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### 2020 Annual Report

Bank of Korea

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ISSN 0067-3706

# 2020 Annual Report

2021. 3



# BANK OF KOREA

## **2020** **Annual Report**

2021. 3

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**「 Bank of Korea Act 」**

Article 102 (Publication of the Annual Report)

- ① The Bank of Korea shall, within three months after the end of each fiscal year, submit to the government its annual report and publish it. This annual report shall outline its business status, its monetary policy and the government's foreign exchange policy, and analyze the economic and financial situation of the country during the fiscal year.
- ② The annual report in Paragraph(1) shall be approved by a resolution of the Monetary Policy Board.

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## **Purpose of Establishment of Bank of Korea**

- To contribute to the sound development of the national economy by pursuing price stability through the formulation and implementation of efficient monetary and credit policies
- To pay attention to financial stability in carrying out monetary and credit policies



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## Preface by the Governor



As the central bank responsible for implementing Korea's monetary and credit policies, the Bank of Korea has dedicated its utmost efforts to achieving price and financial stability, thereby contributing to the sound development of the national economy.

During 2020, the Korean economy suffered great hardships through the global spread of COVID-19 and the persistence of the consequent impact. Lockdown measures across many countries and a decline in global trade drove the world economy to contract to an unprecedented level and the domestic and overseas financial markets to sharply fluctuate. The domestic economy experienced negative growth for the first time since the Asian financial crisis due to the ongoing sluggishness of private consumption resulting from the prolonged implementation of social distancing. Employment conditions significantly deteriorated, especially in the face-to-face service sector. Prices increased at a slow pace at a range hovering around 0.5 percent, influenced by a decline in global oil prices and sluggish demand.

Under these circumstances, the Bank of Korea adopted an accommodative monetary policy through various policy instruments in order to ease anxiety in the financial market and to prevent a dramatic con-



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traction in the real economy. It lowered the Base Rate to a historic low of 0.5 percent, by cutting 0.75 percentage points across two occasions in March and May, and also expanded the liquidity supply for the Korean won and foreign currency by purchasing government bonds and signing a currency swap agreement with the U.S. Federal Reserve. In a bid to provide support to small and medium-sized companies and small business owners affected by COVID-19, the Bank significantly increased the total ceiling of the Bank Intermediated Lending Support Facility. As part of efforts to stabilize the credit market, it also implemented an unprecedented measure to provide funds to set up a special purpose vehicle (SPV) that would manage purchases of corporate bonds and commercial paper. It also continued to exercise vigilance against the possibility of growing risks related to financial stability, such as the growth of leverage in household and corporate sectors and an over concentration of capital in asset markets, while striving to explore countermeasures in concert with the government and related agencies.

Meanwhile, the Bank of Korea completed the development of its next-generation BOK-Wire+ system, a project initiated in 2015, and significantly strengthened the safety and efficiency of the system. In addition, the Bank actively conducted research into institutional conditions and technological feasibility, which will serve as the foundation for the issuance of a central bank digital currency (CBDC) so as to anticipate future changes in the payment and settlement environment. In terms of the organization's internal management, the Bank's medium- and long-term development strategy, BOK 2030, has been established to promote specific measures to support innovation in phases, with the aim of proactively responding to rapidly changing economic paradigms.

In 2021, the Korean economy is expected to recover gradually, led by exports and investments. Responding to the high uncertainty regarding the growth path due to developments of the COVID-19 pandemic and the status of vaccine distribution, the Bank of Korea will maintain its accommodative monetary policy stance until the domestic economy is projected to continue on a trend of stable recovery. In this process, continuous attention will be given to changes in financial stability conditions, such as fund flows into the asset market and an increase in household debt. In response to changes in policy implementation conditions and the discussion on expanding the role of the central bank,

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the current operating system of monetary policy will be reviewed, while diligent efforts will be placed on strengthening policy communication.

This annual report provides an analysis of the financial and economic conditions in Korea and is a systematic presentation of the operation and management conditions of the Bank of Korea during the year 2020. It is our hope that this report will help to broaden the public's understanding of the Bank of Korea's roles and the situation facing the Korean economy.

March 2021  
Lee, Juyeol  
Governor  
Bank of Korea

A handwritten signature in black ink, reading "Juyeol Lee". The signature is written in a cursive, flowing style with a large initial 'J' and 'L'.



