

# Monetary Policy Report

November 2017



# Monetary Policy Report

November 2017



The Bank of Korea sets and implements its monetary and credit policy in order to contribute to the sound development of national economy by pursuing price stability and paying attention to financial stability.

The Bank of Korea Act stipulates that the Bank of Korea, to fulfill its accountability corresponding to these mandates, should compile at least twice each year a report on the implementation of its monetary and credit policies.

In line with this the Bank of Korea prepares the Monetary Policy Report, containing the details of and backgrounds to its monetary policy decisions, the future monetary policy directions, etc., four times per year, and submits it to the National Assembly. Among these four reports, two are the Bank's biannual regular reports and the other two are shortened interim quarterly reports.

This November 2017 Monetary Policy Report has been drawn up to cover the time period from after the Monetary Policy Board meeting for monetary policy decision-making in April 2017 through the date of the Monetary Policy Board meeting for monetary policy decision-making in October 2017.

We sincerely hope that this Monetary Policy Report will be of help in ensuring that the public well understands the Bank of Korea's monetary policy operations, and forms rational expectations concerning the future policy directions.

## **<Bank of Korea Act>**

### **Article 96 (Reporting to National Assembly)**

- (1) The Bank of Korea shall prepare an assessment report on progress in implementing monetary and credit policies and macro-financial stability conditions at least twice every year and submit it to the National Assembly.
- (2) The Governor shall attend a meeting and answer questions, when the National Assembly or any of its committees requests him/her to attend the meeting in connection with the report submitted pursuant to paragraph (1).

This Monetary Policy Report is published in accordance with the provision of Article 96 of the Bank of Korea Act, and upon the resolution of the Monetary Policy Board.

November 2017



Lee, Juyeol  
Governor  
the Bank of Korea

**Monetary Policy Board**

Chairman	Lee, Juyeol
Member	Hahm, Joon-Ho
Member	Lee, Il Houg
Member	Cho, Dongchul
Member	Koh, Seung Beom
Member	Shin, Inseok
Member	Yoon, Myun-Shik

## General Principles of Monetary Policy Operation

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.



# Contents

## Executive Summary

<b>I. Monetary Policy Operating Conditions</b> .....	1
1. Global Economy .....	3
2. Real Economy .....	6
3. Prices .....	9
4. Financial and Foreign Exchange Markets .....	13
<b>II. Conduct of Monetary Policy</b> .....	21
1. Base Rate .....	23
2. Bank Intermediated Lending Support Facility .....	26
3. Financial Stability .....	28
<b>III. Future Monetary Policy Directions</b> .....	33
1. External Conditions .....	35
2. Growth Forecast .....	36
3. Price Forecast .....	38
4. Major Considerations .....	40
5. Future Monetary Policy Operational Directions .....	53

# List of Tables

[Tab. I- 1]	Economic growth in major economies .....	3
[Tab. I- 2]	Major economic growth indicators .....	7
[Tab. I- 3]	Major employment-related indicators .....	7
[Tab. I- 4]	Current account .....	9
[Tab. I- 5]	Consumer prices .....	10
[Tab. I- 6]	Producer prices and import prices (Korean-won basis) .....	12
[Tab. I- 7]	Rates of increase in housing sales and leasehold deposit prices .....	12
[Tab. I- 8]	Corporate funding .....	16
[Tab. I- 9]	Household lending by depository institutions .....	17
[Tab. II- 1]	Details of Bank Intermediated Lending Support Facility reform .....	27
[Tab. II- 2]	Funds covering temporary intraday liquidity shortages .....	30
[Tab. II- 3]	Joint examinations with Financial Supervisory Service .....	32
[Tab. III- 1]	World economic growth outlook .....	35
[Tab. III- 2]	Outlook for economic growth in the euro area .....	35
[Tab. III- 3]	Outlook for economic growth in EMEs .....	36
[Tab. III- 4]	Outlook for international oil prices .....	36
[Tab. III- 5]	Economic growth outlook .....	37
[Tab. III- 6]	Inflation outlook .....	39
[Tab. III- 7]	Major contents of 8.2 Measures .....	47
[Tab. III- 8]	Household lending before and after 8.2 Measures .....	48

# List of Figures

[Fig. I- 1]	International oil prices .....	4
[Fig. I- 2]	Long-term market interest rates in major economies .....	4
[Fig. I- 3]	Share price indices of advanced and emerging markets .....	5
[Fig. I- 4]	Major exchange rates .....	5
[Fig. I- 5]	Manufacturing industry average capacity utilization rate gap .....	8
[Fig. I- 6]	Unemployment rate gap .....	8
[Fig. I- 7]	CPI inflation .....	9
[Fig. I- 8]	Contributions to CPI inflation .....	10
[Fig. I- 9]	Underlying inflation rates .....	11
[Fig. I-10]	Inflation expectations .....	11
[Fig. I-11]	Korean and US Treasury bond yields .....	13
[Fig. I-12]	Corporate bond credit spreads and spreads across credit ratings .....	13
[Fig. I-13]	KOSPI and share volatility index .....	14
[Fig. I-14]	Changes in and balances of foreigners' bond holdings .....	15
[Fig. I-15]	Foreigners' net stock purchases and stock holding shares .....	15
[Fig. I-16]	Exchange rates .....	17
[Fig. I-17]	Exchange rate (KRW/USD) fluctuations .....	18
[Fig. I-18]	Domestic/international interest rate spread and swap rate .....	18
[Fig. I-19]	Real money gap and Financial Conditions Index .....	19
[Fig. II- 1]	Bank of Korea Base Rate .....	23
[Fig. II- 2]	Liquidity adjustment by means of open market operations .....	25
[Fig. II- 3]	Bank of Korea Base Rate and overnight call rate .....	25
[Fig. III- 1]	Economic growth fan chart .....	36
[Fig. III- 2]	CPI inflation fan chart .....	39

[Fig. III- 3]	Percentage GDP gap outlook .....	39
[Fig. III- 4]	GDP growth, percentage GDP gap and core inflation of advanced economies .....	41
[Fig. III- 5]	Correlations between percentage GDP gap and core inflation .....	41
[Fig. III- 6]	Estimation of percentage GDP gap's influence on prices .....	41
[Fig. III- 7]	Unemployment and wage increase rates .....	42
[Fig. III- 8]	US e-commerce product prices .....	43
[Fig. III- 9]	Expected inflation .....	43
[Fig. III-10]	Percentage GDP gap of advanced economies .....	44
[Fig. III-11]	Extents of change in rates of unemployment and wage increase, by business cycle .....	44
[Fig. III-12]	Financial institutions' household lending .....	46
[Fig. III-13]	Housing market changes before and after 8.2 Measures .....	47
[Fig. III-14]	Stock price and stock price volatility changes at times of North Korea risk emergence .....	50
[Fig. III-15]	Interest rate volatility at times of North Korea risk emergence .....	50
[Fig. III-16]	Exchange rate volatility at times of North Korea risk emergence .....	51
[Fig. III-17]	CDS premium volatility at times of North Korea risk emergence .....	51
[Fig. III-18]	Foreigners' portfolio investment at times of North Korea risk emergence .....	52

## ■ Executive Summary

### [Monetary Policy Operating Conditions]

1 A look at financial and economic conditions at home and abroad between April and October of 2017 shows the following. The global economy displayed signs of an expanding pace of recovery. The United States economy continued its stable growth as factors such as improved employment conditions and favorable economic sentiments buoyed domestic demand. In the euro area and Japan the trends of improvement continued, based mainly on consumption, while China sustained its trend of solid growth.

#### Economic growth in major economies<sup>1)</sup>

	2014	2015	2016		2017		
			Year	Q3	Q4	Q1	Q2
US	2.6	2.9	1.5	2.8	1.8	1.2	3.1
Euro area	1.3	2.0	1.8	1.9	2.5	2.2	2.6
Japan	0.3	1.1	1.0	0.9	1.6	1.2	2.5
China	7.3	6.9	6.7	6.7	6.8	6.9	6.9

Note: 1) The quarterly rates of growth are annualized quarter-on-quarter rates for the US, Japan and the euro area, and year-on-year rates for China.

Sources: Individual countries' published statistics.

In the international financial markets, long-term market interest rates in major countries including the US fluctuated within narrow ranges in accord with variations in economic conditions. Stock prices sustained rising trends in both advanced and emerging countries, owing for example to improved corporate performances in major countries and to the global economic recovery. The US dollar meanwhile showed a trend of

weakening, on concerns about political uncertainties in the US and the highlighting of possible reductions in their monetary policy accommodativeness by the ECB and other central banks.

#### US long-term market interest rate<sup>1)</sup>, stock prices<sup>2)</sup> in advanced countries and US dollar index<sup>3)</sup>



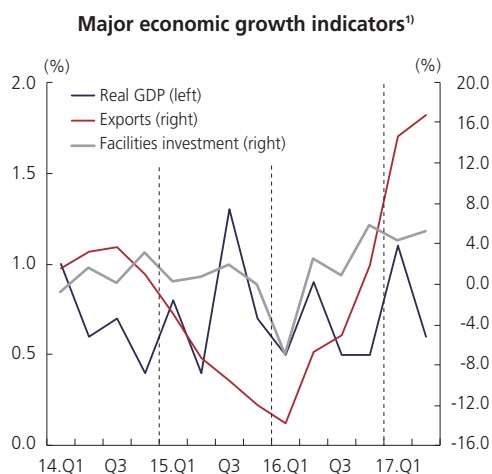
Notes: 1) Treasury bond (10-year) yields.

2) January 1, 2014=100.

3) The measure of the value of the US dollar relative to a basket of foreign currencies (EUR, JPY, GBP, CAD, SEK, CHF); March 1973=100.

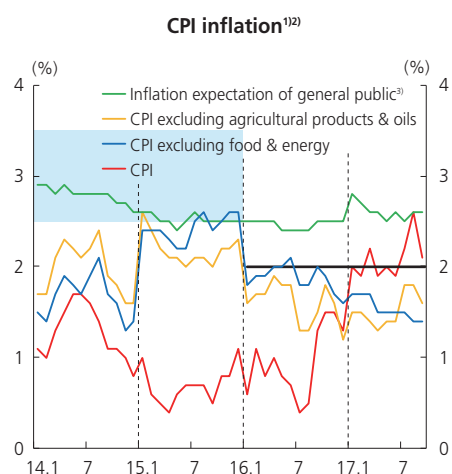
Source: Bloomberg.

2 The domestic economy maintained its upward trend, led by exports and facilities investment. Although the pace of increase in construction investment slowed in the second quarter, the domestic economy recorded a quarter-on-quarter growth rate of 0.6% based on robustness in exports and facilities investment. In the third quarter the growth rate rose, as exports sustained their high rate of increase, driven by semiconductors and petroleum products for example, and as consumption maintained its gradual pace of recovery as well.



Notes: 1) Rates of growth quarter-on-quarter for real GDP and facilities investment; year-on-year for exports (customs clearance basis).

Sources: The Bank of Korea, Korea Customs Service.



Notes: 1) Compared with the same periods of the previous years.

2) The shaded area indicates the medium-term inflation target range during the 2013-2015 period, and the bold line the medium-term inflation target set for 2016 onwards.

3) Expectations for the CPI inflation rate one year in the future.

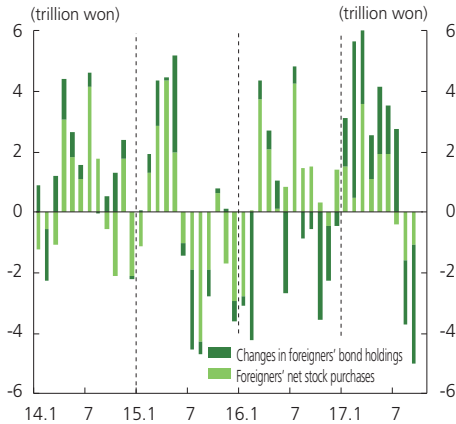
Sources: The Bank of Korea, Statistics Korea.

**3** Domestic consumer price inflation was in the mid-2% range in the second quarter, but entering the third quarter it then accelerated, on the effects for example of increasing agricultural product prices. The inflation expectations of the general public were in the mid-2% range generally, and core inflation, indicative of the underlying price movements, remained at the mid-1% level.

Housing sales prices meanwhile showed a high rate of increase from May, based on rising sales prices especially in Seoul and its surrounding areas. This was in line for example with investment demand related to the reconstruction and redevelopment businesses. However, the pace of housing sales price growth slowed somewhat following the government's announcement of housing market stabilization measures (the 8.2 Measures hereafter). Leasehold deposit prices meanwhile sustained trends of stability generally.

**4** In the domestic financial markets, long-term market interest rates rose gradually from the middle of June, as the possibility of major countries changing their monetary policy stances emerged. Entering August their extents of increase widened with the weakening of investment sentiment due to an increase in North Korea-related geopolitical risk for example. The won/dollar exchange rate fluctuated in line with developments related mainly to monetary policy normalization by the US Federal Reserve and to the North Korea risk. Foreigners' domestic portfolio investment meanwhile reversed to net sales from August, influenced by factors such as the increase in North Korea risk.

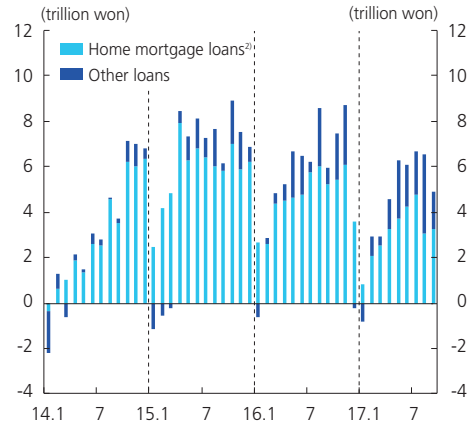
### Changes in foreigners' domestic portfolio investment



Sources: Financial Supervisory Service, Koscom.

⑤ Looking at bank household lending, the extent of growth in banks' individual home mortgage loans slowed somewhat on the effects of the 8.2 Measures. In the third quarter bank household lending increased slightly more than it had in the second quarter, however, as the upward trend in group loans continued and as other lending expanded significantly due to factors such as the launch of Internet-only banks. Meanwhile, the amount of increase in non-bank financial institution household lending fell slightly, as the government's strengthened efforts to manage household lending continued.

### Changes in banks' household loans<sup>1)</sup>



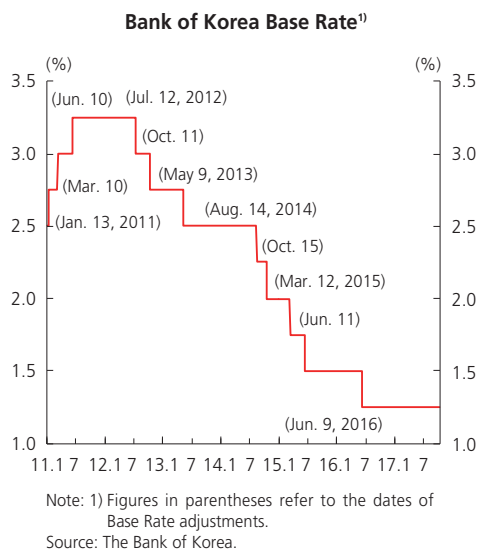
Notes: 1) Compared with the previous months.

2) Including mortgage transfers.

Source: The Bank of Korea.

## [Conduct of Monetary Policy]

⑥ During the May to October 2017 period the Bank of Korea conducted its monetary policy in an accommodative manner, to ensure that the recovery of economic growth continues and that consumer price inflation can be stabilized at the target level over a medium-term horizon. In this process it devoted attention to financial stability as well, and closely monitored changes in the monetary policies of major countries' central banks, conditions related to Korea's trade with major countries, the upward trend of household debt, geopolitical risks, etc.



7 Under this policy stance the Bank of Korea held the Base Rate at a level of 1.25% per annum throughout this period. A review of the factors considered most importantly at the times of the monetary policy decisions follows:

In its May 2017 Monetary Policy Board meeting the Bank of Korea decided to hold the Base Rate at 1.25% per annum because, although the pace of domestic economic growth had accelerated slightly more than had been expected, it was judged necessary to observe future changes in conditions a little longer given the fact that the uncertainties concerning the path of growth were still high. Although the pace of consumption growth had remained unsatisfactory in the period leading up to the meeting, the GDP growth rate for the year was expected to pick up and slightly exceed the April forecast (2.6%) as exports and investment improved. However, there was a possibility that the speed of the economy's improve-

ment could be restrained by changes in Korea's trading conditions vis-à-vis major countries and by uncertainties related to the normalization of its monetary policy by the US Federal Reserve. The rate of consumer price inflation had meanwhile sustained the inflation target level of 2%, in line for example with increases in the prices of petroleum and agricultural, livestock and marine products, and was expected to fluctuate at the 2% level for some time. Meanwhile, it was judged necessary to keep in mind risks from the financial stability perspective, given that foreign exchange market volatility had expanded, due to the uncertainties related to domestic and external conditions, and that the amount of increase in household lending was higher than in normal years even though it had contracted slightly year-on-year.

The Bank continued to hold the Base Rate at an annual level of 1.25% in the July and August Monetary Policy Board meetings as well. The decisions to do so were made in consideration of the fact that, although the domestic economy was forecast to grow at a solid pace, the inflationary pressures from the demand side were not large while the uncertainties as to domestic and external conditions were very high. It was thus deemed necessary to cautiously watch any future changes in these conditions, and the effects that they would have on the domestic economy. The domestic economy was judged likely to continue its solid growth, as exports and investment were improving and consumption was also recovering gradually. The consumer price inflation rate had risen to the lower 2% level, owing for example to

increases in the prices of agricultural, live-stock and marine products and to the base effect following the reduction in electricity fees of the previous year, and it was forecast that for the year as a whole it would not diverge greatly from the July forecast (1.9%). Core inflation, indicative of the underlying price movements, was however maintaining a rate in the mid- to upper 1% range, and the demand-side inflationary pressures did not seem to be great. It was meanwhile deemed necessary to devote attention to the possibility of increased risks to financial stability, as the volatility of financial market price variables had grown, with stock prices, exchange rates and long-term interest rates having fluctuated to significant extents since July on factors such as the rise in North Korea risk. In addition, while household lending had continued to grow at a rate above normal years' levels, due mainly to lending by banks, the pace of increase in housing prices had slowed since the government's announcement of its housing market stabilization measures. It was however also considered necessary to observe whether this situation would become a long-term trend going forward.

In the October meeting as well the Bank maintained the Base Rate at 1.25% per annum. This was decided on after comprehensive consideration of the point that, although the domestic economy would likely continue its solid growth, there were potential uncertainties – related to Korea's geopolitical risks, to changes in its trading conditions vis-à-vis major countries, etc. – and it was thus desirable to watch these trends and their future influences a bit more, together

with the forecast that demand-side inflationary pressures would not be great for the time being. Specifically, it was judged that the domestic economy would continue its solid growth, as exports and facilities investment continued to show high rates of increase and consumption also expanded gradually. In line with this the GDP growth rate for this year was expected to exceed the July forecast figure (2.8%), and to also come out at its potential level next year. The consumer price inflation rate had remained at the 2% level, but was forecast to be in the upper 1% level for some time going forward, due for example to the subsiding of the base effect from the previous year's electricity fee cuts, and then gradually approach the 2% inflation target level. Demand-side inflationary pressures were expected to be not large, with the core inflation rate continuing in the mid-1% range for the time being. With regard to housing prices, the points were also considered that housing prices were rebounding slightly in some parts of Seoul and its surrounding areas, albeit slowly, and that the amount of household lending growth was still sustaining a higher level than in normal years even though it had contracted.

⑧ The Bank of Korea, in accordance with the basic directions revealed in its 「2017 Monetary Policy Operational Directions」 of December last year, reformed its Bank Intermediated Lending Support Facility with effect from September.

The Bank expanded and reorganized its Support Program for High-tech and Other Start-up SMEs, renaming it as the Support

Program for New Growth Engine Development and Job Creation, and thereby strengthened its support for SMEs that contribute to the discovery of new engines of growth and the creation of jobs. Moreover, in order to reinforce the support for regional SMEs, which are experiencing difficulties in business management and in maintaining employment due to the effects for example of the restructurings of large enterprises and the weak consumption recovery, the Bank raised the total ceiling of its Support Program for Regional Enterprises by resuming operation of its special ceiling. In addition the Bank introduced the Program for Stabilization of SME Lending, in order to boost the effectiveness of its conduct of monetary policy by easing the volatility in SME lending and by ensuring the smooth operation of credit channels besides the interest rate channel. Meanwhile, the Bank normalized operation of the 5 trillion won that it had temporarily added to the Bank Intermediated Lending Support Facility ceiling in March of last year, to thus maintain the total facility ceiling at 25 trillion won.

