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Monetary Policy Report

2022. 3

BANK OF KOREA

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

• **Vision**	**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

2022. 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 2022 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 2021 through the date of the Monetary Policy Board meeting for monetary policy decision-making in February 2022.

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 2022

Juyeol Lee

Lee, Juyeol

Governor

Bank of Korea

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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1 A look at financial and economic conditions at home and abroad between November 2021 and February 2022 finds the following. The underlying trend of recovery in the global economy continued, despite the pace being slightly subdued due to the spread of the Omicron variant. The US economy sustained a solid pace of recovery boosted by improved consumption and employment, in spite of the spread of the new variant. The momentum of recovery in the euro area and Japan somewhat weakened, mainly in consumption, affected partly by the heightened level of COVID-19 restrictions. China's growth continued to slow driven by the resurgence of the virus and the slump in the real estate sector, while that of India and the ASEAN-5 countries showed trends of recovery.

Economic growth in major economies[1)]

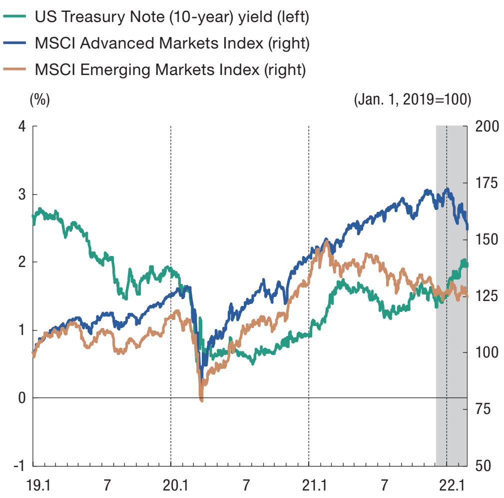
(%)

	2019 Year	2020 Year	2021 Year	2021 Q1	2021 Q2	2021 Q3	2021 Q4
US	2.3	-3.4	5.7	1.5	1.6	0.6	1.7
Euro area	1.6	-6.4	5.2	-0.2	2.2	2.3	0.3
China	6.0	2.2	8.1	18.3	7.9	4.9	4.0
Japan	-0.2	-4.5	1.7	-0.5	0.6	-0.7	1.3

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.

In the international financial market, despite easing concerns about Omicron, investor sentiment contracted and the volatility of price variables increased, influenced by strengthening expectations for early tightening of monetary policy by major central banks following rising inflation and escalating geopolitical risks surrounding Ukraine. The US Treasury yield declined in early December last year, mainly due to the rising Omicron cases, but reversed to an increase in mid-December as such concerns diminished and expectations for the Federal Reserve's early tightening of monetary policy strengthened. Since the beginning of this year, the yield further climbed driven by rising inflation and additional escalation of expectations regarding the accelerating pace of monetary tightening by the Federal Reserve. However, the extent of the increase in the yield was limited due to rising geopolitical tensions over Ukraine. Stock prices in advanced economies fell in December last year, mainly as the market grew cautious of the Federal Reserve's early tightening, but reversed to a rise thanks to reduced concerns over Omicron and expectations for solid performance in the corporate sector. However, stock prices plunged entering this year, due to concerns about early monetary tightening by major central banks including the Federal Reserve and escalating geopolitical tensions surrounding Ukraine. Stock prices in emerging economies also declined, moving generally in line with those of advanced economies. The US dollar remained unchanged against other major currencies in December, fluctuating in line with movements in US Treasury yields, but has remained strong in general since the beginning of this year.

US long-term interest rate, share price indices of advanced and emerging markets



Source : Bloomberg.

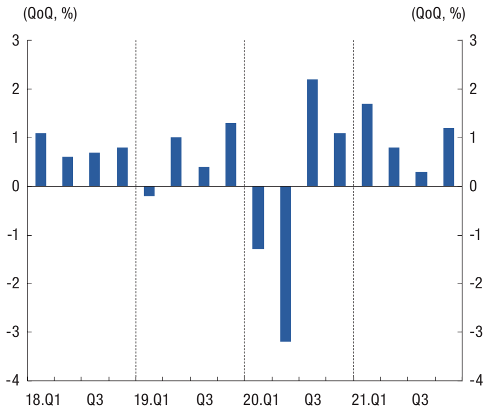
2 The Korean economy sustained its trend of recovery. Facilities investment underwent adjustment in the fourth quarter last year affected by global supply constraints, while exports sustained their buoyancy and private consumption quickly picked up. As a result, the real GDP growth rate exhibited a faster increase in the fourth quarter, up 1.2% from the preceding quarter (+4.2% year-on-year). Services consumption slowed owing to the rise of new variant cases since December last year, but the underlying trend of recovery continued, driven by goods consumption and exports.

By sector, private consumption (based on GDP) rapidly rebounded in the fourth quarter last year and rose 1.6% compared to the previous quarter (+6.3% year-on-year), due to the government's execution of a supplementary budget and easing of COVID-19 restrictions. In January, the Retail Sales Index announced by Statistics Korea declined 1.9% compared to the previous month, owing mainly to conversion of automobile production lines at certain companies. Services consumption, which was very sluggish during December last year, showed an easing of sluggishness in January mainly in face-to-face services such as food and accommodation services. Government consumption rose 1.3% quarter-on-qurater (+8.3% year-on-year) in the fourth quarter last year, especially in goods expenses related to vaccine purchases and administration, and health insurance reimbursements.

Facilities investment continued to undergo a slight adjustment, falling 0.7% quarter-on-quarter in the fourth quarter last year (+4.0% year-on-year). In January, the Equipment Investment Index announced by Statistics Korea grew 2.5% from the previous month, as transportation equipment investment increased despite a decline in machinery investment. Construction investment went up 2.9% from the previous quarter in the fourth quarter (-1.7% year-on-year), despite a bigger increase in the costs of construction materials. In January, the value of construction completed announced by Statistics Korea climbed 0.5% compared to the preceding month, boosted by an increase in building construction, especially non-residential buildings, and also in civil engineering, mainly plants.

Exports (customs-clearance basis) sustained their buoyancy in the fourth quarter last year, with the export value hitting a record high again following the previous quarter. Exports of IT products maintained a rapid pace of growth especially in semiconductors and computers. For non-IT products, exports of petroleum products and steel exhibited sharp increases while those of automobiles also rebounded after November. Exports continued to remain solid after January, with semiconductors, petroleum products and steel growing rapidly.

Real GDP Growth[1)]

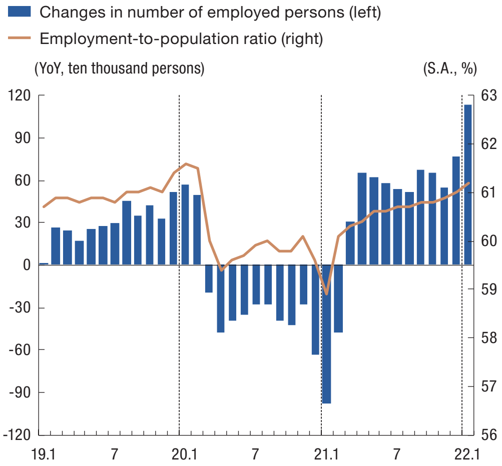


Note: 1) reflecting preliminary figures
Source: Bank of Korea

Recent employment conditions have continued to improve with a substantial margin of growth sustained in the number of persons employed. Total payrolls increased by 1,135,000 year-on-year in January. Private nonfarm payrolls (excluding agriculture and fisheries, public administration, and health and social welfare) have continued to improve, increasing by 757,000. The (seasonally-adjusted) employment-to-population ratio stood at 61.2% in January, rising slightly from the preceding month (61.0%).

Nominal wages increased by 5.2% year-on-year in the fourth quarter last year, continuing their rising trend.

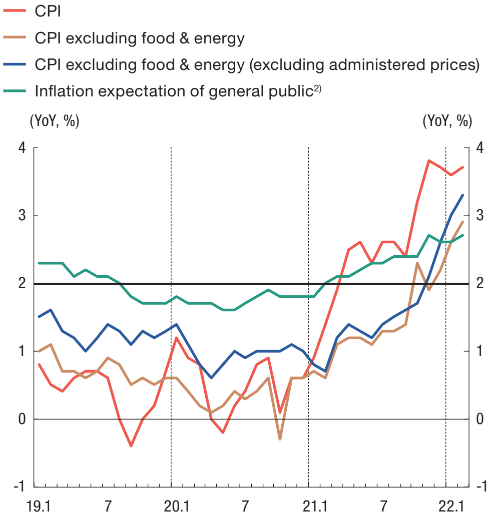
Changes in number of employed persons and employment-to-population ratio



Source : Statistics Korea.

3 Consumer price inflation has remained at the 3% level since October last year. This high level of inflation was attributable to inflationary pressure expanding into a wide range of core items which exclude food and energy, affected partly by consumption recovery and global supply bottlenecks amid a continued rise of petroleum product and food prices. Core inflation (excluding changes in food and energy prices from the CPI) surpassed 2% during the fourth quarter last year, and climbed to the upper-2% level in February this year. When excluding administered prices, core inflation reached the 3% level. The short-term inflation expectations of the general public have risen to the mid- to upper-2% level, while the long-term inflation expectations of an expert group (5-year ahead) moved up to the lower-2% level.

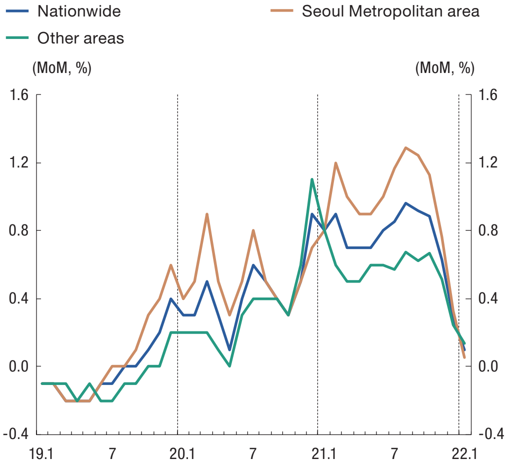
Inflation[1)]



Notes: 1) The bold line indicates the inflation target.
2) Expectations for the consumer price inflation rate over the next 12 months

Sources: Bank of Korea, Statistics Korea.

Housing sales price growth rate



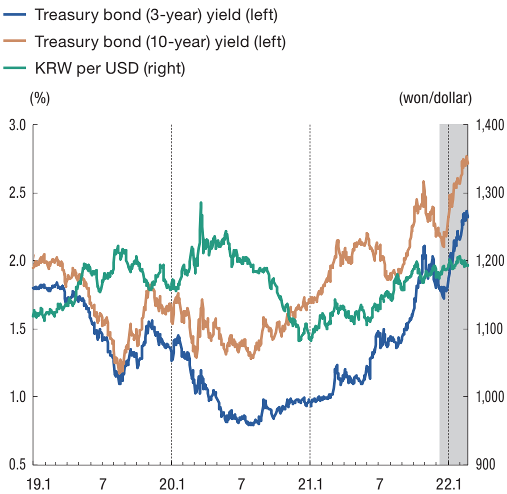
Source: Korea Real Estate Board.

Nationwide housing sales prices posted a smaller increase in the fourth quarter last year, due to loan management by financial institutions and lending rate hikes, and sustained a slowing rate of growth into this year. In addition, expectations for price growth have weakened since November last year. Nationwide leasehold (*jeonse*) deposit prices have also seen their margin of increase narrow since the fourth quarter last year, mainly as the demand for *jeonse* shifted to that for monthly rent owing to lending rate hikes.

④ Korea Treasury bond yields declined due to the resurgence of COVID-19 at home and abroad, but rebounded quickly thanks to the accelerating moves toward monetary policy normalization by major central banks and discussions on a supplementary budget. In December last year, the yields dropped significantly as interest rates in major economies fell primarily from the spread of the Omicron variant, while supply and demand conditions of Korea Treasury bonds improved thanks to government buybacks. However, since the beginning of this year, yields have rapidly bounced back to levels well above last year's peak (2.11% for 3-year, 2.585 for 10-year KTBs) as major central banks including the Federal Reserve are forecast to accelerate the pace of monetary policy normalization. Uncertainties surrounding the supplementary budget, and effects of the Bank of Korea's Base Rate raises, also contributed to the rise of Korea Treasury bond yields.

The Korean won to US dollar exchange rate fluctuated between the 1,170 and 1,190 won levels in December last year, due to a mix of downside factors such as foreign investors' US dollar sales for purchasing Korean stocks, and upside factors such as concerns over the Federal Reserve's accelerating pace of monetary tightening. Entering January, the exchange rate rose to the 1,200 won level, despite the Bank of Korea's policy rate hike, affected by concerns about the accelerating pace of monetary tightening by the Federal Reserve and heightened geopolitical tensions surrounding Ukraine. In February, the exchange rate dipped slightly in tandem with the US dollar index, partly owing to concerns over inflation in the euro area flagged by President Lagarde of the European Central Bank.

Korea Treasury bond yields and exchange rate (KRW per USD)

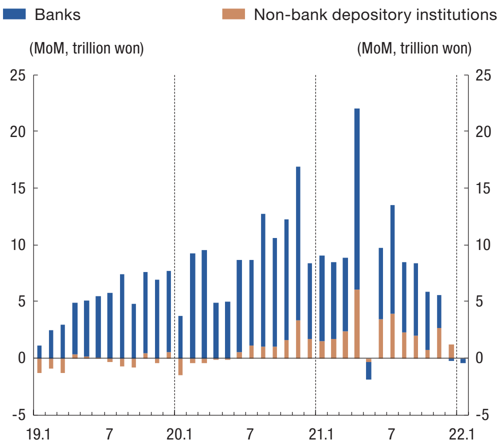


Sources: Bank of Korea, Korea Financial Investment Association.

5 The rate of increase in household lending slowed, mainly affected by tightened management of household lending by the financial institutions and lending rate hikes. After sustaining a high rate of growth until the third quarter last year, banks' household lending rose by a substantially narrower margin in the fourth quarter, particularly in mortgage loans, with the margin of growth shrinking once again in January from December. Non-bank depository institutions also saw the margin of growth in household debt narrow in the fourth quarter of last year, affected by a rise in lending rates and household loan management efforts by some financial institutions.

Corporate financing maintained its pace of growth. Corporate lending by banks, especially to small and medium-sized enterprises (SMEs), increased in the fourth quarter last year, and sustained its pace of growth into January this year, driven by certain banks' efforts to expand corporate lending and increased demand for loans from large companies. Corporate lending by the non-bank financial sector in the fourth quarter also exhibited faster growth than the preceding quarter. Direct corporate financing slowed slightly during the fourth quarter, partly due to decreased year-end investment demand from institutions, but showed a sharp rise in January, mainly through the issuance of stocks.

Changes in household loans[1)2)]

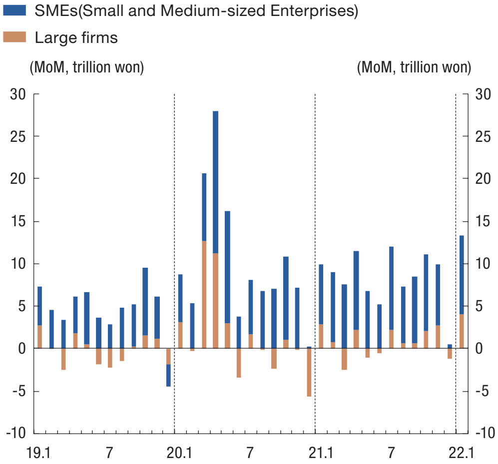


Notes: 1) Including mortgage transfers

2) Figures for January 2022 are based on the Bank of Korea advance estimate for banks and have not been released for non-bank depository institutions.

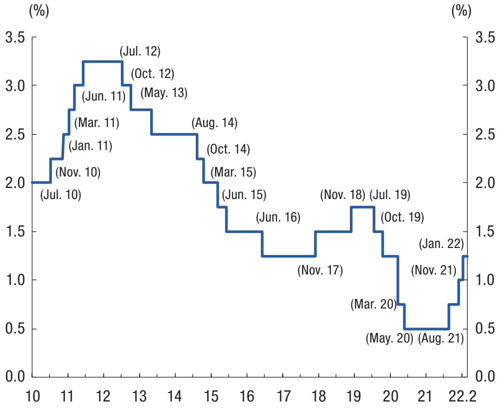
Source: Bank of Korea.

Changes in corporate loans[1)]



Note: 1) Based on banks.
Source: Bank of Korea

Bank of Korea Base Rate[1)]



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

[Conduct of Monetary Policy]

⑥ The Bank of Korea conducted monetary policy in order to sustain the recovery of economic growth and stabilize consumer price inflation at the target level (2%) over a medium-term horizon, while paying attention to financial stability. In this process, it thoroughly assessed global and domestic developments related to COVID-19, changes in monetary policy by major central banks, effects of policy rate raises, the risk of a buildup of financial imbalances, and trend of growth and inflation. Under this policy stance, the Bank of Korea adjusted the degree of monetary policy accommodation in January 2022 by raising the Base Rate by 25 basis points, from 1.00% to 1.25%.

A detailed look at the Base Rate decisions during this period, and the background, are as follows. At the January meeting, the Board raised the Base Rate from 1.00% to 1.25%, in consideration of the points that the Korean economy was expected to continue its sound growth, inflationary pressures were expected to increase more than initially expected, and there was still a great need to reduce financial imbalance risks. Although the improvement in private consumption had moderated owing to the tightening of domestic COVID-19 restrictions, and facilities investment had somewhat slowed due to global supply constraints. The Korean economy continued to recover thanks to sustained buoyancy in exports. Going forward, the economy was expected to sustain its sound growth, as the recovery of private consumption was forecast to pick up again, and exports were expected to continue their solid trend of increase. Consumer price inflation had risen to the upper-3% level due to the ongoing rise in the prices of petroleum products and agricultural, livestock, and fisheries products, as well as the accelerating increase in the prices of industrial products and personal services. It was expected that consumer price inflation would continue to run in the 3% range for a considerable time. On the financial stability side, the amount of increase in household loans had lessened greatly due to efforts to manage household lending in the financial sector and increases in lending rates, and the rise in housing sales prices had somewhat moderated in both the Seoul Metropolitan region and other areas.

At the February meeting, the Board decided to leave the Base Rate unchanged at 1.25%, and appropriately adjust the degree of monetary policy accommodation going forward. This decision was made in consideration of a few points. The Korean economy was sustaining its sound growth and inflationary pressures were increasing more than expected. However, the Board had preemptively raised the Base Rate on three occasions since August last year, uncertainties surrounding external conditions, such as monetary policies of major central banks and geopolitical risks, had heightened, and the effects of the Base Rate raises so far needed to be examined further. Looking at the Korean economy, the improvement in private consumption had moderated owing to the tightening of domestic COVID-19 restrictions, and facilities investment had somewhat slowed due to global supply constraints. However, exports had sustained their buoyancy thanks to robust global demand. Going forward, GDP growth this year was expected to be around 3%, not deviating greatly from the November forecast, as exports were expected to continue their solid trend of increase, and the recovery of private consumption was forecast to pick up again. Consumer price inflation had risen to the mid- to upper-3% level due to the ongoing sharp rise in the prices of petroleum products, as well as accelerating increase in the prices of personal services and industrial products. Going forward, it was forecast that consumer price inflation would run well above 3% for a considerable time. Therefore, consumer prices were expected to increase by 3.1% this year, well above last year's level (2.5%). With respect to financial stability, although household debt growth and the increase in housing prices had moderated, the need to pay attention to the risk of a buildup in financial imbalances was judged to still remain high.

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

The Bank of Korea has continued to provide support for small businesses and SMEs facing increased funding difficulties due to COVID-19 by extending the period of the temporary financial support measures and increasing their ceilings to cope with the spread of the pandemic. The volume of COVID-19 related bank loans supported by the Bank of Korea grew steadily. As of end-January 2022, the volume extended under the Support Program for SMEs Affected by COVID-19 and the Support Program for Small Businesses recorded 32.3 trillion won and 4.9 trillion won, respectively.

Programs under the Bank Intermediated Lending Support Facility

(trillion won, %)

Programs		Ceiling	Interest rate
Support Program for Trade Financing		1.5	0.25
Support Program for New Growth Engine Development and Job Creation		13.0	0.25
Program for Stabilization of SME Lending[1]		3.5	0.25
Support Program for Regional SMEs		5.9	0.25
Ceiling Reserves	Support Program for SMEs Affected by COVID-19	13.0	0.25
	Support Program for Small Businesses	6.0	0.25
	Others	0.1	0.25
Total		43.0	-

Note: 1) Includes the support that had been formerly provided under the Support Program for Facilities Investment and Small-scale Business Owners, etc.
Source: Bank of Korea.

The Bank of Korea terminated corporate bond and CP purchases by the Special Purpose Vehicle (SPV) at end-December 2021 as scheduled, which was set up to mitigate credit market instability and corporations' difficulties in financing following the spread of the pandemic.

The 60 billion US dollar bilateral currency swap agreement signed with the Federal Reserve in March 2020 to resolve a foreign liquidity shortage stemming from the spread of the pandemic and to ensure financial market stability was also terminated at end-December 2021.

In December last year, the Bank of Korea agreed with the Federal Reserve to use the Foreign and International Monetary Authorities (FIMA) Repo Facility if necessary. Accordingly, the Bank of Korea can now use its eligible securities holdings to borrow up to 60 billion US dollars from the Federal Reserve at an annual interest rate of 0.25% through the FIMA Repo Facility.

Meanwhile, as Treasury bond yields rose rapidly due to the global spread of inflation and accelerating moves toward monetary policy normalization in major central banks since the beginning of this year, the Bank of Korea performed outright purchases of Treasury bonds worth 2 trillion won to ease interest rate volatility in February.

8 The Bank of Korea continuously monitored movements in the financial and FX markets at home and abroad. While operating an emergency financial market monitoring and response system activated in the event of increased market volatility, it has also closely looked into the evolution of domestic and global risk factors as well as their impacts on financial and FX markets. The Bank held Conditions Review Meetings to discuss the domestic and global financial market responses to and impacts from the results of FOMC meetings (on December 16, 2021, and January 27, 2022) and the announcement of the US Consumer Price Index (on February 11) which exceeded market expectations, as well as to monitor changes in the international financial market conditions during the Lunar New Year's holidays (on February 3). As the geopolitical risk surrounding Ukraine increased, the Bank also held a Financial and Economic Conditions Review Meeting (on February 22) and Conditions Review Meetings (on February 24 and February 25) to monitor the global financial market responses and the impacts on the domestic financial sector and economy. In the December Financial Stability Meeting last year, the Bank comprehensively examined domestic financial imbalances by analyzing them in comparison with overseas conditions, and closely monitored potential risks in vulnerable sectors such as corporate insolvencies and the debt of small business owners.

Meanwhile, the Bank of Korea raised the ratio of collateral for guaranteeing net settlements of participant banks to 70% from February 2022 after temporarily lowering it (70% → 50%) in April 2020 to cope with deteriorated financial market liquidity following the spread of COVID-19. In order to relieve financial institutions' collateral burden from the increased ratio, the Bank consulted and agreed with the Financial Supervisory Service (FSS) on a plan whereby high-quality liquid assets of liquidity coverage ratio(LCR) would include the amount posted as collateral minus the net debit cap utilization amount at the time of calculating the LCR. Accordingly, The FSS revised the Enforcement Rules of the Banking Supervision Regulations.

The Bank of Korea has continued to perform technical and institutional research on central bank digital currency (CBDC) in order to effectively cope with the rapid progress toward a digital economy. In particular, in the phase 1 pilot test on CBDC completed in December 2021, the Bank created a cloud-based virtual experimentation environment, and implemented basic functions of CBDC including its manufacturing, issuance, circulation, redemption, and disposal. In addition, the Bank analyzed the progress in global discussions on major issues related to the adoption of CBDC, such as design and operation methods, and the expected spillovers. The Bank also stepped up its research on the impacts of the adoption of CBDC on monetary policy and financial stability, jointly with members of academia.

[Future Monetary Policy Directions]

9 The Korean economy is forecast to continue its sound growth supported by continuing resumption of global economic activities and easing of domestic social distancing measures, despite increasing internal and external uncertainties. Accordingly, GDP growth rate is projected to be around 3.0% in 2022 and 2.5% in 2023.

Private consumption, while being affected by the spread of COVID-19, is expected to return to the path of recovery supported by improved income conditions stemming from solid recoveries in employment and wages. Facilities investment is expected to show moderate growth due to solid demand for IT products and the mitigation of automobile production disruptions. Construction investment is expected to show recovery as building construction improves and civil engineering turns into an increase. Exports are expected to maintain a solid growth trend thanks to the robust global demand for goods, particularly IT products. There are still high potential uncertainties surrounding the growth outlook. The upside risks to growth include early easing of social distancing measures, increased government support for consumption, and continuing strength in the global semiconductor industry. Among the downside risks are increased geopolitical risk, delayed resolution of global supply constraints, and prolonged spread of COVID-19.

Economic growth outlook[1]

(YoY, %)

	2021[2]			2022e			2023e
	H1	H2	Year	H1	H2	Year	Year
GDP	4.0	4.1	4.0	2.8	3.1	3.0	2.5
Private consumption	2.4	4.8	3.6	3.9	3.2	3.5	2.6
Facilities investment	12.6	4.1	8.3	-1.3	5.8	2.2	1.7
Intellectual property products investment	4.0	3.9	4.0	4.2	3.7	3.9	3.8
Construction investment	-1.5	-1.5	-1.5	0.6	4.0	2.4	2.3
Goods exports	14.4	6.1	10.0	4.5	2.5	3.4	2.2
Goods imports	12.5	11.4	11.9	5.6	2.1	3.8	2.3

Notes: 1) Figures are the forecast as of February 2022.
2) Reflects fourth quarter preliminary figures of 2021.
Source: Bank of Korea.

Consumer price inflation this year is expected to record 3.1%, rising significantly compared to last year (2.5%) as oil prices and other international commodity prices rise faster and inflationary pressures expand into core items affected by the demand recovery and global supply bottlenecks. Core inflation for items other than food and energy is forecast to rise to 2.6% this year, well above last year's level (1.4%). Consumer price inflation and core inflation is projected to stand at around 2% next year. Upside risks appear to somewhat predominate over the future inflation outlook path. The upside risks include a sustained upward trend in energy prices such as prices of oil and natural gas, a stronger recovery in consumption in line with early easing of social distancing measures, greater impacts of supply bottlenecks on inflation, and a sustained rise in food prices. Among the downside risks are a slow recovery in consumption caused by a prolonged spread of the pandemic, a decline in energy prices including oil prices, and freezes in electricity fees and city gas charges.

Inflation outlook[1]

(YoY, %)

		2021			2022e			2023e
		H1	H2	Year	H1	H2	Year	Year
CPI inflation		2.0	3.0	2.5	3.5	2.7	3.1	2.0
Core inflation	CPI excluding food & energy	1.0	1.8	1.4	2.7	2.5	2.6	2.0
	CPI excluding agricultural products & oil	1.4	2.3	1.8	3.0	2.7	2.8	2.2

Note: 1) Figures are the forecast as of February 2022.
Source: Bank of Korea.

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

The Bank of Korea will appropriately adjust the degree of monetary policy accommodation as the Korean economy is expected to continue its sound growth and inflation to run above the target level for a considerable time, despite underlying uncertainties over the virus. In this process the Bank will judge when to further adjust the degree of accommodation while thoroughly assessing developments related to COVID-19, the effects of Base Rate raises, monetary policy changes in major central banks, the risk of a buildup of financial imbalances, and trend of growth and inflation.

I

Monetary Policy Operating Conditions

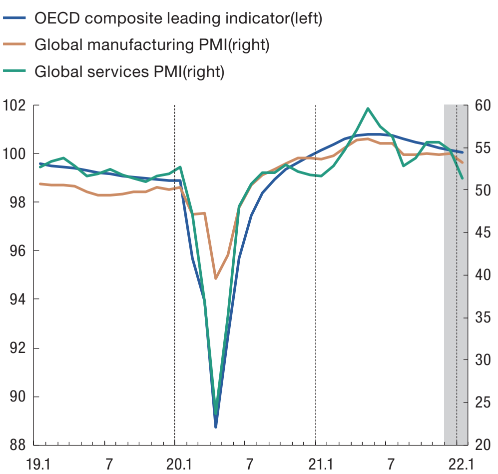
1. Global Economy

Underlying trend of recovery in global economy continues

The underlying trend of recovery in the global economy continued, despite the pace being slightly subdued due to the spread of the Omicron variant. Global Composite PMI has fallen somewhat, led by service industries, since December last year, but remains above the 50-point benchmark.[1] Some advanced economies have recently eased social distancing measures due to the slower spread of COVID-19, and emerging economies are gradually resuming economic activity, bolstered by expanded vaccination. However, uncertainties are still high due to the Ukraine crisis and moves toward early monetary policy normalization by major central banks.

By country, the US economy sustained a solid pace of recovery boosted by improved consumption and employment, in spite of the spread of the new variant.[2] Meanwhile, the momentum of recovery in the euro area and Japan somewhat weakened, mainly in consumption, affected partly by the heightened level of COVID-19 restrictions.[3] Looking at emerging market economies, China's growth continued to slow, mainly in consumption and investment, driven by the resurgence of the virus and the slump in the real estate sector.[4] Meanwhile, growth in India and the ASEAN-5 countries showed trends of recovery, with their exports maintaining robust growth and their manufacturing PMIs exceeding the benchmark.[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.

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1) Global Composite PMI: 54.8 (in November 2021) → 54.3 (in December) → 51.4 (in January 2022).

2) Employment in the US continued to improve, with the US Labor Force Participation Rate rising in January this year (61.9% in December 2021 → 62.2% in January 2022) and average hourly earnings showing a faster increase (year-on-year, 4.9% in December 2021 → 5.7% in January 2022).

3) With retail sales in the euro area and Japan (month-on-month) in December 2021 falling by 3.0% and 1.2%, respectively, Japan's service PMI in January stood at 47.6, running below the 50-point benchmark.

4) The pace of growth in fixed asset investment in China slowed (on a cumulative amount basis, year-on-year, 5.2% in November 2021 → 4.9% in December), and growth in retail sales slowed as well (year-on-year, 3.9% in November 2021 → 1.7% in December).

5) In January 2022, the manufacturing PMIs of India and the ASEAN-5 countries stood at 54.0 and 51.9, respectively, both exceeding the 50-point benchmark.

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

(%)

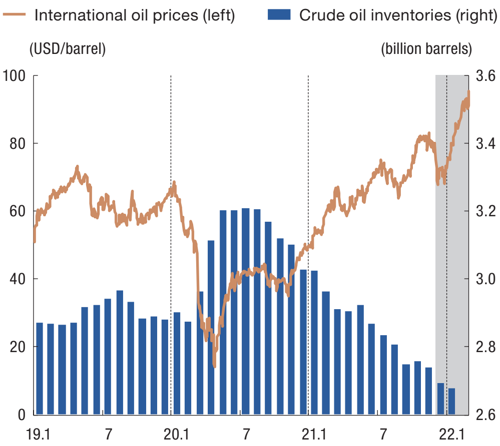
	2019	2020	2021				
	Year	Year	Year	Q1	Q2	Q3	Q4
World	2.8	-3.1	5.9	-	-	-	-
Advanced economies	1.6	-4.5	5.0	-	-	-	-
US	2.3	-3.4	5.7	1.5	1.6	0.6	1.7
Euro area	1.6	-6.4	5.2	-0.2	2.2	2.3	0.3
Japan	-0.2	-4.5	1.7	-0.5	0.6	-0.7	1.3
Emerging market and developing economies	3.7	-2.0	6.5	-	-	-	-
China	6.0	2.2	8.1	18.3	7.9	4.9	4.0
India[3)]	4.8	-7.3	..	1.6	20.1	8.4	..
ASEAN-5[4)]	4.9	-3.4	3.3	-0.6	8.8	1.0	4.7
Brazil	1.2	-3.9	4.6	1.3	12.3	4.0	1.6
Russia	2.0	-2.7	4.7	-0.7	10.5	4.3	..