# Monetary Policy Board



<b>Chairman</b>	Lee, Juyeol
<b>Member</b>	Koh, Seungbeom
<b>Member</b>	Lim, Jiwon
<b>Member</b>	Cho, Yoon-Je
<b>Member</b>	Suh, Young Kyung
<b>Member</b>	Joo, Sangyong
<b>Member</b>	Lee, Seungheon



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# I

## Overview of Bank of Korea

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## 1. History and Mission

The Bank of Korea was established on June 12, 1950, following the passage of the Bank of Korea Act on May 5 of that year, to serve as the central bank of Korea with the purposes of stabilizing the value of the national currency, promoting the soundness of the banking and credit systems, and developing the Korean economy. This took place against a backdrop of hyperinflation and economic turmoil in the years immediately after Korea's liberation from Japan. The Bank began initially as a government-invested organization with paid-in capital of 1.5 billion won, but was later reorganized in 1962 as a non-capital special organization in accordance with the first revision of the Bank of Korea Act.

At the time of its enactment, the Bank of Korea Act specified the Bank's role as the central bank in devising and implementing monetary, credit and foreign exchange policies. In 1962, however, the Act was revised in a direction that enabled the Bank to actively support the government-led economic growth initiatives. Its top decision-making body, the Monetary Policy Board, was accordingly renamed the Monetary Board of Korea, while the number of its government-nominated members increased significantly. In addition, most of its functions related to the formulation of foreign exchange policy and management of the foreign exchange reserves were transferred to the government.

From the late 1980s, in line with the promotion of financial liberalization, there were active discussions regarding the expansion of

Figure I-1. The First Monetary Policy Board Meeting (June 5, 1950)



Source: Bank of Korea



the central bank's role in maintaining price stability as well as its independence, leading to amendments of the Bank of Korea Act in 1997 and 2003. The reforms in the 1997 amendment included the introduction of an inflation targeting regime and the restoration of the name Monetary Policy Board, while all Board members were given the position of standing member. In addition, the position of Board chair was transferred from the Minister of Finance and Economy to the Governor of the Bank. This change served to enhance the neutrality and autonomy of the Bank. However, the authority to supervise banks moved from the Bank to a newly-established joint financial supervisory institution. The 2003 revision of the Act meanwhile stipulated the operation of inflation targeting from a medium-term perspective, while the Bank was delegated the additional functions of oversight and monitoring of the payment and settlement systems.

In addition, the Senior Deputy Governor of the Bank was given the position of ex-officio member of the Monetary Policy Board, and the portion of the budget subject to prior government approval was narrowed from encompassing all expenditures to covering only expenditures classified as salary.

The global financial crisis provided an impetus for accelerated discussions of legislative amendments to strengthen the Bank's function of financial stabilization, so as to establish conditions to facilitate the prevention of financial instability and the implementation of swift countermeasures in response to financial crises. This led to another revision of the Bank of Korea Act in 2011. The revised Act stipulates the purpose of the Bank as the promotion of price stability through the formulation and implementation of effective monetary policy, with a focus on financial sta-

Figure 1-2. Monetary Policy Board Meeting (August 27, 2020)



Source: Bank of Korea

bility in the process. The Act thus states that the Bank, being in charge of monetary policy, has a mandate for financial stability alongside its primary objective of price stability. Under the revision of the Act in 2012, it was then stipulated that candidates for the post of Governor of the Bank must pass through a National Assembly confirmation hearing process prior to appointment. In addition, the Act was revised in 2018 for the purpose of introducing a system of staggered terms,<sup>1)</sup> which ensures service terms of varying lengths for members of the Monetary Policy Board by adjusting the term lengths of some members, and adding local governments to the list of entities that are subject to the collection of data for the Bank's statistics and economic survey activities.

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1) In accordance with the revision of the Act, the term of members, which is initially recommended by the Governor of Bank of Korea and the Chairperson of the Financial Services Commission, was adjusted to three years from four years (stipulated in Addenda) and the term of a member who is not appointed immediately after the expiration of the predecessor's term shall be deemed to have commenced immediately after the expiration of the predecessor's term so as to maintain the staggered term structure.

## 2. Organization

The Bank of Korea's leadership consists of the following: the Monetary Policy Board, which deliberates and decides on matters related to monetary policy and the operations of the Bank; the executive body, comprising the Governor, the Senior Deputy Governor, the Deputy Governors, the head office divisions, domestic branches, etc.; and the Auditor, whose role is to regularly audit the Bank's business operations.

