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Monetary Policy Report

2021. 3

BANK OF KOREA

Bank of Korea Mid- and Long-term Strategic Plan (BOK 2030)

• **Vision**	**The Bank of Korea** **: Taking the lead in stabilizing and developing the national economy**	
• **Strategic Directions**	**A**gility	Pursue Innovation in a Flexible and Swift Manner
	Collaboration	Bolster Synergy Through Collaboration
	Expertise	Reinforce Policy and Research Capability

BANK OF KOREA

Monetary Policy Report

2021. 3

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 March 2021 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 November 2020 through the date of the Monetary Policy Board meeting for monetary policy decision-making in February 2021.

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.

March 2021

Juyeol Lee

Lee, Juyeol

Governor

Bank of Korea

Monetary Policy Board

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

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 the 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% in terms of consumer price inflation (year-on-year).

- o **(Medium-term horizon)** Since consumer price inflation is affected not only by monetary policy but also by various other factors at home and abroad, the inflation target is meant to be achieved over a medium-term horizon, in consideration of price changes owing to transitory and irregular factors and of the lag in monetary policy transmission.

- o **(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 based on a comprehensive evaluation of inflation and growth outlooks as well as their uncertainties and risks, the degree of anchoring of inflation expectations, and financial stability conditions.

- o **(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)** Achieving price stability over the medium term should be based on financial stability, and the Bank pays careful attention to financial stability conditions in its conduct of monetary policy.

- o **(Efforts to stabilize financial market)** The Bank makes efforts to stabilize the financial market and restore the financial intermediary function in the event of financial unrest, given that it constrains the monetary policy transmission channel and undermines macroeconomic stability.

- o **(Attention to financial imbalances)** As persistent financial imbalances such as the buildup of debt could undermine macroeconomic stability, the Bank pays due attention to financial imbalances in conducting its monetary policy.

  - The Bank examines, assesses and announces financial stability conditions on a regular basis, to prevent excessive accumulation of financial imbalances that may be brought about by monetary policy implementation.

  - Since there are limits to maintaining financial stability solely through monetary policy, which affects the whole economy, monetary policy needs to be complemented by macroprudential policies to prevent accumulation of financial imbalances.

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[Monetary Policy Operating Conditions]

1 A look at financial and economic conditions in Korea and abroad between November 2020 and February 2021 finds the following. The trend of recovery in the global economy continues, but has weakened amid stronger restrictions on movement following the resurgence of COVID-19. Meanwhile, expectation of economic recovery seems to be heightening with the commencement of vaccinations; however, uncertainties still remain with a possible delay in the vaccine distribution and the spread of COVID-19 variants. The US economy exhibited a moderate recovery with consumption increasing substantially in January 2021. Meanwhile, the economy in the euro area remained sluggish, owing to the strengthening and expanding of containment measures in major countries at the beginning of the year. The trend of improvement in the Japanese economy weakened, affected by the declaration of a state of emergency in January 2021. China's economy continued its robust growth with investment expanding and exports showing buoyancy.

Economic growth in major economies[1)]

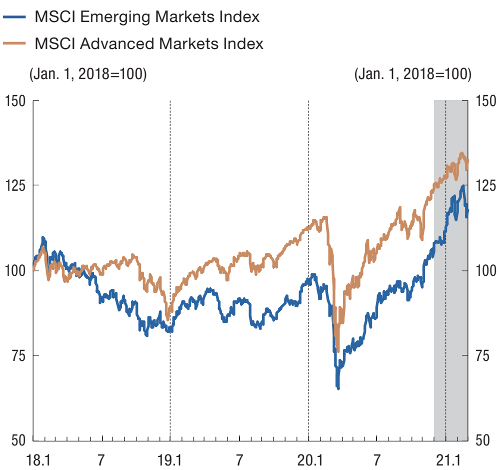
(%)

	2018	2019	2020				
	Year	Year	Year	Q1	Q2	Q3	Q4
US	3.0	2.2	-3.5	-1.3	-9.0	7.5	1.0
Euro area	1.9	1.3	-6.8	-3.7	-11.7	12.4	-0.6
Japan	0.6	0.3	-4.8	-0.6	-8.3	5.3	3.0
China	6.7	6.0	2.3	-6.8	3.2	4.9	6.5

Note: 1) The quarterly rates of growth are quarter-on-quarter (seasonally adjusted) for the US, Japan and the euro area, and year-on-year for China.
Sources: Individual countries' published statistics.

The international financial market saw a temporary increase in credit risk aversion, due mainly to the resurgence of COVID-19, and then generally stabilized, influenced for instance by COVID-19 vaccinations in major countries and the prospect of a large-scale fiscal stimulus package in the United States. Global stock prices remained on the rise, hitting new record highs repeatedly, on the approval and rollout of vaccines, the prospect of a further large-scale fiscal stimulus package in the United States, and favorable corporate earning reports. The US dollar weakened relative to currencies of major countries in December 2020, and then strengthened entering 2021.

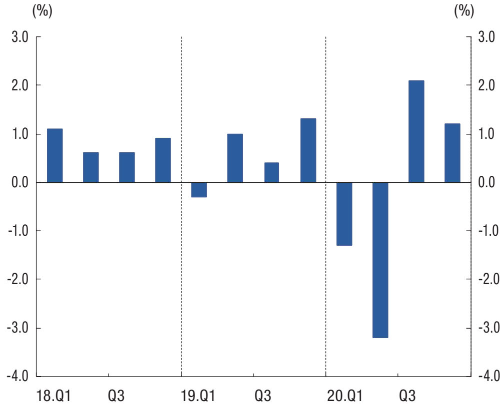
Share price indices of advanced and emerging markets



Source : Bloomberg.

2 The Korean economy continued to show a moderate recovery. Consumption was sluggish, affected by stronger social-distancing measures. However, exports picked up, led mainly by the IT sector, and construction investment recovered slightly from its slump. As a result, real GDP in the fourth quarter increased by 1.2% compared to the previous quarter.

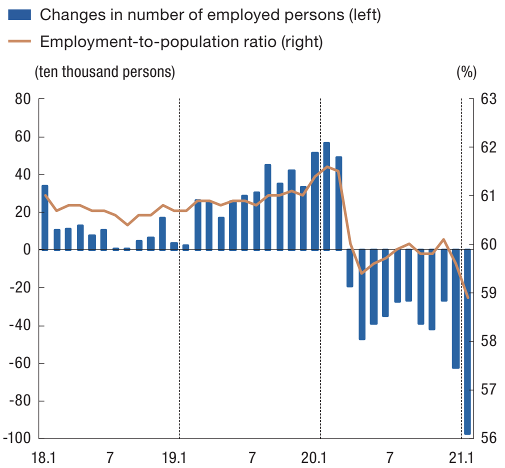
Real GDP Growth[1)]



Note: 1) Quarter-on-quarter (seasonally adjusted), reflects fourth quarter preliminary figures of 2020.
Source: Bank of Korea.

The slump in employment conditions deepened. Due to the resurgence of the pandemic and stronger social-distancing measures, the number of persons employed declined by a much larger amount (year-on-year) by 628,000 and 982,000 in December 2020 and January 2021, respectively. The (seasonally adjusted) employment-to-population ratio also fell, owing to a sharp decline in the number of persons employed.

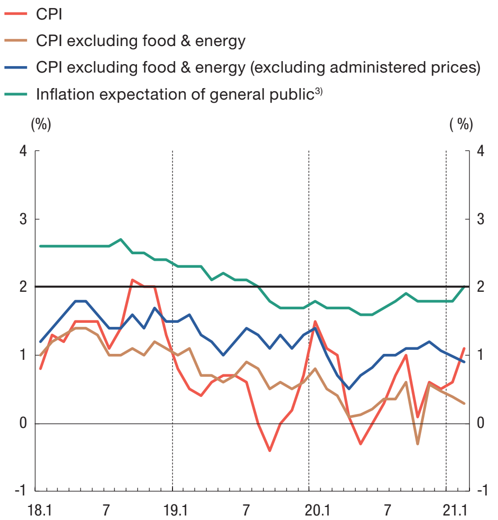
Changes[1)] in number of employed persons and employment-to-population ratio[2)]



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

3 Consumer price inflation ran in the mid-0% level between the fourth quarter of 2020 and January 2021, and then rose considerably to the lower-1% level in February 2021. While demand-driven inflationary pressures remained at a low level, upward forces on inflation included the accelerating pace of increase in international oil prices, and disruptions in the supply of agricultural products and some livestock products following severe cold weather and the spread of avian influenza. Core inflation (excluding changes in food and energy prices from the CPI) has run at the mid-0% level since the second half of 2020, and the inflation expectations of the general public have recently risen to the 2% level.

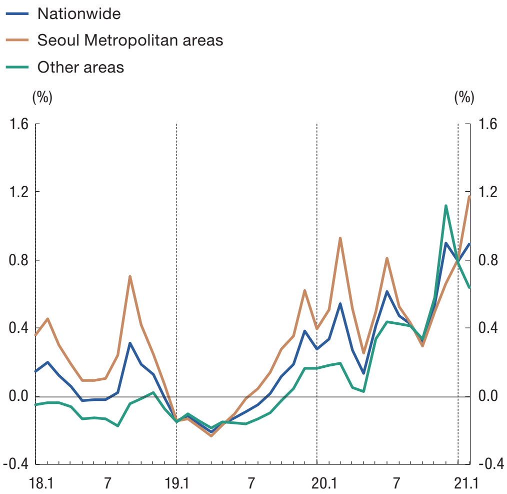
Inflation[1)2)]



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

Housing sales prices showed an accelerated upward trend in the fourth quarter of 2020, and sustained high rates of increase between January and February 2021. Leasehold (jeonse) deposit prices also rose at a higher pace in the fourth quarter of last year, and sustained the upward trend between January and February 2021.

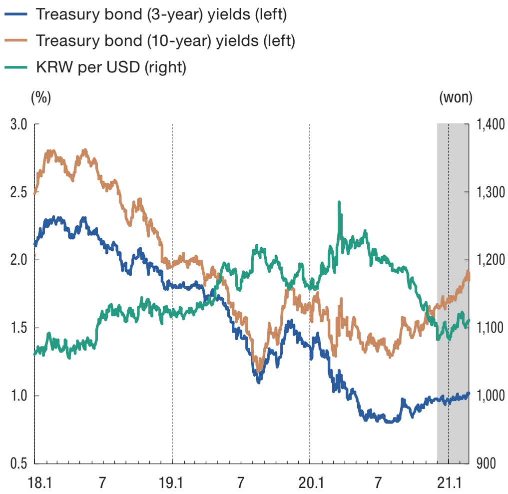
Housing sales price growth rate[1)]



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

4 Treasury bond yields - long-term bond yields in particular - remained on the rise. The 10-year Treasury bond yield rose in December 2020, on expectations for an agreement on the US fiscal stimulus package, and the supply of COVID-19 vaccines in major countries. It then rose further entering January 2021, on expectations for fiscal expansion by the new US administration, the influence of improvements in economic indicators at home and abroad, and an expected increase in government bond issuance related to support for small businesses hit by the COVID-19 pandemic. The Korean won/US dollar exchange rate declined in December 2020 on stronger risk appetite and then rebounded this year on the prospect of a relatively solid recovery in the US economy.

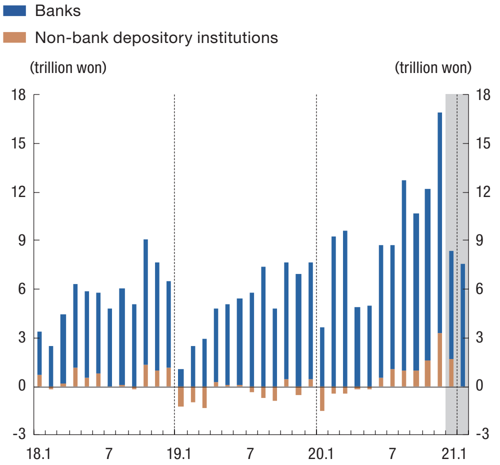
Korean Treasury bond yield and exchange rate (KRW per USD)



Sources: Bank of Korea, KOFIA.

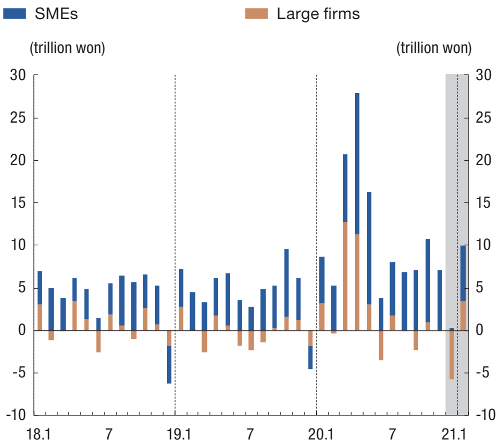
5 Household lending maintained strong growth on increased housing-related fund demand and continued demand related to stock investment and funds for living expenses. Corporate lending continued to grow, led by lending to small and medium-sized enterprises, due to ongoing COVID-19-related fund demand from SMEs and sole proprietors and continued support from the government and financial institutions.

Changes in household loans[1)2)3)]



Notes: 1) Month-on-month.
2) Including mortgage transfers.
3) Figures for January 2021 are based on the Bank of Korea advance estimate for banks and have not been released for non-bank depository institutions.
Source: Bank of Korea.

Changes in corporate loans[1)2)]

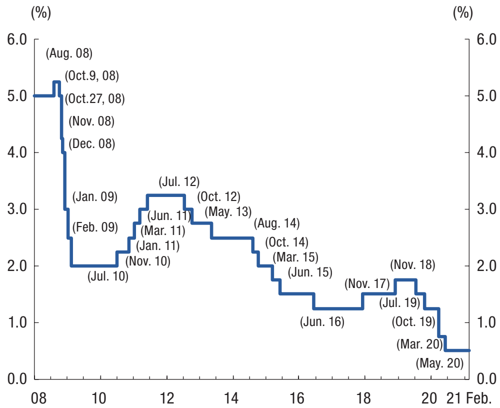


Notes: 1) Month-on-month.
2) Based on banks.
Source: Bank of Korea.

[Conduct of Monetary Policy]

⑥ The Bank of Korea maintained its accommodative policy stance to support the recovery of growth and to help inflation stabilize at the 2% target over a medium-term horizon. In this process, it closely examined risk factors such as the global and domestic development of the COVID-19 pandemic, its financial and economic impacts and changes in financial stability conditions. Under this policy stance, the Bank of Korea maintained the Base Rate at 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 A detailed look at the Base Rate decisions during this period, and the backgrounds behind them, are as follows.

At the January meeting, the Board left the Base Rate unchanged at 0.50%, considering that macroeconomic uncertainties still remained high, affected by the resurgence of the pandemic, despite modest recovery in the domestic economy bolstered by faster-than-expected improvement in exports. Although consumer spending had contracted, due mainly to stronger social-distancing measures, export growth had increased, led by the IT sector, and facilities investment continued to recover. Therefore, it was expected that the domestic economy would recover gradually, led by exports and investment. However, it was judged that uncertainties surrounding the growth path were high, as the degree of economic recovery would be heavily dependent upon the evolution of COVID-19 and the status of vaccine distribution. Consumer price inflation remained low at the mid-0% level, reflecting prolonged effects from the decline in the prices of petroleum products and public services. It was forecast that consumer price inflation would run at the mid- to upper-0% level for some time and then gradually increase to the 1% level. On the financial stability side, household loan growth remained high, and housing prices accelerated in Seoul and its surrounding areas.

At the February meeting, the Board decided to leave the Base Rate unchanged at 0.50%. Expectations of economic recovery had heightened, led by the moderated spread of the virus globally and the prospect of a fiscal stimulus package by the US administration, ahead of the rollout of COVID-19 vaccines at home. However, high uncertainties remained unresolved related to COVID-19, including the emergence of COVID-19 variants and a possible delay in the supply of vaccines, and the resulting economic trends. The Board therefore judged there was a need to maintain the current accommodative monetary stance. The Korean economy had recovered at a moderate pace overall, but showed varying movements by sector. It was expected that the economy was likely to continue its recovery, led by exports and investment. Exports sustained their buoyancy and facilities investment continued to recover while consumption remained weak as stronger social distancing was prolonged. As a result, GDP growth this year was projected to be around 3.0%. It was forecast that consumer price inflation would run at the 1.3% level, slightly exceeding the November forecast of 1.0%, largely reflecting the increase in global oil prices and gradual improvement in economic activity. Meanwhile, on the financial stability side, household loan growth had accelerated, and housing prices continued to increase rapidly in all parts of the country. As a result, the Board saw a growing need to pay attention to the risk of financial imbalances.

8 The Bank of Korea is using various policy instruments to promote stability and smooth credit flows in the financial and foreign exchange markets.

The Bank increased the total ceiling on the Bank Intermediated Lending Support Facility on three occasions last year (in March, May, and October 2020) by a total of 18 trillion won, to 43 trillion won. The ceiling for the Support for SMEs Affected by COVID-19 Program (set up in March 2020) and for the Support for Small Businesses Program (set up in October 2020) is 16 trillion won in total. With such financial support from the Bank of Korea, bank loans amounting to 25.2 trillion won were extended to 105,716 establishments between March 2020 and January 2021 under the Support for SMEs Affected by COVID-19 Program. As for the Support for Small Businesses Program, bank loans worth 0.7 trillion won were extended to 5,789 establishments between October 2020 and January 2021, showing steady growth in support loan performance.

Programs under the Bank Intermediated Lending Support Facility

(trillion won, %)

Program	Ceiling	Interest rate
Support Program for Trade Financing	2.5	0.25
Support Program for New Growth Engine Development and Job Creation[1)]	13.0	0.25
Program for Stabilization of SME Lending[2)]	5.5	0.25
Support Program for Regional SMEs	5.9	0.25
Support for SMEs Affected by COVID-19	13.0	0.25
Support for Small Businesses	3.0	0.25
Total	43.0[3)]	-

Notes: 1) 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).
2) Includes the support that had been formerly provided under the Support Program for Facilities Investment.
3) Includes reserves of 0.1 trillion won.
Source: Bank of Korea.

In addition, the Bank of Korea conducted outright purchases of Treasury bonds amounting to 1.5 trillion won on November 27, 2020, thereby finalizing the planned expansion of outright purchases of Treasury bonds announced by the Bank in September 2020. As a result, the total amount of outright purchases conducted by the Bank in 2020 reached 11 trillion won. On February 26, 2020, the Bank announced another plan to expand outright purchases by a total of 5~7 trillion won during the first half of 2021. The measure aims to ease volatility in market interest rates, as a significant increase in Treasury bond issuance is expected amid the recent escalation of market rate volatility.

On December 24, 2020, the Bank of Korea, jointly with the government and Korea Development Bank, extended the period of corporate bond and commercial paper purchases through an SPV by six months, while expanding the share of subprime bond purchases, aiming to support financing of low-rated companies facing difficulties from the prolonged COVID-19 pandemic. Moreover, the Bank provided the first round of lending (1.78 trillion won) to the SPV on July 23, 2020, followed by the second round (1.78 trillion won) on January 12, 2021. Therefore, the total amount of funds raised so far since the SPV's establishment on July 14, 2020 amounts to 5 trillion won, with the 2 trillion won added to the 3 trillion won from the first round of funding. As of the end of January 2021, the SPV had purchased 2.5 trillion won worth of corporate bonds and commercial paper.

In December 2020, the Bank of Korea also extended its currency swap agreement with the US Federal Reserve by six months, consequently extending the expiration date from March 31 to September 30, 2021. The goal was to preemptively respond to the possible resurgence of market anxiety related to COVID-19, despite a recovery in risk appetite in the international financial markets and generally stabilized global dollar markets and domestic foreign exchange markets.

Furthermore, the Bank of Korea terminated its Corporate Bond-Backed Lending Facility on February 3, 2021. This decision was made taking into account that the financial markets remain stable overall, the liquidity conditions of financial institutions including securities firms are favorable, and the credit market support through the SPV which purchases corporate bonds and commercial paper is ongoing.

9 The Governor of the Bank of Korea held a press conference in December 2020 with a view to enhancing understanding of recent inflation

conditions and future inflation developments, and explained the outcome of the Bank's examination of its inflation targeting operations, concerning which a related report was published. The report evaluates the inflation in 2020 and looks into future inflation conditions and outlooks. A comprehensive assessment was made to identify any room for improvement regarding the inflation targeting framework, and the Bank decided, in consultation with the government, that the current method be maintained until the next assessment.

Furthermore, the Bank amended certain text of the General Principles of Monetary Policy Operation via the publication of Monetary Policy for 2021. A key change was the explicit inclusion of efforts to stabilize the financial market under the "Consideration of financial stability" section, in addition to the mention of attention to financial imbalances. In line with the Bank's employment of wide-ranging monetary policy tools in response to significantly expanded financial market volatility affected by COVID-19 in 2020, the Bank of Korea expressly reflected in the General Principles its considerations of financial market stability and of financial intermediary conditions, as well as its careful attention to the buildup of financial imbalances, in its monetary policy operations.

Moreover, the Bank of Korea continued its research on technological and legal aspects of Central Bank Digital Currency (CBDC) to preemptively cope with future changes in the payment and settlement environment which could increase the need for CBDC adoption. On the technology side, the Bank is consulting with a third party as a preliminary step to setting up a pilot system in a virtual environment to test the performance and stability of CBDC. In terms of the legal considerations, the Bank is operating a legal advisory committee, while outsourcing research on the topic of legal issues and legislative direction relevant to CBDC. In the meantime, the Bank of Korea is closely monitoring changes in the environment surrounding CBDC, while enhancing information sharing and cooperation with other central banks.

[Future Monetary Policy Directions]

⑩ A look at the outlooks for growth and inflation is as follows. It is forecast that GDP will record a growth rate of 3.0% this year. The Korean economy is predicted to recover steadily, driven by exports and investment due to an improvement in the global economy, while private consumption will grow slowly. Although the recovery of private consumption is expected to be slower than previously forecast affected by the continuing COVID-19 pandemic, facilities investment is predicted to remain solid driven mainly by the IT sector. Construction investment is forecast to complete its adjustment and then shift to a recovery. Exports are expected to sustain their improvement, driven by recovery in the global economy and improvement in the semiconductor business. There is a high level of uncertainty surrounding the growth path. The upside risks to growth include early containment of COVID-19, accelerated recovery of the global semiconductor sector and additional economic stimulus at home and abroad. Among the downside risks are continued spread of COVID-19, rising tensions between the US and China and a delay in improvement of employment conditions.

Economic growth outlook[1]

(%)

	2020[2]			2021e			2022e
	H1	H2	Year	H1	H2	Year	Year
GDP	-0.7	-1.2	-1.0	2.6	3.4	3.0	2.5
Private consumption	-4.4	-5.5	-4.9	0.2	3.8	2.0	2.8
Facilities investment	5.6	8.0	6.8	6.9	3.8	5.3	3.0
Intellectual property products investment	3.3	4.0	3.6	4.1	4.0	4.1	3.5
Construction Investment	1.7	-1.8	-0.1	-1.2	2.6	0.8	2.1
Goods exports	-2.9	1.7	-0.5	13.0	2.0	7.1	2.3
Goods imports	-0.9	0.7	-0.1	7.6	5.3	6.4	3.3

Notes: 1) Figures are the forecast as of February 2021.
2) Reflects fourth quarter preliminary figures of 2020.
Source: Bank of Korea.

Consumer price inflation is forecast to rise to 1.3% in 2021, increasing significantly from 0.5% in 2020, as international oil prices are expected to considerably exceed last year's level. Core inflation excluding food and energy prices is forecast to increase from 0.4% last year to 1.0% this year. Upside risks to prices include a faster rise in food and international commodity prices, and a stronger recovery in demand caused by COVID-19 vaccinations. Among the downside risks is worsening sluggishness in demand due to a resurgence of COVID-19.

Inflation outlook[1)2)]

(%)

		2020			2021e			2022e
		1H	2H	Year	1H	2H	Year	Year
CPI inflation		0.6	0.5	0.5	1.2	1.4	1.3	1.4
Core inflation	CPI excluding food & energy	0.4	0.3	0.4	0.6	1.3	1.0	1.3
	CPI excluding agricultural products & oils	0.6	0.7	0.7	0.9	1.3	1.1	1.3

Notes: 1) Year-on-year.
2) Figures are the forecast as of February 2021.
Source: Bank of Korea.

⑪ The Bank of Korea will continue to conduct its monetary policy in order to support the economy and stabilize consumer price inflation at the target level (2%) over a medium-term horizon, while paying attention to financial stability.

As the recovery in the Korean economy is expected to be modest and inflationary pressures on the demand side are forecast to remained weak, the Bank will maintain its accommodative monetary policy stance. In this process, the Bank will thoroughly assess developments related to COVID-19 as well as the effects of the policy measures taken in response to the pandemic, while paying attention to changes in financial stability conditions such as fund flows to asset markets and household debt growth.

I

Monetary Policy Operating Conditions

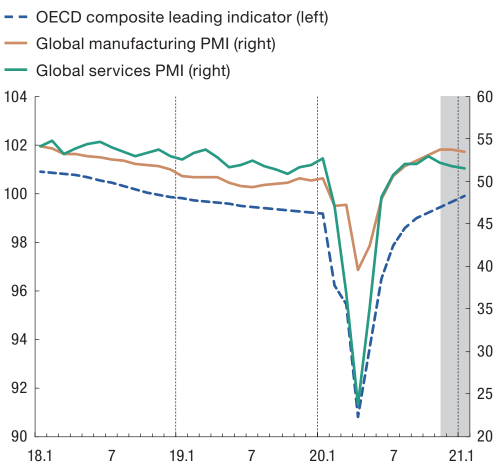
1. Global Economy

Global economic recovery weakens

The trend of recovery in the global economy continues, but has weakened amid stronger restrictions on movement following the resurgence of COVID-19. The OECD composite leading indicators grew at a slower pace, and the global all-industry PMI exceeded the benchmark, but continued to decline[1] from November last year to January this year, led by the services industry. Meanwhile, expectations for global economic recovery seem to be heightening with the start of vaccination campaigns in some countries. However, uncertainties over the economic recovery still remain due to a possible delay in vaccine distribution and the spread of COVID-19 variants.

By country, the US economy exhibited a moderate recovery with a substantial increase in consumption[2] in January 2021. Meanwhile, the economy in the euro area remained sluggish, owing to the strengthening and expanding of containment measures in major countries at the beginning of 2021. The trend of improvement in the Japanese economy weakened,[3] affected by the declaration of a state of emergency in January 2021. The Chinese economy continued its robust growth with investment expanding and exports showing buoyancy.[4] The ASEAN-5 countries saw sluggish domestic demand due to the resurgence of COVID-19, despite accelerated growth in exports. However, domestic demand in India improved from the end of 2020.[5]

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.

1) The global all-industry PMI stood at 53.3 in October 2020, and declined to 53.1 in November 2020, to 52.7 in December 2020, and further down to 52.3 in January 2021.

2) Retail sales, which had fallen for two consecutive months since last November, rose by a large extent (5.3%) in January 2021 on the back of the economic impact payment.

3) The services PMI stayed below the benchmark (50) in January 2021 both in Japan and in the euro area amid sluggish consumption indicators.

4) In China, growth in fixed-investment accelerated gradually (2.6% in November 2020, and 2.9% in December 2020) and exports recorded double-digit growth (20.6% in November, 18.1% in December), led by personal protective equipment and electronics.

5) The all-industry PMI in India greatly exceeded the benchmark, and industrial production and exports shifted to an increase in December 2020 year-on-year.

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

(%)

	2018	2019	2020				
	Year	Year	Year	Q1	Q2	Q3	Q4
World	3.5	2.8	-3.5	-	-	-	-
Advanced economies	2.2	1.6	-4.9	-	-	-	-
US	3.0	2.2	-3.5	-1.3	-9.0	7.5	1.0
Euro area	1.9	1.3	-6.8	-3.7	-11.7	12.4	-0.6
Japan	0.6	0.3	-4.8	-0.6	-8.3	5.3	3.0
Emerging market and developing economies	4.5	3.6	-2.4	-	-	-	-
China	6.7	6.0	2.3	-6.8	3.2	4.9	6.5
India[3)]	6.5	4.0	..	3.0	-24.4	-7.3	0.4
ASEAN-5[4)]	5.3	4.8	-3.5	1.4	-8.7	-4.1	-2.6
Brazil	1.8	1.4	..	-0.3	-10.9	-3.9	..
Russia	2.8	2.0	-3.1	1.6	-8.0	-3.4	..

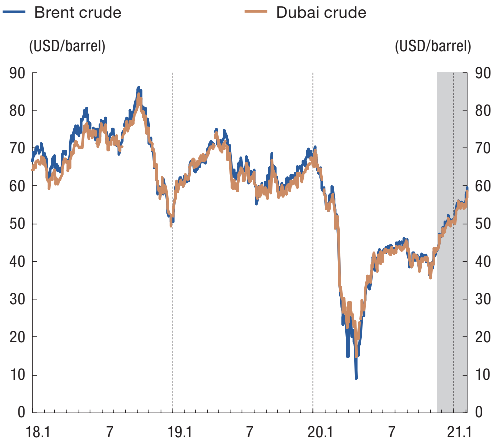
Notes: 1) Based on IMF statistics, except in the cases of individual countries, the euro area and ASEAN-5 which are based on their own published statistics.
2) The quarterly growth rates are quarter-on-quarter (seasonally adjusted) for advanced economies, and year-on-year for the others.
3) The annual growth rates are based on the fiscal year (April of the current year to March of the next year).
4) Indonesia, Thailand, Malaysia, the Philippines, and Vietnam.