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 rates of growth 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 sharply

International oil prices (based on Dubai crude oil) fell to the 60-dollar range per barrel in December last year due to concern about the spread of the Omicron variant, but then continued to rise to reach the 90-dollar range in February this year.[6)] This is mainly due to geopolitical risks surrounding Ukraine, with demand for oil continuing due to economic recovery, and production in major oil producing countries such as the US and OPEC+[7)] failing to meet the demand.

Figure I-2. International oil prices and crude oil inventories[1)]



Note: 1) Based on OECD commercial crude oil inventories
Sources: Bloomberg, EIA

International financial market volatility heightens

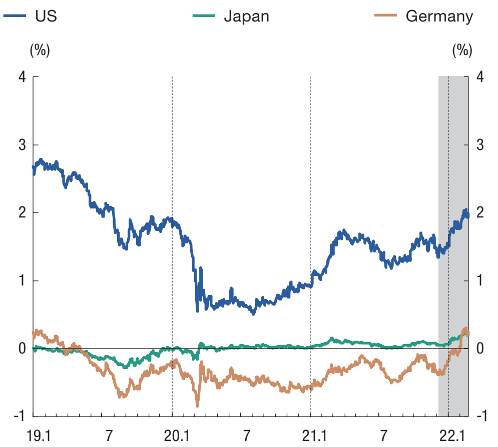
In the international financial market, despite easing concerns about Omicron, investor sentiment contracted and the volatility of price variables increased, influenced by strengthening expectations for early tightening of monetary policy by major central banks following rising inflation and escalating geopolitical risks surrounding Ukraine.

The US Treasury yield declined in early December 2021, mainly due to rising Omicron cases, but reversed to an increase in mid-December as concerns about Omicron diminished and expectations for the Federal

6) International oil prices (based on Dubai crude oil) rose rapidly to 116 dollars per barrel as of March 4 from 93 dollars on February 23, due to the escalation of concerns about energy supply and demand imbalances after the recent deterioration in the Ukraine crisis.
7) The International Energy Agency (IEA) estimated that crude oil production in OPEC+ stood at a mere 280,000 barrels per day (in January 2022), below their targeted increase in production (400,000 barrels per day).

Reserve's early tightening of monetary policy strengthened. Since the beginning of this year, the yield further climbed[8] driven by rising inflation[9] and greater expectations regarding a faster pace of monetary tightening by the Federal Reserve.[10] However, the extent of increase in the yield was limited due to rising geopolitical tensions over Ukraine. Germany's government bond yield rose as well, due to the ECB's move toward monetary policy normalization since December last year.[11]

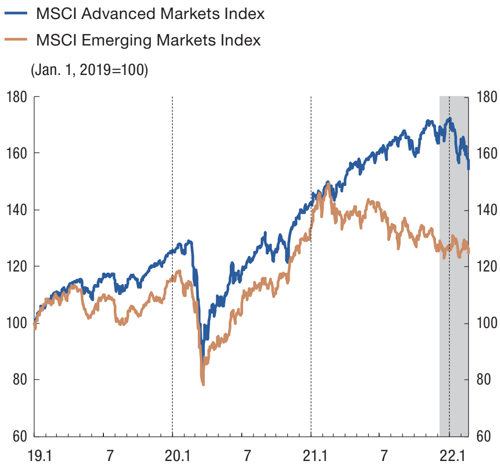
Figure I-3. Long-term market interest rates in major economies[1)]



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

Stock prices in advanced economies fell in December last year, mainly as the market grew cautious about the Federal Reserve's early tightening, but reversed to a rise thanks to reduced concerns over Omicron and expectations for solid performance in the corporate sector. However, stock prices plunged entering this year, due to concerns about early monetary tightening by major central banks including the Federal Reserve and escalating geopolitical tensions surrounding Ukraine. Stock prices in emerging economies also declined, moving generally in line with those of advanced economies.

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



Source: Bloomberg.

8) On February 10, the release date for the US Consumer Price Index for January 2022, the US 10-year Treasury yield recorded 2.03%, exceeding 2% for the first time since July 2019.

9) High inflation continued and there was a heightened interest in the direction of the US Federal Reserve's policy response. Against this backdrop, the US Consumer Price Index for January released on February 10, 2022 registered a 7.5% gain, posting the largest increase since February 1982.

10) At the January FOMC press conference, Federal Reserve Chairman Powell did not rule out the possibility of a federal funds rate hike at every remaining FOMC meeting this year.

11) At the European Central Bank's 2021 December monetary policy meeting (on December 16), it revised upward its projection for consumer inflation for 2021-23 and decided to end the Pandemic Emergency Purchase Programme (PEPP) in March 2022 as scheduled. At a press conference following the February ECB monetary policy meeting (on February 3), ECB President Lagarde raised concern about inflation and suggested that inflation projections and the pace of asset purchases would be examined in more depth at the March meeting.

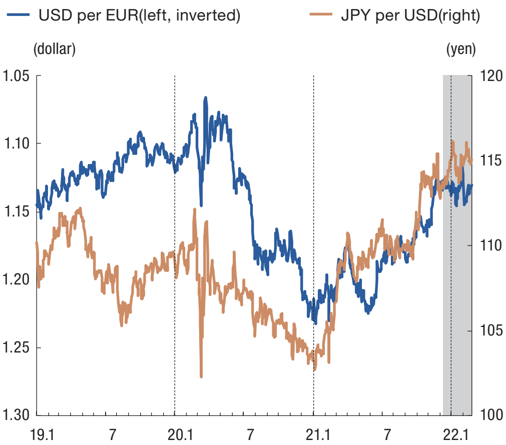
The volatility of US stock prices decreased in December last year thanks to eased concerns about the Omicron variant, but increased again entering this year due to stronger expectations of early tightening by major central banks and uncertainties related to the Ukraine crisis. Meanwhile, US interest rate volatility fluctuated in line with changes in expectations related to monetary policy by the US Federal Reserve, and then increased from February, on concerns over the prospect of prolonged inflation and increased geopolitical risk.

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.

The US dollar remained unchanged against other major currencies in December last year, fluctuating in line with movements in US Treasury yields, but remained strong in general coming into this year. The US dollar fluctuated within a narrow range against the euro in December last year, and then strengthened from mid-January this year on stronger expectations of a Federal Funds rate hike by the US Federal Reserve, and shifted to a trend of slight weakening after the ECB's Governing Council meeting in early February. Meanwhile, the US dollar remained strong against the Japanese yen, due to the prospect of the differentiation of monetary policy stances between the United States and Japan,[12)] and then the extent of strengthening declined entering this year, on increased demand for yen purchases following higher geopolitical risk.

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



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

12) While the US Federal Reserve has moved to tighten monetary policy at a faster pace, the Bank of Japan decided to remain committed to its existing qualitative and quantitative monetary easing at its 2021 December and 2022 January monetary policy meetings.

2. Real Economy

(1) Economic growth

Trend of recovery in Korean economy continues

The Korean economy sustained its trend of recovery. Facilities investment underwent adjustment in the fourth quarter last year affected by global supply constraints, while exports sustained their buoyancy and private consumption quickly picked up. As a result, the real GDP growth rate exhibited a faster increase in the fourth quarter, up 1.2% from the preceding quarter (+4.2% year-on-year). Services consumption slowed owing to the rise of new variant cases since December last year, but the underlying trend of recovery continued, driven by goods consumption and exports.

Meanwhile, global and domestic uncertainties have recently increased, due to the rapid spread of the Omicron variant and the Ukraine crisis.

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

(QoQ, %)

	2019	2020		2021				
	Year	Year	Q4	Year[2]	Q1	Q2	Q3	Q4[2]
Real GDP	2.2	-0.9	1.1 (-1.1)	4.0	1.7 (1.9)	0.8 (6.0)	0.3 (4.0)	1.2 (4.2)
(Private consumption)	2.1	-5.0	-1.3 (-6.6)	3.6	1.2 (1.2)	3.6 (3.7)	-0.2 (3.3)	1.6 (6.3)
(Government consumption)	6.4	5.0	-0.4 (2.3)	5.5	1.6 (2.3)	3.9 (5.3)	1.3 (6.5)	1.3 (8.3)
(Facilities investment)	-6.6	7.1	-0.6 (6.1)	8.3	6.1 (12.4)	1.1 (12.8)	-2.4 (4.2)	-0.7 (4.0)
(Construction investment)	-1.7	-0.4	3.5 (-2.9)	-1.5	1.3 (-1.8)	-2.3 (-1.2)	-3.5 (-1.2)	2.9 (-1.7)
(Goods exports)	-1.1	-0.5	5.4 (3.8)	10.0	2.1 (6.4)	-2.7 (23.5)	1.3 (6.0)	5.8 (6.3)
(Goods imports)	-2.5	-0.1	1.7 (2.3)	11.9	5.3 (9.2)	1.6 (16.0)	0.7 (9.6)	5.0 (13.2)

Notes: 1) Figures in parentheses are year-on-year changes in the original series.
2) Reflects preliminary figures.
Source: Bank of Korea

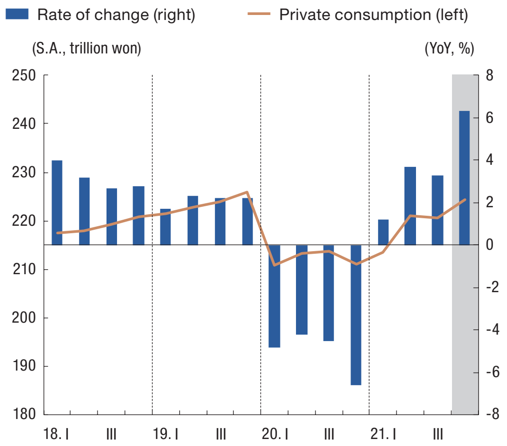
(A) Expenditure

Private consumption maintains a trend of recovery, and government consumption rises

Private consumption (based on GDP) rapidly rebounded in the fourth quarter last year and rose 1.6% compared to the previous quarter (+6.3% year-on-year), due to the government's execution of a supplementary budget and easing of COVID-19 restrictions. By type, goods consumption fell slightly, led by decreases in durable goods stemming from a decline in automobiles following disruptions in the supply of semiconductors for automobiles, despite increases in semi-durable goods such as entertainment goods. Service consumption led a trend of recovery, thanks to a sharp increase in face-to-face services in particular such as food and accommodation, leisure and entertainment services, and transportation. Meanwhile, in January, the Retail Sales Index announced by Statistics Korea declined 1.9% compared to the previous month (+4.5% year-on-year), owing mainly to conversion of automobile production lines at certain companies. Services consumption, which was very sluggish during December last year, showed an easing of sluggishness in January mainly in face-to-face services such as food and accommodation services.

Government consumption rose 1.3% quarter-on-quarter (+8.3% year-on-year) in the fourth quarter last year, especially in goods expenses related to vaccine purchases and administration, and health insurance reimbursements.[13)]

Figure I-7. Private consumption[1)]

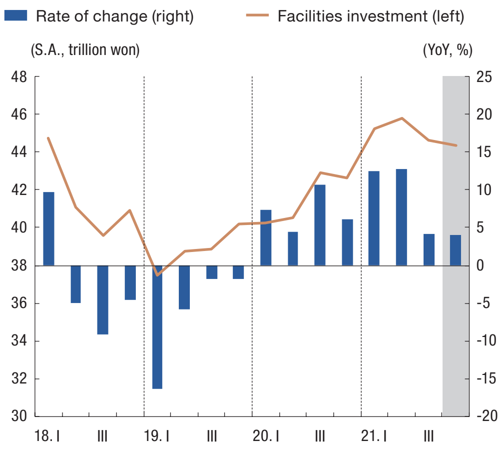


Note: 1) Reflects preliminary figures
Source: Bank of Korea

Facilities investment undergoes slight adjustment

Facilities investment continued to undergo a slight adjustment, falling 0.7% quarter-on-quarter in the fourth quarter last year (+4.0 year-on-year). By sector, investment in transport equipment rose led by aircraft, while investment in machinery shifted to a decline led by semiconductor manufacturing equipment. In January, the Equipment Investment Index announced by Statistics Korea grew 2.5% from the previous month (+0.6% year-on-year), as transport equipment investment increased despite a decline in machinery investment. The decrease in machinery investment was led by precision instruments and display manufacturing equipment, while the higher investment in transport equipment was owing to an increase in investment in other transport equipment such as aircraft and ships.

Figure I-8. Facilities investment[1)]



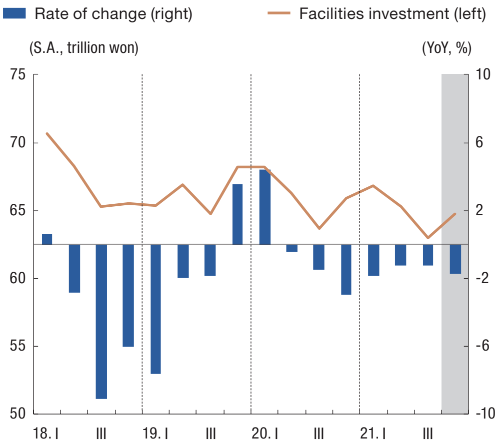
Note: 1) Reflects preliminary figures
Source: Bank of Korea

13) The central government (Korea Disease Control and Prevention Agency) executed a budget worth 2.2 trillion won in the fourth quarter last year to purchase vaccines and run vaccine administration centers, and the expenditure on health insurance reimbursements increased by 13.2% year-on-year.

Construction investment improves

Construction investment went up 2.9% from the previous quarter in the fourth quarter (-1.7% year-on-year), despite a bigger increase in the costs of construction materials.[14] By sector, building construction rose, backed by increases in the volume of construction work for both residential and non-residential buildings. Civil engineering also rose, thanks to increased SOC budget spending. In January, the value of construction completed announced by Statistics Korea climbed 0.5% compared to the preceding month (+6.8% year-on-year). Building construction increased slightly, on the back of a sharp rise in non-residential building construction led by semiconductor plant construction, despite a decline in residential building construction stemming from construction halts following strengthened safety inspections on construction sites.[15] Civil engineering also increased, thanks to a sharp increase in plant construction, despite a decline in general civil engineering caused by reduced SOC budget spending.

Figure I-9. Construction investment[1)]



Note: 1) Reflects preliminary figures

Source: Bank of Korea

Exports remain strong, current account surplus narrows

Exports (customs-clearance basis) sustained their buoyancy in the fourth quarter last year, with the export value hitting a record high again following the previous quarter. Exports of IT products maintained a rapid pace of growth especially in semiconductors and computers, thanks to sustained strength in mobile and server demand. For non-IT products, exports of petroleum products and steel exhibited sharp increases, on the back of recovery in import demand from major economies and rising commodity prices, while those of automobiles also rebounded after

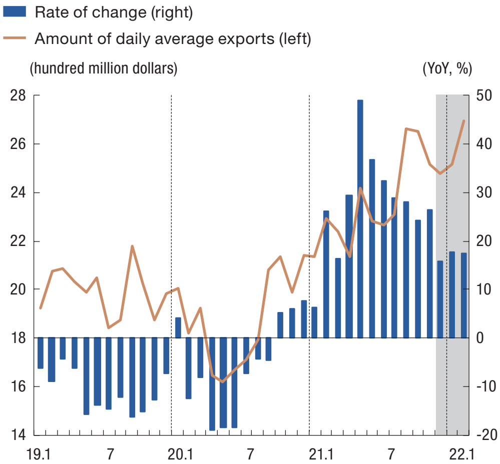
14) The rate of increase in prices of intermediate goods for construction (year-on-year) rose sharply to 28.5% in the fourth quarter 2021 from 24.8% in the third quarter.

15) The government strengthened safety inspection measures and the Serious Accident Punishment Act took effect (on January 27) after the collapse of an exterior wall of an apartment building in Gwangju (on January 11). Against this backdrop, major construction companies discontinued some construction work and carried out safety inspections before and after the Lunar New Year holidays.

16) Automobile exports fell during the period between September and October last year, due to worsened supply disruptions in automobile semiconductor, but then reversed to an increase after November last year (-5.8% in September 2021 → -3.1% in October → 2.2% in November → 11.0% in December → 6.4% in January 2022 → 5.8% in February, year-on-year).

November[16] thanks to partial easing of supply constraints in automobile semiconductors. Exports continued to remain solid after January, with semiconductors, petroleum products and steel growing rapidly.

Figure I-10. Daily average exports calculated on customs clearance basis



Source: Korea Customs Service

Imports (customs-clearance basis) sustained a high rate of growth year-on-year in the fourth quarter last year. Imports of commodities continued to grow, led by crude oil and natural gas, due to energy demand in winter, and imports of capital goods also showed faster growth. However, slower growth was seen in imports of consumer goods, due to a decline in imports of automobiles following a supply shortage in automobile semiconductor. Since January, imports have continued to expand significantly, led by commodities.

The current account surplus narrowed in the fourth quarter last year (20.9 billion dollars) compared to the fourth quarter of 2020 (33.7 billion dollars). The goods account surplus narrowed substantially, due to a sharp increase in imports in line with a surge in commodity prices, despite strong exports. Meanwhile, the services account shifted to a slight surplus, thanks to large improvements in the transportation services account stemming from increased freight rates and higher freight capacities of Korean shipping companies. Meanwhile, the primary income account surplus narrowed slightly, due to increased dividend payments.

Table I-3. Current account

(hundred million dollars, %)

	2020		2021						
	Year	Q4	Year	Q1	Q2	Q3	Q4	Jan.	Feb.
Current Account	759	337	883	223	194	257	209	..	..
Goods	806	308	762	193	191	211	167	..	..
Exports[1]	5,125	1,419	6,444	1,464	1,567	1,645	1,767	553	539
(Rate of change[2])	-5.5	4.1	25.7	12.5	42.0	26.5	24.5	15.2	20.6
Imports[1]	4,676	1,237	6,151	1,366	1,492	1,569	1,724	602	531
(Rate of change[2])	-7.1	-1.7	31.5	12.4	37.7	37.5	39.4	35.3	25.1
Services	-147	-20	-31	-19	-19	5	1	..	..
Credit	896	249	1,212	261	290	317	343	..	..
Debit	1,043	269	1,243	280	309	312	342	..	..
Primary income	135	63	193	61	37	46	49	..	..
Secondary income	-35	-13	-41	-12	-15	-6	-8	..	..

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

(B) Production

Based on the economic activity, growth in manufacturing and services expanded, and construction reversed to an increase. In January, the Index of All Industry Production (IAIP) compiled by Statistics Korea fell by 0.3% month-on-month (+4.3% year-on-year), due to declines in public administration (-3.2%) and services (-0.3%), despite increased industrial production (+0.2%) and construction (+0.5%).

Table I-4. Production indicators[1]

(QoQ, %)

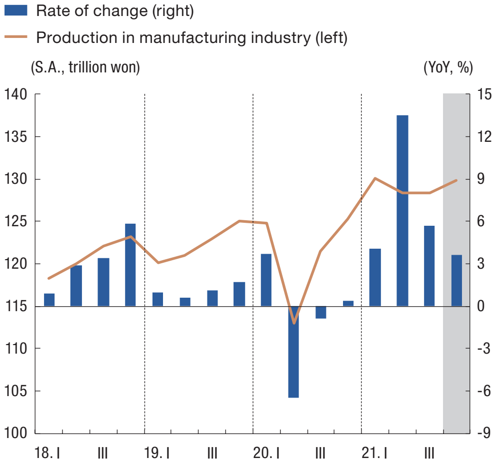
	2019	2020		2021				
	Year	Year	Q4	Year[2]	Q1	Q2	Q3	Q4[2]
GDP by production approach	2.2	-0.9	1.1 (-1.1)	4.0	1.7 (1.9)	0.8 (6.0)	0.3 (4.0)	1.2 (4.2)
Agriculture, forestry and fisheries	3.9	-4.0	4.3 (-1.3)	2.7	7.5 (2.6)	-12.7 (-2.4)	8.9 (6.5)	1.5 (3.9)
Mining	-6.2	-0.2	10.9 (2.6)	5.1	-9.6 (-4.2)	12.6 (13.4)	-0.2 (12.2)	-4.1 (-2.3)
Manufacturing	1.1	-0.9	3.1 (0.4)	6.6	3.8 (4.1)	-1.3 (13.5)	0.0 (5.7)	1.1 (3.6)
Electricity·gas·water supply	4.3	4.2	3.9 (6.2)	4.9	5.9 (5.7)	-4.1 (3.1)	1.9 (7.5)	0.1 (3.5)
Construction	-2.6	-1.4	1.4 (-3.6)	-2.1	0.9 (-3.2)	-1.3 (-3.4)	-2.4 (-1.6)	2.4 (-0.4)
Services	3.4	-1.0	0.6 (-1.8)	3.7	0.7 (1.5)	2.1 (4.4)	0.5 (3.9)	1.4 (4.9)
Taxes less subsidies on products	0.8	0.0	-2.3 (-0.5)	2.6	1.0 (0.1)	3.7 (4.2)	-0.5 (1.9)	-0.1 (3.9)

Notes: 1) Figures in parentheses are year-on-year changes in the original series.
2) Reflects preliminary figures.
Source: Bank of Korea

Manufacturing switches to improvement

Manufacturing production grew at 1.1% in the fourth quarter of last year from the preceding quarter (+3.6% year-on-year), driven by production of computers & electronics, optical instruments and electrical equipment. The January Manufacturing Production Index by Statistics Korea increased by 0.1% month-on-month (+4.4% year-on-year), thanks to increased semiconductor production following strong growth in production of system semiconductors, and increased automobile production in line with expanded automobile exports, despite declines in production of machinery and communication & broadcasting equipment.

Figure I-11. Manufacturing production[1]

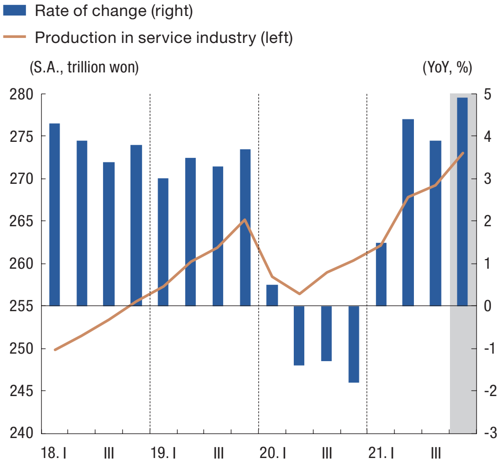


Note: 1) Reflects preliminary figures
Source: Bank of Korea

Trend of recovery in services continues

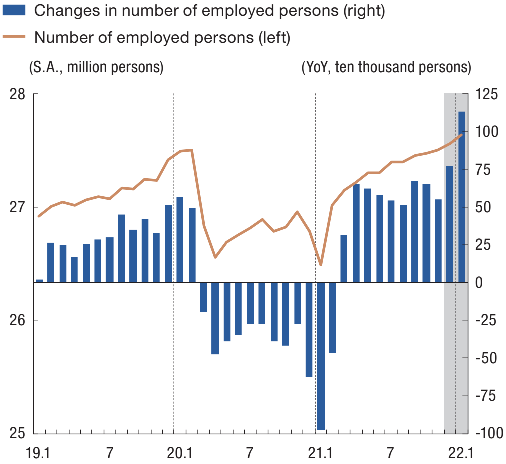
Production in the service industry continued to recover in the fourth quarter of last year, growing at 1.4% compared to the previous quarter (+4.9% year-on-year). By sector, production in accommodation & food, transportation, culture & other services rose sharply thanks to the easing of social distancing measures. The Service Industry Activity Index compiled by Statistics Korea declined by 0.3% month-on-month in January (+4.8% year-on-year), as production in finance & insurance services and professional, scientific & technical services fell, although production in face-to-face service industries such as accommodation & food services rose.

Figure I-12. Service production[1]



Note: 1) Reflects preliminary figures
Source: Bank of Korea

Figure I-13. Number of employed persons



Source: Statistics Korea.

(2) Employment

Employment continues to improve

Recent employment conditions have continued to improve with a substantial margin of growth sustained in the number of persons employed. Total payrolls increased by 1,135,000 year-on-year in January. Private nonfarm payrolls (excluding agriculture & fisheries, public administration, and health & social welfare) have continued to improve, increasing by 757,000 year-on-year.[17)]

By industry, the number of employed persons rose sharply in the service industries, especially in health & social welfare and transportation & warehousing. More specifically, the growth in the number of employed persons in health & social welfare services was attributable largely to increased demand for medical, care and social welfare services, and that in transportation & warehousing was due to a rise in the number of employed persons involved in delivery services. In face-to-face services[18)], the number of employed persons in accommodation & food services climbed up, thanks to increased face-to-face economic activities following expanded COVID-19 vaccinations, while that in wholesale & retail services still remained sluggish. The number of employed persons in the manufacturing sector grew for the third consecutive month to

17) Changes in the number of employed persons, excluding the agricultural & fisheries, public administration, and health & social welfare sectors (year-on-year, ten thousand persons): +36.5 in October 2021 → +32.4 in November → +62.0 in December → +75.7 in January 2022.

18) The face-to-face services industry includes wholesale & retail trade; accommodation & food; education, arts, sports & recreation-related services; and repair & other personal services.

register an increase of 66,000 in January, and the number of persons employed in the construction industry also increased to a greater extent.

Table I-5. Changes in the number of employed persons by industry

(YoY, ten thousand persons)

	2020	2021						2022
	Year	Year	Q1	Q2	Q3	Q4	Dec.	Jan.
Changes in the number of employed persons	-21.8	36.9	-38.0	61.8	57.7	66.0	77.3	113.5
Manufacturing	-5.3	-0.8	-2.8	0.6	-3.5	2.5	3.7	6.6
Construction	-0.4	7.4	3.4	13.7	9.1	3.6	4.0	10.0
Services	-21.6	29.2	-37.9	47.6	50.3	57.0	66.0	87.5
(Wholesale & Retail)	-16.0	-15.0	-19.3	-16.1	-14.0	-10.5	-8.0	-5.6
(Transportation & Warehousing)	5.1	10.3	4.2	9.6	13.0	14.6	12.7	12.1
(Accommodation & Food)	-15.9	-4.7	-20.9	2.6	-0.4	0.1	6.6	12.8
(Information & Communication)	-1.4	5.4	0.4	4.2	7.2	9.7	8.2	10.6
(Education)	-8.6	4.2	-4.2	4.3	5.9	10.9	11.5	7.4
(Personal services)	-4.4	-5.5	-8.6	-4.3	-4.4	-4.5	-2.9	-2.1
(Public administration)	3.6	3.1	5.1	8.3	4.6	-5.7	-5.6	4.0
(Health)	13.0	19.8	6.3	22.4	25.3	25.1	17.4	25.0

Source: Statistics Korea.

By employment status, the number of regular workers continued to increase significantly, while the pace of increase in the number of temporary and daily workers expanded sharply. As for self-employed workers, the number of self-employed workers with employees continued to improve after having shifted to an increase in the fourth quarter of last year.

Table I-6. Changes in the number of employed persons by employment status

(YoY, ten thousand persons)

	2020	2021						2022
	Year	Year	Q1	Q2	Q3	Q4	Dec.	Jan.
Changes in the number of employed persons	-21.8	36.9	-38.0	61.8	57.7	66.0	77.3	113.5
Wage and salaried worker	-10.8	42.1	-20.6	64.6	60.8	63.7	69.8	100.3
(Regular workers)	30.5	36.6	10.9	32.9	40.0	62.6	65.2	68.6
(Temporary & Daily workers)	-41.3	5.5	-31.5	31.7	20.8	1.1	4.6	31.7
Self-employed workers	-11.0	-5.3	-17.4	-2.8	-3.1	2.3	7.5	13.1
(Self-employed businesses with employees)	-16.5	-6.5	-13.6	-7.2	-6.0	0.7	5.3	5.4
(Self-employed businesses without employees)	9.0	4.7	3.0	6.4	5.5	4.1	3.6	8.1
(Unpaid family workers)	-3.5	-3.5	-6.8	-2.1	-2.5	-2.6	-1.3	-0.4

Sources: Statistics Korea.

By age, the numbers of employed youth (aged between 15 and 29) and senior persons (aged 60 and over) continued to rise greatly. The number of employed persons in their 30s continued to decline due to demographic factors[19], and then shifted to a rise in January, for the first time since February 2020.

Table I-7. Changes in the number of employed persons by age group

(YoY, ten thousand persons)

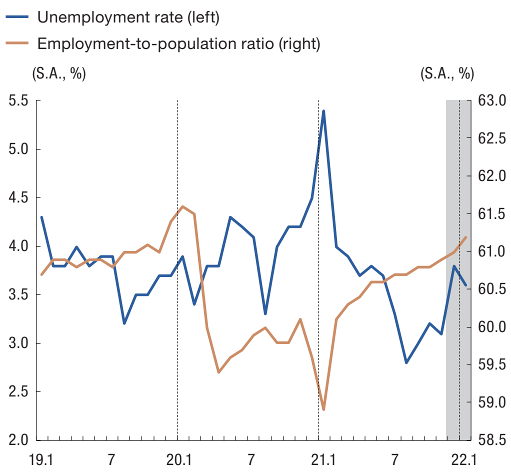
	2020	2021						2022
	Year	Year	Q1	Q2	Q3	Q4	Dec.	Jan.
Changes in the number of employed persons	-21.8	36.9	-38.0	61.8	57.7	66.0	77.3	113.5
Aged 15~29	-18.3	11.5	-10.3	17.6	18.2	20.5	26.6	32.1
Aged 30~39	-16.5	-10.7	-22.7	-9.3	-7.4	-3.5	-1.1	2.2
Aged 40~49	-15.8	-3.5	-15.4	-0.2	1.3	0.2	1.3	2.4
Aged 50~59	-8.8	6.6	-9.9	9.6	10.3	16.3	21.4	24.5
Aged 60 and over	37.5	33.0	20.2	44.1	35.3	32.4	29.0	52.2

Source: Statistics Korea.

19) Despite the fall in the number of persons employed, the employment-to-population ratio of those in their 30s remained on the rise (75.6% in October 2021 → 75.9% in November → 76.4% in December → 76.2% in January 2022).

The employment-to-population ratio (seasonally-adjusted) stood at 61.2% in January, rising slightly from the preceding month (61.0%). The unemployment rate (seasonally-adjusted) reached 3.6% in January, a slight decrease from the preceding month (3.8%). The extended unemployment rate (labor underutilization indicator 3)[20], which includes time-related underemployed persons and the potential labor force, has been on the decline since February last year and recorded 13.1% in January this year, down by 3.7%p year-on-year.

Figure I-14. Employment-to-population ratio and unemployment rate



Source: Statistics Korea.

Table I-8. Major and ancillary indicators related to employment

(ten thousand persons, %)

	2020	2021						2022
	Year	Year	Q1	Q2	Q3	Q4	Dec.	Jan.
Changes in the number of employed persons	-21.8	36.9	-38.0	61.8	57.7	66.0	77.3	113.5
Employment-to-population ratio[1)]	60.1	60.5	59.7	60.5	60.8	60.9	61.0	61.2
(Based on people aged between 15 and 64)	65.9	66.5	65.7	66.4	66.8	67.3	67.5	67.7
Labor force participation rate[1)]	62.5	62.8	62.4	62.8	62.7	63.1	63.4	63.4
Rate of change in the number of economically active population[2)]	-0.6	1.1	-0.6	1.9	1.4	1.6	2.2	2.6
Unemployment rate[1)]	4.0	3.7	4.3	3.7	3.1	3.4	3.8	3.6
Labor underutilization indicator 1[3)]	7.8	7.4	9.1	7.8	6.6	6.3	6.8	7.5
Labor underutilization indicator 2[4)]	10.0	9.7	11.7	9.8	8.8	8.5	9.1	9.9
Labor underutilization indicator 3[5)]	13.6	13.3	15.6	13.4	12.4	11.7	12.2	13.1
Temporarily absent workers	83.7	49.0	67.2	40.9	50.8	36.8	37.8	56.9

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

20) The extended unemployment rate encompasses the unemployed, those working part-time and searching for decent jobs at the same time, and potential job seekers who are not seeking work but wish to work.

