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Monetary Policy Report - June 2020

Bank of Korea

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Monetary Policy Report

2020. 6

BANK OF KOREA

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Monetary Policy Report

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The Bank of Korea sets and implements its monetary and credit policies in order to contribute to the sound development of the national economy by pursuing price stability, and in the process pays attention to financial stability as well.

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.

This June 2020 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 February 2020 through the date of the Monetary Policy Board meeting for monetary policy decision-making in May 2020.

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.

June 2020

Juyeol Lee

Lee, Juyeol

Governor

Bank of Korea

Monetary Policy Board

Chairman	Lee, Juyeol
Member	Koh, Seung Beom
Member	Yoon, Myun-Shik
Member	Lim, Jiwon
Member	Cho, Yoon-Je
Member	Suh, Young Kyung
Member	Joo, Sangyong

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.

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Executive Summary

[Monetary Policy Operating Conditions]

1 A look at economic and financial conditions in Korea and abroad between February and May 2020 finds the following. Global economic growth contracted greatly, affected by the spread of COVID-19. Domestic demand and exports both were sluggish in the US, the euro area, Japan, and other major advanced economies (AEs), as well as in most emerging market economies (EMEs), as economic activity was greatly restrained. Meanwhile, China saw moderate improvement after a first-quarter shock, with sluggishness in domestic demand easing and exports shifting to an increase starting from April.

Economic growth in major economies[1)]

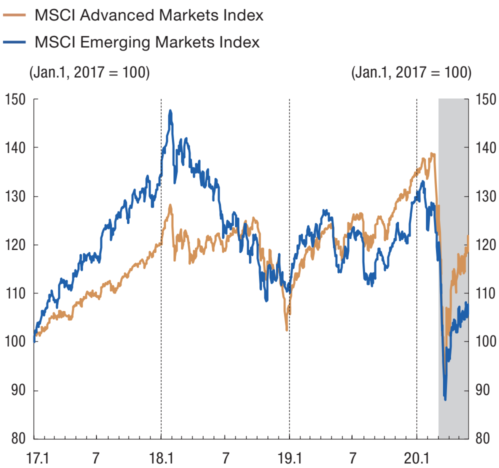
(%)

	2017	2018	2019					2020
			Year	Q1	Q2	Q3	Q4	Q1
US	2.4	2.9	2.3	3.1	2.0	2.1	2.1	-5.0
Euro area	2.5	1.9	1.3	2.0	0.4	1.2	0.2	-13.6
Japan	2.2	0.3	0.7	2.6	2.1	0.0	-7.2	-2.2
China	6.9	6.7	6.1	6.4	6.2	6.0	6.0	-6.8

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 market, the volatility of major price variables expanded due to greatly heightened risk aversion, stemming for instance from concerns about an economic slowdown in response to the coronavirus pandemic, and then decreased thanks to aggressive policy measures taken by major economies, and movements toward economic reopening in line with the slower spread of COVID-19. Global stock prices fell dramatically in March in both AEs and EMEs and then rebounded substantially after April. The US dollar strengthened against currencies of major AEs, affected by increased risk aversion, after which the degree of strengthening narrowed, influenced by liquidity provision measures such as the US Federal Reserve's bilateral currency swaps with major country central banks.

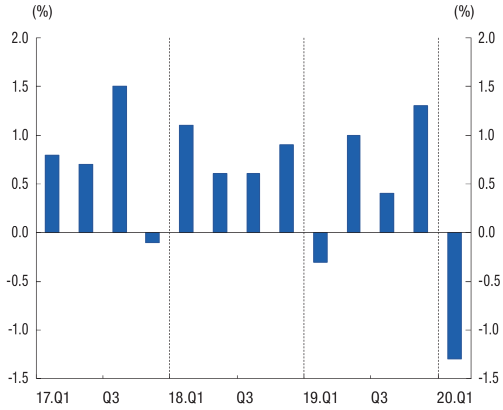
Share price indices of advanced and emerging markets



Source: Bloomberg.

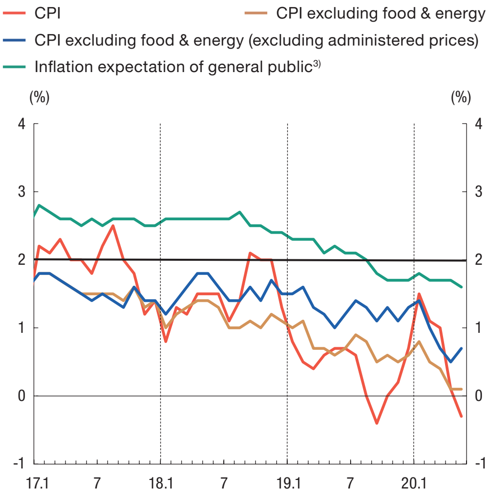
2 In the Korean economy, growth shrank considerably due to a dramatic fall in exports and a delay in the recovery of facilities investment amid sluggish consumption affected by the domestic and global spread of COVID-19. Real GDP in the first quarter declined compared to the quarter before. Meanwhile, employment conditions worsened, with the pace of decrease in the number of persons employed having risen sharply after March, particularly in services industries which are heavily dependent upon face-to-face work.

Real GDP growth[1)]



Note: 1) Quarter-on-quarter.
Source: Bank of Korea.

Inflation[1)2)]



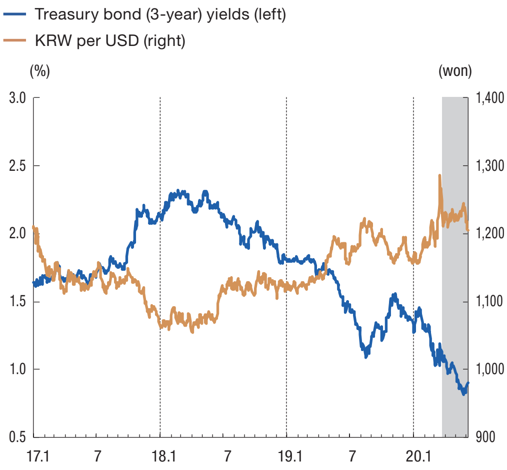
Notes: 1) The bold line indicates the inflation target.
2) Year-on-year.
3) Expectations for the CPI inflation rate one year in the future.
Sources: Bank of Korea, Statistics Korea.

3 Consumer price inflation fell greatly to around 0%, impacted by a plunge in international oil prices after the spread of COVID-19, and by weakened demand-side inflationary pressures, with downward inflationary pressures from government policies continuing. Core inflation excluding food and energy product prices also fell to the lower-0% level, and the inflation rate expected by the general public decreased slightly to the mid-1% range.

The uptrend in housing sales prices slowed since April, particularly in Seoul, due to a contraction of homebuyer sentiment following the spread of COVID-19, and to housing market stabilization measures. The rest of the country also showed deceleration, led by certain metropolitan cities. Leasehold (*jeonse*) deposit prices rose at a slower pace after the first quarter, influenced for instance by the spread of COVID-19.

4 In the domestic financial markets, long-term rates fell, due for instance to Base Rate cuts and financial market stabilization measures. Stock prices fell sharply before rising nearly to their pre-pandemic level on aggressive policy responses taken by major economies, and global movements toward economic reopening. The Korean won/US dollar exchange rate rose significantly and then fell on the signing of a bilateral currency swap agreement with the US Federal Reserve.

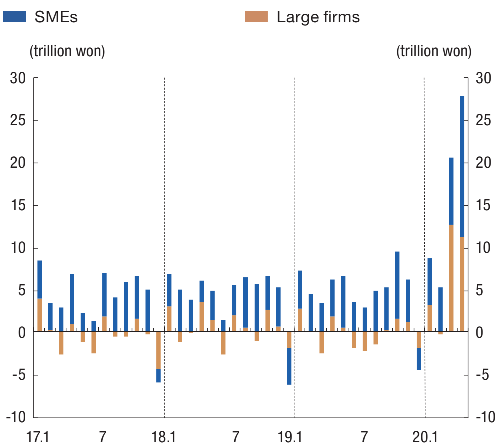
Korean Treasury bond yield and exchange rate (KRW per USD)



Sources: Bank of Korea, KOFIA.

5 Corporate lending increased significantly, with the amount of monthly corporate lending increase posting consecutive record highs in March and April, influenced for instance by increased demand for working capital and by the government's financial support. Household lending maintained strong growth, and then increased at a slower pace after April, due mainly to slower demand for housing-related funds.

Changes in corporate loans[1)2)]

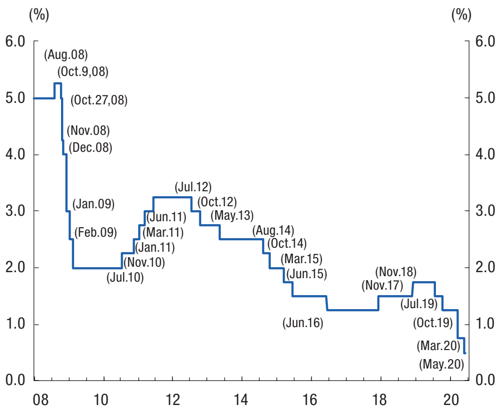


Notes: 1) Month-on-month.
2) Based on banks.
Source: Bank of Korea.

[Conduct of Monetary Policy]

6 The Bank of Korea strengthened its accommodative policy stance to support the recovery of growth and to help inflation gradually converge to the 2.0% target over a medium-term horizon. In this process it closely examined domestic and overseas risk factors such as the severity of the COVID-19 outbreak, its impacts on the domestic financial sector and economy, and changes in financial stability conditions. Under this policy stance, the Bank lowered the Base Rate on two occasions in March and May 2020 by a total of 75 basis points, from 1.25% to 0.50%.

Bank of Korea Base Rate[1)]



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

7 On March 16, the Monetary Policy Board held a special meeting at which it lowered the Base Rate by 50 basis points, from 1.25% to 0.75%. Since the regular Monetary Policy Board meeting on February 27, concerns about global economic slowdown had deepened with COVID-19 spreading worldwide, including to Europe and the US. The spread of the outbreak resulted in significantly increased volatility in do-

mestic and global financial markets. The Board, therefore, judged that further monetary policy accommodation was called for in order to reduce the spillover effects on the real economy and to ensure stability in the financial markets. Accordingly, it held a special meeting at which it decided to lower the Base Rate. This decision was made because in terms of policy effects the Board found it appropriate to respond promptly through a special meeting instead of waiting until the next regular meeting, given the implementation of an expansionary fiscal policy including additional supplementary budgets, and policy rate cuts in major economies.

In the April meeting, the Board decided to keep the Base Rate at 0.75%. The pace of growth in the domestic economy had slowed considerably due to subdued recovery in facilities investment and to a substantial decrease in consumption, influenced by the domestic and global spread of COVID-19. Accordingly, GDP growth was projected to fall considerably short of the February forecast of 2.1%. It was forecast that consumer price inflation would run considerably below the February projection of 1.0% due to increased impacts of the drop in international oil prices and to weakening demand-side inflationary pressures. Meanwhile, the rate of household loan growth had risen, while the rate of increase in housing prices had moderated since mid-March. It was expected that growth and inflation would fall short of the existing forecast paths due to the spread of COVID-19. However, at the March special meeting the Monetary Policy Board had made a large cut in the Base Rate and had expanded the use of non-interest rate monetary policy instruments. The Board thus kept the Base Rate unchanged, on the grounds that it was necessary to conduct monetary policy, while observing the effects of monetary, fiscal and financial policy measures to respond to the COVID-19 pandemic on the real economy and the financial markets.

In the May meeting, the Board decided to lower the Base Rate by 25 basis points to a historic low of 0.50% against the following background. The global economy had contracted significantly due to constrained economic activity caused by the worldwide spread of COVID-19. On the domestic economic front, economic growth in Korea had slowed considerably and labor market conditions had worsened with a sharp decline in the number of persons employed. The Board expected that domestic economic growth would remain sluggish for some time due to the impact of the COVID-19 pandemic. Accordingly, GDP growth was projected to record around 0%, considerably below the February forecast of 2.1%. Consumer price inflation had slowed markedly to the lower-0% level due to declining prices of petroleum products and public services. It was forecast that consumer price inflation would run at the lower-0% level due to the drop in international oil prices and weakening demand-side inflationary pressures. Particularly because of the larger downward adjustments to the outlooks for GDP and inflation on expectations that the impacts of the COVID-19 pandemic would last longer, the Bank of Korea found it necessary to make an additional Base Rate cut to support the recovery of the domestic economy.

8 The Bank of Korea actively used various policy instruments to ensure economic and financial stability after the spread of COVID-19.

The Bank of Korea increased the total ceiling on the Bank Intermediated Lending Support Facility by 10 trillion won (5 trillion won each on March

9 and May 18), from 25 trillion won to 35 trillion won, to provide support to companies affected by COVID-19. In response to the growing range of affected companies, the Bank of Korea also expanded the scope of industries eligible for support to include all service industries (excluding some gambling industries) and strengthened financial support for the self-employed and SMEs with low credit effective March 19. In addition, the Bank of Korea lowered the interest rate on support programs under the Bank Intermediated Lending Support Facility from 0.50-0.75% to 0.25%, effective March 17, in order to strengthen the incentives for banks to lend to SMEs, alleviate the interest burden of SMEs, and improve their financial conditions.

Programs under the Bank Intermediated Lending Support Facility

(trillion won, %)

Program	Ceiling		Interest rate	
	Before adjustment[1]	After adjustment	Before adjustment	After adjustment[2]
Support Program for Trade Financing	2.5	2.5	0.50	0.25
Support Program for New Growth Engine Development and Job Creation[3]	10.0	11.0	0.50	0.25
Program for Stabilization of SME Lending[4]	6.5	5.5	0.50~0.75	0.25
Support Program for Regional Enterprises	5.9	5.9	0.75	0.25
Support for SMEs Affected by COVID-19	0.0	10.0	0.75	0.25
Total	25.0[5]	35.0[5]	-	-

Notes: 1) As of end of Feburary 2020.
2) Lowered to 0.25% per year since March 17, 2020.
3) The Support Program for High-tech and Other Start-up SMEs was expanded and reorganized as the Support Program for New Growth Engine Development and Job Creation (September 2017).
4) Includes the support that had been formerly provided under the Support Program for Facilities Investment.
5) Includes reserves of 0.1 trillion won.
Source: Bank of Korea.

To ensure financial and foreign exchange market stability, the Bank of Korea expanded liquidity supply through RP purchases, launched a Corporate Bond-Backed Lending Facility, prepared a plan to set up an a special purpose vehicle (SPV) which would manage purchases of commercial paper and corporate bonds, and carried out measures to stabilize the foreign exchange market. The Bank of Korea provided liquidity through non-regular purchases of RPs (3.5 trillion won in total) from non-bank financial institutions in response to short-term financial market unrest in late March. It also conducted outright purchases of Treasury bonds (3.0 trillion won in total) on two occasions to stabilize the bond market. The Bank of Korea also temporarily adopted a regular RP purchase facility through which an unlimited amount of liquidity was supplied based on financial market demand from April to June to ensure financial market stability and to support timely implementation of the government's Financial Support Package. This is a weekly regular RP purchase facility through which the Bank of Korea buys bonds (91-day) in repo auctions at a fixed interest rate in full without any auction limit.

For a faster and wider liquidity supply, the Bank of Korea broadened the range of institutions eligible for open market operations, effective temporarily from April to July this year. To expand liquidity supply channels and improve the collateral availability of financial institutions, the Bank also expanded the range of securities eligible for open market operations, effective temporarily from April this year to March next year. The Bank also broadened the range of eligible collateral for lending facilities to reinforce the basis for the Bank to smoothly supply liquidity through loans to banks when necessary, and to alleviate banks' burden of providing collateral. In addition, to expand financial institutions' collateral capacity, the Bank of Korea decided to lower the ratio of collateral for guaranteeing net settlements by 20% points from April 10, and postponed its previously announced plan to increase the ratio.

Since May 4 the Bank of Korea launched and has been running a new lending scheme, the Corporate Bond-Backed Lending Facility (CB-BLF), as a safety net for businesses, banks and non-bank financial institutions bracing for severe difficulties in raising funds due to prolonged impacts of COVID-19. It will be operated as a standing lending facility providing banks and non-bank financial institutions, including securities companies and insurance companies, with ready access to credit from the Bank of Korea whenever they post eligible corporate bonds as collateral. On May 20, the government and the Bank of Korea prepared a plan to set up an SPV which would manage purchases of corporate bonds and commercial paper for credit securities market stability. A total of 10 trillion won will be initially invested in the SPV. Lower-rated corporate bonds and commercial paper were also included in the instruments to be purchased to ease credit risk aversion.

The Bank of Korea conducted FX market stabilization measures to provide FX liquidity to financial institutions and businesses experiencing difficulties in foreign currency funding due to strains in the global financial markets. In March, the Bank signed a 60 billion dollar bilateral currency swap arrangement with the Fed amid surging demand for US dollars due to expanded risk aversion in the global financial markets. It then conducted competitive US dollar loan facility auctions using the proceeds of swap transactions, for the first time since the global financial crisis. FX market stability rules were applied flexibly in consideration of the FX liquidity conditions of financial institutions. Amid growing concerns over domestic FX liquidity conditions, the Bank raised the ceilings on the FX derivatives positions of banks by 25% and lowered the FX liquidity coverage ratio by 10% points, effective temporarily until the end of September. In addition, the Bank temporarily lifted the levy on financial institutions' non-deposit FX liabilities.

While activating an emergency monitoring mechanism in cases of expanded market volatility, the Bank of Korea also closely monitored developments related to COVID-19 and their possible impacts on domestic and foreign financial sectors and economies, as well as changes in financial and FX market conditions after the Bank's market stabilization measures.

Summary of the Bank of Korea's Policy Responses Related to COVID-19[1)]

(as of June 9)

<table>
<tr><th>Category</th><th colspan="2">Policy responses</th></tr>
<tr><td>Base Rate</td><td colspan="2">Base Rate cuts (1.25% → 0.50%)</td></tr>
<tr><td>Bank Intermediated Lending Support Facility</td><td colspan="2">Raised ceilings and lowered the interest rate on the Bank Intermediated Lending Support Facility</td></tr>
<tr><td rowspan="11">Market stabilization measures</td><td rowspan="8">Measures related to won liquidity supply</td><td>Adopted RP purchase facility according to which an unlimited amount of liquidity is supplied</td></tr>
<tr><td>Outright purchases of Treasury bonds</td></tr>
<tr><td>RP purchases from non-bank financial institutions</td></tr>
<tr><td>Broadened the range of institutions and securities eligible for open market operations</td></tr>
<tr><td>Expanded the range of eligible collateral for lending facilities</td></tr>
<tr><td>Lowered the ratio of collateral for guaranteeing net settlements and expanded the range of eligible collateral</td></tr>
<tr><td>Launched the Corporate Bond-Backed Lending Facility (CBBLF)</td></tr>
<tr><td>Prepared a plan to set up an SPV to manage purchases of lower-rated corporate bonds and commercial paper</td></tr>
<tr><td rowspan="3">FX market stabilization measures</td><td>Signed a bilateral currency swap arrangement with the Fed and conducted competitive US dollar loan facility auctions</td></tr>
<tr><td>Raised the ceilings on FX derivatives positions of banks</td></tr>
<tr><td>Temporarily lifted the levy on financial institutions' non-deposit FX liabilities</td></tr>
</table>

Note: 1) The details are described in Table II-8 on page 43.
Source: Bank of Korea.

[Future Monetary Policy Directions]

9 The current outlook is based on the assumption that the number of global confirmed COVID-19 cases will peak in the second quarter and that a large second wave will not occur in Korea, although smaller outbreaks could flare up on occasion. Looking at the economic outlook based on this assumption, it is forecast that GDP will decline by 0.2% this year and grow by 3.1% next year. The domestic economy will contract greatly in the first half of this year, affected by the global spread of COVID-19, but is expected to improve gradually as slumps in private consumption and goods exports slowly ease. However, there is a high level of uncertainty surrounding the growth path, particularly as to how the COVID-19 situation develops. The upside risks to growth include a rebound of the global economy thanks to early containment of COVID-19, domestic and foreign policy actions to tackle the economic impact of the virus, and a faster-than-expected normalization of the Chinese economy. Among the downside risks are a prolonged spread of COVID-19, a revival of the US-China trade dispute, and a delay in the semiconductor industry's recovery.

Economic growth outlook[1)2)]

(%)

	2019[3)]	2020e			2021e		
	Year	H1	H2	Year	H1	H2	Year
GDP	2.0	-0.5	0.1	-0.2	3.4	2.8	3.1
Private consumption	1.7	-3.4	0.6	-1.4	6.3	2.4	4.3
Facilities investment	-7.5	2.6	0.5	1.5	5.7	7.4	6.5
Intellectual property products investment	3.0	2.0	2.4	2.2	3.7	3.1	3.4
Construction investment	-2.5	-0.2	-4.1	-2.2	-2.0	0.3	-0.8
Goods exports	0.5	-0.4	-3.7	-2.1	2.5	3.9	3.2
Goods imports	-0.8	1.2	-1.4	-0.2	3.9	4.0	3.9

Notes: 1) Year-on-year.
2) Figures are the forecast as of May 2020.
3) Reflects preliminary annual figures (released on June 2).
Source: Bank of Korea.

Consumer price inflation is forecast to record 0.3% this year, lower than last year. Downward pressures on prices are expected to increase, affected by declining international oil prices and a slowing economy following COVID-19, amid continued social-welfare policies by the government. However, rises in the Korean won/US dollar exchange rate and in agricultural, fishery & livestock prices will act as factors pushing up prices. Consumer price inflation is expected to record 1.1% in 2021 owing to improved economic conditions and the reduced effects of social-welfare policies as the impacts of low oil prices dissipate. Core inflation excluding food and energy prices is forecast to record 0.4% this year and 0.9% next year. There is a high level of uncertainty surrounding the price path. Upside risks to prices include an accelerated rise of international oil prices resulting from increased production cuts by major oil-producing countries and a stronger economic recovery in line with the early containment of the COVID-19 pandemic. Among the downside risks are delayed recovery of international oil prices owing to continued sluggishness of global oil demand and delayed improvement of domestic demand with a prolonged COVID-19 pandemic.

