Annual Report*)

(1) The Bank of Korea shall within three months after the end of every fiscal year submit to the Government and publish its annual report, outlining its business status and government foreign exchange policy during the fiscal year and analyzing the country's financial and economic conditions during that fiscal year.

(2) The annual report referred to in paragraph (1) shall be approved by a decision by the Monetary Policy Board.

50) The Bank of Korea increased the frequency of its release of economic forecasts from three times a year (April, July, December) to four times a year starting from October 2012. Also the release date, which used to be the day following after the policy setting meeting has been moved forward to be the same date as this meeting.

## 4

**Transmission of Monetary Policy**

The Bank of Korea's monetary policy affects the real economy, including consumption, investment, production and prices, through various transmission channels. Among these channels the interest rate and expectations channels are gaining increasing importance, mainly because the central bank has focused on inflation targeting using interest rate-oriented monetary policy operational framework. In the aftermath of the global financial crisis, rising uncertainty in the global economy led to discussions on global financial regulations on the capital and liquidity of financial institutions, thus emphasizing the importance of the credit and risk-taking channels.

In addition, Korea's monetary policy transmission lags are analyzed to be similar to those of the US and other major countries. According to research on monetary policy implemented during the 1980s and the 1990s, the transmission of monetary policy to real production activity becomes evident no later than two quarters out and reaches its strongest effect four to six quarters out. The transmission of monetary policy to inflation, meanwhile, starts to take effect from the third quarter out and reaches its strongest effect eight to nine quarters out.<sup>51)</sup> Research on the period of 2000–2012 also shows that the effects of monetary policy on real production reach their peak after six quarters, while the effects on inflation reach their peak after eight quarters. However, these results may change depending on domestic and overseas economic conditions because they are based on average experiences from the past. In particular, there is a possibility that monetary policy transmission lag has shortened as economic agents have become more sensitive to monetary policy, affected chiefly by the interest rate-oriented monetary policy operational framework after the inflation targeting having been put in place.

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51) Kim, H., "The Lag in Effect of Monetary Policy," *Monthly Bulletin*, Bank of Korea, January 2000.

Meanwhile, the influence of monetary policy on the real economy can be asymmetric depending upon the direction of monetary policy (tightening or easing), economic phase (contraction or expansion), etc. A comparison of the effects of monetary tightening and easing in Korea finds that the effect of tightening is greater than that of easing. Furthermore, in terms of economic phase, monetary policy is seen to be more effective during an economic contraction than during an economic expansion. Korea's monetary policy transmission channels are more closely examined below, centering around empirical analyses.

## Interest Rate Channel

An adjustment of the Base Rate affects interest rates in the financial markets as a whole, including short-term and long-term interest rates, and deposit and lending rates. For example, if the Bank of Korea raises its Base Rate, short-term interest rates such as the overnight call rate rise immediately, deposit and lending rates show an underlying upward tendency, and long-term interest rates come under upward pressures. Such movements of various interest rates affect aggregate demand in the form of both consumption and investment. For instance, a hike in interest rates leads to a curb on borrowings, an increase in savings, rises in interest payment on deposits and on loans, and ultimately a decline in household consumption. This also applies to businesses. *Ceteris paribus*, an increase in interest rates raises financial expenses and accordingly reduces investment.

Given that monetary policy affects the real economy through the financial system, which consists of financial institutions and markets, the effectiveness of monetary policy transmission channels is significantly affected by various environmental changes in the financial system such as financial regulations and financial innovation.

As the role of interest rates improved substantially due to the great progress in the Korean financial markets through the full-scale deregulation of interest rates during 1990s, all the basic prerequisites for the operation of the interest rate channel were set.



In addition, the interest rate sensitivity of economic agents was increased as the Bank of Korea's introduced interest rate-oriented monetary policy operational framework together with its institution of inflation targeting regime in 1998. Afterwards, the enormous broadening and deepening of short- and long-term financial markets helped to enhance the interconnectedness of individual markets through interest rates, and facilitated the stable establishment of a mechanism for incorporating market expectations and responses into interest rates.

Indeed, it appears that the first-phase channel by which a change in the policy rate is transmitted to the market rate seamlessly as follows: the Bank of Korea's policy rate → short-term market rates → long-term market rates and banks' lending and deposit rates. Looking at changes in short- and long-term market rates and interest rates of deposits and loans during the periods of Base Rate cut policy, it is found that short-term market rates (91-day CDs) declined by the same or a slightly higher margin than the policy rate decrease, shortly after the cut in the policy rate. Long-term market rates (10-year Government bonds) and bank loan and deposit interest rates also showed a significant decline.<sup>52)</sup>

**Table III-15** Transmission effects of Base Rate cuts on market interest rates<sup>1)</sup>

(bp)

Period of Base Rate cuts	Extent of Base Rate cuts	Extent of decline in market rates <sup>2)</sup>			Extent of decline in loan and deposit interest rates <sup>3)</sup>	
		CD (91 days)	Government bonds (3 years)	Government bonds (10 years)	Loan rates	Deposit rates
Feb. 2001–Sep. 2001	125	253	205	64	134	223
May 2003–Nov. 2004	100	137	150	135	96	89
Oct. 2008–Feb. 2009	325	332	208	94	181	294
Jul. 2012–May 2013	75	85	51	44	114	98
Aug. 2014–Jun. 2016	125	129	153	189	117	125

Notes: 1) Extent of changes from two months before the first Base Rate cut through the month following the last Base Rate cut

2) Based on the monthly average

3) Based on newly-handled amounts of deposit banks

Source: Bank of Korea

52) *Monetary Policy Report* (November 2015)

Meanwhile, because changes in the policy rate affect the real economy through channels other than interest rates (which will be discussed below), it is extremely difficult to separately estimate the second phase of the transmission effect of the interest channel alone—for instance, the effects of changes in market rates on investment and consumption. However, the transmission effects of monetary policy on the real economy are likely to be limited due to the changes in Korean economic structure such as population aging and a decline in propensity to consume caused by accumulation of household debts, along with elevated uncertainty at home and abroad after the global financial crisis.

## Asset Price Channel

A change in the Base Rate also influences prices of assets including stocks, bonds and real estate. For instance, if the Base Rate rises, the present value of future profits to be gained through assets such as stocks, bonds and real estate declines, and asset prices accordingly go down. This leads to a decrease in households' assets, or wealth, serving as a factor in bringing down household consumption (wealth effect). In addition, if the Base Rate goes up, the market value of a company moves down relatively more than the replacement cost of real capital due to the decrease in the stock prices. This leads to an decrease in investment of the company (Tobin's  $q$ ).

A substantial body of research has shown that asset prices such as stock prices and housing prices are by and large immune to the influence of Bank of Korea policy rate adjustments. This seems attributable to the growing influence of external variables, as the foreign share of stock market capitalization has risen,<sup>53)</sup> and to the constraints on funding availability imposed by government measures to stabilize housing prices including the regulation of the loan to value (LTV) ratio of mortgage loans.<sup>54)</sup>

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53) The foreign share of Korean stock market capitalization increased from 18.6% at the end of 1998 to 31.2% at the end of 2016.

54) The introduction of a loan to value (LTV) ratio for mortgage loans was made in September 2002 and that of a debt to income (DTI) ratio in August 2005.

In contrast, changes in asset prices have an influence on the real economy to some extent through the wealth effect.<sup>55)56)</sup> Examining the wealth effect indicates a greater impact of changes in real estate prices than in stock prices.<sup>57)</sup> This may largely arise from Korean households' tendency to hold assets preponderantly in the form of real estate<sup>58)</sup> and the disparity between the ownership structure of houses and stocks.

Meanwhile, some empirical studies have shown that the effectiveness of the asset price transmission channel through real estate may come under constraint when the scale of household debts is very large.<sup>59)</sup> To put it more concretely, the higher the ratio of debt to assets, the less the elasticity of consumption with respect to housing prices. This indicates that households with a relatively larger ratio of debts to assets will set aside the increased wealth from higher asset prices for debt redemption rather than directly using it for consumption.

## Exchange Rate Channel

A change in the Base Rate affects exchange rates as well. For instance, if the Base Rate rises in Korea while rates in other countries remain unchanged, returns on Korean won-denominated assets will increase relatively, which will attract foreign capital. As the number of foreign investors hoping to purchase Korean won-denominated assets grows, the won will appreciate. Its appreciation will bring down prices of imported goods and services and demand for them will accordingly grow. This will in turn push up prices of export goods denominated in foreign currency, which will lead to a decline

55) Choi, Y. and E. Kim, "Analysis of the Effect of Changes in Households," *Monthly Bulletin*, Bank of Korea, October 2007.

56) As the facilities investment of Korean companies have been mostly funded internally rather than by issuing stocks since the Asian financial crisis, it is unlikely that the channel of Tobin's  $q$  will operate properly.

57) Kim, Y., "Asset Prices and Consumption Dynamics in Korea," *Policy Research Series*, No. 2009-08, Korea Development Institute, December 2009.

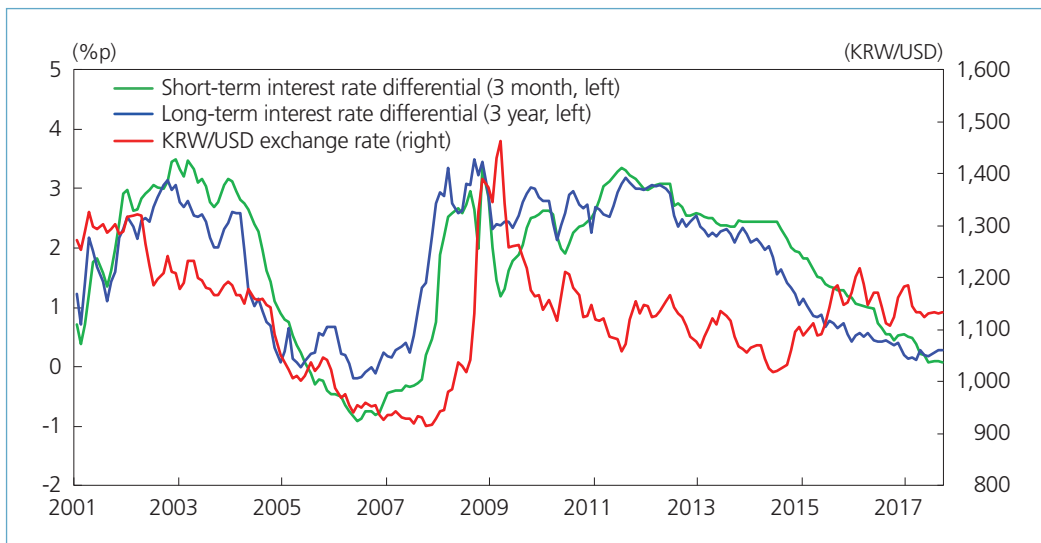
58) Real estate assets account for 69.2% of the total assets owned by households in Korea, while financial assets including stocks, bonds and deposits account for 26.0%, according to the Survey of Household Finances and Living Conditions in 2016.