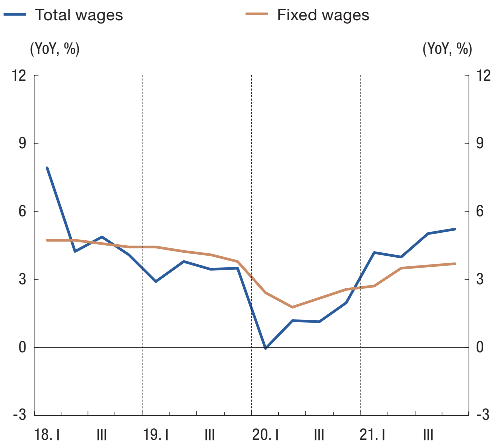
<table>
<tr><td rowspan="3">Employment indicators</td><td colspan="3">Economically active population</td><td colspan="3">Economically inactive population</td></tr>
<tr><td colspan="2">Employed persons</td><td rowspan="2">Unemployed persons</td><td colspan="2">Potential labor force</td><td rowspan="2">Others</td></tr>
<tr><td>Others</td><td>Time-related underemployed persons[1)]</td><td>Unavailable potential jobseekers[2)]</td><td>Available potential jobseekers[3)]</td></tr>
<tr><td rowspan="3">Range of labor underutilization indicators</td><td colspan="6">← Labor underutilization indicator 1 →</td></tr>
<tr><td colspan="6">← Labor underutilization indicator 2 →</td></tr>
<tr><td colspan="6">← Labor underutilization indicator 3 →</td></tr>
</table>

Notes: 1) Those who work less than 36 hours per week but want to and can work additional hours.
2) Those seeking work for the last four weeks but unavailable to work during the surveyed week.
3) Those not seeking work for the last four weeks but want to work and available to work during the surveyed week.

Nominal wage growth continues

Nominal wages continued their rising trend to increase by 5.2% year-on-year in the fourth quarter last year. The wages of regular employees rose 5.2% year-on-year as fixed wages continued their growth and special wage payments exhibited a sharp increase, affected by a base effect and expanded bonus payments following the economic recovery. The wage growth of temporary and daily workers slowed quarter-on-quarter to 3.2%.

Figure I-15. Nominal wage growth[1)]



Note: 1) Based on firms with one or more permanent employees.
Source: Ministry of Employment and Labor.

Table I-9. Nominal wage growth by category

(YoY, %)

	2019	2020	2021				
	Year	Year	Year	Q1	Q2	Q3	Q4
Total wage[1)]	3.4	1.1	4.6	4.2	4.0	5.0	5.2
Regular workers	3.1	0.4	4.7	4.2	4.3	5.1	5.2
(Fixed wages)	4.1	2.2	3.4	2.7	3.5	3.6	3.7
(Excess wages)	2.7	-0.9	3.7	1.2	8.4	3.3	2.3
(Special wages)	-2.8	-9.9	14.3	13.2	9.8	15.1	18.1
Temporary & daily workers	6.2	7.8	3.9	5.1	3.2	4.2	3.2

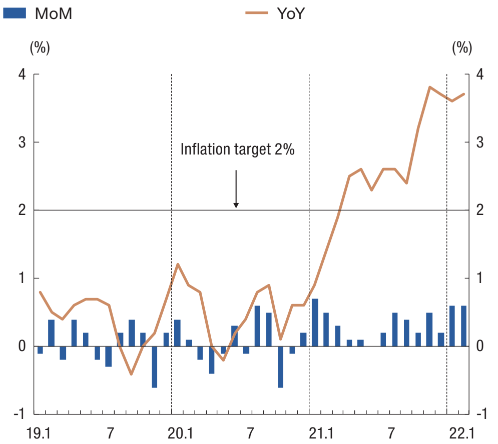
Note: 1) Based on firms with one or more permanent employees.
Source: Ministry of Employment and Labor.

3. Prices

Consumer price inflation remains at 3% level

Consumer price inflation has remained at the 3% level since October last year. This high level of inflation was attributable to inflationary pressure expanding into a wide range of core items[21], affected partly by a demand recovery and global supply bottlenecks amid a continued rise in petroleum product and food prices.[22]

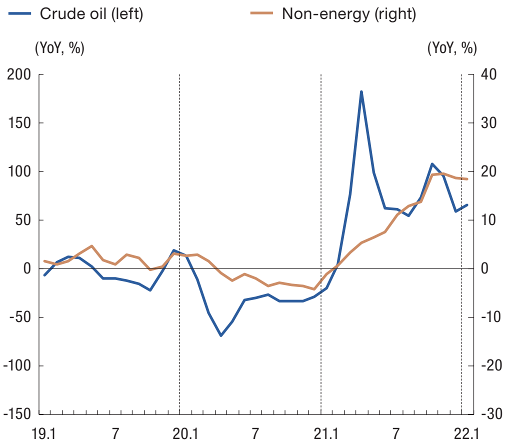
Figure I-16. CPI inflation



Sources: Bank of Korea, Statistics Korea.

Looking at overseas factors affecting consumer price inflation, crude oil import price[23] growth, in reflection of the recent oil price[24] trend, slowed at the end of last year, and then accelerated again this year affected by the Ukraine crisis. The prices of non-energy imports[25] maintained strong growth, as the Korean won/US dollar exchange rate[26] rose, more than offsetting a slowdown in commodity price[27] growth.

Figure I-17. Import prices (Korean won basis)



Source: Bank of Korea.

21) Core items represent items other than food and energy that comprise the CPI basket.

22) Looking at the characteristics of the recent expansion of inflation, inflationary pressure is felt not just in some items including petroleum products but has expanded into a wide range of core items, and this expansion is especially noticeable in dining-out items. In addition, the effect of global supply bottlenecks on domestic prices is seen more clearly in some durables such as automobiles and furniture. For further details, please refer to “Assessment of Trend of Expansion in Inflationary Pressure (BOK Issue Note vol. 2022-10).”

23) The rate of increase in crude oil import prices (Korean won basis, year-on-year) declined from 95.9% in November 2021 to 58.8% in December, and rose again to 65.7% in January 2022.

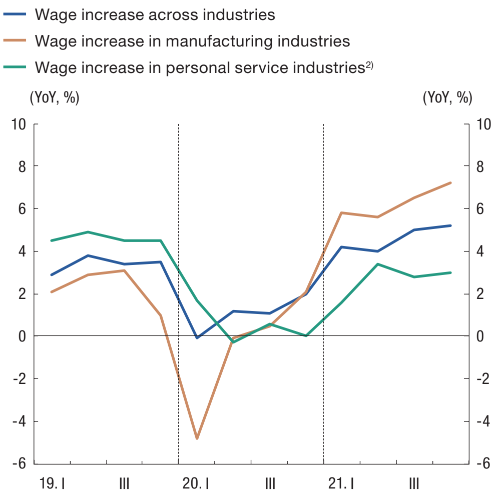
24) The rate of increase in international oil prices (Dubai crude oil basis, year-on-year) slowed from 87.4% in November 2021 to 47.7% in December, and accelerated again to 53.5% in January 2022 and to 54.3% in February.

25) The rate of increase in non-energy import prices (Korean won basis, year-on-year) rose from 12.6% in the third quarter of last year to 19.1% in the fourth quarter, and remained high at 18.4% in January this year.

26) The extent of change in the Korean won/US dollar exchange rate (year-on-year) reversed to a positive figure from -2.5% in the third quarter of last year to 6.0% in the fourth quarter, and expanded further to 8.2% during January and February this year.

As for domestic factors, the upward trend of personal service prices accelerated in line with the sustained recovery of demand. On the cost side, wage growth across all industries[28] climbed at a higher rate than in the previous quarter, led mainly by the rise in special wage payments in the manufacturing sector.[29]

Figure I-18. Rate of wage increase (per employee)[1]



Notes: 1) Based on firms with one or more permanent employees.
2) 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.

As for other factors, agricultural product prices declined this year due to the base effect following a hike in vegetable prices last year, and livestock product prices exhibited slower growth. Among government policies, the extension of the individual consumption tax cut for automobile purchases[30] and the reduction in fuel taxes[31] put downward pressures on inflation. The uptrend in housing rental fees accelerated, owing to continued increases in leasehold (jeonse) deposits and monthly rents (new contract basis).[32]

Looking at changes in consumer price inflation by product, the upward trend of prices of agricultural & livestock products slowed somewhat in the fourth quarter of last year, mainly led by agricultural products, while the extent of rise in petroleum product prices expanded. As for services, with housing rents continuing to rise, personal services prices increased at a faster pace led mainly by dining-out costs[33], and public services prices picked up significantly, owing to the base effect from the government subsidies for telecommunications fees[34] during the fourth

27) The rate of increase in international non-energy commodity prices (S&P GSCI basis, year-on-year) slowed from 33.6% in the third quarter of last year to 25.3% in the fourth quarter, and to 20.6% during January and February this year.

28) The rate of growth in nominal wages (year-on-year) across all industries increased from 5.0% in the third quarter of last year to 5.2% in the fourth quarter.

29) The growth rate of special wages (year-on-year) in the manufacturing industry increased from 18.4% in the third quarter of last year to 31.3% in the fourth quarter.

30) The individual consumption tax cut on automobile purchases (originally 5.0% → 1.5% during March-June 2020 → 3.5% since July 2020), which was scheduled to end at the end of December last year, was extended to the end of June this year.

31) The government cut fuel taxes on gasoline, diesel, LPG butane (Auto LPG, butane gas) by 20%, from November 12, 2021 to April 30, 2022, and adjusted the tariffs on LNG imports from 2% to 0%. It was recently decided that this measure should be extended for three months until July 31 (at the Ministerial Meeting on Prices on March 4).

32) The Housing Rental Price Index comprising leasehold (*jeonse*) and monthly rents (Korea Real Estate Board) was up 5.1% in 2021, recording a higher rise than that in 2020 (3.4%).

33) The pace of growth in dining-out costs accelerated from 3.0% in the third quarter last year to 4.1% in the fourth quarter and to 5.8% during January and February this year.

34) Affected by the government's telecom subsidies (4th supplementary budget) in the fourth quarter of 2020, phone bills plunged temporarily (-21.6% in October 2020 → +25.7% in October 2021).

quarter of 2020. In January and February this year, the extent of increase in prices of agricultural & livestock products narrowed, while growth in prices of petroleum products slowed in January and then accelerated again affected by the faster increase in global oil prices influenced largely by the Ukraine crisis. As for services, growth in personal service prices accelerated considerably, led by a faster pace of growth in dining-out costs and a rise in premiums for supplemental private health insurance[35], and the extent of increase in public service prices narrowed quarter on quarter with the base effect from the subsidies for telecommunications fees fading away.

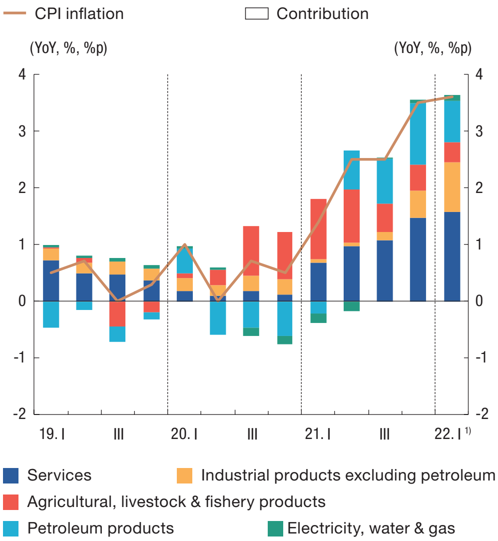
Table I-10. CPI inflation

(YoY, %)

	2020	2021					2022	
	Year	Year	Q1	Q2	Q3	Q4	Jan.	Feb.
Consumer Price Index	0.5	2.5	1.4	2.5	2.5	3.5	3.6	3.7
Agricultural, livestock & fishery products	6.7	8.7	13.3	11.3	5.6	5.2	6.3	1.6
(Agricultural products)	6.4	8.3	16.7	14.9	2.2	1.0	4.6	-2.3
(Livestock products)	7.3	12.7	12.9	10.6	12.9	14.2	11.5	8.8
Industrial products	-0.2	2.3	-0.4	2.2	2.8	4.6	4.2	5.2
(Petroleum products)	-7.3	15.2	-4.8	18.7	21.1	29.1	16.4	19.4
(Industrial products excluding petroleum)	0.8	0.6	0.2	0.3	0.5	1.5	2.5	3.2
Electricity, water & gas	-1.4	-2.1	-5.0	-4.8	0.3	1.4	2.9	2.9
Services	0.3	2.0	1.3	1.8	2.0	2.8	2.9	3.1
(Housing rent)	0.2	1.4	0.8	1.2	1.5	1.9	2.1	2.1
(Public service charges)	-1.9	1.0	0.1	0.5	0.6	2.7	0.9	0.9
(Private service charges)	1.2	2.6	1.9	2.5	2.7	3.1	3.9	4.3
CPI for living necessities	0.4	3.2	1.6	3.2	3.3	4.8	4.1	4.1
CPI excluding food & energy	0.4	1.4	0.8	1.2	1.3	2.2	2.6	2.9
CPI excluding agricultural products & oils	0.7	1.8	1.3	1.5	1.9	2.6	3.0	3.2

Source: Statistics Korea.

Figure I-19. Contributions to CPI inflation



Note: 1) Based on January~February 2022.
Sources: Bank of Korea, Statistics Korea.

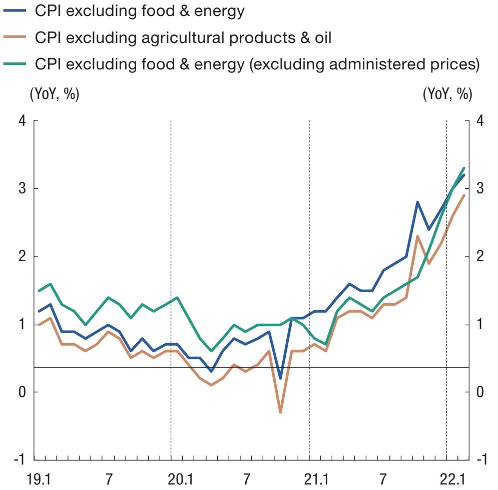
Underlying inflation[36] rises greatly

Core inflation (excluding changes in food and energy prices from the CPI) surpassed 2% during the fourth quarter last year, and climbed to the upper-2% level in February this year. Taking into account the significant effect that government policies have on core inflation, core inflation excluding administered prices[37] reached the 3% level entering this year.[38]

35) Premiums for 1st to 3rd generation supplemental private health insurance have increased by an average of 14.2% since 2022.

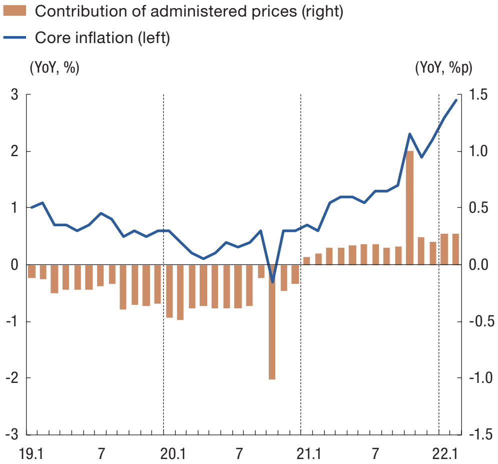
36) Underlying inflation is calculated by eliminating transitory or exceptional factors from consumer price inflation, and can be understood by examining not only core inflation, highlighted in this report, but also trimmed-mean CPI, median CPI and sticky-CPI. For further details, please refer to “Examination of Underlying Inflation (BOK Issue Note vol. 2021-21).”

Figure I-20. Underlying inflation



Sources: Bank of Korea, Statistics Korea.

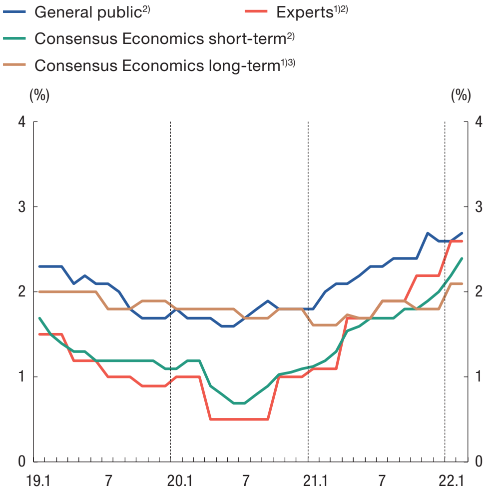
Figure I-21. Contribution of administered prices to core inflation[1)]



Note: 1) Excluding food & energy.
Sources: Bank of Korea, Statistics Korea.

The short-term inflation expectations of the general public have risen to the mid- to upper-2% level, while the long-term (five-year ahead) inflation expectations of an expert group (survey conducted by Consensus Economics[39)]) moved up to the lower-2% level.

Figure I-22. Inflation expectations



Notes: 1) Surveyed four times a year (in the first month of every quarter).
2) Expected CPI inflation rates for the next 12 months.
3) Expected CPI inflation rates after five years.
Sources: Bank of Korea, Consensus Economics.

Housing sales and leasehold deposit prices exhibit slower growth

Nationwide housing sales prices posted a smaller increase in the fourth quarter last year, due to loan management by financial institutions and lending rate hikes, and sustained

37) Administered prices refer to the prices of public services, electricity, water, gas and tobacco, which are greatly affected by government policies both directly and indirectly. Core inflation excluding administered prices is calculated by leaving out the administered prices from core inflation (excluding food and energy).

38) This is because the rate of growth in the prices of public services, one of the items included in the administered prices, has been in the upper-0% range this year, a slower rate than those of other core items.

39) The figures are results of surveys of domestic and foreign investment banks, securities companies and market research institutions conducted by Consensus Economics.

a slowing rate of growth into this year. In addition, expectations for price growth have weakened rapidly since November last year to fall below the benchmark (100) in February this year, for the first time since May 2020.[40)] By region, the margin of increase narrowed in Seoul, Gyeonggi province and Incheon[41)] for the Seoul Metropolitan region in January this year. For the rest of the country, housing sales prices declined month-on-month in Daegu, Daejeon and Sejong[42)], and exhibited slower growth in other areas.

Nationwide leasehold (*jeonse*) deposit prices have also seen their margin of increase narrow since the fourth quarter last year, mainly as the demand for jeonse shifted to that for monthly rent owing to lending rate hikes.

Table I-11. Rates of increase in housing sales and leasehold (*jeonse*) deposit prices[1)]

(%)

	2019	2021							2022
	Year	Year	Q1	Q2	Q3	Q4	Nov.	Dec.	Jan.
Housing sales prices	5.4	9.9	2.4	2.2	2.8	1.8	0.6	0.3	0.1
Seoul Metropolitan area	6.5	12.8	3.0	2.8	3.7	2.2	0.8	0.3	0.1
(Seoul)	2.7	6.5	1.3	1.2	2.0	1.5	0.6	0.3	0.0
Other areas	4.3	7.4	2.0	1.6	1.9	1.4	0.5	0.2	0.1
Sales prices of apartments for reconstruction	14.4	15.9	4.5	4.9	3.6	2.1	0.8	0.4	0.2
Leasehold (*jeonse*) deposit prices	4.6	6.5	1.8	1.2	1.8	1.3	0.5	0.3	0.1
Seoul Metropolitan area	5.6	7.7	1.9	1.3	2.5	1.5	0.5	0.3	0.0
(Seoul)	3.7	4.9	1.2	0.7	1.6	1.1	0.4	0.2	0.0
Other areas	3.7	5.5	1.7	1.1	1.3	1.1	0.4	0.3	0.1

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

40) The housing price forecast CSI has declined steadily, after its peak of 129 in August last year, to stand at 100 in January this year and at 97 in February.

41) Housing sales prices rose by 0.1% (month-on-month, 0.3% in December 2021) in Gyeonggi Province and by 0.1% (0.5%) in Incheon in January 2022.

42) Housing sales prices rose by -0.2% (month-on-month, -0.1% in December 2021) in Daegu, -0.1% (0.2%) in Daejeon, and -0.8% (-1.7%) in Sejong in January 2022.

4. Financial and Foreign Exchange Markets

Korea Treasury bond yields rise sharply

Korea Treasury bond yields declined due to the resurgence of COVID-19 and improvement in Treasury bond supply and demand conditions, but rebounded quickly thanks to the accelerating moves toward monetary policy normalization by the US Federal Reserve and other major central banks and discussions on a supplementary budget. In December last year, the yields dropped significantly as interest rates in major economies fell primarily from the preference for safe haven assets following the spread of the Omicron variant, while supply and demand conditions of Korea Treasury bonds improved. Since the beginning of this year, however, yields have rapidly bounced back to levels well above last year's peak (2.11% for 3-year, 2.58% for 10-year KTBs) as major central banks including the Federal Reserve are forecast to accelerate the pace of monetary policy normalization. Uncertainties surrounding the supplementary budget[43) and effects of the Bank of Korea's Base Rate hikes also contributed to the rise in Korea Treasury bond yields.

Figure I-23. Yields on Korea Treasury Bond and US Treasury Note

Sources: Korea Financial Investment Association, Bloomberg.

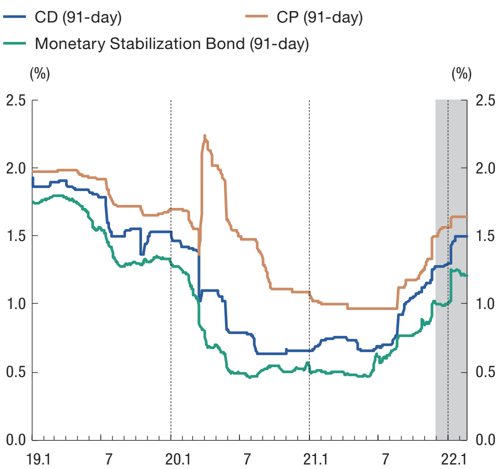
Short-term market interest rates rise

Short-term market interest rates moved up significantly, affected by a Base Rate hike in January. The Monetary Stabilization Bond (91-day) rate had generally fluctuated at around the level of the Base Rate, and then rose to 1.25% in mid-January in reflection of the additional Base Rate hike. Since February, however, the rate has fluctuated slightly below the Base Rate, influenced mainly by a rise in MMF deposit-taking at the beginning of the month (1.21% as of February 23). CD (91-day) rates also increased to 1.50%, in reflection of the Base Rate hike. CP (91-day, rated A1) rates, meanwhile, had risen substantially, driven chiefly by increased issuance, and then exhibited limited growth compared with other rates, in line with a decrease in net issuance[44)

43) The government announced its plan on a supplementary budget worth 14 trillion won (11.3 trillion won of deficit-financing Treasury bond issuance) on January 21, and a supplementary budget worth 16.9 trillion won (deficit-financing Treasury bond issuance unchanged from 11.3 trillion won) was passed at the National Assembly on February 21.

this year.

Figure I-24. Short-term interest rates[1)]

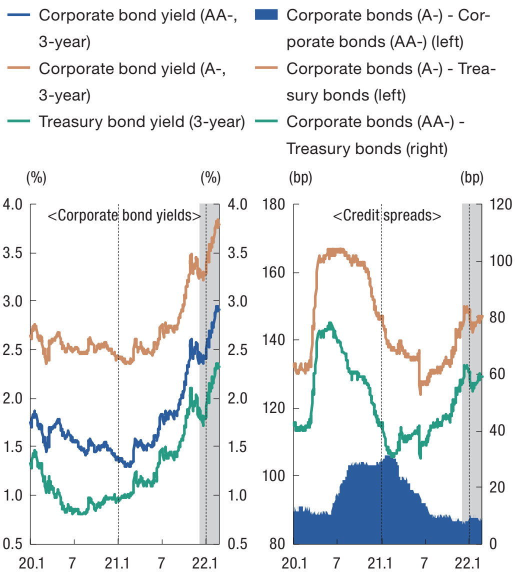


Note: 1) Monetary Stabilization Bond rates based on average rates estimated by four private credit rating agencies; CD and CP rates based on final quoted yields.
Source: Korea Financial Investment Association.

Corporate bond credit spread widens slightly

The credit spread for corporate bonds (3-year) widened substantially, both for prime bonds (rated AA-) and subprime bonds (rated A-), affected largely by the book closing at the end of last year, but it has narrowed this year due to resumption of investment by institutional investors. As of February 23, the credit spread for prime bonds stood at 59bp, up by 3bp from end-November, while that of subprime bonds came to 147bp, up by 4bp. The spread between different credit ratings (A- and AA-) generally remained the same as the credit spreads for prime and subprime bonds exhibited similar movements.

Figure I-25. Corporate bond yields and credit spreads[1)]



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

Bank lending and deposit rates continue to rise

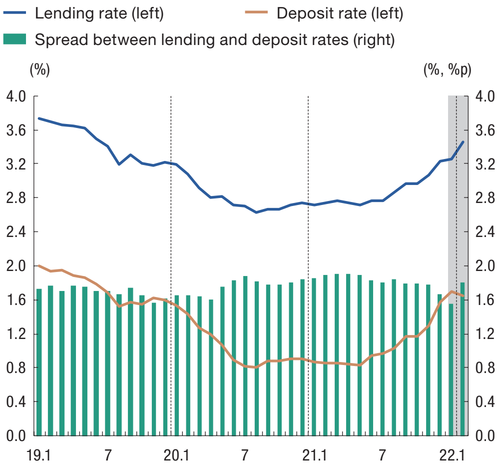
Bank lending rates (new loans basis[45)]) continued to rise amid rapid transmission of the effects of the Base Rate hike to record a 22bp increase from December 2021 to January 2022. Corporate lending rates both for large corporations and SMEs increased substantially due to the rise in short-term benchmark rates.[46)] Household lending rates also rose significantly, as some banks increased the share

44) Driven by the issuance of ABCP backed by time deposits, net issuance of CP increased by 9.0 trillion won in December 2021, a sharp rise from a month before (2.2 trillion won), but declined to 1.8 trillion won in January 2022.

45) Bank deposit and lending rates on an outstanding amount basis were on a modest upward path (+16bp for lending rates and +11bp for deposit rates from December 2021 to January 2022), as the effects of the Base Rate hikes were reflected with a time lag.

of moderate interest rate loans in January. Deposit rates (new deposits basis) had also climbed due to the rise in market interest rates and greater funding incentives for banks, and then declined slightly, owing to an increase in wholesale funding at low interest rates by some banks in January this year, to register a 8bp increase from December 2021 to January 2022.

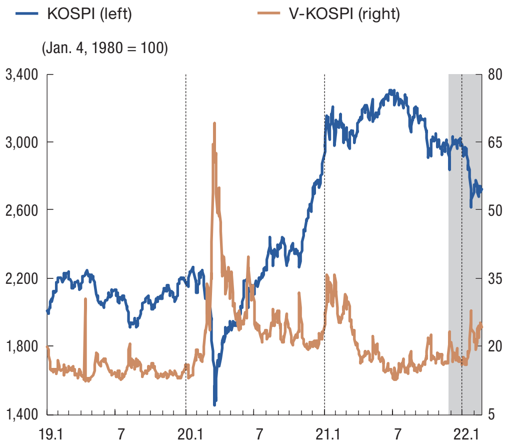
Figure I-26. Bank lending/deposit rates and spread



Source: Bank of Korea.

owing to stock price declines in major economies, mounting geopolitical risks concerning Ukraine, and adjustment of investment portfolios stemming from large-scale IPOs[47], and showed a modest rebound after the Lunar New Year holidays on the back of the rosy outlook for corporate earnings, fluctuating at around 2,700. The stock price volatility index (V-KOSPI) rose, affected by external factors since the end of January.

Figure I-27. KOSPI and stock volatility index



Source: Koscom Corporation.

Stock prices decline sharply

Stock prices (KOSPI) fell to a yearly low at the end of November last year (2,839 on November 30) due to growing concerns about the Omicron variant, and rebounded in December thanks to the improved outlook for the semiconductor industry and inflows of funds for bargain hunting. This year, however, stock prices tumbled (2,614 on January 27)

Foreign bond investment rises

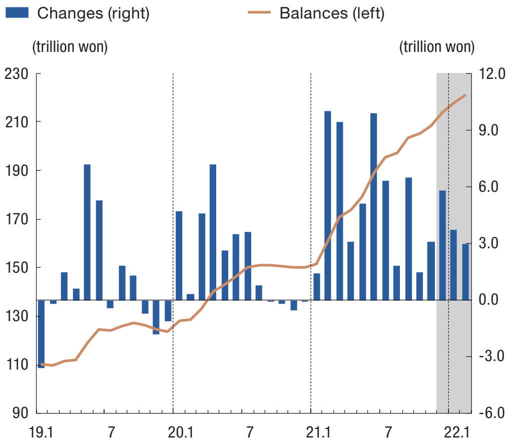
Foreigners' domestic bond investment continued to grow and their securities investment shifted to a rise, leading to higher portfolio investment overall.

46) The increase range (bp) of major benchmark rates (monthly averages) between December 2021 and January 2022: +22 for CDs (91-day), +25 for KORIBOR (3-month), +39 for COFIX (new), +24 for bank debentures (3-month).

47) At around the IPO date of LG Energy Solution (January 27), KOSPI Index funds slashed holdings of existing shares on a large scale to include the shares of LG Energy Solution in their portfolios.

Bond investment jumped considerably, driven by relatively high domestic yields compared to other major economies and robust domestic economic conditions. Last December, unlike previous years when slight fund outflows were normally seen[48], foreigners' bond investment grew by about 6 trillion won and continued to increase during January and February this year. As a result, outstanding bond holdings by foreigners recorded all-time highs every month and stood at 220.8 trillion won as of February 23.

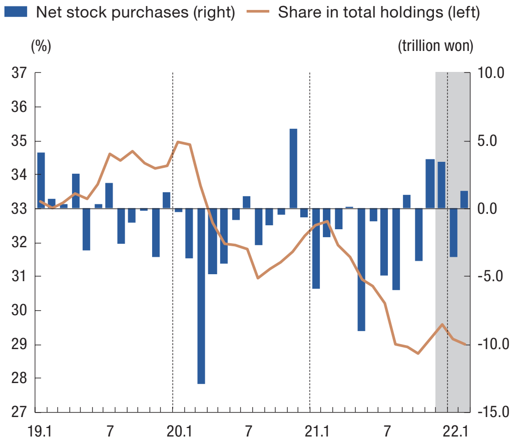
Figure I-28. Changes[1)] in and balances[1)] of foreigners' bond holdings



Note: 1) Based on Febuary 23 for Febuary 2022 figures.
Source: Financial Supervisory Service.

In December last year, foreigners engaged in huge net buying of stocks led by global funds, supported by the improved outlook for the memory chip industry. This January, foreign investors exhibited large net selling, affected by softened investor sentiment in line with major central banks' acceleration of monetary tightening, but in February, they shifted to net buying on expectations of improvement in the semiconductor sector.

Figure I-29. Foreigners' net stock purchases[1)2)] and share in total holdings[1)3)]



Notes: 1) Based on Febuary 23 for Febuary 2022.
2) Sum of net purchases in KOSPI and KOSDAQ markets.
3) Based on stock market capitalization.
Source: Koscom Corporation.

Growth of household lending decelerates

The rate of increase in household lending (based on deposit-taking institutions) slowed, mainly affected by tightened management of household lending by financial institutions and lending rate hikes.

After sustaining a high rate of growth until the third quarter last year, banks' household lending rose by a substantially narrower margin in the fourth quarter. By loan type, mortgage loans increased by a smaller degree due to a slowdown in house purchases and leasehold (jeonse) deposits transactions and

48) In Decembers of 2019 and 2020, the outstanding volume of foreigners' bond holdings fell by 1.1 trillion won and 0.1 trillion won, respectively.

reduction in the handling of group loans, and other loans turned to a decrease owing to the banking sector's management of unsecured loans and the rise in lending rates. In January this year, while the amount of increase in housing-related loans lessened, household lending decreased slightly as a portion of other loans was paid back using performance and holiday bonuses.