Inflation outlook[1)2)]

(%)

		2019	2020e			2021e		
		Year	H1	H2	Year	H1	H2	Year
CPI inflation		0.4	0.5	0.0	0.3	0.8	1.5	1.1
Core inflation	CPI excluding food & energy	0.7	0.4	0.5	0.4	0.8	1.0	0.9
	CPI excluding agricultural products & oils	0.9	0.6	0.7	0.6	0.9	1.1	1.0

Notes: 1) Year-on-year.
2) Figures are the forecast as of May 2020.
Source: Bank of Korea.

10 In the future as well, the Bank of Korea will conduct its monetary policy in order to support the economy and stabilize consumer price inflation at the target level (2.0%) over a medium-term horizon, while paying attention to financial stability.

The Bank will maintain its accommodative monetary policy stance as domestic economic growth is forecast to be sluggish, influenced by the spread of COVID-19, and as demand-side inflationary pressures are expected to remain weak. In this process, the Bank will closely examine the developments of COVID-19, its impacts on global and domestic financial sectors and economies, and changes in financial stability conditions.

I

Monetary Policy Operating Conditions

1. Global Economy

Global economy contracts

The global economy contracted sharply, as economic activity was restrained by the COVID-19 pandemic. The OECD composite leading indicator, showing the fluctuation of global economic activity, and the global manufacturing and services PMIs have declined[1)] sharply since February. This was due to sluggish domestic demand especially in services, driven by countries' social distancing and shutdown measures aimed at curbing the spread of the disease, and by weakening consumer sentiment. A large decline in cross-border exchanges of material and people, including global trade and overseas travel, also played a part. In the United States, GDP dropped by 5.0% (annualized quarter-on-quarter) in the first quarter, due to a contraction in services consumption, and its rate of growth in the second quarter is also likely to decline significantly, affected by the virus containment measures taken from mid-March. The United States also saw an increase in initial unemployment insurance claims,[2)] reflecting worsening labor market conditions. The euro area recorded a negative growth rate (-13.6%, annualized quarter-on-quarter) in the first quarter for the first time since the first quarter of 2013. Growth was notably down in France, Spain and Italy. The euro area is expected to see an even larger contraction in economic activity in the second quarter. In Japan, GDP continued to fall in the first quarter, marking the second consecutive quarter of decline after the fourth quarter[3)] of 2019. The recession is likely to continue into the second quarter due to the declaration of a state of emergency. Meanwhile, China saw moderate improvement in April[4)] after the first quarter recorded the first negative growth since publication of quarterly statistics began in 1992. Consumption and exports in India[5)] and the ASEAN-5 countries slowed greatly, driven by lockdown measures. In some countries, however, economic activity resumed gradually with the spread of COVID-19 slowing. Brazil and Russia saw further economic contractions owing to a decline in commodity prices combined with the rapid spread of COVID-19.

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1) Global manufacturing and services PMIs rebounded slightly in May compared to the previous month to 42.4 and 35.2, respectively, which still remained below the benchmark (50).

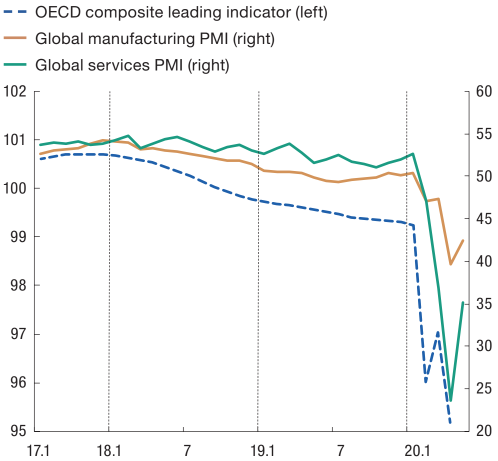
2) Between the third week of March and the fourth week of May, initial unemployment insurance claims (seasonally adjusted series) totaled 42.65 million.

3) Economic activity shrank dramatically in the fourth quarter of 2019, affected by a rise in the consumption tax rate.

4) In April, industrial production (3.9%) and exports (3.5%) reversed to an increase year-on-year, while the manufacturing PMI exceeded the benchmark (50) for the second consecutive month after March (52.0 in March and 50.8 in April).

5) India's exports declined 60.3% year-on-year in April, and its composite PMI fell to 7.2, the lowest level since statistics were first compiled.

Figure I–1. Composite leading indicator[1)] and global PMIs



Note: 1) The composite leading indicator includes OECD member countries and six emerging countries (China, Brazil, India, Russia, Indonesia, and South Africa).

Sources: OECD, Bloomberg.

Table I–1. Economic growth in major economies[1)2)]

(%)

	2017	2018	2019					2020
			Year	Q1	Q2	Q3	Q4	Q1
World	3.9	3.6	2.9	-	-	-	-	-
Advanced economies	2.5	2.2	1.7	-	-	-	-	-
US	2.4	2.9	2.3	3.1	2.0	2.1	2.1	-5.0
Euro area	2.5	1.9	1.3	2.0	0.4	1.2	0.2	-13.6
Japan	2.2	0.3	0.7	2.6	2.1	0.0	-7.2	-2.2
Emerging market and developing economies	4.8	4.5	3.7	-	-	-	-	-
China	6.9	6.7	6.1	6.4	6.2	6.0	6.0	-6.8
India[3)]	7.0	6.1	5.0	5.7	5.2	4.4	4.1	3.1
ASEAN-5[4)]	5.3	5.3	4.9	4.9	4.8	5.0	4.7	1.6
Brazil	1.3	1.3	1.1	0.6	1.1	1.2	1.7	-0.3
Russia	1.8	2.5	1.3	0.4	1.1	1.5	2.1	1.6

Notes: 1) Based on IMF statistics, except in the cases of individual countries, the euro area and ASEAN-5 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.

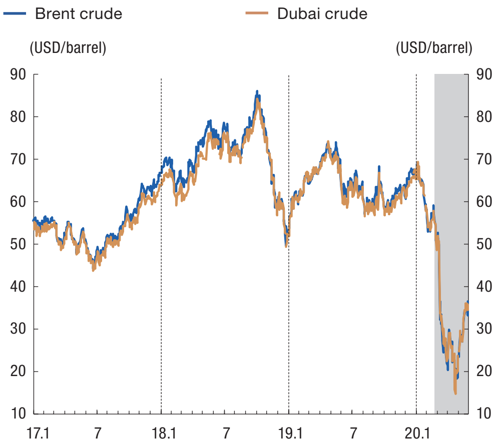
Sources: IMF, Individual countries' published statistics.

International oil prices rebound after a sharp drop

International oil prices (Dubai crude) fell to the range of 10 dollars per barrel in late April, as oil-producing countries failed to agree to reduce oil output, and demand for oil decreased amid the COVID-19 pandemic. Prices then rebounded to the mid-30 dollar range in May, as expectations of a recovery in oil demand heightened as a result of easing of travel restrictions in major countries, and as oil-producing countries resumed their[6)] cuts to output.

6) On April 12, OPEC+ (13 OPEC members and 10 non-OPEC countries) agreed to cut production by a maximum of 9.7 million barrels a day for the next two years starting in May 2020.

Figure I–2. International oil prices



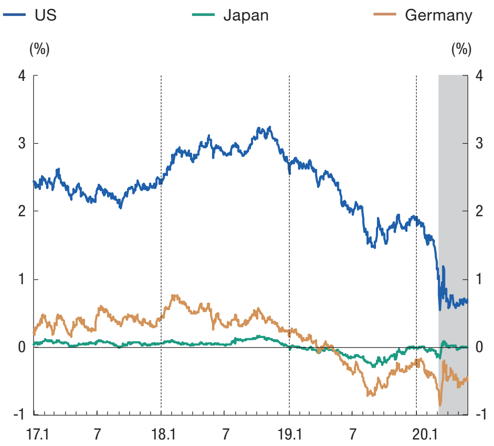
Source: Bloomberg.

International financial market volatility increases, then declines

In the international financial markets, volatility expanded significantly for major price variables in March, due to greatly heightened risk aversion stemming from concerns about an economic slowdown and sluggish economic indicators induced by the COVID-19 pandemic. Later, the volatility was reduced as a result of aggressive policy responses taken by major economies and movements toward economic reopening in line with the slower spread of COVID-19.

The US treasury bond yield rose temporarily in mid-March due to demand for liquidity amid spreading market anxiety, but fell back after policy rate cuts and aggressive liquidity provision measures[7)] were taken by the US Federal Reserve. Government bond yields in Japan and Germany fluctuated, affected by the global economic slowdown and plans for increased fiscal spending due to the implementation of massive stimulus measures.

Figure I–3. Long-term market interest rates[1)] in major economies



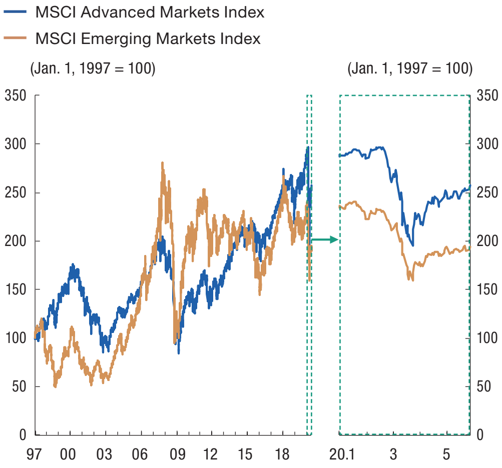
Note: 1) Treasury bond (10-year) yields.
Source: Bloomberg.

Stock prices fell sharply in March in both advanced and emerging market economies, owing to the COVID-19 pandemic and the steep drop in international oil prices. They then rebounded after April, as investor sentiment recovered due to economic reopening in major economies and expectations that a vaccine or treatment for the disease would be developed. However, equity price growth has been held back by the reemergence of the US-China trade conflict.[8)]

7) The US Federal Reserve cut its policy rate by 50 and 100 basis points respectively at two FOMC meetings (March 3 and 15). It also announced unlimited Treasury bond and MBS purchases, and set up facilities to purchase assets such as CP, MMFs, corporate bonds and ABS, as well as a lending program to protect small- and medium-sized businesses.

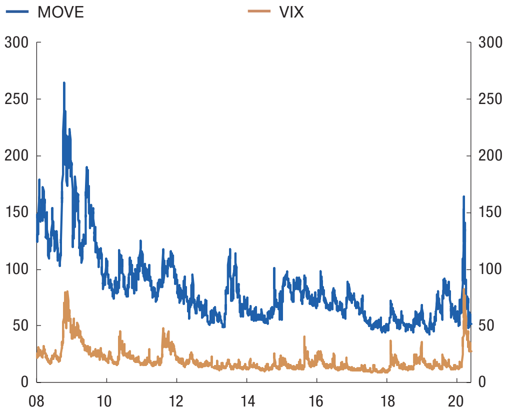
8) The US Commerce Department tightened its rule on May 15 to require American companies to apply for a license to supply equipment and software for Huawei. On May 20, the Senate passed legislation that would delist companies from US stock exchanges if they fail to comply with US accounting standards.

Figure I–4. Share price indices of advanced and emerging markets



Source: Bloomberg.

Figure I–5. Volatility Index (VIX) and Merrill Lynch Option Volatility Estimate (MOVE) Index[1)]



Note: 1) Volatility indices for US equity and Treasury bond prices.
Source: Bloomberg.

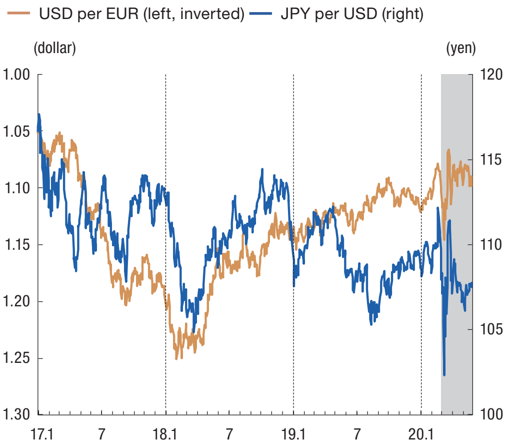
Stock price and interest rate volatility surged to the highest level[9)] since the global financial crisis, and then declined considerably on the back of policy responses by major countries.

The US dollar strengthened against the euro and the yen in mid-March, affected by increased demand in line with heightened global risk aversion. The strength of the dollar was reduced later, however, due to the US Federal Reserve's active liquidity provision measures and expansion of bilateral currency swap agreements[10)] with major central banks.

9) The Volatility Index (VIX), a measure of stock price volatility, stood at a record-high 82.69 on March 16, 2020. The Merrill Lynch Option Volatility Estimate Index (MOVE), a measure of volatility for US Treasury bond prices, recorded 163.7 on March 9, 2020, the highest since June 24, 2009.

10) The US Federal Reserve eased conditions for liquidity provision for its existing swap lines (with the ECB, Bank of Japan, Bank of England, Bank of Canada, and Swiss National Bank), and established new swap lines with nine additional central banks (the Bank of Korea, Reserve Bank of Australia, Monetary Authority of Singapore, Riksbank, Banco Central de Brazil, Banco de Mexico, Norges Bank, Dansmarks NationalBank, and Reserve Bank of New Zealand).

Figure I–6. Major exchange rates[1)]



Note: 1) Based on the New York market rate at 16:30.

Source: Reuters.

2. Real Economy

Domestic growth contracts sharply

Korea's economic growth shrank significantly due to sluggish consumption, a steep fall in exports and a delay in the recovery of facilities investment affected by the domestic and global spread of COVID-19. In the first quarter, real GDP declined by 1.3% quarter-on-quarter (+1.4% year-on-year).

Private consumption declined 6.5% quarter-on-quarter in the first quarter, affected by weakened consumer sentiment and social-distancing measures amid the COVID-19 outbreak. Consumption of goods was lackluster, especially for semi-durable goods such as clothing, while consumption of services including food & accommodation and entertainment also dropped sharply due to restrained social activities. Private consumption has declined at a slightly slower pace recently as social-distancing measures are relaxed. Government consumption continued to grow, up 1.4% quarter-on-quarter in the first quarter. Government expenditures related to personnel and material expenses rose greatly[11] due to the increased fiscal spending[12] in response to COVID-19. Facilities investment showed a slow recovery, growing by a mere 0.2% quarter-on-quarter as a large increase in transportation equipment investment was offset by a decline in machinery investment. However, among machinery investment, purchases of semiconductor manufacturing equipment continued. Despite the ongoing weakness in residential building construction, construction investment rose 0.5% quarter-on-quarter in the first quarter, mainly in civil engineering and non-residential building construction, as the government continued with the expansion of its budget implementation.

Table I–2. Major economic growth indicators[1]

(%)

	2017	2018	2019					2020
			Year	Q1	Q2	Q3	Q4	Q1
Real GDP	3.2	2.9	2.0	-0.3 (1.8)	1.0 (2.1)	0.4 (2.0)	1.3 (2.3)	-1.3 (1.4)
(Private consumption)	2.8	3.2	1.7	0.1 (1.4)	0.7 (1.8)	0.4 (1.6)	0.7 (1.9)	-6.5 (-4.8)
(Government consumption)	3.9	5.3	6.6	1.1 (5.9)	1.7 (7.2)	1.7 (6.9)	1.8 (6.5)	1.4 (6.8)
(Facilities investment)	16.5	-2.3	-7.5	-8.5 (-17.4)	2.6 (-7.0)	1.7 (-2.3)	2.6 (-2.0)	0.2 (7.3)
(Construction investment)	7.3	-4.6	-2.5	-0.7 (-8.1)	2.9 (-3.0)	-6.4 (-2.7)	8.0 (2.6)	0.5 (4.2)
(Goods exports)	4.4	3.3	0.5	-3.7 (-0.9)	1.1 (-0.5)	5.2 (-0.1)	1.0 (3.4)	-1.0 (6.3)
(Goods imports)	8.8	2.0	-0.8	-4.0 (-5.7)	3.1 (-0.6)	1.6 (2.2)	0.7 (1.3)	-2.3 (3.1)

Note: 1) Quarter-on-quarter; figures in parentheses are non-seasonally adjusted year-on-year rates.
Source: Bank of Korea.

Labor market conditions deteriorate

Employment conditions have significantly deteriorated recently. Up until February this year, the number of persons employed had risen at a high rate, but starting in March it plummeted, mainly in services requiring face-to-face interactions (e.g. food & accommodation,

11) The central government's personnel and material expenses rose 15.4% year-on-year during the first quarter.
12) The government made four rounds of reserve fund allocation totaling 0.9 trillion won during the first quarter to support its fight against COVID-19. It executed 6.3 trillion (64.0%) out of 9.9 trillion won of the program budget in its first supplementary budget (decided on March 17) by the end of March.

wholesale & retail, and educational services), as the impacts of COVID-19 began to fully materialize. As a result, the number of persons employed decreased by 195,000 year-on-year during March, and further by 476,000 in April. The seasonally adjusted unemployment rate rose slightly to 3.7% in the first quarter (from 3.6% the quarter before), and further to 3.8% in April.

Table I–3. Major employment-related indicators

(ten thousand persons, %)

	2018	2019					2020	
	Year	Year	Q1	Q2	Q3	Q4	Q1	Apr.
Economically active population (Rate of change)[1]	0.5	1.0	0.9	1.1	0.9	1.3	0.8	-1.9
Number of employed persons (Changes)[1]	9.7	30.1	17.7	23.7	36.6	42.2	28.8	-47.6
Labor force participation rate[2]	63.1	63.3	63.3	63.3	63.2	63.5	63.4	61.6
Employment-to-population ratio[2]	60.7	60.9	60.8	60.8	60.9	61.2	61.1	59.3
Unemployment rate[2]	3.8	3.8	3.9	4.0	3.5	3.6	3.7	3.8

Notes: 1) Year-on-year.
2) Seasonally adjusted.
Source: Statistics Korea.

Current account surplus narrows

The current account recorded a widening surplus[13] year-on-year in the first quarter, but reversed to a deficit in April with the goods account surplus decreasing sharply. As a result, the current account surplus was slightly down[14] year-on-year between January and April this year.

Exports (customs clearance basis, year-on-year) declined at a slower pace in the first quarter despite sluggish exports of automobiles and petroleum products induced by work stoppages and the fall in international oil prices. This was mainly due to the slowing decline in semiconductor unit prices and to exports based on existing contracts. In April, however, the pace of decline picked up sharply,[15] owing to the weakening demand and production setbacks in line with the COVID-19 pandemic.

Imports (customs clearance basis, year-on-year) continued their trend of decline. Capital goods imports shifted to an increase, led mainly by semiconductor equipment, while imports of commodity and consumer goods dropped, driven respectively by crude oil and durable goods such as automobiles. Imports have declined at an even faster rate[16] since April.

13) The current account surplus widened as the drop in the goods account surplus resulting from reduced exports amid the COVID-19 pandemic was offset by the improvement in services, primary income, and secondary income. The services account deficit narrowed as payments decreased to a larger extent than income receipts for travel and transportation, which also dropped due to overseas travel and shipping constraints from COVID-19. The primary income account surplus widened year-on-year, as dividend payments fell in line with last year's drop in corporate profits.

14) The current account surplus stood at 11.79 billion dollars between January and April 2019, and at 10.21 billion dollars in the same period of this year.

15) Growth rate of exports (customs clearance basis, year-on-year): -1.4% (-7.5%, daily average) in March → -25.1% (-18.3%) in April → -23.7% (-18.4%) in May.

16) Growth rate of imports (customs clearance basis, year-on-year): 0.2% (-6.0%, daily average) in March → -15.8% (-8.1%) in April → -21.1% (-15.6%) in May.

Table I-4. Current account

(billion dollars, %)

	2018		2019					2020	
	Year	Q4	Year	Q1	Q2	Q3	Q4	Q1	Apr.
Current account	77.5	19.5	60.0	12.2	10.4	19.2	18.1	13.3	-3.1
Goods	110.1	24.7	76.9	19.5	17.4	19.5	20.4	15.0	0.8
Exports[1]	604.9	154.5	542.2	132.7	138.5	134.7	136.4	130.4	36.6
(Rate of change)[2]	5.4	7.7	-10.4	-8.5	-8.7	-12.3	-11.8	-1.7	-25.1
Imports[1]	535.2	139.3	503.3	123.8	128.8	125.0	125.8	122.1	37.9
(Rate of change)[2]	11.9	12.9	-6.0	-6.5	-3.3	-4.1	-9.7	-1.4	-15.8
Services	-29.4	-6.1	-23.0	-7.2	-4.4	-5.4	-6.1	-5.2	-1.4
Credit	103.7	27.7	107.6	25.7	27.7	27.0	27.3	23.9	6.5
Debit	133.0	33.8	130.7	32.9	32.0	32.3	33.4	29.1	7.9
Primary income	4.9	2.6	12.2	1.5	-0.8	6.0	5.5	3.9	-2.3
Secondary income	-8.2	-1.7	-6.1	-1.7	-1.8	-1.0	-1.7	-0.3	-0.2

Notes: 1) Customs-clearance basis.
2) Year-on-year.

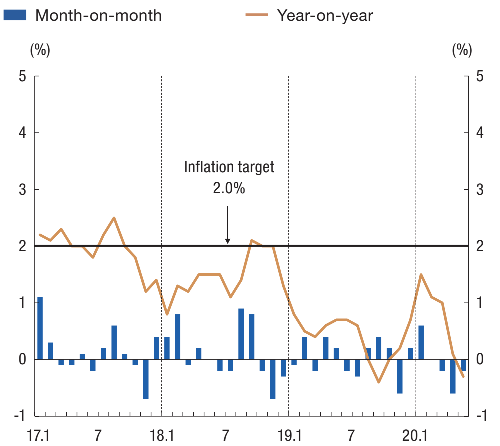
Sources: Bank of Korea, Korea Customs Service.

3. Prices

Consumer price inflation falls to around 0%

Consumer price inflation fell rapidly starting in February this year, dropping sharply to 0.1% in April and recording -0.3% in May. This was primarily a result of weak demand-pull inflationary pressures with continued government social-welfare policy measures and the large drop in international oil prices since the outbreak of COVID-19.

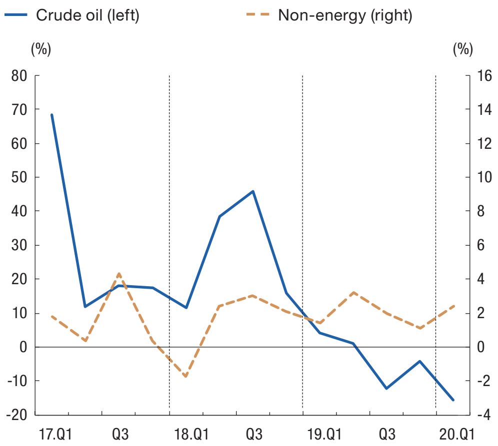
Figure I–7. CPI inflation



Sources: Bank of Korea, Statistics Korea.