### A. Monetary Policy Board

The Monetary Policy Board serves as the Bank of Korea's top decision-making body, and maintains the authority to deliberate and decide on matters of monetary policy and the operations of the Bank. The Board is composed of seven members, including the Governor and the Senior Deputy Governor of the Bank as ex-officio members, as well as five appointed members. The five appointed members are individuals with substantial experience or outstanding expertise concerning finance, economics or industry who are appointed by the President of Korea on the recommendation of pertinent organizations<sup>2)</sup> to serve as standing members on the Board.<sup>3)</sup> Board members serve four-year terms,<sup>4)</sup> with the exception of the Senior Deputy Governor whose term is three years, and are eligible for reappointment.<sup>5)</sup> The Governor also serves as the Chair of the Board. The Chair represents the Monetary Policy Board and presides over Board meetings. If the Chair is unable to conduct their duties owing to unavoidable circumstances, a member appointed in advance by the Board serves as acting Chair.

Figure 1- 3. Members of the Monetary Policy Board (as of December 31, 2020)



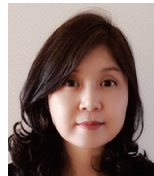
**Lee, Juyeol**

Governor of Bank of Korea, since April 1, 2014  
<Major Work Experience>  
Senior Deputy Governor, BOK  
Deputy Governor, BOK  
Director General, Monetary Policy Dept., BOK



**Koh, Seungbeom**

Recommended by the Governor of Bank of Korea, since April 21, 2016<sup>1)</sup>  
<Major Work Experience>  
Standing Commissioner, FSC  
Secretary General, FSC  
Director, Supervision Policy Division, FSC



**Lim, Jiwon**

Recommended by the Chairman of the Korea Federation of Banks, since May 17, 2018  
<Major Work Experience>  
Managing Director and Chief Korea Economist, J.P. Morgan  
Member, National Economic Advisory Council  
Chief Researcher, Samsung Economic Research Institute



**Cho, Yoon-Je**

Recommended by the Minister of Strategy and Finance, since April 21, 2020  
<Major Work Experience>  
Emeritus Professor, Sogang Univ.  
Advisor to the President on Economics Policy  
Chef Economist, IMF/WB



**Suh, Young Kyung**

Recommended by the Chairman of the Korea Chamber of Commerce and Industry, since April 21, 2020  
<Major Work Experience>  
Director general, SGI, Korea Chamber of Commerce and Industry  
Deputy Governor, BOK  
Director, Financial Markets Dept., BOK



**Joo, Sangyong**

Recommended by the Chairman of Finance Services Commission, since April 21, 2020  
<Major Work Experience>  
Professor, Konkuk Univ.  
Member, National Economic Advisory Council  
Research Fellow, KIEP



**Lee, Seungheon**

Senior Deputy Governor of Bank of Korea, since August 21, 2020  
Major Work Experience  
Deputy Governor, BOK  
Director General, International Dept., BOK  
Press Officer, BOK

Note: 1) After serving a four-year term (from April 21, 2016, to April 20, 2020), having been appointed on the recommendation of the Chairman of the Financial Services Commission, the member was appointed again, this time on the recommendation of the Governor of the Bank of Korea, on April 21, 2020, to serve a three-year service term.

Source: Bank of Korea

The Board reviews and resolves decisions regarding the Base Rate, the issuance of Bank of Korea notes, loan and deposit policies, open market operations, payments and settlements, and inspections of financial institutions. It also deliberates and decides on general issues concerning the management of the Bank, including its budget, settlement of accounts, organizational framework, staff remuneration policy, etc. Except in special cases, resolutions are adopted through simple majority votes among members present at meetings, requiring the attendance of at least five members as a quorum.

Board plenary meetings are divided into regular meetings, normally scheduled on the Thursdays of the second and fourth weeks of every month, and ad hoc meetings convened by the Chair if deemed necessary by the Chair or at the request of at least two members.

In 2020, the Board held 28 plenary meetings, consisting of 24 regular meetings and four ad hoc meetings. In addition, it held 87 consultation meetings for purposes such as exchanges of opinions among members on financial and economic conditions, discussions of major current issues and preliminary deliberations on items to be proposed in the

plenary meetings, as well as 16 meetings for deliberations on the Bank's budget and settlement of accounts. In 2020, the Board held a total 131 meetings, which was more than in other years due to the need for proactive discussions and urgent decision-making regarding the adjustment of the Base Rate and devising new financial support measures in the course of formulating an aggressive response to COVID-19.