Sources: IMF, individual countries' published statistics.

International oil prices rise to 60 dollar range

International oil prices (Dubai crude) continued on an upward trend after November last year, rising to the 60 dollar range per barrel in February this year. Among key factors leading to higher oil prices are growing expectations for global economic recovery with the commencement of vaccination campaigns in the US, the UK and other countries; continued oil production cuts by OPEC+[6)], including Saudi Arabia's additional voluntary cut; and expectations for massive economic stimulus in the US.

Figure I-2. International oil prices



Sources: Bloomberg, Reuters.

International financial market generally stable

The international financial market saw a temporary increase in credit risk aversion, due mainly to the resurgence of COVID-19, and then generally stabilized, influenced for instance by COVID-19 vaccinations in major countries and the prospect of a large-scale fiscal stimulus package in the US.

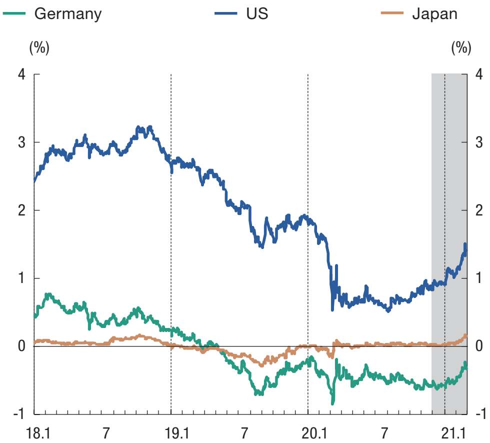
The US Treasury bond yield rose, affected by Congressional approval of the economic stimulus package (USD 0.9 trillion) in December 2020, and picked up at a faster rate after January 2021, as concerns over inflation grew and expectations for economic recovery strengthened with the pursuit of an additional large-scale stimulus package[7)] (USD 1.9 trillion). The

6) OPEC+ (OPEC members and 10 non-OPEC countries) generally maintained its production cut quota in February and March 2021 (some countries such as Russia and Kazakhstan were allowed to raise their oil outputs by a small amount), and Saudi Arabia cut its oil production by an additional 1 million barrels per day. OPEC+ is expected to maintain its stance on production cuts.

7) The Biden administration announced an additional economic stimulus package worth 1.9 trillion dollars (Jan. 14, 2021).

government bond yield in Germany increased due to rising US long-term interest rates and the slowing spread of COVID-19.

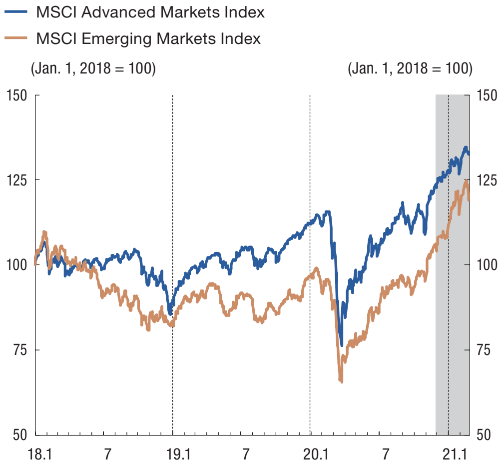
Figure I-3. Long-term market interest rates[1] in major economies



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

Stock prices in advanced economies remained on the rise, repeatedly hitting new record highs[8], on the approval and rollout of vaccinations, the prospect of a large-scale fiscal stimulus package in the United States, and favorable corporate earning reports, despite the resurgence of COVID-19 and concerns about the overvaluation of stock prices after December 2020. Stock prices in emerging economies showed similar movements with those of advanced economies.

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

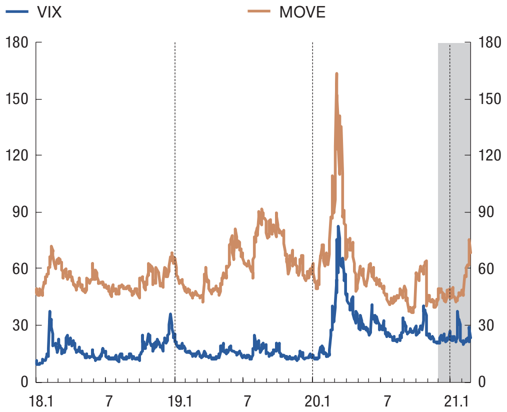


Source: Bloomberg.

While the volatility of US stocks had shown only slight fluctuations, it expanded temporarily affected by the sales[9] of large-cap stocks by some institutional investors in late January this year. However, volatility then narrowed to the prior level, on the back of a pause in stock selling by institutional investors and favorable corporate performance. The volatility of interest rates fluctuated at a low level, influenced by developments related to economic stimulus packages, but expanded owing to concerns about inflation after mid-February.

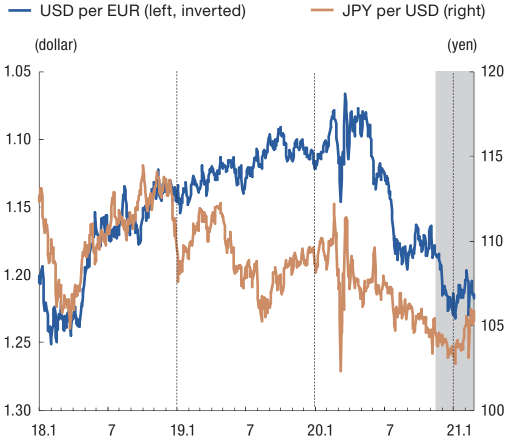
8) The MSCI Developed Markets Index hit record levels 25 times between December 2020 and February 24, 2021.
9) Some of the hedge funds who were short-selling non-blue chip companies including GameStop sold large-cap stocks to meet margin calls as the share prices of such companies surged due to large-scale purchases by retail investors.

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.

Figure I-6. Major exchange rates[1)]



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

The US dollar weakened against currencies of major countries in December 2020, and then strengthened entering 2021. The US dollar weakened against the euro in December 2020, following negotiations between the UK and the EU on the future relationship and a final agreement on the EU recovery fund. The extent of weakening narrowed this year, however, due to a favorable growth outlook for the US compared to other countries, and concerns[10)] over a delay in economic recovery in the euro area. The US dollar weakened against the Japanese yen, but began to strengthen after January 2021, influenced by larger rise in the US Treasury bond yield.

10) The IMF revised its 2021 economic growth outlook for the euro area downward (5.2% → 4.2%) (Jan. 26, 2021).

2. Real Economy

Domestic economy continues modest recovery trend

The Korean economy continued to show a moderate recovery. Consumption was sluggish, affected by stronger social-distancing measures. However, exports picked up, especially in the IT sector, and construction investment recovered slightly from its slump. As a result, real GDP rebounded in the third quarter of 2020 and recorded a 1.2% quarter-on-quarter increase in the fourth quarter (-1.2% year-on-year).

Private consumption decreased by 1.5% quarter-on-quarter in the fourth quarter of 2020. Spending on semi-durable goods (e.g. clothing & footwear) and of services declined as the number of new COVID-19 confirmed cases surged and stricter social-distancing measures were imposed. Government consumption fell by 0.5% quarter-on-quarter in the fourth quarter of 2020. This was due to a drastic decline in health insurance payouts[11)]as a result of widespread fear of COVID-19 preventing people from seeking medical care. Facilities investment dropped by 2.0% quarter-on-quarter in the fourth quarter owing to the base effect of a surge in the previous quarter, but maintained an upward trend year-on-year. Investment in transportation equipment such as automobiles and aircraft declined, but investment in specialized machinery such as semiconductor manufacturing equipment continued its upward trend. Construction investment picked up by 6.5% quarter-on-quarter. Residential building construction continued to increase, and non-residential building construction and civil engineering shifted to an increase on the back of improved weather conditions and increased government investment. Goods exports rebounded greatly in the third quarter, and rose by 5.1% quarter-on-quarter in the fourth quarter.

Employment sluggishness worsens

Table I-2. Major economic growth indicators[1)]

(%)

	2018 Year	2019 Year	2020 Year[2)]	2020 Q1	2020 Q2	2020 Q3	2020 Q4[2)]
Real GDP	2.9	2.0	-1.0	-1.3 (1.4)	-3.2 (-2.7)	2.1 (-1.1)	1.2 (-1.2)
(Private consumption)	3.2	1.7	-4.9	-6.5 (-4.8)	1.5 (-4.0)	0.0 (-4.4)	-1.5 (-6.5)
(Government consumption)	5.3	6.6	4.9	1.4 (6.8)	1.1 (6.1)	0.2 (4.6)	-0.5 (2.3)
(Facilities investment)	-2.3	-7.5	6.8	0.2 (7.3)	-0.5 (4.1)	8.1 (10.6)	-2.0 (5.7)
(Construction investment)	-4.6	-2.5	-0.1	0.5 (4.2)	-1.5 (-0.1)	-7.3 (-1.0)	6.5 (-2.5)
(Goods exports)	3.3	0.5	-0.5	-1.0 (6.3)	-15.9 (-11.5)	18.4 (-0.3)	5.1 (3.6)
(Goods imports)	2.0	-0.8	-0.1	-2.3 (3.1)	-4.8 (-4.8)	6.7 (-0.1)	2.1 (1.4)

Notes: 1) Quarter-on-quarter (seasonally adjusted); figures in parentheses are non-seasonally adjusted year-on-year rates.
2) Reflects fourth quarter preliminary figures.
Source: Bank of Korea.

The employment slump deteriorated, with the number of employed persons declining at a much faster pace year-on-year as social-distancing measures were strengthened with the resurgence of COVID-19 from the end of 2020. The number of employed persons declined by

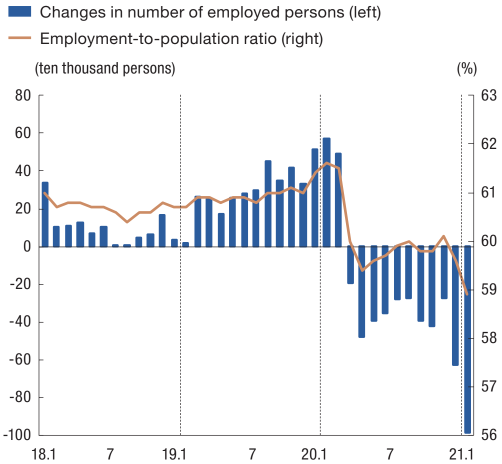
11) Health insurance payouts declined 3.7% quarter-on-quarter in the fourth quarter of 2020.

The number of employed persons declined by 628 thousand in December 2020 and by 982 thousand in January 2021.

By industry, the decrease in the number of persons employed accelerated significantly in the service industries that rely heavily on in-face interaction, especially in accommodation & food services and wholesale & retail trade. The number of employed persons in the manufacturing industry continued to decline, and that in the construction industry turned negative this year. By employment status, the number of temporary, daily and self-employed workers continued falling sharply, and the number of regular workers has increased at a slower pace recently.

The employment-to-population ratio (seasonally adjusted) decreased sharply to 58.9% in January 2021. The unemployment rate (seasonally adjusted) has continued its upward trend from the fourth quarter and hit its highest level (5.4%) in January 2021, with increases in the number of unemployed persons since the onset of the pandemic in 2020.

Figure I-7. Changes[1)] in number of employed persons and employment-to-population ratio[2)]



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

Table I-3. Major employment-related indicators

(ten thousand persons, %)

		2019	2020					2021
		Year	Year	Q1	Q2	Q3	Q4	Jan.
Change in number of employed persons (total)[1)]		30.1	-21.8	28.8	-40.7	-31.4	-44.1	-98.2
By industry	Manufacturing	-8.1	-5.3	0.6	-5.5	-5.7	-10.7	-4.6
	Construction	-1.5	-0.4	-0.8	-6.1	0.9	4.5	-2.0
	Services	34.8	-21.6	18.6	-35.3	-27.8	-41.8	-89.8
By employment status	Regular workers	44.4	30.5	58.0	38.1	24.1	1.9	3.6
	Temporary & daily workers	-8.7	-41.3	-26.9	-64.3	-39.3	-34.9	-79.5
	Self-employed workers	-5.6	-11.0	-2.3	-14.5	-16.3	-11.1	-22.3
Unemployment rate[2)]		3.8	4.0	3.7	4.1	3.8	4.3	5.4
Labor underutilization indicator 1[3)]		6.4	7.8	7.4	8.7	7.6	7.7	10.0
Labor underutilization indicator 3[4)]		11.8	13.6	12.9	14.4	13.5	13.6	16.8
Employment-to-population ratio[2)]		60.9	60.1	61.0	59.6	59.9	59.8	58.9
Labor force participation rate[2)]		63.3	62.5	63.4	62.1	62.2	62.5	62.3
Rate of change in the number of economically active population[1)]		1.0	-0.6	0.8	-1.3	-0.9	-1.0	-2.0

Notes: 1) Year-on-year.
2) Seasonally adjusted.
3) (Unemployed persons + time-related underemployed persons) / economically active population.
4) (Unemployed persons + time-related underemployed persons + potential labor force) / (economically active population + potential labor force).
Source: Statistics Korea.

Employment conditions after third wave of COVID-19

With the rapid resurgence of COVID-19, employment conditions have significantly deteriorated with large declines in the number of employed persons (year-on-year) from December 2020, especially in service industries that depends on in-person interaction. It is assessed that the decline in the number of the employed is affected by the conclusion at end-2020 of a government project to boost public-sector employment and by a delay in the resumption of the project.

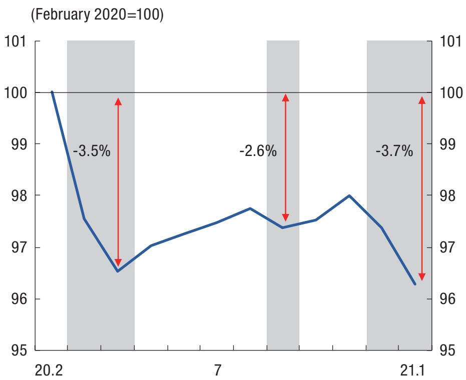
Considering the recent employment shock, future employment conditions are likely to be influenced significantly by COVID-19 developments and the severity of preventive measures, and the patterns of recovery will be sectorally differentiated (industry, employment status). In this section, we will assess employment conditions after the third wave of COVID-19 and draw implications for future employment trends.

(Trend of the number of the employed)

The number of the employed (seasonally adjusted) declined considerably in March and April 2020 (the first phase of COVID-19 infections[12]), and then showed a modest trend of recovery before dropping again in January 2021 to below the level of April 2020 due to the third wave of the pandemic. Compared to the pre-COVID-19 period (February 2020), the number of the employed fell by 3.7%, which is a larger decline than that of April 2020 (-3.5%).

By industry, the number of the employed plunged after the third wave of the pandemic as it had during previous phases, especially in the service industries that rely highly on in-face interactions, such as food & accommodation and wholesale & retail. By employment status, the number of temporary and daily workers, and self-employed businesses with employees saw the steepest declines.

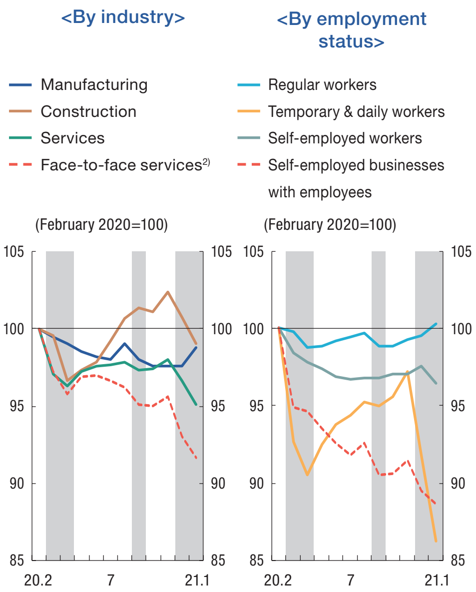
Figure I-8. Trend of number of employed persons[1)]



Note: 1) Seasonally adjusted, shaded areas represent the periods of COVID-19 spread.
Source: Economically Active Population Survey by Statistics Korea.

12) The periods during which the number of employed persons (seasonally adjusted) declined are identified as "phases of COVID-19 infections"- the first phase was set between March and April 2020, the second phase in September 2020, and the third phase between December 2020 and January 2021.

Figure I-9. Trends of number of employed persons by sector[1]



Notes: 1) Seasonally adjusted, shaded areas represent the periods of COVID-19 spread.
2) Food & accommodation; wholesale & retail; education; arts, sports & leisure; personal services.
Source: Economically Active Population Survey by Statistics Korea.

(Unemployment and temporary absence)

An important characteristic seen during the third phase is the simultaneous increase in the number of unemployed and temporarily absent workers[13]. This occurred because businesses found it difficult to respond to the employment shock amid the prolonged pandemic through working-hour adjustments alone. By contrast, during the first phase of the pandemic, temporary absence had increased more than unemployment, as companies responded to the shock by first adjusting working hours rather than through immediate recruitment and layoffs.

Table I-4. Number of unemployed and temporarily absent workers since COVID-19[1]

(ten thousand persons)

	2018-2019	2020 Mar.-Apr.	2020 Nov.	2020 Dec.	2021 Jan.
Unemployed	106.8	105.7	117.0	125.7	151.9
Temporarily absent	40.5	179.5	65.2	90.7	62.2

Note: 1) Seasonally adjusted, average during the period.
Source: Economically Active Population Survey by Statistics Korea.

(Labor supply and demand)

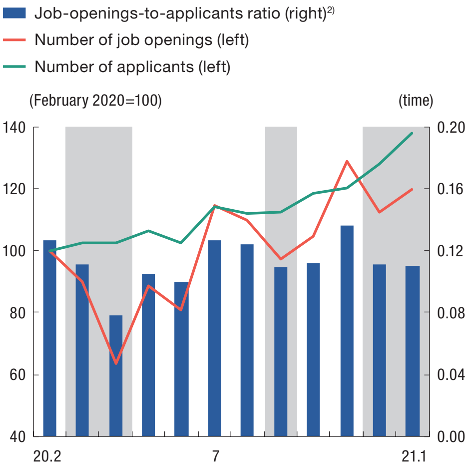
After the third wave, imbalances between labor supply and demand are assessed to have worsened as firms slowed recruitment (labor demand) while unemployed and temporarily absent workers, the number of which had increased since the outbreak of COVID-19, began to search for jobs (labor supply). The job openings-to-applicants ratio[14], a major assessment indicator for labor supply and demand conditions, plunged in March

13) In the US, workers suffering temporary absence due to business slumps and suspension of operations are classified as temporarily laid-off, and are included in the group of the unemployed, while in Korea, people on temporary leave (people on paid leave and on unpaid leave, able to return to work within six months) are categorized as employed according to the ILO standard.
14) The job openings-to-applicants ratio is defined as the number of job openings divided by the number of job applicants. The lower the ratio, the more abundant the labor market slack.

and April 2020, showed an upward trend thereafter, and has remained at a low level since December 2020.

Labor force participation shrank significantly. The number of discouraged workers[15] surged due to the difficult job market as the pandemic wore on. In high-contact service industries that experienced economic shocks and serious imbalances in labor supply and demand after COVID-19, recruitment of new employees has been sluggish. As a consequence, among the youth (aged between 15 and 29) newly entering the labor market, the number of the employed plunged, and the number of respondents who said "not studying or seeking work" increased significantly.[16]

Figure I-10. Trends of job openings, job applications, and job openings-to-applicants ratio[1)]

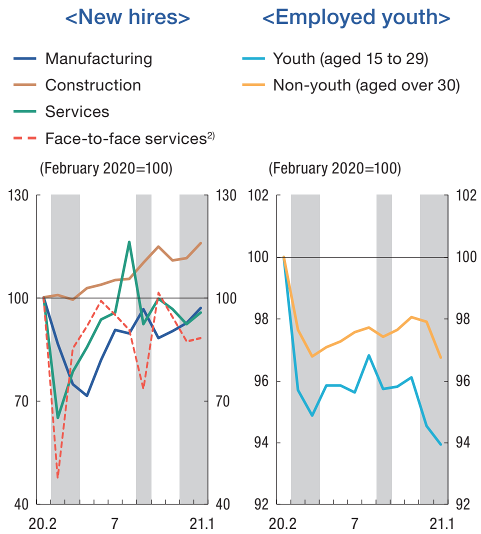


Notes: 1) Seasonally adjusted; the shaded areas represent the spread of COVID-19.
2) Number of job openings/number of job applicants.
Source: Statistics on job and employee searching published by Work-Net.

15) Discouraged workers are defined as people among the economically inactive population, who have sought work in the past year but not have not actively sought work in the last four weeks due to lack of job positions and skills despite being willing and able to work. The number of discouraged workers (seasonally adjusted) rose from 511 thousand in February 2020 to 700 thousand in January 2021.

16) The number of respondents that said "not studying or seeking work" (seasonally adjusted) increased from 398 thousand in February 2020 to 492 thousand in January 2021.

Figure I-11. Trends of new hires and employed youth[1)]



Notes: 1) Seasonally adjusted; the shaded areas represent the spread of COVID-19.
2) Food & accommodation; wholesale & retail; education; arts, sports & leisure; and personal services.

Sources: Labor Force Survey by the Ministry of Employment and Labor, Economically Active Population Survey by Statistics Korea.

The employment recovery is expected to slow down due to the worsening job market stemming from the third wave of COVID-19. New hires are unlikely to increase rapidly unless there are some improvements in the number of unemployed and temporary absent workers returning to the workplace and in corporate profits. Moreover, the prolonged business slump in the face-to-face service industry and the sluggish youth employment and hiring could work as factors that constrain employment recovery.

Current account surplus widens

The current account surplus widened year-on-year in the fourth quarter of 2020. This is due to a large increase in the goods account surplus as exports recovered rapidly, led by semiconductors and other IT products. The services account deficit narrowed in the fourth quarter of 2020 due to the reduction of the travel account deficit stemming from COVID-19 and the shift of the transportation account to a surplus with the recovery of market conditions for container ships from the second half of 2020. The primary income account surplus increased slightly in the fourth quarter.

Exports (customs clearance basis, year-on-year) moved into positive territory[17] in the fourth quarter of 2020. The main factors driving this increase are robust exports of IT products such as semiconductors and wireless communication devices; the accelerated increase in exports of chemical and industrial products, especially medicines, medical supplies and test kits; and vessel exports turning positive as previously delayed ship deliveries were carried out. Korea's export sector's has remained strong as exports increased at a faster pace last December, driven by IT products thanks to the early launch of smartphones[18] by Korean manufacturers, and as exports of non-IT products such as automobiles and chemical and industrial products rose at a faster pace from January 2021.

Imports (clearance basis, year-on-year) fell[19] at a slower pace in the fourth quarter of 2020. The decline in imports of raw materials slowed, and the increase in capital goods imports accelerated. Imports of consumer goods entered positive territory, mainly led by passenger cars. Imports rose in January 2021 with upticks in capital and consumer goods, and imports of raw materials shifted to an increase in February.

Table I-5. Current account

(billion dollars, %)

	2019	2020					2021	
	Year	Year	Q1	Q2	Q3	Q4	Jan.	Feb.
Current account	59.7	75.3	12.9	6.1	24.0	32.2	..	..
Goods	79.8	81.9	15.6	9.5	26.2	30.6	..	..
Exports[1]	542.2	512.5	130.2	110.3	130.1	141.9	48.0	44.8
(Rate of change[2])	-10.4	-5.5	-1.9	-20.3	-3.5	4.1	11.4	9.5
Imports[1]	503.3	467.6	121.5	108.4	114.1	123.7	44.3	42.1
(Rate of change[2])	-6.0	-7.1	-1.9	-15.8	-8.7	-1.7	3.6	13.9
Services	-26.8	-16.2	-6.1	-3.5	-4.3	-2.3	..	..
Credit	103.8	90.1	23.2	20.2	20.9	25.8	..	..
Debit	130.7	106.3	29.3	23.7	25.2	28.1	..	..
Primary income	12.9	12.1	3.7	0.1	3.1	5.2	..	..
Secondary income	-6.1	-2.5	-0.3	0.0	-1.0	-1.2	..	..

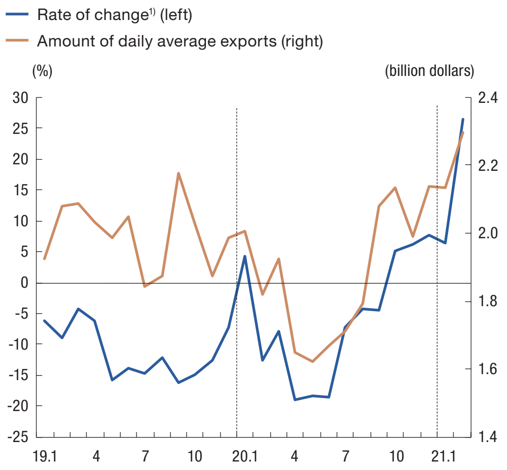
Notes: 1) Customs-clearance basis.
2) Year-on-year.
Sources: Bank of Korea, Korea Customs Service.

17) Growth rate for exports (customs clearance basis, year-on-year): 3.9% (6.1%, daily average) in November 2020 → 12.4% (7.7%) in December 2020 → 11.4% (6.5%) in January 2021 → 9.5% (26.4%) in February 2021.

18) As the launch of Samsung Electronics'Galaxy S21 was moved up from March 2021 to January 2021, semiconductor and wireless communication device exports rose by 29.7% and 38.2% year-on-year, respectively.

19) Growth rate for imports (customs clearance basis, year-on-year): -1.9% (0.2%, daily average) in November 2020 → 2.2% (-2.1%) in December 2020 → 3.6% (-1.0%) in January 2021 → 13.9% (31.4%) in February 2021.

Figure I-12. Daily average exports (customs-clearance basis)



Note: 1) Year-on-year.

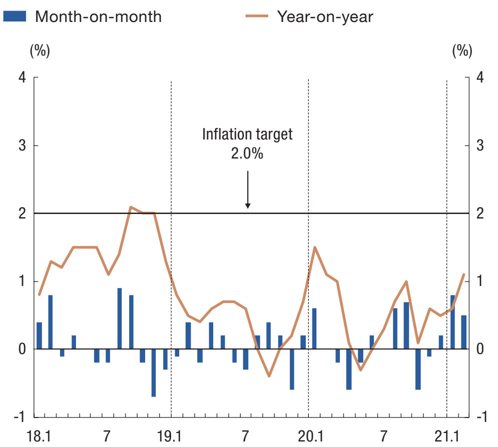
Source: Korea Customs Service.

3. Prices

Consumer price inflation increases to the lower-1% level

Consumer price inflation remained low at around the mid-0% level between the fourth quarter of 2020 and January 2021, but then rose considerably to the lower-1% level in February 2021. While demand-side inflationary pressures remained low, factors exerting upward pressures included rising oil prices and disruptions in supply of agricultural products and some livestock products following severe cold weather and the spread of avian influenza.

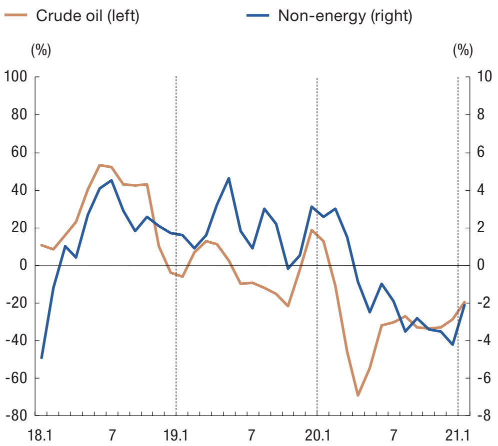
Figure I-13. CPI inflation



Sources: Bank of Korea, Statistics Korea.

With regard to overseas factors affecting consumer price inflation, international oil prices increased[20] at a quicker pace recently while the drop in crude oil import prices slowed[21] substantially. An accelerated decline was observed in prices of non-energy imports, which affect domestic industrial product prices indirectly, influenced by the strengthening of the won[22] in the fourth quarter of 2020. The decline, however, slowed[23] entering 2021, reflecting a faster rise[24] in international commodity prices.

Figure I-14. Import prices (Korean-won basis)[1)]



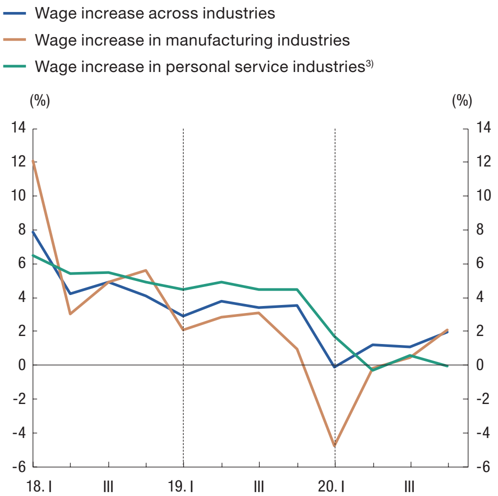
Note: 1) Year-on-year.
Source: Bank of Korea.