With regard to the overseas factors affecting prices, the accelerated decline in crude oil import prices[17)] reflecting the plunge in international oil prices[18)] since February contributed to a drop in consumer price inflation. Prices of non-energy imports, which affect domestic industrial product prices indirectly, grew at a slightly higher rate,[19)] led by a rise in the Korean won/US dollar exchange rate.[20)]

Figure I–8. Import prices (Korean-won basis)[1)]



Note: 1) Year-on-year.
Source: Bank of Korea.

As for domestic factors influencing prices, inflationary pressures weakened on the demand side, affected by the decline in private consumption. On the cost side, the rate of wage growth slowed substantially due to the economic downturn and decrease in corporate profits.

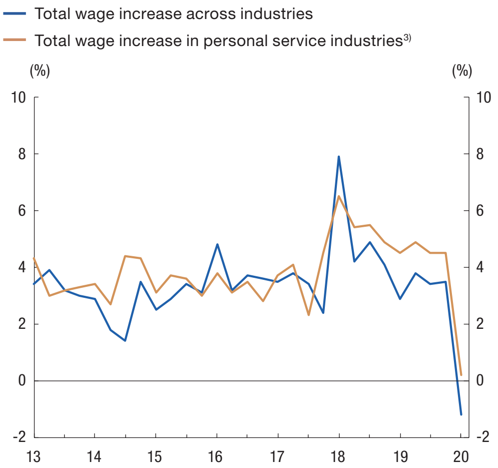
17) The rate of decline in crude oil import prices (Korean won basis, year-on-year) accelerated from 4.0% in the fourth quarter of 2019 to 15.7% in the first quarter this year.

18) The decline in international oil prices (Dubai crude oil basis, year-on-year) slowed from 17.4% in the third quarter of 2019 to 8.9% in the fourth quarter, and then accelerated to 20.4% in the first quarter of this year.

19) The rate of increase in non-energy import prices (Korean won basis, year-on-year) rose slightly from 1.1% in the fourth quarter of 2019 to 2.4% in the first quarter this year.

20) The extent of increase in the Korean won/US dollar exchange rate (year-on-year) rose from 4.2% in the fourth quarter of 2019 to 6.1% in the first quarter this year.

Figure I-9. Rate of wage increase (per employee)[1)2)]



Notes: 1) Based on the firms with one or more permanent employees.
2) Year-on-year; based on January and February for Q1 2020.
3) Simple average of the wage increase in the industries related to personal services such as the accommodation and food service industries.

Source: Ministry of Employment and Labor.

A look at other factors affecting inflation finds that the prices of agricultural, livestock & fishery products contributed to a rise in consumer price inflation, while the government's strengthening of social-welfare policies related to education worked as a factor pushing inflation down. The rate of increase in the prices of agricultural, livestock & fishery products turned positive, owing to the base effect from a slow increase in early 2019,[21)] and to the recent faster increase in livestock product prices.[22)] In terms of government policy, the expansion of free high school education[23)] and the cut in the consumption tax on passenger cars[24)] were factors driving down inflation, while housing rental fees declined at a slightly slower rate, affected by rises in leasehold (*jeonse*) deposits and monthly rents (new contract basis) since late 2019.

Looking at the first-quarter changes in CPI inflation in the individual product categories, rates of price increase in agricultural, livestock & fishery products and petroleum products turned positive, as it increased sharply due to a base effect. As for services, public service charges continued to decline, while private service charges increased at a slower pace. Since April, the rate of increase in petroleum product prices reversed to negative in line with the plunge in international oil prices, and that of public and private service charges decelerated considerably.

21) In the first quarter of 2019, the prices of agricultural, livestock & fishery products increased by 0.2% quarter-on-quarter, far slower than the normal year average (4.5% between 2009 and 2018).

22) The prices of livestock products, which increased by 1.8% in the fourth quarter of 2019, rose faster at 4.2% in the first quarter of this year.

23) Free high school education, which was introduced for third-year high school students in September 2019, was expanded to include second-year students in April this year.

24) The consumption tax was cut to 1.5% (previously 5.0%) for passenger cars purchased between March and June this year.

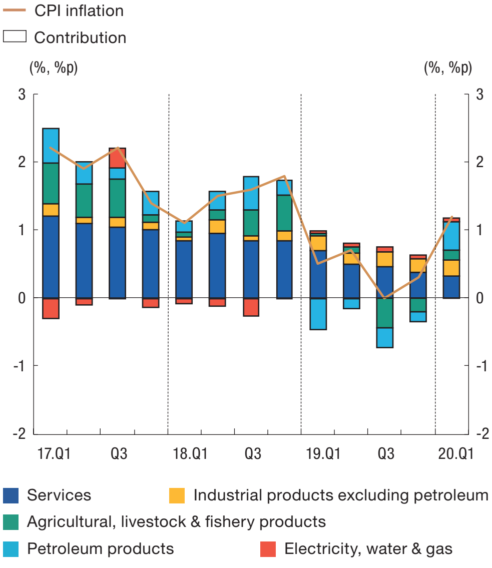
Table I–5. CPI inflation[1)]

(%)

	2018	2019				2020		
		Year	Q2	Q3	Q4	Q1	Apr.	May
Consumer price index	1.5	0.4	0.7	0.0	0.3	1.2	0.1	-0.3
Agricultural, livestock & fishery products	3.7	-1.7	1.2	-5.4	-2.5	2.0	1.8	3.1
(Agricultural products)	8.1	-3.0	1.6	-8.7	-5.8	-0.5	-0.8	-0.5
(Livestock products)	-3.5	0.0	1.7	-2.0	1.8	4.2	3.5	7.2
Industrial products	1.3	-0.2	0.0	-0.2	0.2	1.9	-0.7	-2.0
(Petroleum products)	6.8	-5.7	-3.5	-6.0	-3.1	10.5	-6.7	-18.7
(Industrial products excluding petroleum)	0.5	0.7	0.6	0.8	0.7	0.8	0.1	0.6
Electricity, water & gas	-2.9	1.5	1.3	1.9	1.5	1.5	1.4	1.3
Services	1.6	0.9	0.9	0.9	0.7	0.6	0.2	0.1
(Rentals for housing)	0.6	-0.1	-0.1	-0.2	-0.2	-0.1	0.0	0.1
(Public service charges)	0.2	-0.5	-0.2	-0.4	-1.0	-0.6	-1.6	-1.9
(Private service charges)	2.5	1.9	1.7	1.7	1.6	1.3	1.0	0.9
CPI for living necessities	1.6	0.2	0.7	-0.3	0.3	1.9	0.3	-0.7
CPI excluding food & energy	1.2	0.7	0.6	0.7	0.6	0.6	0.1	0.1
CPI excluding agricultural products & oils	1.2	0.9	0.9	0.8	0.7	0.8	0.3	0.5

Note: 1) Year-on-year.
Sources: Statistics Korea.

Figure I–10. Contributions to CPI inflation[1)]



Note: 1) Year-on-year.
Sources: Bank of Korea, Statistics Korea.

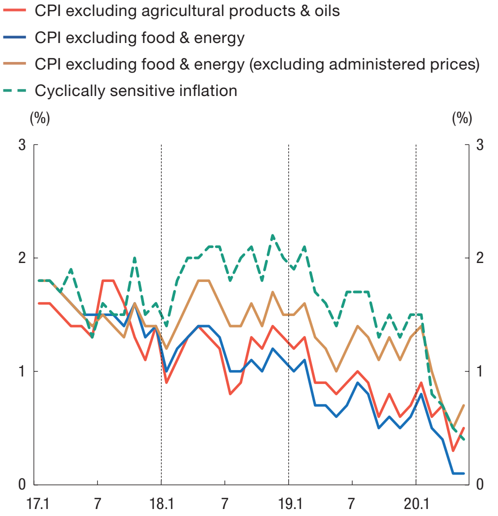
Underlying inflation slows

Core inflation excluding food and energy prices slowed since February, recording the lower-0% level in April and May. A look at core inflation excluding administered prices,[25)] given that it has been greatly influenced by the government's stronger social-welfare policies, shows that it was down from 1.4% in January to the middle- and upper-0% level in April and May. Meanwhile, cyclically sensitive inflation[26)] slowed from 1.5% in January to the mid-0% range since April.

25) The core inflation index (excluding food and energy prices) with administered prices excluded is calculated by excluding the prices of public services, electricity, water, gas and school meals, which are greatly affected directly and indirectly by the government.

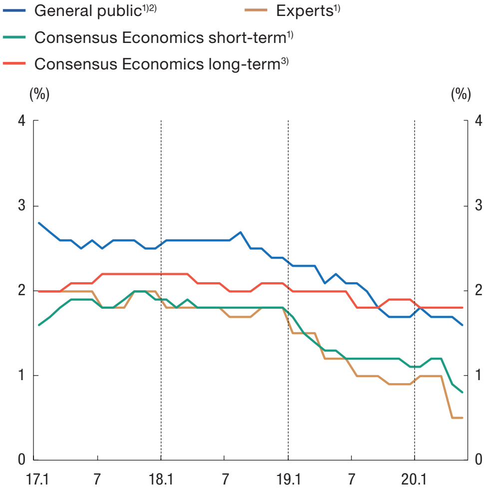
26) Cyclically sensitive inflation was calculated based on the items from among the group of products comprising the core inflation index (excluding food and energy prices) that react sensitively to the percentage GDP gap.

Figure I–11. Underlying inflation rates[1)]



Note: 1) Year-on-year.
Sources: Bank of Korea, Statistics Korea.

Figure I–12. Inflation expectations



Notes: 1) Expected CPI inflation rates for the next 12 months.
2) Based on new samples since September 2018.
3) Expected CPI inflation rates after 5 years.
Sources: Bank of Korea, Consensus Economics.

The short-term (one-year) inflation expectations of the general public and a group of experts[27)] both declined, while the long-term inflation expectations of experts remained at the upper-1% level.

Housing sales prices decelerate

Nationwide housing sales prices rose[28)] at a higher rate, recording a 1.2% increase during the first quarter, but slowed down afterwards. In April and May, the uptrend in housing sales prices in Seoul decelerated, affected by the government measures to cool off the housing market and by a contraction of homebuyer sentiment following the spread of COVID-19. The rest of the country also showed deceleration, led by some metropolitan cities including Busan and Daejeon.

Nationwide leasehold (*jeonse*) deposit prices rose at a slower pace since April, affected by the spread of COVID-19.

27) These figures are the results of surveys of domestic and foreign investment banks, securities companies, and market research institutions conducted by Consensus Economics, Inc.
28) Nationwide housing sales prices rose by 0.3% in January, 0.3% in February and 0.5% in March.

Table I-6. Rates of increase in housing sales and leasehold (*jeonse*) deposit prices[1]

(%)

	2018	2019				2020		
	Year	Year	Q2	Q3	Q4	Q1	Apr.	May
Housing sales prices	1.1	-0.4	-0.5	-0.1	0.7	1.2	0.3	0.1
Seoul and its surrounding areas	3.3	0.5	-0.5	0.2	1.3	1.8	0.5	0.3
(Seoul)	6.2	1.2	-0.3	0.4	1.8	0.6	0.0	-0.1
Other areas	-0.9	-1.1	-0.5	-0.4	0.2	0.5	0.1	0.0
Sales prices of apartments for reconstruction	17.9	11.3	2.2	3.7	6.1	0.6	-0.8	-0.1
Leasehold (*jeonse*) deposit prices	-1.8	-1.3	-0.7	-0.3	0.4	0.7	0.1	0.1
Seoul and its surrounding areas	-1.5	-0.8	-0.7	0.0	0.9	1.0	0.2	0.1
(Seoul)	0.3	-0.4	-0.4	0.2	0.9	0.7	0.1	0.0
Other areas	-2.1	-1.7	-0.7	-0.6	0.0	0.4	0.0	0.0

Note: 1) Compared with the last survey dates of the previous period.

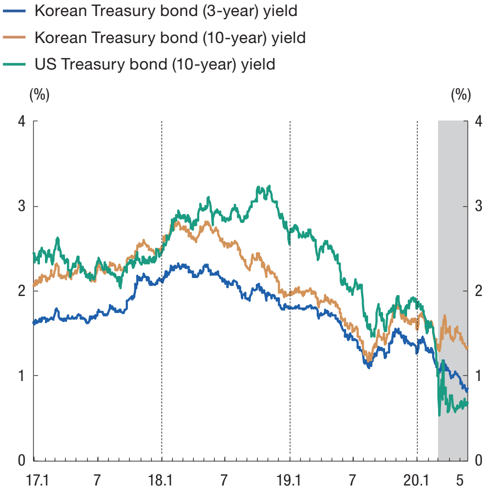
Sources: Korea Appraisal Board, Real Estate 114.

4. Financial and Foreign Exchange Markets

Long-term market interest rates decline

The Korean Treasury bond yield (3-year) rose in mid-March, affected by US dollar demand in the global financial markets following the COVID-19 pandemic, but declined afterwards due to Base Rate cuts by the Bank of Korea and financial market stabilization measures[29] at home and abroad. In May, the yield dropped further to a historic low (0.82%, May 25) on expectations of monetary policy accommodation taken by many countries and the escalation of the US-China trade dispute. The 10-year Treasury bond yield fell to a relatively smaller extent than the 3-year one, on concerns about an increase in bond supply in response to COVID-19.

Figure I–13. Korean and US Treasury bond yields



Sources: KOFIA, Bloomberg.

CP rates rise sharply

Movements of short-term market rates varied across instruments. Monetary Stabilization Bond (MSB, 91-day) and CD (91-day) rates plummeted due to strong investment demand for MSBs and the reduced CD issuance[30] by banks, in addition to the Base Rate cuts. On the other hand, CP rates (91-day, A1 rate) climbed sharply from mid-March, driven by quarter-end factors including reduced MMF inflows, and by a rise in risk aversion on concerns about worsening liquidity conditions[31] for securities firms. This caused the spread be-

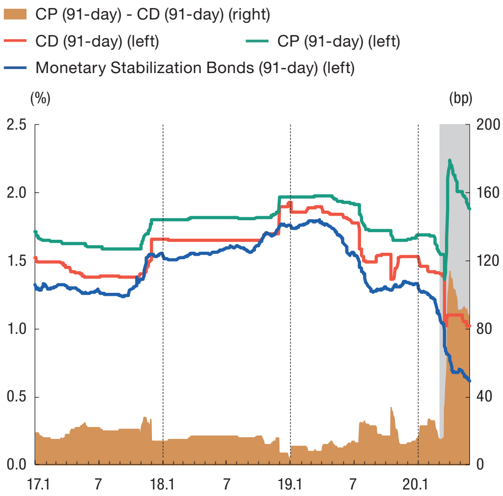
29) The Bank of Korea has continued to take policy responses since the start of the coronavirus outbreak to ensure financial and economic stability. Measures include signing a bilateral currency swap agreement with the US Federal Reserve (March 19), broadening the range of securities and institutions eligible for open market operations (March 16 - April 9), introducing an RP purchase facility under which an unlimited amount of liquidity is provided (March 26), and performing outright purchases of Treasury bonds (March 20 and April 10).

30) CD issuance fell year-on-year (from 11.3 trillion won between January and April 2019 to 8.5 trillion won during the same period in 2020). This is because banks that increased CD issuance last year to meet the new loan-to-deposit ratio requirement (implemented as of January 2020), under which CDs outstanding are recognized as deposits (1% of total deposits), focused their efforts on financing mainly through deposit-taking.

31) As global stock prices collapsed due to the COVID-19 pandemic, securities companies needed massive financing to pay margin calls for overseas index-related derivatives (including options) they held for hedging purposes for their equity-linked securities.

tween CP and CD rates to widen to 114bp, the highest level since the global financial crisis (117bp, January 28, 2009). Although CP rates took a downturn in April on the back of market stabilization measures,[32] they still remain high compared to other short-term rates.

Figure I–14. Short-term interest rates and spread[1]

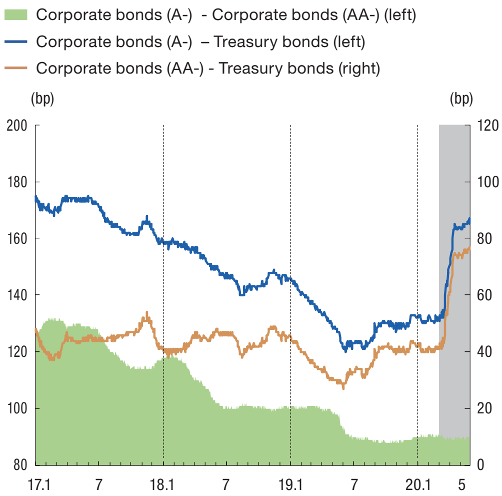


Note: 1) CP (91-day) - CD (91-day).
Source: KOFIA.

Corporate bond credit spread widens

The corporate bond credit spread widened significantly for both high- and low-grade bonds on concerns regarding reduced corporate profits and credit rating downgrades induced by the COVID-19 shock. After April, however, the expansion of the credit spread slowed as risk aversion somewhat eased thanks to multi-faceted measures[33] to stabilize the corporate bond market.

Figure I–15. Corporate bond credit spreads[1]



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.

Bank lending and deposit rates decline

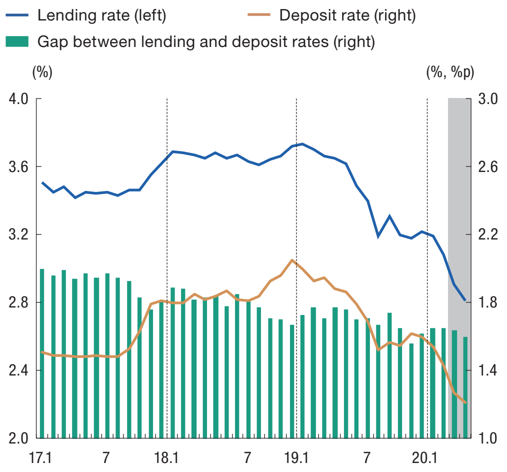
Banks' interest rates on loans and deposits continued to fall during March and April, reaching the lowest level since the start of statistics compilation (January 1996). Lending rates declined considerably, influenced by the fall in major market indicators following the Base Rate cuts, and provision of low-rate loans to businesses affected by COVID-19. Deposit rates also declined in reflection of market rates, but to a smaller extent than lending

32) The government's financial market support package (March 24) includes money market stabilization measures such as expanded liquidity supply to securities companies, and support for refinancing issue of corporate CP and short-term corporate bonds through state-run banks.

33) The Korean government announced measures to stabilize financial markets (on March 24), which include financing support through the Bond Market Stabilization Fund (20 trillion Korean won), support for the issuance of corporate bonds through primary collateralized bond obligations (P-CBOs), and a quick bond takeover program and support for refinancing issue of corporate bonds by the Korea Development Bank. The Bank of Korea also announced the launch of its Corporate Bond-Backed Lending Facility (April 16).

rates because of banks' need to attract deposits.[34)]

Figure I–16. Bank lending/deposit rates and spread

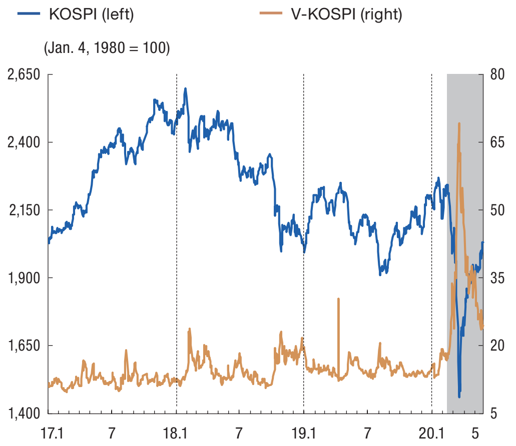


Source: Bank of Korea.

Stock prices rebound after a short-term plunge

Stock prices (KOSPI) plummeted[35)] in March, in sync with those in major countries including the US, due to the COVID-19 pandemic, rising concerns about a global recession, and the plunge in international oil prices. They rebounded rapidly after late March on the back of aggressive policy responses taken in Korea and other major economies, and continued on an uptrend afterwards despite concerns about the US-China trade conflict, driven by global movements to reopen economies and expectations of coronavirus vaccine development. The stock price volatility index (V-KOSPI) rose sharply[36)] in March with investor confidence rapidly deteriorating amid the COVID-19 pandemic, but it showed a far slower rate of increase from late March.

Figure I–17. KOSPI and stock volatility index



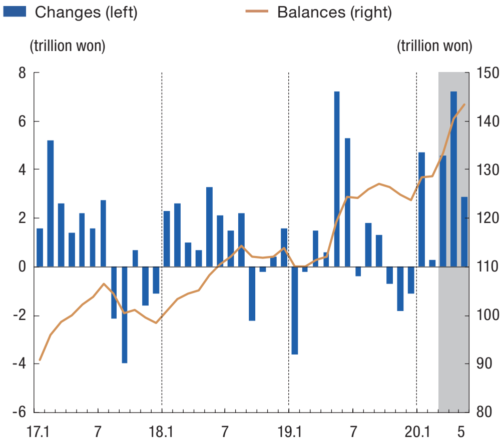
Source: Koscom.

Foreign investors increase domestic bond investment and reduce stock investment

Since March, domestic bond investment by foreigners increased sharply, but their stock investment declined. Despite the spread of COVID-19, bond investment rose significantly,[37)] led mainly by public funds, thanks to Korea's sound international credit standing and relatively high yield.