**Table 1 - 1. Number of Monetary Policy Board Meetings**

Year	Plenary	(number)				Total
		Regular	Ad-hoc	Consultations	Deliberations	
2018	26	24	2	81	14	121
2019	25	24	1	78	16	119
2020	28	24	4	87	16	131

Source: Bank of Korea

The Board announces the dates of its plenary meetings in advance for the following year. The plenary meetings are held a total of 24 times throughout the year, including eight sessions for the determination of the monetary policy direction and four sessions devoted to Financial Stability Meetings. The minutes of each Board plenary meeting are recorded and stored in written form. In addition, in order to strengthen the transparency and accountabil-

- 2) Recommendations are put forward by the Minister of Strategy and Finance, the Governor of the Bank of Korea, the Chairperson of the Financial Services Commission, the Chairperson of the Korea Chamber of Commerce of Industry or the Chairperson of the Korea Federation of Banks.
- 3) Following the revision of the Bank of Korea Act on December 31, 1997 (enforced on April 1, 1998), all appointed members were given the position of standing member, in contrast to their previously temporary roles, so as to enhance their accountability for and expertise on monetary policy.
- 4) In accordance with the introduction of staggered terms for the Monetary Policy Board in March 2018, the service term of three years is applicable only to prospective members who were appointed on the recommendation of the Governor of the Bank of Korea and the Chairperson of the Financial Services Commission.
- 5) The Governor and the Senior Deputy Governor of the Bank of Korea may be reappointed only once each to serve a consecutive term.

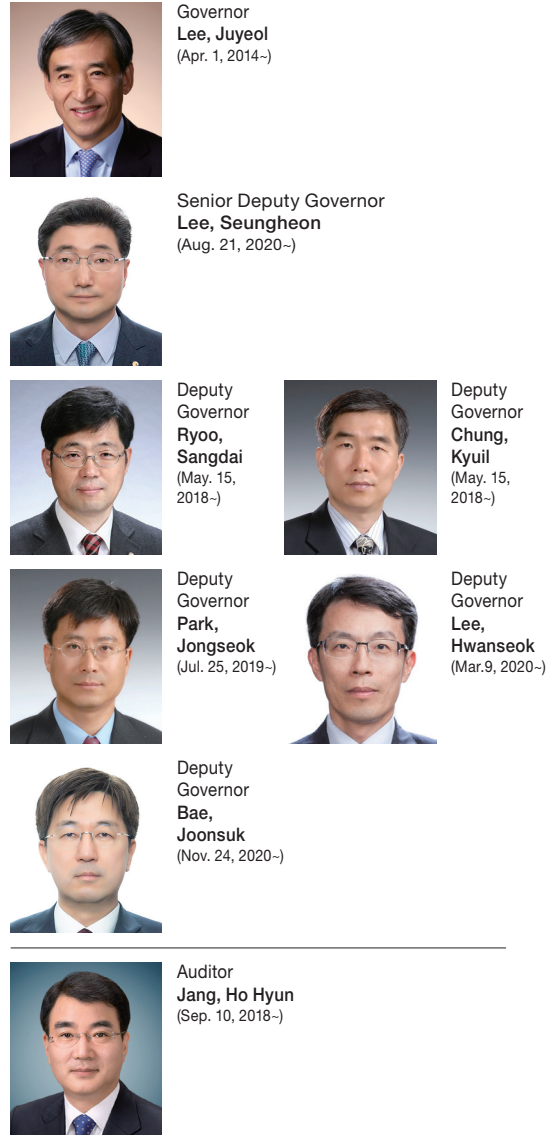
ity of the Bank's monetary policy, the minutes of the meetings to determine its monetary policy decisions are publicly disclosed on the first Tuesday following two weeks after a meeting.

## B. Executive Officers and Auditor

The executive officers of the Bank of Korea include the Governor, the Senior Deputy Governor, and five Deputy Governors. The Governor is appointed to a four-year term by the President of Korea following deliberation by the Cabinet and a National Assembly confirmation hearing,<sup>6)</sup> and may be reappointed once to serve a consecutive term. The Senior Deputy Governor is chosen by the President for a three-year term upon the Governor's recommendation, and may also be reappointed once to a consecutive term. As Chair of the Monetary Policy Board, the Governor participates in the Board's decision-making process and executes the monetary policy as set by the Board, while exercising the authority granted to them by the Bank of Korea Act and other legislation as head of the Bank. The Governor is also obligated to notify the Board of matters requiring its attention, and to provide it with data and opinions necessary for its deliberation and decision-making processes. The current Governor, Lee Juyeol, was appointed on April 1, 2014, and was reappointed to serve a consecutive term on April 1, 2018.