59) Lee, H., "Changes in House Prices and Wealth Effect," *Finance and Economics Working Papers*, No. 181, Bank of Korea, July 2004.

in overseas demand for Korean goods and services.

For the effect of monetary policy to be transmitted to the real economy through changes in exchange rates first calls for the exchange rate to respond to a significant degree to changes in domestic interest rates, and moreover, for that response to be in a consistent direction. In Korea, however, the exchange rate has not shown a significant response to changes in the differential between domestic and international interest rates, and there have been many cases in which the direction of the change failed to match theoretical predictions.<sup>60)</sup> This is presumably attributable to the fact that in Korea's small and open economy, exchange rates are much more affected by various external factors such as global economic conditions and liquidity, and changes in major countries' exchange rates and international interest rates, than by domestic factors such as monetary policy.

**Figure III-7** Interest rate differential<sup>1)</sup> and the won/dollar exchange rate



Note: 1) For the short term, the gap between secondary market yields on CDs and 3-month LIBOR, and for the long term, between yields on 3-year Government bonds of Korea and the US

Source: Bank of Korea

60) Park, C. and A. Kim, "An Analysis of the Relation between the Korea-U.S. Policy Rate Gap, and the KRW/USD Exchange Rate," *Monthly Bulletin*, Bank of Korea, February 2008.

This uncertain relationship between changes in exchange rates and domestic interest rates is assumed to be mainly due to the composition of inflows and outflows of foreign currency. The inflows of foreign currency funds to Korea normally take the form of portfolio investment funds targeting stocks and bonds, and foreign currency borrowings and loans. The response to changes in interest rates therefore tends to manifest differently depending on the type of funds. That is, if the interest rate spread widens due to a rise in domestic interest rates, the expected increase in investment yields tends to attract more money for investment in bonds and inflows of foreign currency borrowings, but the fear of a slowdown in the economy following higher interest rates is likely to reduce the inflow of stock investment funds or even reverse their trend to an outflow. Therefore, net inflows and outflows of foreign funds in response to the change in domestic interest rates are supposed to move in the direction decided by the relative strength of these two effects. In the case of Korea, it is estimated that there are repeated instances of the exchange rate rising (or declining) when the interest rate spread widens (or narrows), contrary to theoretical predictions, due to the fact that stock investment funds are larger than other funds.<sup>61)</sup> Instead of asserting that the exchange channel of monetary policy does not function for this reason, it would be desirable to understand that the exchange channel does work, but does not show itself clearly, due to factors such as the composition of foreign funds and external factors.

On the other hand, a change in the exchange rate affects the real economy quite markedly due to the Korean economy's high degree of export dependence. Regarding the effect of a change in the exchange rate on the current account for instance, the analysis indicates that a rise in the exchange rate improves both the trade balance and the services balance. However, with regard to the trade balance, as companies' abilities to adjust prices in response to exchange rate movements have weakened<sup>62)</sup>

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61) As of the end of 2016, domestic stock held by foreign investors stood at 481.6 trillion won, five times higher than 89.3 trillion won in domestic bonds held by foreign investors.

62) Hwang, G. and Y. Lee, "Analysis of Decisive Factors behind Exchange Rate Pass-through to Korean Export Prices," *monthly bulletin*, Bank of Korea, July 2015.

amid intensifying global competition, and as the utilization of imported intermediate goods in the production of goods has increased,<sup>63)</sup> the effect of the exchange rate is estimated to be gradually decreasing. Meanwhile, floating exchange rates have direct and indirect effects on consumer prices through changes in import prices, but the recent effect of the won-dollar exchange rate on CPI has shown a moderate decline.<sup>64)</sup>

## Expectations Channel

An adjustment of the Base Rate leads to a change in inflation expectations, consequently affecting prices. For example, an increase in the Base Rate is interpreted as showing the Bank of Korea's willingness to reduce inflation, which brings inflation expectations down. This consequently influences firms' setting of their product prices and wages, as a result pulling real price inflation down.

The expectations channel has become more important as the expectations of economic agents have come to have a broad-spectrum effect embracing not just the real economy but also the financial markets, thanks to the active communication between central banks and market participants along with the development of the financial markets. Other factors behind the higher role of expectations in the financial and the real sectors include the growing interest of economic agents in whether the monetary policy stance will change, along with the introduction of inflation targeting and interest rate-oriented monetary policy operational framework. In particular, changes such as the decreased interval in the publication of the minutes of the Monetary Policy Board (2012) and the increases in the frequency of the publication of *Economic Outlook Report* (2012) and *Monetary Policy Report* (2016), can be seen as part of the Bank of Korea's efforts to enhance transparency and therefore the

63) Ryou, H., "Analysis of Exchange Rate Pass-through into Export Prices: A Cost Side Approach," *monthly bulletin*, Bank of Korea, August 2013.

Ahn, J. and C. Park, "Exchange Rate Pass-Through to Domestic Producer Prices: Evidence from Korean Firm-Level Pricing Survey," *Economics Letters*, Vol. 125, 2014, pp.138-142.

64) *Inflation Report* (July 2014).

effectiveness of monetary policy by strengthening the expectation channel.

According to a study using a Dynamic Stochastic General Equilibrium (DSGE) model, expectation shocks with regard to a change in the Bank of Korea's policy rate are found to affect price variables, such as wages and stock prices, as well as real economic variables, prior to the time when a change in the policy rate is anticipated.<sup>65)</sup> Such analysis indicates the need for the central bank, in deciding a policy direction, to devote efforts for the efficient conduct of monetary policy by taking account of the process whereby expectations of economic agents are formed, realized or ended.

## Credit Channel

As discussed above, the interest rate channel, the asset price channel, and the exchange rate channel refer to the processes in which monetary policy affects price variables in the financial market, which are eventually translated into effects on the real economy. By contrast, the credit channel refers to the spillover effects of monetary policy on the real economy through changes in banks' lending as a quantitative variable.

Depending on which side, demand or supply, is emphasized, the credit channel can be categorized as the bank lending channel or the balance sheet channel.

An adjustment of the Base Rate influences banks' lending behavior (bank lending channel). For example, if there is a Base Rate hike, banks may become even more prudent than before in lending, concerned about the redemption capacity of borrowers. This dampens both investment by businesses raising funds through bank loans and credit-based consumption by households.

Changes in interest rate also affect the net worth of households and firms (balance sheet channel). For example, an increase in interest rates will lower the net worth of firms, leading to a lower collateral value and thus a reduction of the ability to borrow.

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65) Kang, H. and J. Lee, "Analysis of the Impacts of Changes in Expectations of Economic Agents on Domestic Economy and Monetary Policy," *Monthly Bulletin*, Bank of Korea, July 2008.

Although the credit channel remains active through the bank lending and balance sheet channels, their effectiveness as transmission channels appears to have diminished as companies have become less dependent on bank loans and as their financial health, including their liability ratios, has improved amid the development of the financial market.

The bank lending channel is working, but its transmission effects are not estimated as being large. Especially after the Asian currency crisis, transmission through the bank lending channel is found to have a smaller effect than before.<sup>66)</sup> This appears to have been caused by the reduced role of banks as financing channels for firms compared to the past. After the currency crisis, banks and companies embarked on the expansion of revenue through issuing bank debentures or corporate bonds, becoming less dependent on deposits or loans. In addition, a study found that the monetary tightening reduced bank lending in the short term. However, approximately three months later, such lending returned to its previous level with no significant change afterward. Conversely, although another study found the balance sheet channel to be in effective operation,<sup>67)</sup> the influence of the channel may have become weaker given the current emphasis by corporate management on the soundness of corporate financial structure.

## Risk-taking Channel

The risk-taking channel refers to the impact of monetary policy on the real economy through changes in the risk-taking propensity of financial institutions. Monetary easing increases risk-preferences among financial institutions, and the consequent expansion of credit supply driven by high-risk, high-return lending leads to increases in consumption and investment.

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66) Kim, J. and M. Yie, "Corporate Finance and Lending Channel," *Journal of Money & Finance*, Korea Institute of Finance, September 2009.

67) Shin, H., "The Influence of Monetary Policy on Facilities Investment through the Credit Channel," *Monthly Bulletin*, Bank of Korea, February 2010.



The importance of the risk-taking channel has increased as central banks around the world, including the Bank of Korea, have come to regard financial stability as a core policy objective in addition to price stability, amid the global stance of low interest rates, which has continued for a considerable period of time since the global financial crisis. This reflects the recognition that, while low interest rates stance can contribute to over-coming the recession, it can also increase the risk preferences of financial institutions, thereby expanding financial imbalances.

Whereas the credit channel, as stated above, refers to the transmission of monetary policy to the real economy by affecting the quantity of credit, the risk-taking channel is a process by which monetary policy impacts not only the quantity of credit but also its quality, creating an effect that eventually spreads to the real sector.

There have not yet been many empirical studies of the risk-taking channel, but it has been found that accommodative monetary policy appears to increase banks' risk-taking to some extent. This propensity for risk-seeking behavior among banks under monetary easing was seen in an empirical assessment based on micro-data from five Korean banks.<sup>68)</sup> In terms of the transmission of monetary policy between countries, low interest rates and quantitative easing policies in major advanced countries are analyzed to reduce volatility in the global financial market, while expanding risk-taking among global financial institutions, thereby increasing capital inflows into emerging markets including Korea.<sup>69)</sup>

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68) Kim, M., "The Risk-Taking Channel of Monetary Policy in Korea," *Korea and the World Economy*, Vol. 15, December 2014.