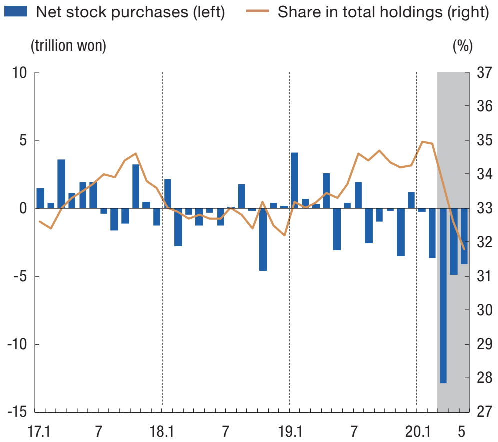
34) Banks needed to manage their loan-to-deposit ratios as they increased COVID-19-related corporate lending.
35) On March 19, the KOSPI fell to 1,458, down by 35.7% from its previous high (2,267, January 22), while the Dow Jones Industrial Average recorded 18,592 on March 23, down by 37.1% from its previous high (29,551, February 12).
36) V-KOSPI rose to 69 on March 19, reaching the highest level since the global financial crisis (a historic high of 89, October 29, 2008).
37) Foreigners' outstanding bond holdings posted 144.4 trillion Korean won on May 20, the largest volume in history.

Figure I–18. Changes1) in and balances1) of foreigners' bond holdings



Note: 1) Based on May 27 for May 2020.
Source: Financial Supervisory Service.

Figure I–19. Foreigners' net stock purchases1)2) and share in total holdings1)3)



Notes: 1) Based on May 27 for May 2020.
2) Sum of net purchases in KOSPI and KOSDAQ markets.
3) Based on total stock market capitalizations.
Source: Koscom.

Investment in domestic stocks recorded an all-time high monthly net selling of 12.9 trillion won during March, as investors increasingly grew risk-averse amid the COVID-19 pandemic and consequent concerns about a global recession. Although the decrease in foreigners' stock investment continued even after April, the pace of decline slowed due to movements toward economic reopening in major countries.

Corporate lending rises sharply

Banks' lending to enterprises has risen sharply since March when COVID-19 began to spread. Loans to large corporations increased by a large extent, due to the rise in corporate demand for working capital, liquidity, and funds for corporate bond and CP repayment. Lending to small and medium-sized enterprises (SMEs) climbed at a faster rate, driven by the increased demand from small- and medium-sized corporations and sole proprietors for working capital, and by financial support[38] from the government and banks. Non-bank lending to corporations also maintained a high rate of growth in the first quarter.

38) Support measures include ultra-low interest rate loans to small merchants, policy financing for small- and medium-sized businesses, and the raising of ceilings on the Bank of Korea's Bank Intermediated Lending Support Facility.

As for direct funding by corporations, conditions for issuance deteriorated[39] to some extent in the corporate bond and CP markets starting in March, driven by expanded risk aversion amid the COVID-19 outbreak. Thereafter they gradually improved, on the back of market stabilization measures by the government and the Bank of Korea.

Table I-7. Corporate funding[1]

(trillion won, %)

		2018	2019					2020	
		Year	Year	Q1	Q2	Q3	Q4	Q1	Apr.[2]
Loans	Total	91.2	98.6	21.8	27.7	21.9	27.2	49.0	..
	(Rate of change)[3]	(8.7)	(8.7)	(8.3)	(8.6)	(7.9)	(8.7)	(10.8)	..
	Banks	46.7	47.7	12.6	14.6	9.2	11.2	34.3	27.9
	(Large firms)	6.9	-1.8	0.2	0.5	-3.4	0.9	15.6	11.2
	(SMEs)	39.8	49.4	12.4	14.1	12.7	10.3	18.8	16.6
	Non-banks[4]	44.5	51.0	9.2	13.1	12.6	16.0	14.7	..
Direct financing	Corporate bond net issuance[5]	5.2	15.8	6.3	3.1	4.1	2.3	2.9	0.1
	CP net issuance[6]	0.8	-1.3	1.3	0.2	0.0	-2.8	4.7	0.6
	Stock issuance[7]	10.1	6.3	1.0	2.0	1.2	2.1	0.7	0.1

Notes: 1) Based on changes in balances during the periods.
2) Based on Bank of Korea advance estimate.
3) Year-on-year growth rate of loan balances.
4) Based on loans by mutual savings banks, credit unions, mutual credit cooperatives, community credit cooperatives, and insurance companies (including public and other lending).
5) Based on corporate bonds issued through public subscription by non-financial corporations (excluding ABSs but including P-CBOs).
6) Based on CP handled by securities firms, merchant banking corporations and trust accounts of banks.
7) Initial public offerings and paid-in capital increases.
Sources: Bank of Korea, Financial Supervisory Service, Korea Securities Depository, Korea Credit Information Services.

Household lending grows slowly in April

Growth in household lending accelerated in the first quarter year-on-year, but has slowed since April.

Household lending by banks increased at a faster rate in the first quarter compared to the quarter before. Home mortgage loans grew significantly, due to continued demand for funds for house purchases and leasehold (*jeonse*) deposit transactions, and to the increase in conversion to low-interest rate loans. Other loans continued to increase, led by demand for housing-related funds, despite inflows of Lunar New Year holiday bonuses. In April, however, their growth slowed compared to the previous month, driven by weaker demand for housing-related funds and for settlement funds in line with the contraction in consumption.

Household lending by non-banks decreased, due for instance to the increase in conversion to low-interest rate loans under the mortgage refinancing program during the first quarter of this year.

39) There was a net redemption of corporate bonds and CP in March due to increased risk aversion and seasonal factors (corporate bonds -0.5 trillion won and CP -1.5 trillion won). April also saw only a small net issuance (corporate bonds +0.1 trillion won and CP +0.6 trillion won).

Table I–8. Household lending by depository institutions[1]

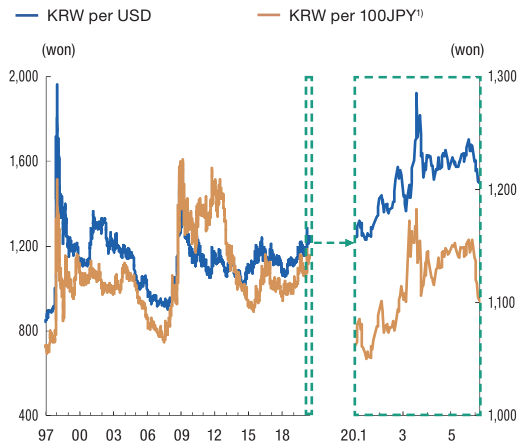
(trillion won, %)

	2018	2019					2020	
	Year	Year	Q1	Q2	Q3	Q4	Q1	Apr.[2]
Total	67.3	56.3	3.0	15.4	16.1	21.8	20.3	..
(Rate of change)[3]	(6.2)	(4.9)	(5.5)	(5.2)	(5.1)	(4.9)	(6.4)	..
Commercial & specialized bank loans[4]	60.4	60.7	6.5	14.9	18.0	21.3	22.6	4.9
(Mortgage loans)[4)5]	38.1	45.8	7.9	10.6	12.4	14.9	18.4	4.9
(Other loans, including through overdraft accounts)	22.4	14.9	-1.4	4.3	5.6	6.3	4.2	-0.1
Non-bank depository institution loans[4]	6.8	-4.5	-3.5	0.5	-1.9	0.5	-2.3	..
(Mutual credit cooperatives)	7.5	0.6	-0.1	1.2	-0.8	0.4	-0.9	..
(Credit unions)	-1.4	-0.8	-0.4	0.1	-0.3	-0.2	-0.7	..
(Community credit cooperatives)	-1.9	-6.8	-3.2	-1.6	-1.5	-0.5	-1.5	..
(Mutual savings banks)	2.5	2.6	0.3	0.8	0.7	0.8	0.8	..
(Others)[6]	0.2	-0.1	-0.1	-0.0	-0.1	0.1	-0.1	..

Notes: 1) Based on changes in balances during the periods.
2) Based on Bank of Korea advance estimate.
3) Year-on-year growth rate of loan balances.
4) Including mortgage transfers.
5) Including housing-related loans, such as loans for leasehold deposits, moving expenses and intermediate payments, that are not collateralized by houses.
6) Trust accounts of banks and postal savings.
Sources: Bank of Korea, Korea Housing Finance Corporation.

announcement of the signing of a currency swap agreement with the US Federal Reserve, and on policy responses taken by major economies. From April, it fluctuated within the range of 1,210 to 1,240 won, influenced by pandemic developments and news related to the US-China conflict, and then fell in June as risk aversion eased due to the improvement in US employment indicators. The Korean won/Japanese yen (100 yen) exchange rate showed movements similar to the won/dollar exchange rate, mainly affected by changes in preferences for safe assets.

Figure I–20. Exchange rates



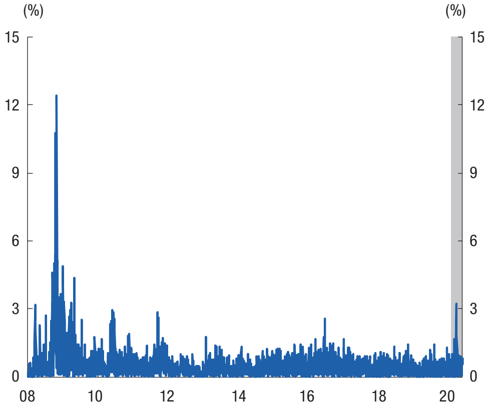
Note: 1) Final transaction standard rate offered to customers posted by Hana Bank during the day.
Sources: Bank of Korea, Hana Bank.

Volatility in Korean won/dollar exchange rate expands, then contracts

The Korean won/US dollar exchange rate rose to 1,285.7 won per dollar (March 19), reaching the highest level since the global financial crisis, as risk aversion increased greatly owing to the spread of COVID-19 and to the plunge in international oil prices and stock prices. The increase then decelerated on the

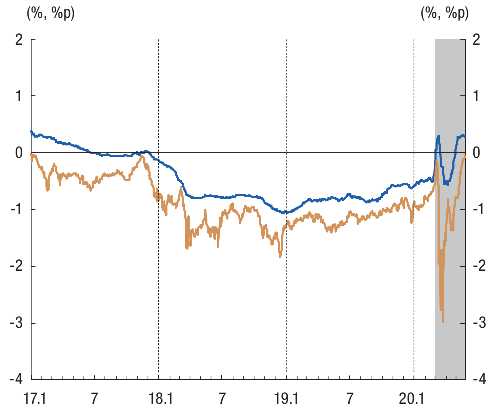
The volatility in the Korean won/US dollar exchange rate expanded to reach the highest level since the global financial crisis. The interday change rose to 3.2% in mid-March when the exchange rate hit the record high for the year, but the announcement of a currency swap arrangement with the US Federal Reserve helped to reduce volatility rapidly.

Figure I-21. KRW per USD exchange rate volatility[1)]



Note: 1) Daily change rate of the exchange rate.
Source: Bank of Korea.

Figure I-22. Domestic/international interest rate spread[1)] and swap rate



Note: 1) Yield on Korean Monetary Stabilization Bonds (MSBs) (3-month) - US LIBOR (3-month).
Source: Bank of Korea.

The swap rate (3-month maturity) plummeted as risk aversion rose significantly amid the COVID-19 pandemic, combined with the increased demand[40)] from institutional investors for short-term US dollar liquidity. Its decline slowed after concerns about US dollar shortages were eased after the announcement of the provision of proceeds from a currency swap line with the US Federal Reserve. After April, the swap rate rose substantially, backed by the improvement in FX liquidity conditions and the interest rate differential turning positive driven by a fall in US dollar LIBOR.

Liquidity increases faster, FCI declines

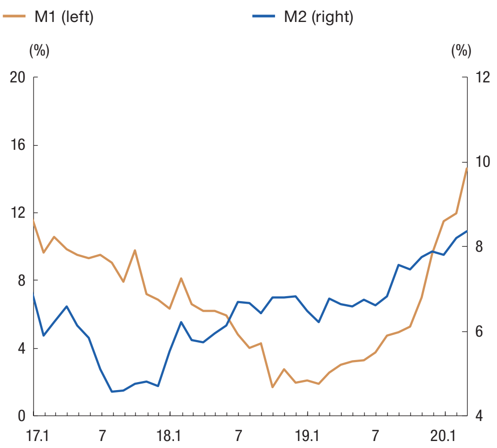
M2 growth (period-average basis, year-on-year) increased rapidly from 7.9% in December 2019 to 8.4% in March 2020, owing to a sharp rise in private credit including corporate loans. The real money gap[41)] continued to climb steeply, as the money supply maintained high growth during the first quarter. However, the Financial Conditions Index[42)] turned tight in March, as stock prices plunged and the risk premium for corporate bond rose considerably, affected by COVID-19. It became less tight in May due to the increase in stock prices and the drop in long-term interest rates.

40) US dollar liquidity demand increased from securities companies who had issued equity-linked securities, as they had to pay margin calls for their overseas index-related derivatives.

41) The real money gap 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 shortfall (gap<0) of the real money supply compared to the long-term equilibrium money supply.

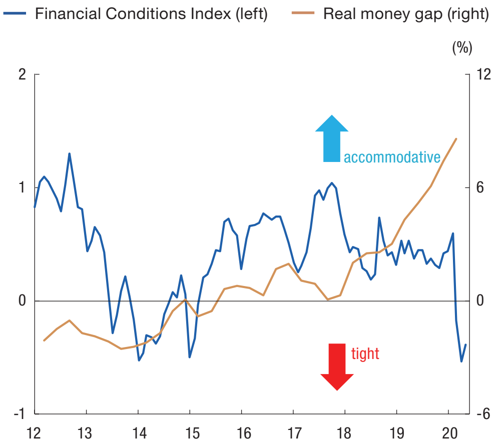
42) The Financial Conditions Index (FCI) assesses whether financial conditions are accommodative or tight and is calculated by standardizing the weighted sum of six major financial variables that are important in assessing financial conditions, such as interest rates, exchange rates and stock prices.

Figure I–23. Growth rate of key money supply indicators[1)]



Note: 1) Period-average basis; year-on-year.
Source: Bank of Korea.

Figure I–24. Financial Conditions Index[1)] and real money gap[1)2)]



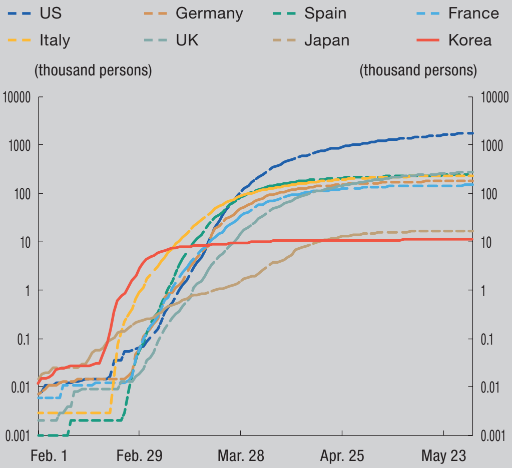
Notes: 1) If the figure is above (below) zero, the long-term equilibrium, it means that financial conditions are accommodative (tight). The analysis period is from Q1 2000 to Q1 2020 for the real money gap and from January 2000 to May 2020 for the Financial Conditions Index.
2) Based on M2.
Source: Bank of Korea.

Box I-1.

Inflation Developments in Korea and Major Economies After COVID-19 Outbreak

The COVID-19 pandemic and the lockdown and quarantine measures taken by major economies to contain it have not only created unprecedented global supply and demand shocks, but have also had a substantial impact on inflation. Above all, demand-pull inflationary pressures have weakened as a result of increased uncertainty and reduced face-to-face contacts due to social distancing measures, combined with downward pressures exerted by a decline in international oil prices. On the other hand, disruptions in production owing to weakened global supply chains and a decreased labor supply as a result of travel restrictions could put upward pressures on inflation. As for government policies, measures to support household and corporations in response to COVID-19 shocks reduce downward inflationary pressures, while social-welfare policies and indirect tax cuts work as temporary downward pressures. The actual inflationary impact of all these factors, however, can vary across countries, depending on the timing and extent of the virus spread and the intensity of lockdown measures.[1] In this section, we examine Korea's inflation trends since the COVID-19 outbreak, in comparison to those in other major countries.

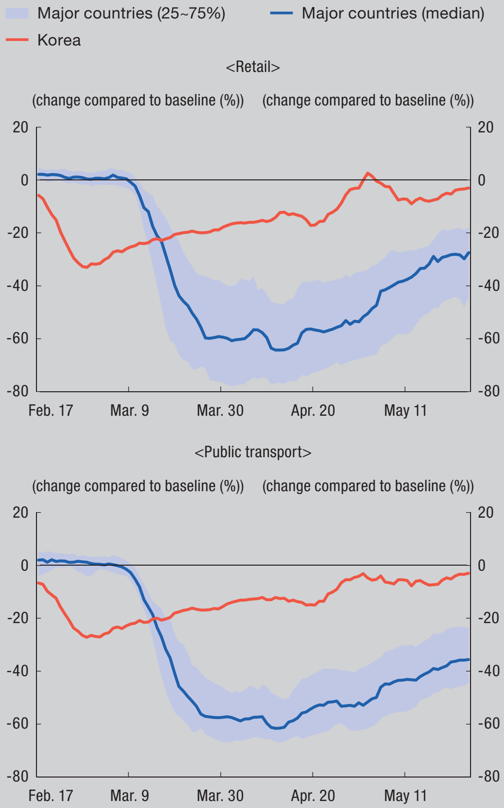
Spread of COVID-19 in major economies



Source: European CDC.

1) Korea contained the virus early after its outbreak in mid-February, and therefore its economic activity contracted to a relatively modest degree, whereas other major economies experienced major slumps in economic activity as they implemented complete shutdown measures after mid-March to contain the rapid spread of the virus.

Mobility changes[1] in major countries[2]



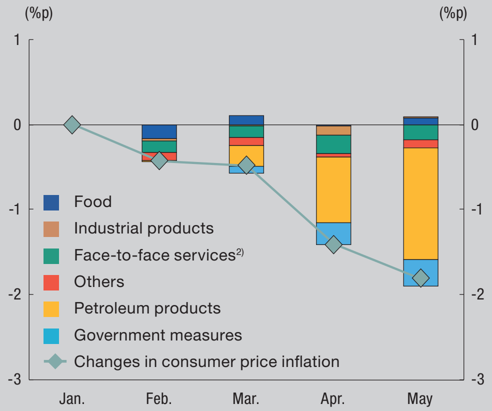
Notes: 1) Number of visits and length of stay at different places compared with the pre-virus baseline (from Jan. 3 to Feb. 6 2020), using Google location data and based on weekly averages.
2) 42 countries including the US, the UK, Japan, Germany, and France.
Source: Google Mobility.

(Consumer price inflation)

Korea and major economies have all seen a sharp rise in downward pressures on consumer price inflation following the spread of COVID-19, but the sectoral impact has varied to some extent.

In Korea's case, consumer price inflation slowed rapidly starting in February when the COVID-19 outbreak began, from 1.5% in January to 0.1% in April and further to -0.3% in May. This was mainly attributable to a large fall in petroleum product price increases in line with a decline in international oil prices; to a deceleration of prices of services such as travel, accommodation and restaurants, resulting from reduced face-to-face contacts following social distancing measures; and to additional downward inflationary pressures exerted by the government policies expanding free high school education and cutting the consumption tax on passenger cars. Prices of some daily necessities including food rose due to increased demand for groceries, albeit to a limited extent. A breakdown of contributors to the decline (-1.8 percentage points) in consumer price inflation in May vis-a-vis January shows that the decrease in petroleum product prices and government measures taken this year accounted for -1.6 percentage points, and the slowdown in face-to-face services prices -0.2 percentage points.

Contributions to changes in consumer price inflation[1]

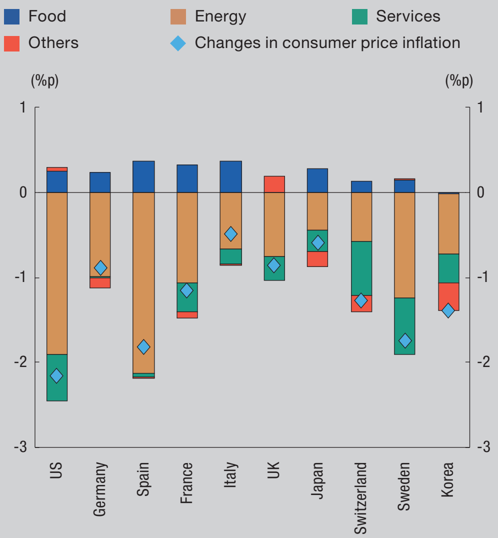


Notes: 1) Contributions to changes in consumer price inflation (year-on-year) relative to Jan. 2020 (for government measures, calculation is of contributions of this year's policies such as expansion of free high school education and reduction of consumption tax for passenger cars).
2) Combined services related to travel, accommodation and restaurants (excluding school lunches).
Sources: Statistics Korea, Bank of Korea.

Consumer price inflation has also slowed significantly in major economies including the US and the EU since mid-March when COVID-19 began to spread widely. By sector, energy prices dropped sharply following a decline in oil prices, and service price inflation also slowed in air transportation, hotels and restaurants due to reduced face-to-face contacts. For some products including food, price increases accelerated considerably owing to production setbacks and increased demand from hoarding amid complete lockdown measures.

Comparing Korea with other major economies, most countries have seen their consumer price inflation slow rapidly since the pandemic, as the downward pressures from demand and oil price falls outweigh the upward pressures coming from production disruptions. The biggest contributor to the subdued inflation was the drop in energy prices reflecting the plunge in international oil prices.

Contributions of items to changes in consumer price inflation in major economies[1)2)]



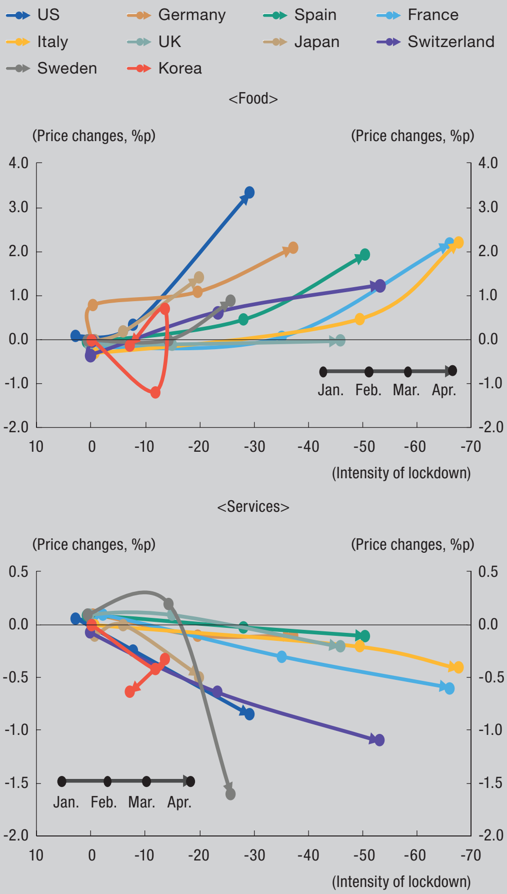
Notes: 1) Contributions to changes in inflation between January and April 2020.
2) For comparison, official data up to April was used.
Sources: OECD, Eurostat.