⑨ The Bank of Korea also continued its policy efforts to secure financial and foreign exchange market stability. When the US Federal Reserve announced its rate hikes and implementation of its balance sheet normalization program, and when North Korea continued its provocations, the Bank convened meetings of its 「Monetary and Financial Task Force」 to monitor the international financial market fluctuations in the CDS premium or the exchange rate, along with market participants' reactions, and to discuss any measures needed in

response. In September, notably, when geopolitical risks became greatly elevated due to North Korea's sixth nuclear test, the Bank activated its emergency system in collaboration with its overseas representative offices, and strengthened its monitoring of the domestic and international markets. During the long Chuseok holidays in October as well it examined international financial market conditions daily.

The Bank also devoted steady efforts to the preemptive identification of potential risk factors and the presentation of early warnings. Through the June issue of its 「Financial Stability Report」, and its 「Financial Stability Meeting」 held in September, it closely assessed vulnerabilities in financial stability conditions by sector, and examined resilience against domestic and external shocks to the financial system. In preparation for the possibility of increased risk stemming from the buildup in household debt, it closely monitored trends of household lending, through meetings of its 「Household Debt Task Force」 for example, while also attending the meetings of the 「Consultative Group for Managing Household Debt」 and the 「Microeconomic and Financial Meeting」 to share with the government and the supervisory authorities understandings related to the household debt problem and state its views as to the appropriate responses.

### **[Future Monetary Policy Directions]**

⑩ In the Bank's 「Economic Outlook Report」 released on October 19, it forecast that the domestic economy will continue its

trend of improvement, as the buoyancy of goods exports and facilities investment persists, thanks to the global economic recovery, and private consumption also shows a gradual trend of recovery, and record a rate of growth during this year of 3.0%. In 2018 the Korean economy is expected to show a growth rate of 2.9%, in line with a pickup in the pace of private consumption growth under the influence of the government policies, amid a continuing trend of world economic recovery. Looking at the contributions to growth of the different expenditure sectors, it is forecast that during next year the contribution of exports will rise and that of domestic demand activities will fall.

Concerning the future path of growth there is a mix of both upside and downside risks. The former include risks of strengthening trends of improvement in exports and facilities investment in line with an acceleration of the world economic recovery, of an improvement in Korea's trade conditions vis-à-vis China stemming from an easing of the THAAD tensions, and of an expansion of the consumption recovery due to the government's household income boosting policies. Among the downside risks meanwhile are those of worsening trade conditions with major countries such as the US, of expanded financial market volatility in line with major countries' normalizations of their monetary policies, and of a contraction in economic sentiment as a result of heightened North Korea risks.

### Economic growth outlook<sup>1)</sup>

(%)

	2016		2017		2018 <sup>e</sup>		
	Year <sup>e</sup>	Year <sup>e</sup>	1st half	2nd half <sup>e</sup>	Year	1st half	2nd half
GDP	2.8	3.0	2.8	3.2	2.9	2.9	3.0
Private consumption	2.5	2.3	2.1	2.5	2.6	2.7	2.6
Facilities investment	-2.3	14.0	15.9	12.1	2.8	2.3	3.4
Intellectual property products investment	2.3	2.9	2.6	3.1	3.0	3.2	2.9
Construction investment	10.7	6.9	9.4	4.9	0.2	0.3	0.1
Goods exports	2.2	3.7	4.2	3.3	3.5	2.4	4.6
Goods imports	3.6	7.1	9.3	5.0	3.4	2.1	4.8

Note: 1) Compared with the same periods of the previous years; the figures are forecast as of October 2017.

Source: The Bank of Korea.

It is forecast that consumer prices will rise by 2.0% during this year, and their pace of increase is expected to then slow slightly in 2018. The upside and downside risks to the future path of inflation are also assessed as mixed, with the overall risk being neutral. As the major upside risks, there are those of a strengthening of the domestic economic recovery due to the improved global economic conditions, of a rise in the won/dollar exchange rate in reaction to North Korea risk and to the monetary policy normalization by the US Federal Reserve, and of a pickup in the degree of wage increases in line with improving employment conditions. The downside risks meanwhile include a drop in international oil prices in consequence of increased US shale oil production, and the possibility of the private consumption recovery proceeding more slowly than expected.

### Inflation outlook<sup>1)</sup>

(%)

	2016	2017			2018 <sup>e</sup>		
		Year <sup>e</sup>	1st half	2nd half <sup>e</sup>	Year	1st half	2nd half
CPI inflation	1.0	2.0	2.0	2.0	1.8	1.7	1.9
Core Inflation							
CPI excluding food & energy	1.9	1.6	1.6	1.6	1.9	1.8	1.9
CPI excluding agricultural products & oils	1.6	1.5	1.4	1.6	1.9	1.8	1.9

Note: 1) Compared with the same periods of the previous years; the figures are forecast as of October 2017.

Source: The Bank of Korea, Statistics Korea.

11 Among the major issues that will have to be considered in the future operation of monetary policy, we have looked closely at the changes in the relationship between growth and prices, and their causes, at the impacts on household lending of the government's measures related to housing and household debt, and at the effects of the North Korea risk on the financial and foreign exchange markets.

Since the global financial crisis the relationship between growth and prices has weakened, in major countries as well as in Korea. This appears to have been a result of a combination of structural factors and cyclical factors. The former include changes in the labor market structure, intensified intra- and international competition, and the decline in inflation expectations, and the latter a diminution in the influence of growth on prices due to the persisting idle production capacity. The problems due to structural factors will be difficult to resolve within a short span of time, but if that of idle production capacity is resolved as the solid growth continues going forward, then it is judged that there is a possibility that the

cyclical factors which have constrained the upward trend of prices will gradually ease. Moving ahead there is thus a need to continuously examine and analyze the sustainability of growth in major countries and in Korea, as well as the speed at which idle production capacity decreases and the consequent changes in the price level.

The amount of increase in financial sector household lending lessened between January and March of this year, but from May it expanded again due to factors such as expectations of increases in housing prices. In response, the government has promoted housing market stabilization through the 8.2 Measures for example, and strengthened its management of the trend of household lending growth. Notably, as the 8.2 Measures include additional designations of speculative districts and overheated speculative districts, stricter regulations on household financing, and stronger levies on transfer incomes earned by owners of multiple homes, the pace of price increase has slowed, the volume of transactions in the housing market has declined, and household lending growth has fallen somewhat. Going forward as well it is expected that the amount of growth in household loans will decrease, as the housing market stabilizes and the amount of loans available declines on the effects of the government's measures related to housing and to household debt. However, given the possibility that household lending may not slow greatly in the short term – in consequence of increases in the quantity of newly occupied residences and in the number of new apartment lots sold, of group loans that have already been

approved, and of advance demand for loans prior to the strengthening of loan regulations – there is a need to continue observing household lending trends closely.

The risks related to North Korea have risen recently but, similarly to in the past, the domestic financial and foreign exchange markets have generally shown temporary expansions in volatility and regained stability afterwards. This has been a result, together with the learning effect from the experience to this time, of the predominant view seeing the occurrence of an extreme situation such as a war to be unlikely. However, with the level of tension on the Korean peninsula having become elevated due to North Korea's frequent provocations, cautions about the North Korea risk appear to have grown more than in the past, especially among foreign investors. And inasmuch as the possibility cannot be ruled out of financial market volatility expanding following future changes in circumstances, such as additional provocations by North Korea, there is a need to continue close monitoring of developments related to North Korea risk.

**12** In the future as well, the Bank of Korea will conduct its 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 also devoting attention to financial stability.

The domestic economy appears likely to continue its solid growth, but since it is forecast that the demand-side price inflationary

pressures will not be large, the Bank will maintain its accommodative policy stance while carefully checking future economic growth and inflation trends. In this process it will closely observe developments related to domestic and external risk factors, and any resulting changes in financial and economic conditions as well. Besides consumer price inflation the Bank will also closely monitor core inflation, expected inflation, international oil prices, global inflation, various auxiliary price indices, the GDP gap, and the spare capacities in employment and in the manufacturing sector.

The Bank will in addition take into account the high uncertainties as to the domestic and external conditions surrounding the Korean economy, and devote efforts to ensuring that financial market stability is firmly maintained. It will strengthen its examinations related to changes in domestic and external conditions that can heighten financial market volatility, such as geopolitical risks, the changes in monetary policies of major countries' central banks, etc., and closely monitor trends of capital in- and outflows. Together with this, given the ongoing trend of household lending growth the Bank will also continue devoting attention to any possible expansion in financial imbalances.

Meanwhile, it appears that conditions are gradually forming for an adjustment in the degree of monetary policy accommodativeness, which has been expanded in response to the low-growth and low-inflation environment until this time. This view is grounded in the forecast that the domestic economy

will show a growth rate at around its potential level, and that inflation will also be at the target level. However, given the potential uncertainties related to geopolitical risks, to Korea's trade conditions vis-à-vis major countries, etc., the Bank will check whether the recent trends of improvement in the economy remain firm going forward as well, and whether they are sustainable.

# I

## Monetary Policy Operating Conditions

1. Global Economy .....	3
2. Real Economy .....	6
3. Prices .....	9
4. Financial and Foreign Exchange Markets .....	13



# 1. Global Economy

## Pace of Recovery Expands

The pace of global economic growth has accelerated. The US economy has continued its favorable growth, as factors such as improved employment conditions and favorable economic sentiments have buoyed domestic demand. Although it did slow somewhat at the end of August due to the effects of Hurricane Harvey, the US economy maintained a solid upward trend in September, with indicators of business conditions in the manufacturing and non-manufacturing industries rising greatly for instance.<sup>1)</sup> In the euro area the recoveries continued in the majority of countries, as employment conditions and consumer sentiments improved. Notably, while the unemployment rate fell in June to its lowest level (9.1%) since May 2009, consumption increased steadily and manufacturing business conditions improved greatly.<sup>2)</sup> In Japan the economic recovery has strengthened, as the paces of facilities investment and consumption growth have accelerated and large-scale public investment has been carried out. China has continued its pace of growth exceeding market expectations, driven by consumption, while the paces of growth in the ASEAN-5 countries have accelerated as domestic demand and exports have both improved. Brazil and Russia have also shown trends of recovery, owing to

buoyancy in exports. Growth in India has slowed slightly, however, on the effects for example of contractions in corporate sentiment stemming from the currency reform and from the introduction of the Goods and Services Tax.<sup>3)</sup>

<Table I - 1> Economic growth in major economies<sup>1)</sup>

	2014	2015	2016 <sup>2)</sup>		2017 <sup>2)</sup>		
			Year	Q3	Q4	Q1	Q2
World	3.5	3.4	3.2	-	-	-	-
Advanced economies	2.0	2.2	1.7	-	-	-	-
US	2.6	2.9	1.5	2.8	1.8	1.2	3.1
Euro area	1.3	2.0	1.8	1.9	2.5	2.2	2.6
Japan	0.3	1.1	1.0	0.9	1.6	1.2	2.5
Emerging market and developing economies	4.7	4.3	4.3	-	-	-	-
China	7.3	6.9	6.7	6.7	6.8	6.9	6.9
India <sup>3)</sup>	7.5	8.0	7.1	7.5	7.0	6.1	5.7
ASEAN-5 <sup>4)</sup>	4.6	4.9	4.9	5.0	4.9	5.0	5.2
Brazil	0.5	-3.8	-3.6	-2.9	-2.5	-0.4	0.3
Russia	0.7	-2.8	-0.2	-0.4	0.3	0.5	2.5

Notes: 1) Based on IMF statistics, apart from individual countries and the euro area which are based on their own published statistics.

2) The rates of growth are annualized quarter-on-quarter rates for advanced economies, and year-on-year rates for the others.

3) The annual growth rates are based on the fiscal year (April of the current year to March of the next year).

4) Indonesia, Thailand, Malaysia, the Philippines, and Vietnam.

Sources: IMF, Individual countries' published statistics.

## International Oil Prices Rise to Mid-50 US Dollars per Barrel Level

The international oil prices fell to the low to mid-40 US dollars-to-the-barrel level in the middle of June, influenced by increases in the production of shale oil by the US and of crude oil by Libya and Nigeria, but from the end of June it began to rise as US crude oil inventories shrank. It subsequently fell

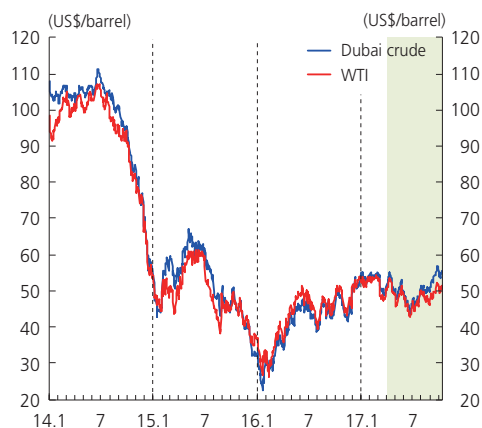
1) The United States' ISM Manufacturing (August 58.8 → September 60.8) and Non-Manufacturing (August 55.3 → September 59.8) Indices rose greatly in September, driven by new orders, and recorded their highest figures since May 2004 and August 2005 respectively.

2) The euro area's September Manufacturing PMI Index (August 57.4 → September 58.1) rose to its highest level since February 2011.

3) The Indian government on July 1 reformed the system of multiple indirect taxes that had been separately applied by the central and the state governments, to create a unified Goods and Services Tax comprising five tax brackets.

again, as the refineries on the US Gulf Coast temporarily ceased operations due to Hurricane Harvey, before rising again to the mid-50 dollars-to-the-barrel level entering September, as an increase in global demand, etc. was expected in line with improvements in business activities.<sup>4)</sup>

<Figure I - 1> International oil prices



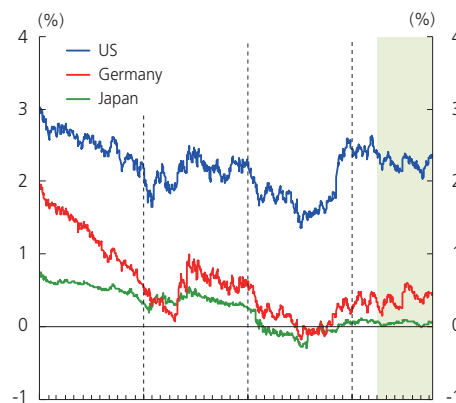
Source: Bloomberg.

### Major Country Long-term Market Interest Rates Fluctuate within Narrow Ranges

US long-term market interest rates showed trends of declining from April, owing to a rise in geopolitical risks related to North Korea and to increased political uncertainties surrounding the Trump administration. They rebounded after the September FOMC meeting, however, as a December policy rate hike by the US Federal Reserve became more likely. Long-term market interest rates in Germany and Japan fluctuated repeatedly within narrow ranges, as

inflation rates sustained low levels despite their countries' solid trends of growth.

<Figure I - 2> Long-term market interest rates<sup>1)</sup> in major economies



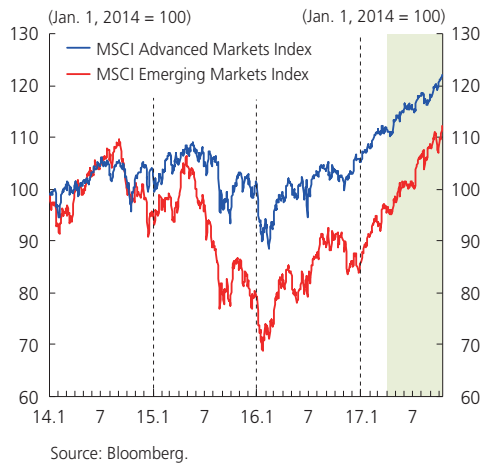
Note: 1) Treasury bond (10-year) yields.  
Source: Bloomberg.

### Upward Global Stock Price Trend Continues

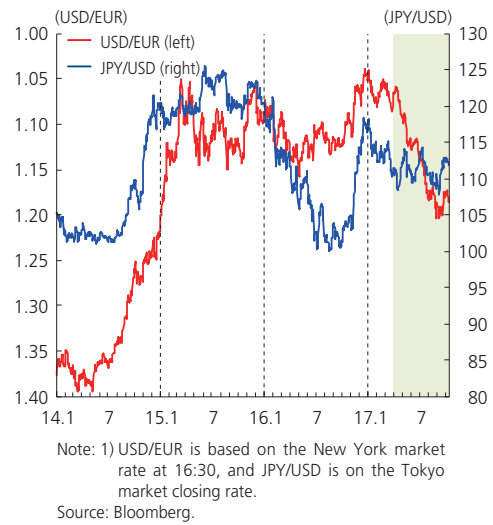
Stock prices in advanced countries rose as the political uncertainties in the euro area eased after the French presidential election in April and corporate performances in major countries improved. They did subsequently show downward trends, on the expansion in the North Korea risk, but then resumed their upward trend owing to the solid economic recoveries in advanced countries. Stock prices in emerging market countries also continued to rise, as expectations of economic improvements grew.

4) In its September 「Monthly Oil Market Report」, OPEC readjusted its August forecasts for the amounts of increase in daily average global crude oil demand during 2017 and 2018 (1.4 million and 1.3 million barrels respectively) upward by 50 thousand and 70 thousand barrels respectively.

<Figure I - 3> Share price indices of advanced and emerging markets



<Figure I - 4> Major exchange rates<sup>1)</sup>



## US Dollar Depreciates Substantially against Euro

The US dollar showed a trend of large-scale depreciation against the euro, affected by the solid economic recovery in the euro area and the likelihood of an ECB reduction in its quantitative easing. The dollar fluctuated against the Japanese yen, meanwhile, in line with developments related to factors such as the geopolitical risks related to North Korea and Syria, the political uncertainties in the US, and the possibility of policy rate hikes by the US Federal Reserve.

## 2. Real Economy

### Trend of Improvement in Continues

The domestic economy has maintained its upward trend, led mainly by exports and facilities investment. During the second quarter of 2017 the real GDP growth rate recorded a figure of 0.6% quarter-on-quarter, and in the third quarter the pace of growth accelerated.

Private consumption showed a mild trend of recovery. Amid improved consumer sentiments it increased by 1.0% quarter-on-quarter in the second quarter, driven by durable goods consumption under the influences of the government support for replacements of old diesel-powered automobiles, and of increased demand for automobiles and home appliances in line with the pollution due to fine dust and with a heat wave. In the third quarter it grew modestly<sup>5)</sup> despite the rise in North Korea risk and deteriorating trading conditions vis-à-vis China due to the dispute over Korea's THAAD deployment – thanks to the persistence of robust consumer sentiments, to the launches of new mobile phone products, to an expansion in fiscal expenditure in line with the government's supplementary budget execution, etc. Facilities investment meanwhile remained robust. In the second quarter it expanded by 5.2% quarter-on-quarter, as investment in

machinery showed a high rate of growth based mainly on the IT sector including semiconductors, and as investment in transport equipment such as aircraft and automobiles increased as well. Facilities investment declined slightly quarter-on-quarter in the third quarter, as the large-scale IT investment of the first half concluded, but on a year-on-year basis its high pace of growth continued.<sup>6)</sup> The pace of expansion in construction investment meanwhile slowed to just 0.3% quarter-on-quarter in the second quarter, as the rate of growth in building construction was low and civil engineering contracted due to a reduction in the SOC budget. In the third quarter the pace of construction investment growth continued to slow, under the influences for example of the drop in building commencements since 2016.<sup>7)</sup> Intellectual property products investment increased by a quarter-on-quarter rate of 1.2% in the second quarter, as other intellectual property products investment for example in R & D and in software expanded.

---

5) During the July to August 2017 period Statistics Korea's retail sales index rose by 0.1% compared to the second quarter (+2.1% year-on-year), while its service industry production index increased by 1.0% (+2.1% year-on-year).

6) During July and August Statistics Korea's equipment investment index fell by 1.5% compared to the second quarter (+19.0% year-on-year).

7) The year-on-year rate of increase in Statistics Korea's 'Value of Construction Completed' slowed from 17.9% in the first quarter of 2017 to 13.6% in the second quarter and 10.6% in the July to August period.

**<Table I - 2> Major economic growth indicators<sup>1)</sup>**

	2015	2016		2017		
		Year	Q3	Q4	Q1	Q2
Real GDP	2.8	2.8	0.5 (2.6)	0.5 (2.4)	1.1 (2.9)	0.6 (2.7)
(Private consumption)	2.2	2.5	0.6 (2.7)	0.2 (1.5)	0.4 (2.0)	1.0 (2.3)
(Facilities investment)	4.7	-2.3	0.9 (-3.9)	5.9 (2.0)	4.4 (14.4)	5.2 (17.3)
(Construction investment)	6.6	10.7	2.2 (11.2)	-1.2 (11.6)	6.8 (11.3)	0.3 (8.0)
(Intellectual property products investment)	1.8	2.3	0.5 (2.7)	0.6 (2.6)	0.3 (2.7)	1.2 (2.6)
(Goods exports)	-0.6	2.2	1.5 (3.9)	0.4 (2.1)	2.8 (6.6)	-2.7 (2.0)
(Goods imports)	0.7	3.6	3.0 (5.3)	1.3 (3.7)	4.1 (10.9)	-0.7 (7.8)

Note: 1) Compared with the previous periods; figures in parentheses are non-seasonally adjusted year-on-year rates.