The Senior Deputy Governor, as a member of the Monetary Policy Board, participates in the process of decision-making by the Board,

**Figure 1- 4. Executive Officers and Auditor**  
(as of December 31, 2020)



Source: Bank of Korea

alongside the Governor, and assists the Governor in all matters concerning the Bank. If the Governor is unable to conduct their duties owing to unavoidable circumstances, the Se-

6) Required since April 22, 2012, pursuant to the ninth revision of the Bank of Korea Act, a National Assembly confirmation hearing was held for Lee Juyeol, the first Governor of the Bank to be appointed after the revised Act entered into effect.

nior Deputy Governor serves as acting Governor.

The Deputy Governors are chosen by the Governor, and serve three-year terms to assist the Governor and the Senior Deputy Governor.

The Bank employs one Auditor who is appointed by the President upon the recommendation of the Minister of Economy and Finance, and who also serves a three-year term. The Auditor regularly monitors the Bank's operations and reports all findings to the Monetary Policy Board.

### C. Departmental Organization and Responsibilities

As of the end of 2020, the Bank of Korea has 17 departments and ten sub-department offices at its head office, with a subordinate structure of 20 divisions and 146 teams. There are 16 domestic branches of the Bank across Korea, supported by seven regional economy research divisions and 54 teams. There are also five overseas representative offices in operation. As of the end of 2020, the number of Bank employees stood at 2,445.<sup>7)</sup>

The functions of the individual departments, branches, etc., are as follows.

#### Planning & Coordination Department

Develops and promotes management strategies, manages operational risk, manages the organization and its human resources,

formulates the budget and settles accounts, coordinates functions among departments, coordinates and integrates activities of the domestic branches and overseas representative offices, and conducts research into regional economies. It also oversees the management of the minutes of the Monetary Policy Board meetings, of the review of laws and regulations, and of digital innovation.

#### Communications Department

Coordinates and takes overall charge of communication activities, including the collection of internal and external opinions, performs PR activities, including operating the Bank of Korea Money Museum, manages informational material, prepares the Annual Report and provides economic education to the public.

#### Information Technology Department

Provides information technology services, including the development and operation of the Bank's computer systems, the introduction and maintenance of its electronic data-processing equipment, etc.

#### Human Resources & Administration Department

Administers the management of human resources, the delivery of wages and welfare benefits, the Bank's real estate and facilities management, security, etc.

<sup>7)</sup> This figure excludes 13 persons, including the Governor, the members of the Monetary Policy Board, including the Senior Deputy Governor, the Executive Officers and the Auditor.

**Bank of Korea Academy**

Provides professional education and training for the Bank's employees.

**Research Department**

Conducts analyses of macroeconomic trends and prospects, analyses of industrial trends and research on industrial policies, and analyses of employment and related prospects; suggests the inflation target and performs related research; and develops and analyzes econometric models. It also handles work related to the analysis and forecasting of overseas economic trends.

**Economic Statistics Department**

Organizes, analyzes, and produces economic statistics on the national income, money and finance, the balance of payments, prices, flow of funds charts, input-output tables, national balance sheet, and business management analyses. It also evaluates the quality of the Bank's statistics and operates the Economic Statistics System (ECOS).

**Financial Stability Department**

Carries out the analysis and comprehensive evaluation of financial stability conditions; measures, analyzes and develops models related to systemic risks; analyzes macroprudential policy instruments and their transmission mechanisms; conducts research on banks and non-bank financial institutions; performs research on the overall financial system; and prepares the Financial Stability Report. It also conducts management analysis and inspections of financial institutions.

**Monetary Policy Department**

Drafts the Bank's monetary policy; plans and implements specific policy measures; analyzes the conditions for and effects of monetary policy; conducts research and studies on pending issues related to monetary and credit policy; and prepares the Monetary Policy Report.

**Financial Markets Department**

Implements monetary policy through open-market operations; analyzes and forecasts monetary conditions and interest rates; and analyzes financial market and corporate finance trends.

**Payment & Settlement Systems Department**

Supervises the operation, management, and monitoring of the payment and settlement systems; carries out research and studies into payment and settlement systems; conducts planning and research for electronic finance; promotes financial informatization; and oversees tasks related to loans and deposits, operation of the national treasury, securities, and funds.

**Currency Department**

Carries out the issuance, distribution, and control of currency, as well as research and investigation into currency and banknote issuance systems. It also handles matters related to the mechanization of the banknote issuance process.

## International Department

In charge of planning, research, and analysis in connection with foreign exchange and international finance. It provides services related to the foreign exchange markets and exchange rates; manages foreign reserves and foreign debt; reports on foreign exchange transactions and provides the relevant follow-up management; monitors and examines foreign exchange transactions; and operates the foreign exchange computer network.