Meanwhile, non-bank depository institutions saw the margin of growth in household debt narrow in the fourth quarter of last year, with household lending by mutual credit cooperatives turning to a decrease. This was attributable to a rise in lending rates and household loan management efforts by some financial institutions.

Table I-12. Household lending by depository institutions[1)]

(trillion won, %)

	2020		2021					2022
	Year	Q4	Year	Q1	Q2	Q3	Q4	Jan.[2)]
Total loans	108.1	37.5	99.1	26.3	29.9	30.4	12.4	··
(Rate of change[3)])	(9.0)	(9.0)	(7.6)	(9.3)	(10.1)	(9.7)	(7.6)	··
Commercial & specialized banks[4)]	100.5	30.9	71.6	20.8	20.9	22.1	7.8	-0.5
Mortgages[4)5)]	68.3	19.3	57.0	17.1	13.3	17.5	9.0	2.2
Others	32.2	11.5	14.6	3.6	7.6	4.6	-1.2	-2.6
Non-bank depository institutions[4)]	7.6	6.6	27.7	5.6	9.1	8.2	4.6	··
Mutual finance	6.0	3.7	13.7	3.8	5.7	5.2	-1.0	··
Credit unions	-0.7	0.5	2.5	0.0	0.2	0.6	1.6	··
Korean Federation of Community Credit Cooperatives	-3.2	0.4	5.2	-0.1	0.5	0.9	3.6	··
Mutual savings banks	5.5	2.0	6.2	1.9	2.5	1.5	0.3	··
Others[6)]	-0.1	0.1	0.1	-0.1	0.0	0.1	0.1	··

Notes: 1) Based on changes in balances during the periods.
2) Based on Bank of Korea advance estimate for January 2022 figures.
3) Year-on-year growth rate of loan balances.
4) Including mortgage transfers by Korea Housing Finance Corporation.
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.

Corporate financing maintains its pace of growth

Corporate lending by banks, especially to small and medium-sized enterprises (SMEs), continued to increase in the fourth quarter last year. SME loans maintained their pace of growth, led by the continued supply of COVID-19 financial support[49)], while lending to large enterprises went up due to demand for operating funds. Corporate lending by

49) The measures adopted since the outbreak of COVID-19 remained in place, including the financial support program for small businesses and policy financing for SMEs and mid-market enterprises. Loan maturity extention and deferral of principal and interest payments were scheduled to expire at end-March, 2022, but the financial authorities have recently decided to extend them further.

non-bank financial institutions increased by a large margin, exhibiting rapid growth. Bank lending to both large corporations and SMEs expanded significantly in January, as seasonal factors, such as relending of loans temporarily redeemed at the year-end and demand for funds related to value-added tax payments were met with the efforts of some banks to expand their corporate lending.

Regarding direct corporate financing, both corporate bonds[50)] as well as CP and short-term bonds showed net redemption in the fourth quarter, owing to decreased year-end demand from institutions and to year-end bullet repayments, respectively. The volume of stock issuance also declined due to the decrease in initial public offerings(IPOs)[51)] compared to the previous quarter. In January, however, corporate bonds, as well as CP and short-term bonds shifted to net issuance due to institutional investors' resumption of investment and refinancing of bullet loans. Furthermore, the volume of stock issuance rose substantially on the back of large-scale initial public offerings[52)] by some companies.

Table I-13. Corporate funding[1)]

(trillion won, %)

		2020		2021					2022
		Year	Q4	Year	Q1	Q2	Q3	Q4	Jan[2)]
Corporate loans	Total	169.6	26.6	171.5	38.9	40.9	47.4	44.3	··
	(Rate of change[3)])	(15.5)	(15.5)	(12.7)	(14.1)	(11.5)	(11.7)	(12.7)	··
	Banks	110.8	12.4	94.1	24.1	21.9	27.8	20.3	13.3
	Large firms	20.9	-4.8	9.0	1.2	0.6	3.5	3.7	4.0
	SMEs	90.0	17.2	85.1	22.9	21.3	24.3	16.6	9.2
	Non-banks[4)]	58.8	14.2	77.4	14.8	19.0	19.6	23.9	··
Direct funding	Net corporate bond issuance[5)]	15.5	1.7	16.2	7.8	5.8	3.3	-0.8	2.3
	Net CP·Short-term bond issuance[6)]	2.3	-3.4	4.1	5.9	2.1	-0.5	-3.3	5.8
	Stock issuance[7)]	11.0	5.1	28.9	8.9	5.8	10.2	4.0	13.0

Notes: 1) Based on changes in balances during the periods.
2) Bank of Korea advance estimates for January 2022 figures.
3) Year-on-year growth rate of loan balances.
4) Loans by mutual finance, credit unions, Korean Federation of Community Credit Cooperatives, and mutual savings banks.
5) Corporate bonds issued through public offering by non-financial corporations (excluding ABSs but including P-CBOs).
6) Non-financial corporations.
7) Initial public offerings and paid-in capital are included

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

50) By credit rating, there were net redemptions of prime bonds in the fourth quarter last year, while there was a reversal to net issuance in January this year supported by growing demand for corporate bond investment in line with institutional investors' resumption of investment.

(trillion won)

	2020					2021					2022
	Year	Q1	Q2	Q3	Q4	Year	Q1	Q2	Q3	Q4	Jan.
Prime bonds(rated AA and above)	10.9	3.0	6.4	2.2	-0.7	7.3	5.0	4.8	-0.5	-2.0	1.8
Subprime bonds(rated A and below)	0.5	-0.1	-0.2	-0.6	1.4	5.3	2.2	-0.3	2.8	0.6	0.6

Note: 1) Public offering and general companies basis, ABS and P-CBO excluded
Source: Korea Securities Depository

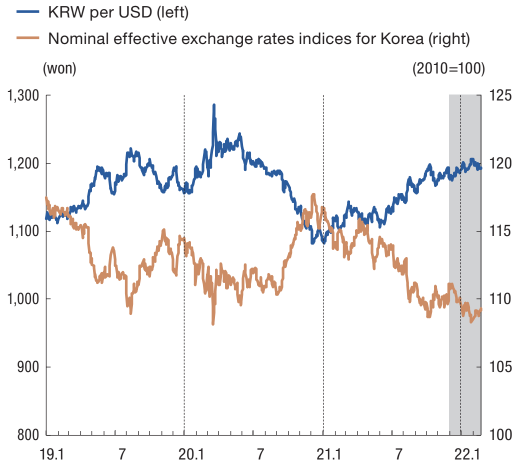
51) In the third quarter of 2021, the volume of IPOs amounted to about 8.5 trillion won (25 offerings) with IPOs of Krafton (4.3 trillion won raised in public subscription), Hyundai Heavy Industries (1.1 trillion won), and Lotte Rental (0.9 trillion won), but contracted to 1.0 trillion won (20 offerings) in the fourth quarter.
52) LG Energy Solution went public (12.8 trillion won raised in public subscription) in January 2022.

Korean won/US dollar exchange rate rises

The Korean won to US dollar exchange rate fluctuated between the 1,170 and 1,190 won levels in December last year, due to a mix of downside factors such as foreign investors' US dollar sales for purchasing Korean stocks and improved investor sentiment in line with eased concerns about the Omicron variant, and upside factors such as concerns over the Federal Reserve's early monetary tightening and the increased purchases of FX derivatives by domestic firms. Entering January, despite the Bank of Korea's policy rate hike, the exchange rate rose to the 1,200 won level[53], affected by concerns about the accelerating pace of monetary tightening by the Federal Reserve, heightened geopolitical tensions surrounding Ukraine, and rising demand for US dollar purchases in line with the surge in oil prices. In February, the exchange rate dipped slightly in tandem with the US dollar index, partly owing to concerns over inflation in the euro area flagged by President Lagarde of the ECB and the Bank of England's policy rate hike.

The nominal effective exchange rate (NEER) index of the Korean won declined, owing to the strengthening of the yuan following China's strong exports[54] and expectations of ECB policy rate hikes in line with inflation concerns in the euro area, amid lingering concerns about the Federal Reserve's accelerating pace of monetary policy normalization.

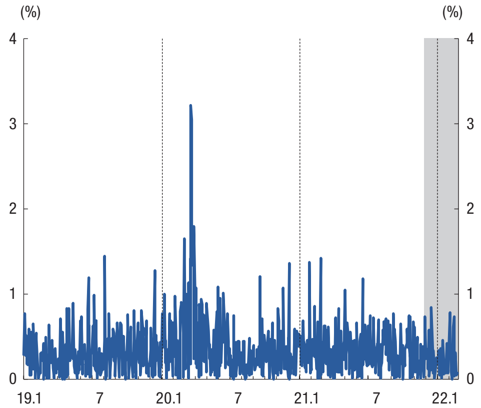
Figure I-30. Exchange rate, nominal effective exchange rate indices for Korea[1)]



Note: 1) Based on the BIS effective exchange rate indices for Korea in nominal terms.
Sources: Bank of Korea, Bank for International Settlements.

Meanwhile, the volatility in the Korean won to US dollar exchange rate (day-to-day change) remained stable overall, not deviating greatly from the average of last year (0.32%).

Figure I-31. KRW per USD exchange rate volatility[1)]

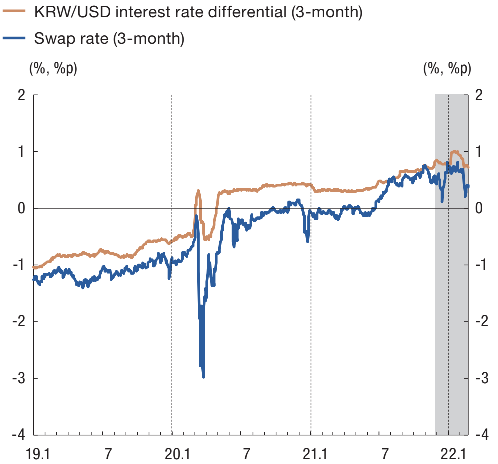


Note: 1) Daily change rate of the exchange rate.
Source: Bank of Korea.

53) The Korean won to US dollar exchange rate came to 1,200.9 won on January 6, which was the first time the closing price exceeded 1,200 won since July 2020.
54) The rate of growth in China's exports (year-on-year) recorded 22.0% in November 2021 and 20.9% in December, exceeding market expectations (20.3% and 20.0%, respectively).

The swap rate (3-month) fell greatly last December due to banks' conservative fund management ahead of the year-end, and to increased demand for foreign currency funds from institutional investors for the purpose of overseas investment, but rebounded sharply owing to alleviation of the year-end caution and supply of foreign currency funds related to corporations' purchase of FX derivatives. Entering this year, the rate fluctuated as upside factors including the widening interest rate differential affected by the policy rate hikes were mixed with downside factors including domestic institutional investors' demand for foreign currency funds for the purpose of overseas investment. Since February, the rate has fallen on concerns about the US Federal Reserve's acceleration of monetary tightening and the dampened investor sentiment owing to geopolitical risks.

Figure I-32. KRW/USD interest rate differential and swap rate



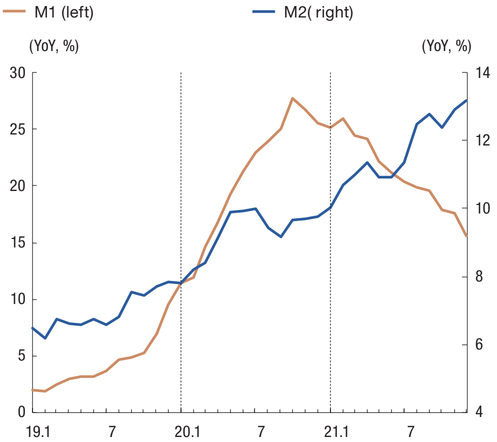
Note: 1) Yield on Korean Monetary Stabilization Bonds (MSBs) (3-month) - LIBOR (3-month).
Source: Bank of Korea.

Liquidity growth continues, and financial conditions remain accommodative

M2 (broad money) growth (average basis, year-on-year) remained high at above 10%, on the back of the continuous rise in corporate lending, and inflows of household investment funds into time deposits and installment savings. The degree of easing in the Financial Conditions Index(FCI)[55] somewhat decreased entering January this year due to the rise in short-term rates and asset price adjustments, but the index still remained accommodative.

55) 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 (analysis period: between January 2000 and January 2022).

Figure I-33. Growth rate of key money supply indicators[1)]



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

Figure I-34. 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).
Source: Bank of Korea.

Box I-1.

Examination of Recent Export Situation and Major Risks

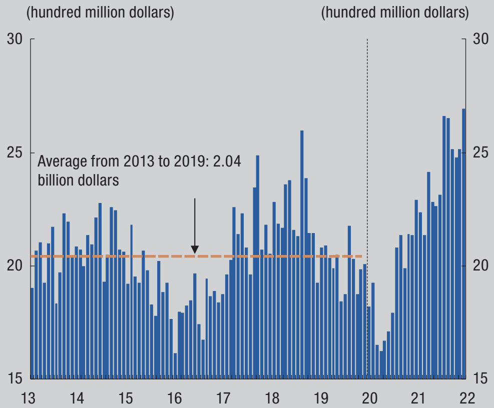
Korea's exports reached a record high last year with annual exports posting 644.4 billion dollars, and have remained at a level exceeding the pre-pandemic trend this year as well. In order to determine whether this favorable trend of exports will continue going forward as well, we assessed the recent export situation and examined major risk factors that could affect our exports in the future.

(Assessment of the recent export situation)

After falling slightly since September 2021, exports (daily average, customs-clearance basis) reached a historic high again in February 2022 and maintained the level of 2.6 billion dollars, surpassing the pre-pandemic trend (daily average of 2.04 billion dollars from 2013 to 2019). Real GDP goods exports rose by 5.8% (quarter-on-quarter) in the fourth quarter of 2021, greatly contributing to the GDP growth rate (1.2%) of the same quarter.

Looking at the underlying trend of exports since the COVID-19 pandemic, Korea's exports have grown rapidly since the second half of 2020 in line with the global economic recovery driven by demand for goods, on the back of non-face-to-face economic activities and major economies' strong policy support. In addition, the acceleration of going green (especially the prevalence of electric vehicles) and digitalization since the pandemic also acted in favor of our exports that are competitive in the IT sector.

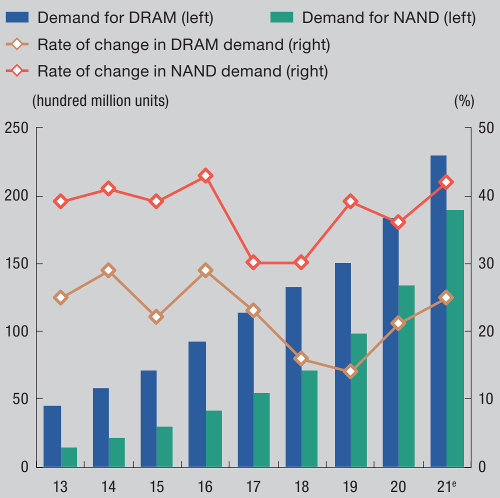
Daily average export value (customs-clearance basis)



Source: Korea Customs Service

If the economic recovery pivots from goods to services as the fallout of the pandemic gradually fades away, Korea's export growth is projected to slow gradually. However, while the substitution of goods consumption with service consumption is being delayed longer than expected due to the Omicron surge, structural increases in IT sector demand are expected to act as a factor cushioning the slowdown in export growth.

Demand[1] in the IT sector



Note: 1) Units for DRAM and NAND are 8GB and 256GB.
Source: J.P. Morgan.

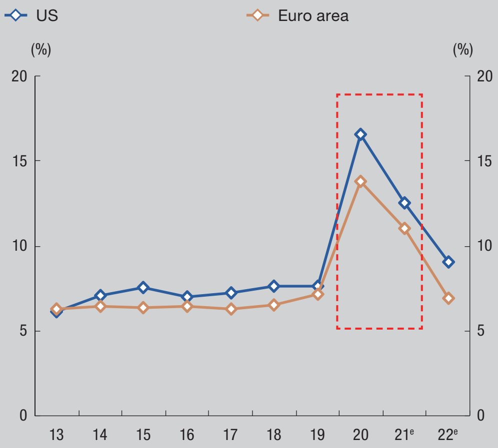
Meanwhile, factors such as slower growth of major economies, production disruptions stemming from supply chain shocks, the conflict between the US and China, and geopolitical risks concerning Ukraine, are expected to pose risks to our exports going forward.

(Slower growth of major economies)

Major economies are witnessing slower growth due to the lingering effects of the pandemic. Moreover, as high levels of inflation have persisted in major advanced economies including the US and EU due to rising energy prices and the continuation of supply bottlenecks, uncertainties are also mounting with respect to the timing and pace of change in their monetary policy stances. Consumption and investment in China, Korea's major export market, seem to be weakening owing to its zero-tolerance policy on COVID-19 and the real estate market slump. It appears that the decline in global demand for imports in line with the slower growth will have adverse effects on our exports.

However, even though growth of major economies somewhat slows, the favorable trend above potential growth[1] is expected to last. This is because the degree of economic slowdown in advanced economies is projected to be limited due to continued demand for investment in order to secure stable supply chains, in addition to considerable consumption capacities supported by accumulated savings and continuous recovery in employment. In particular, we need to consider that China's exports as well as US consumption and IT investment, which greatly affect Korea's exports, have maintained relatively robust trends.

Household saving rates[1)2)] in the US and the euro area



Notes: 1) Net savings/net disposable income.
2) Figures for 2021 and 2022 are estimates.
Source: OECD Economic Outlook (December, 2021).

1) US GDP gap (IMF, October 2021): -1.4% during 2020 and 2021 → +3.2% during 2022 and 2023.

Moreover, growing global demand for semiconductors is also projected to have positive effects on Korea's exports. Since the recent semiconductor exports are attributable to structural factors such as digital transformation[2] and Korean companies' strong technological competitiveness, the impact of major economies' cyclical factors on our exports is likely to weaken compared to the past. As demand for car imports in major economies is sufficient[3], exports are projected to expand rapidly if the supply shortage of car chips is gradually resolved.

Considering these aspects, if advanced economies' slowdown is realized going forward, this could adversely affect our exports this year to some extent. However, the possibility of this greatly constraining our exports is not deemed high.

(Production disruptions caused by supply chain shocks)

As global supply chains have weakened and geopolitical risks have emerged since the pandemic, Korean exporters have had difficulties in securing raw materials due to their heavy reliance on overseas suppliers. Given this situation, there remains a chance that our exports could be negatively affected if a shock similar to last year's disruptions to imports of essential materials happens again.[4]

In 2021, there were several import disruptions arising from natural disasters, the spread of COVID-19, and policy changes in countries we import from, and the negative effects of chip shortages[5] on car exports remain ongoing. Moreover, Korea's heavy reliance on China for intermediate goods is also assessed to be a factor increasing vulnerability regarding supply chain disruptions.[6]

Value and number of cars exported

(hundred million dollars, 10,000 units, %)

	2021			
	I	II	III	IV
Value of cars exported	121.5	119.1	109.0	124.8
Number of cars exported	54.6	51.2	46.3	51.9
(Rate of change[1])	(14.9)	(48.1)	(-8.9)	(-6.9)

Note: 1) Year-on-year basis.

Sources: Korea Customs Service, Bank of Korea.

2) Gartner, an IT research and consulting firm, projected that demand for NAND will triple over the next four years, from 644.5 billion GB in 2021 to 1.9506 trillion GB in 2025, on the back of investment in data centers.

3) Market research firms including IHS expected that global car production will still be outweighed by demand this year as well. It is estimated that as of January 2022, the time from contract signing to delivery is about 7 to 14 months for the most popular Hyundai and KIA car models.

4) Not only import disruptions stemming from global supply bottlenecks but also logistical disruptions could negatively affect our exports through a rise in freight fees and reduction in freight volume.

5) During 2021, semiconductor supply was not smooth due to the cold spell in the US (February), the fire at a major semiconductor supplier in Japan (March), and the spread of the coronavirus variant in Southeast Asia (Q3, 21).

6) The number of import items from China that Korea heavily relies on is higher than such number from the US and Japan. Of these Chinese imports, the proportion of intermediate goods is also high (November 2021, Korea Institute for Industrial Economics and Trade).

	Korea			US			Japan		
	Intermediate goods	Consumer goods	Total	Intermediate goods	Consumer goods	Total	Intermediate goods	Consumer goods	Total
Number of items with import dependency ratio regarding China of over 50%	604	264	1,088	185	241	575	475	385	1,048

In particular, as shocks to supply chains by item are hard to predict and develop in highly uncertain ways, it is not easy to predict their effects on production and exports. Depending on the actual state of shocks to overseas supply chains, inventory levels, and the possibility of producing alternatives to parts imports or importing from other countries, the effects on Korea's exporting companies could vary. Meanwhile, concerning mineral products, the negative effects in terms of import disruptions are not expected to be small, as Korea does not produce enough mineral products locally and relies solely on imports for many items.

(Geopolitical risks)

Amid the sustained conflict between the US and China, as tensions between the US·EU and Russia are escalating due to the intensification of the Ukraine crisis, there is concern that the situation could negatively affect our exports.

The US and the EU imposed strong economic sanctions[7)] on Russia after its invasion of Ukraine, and Russia is strengthening cooperation[8)] with China. In addition, tensions between the US and China are also mounting. The US announced restrictions on Chinese companies[9)] while China banned foreign investment activities related to rare-earth metals.

The aggravation of the Ukraine crisis could work as a downside risk to exports through a rise in energy prices and contraction in trade, but it is expected to have only limited direct effects on total exports since the proportion of Korea's exports to Russia and Ukraine is not large. However, if the EU's growth slows as the crisis drags on, it is likely to have negative impacts on global demand for imports. Furthermore, amid confrontation between major superpowers, geopolitical issues[10)] not directly related to Korea may emerge and thus Korea could be faced with a situation where it will need to choose sides. Depending on the choice that is made, it is hard to rule out the possibility that this could combine with the supply chain vulnerability issue to take a toll on exports.

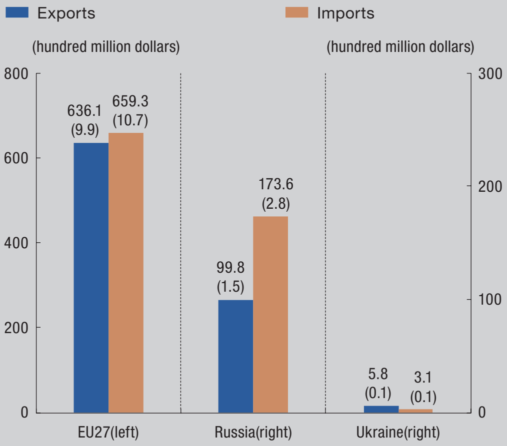
7) They include financial sanctions (from February 22), export restrictions on major items such as strategic materials (from February 24), a ban on any transactions involving the Russian central bank (from February 28), and blocking of some Russian banks'access to the SWIFT system (from March 2).

8) In response to the possibility of a restriction on natural gas imports, Russia concluded a deal to provide gas (10 billion ㎥) to China (February 4, 2022). If it is barred from the SWIFT system, Russia is expected to increase the use of yuan for settlement.

9) The US announced export controls against 11 biotech research institutes (December 2021) and 33 electronic firms (February 2022) that could use their technologies for military purposes and that are suspected of human rights abuses.

10) The issue regarding Taiwanese and Tibetan independence with respect to the one China policy, as well as the territorial disputes between China and Japan over the Senkaku Islands and between Russia and Japan over the Kuril Islands, could heighten geopolitical risks in East Asia.

Volume[1)2)] of exports to and imports from the EU, Russia and Ukraine



Notes: 1) Based on 2021.
2) Figures within ( ) are proportions (%) to total exports and imports.
Source: Korea Customs Service.

(General assessment)

Our exports have remained robust since the second half of 2020 in line with the global economic recovery driven by strong demand for goods on the back of contactless economic activities and major economies' policy support. However, export growth is projected to slow gradually as the upside factors concerning the pandemic dissipate going forward.

Daily average exports have nonetheless shown a solid upward trend this year, with exports greatly exceeding pre-pandemic levels. This is because favorable global demand for goods has continued as demand in the IT sector expanded as an underlying trend, and the consumption substitution from goods to services has been delayed longer than expected due to the Omicron surge.

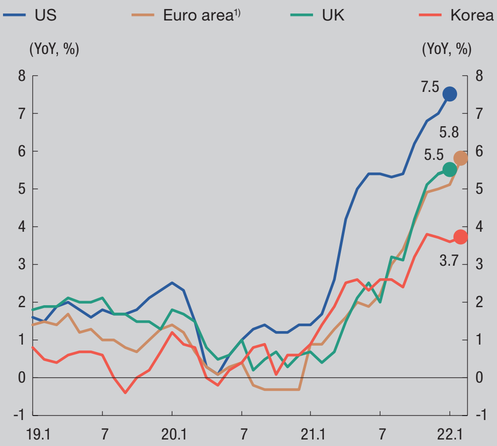
An examination of major risks to exports shows that despite the slowdowns in major economies, exports are not likely to slump below the previous trend in the absence of global shocks such as armed conflicts among superpowers and supply chain disruptions at home and abroad.

Box I-2.

Review and Assessment of Major Price Conditions

As upward trends in consumer prices in major economies have accelerated substantially since last year,[1] concerns about inflation have heightened globally. Forecasts of annual consumer price inflation have been revised sharply upward not only in Korea but also in major economies, due to inflationary pressures that are greater and persisting longer than initially expected. The European Commission revised upward the outlook for Harmonised Index of Consumer Prices (HICP) inflation to 3.5%, from its November forecast of 2.2%. The averages of experts' forecasts of consumer price inflation in the US, the euro area, and the UK compiled by Consensus Economics in February this year were revised upward by 1.5%p, 1.6%p. and 1.7%p, respectively, from the 2021 November projections.

CPI inflation in major economies



Note: 1) Based on HICP.
Sources: Statistics Korea, BLS, Eurostat, ONS.

Changes in the forecasts of CPI inflation for this year in major economies[1]

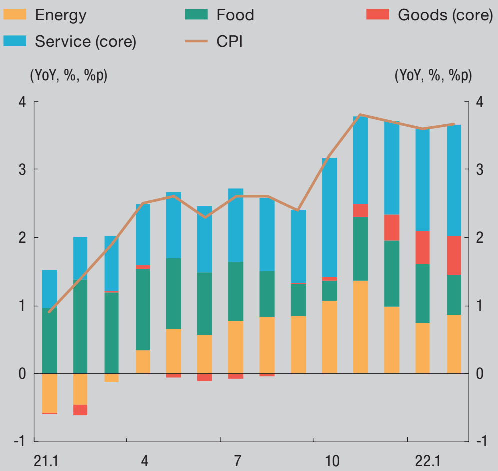
Note: 1) Changes in the forecasts of CPI inflation for 2022 by forecast time (month).
Source: Consensus Economics.

1) In January this year, consumer price inflation in the US (7.5%) and the UK (5.5%) recorded their highest levels since February 1982 and March 1992, respectively, and in February, HICP inflation in the euro area (5.8%) hit the highest level since the beginning of its compilation in 1997.
2) CPI inflation in Korea has risen to the highest level since 2011, remaining in the 3% range for the fifth consecutive month, recording 3.2% in October, 3.8% in November, and 3.7% in December last year, and 3.6% in January and 3.7% in February this year.

Consumer prices in Korea have been continuing to rise in the 3% range since October last year,[2] and since the beginning of this year, core inflation has also risen faster, reaching the upper-2% range in February. This is attributable to a substantial increase in upward pressures on prices, led by prices of durable goods, and eating-out and other personal service charges, amid sustained rises in prices of oils and food. Eating-out prices in particular have been rising very rapidly since the second half of last year.

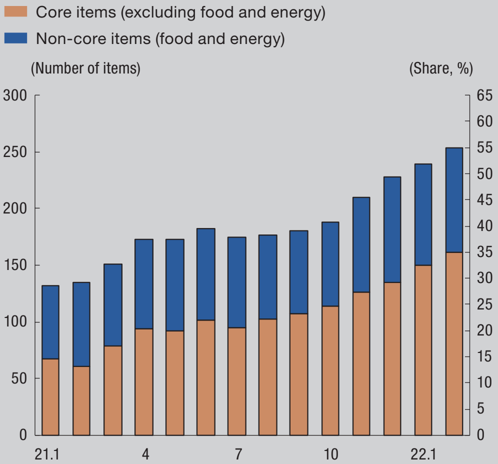
Meanwhile, with inflationary pressures spreading widely among core items, the share of consumer items with price increases higher than 2% has been on a steady rise.[3]

Contribution to CPI growth



Sources: Statistics Korea, staff calculation.

Consumer items with price increases higher than 2%[1]



Note:1) Year-on-year basis.
Sources:Statistics Korea, staff calculation.

Given heightened uncertainties surrounding price movements at home and abroad in line with changes in price conditions, this report looks at major factors that could affect price movements going forward, including upward trends in energy and food prices, global supply bottlenecks, and wage-side inflationary pressures.

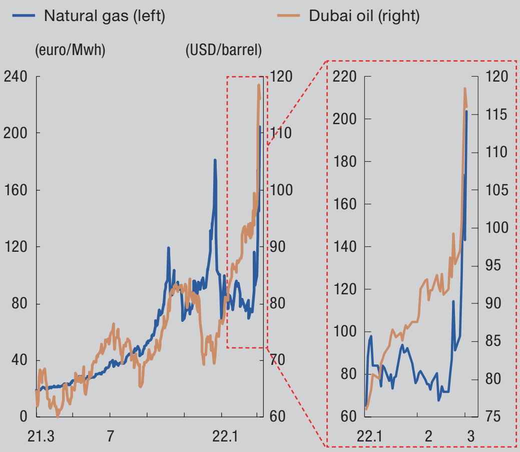
(Review of major price conditions)

First, prices of energy such as oil and natural gas have risen significantly due to the Russian invasion of Ukraine as well as to sustained supply and demand imbalances stemming from the resumption of economic activity and the promotion of net zero since last year. International oil prices continued to rise due to political unrest related to Ukraine, with the expansion in oil production in major oil-producing countries, including OPEC+ and the US, slower than the recov-

3) For more detail, please refer to "Assessments of Trends of Spread of Inflationary Pressures" (BOK Issue Note vol.2022-10).

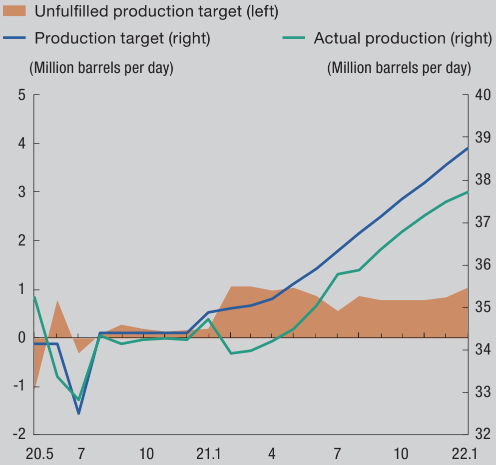
ery in oil demand. After Russia invaded Ukraine on February 24, oil prices soared to around 120 dollars per barrel. Natural gas prices, which were stabilizing entering this year compared to the end of last year, have also risen sharply since the invasion.

Energy prices



Note: 1) Based on the TTF exchange in the Netherlands.
Source: Bloomberg.

OPEC+ crude oil production



Source: IHS.