However, the short-term inflation trend differs across countries depending on the extent of the virus spread, and the lockdown measures and government policies in response. In major advanced countries that implemented a complete lockdown, prices of daily necessities including food increased at a higher rate due to production setbacks and increased hoarding demand, curbing the deceleration of inflation. Difficulty in conducting price surveys[2)] due to closure of businesses during lockdowns also prevented downward pressures on service prices from being fully reflected.[3)] In Korea however, where a complete lockdown was not implemented, the

2) To resolve the difficulty in collecting basic data for price index compilation caused by the reduced face-to-face surveys during business shutdowns, statistical offices in major countries adopted alternative methods such as using online data for index compilation for relevant items, using previous month prices, and, for some items, applying the overall increase rate of the category to which each item belongs.
3) However, in the case of Sweden, which did not have a full lockdown, the deceleration of service price inflation was larger than other countries.

increase in daily necessities prices was weak, while government policies expanding free high school education and cutting the consumption tax on passenger cars added downward inflationary pressures. The relationship between the intensity of lockdowns in individual countries and changes in their food and service prices also shows that countries with stronger lockdown measures had larger food price increases and service price declines.

Price changes[1] in major countries relative to intensity of lockdown[2]



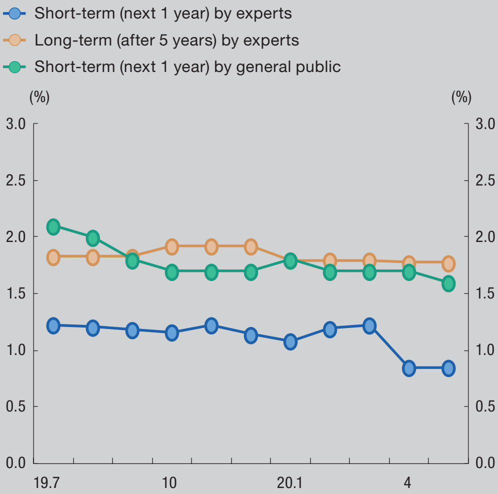
Notes: 1) Inflation change relative to Jan. 2020.
2) The intensity of lockdown measures was assessed based on national mobility data from Google Mobility. The larger the reduction in mobility, the higher the assumed intensity of the lockdown.

Sources: OECD, Eurostat, Google Mobility.

(Inflation expectations)

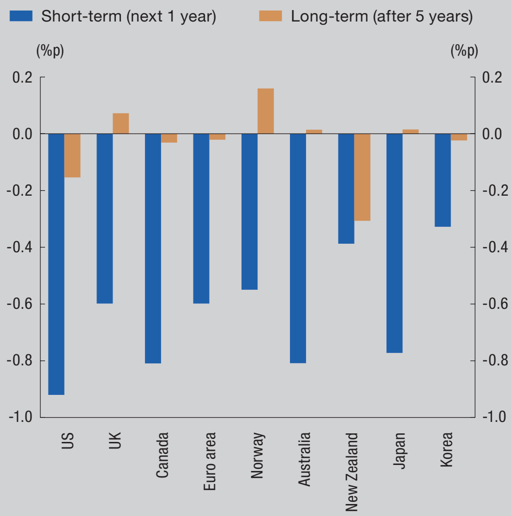
Inflation expectations have shown differing movements across indicators since the COVID-19 outbreak. The short-term inflation expectations (for the next one year) of the general public and a group of experts in Korea declined, reflecting the recent price movements, while their long-term expectations (after five years) generally remained at pre-COVID-19 levels. Comparing inflation expectation surveys of experts in other major economies in May relative to those in January shows that their short-term expectations declined by 0.3 to 0.9 percentage points, while for long-term inflation, experts had mixed expectations of increase and decrease, both within a limited range.

Inflation expectations in Korea



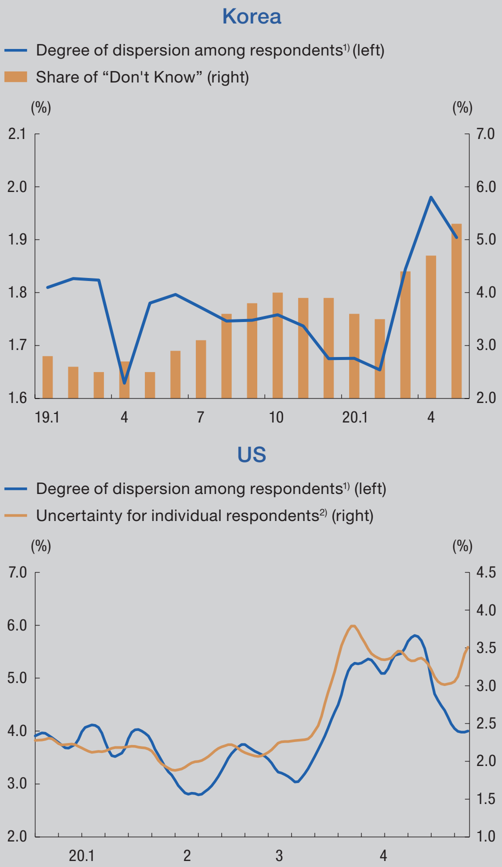
Sources: Bank of Korea, Consensus Economics.

Changes[1] in expert inflation expectations in major countries



Note: 1) Figures in May relative to January 2020.
Source: Consensus Economics.

Uncertainty in inflation expectations by general public



Notes: 1) Interquartile range of the response distribution.
2) The median value of interquartile ranges of each respondent's probability distribution of expected inflation.
Sources: Bank of Korea and “Inflation Expectations in Times of COVID-19”(NY Fed, May 2020).

The response distribution for the general public shows that since the COVID-19 pandemic consumers have felt more uncertain about future inflation than before. In the case of Korea, the share of respondents answering “Don't know” to a question about future inflation levels was higher than before, with a higher degree of dispersion[4] among responses. Among the US respondents, more felt uncertain about future inflation than before, with an increased degree of dispersion among responses.

(Implications)

Since the outbreak of the COVID-19 pandemic, Korea's consumer price inflation has slowed significantly, affected by the plunge in international oil prices, the slump in economic activity, and the expansion of free education. Other major advanced economies have also generally seen their inflation rates fall steeply, to varying degrees

4) The degree of dispersion among responses was estimated based on the interquartile range of the response distribution.

across sectors depending on the intensity of their lockdown measures. As these factors continue to exist, future consumer price inflation in Korea is expected to run low up until next year, when it is predicted to begin rising gradually as the impact of low international oil prices fades away, with economic activity improving and the impact of social-welfare policies reduced. However, a high level of uncertainty still remains surrounding the outlook for inflation, particularly related to COVID-19 and international oil price developments.

Ⅱ

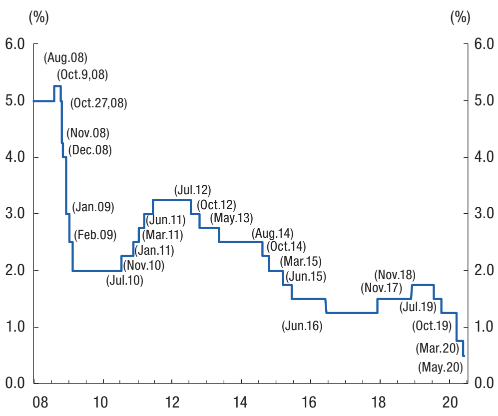
Conduct of Monetary Policy

1. Base Rate

Base Rate lowered in March and May 2020

The Bank of Korea strengthened its accommodative policy stance to support the recovery of growth and to help inflation gradually converge to the 2.0% target over a medium-term horizon. In this process it closely examined domestic and overseas risk factors such as the severity of the COVID-19 outbreak, its impacts on the domestic financial sector and economy, and changes in financial stability conditions. Under this policy stance, the Bank lowered the Base Rate on two occasions in March and May 2020 by a total of 75 basis points, from 1.25% to 0.50%.

Figure II-1. Bank of Korea Base Rate[1]



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

A detailed look at the monetary policy decisions during this period, and the background behind them, are as follows:

On March 16, the Monetary Policy Board held a special meeting at which it lowered the Base Rate by 50 basis points, from 1.25% to 0.75%.[43] Since the regular Monetary Policy Board meeting on February 27, concerns about global economic slowdown had deepened with COVID-19 spreading worldwide, including to Europe and the US. As a result, volatility in domestic and global financial markets had increased significantly. Against this backdrop, the Board judged that further monetary policy accommodation was called for in order to reduce the spillover effects on the real economy and to ensure stability in the financial markets. Accordingly, it held a special meeting at which it decided to lower the Base Rate. This decision was made because in terms of policy effects the Board found it appropriate to respond promptly through a special meeting instead of waiting until the next regular meeting, given the implementation of an expansionary fiscal policy including the compilation of additional supplementary budgets, and policy rate cuts in major economies.

In the April meeting, the Board decided to keep the Base Rate unchanged at 0.75%.[44] The pace of growth in the domestic economy had slowed considerably due to a substantial decrease in consumption and to a subdued recovery in facilities investment, influenced by the domestic and global spread of COVID-19. Accordingly, GDP growth was projected to

43) Board member Jiwon Lim expressed clear opposition to lowering the Base Rate by 0.50 percentage points and argued for cutting it by 0.25 percentage points.

44) Board members Dongchul Cho and Inseok Shin expressed clear opposition to keeping the Base Rate at the current level and argued for cutting it by 0.25 percentage points.

fall considerably short of the February forecast of 2.1%. It was forecast that consumer price inflation would run considerably below the February projection of 1.0% due to increased impacts of the drop in international oil prices and to weakening demand-side inflationary pressures. Meanwhile, the rate of household loan growth had risen, while the rate of increase in housing prices had moderated since mid-March. It was expected that growth and inflation would fall far short of the existing forecast paths due to the spread of COVID-19. However, at the March special meeting, the Monetary Policy Board had made a large cut in the Base Rate and had expanded the use of non-interest rate monetary policy instruments. The Board thus kept the Base Rate unchanged, on the grounds that it was necessary to conduct monetary policy while observing the effects of monetary, fiscal and financial policy responses to the COVID-19 pandemic on the real economy and financial markets.

In the May meeting, the Board decided to lower the Base Rate by 25 basis points to a historic low of 0.50% against the following background. The global economy had contracted significantly due to constrained economic activity caused by the worldwide spread of COVID-19. On the domestic economic front, economic growth in Korea had slowed considerably and labor market conditions had worsened with a sharp decline in the number of persons employed. The Board expected that domestic economic growth would remain sluggish for some time due to the impact of the COVID-19 pandemic. Accordingly, GDP growth was projected to record around 0%,[45] considerably below the February forecast of 2.1%. Consumer price inflation had slowed markedly to the lower-0% level due to declining prices of petroleum products and public services. It was forecast that consumer price inflation would run at the lower-0% level due to the drop in international oil prices and weakening demand-side inflationary pressures. Particularly because of the larger downward adjustments to the outlooks for GDP and inflation based on expectations that the impacts of the COVID-19 pandemic would last longer, the Bank of Korea found it necessary to make an additional Base Rate cut to support the recovery of the domestic economy.

Open market operations to maintain call rate at Base Rate level

In order to influence the overnight call rate so that it does not deviate greatly from the Base Rate, the Bank of Korea adjusts market liquidity by utilizing its open market operation instruments, including issuance of Monetary Stabilization Bonds (MSBs), RP transactions, and deposits into the Monetary Stabilization Account (MSA).

In April, as in the first quarter, the total amount of liquidity adjustment needed (average balance basis) decreased, due to expanded currency issuance[46] and increased deposits

45) This outlook is based on the assumption that the number of global confirmed cases of COVID-19 will reach a peak in the second quarter and there will be no second wave of infections on a large scale in Korea. Uncertainties concerning the forecast path were seen to be very high, in that the future growth path will be mainly affected by COVID-19 developments.

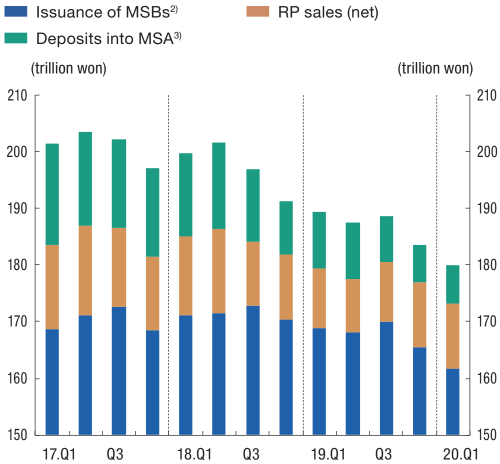
46) Due to the expanded currency issuance during the Lunar New Year holiday in January (5.6 trillion won over the ten business days immediately preceding the Lunar New Year holiday), the value of outstanding currency (average balance basis) in the first quarter increased by 6.3 trillion won compared to the preceding quarter.

to the money market deposit accounts.[47] The Bank responded by reducing the issuance of MSBs and flexibly adjusting[48] the amount of RP transactions and the amount of deposits into the MSA, given supply and demand conditions in the short-term money market.

Meanwhile, the Bank managed liquidity in the market at a sufficient level to respond to heightened financial market volatility stemming for instance from the spread of COVID-19, and actively implemented market stabilization measures through open market operations.[49]

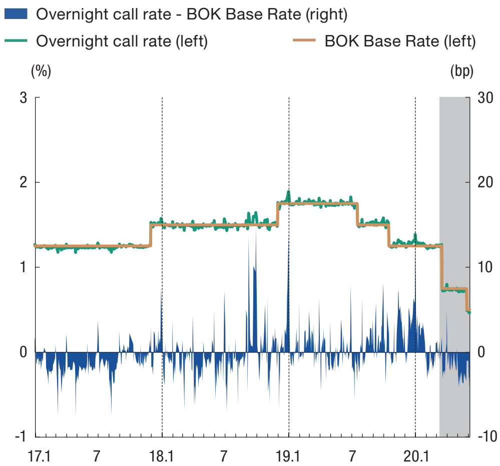
As a result, the call rate remained generally stable at around the Base Rate.

Figure II-2. Liquidity adjustment[1] by means of open market operations



Notes: 1) Quarterly average balance basis.
2) Monetary Stabilization Bonds.
3) Monetary Stabilization Account.
Source: Bank of Korea.

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



Source: Bank of Korea.

47) This leads to an increase in the required reserves against deposits which financial institutions must deposit with the Bank, which then results in a corresponding reduction in the amount of excess liquidity that needs to be withdrawn by the Bank through open market operations.

48) In order to respond to the possibility of expanded interest rate volatility stemming from the temporary mismatch of funds supply and demand, the Bank purchased one-day RPs (12.9 trillion won) on the closing day of bank reserve settlement in January (Jan. 8), and took 28-day MSA deposits (0.7 trillion won, Feb. 4) the day before the closing day (Feb. 5) of bank reserve settlement in February.

49) The details are described in Ⅱ.3. Market Stabilization Measures.

2. Bank Intermediated Lending Support Facility

Total ceiling for Bank Intermediated Support Facility adjusted upward by 10 trillion won and lending rates lowered in response to COVID-19

To ensure that banks are active in lending to small and medium-sized enterprises, the Bank of Korea operates the Bank Intermediated Support Facility, through which it supports banks by supplying them with funds at interest rates lower than the Base Rate. Operation of the Bank Intermediated Lending Support Facility ensures that funds are allocated to productive sectors, and thus contributes to boosting the effectiveness of monetary policy through the credit channel. When necessary, the Monetary Policy Board adjusts the Bank Intermediated Lending Support Facility's total ceiling, and its individual program ceilings and reserves, in consideration of financial and economic trends and SME funding conditions.

After increasing the ceilings of programs under the Bank Intermediated Lending Support Facility from 25 trillion won to 30 trillion won on March 9 to provide financial support for companies affected by COVID-19, the Bank of Korea expanded the industry sectors qualified for support[50) effective March 19 to deal with the spread of damage, while strengthening financial support for the self-employed and SMEs with low credit.[51) Later, as SMEs continued to have difficulties, the Bank increased the ceiling from 30 trillion won by an additional 5 trillion won, effective May 18. As a result of these changes, the ceilings of each program under the Bank Intermediated Lending Support Facility are currently as follows: 2.5 trillion won for the Support Program for Trade Financing, 11 trillion won for the Support Program for New Growth Engine Development and Job Creation, 5.5 trillion won for the Program for Stabilization of SME Lending, 5.9 trillion won for the Support Program for Regional Enterprises, and 10.0 trillion won for the Support Program for Companies Affected by COVID-19. The total ceiling stands at 35 trillion won, which includes reserves of 0.1 trillion won.

Meanwhile, the Bank of Korea lowered the interest rate on support programs under the Bank Intermediated Lending Support Facility from 0.50-0.75% to 0.25%, effective March 17, in order to strengthen the incentives for banks to lend to SMEs, and to alleviate the interest burden of corporate borrowers and improve their financial conditions.

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50) The Bank expanded the scope of industries eligible for support to include all services industries (excluding some gambling industries), in addition to existing industries, such as wholesale & retail trade, accommodation & food services, tourism, leisure, and transportation.

51) The proportion of bank loans to the self-employed and low-credit SMEs (credit ratings from Grade 6 to 10) supported by the Bank of Korea was raised from 50% to 75-100%.

Table II-1. Programs under the Bank Intermediated Lending Support Facility

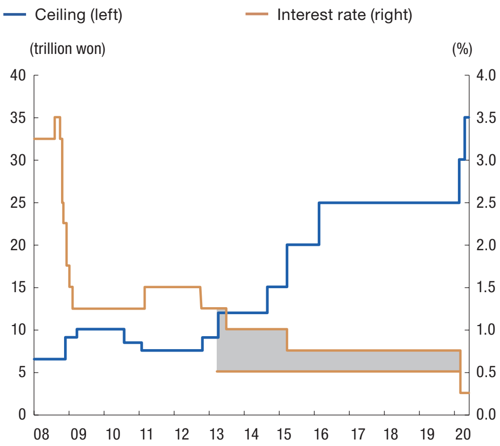
(trillion won, %)

Program	Ceiling		Interest rate	
	Before adjustment[1]	After adjustment	Before adjustment	After adjustment[2]
Support Program for Trade Financing	2.5	2.5	0.50	0.25
Support Program for New Growth Engine Development and Job Creation[3]	10.0	11.0	0.50	0.25
Program for Stabilization of SME Lending[4]	6.5	5.5	0.50~0.75	0.25
Support Program for Regional Enterprises	5.9	5.9	0.75	0.25
Support for SMEs Affected by COVID-19	0.0	10.0	0.75	0.25
Total	25.0[5]	35.0[5]	-	-

Notes: 1) As of end of Feburary 2020.
2) Lowered to 0.25% per year since March 17, 2020.
3) The Support Program for High-tech and Other Start-up SMEs was expanded and reorganized as the Support Program for New Growth Engine Development and Job Creation (September 2017).
4) Includes the support that had been formerly provided under the Support Program for Facilities Investment.
5) Includes reserves of 0.1 trillion won.

Source: Bank of Korea.

Figure II-4. Ceiling and interest rates of Bank Intermediated Lending Support Facility



Source: Bank of Korea.

3. Market Stabilization Measures

To ensure economic and financial stability following the spread of COVID-19, the Bank of Korea expanded the supply of liquidity through RP purchases, launched a Corporate Bond-Backed Lending Facility, prepared a plan to set up a special purpose vehicle (SPV) which would manage purchases of corporate bonds and commercial paper, and carried out measures to stabilize the foreign exchange market.

Liquidity supply expanded through adoption of a full-allotment RP purchase facility

The Bank of Korea provided liquidity through non-regular purchases of RPs (3.5 trillion won in total) from non-bank financial institutions in response to short-term financial market unrest in late March, stemming for instance from increased demand for funds by securities companies[52] and a deepening mismatch between supply of and demand for funds at the quarter-end.[53] It also conducted outright purchases of Treasury bonds (3.0 trillion won in total) on two occasions to stabilize the bond market.

The Bank of Korea also temporarily adopted a regular RP purchase facility through which an unlimited amount of liquidity was supplied based on financial market demand from April to June[54] to ensure financial market stability and to support timely implementation of the government's Financial Support Package. This is a weekly regular RP purchase facility through which the Bank of Korea buys bonds (91-day) in repo auctions at a fixed interest rate in full without any auction limit. As of June 9, a total of 13.54 trillion won was supplied and the auction interest rate is not to exceed "Base Rate + 10bp." "Base Rate + 3~5bp" was applied for each auction in consideration of securities companies' short-term financing rates and secondary market yields of bonds with the same maturities. Meanwhile, in July or later, the Bank of Korea will make a separate decision as to whether to extend the period of the facility, in consideration of the auction results and market conditions.

Table II-2. Liquidity supply

(trillion won)

RP purchases		Outright purchases of Treasury bonds[3]
Non-regular purchases from non-banks[1]	Full-allotment regular purchases[2]	
3.5	13.54	3.0

Notes: 1) 1.0 trillion won on Mar. 19, 2.5 trillion won on Mar. 24.
2) Total supply as of Jun. 9 (the first auction took place on April 2 and regular auctions take place every Tuesday).
3) 1.5 trillion on Mar. 20, 1.5 trillion won on Apr. 10.
Source: Bank of Korea.

52) A plunge in stock prices in major economies led to increased demand for funds by securities companies in order to pay margins on derivatives trading associated with related stocks.
53) Mismatches between supply of and demand for funds in the short-term money market tend to deepen at quarter-end due to increased MMF buybacks by corporations and financial ratio management by the banking sector.
54) This facility has contributed to the easing of credit risk aversion through liquidity provision to institutions investing in the Bond Market Stabilization Fund.

Channels to provide liquidity expanded by broadening the range of institutions and securities eligible for open market operations

For faster and wider liquidity supply, the Bank of Korea broadened the range of institutions eligible for open market operations, effective temporarily from April to July this year. The Bank made eleven brokerages newly eligible for RP transactions, including four primary dealers and seven institutions eligible for Monetary Stabilization Bond transactions, in addition to the existing twenty-two institutions eligible for RP transactions including banks and securities companies.