As for domestic factors, inflationary pressures on the demand side remained low, as private consumption continued to be weak due to the

20) The rate of decline in international oil prices (Dubai crude oil basis, year-on-year) slowed greatly from 30.4% in the third quarter of 2020 to 28.5% in the fourth quarter of 2020, and to 3.5% in January and February 2021.
21) The rate of change in crude oil import prices (Korean won basis, year-on-year) slowed from -31.7% in the third quarter of 2020 to -19.7% in January 2021.
22) The extent of change in the Korean won/US dollar exchange rate (year-on-year) accelerated from -0.5% in the third quarter of 2020 to -5.0% in the fourth quarter of 2020.
23) The rate of increase in non-energy import prices (Korean won basis, year-on-year) accelerated from -2.7% in the third quarter of 2020 to -3.7% in the fourth quarter of 2020, but then slowed to -2.1% in January 2021.
24) The rate of increase in international non-energy commodity prices (S&P GSCI basis, year-on-year) rose from 4.2% in the third quarter of 2020 to 12.1% in the fourth quarter of 2020, and to 23.1% in January and February 2021.

prolonged social-distancing measures. On the cost side, the wage growth rate remained slow in the personal services sector, mainly in face-to-face services like food & accommodation. However, wage growth across industries increased slightly in the fourth quarter of 2020, reflecting the increase in bonuses in the manufacturing sector.

Figure I-15. Rate of wage increase (per employee)[1)2)]



Notes: 1) Based on the firms with one or more permanent employees.
2) Year-on-year.
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.

While the prices of agricultural, livestock & fishery products exerted upward pressure on consumer price inflation, government policies acted to push inflation down. The prices of agricultural, livestock & fishery products climbed higher, having sharply risen since the second half of 2020 as the prices of agricultural products - especially vegetables - rose steeply amid severe cold weather, and as the prices of some livestock products such as eggs and chicken also picked up due to the spread of avian influenza. In terms of government policy, downward inflation pressure continued with the expansion[25)] of free high school education, while the extension[26)] of the individual consumption tax cut for automobiles worked as a factor pushing inflation further down. The rise[27)] in housing rental fees accelerated gradually, owing to upticks in leasehold (jeonse) deposits and monthly rents (new contract basis).

Looking at changes in consumer price inflation in the individual product categories, prices of agricultural, livestock & fishery products increased at a higher rate, while those of petroleum products fell to a larger extent during the fourth quarter. As for services, private service charges increased at a slightly faster pace, while the decline in public service charges widened temporarily driven by the government's telecom subsidy. In January and February 2021, prices of agricultural, livestock & fishery products went up sharply, particularly for certain agricultural products and livestock

25) Free high school education was expanded to first-year students in areas such as Gyeonggi province and Incheon in December 2020.

26) The individual consumption tax on automobile purchases was cut from 5% to 1.5% between March and June 2020, after which the tax reduction was scaled back to 3.5% between July and December 2020. The reduced rate of 3.5% was initially scheduled to end at the end of 2020 but was extended to June 2021.

27) The rate of increase in leasehold *(jeonse)* deposits and monthly rents (Korea Appraisal Board, relative to the last month of the preceding year) recorded -1.1% in 2019 and 3.4% in 2020.

28) Under the new fuel-cost adjustment system starting from 2021, electricity fees will be adjusted every quarter, reflecting changes in fuel costs. The changes in fuel costs for the first quarter of this year will be calculated by subtracting the average fuel cost for the period between September and November 2020 from the average fuel cost for the previous year (between December 2019 and November 2020).

products, while prices of petroleum products fell to a smaller extent. Electricity, water and gas fees dropped at a modestly faster pace following the new revision[28] to the nation's electricity billing system. Public service prices continued to decline, while housing rents and personal service prices increased at a slightly faster pace.

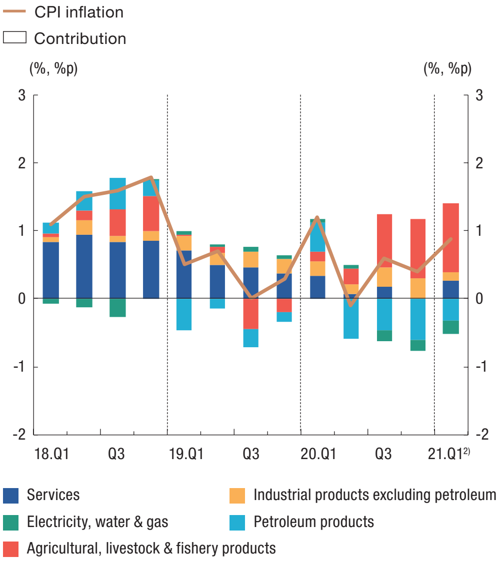
Table I-6. CPI inflation[1]

(%)

	2019	2020						2021	
	Year	Year	Q1	Q1	Q3	Q4	Dec.	Jan.	Feb.
Consumer price index	0.4	0.5	1.2	-0.1	0.6	0.4	0.5	0.6	1.1
Agricultural, livestock & fishery products	-1.7	6.7	2.0	3.2	10.3	11.4	9.7	10.0	16.2
(Agricultural products)	-3.0	6.4	-0.5	-0.3	12.3	14.5	11.3	11.2	21.3
(Livestock products)	0.0	7.3	4.2	7.1	9.0	8.9	9.4	11.5	14.4
Industrial products	-0.2	-0.2	2.0	-1.4	-0.5	-0.9	-0.9	-0.6	-0.7
(Petroleum products)	-5.7	-7.3	10.5	-13.7	-10.7	-13.8	-12.6	-8.6	-6.2
(Industrial products excluding petroleum products)	0.7	0.8	0.8	0.5	1.0	1.0	0.9	0.6	0.2
Electricity, water & gas	1.5	-1.4	1.5	1.3	-4.3	-4.1	-4.1	-5.0	-5.0
Services	0.9	0.3	0.6	0.1	0.3	0.0	0.4	0.4	0.5
(Housing rentals)	-0.1	0.2	-0.1	0.1	0.3	0.6	0.7	0.7	0.9
(Public service charges)	-0.5	-1.9	-0.6	-1.8	-1.7	-3.5	-2.0	-2.1	-2.1
(Private service charges)	1.9	1.2	1.3	1.0	1.2	1.4	1.3	1.5	1.6
CPI for living necessities	0.2	0.4	1.9	-0.2	0.5	-0.3	-0.1	0.3	1.2
CPI excluding food & energy	0.7	0.4	0.6	0.1	0.4	0.2	0.5	0.4	0.3
CPI excluding agricultural products & oil	0.9	0.7	0.8	0.5	0.8	0.7	0.9	0.9	0.8

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

Figure I-16. Contributions to consumer price inflation[1]



Notes: 1) Year-on-year.
2) January to February 2021.
Sources: Bank of Korea, Statistics Korea.

Underlying inflation remains around 1%

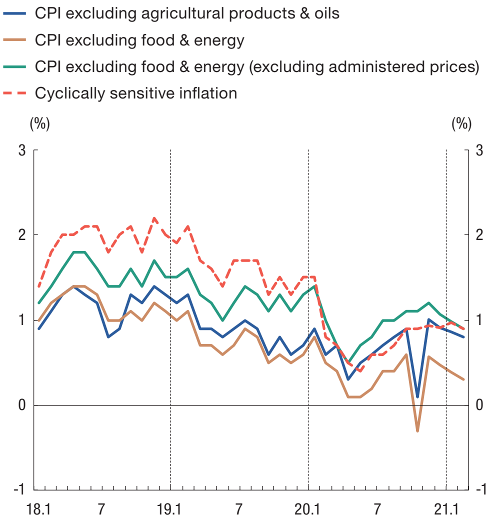
Core inflation has generally remained at the mid-0% level since the second half of 2020.[29] Core inflation movements can change depending on the trend in administered prices[30], which are greatly affected by government policy. A look at core inflation excluding administered prices shows that it remained at around 1% recently. Cyclically sensitive inflation[31] also recorded the 1% level.

29) Core inflation (excluding food and energy) fell temporarily in October 2020 (-0.3%), driven by government subsidies for telecommunication fees.

30) Administered prices refer to the prices of electricity, water, & gas, public services, and school meals, which are greatly affected directly and indirectly by the government. Administered prices excluding core inflation is calculated by leaving out the administered prices from core inflation (excluding food & energy).

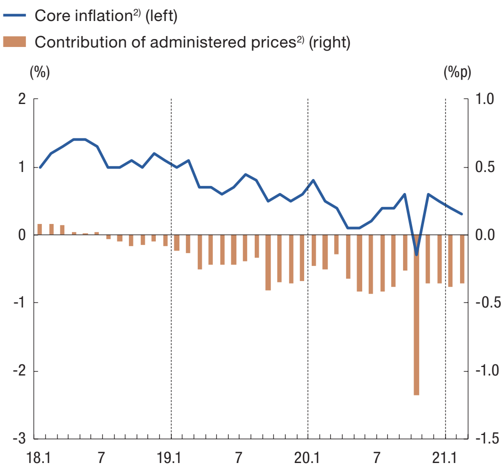
31) Cyclically sensitive inflation is calculated based on product items from the subcomponents of core inflation (excluding food and energy) that are sensitive to the output gap.

Figure I-17. Underlying inflation rates[1]



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

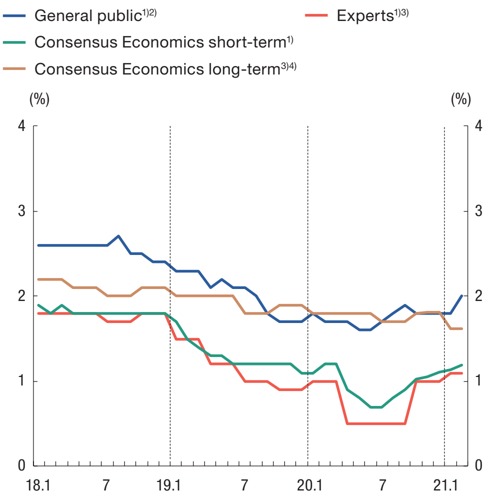
Figure 1-18. Contribution of administered prices to core inflation[1]



Notes: 1) Excluding food & energy.
2) Year-on-year.
Sources: Bank of Korea, Statistics Korea.

The short-term (one-year) inflation expectations of a group of experts (Consensus Economics)[32] recently rose slightly to the lower-1% level. The long-term expectations of experts fluctuated at the mid- and upper-1% level, while the short-term expectations of the general public rose to the 2% level.

Figure I-19. Inflation expectations



Notes: 1) Expected CPI inflation rates for the next 12 months.
2) Based on new samples since September 2018.
3) Surveyed four times a year (in the first month of every quarter)
4) Expected CPI inflation rates after 5 years.
Sources: Bank of Korea, Consensus Economics.

Housing sales prices continue to rise

Nationwide housing sales prices accelerated in the fourth quarter of 2020, and continued[33] to rise at a rapid pace in January and February 2021. By region, the upward trend of housing prices in the Seoul Metropolitan area (mainly areas in Seoul, Gyeonggi province and Incheon)[34] accelerated, while growth slowed

32) The figures are results of a Consensus Economics survey of domestic and foreign investment banks, securities companies, and market research institutions.
33) Nationwide housing sales prices rose by 0.5% in August, 0.4% in September, 0.3% in October, and 0.5% in November 2020.

modestly in other areas, including Busan, Daegu and Gyeongnam Province.[35)]

The rise in leasehold *(jeonse)* deposit prices nationwide rose at a higher rate in the fourth quarter of 2020, and continued on an increasing trend in January and February 2021.

Table I-7. Rates of increase in housing sales and leasehold *(jeonse)* deposit prices[1)]

(%)

	2019	2020						2021	
	Year	Year	Q1	Q2	Q3	Q4	Dec.	Jan.	Feb.
Housing sales prices	-0.4	5.4	1.2	0.8	1.5	1.8	0.9	0.8	0.9
Seoul Metropolitan area	0.5	6.5	1.8	1.3	1.8	1.5	0.7	0.8	1.2
(Seoul)	1.2	2.7	0.6	0.0	1.4	0.6	0.3	0.4	0.5
Other areas	-1.1	4.3	0.5	0.4	1.3	2.0	1.1	0.8	0.6
Sales prices of apartments for reconstruction	12.8	11.2	1.6	1.3	4.9	3.0	0.8	1.0	0.6
Leasehold *(jeonse)* deposit prices	-1.3	4.6	0.7	0.5	1.3	2.1	1.0	0.7	0.6
Seoul Metropolitan area	-0.8	5.6	1.0	0.7	1.6	2.2	0.9	0.7	0.7
(Seoul)	-0.4	3.7	0.7	0.3	1.1	1.5	0.6	0.5	0.4
Other areas	-1.7	3.7	0.4	0.3	1.0	2.0	1.0	0.7	0.6

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

34) In February 2021, housing sales prices rose month-on-month by 1.6% (1.0% in December 2020 and 1.1% in January 2021) in Gyeonggi province and 1.2% (0.5% and 0.7%) in Incheon.

35) The month-on-month increases in housing sales prices in February were 1.0% (2.1% in December 2020 and 1.3% in January 2021) in Busan, 0.9% (2.5% and 1.5%) in Ulsan, and 0.4% (1.3% and 0.7%) in Gyeongnam Province.

4. Financial and Foreign Exchange Markets

Long-term Treasury bond yield rises steeply

Treasury bond yields - long-term bond yields in particular - remained on the rise. The 10-year bond yield rose in December 2020 on expectations for an agreement on the US fiscal stimulus package and the supply of COVID-19 vaccines in major countries. It then rose further entering January 2021, stemming from expectations for fiscal expansion by the new US administration, improvements in economic indicators at home and abroad, and an anticipated increase in government bond issuance related to support for small businesses hit by the COVID-19 pandemic (1.85% as of Feb. 24, 2021). However, the 3-year Treasury Bond yield, which is affected more by the Base Rate, climbed to only a limited extent (1.01% as of February 24, 2021).

Figure I-20. Korean and US Treasury bond yields

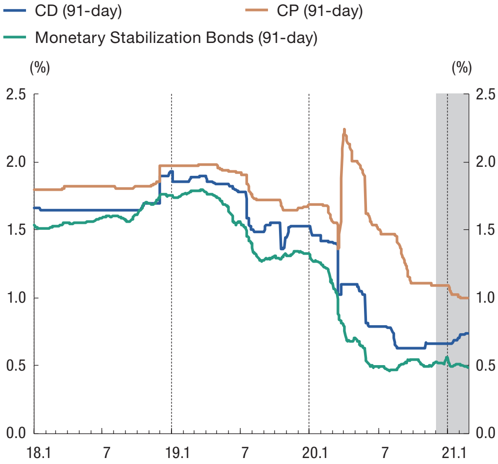
Sources: KOFIA, Bloomberg.

Short-term market interest rates stabilize

Short-term interest rates remained generally stable, despite the year-end demand for funds. The Monetary Stabilization Bond (91-day) rate rose slightly in late December 2020, owning to reduced investment demand in money market funds from year-end redemption pressure, and then fell back to the Base Rate level entering 2021. CD rates (91-day) climbed in 2021, with the effects of the year-end rise[36] in bank debenture (3-month) yield reflected afterwards. CP rates (91-day, A1 rate) continued to decline in line with the easing in risk aversion.

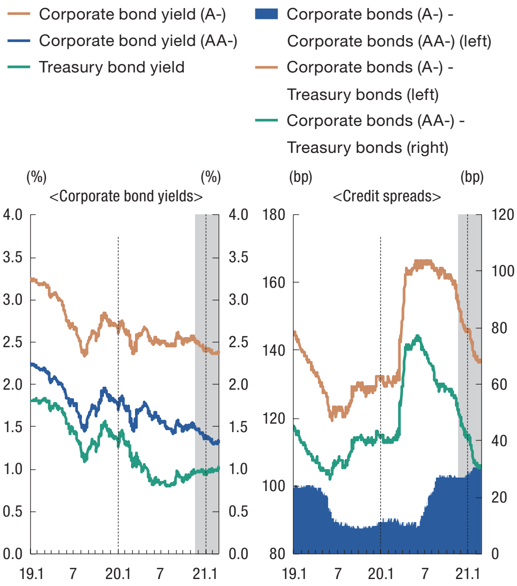
36) With banks having issued bank debentures (including special bank debentures) with less than one-year maturities in large volumes during 2020 to finance their lending, the yield for bank debentures rose at year-end, mainly because money market funds and other investors sold much of their short-term bank debenture holdings to deal with year-end demand for redemptions.

Figure I-21 Short-term interest rates[1)]



Note: 1) Monetary Stabilization Bond yields based on average rates estimated by private credit rating agencies; CD and CP rates based on final quoted yields.
Source: KOFIA.

Figure I-22. Corporate bond yields and credit spreads[1)]



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

Corporate bond credit spread narrows considerably

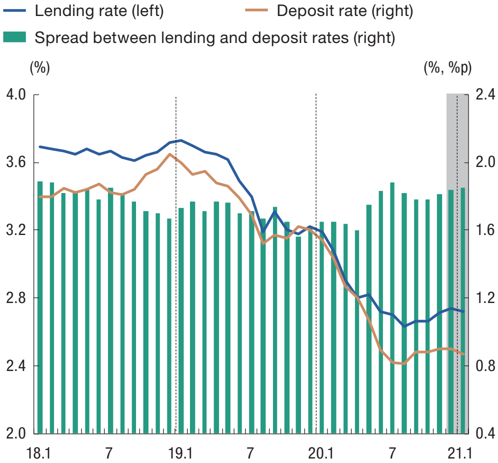
The credit spread for corporate bonds narrowed substantially for both prime bonds (AA-) and subprime bonds (A-), owing to the reduced risk aversion following the supply of COVID-19 vaccines, to support for markets[37)] via a special purpose vehicle (SPV) for purchasing corporate bonds and commercial paper (CP), and to fund execution by institutional investors at the beginning of the year. As of February 24, 2021, the credit spread for prime bonds stood at 31bp, below the pre-COVID-19 level (42bp as of end-Jan. 2020), and that for subprime bonds fell to 137bp, slightly higher than the pre-COVID-19 level (133bp).

Bank lending rates decline after rising, and deposit rates fall

Banks' lending rates (new loans) rose in December 2020 and fell in January 2021. The December rise was driven by the increase in long-term and short-term market interest rates as well as strengthened household debt management by banks. In January 2021, however, the lending rates declined, especially those on corporate loans, affected by the fall in short-term market rates including bank debenture rates. Deposit rates (new business) stayed flat in December 2021, and then dropped in January 2021 due to lower rates on fixed deposits.

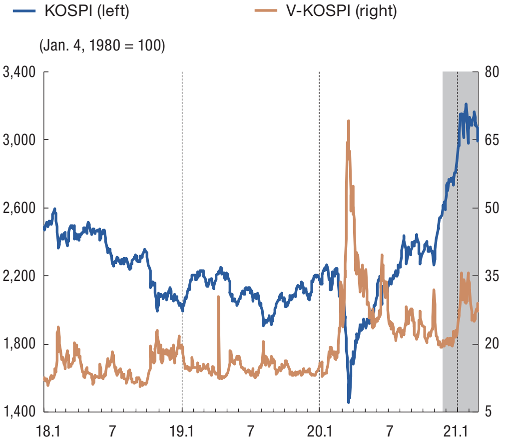
37) The government, the Bank of Korea, and Korea Development Bank announced on December 24, 2020, that they would extend the operation of the SPV for purchasing corporate bonds and CP including low-rated bonds, from January 13, 2021 to July 13, 2021, and would increase the purchases of subprime bonds (A to BBB).

Figure I-23. Bank lending/deposit rates and spread



Source: Bank of Korea.

Figure I-24. KOSPI and stock volatility index



Source: Koscom.

Stock prices fluctuate after a steep rise

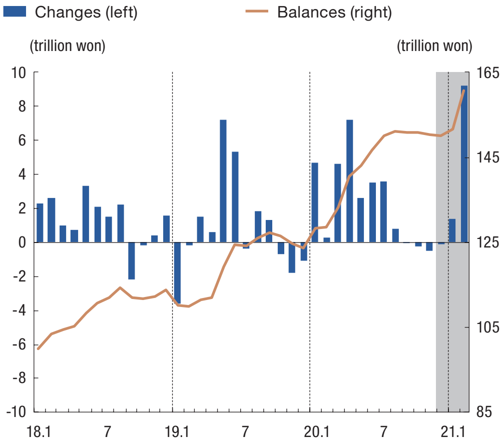
Stock prices (KOSPI) rose sharply, driven by improved investor sentiment following a December agreement on additional fiscal stimulus in the US, improved domestic and overseas economic indicators, and the wider distribution of vaccines in major countries. In January 2021, despite the strengthening of COVID-19-related lockdown measures in major countries, the index continued its uptrend to hit a new high (3,209 points on Jan. 25) on active purchases by retail investors and expectations for the new US administration's fiscal expansion. After the end of January, however, it fluctuated significantly, influenced by both upside factors including improved economic indicators at home and abroad and downside factors such as caution about the recent rally. After remaining low for some time, the stock price volatility index (V-KOSPI) increased in January, affected mainly by external factors, but then dropped slightly in February 2021.

Bond investment by foreigners turns to increase while stock investment declines sharply

Foreigners' domestic securities investment increased overall, as a substantial decline in their stock investment was offset by a large increase in their bond investment.

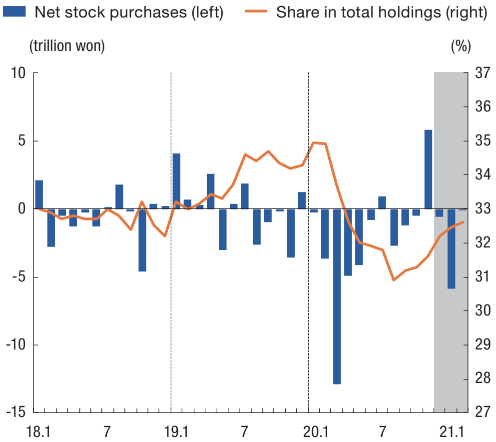
Bond investment had decreased up until December 2020 as reinvestment of maturing funds was delayed, but reversed to record positive growth this year in both the public and private sectors, driven by fund execution by major investors. Foreigners' outstanding bond holdings recorded an all-time high volume of 160.7 trillion won on February 24, 2021.

Figure I-25. Changes[1)] in and balances[1)] of foreigners' bond holdings



Note: 1) Based on February 24 for February 2021 figures.
Source: Financial Supervisory Service.

Figure I-26. Foreigners' net stock purchases[1)2)] and share in total holdings[1)3)]



Notes: 1) Based on February 24 for February 2021 figures.
2) Sum of net purchases in KOSPI and KOSDAQ markets.
3) Based on total stock market capitalizations.
Source: Koscom.

Stock investment by foreigners turned to net selling, driven by portfolio adjustment and profit realization by overseas pension funds following the stock price rally in December 2020. The net selling continued at a small volume in January this year, but increased sharply from late January due to the strengthening of global risk aversion in line with the increased volatility in the US stock market. Entering February, however, the volume of net selling declined, affected by improvement in domestic and overseas economic indicators.

Corporate lending continues to grow

Banks' lending to enterprises continued to grow in the fourth quarter of 2020, led mainly by lending to small and medium-sized enterprises (SMEs). Lending to SMEs increased substantially as demand from SMEs and sole proprietors for COVID-19-related funds and financial support[38)] from the government and banks continued. Lending to large enterprises, however, decreased due to slowing corporate demand for liquidity and bullet repayments for their year-end financial ratio management. In January this year, banks' lending to enterprises grew by a large extent, driven by the re-extension of loans that had been temporarily redeemed to meet year-end financial ratios at the end of 2020, and by demand for loans related to value-added tax payments.

38) Support measures include a financial support program for small businesses policy financing for small- and medium-sized and mid-market enterprises, the extension of loan maturity and loan moratorium for businesses affected by COVID-19.

Concerning direct funding by corporations, net issuance[39] of corporate bonds declined in the fourth quarter of 2020, due to reduced investment demand from institutional investors at the year-end. In January this year, however, corporate bonds recorded a large volume of net issuance as purchases were executed by institutional investors. The issuance of stocks increased, influenced by some companies' large paid-in capital increases and initial public offerings. CP posted a net redemption in the fourth quarter of 2020, due to bullet repayments by corporations for their year-end financial ratio management, but then turned to a substantial net issuance in January as companies resumed the issuance.

Table I-8. Corporate funding[1)]

(trillion won, %)

		2019	2020					2021
		Year	Year	Q1	Q2	Q3	Q4	Jan.[2)]
Loans	Total	90.2	169.6	47.2	62.9	32.9	26.6	··
	(Rate of change)[3)]	(9.0)	(15.5)	(11.4)	(14.7)	(15.6)	(15.5)	··
	Banks	47.7	110.8	34.3	44.5	19.6	12.4	10.0
	(Large firms)	-1.8	20.9	15.6	10.9	-0.8	-4.8	3.4
	(SMEs)	49.4	90.0	18.8	33.6	20.3	17.2	6.6
	Non-banks[4)]	42.5	58.8	12.9	18.4	13.4	14.2	··
Direct financing	Corporate bond net issuance[5)]	15.8	15.5	2.9	7.8	3.0	1.7	2.2
	CP net issuance[6)]	-1.3	0.6	4.7	-2.0	-0.9	-1.3	2.3
	Stock issuance[7)]	6.3	11.0	0.7	1.7	3.5	5.1	1.5

Notes: 1) Based on changes in balances during the periods.
2) Based on Bank of Korea advance estimates.
3) Year-on-year growth rate of loans 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 offering 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 faster

Household lending (based on depository institutions) continued to grow rapidly, driven by increased demand for housing-related funds.

39) By rating, prime bonds recorded net redemption in the fourth quarter of 2020, while subprime bonds recorded net issuance, due to purchases by an SPV established for purchasing corporate bonds and CPs. As institutions resumed their fund management in January, demand for corporate bonds increased, resulting in net issuance mainly in prime bonds. Net issuance of corporate bonds (public offering, general enterprises only, ABS and P-CBOs excluded) are as follows:

(trillion won)

	2019	2020					2021
	Year	Year	Q1	Q2	Q3	Q4	Jan.
Prime bonds (AA and above)	9.8	10.9	3.0	6.4	2.2	-0.7	1.9
Subprime bonds (A and below)	6.1	0.5	-0.1	-0.2	-0.6	1.4	0.1

source: Korea Securities Depository.

Household lending by banks grew at a steep pace in the fourth quarter of last year. Home mortgage loans rose rapidly as fund demand soared in line with the increase in housing sales transactions, and as previously-approved group lending was executed. Growth in other loans also continued to expand greatly, especially in unsecured loans[40] reflecting demand for funds for stock investment and living expenses as well as funds for housing purchases and leasehold deposits. Banks' household lending grew sharply in January compared to the normal year average, as these sources of fund demand were sustained.

Growth in household loans by non-banks accelerated in the fourth quarter of 2020 due to a rise in other loans by mutual credit cooperatives and community credit cooperatives reflecting the increased demand for living-expense-related funds.

Table I-9. Household lending by depository institutions[1]

(trillion won, %)

	2019	2020					2021
	Year	Year	Q1	Q2	Q3	Q4	Jan.[2]
Total	56.3	108.1	20.3	18.3	32.1	37.5	··
(Rate of change)[3]	(4.9)	(9.0)	(6.4)	(6.5)	(7.8)	(9.0)	··
Commercial & specialized bank loans[4]	60.7	100.5	22.6	18.0	29.0	30.9	7.6
(Mortgage loans)[4][5]	45.8	68.3	18.4	13.9	16.6	19.3	5.0
(Other loans)	14.9	32.2	4.2	4.1	12.3	11.5	2.6
Non-bank depository institution loans[4]	-4.5	7.6	-2.3	0.2	3.1	6.6	··
(Mutual credit cooperatives)	0.6	6.0	-0.9	1.1	2.1	3.7	··
(Credit unions)	-0.8	-0.7	-0.7	-0.4	-0.1	0.5	··
(Community credit cooperatives)	-6.8	-3.2	-1.5	-1.3	-0.8	0.4	··
(Mutual savings banks)	2.6	5.5	0.8	0.9	1.8	2.0	··
(Others)[6]	-0.1	-0.1	-0.1	-0.1	0.0	0.1	··

Notes: 1) Based on changes in balances during the periods.
2) Based on Bank of Korea advance estimates.
3) Year-on-year growth rate of loans 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.