## International Affairs Department

Carries out planning and research related to international cooperation; handles exchanges with international financial institutions and central banks; and engages in cooperative efforts on financial information.

## Reserve Management Group

Conducts planning for the Bank's foreign currency asset management; manages the overseas operations and risks of its foreign currency assets; and analyzes their management performances.

## Economic Research Institute

Oversees medium- to long-term research on currency and finance, financial systems, international banking, international trade, macroeconomics, industry, labor, and the North Korean economy, while engaging in research exchanges with other countries.

## Audit Department

Audits the operations of the Bank of Korea.

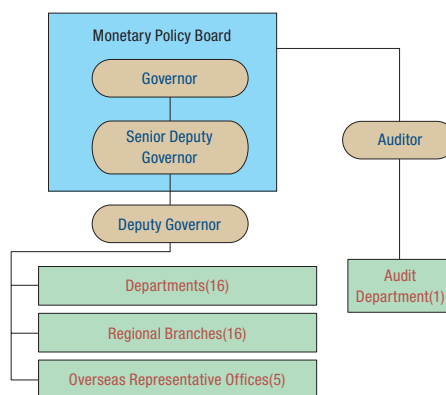
## Regional Branches

Conduct research on the regional economies, as well as business related to currency supply and demand, the receipt of Treasury funds, and securities management.

## Overseas Representative Offices

Undertake research on finance and the economies of their host countries and neighboring regions of interest; information gathering; and overseas management of the foreign currency assets of the Bank of Korea.

Figure 1 - 5. Organization



Source: Bank of Korea





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# II

## Economic Trends

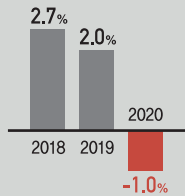
1. Real Economy	15
2. Financial and Foreign Exchange Markets	28

# Major Economic Indicators in 2020

## Growth

**-1.0%**

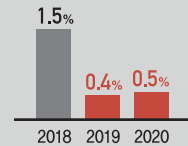
Real GDP Growth Rate



## Prices

**0.5%**

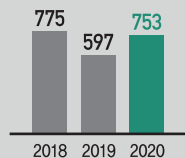
CPI Inflation



## Current Account

**753**

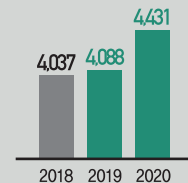
\$ hundred million (surplus)



## Foreign Exchange Reserves (as of year-end)

**4,431**

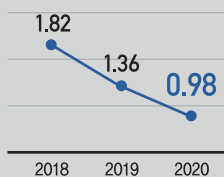
\$ hundred million



## Interest Rate (as of year-end)

**0.98%**

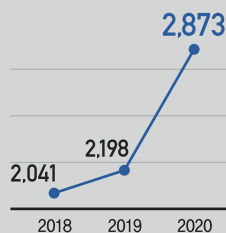
KTB(3y)



## Stock Index (as of year-end)

**2,873**

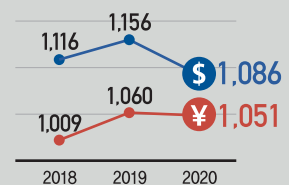
KOSPI



## Exchange Rate (as of year-end)

**\$ 1,086** ₩/\$

**¥ 1,051** ₩/100¥



## 1. Real Economy

In 2020, the world was heavily impacted by the spread of COVID-19 and each country's measures to combat the virus. At the beginning of the year, the infectious disease rapidly spread across the world, driving the WHO to declare COVID-19 to be a global pandemic on March 11, 2020. The number of newly confirmed cases of COVID-19, which had been increasing, showed signs of slowing owing to the intensive lockdowns implemented by numerous countries around April, but rose again in the wake of the resumption of economic activities starting in May. Thereafter, as the pandemic resurged ahead of the winter season, particularly in the U.S. and Europe, the

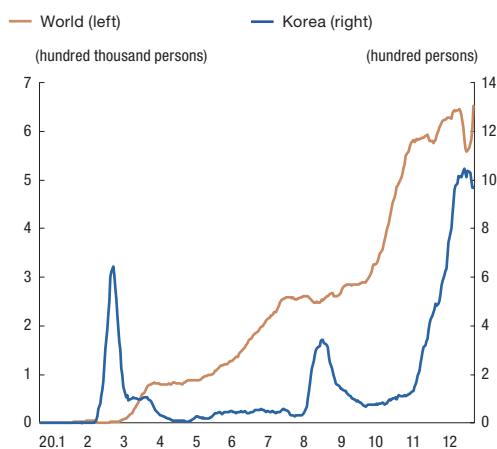
number of newly confirmed cases increased sharply starting in October 2020. In Korea, the infectious disease spread significantly in February, but later slowed following a range of measures, including social distancing. Since then, community-acquired infections continued sporadically, and as November passed, infections began to proliferate in earnest in the winter season.