To expand the channels through which liquidity is supplied to financial markets and improve the collateral availability of financial institutions, the Bank also expanded the range of securities eligible for open market operations, effective temporarily from April this year to March next year. Securities eligible for RP transactions were broadened to include debentures issued by three specialized banks (the Korea Development Bank, the Industrial Bank of Korea, and the Export-Import Bank of Korea), general bank debentures (including debentures issued by the National Agricultural Cooperative Federation and Nonghyup Bank, and by the National Federation of Fisheries Cooperatives and Suhyup Bank), and special bonds issued by nine public organizations,[55] in addition to existing securities eligible for such transactions, including government bonds, government-guaranteed bonds, Monetary Stabilization Bonds, and MBSs issued by Korea Housing Finance Corporation. In addition to the existing government bonds and government-guaranteed bonds, the Bank included debentures issued by three specialized banks and MBSs issued by the Korea Housing Finance Corporation as securities eligible for outright transactions.

Table II-3. Institutions eligible for RP transactions

	Banks	Non-bank financial institutions
Existing institutions	(13 domestic banks) Kookmin Bank, Shinhan Bank, Woori Bank, Hana Bank, Nonghyup Bank, Standard Chartered Bank Korea, Industrial Bank of Korea, Citibank Korea, Korea Development Bank, Kyongnam Bank, Gwangju Bank, Daegu Bank, Busan Bank (4 foreign bank branches) Mizuho Bank, BNP Paribas, ING, JP Morgan Chase	(5 institutions) Mirae Asset Daewoo, Samsung Securities, Shinyoung Securities, NH Investment & Securities, Korea Securities Finance Corp.
Newly included institutions[1]	-	(7 institutions eligible for Monetary Stabilization Bond transactions) Shinhan Investment, Hyundai Motor Securities, KB Securities, Hi Investment & Securities, Kiwoom Securities, Korea Investment & Securities, Eugene Investment & Securities (4 primary dealers) Kyobo Securities, Daishin Securities, DB Financial Investment, Meritz Securities

Note: 1) Effective until Jul. 31, 2020.
Source: Bank of Korea.

55) Special bonds issued by Korea SMEs & Startups Agency, Korea Gas Corporation, Korea Expressway Corporation, K-Water, KEPCO, Korail, Korea Rail Network Authority, Korea Land & Housing Corporation, and Korea Deposit Insurance Corporation were newly added.

Table II-4. Securities eligible for open market operations

	Outright transactions	RP transactions
Existing	Government bonds, government-guaranteed bonds	Government bonds, government-guaranteed bonds, Monetary Stabilization Bonds, MBSs issued by Korea Housing Finance Corporation
New[3]	MBSs issued by Korea Housing Finance Corporation, debentures issued by three specialized banks[1]	Debentures issued by three specialized banks,[1] general bank debentures (including debentures issued by the National Agricultural Cooperative Federation and Nonghyup Bank, and by the National Federation of Fisheries Cooperatives and Suhyup Bank), Special bonds issued by nine public organizations[2]

Notes: 1) Korea Development Bank, the Industrial Bank of Korea, and the Export-Import Bank of Korea.
2) Korea SMEs & Startups Agency, Korea Gas Corporation, Korea Expressway Corporation, K-Water, KEPCO, Korail, Korea Rail Network Authority, Korea Land & Housing Corporation, and Korea Deposit Insurance Corporation.
3) Effective until Mar. 31, 2021.
Source: Bank of Korea.

Eligible collateral for lending facilities broadened and collateral availability of financial institutions improved

In an effort to cope with the spread of COVID-19, the Bank of Korea broadened the eligible collateral that banks could provide when they receive loans from the Bank of Korea, in order to reinforce the basis for the Bank of Korea to smoothly supply liquidity through loans to banks when necessary and to alleviate banks' burden of collateral provision. In addition to the existing government bonds, government-guaranteed bonds, and Monetary Stabilization Bonds, MBSs issued by the Korea Housing Finance Corporation, debentures issued by three specialized banks, general bank debentures, and special bonds issued by nine public organizations have been newly recognized as eligible collateral for lending facilities.

Table II-5. Eligible collateral for lending facilities

	Eligible collateral for lending facilities	Note
Existing	Government bonds, government-guaranteed bonds, Monetary Stabilization Bonds	
New	MBSs issued by the Korea Housing Finance Corporation, debentures issued by three specialized banks[1]	-
	General bank debentures (including debentures issued by the National Agricultural Cooperative Federation and Nonghyup Bank, and by the National Federation of Fisheries Cooperatives and Suhyup Bank), bonds issued by nine public organizations[2]	Effective until Mar. 31, 2021

Notes: 1) Korea Development Bank, the Industrial Bank of Korea, and the Export-Import Bank of Korea.
2) Korea SMEs & Startups Agency, Korea Gas Corporation, Korea Expressway Corporation, K-Water, KEPCO, Korail, Korea Rail Network Authority, Korea Land & Housing Corporation, and Korea Deposit Insurance Corporation.
Source: Bank of Korea.

In addition, to expand financial institutions' collateral capacity, the Bank of Korea lowered the ratio of collateral for guaranteeing net settlements by 20 percentage points (from 70% to 50%), effective April 10, and postponed its previously announced plan to progressively increase the ratio.[56] As a result, the required amount of collateral is expected to be reduced, which will have the effect of providing an equivalent amount of liquidity to the financial markets. The Bank also lessened financial institutions' collateral burden by temporarily broadening eligible collateral to newly include

56) The Bank of Korea pushed back the time when the ratio will be increased to 100% (after annual increases of 10 percentage points) to meet the international standard (Principles for Financial Market Infrastructures, PFMIs), from August 2022 to August 2024.

bonds issued by nine public organizations and general bank debentures from May until March next year.

Table II-6. Planned increases to the ratio of collateral for guaranteeing net settlements

(%)

Existing	Apr. 2020	Aug. 2021	Aug. 2022	Aug. 2023	Aug. 2024
70	50	70	80	90	100

Source: Bank of Korea.

Corporate Bond-Backed Lending Facility launched

The Bank of Korea has been running a new lending scheme, the Corporate Bond-Backed Lending Facility (CBBLF), since its launch on May 4. The CBBLF serves as a safety net for businesses, banks and non-bank financial institutions bracing for severe difficulties in raising funds due to prolonged impacts of COVID-19. It will be operated as a standing lending facility providing banks and non-bank financial institutions,[57] including securities companies and insurance companies, with ready access to credit from the Bank of Korea whenever they post eligible corporate bonds[58] as collateral. The ceiling for the facility is 10 trillion won. The interest rate is 0.85%p over yield on Korean Monetary Stabilization Bonds (182 days). The CBBLF is expected to contribute to stabilizing the corporate bond market and to improving funding conditions for financial institutions.

Plan drawn up to establish an SPV which would manage purchases of corporate bonds and commercial paper

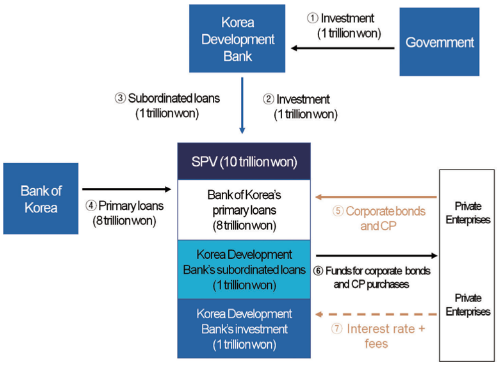
Credit risk aversion had remained in the financial markets due to high credit spreads and ongoing difficulties by companies with low credit ratings in issuing bonds. Accordingly, on May 20, the Bank of Korea, together with the government, prepared a plan to set up an SPV which would manage purchases of corporate bonds and commercial paper[59] to ensure financial market stability. A total of 10 trillion won will be initially invested in the SPV. Purchases of corporate bonds and commercial paper will be financed through the Bank of Korea's primary loans, the Korea Development Bank's (the government's) investment, and subordinated loans. In particular, lower-rated corporate bonds and commercial paper were also included in the instruments to be purchased to ease credit risk aversion toward non-prime bonds and to ensure stability in the credit and securities markets.

57) Loans to non-bank financial institutions are made under the authority of Article 80 (Credit to For-profit Enterprises) of the Bank of Korea Act. This is the first lending to non-bank financial institutions since loans were made to the Korea Securities Finance Corporation and Credit Management Fund during the period between 1997-1998.

58) Eligible corporate bonds are high-quality corporate bonds (rated at least AA-) issued by private enterprises with remaining maturity of 5 years or less.

59) On May 20, the government and the Bank of Korea prepared a plan to set up an SPV which would manage purchases of corporate bonds and commercial paper, including lower-rated corporate bonds and commercial paper. According to this plan, the 10 trillion won SPV will consist of the Korea Development Bank's (the government's) 1 trillion won investment, the Korea Development Bank's 1 trillion won of subordinated loans. and 8 trillion won of primary loans extended by the Bank of Korea. If necessary, the size of the SPV can be expanded to a maximum of 20 trillion won.

Figure II-5. Financial structure of SPV to purchase corporate bonds and commercial paper (draft)[1)]



Note: 1) The Bank of Korea's direct lending to the SPV is subject to Article 80 of the Bank of Korea Act (Credit to For-profit Enterprises) and requires a resolution of the Monetary Policy Board.

Source: Joint press release made by the relevant institutions (Bank of Korea, Ministry of Economy and Finance, Financial Services Commission) (May 20).

FX market stabilization measures

The Bank of Korea conducted FX market stabilization measures to provide FX liquidity to financial institutions and businesses experiencing difficulties in foreign currency funding due to strains in the global financial markets.

In March, the Bank signed a 60 billion dollar bilateral currency swap arrangement[60)] with the US Federal Reserve amid surging demand for US dollars due to expanded risk aversion in the global financial markets. It then conducted competitive US dollar loan facility auctions using the proceeds of swap transactions, for the first time since the global financial crisis. Until early May, the Bank supplied 19.872 billion dollars through banks to the foreign currency money markets and corporations, comprising a total of six auctions.

Table II-7. Results of competitive US dollar loan facility auctions

(billion dollars)

Round	USD amount offered	USD amount demanded	USD amount allocated
March 31 (first)	12.0	8.720	8.720
April 7 (second)	8.5	4.415	4.415
April 14 (third)	4.0	2.025	2.025
April 21 (fourth)	4.0	2.119	2.119
April 27 (fifth)	4.0	1.264	1.264
May 6 (sixth)	4.0	1.329	1.329

Source: Bank of Korea.

FX market stability rules were applied flexibly in consideration of the FX liquidity conditions of financial institutions. Amid growing concerns over domestic FX liquidity conditions, the Bank raised the ceilings on the FX derivatives positions of banks by 25%[61)] and lowered the FX liquidity coverage ratio (LCR) by 10 percentage points (80% → 70%), effective temporarily until the end of September, to allow financial institutions to flexibly manage foreign currency funds. In addition, the Bank temporarily lifted the levy on financial institutions' non-deposit FX liabilities.

60) On March 19, the US Federal Reserve announced the signing of bilateral currency swap arrangements with nine central banks, including the Bank of Korea, to alleviate crunches in the global dollar-denominated money market. The volumes of arrangements are 60 billion US dollars (with Korea, Australia, Singapore, Sweden, Brazil, and Mexico) and 30 billion US dollars (with Norway, Denmark, and New Zealand). The duration of the arrangements are at least six months. The volume of the Bank of Korea's bilateral currency swap arrangement with the US Federal Reserve in 2008 was 30 billion US dollars.

61) Ceilings on the FX derivatives positions of domestic banks were raised from the current 40% to 50%, and those of foreign bank branches, from 200% to 250%.

Table II-8. Bank of Korea's Policy Responses Related to COVID-19

(as of June 9)

Policy response measures			Objectives	Major details
Base Rate	Cut the Base Rate by 75 basis points		To promote real economic recovery and ensure financial stability	• 1.25% → 0.50%
Bank Intermediated Lending Support Facility	Raised ceilings and lowered the interest rate on the Bank Intermediated Lending Support Facility		To support SMEs affected by COVID-19	• Total ceiling: 25 trillion won → 30 trillion won → 35 trillion won • Lending rate: 0.5%~0.75% → 0.25%
Market stabilization measures	Measures related to won liquidity supply	Adopted RP purchase facility through which an unlimited amount of liquidity is supplied	To ensure financial market stability and to support implementation of Financial Support Package	• Auction method: Liquidity is supplied by purchasing bonds (at a fixed interest rate) in full without any auction limit. • Auction interest rate: The offering rate is announced whenever an auction takes place and is not to exceed "Base Rate + 10bp." • Maturity: 91 days • Auction period: April - June 2020 (Auctions take place every Tuesday.) • Whether to extend the period of the facility: The BOK will make the decision in July, in consideration of market conditions. • Amount supplied: 13.54 trillion won (total amount supplied as of June 9)
		Outright purchases of Treasury bonds	To ensure bond market stability	• 3.0 trillion won in total (1.5 trillion won on March 20, 1.5 trillion won on April 10) • Implementation period: When necessary
		RP purchases from non-bank financial institutions	To provide liquidity to non-bank financial institutions	• 3.5 trillion won in total (1.0 trillion won on March 19, 2.5 trillion won on March 24) • Maturity: 14 days • Implementation period: When necessary
		Broadened the range of institutions eligible for open market operations	To reinforce the basis for the BOK to supply liquidity	• The range of institutions eligible for RP transactions was broadened: seven institutions eligible for Monetary Stabilization Bond transactions and four primary dealers
		Broadened the range of institutions eligible for open market operations		• The range of securities eligible for outright transactions was broadened : MBSs issued by the Korea Housing Finance Corporation and debentures issued by three specialized banks[1)] • The range of securities eligible for RP transactions was broadened : Debentures issued by three specialized banks, general bank debentures,[2)] bonds issued by nine public organizations[3)]
		Expanded the range of eligible collateral for lending facilities		• The range of eligible collateral for lending facilities was expanded: MBSs issued by Korea Housing Finance Corporation, debentures issued by three specialized banks,[1)] general bank debentures,[2)] bonds issued by nine public organizations[3)]
		Improved collateral availability of financial institutions		• The ratio of collateral for guaranteeing net settlements was lowered (70%→50%) • The eligible collateral for guaranteeing net settlements was broadened : General bank debentures,[2)] bonds issued by nine public organizations[3)]
		Launched the Corporate Bond-Backed Lending Facility	To stabilize the corporate bond market and to improve funding conditions for financial institutions	• Ceiling: 10 trillion won • Rate: Yield on Korean Monetary Stabilization Bonds (182 days) + 85bp • Term: within six months • Operating period: three months from the effective date • Eligible collateral: high-quality corporate bonds (rated at least AA-) issued by private enterprises with remaining maturity of five years or less
		Prepared a plan to set up an SPV to manage purchases of lower-rated corporate bonds and commercial paper	To provide liquidity to the credit market	• Size: 10 trillion won (The size can be expanded to up to 20 trillion won, in accordance with market conditions) • Funding structure: Bank of Korea's primary loans (8 trillion won), Korea Development Bank's investment (1 trillion won) and subordinated loans (1 trillion won) • Operating period: Whether to extend the operating period will be determined in consideration of market stability conditions after six months of SPV operation.
	FX market stabilization measures	Signed a bilateral currency swap arrangement with the Fed	To improve foreign currency funding conditions	• A 60.0 billion US dollar bilateral currency swap arrangement was signed. • Competitive US dollar loan facility auctions took place (a total of 19.872 billion US dollars was supplied).
		Raised the ceilings on FX derivatives positions of banks		• Ceilings on the FX derivative positions of domestic banks (40% → 50%) and foreign bank branches (200% → 250%) were raised.
		Temporarily lifted the levy on financial institutions' non-deposit FX liabilities		• Banks, securities companies, card companies, and insurance companies are exempted from the levy for three months (during the period between April and June 2020).

Notes: 1) Debentures issued by Korea Development Bank, the Industrial Bank of Korea, and the Export-Import Bank of Korea.
2) Including debentures issued by the National Agricultural Cooperative Federation and Nonghyup Bank, and by the National Federation of Fisheries Cooperatives and Suhyup Bank.
3) Korea SMEs & Startups Agency, Korea Gas Corporation, Korea Expressway Corporation, K-Water, KEPCO, Korail, Korea Rail Network Authority, Korea Land & Housing Corporation, and Korea Deposit Insurance Corporation.

Source: Bank of Korea.

4. Other Monetary Policy Measures

The Bank of Korea is working to strengthen its global financial cooperation and improve the safety and efficiency of the payment and settlement systems, while enhancing monitoring of financial and FX market movements and of financial stability conditions.

Monitoring of financial and FX market conditions enhanced

The Bank of Korea constantly monitored movements in the domestic and international financial and FX markets. The Bank also looked closely into the impacts of domestic and international risk factors on the financial and FX markets by running the emergency response system during times of heightened market volatility.

The Bank reviewed market conditions by convening 「Financial and Economic Conditions Review Meetings」 and 「Monetary and Financial Response Task Force Meetings」 in response to the rapid global spread of COVID-19, announcements of major policy rate cuts and financial market support measures by major central banks including the US Federal Reserve, and the plunge in international oil prices. The Bank also made clear in the meetings that, if necessary, it would pursue market stability by actively using all available policy instruments. The Bank also set up a 「COVID-19 Response Task Force」 in late January and continued to carefully monitor developments of the COVID-19 pandemic and the impacts on the domestic and international financial sectors and economies, and changes in financial and FX market conditions following the Bank of Korea's adoption of market stabilization measures. The Bank also joined the 「Macroeconomic and Financial Meeting」, with the relevant institutions and the 「Financial Risk Assessment Meeting」 held by the Central Economic Response Headquarters to share perceptions about major pending issues and risk factors related to the domestic macroeconomy and financial stability, and to discuss countermeasures.

Early warning activities of potential financial system risks strengthened

The Bank of Korea paid attention to the possibility of heightened risk related to financial stability in line with deteriorated domestic and international conditions, and strengthened preemptive identification of and early warning activities related to potential financial system risks.

In the March 「Financial Stability Meeting」, the Bank examined the possibility of financial systemic risk in line with the COVID-19 pandemic. As financial and FX market volatility and credit risk aversion rose sharply at the early stage of the spread of COVID-19, the Bank closely assessed vulnerability of each sector, including asset markets and household and corporate credit markets. The Bank also monitored financial system resilience including the shock absorption capacities of financial institutions, particularly since deteriorated corporate performance and employment conditions and further weakness in self-employed businesses could lead to a worsening of the asset soundness of financial institutions. In addition, in order to systematically address possible financial system-related risk stemming from the spread of COVID-19, the Bank established the 「Financial System Stability Response Task Force」 on March 24 to prepare a system through which financial market conditions, financial institution soundness, and payment system stability can be checked constantly.

Meanwhile the Bank temporarily halted[62] joint examinations of financial institutions after the COVID-19 outbreak and strengthened monitoring of financial institutions, households and corporations. The Bank assessed the effects of the government's financial support related to COVID-19 by conducting intensive analyses of the liquidity conditions of SMEs, small business owners, and large corporations in major sectors affected by COVID-19, while keeping an eye on the possibility of the accumulation of financial institution risk that could take place in response to such conditions. The Bank also analyzed the management of banks and bank holding companies and reviewed their key operating conditions, such as asset soundness, profitability and liquidity.

Global financial cooperation strengthened

The Bank of Korea frequently participated in virtual meetings of international organizations and consultative bodies, such as the BIS, G20 and IMF, to promptly identify the impacts of COVID-19 on the global economy and financial markets, as well as the responses of major economies, thus improving the effectiveness of the Bank's monetary policy.

The Bank also continued its efforts to reinforce multi-layered financial safety nets, by for instance building up currency swap networks with major central banks. It signed a bilateral currency swap arrangement with the US Federal Reserve as part of policy coordination among major central banks. It also extended the existing currency swap arrangement with Bank Indonesia by three years. In addition, it continued consultations aimed at increasing the effectiveness of the Chiang Mai Initiative Multilateralization (CMIM), a multilateral currency swap arrangement among ASEAN+3 member countries.

Safety and efficiency of payment and settlement systems enhanced

The Bank of Korea continued efforts to enhance the safety and efficiency of the payment and settlement systems.

The Bank devoted efforts to ensure smooth domestic implementation of the 「Principles for Financial Market Infrastructures (PFMI)」[63] and other international standards in the field

62) This was because the government raised the level of the national infectious disease alert system for COVID-19 to "serious" (on February 23).

63) Following the global financial crisis, a need was identified to expand over-the-counter derivatives market infrastructures and strengthen the international standards for the operation of financial market infrastructures. Accordingly, the BIS 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. CPMI-IOSCO has enacted additional international standards as supplementary guidelines for PFMI compliance, including its Guidelines on cyber resilience for financial market infrastructures (Jun. 2016), Recovery of financial market infrastructures (Jul. 2017) and Resilience of central counterparties (CCPs): Future guidance on the PFMI (Jul. 2017).

of payment and settlement. The Bank examined the Korea Financial Telecommunications and Clearings Institute's compliance with the PFMI and cyber-risk response framework in operating its electronic banking network, checks clearing service, interbank funds transfer system and open banking system. The Bank is planning to provide recommendations on areas that are identified as needing improvement.

Meanwhile, with respect to the spread of COVID-19, the Bank of Korea strengthened cooperation with institutions operating payment and settlement systems (the Korea Exchange, the Korea Securities Depository, and the Korea Financial Telecommunications & Clearings Institute) to ensure seamless operation of major payment and settlement systems. The Bank, meanwhile, strengthened the examination of the response systems and the settlement risk management statuses of participants, such as banks and securities companies.

In addition, the Bank is preemptively reviewing technological and legal requirements for the adoption of central bank digital currencies (CBDCs) to cope with future changes in the payment and settlement environment which could increase the need for CBDC adoption. The Bank is also carrying out research to set up and test a pilot system.

Box II-1.