Source: The Bank of Korea.

## Improvement in Employment Conditions Slows

The trend of improvement in employment conditions faltered. During the second quarter the number of persons employed showed an increase of 367 thousand people year-on-year, in line mainly with the buoyancy of exports, but in the third quarter its extent of increase narrowed to 279 thousand persons, on the effects for example of a reduction in foreign tourists, of the worsening of weather conditions<sup>8)</sup>, and so on. The unemployment rate fell slightly from 3.8% in the second quarter to 3.7% in the third quarter.

8) During July and August the nationwide average number of days of rain was 32.7, up by 10.7 days from the 22 days during the same period last year.

9) The capacity utilization rates for electronic products (displays) and communications equipment (smartphones) appear very low, because their productions require large-scale investments over long periods of time in order to expand capacity, and also because a certain extent of idle production capacity is inevitable given the short cycles of new product releases.

**<Table I - 3> Major employment-related indicators**

	2015	2016		2017			
		Year	Q3	Q4	Q1	Q2	Q3
Economically active population	26.9	27.3	27.5	27.3	27.1	27.8	27.8
(Rates of change <sup>1)</sup> )	1.4	1.2	1.4	1.3	1.4	1.5	0.9
Number of employed persons	25.9	26.2	26.6	26.5	25.9	26.8	26.8
(Changes <sup>1)</sup> )	0.3	0.3	0.3	0.3	0.4	0.4	0.3
Labor force participation rate <sup>2)</sup>	62.6	62.8	62.8	62.9	63.2	63.0	63.0
Employment-population ratio <sup>2)</sup>	60.3	60.4	60.5	60.6	60.8	60.6	60.6
Unemployment rate <sup>2)</sup>	3.6	3.7	3.8	3.6	3.8	3.8	3.7

Notes: 1) Compared with the same periods of the previous years.

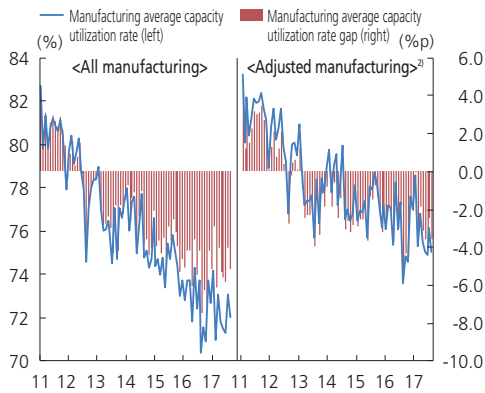
2) Seasonally adjusted.

Source: Statistics Korea.

## Idle Production Capacity Persists

The negative average capacity utilization rate gap in the manufacturing sector has been showing a trend of widening since 2012. In view of this, it is assessed that the idle production capacity remains within the Korean economy. In the cases of some industries, certain levels of idle production capacity are inevitable given their industrial natures.<sup>9)</sup>

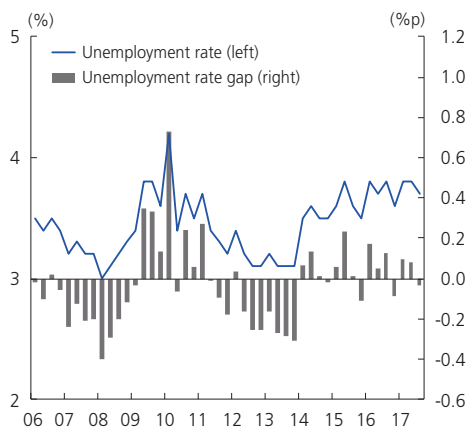
<Figure I - 5> Manufacturing industry average capacity utilization rate gap<sup>1)</sup>



Notes: 1) (Capacity utilization rate - Average capacity utilization during previous 10 years); a figure below 0 indicates the existence of idle production capacity.  
 2) With electronic products (displays) and communication devices (smartphones) excluded.  
 Source: Statistics Korea.

Since the unemployment rate has not diverged greatly from the non-accelerating inflation rate of unemployment (NAIRU), the unemployment rate gap has fluctuated within a narrow range.

<Figure I - 6> Unemployment rate gap<sup>1)</sup>



Note: 1) Unemployment rate (seasonally adjusted) - Non-accelerating inflation rate of unemployment (NAIRU, estimated by Bank of Korea).  
 Sources: Bank of Korea estimates, Statistics Korea.

## Current Account Surplus Narrows

During the second quarter of 2017 the current account surplus narrowed compared to that during the same period last year, as the surplus in the goods account lessened while the deficit in the services account widened. The goods account surplus was 30.4 billion dollars, down slightly compared to the same quarter in 2016, while the services account recorded a 6.9 billion dollar deficit due to deteriorations in the travel and the transport accounts. During the July to August period as well these goods account surplus and services account deficit trends were sustained.

Exports (customs clearance basis) grew by a large amount from the second quarter, as the majority of major export items excluding wireless communication devices and automobile parts continued their trends of increase. A look at exports by item shows that the trend of buoyancy in semiconductor exports continued, while shipbuilding exports expanded greatly as deliveries of high-value offshore plants increased. Together with this, exports of steel and machinery rose greatly in the second quarter, and exports of petroleum and petrochemical products in the third quarter.

Imports (customs clearance basis) also grew steadily from the second quarter, in line with the expansions in exports and in facilities investment. Capital goods imports sustained their high pace of increase, based mainly on semiconductor manufacturing equipment and precision instruments for example. Consumer goods imports also con-

tinued their modest growth, led by goods for direct consumption and by non-durable consumer goods. The pace of increase in raw materials imports meanwhile slowed, in reflection of factors such as the slowdown in the pace of increase in the unit import cost of crude oil, and reduced imports of petroleum and steel products.

<Table I - 4> **Current account**

(billion dollars, %)

	2015		2016				2017	
	Year	Q2	Q3	Q4	Q1	Q2	Jul.-Aug.	
Current account	105.9	98.7	26.3	21.5	25.5	19.4	16.8	13.3
Goods	122.3	120.4	33.5	28.3	29.7	28.0	30.4	20.0
Exports <sup>1)</sup>	526.8	495.4	126.0	121.9	132.4	132.1	147.1	151.0 <sup>2)</sup>
(Rate of change <sup>2)</sup> )	-8.0	-5.9	-6.7	-5.0	1.8	14.7	16.7	24.0 <sup>2)</sup>
Imports <sup>1)</sup>	436.5	406.2	99.3	102.5	110.6	116.3	117.9	120.7 <sup>2)</sup>
(Rate of change <sup>2)</sup> )	-16.9	-6.9	-10.1	-5.1	4.1	24.0	18.7	17.8 <sup>2)</sup>
Services	-14.9	-17.6	-3.9	-5.7	-4.1	-8.9	-6.9	-5.6
Credit	97.7	92.8	22.9	22.8	23.5	21.0	20.9	15.1
Debit	112.6	110.4	26.8	28.5	27.6	29.8	27.8	20.7
Primary income	3.6	1.5	-2.1	1.3	1.1	1.1	-5.2	0.5
Secondary income	-5.0	-5.6	-1.2	-2.4	-1.2	-0.8	-1.5	-1.6

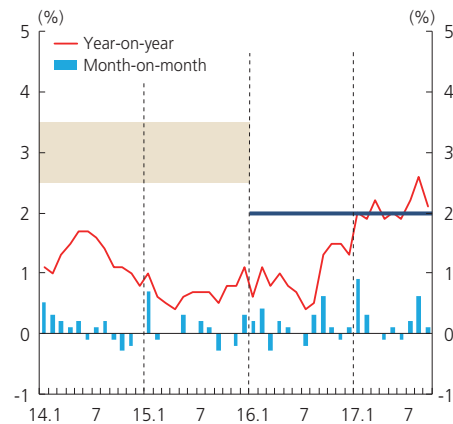
Notes: 1) Customs-clearance basis.  
 2) Compared to the same periods of previous years.  
 3) Based on the third quarter of 2017.  
 Sources: The Bank of Korea, Korea Customs Service.

### 3. Prices

#### Upward Trend of Consumer Prices Accelerates

Consumer prices increased by around 2% during the second quarter of this year, but entering the third quarter their pace of increase accelerated, on the effects of rising agricultural product prices for example.

<Figure I - 7> **CPI inflation<sup>1)</sup>**



Note: 1) The shaded area indicates the medium-term inflation target range during the 2013~2015 period, and the bold line the medium-term inflation target set for 2016 onwards.  
 Sources: The Bank of Korea, Statistics Korea.

Agricultural, livestock and marine product prices showed high rates of increase, in line with the sharply rising prices of agricultural products including vegetables. The pace of growth in industrial product prices slowed, as the base effect from the petroleum product prices weakened. Service charges showed an upward trend of around 2%, driven mainly by private services. Electricity, water and gas charges rose temporarily to considerable extents temporarily during the third

quarter, under the influence of the base effect following the temporary cuts in electricity fees during the summer of last year.<sup>10)</sup>

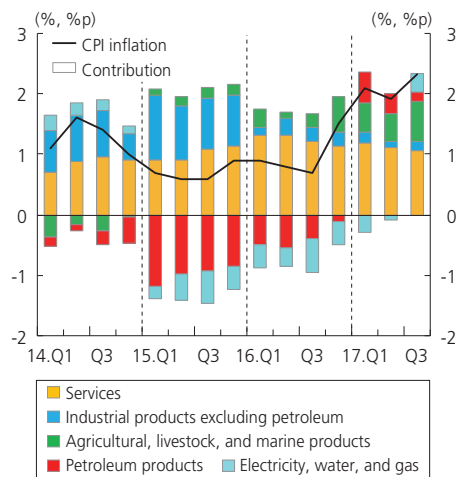
<Table I - 5> Consumer prices<sup>1)</sup>

	2015						2016			2017		
	Year	Q3	Q4	Q1	Q2	Q3	Q3	Q4	Q1	Q2	Q3	
Consumer price index	0.7	1.0	0.7	1.5	2.1	1.9	2.3					
Agricultural, livestock, and marine products	2.0	3.8	3.1	7.5	6.1	6.1	8.4					
(Agricultural products)	1.2	3.8	2.1	9.1	4.7	3.6	10.2					
(Livestock products)	3.7	4.4	4.2	6.0	8.6	9.6	6.7					
Industrial products	-0.2	-0.5	-0.5	0.4	2.1	1.3	0.9					
(Petroleum products)	-19.2	-8.1	-8.1	-2.3	12.0	7.7	3.4					
(Industrial products excluding petroleum)	3.3	0.8	0.8	0.8	0.7	0.3	0.5					
Electricity, water, and gas	-7.4	-9.2	-13.0	-8.7	-6.9	-2.4	8.0					
Services	1.8	2.3	2.2	2.1	2.1	2.0	1.9					
(Rentals for housing)	2.5	1.9	1.8	1.7	1.7	1.8	1.6					
(Public service charges)	1.2	1.5	1.0	0.9	1.0	1.0	1.0					
(Private service charges)	1.9	2.7	2.8	2.7	2.7	2.5	2.3					
CPI for living necessities	-0.2	0.7	0.2	1.4	2.5	2.4	3.2					
CPI excluding food & energy	2.4	1.9	1.9	1.7	1.7	1.5	1.4					
CPI excluding agricultural products & oils	2.2	1.6	1.4	1.5	1.5	1.4	1.7					

Note: 1) Compared with the same periods of the previous years.  
Source: Statistics Korea.

Looking at the degrees of contribution to the CPI inflation rate of the various individual product categories, the positive contribution of agricultural, livestock and marine product prices expanded greatly during the third quarter of this year. In the case of electricity, water and gas charges, their negative contribution turned temporarily positive in line with the related base effects. However, the positive degrees of contribution to inflation of industrial product prices and service charges both lessened slightly.

<Figure I - 8> Contributions to CPI inflation<sup>1)</sup>



Note: 1) Compared with the same periods of the previous years.  
Source: Statistics Korea.

## Underlying Price Movements Generally Stable

The recent acceleration in the upward trend of consumer prices has been a result largely of supply-side factors including rises in agricultural, livestock and marine product prices, as well as systemic factors such as the base effect of last year's temporary cut in electricity fees. The underlying price movements, with the influences due to these factors excluded, have been generally stable.

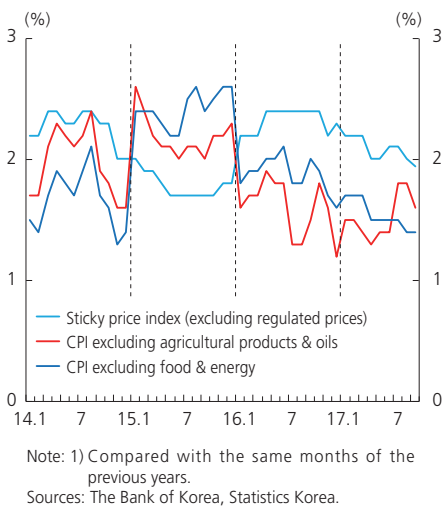
The rate of core inflation (the index with food and energy product prices excluded), indicative of the underlying price movements, has maintained a level in the mid-1% range since the second quarter. During the

<sup>10)</sup> To alleviate people's electricity fee burdens due to the heat wave from July to September of last year, the government temporarily cut electricity fees substantially (-18.7%).

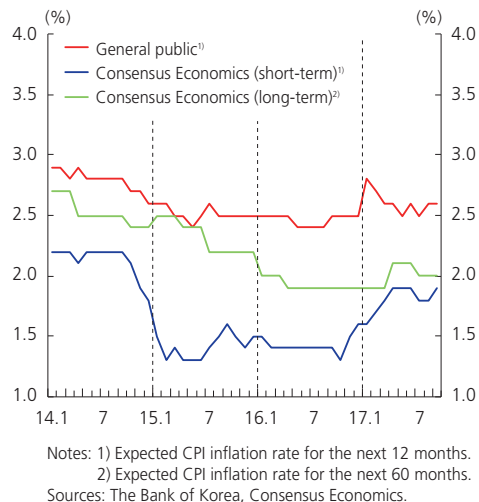
same period the sticky price index<sup>11)</sup>, which excludes regulated prices, has sustained a rate of increase of around 2%.

Looking at inflation expectations, the short-term (for the next one year) expectations of both the general public and economic experts<sup>12)</sup> have been stable since the second quarter, at levels of 2.6% and 1.9% respectively. Meanwhile, the long-term (five years in the future) rate of inflation expected by the economic experts group recorded 2.1% in the second quarter and 2.0% in the third.

<Figure I - 9> Underlying inflation rates<sup>1)</sup>



<Figure I -10> Inflation expectations



### Producer and Import Prices Sustain High Rates of Increase

Producer prices have sustained relatively high paces of increase. By product category, agricultural, forestry and marine product prices and electricity, water and gas charges have on the one hand risen greatly, while the extents of increase in prices of industrial products such as petroleum and chemical products have narrowed, as the base effects from the oil prices have weakened compared to the first quarter.

The extent of increase in import prices (Korean won basis) expanded in the third quarter, on the effects for example of the rise in the Korean won/US dollar exchange rate.

11) Sticky prices, as they are calculated using products whose prices do not frequently change, not only reflect inflation expectations well but are known to be useful in predicting consumer prices also. At the time of index calculation regulated prices (public service fees, electricity, water and gas charges, cigarette taxes, school meal fees, childcare charges, etc.), which are greatly affected by regulatory factors, are excluded.  
12) Referring to the results of a survey by Consensus Economics of investment banks, securities companies, market research and analysis institutions, etc., in Korea and overseas.

<Table I - 6> **Producer prices and import prices (Korean-won basis)<sup>1)</sup>**

(%)

	2015	2016			2017		
		Year	Q3	Q4	Q1	Q2	Q3
Producer prices	-4.0	-1.8	-1.8	0.8	4.2	3.3	3.3
Goods	-6.4	-3.4	-3.4	0.5	5.8	4.3	4.3
(Agricultural, forestry and marine products)	2.3	5.8	6.0	9.4	7.8	8.4	8.1
(Manufacturing industry products)	-6.7	-3.5	-3.4	0.8	6.5	4.3	4.0
(Electric power, gas and water supply)	-7.9	-8.3	-8.7	-7.4	-3.0	2.1	5.1
Services	1.2	1.2	1.3	1.3	1.3	1.6	1.5
Import prices <sup>2)</sup>	-15.3	-4.2	-7.7	4.0	9.7	5.0	8.4
	[-19.5]	[-7.3]	[-5.3]	[3.4]	[14.1]	[8.4]	[7.7]
Exchange rate	7.4	2.6	-4.2	0.1	-4.0	-2.9	1.1

Notes: 1) Compared with the same periods of the previous years; the figures for September 2017 are preliminary.

2) Figures in square brackets are on a contract-currency basis.

Source: The Bank of Korea.

## Pace of Housing Sales Price Increase Slows, in Line with Government Policies

Nationwide housing sales prices showed a high rate of increase from May, led mainly by Seoul and its surrounding areas, owing for example to investment demand related to the reconstruction and redevelopment businesses. However, after the government's announcement of the 8.2 Housing Market Stabilization Measures (the 8.2 Measures hereafter)<sup>13)</sup> the pace of housing sales price growth slowed.<sup>14)</sup> Meanwhile, in the parts of the country other than Seoul and its surrounding areas, the extents of increase in housing sales prices sustained generally low levels, due to slumps in the regional

economies, to increases in the amounts of newly occupied residences, etc.

Nationwide leasehold deposit prices remained stable entering this year. By region, the upward trend in Seoul and its surrounding areas continued, owing to housing demand from those moving out of apartments being reconstructed for example, while in the areas other than Seoul and its surrounding areas leasehold deposit prices fell slightly under the impacts for example of oversupply.

<Table I - 7> **Rates of increase in housing sales and leasehold deposit prices<sup>1)</sup>**

(%)

	2015	2016				2017			
		Year	Q1	Q2	Q3	Q4	Q1	Q2	Q3
Housing sales prices	3.5	0.7	0.0	0.1	0.2	0.4	0.1	0.5	0.6
Seoul and its surrounding areas	4.4	1.3	0.0	0.3	0.4	0.6	0.1	0.7	0.8
(Seoul)	4.6	2.1	0.1	0.4	0.7	0.9	0.2	1.2	0.9
Regional metropolitan cities	2.7	0.2	0.0	-0.1	0.0	0.2	0.1	0.2	0.3
Reconstructed apartment sales prices	9.7	15.6	0.1	6.4	7.4	1.0	1.6	4.5	3.1
Leasehold deposit prices	4.8	1.3	0.4	0.3	0.2	0.4	0.1	0.2	0.2
Seoul and its surrounding areas	7.1	2.0	0.5	0.6	0.5	0.5	0.2	0.5	0.5
(Seoul)	7.2	2.0	0.5	0.5	0.5	0.5	0.2	0.7	0.6
Regional metropolitan cities	2.8	0.7	0.2	0.1	0.0	0.3	0.1	0.0	-0.1

Note: 1) Compared with the last survey dates of the previous periods.  
Sources: Korea Appraisal Board, Real Estate 114.

13) The government on August 2 of this year announced its 8.2 Housing Market Stabilization Measures, with major details including additional designations of overheated speculative districts and speculative districts, stronger levies on capital gains from housing transactions, tightening of the LTV and DTI ratios in overheated speculative and speculative districts, etc.

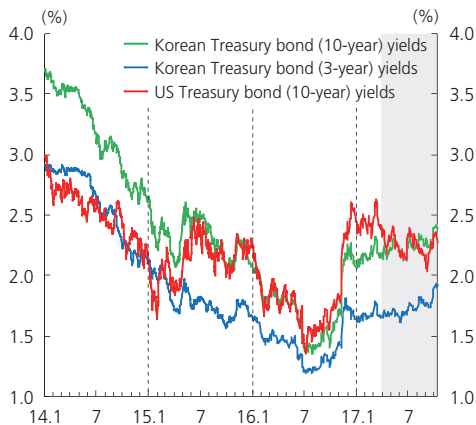
14) In Seoul and its surrounding areas the rate of housing sales price growth (compared to the previous month-end) fell from 0.4% in August to 0.2% during September.

## 4. Financial and Foreign Exchange Markets

### Long-term Market Interest Rates on an Upward Trend

The Treasury bond yield (3-year), after having fluctuated within a limited range, began to rise slowly from the middle of June, owing for example to the emergence of a possibility of changes by major countries' central banks in their monetary policy stances and to strengthening expectations of a domestic economic recovery in line with the buoyancy of major economic indicators including exports. Notably, the extent of the Treasury bond yield's increase expanded from August, affected by factors such as weakening investor sentiment and large-volume net sales by foreign investors of spot and forward bonds in reaction to the rise in North Korea risk.