69) Bruno, V. and H. Shin, "Capital Flows, Cross-Border Banking and Global Liquidity," *NBER Working Paper*, No. 19038, May 2013.

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# IV

## Conduct of Monetary Policy





# IV Conduct of Monetary Policy

## 1 Post-Currency Crisis–2004

In the immediate aftermath of the 1997 currency crisis, the Bank of Korea, acting under its agreement with the IMF, raised the interest rate applied in its open market operations as high as 35% per annum so as to stabilize the exchange rate. With the stabilization of the exchange rate since March 1998 thanks to such measures, there was thought to be scope for action in terms of monetary policy to prevent an excessive economic downturn following the currency crisis.<sup>1)</sup> In 1998, during the course of the contraction in business activity after the currency crisis, a credit crunch emerged as banks cut back their lending. Thus, the Bank of Korea sought to relieve the credit crunch early by lowering interest rates and providing inducements for banks to expand their lending. In addition, it was thought desirable to make active use of the credit guarantee system to disperse credit risk taken by banks.

The measures taken by the Bank of Korea and the government to ease the credit crunch gradually began to bear fruit, with bank lending shifting to an upward trend from February 1999 onwards. At the same time, many indicators of real economic activity including industrial output, consumption, and exports began to exhibit a clearly marked upward trend. Nevertheless, the Bank of Korea continued to maintain its stance of favoring the downward adjustment of interest rates for some time, considering that a somewhat longer period of observation was needed in order to judge whether the trend of recovery in business activity would prove to be sustainable.

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1) At that time, the direction of monetary policy was largely subordinated to foreign exchange market trends. Because the focus was placed, above all, on exchange rate stability under the IMF program, it would have been difficult to ease the high interest rate policy unless the exchange rate had stabilized.

Reflecting the central bank's stance, the overnight call rate, which had fluctuated at around 6% per annum at the beginning of the year, had fallen to a little below the level of 5% by mid-April.

In May, the Monetary Policy Board decided not to lower its call rate target any further as the domestic economy appeared to be sustaining its recovery trend and there was concern about the generation of imbalances in external sectors. In addition, in July, the financial markets were thrown into turmoil with long-term interest rates on the rise due mainly to the Daewoo Group restructuring problem and the large-scale redemptions of the beneficiary certificates of investment trust companies. Consequently, so that financial market instability did not detract from the pace of real economic recovery, the Bank of Korea and the Korean government cooperated to keep the call rate stable and inject sufficient liquidity in line with market conditions, while making efforts to address financial market disruptions by establishing a Bond Market Stabilization Fund<sup>2)</sup> to make up for a shortfall of demand in the bond market and by implementing a partial repurchase system<sup>3)</sup> in order to curb the run on investment finance companies' bond-type beneficiary certificates.

Influenced by such policy efforts, long-term interest rates seemed to have regained stability, but then rose sharply again as expectations of a future increase in inflation grew due to the continuation of the economic recovery and cost-push price hikes, with factors causing financial market instability left partially unresolved. A sharp rise in long-term interest rates with the BOK's target for call rate being maintained at 4.75% per annum led to the widening of the gap between long- and short-term interest rates. Since a widening of the gap could act to limit the smooth implementation of monetary policy, the narrowing of the gap became an important objective of monetary policy. If

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2) This fund whose ceiling was 30 trillion won, was operated from September 1999 until March 2000 in order to deal with a sharp rise in market interest rates following the Daewoo crisis. And in actual fact, around 25 trillion won was raised. Mainly banks and insurance companies subscribed to the Fund which was used mostly for purchasing sovereign debt securities, Monetary Stabilization Bonds and prime corporate bonds.

3) Repurchases were allowed for beneficiary certificates excluding Daewoo Group bonds. However, this was an emergency measure whereby 50% repurchase of the book value of Daewoo bonds was guaranteed if an application for repayment was made within 90 days, 80% repurchase was guaranteed if the application was made within 180 days, and 95% repurchase for the application was made after 180 days had passed.

the call rate target was to be raised in consideration of economic conditions amid financial market instability, however, there was a possibility that market rates could climb excessively, which made it difficult to immediately raise the target for the call rate without first resolving the instability in the financial market.

The Bank of Korea decided to increase the call rate target by 0.25%p to 5% per annum on February 10, 2000, after determining the financial market instability related to Daewoo Group bonds to be manageable.<sup>4)</sup> From June 2000 onwards, with the trend of increased economic activity seen in 1999 continuing, consumer prices bolted from their previous stable trend and rose sharply. Against this backdrop, the Bank of Korea adjusted its call rate target upward by 0.25%p from 5.0% to 5.25% per annum on October 5 in order to respond preemptively to the inflationary pressure. Meanwhile, the financial markets, which had been stabilized on the resolution of the Daewoo bond repurchase problem, started to show instability again from May onwards since some large corporations faced a liquidity crunch. Against this backdrop, the Korean government and the Bank of Korea on June 19, 2000 announced a measure to facilitate more demand for corporate bonds.<sup>5)</sup> In addition, the Bank of Korea created an environment conducive to ensuring financial market stability by maintaining flexibility in the injections of liquidity.

Monetary policy conditions changed rapidly from early 2001. First, as the US economy, which had been experiencing a prolonged economic boom, started to show clear signs of slowdown and remained subdued from the latter half of 2000, the US Federal Reserve lowered the target for the federal funds rate in six steps by a total of 2.75%p in the first half of 2001. As the US Fed reduced its rate, other major central banks also started to lower their policy rates in order to curb the economic downturn. The Bank of Korea, similarly, decided to cut its call rate target by 0.25%p in February

4) This was the first raise in the rate since it had started to be used as an operational target in 1998.

5) The measure, announced on June 19, 2000 through consultations between the Bank of Korea, the Ministry of Finance and Economy, and the Financial Supervisory Commission, mainly dealt with heightened monitoring on corporate financial conditions, credit enhancement, strengthening the demand base for corporate bonds and CP through the introduction of new financial products, the maintenance of a base for flexible liquidity supply, and the resolution of financial market uncertainty.

2001 amid signs of an economic slowdown materializing. However, conscious of upward price movements, it did not carry out any further downward adjustment until June.

From the beginning of the latter half of 2001, US economic growth remained virtually stagnant, and accordingly the possibility of a global recession gradually loomed larger. To add to this, September 11 attack and the ensuing outbreak of war against Afghanistan further depressed economic activity, dashing hopes of an early recovery for the global economy. In the aftermath, while the US Federal Reserve continued to lower interest rates, other major central banks greatly expanded their supply of liquidity and cut interest rates in order to avert turmoil in financial markets and simultaneously provide the impetus for a recovery of business activity.

In July and August 2001, the Bank of Korea undertook interest rate cuts in two successive months, bringing the call rate target down by 50 basis points in all. In response to September 11 attack, which increased the prospect of a protracted downturn in business activity, the call rate target was brought down further by half a percentage point later that month to stand at 4% per annum. In an additional move designed to ease the shock of these events, the interest rate on Aggregate Credit Ceiling Loans was lowered by half a percentage point to 2.5% per annum and the total size of the facility was increased by 2 trillion won. This was done in order to encourage banks' corporate lending and help lighten the burden of companies' financial expenses. The reasons why the Bank of Korea was better placed to ease its monetary policy boldly from July 2001 were that, although prices had risen sharply in the first half of the year, their upward trend was anticipated to flatten out moving into the latter half, with demand-pull pressures virtually absent amid the business downturn and few factors making for an increase in international oil prices or charges for public services.

From early 2002, the Korean economy showed a clearly marked recovery trend. In this process, prices showed signs of moving upward rapidly because demand-pull pressures had increased greatly and international oil prices were surging. Besides this,

as real estate prices rose at a fast pace with household loans expanding by a large margin, concerns arose that this might lead to a rise in inflation expectations among the general public. Accordingly, the Bank of Korea adjusted the policy rate upward by a quarter of a percentage point from 4.0% to 4.25% per annum in May in order to deal preemptively with the various types of imbalances which might arise in the course of a business recovery.

The call rate target had been kept on hold at 4.25% per annum for a year from May 2002 onwards, but the Bank of Korea started to lower it from May 2003, undertaking further reductions in July that year and again in August and November 2004, bringing it down in a four-step process to its then lowest-ever level of 3.25%. The reason for this expansion of monetary easing was that the real economy showed signs of falling into a protracted depression due to extremely lackluster domestic demand such as private consumption and facilities investment,<sup>6)</sup> which had begun to show a downward trend since early 2003. Stable prices during this period helped the Bank of Korea to maintain its stance of monetary easing. Core inflation, used as the target indicator at the time, remained stable at around 3%, the midpoint of its target range (3%±1%p in 2003 and 2.5–3.5% in 2004–2006). This stability was attributable to the slackening of demand pressure amid the protracted downturn in domestic demand and to the stabilization of import prices caused by the sharp appreciation of the Korean won, which offset the effects of the sharp run-up in international oil prices.