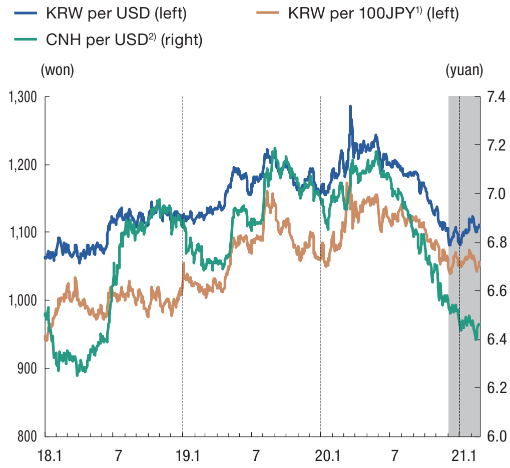
Korean won/US dollar exchange rate fluctuates

The Korean won/US dollar exchange rate continued to fall in December last year, but rebounded in January and February this year. It had continued to decline until early December of 2020, impacted by the current account surplus[41] and the risk-on sentiment boosted by expectations for the rollout of COVID-19 vaccines. After hitting the lowest level of the year

40) Unsecured loans by banks increased by 11.5 trillion won in the third quarter of 2020, and by 10.2 trillion won in the fourth quarter of 2020 (up by 5.4 trillion won during the fourth quarter of 2019) (source: Financial Supervisory Service).
41) Current account surplus stood at 10.34 billion dollars in September 2020, 11.55 billion dollars in October (the largest since September 2017), 9.18 billion dollars in November 2020, and 11.51 billion dollars in December 2020.

(1,082.1 on Dec. 4, 2020), it fluctuated driven by the resurgence of COVID-19 in Korea and global investor sentiment. It then rebounded entering 2021, as the US dollar strengthened on the prospect of a relatively solid recovery in the US, and as FX demand increased from foreign investors selling domestic stocks. The Korean won/Japanese yen exchange rate showed a similar movement as the won/dollar rate, affected by developments regarding the pandemic and the US fiscal stimulus.

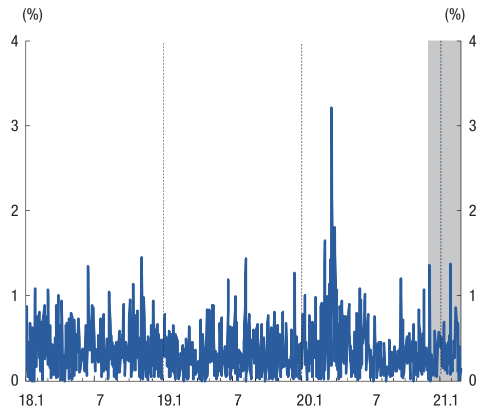
Figure I-27. Exchange rates



Notes: 1) Final transaction standard rate offered to customers posted by Hana Bank during the day.
2) Based on offshore rates.
Sources: Bank of Korea, Hana Bank, Reuters

The volatility in the Korean won/US dollar exchange rate expanded[42] temporarily in late January this year due to increased volatility in the US stock market, but generally moved at around 0.30%[43].

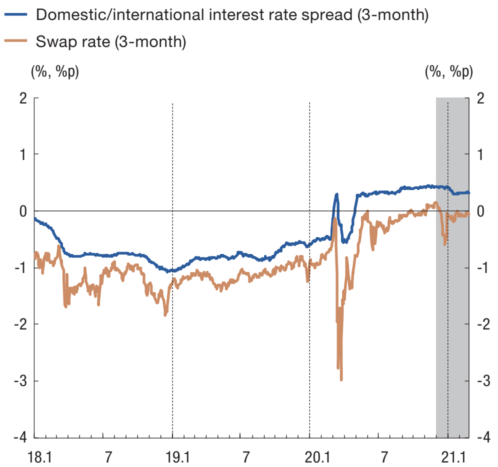
Figure I-28. KRW per USD exchange rate volatility[1]



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

The swap rate (3-month maturity) plunged temporarily, as banks managed their FX funds conservatively in December as part of their year-end practice to manage their regulatory ratios. It rebounded afterwards, and fluctuated at around -0.10% entering this year.

Figure I-29. Domestic/international interest rate spread[1] and swap rate



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

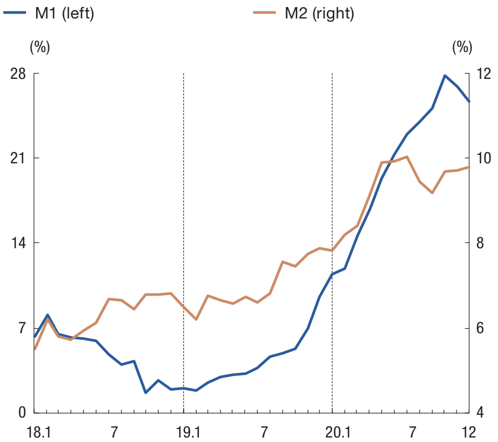
42) Hedge funds, which took a short position on struggling stocks like GameStop and suffered huge losses after the prices soared, were assumed to secure cash by selling their stock holdings in major Asian markets (Reuters).

43) This figure is the annual average for 2019, before the COVID-19 pandemic.

Liquidity growth continues, and Financial Conditions Index rises

M2 (broad money) continued to grow rapidly at around 9%, affected by the faster growth in household loans. The Financial Conditions Index[44] rose considerably in January 2021 compared to in September 2020, driven by the stock market's bull run.

Figure I-30. Growth rate of key money supply indicators[1]



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

Figure I-31. Financial Conditions Index[1]

Note: 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 January 2000 to January 2021.
Source: Bank of Korea.

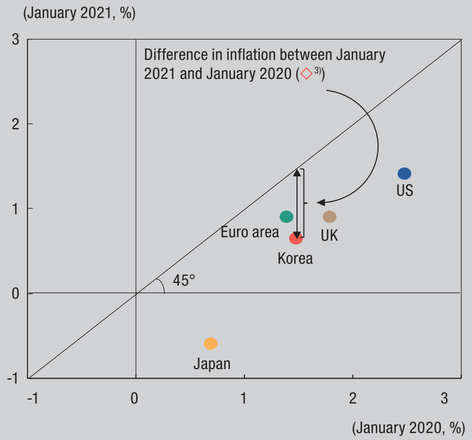
44) The Financial Conditions Index (FCI) assesses whether financial conditions are accommodative or tight and is calculated by standardizing the weighted sum of six major financial variables that are important in assessing financial conditions, such as interest rates, exchange rates and stock prices.

Box I-1.

Examination and Assessment of Recent Inflation Developments in Korea and Major Economies

In the year since the outbreak of COVID-19 (February 2020 through January 2021), consumer price inflation in Korea and major countries slowed substantially, due mainly to a weakening of demand-side inflationary pressures and a drop[1] in international oil prices.

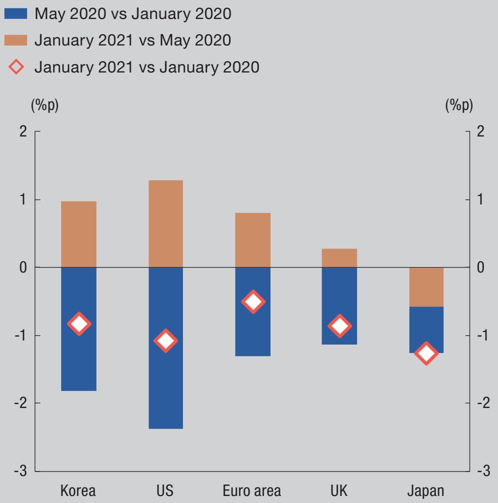
January consumer price inflation[1)2)] in 2020 and 2021



Notes: 1) Based on CPI for Korea, the US, and Japan, CPIH for the UK, and HICP for the euro area.
2) year-on-year.
3) See ◇ in Figure below.
Sources: Statistics Korea, OECD, Eurostat.

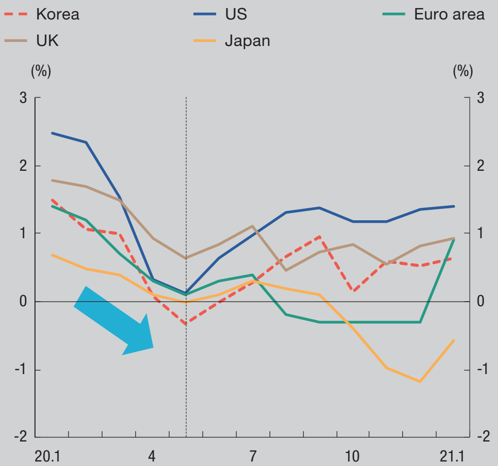
Consumer price inflation[2] slowed significantly from February to May 2020 under the effects of the COVID-19 shock but has been partially rebounding since June with the global economy improving gradually and international oil prices rising.

Changes in the CPI over the past year[1)]



Note: 1) Difference between year-on-year inflation rates.
Sources: Statistics Korea, OECD, Eurostat.

Recent consumer price inflation[1)] developments



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

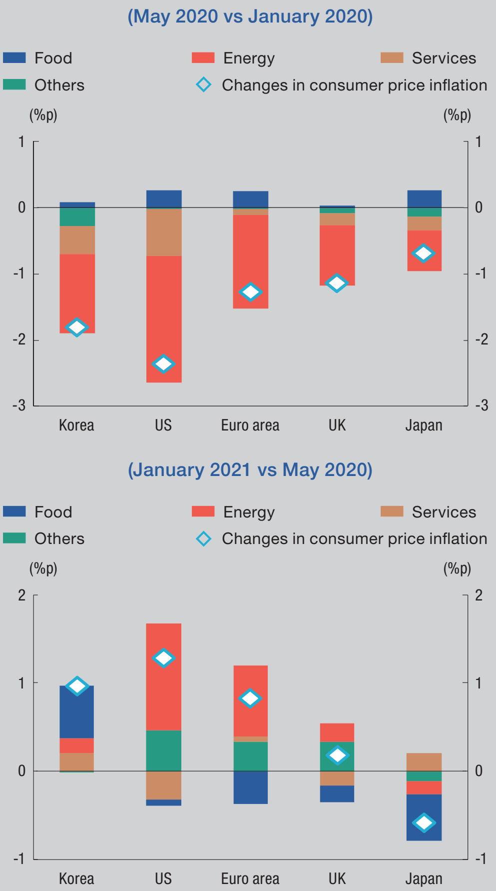
1) International oil prices (Dubai crude) recorded an annual average of 42.2 dollars per barrel last year, down by 33.2% from the previous year (63.2 dollars). The prices declined sharply from a monthly average of 63.8 dollars in January 2020 to 23.3 dollars in April, and then shifted to a rise in May (31.6 dollars) to stand at 60.4 dollars in February 2021.
2) See 「Inflation Developments in Korea and Major Economies After COVID-19 Outbreak」 (Jun. 2020, Monetary Policy Report) for details on inflation developments in Korea and major economies from February to May 2020.

In this section, we examine inflation developments in Korea and major economies since June 2020 in the areas of energy, food and services, and review discussions on the recent trends in inflation expectations and on the possibility of higher inflation.

(Consumer price inflation)

Affected by the COVID-19 shock, consumer price inflation slowed significantly in most economies from February to May 2020, which was attributable to a sharp drop in energy prices following a plunge in international oil prices and also to a substantial slowdown in the growth of face-to-face service charges. Over the same period, food prices exhibited faster growth in the US and major European countries due mainly to production setbacks and increased hoarding demand resulting from lockdown measures, while food prices in Korea, where no lockdown was implemented, rose to a relatively limited extent.

Contributions to changes in consumer price inflation[1)]



Note: 1) Sectoral contributions to changes in consumer price inflation (year-on-year).
Sources: Statistics Korea, OECD, Eurostat.

A sectoral look at inflation developments in Korea and major economies since June 2020 shows that energy prices have acted as a factor increasing consumer price inflation in most countries except for Japan[3)], with international oil prices shifting to positive growth. Energy prices in Korea had fallen by 11.8% from February to May 2020, and then rebounded by 4.9% from June 2020 to January 2021.[4)]

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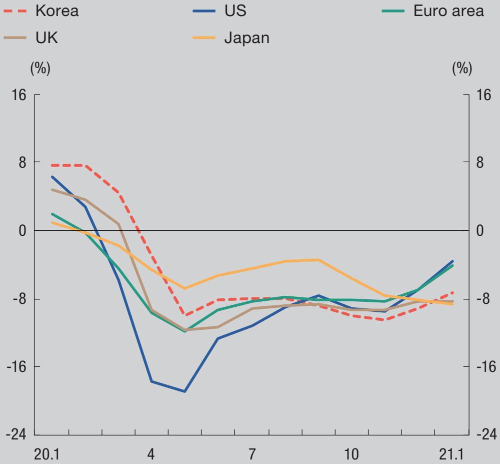
3) In Japan, energy prices continue to exert downward pressures on inflation relative to May 2020, as the rise in international oil prices is transmitted to electricity and gas charges with a longer time lag than in major economies, while effects of a consumption tax hike in October 2019 (8% →10%) dissipated in October 2020. The effects of the consumption tax hike have also acted as a factor dragging down food prices in Japan since October 2020.

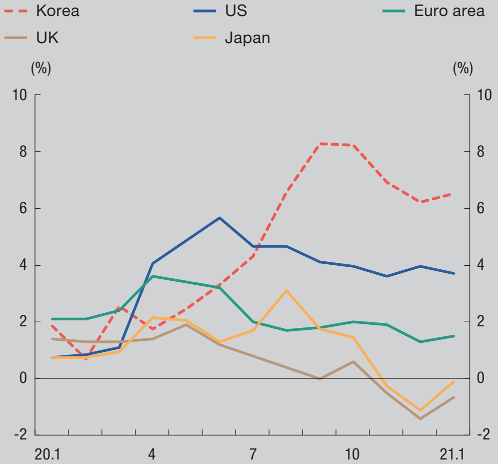
4) When the effects of a cut in city gas charges in July 2020 are excluded, the size of the energy price hike since June 2020 increases by 4.2%p.

Energy price inflation[1)]



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

Food price inflation[1)]



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

Other major countries saw food prices falling or exhibiting slower growth[5)] in the second half of 2020 compared with the first half. In Korea, however, food prices have sustained strong growth and acted as a factor increasing inflation since the second half of last year, affected by severe weather conditions and the recent spread of avian influenza.[6)]

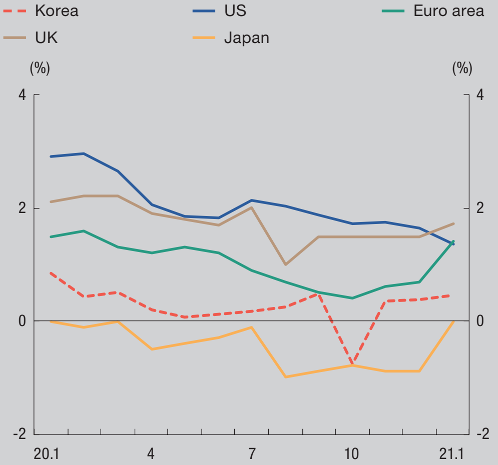
Service prices have sustained their modest uptrend, with demand-side inflationary pressures remaining weak due to the prolonged spread of COVID-19.[7)] More specifically, prices related to face-to-face service industries such as hotels and airlines that have been hit hard by the COVID-19 shock have remained in a slump even in the second half of last year and thereafter.

5) This was attributable substantially to the easing of the effects of factors acting as upward pressures in the first half of 2020, including the increased demand for food ingredients for at-home consumption due to travel restrictions immediately after the COVID-19 outbreak, increased expenses owing to heightened sanitary regulations, and decreased supply due to distribution problems. Government policies such as Germany's temporary reduction of the value-added tax on daily necessities (from 7% to 5% in the second half of 2020) were also partly responsible.

6) See「Evaluation of Recent Food Price Growth」(Examination of major pending issues from「Economic Outlook Report」released in February 2021 by the Bank of Korea, availabe in Korean only) for more details.

7) The difference in service price inflation between countries is attributable partly to the difference in the components of the CPI and their weights. For instance, owner-occupied housing costs fall under the category of services in the US, but not in Korea and the euro area. In the US, housing costs account for as much as 32.1% (including 24.2% for owner-occupied housing costs) of the CPI (as of 2020), but the ratio goes down to 9.4% in Korea and 6.6% in the euro area where (owner-occupied) housing costs are not included in the official CPI.

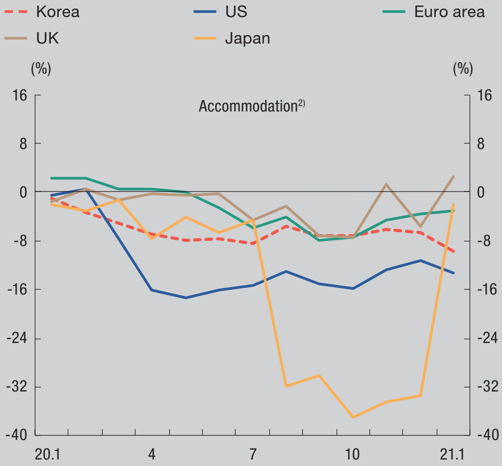
Service price inflation[1)]



Note: 1) Year-on-year.

Sources: Statistics Korea, OECD, Eurostat.

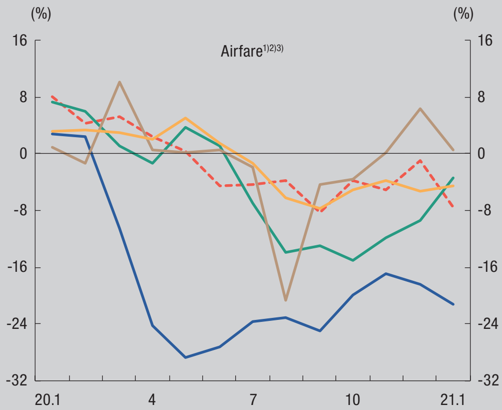
Price inflation in major face-to-face service industries[1)]



Notes: 1) Year-on-year.

2) Inflation in the UK (2.4%) slightly accelerated in January 2021 because usual January discounts did not take place this year, as a result of the resurgence of COVID-19.

Sources: Statistics Korea, OECD, Eurostat.



Notes: 1) Year-on-year.

2) Based on domestic airfare in Korea.

3) The UK recorded a high level of inflation (6.4%) in December 2020 due to a base effect from the low level of inflation (-8.4%) in December 2019.

Sources: Statistics Korea, OECD, Eurostat, ONS.

Meanwhile, the government policy measures some countries adopted to mitigate COVID-19 shocks exerted additional downward pressures on service prices. For instance, a telecom subsidy in Korea, a temporary reduction in value-added taxes in Germany,[8)] a dining subsidy and temporary reduction in value-added taxes in the hospitality sector in the UK, and support for domestic travel expenses related to accommodation and eating-out in Japan exerted downward pressures on service prices.[9)]

Government measures against COVID-19 that affect service prices

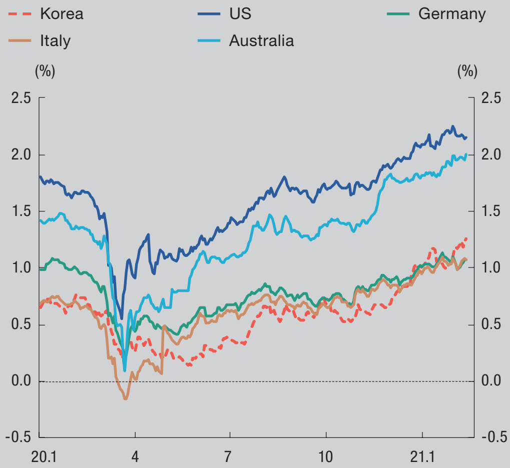
Korea	· Telecom subsidy (October 2020): providing 20,000 won targeting those aged between 16 and 34, and 65 or older
Germany	· Reductions in value-added taxes (July to December 2020): Value-added taxes were lowered from 7% to 5% for medicine, culture and accommodation.
UK	· EOHO (Eat-Out-to-Help-Out): temporarily providing 50% discount coupons for eating out (August 2020) · Reductions in value-added taxes for the hospitality sector including restaurants, theaters, hotels, etc. (20% → 5%, July 2020 to March 2021)
Japan	· Go-to-Campaign: Discounts on travel-related accommodation and eating-out expenses (July to December 2020)
Spain	· Tax cut for property owners who reduced rent, and rent support for low-income households

Sources: IMF, Financial Times, individual countries' published figures.

(Inflation expectation trends)

As the impacts of accommodative monetary policies and expansionary fiscal policies of individual countries to deal with COVID-19 were priced into financial markets, BEI rates (break-even inflation, 10-year maturity)[10)], measures of financial market-based inflation expectations of major countries, generally fell to their lowest points in March last year and have since remained on the rise. The US BEI rate in particular rose above 2% this year, affected by heightened expectations for improvement in economic activity[11)] following a massive fiscal stimulus package by the Biden administration (worth 1.9 trillion dollars) and the rollout of coronavirus vaccines.

Trends of inflation expectations index (BEI)[1)] based on financial markets of major economies

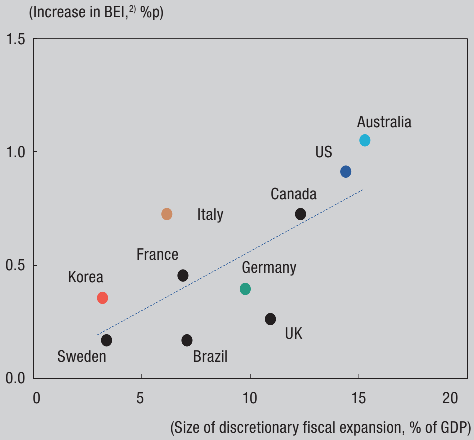


Notes: 1) 10-year maturity.
Source: Bloomberg.

Meanwhile, looking at the relationship between fiscal policy and inflation expectations in major countries, the size of fiscal expansion to deal with COVID-19[12)] is generally proportionate to the increase in BEI.[13)]

8) A policy measure in Germany to temporarily reduce value-added taxes in the second half of last year ended this year. This caused higher growth in service prices in the euro area in January this year.
9) Meanwhile, the termination of these government measures could work to temporarily accelerate price inflation.
10) BEI refers to the difference between the nominal yield on a Treasury bond and the real yield on an Inflation-linked Treasury bond.
11) In addition to heightened inflation expectations, a net inflow of funds into Inflation-linked Treasury bonds and a net outflows from nominal Treasury bonds for inflation hedging (supply and demand factors), the run-up in oil prices, and increased risk aversion are assessed to have recently influenced the recent trend of rising BEI.
12) This refers to additional spending and forgone revenue in areas other than health, compiled by the IMF「Fiscal Monitor Update」, released in January 2021 as of end-2020. It is the portion exceeding the amount of fiscal expansion based on automatic stabilizers, such as existing progressive tax systems or unemployment benefits.
13) Given that the benchmark date for compiling the size of discretionary fiscal expansion is the end of 2020, the increase in inflation expectations in December 2020 compared to that in March 2020 was used.

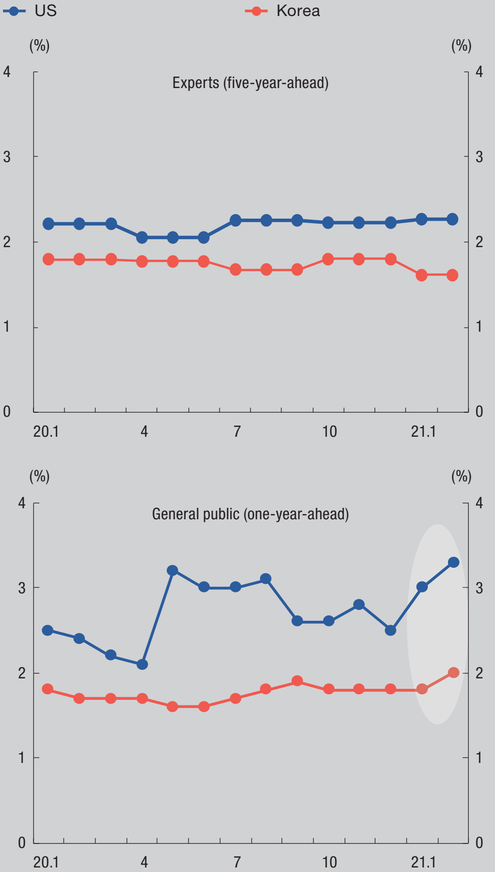
Fiscal expansion in response to COVID-19[1] and changes in BEIs[2]



Notes: 1) Size of discretionary fiscal expansion (the portion exceeding the size of fiscal expansion based on automatic fiscal stabilizers, excluding spending in the public health sector).
2) Increase in BEI in December 2020 compared to that in March 2020.
Sources: IMF, Bloomberg.

Survey-based inflation expectations show relative stability compared to financial market-based inflation expectations, and inflation expectations of the general public have recently been on the rise. In Korea and the US, the long-term inflation expectations of a group of experts (five-year-ahead) generally remained stable at around 2% without any major change for the past one year, while the short-term inflation expectations of the general public (one-year-ahead) rose, due mainly to the impacts of recent faster growth in international commodity prices and grocery prices, and heightened expectations for economic recovery following the rollout of vaccines and expansionary government policy measures.[14]

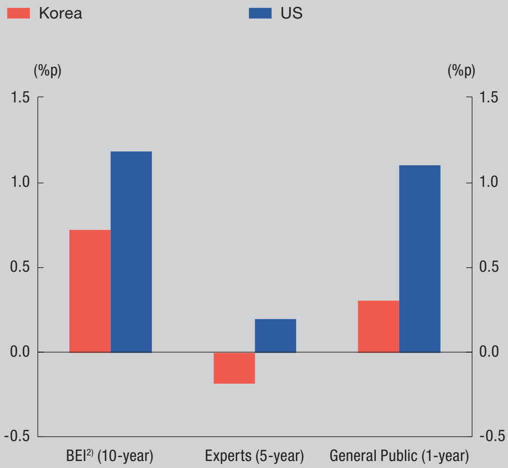
Survey-based[1),2)] inflation expectations



Notes: 1) Short-term inflation expectations of the general public (one-year-ahead) are based on surveys conducted by the University of Michigan (US) and by the Bank of Korea (Korea). Long-term inflation expectations of experts (five-year-ahead) are based on surveys undertaken by Consensus Economics.
2) Short-term inflation expectations of the general public (one-year-ahead) are based on monthly surveys conducted by the University of Michigan (US) and the Bank of Korea (Korea). Long-term inflation expectations of experts (five-year-ahead) are based on group surveys conducted in the first month of every quarter by Consensus Economics.
Sources: Bank of Korea, Consensus Economics, University of Michigan.

14) Data since January 2021 was available for Korea and the US among major economies. In the US, the University of Michigan Surveys of Consumers found that the inflation expectations of the general public rose rapidly from 2.5% in December 2020 to 3.0% in January and 3.3% in February 2021. In Korea, the Bank of Korea survey found that the inflation expectations of the general public remained at 1.8% after October 2020 and then rose to 2.0% in February 2021.

Comparison of changes in inflation expectations[1]



Notes: 1) Difference in expectation figures between February 2021 and March 2020.
2) Based on a monthly average.
Sources: Bank of Korea, Bloomberg, Consensus Economics, University of Michigan.

(Discussion on future inflation)

With heightened expectations for economic recovery following coronavirus vaccinations in major economies, financial market-based inflation expectations and short-term inflation expectations of the general public have recently increased. Against this backdrop, there is ongoing discussion about the future prospect of higher inflation. A general consensus has been reached that price inflation could rise in the short-term, due mainly to a possible outpouring of pent-up demand seen since the outbreak of COVID-19 amid possible economic improvement, as well as to base effects. However, there are conflicting views on the future course of inflation over a medium- and long-term horizon.[15)]

Some expect that inflation will rise as a result of large-scale fiscal spending and the resulting liquidity expansion,[16)] and weaker GVCs. Particularly in the US,[17)] there is rising concern that inflation risk will materialize, given large-scale fiscal stimulus by the Biden administration and the possibility that inflation will be allowed to run above 2% following the Fed's adoption of average inflation targeting.

Meanwhile, others see the possibility of a continued rise in inflation as unlikely, given that long-term inflation expectations remain stable and central banks possess tools to deal with inflation. Other considerations include the sustained employment slump, slack in the production sector, and changes[18)] in the economic structure.[19)]

15) James, Brunnermeier, and Landau (Mar. 2021) assessed that, since the impacts of the COVID-19 shocks are one-off, if the current accommodative monetary policy or expansionary fiscal policy is normalized rather than prolonged, there is little risk of inflation. However, they saw an increased risk of inflation through the path of inflation expectations if the COVID-19 shock is prolonged. Meanwhile, Rogoff (Mar. 2021) projected that, if globalization is reversed or the independence of central banks is impaired, inflation risk could become greater than expected from a medium- to long-term perspective. However, given that inflation dynamics are heavily affected by long-term expectations, he judged that even if demand soars temporarily, due mainly to outpouring of pent-up demand and large-scale fiscal stimulus, the possibility of soaring inflation would be remote.

16) Summers (Feb. 2021) assessed that the Biden administration's fiscal stimulus (worth $1.9 trillion) is excessive, reaching at least 3 times the US output gap (compared to 0.5 times the output gap for the fiscal stimulus during the GFC), and claimed that this could lead to higher inflation. Blanchard (Feb. 2021) agreed with this assessment.