<Figure I -11> Korean and US Treasury bond yields



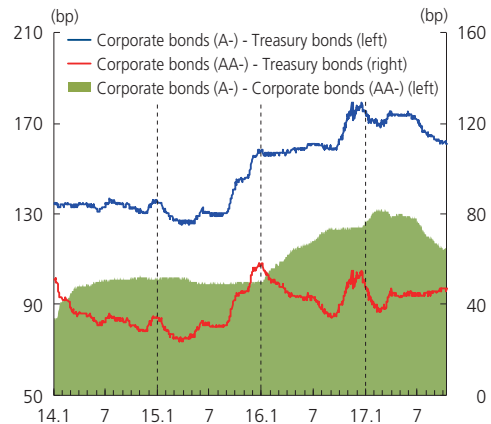
Sources: KOFIA, Bloomberg.

### Corporate Bond Credit Spreads Narrow, Led Mainly by Sub-prime Bonds

The corporate market was stable, with for example credit spreads in particular of sub-prime (A-) bonds narrowing.

The credit spread on prime (AA-) corporate bonds remained at around 45 bp, while those on sub-prime (A-) corporate bonds narrowed gradually, due for example to expectations of improved corporate performances and to the highlighting of their favorable interest rates. In line with this the credit differentiation between prime and sub-prime corporate bonds gradually eased.

<Figure I -12> Corporate bond credit spreads<sup>1)</sup> and spreads across credit ratings



Note: 1) 3-year maturity basis; Treasury bond yields based on final quoted yields, and corporate bond yields on average yields estimated by four private credit rating agencies.

Source: KOFIA.

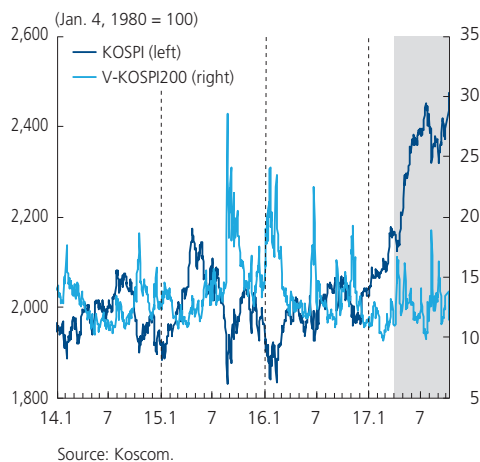
### KOSPI Rises Substantially

The KOSPI rose to a large extent from April, influenced for example by the economic recoveries at home and abroad and

improvements in corporate performances, as well as expectations related to the government's expansionary fiscal policies, before then weakening from the end of July, due to sales of stocks for profit-taking, to the increased North Korea risk, etc. In particular, the series of aggressive statements exchanged between North Korea and the US, and North Korea's additional provocations including its sixth nuclear test (in September), were the main factors causing investor sentiments to contract. However, amid a predominant view that the North Korea risk will not develop into an extreme situation stock prices rose again, owing to increases in corporate earnings, to the recognition that they had been undervalued<sup>15)</sup>, etc., and in October recorded a series of historic highs.

The stock price volatility index (V-KOSPI 200), after having maintained generally low levels, rose to its highest level of the year in August, on the heightening of tensions between North Korea and the US, before then falling rapidly. After that it showed repeated fluctuations whenever the North Korea risk became highlighted.

<Figure I -13> KOSPI and share volatility index



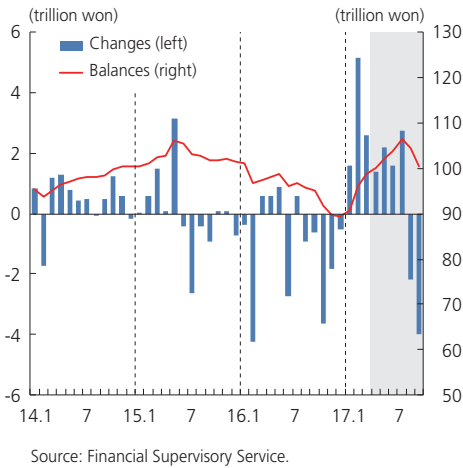
### Foreigners' Domestic Portfolio Investment Reversed to Net Sales

Foreigners' domestic portfolio investment reversed to net sales from August.

Bond investment by foreigners continued its solid upward trend seen since the beginning of the year until July. From August it then reversed to a considerable decline, as for example funds tending to be invested on short-term bases, such as those of banks and global funds, reversed to declines.

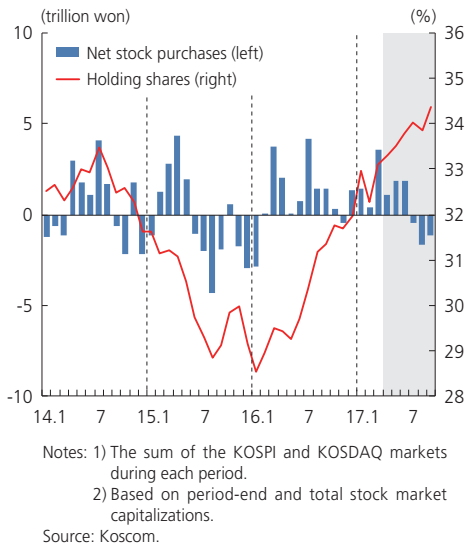
15) Corporations' price-to-book ratio (PBR, 1.0, September 27 basis), which shows the level of their stock prices compared to their current liquidation values, and their price-to-earnings ratio (PER, 9.0), indicating the level of their stocks' prices relative to future cash flows (profits), are very low compared to those in major countries (in the case of the US 3.7 and 18.1 respectively). In addition, they are also running below their long-term averages (of 1.1 and 9.2 respectively during the January 2001~August 2017 period).

<Figure I -14> Changes in and balances of foreigners' bond holdings



Foreigners' stock investment, after having sustained net purchases since the end of last year, reversed to net sales from late July, on the effects for example of profit-taking, the increase in North Korea risk, etc.

<Figure I -15> Foreigners' net stock purchases<sup>1)</sup> and stock holding shares<sup>2)</sup>



## Trend of Increase in Banks' Corporate Lending Continues

From the second quarter of this year banks continued to expand their corporate lending, as they had during the quarter before as well, in line with the easing of credit concerns following the recovery in business activities. Banks' lending to large firms declined, affected by their sales and write-offs of bad loans for example, but their SME lending continued its upward trend, driven mainly by loans to self-employed business owners. Corporate lending by non-bank financial institutions also sustained its trend of increase, led especially by loans of insurance companies and mutual credit cooperatives.

The amount of corporate funds raised through the direct financial markets (net increase basis) remained favorable from the second quarter, driven mainly by stock issuance. The amount of net issuance of corporate bonds expanded during the second quarter, due for example to a recovery in investment sentiment in line with improvements in corporate performances. In the third quarter corporate bonds showed net redemptions, however, owing for example to off-season sluggishness in new issuance. CP recorded a large-volume net issuance, as corporations' demand for short-term funds grew in the third quarter. Fund raising through stock issuance sustained its upward trend, due to initial public offerings by some corporations for instance.

**<Table 1 - 8> Corporate funding<sup>1)</sup>**

(trillion won)

	2015	2016			2017			
		Year	Q3	Q4	Q1	Q2	Q3	
Corporate loans	Banks	50.0	23.9	11.0	-5.4	12.2	6.7	15.5
	(Large firms)	-4.3	-9.9	0.6	-9.2	1.6	-2.9	0.4
	(SMEs)	54.3	33.8	10.4	3.8	10.6	9.6	15.1
	Non-banks <sup>2)</sup>	18.1	30.0	7.7	8.8	8.4	10.9	7.4
Corporate direct financing	Corporate bond issuance <sup>3)</sup>	-0.4	-6.7	-4.1	-3.6	0.2	2.7	-1.6
	CP issuance <sup>4)</sup>	-5.4	-2.1	-0.8	0.4	0.5	0.4	2.5
	Stock issuance <sup>5)</sup>	7.0	15.9	3.3	9.0	1.6	4.5	3.2

Notes: 1) Based on changes in balances during the periods; banks' corporate loans for September 2017 are preliminary.

2) Based on loans by mutual savings banks, credit unions, mutual credit unions, community credit cooperatives, and insurance companies (including public and other lending); figures for the third quarter of 2017 based on July-August figures.

3) Based on corporate bonds issued through public subscription by non-financial corporations (excluding ABSs but including P-CBOs).

4) Based on CPs handled by securities firms, merchant banking corporations and trust accounts of banks.

5) Initial public offerings and paid-in capital increases.

Sources: The Bank of Korea, Financial Supervisory Service, Korea Securities Depository, Korea Credit Information Services.

steady pace of increase. The extent of growth in other loans expanded, on the effects of fund demand for consumption purposes during the August vacation season and of the launches of Internet-only banks. Non-bank financial institution household lending meanwhile increased by a monthly average of 1.4 trillion won during the third quarter, with its extent of increase thus shrinking compared to the previous quarter (2.1 trillion won). This appears to have been a result of the government's continued efforts to manage household lending, including its expansion of the coverage of the 「Guideline on Customized Mortgage Loan Screening」 to include mutual credit cooperatives<sup>17)</sup>, its measures to strengthen prudential management of the non-bank financial institution sector<sup>18)</sup>, etc.

## Household Lending Increases, Led Mainly by Banks

Banks' household lending increased in both the second and the third quarters of this year, by monthly averages of 5.7 trillion and 6.0 trillion won respectively. Although the amount of increase in individual home mortgage loans contracted somewhat, under the influence for example of the 8.2 Measures, the quarterly amount of increase in bank home mortgage lending overall maintained a similar level<sup>16)</sup> as group loans showed a

16) Banks' home mortgage lending showed similar monthly average amounts of increase of 3.8 trillion and 3.7 trillion won respectively during the second and the third quarters, but by individual month they decreased in the third quarter, from 4.8 trillion won in July to 3.1 and 3.3 trillion won respectively in August and September.

17) From March 13, 2017 the government implemented a 「Guideline on Customized Mortgage Loan Screening」 to mutual credit cooperatives with total asset volumes of 100 billion won or more, and from June 1 the guideline's scope of application was expanded to cover all mutual credit cooperatives.

18) In June the government raised the additional reserve accumulation ratio standard for high-risk loans of savings banks, mutual credit cooperatives and credit-specialized financial institutions.

**<Table I - 9> Household lending by depository institutions<sup>1)</sup>**  
(trillion won)

	2015	2016			2017		
		Year	Q3	Q4	Q1	Q2	Q3 <sup>2)</sup>
Commercial & specialized bank loans <sup>3)</sup>	6.5	5.7	6.9	6.5	2.0	5.7	6.0
(Mortgage loans) <sup>3)</sup>	5.8	4.7	5.7	5.0	1.8	3.8	3.7
(Other loans including loans through overdraft accounts)	0.7	1.1	1.3	1.5	0.1	1.9	2.3
Non-bank depository institution loans <sup>3)</sup>	1.9	3.5	3.7	4.5	2.4	2.1	1.4
(Mutual credit)	0.8	1.6	1.6	1.9	1.0	0.8	0.4
(Credit unions)	0.4	0.5	0.6	0.6	0.3	0.2	-0.1
(Community credit cooperatives)	0.4	1.0	1.1	1.6	0.8	0.9	0.8
(Mutual savings banks)	0.3	0.4	0.4	0.4	0.4	0.1	0.3
(Others) <sup>4)</sup>	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>Total<sup>3)</sup></b>	<b>8.4</b>	<b>9.3</b>	<b>10.6</b>	<b>11.0</b>	<b>4.4</b>	<b>7.8</b>	<b>7.4</b>

Notes: 1) Based on average monthly changes during the periods.  
 2) The September figures are the Bank of Korea advance estimates for banks, and the Financial Supervisory Service advance estimates for non-bank depository institutions.  
 3) Including mortgage transfers.  
 4) Trust accounts of banks and postal savings.

Sources: The Bank of Korea, Financial Supervisory Service, Korea Housing Finance Corporation.

### Korean Won/US Dollar Exchange Rate Fluctuates within Limited Range

The Korean won/US dollar exchange rate rose from June, on the impacts among others of the US Federal Reserve’s hike of its policy rate and announcement of its plan to begin reducing its balance sheet within this year, as well as the surfacing of North Korea risk. After that it then fell, however, to hit its low for the year to that time (1,112.8 won, July 27), due to the effects for example of the possibility of a slowdown in the speed of policy rate hikes by the US Federal Reserve, and of the depreciation of the US dollar following the uncertainties concerning the policies of the US government. Subsequently it fluctuated in accordance for example with developments in

conditions related to the North Korea risk, and with changes in expectations for another policy rate hike by the US Federal Reserve within this year.

The Korean won/Japanese yen (100 yen) exchange rate fell to a considerable extent from mid-April, in line with the easing of domestic and external uncertainties related for example to the French presidential election and to geopolitical risks. After that it then rose, however, on the effects of safe asset preference stemming from the concerns about US political conditions, the emergence of geopolitical risks, etc.

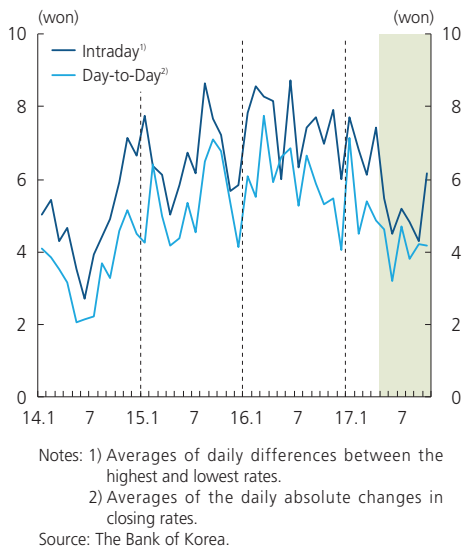
**<Figure I -16> Exchange rates**



Note: 1) The final transaction standard rate offered to customers posted by KEB Hana Bank during the day.  
 Sources: The Bank of Korea, KEB Hana Bank.

Meanwhile, the extent of volatility in the Korea won/US dollar exchange rate generally declined, as the upside and downside factors concerned, such as the weakening US dollar and the North Korea risk, offset each other.

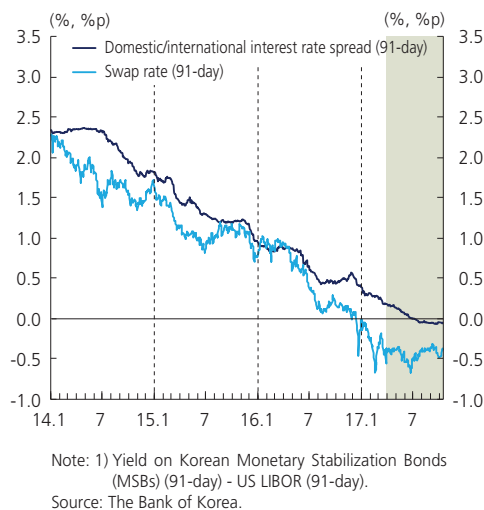
<Figure I -17> Exchange rate (KRW/USD) fluctuations



The swap rate (3-month maturity) fell, owing to the effects for instance of the decline in the domestic/international interest rate spread due to the US Federal Reserve’s policy rate hike, and of the continuing dominance of institutional investors’ foreign currency fund demand for overseas investment purposes. It then rebounded from July, as banks’ demand for foreign currency funds that had temporarily increased at the end of the first half subsided, and as non-residents purchased non-deliverable forwards (NDFs). In September the extent of increase in the swap rate then contracted slightly, owing for example to institutional investors’ expanded

demand for foreign currency funds, to strengthened expectations of a policy rate hike by the US Federal Reserve, and so on.

<Figure I -18> Domestic/international interest rate spread<sup>19)</sup> and swap rate



### Overall Financial Conditions Remain Accommodative

In view of indicators such as the real money gap<sup>19)</sup> and the Financial Conditions Index<sup>20)</sup>, it is assessed that financial conditions have been accommodative. The real money gap has fallen to a relatively large extent, but the real money supply is still exceeding its long-term equilibrium level. The Financial Conditions Index has mean-

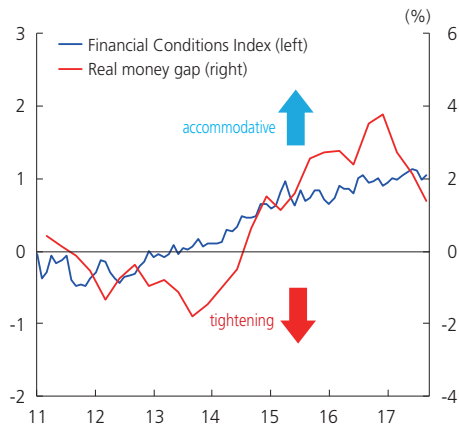
19) This refers to the divergence between the real money supply at a specific point in time and the long-term equilibrium money supply, and is used for judging whether there is an excess (gap > 0) or a shortfall (gap < 0) of real money supplied compared to the long-term equilibrium money supply:

$$\text{Real money gap}_t = \frac{\text{Real money supply}_t - \text{Equilibrium money supply}_t}{\text{Equilibrium money supply}_t} \times 100$$

20) The Financial Conditions Index (FCI), an aggregate of several financial variables to form one information variable, is used as an index to assess whether financial conditions are accommodative or tight. It is calculated by including 50 financial variables regarded as important, such as credit indicators, liquidity indicators, market volatility indicators, survey data from financial institutions, etc. After extraction (through iterative estimation using the least squares method) of the factors best reflecting common movements among the 50 total financial variables, the index is standardized (mean: 0, standard deviation: 1) and calculated.

while also shown conditions to be accommodative, with the volatilities of the financial and foreign exchange markets having maintained relatively low levels amid favorable financial market liquidity conditions.

**<Figure I -19> Real money gap<sup>1)2)</sup> and Financial Conditions Index<sup>2)</sup>**



Notes: 1) Based on M2.  
 2) If the gap is positive(negative), it means that financial conditions are accommodative (tightening).  
 Source: The Bank of Korea.



# II

## Conduct of Monetary Policy

1. Base Rate .....	23
2. Bank Intermediated Lending Support Facility .....	26
3. Financial Stability .....	28



# 1. Base Rate

## Base Rate Operated at 1.25% per Annum

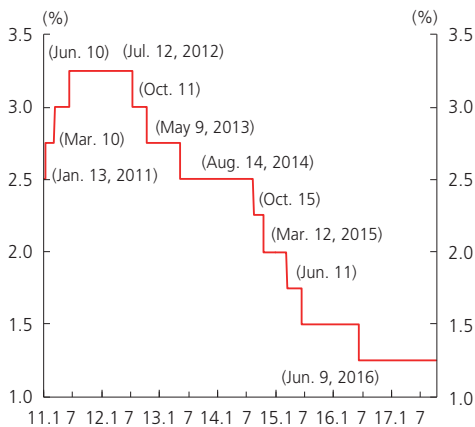
During the May to October 2017 period the Bank of Korea conducted its monetary policy in an accommodative manner, to ensure that the recovery of economic growth continues and that consumer price inflation can be stabilized at the target level over a medium-term horizon. In this process it devoted attention to financial stability as well, and closely monitored changes in the monetary policies of major countries' central banks, conditions related to Korea's trade with major countries, the upward trend of household debt, geopolitical risks, etc.

Under this policy stance the Bank of Korea held the Base Rate at a level of 1.25% per annum from May through October of 2017.

The details of the monetary policy decisions made during this period, and the points given most attention in the decision-making processes, follow:

In its May 2017 Monetary Policy Board meeting the Bank of Korea decided to hold the Base Rate at 1.25% per annum because, although the pace of domestic economic growth had accelerated slightly more than had been expected, it was judged necessary to observe future changes in conditions a little longer given the fact that the uncertainties concerning the path of growth were still high. Although the pace of consumption growth had remained unsatisfactory in the period leading up to the meeting, the GDP growth rate for the year was expected to pick up and slightly exceed the April forecast (2.6%) as exports and investment improved. However, there was a possibility that the speed of the economy's improvement could be restrained by changes in Korea's trading conditions vis-à-vis major countries and by uncertainties related to the normalization of its monetary policy by the US Federal Reserve. The rate of consumer price inflation had meanwhile sustained the inflation target level of 2%, in line for example with increases in the prices of petroleum and agricultural, livestock and marine products, and was expected to fluctuate at the 2% level for some time. Meanwhile, it was judged necessary to also keep in mind risks from the financial stability perspective, given that foreign exchange market volatility had expanded, due to the uncertainties related to domestic and external conditions, and that the amount of increase in household lending was greater than in normal years even

<Figure II - 1> Bank of Korea Base Rate<sup>1)</sup>



Note: 1) Figures in parentheses refer to the dates of Base Rate adjustments.  
Source: The Bank of Korea.

though it had contracted slightly year-on-year.