Initially, major forecasting institutions projected energy prices to stabilize gradually from the second half of this year. However, if Russia's supply of natural gas to Europe declines or its crude oil exports are restricted due to strengthened sanctions against Russia by Western nations following the Russian invasion of Ukraine,[4)] uncertainties surrounding the future oil price path will likely be heightened further. There is a not-uncommon view that even if the Ukraine crisis subsides, international oil prices will likely remain high due to sustained structural supply and demand imbalances.[5)] However, if the recently ongoing negotiations to restore the Iran nuclear deal are completed and Iran resumes its crude oil exports, imbalances between supply and demand in the crude oil market could par-

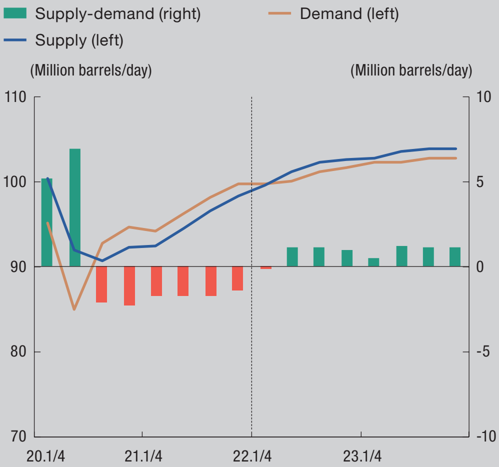
4) Before and after the Russian invasion of Ukraine (on February 24), sanctions against Russia by the US and Europe have continually been in place, including suspending approval of the natural gas pipeline (Nord Stream 2) between Germany and Russia, excluding some Russian financial institutions from the SWIFT international payment system, freezing assets of specific Russian individuals and companies, and restricting exports of high-tech goods including semiconductors to Russia.

5) Concerns about greenflation have been constantly raised. Greenflation means that, if fossil fuel is not smoothly replaced with renewable energy in the course of gradually reducing the use of existing fossil fuel to achieve a net zero society, prices of energy, and fossil fuel in particular, including oil and natural gas, could rise and inflationary pressures could constantly increase.

tially ease.

Meanwhile, since Korea is heavily dependent on overseas markets in terms of energy, a surge in energy prices including oil prices following the Ukraine crisis would likely have a significant impact on domestic prices.[6)]

Oil supply and demand trends and forecasts

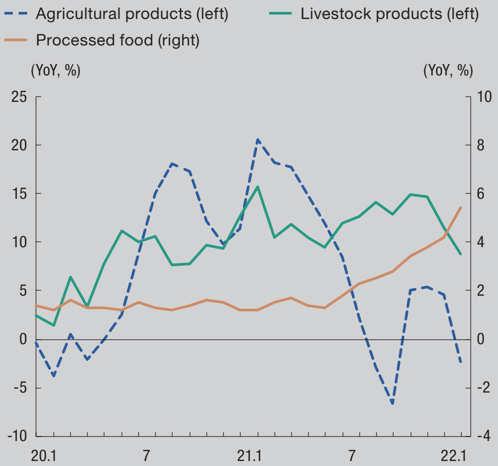


Note: 1) Projections for figures in 2022 onward.
Source: US Energy Information Agency (EIA, on February 9, 2022).

Second, concerning food prices, prices of agricultural and livestock products have been rising at a gradually slower pace, thanks to improvements in supply and demand situations since the second half of last year, while prices of processed foods have risen substantially, affected by higher raw material prices.[7)] The rise in prices of processed foods appears to be partially because global food prices have recently risen steadily to create upward pressures due to rising production costs since the outbreak of COVID-19,[8)] and climate anomalies.[9)]

Meanwhile, global food prices, and grain prices in particular, are expected to come under even greater upward pressures, with the Russian invasion of Ukraine.[10)] Accordingly, this will likely affect processed food prices and eating-out costs in Korea, exerting upward pressures on them.[11)]

Domestic food price growth



Source: Statistics Korea.

6) The impact could vary depending on how long energy price increases persist. The impact on prices could partially ease in line with the level of government responses related to the fuel tax and energy prices.

7) Prices of processed foods have constantly risen at a rapid pace since the second half of last year to show the biggest increase (5.4%) since April 2012 (6.5%) in February this year.

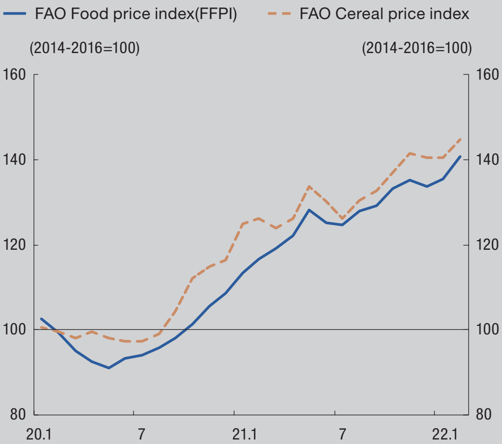
8) Among Import Price Index items, ‘fertilizers & pesticides’ rose 147.4% (YoY, in won) in January this year.

9) In February this year, the Food and Agriculture Organization of the United Nation (FAO) World Food Price Index (average for 2014-2016=100) stood at 140.7, surpassing a past historic high (137.6, in February 2011).

10) Russia and Ukraine are major exporters of wheat and corn. As of 2020, Russia ranks first (18.8%) in the world in wheat exports and eleventh (1.2%) in corn exports, while Ukraine ranks fifth (9.1%) in wheat exports and fourth (14.5%) in corn exports (in terms of volume).

11) A rise in global food prices usually affects processed food prices and dining-out costs with a time lag of around ten months.

Global food prices

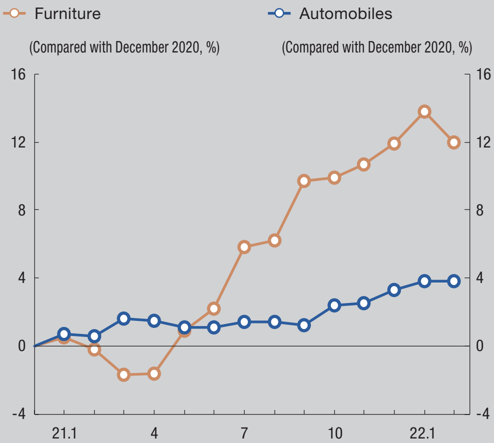


Source: UN FAO.

Third, demand for goods, durable goods in particular, has increased significantly since COVID-19, but due to global supply disruptions caused by a shortage of parts such as semiconductors for automobiles and by shipping delays, prices of durable goods including automobiles rose considerably in major countries last year. Korea has also seen prices of durable goods, particularly automobiles and furniture, growing at increasingly fast paces since the second half of last year.

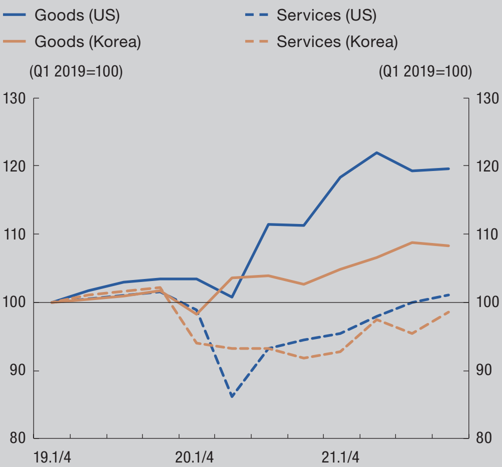
Global supply disruptions are expected to ease gradually from the second half of this year, but there is a substantial possibility of their prolongation being affected chiefly by the spread of COVID-19, the ongoing conflicts between major countries and the Ukraine crisis. There is also a chance that, if the pandemic situation stabilizes and the imbalances between goods consumption and services consumption narrow, supply disruptions will have less impacts on inflation. However, if GVCs weaken,[12] with global supply chains rearranged towards enhanced resilience, structural factors may push up inflationary pressures. If a rise in production costs caused by accelerating growth in commodity prices is combined with a prolongation of global supply disruptions and moves to reorganize global supply chains, larger inflationary pressures will likely continue for a longer time than expected.

Major durable goods prices in Korea



Source: Statistics Korea, staff calculation.

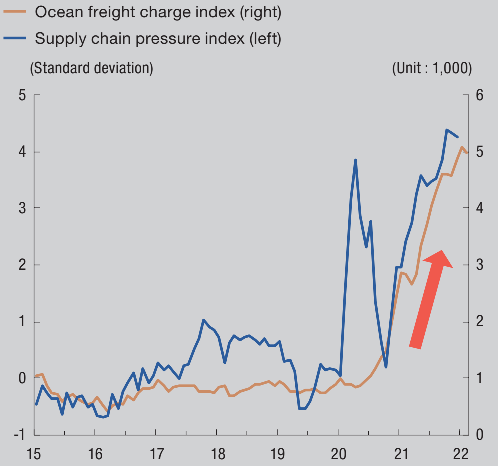
Goods and services consumption



Sources: Bank of Korea, BEA.

12) The current GVCs are based on the just-in-time method, which values efficiency and ensures that inventory is minimized. A shift to the just-in-case method, which focuses on supply chain stability through precautionary stockpiling, re-shoring and near-shoring, could incur additional costs.

Ocean freight charges and supply chain pressure indices

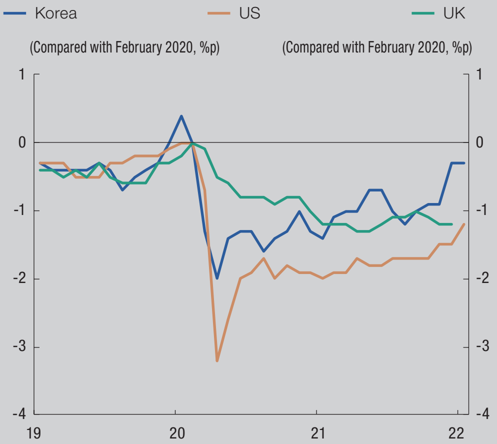


Notes: 1) Based on SCFI.
2) Principal component analysis is used to extract and standardize the principal components of supply disruption-related indicators.
Sources: Bloomberg, Federal Reserve Bank of New York.

Fourth, in some advanced countries such as the US and the UK, recruiting demand increased in line with the resumption of economic activities, while there was a shortage of labor supply mainly due to concerns about infections,[13] the burden of childcare and early retirement, leading to an increase in upward pressure on wages. Korea is also experiencing a shortage of labor in some sectors, but overall supply and demand imbalances in the labor market and upward pressure on wages are not as large as in the US or the UK.[14]

However, attention should be paid to the possibility that, if a wide expansion of inflationary pressure causes instability in inflation expectations, upward pressure on wages could increase even further through the interactions between wages and inflation, and inflation could exceed its target for a longer period of time.

Labor force participation rate

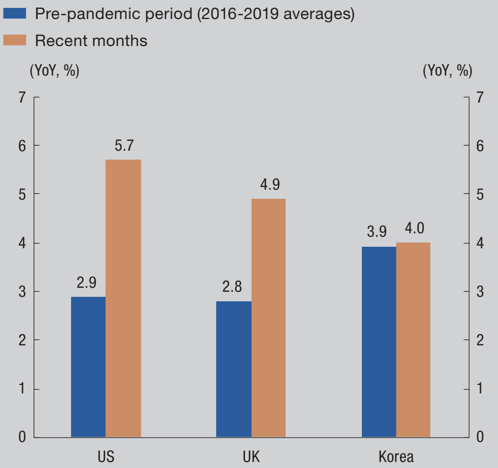


Sources: Statistics Korea, BLS, ONS.

13) Labor demand has surged in the US and the UK, with the number of job openings hitting a record high since the compilation of related statistics, while labor supply is insufficient with the labor force participation rate remaining well below its pre-pandemic level.

14) The recent rate of growth in basic wages of regular workers in Korea (4.0% in December 2021) has not changed much from the average of previous years (average of 3.9% between 2016 and 2019). Meanwhile, the recent hourly wage growth rate in the US (5.7% in January 2022) and the weekly wage growth rate in the UK (4.9% in December 2021) have increased considerably compared to the pre-pandemic levels (average of 2.9% in the US and 2.8% in the UK between 2016 and 2019).

Wage growth rate[1)]



Notes: 1) On an hourly basis for the US, a weekly basis for the UK and a monthly basis for Korea (fixed wages of regular workers).
2) As of January 2022 for the US and December 2021 for the UK and Korea.
Sources: Ministry of Employment and Labor, BLS, ONS.

(Overall assessment)

An examination of major inflation conditions shows that upside risks to the price path predominate. A further uptrend in energy prices following Russia's invasion of Ukraine could have a substantial impact on domestic prices, and the sustained increase in global food prices could act as a factor aggravating upward pressure on processed food prices and eating-out costs in Korea. Furthermore, in the event of a prolongation of global supply disruptions, inflationary pressure could continue longer than expected. Meanwhile, although inflationary pressure on the wage side is not as large in Korea as in the US or the UK, it is concerning that, if inflation expectations become unstable, the recent high inflation may continue for a longer period of time through the interactions between wages and inflation.

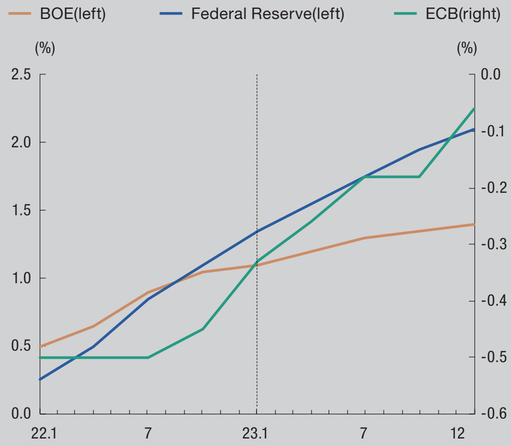
If inflationary pressure remains high for a considerable period of time, it may add to the burdens on economic agents - with corporate production costs increasing and consumers' real purchasing power weakening - and have negative effects on the domestic economy, and particular attention should be paid in this regard.

Box I-3.

Impacts and Assessment of Strengthened Global Risk Aversion in Global Financial Markets

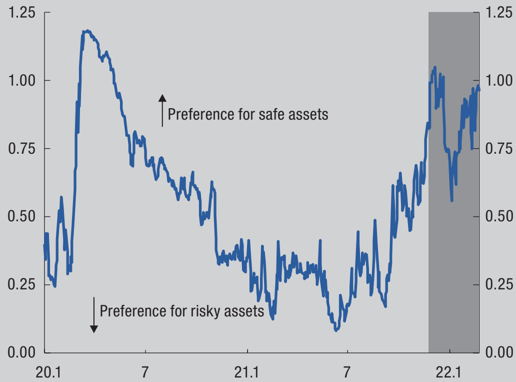
Entering this year, global risk aversion has strengthened1) in line with heightened expectations for early tightening of monetary policy by the US Federal Reserve and increased geopolitical risks related to Ukraine. In particular, as major central banks, such as the BOE and the ECB, are expected to tighten their monetary policies as well, market volatility has expanded with greater adjustments in US and global stock prices, resulting in growing attention on future market movements. As changes in risk preference can have large financial and economic impacts globally through changes in financial conditions and fund flows, it is important to thoroughly examine and assess their movements.

Projections for policy rates in major countries[1]



Note: 1) Based on Bloomberg survey.
Source: Bloomberg.

Citi Macro Risk Index



Source: Bloomberg.

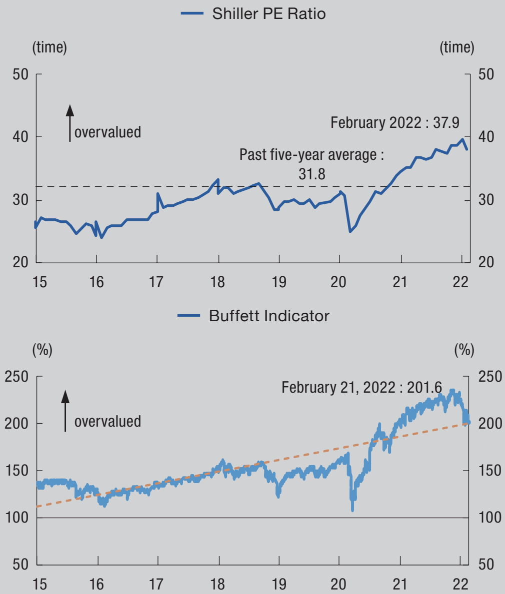
In the following section, we will look at the changes in the financial sector in the US and emerging countries stemming from the strengthening of global risk aversion, and draw implications.

1) Citi Macro Risk Index, which indicates global risk preference, was far above 0.5, the threshold of risk aversion, for a considerable time.
2) The Shiller PE ratio (S&P500 real stock prices/inflation-adjusted 10-year average EPS) and the Buffett Indicator (Total US market capitalization/GDP) have remained far above the historical averages and trends.
3) The share of growth stocks, such as tech and IT stocks, in the S&P500 increased from 33.5% at the end of 2019 to 39.1% at the end of 2021.

(US financial markets)

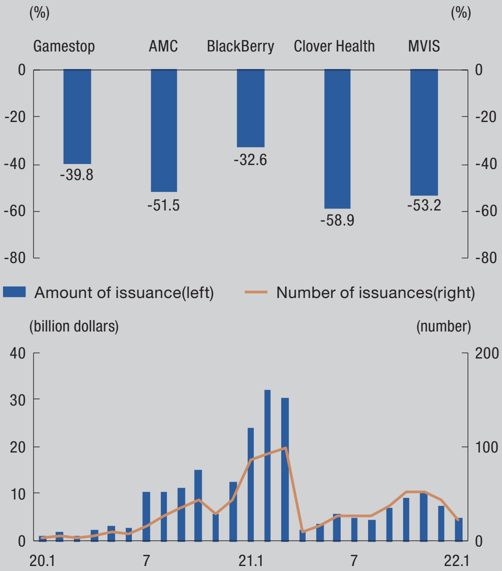
In the US financial markets, risky assets such as stocks and high-yield bonds saw their price volatility and credit risk aversion increase in line with the strengthening of global risk aversion. Firstly, in the stock market, amid continued equity overvaluations,[2] stock price volatility has expanded greatly, led by tech stocks, whose proportion in the stock indices rose,[3] and stock-related high-risk transactions have slowed. In particular, meme stocks,[4] which are high-risk and high-return, have shown substantial weakness, and the issuance of SPAC shares has been sluggish.

Shiller PE Ratio[1] and Buffett Indicator in US[2]



Notes: 1) S&P 500 real stock prices / inflation-adjusted 10-year average EPS.
2) Total US market capitalization/ GDP.
Source: Bloomberg.

Changes in major meme stocks[1] and number and size of SPAC issuance[2]



Notes: 1) Between December 1, 2021 and February 22, 2022.
2) Market contracted greatly in April 2021 due to stronger regulations by the US financial authorities.
Source: Bloomberg

Regarding high yield bonds, related credit risk aversion has expanded while attention on their risks has risen. This has led to a considerable increase in speculative-grade corporate bond credit spreads,[5] and to a signifcant decline in the prices of CLOs, which mostly include high-risk loans as their underlying assets. Under these circumstances, there have been outflows of speculative-grade corporate bond funds invested by global institutional investors on a massive scale,[6] and transactions for hedging credit risks have increased.[7]

4) Meme stocks refer to stocks that have gained attention of individual investors with their cult-like following online, rather than with evaluations and forecasts based on fundamentals of businesses (e.g. Gamestop, AMC).

5) Speculative-grade (less than BBB- based on S&P credit rating) corporate bond spreads (compared to the 10-year US Treasury bonds) rose to 389bp as of February 21, 2022, up by 119bp from 270bp at the end of last year.

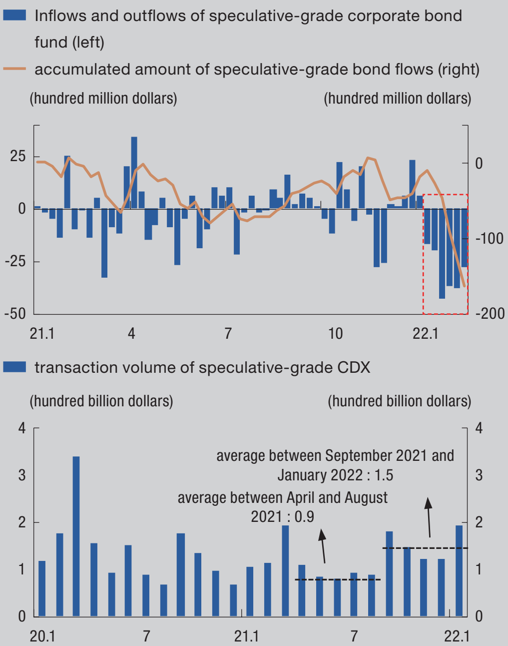
6) Entering this year, speculative-grade corporate bond funds of global institutional investors recorded net outflows for six consecutive weeks (-17.9 billion dollars between January 6, 2022, and February 16).

7) Credit default swap index (CDX) transactions, which are used to hedge credit risks of speculative-grade businesses, amounted to 195 billion dollars as of January 2022, the highest level since March 2020.

US speculative-grade corporate bond spread[1] and returns on CLOs

Note: 1) Difference with the US 10-year Treasury yield.
Source: Bloomberg.

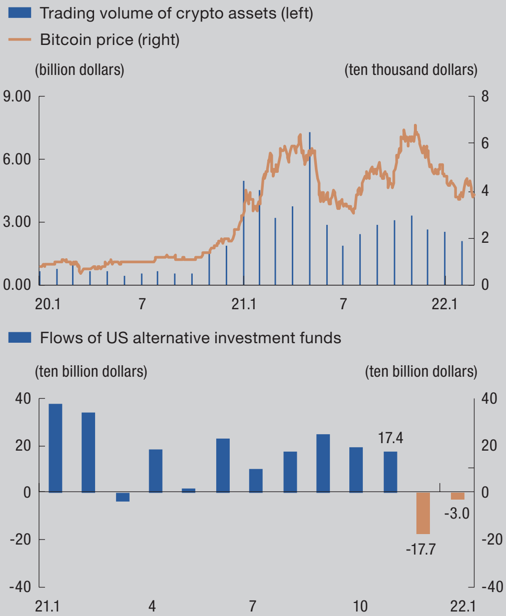
Inflows and outflows of speculative-grade corporate bond funds and transaction volume of speculative-grade CDX



Notes: 1) Based on invested funds by global investment companies, etc.
2) Based on accumulated amount after January 2021.
Sources: EPFR, Bloomberg.

Moreover, in other high-risk asset markets, crypto asset prices have shown sudden volatility, resulting in shrinking transactions, and the search for yield has weakened with alternative investment[8] funds flowing out.

Transaction volume and prices of crypto assets, inflows and outflows of alternative investment funds



Notes: 1) Daily average transaction volume by month (based on major ten global crypto assets)
2) Based on invested funds by global investment companies, etc.
Sources: Bloomberg, EPFR

(EME financial markets)

In EMEs, the strengthening of global risk aversion has been reflected in some price indicators. The prime example is that the EMBI+ spread, the weighted average of the difference between treasury bond yields in EMEs and those in the US, rose from 382bp (monthly average) in November last year to 406bp in January this year.

8) Compared to investment in traditional assets like stocks and bonds, alternative investment seeks higher risk and higher returns by investing in real estate, crypto assets, infrastructure, and private-placed stocks and bonds.

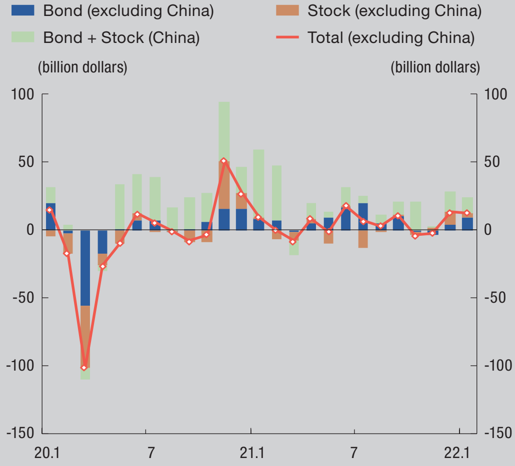
However, the negative impacts have been limited. Foreign portfolio investment funds continued to flow in as investment incentives were sustained by preemptive policy rate hikes by major EME central banks.[9] The fact that EME stock markets are less burdened by overvaluation compared to advanced economies[10] seems to have partially affected the inflows of portfolio investment funds.

EMBI+ spread

Note: 1) Spread between US dollar-denominated government bonds in EMEs and US Treasury bonds.

Source: Bloomberg.

Foreign portfolio investment funds in EMEs[1)]



Note: 1) 20 countries in total, including China, Taiwan, India, Indonesia, Brazil and Mexico.

Sources: Bloomberg, IIF, Foreign Exchange Information System.

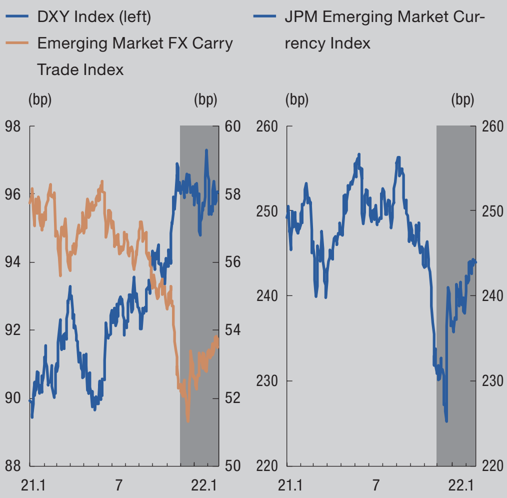
With limited strengthening of the US dollar,[11] the attractiveness of carry trades, which sell US dollars and purchases assets denominated in EME currencies, has been increasing, and this is assessed as one of the factors behind continued inflows of foreign portfolio funds to EME markets. In particular, entering this year, Brazil, Chile, and South Africa, which quickly raised policy rates or have high shares of commodity exports, have seen higher returns from carry trades.

9) A look at changes in policy rates in major EMEs since November 2021 shows that Mexico raised its policy rate by 125bp (three hikes), Chile by 275bp (two hikes), and Brazil by 300bp (two hikes).

10) The comparison between the PER of the MSCI World Index and that of the Emerging Market Index shows that the PER of the Emerging Market Index is 68% of that of the MSCI World Index, which is lower than the past five-year average of 75%.

11) The values of the euro and the pound have shown continued strength, affected by hawkish signals from the ECB and the BOE in their policy operations this year.

DXY[1]·Emerging Market Currency Index[2] and Emerging Market FX Carry Trade Index[3]



Notes: 1) Index of the value of the US dollar relative to six major currencies, including the euro, the yen, and the pound.
2) Based on JPM Emerging Market Currency Index.
3) Yield index of carry trade positions on eight EMEs.
Source: Bloomberg.

(Assessment and implications)

In recent global financial markets, changes in pending risk factors, such as the tightening of monetary policies in major central banks and heightening geopolitical risks, appear to have been rapidly reflected in price variables.

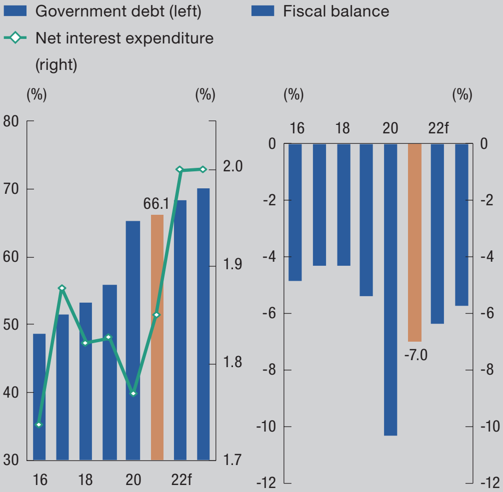
In the US, the prices of risky assets, which had boomed under the accommodative monetary policy of the Federal Reserve, have been undergoing adjustments, affected by concerns over the Fed's earlier-than-expected tightening of monetary policy and worsening situation in Ukraine. In this process, investors' search-for-yield behaviour has shown some signs of change. However, in case of EMEs, the impacts of stronger risk aversion have been limited, as foreign portfolio investment funds recorded net inflows on the back of preemptive rate hikes and increasing carry trades.

In the meantime, some take a positive view about future market developments, seeing the recent expansion of market volatility as a temporary adjustment process, rather than as the end of price rallies. However, as the market's sensitivity to risks has risen significantly, close attention must be paid to the fact that market volatility could increase considerably on unexpected small shocks as well as on the Fed's accelerated tightening of its monetary policy and an intensification of geopolitical risks.

In the case of EMEs, with room for additional rate hikes highly likely to be limited[12], if the extents to which US long-term interest rates rise and the US dollar strengthens exceed market expectations, capital outflow pressures could expand and external funding conditions could deteriorate.[13] This could particularly weigh more heavily on vulnerable EMEs as their solvency on external debt are weak with insufficient foreign reserves or high foreign liabilities. If these concerns materialize, capital inflows and outflows and volatility of price variables in the global financial markets could escalate, which could have major impacts on Korean FX and financial markets, and thus close monitoring is needed with respect to related developments.

12) Amid the growing size of government debt since COVID-19, a continued rise in long-tern interest rates could significantly increase the government's interest payment burden.
13) The IMF evaluated that abrupt policy rate hikes by the Federal Reserve could weigh heavily on EMEs, and EME financial markets could overreact if communication between the Federal Reserve and markets is not smooth. (January 2022)

Government debt and fiscal balance[1] in EMEs[2]



Notes: 1) Relative to GDP.
2) 40 countries including China (excluding Korea).
3) Consolidated fiscal balance-primary balance.
Source: IMF Fiscal Monitor (October 2021).

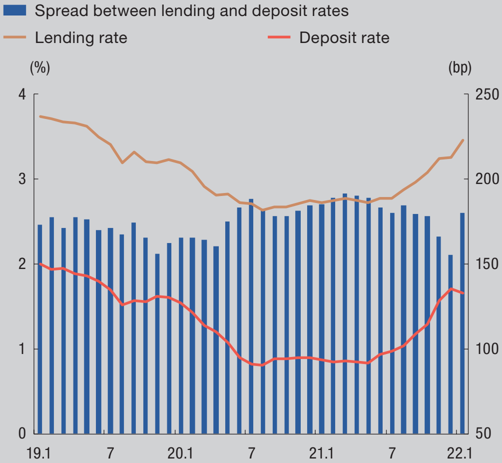
Box I-4.

Recent Developments and Assessment of Bank Lending and Deposit Rates Following Base Rate Hikes

(Recent Developments)

Bank lending and deposit rates (new loans and deposits basis) have sustained their uptrend since June last year[1] in tandem with short-term and long-term market rates. Bank lending rates rose 73 basis points, from 2.72% in May last year to 3.45% in January this year, while deposit rates climbed 82 basis points from 0.83% to 1.65% during the same period. The margin of increase in lending and deposit rates are largely similar to that of the Base Rate (75 basis points), which was raised through three rate hikes (August and November 2021, January 2022). Deposit rates exhibited a bigger jump than lending rates, narrowing the spread between lending and deposit rates from 189 basis points in May last year to 180 basis points in January this year.

Bank lending and deposit rates[1]



Note: 1) New loans and deposits basis.
Source: Bank of Korea.

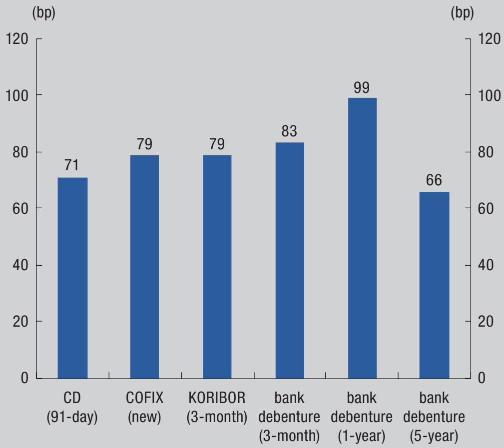
(Changes in Lending and Deposit benchmark Rates)

Generally, a hike in the Base Rate is transmitted to bank lending and deposit rates through the movements of short-term and long-term market rates, collectively referred to as the interest rate channel. The lending and deposit benchmark rates showed a considerable increase since June last year, affected by hikes in the Base Rate. Short-term benchmark rates such as CD and bank debenture rates, COFIX,[2] and KORIBOR, displayed a steeper margin of rise than that of the Base Rate, reflecting hikes in the Base Rate and expectations for further hikes. The 5-year bank debenture rate, which is a long-term benchmark rate, increased by a narrower

1) The assessment period was set between June 2021 and January 2022, considering market rates rose since June last year partly due to expectations for a hike in the Base Rate.
2) COFIX is an index produced by calculating the weighted average of interest rates of eight key deposits and marketable financial products of domestic banks, indicating changes in funding cost for domestic banks. It is mainly used for determining interest rates of household mortgage loans and other loans.
3) Long-term market rates continued their upward trend owing to outlooks for monetary policy normalization in major economies, but the margin of increase has been limited since November due to the policy authorities' market stabilization measures and concerns over the spread of the Omicron variant.

margin compared to short-term benchmark rates.[3)]

Margin of increase in lending and deposit benchmark rates[1)]



Note: 1) Margin of increase in monthly average between June 2021 and January 2022.
Sources: Bank of Korea, Korea Financial Investment Association and Korea Federation of Banks.