### A. Global Economy

#### Contraction of the Global Economy

During 2020, the global economy contracted to an unprecedented level as COVID-19 spread since the beginning of the year.<sup>8)</sup> The decline in global GDP is estimated to be at around four percent, which is markedly higher than the decline seen during the global financial crisis in 2009.<sup>9)</sup> This is because economic activity centering on services became sluggish due to social distancing, restrictions on movement, and worsening consumer sentiment in many countries, while cross-border exchanges of materials and people, including overseas travel, dropped significantly.

Figure II - 1. Number of Newly Confirmed COVID-19 Cases<sup>1)</sup>



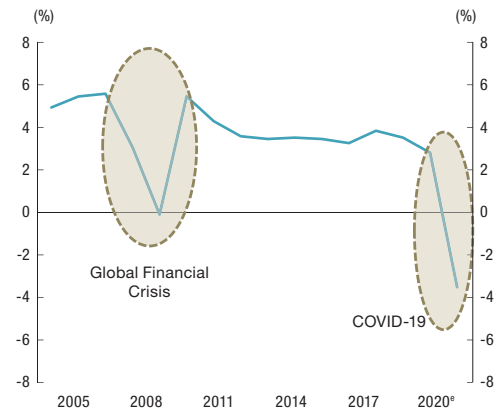
Note: 1) Based on seven-day moving averages.

Source: Worldometer

8) A detailed explanation of economic trends during 2020 can be found in the Monetary Policy Report (Quarterly) published by the Bank of Korea.

9) From 1980 when IMF statistics began through to the previous year, the only year in which the global economy posted a negative growth rate was 2009 (minus 0.1 percent). The growth rate of the global economy in 2020 is estimated to have been minus 3.5 percent by the IMF, minus 3.7 percent by the World Bank, and minus 3.4 percent by the OECD.

**Figure II - 2. Changes in Global Economic Growth**

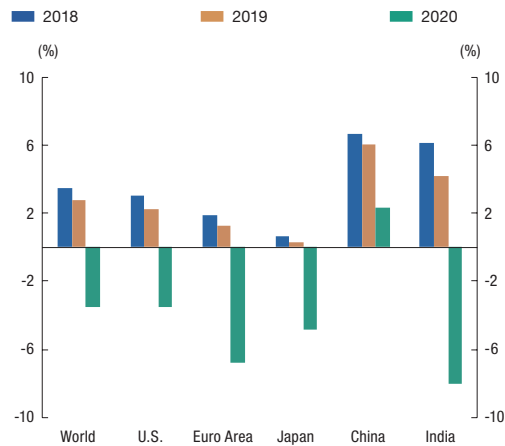


Source: IMF

In the second half of 2020, the COVID-19 shock appeared to ease slightly compared to the first half, but to varying degrees in each country, depending on the country's fiscal capacity, infection spread patterns, and major export items. The U.S. posted a relatively rapid consumption-based recovery on the back of massive economic stimulus packages. In the euro area, the economy rebounded, also with a focus on consumption, and then shrank again due to strengthened containment measures following the resurgence of COVID-19 in the winter. In the case of Japan, its economic recovery was tepid as its consumption recovery was slow compared to other advanced countries. Among emerging countries, China's economy was sluggish at the beginning of the year due to the COVID-19 crisis, but it later showed a rapid recovery, boosted by successful measures to combat the virus and early normalization of production activities. On the other hand, India suffered a greater economic

contraction driven by stronger lockdown measures. In ASEAN, exports improved mainly in electronic products, but domestic demand was sluggish.

**Figure II - 3. Growth Rate of World Economy and Major Countries<sup>1)</sup>**



Note: 1) The growth rates for the global economy and India in 2020 are based on IMF estimates (January 2021).