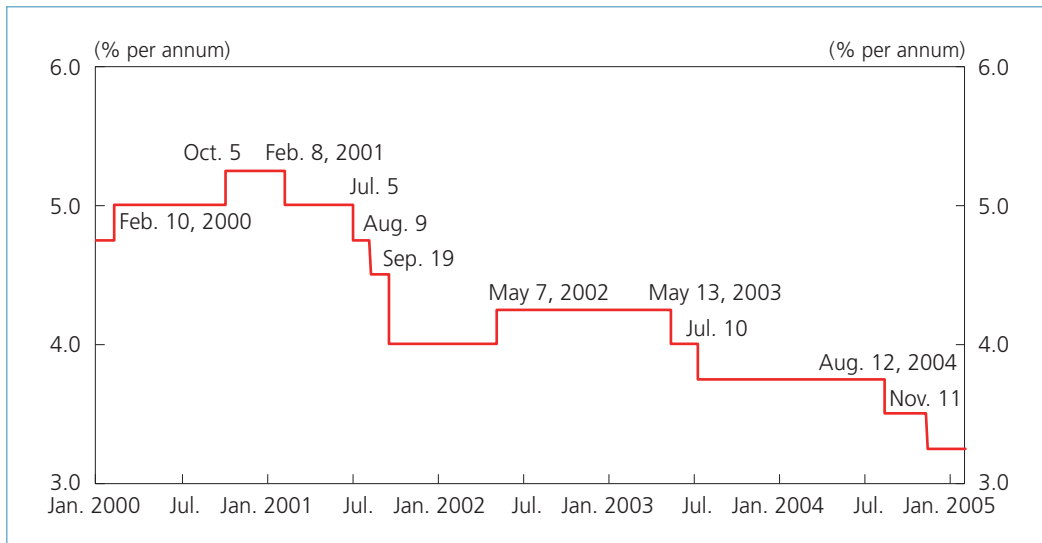
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6) Private consumption registered negative growth for six straight quarters from the second quarter of 2003 until the third quarter of 2004, while facilities investment was similarly depressed for four quarters in a row from the second quarter of 2003 until the first quarter of 2004 (year-on-year basis). This was the first time that private consumption had been in negative territory since 1980, apart from just after the foreign currency crisis. Moreover, it was very exceptional for both private consumption and facilities investment to contract for several quarters in succession.



Figure IV-1

Call rate target



Source: Bank of Korea

## 2

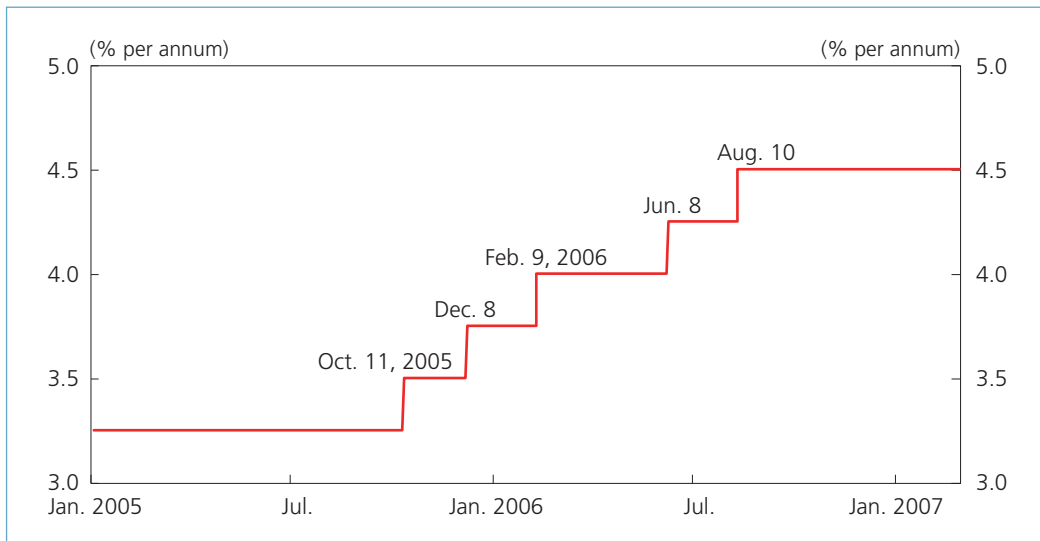
## 2005–Prior to Global Financial Crisis

## 2005–2006: Gradual Lessening of Accommodative Bias amid Economic Recovery

From the latter half of 2005, the Bank of Korea shifted its policy stance toward gradually reducing the degree of monetary accommodation in response to the recovering trend of the real economy, while paying careful attention to price stability. Consequently, the Bank of Korea raised the call rate target by a quarter of a percentage point each time in a series of five steps, between October 2005 and September 2006, bringing it up from 3.25% to 4.5% per annum.

Figure IV-2

Call rate target



Source: Bank of Korea

The gradual increase in the call rate target by the Bank of Korea was based on its judgment that as the upswing in domestic business activity had continued since the

second quarter of 2005, backed by robust exports and the recovery of domestic demand, it was desirable to gradually resolve the side effects arising from a protracted period of low interest rates, including the heightened upward pressure on asset prices and the concentration of financial institutions' funds at the short-term end of the market, as well as to cope preemptively with the upward pressure on prices anticipated in the course of the future business recovery.

As for domestic business activity, the GDP growth rate was bolstered by continuous double-digit growth in exports and a steady recovery of domestic demand including private consumption and facilities investment. The GDP growth rate rose from 2.7% in the first quarter of 2005 to 3.3% in the second quarter, and then accelerated further to 5.3% in the fourth quarter. The upswing continued even in 2006 and in particular, despite changes in the economic environment such as a sharp rise in international oil prices and a North Korean missile test, the domestic economy maintained a moderate upward pace owing to buoyant exports and the consistent steady growth of domestic demand.

Meanwhile, it was true that the low interest rate stance up to that point had formed the basis for the economic recovery by reducing economic agents' financial burden. A number of malign side effects, though, had arisen from the maintenance of low interest rates for a considerable length of time. Among other things, it had intensified the herd behavior of market liquidity to gain even a slightly higher profit. This was particularly prominent in the housing market. Although the government implemented real estate market stabilization measures on several occasions, the sharp run-up in real estate prices was very hard to stop. In addition, the short-termism of market funds, in which market funds concentrate on short-maturity products, became more pronounced as funds needed to be kept quasi-liquid for rapid shifts in quest of high-yields. Where fund-raising was short-term, the operation of those funds also had to be kept short-term to avoid a mismatch of maturities, which brought about difficulty in securing the stable and long-term supply of funds to financial institutions. Accordingly, there was a growing need to gradually lessen the degree of the accommodative policy stance to eliminate the effects arising from a low interest rate policy as the recovery trend of the real economy became

more evident.

The pace of the upward trend of lending by financial institutions decelerated from June 2006 onwards as a result of the Bank of Korea's raising its call rate target. The Korean government's various real estate market stabilization packages also began to bite, easing the upward movement of housing prices from June onwards. In addition, short-termism in the deposit structure of major financial institutions also reduced slightly, with the share of short-term deposits with a maturity of less than six months declining from 52.6% in August 2005 to 50.3% in August 2006.

With domestic economic activity maintaining a modest upturn, however, expectations of real estate price increases had spread, driven by the hikes in leasehold deposit fees and apartment sales prices from September, and apartment prices in Seoul and the surrounding metropolitan areas rose steeply. Therefore, the Bank of Korea decided to hold the call rate target at 4.5% per annum from September 2006, judging it necessary to observe economic developments at home and abroad given the increased level of uncertainty. The Bank also took into account the possibility that the heightening of geopolitical risks, including the North Korean rocket launch and armed conflict in the Middle East, could dampen economic agents' sentiment.

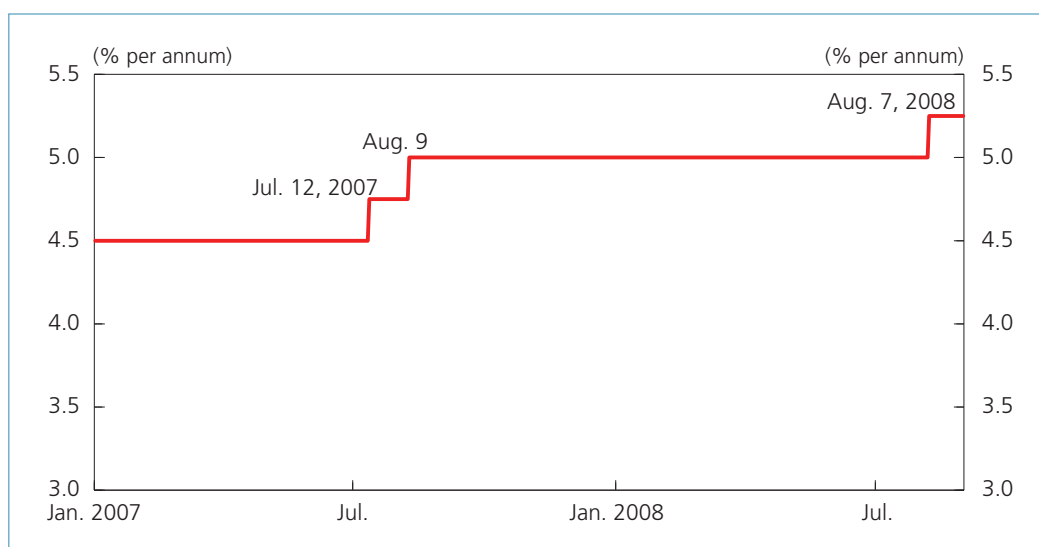
Meanwhile, despite the series of increases in the call rate target, there was a rapid acceleration in the growth of monetary aggregates led by a surge in private credit. This rapidly swelling market liquidity resulted from a sharp expansion in the demand for loans owing to heated competition among financial institutions to expand their loan books and mounting anticipations of higher housing prices. It also reflected the greatly enlarged lending capacity of financial institutions through overseas borrowings. The Bank of Korea adjusted the reserve requirement ratios for Korean won and foreign currency deposits in November and December 2006 in order to improve the effectiveness of interest rate policy by restraining the sharp increase in bank credit. The reserve requirement ratios were adjusted as to increase the average reserve requirement ratio, while expanding the difference between the reserve requirement ratios on long-term and on short-term deposits. As a result, the average reserve requirement ratio rose from

3.0% to 3.8% on Korean won deposits and from 3.6% to 4.8% on foreign currency deposits.

## 2007–Prior to Global Financial Crisis (September 2008): Strengthening Foundation for Medium- and Long-term Price Stability

After keeping its call rate target at 4.5% from August 2006 onwards, the Bank of Korea adjusted the target upward in a series of three 25-basis point rises in July and August 2007 and August 2008, bringing it to 5.25%. The Bank's tightening of monetary policy was intended to prevent the foundation of price stability from being weakened in the medium- and long-term by factors putting upward pressures on prices, such as the possibility of demand pressures materializing amid the stronger domestic business activity, swelling market liquidity and the steep rise in the international prices of raw materials including crude oil.