(Change in Lending Rates)

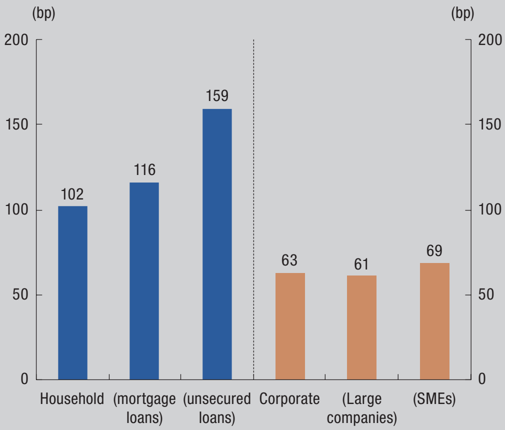
Banks' household and corporate lending rates climbed during the assessment period, in reflection of the changes in market rates following the Base Rate hikes. The margin of increase in the household lending rate (+102bp) was greater than that in the corporate lending rate (+63bp). The household lending rate went up from 2.89% in May last year to 3.91% in January this year, standing well above the pre-COVID-19 level (2.98% in Dec. 2019), whereas the corporate lending rate rose from 2.67% to 3.30% during the same period, falling below the pre-pandemic level (3.36%).

Developments of bank lending rates

Source: Bank of Korea.

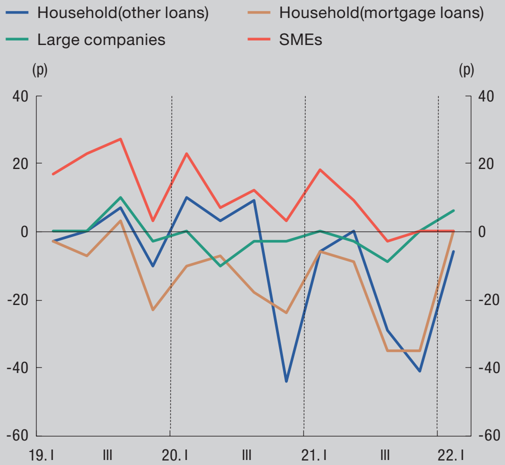
Household lending rate rose by a bigger margin than the Base Rate, affected by the widening of the bank spread (narrowing prime rate), owing to banks' management of household lending growth, in addition to a rise in short-term interest rate. By loan type, the interest rate on unsecured loans exhibited a greater increase (+159bp) than that of mortgage loans (+116bp). Regarding mortgage loans, floating-rate loans (+136bp), which are largely linked to short-term benchmark rates, grew more sharply than fixed-rate loans (+91bp). In the meantime, the corporate lending rate grew by a narrower margin than the Base Rate. This is mainly attributable to banks maintaining accommodative lending standards on businesses, amid their efforts to increase corporate lending in response to tighter regulation on household lending. By loan type, the margins of increase in lending rates have been similar between large companies (+61bp) and SMEs (+69bp).

Margin of increase in lending rates by loan type[1]



Notes: 1) Margin of increase in monthly average between June 2021 and January 2022.
2) Based on general unsecured loans.
Source: Bank of Korea.

Domestic bank lending standards[1)2)3)]

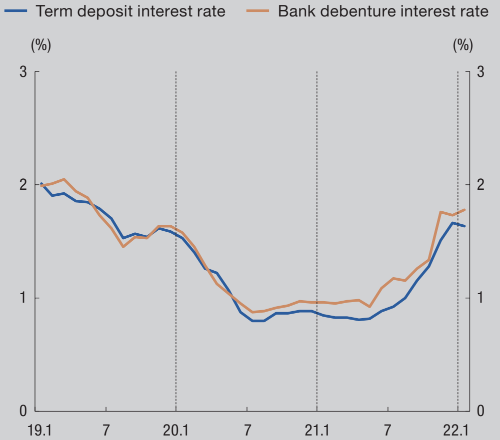


Notes: 1) A weighted average index distributed between +100 and -100 calculated from a survey of five criteria related to financial institutions' lending standards.
2) Indicates financial institutions' intention to either increase or decrease lending, where tightening (-) refers to their stance of suppressing lending by either operating strict lending standards or offering unfavorable lending terms to borrowers, and easing (+) refers to the opposite.
3) Figures for Q1 2022 are forecasts.
Source: Bank of Korea.

(Change in Deposit Rates)

Bank deposit rates increased by a bigger margin than the Base Rate, due to an expansion in banks' financing through term deposits and marketable financial products. Banks preemptively increased funding to prepare against term deposits reaching maturity, the government's budget execution, and future interest rate increases. In particular, the sector expanded issuance of bank debentures and CDs while selling a large volume of special deposit products, in order to proactively respond to a rise in fund demand following resumption of household loan extension at the beginning of this year and normalization of regulations on the liquidity coverage ratio and loan-to-deposit ratio,[4] which had temporarily been eased.

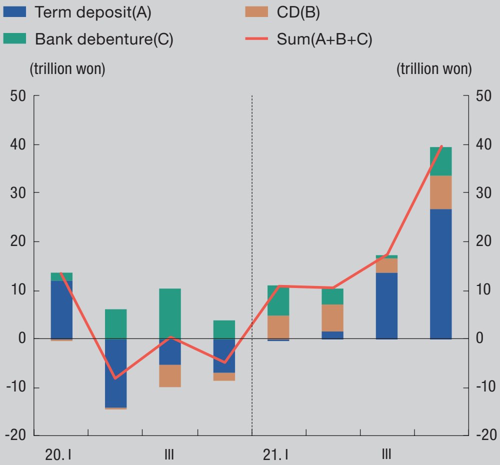
Developments of bank deposit rates



Source: Bank of Korea.

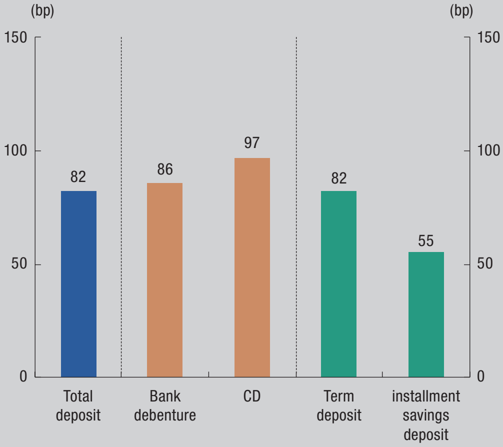
4) The government temporarily relaxed the regulation ratios until the end of March this year in the process of responding to COVID-19 (consolidated LCR 100% → 85%, loan-to-deposit ratio 100% → 105%).

Changes in bank deposits[1]



Note: 1) Excluding deposits from banks, central government and non-residents.
Source: Bank of Korea.

Margin of increase by deposit type[1]



Note: 1) Margin of increase in monthly average between June 2021 and January 2022.
Source: Bank of Korea.

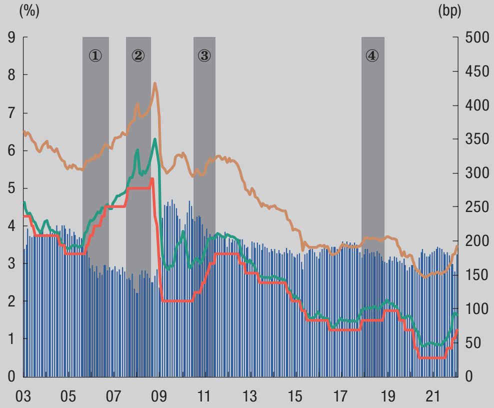
By deposit type, interest rates on marketable financial products grew by a greater margin than interest rates on savings deposits. Among marketable financial products, CD rates (+97bp) showed a bigger rise than bank debenture rates (+86bp). For savings deposits, interest rates on term deposits (+82bp) rose more than installment savings deposits (+55bp).

(Past Periods of Base Rate Hikes)

During periods of Base Rate hikes in the past,[5] the spread between lending and deposit rates narrowed since the margin of increase in lending rates was limited relative to that of deposit rates. This is mainly attributable to lending rates rising less, due to banks lowing their spread in an attempt to reduce the burden from lending rate rises, whereas deposit rates showed a greater jump owing to banks securing funds for loans and managing their regulatory ratios, in addition to a rise in short-term interest rate. By period, when banks competitively expanded lending (periods 1 & 3), bank spreads fell more acutely, causing the spread between lending and deposit rates to further narrow. However, when banks' lending standards tightened due to enhanced regulation on household lending and growing concerns over corporate credit risks(period 2), the spread dropped by a relatively narrower

5) Refers to periods since 2000 when the Base Rate was raised twice or more within one year (→ October 2005-August 2006, → July 2007-August 2008, → July 2010-June 2011, → November 2017-November 2018).

Bank lending and deposit rates and the base rate[1]



Note: 1) Grey area indicates periods of Base rate hikes.
Source: Bank of Korea

margin.

(Assessment and Outlook)

The three recent Base Rate hikes are assessed to have been well transmitted to bank lending and deposit rates through a rise in short-term and long-term benchmark rates. This is mainly due to the Base Rate hikes continuously being reflected in advance since the end of May last year, while benchmark rates jumped significantly amid sustained expectations for further hikes in the Base Rate. In addition, bank spreads rose as banks tightened management of household lending growth. Going forward, bank lending and deposit rates are expected to rise gradually, as expectations for further hikes in the Base Rate and the effects of benchmark rate increases are reflected. However, if bank lending standards tighten due to accelerating moves toward monetary policy normalization by major central banks and escalated geopolitical risks associated with the Ukraine crisis, funding costs could heighten especially for vulnerable companies, as experienced in the past.

Ⅱ

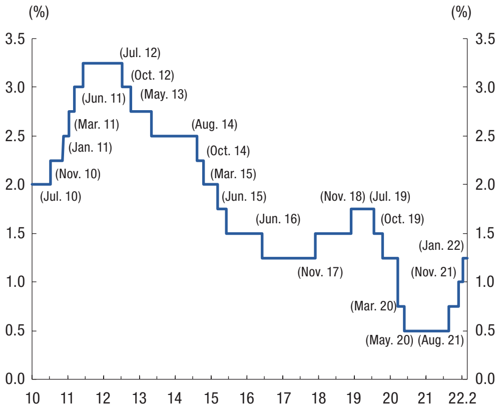
Conduct of Monetary Policy

1. Base Rate

Base Rate raised from 1.00% to 1.25% in January 2022

The Bank of Korea conducted monetary policy in order to sustain the recovery of economic growth and stabilize consumer price inflation at the target level (2%) over a medium-term horizon, while paying attention to financial stability. In this process, it thoroughly assessed global and domestic developments related to COVID-19, changes in monetary policy by major central banks, effects of policy rate hikes, the risk of a buildup of financial imbalances, and trends of growth and inflation. Under this policy stance, the Bank of Korea adjusted the degree of monetary policy accommodation in January 2022 by raising the Base Rate by 25 basis points, from 1.00% to 1.25%.

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 background, are as follows.

At the January meeting, the Monetary Policy Board raised the Base Rate from 1.00% to 1.25%[56)], in consideration of the points that the Korean economy was expected to continue its sound growth, inflationary pressures were forecast to increase more than initially expected, and there was still a great need to reduce financial imbalance risks. Although the improvement in private consumption had moderated owing to the tightening of domestic COVID-19 restrictions, and facilities investment had somewhat slowed due to global supply constraints, the Korean economy continued to recover thanks to sustained buoyancy in exports. Going forward, the economy was expected to sustain its sound growth, as the recovery of private consumption was forecast to pick up again, and exports were expected to continue their solid trend of increase. Consumer price inflation had risen to the upper-3% level due to the ongoing rise in the prices of petroleum products and agricultural, livestock, and fisheries products, as well as the accelerating increase in the prices of industrial products and personal services. It was expected that consumer price inflation would continue to run in the 3% range for a considerable time. On the financial stability side, the amount of increase in household loans had lessened greatly due to efforts to manage household lending in the financial sector and increases in lending rates. The rise in housing sales prices had somewhat moderated in both the Seoul Metropolitan region and other areas.

56) Among the seven total members attending, six board members agreed to raise the Base Rate by 0.25%p, while one member was opposed to it and argued for leaving the Base Rate unchanged.

At the February meeting, the Monetary Policy Board decided to leave the Base Rate unchanged at 1.25%[57], and appropriately adjust the degree of monetary policy accommodation going forward. This decision was made in consideration of several points. The Korean economy was sustaining its sound growth and inflationary pressures were increasing more than expected. However, the Monetary Policy Board had preemptively raised the Base Rate on three occasions since August last year, uncertainties surrounding external conditions, such as monetary policies of major central banks and geopolitical risks, had heightened, and the effects of the Base Rate raises so far needed to be examined further. Looking at the Korean economy, the improvement in private consumption had moderated owing to the tightening of domestic COVID-19 restrictions, and facilities investment had somewhat slowed due to global supply constraints. However, exports had sustained their buoyancy thanks to robust global demand. Going forward, GDP growth this year was expected to be around 3%, not deviating greatly from the November forecast, as exports were expected to continue their solid trend of increase, and the recovery of private consumption was forecast to pick up again. Consumer price inflation had risen to the mid- to upper-3% level due to the ongoing sharp rise in the prices of petroleum products, as well as accelerating increase in the prices of personal services and industrial products. Going forward, it was forecast that consumer price inflation would run well above 3% for a considerable time. Therefore, consumer prices were expected to increase by 3.1% this year, well above last year's level (2.5%). With respect to financial stability, although household debt growth and the increase in housing prices had moderated, the need to pay attention to the risk of a buildup in financial imbalances was judged to still remain high.

Liquidity adjustment via open market operations

The Bank of Korea seeks to ensure that the overnight call rate remains generally stable around the Base Rate by utilizing its open market operation instruments which include the issuance of Monetary Stabilization Bonds (MSBs), repurchase agreement (RP) transactions, and deposits with the Monetary Stabilization Account (MSA).

The total amount of liquidity adjustment needed (average balance basis) decreased in the fourth quarter last year owing to an increase in currency demand from the private sector[58] quarter-on-quarter, and continued to

57) All seven members attending unanimously agreed with keeping the Base Rate unchanged.

58) Affected continuously by the increased supply of issued currency for the Chuseok holidays in September (a 4.8 trillion won increase over the 10 business days preceeding the Chuseok holidays), currency issuance (average balance basis) in the fourth quarter increased by 5.9 trillion won from the previous quarter.

59) The volume of MSB issuance (average balance basis) was reduced by 7.2 trillion won in the fourth quarter of last year (quarter-on-quarter) due to the greater volatility in market rates and book closures of institutional bond investors at the year-end.

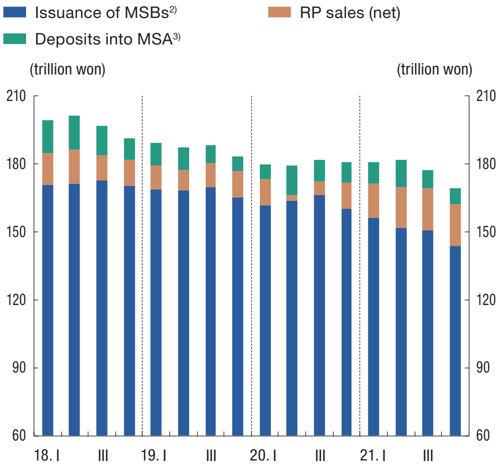
60) The average MSA balance dropped by 0.8 trillion won in the fourth quarter of last year (quarter-on-quarter) and by 1.6 trillion won (month-on-month) in January 2022.

61) Net RP sales (average balance basis) rose by 0.2 trillion won in the fourth quarter of last year (quarter-on-quarter), and decreased by 5.2 trillion won (month-on-month) in January 2022.

decline in January. Accordingly, the Bank reduced the issuance of MSBs[59] and the deposits with the MSA[60], while flexibly adjusting RP sales[61] in consideration of supply and demand conditions in the short-term fund market.

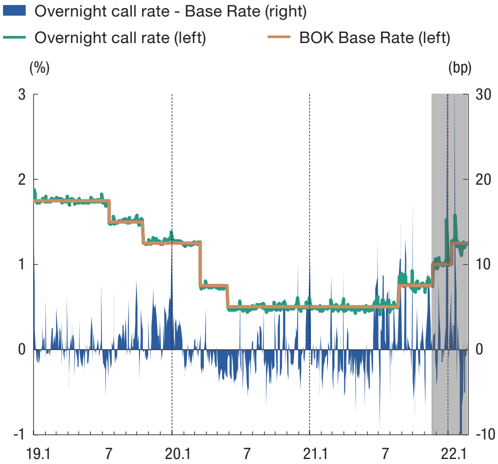
To preemptively respond to the possible surge in the overnight call rate due to mismatches between fund supply and demand at the end of last year[62], the Bank reduced RP sales and deposits with the MSA from mid-December through the year-end. In order to buffer market shocks from temporary withdrawal of national treasury funds all at once at the year-end, the Bank also provided liquidity worth 4 trillion won through irregular RP purchases. As a result, the overnight call rate remained generally stable around the Base Rate.

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



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

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



Source: Bank of Korea.

62) At the year-end, the mismatch between fund supply and demand in the short-term financial markets tends to deepen affected by the increased MMF buybacks by corporations and the banking sector's management of financial ratios, especially in the RP market.

2. Bank Intermediated Lending Support Facility

Continued support for businesses affected by COVID-19 and for 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. When deemed necessary, the Monetary Policy Board makes adjustments to the total ceiling of the Facility, the ceiling for each program, and ceiling reserves, taking into account the financial and economic situation as well as the financing conditions of SMEs.

The Bank of Korea has continued to provide support for small businesses and SMEs facing increased funding difficulties due to COVID-19 by extending the period[63)] of the temporary financial support measures[64)] and increasing their ceilings[65)] to cope with the spread of the pandemic.

The volume of COVID-19 related bank loans supported by the Bank of Korea grew steadily. As of end-January 2022, the volume extended under the Support Program for SMEs Affected by COVID-19 and the Support Program for Small Businesses recorded 32.3 trillion won and 4.9 trillion won, respectively.

Meanwhile, the ceilings of each program under the Bank Intermediated Lending Support Facility as of March 2022 are as follows: 1.5 trillion won for the Support Program for Trade Financing; 13 trillion won for the Support Program for New Growth Engine Development and Job Creation; 3.5 trillion won for the 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 6 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.

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63) The operation period (bank lending basis) for the temporary support measures scheduled to expire at the end of March 2021 was extended by six months twice (pushing back the end of the period from end-March 2021 to end-March 2022.)

64) The Support Program for SMEs Affected by COVID-19 (March 2020) and the Support Program for Small Businesses (October 2020) were newly launched in 2020, and have been in operation temporarily.

65) By utilizing the amount of ceiling still left for the Program for Stabilization of SME Lending from October 1, 2021, the Bank raised the ceiling of the Support Program for Small Businesses by 3 trillion won.

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

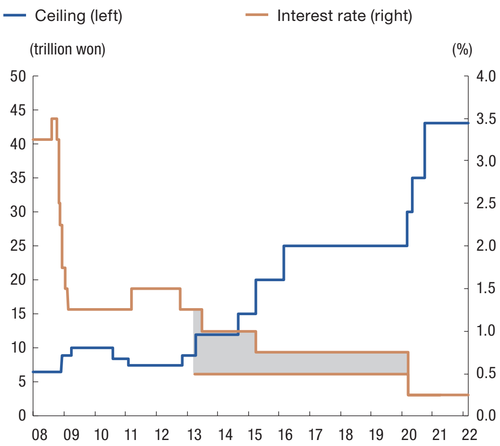
(trillion won, %)

Programs		Ceiling	Interest rate
Support Program for Trade Financing		1.5	0.25
Support Program for New Growth Engine Development and Job Creation		13.0	0.25
Program for Stabilization of SME Lending[1]		3.5	0.25
Support Program for Regional SMEs		5.9	0.25
Ceiling Reserves	Support Program for SMEs Affected by COVID-19	13.0	0.25
	Support Program for Small Businesses	6.0	0.25
	Others	0.1	0.25
Total		43.0	-

Note: 1) Includes the support that had been formerly provided under the Support Program for Facilities Investment and Small-scale Business Owners, etc.

Source: Bank of Korea.

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



Note: 1) Shaded area represents the time frame where interest rates were different for each program.

Source: Bank of Korea.

3. Market Stabilization Measures

Terminated support for credit market via SPV purchasing corporate bonds and CP

The Bank of Korea terminated corporate bond and commercial paper (CP) purchases by the Special Purpose Vehicle (SPV)[66] at end-December 2021 as scheduled.[67] The SPV had been set up to mitigate credit market instability and corporations' difficulties in financing following the spread of the pandemic. The decision to terminate the purchases was made in consideration of the fact that the corporate bond and CP markets showed relatively stable conditions compared to when the SPV was set up, and that normalization of the pandemic response measures was necessary. However, given the possible widening of market volatility, the Bank decided to stand ready to resume the SPV (financing additional resources, resuming corporate bond and CP purchases), so that it can perform the role of financial market safety net in the event of a market disturbance. The SPV had purchased corporate bonds and CP worth 4.5 trillion won before it was terminated.

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

(hundred million won, %)

Credit rating[3)]	Value	Share
AA(A1)	12,200	27.0
A(A2)	26,291	58.1
BBB(A3)	6,720	14.9
Total	45,211	100.0

Notes: 1) As of end-December 2021
2) Face value basis
3) Figures in parentheses refer to CP credit ratings
Source: Bank of Korea

Agreed with the US Federal Reserve on termination of currency swap agreement and the use of FIMA Repo Facility

The bilateral currency swap agreement signed with the Federal Reserve in March 2020 was terminated at end-December 2021. The Bank of Korea and the Federal Reserve had signed the 60 billion US dollar swap agreement to address foreign currency liquidity shortages and to stabilize the financial market, and extended its expiration date three times. The termination of the agreement was based on the judgment that domestic and overseas financial and economic conditions had emerged out of the crisis and were maintaining stability.

Meanwhile, in December last year, the Bank of Korea agreed with the Federal Reserve to use the Foreign and International Monetary Authorities (FIMA) Repo Facility[68] if nec-

66) In cooperation with the government and a policy bank (Korea Development Bank), the Bank of Korea established the SPV on July 14, 2020, to purchase commercial paper and corporate bonds including low-rated bonds.

67) The expiration date of the purchases, originally scheduled for January 13, 2021, was extended to December 31, 2021, after being extended once to July 13, 2021.

68) The Foreign and International Monetary Authorities (FIMA) Repo Facility, which allows foreign central banks to enter into repurchase agreements with the US Federal Reserve using their US Treasury securities in exchange for US dollar liquidity, was put in place temporarily on March 31, 2020 immediately after the COVID-19 pandemic outbreak, and then became a standing facility on July 27, 2021. This facility provides a backstop source of US dollar liquidity to foreign central banks.

essary (December 21, 2021, US local time). Accordingly, the Bank can now use its eligible securities[69] holdings to borrow up to 60 billion US dollars from the Federal Reserve at an annual interest rate of 0.25% through the FIMA Repo Facility. It plans to draw on the facility if necessary, should US dollar financing conditions worsen in the future due to global financial turmoil.

Conducted outright purchases of Treasury bonds

Since the beginning of this year, Treasury bond yields rose rapidly due to the global spread of inflation and accelerating moves toward monetary policy normalization by major central banks. In response, the Bank of Korea performed outright purchases of Treasury bonds worth 2 trillion won to ease interest rate volatility in February.

69) Eligible securities include T-bills, T-Notes, T-Bonds, and TIPS, issued by the US Treasury Department.

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

(as of February 28, 2022)

Policy response		Major details[1]
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, and 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 (expired at end-March 2021)
	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 (expired at end-March 2021)
	Improved collateral availability of financial institutions	• The collateral ratio for guaranteeing net settlements was lowered (expired at end-January 2022) • The range of eligible collateral for guaranteeing net settlements was broadened (expired at end-March 2021)
Stabilization of Treasury, corporate bond and CP markets	Performed outright purchases of Treasury bonds	• Amount purchased: a total of 17.0 trillion won (1.5 trillion won each in March, April, July and August 2020, 2.0 trillion won in September 2020, 1.5 trillion won each in October and November 2020, 2.0 trillion won in March 2021, 1.0 trillion won in April 2021, and 3.0 trillion won in June 2021)
	Corporate bond-backed lending facility	• Total ceiling: 10 trillion won • Operation period: terminated on February 3, 2021 (available for emergency thereafter) • Eligible collateral: Prime corporate bonds (rated AA- and above) with remaining maturity of five years or less
	Supported credit market through an SPV that purchases corporate bonds and commercial paper	• Size: 10 trillion won • Expiration: December 31, 2021 (extended additionally by the end of this year, after being extended by six months) • Size of the Bank's loans to the 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 • Expiration: December 31, 2021 (extended twice by six months each, extended by three months once)
	Implemented competitive US dollar loan facility auctions	• A total of 19.872 billion dollars was supplied (July 30, 2020)
	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 macro-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 provided US dollar funding to domestic financial institutions through foreign currency bond repurchase agreements • Eligible bonds : US Treasury bonds (US government agency bonds if necessary)
	Agreed with the US Federal Reserve to use its FIMA Repo Facility	• The Bank of Korea will use its eligible securities holdings to borrow up to 60 billion US dollars from the Federal Reserve. • Eligible securities: T-bills, T-Notes, T-Bonds, and TIPS issued by the US Treasury Department

Notes: 1) Shaded cells indicate measures that have expired or were not in operation for pandemic-related market stabilization purposes as of end - February.

2) The outright purchases of Treasury bonds worth of 2.0 trillion won performed earlier this year is not included in this table, as they were aimed at easing the interest rate volatility, and were not pandemic-related measures.

Source: Bank of Korea.

4. Other Monetary Policy Measures

Continued monitoring of financial and foreign exchange market conditions

The Bank of Korea continuously monitored movements in the financial and FX markets at home and abroad. While operating an emergency financial market monitoring and response system activated in the event of increased market volatility, it has also closely looked into the evolution of domestic and global risk factors as well as their impacts on financial and FX markets. The Bank held Conditions Review Meetings to discuss the domestic and global financial market responses to and impacts from the results of FOMC meetings (on December 16, 2021, and January 27, 2022) and the announcement of the US Consumer Price Index (on February 11) which exceeded market expectations, as well as to monitor changes in international financial market conditions during the Lunar New Year's holidays (on February 3). As the geopolitical risk surrounding Ukraine increased, the Bank also held a Financial and Economic Conditions Review Meeting (on February 22) and Conditions Review Meetings (on February 24 and February 25) to monitor the global financial market responses and the impacts on the domestic financial sector and economy.

Strengthened monitoring of financial risks factors and early warning activity

With financial imbalances having built up, the Bank of Korea strengthened its activities of identification and early warning of risks in the financial system that can be caused by changes in financial and economic conditions, such as growing inflationary pressures at home and abroad and normalization of monetary policies in major economies.

At the December Financial Stability Meeting[70], the Bank comprehensively examined domestic financial imbalances by analyzing them in comparison with overseas conditions, and closely monitored potential risks in vulnerable sectors including corporate insolvencies and the debt of small business owners. In particular, considering that Korea's household debt has grown steadily, the Bank took a multi-faceted look into the financial and economic impact of household debt and assessed related vulnerabilities. Given that major central banks were likely to proceed with monetary policy normalization faster than expected, the Bank reviewed foreigners' portfolio investment in Korea, while assessing the possibility of fund flows growing more volatile going forward. In addition, it conducted a stress test to look at the impact of rising inflationary pressures on the financial system.

Meanwhile, the Bank of Korea shared views and made efforts to come up with counter-measures regarding the key current issues and potential risk factors pertinent to Korea's financial and economic stability through various consultative bodies including the Macroeconomic and Financial Meeting.

70) Please refer to the *Financial Stability Report* (December 2021) for further details.

Assessed current issues and potential risks to Korean financial system through joint examinations

In order to assess potential risk factors accumulated in the financial system, the Bank of Korea conducted examinations of individual banks and continued monitoring of vulnerable sectors.

In examinations of risks at individual banks, the Bank identified their lending practices, financial support they provided in response to COVID-19, and risk factors, while reviewing their compliance with the Bank of Korea's regulations.

In addition, the Bank strengthened its review of the impact of the recent changes in economic conditions on the management soundness of financial institutions, by analyzing changes in corporate lending behavior since the pandemic, debt of small business owners, and relevant risk factors.

Table II-4. BOK-FSS joint examination of financial institutions[1]

(number)

2018 Year	2019 Year	2020 Year	2021 Year	2022 Jan.~Feb.
5	6	2	6	-

Note: 1) Number of examinations conducted.
Source: Bank of Korea.

In addition, the Bank improved the feedback system for its examinations, and made continuous efforts for smooth communication with examined banks, by holding briefing sessions to explain the examination results, as well as meetings with financial institution staff in charge of inspections. It also discerned the global business and risk management status of large foreign banks operating in Korea, and exchanged information on global financial supervisory issues, by attending the Supervisory College hosted by major global supervisory authorities.

Strengthened global exchange and financial cooperation

The Bank of Korea continued with global exchange and financial cooperation by participating in online meetings hosted by international organizations and consultative bodies such as the BIS, G20, and ASEAN+3. In particular, at the BIS and G20 meetings, the Bank discussed EMEs' growth dynamics and paths, factors behind housing price changes and their implications, the enhancement of Nonbank Financial Institution (NBFI) resilience, and the improvement in cross-border payment services. The Bank examined the spillovers on the Korean economy and worked to enhance the effectiveness of policy responses by looking closely into the global financial and economic conditions and policies of major countries.

Meanwhile, as a co-chair central bank of the ASEAN+3 Finance Ministers and Central Bank Governors Meeting[71] in 2021, the Bank of Korea focused on reconciling members' opinions to enhance the effectiveness of the Chiang Mai Initiative Multilateralization (CMIM), a regional multilateral currency

71) The meeting is co-chaired by one of the ASEAN+10 countries and one among Korea, China, and Japan in rotation every year. Korea and Brunei were the co-chair countries for the 2021 meeting.

swap agreement. At the December CMIM meeting, it decided on a new CMIM reference rate replacing LIBOR, and led the revision of the operational guidelines to institutionalize financial support using local currencies.

Enhanced safety and efficiency of payment and settlement systems, and continued research on CBDC

The Bank of Korea has continued efforts to enhance the safety and efficiency of the payment and settlement systems, by monitoring to ensure that the Principles for Financial Market Infrastructures (PFMI)[72] and other international standards in the field of payment and settlement are implemented smoothly at home. To this end, an assessment is underway on Korea Securities Depository and Korea Exchange for their compliance with the PFMIs, overall risk management systems, cyber resilience, and capacity to respond to operational risk. The Bank will also make recommendations where improvement is needed. Meanwhile, through a joint examination conducted on a domestic bank in January 2022, the Bank reviewed its performance of payment and settlement functions and management of payment and settlement risks.