Assessments of Financial Market Conditions After Implementation of Market Stabilization Measures related to COVID-19 Crisis

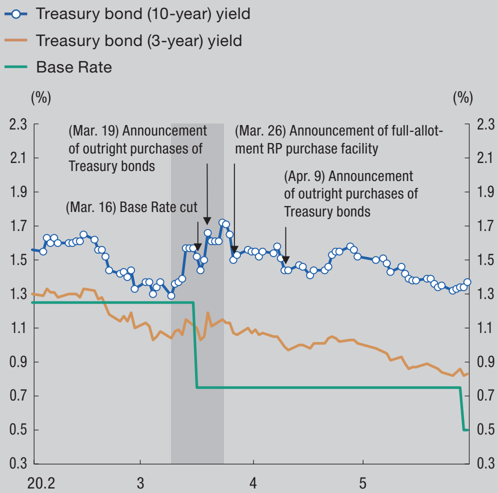
After mid-March when the global spread of COVID-19 caused international financial market instability to deepen, volatility in price variables increased sharply and credit risk aversion spread rapidly. To deal with this issue, the Bank of Korea and the government implemented unprecedented market stabilization measures to head off a crisis and ensure seamless market functioning. This section assesses financial market conditions after the adoption of a set of market stabilization measures to deal with financial market instability stemming from the COVID-19 pandemic, and draws relevant implications.

(Treasury bond market)

After increasing sharply in mid-March, the Treasury bond yield gradually stabilized after the implementation of the Bank of Korea's market stabilization measures. The Treasury bond (10-year) yield rose sharply after hitting a short-term low of 1.29% on March 9, but the upward trajectory then eased thanks to the announcement of outright purchases of Treasury bonds[1] and the expression of the willingness for additional purchases, following a 50 basis points Base Rate cut by the Bank of Korea (on March 16). The yield shifted to a decline after hitting a short-term high of 1.72% on March 23, thanks for instance to the announcements of measures to ensure economic and financial stability by major economies. Later, the yield steadily declined, owing primarily to full-allotment RP purchases and additional outright purchases of Treasury bonds. The Bank of Korea's series of measures contributed to the downward stabilization of not only the Treasury bond yield but also overall market interest rates, such as corporate bond rates.

Meanwhile, interest rate volatility, which had heightened greatly in mid-March, fell rapidly following the implementation of market stabilization measures. In mid-April, bid-ask spreads of Treasury bonds also recovered to the level seen at the beginning of year.

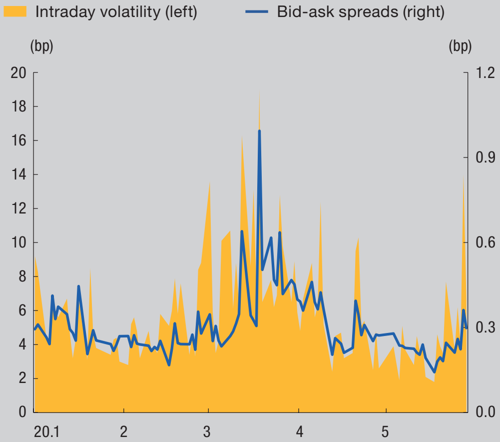
Recent major market stabilization measures and Treasury bond yields



Source: KOFIA.

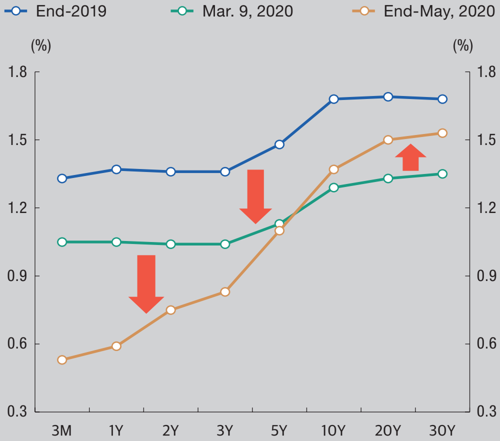
1) On March 19, the Treasury bond (10-year) yield, which had risen sharply by as much as 22 basis points day-on-day, fell back by about 8 basis points immediately following the announcement of outright purchases of Treasury bonds by the Bank of Korea (worth 1.5 trillion won), and then rose to close at a 16 basis points increase day-on-day.

Treasury bond yield volatility[1] and bid-ask spreads[2]



Notes: 1) Based on intraday high-low for 10-year Treasury bonds.
2) Based on the average for best bid-ask spreads for 10-year Treasury bonds.
Source: Korea Exchange.

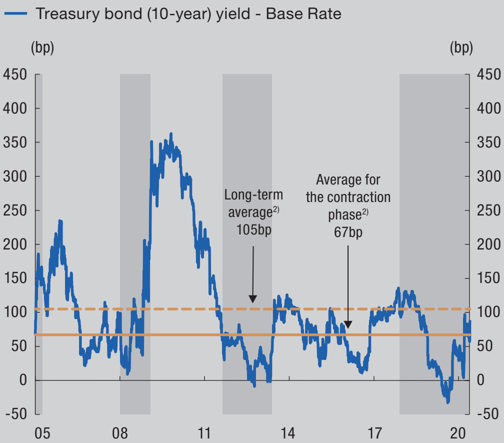
Changes in yield curve[1]



Note: 1) Monetary Stabilization Bond rate when maturities are 2 years or shorter, and Treasury bond yield when maturities are 3 years or longer.
Source: KOFIA.

The Treasury bond yield stabilized downward, but the extent of decline in long-term interest rates with maturities of 10 years or longer was relatively limited, due for instance to concerns about increased bond supply[2] in line with supplementary budgets. As a result, the yield curve steepened. The Treasury bond (10-year) yield has recently been somewhat high, given economic conditions and the Base Rate level. As of end-May, the gap between the Treasury bond (10-year) yield and the Base Rate (87bp) exceeded the average for economic contraction phases since 2005 (67bp).[3]

Yield curve spreads by business cycle[1]



Notes: 1) Based on the business cycle reference dates of Statistics Korea; ▒ are business contraction phases.
2) Between January 2005 - May 2020.
Source: KOFIA.

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2) The (expected) amount of a net increase in Treasury bond issuance for this year (70.9 trillion won based on the 2020 budget) has increased by an additional 13.7 trillion won due to the first and second supplementary budgets. If the third supplementary budget (issuance of Treasury bonds worth 23.8 trillion won) announced by the government on June 3 is finalized at the National Assembly, the amount is expected to increase further.

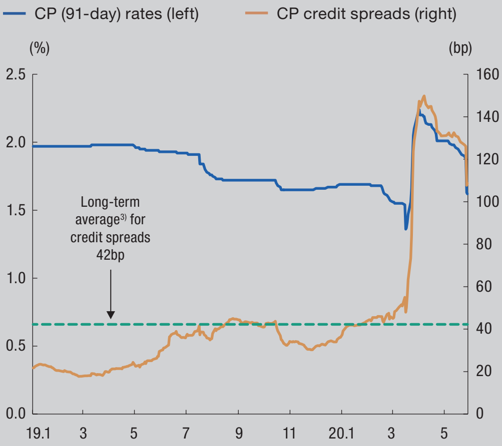
3) As an excessive supply of bonds stemming from supplementary budgets has a greater effect on the medium- to long-term maturity brackets, the gap between the 10-year Treasury bond yield and 3-year Treasury bond yield (54 basis points as of end-May) far exceeds the average for economic contraction phases (37 basis points).

(CP·short-term bond market)

The short-term financial markets, which showed instability due for instance to the deterioration of funding conditions of some securities companies in mid-March, have gradually been stabilizing after April, when market stabilization measures began to take full effect. Short-term funding conditions of securities companies have improved, and CP (91-day, A1) rates, which had soared, have also been on a decline since early April, thanks for instance to the Bank of Korea's full-allotment RP purchases and to the easing of the government's call market regulation. The Bank supported improvements in short-term funding conditions by including some credit bonds[4] in securities eligible for RP transactions and deciding to set the rate for fulll-allotment RP purchases at a relatively low level (0.78%). CP and short-term bonds, which saw net redemptions in March and April, shifted to net issuances in May, led by those rated A1. Those rated A2 or lower, however, remained sluggish, seeing net redemptions in May as well.

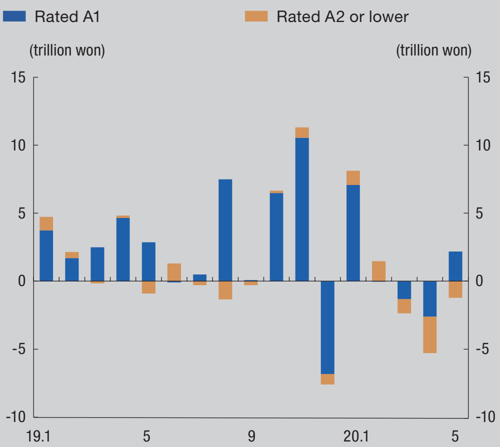
CP rates have recently declined, but credit risk aversion still appears to be high, given credit spread levels and issuance conditions. As of end-May, the CP (91-day) credit spread (109bp) far surpassed the long-term average (42bp) since 2005.

CP rates[1] and credit spreads[2]



Notes: 1) Final price quote yields (91-day, rated A1).
2) Compared with Monetary Stabilization Bond (91-day) rate.
3) Between January 2005 - May 2020.
Source: KOFIA.

Net issuance of CP and short-term bonds



Source: Yonhap Infomax.

4) In an effort to support liquidity provision on a large scale, the Bank of Korea broadened securities eligible for RP transactions to include debentures issued by specialized banks, general bank debentures, bonds issued by eight public organizations, and bonds issued by the Korea Deposit Insurance Corporation, in addition to existing securities eligible for such transactions, such as government bonds, Monetary Stabilization Bonds, government-guaranteed bonds, and MBSs issued by Korea Housing Finance Corporation.

(Corporate bond market)

In the corporate bond market, credit spreads widened rapidly starting in late March, but the widening trend has eased since mid-April, influenced for instance by the launch (on April 1) of the bond market stabilization fund.[5] In the primary market, issuance of prime corporate bonds (rated AA or higher) expanded, thanks to growing demand following investments in the bond market stabilization fund. However, issuance of non-prime corporate bonds, which are excluded from the bond market stabilization fund[6] (rated A or lower), has been relatively sluggish. Issuance rates of corporate bonds have consistently surpassed the yields of the existing bonds of individual corporations since March, and the gap between the yield and the issuance rate has widened further for non-prime corporate bonds since April.[7]

Corporate bond market conditions have improved somewhat, but there still appears to be credit risk aversion, especially for non-prime corporate bonds, given that credit spreads and issuance rate levels are still high. Credit spreads have recently been surpassing the long-term averages since 2005, for both prime and non-prime corporate bonds.

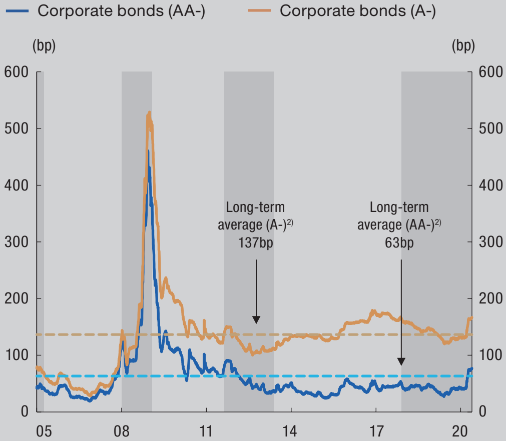
Issuance and net issuance of corporate bonds[1] by credit rating

(trillion won)

		2019			2020				
		Monthly average	Apr.	May	Jan.	Feb.	Mar.	Apr.	May
Issuance	Rated AA or higher	2.6	2.1	1.6	2.5	5.8	1.5	4.0	4.0
	Rated A or lower	1.2	2.6	1.0	0.7	0.9	1.0	0.2	0.9
Net issuance	Rated AA or higher	0.8	-1.0	-0.2	0.1	3.4	-0.6	1.1	2.2
	Rated A or lower	0.5	1.3	0.6	0.0	-0.1	0.1	-1.1	0.4

Note: 1) Based on public offering companies and private enterprises.
Source: Korea Securities Depository.

Corporate bond credit spreads by business cycle[1]



Notes: 1) Based on the business cycle reference dates of Statistics Korea; ▒ are business contraction phases.
2) Between January 2005 - May 2020.
Sources: KOFIA, Bank of Korea.

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5) The Bank of Korea's adoption of fulll-allotment RP purchases and the Corporate Bond-Backed Lending Facility (CBBLF) also contributed to the easing of credit risk aversion, the former by providing liquidity to financial institutions investing in the bond market stabilization fund and the latter by improving investor sentiment.

6) As for corporate bonds, investments were originally limited to bonds rated AA- or higher, but from May 19, investments have become possible even when corporate bonds falling into this category (as of April 1) are downgraded to A+.

7) Corporate bond (of public offering companies and private enterprises) issuance rate spreads (actual issuance rates - the averages for the yields of the company (or credit rating) set by private bond credit rating companies, weighted average by issuance amount) have expanded since the beginning of this year. Those rated AA or higher (rated A or lower): -6bp (+1bp) in January 2020 → -3 (-1) in February → +10 (+29) in March → +32 (+47) in April → +27 (+69) in May.

After showing instability since mid-March, the financial markets are assessed to be gradually steadying thanks to the series of market stabilization measures by the Bank of Korea and the government. However, there still are concerns about imbalances in supply and demand in the Treasury bond markets due to the third supplementary budget, while high credit risk aversion persists in the credit and securities markets, particularly related to non-prime bonds, due to concerns over the real economic shock. Financial markets could become unstable again depending on changing domestic and international conditions such as the spillover effects of COVID-19 and the reemergence of the US-China trade dispute. Accordingly, close monitoring of market developments is required.

Ⅲ

Future Monetary Policy Directions

1. Growth and Price Forecasts[64]

The current outlook is based on the assumption that the number of global confirmed COVID-19 cases will peak in the second quarter and that a large second wave will not occur in Korea, although smaller outbreaks could flare up on occasion.

Domestic economic growth to improve gradually after contraction

GDP growth rates for this year and the next are forecast to be -0.2% and 3.1%, respectively.[65] The domestic economy will contract greatly in the first half of this year, affected by the global spread of COVID-19, but is expected to improve gradually in the second half as slumps in private consumption and goods exports slowly ease.

By sector, although private consumption is expected to shrink, affected by the spread of COVID-19, it is forecast to shift to an increase in the second half of the year as income conditions improve, due for instance to government policies. Household income growth is forecast to decelerate significantly due to sluggish employment, slower wage growth and decreased self-employment income. The propensity to consume is likely to decline owing to the worsening of consumer sentiment and the reduction of spending resulting from avoidance of outside activities. In addition, a sharp drop in overseas spending by Korean residents as they avoid travelling abroad is expected to act as a factor contributing to the sluggishness of private consumption. However, an increase in the government's transfer payments related to COVID-19, such as disaster income provided by local governments including emergency disaster relief payments and childcare coupons, is forecast to contribute to expanding households' capacities for consumption.

Facilities investment is projected to increase slightly, primarily due to investment in IT sectors such as the semiconductor industry despite the delayed recovery of non-IT sector investment. Risk associated with future COVID-19 developments still remains, but investment in the semiconductor and display industries is expected to continue smoothly. However, in non-IT sectors, a considerable amount of investment adjustment is inevitable owing to factors such as deteriorating business conditions and increased uncertainty. Growth in intellectual property products investment, and private-sector R&D investment in particular, will slow slightly with corporate sales reversing to a decrease. Construction investment will continue to go through an adjustment as the private sector remains sluggish.

Exports are forecast to shift to a decline due to the global spread of COVID-19 this year, but are expected to improve modestly from the second half of the year as each country grad-

64) Based on the Bank of Korea's 「Economic Outlook Report」 released on May 28, 2020.

65) Under the positive scenario, in which governments around the world ease lockdowns rapidly when the spread of COVID-19 is contained sooner than forecast in the basic scenario in line with progress toward developing a cure or vaccine, GDP growth rates for this year and the next are forecast to be 0.5% and 3.8%, respectively. These figures would be -1.8% and 1.6%, respectively, under the negative scenario, in which the number of confirmed cases peaks during the third quarter and lockdowns are eased at a slower pace than in the basic scenario.

ually resumes economic activities. The current account surplus is projected to decrease compared to last year, led by the narrowing of the goods account surplus resulting from dampened global trade, more than offsetting the narrowing of the services account deficit in line with a sharp drop in the number of Koreans travelling abroad.

There is a high level of uncertainty surrounding the growth path, particularly as to how the COVID-19 situation develops. The upside risks to growth include a rebound of the global economy thanks to early containment of COVID-19, domestic and foreign policy actions to tackle the economic impact of the virus, and a faster-than-expected normalization of the Chinese economy. Among the downside risks are a prolonged spread of COVID-19, a revival of the US-China trade dispute, and a delay in the semiconductor industry's recovery.

Table III-1. Economic growth outlook[1)2)]

(%)

	2019[3)]	2020[e]			2021[e]		
	Year	H1	H2	Year	H1	H2	Year
GDP	2.0	-0.5	0.1	-0.2	3.4	2.8	3.1
Private consumption	1.7	-3.4	0.6	-1.4	6.3	2.4	4.3
Facilities investment	-7.5	2.6	0.5	1.5	5.7	7.4	6.5
Intellectual property products investment	3.0	2.0	2.4	2.2	3.7	3.1	3.4
Construction investment	-2.5	-0.2	-4.1	-2.2	-2.0	0.3	-0.8
Goods exports	0.5	-0.4	-3.7	-2.1	2.5	3.9	3.2
Goods imports	-0.8	1.2	-1.4	-0.2	3.9	4.0	3.9

Notes: 1) Year-on-year.
2) Figures are the forecast as of May 2020.
3) Reflects preliminary annual figures (released on June 2).
Source: Bank of Korea.

Inflation forecast to be in the lower 0% range in 2020

Consumer price inflation is forecast to record 0.3% this year, lower than last year. Downward pressures on prices are expected to increase, affected by declining international oil prices and a slowing economy following COVID-19, amid continued social-welfare policies by the government. However, rises in the Korean won/US dollar exchange rate and in agricultural, fishery & livestock prices will act as factors pushing up prices. Consumer price inflation is expected to record 1.1% in 2021 owing to improved economic conditions and the reduced effects of social-welfare policies as the impacts of low oil prices dissipate. Core inflation excluding food and energy prices is forecast to record 0.4% this year and 0.9% next year.

A look at various factors affecting prices shows that, in terms of overseas factors, international oil prices, which had plunged significantly due mainly to the demand contraction resulting from the spread of COVID-19 before rebounding in line with the partial easing of lockdown measures in major countries, are forecast to increase modestly as economies gradually reopen. In terms of domestic factors, demand-side inflationary pressures have weakened, while the rate of wage growth is expected to be lower than that in the previous year due to the economic slowdown and worsening business performance. Regarding other factors, upward pressures on inflation may come from rises in agricultural product prices, driven mainly by a base-period effect from last year and the unusually cold temperatures this spring, and the uptrend of livestock product prices in line with a drop in pork imports. Concerning government policies, the strengthening of social-welfare policies in education and healthcare is expected to exert downward pressure on prices, and declines in some indirect taxes and public service fees could also work as factors pulling inflation down. Increases in leasehold (*jeonse*) deposit prices and monthly rents (based on new contracts) since the end of last year are expected to work as factors speeding up the pace of growth in housing rental fees.

There is a high level of uncertainty surrounding the price path. Upside risks to prices include an accelerated rise of international oil prices, resulting from increased production cuts by major oil-producing countries, and a stronger economic recovery in line with the early containment of the COVID-19 pandemic. Among the downside risks are a delayed recovery of international oil prices, owing to continued sluggishness of global oil demand, and delayed improvement of domestic demand in line with a prolonged COVID-19 pandemic.

Table III-2. Inflation outlook[1)2)]

(%)

		2019	2020e			2021e		
		Year	H1	H2	Year	H1	H2	Year
CPI inflation		0.4	0.5	0.0	0.3	0.8	1.5	1.1
Core inflation	CPI excluding food & energy	0.7	0.4	0.5	0.4	0.8	1.0	0.9
	CPI excluding agricultural products & oils	0.9	0.6	0.7	0.6	0.9	1.1	1.0

Notes: 1) Year-on-year.
2) Figures are the forecast as of May 2020.
Source: Bank of Korea.

2. Major Considerations

Looking ahead, the Bank of Korea will operate its monetary policy while closely watching the impacts of uncertainties at home and abroad on the growth and inflation forecast paths, and devoting attention to financial stability as well. In this process, it will also carefully monitor the impacts of the spread of COVID-19, uncertainties regarding the US-China trade dispute and vulnerable emerging market countries, domestic and international financial market conditions, and financial imbalances.

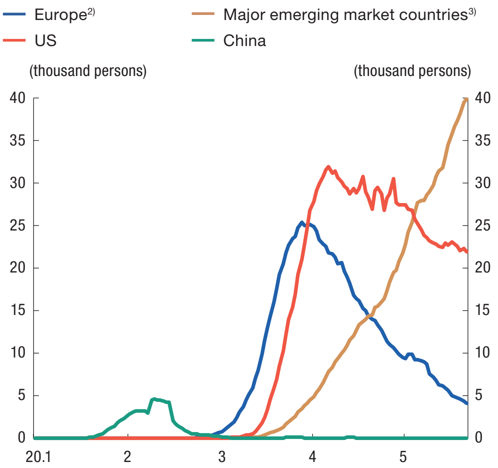
Impacts of the global spread of COVID-19

The world economy is expected to improve from the second half, but uncertainties regarding the pace and timing of recovery are very high. Major advanced countries including the US and European countries have been recently reopening their economies gradually and easing lockdown measures as the spread of the virus slows somewhat. However, the virus is still spreading in emerging market countries such as Brazil and Russia, which might limit their economic recoveries as well as the broader recovery of the global economy.

In addition, major advanced countries may see delayed economic recovery, as periods of resumption and contraction of economic activities are likely to alternate depending on the extent of the spread of COVID-19 until there is a cure or a vaccine. Even if the spread of the virus weakens, economic recovery might be limited by the avoidance of overseas travel in the private sector, stronger trade protectionism in countries around the world, and unemployment hysteresis.

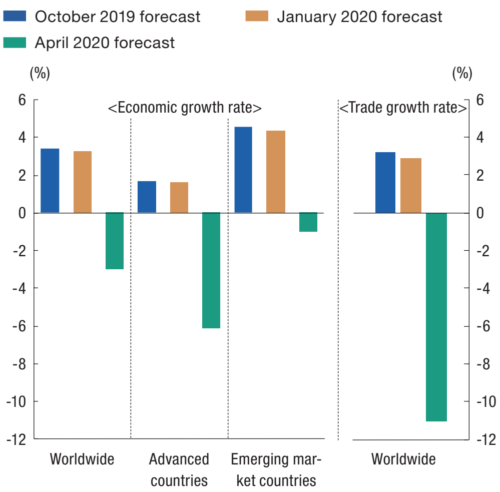
Since future real economic developments could vary greatly depending on the spread of the virus and countries' response measures, it is necessary to closely monitor the extent of the virus's spread and the effects of related policies.