The Bank continued to hold the Base Rate at an annual level of 1.25% in the July and August Monetary Policy Board meetings as well. The decisions to do so were made in consideration of the fact that, although the domestic economy was forecast to grow at a solid pace, the inflationary pressures from the demand side were not large while the uncertainties as to domestic and external conditions were very high. It was thus deemed necessary to cautiously watch any future changes in these conditions, and the effects that they would have on the domestic economy. The domestic economy was judged likely to continue its solid growth, as exports and investment were improving and consumption was also recovering gradually. The consumer price inflation rate had risen to the lower 2% level, owing for example to increases in the prices of agricultural, livestock and marine products and to the base effect following the reduction in electricity fees of the previous year, and it was forecast that for the year as a whole it would not diverge greatly from the July forecast (1.9%). Core inflation, indicative of the underlying price movements, was however maintaining a rate in the mid- to upper 1% range, and the demand-side inflationary pressures did not seem to be great. It was meanwhile deemed necessary to devote attention to the possibility of increased risks to financial stability, as the volatility of financial market price variables had grown, with stock prices, exchange rates and long-term interest rates having fluctuated to significant extents since July on factors such as the rise in North

Korea risk. In addition, while household lending had continued to grow at a rate above normal years' levels, due mainly to lending by banks, the pace of increase in housing prices had slowed since the government's announcement of its housing market stabilization measures. It was however also considered necessary to observe whether this situation would become a long-term trend going forward.

In the October meeting as well the Bank maintained the Base Rate at 1.25% per annum. This was decided on after comprehensive consideration of the point that, although the domestic economy would likely continue its solid growth, there were potential uncertainties – related to Korea's geopolitical risks, to changes in its trading conditions vis-à-vis major countries, etc. – and it was thus desirable to watch these trends and their future influences a bit more, together with the forecast that demand-side inflationary pressures would not be great for the time being. Specifically, it was judged that the domestic economy would maintain its solid growth, as exports and facilities investment continued to show high rates of increase and consumption also expanded gradually. In line with this the GDP growth rate for this year was expected to exceed the July forecast figure (2.8%), and to also come out at its potential level in 2018. The consumer price inflation rate had remained at the 2% level, but was forecast to be in the upper 1% range for some time going forward, due for example to the subsiding of the base effect from the previous year's electricity fee cuts, and then gradually approach the 2% inflation target level. Demand-side

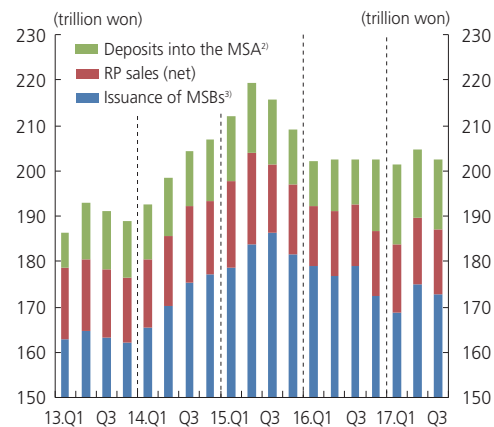
inflationary pressures were expected to be not large, with the core inflation rate remaining in the mid-1% range for the time being. With regard to housing prices, the points were also considered that housing prices were rebounding slightly in some parts of Seoul and its surrounding areas, albeit slowly, and that the amount of household lending growth was still sustaining a higher level than in normal years even though it had contracted.

### Open Market Operations to Maintain Call Rate at the Base Rate Level

In order to influence the overnight call rate so that it does not deviate greatly from the Bank of Korea Base Rate, the Bank of Korea adjusts market liquidity utilizing its open market operations instruments such as Monetary Stabilization Bond issuance, purchases and sales of RPs, and deposits into the Monetary Stabilization Account.

During the second and third quarters of this year the Bank implemented its open market operations in a direction by which it adjusted the amounts operated using the different instruments flexibly, in accordance with changes in market conditions, while maintaining the total amount (average balance basis) of liquidity adjustment at a level similar to that during the previous period (Q4 of last year through Q1 of this year).

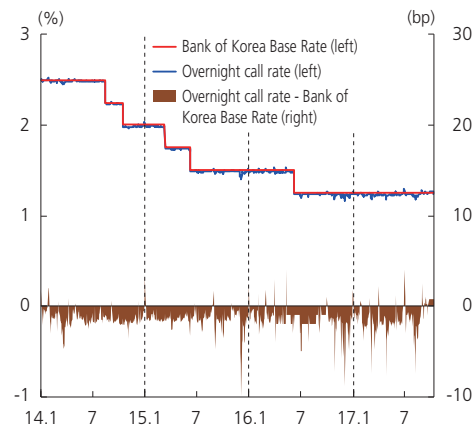
<Figure II - 2> Liquidity adjustment<sup>1)</sup> by means of open market operations



Notes: 1) Quarterly average balance basis.  
 2) Monetary Stabilization Account.  
 3) Excluding 3.48 trillion won (Mar.27, 2014-Mar.26, 2015) and 3.45 trillion won (Oct.16, 2015-Oct.14, 2016) of MSB sales to Korea Development Bank by negotiated transactions.  
 Source: The Bank of Korea.

In line with this the call rate showed stability at around the level of the Base Rate (1.25%).

<Figure II - 3> Bank of Korea Base Rate and overnight call rate



Source: The Bank of Korea.

## 2. Bank Intermediated Lending Support Facility

### Bank Intermediated Lending Support Facility Reformed to Support the Development of New Growth Engines and Job Creation

In accord with the basic directions specified in its 「2017 Monetary Policy Operational Directions」 of December last year<sup>21)</sup>, the Bank of Korea reformed its Bank Intermediated Lending Support Facility with effect from September 2017. This was on the one hand done to strengthen the facility's support for SMEs that contribute to job creation and the discovery of new growth engines, as well as regional SMEs that are suffering from sluggish business conditions, in order to expand these firms' incentives to employ workers and boost potential growth. It was on the other hand also done to enhance monetary policy effectiveness by strengthening the facility's counter-cyclicality.

The Bank expanded and reorganized its Support Program for High-tech and Other Start-up SMEs, renaming it the Support Program for New Growth Engine Development and Job Creation, and thereby strengthened its support for SMEs that contribute to the discovery of new engines of

growth and the creation of jobs. The Bank included among the companies subject to support small and medium-size venture companies whose share of investment in research and development is high, SMEs whose degrees of contribution to job creation are high, etc. and decided to apply preferential support ratios to loans made to such firms. Moreover, to induce the creation of jobs through launches of start-ups, the Bank reduced the minimum number of a firm's regular workers necessary in order for it to be eligible for support from five to three, and normalized the operation of its support program for general start-up firms.<sup>22)</sup> Further, in an effort to reinforce the support for regional SMEs, which are experiencing difficulties in business management and in maintaining employment due to the effects for example of the restructuring of large corporations and the weak consumption recovery, the Bank raised the total ceiling of its Support Program for Regional Enterprises by resuming operation of the program's special ceiling.<sup>23)</sup> The Bank in addition introduced the Program for Stabilization of SME Lending, in order to boost the effectiveness of its conduct of monetary policy by easing the volatility in SME lending and ensuring the smooth operation of credit channels besides the interest rate channel. In consideration of overall financial and economic conditions, SMEs' funding situations and so on, it was decided to operate this program

---

21) In consideration of domestic and overseas financial and economic circumstances, SME funding conditions, etc., the Bank decided to reform this lending system in order to on the one hand strengthen support for SMEs that contribute to expanding the growth potential, SMEs that are eager to employ workers, and regional SMEs that are experiencing temporary funding difficulties in the course of large enterprises' restructuring, while on the other hand making it more reasonable from a medium- to long-term perspective.

22) The support program for general start-up firms, which is now a part of the Support Program for New Growth Engine Development and Job Creation, was to have been terminated on August 31, 2017, but that plan has been cancelled.

23) It was decided to operate the special ceiling of one trillion won for two years.

when necessary with a focus on strengthening the counter-cyclicality of the central bank's lending facilities during the business and financial cycles rather than providing selected support for specific sectors.

Together with this, the Support Program for Facilities Investment and the Support Program for Trade Financing (temporary ceiling increase) were terminated as their temporary periods of operation expired and it was decided to end provision of new support under them from September.<sup>24)</sup>

The Bank in addition normalized operation of the 5 trillion won that it had temporarily added to the Bank Intermediated Lending Support Facility ceiling in March of last year, to thus maintain the total facility ceiling at 25 trillion won.

<Table II - 1> Details of Bank Intermediated Lending Support Facility reform

(trillion won)

Before		After		Notes
Program	Ceiling	Program	Ceiling	
Support Program for High-tech and Other Start-up SMEs	5.0	Support Program for New Growth Engine Development and Job Creation	6.0	- Temporary loan ceiling increase of 1 trillion won made permanent
temporary ceiling increase	1.0			
Support Program for Trade Financing	1.5	Support Program for Trade Financing <sup>1)</sup>	1.5	- Takes over exclusive use of loans under temporary loan ceiling increase of 3 trillion won from Support Program for Trade Financing
temporary ceiling increase	3.0			
Support Program for Facilities Investment	7.0	Program for Stabilization of SME Lending	11.0	- Takes over exclusive use of loans under 8 trillion won loan ceiling of Support Program for Facilities Investment (including temporary ceiling increase of 1 trillion won)
temporary ceiling increase <sup>2)</sup>	1.0			
Support Program for Small-scale Business Owners	0.5	Support Program for Small-scale Business Owners	0.5	
Support Program for Regional Enterprises <sup>2)</sup>	5.9	Support Program for Regional Enterprises <sup>2)</sup>	5.9	
Total <sup>3)</sup>	25.0	Total <sup>3)</sup>	25.0	

Notes: 1) Support based on outstanding loans.

2) Includes a special ceiling of 1.0 trillion won.

3) Includes 0.1 trillion ceiling for reserves, which can be operated when necessary.

Source: The Bank of Korea.

24) It was decided to continue support, under the Program for Stabilization of SME Lending, for the credit that had been extended under the Support Program for Facilities Investment and the Support Program for Trade Financing (temporary ceiling increase) prior to August 31, 2017.

## 3. Financial Stability

### Efforts for Financial and Foreign Exchange Market Stability Continue

The Bank of Korea also continued its policy efforts to secure financial and foreign exchange market stability. While on the one hand regularly monitoring changes in domestic and overseas market conditions, the movements of major price variables such as interest and exchange rates, global capital flows, and the in- and outflows of foreign currencies, it also responded appropriately to the materialization of destabilizing factors at home and abroad, by activating its emergency response system and thereby promoting financial and foreign exchange market stability.

When geopolitical risks, related for example to North Korea and Syria, became accentuated in April of this year, the Bank ensured that market anxieties did not spread excessively through examining financial and foreign exchange market conditions and strengthening its communication efforts. At times of heightened financial and foreign exchange market volatilities and growing concerns about outflows of foreign investors' funds, due to the US Federal Reserve's announcement of its policy rate hike (June) and its implementation of balance sheet normalization (September), and to the continued missile launches by North Korea from July, etc., the Bank convened meetings of its 「Monetary and Financial Task Force」 to monitor the international financial market fluctuations of Korea's CDS premium and

exchange rates, together with market participants' reactions, and to discuss their effects and any measures needed in response. In September, notably, when geopolitical risks became greatly elevated due to North Korea's sixth nuclear test, the Bank activated its emergency system in collaboration with its overseas representative offices, and strengthened its monitoring of the domestic and international markets.

Meanwhile, during the long Chuseok holidays in October as well the Bank devoted steady efforts to ensuring financial market stability. Just before and after the long holiday it implemented its open market operations flexibly, so as to manage market liquidity in a stable manner. During the holiday period it activated its emergency examination system, and monitored the international financial markets daily. On October 9, the day before the domestic financial markets reopened, it also convened its 「Financial and Economic Conditions Review Meeting」, and comprehensively examined matters including any changes in financial market conditions that had occurred during the holidays, and any resulting effects on the domestic financial and foreign exchange markets that might occur.

### Efforts for Preemptive Identification of and Response to Potential Financial System Risks

The Bank devoted steady efforts to the preemptive identification of potential risk factors and the presentation of early warnings.

Through its June 「Financial Stability Report」 the Bank carefully assessed vulnerabilities in financial stability conditions in various sectors, and examined the financial system's resilience against domestic or external shocks. In particular, in line with the heightened concerns about a deterioration in financial stability as the rapid growth in household debt continued, the Bank carried out an intensive examination of the factors behind the household debt buildup, considering even the structural aspects of the Korean economy such as its demographics, its housing market, etc., and presented measures for achieving a soft landing of household debt. The Bank also considered the likelihood of a rise in market interest rates due for example to continued monetary policy normalization by the US Federal Reserve, and examined the interest rate risks of non-bank financial institutions (insurance, securities and credit card companies, etc.), which raise high proportions of their funds in the capital markets.

In its September 「Financial Stability Meeting」<sup>25)</sup> the Bank analyzed financial stability conditions by sector, including for example household and corporate credit, the asset markets, and so on, while also examining the financial system's resilience. While identifying the channels of risk transmission between financial sectors on the one hand, in view of the recent rapid growth in extensions of unsecured household loans it on the other hand also examined conditions related to the unsecured loans made to medium-

credit borrowers and Internet-only banks' loans and deposits. Moreover, in concert with the government and the supervisory authorities, it used microdata to analyze in depth the current status of the recoveries of creditworthiness of debt defaulters, for whom related measures are now being prepared.

Meanwhile, in preparation for the possibility of increased risks stemming from the buildup in household debt, the Bank closely monitored trends of household lending through meetings of its 「Household Debt Task Force」 for example. Further, it attended the meetings of the 「Consultative Group for Managing Household Debt」 and the 「Macroeconomic and Financial Meeting」, and shared with the government and the supervisory authorities understandings related to the household debt problem while actively stating its views for example as to the appropriate responses.

### Efforts to Strengthen Global Financial Safety Nets Continue

The Bank of Korea took part in meetings of international consultative bodies such as the G20, the ASEAN+3, etc., and discussed the timely identification of changes in global financial and economic conditions and their effects, as well as major pending issues such as the monetary policy stances of major countries, financial regulation, etc. Notably, in the G20 Finance Ministers' and Central Bank Governors' Meetings, held in April

25) Through an improvement in the operational framework for meetings of the Monetary Policy Board, beginning from 2017 four per year of the Board's regular meetings are devoted to examining financial stability conditions.

and October of this year in Washington, D.C., the Bank participated in the discussions related to strengthening the global financial safety nets, reforming financial regulations, etc., and in the ASEAN+3 Finance Ministers' and Central Bank Governors' Meeting convened in Yokohama, Japan in May, it took active part in the discussions for example of plans to boost the effectiveness of Chiang Mai Initiative Multilateralization (CMIM). Moreover, through its hosting of the Korea-China-Japan tripartite central bank governors' meeting in Incheon, the Bank of Korea also continued its efforts to foster regional financial stability, by strengthening the cooperation between the three countries' central banks for example.

In October, meanwhile, through an extension of the expiring Korea-China currency swap for an additional three years, the Bank of Korea kept up its endeavors to strengthen the financial safety nets by means of currency swap arrangements with major countries.

### Enhanced Safety and Efficiency of Payment and Settlement Systems

In response to changes in domestic and external conditions, the Bank of Korea continued its efforts to enhance the safety and efficiency of the payment and settlement systems.

In order to prevent temporary liquidity shortages of BOK-Wire+ participants from spreading to cause settlement delays for other institutions, the Bank supplied these participants with intraday liquidity support. It supplied funds via collateralized intraday overdrafts and sales of intraday repurchase agreements, to banks and financial investment companies respectively, to support them by covering their temporary shortages of settlement funds. During the January through September period of this year the Bank provided BOK-Wire+ participants with a daily average amount of 2.5 trillion won in intraday liquidity support to resolve their tempo-

<Table II - 2> Funds covering temporary intraday liquidity shortages<sup>1)</sup>

	2015	2016	2017 Jan.-Sep.	(Rate of change)
Intraday overdrafts <sup>2)</sup>	394.5	380.2	320.6	(-15.7)
Intraday RPs	2,613.7	2,449.8	2,160.8	(-11.8)
<b>Total</b>	<b>3,008.2</b>	<b>2,830.0</b>	<b>2,481.4</b>	<b>(-12.3)</b>

Notes: 1) Daily average basis.

2) Based on average balance of net intraday overdraft loan (Amount of intraday overdrafts loan used - Outstanding balance of deposits only for settlement).

Source: The Bank of Korea.

rary shortages of settlement funds.

The Bank also continued its efforts to ensure smooth domestic implementation of the 「Principles for Financial Market Infrastructures (PFMI)」<sup>26)</sup>, the international-standards in the field of payment and settlement, and of the 「Guidance on Cyber Resilience for Financial Market

26) Following the identification after the global financial crisis of the needs to expand the over-the-counter derivatives market infrastructures and to strengthen international standards concerning the operation of financial market infrastructures, the BIS's Committee on Payments and Market Infrastructures (CPMI), jointly with the International Organization of Securities Commissions (IOSCO), integrated the existing international standards, and in April 2012 they were established as the new international standards for payment and settlement.

27) In June 2016 CPMI-IOSCO, in an effort to induce the heightening of financial market infrastructure cyber resilience, established additional guidelines related for example to PFMI 2 (Governance), 3 (Framework for the comprehensive management of risks), 8 (Settlement finality), 17 (Operational risk) and 20 (FMI links).

Infrastructures」.<sup>27)</sup> In order to enhance transparency in the operation and surveillance of the businesses of the payment and settlement system, it announced the 「Disclosure on BOK-Wire+」<sup>28)</sup> (July) and established the 「Assessment Methodology for Cyber Resilience of Korean Financial Market Infrastructures (KFMI)」 (August). With regard to the major payment and settlement systems operated by the Korea Exchange and Korea Securities Depository, the Bank examined their compliances with the PFMI, their frameworks for responding to cyber risks, etc. In addition, through joint examinations with the Financial Supervisory Service of one domestic bank and two financial investment companies during the April~September period, the Bank of Korea examined matters such as these institutions' compliances with the related regulations and their settlement risk management, and recommended to the institutions that needed to improve their management of net settlement and operational risks that they take supplementary actions.

Meanwhile, the Bank of Korea in April commenced a 'Coinless Society' pilot project<sup>29)</sup>, to enhance people's convenience, reduce social costs and so on. It also devoted efforts to promoting payment and settlement system development by for example taking active part in the 「Joint T/F on Virtual Currencies」, which devised a set of measures to secure the transparency of transactions in virtual currencies and to protect consumers.

## Joint Examinations of Financial Institutions, to Detect Potential Financial System Risks

To facilitate the early identification of potential risks within the financial system, the Bank of Korea strengthened its joint examinations of as well as its regular monitoring activities related to financial institutions. It meanwhile also sustained its efforts for communication with financial institutions, and for the establishment of frameworks for cooperation with supervisory institutions at home and abroad for example.

From April through October of this year the Bank, together with the Financial Supervisory Service, carried out four joint examinations of banks, including sectoral examinations related to major financial issues, inspections of risks at individual banks, etc. Through a sectoral examination concerning loans to self-employed private business owners, it examined the concentration of loans to the real estate leasing businesses, the status of high LTV loans, the debt repayment capacities of vulnerable borrowers, etc. Through sectoral examinations of risks at major banks, it investigated for example the credit risk management framework in the banking sector, as well as the application of risk weights and its effects on economic procyclicality. In addition, through examinations of risks at individual banks the Bank of Korea checked on matters such as loan defaults by borrowers in vulnerable industries and banks' loss-absorbing capaci-

28) The Korean version was announced in July, and the official translation will be disclosed afterwards.

29) This is a project to ensure that the change created through cash transactions at marts, convenience stores, etc. can be accumulated for use via electronic prepayment instruments such as transportation cards.

ties, the status of corporate restructuring, and so on.

<Table II - 3> **Joint examinations<sup>1)</sup> with Financial Supervisory Service**

(times)				
2013	2014	2015	2016	2017 Jan.-Oct.
8	7	7	6	5

Note: 1) Examinations of banks.  
Source: The Bank of Korea.

In parallel with its joint examinations of financial institutions, the Bank of Korea actively carried out regular monitoring of them in the forms of visits or telephone interviews, in order for example to identify factors hindering financial stability and to gather information related to changes in financial institutions' business behaviors.

Meanwhile, to ensure that the policy authorities and market participants perceive the risks inherent in the financial system and respond to them preemptively, the Bank of Korea shared the results of its financial institution examinations with government institutions and supervisory authorities, and included them in its Financial Stability Report as well. Moreover, by briefing financial institution executives and staff on the examinations' results, holding meetings with the staff responsible for compiling the related statistics, etc., the Bank also devoted efforts to promoting the relevant communication with financial institutions.

Besides this the Bank also participated in the meetings of the Supervisory Colleges<sup>30)</sup> and Crisis Management Groups for Standard Chartered and HSBC Banks, hosted by the Bank of England, and examined the management strategies and business performances of these large foreign banks along with their risk management, while discussing their recovery resolution plans for cases of emergencies.<sup>31)</sup> Moreover, through conference calls with the ECB for example, it participated in frequent discussions of pending global financial issues.