Figure IV-3

Base Rate<sup>1)</sup>

Note: 1) Call rate target until February 2008

Source: Bank of Korea

From the beginning of 2007, the upward pace of the domestic economy gradually accelerated, bolstered by sustained strong exports and a steady increase in domestic demand. GDP growth (year-on-year) rose significantly from 4.0% in the first quarter to 5.0-5.7% from the second to fourth quarters. Accordingly, the Bank of Korea judged that the upward pressure on prices from demand factors would gradually grow from the latter half of 2007 onwards. From the beginning of 2008, though, the business upswing was weakened with domestic demand, particularly private consumption and facilities investment, at a low ebb, offsetting the export buoyancy.

In the financial markets, household lending centering on credit-based lending grew rapidly from the latter half of 2007 and loans to small- and medium-sized enterprises also saw a large-scale increase, influenced by the business upswing and banks' focus on corporate loans. Consequently, liquidity remained ample with monetary growth running at a persistently high level.

Meanwhile, the international oil price remained below 50 US dollars per barrel (Brent crude oil) in mid-January 2007 and then climbed rapidly to near 150 US dollars in early July 2008. This resulted from a combination of several factors such as deepening concerns over unstable demand-supply conditions for crude oil arising from geopolitical risks, the expansion of demand led by emerging markets, the weakening of the US dollar, and increased speculative demand.

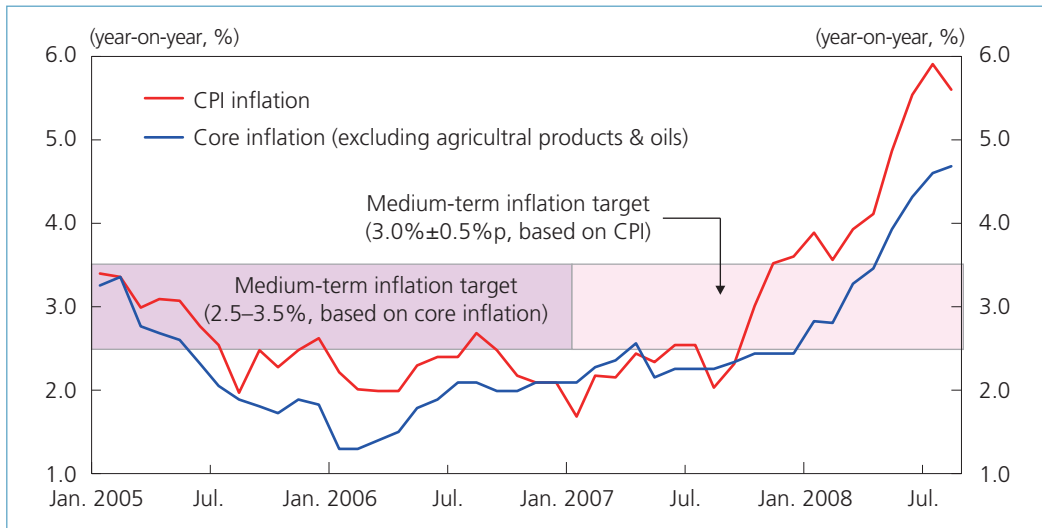
Closely monitoring these changes in financial and economic conditions and judging that upward pressure on prices would gradually build up from the latter half of 2007, the Bank of Korea raised the call rate target by a quarter of a percentage point in both July and August 2007, bringing it up to 5.0% per annum.<sup>7)</sup>

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7) Meanwhile, from late July 2007, influenced by concerns over the credit crunch arising from US subprime mortgage defaults, the volatility of price variables such as market interest rates and stock prices increased greatly in financial markets in Korea and a number of countries around the world. Although concerns arose that the international financial market unrest would continue for a considerable period of time and drag down global economic growth, it was predicted that its effects on domestic economic activity would be limited. In addition, it was judged that there was a need to further consolidate the foundation for economic stability by raising the call rate target, so that the economy could adequately cope with the high degree of uncertainty shrouding the knock-on effects arising from external destabilizing factors.

Figure IV-4

## CPI and core inflation



Source: Statistics Korea

And, in fact, prices did exhibit a steep upward trend from October 2007. Consumer price inflation, after registering an increase of 3.6% (year-on-year) in December 2007, continued running at a high level well above the upper bound of the medium-term inflation target range (3.0%±0.5%p).

Despite the constant upward trends of business activity and prices, the Bank of Korea maintained the call rate target (Base Rate of the Bank of Korea from March 2008) at 5.0% per annum from September 2007 to July 2008. This policy was conducted against the backdrop of mounting macroeconomic uncertainty from September 2007, such as the international financial market unrest triggered by subprime mortgage defaults and the sharp run-up in the international oil price. From the beginning of 2008, the Bank of Korea paid close attention to the gradually more evident signs of a slowdown in business activity because of the instability of international financial markets and sluggish domestic demand.

In August 2008, though, the Bank of Korea adjusted its policy rate upward to 5.25% per annum due to its concern that inflation expectations might be kindled, with consumer price inflation having approached 6% in that June and July.

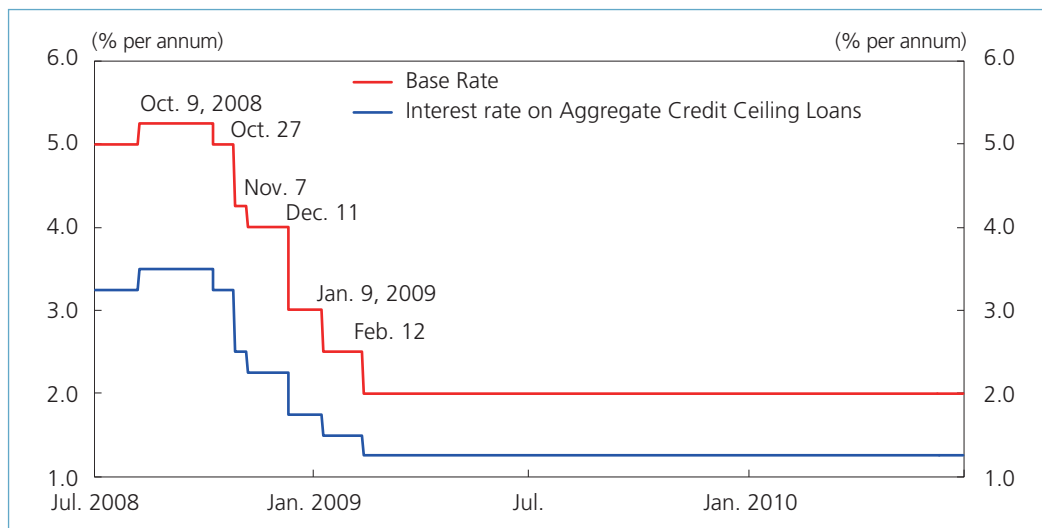
### 3 Post-Global Financial Crisis

#### September 2008–2009: Minimizing Negative Effects of Crisis

The Bank of Korea conducted monetary and credit policies toward minimizing the negative effects on the domestic financial markets and the real economy stemming from the global financial crisis, which had begun with Lehman Brothers' filing for bankruptcy protection in September 2008, and the consequent worldwide economic recession.

In accordance with this policy stance, the Bank of Korea lowered its Base Rate in six steps, from October 2008 to February 2009, resulting in a total cut of 3.25 percentage points. As a result, the Base Rate fell from 5.25% per annum to its lowest level of 2.0% per annum since May 1999 when the Bank had started to announce a policy rate target.

Figure IV-5 Base Rate and interest rate on Aggregate Credit Ceiling Loans



Source: Bank of Korea



In addition, to secure the stability of financial and foreign exchange markets, the Bank of Korea expanded the supply of Korean won and foreign currency liquidity through open market operations and foreign currency loans. Above all, by its active use of open market operations, the Bank of Korea provided total liquidity of 18.5 trillion won<sup>8)</sup> between September 2008 and February 2009 to encourage the smooth flow of funds into long-term and short-term financial markets including the bank debenture and CP markets. Furthermore, it widened the scope of the collateral eligible for its open market operations<sup>9)</sup> and greatly increased the number of securities firm counterparts for its RP transactions. The Bank raised the Aggregate Credit Ceiling to 10.0 trillion won by a total of 3.5 trillion won, in October 2008 and March 2009, while lowering the interest rate on loans to 1.25% per annum. In November 2008, it supplied 2.1 trillion won to financial institutions subscribing to the Bond Market Stabilization Fund. The Bank of Korea also made a one-off interest payment of 500.2 billion won in December 2008 on reserves to financial institutions, so as to improve banks' BIS capital adequacy ratios as a means of enhancing their credit supply capacity. Moreover, in March 2009, it provided 3.3 trillion won to the Bank Recapitalization Fund to increase banks' equity capital to facilitate the expansion of credit supply and the smooth implementation of corporate restructuring. For the stability of the foreign exchange market, the Bank provided 22.4 billion dollars (period-average basis) to financial institutions in the first quarter of 2009 by way of swap transactions and foreign currency loans using the proceeds of currency swaps with the US Federal Reserve.

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8) A total of 16.8 trillion won by means of long-term and unscheduled ad hoc RP purchases and 1.7 trillion won by means of the redemption of Monetary Stabilization Bonds prior to maturity and the outright purchase of Government bonds.

9) Financial debentures and some special bonds were included among the collateral eligible for use in open market operations in order to induce flow of funds into the market for securities carrying credit risk.