Figure III–1. Global spread of COVID-19[1)]



Notes: 1) Daily new confirmed cases by region (based on 7-day moving averages).
2) Germany, Spain, the UK, Italy and France.
3) Russia, Brazil, Mexico, Argentina, Chile, Turkey, Peru and South Africa.
Source: Our World in Data.

Figure III–2. Economic and trade[1)] growth outlooks[2)] for 2020



Notes: 1) Goods and services.
2) Outlook at respective point in time.
Source: IMF WEO.

US-China trade dispute and uncertainties related to vulnerable EMEs

Uncertainties remain as to the US-China trade dispute and financial and economic conditions in vulnerable emerging market countries.

There are concerns that conflicts related to COVID-19 could reignite the US-China trade dispute. Tensions between the two countries have heightened: the US has placed responsibility on China for the spread of COVID-19 and mentioned the possibility of cancelling the Phase One trade agreement[66)] and imposing tariffs on Chinese goods, after which China stated that it might postpone a Phase Two trade deal indefinitely. The trade conflict appears to be spreading to the technology and financial sectors, as the US continues to hold Chinese firms in check[67)] and is strengthening financial regulations[68)] on China by limiting stock investment in China and restricting Chinese companies from being listed on US stock exchanges. The two countries are also sharply at odds over issues involving Hong Kong and Taiwan, which could heighten geopolitical risks in the East Asian region.

In addition, vulnerable emerging market countries may face growing concerns about financial and economic instability resulting mainly from declines in exports due to COVID-19 and currency depreciation. Emerging market countries whose economies are highly dependent on commodity exports and tourism are expected to see their current accounts worsen and their economies shrink further. Moreover, as credit risk aversion continues with the downgrading of credit ratings of some countries, emerging market countries

66) Skepticism is growing in the US that it will be difficult for China to implement the trade deal. The Peterson Institute for International Economics reported that China had imported only 19.8 billion dollars of US goods as of March, despite the Phase One trade deal requiring imports of 172.7 billion dollars. However, on June 2 the Office of the United States Trade Representative (USTR) stated that China was properly following the trade deal, so there are still also positive outlooks that the agreement will be implemented as planned.

67) The US Department of Commerce announced that it would impose licensing requirements on foreign companies located outside the US if they want to supply Huawei with semiconductor items that are the direct product of certain US Commerce Control List (CCL) software and technology.

68) The Federal Retirement Thrift Investment Board (FRTIB) announced that the Thrift Savings Plan (TSP) postponed its scheduled investment in an index fund in which Chinese stocks are included from the second half of this year. In addition, the US Senate unanimously passed a bill that would require US-listed foreign companies to disclose whether they were controlled by a foreign government and comply with the audit standards of the Public Company Accounting Oversight Board (PCAOB) for three years in a row.

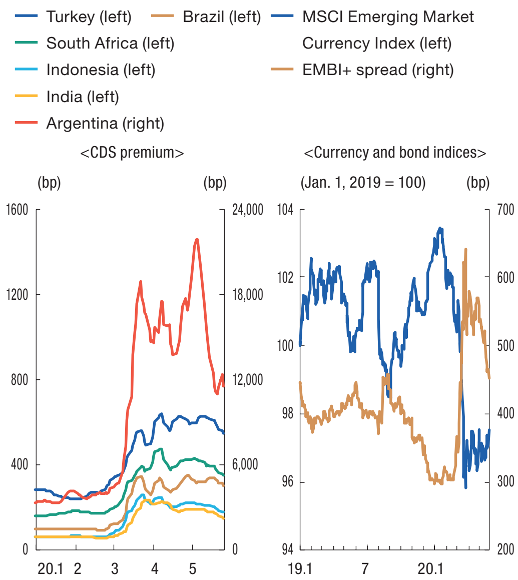
with weak economic fundamentals may experience greater capital outflows.

Financial and economic conditions at home and abroad could be affected significantly by the US-China trade dispute and changes in financial and economic conditions in emerging market countries, and in this regard, it is necessary to keep an eye on related developments.

Figure III–3. Global uncertainty index[1]

Note: 1) Global economic policy uncertainty index.
Source: Economic Policy Uncertainty.

Figure III–4. CDS premium[1] and currency & bond indices of emerging market countries



Note: 1) Based on 5-day moving averages.
Source: Bloomberg.

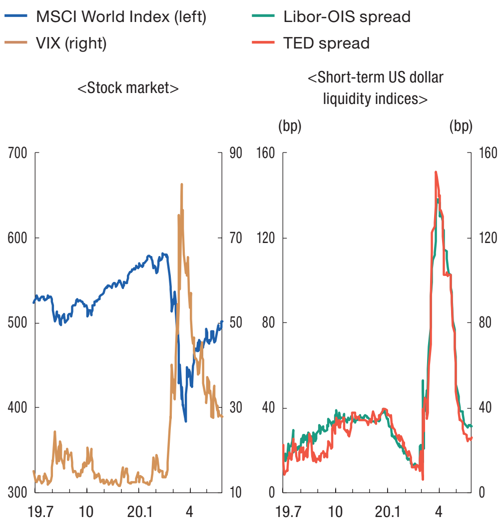
Domestic and international financial market conditions

Volatility had increased in the domestic and global financial markets due to the spread of COVID-19, but thereafter markets have been generally stabilizing, primarily due to the aggressive policy responses of individual countries and expectations of economic reopening. Stock prices showed lower volatility after a sharp rebound, and long-term interest rates fluctuated within a narrow range. US dollar funding conditions improved, and corporate bond credit spreads in major countries narrowed after having widened significantly.

However, there remain factors causing financial market unease. Despite the quick recovery of stock prices at home and abroad, the corporate performance outlook is worsening, raising concerns about a widening of the gap[69] between the real economy and financial markets. In this situation, a delay in economic recovery could bring about a rapid adjustment of market expectations and increased volatility of price variables such as stock prices. Furthermore, a prolongation of the pandemic could add to credit risks for households and corporations. With regard to the corporate sector, economic shocks from COVID-19 may cause corporate profitability to worsen and financial soundness to decline, consequently lowering corporate debt servicing capacity. As for the household sector, households may face greater debt repayment burdens due to the worsening employment conditions for vulnerable groups, including temporary and casual workers as well as the self-employed, and to a consequent slowdown in income growth.

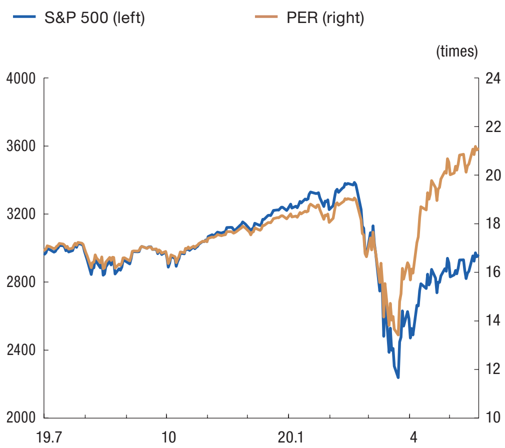
Although financial markets have been gradually stabilizing recently, credit risk aversion remains high, as does uncertainty about the real economic shock from COVID-19. Therefore, it is necessary to strengthen monitoring of factors causing market instability and closely examine movements of major price variables, foreign investment fund flows, and funding conditions for financial institutions and corporations.

Figure III-5. Stock market and short-term US dollar liquidity indices



Source: Bloomberg.

Figure III-6. Price-earnings ratio[1)]



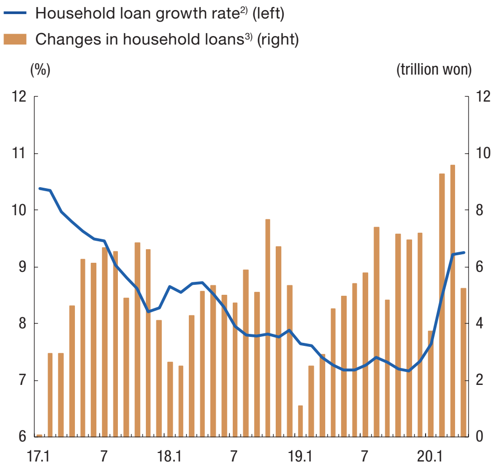
Note: 1) S&P 500 forward PER for the next 12 months.
Source: Bloomberg.

69) The S&P 500 forward price-earnings ratio was 20.85 on May 11, 2020, the highest recorded since 2002.

Financial imbalances

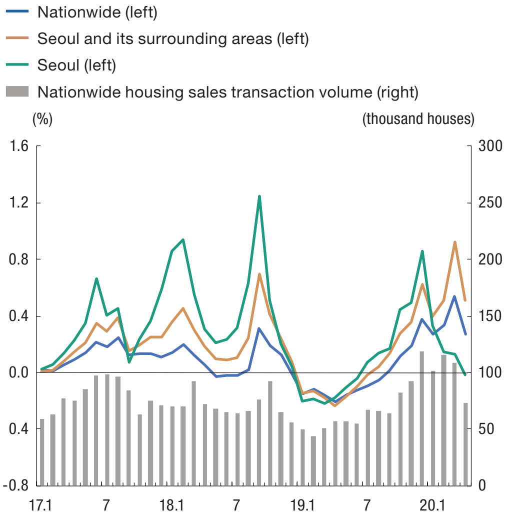
Looking at the recent state of financial imbalances, household lending has grown at a slower pace since April, due to a slowdown in the growth of mortgage lending following the decrease in housing transactions and to a decline in other lending in line with reduced consumption. Housing prices increased at a slower pace, falling in Seoul due to a contraction of homebuyer sentiment resulting from the spread of COVID-19.

Figure III–7. Household loan changes and growth rate[1)]



Notes: 1) Based on deposit banks; including mortgage transfers.
2) Year-on-year.
3) Month-on-month.
Source: Bank of Korea.

Figure III–8. Housing sales price growth rate[1)] and housing sales transaction volume



Note: 1) Month-on-month.
Source: Korea Appraisal Board.

Given the economic slump and the stronger government regulations on the real estate market, there seems to be only a slight chance of a renewed overconcentration of capital in the housing market for the time being. However, there is a need to continue the close monitoring of housing market and household lending trends, considering the sustained accommodative financial conditions.

3. 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 support the recovery of economic growth and ensure that consumer price inflation can be stabilized at the target level (2.0%) over a medium-term horizon, while also paying attention to financial stability.

The Bank will maintain its accommodative monetary policy stance as domestic economic growth is forecast to be sluggish, influenced by the spread of COVID-19, and as demand-side inflationary pressures are expected to remain weak. In this process, the Bank will closely examine the developments of COVID-19, its impacts on global and domestic financial sectors and economies, and changes in financial stability conditions.

Enhancement of monetary policy effectiveness

The Bank will consider all possible policy tools, given the high uncertainties in the policy environments at home and abroad. The Bank will also make continuous efforts to explain in more detail the background behind monetary policy decisions and expected effects, as the market is paying close attention to domestic and global economic conditions. Moreover, as inflation has hovered well below the target level for an extended period, the Bank of Korea will examine on a regular basis how the inflation target is managed and provide detailed explanations to enhance economic agents' understanding of inflation conditions.

Promotion of financial and foreign exchange market stability

The Bank of Korea will make particular efforts to promote the stability of financial and foreign exchange markets. There is a possibility that the financial and foreign exchange markets could respond sensitively to the spillover effects of COVID-19 and changes in the US-China trade dispute. Going forward, the Bank will continue to closely monitor the intermediary role of financial markets and the supply and demand conditions of bond and foreign exchange markets, and if needed, will take appropriate market stabilization measures in a timely manner.

Maintenance of financial system stability

The Bank of Korea will thoroughly monitor financial stability in line with changes in domestic and overseas financial and economic conditions and continue early warning activities concerning potential risks to the financial system. The Bank will particularly strengthen monitoring of potential risks in vulnerable sectors, paying attention to the possibility of a gradual emergence of these risks due to a prolongation of COVID-19.

Box III-1.

Examination of Export Environment Following Global Spread of COVID-19 and Assessment of Outlook

The export environment for Korea has worsened as COVID-19 has been spreading, with time lags, to countries around the globe. Outbreaks were limited to China, Korea and a few more countries earlier this year, but the virus has spread to Europe and the US since mid-March, and even to emerging market countries recently. Accordingly, COVID-19 had only limited effects on Korea's exports until March, but its impact has been growing since April.[1] With these recent developments taken into consideration, this section examines changes in the export environment in line with the global spread of COVID-19 and future risk factors and assesses the goods export outlook for this year.

(Global demand contraction)

Global import demand this year is expected to shrink, affected by the stronger-than-expected spread of COVID-19. Setbacks to the global supply, limited purchases[2] and a delay in customs clearance and logistics following the unprecedented lockdown measures that countries adopted to contain the pandemic will likely lead to a contraction in economic activities in these countries as well as in global trade. The degree of contraction in global production and trade is forecast to be larger than that during the financial crisis.[3] More specifically, China and the ASEAN-5 countries, with whom Korea is engaged in trade to a greater extent than during the financial crisis, are likely to see their growth rates declining[4] significantly, which will work to increase the negative impacts of the pandemic on Korea's exports. However, as major countries have been reopening their economies gradually starting from late April, global demand is forecast to pick up gradually from the second half of the year.

1) Figures related to goods exports are as follows:

(Year-on-year, %)

	Q3 2019	Q4	Q1 2020	Mar.	Apr.	May
Goods exports (GDP)	-0.1	3.4	6.3	..	..	..
Customs-cleared exports	-12.3	-11.8	-1.7	-1.4	-25.1	-23.7
Export volume index	-2.9	-0.2	5.6	10.1	-12.6	..

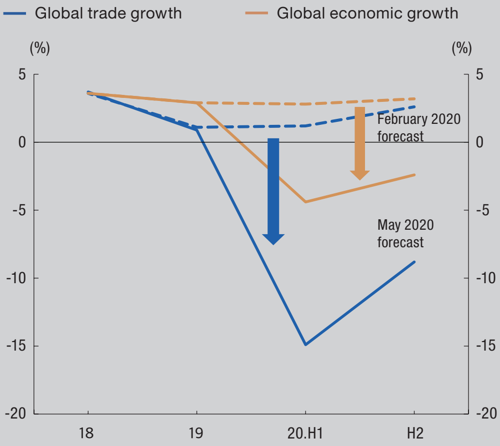
Sources: Bank of Korea, Korea Customs Service.

2) Consumption of some durable consumer goods, such as automobiles, which are difficult to buy through online, dropped sharply due to the closures of stores.

3) The IMF lowered (on April 14) its forecast for global economic growth for this year to -3.0%, far below the growth rate during the global financial crisis (-0.1% in 2009) and significantly below its previous forecast (+3.3%).

4) While the share of exports to China in Korea's total exports increased from 11.5% in 2009 to 25.1% in 2019, China is expected to see its growth rate decline to a larger extent (9.4% in 2009 → 1.6% in 2020^e, -7.8%p) than the US (-2.5% in 2009 → -6.7% in 2020^e, -4.2%p) in 2020 compared with during the financial crisis.

Global economic and trade growth[1] forecasts



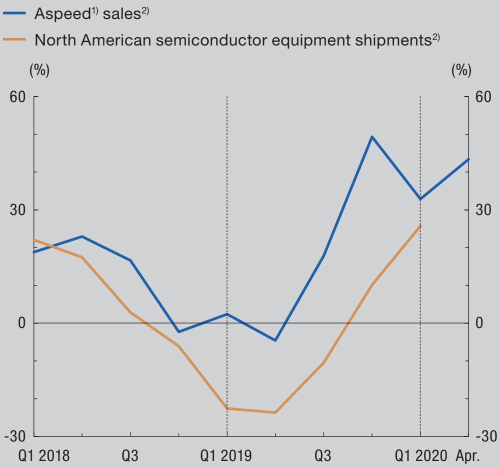
Note: 1) Year-on-year.
Sources: Forecasts by the IMF and the Bank of Korea.

(Delay in recovery of semiconductor industry)

The spread of COVID-19 is having both positive and negative impacts on the semiconductor industry, but in the short term, the negative impacts are expected to outweigh the positive ones. This is mainly because the demand for durable consumer goods, such as mobile phones and home appliances that account for a larger share[5] of total demand for semiconductors, declined due to lockdown measures, which more than offset the increased demand for servers in line with the spread of non-face-to-face economic activities.

With the reopening of economies around the world, the delayed demand for mobile phones and home appliances will start to see growth from the second half of this year and semiconductor exports will show gradual recovery accordingly. The sustained improvements in semiconductor-related leading indicators, such as shipments of semiconductor equipment and semiconductor design orders, appear to be underpinning the recovery of the industry. However, the possibility cannot be ruled out of a further delay in its recovery, as businesses will postpone semiconductor purchases if the fixed prices of semiconductors fall due to a contraction in the demand from downstream industries resulting from the spread of COVID-19.

Leading semiconductor indicators



Notes: 1) This is a semiconductor design company whose sales are considered to be a leading indicator of server DRAM.
2) Year-on-year growth rate.
Sources: Aspeed, SEMI.

(Plunge in global oil prices)

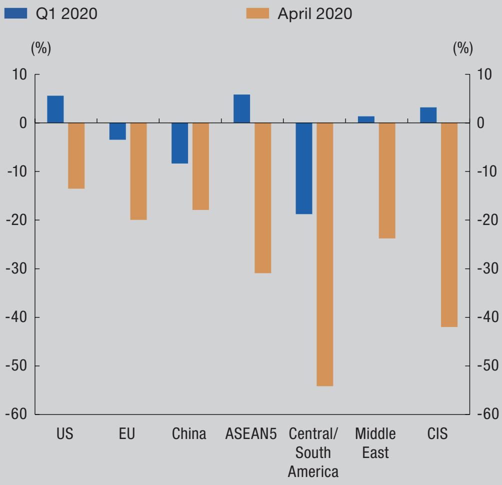
Amid weakening demand, sustained low oil prices are expected to have negative impacts on Korea's exports by causing economic downturns in oil-producing countries and worsening business conditions of crude oil-related indus-

5) Out of the total global demand for DRAM, mobile phones accounted for 36.2%, servers 23.4%, PCs 13.9%, and home appliances 9.9% in 2019 (Gartner, March 2020).

tries such as shipbuilding, machinery and steel. More specifically, if global oil prices remain low, this will lead to economic slowdowns in oil-producing countries including Middle Eastern countries and Russia, in turn working to decrease exports of automobiles and machinery, as these countries are their major export destinations.[6) Furthermore, if this trend of low oil prices becomes prolonged, investment related to the US shale industry will decline, and exports to the US will decrease accordingly. The trend will also lead to a drop in shipbuilding and overseas construction orders and a fall in demand for oil pipelines, negatively affecting shipbuilding, machinery and steel exports.

Exports to the Middle East and CIS countries grew during the first quarter, but shifted to a sharp drop in April when global oil prices plunged. The decline in exports to Central and South American countries also accelerated.

Korea's exports by country[1)]



Note: 1) Year-on-year growth rate.
Source: Korea Customs Service.

(Reemergence of the US-China trade conflict)

After intensifying last year, the US-China trade conflict appears to be worsening again amid the global spread of COVID-19.

Tensions between the US and China had been easing following the Phase One trade agreement in January this year, but if their conflict intensifies again, downside risks to Korea's exports are likely to increase. A worsening trade conflict between the two countries could increase global economic uncertainty, as it did last year, and dampen global investment, which has huge import inducement effects.[7)] The US restrictions on Chinese firms and the accelerating exodus of global companies from China could also have

6) Oil producing countries (based on Middle Eastern and CIS countries) do not account for a large share of Korea's total exports (5.5% as of 2019), but they make up relatively large shares of Korea's automobile and machinery exports (15.4% and 9.9%, respectively).
7) The IMF estimated (in October 2019) that the global economic growth rate declined by 0.4%p due to the US-China trade dispute.

negative impacts on Korea's exports, which are highly dependent on China. For instance, slowing growth of Chinese tech firms and a growing number of reshoring multinational companies based in China could work to decrease Korea's exports, as China accounts for a large share of Korea's exports of intermediate goods. Furthermore, if China finds it hard to export to the US due to the escalating trade dispute, China could provide its manufactured goods to East Asian countries at low prices, further intensifying price competition with Korean products.

(Assessment of the outlook)

Given the changes in external conditions mentioned earlier, goods exports (on a GDP basis) this year are expected to be far lower than the February forecast. However, considering the favorable performances during the first quarter, additional demand for semiconductors related to server expansions, and improvement in the Chinese economy in the second half of the year, Korea's exports are likely to be more favorable than the global goods trade.

More specifically, Korea's exports were more favorable than global trade in the first quarter,[8)] led chiefly by favorable semiconductor demand and exports in accordance with existing contracts, more than offsetting delayed operations in China due to the outbreak of COVID-19. Furthermore, semiconductor exports, after having been sluggish last year, are expected to lead Korea's exports, driven by strong demand for servers in line with growing non-face-to-face economic activities, and also by demand for mobile phones and home appliances, which is forecast to pick up from the second half. Korea's exports are also likely to be boosted by the Chinese economy,[9)] which is forecast to improve in the second half boosted largely by China's relatively effective disease control and the Chinese government's aggressive policy measures to stimulate domestic demand.

However, the possibility of a further delay in global economic recovery cannot be ruled out in the event of a second wave of infections, and if the Chinese economy, currently more favorable than those of major countries, is hit hard again by the US-China trade dispute, this will have substantial impacts[10)] on Korea's exports to China. In this regard, it is necessary to step up monitoring of developments of the pandemic and the trend of the trade conflict between the two countries.

8) The global trade volume decreased by 2.9% year-on-year in the first quarter, but Korea's goods exports grew by 6.3% based on real GDP.

9) Korea's exports to China accounted for 25.1% of its total exports (customs clearance basis) in 2019.

10) Korea's exports to China declined by 16.0% in 2019 when the US-China trade conflict intensified significantly, far lower than the rate of total export growth (-10.4%).

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