30) Supervisory colleges are organizations composed of the supervisory authorities of the home countries where large banks' headquarters are, and of the host countries where their overseas local subsidiaries and branches are operating. They share information related to the management conditions of the banks concerned, and discuss the trends of their supervision.

31) The FSB, in its 'Key Attributes of Effective Resolution Regimes for Financial Institutions' established in November 2011, recommended the setting up of Recovery and Resolution Plans (RRPs) for systemically important financial companies for times of emergency.

# III

## Future Monetary Policy Directions

1. External Conditions .....	35
2. Growth Forecast .....	36
3. Price Forecast .....	38
4. Major Considerations .....	40
5. Future Monetary Policy Operational Directions .....	53



# 1. External Conditions<sup>32)</sup>

## Trend of Improvement in World Economy Forecast to Continue

It is forecast that the world economy will continue its trends of improvement. While advanced countries continue to grow at stable paces, the momentums of growth in emerging market countries are expected to strengthen, led mainly by the ASEAN countries and India.

<Table III - 1> World economic growth outlook<sup>1)</sup>

	2015	2016	2017 <sup>e</sup>	2018 <sup>e</sup>
World	3.4	3.2	3.6	3.7
Advanced economies	2.2	1.7	2.2	2.0
(US)	2.9	1.5	2.2	2.3
(Euro area)	2.0	1.8	2.1	1.9
(Japan)	1.1	1.0	1.5	0.7
Emerging market and developing economies	4.3	4.3	4.6	4.9

Note: 1) Based on IMF World Economic Outlook (Oct. 2017); 2015-2016 statistics for the US, Japan and the euro area are from their own representative agencies.

Sources: IMF, Individual countries' published statistics.

It is forecast that the United States will maintain solid growth, as corporate investment expands due to improvements in investor sentiment, amid steadily rising private consumption thanks to the buoyancy of employment conditions. High uncertainties do still exist, however, related to the carrying out of major policies including tax reform and monetary policy normalization. In the euro area it appears likely that the modest pace of growth will be sustained,

owing to increases in consumption and investment in line with the improvements for example in employment conditions and in corporate sentiment. It is however possible that the political uncertainties surrounding the Brexit negotiations and Catalonia's demand for independence could restrict the future pace of growth. Japan is meanwhile expected to continue its modest growth, driven by exports and investment.

<Table III - 2> Outlook for economic growth<sup>1)</sup> in the euro area

	2015	2016	2017 <sup>e</sup>	2018 <sup>e</sup>
Euro area	2.0	1.8	2.1	1.9
(Germany)	1.7	1.9	2.0	1.8
(France)	1.1	1.2	1.6	1.8
(Italy)	1.0	0.9	1.5	1.1
(Spain)	3.4	3.3	3.1	2.5

Note: 1) Based on IMF World Economic Outlook (Oct. 2017); 2015-2016 statistics for the individual countries are based on those published by Eurostat.

Sources: IMF, Eurostat.

It is forecast that the stable trend of growth in China will persist, led by consumption and exports. However, the government's strengthening of structural reforms and the slowdown in the real estate economy are expected to work as downside risks to growth. It is forecast that growth in India and the ASEAN-5 countries will accelerate, thanks to expansions in their exports, while Brazil and Russia seem likely to continue their trends of recovery due for example to increasing exports of raw materials.

32) Part III Sections "1. External Conditions," "2. Growth Forecast" and "3. Price Forecast" have been drawn up based on the Bank of Korea's 「Economic Outlook Report」 released on October 19, 2017.

<Table III - 3> Outlook for economic growth<sup>1)</sup> in EMEs (%)

	2015	2016	2017 <sup>e</sup>	2018 <sup>s</sup>
China	6.9	6.7	6.8	6.5
Brazil	-3.8	-3.6	0.7	1.5
Russia	-2.8	-0.2	1.8	1.6
India <sup>2)</sup>	8.0	7.1	6.7	7.4
ASEAN-5 <sup>3)</sup>	4.9	4.9	5.2	5.2

Notes: 1) Based on IMF World Economic Outlook (Oct. 2017); 2015-2016 statistics for the individual countries are from their own representative agencies.

2) Fiscal year basis (April of the current year to March of the next year).

3) Indonesia, Malaysia, the Philippines, Thailand and Vietnam.

Sources: IMF, Individual countries' published statistics.

### International Oil Price Forecast to Fluctuate around 50 US Dollars per Barrel for the Time Being

It is forecast that international oil prices will fluctuate around 50 US dollars per barrel for some time despite the steady growth in the demand for crude oil in line with the improvements in the world economy, as increases in prices are constrained due to the expanded production of shale oil. There is however a possibility of substantial fluctuations, depending for instance on the courses of political unrest in some oil-producing countries, and on the actual implementations of production cuts that major oil-producing countries have agreed on.

<Table III - 4> Outlook for international oil prices<sup>1)</sup> (US\$/barrel)

	2016	2017		2018 <sup>e</sup>
		1st half	2nd half <sup>a</sup>	
<Brent>	44.1	52.1		
CERA (Oct. 17)			53.1	51.8
OEF (Sep. 28)			51.5	50.3
EIA (Oct. 11)			53.3	54.1

Note: 1) Period-average; figures in parentheses refer to the dates of forecasts.

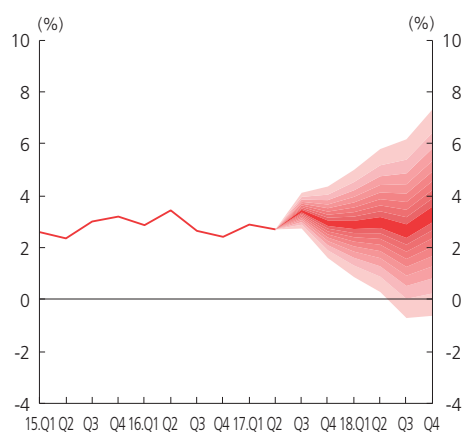
Sources: CERA, OEF, EIA.

## 2. Growth Forecast

### Domestic Economy Forecast to Continue Trends of Improvement

It is forecast that the domestic economy will continue its improvements and show a growth rate of 3.0% this year, as the buoyancies of goods exports and facilities investment continue due to the global economic recovery, and as private consumption shows a modest recovery as well. During next year a growth rate of 2.9% is expected, in line with an accelerated pace of private consumption growth on the effects for example of government policies, amid a continuing trend of global economic recovery. Looking at the contributions to growth of the different expenditure sectors, it is forecast that the contribution of exports will rise during next year while that of domestic demand activities will fall.

<Figure III - 1> Economic growth fan chart<sup>1)2)</sup>



Notes: 1) Compared with the same periods of the previous years; figures are the forecasts as of Oct. 2017.

2) The darkest band in the center of the chart represents a 10% confidence interval including the central projection, and the other colored bands cover confidence intervals ranging from 20% to 90% as the shading lightens.

Source: The Bank of Korea.

A look at the different sectors in terms of their future paths of growth foresees private consumption continuing its trend of modest growth, thanks for example to the government's policies to revitalize consumption and the economy. Factors including the long holidays in early October, the government's consumption revitalization policies, Korea's holding of the Winter Olympic Games, etc. are expected to positively affect the consumption recovery. Moreover, as the government's income-led growth policies are carried out on full scale next year, they are expected to contribute to a recovery of private consumption. However, it is forecast that the increase in interest payment burdens and the inadequate improvements in real purchasing power for example will likely limit the speed of the private consumption recovery.

Facilities investment will maintain a high level next year as well, led mainly by the IT sector thanks to the robustness in global IT business conditions, but its rate of growth is expected to slow considerably owing to base effects following the expansion until this time. Intellectual property products investment is foreseen growing modestly, affected by an expansion in R & D investment due to the improvements in business performances of major IT companies and to the buoyancy of global IT business activities. In the case of construction investment, meanwhile, its pace of growth is projected to decline greatly in 2018, as building construction will gradually slow due to reductions in the total area of projects commenced and orders since last year, while civil engineering will be sluggish as a result of large-scale pro-

jects having entered their final stages, of the government's reduction of its SOC budget volume, etc.

It is forecast that exports will sustain their modest pace of recovery, in line with the continuing favorable trend of world trade growth. However, downside risks such as of worsening trade conditions vis-à-vis major countries including China and the US remain. As for imports, their pace of growth is expected to slow, in consequence of the slowing paces of increase in raw materials prices and in facilities investment. The current account will meanwhile maintain its surplus, based mainly on the goods account, but it is forecast that the size of the surplus will narrow as the deficit in the services account widens.

<Table III - 5> Economic growth outlook<sup>1)</sup>

	2016		2017		2018*		
	Year <sup>a</sup>		1st half	2nd half	Year	1st half	2nd half
Real GDP	2.8	3.0	2.8	3.2	2.9	2.9	3.0
Private consumption	2.5	2.3	2.1	2.5	2.6	2.7	2.6
Facilities investment	-2.3	14.0	15.9	12.1	2.8	2.3	3.4
Intellectual property products investment	2.3	2.9	2.6	3.1	3.0	3.2	2.9
Construction investment	10.7	6.9	9.4	4.9	0.2	0.3	0.1
Goods exports	2.2	3.7	4.2	3.3	3.5	2.4	4.6
Goods imports	3.6	7.1	9.3	5.0	3.4	2.1	4.8

Note: 1) Compared with the same periods of the previous years; figures are the forecasts as of Oct. 2017.  
Source: The Bank of Korea.

Concerning the future path of growth there is a mix of both upside and downside risks. The former include risks of strengthening trends of improvement in exports and

facilities investment in line with an acceleration in the world economic recovery, of an improvement in Korea's trade conditions vis-à-vis China stemming from an easing of the THAAD tensions, and of an expansion in the consumption recovery due to the government's policies to boost household income. Among the downside risks meanwhile are those of worsening trade conditions with major countries such as the US, of expanded financial market volatility in line with major countries' normalizations of their monetary policies, and of a contraction in economic sentiment following a heightening of geopolitical risks related to North Korea.

### 3. Price Forecast

#### **Consumer Prices Forecast to Increase at around 2%**

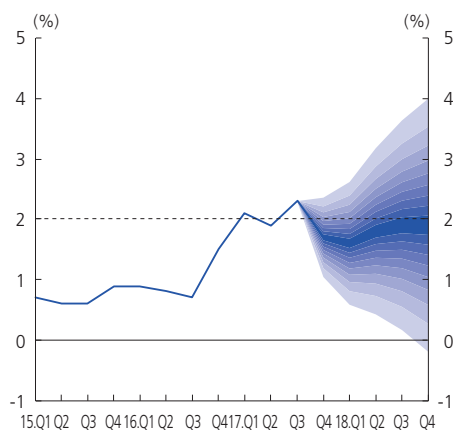
It is forecast that consumer prices will rise by 2.0% during this year, and at a slightly slower pace next year.

Looking first at the supply side, it is forecast that the paces of increase in prices of agricultural and livestock products will slow while international oil prices fluctuate at around their current levels. On the demand side, it is projected that the negative GDP gap will gradually turn positive, and that the pace of nominal wage increase will eventually pick up thanks to the improvement in labor market conditions for example. Meanwhile, the upward trend in housing rental prices is expected to slow somewhat, on factors such as an expansion in the number of newly occupied residences, while the rate of increase in public service charges is expected to slow somewhat given for example the possibility of a reduction in city gas prices. The core inflation index excluding food and energy products, one of the indicators of core inflation that remove the effects on prices of irregular supply-side factors, is expected to rise by 1.6% this year and by 1.9% next year.

The upside and downside risks to the future path of inflation are assessed as mixed, with the overall risk being neutral. As the major upside risks, there are those of a strengthening of the domestic economic recovery due to the improved global eco-

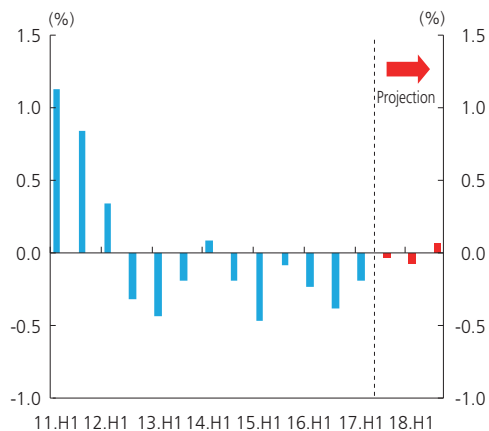
conomic conditions, of a rise in the won/dollar exchange rate in reaction to North Korea risk and to the monetary policy normalization by the US Federal Reserve, and of a pickup in the degree of wage increase in line with improving employment conditions. The downside risks meanwhile include a drop in international oil prices in consequence of increased US shale oil production, and the possibility of the private consumption recovery proceeding more slowly than expected.

<Figure III - 2> CPI inflation fan chart<sup>(1)(2)</sup>



Notes: 1) Compared with the same periods of the previous years; figures are the forecasts as of Oct. 2017.  
 2) The darkest band in the center of the chart represents a 10% confidence interval including the central projection, and the other colored bands cover confidence intervals ranging from 20% to 90% as the shading lightens.  
 Source: The Bank of Korea.

<Figure III - 3> Percentage GDP gap outlook<sup>(1)</sup>



Note: 1) Figures are the forecasts as of Oct. 2017.  
 Source: The Bank of Korea.

<Table III - 6> Inflation outlook<sup>(1)</sup>

		2016		2017		2018 <sup>(1)</sup>		
		Year <sup>a</sup>	1st half	2nd half	Year	1st half	2nd half	
Core Inflation	CPI inflation	1.0	2.0	2.0	2.0	1.8	1.7	1.9
	CPI excluding food & energy	1.9	1.6	1.6	1.6	1.9	1.8	1.9
	CPI excluding agricultural products & oils	1.6	1.5	1.4	1.6	1.9	1.8	1.9

Note: 1) Compared with the same periods of the previous years; figures are the forecasts as of Oct. 2017.  
 Sources: The Bank of Korea, Statistics Korea.

## 4. Major Considerations

Among the major issues that will have to be considered in the future operation of monetary policy, we have looked closely at the changes in the relationship between growth and prices, together with their causes, at the impacts on household lending due to the government's measures related to housing and household debt, and at the effects of the North Korea risk on the financial and foreign exchange markets.

### A. Changes in the Relationship between Growth and Prices, and Their Causes

Since the global financial crisis the relationship between growth and prices has weakened, in major countries as well as in Korea. This appears to have been a result of a combination of structural factors and cyclical factors. The former include changes in the labor market structure, intensified intra- and international competition, and the decline in inflation expectations, and the latter a diminution in the influence of growth on prices due to the persisting idle production capacity. The problems due to structural factors will be difficult to resolve within a short span of time, but if that of idle produc-

tion capacity is resolved as the solid growth continues going forward, then it is judged that there is a possibility that the cyclical factors which have constrained the upward trend of prices will gradually ease. Moving ahead there is thus a need to continuously examine and analyze the sustainability of growth in major countries and in Korea, as well as the speed at which idle production capacity decreases and the consequent changes in the price level.

This weakening of the relationship between growth and prices since the global financial crisis is becoming common in both advanced countries and Korea. Although the levels of production slack in major countries<sup>33)</sup> are continuously lessening as their economic recoveries persist, their core inflation rates are sustaining low levels. In consequence, the positive correlation<sup>34)</sup> between the percentage GDP gap<sup>35)</sup> and the core inflation rate has become unclear since 2010. In Korea also, the pace of growth has accelerated to a level approaching the potential growth rate<sup>36)</sup> entering this year, but the core inflation rate is not rising greatly above the mid-1% range, and just like in advanced countries the positive correlation between the percentage GDP gap and the core inflation rate appears to have weakened since the financial crisis.

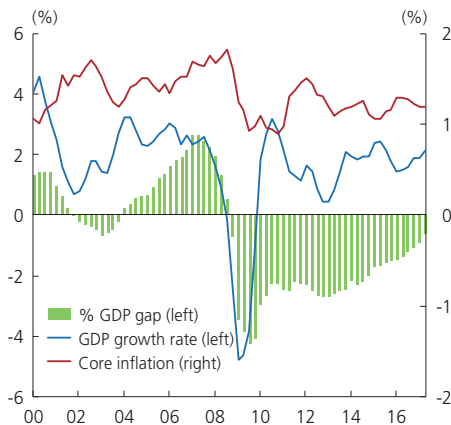
33) The 11 advanced economies referred to in this article are the US, the euro area, Japan, the UK, Canada, Switzerland, Norway, Sweden, Australia, New Zealand and Israel.

34) An increase in a positive percentage GDP gap (decrease in a negative percentage GDP gap) causes upward (downward) price pressures to rise (fall).

35) Percentage GDP gap = (actual GDP – potential GDP) / potential GDP x 100. Generally, if the percentage GDP gap is negative it is assessed that the economy has idle production capacity.

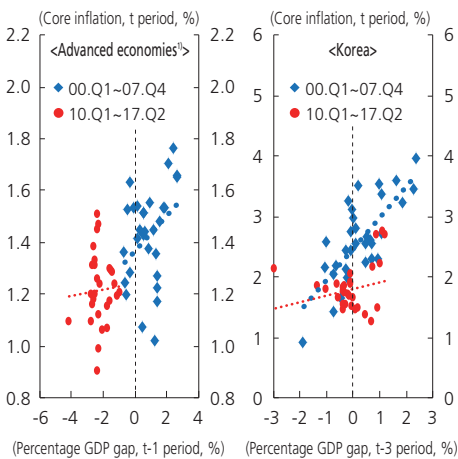
36) According to the Bank of Korea's July 2017 Economic Outlook Report, the estimate for Korea's potential growth rate during 2016 to 2020 is at a level between 2.8% and 2.9% per year.

**<Figure III - 4> GDP growth<sup>1)</sup>, percentage GDP gap and core inflation<sup>2)</sup> of advanced economies**



Notes: 1) Compared with the same periods of the previous years.  
 2) Compared with the same periods of the previous years; based on the weighted average GDPs of 11 advanced economies.  
 Sources: OECD, central banks and statistical agencies of the respective countries.

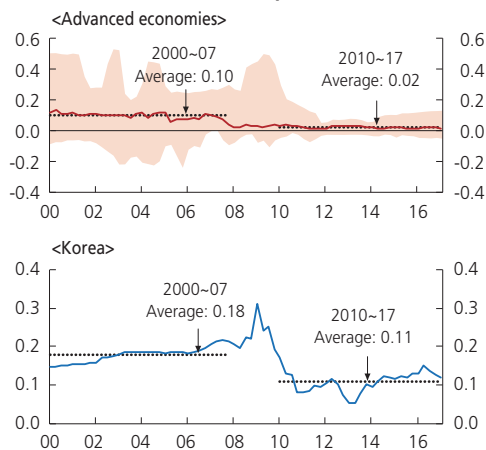
**<Figure III - 5> Correlations between percentage GDP gap and core inflation**



Note: 1) Based on the weighted average GDPs of 11 advanced economies.  
 Source: Bank of Korea estimates.

Whether or not there has been a weakening of the relationship between growth and prices can also be assessed through an estimation of the influence of the percentage GDP gap on prices, and the results of analysis<sup>37)</sup> of major advanced countries and Korea show that the size of this influence has lessened since 2010.<sup>38)</sup>

**<Figure III - 6> Estimation of percentage GDP gap's influence on prices<sup>1)2)</sup>**



Notes: 1) Analysis carried out of Korea and 10 advanced economies.  
 2) The shaded area indicates the ranges of estimates for the respective economies.  
 Source: Bank of Korea estimates.

The fact that the relationship between growth and prices has weakened is judged to be a result in considerable part of structural factors including changes in the labor market structure, the intensification of competition among firms in line with globalization, and the weakening of inflation expectations.

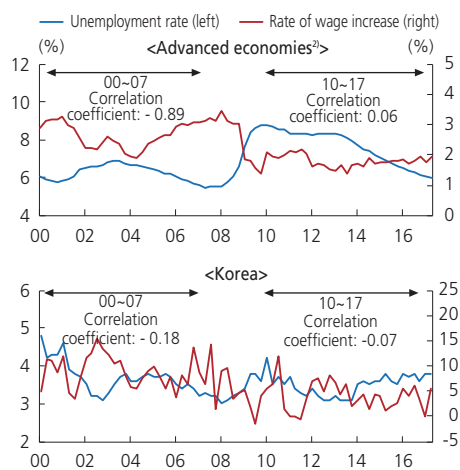
37) For our analysis we use the Phillips Curve model ( $\pi_t = \beta_1\pi_{t-1} + \beta_2\text{gap}_{t-1} + u_t$ , with  $\pi_t$  being the core inflation rate in period t, and  $\text{gap}_{t-1}$  the percentage GDP gap in period t-1) generally applied in estimations of the impact of the percentage GDP gap on prices, and we estimate the effects of the each country's percentage GDP gap on its prices using the general method of moments (GMM) by 10-year intervals. The analysis covers Korea and 10 advanced economies (the US, the euro area, Japan, the UK, Canada, Switzerland, Norway, Sweden, Australia and New Zealand) from Q2 1990 to Q1 2017.