Meanwhile, the Bank of Korea raised the ratio of collateral for guaranteeing net settlements of participant banks to 70% from February 2022 after temporarily lowering it (70% → 50%) in April 2020 to cope with deteriorated financial market liquidity following the spread of COVID-19. This ratio is scheduled to be raised in phases up to 100% by February 2025.[73]

The Bank consulted and agreed with the Financial Supervisory Service (FSS) on a plan whereby high-quality liquid assets of the Liquidity Coverage Ratio (LCR) would include the amount posted as collateral minus the net debit cap utilization amount at the time of calculating the LCR. Accordingly, the FSS revised the Enforcement Rules of the Banking Supervision Regulations.[74] The revision greatly reduced the collateral provision burden for financial institutions[75], which faced a higher collateral ratio for guaranteeing net settlements.

The Bank of Korea has continued to perform technical and institutional research on cen-

72) Following the global financial crisis, a need was identified to expand over-the-counter (OTC) derivatives market infrastructure 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), established new international standards for payment and settlement systems in April 2012. CPMI-IOSCO has enacted additional international standards as supplementary guidelines for PFMI compliance, including its *Guidelines on cyber resilience for financial market infrastructures* (June 2016), *Recovery of financial market infrastructures* (July 2017) and *Resilience of central counterparties (CCPs): future guidance on the PFMI* (July 2017).

73) The PFMI requires a collateral ratio (100%) that is sufficient to fully cover credit exposures.

74) By revising the Enforcement Rules of the Banking Supervision Regulations (effective on February 1, 2022), the Financial Supervisory Service allowed financial institutions to include unused collateral securities for guaranteeing net settlements in their high-quality liquid assets.

75) The amount recognized as high-quality liquid assets in LCR was 26.4 trillion won as of November 2021, implying a 5.8% percentage point increase in LCR.

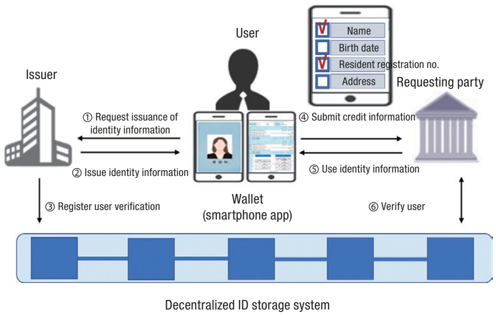
76) CBDC refers to a type of digital currency issued by a central bank, separate from reserve requirements and transferable deposits.

tral bank digital currency (CBDC)[76] in order to effectively cope with the rapid progress toward a digital economy. In particular, in the phase 1 pilot test of CBDC completed in December 2021, the Bank created a cloud-based virtual experimentation environment, and implemented basic functions of CBDC including its manufacture, issuance, circulation, redemption, and disposal.[77] In addition, the Bank analyzed the progress in global discussions on major issues related to the adoption of CBDC, such as design and operation methods, and the expected spillovers.[78] The Bank also stepped up its research on the impacts of the adoption of CBDC on monetary policy and financial stability, jointly with academia. Apart from this, the Bank of Korea has continued with information exchange and cooperation with other central banks, aiming at closely monitoring changes in the global environment surrounding CBDC and sharing research results with major economies.

The Bank of Korea established the Service Employment and Sharing Scheme using Decentralized Identity[79] in the Financial Sector in December 2021, through the Committee on Financial Informatization Promotion (chaired by the Deputy Governor of the Bank of Korea). The scheme defines service models, function requirements, and procedures for issuing and submitting identity information for financial institutions' reference when they establish a system for decentralized ID services. With the scheme now in place, the financial sector will be able to achieve the interoperability of decentralized ID services, prevent duplicate investments, and facilitate the use of decentralized ID services.

The Bank has also actively taken part in discussions on linking the global payment and settlement infrastructure[80] to improve overseas remittance services, seeking measures suitable for Korea's financial environment.

Figure II-5. Outline of decentralized ID services



Source: Bank of Korea.

77) In the phase 2 simulation, scheduled to be carried out until June this year, the Bank will put in place more sophisticated functions such as offline payments (where transfer and settlement can be conducted using CBDC even when devices (mobile devices, IC cards, etc.) of both the sender and recipient are not connected to the Internet), digital asset transactions, and cross-border transfers, while exploring the possibility of applying new IT technology including enhanced protection of private information.

78) The Bank of Korea published a report in January 2022 on major issues of CBDC addressed in ongoing global discussions.

79) Decentralized ID (DID) is a blockchain-based digital identity verification system that allows users to store identifiers such as names, resident registration numbers, and addresses in identity wallets such as smartphone apps, and to present only information of their choice for verification when required by the requesting party.

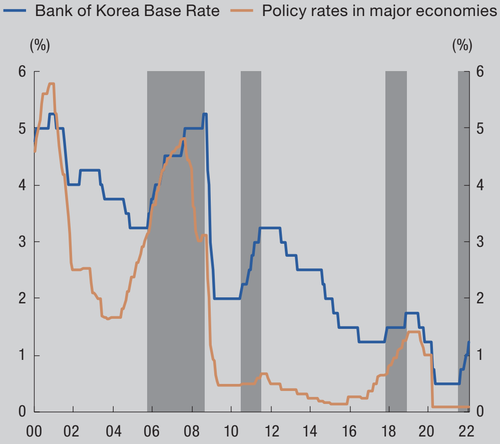
80) International organizations including the G20 and the BIS are actively engaged in the discussion, as payment and settlement systems linked across countries will bring benefits such as faster overseas transfers and reduced fees for customers.

Box Ⅱ-1.

Review of Financial and Economic Impact of Base Rate Hikes

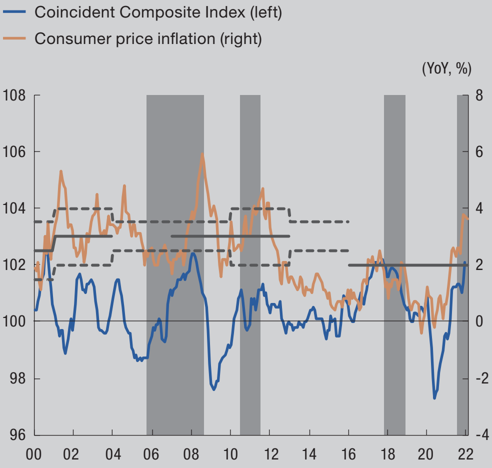
The Bank of Korea has raised its Base Rate on three occasions since August 2021 for a total increase of 75 basis points,[1] in order to normalize the ultra-accommodative monetary policy stance[2] it took in response to the COVID-19 pandemic. This came ahead of moves by major advanced economy central banks such as the US Federal Reserve,[3] the ECB, and the Bank of England, as the Bank of Korea saw the need to address financial stability risk with economic recovery continuing at home and abroad and inflation rising.

Policy rates[1] in major economies and Korea's Base Rate



Notes: 1) GDP-weighted average of policy rates in the US, the euro-zone, the UK and Canada.
2) Shaded areas represent the periods of Base Rate hikes in Korea.
Source: Bank of Korea.

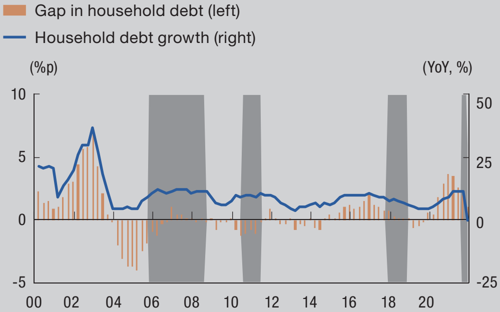
Cyclical component of Coincident Composite Index and consumer price inflation

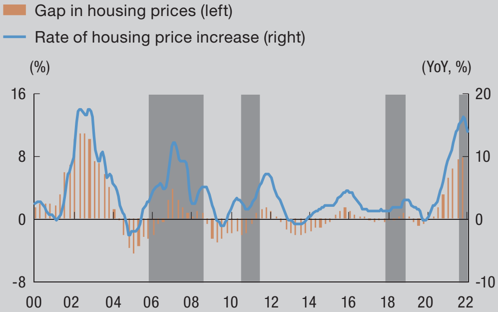


Notes: 1) Shaded areas represent the periods of Base Rate hikes in Korea.
2) Solid and dotted lines represent the median and the scope of inflation target, respectively.
Sources: Bank of Korea and Statistics Korea.

1) The Bank of Korea raised the Base Rate from 0.50% to 0.75% in August 2021, to 1.00% in November 2021, and to 1.25% in January 2022.
2) The Bank of Korea had maintained its Base Rate at 0.50% before raising it in August 2021, after cutting it twice in March 2020 (from 1.25% to 0.75%) and May 2020 (from 0.75% to 0.50%).
3) The Bank of Korea began to raise its policy rate, ahead of other major countries, in July 2010 as well, as the economy had shown a faster recovery and inflation was running high.

Gaps[1] in household debt and housing prices





Notes: 1) Gaps of household debt and housing prices relative to the trend.
2) Shaded areas represent the periods of Base Rate hikes in Korea.
Source: Bank of Korea.

Base Rate adjustment affects growth, inflation and financial imbalances[4] via the financial market after a certain time lag. In this section, we review the impact of the past three Base Rate hikes on the financial market, financial imbalances and the real economy. We also analyze the expected effects of the Base Rate hikes from a medium- and long-term macroeconomic perspective.

(Financial market)

The effect of the recent rate hike appears to have been transmitted smoothly to the financial market, which is the first step in the transmission mechanism. Market interest rates and bank lending and deposit rates have risen to a similar or larger extent compared to those during the past hikes. In particular, long-term interest rates and household lending rates have risen noticeably relative to the past hikes. The increase in long-term interest rates has been driven not only by the Base Rate hikes, but also by a combination of factors including global interest rate rises reflecting expectations for monetary policy shifts by major central banks, and concerns about a possible increase in Treasury bond issuance following talks of supplementary budget compilation. The rise in household lending rates appears to be attributable to both the higher funding rates for financial institutions and the increased premium (or reduced prime rates) as a result of the government's tighter household lending management.

Changes in major financial indicators during Base Rate hike periods

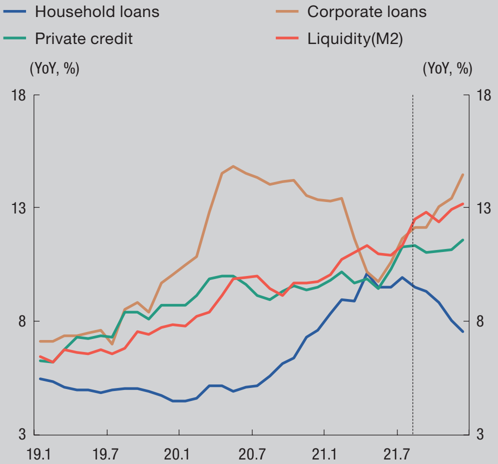
Hike period (Size of increase)	Market interest rates[1)2)] (bp)			Lending and deposit rates[1)2)] (bp)			
	MSB (91-day)	TB (3-yr)	TB (10-yr)	Lending			Deposit
				Private	Household	Corporate	
① October 2005 ~August 2008 (+200bp)	196 (74)	148 (55)	91 (34)	195 (73)	207 (78)	191 (72)	257 (96)
② July 2010 ~June 2011 (+125bp)	127 (76)	7 (4)	-72 (-43)	46 (28)	30 (18)	50 (30)	90 (54)
③ November 2017 ~November 2018 (+50bp)	49 (73)	4 (6)	-29 (-44)	26 (39)	20 (30)	29 (44)	52 (78)
④ August 2021 ~February 2022 (+75bp)[3)]	62	87	71	68	99	58	71

Notes: 1) Increases in the rates in the following month of the last rate hike relative to two months before the initial hike.
2) Figures in parentheses represent changes with the assumption of a 75bp rate hike (arithmetical calculations).
3) Lending and deposit rates are as of end-January.
Sources: Bank of Korea, Korea Financial Investment Association.

4) Although there is no official agreed-upon definition in the central bank community or academia, financial imbalances usually refer to an excessive increase in leverage and an overvaluation of asset prices, seen as a result of economic agents' heightened risk appetite. This article focuses mainly on household debt and housing prices for its assessment of financial imbalances.

As a result, the growth in private credit (household and corporate loans), particularly household loans, has slowed moderately. However, M2 growth remains high, due to increased corporate lending[5] and household investment funds flowing into deposit products. Meanwhile, the search-for-yield seen in the broader asset markets under the low interest rate environment appears to be undergoing a partial adjustment.[6]

Private credit[1] and liquidity growth rate



Note: 1) Based on Depository Corporations Survey.
Source: Bank of Korea.

(Financial imbalances)

Household debt-related financial stability risk, which had been regarded as one of the major risk factors, has eased to some extent: household debt growth has slowed and housing price increases have decelerated rapidly. It is believed that the government's tighter lending regulations together with the Base Rate hikes have been effective. We analyzed the impact of stronger macroprudential measures on household debt and housing prices since 2002 when LTV and other macroprudential regulations were introduced.[7] The results showed that macroprudential measures had a greater impact on household lending and housing prices when operated under the same stance as monetary policy.[8]

5) The increase in corporate lending is mainly due to financial institutions' expansion of corporate loan business aimed at securing a source of profit, and to the sustained demand for facilities and working funds.

6) Since the second half of 2021, net equity buying and crypto-asset transactions by retail investors have declined, and expectations for housing price increases have weakened rapidly.

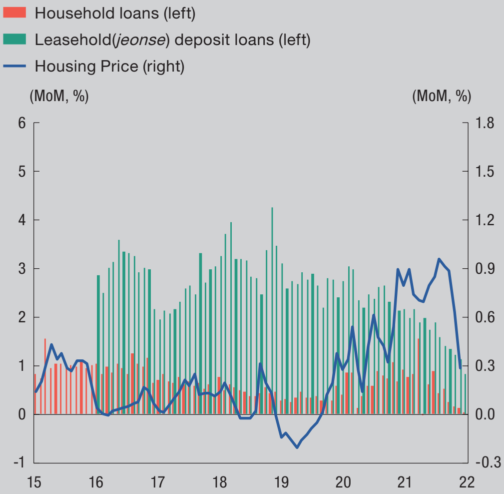
	July 2021	August	September	October	November	December	January 2022
Net equity buying by retail (trillion won)	9.0	7.0	4.6	2.9	-2.4	-7.5	7.2
Bitcoin transactions (trillion won)	7.2	10.5	9.5	13.4	13.6	8.9	8.8
Housing price forecast CSI (criteria=100)	129	129	128	125	116	107	100

Sources: Bank of Korea, Korea Exchange, Cryptocompare.

7) We set up a household debt model having previous-quarter household debt growth rate, household lending rate, GDP growth rate and rate of housing price increase, and a dummy indicating a combination of monetary and macroprudential policies as explanatory variables, and estimated using the generalized method of moments (GMM), considering potential endogeneity among variables.

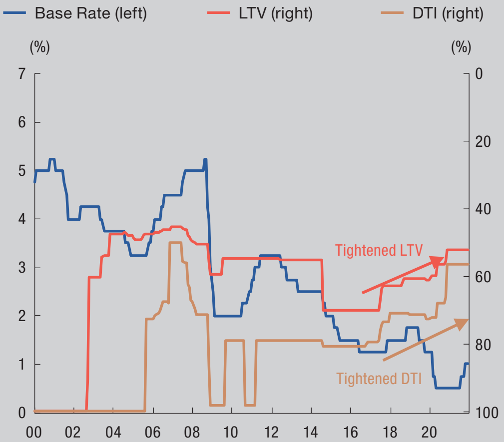
8) Macroprudential measures were found to be twice as effective in reducing household debt when they were tightened in line with monetary policy than against the stance of monetary policy.

Rates of household loans[1] growth and housing price increase



Note: 1) Banks and non-banks combined (leasehold deposit loans are based on bank data only).
Sources: Bank of Korea, Korea Real Estate Board.

Base Rate and macroprudential measures[1]

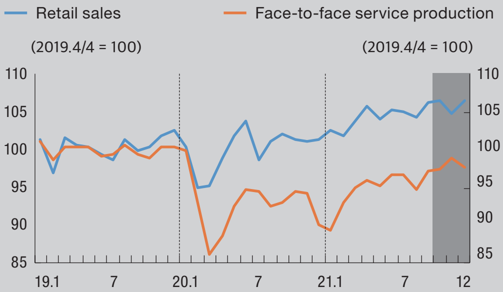


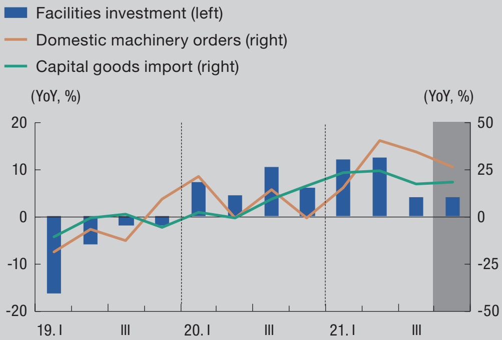
Note: 1) Macroprudential measures are computed by weighted averaging of DTI and LTV in respective regions based on the number of houses.
Source: Bank of Korea.

(Real economy)

The impact of the Base Rate hikes on growth and inflation is not clear yet.[9] Private consumption continues to recover, driven mainly by goods consumption. Although the rapid growth in facilities investment seen in the first half of 2021 has been under adjustment, related leading indicators including domestic machinery orders and capital goods imports has shown a solid trend. Consumer price inflation has been rising rapidly, hovering above the target level of 2%.

Consumption and investment





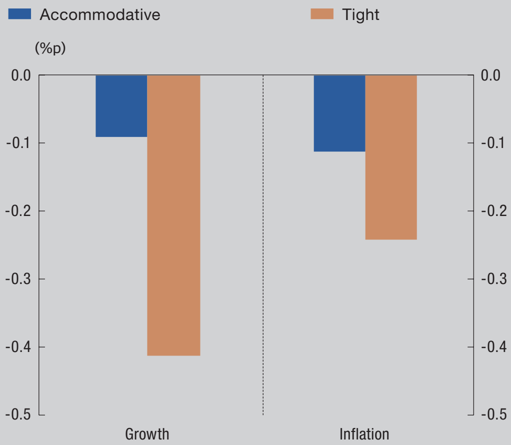
Note: 1) Shaded areas represent the latest Base Rate hike period.
Sources: Bank of Korea, Statistics Korea, Korea Customs Service.

9) Considering the time lag in the transmission of monetary policy to the real economy, the transmission of the Base Rate hikes in August and November 2021 and January 2022 by respective channels and their real economic impact will be better analyzed once more time series data of financial and economic variables are accumulated. In this regard, this article focuses its assessment of the real economic impact on the trend of growth and inflation seen since monetary policy normalization began, as well as the relevant background.

Despite the Base Rate hikes, the overall financial conditions still remain accommodative, while growth is supported by improved household income and corporate performance.

Considering the real Base Rate level relative to the real neutral interest rate, the current monetary policy stance still remains accommodative. A panel analysis of 18 countries including Korea shows that the real economic impact of a policy rate hike is smaller under accommodative financial conditions than under tight conditions.

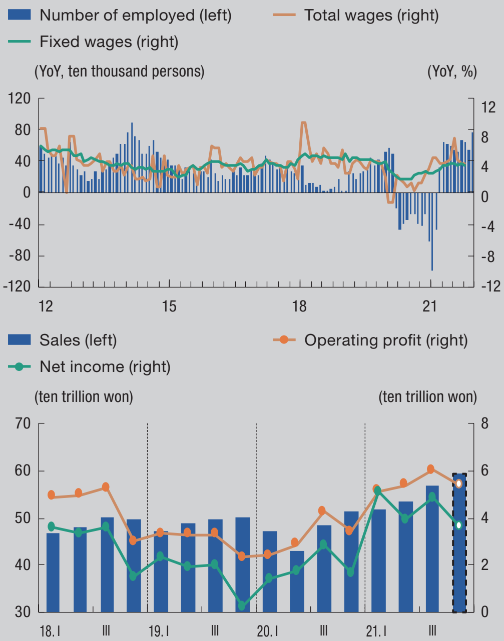
Effect[2] of 25bp rate hike by financial conditions[1]



Notes: 1) We identify that the policy is contractionary (or easing) if the real policy rate is higher (or lower) than its trend.
2) Based on an estimation obtained from a local projection method (the maximum values of growth and inflation responses over a 2-year horizon), using cross-country panel data including 18 countries (from Q1 2000 to Q4 2021).
Source: Bank of Korea.

Improved labor market conditions and government support have also facilitated household income growth, and business conditions for companies have been recovering rapidly driven by increased demand at home and abroad. Household savings[10] that have been increasing fast has also helped to maintain consumption capacity.

Employment, wages[1] and business conditions[2]



Notes: 1) Averages for the periods of January to February and September to October.
2) 454 largest companies by market cap, market outlook for Q4 2021.
Sources: Statistics Korea, Ministry of Employment and Labor, Dataguide.

The recent rise in inflation is assessed to be owing to the sustained effects of global supply chain bottlenecks and commodity price hikes amid the continued growth momentum. Accord-

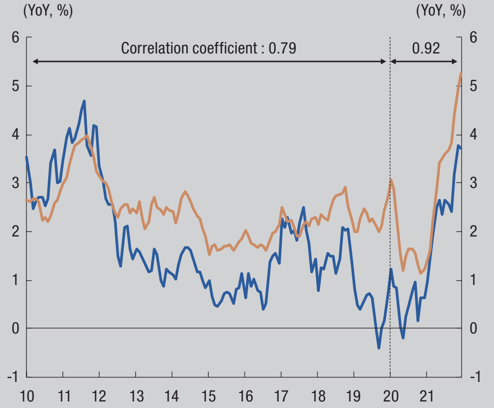
10) The household savings rate in Korea rose from 8.1% in 2019 to 12.0% in 2021.

(%)	2017	2018	2019	2020	2021e)	2022e)	2023e)
Household savings rate in Korea[1]	7.5	7.2	8.1	14.1	12.0	9.9	8.2

Note: 1) Net savings/net disposable income.
Source: OECD.

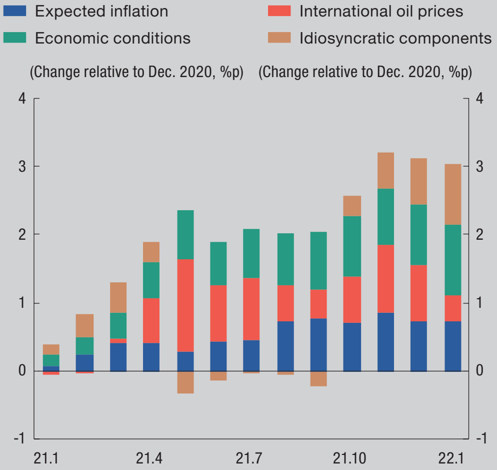
ing to the results of a historical decomposition of recent inflation, which shows contributions by individual factors,[11)] higher inflation expectations have had a greater contribution to inflation since the second half of 2021, in part indicating a second-round effect of the inflationary shock.

Global[1)] and Korean CPI increase rates



Note: 1) GDP-weighted average of CPI increase rates in 34 major advanced and emerging economies.
Sources: Bloomberg, Bank of Korea.

Decomposition of recent inflation factors



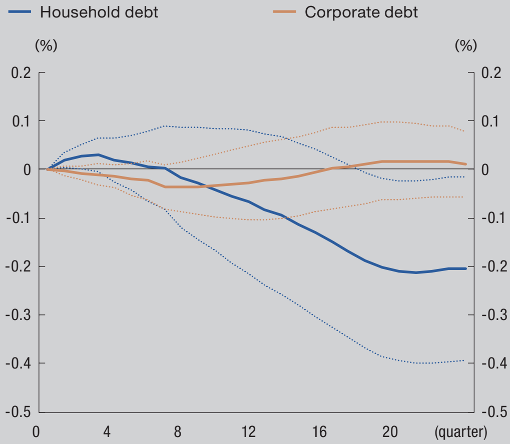
Note: 1) The contribution of idiosyncratic components of inflation is measured by extracting the contributions of other variables of the VAR (expected inflation, international oil prices and economic conditions) from the total increase in inflation at the time.
Source: Bank of Korea.

(Overall macroeconomy)

The recent Base Rate hikes are assessed to contribute to stable macroeconomic management over the medium- and long-term horizon, by easing financial stability risks mainly with respect to household debt. A panel analysis of 18 countries including Korea shows that the buildup of household debt plays a role in supporting growth in the earlier stage, but tends to affect growth negatively from a medium- and long-term perspective. In relation to this, a GaR (Growth at Risk) analysis indicates that the past three rate hikes contributed to reducing the tail risk of GDP growth (lower 5% GDP growth rate on probability distributions of one-year-ahead GDP growth rate), by alleviating financial stability risk.[12)]

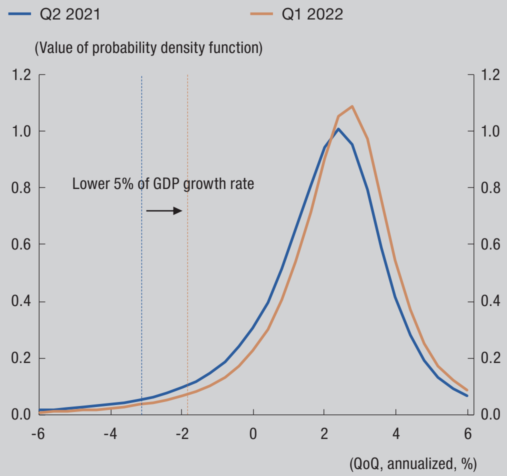
11) We estimated a VAR with four variables including inflation expectations by the general public, consumer price inflation (year-on-year), the cyclical component of the Coincident Composite Index (3-month moving average), and the international oil price increase rate (year-on-year) (between January 2010 to January 2021), and analyzed the contributions of each factor to price changes since 2021.

Impact[1)2)] of increased debt-to-GDP ratio on growth



Notes: 1) Impact of a 1%p increase in debt-to-GDP ratio for the past three years.
2) Results of local projection analysis using panel data of 18 major countries (Q1 2000 to Q4 2021).
Source: Bank of Korea.

Tail risk of GDP growth (GaR; Growth at Risk)[1)2)]



Notes: 1) Refers to a methodology in the IMF GFSR (April 2021).
2) Probability distributions of one-year-ahead GDP growth predicted at each period.
Source: Bank of Korea

(Overall assessment)

As examined above, the Base Rate hikes have not yet had a clear effect on the real economic front including growth and inflation. In contrast, the policy effect has been transmitted to the financial market smoothly, partly easing financial stability risks.

Future adjustment of monetary policy accommodation will need to be carried out in a balanced consideration of its impact on growth, inflation, and financial stability as well as the consequent short- and long-term costs and benefits. In particular, the Bank should pay attention to any changes in inflation risk, while closely examining the spread of a second-round effect caused by the interaction between inflation indicators and inflation expectations.

12) By easing the buildup of financial imbalances, a policy rate hike can reduce the possibility of a sharp contraction in economic activity caused by a steep fall in asset prices and default by vulnerable groups in times of unexpected shocks.

Ⅲ

Future Monetary Policy Directions

1. Growth and Inflation Forecasts[81)]

Domestic economy projected to continue sound growth trend

The domestic economy is forecast to continue its sound growth supported by continuing resumption of global economic activities and easing of domestic social distancing measures, despite increasing internal and external uncertainties. Accordingly, the GDP growth rate is projected to be around 3.0% in 2022 and 2.5% in 2023.[82)83)]

By sector, private consumption, while being affected by the spread of COVID-19, is expected to return to the path of recovery supported by improved income conditions stemming from solid recoveries in employment and wages. Consumption of goods is expected to sustain its favorable growth, as the sales of automobiles improve gradually amid the spread of online shopping. Consumption in face-to-face services is projected to resume its recovery trend due to the easing of social distancing measures, although the pandemic will unavoidably have some effect. However, a recovery in overseas consumption is projected to be delayed somewhat due to restrictions related to immigration. The government measures to support small businesses through the supplementary budget and pent-up household savings are expected to support rapid recovery in private consumption.

Facilities investment is expected to show moderate growth due to solid demand for IT products and the mitigation of automobile production disruptions. The IT sector is expected to see a similar volume of investment as in the previous year, led by foundries and OLED. Investment in the non-IT sector is forecast to continue growing, driven by new growth sectors, such as electric cars and batteries. Investment in intellectual property products is expected to continue its solid growth. R&D investment is projected to increase on the back of favorable corporate earnings and the government's increased R&D budget. Investment in other intellectual property products is forecast to increase, as the demand for IT services rises with continued digital transformation. Construction investment is expected to show recovery as building construction improves and civil engineering turns into an increase. With regard to residential building investment, housing construction volume is projected to increase continuously, considering the favorable trend in leading indicators, such as housing licenses and orders. However, the contraction of housing transactions could act to limit an increase in residential building

81) This section is based on the Bank of Korea's *Economic Outlook Report* released on February 24, 2022.

82) The GDP growth forecasts for 2022 and 2023 (3.0% and 2.5%, respectively) remain unchanged from the November forecasts.

83) The current economic outlook is based on assumptions associated with a scenario for COVID-19 developments. The spread of the contagious disease is expected to continue globally for the time being while restrictions on economic activities are lifted gradually with widespread vaccinations. Advanced countries are expected to continue easing restrictions on economic activities from the second quarter of 2022. In emerging economies, restrictions on economic activities are expected to be lifted gradually after the second half of this year with widespread vaccinations. The current outlook presumes that restrictions on economic activities in Korea will ease gradually from the second quarter of this year while the spread of COVID-19 continues for the time being.

construction. Non-residential building investment is expected to continue increasing, led by commercial building construction. Civil engineering is forecast to shift to an increase, backed by greater investment by the government and public institutions.

Exports are expected to maintain a solid growth trend thanks to sustained global demand for goods, particularly IT products. The current account surplus is expected to narrow as the goods account surplus shrinks and the services account deficit widens. The goods account surplus is forecast to shrink due to significant growth in imports stemming from rising commodity prices and recovery in domestic demand despite the favorable export trend. The primary income account surplus is forecast to narrow as dividend income declines with slowing growth of the global economy. The services account deficit is projected to widen with the partial resumption of residents' overseas trips, despite favorable transportation income stemming from continued global demand for goods.

There are still high potential uncertainties surrounding the growth outlook. The upside risks to growth include early easing of social distancing measures, increased government support for consumption, and continuing strength in the global semiconductor industry. Among the downside risks are increased geopolitical risk, delayed resolution of global supply constraints, and prolonged spread of COVID-19.

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

(YoY, %)

	2021[2)]			2022[e]			2023[e]
	H1	H2	Year	H1	H2	Year	Year
GDP	4.0	4.1	4.0	2.8	3.1	3.0	2.5
Private consumption	2.4	4.8	3.6	3.9	3.2	3.5	2.6
Facilities investment	12.6	4.1	8.3	-1.3	5.8	2.2	1.7
Intellectual property products investment	4.0	3.9	4.0	4.2	3.7	3.9	3.8
Construction investment	-1.5	-1.5	-1.5	0.6	4.0	2.4	2.3
Goods exports	14.4	6.1	10.0	4.5	2.5	3.4	2.2
Goods imports	12.5	11.4	11.9	5.6	2.1	3.8	2.3

Notes: 1) Figures are the forecast as of February 2022.
2) Reflects preliminary figures for the 4th quarter.
Source: Bank of Korea.

Consumer price inflation projected to significantly exceed the level of last year

Consumer price inflation this year is expected to record 3.1%, significantly higher than last year (2.5%) as oil prices and other international commodity prices rise faster and inflationary pressures expand into core items affected by the demand recovery and global supply bottlenecks. Core inflation for items other than food and energy is forecast to rise to 2.6% this year, well above last year's level (1.4%). Consumer price inflation and core inflation are projected to stand at around 2% next year.

In terms of overseas factors affecting prices, while supply and demand imbalances have continued in the crude oil market, international oil prices have grown faster due to the heightened geopolitical risk surrounding Ukraine. Grain prices have continued to rise, led by corn and soybeans. The Korean won/US dollar exchange rate has risen owing to stronger expectations for rate hikes by the

US Federal Reserve. As for domestic factors affecting prices, inflation expectations of the general public (one-year ahead) have risen greatly since November last year, and nominal wages exhibited a continued upward trend due to improved business conditions. Looking at other factors, dining-out prices have increased at a faster pace, affected by demand recovery and rising prices of ingredients. The rise in the prices of durable goods has continued to accelerate, led by automobiles and furniture, as inflationary pressures have become more evident due to supply bottlenecks. In terms of the government policy side, increases in electricity fees and city gas charges, which are scheduled after the second quarter of this year, are a factor pushing up prices, while the government's freeze of public services charges and its delay of hikes will act as downward pressures. The extent of rise in housing rental fees could slow moderately if the recent slowing of the upward trend in leasehold (jeonse) deposits and monthly rents (new contract basis) continues.