17) There has recently been an expectation that price inflation will rise this year in countries other than the US as well. For instance, Jens Weidmann, president of the Deutsche Bundesbank, noted that inflation could run above 3% at the end of this year (Feb. 12, 2021), and the possibility has been raised in the UK that the recent increase in international commodity prices could lead to higher consumer prices, which could push inflation above 2% at around the end of this year (Financial Times, Feb. 17, 2021).

Taking these opinions into overall consideration, there appears to be only a slight possibility of a rapid rise in inflation in a situation in which uncertainties related to COVID-19 remain high. However, it is possible that inflationary pressures could rise temporarily, due mainly to the outpouring of pent-up demand, as well as to the reopening of economic activity and a rapid recovery following vaccinations. It is also possible that inflation could rise faster than expectations, influenced by supply shocks including rising international commodity prices. Therefore, future inflation trends must be carefully monitored.

18) Changes in the economic structure include the acceleration of the digital economy, expansion in automation and unmanned technologies, and the population aging. Gopinath (Feb. 2021) also saw that the possibility of price inflation in the US running persistently above the Fed's target would be low, due mainly to structural factors such as automation and fiercer competition in the markets.

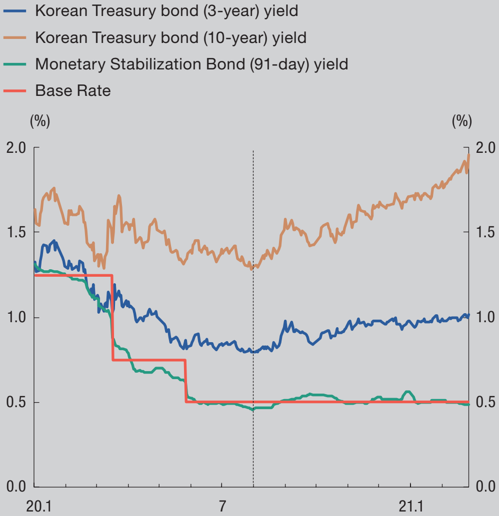
19) Fed Chair Powell (Jan. 2021) stated that price inflation could rise temporarily, due mainly to pent-up demand and base effects, but any such increase was likely to be transient. ECB President Christine Lagarde (Feb. 2021) also saw little possibility of rapid inflationary pressures continuing.

Box I-2.

Current Status of Long-Term Interest Rates and Assessment

Long-term market interest rates (10-year Treasury bonds) in Korea continued to rise overall from August last year. The 10-year rate rose to 1.96% at the end of February this year, 66bp higher than the end of July last year. As long-term interest rates rose, the spread between long-term and short-term rates widened. As of February 2021, the daily average spread between long-term and short-term rates was 135bp, far above[1] the long-term average (66bp between Jan. 2011 and Dec. 2020). In this section, we look into the background behind the recent rise in long-term interest rates and assess the movements of long-term interest rates by comparing them with past rates and those of major countries.

Long- and short-term market interest rates



Sources: Korea Financial Investment Association, Bank of Korea.

1) The current spread between long-term and short-term interest rates is considerably wide when compared with the spread during periods of economic contraction (56bp), even considering that the Korean economy has been hard hit by the COVID-19 crisis.

(bp)

Spread	Long-term average[1]	By economic phase[1)2)]		Current level[3]
		Periods of economic expansion	Periods of economic contraction	
Treasury bond (10-year) yield - MSB (91-day) yield	66	75	56	135
Treasury bond (3-year) yield - MSB (91-day) yield	22	24	20	50
Treasury bond (10-year) yield - Treasury bond (3-year) yield	44	51	35	85

Notes: 1) From January 2011 to December 2020.
2) Based on Statistics Korea.
3) Average in February 2021.
Sources: Korea Financial Investment Association, Bank of Korea staff calculations.

Spread between long-term and short-term rates

— Korean Treasury bond (3-year) yield - Monetary Stabilization Bond (91-day) yield
— Korean Treasury bond (10-year) yield - Monetary Stabilization Bond (91-day) yield

Source: Korea Financial Investment Association.

(Background behind long-term interest rate hikes)

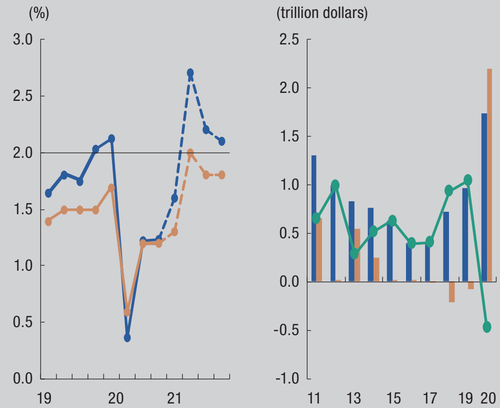
The rise in long-term interest rates in Korea from August last year is attributable to several factors: rising interest rates in the US, improvements in economic indicators at home and abroad, easing of risk aversion, and concerns about an excess supply of Treasury bonds.

First, the US Treasury bond yield rose significantly from August last year, as expectations[2] of large-scale economic stimulus and of an economic recovery were priced in markets. In particular, entering this year, the Treasury bond yield rose further, as expectations of an economic recovery strengthened with the prospect of an additional large-scale economic stimulus package[3] and vaccine distribution. Other factors affecting the hike included expectations[4] of rising prices due to growing inflationary pressures on both the supply and demand sides, and projections for a net supply of medium- to long-term US Treasury bonds in record volume.[5]

Expected US inflation and size of net issuance of medium- to long-term US Treasury bonds

CPI
PCE

Net issuance of medium- to long-term Treasury bonds
Fed Treasury purchases
Treasury purchases by market participants excluding the Fed



Sources: Bloomberg, US Department of the Treasury.

As the US Treasury bond yield, which has a major influence on the global financial market, rose

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2) In 2020, expectations of an agreement on an additional economic stimulus package (before the November presidential election) and the outlook for fiscal expansion by the new government worked as factors pushing up interest rates.

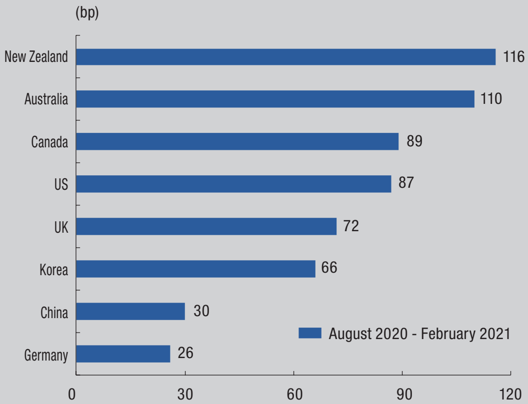
3) Entering 2021, materialization of a Democratic "blue wave" and the Biden administration's announcement of a stimulus package (around 1.9 trillion dollars) had impacts on the hike in long-term interest rates.

4) There is a possibility of private consumption rising rapidly if economic activity normalizes, as the balance of personal savings in the US is twice the long-term trend. Rising production costs such as major commodity prices and shipping fees are expected to push prices up. The PCE price index recorded growth at the low- to mid-1% level (1.3% in December 2020), and the BEI rate, which reflects the yield on inflation-linked government bonds, rose above 2%.

5) The US Treasury bond (10-year) yield rose by 38bp from August to December 2020 and again by 49bp by the end of February 2021 to stand at 1.40%.

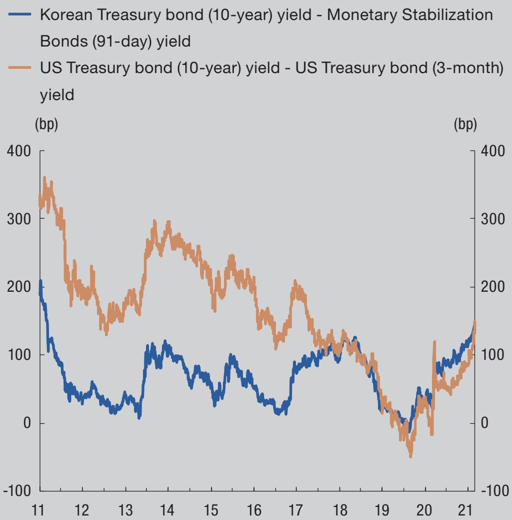
on expectations of a global economic recovery, long-term interest rates in major economies and Korea also reflected these expectations and increased in parallel.[6)]

Changes in long-term rates[1)] in major countries



Note: 1) Based on Treasury bond (10-year) yield.
Sources: Bloomberg, Korea Financial Investment Association.

Spread between long-term and short-term interest rates in the US and Korea



Sources: Korea Financial Investment Association, Bloomberg.

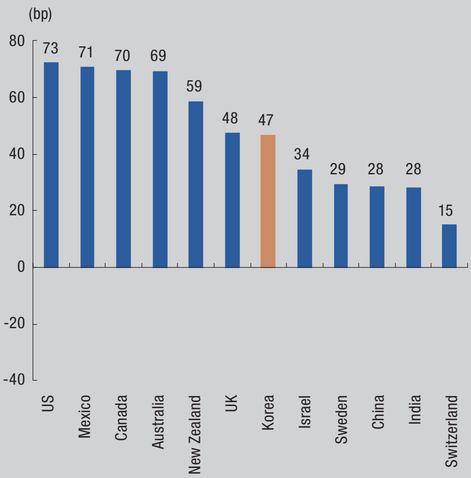
Looking at changes in the spread between long-term and short-term interest rates in major economies between August 2020 and February 2021, the spread widened by 73bp in the US (based on the spread between 10-year and 3-month Treasury bonds and 3-month ones), 70bp in Canada, 69bp in Australia, and 48bp in the UK. The positive correlation between the spread of the US and those of other major economies has strengthened[7)] overall as the spread widened in the US and other major economies in parallel.

6) The correlation coefficient between the US government bond and 10-year Treasury bond yields was 0.57 on a daily basis between January 2011 and December 2020 (0.83 over the last three years). The high synchronization among the interest rates of the US, Korea and other major economies is attributable not only to economic aspects but also to changes in demand for global bond investment stemming from the interest rate spread.

7) The followings are changes in the correlation coefficient of the spread between long-term and short-term interest rates in the US and other major economies since last year.

Period	Korea	Australia	Canada	New Zealand	UK
Between March and July 2020	0.36	0.31	0.67	0.62	0.87
Between August 2020 and February 2021	0.95	0.94	0.99	0.91	0.87

Changes in spread between long-term and short-term rates in major countries (August 2020 to February 2021)[1)2)]

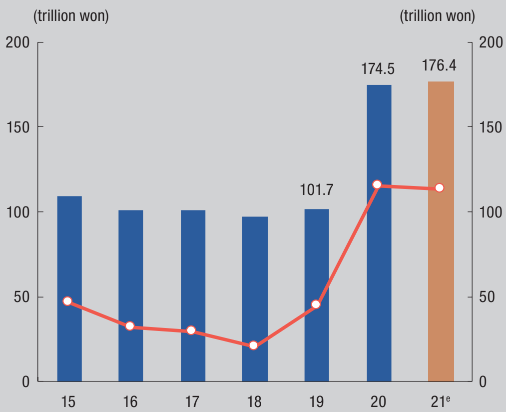


Notes: 1) Based on Treasury bond (10-year - 3-month) yield; for New Zealand, Sweden and Israel, which do not publish yield for 3-month Treasury bonds, the policy rate was used instead.
2) Based on daily averages during each month.
Sources: Bloomberg, Korea Financial Investment Association.

Interest rates increased due to the announcements[8)] of positive economic indicators at home and abroad, declining uncertainties surrounding the US presidential election, and easing risk aversion following the distribution of COVID-19 vaccines in major countries from November 2020.

The hike in long-term interest rates is also owing to concerns[9)] about increases in Treasury bond issuance in the process of responding to COVID-19 and supporting the economic recovery. In fact, the issuance of Treasury bonds increased greatly last year compared to normal years due to four rounds of supplementary budgets. Concerns about an excess bond supply continued this year, as Treasury bond issuance is set to be similar to last year's size based on the main budget plan[10)], and as additional issuance of Treasury bonds is likely due to the supplementary budget compilation in response to COVID-19, including the fourth round of emergency relief payments.

Trends of Treasury bond issuance[1)]



Note: 1) Based on draft of main budget for 2021.
Source: Ministry of Economy and Finance.

(Assessment)

As noted above, the rises in domestic long-term interest rates that have persisted since the second half of last year have been largely effects of external factors such as rising rates in major

8) GDP growth rate in the third quarter of 2020 was 1.9% (quarter-on-quarter), exceeding market expectations (1.7%). Daily average exports improved (1.65 billion dollars in the second quarter → 1.86 billion dollars in the third quarter). In the case of the US, GDP growth rate in the third quarter of 2020 (annualized rate of 33.1% quarter-on-quarter) and private consumption (0.5%) all exceeded the expected figures (32.0% and 0.4%, respectively).

9) The compilation of the fourth supplementary budget (Aug. 2020) and the government's announcement of the large-scale budget plan for 2021 (Dec. 2020) acted as factors heightening concerns about an oversupply of Treasury bonds.

10) Total issuance of Treasury bonds is expected to amount to 176.4 trillion won based on the confirmed main budget plan for 2021. This is similar to the 175.4 trillion won of total Treasury bond issuance last year, which reflected four rounds of supplementary budgets.

economies in line with the global economic recovery and inflation expectations. Domestic factors such as concerns about an excess supply of Treasury bonds stemming from their increased issuance have also had impacts.

Going forward, domestic long-term interest rates are likely to be affected by fiscal and monetary policies in major countries, COVID-19 developments, subsequent movements of Treasury bond yields in these countries, the path of the domestic economic recovery, and the supply of Treasury bonds. Therefore, we will closely monitor the situation and respond appropriately if needed.[11)]

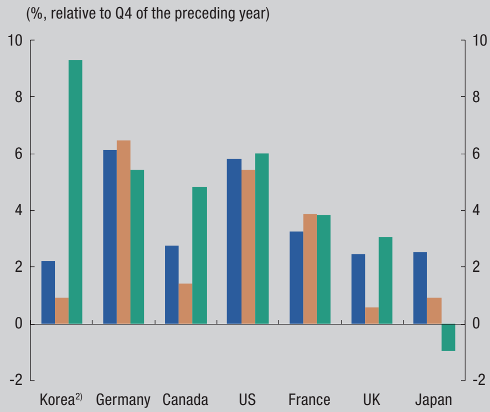
11) Amid greatly expanded volatility of market interest rates, on February 26, 2021 the Bank of Korea announced a plan to make outright purchases of Treasury bonds worth a total of 5 to 7 trillion won to ease market rate volatility as Treasury bond issuance is expected to increase considerably in the future.

Box I-3.

Backgrounds and Assessment of Asset Price Increases

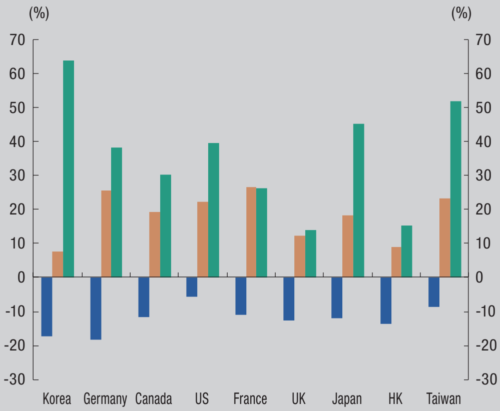
Since the outbreak of the COVID-19 pandemic, prices of assets including houses and stocks have sustained sharp rises relative to the real economy. Such rises are seen across all major economies including the US, the UK, Germany and France, but asset prices have increased significantly faster in Korea. In this section, we examine the drivers behind the recent rise in asset prices in Korea by classifying them as common and market-specific factors. We then carry out an empirical analysis to measure the impacts from global common factors and idiosyncratic factors on asset price rises in major economies including Korea.

Rates of increase in housing prices[1] in major countries



Notes: 1) Based on actual transaction prices for all house types (apartments and detached single-family houses only for Korea and the US, respectively).
2) Actual transaction prices of nationwide apartments were used for Korea, considering that statistics in major countries are also based on actual transaction prices.
3) Q2 2020 for Japan.
Sources: Korea Real Estate Board, OECD.

Rates of increase in stock prices in major countries



Source: Bloomberg.

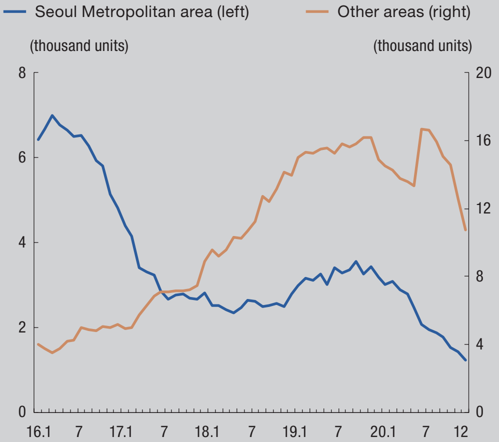
(Common drivers)

It is believed that the recent asset price rises in Korea have been driven by the accommodative macroeconomic and financial policy and economic agents' positive outlooks for future asset price increases. First, major economies have maintained their stances of ultra-low interest rates and liquidity expansion since the coronavirus outbreak. In response to the COVID-19-induced shock, which began in March 2020, central banks in major economies including the US, the euro area, and Japan raised the volume of their asset purchasing programs by broadening eligible securities, and increased liquidity supply by facilitating lending to SMEs, while maintaining[1] zero or negative policy rates. The Bank of Korea, in response to the COVID-19 crisis, also lowered its Base Rate by 75bp (from 1.25% to 0.50%) in two rounds of cuts, and increased liquidity provision by raising the total ceiling on its Bank Intermediated Lending Support Facility and adopting a regular RP purchase facility through which an unlimited amount of liquidity was supplied based on demand. Another driver pushing up asset prices was the spread of optimistic expectations for housing[2] and stock price rises, based on optimism that the pandemic crisis would ease in line with vaccine development and distribution, maintenance of the accommodative policy stance, and transition to a digital and low-carbon economy.

(Market-specific drivers)

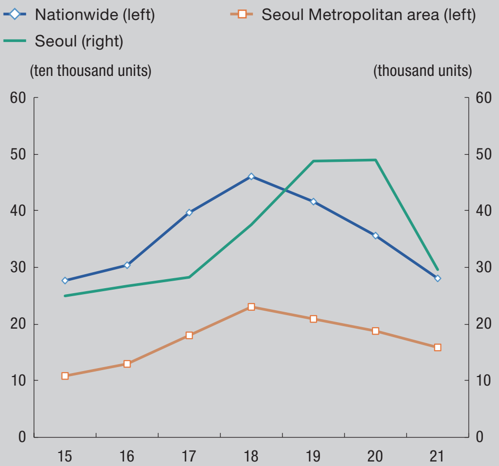
The recent hike in housing prices has mainly been led by concerns about supply shortages and the rise[3] in leasehold *(jeonse)* deposit prices. Demand for new housing has been strong, with the number of unsold new housing units reduced in the Seoul Metropolitan area. Concerns about potential supply shortages have also increased due to the reduction in new housing supply and houses listed for sale on expectations for a further price increase. These anxieties are regarded as having stimulated demand for housing and pushed up house prices.

Number of unsold apartment units after construction



Source: Ministry of Land, Infrastructure and Transport.

New apartment supply[1]



Note: 1) Estimates for 2021.
Source: Real Estate 114.

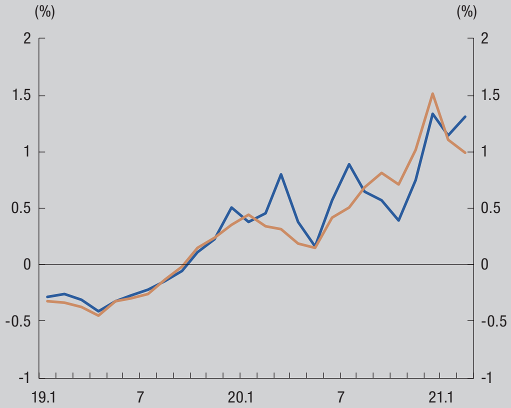
1) After the COVID-19 outbreak last year, the US Federal Reserve and the Bank of England each made two large cuts to their policy rates (from 1.5~1.7% to 0~0.25%, and from 0.75% to 0.1%, respectively) and have maintained them at those levels since. The ECB and the Bank of Japan have also maintained their policy rates at 0.0% and -0.1%, respectively.

2) The Consumer Sentiment Index (CSI) for future housing prices continued to climb after June 2020 (112 in Jun. 2020 → 117 in Sep. → 132 in Dec. → 129 in Feb. 2021).

3) Leasehold *(jeonse)* deposit prices (for apartments nationwide) rose at a higher rate in the second half of 2020, after turning to a positive increase in the second half of 2019.

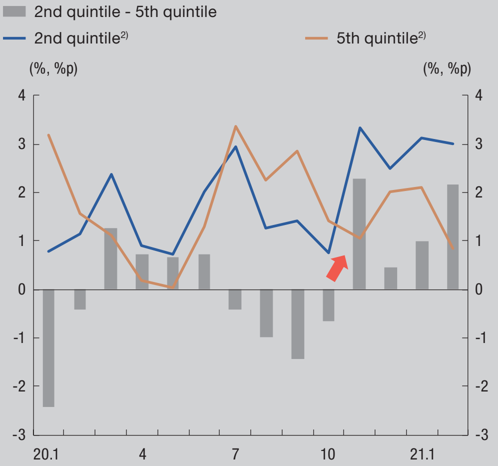
The recent rise in leasehold deposit *(jeonse)* prices was also another factor prompting housing prices to rise. Since purchases of low- and medium-priced houses are subject to more relaxed lending regulations and involve smaller tax burdens, the *jeonse* price increase played a part in converting some jeonse demand into purchasing demand particularly for low- and medium-priced houses in the Seoul Metropolitan area. The price growth of such houses in the Seoul Metropolitan area has actually outstripped that of high-value houses since November 2020.

Nationwide apartment price index[1]



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

Rate of increase in apartment sales prices[1] in Seoul Metropolitan area

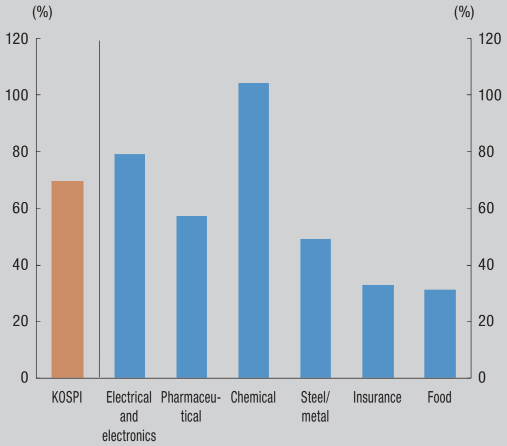


Notes: 1) Changes in sales price per square meter (m²) relative to prices in previous months.
2) Based on the average housing price in quintile in ascending order, where the 2nd quintile is the average of the lowest 20% to 40%, and the 5th quintile is the average of the top 20%.
Source: Kookmin Bank.

With regard to surge in stock prices, the main drivers were the expectations of improved sales for some companies that benefited from the pandemic, and the fact that listed companies were relatively less affected by the COVID-19 shock. First, expectations of improved sales mounted for some sectors that benefited from the pandemic, such as electrical & electronics, chemical, and pharmaceutical companies, in line with the increase in contactless demand since the COVID-19 outbreak and the anticipated development of testing kits and vaccines. These sectors account for a large share[4] of the stock market and have driven the recent rally.[5]

4) As of end-January 2021, the ICT, bio, chemical and information services sectors accounted for 61% of the total market capitalization.
5) The ICT, bio, chemical and information services sectors accounted for 64% of the total increase in KOSPI between April 2020 and January 2021.

Rates of increase[1] in stock prices in major sectors



Note: 1) Increase at end-January 2021 relative to end-March 2020.
Source: Koscom.

In addition, unlisted firms including small merchants and SMEs were hit harder by the pandemic shock than the comparatively small[6] number of listed companies. Large companies suffered pandemic-related sales declines in the second quarter of 2020 but returned to positive growth from the third quarter. In contrast, sales of SMEs continued to fall. Small merchants saw their sales plunge last year, particularly in the accommodation & food, culture & arts, and travel industries, which were not able to shift to contactless activities.[7]

Production index[1] for large and small to medium enterprises

(%)

		2019	2020 Q1	2020 Q2	2020 Q3	2020 Q4
Manufacturing	Large companies	0.9	7.5	-3.7	2.3	1.7
	SMEs	-2.9	-1.2	-10.3	-2.6	-3.2
Services	Large companies	1.2	0.0	-1.9	0.3	1.0
	SMEs	1.9	-2.3	-4.6	-3.6	-4.8

Note: 1) Sales for manufacturing; year-on-year.
Source: Statistics Korea.

(Empirical analysis)

Using a factor model[8] that uses a correlation between variables to look into the extent of impacts of different factors on asset price volatility, we decomposed common global factors and idiosyncratic factors behind the changes in housing and stock prices in major economies.[9] The results show that the global factors were the biggest driver (72%) behind the movements in Korea's stock price-earnings ratio in 2020. Meanwhile, when we confined the period of housing price changes to the period between the first quarter of 2006 and the second quarter of 2020 in consideration of the limitations of the time-series data sources, it was found that the housing price changes could be explained primarily by idiosyncratic factors (71%).

6) As of February 2021, the number of listed companies in the stock market (KOSPI) was 803, which was only 0.01% of the total number of Korean companies (about 6.5 million).

7) Analysis of data from Korea Credit Data shows that the total sales of small merchants declined by 12.3% year-on-year. Sales in the travel (-30.9%), restaurant (-19.5%), and culture & arts (-16.5%) sectors saw the biggest drops.

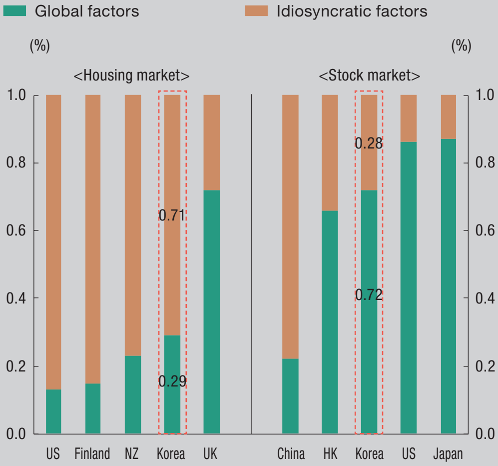
8) $X_{i.t} = \mu_i + L_i f_{i.t} + e_{i.t}\ (i=1,\ldots,p,\ t=1,\ldots,T),\ var(X) = var(Lf) + var(e) = LL' + \Psi$

$X_{i.t}$ refers to the change in asset prices in country *i* at t point in time, μ average, L factor loadings, f global common factor, e idiosyncratic factor, $E(f_t)=0,\ E(e_t)=0,\ E(f_t e_t)=0,\ var(f_t)=1$, and $E(e_t e_t{}')=\Psi$

For analysis of stock markets, we used weekly data of 15 countries between January and December 2020. For housing price analysis, quarterly data of 20 countries between Q1 2006 and Q2 2020 was used.

9) As a factor model uses correlation between variables to estimate the extent of impacts of common and idiosyncratic factors, it may have limitations in singling out specific factors affecting asset price volatility.

Results[1)2)] of factor model variance decomposition



Notes: 1) var(change in asset price) = var (common global factors) + var (idiosyncratic factors).
2) Estimations of only some of the countries are shown here (out of total 15 stock markets and 20 housing markets surveyed).

Source: Bank of Korea.

(Assessment)

Asset price increases are a phenomenon typically seen during a recovery from a crisis. Nonetheless, the asset price growth in Korea since the pandemic outbreak has been steeper relative both to that observed in other major economies and also to its income growth. Such a high rate of price growth may be the result of a combination of optimism about accommodative fiscal and monetary policies and economic recovery, and market-specific factors.

The improvement in financial conditions driven by rising stock price does contribute to a real economic recovery to some extent. With economic uncertainties still high amid the resurgence of COVID-19, however, sustained asset price growth could result in a worsening of asset inequality and financial imbalances. The rise in housing prices, in particular, merit further attention, given that they are closely related to the growth in private debt and could pose a risk to the overall financial system and macroeconomy.

Box I-4.

Review of Future Export Conditions

Domestic exports have been recovering rapidly from the COVID-19 slump since the second half of 2020, as global demand improves thanks to economic reopening in major countries and the resumption of normal operations[1] at Koreans companies' overseas production facilities.[2] Exports have seen a K-shaped recovery, with performances increasingly polarized among industries. Many of Korea's key export items including semiconductors are following the upward line in the "K" and have been leading the rebound in exports, owing to the increased demand from non-face-to-face sectors since the outbreak of the virus. In order to assess whether this export recovery will continue going forward, this section analyzes export conditions for this year by export item and evaluates major risk factors.

(Export conditions by item)

Export conditions have differed by item since COVID-19, affected by changes in consumption patterns such as increased goods consumption and expanded demand for non-face-to-face services, as well as by lockdown measures.