38) However, the results of estimation using the Phillips Curve model can differ depending upon the period of analysis, the variables used, the method of estimation, and so on. In academia arguments about the weakening influence of the percentage GDP gap on prices have continued for a long time, and since the global financial crisis results saying that the percentage GDP gap influence on prices has weakened (Murphy 2016, Lansing 2015, etc.) and those saying that it has not weakened (Blanchard 2016, IMF 2016, etc.) are both being reported.

In what follows we look closely at these structural factors:

First of all, in major economies like the US and the euro area the relationship between employment and wages has weakened due to structural changes in their labor markets.<sup>39)</sup> The rate of increase in labor productivity, which determines firms' abilities to raise wages, has slowed greatly due to the sluggishness of capital investment and technological innovation since the global financial crisis. Moreover, the proportion of temporary workers, whose capacities to negotiate their wages are weaker than those of regular workers, has grown significantly, and the number of elderly employees has grown in line with population aging while the types of jobs they have taken are concentrated among those that pay low wages such as hourly labor.<sup>40)</sup> In line with this, the amount of wage increases has been modest despite the increase in employment following the economic recovery. In Korea as well, just as in major countries, the relationship between employment and wages appears to have weakened since the global financial crisis, due to a slowdown in labor productivity, to the changes in the employment and demographic structures, etc.

<Figure III - 7> Unemployment and wage increase rates<sup>1)</sup>



Notes: 1) Compared with the same periods of the previous years; Based on nominal incomes during the periods.  
2) Based on the weighted average GDPs of 11 advanced economies.  
Sources: OECD, Statistics Korea.

Second, the increases in manufactured product prices have been limited due to intensified intra- and international competition in line for example with the advance of globalization and with innovations in the distribution structure. Even despite the decline in trade openness since the global financial crisis the global competition among companies has strengthened continuously.<sup>41)</sup> Moreover, as the share of electronic commerce expands the price competition between online retailers, and between online and offline retailers, has intensified, and in the case of the US, notably, e-commerce

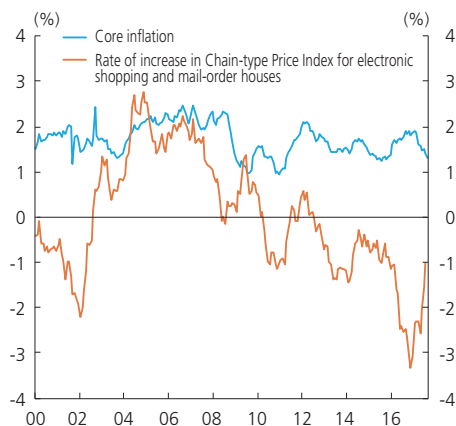
39) In consequence the rises in wages have been restrained even though employment has increased due to economic recovery, leading to a weakening in the relationship between economic growth and prices.

40) The proportions of hourly employees rose from 18.6% in 2007 to 21.7% in the second quarter of 2017 in the euro area, and from 17.1% to 17.8% during the same period in the US. Moreover, the share among hourly employees accounted for by elderly (55 years of age and above) workers rose from 24.7% in 2007 to 27.0% in Q2 2017 in the euro area.

41) Calculation of the Hirschman-Herfindahl Index (HHI, defined as the sum of the squares of the market shares of the firms within an industry, where the market shares are expressed as fractions; with a smaller value indicating greater competition among companies) shows that the global HHI of the consumer goods industries, including for example distribution, food and beverages, clothing and electronic goods, has been falling continuously since the financial crisis.

product prices have been sustaining trends of decline since 2012.

<Figure III - 8> US e-commerce product prices<sup>1)</sup>

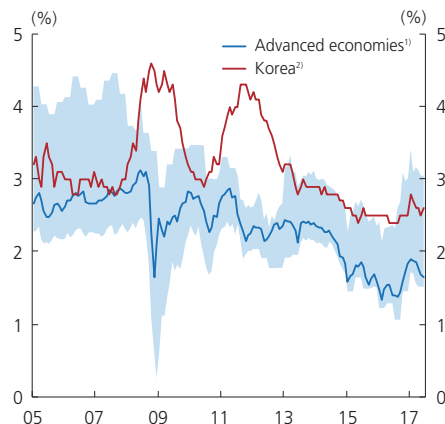


Note: 1) Compared with the same periods of the previous years.

Source: US Department of Commerce.

Third, the decrease in inflation expectations, under the influence for example of the low prices worldwide sustained over a prolonged period of time since the global financial crisis, has also caused the connection between growth and prices to weaken. Normally a decline in inflation expectations limits increases in wages and in the prices of manufactured products<sup>42)</sup>; and empirical analysis<sup>43)</sup> has shown that, in the US and in Korea, the rate of wage increase drops by around 0.4~0.5% point when the rate of expected inflation falls by 1% point.

<Figure III - 9> Expected inflation



Notes: 1) The US, euro area, UK and Canada based on inflation-linked Treasury bonds (10-year); the shaded area indicates the range of figures for the different countries and the line the median values.

2) Based on the rate of inflation expected by the general public over the next one year.

Sources: Bloomberg, the Bank of Korea.

Meanwhile, besides the structural factors looked at so far, it is judged that cyclical factors have also had effects on the recent weakening of the relationship between growth and prices. First, the considerable level of idle production capacity that still remains appears to have been applying downward pressures on prices on the demand side. In particular, it is known that if there is idle production capacity in the economy, the amount of inflation that results due to the narrowing of a negative GDP gap is small because the influence of the GDP gap on prices is relatively less than in the case where there is no idle capacity.<sup>44)</sup>

42) According to the results of a survey by the US Federal Reserve Bank of Atlanta, corporations in the United States consider consumers' expectations of prices important when they set the prices of their products.

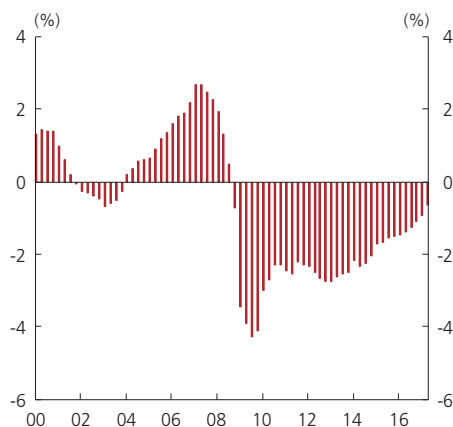
43) Analysis was done using a five-variable (GDP, core inflation, wages, the unemployment rate, expected inflation) VAR model for the period from Q1 2011 through Q2 2017.

44) The situation where the GDP gap's influences on prices vary depending upon the economic cycle is usually said to show the "Non-linearity of the Phillips' Curve." Recent studies such as Dolado et al (2005), Ball et al. (2017), FRB (2017), etc. analyze that non-linearity of the Phillips Curve does exist in major advanced economies like the US and the euro area. As the reasons causing this Phillips Curve non-linearity, factors such as the existence of idle production capacity, the downward rigidity of nominal prices, etc. can be raised. In the estimation of the non-linear Phillips Curves for Korea, the US, the euro area and the UK (target period of Q2 1990 to Q2 2017) for this article also, it is found that the slopes of the curves are small when the percentage GDP gap is negative (existence of idle production capacity), compared to the case where it is positive (idle production capacity resolved).

Moreover, considering that there is a transmission lag of about four to seven quarters before growth affects prices<sup>45)</sup>, it would also require some time before an acceleration in growth were sufficiently reflected in prices. From this standpoint, it is estimated that the slowdowns in growth in major advanced countries and in Korea during the 2015~2016 period are causing their inflation rates to slow and their economies to slump this year after a transmission lag, and that if the recent solid growth continues and the idle production capacity is resolved, then inflation can rise again.

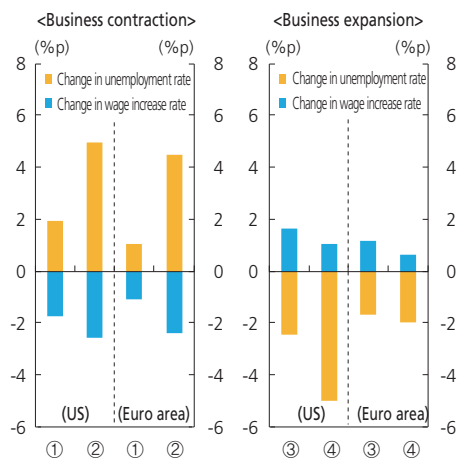
compared to the extents of the economic slumps that they suffered after the global financial crisis appears to have been another factor that has limited their wage increases recently.<sup>46)</sup> Compared to the cases of past economic contractions, unemployment rates in the US and the euro area rose greatly immediately after the financial crisis, but the rates of increase in wages in these economies fell only slightly. Due to this, a contrasting symmetry in which the rate of wage increase does not accelerate significantly despite a continuous decline in employment has been emerging since 2014.<sup>47)</sup>

<Figure III -10> Percentage GDP gap of advanced economies<sup>1)</sup>



Note: 1) Based on the weighted average GDPs of 11 advanced economies.  
Sources: OECD, central banks and statistical agencies of the respective countries.

<Figure III -11> Extents of change<sup>1)</sup> in rates of unemployment and wage increase, by business cycle<sup>2)</sup>



Notes: 1) ① means past periods of contraction, ② the period immediately after the global financial crisis, ③ past periods of expansion, and ④ the current period of expansion.  
2) Unemployment rates for the period since 1990 classified on the basis of their peaks and troughs.  
Source: OECD.

Finally, the fact that wages in major advanced countries did not fall so much

45) The highest lag coefficients of correlation between the GDP growth rate and the core inflation rate appeared at from four to seven quarters in the US, the euro area, Japan, etc., and at four quarters in Korea.

46) In Korea, differently from in major advanced countries, the extent of decline in the rate of wage growth immediately after the financial crisis was higher than the extent of increase in the unemployment rate. This is judged to have been a result of companies and workers dealing with the financial crisis through wage adjustments more than through reductions in employment, based on agreement among laborers, business executives, the society and the government, and on the active employment-related measures by the government, etc.

47) Yellen (2014), BIS (2017), etc. express this as “pent-up wage deflation” resulting from the insufficient wage adjustments immediately after the financial crisis, and say that once this factor is resolved wages can rise rapidly.

It is thus judged that the weakening of the relationship between growth and prices since the global financial crisis is a result in considerable part of structural factors including changes in the labor market structure, the intensification of intra- and international competition, and the weakening of inflation expectations, but that it is also due to the impacts of cyclical factors such as the still existing idle production capacity in the economy, the time lag before growth has an effect on prices, and the insufficient wage adjustments that took place immediately after the global financial crisis.

It is expected that the structural factors that have caused the relationship between growth and prices to weaken will be difficult to resolve within a short span of time. However, if the problem of idle production capacity is resolved as the trend of growth continues going forward, then it is judged that there is a possibility that the cyclical factors that have constrained the upward trend of prices will gradually ease. Going forward there is thus a need to continuously examine and analyze whether growth is continuing in major countries and in Korea, as well as the speed at which idle production capacity decreases and the consequent changes in the price level.

## B. Impacts on Household Lending due to the Government's Measures Related to Housing and Household Debt

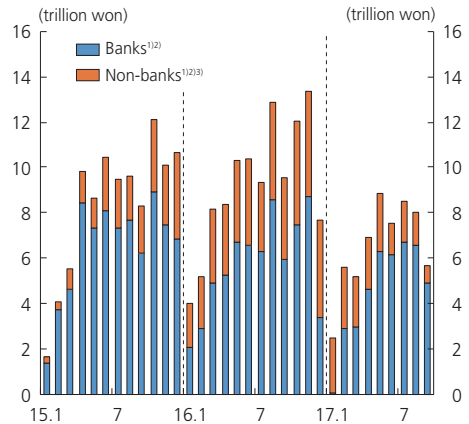
The amount of increase in financial sector household lending lessened between January and March of this year, but from May it expanded again due to factors such as expectations of increases in housing prices. In response, the government has promoted housing market stabilization through the 8.2 Measures for example, and strengthened its management of the trend of household lending growth. Notably, as the 8.2 Measures include additional designations of speculative districts and overheated speculative districts, stricter regulations on household financing, and stronger levies on transfer incomes earned by owners of multiple homes, the pace of price increase has slowed, the volume of transactions in the housing market has declined, and household lending growth has fallen somewhat.

Going forward as well it is expected that the amount of growth in household loans will decrease, as the housing market stabilizes and the amount of loans available declines on the effects of the government's measures related to housing and to household debt. However, given the possibility that household lending may not slow greatly in the short term – in consequence of increases in the quantity of newly occupied residences and in the number of new apartment lots sold, of group loans that have already been

approved, and of advance demand for loans prior to the strengthening of loan regulations – there is a need to continue observing household lending trends closely.

As the housing transaction volume had decreased last year, on weakening expectations of housing price increases after the government’s 11.3 Measures for example, household lending by banks and non-bank financial institutions also grew by a mere 13.2 trillion won during January through March of this year. From May, however, the amount of housing transactions expanded<sup>48)</sup>, and housing prices also climbed significantly especially in Seoul<sup>49)</sup>, as expectations of rising housing prices strengthened due to anticipations of economic recovery in addition to seasonal factors such as the arrival of the spring moving season. In line with this household lending grew by 23.3 trillion won again during the April to June period, a substantial jump compared to the amount of increase between January and March.

<Figure III -12> Financial institutions’ household lending



Notes: 1) Including mortgage transfers.  
 2) Figures for September 2017 are based on Bank of Korea's advanced estimates for banks and on Financial Supervisory Service's advanced estimates for non-bank financial institutions.  
 3) Based on credit unions, mutual savings banks, trust accounts of banks and postal savings.  
 Sources: The Bank of Korea, Financial Supervisory Service.

In response the government announced measures to stabilize the housing market and manage the upward trend of household loans, including the 6.19 Measures<sup>50)</sup> and the 8.2 Measures. In particular, the 8.2 Measures focused on housing market stability by protecting those with real demand and restraining speculative demand. To this end the 8.2 Measures included additional designations of speculative districts and overheated speculative districts, a tightening of regulations on household financing including the

48) During the past one year the expectations of housing price increase and the volume of housing transactions have shown the following trends:

	Oct. 2016	Nov.	Dec.	Jan. 2017	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.
CSI for prospective housing prices	114	107	97	92	92	99	103	109	116	115	99	103
Housing transactions volume (ten thousand)	10.9	10.3	8.9	5.9	6.3	7.7	7.5	8.5	9.8	9.8	9.7	8.4

Sources: The Bank of Korea, Ministry of Land, Infrastructure and Transport.

49) Housing prices in Seoul rose by 0.63% month-on-month in July, to thus record their highest monthly rate of increase since the 1.12% rise in September 2009. (Source: KB Kookmin Bank)

50) The government on June 19 announced its 6.19 Measures, with major details including the designation of additional districts for which regulations are to be adjusted, lengthening of the period of restriction on resales of rights to purchase newly build apartments in the Seoul area, tightening of the LTV and DTI ratio requirements in regions subject to adjustment of their regulations, etc.

LTV and DTI ratio requirements, strengthened regulations on reconstruction and redevelopment, stronger levies on transfer incomes earned by owners of multiple homes, reform of the housing subscription system, etc.

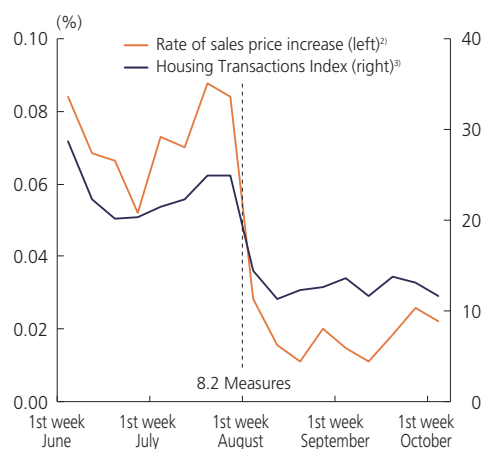
<Table III - 7> Major contents of 8.2 Measures

Tasks to carry out	Details
Designation of speculative and overheated speculative districts	(Speculative areas) 4 districts in the Gangnam region, 7 other districts (Overheated speculative areas) Seoul, Gwacheon, Sejong, Bundang District in Seongnam, Suseong District in Daegu (follow-up measures)
Strengthening of housing finance regulations	(Speculative areas) Restriction on the number of home mortgage loans (1 per borrower → per household) (Overheated speculative areas) LTV 60% → 40%, DTI 50% → 40%
Strengthening of regulations on housing reconstruction and redevelopment	- Modification of regulation requiring repayment of excess earnings from apartment reconstruction - Limitation on the transfer of reconstruction association membership lengthened (2 years → 3 years) - Restriction of rights to re-sell already purchased newly redeveloped apartments (for ownership transfer registrations), etc.
Strengthening of transfer income taxation of multiple home owners	- Elimination of special tax deduction for long-term holdings of housing and heavy tax imposition for multiple home owners (2 homes +10%p, 3 homes +20%p) - Strengthening of actual residency requirement for eligibility for tax exemptions (additional residency requirement) - Raising of transfer tax rate for sales of new apartment purchase rights (adjusted areas, 50%), etc.
Reform of housing subscription system	- Tightening of qualifications for having first housing purchase priority (2 years after membership, 24 or more payments made) - Increase in the application of additional point system (75% → 100%), etc.

Source: Ministry of Land, Infrastructure and Transport.

Under the effects of the 8.2 Measures a wait-and-see attitude has appeared in the housing market, and especially in the speculative districts. Influenced by the government regulations, expectations of housing price increases have weakened (CSI for prospective housing prices: July 2017 115 → September 103), and the pace of housing price growth has also slowed. The amount of housing transactions<sup>51)</sup> also declined in September.

<Figure III -13> Housing market changes before and after 8.2 Measures<sup>1)</sup>



Notes: 1) Based on apartment sales nationwide.  
2) Compared with the same periods of the previous years.  
3) Research carried out in the form of weekly surveys of approximately 30,000 apartments nationwide.  
Source: KB Real Estate.

As the housing market has stabilized since the announcement of the 8.2 Measures, the extent of increase in banks' household lending has also lessened somewhat. The amount of increase in banks' home mortgage lending has fallen compared to the June to July period, due mainly to a slowdown in individual home mortgages in line with the drop in the housing

51) The monthly apartment transaction volume in Seoul declined from 15 thousand units in August 2017 to 8 thousand units in September. (Source: Seoul Real Estate Information Plaza)

transaction volume. Other loans have however shown a somewhat high rate of increase, led by unsecured loans in accordance for example with the launches of Internet-only banks. The implementation of the 「Customized Guideline on Mortgage Loan Screening」 on mutual credit cooperatives in March of this year<sup>52)</sup>, and the announcement of measures to strengthen prudential management<sup>53)</sup>, have caused the pace of increase in non-bank financial institution household lending and especially home mortgage loans to slow, and it appears that the 8.2 Measures have also contributed to this slowdown.

<Table III - 8> Household lending before and after 8.2 Measures<sup>1)</sup>

(trillion won)

	Jan. 2017	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep. <sup>3)</sup>
Bank household loans	0.1	2.9	2.9	4.6	6.3	6.1	6.7	6.5	4.9
(Home mortgages)	0.8	2.1	2.6	3.3	3.7	4.3	4.8	3.1	3.3
(Other loans) <sup>2)</sup>	-0.8	0.8	0.4	1.4	2.5	1.8	1.9	3.4	1.7
Non-bank financial institution household loans <sup>4)</sup>	2.4	2.7	2.2	2.3	2.5	1.4	1.8	1.5	0.7
Total	2.4	5.6	5.1	6.9	8.8	7.5	8.5	8.0	5.6

Notes: 1) Including mortgage transfers.

2) Comprising general unsecured loans, account overdraft loans, commercial-use real estate mortgage loans, other loans (e.g. loans secured by deposit and installment savings or by stocks), etc.

3) Based on Bank of Korea advance estimates for banks and on Financial Supervisory Service's advance estimates for non-bank financial institutions.

4) Based on credit unions, mutual savings banks, trust accounts of banks and postal savings.

Sources: The Bank of Korea, Financial Supervisory Service.

Going forward the amount of increase in financial institution household lending is expected to lessen as the regulations under the 8.2 Measures are progressively implemented, and the effects of the comprehensive household debt measures announced on October 24<sup>54)</sup> also materialize. This is because the amount of home mortgage loans available to borrowers seems likely to decline as loan regulations such as those on the LTV and DTI ratio requirements are tightened significantly in line with the government's housing and household debt measures. In addition, if speculative demand in the housing market shrinks and expectations of rising housing prices weaken due to such a decrease in available loans, then it can be expected that the demand for mortgage loans will contract as well. However, given the possibility that household lending may not slow greatly in the short term, in consequence of fund demand related to the future residences that will be occupied and new apartment lots sold in the future<sup>55)</sup>, of group loans that have already been approved, and of advance demand for loans prior to the implementation of loan regulations, there is a need for continuous and close observation of household lending trends.<sup>56)</sup>

52) The government in December of last year announced that it was requiring the presentation of objective proof of income by borrowers from mutual credit cooperatives, community credit cooperatives, the National Credit Unions Federation of Korea, etc., while also introducing an amortizing loan scheme requiring that borrowers repay interest and 1/30 of loan principal each year. The guideline was implemented from March 13 of this year.