Upside risks appear to somewhat predominate with respect to the future inflation outlook path. The upside risks include a sustained upward trend in energy prices such as prices of oil and natural gas, a stronger recovery in consumption in line with early easing of social distancing measures, greater impacts of supply bottlenecks on inflation, and a sustained rise in food prices. Among the downside risks are a slow recovery in consumption caused by a prolonged spread of the pandemic, a decline in energy prices including oil prices, and freezes in electricity fees and city gas charges.

Table III-2. Inflation outlook[1)]

(YoY, %)

		2021			2022^e			2023^e
		H1	H2	Year	H1	H2	Year	Year
CPI inflation		2.0	3.0	2.5	3.5	2.7	3.1	2.0
Core inflation	CPI excluding food & energy	1.0	1.8	1.4	2.7	2.5	2.6	2.0
	CPI excluding agricultural products & oil	1.4	2.3	1.8	3.0	2.7	2.8	2.2

Note: 1) Figures are the forecast as of February 2022.
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 economic growth and inflation forecast paths and paying attention to financial stability as well. In this process, the Bank will also carefully monitor the developments of COVID-19 at home and abroad, changes in growth and inflation from global supply disruptions, the progress of monetary policy normalization in major countries, and subsequent financial market reactions at home and abroad as well as financial imbalance conditions.

Developments of COVID-19 at home and abroad

After the highly transmissable Omicron variant was first identified in November last year, it quickly became the dominant strain[84], causing the number of new confirmed cases to record all-time highs globally.[85] Amid the spread of the Omicron variant, the tightening of disease control measures[86] is expected to have negative impacts on the global economic recovery. Nonetheless, the global economy is expected to maintain an underlying recovery trend due to low hospitalization and fatality rates, a short epidemic cycle[87], and learning effects from the prolonged disease control situation. However, economic recovery patterns could be differentiated from country to country. While some emerging countries including China[88] have maintained their strict disease control measures, the US and the EU, whose COVID cases have passed their peak, have been easing their preventive measures.[89] The fact that supply chain bottlenecks have not been resolved is another factor that still limits the global economic recovery.

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84) The detection rate of the Omicron variant approached 100% in major advanced economies (99.8% in the United States, 99.9% in the United Kindom, 99.5% in Germany, 99.4% in Canada).

85) The number of new cases globally was about 90 million in the month of January, exceeding the 84 million new cases that occurred in the year of 2020, the first year of the pandemic.

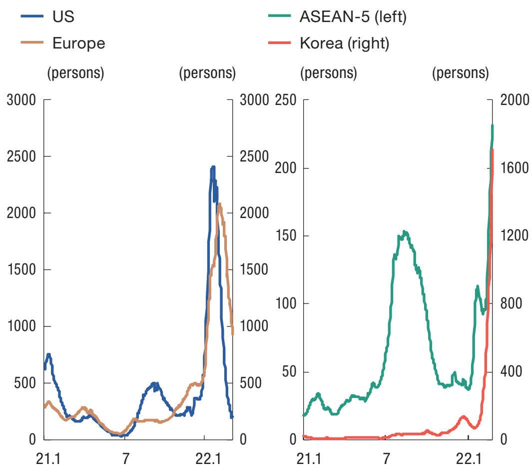
86) The Netherlands banned the operation of restaurants and nonessential business establishments for one month from December 19 last year. Denmark shut down theaters, concert halls, amusement parks, and museums effective from December 19. Quebec city in Canada imposed nighttime curfew effective as of December 31. France adopted vaccine passes in multiuse facilities and long-distance public transportation from January 20 this year.

87) It took 25 days on average for G7 countries to reach the peak of Omicron infections, 40% of the comparable period during of the Delta variant spread (64 days).

88) China has maintained its zero-COVID policy, which locks down COVID-19 affected regions. Hong Kong also implemented strict disease control measures, by for example limiting the maximum private gathering size to two people as confirmed cases surged with the spread of the Omicron variant.

89) The United Kingdom lifted all legal preventive measures, including the self-quarantine starting from February 24. Indoor mask requirements have been lifted (Denmark) or eased (United States, France, Sweden, etc.), and vaccine passes have been suspended (Germany, United States, Switzerland, etc.), while Japan and the Netherlands, which had tightened preventive measures in the early stages of the Omicron spread, eased their preventive measures.

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



Notes: 1) Daily new confirmed cases per million persons by region (based on 7-day moving averages); ASEAN-5 based on Indonesia, Thailand, Vietnam, Malaysia and Phillipines
2) As of February 28, 2022
Source: Our World in Data

The number of new confirmed cases in Korea also hit an all-time high, as the Omicron variant spread quickly to become the dominant strain.[90)] The number of daily confirmed cases was surging to 170,000 as of the end of February from around 5,000 at the end of December 2021. With the basic reproduction number standing at around 1.5[91)], some forecasted the number of confirmed cases to skyrocket to a maximum of 350,000 in March. However, as vaccination rates expanded[92)] and the number of critically ill patients was managed at a stable level[93)], the health authority eased some restrictions[94)], and is reviewing lifting them in a phased manner[95)] depending on situations

Private consumption has been somewhat limited[96)] mainly led by the service industry and production has moderated[97)], due to the recent spread of Omicron and the extension of social distancing measures, but the extent of the declines appears to be small.[98)] Going forward, the Korean economy is expected to continue its favorable trend of growth, as private consumption resumes its recovery trend supported by improvements in income conditions[99)] and consumer sentiment. However, as there are uncertainties surrounding

90) The detection rate of Omicron in Korea increased rapidly from 6% in the fourth week of December 2021, to 99.6% in the fourth week of February 2022.

91) Basic reproduction number: 0.92 (2nd week of January) → 1.18 (3rd week of January) → 1.58 (4th week of January) → 1.6 (1st week of February) → 1.6 (2nd week of February) → 1.44 (3rd week of February) → 1.46 (4th week of February)

92) 61.4% of Koreans are fully vaccinated with a booster shoot, while 86.5% of Koreans have gotten their first and second shots (as of midnight Korea Standard Time, March 1).

93) Hospitalization rate: 2.95% in November → 2.01% in Dec → 0.61% in January.
Bed occupancy rate: 71.9% (5th week of December) → 18.6% (4th week of January) → 44.0% (4th week of February)

94) Starting from February 21, the government extended the business curfew by one hour to 10 p.m., for a period of three weeks.

95) The government announced a plan to phase out preventive measures and return to everyday life if the hospitalization and fatality rates are managed stably and medical system capacities are sufficient (Central Disaster and Safety Countermeasures Headquarters, February 4).

96) The Composite Consumer Sentiment Index (CCSI) fell 1.3p month-on-month to 103.1 in February.

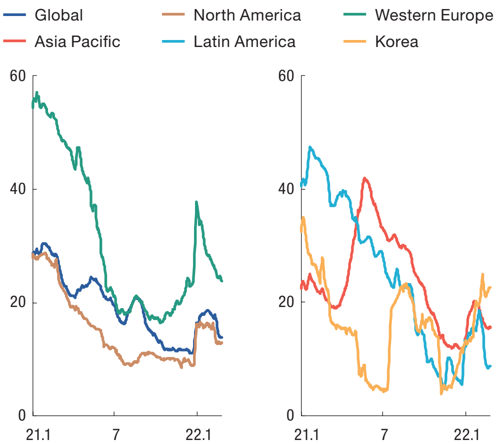
97) In December, service production declined 0.4% month-on-month, affected by stricter restrictions on social gatherings.

98) The recent decline in the mobility index in Korea (based on retail and leisure activities) appears to have been small compared to the levels seen during previous COVID-19 surges (-24.5% in March 2020, -20.1% in September 2020, -23.5% in December 2020, and -3.3% in February 2022; averages during the relevant period).

99) The government is planning to provide relief payments and compensation to small businesses through the supplementary budget.

a delayed recovery of global supply chains, slowing growth of the Chinese economy, and the war in Ukraine as well as developments of COVID-19 at home and abroad, the Bank of Korea will carefully examine their impacts on the domestic economy.

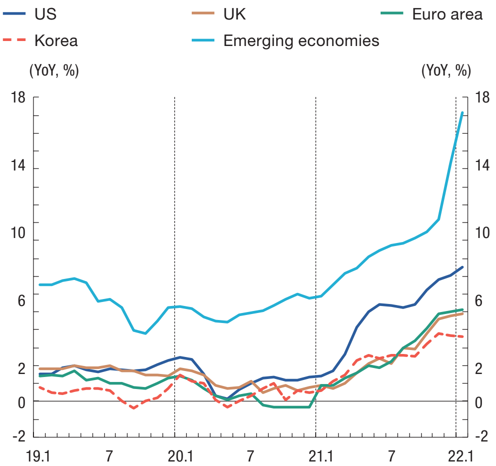
Figure III-2. Effective Lockdown Index[1)2)]



Notes: 1) Effective Lockdown Index(ELI); 7-day moving average
2) As of February 24, 2022
Source: Goldman Sachs

supply disruptions has been delayed. In reflection of this, many countries, including the United States[100)], the euro area[101)] and emerging countries[102)], have seen steep rises in inflation.

Figure III-3. CPI inflation in major economies[1)]



Note: 1) Emerging economies are simple average of India, Brazil, Russia, Mexico and Turkey
Sources: Statistics Korea, BLS, Fred, Bloomberg

Inflationary pressures remained high

(Global inflation)

Since last year, global inflationary pressures have remained at high levels, as energy prices have continued to rise and the resolution of

Energy prices have sustained their upward trend, as the expansion of production in major oil-producing countries has not kept up with recovery in demand, and as concerns about supply contraction have increased, affected by risks related to Ukraine. The rise in grain prices has accelerated, influenced by production setbacks with extreme weather events.[103)]

100) Consumer price inflation in the US recorded 7.5% year-on-year in January 2022 (the highest in 40 years), as goods and service prices continued their upward trend, mainly affected by persistent supply chain disruptions and rising wages, respectively.

101) The CPI in the euro area recorded 5.0% year-on-year in December 2021, and 5.1% in January 2022, the highest levels since statistics began.

102) Brazil, Russia, and Turkey continued to show high upward trends in their inflation in January 2022 (10.4%, 8.7% and 48.7%, respectively, year-on-year), as grocery prices continued to rise. However, consumer price inflation in emerging countries in Asia recorded 2.5% (simple average of Indonesia, Thailand, Malaysia, Vietnam and Philippines), showing relative stability.

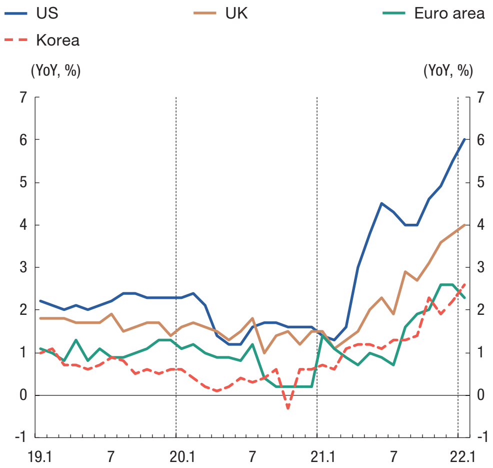
103) Setbacks in grain production stemming from dry weather in the North American region and droughts in Brazil and Argentina are acting to push up prices.

The supply disruptions caused by preventive measures in response to the Omicron variant may ease gradually, but inflationary pressures could increase structurally if conflicts among major countries lead to the reorganization of global supply chains.

In the meantime, goods and service prices have continued to rise, as major countries' preventive measures have not returned to the comprehensive restrictions seen in the past, and as economic activities have continued despite the spread of Omicron.[104] In particular, in the case of the US, wages[105] and housing costs (imputed rent and rent), major factors behind service price hikes, have shown a noticeable upward trend.

With regard to wages and housing costs, it is worth noting that they are structural factors that could have lasting ripple effects due to their high rigidity. This implies that the current high inflation phenomenon could persist for a considerable time[106], spreading broadly across the service and other sectors, unlike in the past when inflationary pressures were due mainly to temporary factors, such as supply disruptions in the goods market, arising from the process of resuming economic activities after shutdowns. In reflection of this, major advanced countries have seen inflationary pressures in their core items[107] expand.

Figure III-4. Core inflation in major economies



Sources: Statistics Korea, Fred, ONS, Eurostat

(Domestic Inflation)

Domestic inflation is also running high, above the 2% target, affected by such developments in global inflation. While food and petroleum product prices are continuing to rise, core inflation (excluding food and energy prices) shows steeper rise mainly led by personal services (e.g. dining out) and durable goods. Attention should be paid to the likelihood that domestic inflation going forward will be exposed to upside risks including a surge in energy prices resulting from the Ukraine crisis, sustained growth in food prices and an expansion in demand following consumption recovery.

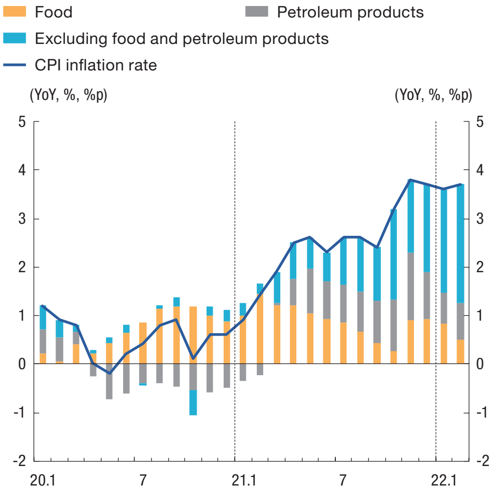
104) Retail sales in the US rose 3.8% month-on-month in January 2022 (-2.5% in December 2021), showing a relatively favorable trend amid the spread of the Omicron variant and high inflation.

105) In case of the US, the shortage of labor supply continued, resulting in a continued high upward trend in the average hourly wage, rising 0.7% month-on-month in January 2022 (0.4% in November and 0.5% in December 2021).

106) However, some presented opinions that, although consumer price inflation has remained at high levels, inflation could stabilize if supply chains and inventory issues are addressed, considering that the rise in new car prices, which had led price increases in the US, has moderated and the semiconductor supply issue has been resolved recently.

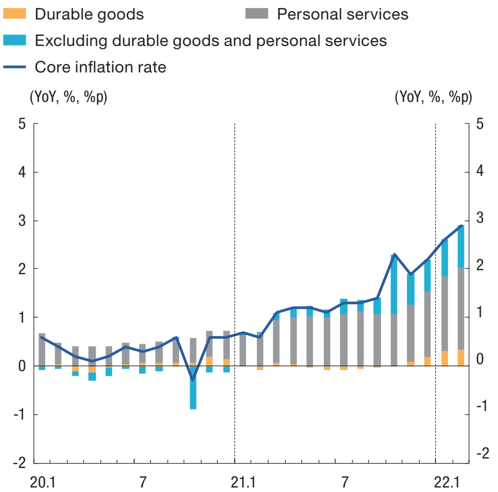
107) Core inflation has been on the rise. In January 2022, core consumer price inflation in the US (excluding energy, food and beverages, year-on-year) recorded 6.0% while that in the euro area stood at 2.3% (year-on-year).

Figure III-5. CPI inflation in Korea and contribution by product



Source: Statistics Korea.

Figure III-6. Core inflation in Korea and contribution by product



Source: Statistics Korea.

Amid the recent expansion of inflationary pressures across a wide range of items, another possible development that cannot be ruled out is sustained inflation above the target level causing instability in inflation expectations, resulting in the recent high inflation to persist for a long time through wage-price dynamics. Therefore, the developments of risks associated with inflation will be closely monitored going forward, while paying close attention to wage pressures following an increase in inflation expectations.

Progress of monetary policy normalization by major central banks and its impact on financial markets

In reflection of the economic recovery and high inflation, major central banks are normalizing accommodative monetary policies that had been implemented. Financial markets at home and abroad are seeing a significant jump in long-term market rates and a drop in stock prices, affected by the normalization process.

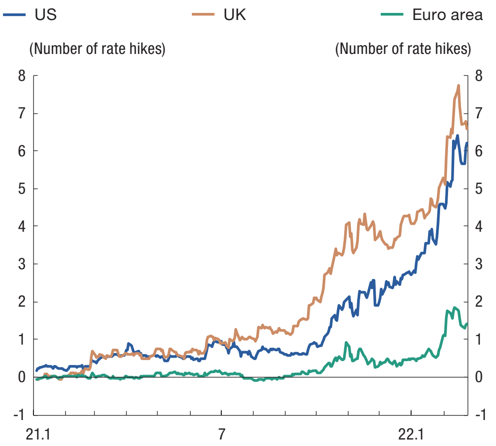
As the global economy sustains its pace of recovery while global inflation accelerates and the high rate of inflation is expected to continue for a longer period than previously expected, a greater number of countries have began reducing the degree of monetary accommodation[108], with major central banks giving stronger signals for early reduction. The US Federal Reserve stated at its December FOMC meeting its plan to speed up the pace of tapering, and at its January meeting the possibility of raising the federal funds rate in March.[109] In addition, since Chair Powell during the press conference did not rule out the possibility of raising

108) Since November 25, 2021, not only the UK (40bp) but also Norway (25bp), Brazil (300bp), Hungary (130bp) and Czech Republic (175bp) have raised their policy rates.

109) The FOMC statement said "with inflation well above 2 percent and a strong labor market, the Committee expects it will soon be appropriate to raise the target range for the federal funds rate."

the policy rate at every meeting in 2022 or of a 50 basis point increase[110)], financial markets assess a high likelihood of seeing an accelerated pace of monetary policy normalization by the US central bank. The European Central Bank maintained its current policy stance including keeping the benchmark rate unchanged, but flagged at the press conference the possibility of prolonged high inflation and related concerns[111)], thereby enhancing the expectations for a rate hike. The Bank of England raised its policy rate at the February Monetary Policy Committee once again, following a hike in December, while deciding to reduce its asset holdings and implying the possibility of additional rate hike.[112)] As major central banks have signalled monetary policy normalization is in full swing, financial markets are adjusting the outlooks for the number of policy rate hikes upward during this year.

Figure III-7. Expectations for policy rate hikes by major central banks in 2022 implied in interest rate futures



Note: 1) (Interest rate implied in interest rate futures reaching maturity at 2022-end - interest rate implied in interest rate futures reaching maturity at 2021-end) ÷0.25

Source: Bloomberg.

The international financial markets have seen heightened volatility in interest rates and stock prices affected by the movements of monetary policy normalization by major central banks, with long-term market rates rising and stock prices falling. In EMEs, risk aversion appears to have strengthened[113)] owing to an increase in financial market volatility.

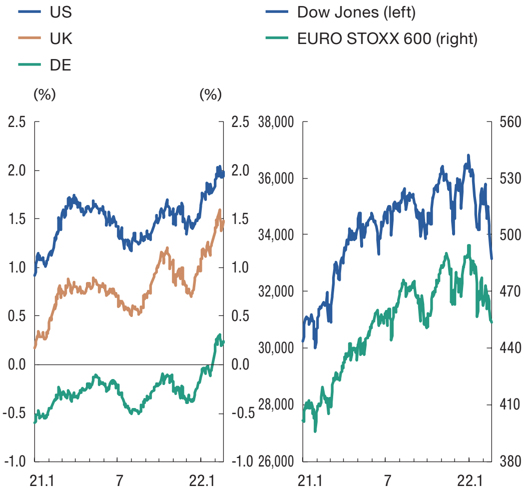
110) Given that the possibility of raising the federal funds rate at every FOMC meeting and more aggressively than the market consensus (25bp raise per quarter) was not denied, his remarks were assessed as hawkish.

111) The statement that all Governing Council members showed concerns over the inflation rate in December last year and January this year, and that the upside risks to inflation are expected to continue for a few months in the short run, were assessed as hawkish by market participants.

112) The Monetary Policy Summary included a statement that further tightening of monetary policy would depend on the medium-term inflation outlook, but if the current economic conditions continue, further measures (e.g. additional interest rate hikes) would be taken.

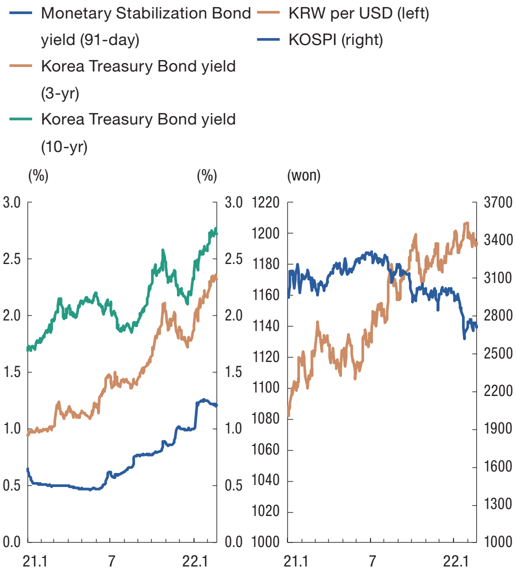
113) The EMBI+ treasury bond spread, indicating credit risks of EMEs, rose from 391.1bp on November 24, 2021 to 457.8bp on February 23, 2022.

Figure III-8. Long-term market interest rates[1] and stock prices in major economies



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

Figure III-9. Korea Treasury bond yields, KRW per USD exchange rate and stock prices



Sources: Bank of Korea, Korea Financial Investment Association, Koscom Corporation.

In domestic financial markets, long-term market rates soared while stock prices underwent a significant adjustment, mainly in reflection of a diminution of accommodative financial conditions at home and abroad. Long-term rates rose due to a rise in treasury bond yields in major countries and concerns over supply and demand of Korea Treasury Bonds, following discussions on a supplementary budget. Stock prices declined as investor sentiment contracted from weakening risk appetite in domestic and global financial markets. The Korean won/US dollar exchange rate climbed owing to concerns over faster monetary policy normalization by the US Federal Reserve and heightened geopolitical risks surrounding Ukraine.

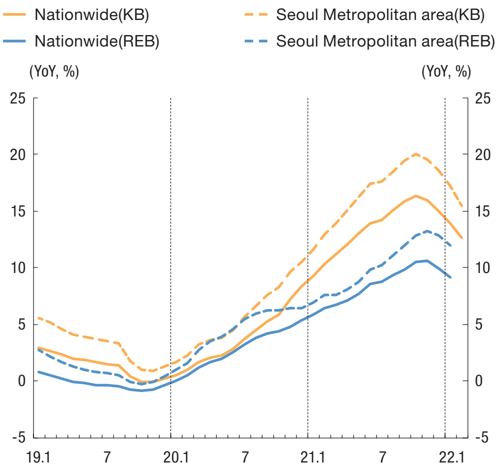
Going forward, the pace of monetary policy normalization in major economies and the changes in market expectations toward it are expected to affect financial markets at home and abroad. However, given Korea's solid external soundness and strong demand for domestic securities by foreign investors, massive capital outflows leading to financial market unrest is not very likely. Nevertheless, if monetary policy normalization in major economies accelerates at a substantially faster pace than previously expected, due to for example prolonged global inflation, the possibility of high financial market volatility cannot be ruled out. In this regard, close attention must be paid to related risk factors.

Housing market and household debt conditions

Despite the recent slowdown of growth in housing prices and household debt, it is assessed that financial imbalance risks still need to be reduced in terms of their underlying trend, given that the buildup of the risks has been continuous and considerable as the increased leverage from excessive borrowings by economic agents have been concentrated in asset markets.

Housing sales prices have slowed after having exhibited sharp growth, with the volume of housing transactions[114] also declining considerably, as the government's tightening of lending regulations and interest rate hikes caused expectations for price growth[115] and purchase sentiment[116] to weaken significantly. This is assessed to be reflective of a deterioration in funding conditions for home buyers, and the subsequent rise in downward pressures on housing prices, amid expanding perception that housing prices have already reached high levels. However, while considerable time will be needed to ease the concerns over supply shortages, which has been one of the leading factors of housing price growth, potential housing purchase demand is temporarily suppressed due to tightened lending regulations, remaining as a factor of potential instability for future housing price developments.[117] Given that housing sales prices are affected by various factors such as supply and demand conditions, funding conditions and government policies, and that there are high uncertainties surrounding the development of those factors, housing market conditions should be assessed over a longer timeframe.

Figure III-10. Housing sales price growth



Sources: Korea Real Estate Board, KB Kookmin Bank

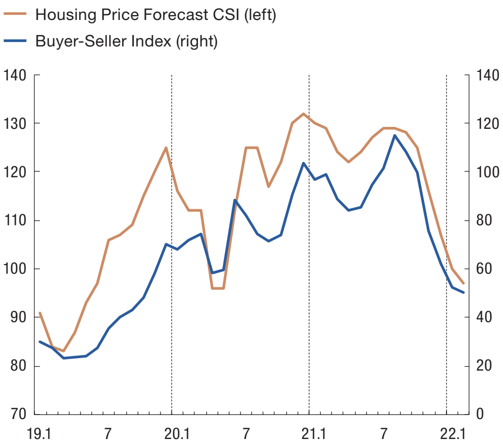
114) The nationwide housing transaction volume (monthly average) in the fourth quarter last year dropped sharply from a year earlier (117,000) to 65,000, and posted 42,000 in January, the lowest level since July 2013 (40,000).

115) The housing price forecast CSI stood at 97 in February, declining for six consecutive months from 129 in August last year. This indicates that survey respondents forecast housing prices to stand lower than current levels in one year.

116) The Buyer-Seller Index for housing nationwide recorded 50.1 in February, posting the lowest figure since October 2019 (48.0), indicating that sellers outnumbered buyers.

117) According to a survey on future housing prices announced recently, a higher number of market experts forecast housing prices to rise owing to supply shortages and change in policies after the presidential election, while a greater number of realtors answered that prices would decline due to lending regulations and constraints caused by sales prices (KB Real Estate Report 2020).

Figure III-11. Housing price forecast CSI and Buyer-Seller Index

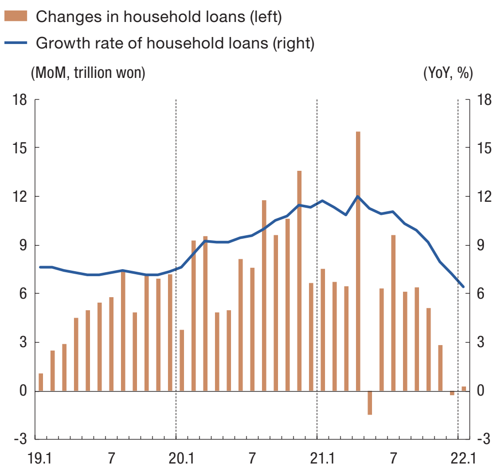


Sources: Bank of Korea, KB Kookmin Bank.

The growth of household lending has also decelerated recently, affected by a mix of factors such as management of household lending by the government and financial institutions[118], a rise in lending rates, and sluggish housing transactions. As for housing-related loans, although the demand for leasehold(*jeonse*)-associated funds continued, it exhibited a narrower margin of growth due to slowing housing sales transactions. Other loans including unsecured loans declined by a wider margin, affected by a cut in the loan limit and a rise in lending rates. Household lending is expected to continue slowing for the foreseeable future considering the government's stance toward household debt management. However, amid households' still high demand for loans, there is also a possibility of seeing a recovery in fund demand for investment purposes, depending on future developments in the housing market and the recovery of the stock market in line with COVID-19 developments.

Furthermore, in past experience banks aggressively increased their exposures to corporate loans when regulations on household lending were tightened, causing financial vulnerabilities to escalate. Therefore, enhanced monitoring might be needed with regards to the recent growth in corporate lending related to commercial real estate.[119]

Figure III-12. Household loans[1] changes and growth rate



Note: 1) Including mortgage transfers; based on depository institutions.

Source: Bank of Korea.

Although household debt and housing prices have recently been exhibiting a slowing pace of growth, there are considerable uncertainties surrounding whether this will be sustained

118) The Financial Services Commission is planning to incrementally tighten the borrower-based DSR regulation and manage the rate of household debt growth at the 4 to 5% level within this year.

119) Lending related to facilities investment provided to property rental businesses increased rapidly since the second half of last year and sustained its steep rise into January this year, partly due to the continued commercial real estate transactions (31,000 in October → 33,000 in November → 35,000 in December 2021).

for a significant period of time in terms of the underlying trend, amid the possibility of excessive growth in other lending as a balloon effect of tightened regulations on household lending. Therefore, continued attention should be paid to the risks associated with the build-up of financial imbalances, while maintaining close monitoring of related indicators for now.

3. Future Monetary Policy Operational Directions

Base Rate Operations

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

The Bank of Korea will appropriately adjust the degree of monetary policy accommodation, as the Korean economy is expected to continue its sound growth and inflation to run above the target level for a considerable time, despite underlying uncertainties over the virus. In this process, the Bank will judge when to further adjust the degree of accommodation while thoroughly assessing developments related to COVID-19, the effects of Base Rate raises, monetary policy changes in major central banks, the risk of a buildup of financial imbalances, and trend of growth and inflation.

Enhancement of monetary policy effectiveness

The Bank of Korea will continue its efforts to enhance monetary policy effectiveness. First, the Bank will work continuously to reinforce its policy communication to increase the transparency and predictability of monetary policy. In the course of appropriately adjusting the monetary policy stance, the Bank will reduce the accommodation of monetary policy, which had been exceptionally accommodative in response to the COVID-19 pandemic, in tandem with economic improvement. Throughout this process, it will devote efforts to bring market expectations of economic agents in line with its policy intention, by smoothly communicating its assessment of macroeconomic and financial stability conditions and other important considerations in its monetary policy decisions. In addition, given that the recent high rate of inflation is expected to continue for a considerable period of time, and the inflation expectations of the general public have risen, the Bank will closely examine the price related conditions to achieve its inflation targer and faithfully communicate its assessments with the public and market participants. Furthermore, the Bank will continuously seek ways to effectively operate monetary policy instruments, including the Bank Intermediated Lending Support Facility and open market operations. Meanwhile, the Bank will also continue its efforts to examine and improve the current monetary policy framework over a medium- to long-term horizon, considering the changing conditions for operating monetary policy given rapid shifts in economic conditions, and expectations for an expanded role of the central bank. The Bank of Korea will also analyze the structures of the economy, industries, and the labor market in the post-pandemic era, as well as technological and environmental changes, and strengthen its research on their implications for monetary policy.

Promotion of financial and foreign exchange market stability

The Bank of Korea will continue its efforts to maintain the stability of the financial and foreign exchange markets. Domestic and international financial markets could respond sensitively to a number of factors such as developments associated with the pandemic at home and abroad, the consequent changes visible in economic and inflation trends, the pace of monetary policy normalization by major central banks, and evolution of geopolitical risks. With the above taken into consideration, the Bank will closely monitor major price variables and the flow of funds in the market. The Bank will also pay attention to the possibility of sudden adjustments in risk appetite and a rapid shift in flows of global investment funds in response to changes in the monetary policy stances of major central banks including the US Federal Reserve. The Bank will implement market stabilization measures in a timely manner, should concerns over market turbulence heighten due to changes in financial and economic conditions at home and abroad.

Maintenance of financial system stability

The Bank of Korea will examine the effects of changes in financial and economic conditions at home and abroad, including monetary policy normalization by major central banks and developments of geopolitical risks, on the stability of financial system, and enhance its early warning activities concerning potential financial sector risks. In particular, it will comprehensively examine the possibility of external or internal shocks causing adverse effects through heightened financial market volatility, asset price adjustments and deleveraging, while paying close attention to the risks of vulnerable borrowers facing aggravated debt service burdens in the course of normalization of accommodative financial conditions.

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