Exports by item[1]

(YoY, %)

		2020					2021	
		Year	Q1	Q2	Q3	Q4	Jan.	Feb.
Total		-5.5	-1.9	-20.3	-3.5	4.1	11.4	9.5
Items benefited from COVID-19	Semiconductors [19.9]	5.4	0.2	-3.2	7.1	18.5	20.6	12.6
	Chemical products [13.0]	-1.2	-4.3	-11.8	1.6	9.6	20.0	27.0
Durable goods	Automobiles [10.9]	-14.1	-8.1	-45.2	-4.0	2.4	27.0	31.0
	Mobile phones [2.6]	-6.4	-1.3	-22.7	-14.4	11.9	58.0	10.3
Infrastructure	Machinery [10.1]	-8.1	-0.6	-14.2	-7.4	-9.5	-8.9	-1.2
	Steel·Metal [7.7]	-10.3	-7.3	-25.0	-8.4	0.1	7.8	4.9
Items hit by lockdown measures	Petroleum products [4.8]	-40.2	-12.3	-58.4	-43.3	-44.4	-45.0	-15.2
	Ships [3.7]	-2.0	9.7	-31.7	-8.4	35.3	23.6	4.9

Note: 1) Figures in brackets are the share as of 2020.
Source: Korea Customs Service.

Specifically, semiconductor exports have been showing solid growth since the third quarter of last year, driven by increased demand for over-the-top media services and IT devices such as laptop computers, caused by an expansion of remote working and education as well as digital leisure activities. Moreover, a rapid improvement in mobile phone demand has also led to greater demand for memory and non-memory chips for mobile phones (including mobile application processors and image sensors), contributing to a recovery in semiconductor exports. Despite

1) Due to the lockdown measures imposed between April and May last year following the spread of COVID-19, operations were suspended at key overseas production facilities of Korean companies in, for example, the US, India, Mexico and Brazil, resulting in a downturn in exports of intermediate goods for overseas production.

2) At the time of the global financial crisis, it took 1 year and 8 months to return to the pre-crisis level of average daily exports, whereas it took only 8 months during the current crisis, with Korea's exports improving at a faster pace relative to those of other major economies. Major economies' exports on a customs-cleared basis during Q4 2020 (based on Year-on-year) are as follows:

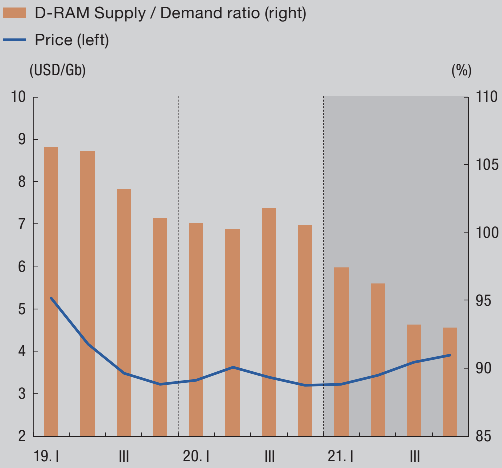
(%)

	Korea	China	Japan	US	UK	Australia	EU
Growth	4.1	17.0	-0.7	-5.4	-20.2	-2.3	-3.7

Source: CEIC.

the possibility that the demand for the non-face-to-face sector could slow[3] in the second half of this year, due for instance to vaccines rollouts, export conditions for semiconductors will likely remain favorable thanks to a pickup in server chip demand from multinational IT companies and to the growth[4] of the 5G smartphone market.[5]

D-RAM supply and demand and prices[1]



Note: 1) As of December 2020.
Source: Gartner.

The growth in exports of petrochemical products has accelerated since the second half of last year, buoyed by solid sales of healthcare and sanitation products as well as medicines and test kits related to COVID-19 responses, and boosted by increased use of disposable products and packing materials in connection with online shopping and related deliveries. The overall conditions for petrochemical exports are expected to improve within this year as downstream industries including textile and electronics gradually rebound, boosted by additional economic stimulus put forward by major economies. However, if COVID-19 is contained in major economies thanks to vaccinations in the second half of this year, the demand for medicines and test kits could decline, possibly working as a constraining factor.

Exports of automobiles, which are a durable consumer good, have recovered relatively quickly since the fourth quarter last year, due to the pent-up demand from the shutdown of distribution networks during the lockdown period, to a base effect as people avoid public transportation, and to solid SUV sales in the US. The global economic recovery and expanded demand[6] for electric vehicles could act as positive factors for exports.

Exports of steel, an item related to infrastructure investment, have seen reduced sluggishness since the second half of last year, thanks to expanded infrastructure investment by China and improvement in downstream industries including automobiles. However, the slump in machinery exports worsened once again, caused by reimposition of tighter lockdown measures following the resurgence of COVID-19 in winter. Nevertheless, export conditions surrounding the steel and machinery sectors are expected to improve this year, thanks to increased demand from downstream industries and infrastructure investment in major economies.

3) The shipment volume of laptop computers rose by 14.1% in 2020 compared to the previous year due to COVID-19, but is expected to increase by a mere 4.6% this year due to a base effect (Oct. 2020, OMDIA).
4) 5G phones accounted for 19% of total smartphone sales in 2020. Their share is forecast to increase to 37% in 2021 (Jan. 2021, TrendForce).
5) The Ministry of Trade, Industry and Energy predicts semiconductor exports to be 10.2% higher than a year earlier (Jan. 2021).
6) Global automobile demand dropped by 16.2% in 2020 compared to the previous year, due to the shutdown of distribution networks following COVID-19, but is forecast to rise by 10.9% in 2021 (Oct. 2020, LMC).

Outlooks for steel demand in major countries[1)]

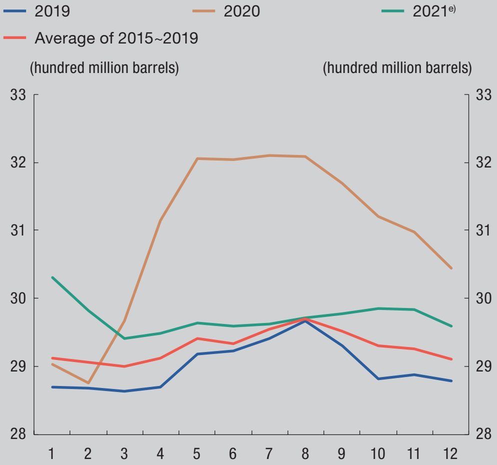
(million tons, %)

Country	2020		2021	
China	980.1	(8.0)	980.1	(0.0)
EU	134.3	(-15.2)	149.0	(11.0)
US	82.3	(-15.8)	87.6	(6.6)
India	81.9	(-20.2)	100.4	(22.7)
ASEAN-5	73.1	(-6.0)	77.3	(5.8)
Japan	50.8	(-19.6)	54.9	(8.1)
Global	1,725.1	(-2.4)	1,795.1	(4.1)

Note: 1) As of November 2020.
Source: World Steel Association.

Exports of petroleum products continued to decline rapidly last year, due to the imposition of movement restrictions and sluggish global demand following slumps in tourism and transportation. However, ships, which suffered delivery delays due to lockdown measures, shifted to an increase in the fourth quarter last year as the global cargo volume rose. Petroleum product exports are expected to climb this year both in terms of demand and unit price, due to the relaxing of movement restrictions and to rising international oil prices. Export conditions for ships are also forecast to improve as ship deliveries are carried out after being postponed last year.

Oil inventories[1)]



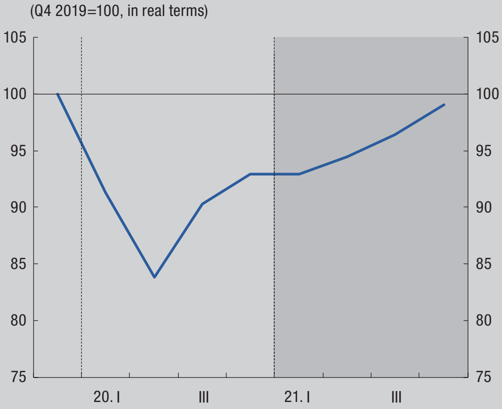
Note: 1) As of February 2021.
Source: EIA.

(Major risk factors)

In addition to the above mentioned export conditions by item, the export sector will likely be affected by the following risk factors going forward.

First of all, global import demand is predicted to continue its upward trend this year, thanks to expanded COVID-19 vaccination and additional economic stimulus implemented in major countries. However, high uncertainties surrounding COVID-19 developments, such as a possible delay in vaccine rollouts and the emergence of new variants, could work as downside risks to exports. Moreover, even if face-to-face activities resume thanks to vaccination, economic recovery in major economies could center around the services sector with subdued goods consumption. In that case, the pace of further improvement in global import demand could be more modest.

Assumptions of global trade outlooks[1)]



Note: 1) As of October 2020.
Source: IMF.

The changes in the global trade environment are also forecast to greatly affect Korea's export conditions. The majority view is that uncertainty related to US trade policy will decline under the Biden administration. This is predicted to improve Korea's export conditions by, for instance, boosting global investor sentiment. Meanwhile, the US is likely to continue pressuring China, Korea's largest export destination, in their trade relationship, which is expected to remain as a constraint on our export sector.[7)] Furthermore, as major economies step up their environmental and climate change responses, Korea's exports could be considerably influenced by the related changes in the trade policies of major economies.[8)] The government's efforts to expand free trade agreements including the Regional Comprehensive Economic Partnership[9)] are forecast to have a positive influence on Korea's export conditions by raising market openness, consolidating trade norms and strengthening capacity to tackle protectionism.

Lastly, global oil prices have soared[10)] recently, in part due to economic recovery in major countries, and the majority predicts that prices will continue rising gradually this year, also thanks to the rebound in the global economy.[11)] Higher oil prices, in general, raise the unit prices of export products, but could have negative effects on export volume by limiting global economic recovery. However, the recent rise in oil prices appears to be attributable to a pickup in crude oil demand rather than to supply-side factors

7) Major investment banks such as HSBC and Bank of America predicted that trade tensions between the US and China would continue even under the Biden administration, but uncertainty surrounding US trade policy would generally decline.
8) Environmentally friendly industries are expected to see growing opportunities for exports thanks to increased global demand, but carbon-emitting industries including chemical products and steel are likely to face significant negative impacts from the adoption of a carbon border tax in the EU and the expansion of environmentally friendly policies in the US.
9) The RCEP is the world's largest free trade agreement, encompassing 30% of global trade, GDP and population, with the participation of 15 countries including 10 ASEAN countries as well as Korea, China, Japan, Australia and New Zealand. The agreement was signed by the participating countries on November 15, 2020, and is expected to enter into effect during the second half of this year. The Korea Institute for International Economic Policy estimates that the reduced tariffs under the RCEP will contribute to domestic GDP growth of 0.03% per annum for the next 15 years.
10) Oil prices dropped from 50 dollars in the first quarter of 2020 to 32 dollars in the second quarter of 2020, but have since rebounded gradually, reaching 54 dollars at the end of January and 63 dollars at the end of February 2021.
11) International oil price outlooks by major institutions are as follows (Feb. 2021):

(Brent basis, dollar/barrel)

	EIA	IHS	OEF
2021	53	61	56
2022	55	60	57

such as reduced output, and thus its negative impact on export volume is expected to be limited.[12] Therefore, the rise in oil prices is forecast to increase unit prices for petroleum and chemical product exports, which will likely lead to higher exports on a customs-cleared basis this year.

(Overall assessment)

Looking comprehensively at export conditions by item and risk factors, it is judged that our exports (customs-cleared basis) this year will climb significantly compared to last year, thanks mainly to recoveries in the global economy and semiconductor sector. However, the pace of increase will be faster in the first half and slower in the second half of the year, due to the base effect of a substantial decline in the second quarter last year.

Export conditions for Korea are forecast to improve going forward, driven by a rebound in global import demand, a decline in uncertainty related to US trade policy and the Korean government's efforts to expand FTAs. However, we cannnot rule out the possibility of a slow pace of vaccination pushing back the recovery of global import demand. Moreover, it remains possible that an escalation of tensions between the US and China could affect our export conditions negatively. Therefore, we will need to continue closely monitoring developments related to COVID-19 and US trade policy toward China, with a view to identifying changes in Korea's export conditions.

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12) According to Kilian (2009) and IMF (2015), oil price increases caused by global demand shocks have limited negative impacts on the global economy. The negative impacts of increased expenses following an oil price hike are outweighed by the increased output driven by improvement in the global economy, as well as by the greater import demand from oil-producing countries.

II

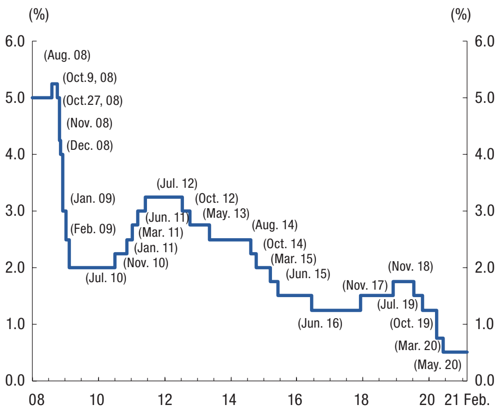
Conduct of Monetary Policy

1. Base Rate

Base Rate operated at 0.50%

The Bank of Korea maintained its accommodative policy stance to support the recovery of growth and to help inflation stabilize at the 2% target over a medium-term horizon. In this process, it closely examined risk factors such as the global and domestic development of the COVID-19 pandemic, its financial and economic impacts, and changes in financial stability conditions. Under this policy stance, the Bank of Korea maintained the Base Rate at 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 Base Rate decisions during this period, and the backgrounds behind them, are as follows.

At the January meeting, the Board left the Base Rate unchanged at 0.50%, considering that macroeconomic uncertainties still remained high, affected by the resurgence of the pandemic, despite modest recovery in the domestic economy bolstered by improvement in exports. Although consumer spending had contracted, due mainly to stronger social-distancing measures, export growth had increased, especially in the IT sector, and facilities investment continued to recover. Therefore, it was expected that the domestic economy would recover gradually, led by exports and investment. However, it was judged that uncertainties over the growth path were high, as the degree of economic recovery would be heavily dependent upon the evolution of COVID-19 and the status of vaccine distribution. Consumer price inflation remained low at the mid-0% level, reflecting prolonged effects from the decline in the prices of petroleum products and public services. It was forecast that consumer price inflation would run at the mid- to upper-0% level for some time and then gradually increase to the 1% level. On the financial stability side, household loan growth remained high, and housing prices had accelerated in the Seoul Metropolitan area and other regions.

At the February meeting, the Board decided to leave the Base Rate unchanged at 0.50%. Expectations for economic recovery had heightened, led by the moderated spread of the virus globally and the prospect of a fiscal stimulus package by the new US administration, ahead of the rollout of COVID-19 vaccines at home. However, high uncertainties remained unresolved related to COVID-19 variants and a possible delay in the supply of vaccines, and the resulting economic trends. The Board therefore judged there was a need to maintain the current accommodative monetary stance. The Korean economy had recovered at a moderate pace overall, but showed varying movements by sector. Exports had sustained their buoyancy and facilities investment continued to recover while consumption remained weak as stronger social distancing was prolonged. It was expected that the economy was likely to continue its recovery, led by exports and investment. As a result, GDP growth this year was projected to be around 3.0%. It was forecast that consumer price inflation would run at the 1.3% level, slightly exceeding the November forecast of 1.0%, largely reflecting the increase in global oil prices and gradual improvement in economic activity. Meanwhile, on the financial stability side, household loan growth had accelerated, and housing prices continued to increase rapidly in all parts of the country. As a result, the Board saw a growing need to pay attention to the risk of financial imbalances.

Liquidity Adjustment via Open Market Operations

Bank of Korea seeks to ensure that the overnight call rate does not deviate too widely from the Base Rate by carrying out its open market operation instruments which include the issuance of Monetary Stabilization Bonds (MSBs), Repurchase (RP) transactions, and deposits with the Monetary Stabilization Account (MSA).

The total amount of liquidity adjustment needed (average balance basis) declined in the fourth quarter last year, driven by the government's repayment of loans to the Bank of Korea and the increased[45] volume of currency issuance, followed by a further decline in January as well. Accordingly, the Bank reduced the issuance[46] of MSBs and the deposits[47] with the MSA. (Net) RP sales rose greatly in the fourth quarter last year as the full-allotment RP purchase program implemented in July expired in October, but they dropped slightly in January this year compared to the preceding month.[48]

At the end of last year, the Bank of Korea reduced RP sales and MSA deposits from mid-December to the year-end, as preemptive measures against a possible spike in call rates from supply and demand mismatch[49]. The aim was to ensure that banks have sufficient funds under their required reserves, thereby facilitating smooth supply and demand of short-term financing.

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

45) In quarter-on-quarter terms, the currency issuance (average balance basis) in the fourth quarter last year increased by 6.2 trillion won, having been expanded by 5.1 trillion won over the 10 business days preceding the Chuseok holiday (end-September to early-October 2020). When the reserve requirements are reduced by the increased supply of issued currency, the amount of excess liquidity absorbed declines.

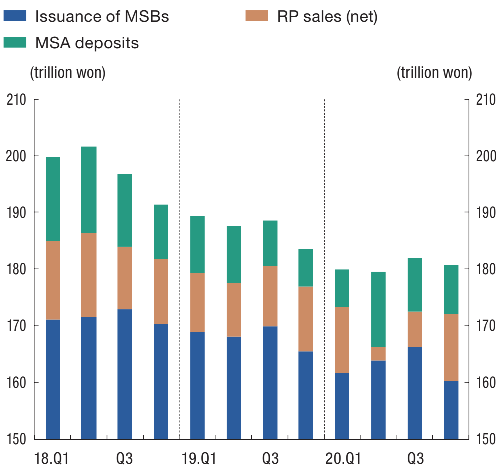
46) The volume of MSB issuance (average balance basis) in the fourth quarter was reduced by 6.0 trillion won (quarter-on-quarter), in consideration of the burden placed on supply and demand caused by issuance of Treasury bonds for the government's fourth supplementary budget and year-end book closing of institutional investors.

47) The average MSA balance dropped by 0.5 trillion won in the fourth quarter (quarter-on-quarter) and by 1.1 trillion won (month-on-month) in January 2021.

48) Net RP sales (average balance basis) rose by 5.5 trillion won in the fourth quarter (quarter-on-quarter), and dropped by 0.3 trillion won (month-on-month) in January 2021.

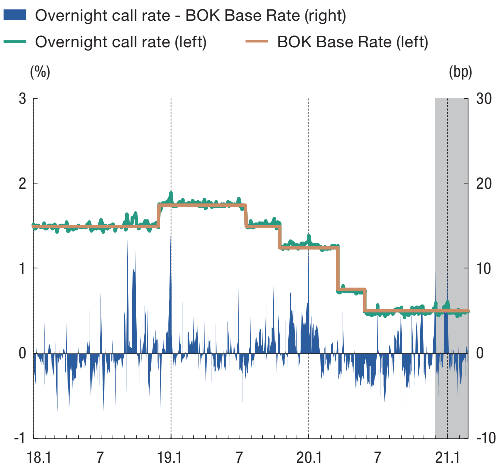
49) At the year-end, the mismatch in supply and demand of funds in the short-term money market, including the RP market in particular, tends to deepen, owing mainly to an increase in corporations' MMF liquidation and to the banking sector's management of financial ratios.

Figure II-2. Liquidity adjustment[1] via open market operations



Notes: 1) Quarterly average balance basis.
Source: Bank of Korea.

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



Source: Bank of Korea.

2. Bank Intermediated Lending Support Facility

Continued support for companies affected by COVID-19 and small businesses

To ensure that banks actively lend to small and medium-sized enterprises (SMEs), the Bank of Korea operates the Bank Intermediated Lending Support Facility. The Facility supports banks by extending funds at interest rates lower than the Base Rate. The Monetary Policy Board makes adjustments to the total ceiling of the Facility when deemed necessary, taking into account the financial and economic situation as well as the financing conditions for SMEs.

The Bank of Korea increased the total ceiling of the Bank Intermediated Lending Support Facility on three occasions last year (in March, May, and October 2020) by a total of 18 trillion won. When the ceiling was increased by 8 trillion won in October 2020, 3 trillion won was allocated solely to small merchants and businesses under the newly adopted Support Program for Small Businesses[50], while 3 trillion won of new funding was added[51] to the program that supports SMEs affected by COVID-19, with a six-month extension[52] of the operation period. The ceiling of the program that supports[53] facilities investment of startups, of businesses that create jobs, and of material, parts and equipment businesses was raised from 3 trillion won to 5 trillion won, and the program was extended[54] by one year.

Looking at the volume of COVID-19-related bank loans supported by the Bank of Korea, bank loans amounting to 25.2 trillion won were extended to 105,716 establishments between March 2020 and January 2021 under the Support for SMEs Affected by COVID-19 Program. As for the Support for Small Businesses Program, bank loans worth 0.7 trillion won were extended to 5,789 establishments between October 2020 and January 2021, showing steady growth in support loan performance.

The enhanced financial assistance by the Bank is expected to reduce the interest burden of and provide greater financial access to small businesses and SMEs hit by COVID-19, while acting as a new growth engine of the Korean economy and contributing to employment.

The increased ceilings of each program under the Bank Intermediated Lending Support Facility as of February 2021 are as follows: 2.5 trillion won for the Support Program for Trade Financing; 13 trillion won for the Support Program for New Growth Engine Development and Job Creation; 5.5 trillion won for the

50) Bank of Korea provides full funds to banks which have extended lending to small merchants and businesses that had not suffered any delinquent loans, capital impairment and disclosure until end-March 2021.

51) As a result, the cap on the Support Program for SMEs affected by COVID-19 has been raised from 10 trillion won to 13 trillion won.

52) The operation period of the program (bank lending basis) has been extended from end-September 2020 to end-March 2021.

53) The Bank is supporting 25% of banks' loans to eligible companies (50% for material, parts & equipment companies) for up to 5 years.

54) The operation period of the program (bank lending basis) has been extended from end-September 2020 to end-September 2021.

Program for Stabilization of SME Lending; 5.9 trillion won for the Support Program for Regional SMEs; 13 trillion won for the Support Program for SMEs Affected by COVID-19; and 3 trillion won for the Support Program for Small Businesses. The total ceiling stands at 43 trillion won, which includes reserves of 0.1 trillion won. The interest rates on support programs under the Bank Intermediated Lending Support Facility are 0.25% per annum.

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

(trillion won, %)

Program	Ceiling	Interest rate
Support Program for Trade Financing	2.5	0.25
Support Program for New Growth Engine Development and Job Creation[1]	13.0	0.25
Program for Stabilization of SME Lending[2]	5.5	0.25
Support Program for Regional SMEs	5.9	0.25
Support for SMEs Affected by COVID-19	13.0	0.25
Support for Small Businesses	3.0	0.25
Total	43.0[3]	-

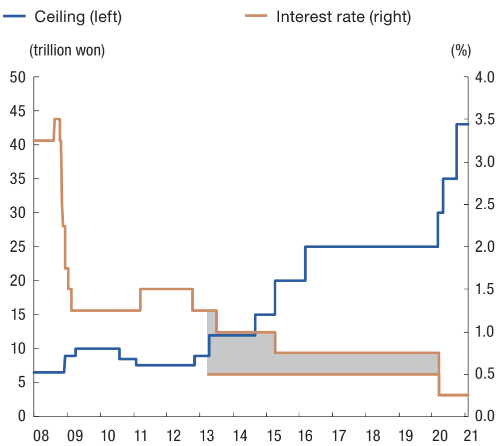
Notes: 1) The Support Program for High-tech and Other Start-up SMEs was expanded and reorganized as the Support Program for New Growth Engine Development and Job Creation (September 2017).

2) Includes the support that had been formerly provided under the Support Program for Facilities Investment.

3) 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

Conducted outright purchases of Treasury bonds

The Bank of Korea conducted outright purchases of Treasury bonds amounting to 1.5 trillion won on November 27, 2020, thereby finalizing the planned expansion[55] of such purchases announced in September 2020. As a result, the amount of outright purchases conducted by the Bank of Korea in 2020 totaled 11 trillion won. On February 26, 2021, the Bank announced another plan to expand outright purchases by a total of 5-7 trillion won during the first half of the year. The measure aims to ease volatility of market interest rates, as a significant increase in Treasury bond issuance is expected amid the recent escalation of market rate volatility. In addition to this plan, the Bank also stated that it will implement further market stabilization measures when deemed necessary, for instance, a spike in for instance, when market rates unsettled.

Extended period of corporate bond and CP purchases and increased share of subprime bond purchases by SPV

On December 24, 2020, the Bank of Korea, jointly with the government and Korea Development Bank (KDB), extended[56] the period of corporate bond and commercial paper (CP) purchases through a special purpose vehicle (SPV) by six months, while increasing[57] the share of subprime bond purchases, aiming to support financing of low-rated companies facing difficulties from the prolonged COVID-19 pandemic. Moreover, the Bank provided the first round of lending (1.78 trillion won) to the SPV on July 23, 2020, followed by the second round (1.78 trillion won) on January 12, 2021. Therefore, the total funds raised since the SPV's establishment on July 14, 2020 total 5 trillion won[58], with 2 trillion won added to the 3 trillion won from the first round of funding. As of end-January 2021, the SPV had purchased 2.5 trillion won[59] worth of corporate bonds and CP.

Table II-2. SPV's purchases of corporate bonds and CP[1)2)] by credit rating

(hundred million won, %)

Credit rating	Value	Share
AA(A1)	5,400	21.7
A(A2)	13,711	55.0
BBB(A3)	5,820	23.3
Total	24,931	100.0

Notes: 1) As of the end-January 2021.
2) Par value basis.
Source: Bank of Korea.

55) The Bank of Korea announced a plan to carry out outright purchases of Treasury bonds worth 5 trillion won from September to the end of 2020 to improve the supply and demand in the bond market and to mitigate volatility in long-term market interest rates in an preemptive manner. The total amount of outright purchases conducted by the Bank on three occasions amounted to 5 trillion won (2.0 trillion won in September, 1.5 trillion won in October and 1.5 trillion won in November 2020).

56) The operation period of the program has been extended from January 13, 2021 to July 13, 2021.

57) The share of prime bond (AA) purchases has been reduced from 30% to 25% while the share of subprime bond (A to BBB) purchases has been expanded from 70% to 75%.

58) The 3 trillion won raised from the first round of funding consists of 1.78 trillion won in senior loans from the Bank of Korea, and 1 trillion won in contributions plus 0.22 trillion won in subordinated loans from the KDB. The second pool of 2 trillion won consists of 1.78 trillion won in senior loans from the Bank of Korea and 0.22 trillion won in subordinated loans from the KDB.

59) The SPV purchased 1.3 trillion won of corporate bonds and 1.2 trillion won of CP.

Terminated Corporate Bond-Backed Lending Facility

The Bank of Korea terminated[60] its Corporate Bond-Backed Lending Facility on February 3, 2021. This decision was made taking into account that the financial markets remain stable overall, the liquidity conditions of financial institutions including securities firms are favorable, and the credit market support through the SPV which purchases corporate bonds and commercial paper (CP) is ongoing.

Extended currency swap agreement with the US Federal Reserve

The Bank of Korea continued its efforts to reinforce multi-layered financial safety nets, by, for instance, broadening currency swap networks with major central banks. In December 2020, the Bank extended[61] its currency swap agreement with the US Federal Reserve by six months, consequently extending the expiration date from March 31, 2021 to September 30, 2021. The goal was to act preemptively against the possible resurgence of market anxiety related to the pandemic, despite a recovery in risk appetite in the international financial markets and the general stability seen in global dollar markets and domestic foreign exchange markets.

60) The Corporate Bond-Backed Lending Facility has been extended twice by three months each, from the initial expiration date of August 3, 2020, in consideration of escalating uncertainties over financial and economic conditions caused by the resurgence of COVID-19.

61) After entering into a six-month, bilateral currency swap agreement in March 2020, the Bank of Korea and the US Fed extended the agreement in July and once again in December 2020.