53) The standards for the additional loan loss provision accumulation ratios for high-risk loans lent by savings banks (20% → 50%), mutual credit cooperatives (20% → 30%) and credit-specialized financial companies (30%, new provision) were adjusted upward.

54) These measures include the improvement of the method of DTI calculation, the phased introduction of DSR as the indicator for credit management in the financial sector as a whole, a reduction in lending for investment purposes, more focused management of sectors vulnerable to rises in household debt. etc.

55) The amounts of newly occupied apartments and new apartment lots sold are as follows:

	16.Q1	Q2	Q3	Q4	17.Q1	Q2	Q3	Q4
Number of newly occupied residences (ten thousand)	6.1	6.9	7.1	9.2	7.3	7.7	11.0	11.9
Number of new apartment lots sold (ten thousand)	5.5	12.8	9.7	17.0	5.6	8.1	9.1	15.3

Source: Real Estate 114 (Oct.10).

56) Meanwhile, as the possibility cannot be ruled out of loan demand increasing in the form of loans to the self-employed, who are subject to relatively weaker regulations, after implementation of the 8.2 and 10.24 Measures, there is a need to also carefully watch for any balloon effects stemming from the household loan regulations.

## C. The Effects of North Korea Risk on the Financial and Foreign Exchange Markets<sup>57)</sup>

The risks related to North Korea have risen recently but, similarly to in the past, the domestic financial and foreign exchange markets have generally shown temporary expansions in volatility and regained stability afterwards. This has been a result, together with the learning effect from the experience to this time, of a predominant view seeing the occurrence of an extreme situation such as a war to be unlikely. However, with the level of tension on the Korean peninsula having become elevated due to North Korea's frequent provocations, cautions about the North Korea risk appear to have grown more than in the past, especially among foreign investors. And inasmuch as the possibility cannot be ruled out of financial market volatility expanding following future changes in circumstances, such as additional provocations by North Korea, there is a need to continue close monitoring of developments related to North Korea risk.

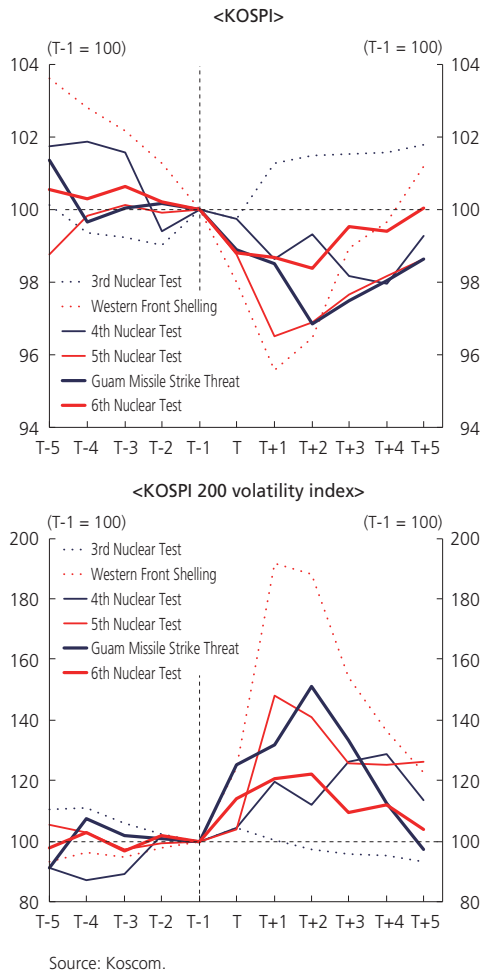
The recent increases in the North Korea risk following events such as North Korea's statement threatening a missile strike on Guam (August 9) and the conduct of its sixth nuclear test (September 3), caused the volatilities of price variables in the domestic

financial and foreign exchange markets to expand temporarily.

Stock prices showed trends of falling temporarily after the heightening of North Korea risk and then recovered, similarly to in the past. However, the speed at which they recovered after the threat of a missile strike on Guam appeared relatively slow compared to the past. During this time period the stock price volatility index (V-KOSPI 200) soared, and on August 11 recorded its high for the year. However, after a certain period of time stock prices then stabilized downward to their levels prior to the emergence of North Korea risk.

57) We have compared the effects on the financial markets of the third nuclear test (February 2013), the artillery firing on the western front (August 2015), the fifth nuclear test (September 2016) and the recent events (the August 9 threat of a missile strike on Guam and the September 3 sixth nuclear test) that have occurred since Kim Jong Un came to power, based on the movements of major price variables during the five business days before and after the days of these incidents' occurrences.

<Figure III -14> Stock price and stock price volatility changes at times of North Korea risk emergence

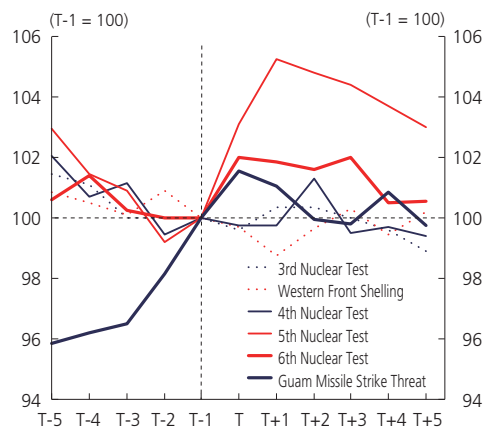


Source: Koscom.

In the case of interest rates, on which the effects of North Korea risk have in the past been limited<sup>58)</sup>, some negative impacts have appeared this time, including signs of their rising. In particular, the upward pressures on domestic interest rates increased after the

sixth nuclear test, even despite declines in market interest rates in major countries in response for example to the possibility of a slowdown in global inflation.<sup>59)</sup>

<Figure III -15> Interest rate<sup>1)</sup> volatility at times of North Korea risk emergence



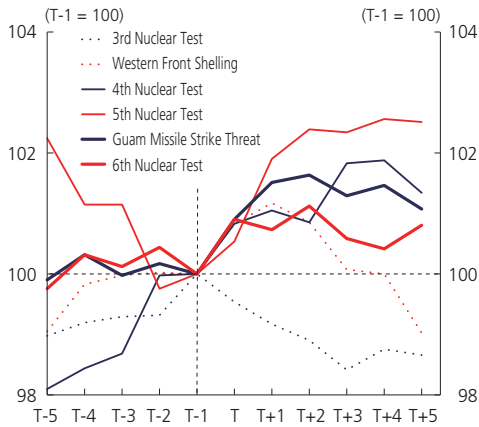
Note: 1) Treasury bond (3-year) yield.  
Source: KOFIA.

The US dollar/Korean won exchange rate rose immediately after the threat of a missile strike on Guam and the North's sixth nuclear test, but the extents of its increases were limited as the negative effects of North Korean provocations had weakened in consequence for example of the learning effect from the experience to this time, the global trend of US dollar weakness, etc.

58) When North Korea carried out its fifth nuclear test (on September 9, 2016) interest rates rose more due to the significant effects for example of global interest rate movements in line with the concerns about a US policy rate hike, than they did due to the North Korea-related risk.

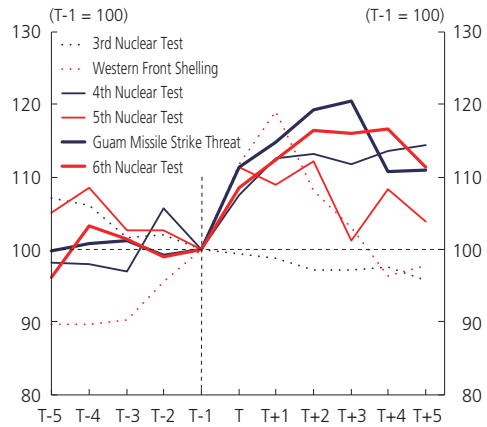
59) In particular, during the five business days following the North's sixth nuclear test, US Treasury yields fell to large extents (Treasury note (2-year) yield -8bp, Treasury note (10-year) -12bp), on the effects of concerns about slowing inflation, on the dovish statements made by officials of major countries' central banks, etc.

<Figure III -16> Exchange rate<sup>1)</sup> volatility at times of North Korea risk emergence



Note: 1) Korean won/US dollar (closing rate).  
Source: The Bank of Korea.

<Figure III -17> CDS premium<sup>1)</sup> volatility at times of North Korea risk emergence



Note: 1) Foreign exchange stabilization bond (5-year) basis.  
Sources: Bloomberg, CMA Datavision.

The CDS premium was meanwhile negatively affected to a somewhat significant extent. Market vigilance persisted after the threat to attack Guam and the sixth nuclear test, as indicated by the fact that the CDS premium rose immediately to levels which it maintained for longer periods than in the past<sup>60)</sup>, and in August and September it recorded its highest levels of the year.<sup>61)</sup>

Meanwhile, portfolio investment funds of foreigners have generally flowed out due to the recent heightening of North Korea risk. In the past foreigners' stock investment funds flowed in on a net basis when North Korea risk expanded, in line with purchases at the low prices available for example.<sup>62)</sup> But recently they have shown net outflows, as the incentives for profit-taking following the rise in stock prices to this time have coincided with the North's provocations. In particular, for five business days in a row after the North's threat to strike Guam foreigners recorded large net stock sales (1.4 trillion won during August 9~16). In the case of bond investment as well, foreigners had generally shown net purchases during past outbreaks of North Korea risk, but after the threat of a missile strike on Guam a considerable volume of net sales appeared

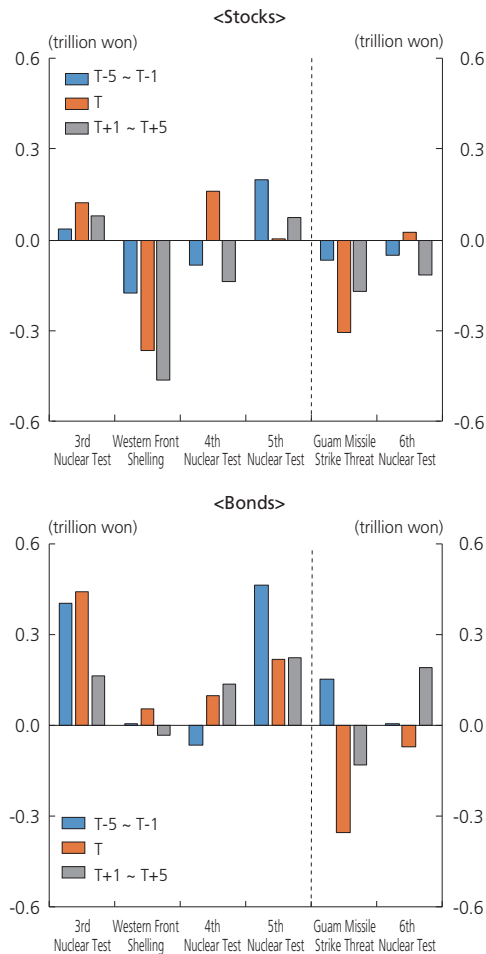
60) Differently than at the times of the North's third nuclear test, its artillery firing on the western front and its fifth nuclear test, the CDS premium sustained high levels for five business days or longer after both the threat of a strike on Guam and the sixth nuclear test.

61) Before July it maintained a monthly average of 60bp or less, but in August it recorded 62bp and in September 69bp.

62) However, foreigners did sell domestic stocks on a large scale on net at the time of the North's firing of artillery across the western front.

(0.9 trillion won during August 9~16), due mainly to short-term funds that are sensitive to changes in market conditions. At the time of the sixth nuclear test, meanwhile, net sales of bonds by foreigners were temporarily seen, which afterward reversed to net purchases.

<Figure III -18> Foreigners' portfolio investment at times of North Korea risk emergence



Note: 1) Daily averages.  
Source: Koscom.

the domestic and overseas financial markets have generally shown temporary expansions in volatility and then regained stability afterward. This has been a result, together with the learning effect from the experience accumulated to this time, of the predominant view that sees occurrence of an extreme situation such as a war to be unlikely.

However, with the level of tension on the Korean peninsula assessed as having risen one notch further due to the North's frequent provocations, cautions about the North Korea risk appear to have grown more than in the past, especially among foreign investors. In line with this it is difficult to rule out the possibility also of financial and foreign exchange market volatility expanding in line with future changes in circumstances, such as additional provocations by North Korea. There is in consequence a need for continued close monitoring of developments related to North Korea risk in the future as well, since an expansion in market volatility can lead to capital outflows due for example to increases in the risk premiums on domestic financial assets.

The risks related to North Korea have risen recently but, similarly to in the past,

## 5. Future Monetary Policy Operational Directions

### Base Rate Operation

In the future as well, the Bank of Korea will conduct its 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 also devoting attention to financial stability.

The domestic economy appears likely to continue its solid growth, but as it is forecast that the demand-side price inflationary pressures will not be large, the Bank will maintain its accommodative policy stance while carefully checking future economic growth and inflation trends. In this process it will closely observe developments related to domestic and external risk factors, and any resulting changes in financial and economic conditions as well. Besides consumer price inflation the Bank will also closely monitor core inflation, expected inflation, international oil prices, global inflation, various auxiliary price indices, the GDP gap, and the spare capacities in employment and in the manufacturing sector.

The Bank will in addition take into account the high uncertainties as to the domestic and external conditions surrounding the Korean economy, and devote efforts to ensuring that financial market stability is firmly maintained. It will strengthen its examinations related to changes in domestic and external conditions that can heighten

financial market volatility, such as geopolitical risks, the monetary policies of major countries' central banks, etc., and closely monitor trends of capital in- and outflows. Together with this, given the ongoing trend of household lending growth the Bank will also continue devoting attention to any possible expansion in financial imbalances.

Meanwhile, it appears that conditions are gradually forming for adjustment in the degree of monetary policy accommodativeness, which has been expanded in response to the low-growth and low-inflation environment until this time. This view is grounded in the forecast that the domestic economy will show a growth rate at around its potential level, and that inflation will also be at the target level. However, given the potential uncertainties related to geopolitical risks, to Korea's trading conditions vis-à-vis major countries, etc., the Bank will check on whether the recent trends of improvement in the economy remain firm going forward as well, and whether they are sustainable.

### Enhancement of Monetary Policy Effectiveness

The Bank of Korea will continue its policy efforts to enhance the effectiveness of its monetary policy. Through the productive operation of its Bank Intermediated Lending Support Facility, reformed in August of this year, it will strengthen its support for sectors contributing to an expansion in the potential growth capacity, and devote efforts to ensuring that the counter-cyclical function of central bank lending throughout the business and economic cycles can be strengthened.

The Bank will moreover work to strengthen its policy communication so as to ensure that the transparency and predictability of its monetary policy can be enhanced. In accordance with its 「General Principles of Monetary Policy Operation」 announced last year, the Bank will devote its best efforts to maintaining the consistency of its monetary policy communication and heightening the general public's understanding of its policy conduct. In addition, while on the one hand faithfully disclosing the contents of its monetary policy decision-making meetings, through its Monetary Policy Report for example, the Bank will strive to expand its opportunities for communication with the financial markets, academia, the media, and so on.

### **Promotion of Financial and Foreign Exchange Market Stability**

The Bank of Korea will also continue its efforts to promote the stability of the financial and foreign exchange markets. In particular, in relation to North Korea risk and to the US Federal Reserve's normalization of its monetary policy for example, the Bank plans to devote active attention to any expansions in the volatility of price variables in the international financial markets, or in the flows of foreign currency funds for example. In any case where overseas uncertainties become amplified and the financial and foreign exchange markets show pictures of unrest, the Bank will activate its emergency examination system and, when needed, devise appropriate measures for responding. Moreover, it will continuously examine and supplement its scenario-based contin-

gency plans prepared for cases of deepening market unrest. It will in addition also strengthen its efforts aimed at international cooperation to construct multi-level financial stability nets, to ensure that the Korean economy's favorable external soundness can be well maintained.

### **Strengthening of Financial System Stability**

The Bank of Korea will devote particular efforts to regularly check for vulnerabilities and preemptively identify potential risks in the financial system, and to devise appropriate measures in response. In particular, inasmuch as upward pressures on market interest rates due to the monetary policy normalization by the US Federal Reserve can cause the debt repayment burdens of vulnerable borrowers for example to worsen, the Bank will consult closely with the government and the supervisory authorities, and seek measures for managing the pace of increase in household debt at an appropriate level. Moreover, it will respond to any increases in uncertainties domestically or abroad, related for example to geopolitical risks, and strengthen its examinations of the financial system's soundness.

## Contributing Departments & Authors by Section

Section	Author
Planning & Coordinating	Monetary Policy Dept. Kwon, Yong Jun Kim, Byungkuk Kim, Nak Hyun Ahn, Seoung Hun Kim, Ji Hoon Bae, Han Iee (Monetary Policy Communication Team)
I. Monetary Policy Operating Conditions 1. Global Economy 2. Real Economy 3. Prices 4. Financial and Foreign Exchange Markets	Research Dept. Kim Yoon Kyum (Global Economy Analysis Team) Research Dept. Choi, In Hyup (Overall Research & Forecasting Team) Research Dept. Lim, Choon Sung & Kim, Mi Ju (Inflation Monitoring & Forecasting Team) Financial Markets Dept. Na, Young In (Financial Markets Affairs Team) Chae, Kyungrae (Fixed Income Markets Analysis Team) Lim, In Hyuk (Equity Markets & Corporate Finance Team) International Dept. Baek, Bong Hyun (Foreign Exchange Market Team)
II. Conduct of Monetary Policy 1. Base Rate 2. Bank Intermediated Lending Support Facility 3. Financial Stability	Monetary Policy Dept. Lim, Kun Tae & Kang, Gyuwhi (Monetary Policy Planning & Coordination Team) Financial Markets Dept. Kim, Bo-Keong (Market Operations Team) Monetary Policy Dept. Lee, Jungkook (Credit & Reserves Policy Team) Financial Markets Dept. Na, Young In (Financial Markets Affairs Team) International Dept. Gu, Jong Hwan (International Planning & Coordinating Team) International Affairs Dept. Lee, Seok Woo (International Affairs Strategy & Coordination Team) & Kim, Joo Yeun (Financial Cooperation Team) Payment & Settlement Systems Department Kang, Jung Mi (Payment Systems Policy Team) Financial Stability Dept. Park, Jungmin (Financial Stability Planning & Coordination Team) Office of Bank Examination Yun, Hyuncheol (Examination Planning Team)
III. Future Monetary Policy Directions 1. External Conditions 2. Growth Forecast 3. Price Forecast 4. Major Consideration A. Changes in the Relationship between Growth and Prices, and Their Causes B. Impacts on Household Lending due to the Government's Measures Related to Housing and Household Debt C. The Effects of North Korea Risk on the Financial and Foreign Exchange Markets 5. Future Monetary Policy Operational Directions	Research Dept. Kim, Yoon Kyum (Global Economy Analysis Team) Research Dept. Choi, In Hyup (Overall Research & Forecasting Team) Research Dept. Lim, Choon Sung & Kim, Mi Ju (Inflation Monitoring & Forecasting Team) Monetary Policy Dept. Lee, Hwayun & Ahn, Sohee (Monetary Policy Analysis Team) Financial Markets Dept. Gwon, Taehyo & Jeong, Hyo Won (Financial Markets Affairs Team) Financial Markets Dept. Cho, Kwangsick (Fixed Income Markets Analysis Team) & Lim, In Hyuk (Equity Markets & Corporate Finance Team) International Dept. Gu, Jong Hwan (International Planning & Coordinating Team) Monetary Policy Dept. Lim, Kun Tae & Kang, Gyuwhi (Monetary Policy Planning & Coordination Team)

# Monetary Policy Report

**Publisher** Lee, Juyeol

**Editor** Park, Jong Seok

**Published by** The Bank of Korea

67, Sejong-daero, Jung-Gu, Seoul, 04514, Korea

[www.bok.or.kr/eng](http://www.bok.or.kr/eng)

**Published on** December 15, 2017

**Printed by** Jeil Printech Co., Ltd.

- This material is posted on the web-site of the Bank of Korea  
(<http://www.bok.or.kr/eng> > Monetary Policy > Monetary Policy Reports)
- Please contact Monetary Policy Communication Team, Monetary Policy Department,  
the Bank of Korea (Tel: +82-2-759-4465, Fax: +82-2-759-4500, Email: bokmpcm@bok.or.kr)
- This book is available at the price of 8,100 won at the book/souvenir shop (+82-2-759-4805)  
in the Bank of Korea Money Museum

Copyright © THE BANK OF KOREA. All Rights Reserved

ISSN 2005-2707