**Table IV-1 Liquidity provision by the Bank of Korea after Lehman Brothers (September 28, 2008 – March 31, 2009)**

① Open market operations			
① Purchase of long-term and non-regular RPs and reduction of regular RP sales (16.8 trillion won)	Sep. 18, 2008	3.5 trillion won (decrease RP selling)	<ul style="list-style-type: none"> <li>■ expand liquidity supply to financial market</li> <li>■ diversify the liquidity provision channels and the instruments</li> <li>■ restore the interest rate mechanism 「lower the Base Rate → decrease short-term market interest rate like CDs → decrease long-term market interest rate like corporate bonds and deposit and lending bank interest rate」</li> </ul>
	Oct. 24	2 trillion won (28-day)	
	Oct. 31	1 trillion won (91-day)	
	Nov. 11	1 trillion won (63-day)	
	Nov. 21	2 trillion won (28-day)	
	Dec. 16	2 trillion won (91-day)	
	Dec. 19	2 trillion won (28-day)	
	Jan. 13, 2009	1 trillion won (91-day)	
	Jan. 16	1.4 trillion won (21-day)	
	Feb. 6	0.9 trillion won (14-day)	
② Outright purchase of Government bonds and Interim redemption of MSBs (1.7 trillion won)	Oct. 23, 2008	interim redemption of MSBs, 0.7 trillion won	<ul style="list-style-type: none"> <li>■ improve the conditions for issuance of debt securities, including corporate bonds and CP</li> <li>■ induce expansion of bank lending to SMEs</li> <li>■ enlarge lending capacity by improving bank balance sheets and financial soundness</li> <li>■ improve funds flow in direct financial markets, including those for corporate bonds and CP</li> </ul>
	Nov. 19	outright purchase of Government bonds, 1 trillion won	
③ Expansion of eligible collateral and counterparts	Oct. 27, 2008	include bank bonds and some special bonds	
	Dec. 23	include bonds issued by Korea Housing Finance Corp.	
	Dec. 12	add 12 securities companies	
② Lending facilities	Oct. 23, 2008	expand the total Aggregate Credit Ceiling (6.5 trillion won → 9 trillion won)	
	Mar. 23, 2009	expand the total Aggregate Credit Ceiling (9 trillion won → 10 trillion won) as of the end of Mar, 2009, provide 2.6 trillion won	
③ Reserve requirements system	Dec. 3, 2008	pay interest on reserve deposits (0.5 trillion won)	
④ The others	Nov. 24, 2008	announce the support of bond market stabilization fund (2.1 trillion won)	
	Mar. 26, 2009	announce the support of bank recapitalization fund (3.3 trillion won)	

Source: Bank of Korea

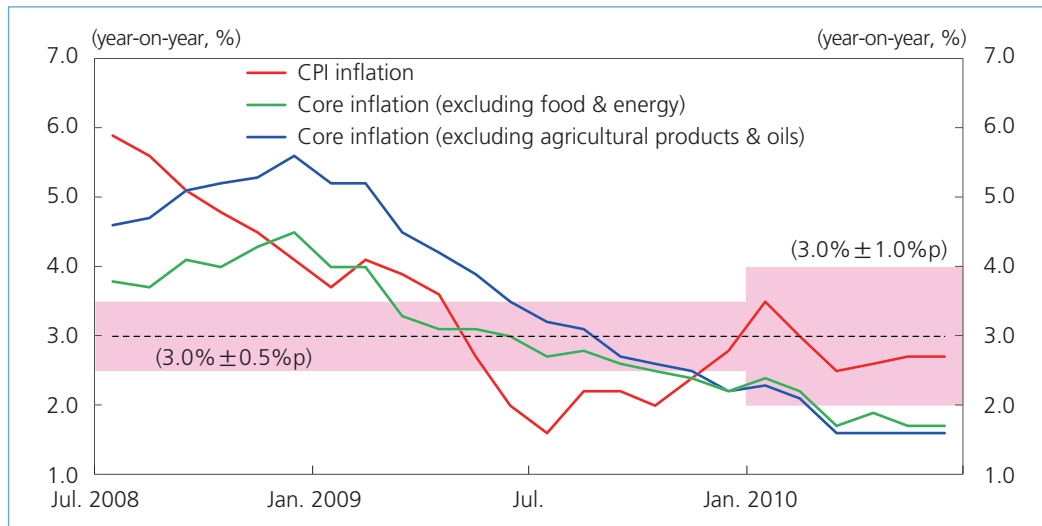
The rationale for its dramatic lowering of Base Rate within a short period and expansion of liquidity supply was its judgment that the Korean economy was vulnerable to extremely negative effects, given that the global financial crisis and the world economic recession had destabilized domestic financial and foreign exchange markets and sharply contracted the real economy, on top of the strong likelihood that a

considerable amount of time would be needed before the global economy's recovery from its massive downturn.

Domestic business activities declined rapidly from the fourth quarter of 2008 as domestic demand in terms of consumption and investment shrank further and exports also fell sharply. Consequently, GDP growth (year-on-year) plunged from 3.1% in the third quarter of 2008 to -3.4% in the fourth quarter. The upward trend of prices flattened out remarkably from the latter half of 2008 as the effects of business activity weakness were added to those of the drop in the international prices of oil and other raw materials. The financial markets exhibited an unstable pattern of movements as shown by the massive outflow of foreign investment funds due to the international financial market turmoil, banks' conservative operation of their funds, and a severe credit crunch. Consequently, with stock prices falling sharply, the KOSPI index fell to as low as 939 in late October 2008. Looking at market interest rates, yields on credit securities carrying credit risks including corporate bonds and CP rose sharply and spread of yields of the credit securities over Government bonds widened greatly. Meanwhile, the Korean won/US dollar exchange rate soared from mid-September 2008, owing to the outflow of foreign portfolio investment funds and worsening for foreign currency borrowings conditions stemming from the international financial market turmoil.

Figure IV-6

## CPI and core inflation



Note: The shaded area indicates the medium-term inflation target range.  
Source: Statistics Korea

Immediately after the outbreak of the global financial crisis, the Bank of Korea implemented a bold and resolute monetary policy. The government, for its part, took active steps to counter the economic slowdown by drawing up a large-scale revised supplementary budget and the front-loading of its fiscal expenditures. Accordingly, from mid-March 2009, market interest rates maintained a stable trend, while stock prices rebounded and the Korean won/US dollar exchange rate showed downward stability. The real economy also evidenced a gradual improvement as exports recovered steadily and domestic demand revived, albeit at a modest pace. However, despite continued improvement in the financial and economic circumstances, the Bank of Korea maintained the Base Rate at 2.0% per annum, in consideration of the high degree of uncertainty associated with policy conditions such as concerns about delayed economic recovery in advanced countries, instability in the international financial markets, and fiscal crises in some euro area countries.

While maintaining its stance of financial easing, the Bank of Korea also continued its efforts to withdraw the liquidity that it had provided to cope with the financial crisis, in keeping with the recovery trends in the financial and foreign exchange

market situation. As one element in this, the Bank started to ratchet down the Korean won liquidity supplied by purchasing long-term RPs. In August and December 2009, it also collected the entire amount of the foreign currency liquidity supplied through swap transactions and through foreign currency loans from the proceeds of its currency swap with the US Federal Reserve. In addition, the temporary measure under which risk-bearing securities including bank debentures and certain special bonds had been included among securities eligible for use in open market operations was terminated as scheduled on November 6, 2009. At the end of March 2010, 0.2 trillion won of the 3.3 trillion won provided to the Bank Recapitalization Fund at the end of March 2009 was also withdrawn.

## **2010–2011: Gradual Lessening of Degree of Financial Easing**

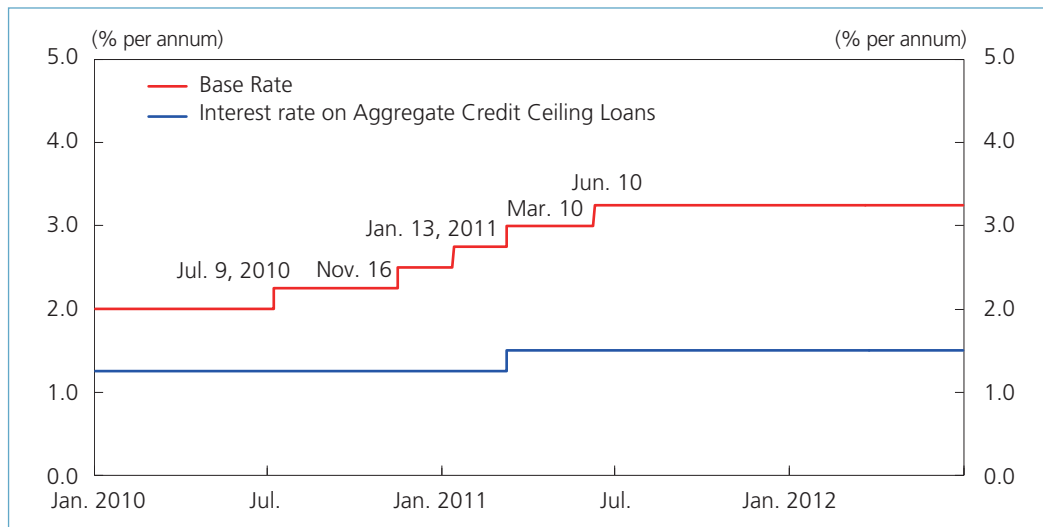
During the first half of 2010, the Bank of Korea maintained the Base Rate at 2.0% per annum, the level to which it had been dramatically reduced in response to the financial crisis. This policy stance was adopted after taking it into due consideration that prices were showing generally stable movements, as the pressures on the demand side were not very great in spite of the continuous upward trend of domestic business activity, and the Korean won/US dollar exchange rate had eased below its level of the previous year. In addition, it was also considered that the future economic prospects were highly uncertain owing to the inadequacy of the economic recovery in major advanced countries and the frequent reemergence of international financial market unrest.

From the latter half of 2010, however, in keeping with the increase in upward price pressures as the economy continued its upswing trend, the Bank of Korea conducted monetary policy in such a way as to gradually reduce the degree of financial easing and normalize interest rates.

In accordance with this policy stance, the Bank of Korea adjusted the Base Rate upward on five occasions, raising it by quarter of a percentage point steps in July and

November 2010 and in January, March and June 2011, bringing it from 2.0% per annum to 3.25% per annum. However, despite the increase in the Base Rate, the interest rate on Aggregate Credit Ceiling Loans had been left unchanged at 1.25% to bring about favorable financial conditions for small and medium-sized enterprises and encourage banks to lend to them. Then, in March 2011, the interest rate on these loans was raised by a quarter of a percentage point to 1.50% per annum. The Bank, meanwhile, continued to strive to withdraw the liquidity provided in response to the global financial crisis.