Table II-3. Bank of Korea's market stabilization measures related to COVID-19

(as of February 28, 2021)

Policy response measures			Major details[1]
Base Rate	Base Rate cuts		• 1.25% → 0.50% (0.75%p)
Bank Intermediated Lending Support Facility	Raised ceiling		• 25 trillion won → 43 trillion won (+18 trillion won)
	Lowered interest rate		• 0.5%~0.75% → 0.25%
Market Stabilization measures	Liquidity provision	Carried out full-allotment RP purchases	• Amount supplied: A total of 19.43 trillion won (expired at end-July 2020)
		Carried out RP purchases from non-bank financial institutions	• Amount supplied: A total of 3.5 trillion won (1.0 trillion won on March 19, 2020, 2.5 trillion won on March 24, 2020)
		Broadened the range of institutions eligible for open market operations	• The list of institutions eligible for RP transactions was broadened (expired at end-July 2020).
		Broadened the range of securities eligible for open market operations	• The list of securities eligible for outright transactions and RP transactions was broadened.
		Expanded the range of eligible collateral for lending facilities	• The range of eligible collateral required for borrowing from the Bank of Korea's lending facilities was expanded.
		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.
	Stabilization of Treasury, corporate bond and CP markets	Performed outright purchases of Treasury bonds	• Amount purchased: A total of 11.0 trillion won (1.5 trillion won each in March, April, July and August, 2.0 trillion won in September, 1.5 trillion won in October, and 1.5 trillion won in November 2020)
		Corporate Bond-Backed Lending Facility	• Ceiling: 10 trillion won • Operation period: terminated on February 3, 2021 • Eligible collateral: Prime corporate bonds (rated at least AA-) with remaining maturity of five years or less.
		Supported the credit market through an SPV that purchases corporate bonds and commercial paper	• Size: 10 trillion won (expanded up to 20 trillion won depending on market conditions) • Expiration date: July 13, 2021 (extended by six months) • Size of the Bank's loan to SPV: 3.56 trillion won (accumulative basis)
	FX market stabilization	Signed a bilateral currency swap agreement with the US Federal Reserve	• A 60.0 billion US dollar bilateral currency swap agreement was signed. • Maturity: End-September 2021 (extended twice by six months each)
		Implemented competitive US dollar loan facility auctions	• A total of 19.872 billion dollars was supplied.
		Raised the ceilings on FX derivatives positions of banks	• Domestic banks (40% → 50%) and foreign bank branches (200% → 250%)
		Temporarily lifted the levy on financial institutions' non-deposit FX liabilities	• Banks, securities companies, credit card companies and insurance companies were temporarily exempted from the foreign exchange prudential stability levy for three months (during the period between April and June 2020).
		Supplied foreign currency liquidity through purchase of foreign currency bond repurchase agreements	• The Bank of Korea will provide US dollar funding to domestic financial institutions through foreign currency bond repurchase agreements. • Eligible bonds: US Treasury bonds (US government agency bonds if necessary)

Note: 1) Shaded cells indicate measures nearing their expiration date.

Source: Bank of Korea.

4. Other Monetary Policy Measures

The Bank of Korea has enhanced its monitoring of financial and FX market movements and of financial stability conditions, while reviewing conditions for inflation targeting and amending the 「General Principles of Monetary Policy Operation」. The Bank is also striving to strengthen its global cooperation and improve the safety and efficiency of the payment and settlement systems.

Monitored conditions for inflation targeting

The Governor of the Bank of Korea held a press conference in December 2020 with a view to enhancing the public understanding of recent conditions and future developments with respect to inflation, and explained the Bank's examination of its inflation targeting operations, concerning which a related report was published. The report evaluates the price situation in 2020 and looks into future inflation conditions and outlooks. It also analyzes[62)] the impacts of administered prices and digitalization of the economy on inflation as well as the changes in upside and downside risks to consumer price inflation.

Meanwhile, the Bank made a comprehensive assessment[63)] to identify any room for improvement regarding its inflation targeting operations and decided, in consultation with the government, that the current method be maintained until the next assessment. This decision was made in overall consideration of the following factors: (i) when the coronavirus recedes, consumer price inflation is expected to approach the inflation target gradually albeit slowly; (ii) a change in inflation targeting operations amid growing economic uncertainty over the pandemic could further elevate uncertainty; and (iii) although the recent low inflation environment is commonly observed not only in Korea but also in major economies, most major central banks with the exception of the US Federal Reserve are maintaining their existing inflation targeting regimes. The Bank of Korea will continue to explore measures to improve inflation targeting by analyzing its benefits and limitations and referring to discussions of other major central banks.

Amended 「General Principles of Monetary Policy Operation」

The Bank of Korea amended certain text of the General Principles of Monetary Policy Operation[64)] via the publication of Monetary

62) Please refer to the report 「Review of Status of Inflation Targeting Operations」 released on December 17, 2020 for further information (Bank of Korea website > communication > press releases) (available in Korean only).

63) When the Bank set the inflation target for 2019 onwards in December 2018, it decided to maintain the target at 2%. It did not specify an application period for the inflation target but decided to review areas for improvement regarding the operation every two years. Accordingly, the Bank conducted an assessment in 2020 and released the outcome in December 2020 through a press conference on the review of inflation targeting operations.

64) Through the publication of the 「General Principles of Monetary Policy Operation」 in 2016, the Bank specified the objectives of its monetary policy stipulated in the Bank of Korea Act, and stated the relationship between its monetary policy objectives and various considerations to make when conducting monetary policy, as well as basic principles to achieve the goals. Since the release of the General Principles, the Bank has looked into whether there is any need to amend or improve them when establishing the annual monetary policy direction every year-end. Thus far, few revisions have been made.

Policy for 2021. A key change was the explicit inclusion[65] of efforts to stabilize the financial market under the "Consideration of financial stability" section, in addition to the mention of attention to financial imbalances. In line with the Bank's employment of wide-ranging monetary policy tools in response to significantly expanded financial market volatility affected by COVID-19 in 2020, the Bank of Korea expressly reflected in the General Principles its considerations of financial market stability and of financial intermediary conditions, as well as its careful attention to the buildup of financial imbalances, in its monetary policy operations.

Table II-4. Changes in 「General Principles of Monetary Policy Operation」

Original	Revised
(Omitted)	(Same as the original)
- The path of convergence of inflation toward the target is assessed comprehensively on inflation and growth outlooks as well as their uncertainties and risks, and on financial stability conditions.	- The path of convergence of inflation toward the target is assessed based on a comprehensive evaluation of inflation and growth outlooks as well as their uncertainties and risks, the degree of anchoring of inflation expectations, and financial stability conditions.
(Omitted)	(Same as the original)
□ **(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.	□ **(Consideration of financial stability)** Achieving price stability over the medium-term should be based on financial stability, and the Bank pays careful attention to financial stability conditions in its conduct of monetary policy.
(Added)	○ (Efforts to stabilize financial market) The Bank makes efforts to stabilize the financial market and restore the financial intermediary function in the event of financial unrest, given that it constrains the monetary policy transmission channel and undermines macroeconomic stability.
○ (Relationship with inflation targeting) As persistent financial imbalances could undermine macroeconomic stability, paying due attention to financial stability in conducting monetary policy is consistent with the rationale behind flexible inflation targeting.	○ (Attention to financial imbalances) As persistent financial imbalances such as the buildup of debt could undermine macroeconomic stability, the Bank pays due attention to financial imbalances in conducting its monetary policy.
○ (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.	- The Bank examines, assesses and announces financial stability conditions on a regular basis, to prevent excessive accumulation 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 indiscreetely affects the whole economy, monetary policy needs to be complemented by macroprudential policies to prevent accumulation of financial imbalances.	- Since there are limits to maintaining financial stability solely through monetary policy, which affects the whole economy, monetary policy needs to be complemented by macroprudential policies to prevent accumulation of financial imbalances.

Source: Bank of Korea.

65) In addition, the degree of anchoring of inflation expectations was included as an evaluation standard for judging the possibility of convergence toward the inflation target. Since inflation expectations could affect actual prices as they are reflected in economic agents' decision-making such as wage negotiations, price setting and investment decisions, this is one of the key indicators that the central bank should pay attention to and manage at a stable level in order to achieve price stability.

Enhanced monitoring of global and FX market conditions

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

Through the「COVID-19 Response Task Force」 set up in late January 2020, the Bank of Korea continuously and carefully monitored developments of the COVID-19 pandemic and the impacts on the domestic and international financial sectors and economies, as well as changes in financial and FX market conditions following the Bank's implementation of market stabilization measures. The Bank held a Financial and Economic Conditions Review Meeting during the Lunar New Year's holidays, on February 14, 2021, to monitor developments of international financial market conditions and their impacts on domestic financial and FX markets.

Selected risk-free reference rate

In line with global moves, the Bank of Korea and the Financial Services Commission jointly launched a working group on benchmark rate reform[66] in June 2019, which aims to enhance the credibility of domestic benchmark interest rates and replace the current benchmark interest rates. Under the auspices of the working group[67], they ran a task force to develop a risk-free reference rate (RFR) for use[68] as an alternative benchmark interest rate.

The task force on development of an alternative reference rate prepared various RFR candidates including the overnight call rate and repo rate in consideration of major economies' cases. After a series of discussions and votes by a market participants group (MPG), the taskforce selected the overnight repo rate of government bonds and monetary stabilization bonds as Korea's new risk-free reference rate in February 2021. The RFR will be calculated and released in the third quarter of this year.

Strengthened monitoring of financial system risk factors in line with resurgence of COVID-19

The Bank of Korea continued its preemptive identification of and early warning activities related to potential risk factors within the financial system that could be caused by the heightened uncertainties at home and abroad from the resurgence of COVID-19, and the subsequent drag on the recovery of the real economy.

At the December Financial Stability Meeting

66) The working group on benchmark rate reform (co-chaired by the BOK Senior Deputy Governor and FSC Vice Chairman) set up four taskforce teams:「Task Force on Development of an Alternative Reference Rate」,「Task Force on System Improvement」,「Task Force on Market Settlement of the Reference Rate」, and「Task Force on Response to LIBOR」.

67) A total of 38 institutions participate in the task force on development of an alternative reference rate: a managing and advisory group of 12 institutions, mostly policy institutions and public organizations, and a market participants group of 26 institutions, mostly private financial firms.

68) The benchmark reference interest rate is expected to be used for emergencies, such as the suspension of calculation of major references, or utilized as a reference interest rate in new financial transactions, pursuant to Paragraph 2, Article 9 of the Act on「Management of Financial Transaction Benchmarks」.

last year, the Bank made multifaceted examinations of how the changes in real and financial sector conditions brought on by the prolonged pandemic could affect household and corporate debt servicing capacities and their fiscal soundness. In response to the recent surge in asset prices, the Bank also focused on reviewing the negative effects that delayed economic recovery and adjustment of financial imbalances could have on households, corporations and the financial system.

Meanwhile, the Bank of Korea shared views and discussed countermeasures regarding the key current issues and potential risks related to Korea's financial stability through the Macroeconomic and Financial Meeting and other consultative bodies.

Reviewed financial issues and potential risks to the financial system through joint examinations

The Bank of Korea examined risks of an individual bank in order to check potential risk factors accumulated in the financial system, while stepping up constant monitoring of potential risks of financial institutions, households and corporations.

During the examination of this individual bank, the Bank of Korea conducted an overall assessment of the bank's lending status, the possibility of corporate loans becoming distressed, and its compliance with the Bank of Korea's regulations. The Bank also analyzed the effects of pandemic relief handouts and related risks, and potential risks stemming from the rise in household debt.

Meanwhile, the Bank laid the groundwork for effective monitoring activities (on a regular basis) regarding the corporate sector, by concluding an MOU with Korea Credit Information Services in November 2020 and working to build a microdata DB on corporate lending in the financial sector.

In addition, the Bank also participated in the Supervisory College hosted by supervisory authorities of major countries in January 2021 and discussed major business conditions and risk management of large foreign banks doing businesses in Korea.

Worked to improve foreign currency liquidity management system

The Bank of Korea, in cooperation with the government and relevant authorities, devised and announced (Jan. 20, 2021) a plan to improve the foreign currency liquidity management and supply facility, with a focus on alleviating FX vulnerabilities of non-banking financial institutions such as securities firms and insurers. Going forward, the Bank will step up monitoring of non-bank financial institutions' foreign currency liquidity, work to overhaul FX prudential regulations, and revamp the foreign currency liquidity support facility.

Strengthened global financial cooperation

The Bank of Korea participated in conference calls hosted by international organizations and consultative bodies, such as the BIS, G20 and IMF. Through these meetings, the Bank identified evolving global financial and economic conditions affected by the spread of COVID-19 as well as major economies' policy actions in a timely manner, while strengthening global policy coordination.

As a co-chair central bank of the ASEAN+3 Finance Ministers and Central Bank Governors Meeting[69], the Bank of Korea led consultations to enhance the effectiveness of regional financial safety nets by revising the operational guidelines of the Chiang Mai Initiative Multilateralization (CMIM), which is a regional multilateral currency swap arrangement. Key revisions to the guidelines that will be made in 2021 concern the establishment of regulations on an alternative interest rate to LIBOR and institutionalization of the use of regional currencies.

Enhanced safety and efficiency of payment and settlement systems, and continued study of CBDC

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

The Bank devoted efforts to ensure smooth implementation of the「Principles for Financial Market Infrastructures (PFMI)」[70] and other international standards in the field of payment and settlement. The Bank assessed (completed in January 2021) the Korea Financial Telecommunications and Clearings Institute's compliance with the PFMI including the cyber-risk response framework used when operating its retail settlement systems such as the electronic banking network, checks clearing service, interbank funds transfer system and open banking system. According to the assessment outcome, most systems were operated in a stable manner while meeting international standards across the board. However, the Bank recommended improvement in risk management governance which was identified as an area in need of improvement. BOK-Wire+ was scheduled to be assessed last year, but the Bank plans to conduct the assessment in 2021 given that Next Generation BOK-Wire+ was newly launched and has been operated since October 2020. Meanwhile, through a joint examination of one domestic bank in December 2020, the Bank of Korea assessed the bank's compliance with relevant regulations as well as its settlement risk management practices, and recommended necessary improvements in some areas.

Moreover, the Bank of Korea continued its research on technological and legal aspects of Central Bank Digital Currency (CBDC)[71] to preemptively cope with future changes in the payment and settlement environment which could increase the need for CBDC adoption. On the technology side, as a preliminary step to setting up a pilot system[72] in a virtual envi-

69) This meeting is co-chaired by one of the ASEAN+10 countries and one of Korea, China and Japan in rotation every year. Korea and Brunei are the co-chairs of the meeting this year.

70) Following the global financial crisis, a need was identified to expand over-the-counter (OTC) 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 Commission (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 (July 2017) and Resilience of central counterparties (CCPs): Future guidance on the PFMI (July 2017).

71) Different from reserve requirements and transferable deposits, it means a digital currency issued by a central bank.

ronment to test the performance and stability of CBDC, the Bank is consulting with a third party (November 2020 to March 2021) for designing a CBDC work process and system architecture[73]. In terms of the legal considerations, while operating a legal advisory committee, the Bank outsourced research on the topic of legal issues and legislative direction relevant to CBDC and released the results in February 2021. In the meantime, the Bank of Korea is closely monitoring changes in the global environment surrounding CBDC, while enhancing information sharing and cooperation with other central banks in order to share the results of research conducted by major economies.

72) Designed to look at whether the CBDC system operates normally in a restricted environment, the pilot system will create virtual participating institutions and users, and test transactions and their processing among the participants.

73) This is a structurally organized framework for the computer system's structure and operation methods and the relationships among its components from the perspectives of application, data management, implementation technology and security.

Box II-1.

Status and Assessment of Special Purpose Vehicle (SPV) Purchasing Corporate Bonds and Commercial Paper

(Background and progress)

After the spread of COVID-19, the Bank of Korea set up and began providing support to a Special Purpose Vehicle (SPV) designed to purchase corporate bonds and commercial paper (CP), including low-rated instruments, in cooperation with the government and a state-run bank (Korea Development Bank, KDB hereafter) in order to stabilize credit markets and mitigate corporate funding difficulties. The SPV was launched[1] on July 14 last year after completing its incorporation registration[2], and the Bank of Korea and the KDB provided initial funding totaling 3 trillion won[3] to the SPV on July 23, 2020. From July 24, the SPV started to purchase eligible corporate bonds and CP in earnest.

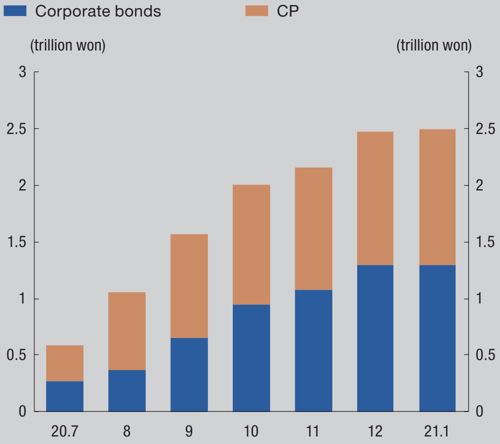
Established with the principle of temporary investment until the financial markets stabilize, the SPV was scheduled to purchase bonds for six months (from July 14 of 2020 to January 13 of 2021). However, as the pandemic had lasted longer than expected, the Bank of Korea and the KDB decided[4] on December 24, 2020 to extend the period of bond purchases by six months in order to help alleviate funding difficulties of firms with low credit ratings. Along with this, a second round of loans amounting to 2 trillion won was performed[5] to secure the SPV's bond purchase capacity.

(Performance)

Since its launch, the SPV purchased corporate bonds and CP worth 2.5 trillion won (based on par value) by the end of January 2021. By asset type, it purchased 1.3 trillion worth of corporate bonds (52.1%) and 1.2 trillion won worth of CP (47.9%). Purchases continued to rise month by month, with accumulated purchases as of end-January 2021 amounting to about 4.3 times the purchases[6] as of the end of July last year (0.6 trillion won) when the SPV was newly launched. Meanwhile, as some CP had been fully redeemed at maturity (0.3 trillion won) since November, the SPV's outstanding balance of corporate bonds and CP (net purchases) stood at 2.2 trillion won as of end-January 2021.

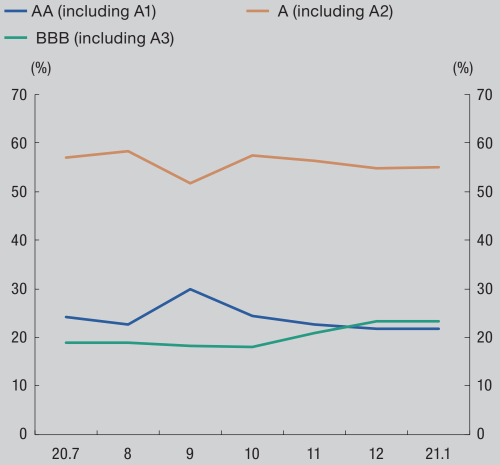
1) The SPV is financed by the Bank of Korea's 8 trillion won of senior loans, the KDB's 1 trillion won of investment based on the government's equity capital, and the KDB's 1 trillion won of subordinated loans.
2) The corporation is a limited company with the official name of Corporate Liquidity Assistance Agency Co., Ltd.
3) Consists of KDB's 1 trillion won of investment based on the government's equity capital, the Bank of Korea's 1.78 trillion won of senior loans equivalent to its first capital call, and the KDB's 0.22 trillion won of subordinated loans.
4) Along with the extension of the purchase period (Jan. 13 to Jul. 13, 2021), it was decided that the SPV will reduce the share of prime bond purchases (30% → 25%), and expanded that of non-prime bonds (rated A to BBB) (70% → 75%) to strengthen the support for low-rated corporate bonds and CP.
5) The second capital call comprising the Bank of Korea's 1.78 trillion won of senior loans and the KDB's 0.22 trillion won of subordinated loans was implemented on January 12, 2021.
6) However, as a smaller number of corporate bonds was issued due to seasonal factors last December and the SPV was unable to secure corporate bonds due to significant improvement in market conditions this January despite its active participation in a demand forecasting system, the SPV's purchases declined modestly.

SPV portfolio's purchases[1] by asset type



Note: 1) Based on accumulative purchases and par value.
Source: Korea Development Bank.

SPV portfolio's purchases[1] by credit rating

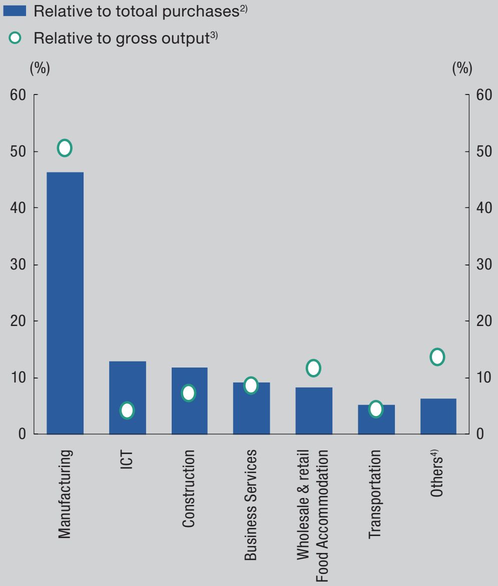


Note: 1) Based on accumulative purchases and par value.
Source: Korea Development Bank.

By credit rating, the SPV purchased AA-rated bonds (including A1-rated bonds) worth 0.5 trillion won (21.7%), A-rated bonds (including A2-rated bonds) worth 1.4 trillion won (55.0%), and BBB-rated or below bonds (including A3-rated bonds) worth 0.6 trillion won (23.3%) as of the end of January 2021. Compared to the SPV portfolio's compliance guidelines (more than 25% in AA-rated bonds, about 55% in A-rated bonds, less than 20% in BBB-rated or below bonds) for proportions of asset purchases by credit rating, the share of AA-rated prime bonds is somewhat low. By month, the share of prime-rated bonds decreased by 2.4%p to reach 21.7% at end-January 2021 from 24.1% at end-July 2020. This is attributable to the SPV's failure to purchase prime-rated corporate bonds as planned due to the rise in market demand for prime-bonds, which is an indication of improvement in market conditions.

Purchases by industry as of end-January 2021 are as follows: 1.2 trillion won for manufacturing (46.4%), 0.3 trillion won for IT (12.8%), 0.3 trillion won for construction (11.8%), and 0.2 trillion won for business services (9.2%). The proportions above show that the SPV's corporate bond and CP purchases did not deviate greatly from the respective industry shares of gross output (based on nominal GDP).

SPV portfolio's purchases by industry[1)]



Notes: 1) Sorted by Korean Standard Industrial Classification (10th version).
2) Based on accumulative purchases as of end-January 2021, and on par value.
3) National accounts for 2018 (nominal GDP basis, excluding financial and insurance as well as public administration sectors).
4) Agriculture, forestry & fisheries; electricity, gas & steam providers; and education, public health, art & leisure services industries.

Sources: Korea Development Bank, Bank of Korea.

Meanwhile, as for corporate bonds and CP purchased by the end of January 2021, no serious problems occurred, such as a default on the principal payments of corporate bonds and CP or the commencement of a rehabilitation procedure.

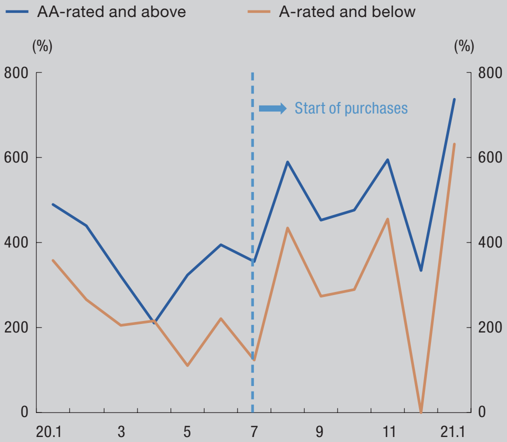
(Effects)

Since its inception, the SPV has actively purchased corporate bond and CP from the primary market in order to quickly improve corporate funding conditions, which had deteriorated due to COVID-19. While participating in a bid for eligible[7)] corporate bonds via the demand forecasting system, the SPV purchased some subprime bonds as an underwriter group when there were unsold corporate bonds. The SPV actively purchased CP as well, when asked by issuers and as long as the CP met the purchase requirements.

Since the SPV's purchases began in earnest, the participation rate in demand forecasting in the corporate bond primary market rose overall, except in December when the volume of issuance was low due to seasonal factors. The firms whose bonds were purchased by the SPV in the corporate bond primary market issued a higher volume of bonds (an increase of 1.9 trillion won) than initially planned (4.9 trillion won), showing improvement in investor sentiment. With respect to the unsold subprime corporate bonds that were not absorbed in the market due to heightened credit risk aversion, the SPV participated as an underwriter in purchasing these bonds (A-rated bonds worth 0.3 trillion won, BBB-rated bonds worth 0.3 trillion won), acting to safeguard the corporate bond market.

7) The SPV was mandated to serve its goal of one-off liquidity provision to the corporate bond and CP markets rather than supporting distressed companies, by limiting its purchases to bonds with ratings from AA (including A1) to BBB (including A3) and those maturing within 3 years (3-6 months for CP) and by excluding companies with an interest coverage ratio of less than 100% for two years in a row (based on pre-COVID-19 levels). In addition, in order to ensure financial market stabilization rather than providing support to specific companies, the ceiling of purchases for each firm and industry was limited to 2% and 3%, respectively, out of the total support amount.

Participation in book-building for corporate bonds[1)]

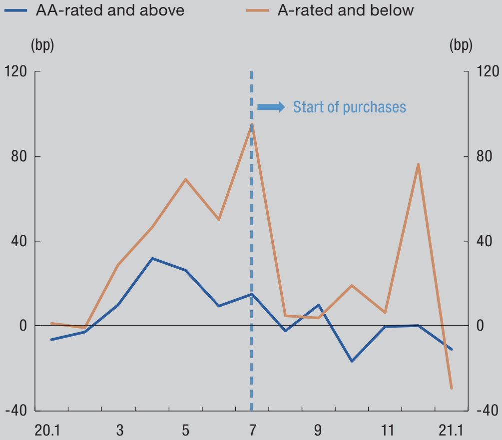


Note: 1) Based on general corporations and publicly listed corporate bonds.

Source: Financial Supervisory Service.

In terms of re-offer yields, corporate funding costs seem to have decreased in line with a rise in market demand. The re-offer yields spreads[8)] on prime bonds (AA-rated or above) declined to -11bp in January this year from 15bp last July, while those on subprime bonds (A-rated or below) fell sharply to -29bp from 95bp during the same period. Corporate bond credit spreads have continued to narrow and have remained stable, recovering recently to pre-COVID-19 levels in general led by prime bonds.

Re-offer yields spreads[1)] on corporate bond[2)]

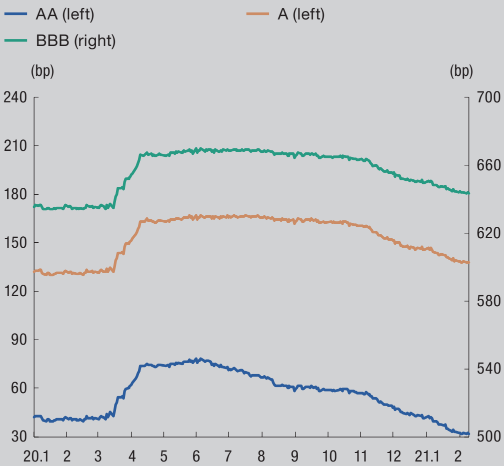


Notes: 1) Re-offer yields minus the interest rates assessed by private bond assessment institutions of the companies (or grades) that issued bonds.

2) Based on general corporations and publicly listed corporate bonds.

Source: Financial Supervisory Service.

Corporate credit spreads[1)]



Note: 1) Compared to Treasury (3-year) yield; corporate bond yield is the average of four private credit ratings companies.

Source: Korea Financial Investment Association.

8) The re-offer yield spread means the actual interest rates on corporate bonds as issued by individual corporations minus the interest rates calculated by private assessments (average of four institutions) of the issuing companies (or grades).

(Status of corporate bond and CP purchases in major economies)

Like Korea, the US and the UK have engaged[9] in the purchase of corporate bonds and CP through SPVs, with their central banks implementing asset purchase programs to stabilize the markets since the outbreak of COVID-19.

The US Federal Reserve introduced the Secondary Market Corporate Credit Facility (SMCCF)[10] and the Commercial Paper Funding Facility (CPFF) in March 2020 to make CP purchases. Operation of the SMCCF ended at the end of December 2020 with its corporate bond holdings amounting to 5.54 billion dollars (based on market value, 14.32 billion dollars including ETFs), while the CPFF was extended until the end of March 2021 but holds no outstanding balance as of now due to full redemption.

In response to COVID-19, the Bank of England raised the ceiling of its Asset Purchase Facility (APF) which was originally launched to purchase government and corporate bonds during the global financial crisis, and separately set up the Covid Corporate Financing Facility (CCFF) in March 2020 for CP purchases. The outstanding balance of corporate bonds in the APF rose by 10.12 billion pounds (par value basis) from a year earlier to reach 19.94 billion pounds at the end of January 2021, and the outstanding balance of CP in the CCFF came to 12.06 billion pounds.

Meanwhile, both the US Federal Reserve and the Bank of England are making securities purchases in the secondary market. In this regard, they have established benchmarks for example by industry and by credit rating in reflection of market conditions, and have maintained and managed purchase proportions accordingly.

(Assessment)

Our assessment is that the SPV has made major contributions to alleviating corporate funding difficulties and stabilizing markets which were the focal points of its launch. Since there was an urgent need to mitigate anxieties in funding markets last year due to COVID-19, the Bank of Korea, the government and KDB dealt with market unrest flexibly, for example by expanding purchasing targets to include subprime bonds. In particular, the SPV's asset purchases in the primary market[11], in consideration of the differences between Korea's market conditions and those of major economies, helped to boost investment demand and narrow credit spreads, alleviating corporate funding difficulties and thus contributing to overall market stabilization.

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9) The US Federal Reserve is not authorized to purchase assets directly, and there are no relevant legal provisions in the UK for the Bank of England. Therefore, the two central banks have adopted an approach in which they provides loans to an SPV and the SPV purchases bonds.