**Figure IV-7** Base Rate and interest rate on Aggregate Credit Ceiling Loans



Source: Bank of Korea

Table IV-2 Supply and withdrawal of liquidity following the global financial crisis

Type		Scale	Withdrawal
Korean won liquidity (trillions of won)	■ Bank Recapitalization Fund	3.3	Full amount withdrawn
	■ An increase in Aggregate Credit Ceiling Loans <sup>1)</sup>	3.5	
	■ Bond Market Stabilization Fund	2.1	
	Sub-total	8.9	–
	■ Unscheduled ad hoc RP purchases	16.8	Full amount withdrawn
	■ Other Korean won liquidity <sup>2)</sup>	2.3	One-off support
	Total	28.0	–
Foreign currency liquidity <sup>3)</sup> (billions of dollars)		26.8	Full amount withdrawn

Notes: 1) Fast Track Program for SMEs, ceiling for settlement support, and ceiling for trade financing

2) Outright purchases of Government bonds, repurchases of MSBs prior to maturity, etc.

3) Foreign currency swaps, foreign currency loans, etc.

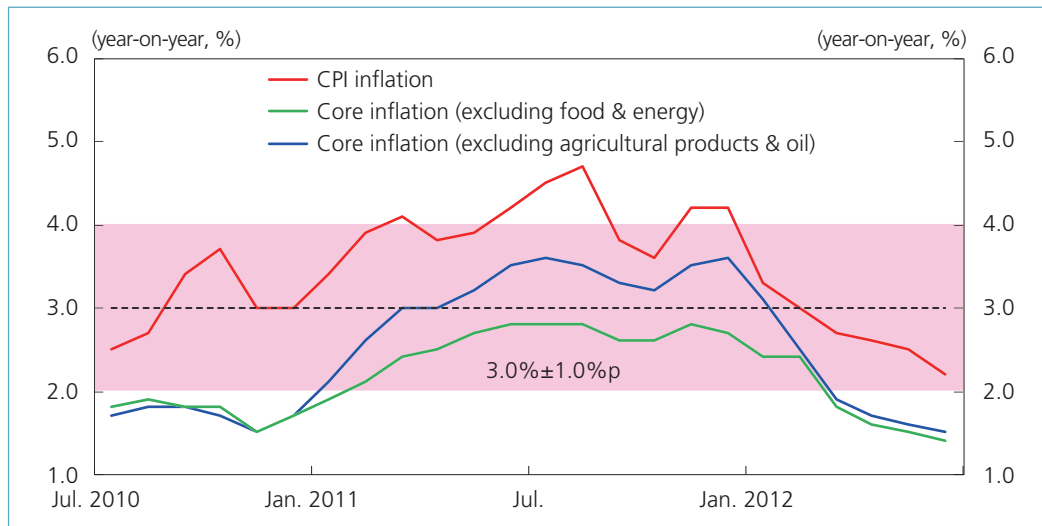
Source: Bank of Korea

The background to the gradual normalization of the Base Rate by the Bank of Korea was, that the world economy was maintaining its recovery trend led by emerging markets, and domestic economy was continuing to rise, boosted by the consistent growth of exports and domestic demand, the latter driven by factors such as private consumption.

From the latter half of 2010 onwards until the latter half of 2011, prices continued on an upward trend as cost-side factors such as the sharp rise in prices of agricultural, livestock and marine products and an increase in international prices of raw materials were compounded by demand pressures driven by the economic upswing. Consumer price inflation (year-on-year) continued to exceed 3.0%, mid-point of the medium-term inflation target from September 2010 onwards and reached 4.7% in August 2011. Thereafter, it slowed down to some degree, but was still running at elevated rate of around 4% until the end of 2011.

Figure IV-8

## CPI and core inflation



Note: The shaded area indicates the medium-term inflation target range.  
Source: Statistics Korea

During the latter half of 2011, the Base Rate was held at 3.25% per annum even despite the continued high rate of increase in consumer prices at around 4%. The rationale for keeping the Base Rate unchanged was that while the upward pressure on prices was expected to ease slightly in the future, the downside risks to growth and volatility of domestic financial and foreign exchange markets had been heightened by the sovereign debt problems in euro area, the economic slowdown in major countries and the international financial market unrest. In actual fact, during the latter half of 2011, growth slowed down with both exports and domestic demand declined, due to an uncertain external environment as the negative impact on the real economic activity amid the continued deterioration of the sovereign debt problems in euro area spread out to engulf even the emerging market countries, and the waning of economic agents' consumption and investor confidence. Real GDP growth fell from 3.6% in the third quarter to 3.3% in the fourth quarter.

Meanwhile, the Bank of Korea devoted multi-faceted efforts to minimize the influence of destabilizing factors in the financial and foreign exchange markets such



as the expanded volatility of capital flow, the spread of the sovereign debt crisis in euro area, and uncertainties related to North Korea. As an initial step, the Bank strove to enhance the effectiveness of foreign exchange macroprudential policy in concert with the government. It came up with a number of supplementary measures including lowering the ceilings on foreign exchange banks' FX-forward positions and restricting their investment in foreign currency-denominated bonds issued domestically for the purpose of Korean-won financing. At the same time, it adopted measures to facilitate the seamless implementation of the Macroprudential Stability Levy. Constantly monitoring Korean won and foreign currency liquidity conditions and the movements of price variables, the Bank promptly brought into operation a system of emergency responses arrangements such as the formation of the Monetary and Financial Action Task Force, upon the emergence of factors making for market instability, including the downgrade of the US sovereign credit rating and the death of the North Korean leader. Moreover, to enhance the Bank's capacity for responding to external shocks, the Bank arranged to enlarge the size of its currency swap lines with Japan and China.<sup>10)</sup>

## **2012–First Half of 2016: Expansion of the Monetary Easing Stance Following Economic Slowdown and the Increased Downward Price Pressure**

The Bank of Korea maintained the Base Rate at 3.25% per annum during the first half of 2012. Above all, even with the presence of downward risks to growth generated by the sovereign debt crisis in euro area, it was forecast that the domestic economic growth rate would recover, albeit at a moderate rate, to the level of its long-term trend.

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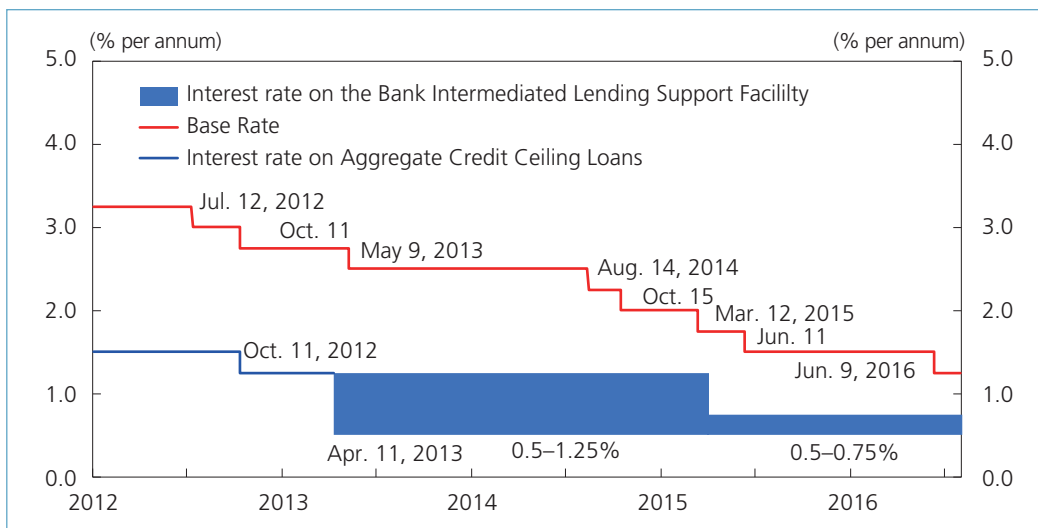
10) In October 2011, the Bank of Korea and the Bank of Japan agreed to expand the size of their existing \$13 billion bilateral currency swap to a total size of \$70 billion. The won/yen currency swap arrangement with the BOJ was increased from \$3 billion to \$30 billion, and in a joint effort with the government the Bank of Korea concluded a new US dollar/local currency swap deal worth \$30 billion with the Ministry of Finance of Japan and also agreed on extending the maturity of the countries' existing CMI bilateral currency swap (\$10 billion). The BOK meanwhile also doubled the size of its won/yuan currency swap agreement with the People's Bank of China from the existing 180 billion yuan (38 trillion won) to 360 billion yuan (64 trillion won).

Moreover, although consumer price inflation had fallen to a level of around the mid-2%, there were potential destabilizing factors such as high inflation expectations.

However, from the second half of 2012, the Bank of Korea gradually expanded the extent of the monetary easing as the protracted sovereign debt crisis in euro area and the longstanding slowdowns in major economies led to a downturn in the domestic economy and an increase in deflationary pressure.

In July 2012, the Bank of Korea cut the Base Rate by 0.25%p, the first cut since February 2009, and then made two further 0.25%p decreases in October 2012 and May 2013, bringing the Base Rate down to 2.50% per annum from 3.25%. Additionally, in October 2012 and April 2013, the Bank lowered its interest rate on Aggregate Credit Ceiling Loans from 1.50% to the range of 0.5–1% per annum. The Bank of Korea's policy shift to reducing the Base Rate was made in consideration of, above all, the slow recovery in the global economy resulting from the sovereign debt crisis in euro area, and also took into account the increased domestic downward risks, including the weak yen and the geopolitical risk in relation to North Korea. It was also considered that the upward trend in prices had significantly slowed by the second half of 2013 due to a reduction in the pace of increase in personal service charges, which had been influenced by institutional factors such as the expansion of free childcare and school meals, amid the subdued growth of prices of agricultural, fishery, and livestock products since the second quarter of 2012.

**Figure IV-9 Base Rate, interest rates on Aggregate Credit Ceiling Loans and the Bank Intermediated Lending Support Facility**



Source: Bank of Korea

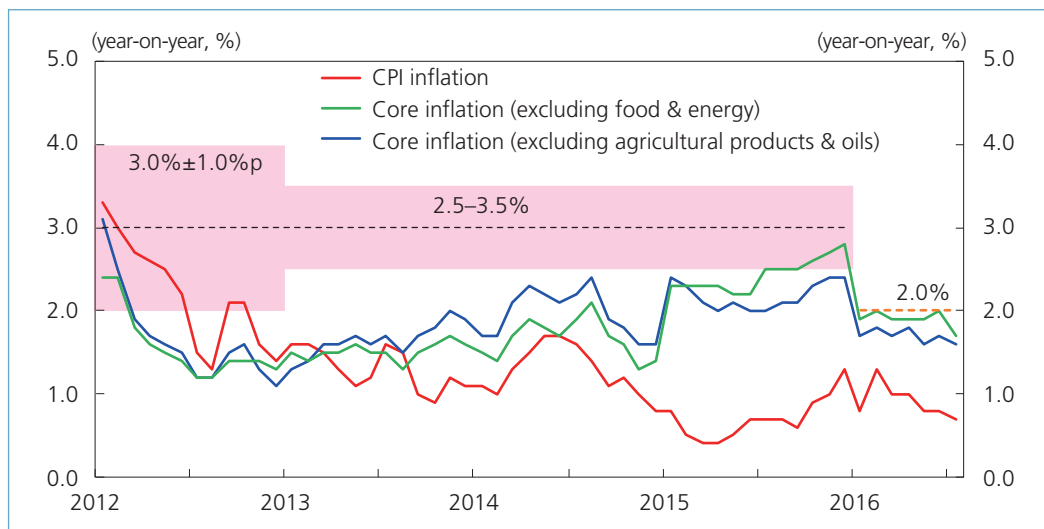
Then, the Bank of Korea maintained the Base Rate at 2.50% until July 2014. This stance was taken to reflect the prospect of a gradual increase in consumer price inflation amid expectations that the domestic economy would continue its accelerating recovery, helped by the effect of the Base Rate cut and moderate growth in the global economy. In addition, the Bank determined that it would be desirable to closely monitor the financial and economic outlooks due to a number of external factors, including widespread concerns in May 2013 that the US Federal Reserve would scale back its quantitative easing (taper tantrum), the actual reduction in quantitative easing at the beginning of 2014, and instability in emerging financial markets including a massive outflow of foreign investment led by concerns of a slowdown in the Chinese economy and political instability in some emerging economies.

Entering the second half of 2014, the pace of growth in the domestic economy slowed again due to the impact of both internal and external factors and a sharp drop in the previously rising inflation rate. Accordingly, the Bank of Korea cut the Base Rate in August and October of 2014 and March and June of 2015 by 0.25%p on each

occasion, bringing the rate down to 1.50%. As for the Bank Intermediated Lending Support, the Bank raised its total ceiling by 3 trillion won in July 2014 and additionally by 5 trillion won in April 2015, in order to expand the total ceiling to 20 trillion won, while cutting the lending interest rates applied to some programs by 0.25%p. The background to this period's expansion of monetary easing, including reductions of the Base Rate, is as follows. First, exports had shown an increased slump due to the weakened external demand in line with declining global economic growth centering on emerging economies, and domestic demand had also shown a weak recovery. In addition, there was a need to mitigate the possible negative impacts of the Sewol ferry accident in 2014 and the MERS outbreak in 2015 on economic sentiment and real economic activities. In particular, it was considered that the large-scale drop in the inflation had been influenced by the rapid decline in petroleum product prices linked to the plunge in international oil prices since the second half of 2014. Consumer price inflation stood at 1.3% in 2014 and 0.7% in 2015, far below the medium-term inflation target of 2.5–3.5% for the period between 2013 and 2015.

Figure IV-10

## CPI and core inflation



Note: The shaded area indicates the medium-term inflation target range, and the orange dotted line indicates the medium-term inflation target set for 2016 onwards.

Source: Statistics Korea

From the second half of 2015, the Bank of Korea maintained the Base Rate at a level of 1.50% per annum due to the need to monitor the effects of expansionary macroeconomic policies, including the cuts in the Base Rate and the government's drawing up an additional supplementary budget. There was also a need for greater caution toward financial stability risks amid rising volatility in financial markets at home and abroad, triggered by high household debt growth, the likelihood of the US Federal Reserve raising its policy rate, and China's unstable financial and foreign exchange markets.

In the first half of 2016, however, the trend of growth in the domestic economy did not show a clear recovery owing to the continuing slump in exports, and therefore, the Bank of Korea cut the Base Rate in June to a record low of 1.25% per annum, in response to the need to preemptively mitigate the negative effects on the real economy and economic sentiment that may have occurred as a result of corporate restructuring focused in industries such as shipbuilding.

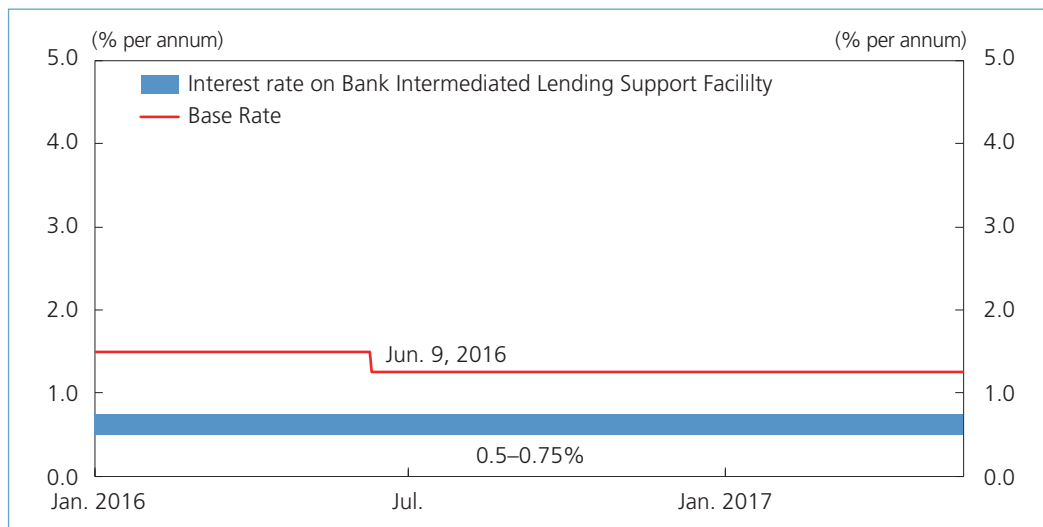
### **Second Half of 2016–First Half of 2017: Support for the Recovery of Economic Growth and Maintenance of an Accommodative Monetary Policy Stance for Financial Stability**

From the second half of 2016, the Bank of Korea maintained its accommodative monetary policy to ensure that the recovery of economic growth continues and the consumer price inflation would approach the target level over a medium-term horizon. In this process, the Bank closely monitored risks to financial stability, such as the buildup of household debt and the hikes in the interest rate by the US Federal Reserve.

Under this policy stance, the Bank maintained the Base Rate at a level of 1.25% per annum from July 2016. The decision to do so was made because although the domestic economy showed faster growth as exports and investments improved on the back of the global economic recovery in 2017 despite anemic performance in the second half of 2016, the Bank deemed it desirable to cautiously observe future

changes and consequences in relevant conditions, given the high uncertainties about the path of economic growth, including uncertainties about US Federal Reserve's monetary policy normalization, rising protectionism and changes in trade conditions with advanced countries. Another factor was that consumer price inflation was forecast to gradually rise from the 1% range in the second half of 2016 to the 2% target in 2017. In addition, it was also deemed necessary to closely monitor the possibility of expanding volatilities in the financial and foreign exchange markets, caused by interest rate hikes by the US Federal Reserve and heightened geopolitical risks. In the meantime, it was further necessary to dedicate additional attention to financial stability risks, because household debt, which had grown at a fast pace since 2014 and was regarded as a potential risk to the Korean economy, continued to grow far more rapidly than usual, notwithstanding the continuous efforts to curb household debt growth by the government and the financial authorities.

**Figure IV-11** Base Rate and interest rate on Bank Intermediated Lending Support Facility

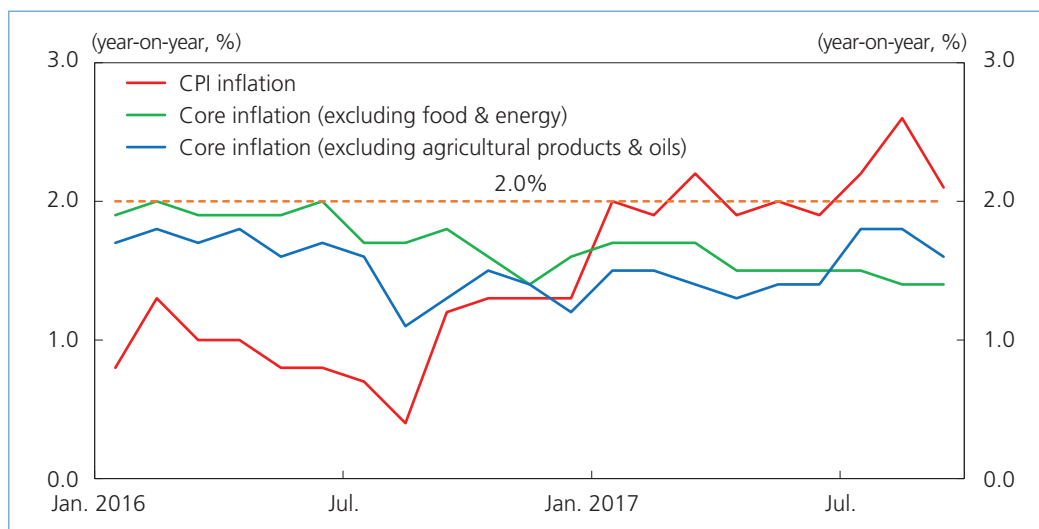


Source: Bank of Korea

Entering 2017, under the influence of the continued accommodative monetary policy stance and the recovery of the global economy, the domestic real economy saw robust growth, mainly led by exports and investments, with consumer price inflation coming in at around 2% in the first half. In addition, it was forecast that the domestic economy would show a trend of solid growth thanks to the recovery of the global economy and improvement in economic sentiment, although there remained significant uncertainties arising from changes in trade conditions with major advanced countries and from geopolitical risks. Consumer price inflation, meanwhile, was expected to fluctuate at around the target level of 2%.

Figure IV-12

## CPI and core inflation



Note: The orange dotted line indicates the medium-term inflation target set for 2016 onwards.

Source: Statistics Korea

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