10) After the launch of the SMCCF on March 23, 2020, the US Federal Reserve purchased corporate bond ETFs on May 12 and started to buy individual corporate bonds from June 16. Operation of the Primary Market Corporate Credit Facility, set up by the US Federal Reserve in order to purchase corporate bonds in the primary market, expired at the end of December 2020 without any result as it was unable to make actual purchases due to the burden of verification of corporate qualifications and additional charge (100bp).

11) While the US Federal Reserve and the Bank of England purchased corporate bonds and CP mostly in the secondary market, the Bank of Korea's purchases have taken place mainly in the primary market. This reflects differences between the countries such as market conditions and the effects of financial support. As Korea's secondary market for credit securities is smaller than those of the other two countries, the Bank of Korea buys assets mainly in the primary market for speed and effectiveness. However the Bank of Korea is able to purchase assets in the secondary market as well if necessary for market stabilization.

III

Future Monetary Policy Directions

1. Growth and Price Forecasts[74)]

Domestic economy to show modest recovery

The GDP growth rate is forecast[75)] to be 3.0% in 2021 and 2.5% in 2022. Despite a slow recovery in private consumption, the domestic economy is expected to show modest recovery centering around exports and investment, boosted chiefly by the global economic recovery.

By sector, private consumption is forecast to exhibit a slower-than-expected recovery, due mainly to sluggish household income conditions and continued concerns about infections owing to the prolonged COVID-19 pandemic. The sluggishness of employment conditions and business conditions of the self-employed is expected to delay the improvement of household incomes, while consumer sentiment related to activities outside the home has contracted significantly with the number of new COVID-19 cases remaining high.

Despite the easing of social-distancing measures, consumption of face-to-face services is expected to recover slowly due to continued voluntary social distancing out of concern about infections. Moreover, even if cross-border travel restrictions are relaxed, recovery of expenditures abroad by Korean residents could be delayed due to avoidance of overseas travel. However, government support measures and increased savings since the outbreak of COVID-19 are expected to contribute to a recovery in consumption.

Facilities investment is forecast to remain favorable, particularly in the IT sector. The IT sector is expected to see continued strong investment as in the previous year, driven chiefly by the recovery of the semiconductor industry, while investment in the non-IT sector is forecast to improve gradually, boosted by maintenance outlays that had been deferred due to the spread of COVID-19 and also by investment to foster new growth industries. Intellectual property products investment is projected to exhibit faster growth, as R&D investment is forecast to show favorable movements led chiefly by the recovery of corporate sales and the expanded government R&D budget, while other intellectual property products investment is also expected to continue its upward trend, boosted by increased demand for new technology-based software in line with the surge in non-face-to-face demand and the accelerated transition to the digital economy. Construction investment will likely start to see a recovery, as a period of adjustment centering around residential building construction investment since 2018 is coming to an end. Civil engineering will likely maintain its uptrend boosted by an expansion in SOC and other public investment, and the sluggishness of residential and non-residential building construction is expected to ease gradually in line with the increased volume of

74) Based on the Bank of Korea's「Economic Outlook Report」released on February 25, 2021.

75) The current outlook is based on the following assumptions: The global economy will return to its pre-pandemic level in the second half of 2021. Amid differentiated spread of COVID-19 from country to country, the pandemic will ease gradually from the middle or second half of this year and travel restrictions will start to be relaxed this spring. In Korea, the spread of COVID-19 will slow at a modest pace and ease gradually from the middle or second half of this year.

construction work.

Exports are projected to maintain favorable movements, driven chiefly by the global economic recovery and the recovery of the semiconductor industry. The current account surplus is expected to narrow year-on-year, as the goods account surplus shrinks due to increased imports resulting from rising international oil prices, more than offsetting a slight narrowing of the services account due to the sustained transport services account surplus following global trade expansion.

There is a high level of uncertainty surrounding the growth path. The upside risks to growth include an early subsiding of the spread of COVID-19, an expansion in the recovery of the global semiconductor industry, and additional stimulus measures at home and abroad. Among the downside risks are a prolonged spread of COVID-19, escalating tensions between the US and China, and a delay in the improvement of employment conditions.

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

(%)

	2020[3)]			2021[e]			2022[e]
	H1	H2	Year	H1	H2	Year	Year
GDP	-0.7	-1.2	-1.0	2.6	3.4	3.0	2.5
Private consumption	-4.4	-5.5	-4.9	0.2	3.8	2.0	2.8
Facilities investment	5.6	8.0	6.8	6.9	3.8	5.3	3.0
Intellectual property products investment	3.3	4.0	3.6	4.1	4.0	4.1	3.5
Construction investment	1.7	-1.8	-0.1	-1.2	2.6	0.8	2.1
Goods exports	-2.9	1.7	-0.5	13.0	2.0	7.1	2.3
Goods imports	-0.9	0.7	-0.1	7.6	5.3	6.4	3.3

Notes: 1) Year-on-year.
2) Figures are the forecast as of February 2021.
3) Reflects fourth quarter preliminary figures.
Source: Bank of Korea.

Inflation forecast to accelerate significantly to record 1.3% this year

Consumer price inflation is forecast to record 1.3% this year, a sharp rise from last year (0.5%), due mainly to expectations that international oil prices will far exceed their level of the previous year. Consumer price inflation is forecast to rise to 1.4% in 2022, as economic conditions continue to improve and downward inflationary pressures on the government policy side dissipate. Meanwhile, core inflation excluding food and energy prices is forecast to rise from last year's 0.4% to 1.0% this year and 1.3% in 2022.

A look at various factors affecting prices shows that, in terms of overseas factors, international oil prices have sustained their uptrend since November last year to stand at around 60 dollars, and grain and non-ferrous metal prices have also maintained strong growth since the second half of last year. The Korean won-US dollar exchange rate declined rapidly in the second half of last year and then has been rising somewhat this year. In terms of domestic factors, while the negative output gap is expected to narrow gradually and inflation expectations among the general public (for the next 12 months) are forecast to remain in the upper-1% range, nominal wages are expected to show somewhat faster growth than in the previous year, in line with a modest recovery in economic activity and corporate profitability, but the pace of growth is likely to be slower than usual. Regarding other factors, agricultural product prices are expected to maintain unusually strong growth for some time due to severe cold waves, and the spread of avian influenza is likely to act as an upward pressure on the prices of eggs and some other livestock products. Downward inflationary pressures on the government policy side are forecast to decrease gradually. This is attributable mainly to the dissipation of downward inflationary pressures from the introduction of free high-school education and free school meals last year and to the base-period effects from the telecom subsidy (in fourth quater of 2020). The sustained increases in leasehold *(jeonse)* deposit prices and monthly rents (based on new contracts) are forecast to gradually push up the pace of growth in housing rental fees.

There is a mix of both upside and downside risks to the price path. Upside risks to prices include an acceleration of the rise in food and international commodity prices and a stronger demand recovery in line with the distribution of COVID-19 vaccines. Among the downside risks are a worsening slump in demand resulting from the resurgence of COVID-19.

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

(%)

		2020			2021[e]			2022[e]
		H1	H2	Year	H1	H2	Year	Year
CPI inflation		0.6	0.5	0.5	1.2	1.4	1.3	1.4
Core inflation	CPI excluding food & energy	0.4	0.3	0.4	0.6	1.3	1.0	1.3
	CPI excluding agricultural products & oils	0.6	0.7	0.7	0.9	1.3	1.1	1.3

Notes: 1) Year-on-year.
2) Figures are the forecast as of February 2021.
Source: Bank of Korea.

2. Major Considerations

Looking ahead, the Bank of Korea will operate its monetary policy while closely watching the impacts of domestic and external uncertainties on the growth and inflation forecast paths and devoting attention to financial stability as well. In this process, the Bank will also carefully monitor the developments of COVID-19 resurgence at home and abroad, changes in uncertainties surrounding external conditions and consequent financial market trends, as well as the possibility of an accumulation of financial imbalances.

Developments of COVID-19 resurgence at home and abroad

There are growing expectations of a global economic recovery, as the global resurgence of COVID-19 since last fall has recently eased somewhat due mainly to the strengthening of measures to combat COVID-19 and rapid vaccinations[76] in major countries. However, uncertainties remain high surrounding vaccine manufacturing and distribution, COVID-19 variants and vaccine receptivity.

Global vaccine manufacturing capacity[77] this year (based on eight major manufacturers) will be 0.5 to 0.9 times the global population (based on two shots per person), meaning that vaccine supply may not[78] be sufficient this year. Even if sufficient vaccine supply is ensured, low vaccine receptivity[79] could be an obstacle to reaching herd immunity. If virus variants speed up the spread of COVID-19 or weaken the effectiveness of existing vaccines, this could delay the achievement of herd immunity. In addition, due to their limited capacities for large-scale distribution and inoculation, emerging market economies lacking medical and healthcare systems for vaccine distribution may need to spend a considerable period of time for inoculation. The possibility cannot be ruled out that a vaccination gap between advanced and emerging market economies will result in a prolonged spread of COVID-19 and a delay in reaching global herd immunity. This could limit the recovery of the global economy and trade and affect Korea's exports as well.

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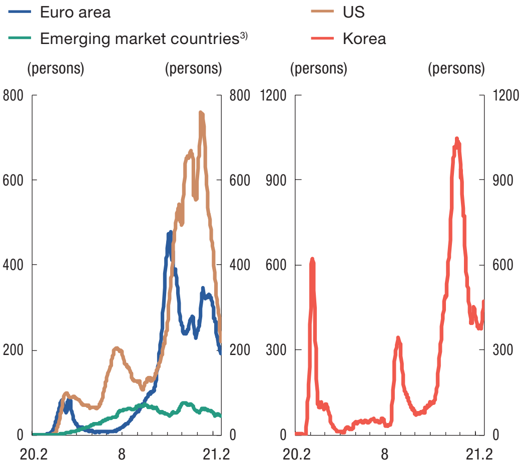
76) In Israel, which has a high rate of vaccination, the number of new confirmed COVID-19 cases has been declining and the rate of infection of vaccinated people remains low, leading to growing expectations that herd immunity will be reached through vaccine distribution.

77) The current vaccine manufacturing capacity is about 8 billion doses, and will likely be upsized to a maximum of 13 billion doses for example through facilities expansion.

78) For this reason, advanced countries signed pre-purchase agreements to secure more doses than needed, which resulted in severe imbalances between advanced and emerging market economies.

79) A survey on vaccination intent in major countries (IPSOS, as of Jan. 2021) shows that 71% of Americans, 89% of the British, 68% of Germans, 57% of the French and 64% of the Japanese are willing to get vaccinated, suggesting that around 30% still refuse to take the vaccine.

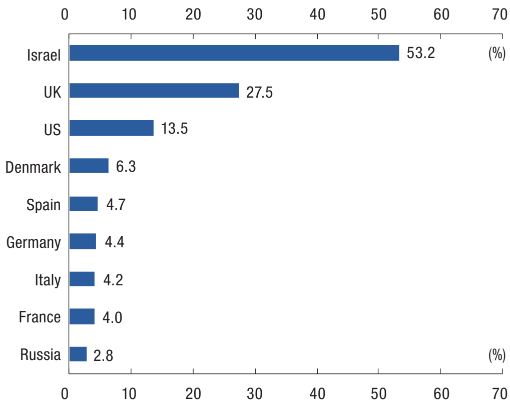
Figure III-1. New confirmed COVID-19 cases (abroad[1]) and at home[2])



Notes: 1) Daily new confirmed cases per million persons by region (based on 7-day moving averages).
2) Daily new confirmed cases nationwide (based on 7-day moving averages).
3) India, Brazil, Russia, Mexico, and Turkey.
Source: OurWorldInData.

Although private consumption was sluggish due chiefly to the resurgence of COVID-19 and the strengthening of social-distancing measures, the domestic economy continued to show a moderate recovery, led by exports. Going forward, the domestic economic recovery is likely to accelerate gradually, with the start of vaccinations in Korea and the government's stronger emergency rescue package serving as upside risks to the economy. However, uncertainties surrounding the future growth path are seen to remain high, given the continued serious concerns about the spread of virus variants at home and abroad. In this regard, it is necessary to closely monitor COVID-19 developments and the status of vaccine distribution at home and abroad, the scale and effects of government support measures, and their impacts on the Korean economy.

Figure III-2. COVID-19 vaccination ratio by country[1)2)]



Notes: 1) Administered at least one dose; in total population.
2) As of February 24, 2021.
Source: OurWorldInData.

Changes in external uncertainties

Expectations of global economic recovery have increased, boosted by the ongoing COVID-19 vaccinations and the sustained aggressive stimulus measures in major countries, but there are still latent uncertainties surrounding external conditions.

Political and economic uncertainties in major countries seem to have been resolved substantially, with a Democratic "blue wave" taking control[80] of the US Congress, further fiscal expenditure expansion in major countries and an agreement[81] on the post-Brexit relationship between the EU and the UK. The US Con-

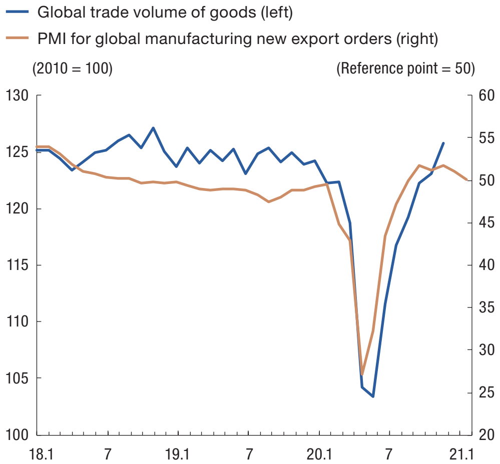
80) The runoff elections in Georgia (on Jan. 5, 2021) handed the Democratic Party control of both chambers of the US Congress, which will likely speed up the Biden administration's implementation of policies such as fiscal expansion and tax increases.

81) On December 24, 2020, the UK and the EU ended talks that had continued since the UK's withdrawal from the EU (on Jan. 31, 2020), on their future relationship in areas of trade and security, and reached a final agreement on an FTA focusing on duty- and quota-free goods trade.

gress finalized an additional stimulus package[82] worth 900 billion dollars in December 2020, followed by President Biden's announcement of the American Rescue Plan[83] worth 1.9 trillion dollars as he took office in January 2021, and a deal on a 750 billion euro recovery instrument[84] was reached by EU leaders in December 2020 after summit talks.

Global trade has sustained its moderate recovery trend recently, led by goods trade. Although services trade is exhibiting a slow recovery due mainly to cross-border travel restrictions, goods trade continues to improve, boosted largely by an increase in major countries' import demand[85] to meet growing demand for inventory expansion.

Figure III-3. Global trade volume of goods and PMI for manufacturing new export orders



Sources: CPB, JP Morgan.

However, lingering uncertainties concerning the global economic recovery include the dominant outlook within the Biden administration that the US-China conflicts would continue, and the expectation[86] that the pace of economic recovery may differ from country to country depending on the timing of vaccine

82) The US Congress carried out a total of 2.7 trillion dollars of stimulus packages on four occasions in the first half of 2020, and approved the fifth stimulus bill worth 900 billion dollars on December 21, 2020. This bill includes additional unemployment benefits, cash assistance to households, support for small businesses and funding for vaccine distribution and will be implemented in the first half of 2021.

83) The existing support measures were strengthened, including an additional 1,400 dollars per person in direct checks and extended jobless benefits (400 dollars per week, Mar. 2021 → Sep. 2021). The plan also introduced new measures such as increasing the minimum wage (7.25 dollars → 15 dollars), providing state and local aid and extending the eviction and foreclosure moratoriums.

84) Under the recovery instrument, 672.5 billion euros will be distributed to support the recovery of EU economies damaged by the COVID-19 pandemic and strengthen their resilience, and 77.5 billion euros to research and investment in healthcare and climate as well as rural development, in the form of grants and loans.

85) In the event of a sharp drop in demand due, for example, to an economic crisis, importers cut new orders significantly and use up existing inventory first, thereby resulting in a sharp decline in imports. While the economy is emerging from its sluggishness, however, importers increase new orders to meet recovering demand and expand inventory, and as a result, growth in imports usually outpaces that in demand.

86) While advanced countries have been adopting bold measures to combat COVID-19 and implementing bold stimulus measures, most emerging market countries are having difficulties in controlling the pandemic and coping with their economic situations due to poor sanitary conditions and a shortage of fiscal space. More specifically, the IMF's World Economic Outlook released in January 2021 shows that Asian emerging market countries (except for China) saw their GDP forecast for 2022 drop by 8% from the figure projected last year (Jan. 2020), while advanced countries experienced only a 2.5% decrease.

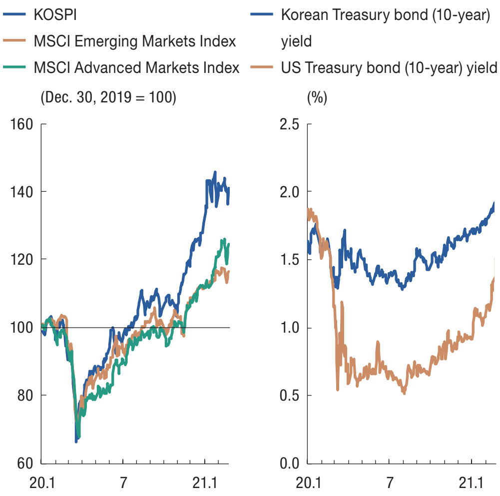
distribution and fiscal space. Furthermore, the possibility of China's shrinking participation in the global supply chain following its full-fledged implementation of a domestic demand-oriented development model[87] may act as a potential risk factor. Since there remain uncertainties surrounding financial and economic conditions at home and abroad, attention should be paid to their developments.

Financial market conditions at home and abroad

Preference for risky assets continued in the domestic and international financial markets, owing primarily to expectations for economic recovery in line with the new US administration's fiscal stimulus and expanded vaccine supply in major countries.

In the international financial markets, long-term market rates went up, mainly on expectations for economic recovery, and stock prices temporarily became more volatile in January this year but remained high despite concerns about overvaluation.[88] Risk aversion eased in the credit market, with the spread on speculative-grade corporate bonds narrowing significantly.[89] Meanwhile, the bond spread narrowed and inflows of fund assets continued in emerging countries. However, market volatility increased somewhat after late February, with Treasury bond yields in major countries increasing at faster rate and stock prices fluctuating widely.

Figure III-4. Global stock prices and Treasury bond yield



Sources: Bank of Korea, Bloomberg.

Stock prices and interest rates at home showed movements similar to those in the international financial markets, and domestic and overseas stock investment by individual investors expanded significantly.[90] In this process, financing through borrowing from financial institutions also increased.[91]

87) China's Central Economic Work Conference (Dec. 16-18, 2020) outlined the nation's major policy tasks for 2021, including expanding the budget for R&D and infrastructure (e.g. 5G networks and data centers) investment as well as boosting domestic demand.

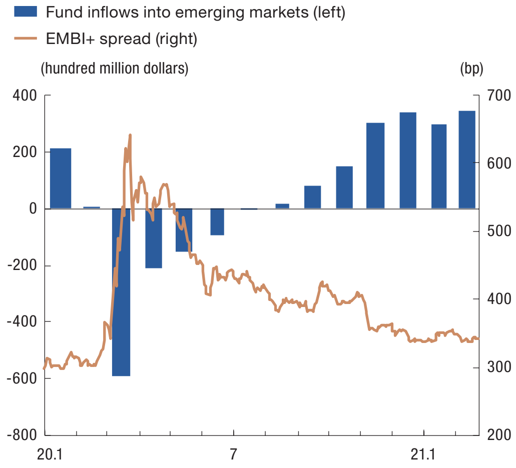
88) While stock investment by individuals expanded greatly, stock prices of some corporations in which individuals' investment is concentrated fluctuated widely and prices of some cryptocurrencies (such as Bitcoin) categorized as ultra-high risk assets rose steeply. These factors reflect recently increased risk preferences.

89) The spread on speculative-grade US corporate bonds fell significantly to 265bp on February 19, 2021 from 508bp at the end of September 2020.

90) The volume of net buying of domestic shares by individuals increased to 63.8 trillion won in 2020, much higher than in past years (the average for the period between 2017 and 2019, -1.1 trillion won). Retail investors' massive net buying has continued in 2021 as well (31.2 trillion won between Jan. 1 and Feb. 18).

91) Credit extended by securities companies to retail investors increased by about 11 trillion won in 2020. The increase in household lending (114 trillion won) by financial institutions (excluding securities companies) is also estimated to have been partially used for stock investment.

Figure III-5. Bond spreads of and fund inflows into emerging markets



Sources: Bloomberg, EPFR.

Risk preferences in the financial markets appear to have largely been attributable to the expectation that an accommodative monetary policy will last for a considerable time due to low inflation, despite the prospect of an economic recovery. Therefore, if expectations about monetary policies of major countries change due to concerns about an increased risk of inflation, or trends of the vaccine supply and slower spread of COVID-19 develop differently from expectations, we cannot rule out the possibility of asset price adjustments and other market volatility at home and abroad. In addition, individual investors' expanded investment at home based on borrowings could work as a risk factor.

Accordingly, it is necessary to continue to carefully monitor risk preferences in the domestic and international financial markets, movements of major price variables, and risk factors affecting them.

Concerns about the accumulation of financial imbalances

There is mounting concern about the accumulation in the risk of financial imbalances due to the recent continuation of rising housing prices and household debt growth.

Housing prices grew at a much faster pace in all parts of the country in December last year,[92] and have maintained growth this year as well amid ongoing anticipation of rising prices. In addition, housing leasehold deposit *(jeonse)* prices have also remained on the rise since May 2020, due to a supply and demand imbalance.[93] As a result, household lending sustained strong growth.[94] Housing-related loans sustained their high rate of increase on heightened fund demand related to leasehold and housing sales transactions, and other lending also showed steady growth due to demand for funds related to stock investment.[95]

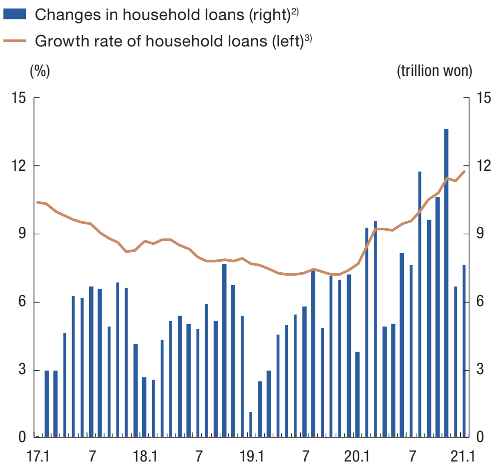
92) The nationwide rate of growth in housing sales transaction prices stood at 0.9% in December 2020, hitting a record high since April 2011 (source: Korea Real Estate Board).

93) The apartment leasehold deposit supply and demand index in the Seoul metropolitan area stood at 127.1 in December 2020, hitting the highest level since July 2012 from when time-series data are available, and the index remained high (126.3) in January 2021 as well (source: Korea Real Estate Board).

94) Rate of household lending increase (year-on-year, %): 10.8 in October → 11.5 in November → 11.3 in December 2020 → 11.7 in January 2021.

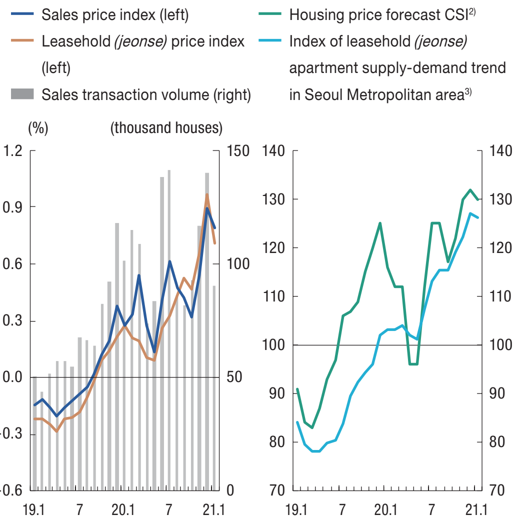
95) Bank lending to the household sector usually tends to grow slightly or decrease in January due to seasonal factors such as New Year's Day and performance-based bonus payments. In spite of this trend, bank lending to the household sector showed significant growth in January this year, in contrast with past years, marking the biggest increase ever in January (+7.6 trillion won month-on-month) owing to sustained fund demand for housing transactions and stock investment.

Figure III-6. Household loans[1)] growth rate and changes



Notes: 1) Including mortgage transfers.
2) Month-on-month.
3) Year-on-year.
Source: Bank of Korea.

Figure III-7. Housing market price indices,[1)] sales transaction volume and sentiment index



Notes: 1) All housing types, nationwide; month-on-month.
2) A figure exceeding 100 indicates that a forecast for an upward trend is dominant.
3) A figure exceeding 100 indicates that demand exceeds supply.
Sources: Korea Real Estate Board, Bank of Korea.

Going forward, pressures causing growth in household lending could continue for some time, in light of recent housing transaction situations, demand for funds related to COVID-19, and increased leveraged investment by individuals. Housing-related loans are likely to maintain growth for some time, given expectations for the continuation of accommodative financial conditions and demand for housing sales and leasehold *(jeonse)* transactions, despite the government's recent policy measure to expand housing supply.[96)] The fact that the share of those in their 30s or younger who are heavily dependent upon loans is increasing[97)] could also lead to increases in housing-related loans. Given demand for borrowing for stock investment and

96) On February 4, 2021, the government announced a plan to supply 836 thousand houses nationwide, including 323 thousand houses in Seoul, 293 thousand houses in Incheon and Gyeonggi province by 2025.
97) The share of those in their 30s or younger who bought apartments in the Seoul Metropolitan area (%): 28.7 in Q1 → 28.6 in Q2 → 33.0 in Q3 → 36.4 in Q4 2020.

demand for living expenses from COVID-19, the trend of increase in other lending is unlikely to slow substantially.

Given the ongoing rise in prices of assets including housing and the continuing sharp increase in household debt, the Bank of Korea will need to pay heed to the possibility of a accumulation in financial imbalances and closely monitor conditions related to financial stability, including fund inflows to the housing market and household debt growth, as it conducts monetary policy.

3. Future Monetary Policy Operational Directions

Base Rate operations

The Bank of Korea will continue to conduct its monetary policy in order to support the economy and stabilize consumer price inflation at the target level (2%) over a medium-term horizon, while paying attention to financial stability.

As the recovery in the Korean economy is expected to be modest and inflationary pressures on the demand side are forecast to remain weak, the Bank will maintain its accommodative monetary policy stance. In this process, it will thoroughly assess developments related to COVID-19 as well as the effects of the policy measures taken in response to the pandemic, while paying attention to changes in financial stability conditions such as fund flows to asset markets and household debt growth.

Enhancement of monetary policy effectiveness

The Bank of Korea will continue its efforts to enhance monetary policy effectiveness. First, the Bank will work to reinforce its policy communication to enhance the transparency and predictability of monetary policy. Given the ongoing high uncertainties surrounding economic conditions at home and abroad, the Bank will devote efforts to bring market expectations in line with its policy intention by giving detailed explanations of the background behind policy decisions and giving appropriate signals related to the future direction of policy. In addition, the Bank will continue conducting close examination of the effects of monetary policy transmission, while seeking ways to effectively operate monetary policy instruments, including the Bank Intermediated Lending Support Facility and open market operations. Furthermore, as inflation has hovered below the target level for an extended period, the Bank will endeavor to provide more detailed explanations of inflation conditions and forecasts, and related risks, to ensure that economic agents' inflation expectations remain stable. Meanwhile, given changes in monetary policy operation conditions in line with rapid changes in economic conditions and expectations of an expanded role for the central bank, the Bank will also strengthen its efforts to examine and improve the monetary policy framework over a medium- to long-term horizon. The Bank will also analyze the economic, industrial, and labor structure in the post-pandemic era, as well as environmental and climate changes, and strengthen its research on the effects on monetary policy.

Promotion of financial and foreign exchange market stability

The Bank of Korea will continue its efforts to maintain the stability of financial and foreign exchange markets. There is a possibility that volatility in the domestic financial and foreign exchange markets could increase frequently, following changes in domestic and international risk factors such as pandemic developments and the monetary and fiscal policy of major countries. In light of this, the Bank will closely monitor major price variables in the financial and foreign exchange markets and flows of funds in the market, and in the event of any sign of instability, it will respond in a timely manner. The Bank will purchase Treasury bonds in accordance with a plan to expand outright purchases of Treasury bonds, and will further act to ensure market stability when deemed necessary, for instance, in the event of sudden fluctuations in market interest rates. Furthermore, when the current temporary measures to support the financial markets are set to expire, the Bank will decide whether to extend them after comprehensively evaluating their continued necessity and what effects their termination would have.

Maintenance of financial system stability

The Bank of Korea will examine the effects of changes in financial and economic conditions at home and abroad on financial system stability, and strengthen early warning activities concerning potential risks to the financial system. Particularly since there are mounting financial imbalances with private sector leverage rising, the Bank will examine financial stability conditions, paying attention to the possibility of an uneven economic recovery bringing about the materialization of credit risks, especially centered in vulnerable household and corporate sectors, as well as to the possibility of changes in risk preferences and the resulting asset price adjustments leading to heightened instability in the financial system.

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