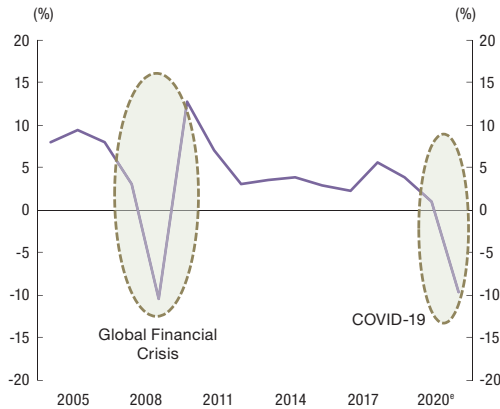
Sources: Statistics agencies of individual countries, IMF

### Sluggish World Trade

World trade in 2020 also notably slowed<sup>10)</sup>. Trade in commodities recovered rapidly from May, when major countries resumed their economic activities, driven by improved consumption of commodities in advanced countries, centering on exports to Asian regions, such as China, but the services trade continued to be sagging as personnel exchanges were restricted due to tightened immigration control.

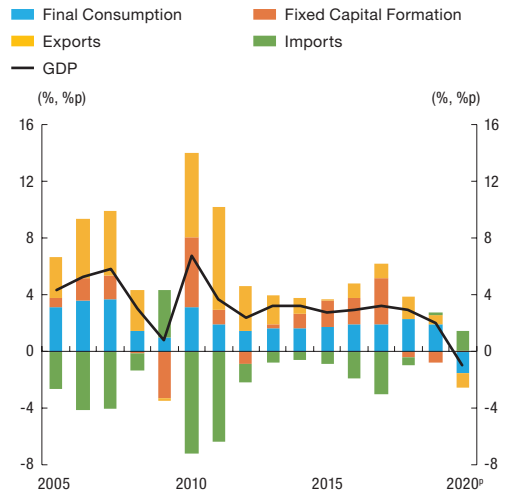
10) The year 2020 is only the third year since 1980 in which world trade has declined, following 1982 (minus 1.6 percent) and 2009 (minus 10.4 percent). The decline in 2020 is estimated to be comparable to that of 2009 (IMF minus 9.6 percent, World Bank minus 9.5 percent, OECD minus 10.3 percent).

Figure II- 4. Changes in World Trade Growth<sup>1)</sup>



Note: 1) Based on trade of goods and services.  
Source: IMF

Figure II- 5. GDP Growth and Contributions by Expenditure Item (in real terms)



Source: Bank of Korea

## B. Domestic Economy

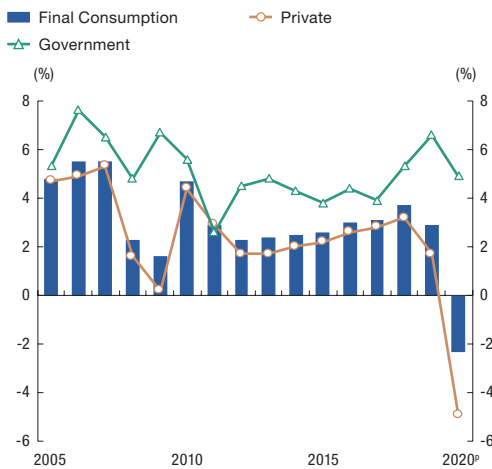
### (1) Economic Growth

#### First Negative Growth Since 1998 Asian Financial Crisis

In 2020, the Korean economy witnessed a negative GDP growth of 1.0 percent in real terms for the first time since the minus 5.1 percent seen during the 1998 Asian financial crisis, due to sagging consumption and exports following the spread of COVID-19, which was also much lower than the 0.8 percent recorded during the 2009 global financial crisis.

Examining the components of demand, overall consumption decreased by 2.3 percent as private consumption was significantly sluggish despite a continued upward trend in government consumption. Amid deteriorating employment conditions and shrinking consumer sentiment stemming from the protracted COVID-19 pandemic, private consumption, which slightly increased by 0.2 percent even during the global financial crisis, dropped by 4.9 percent due to a sharp decline in the consumption of semi-durable goods, such as clothing, and face-to-face services, as people refrained from going out because of the strengthening social distancing measures.

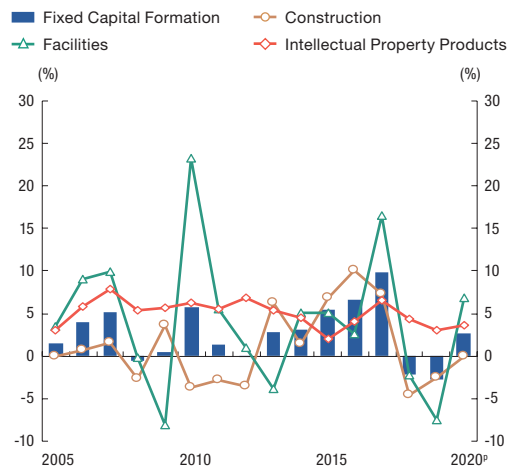
Figure II - 6. Final Consumption (in real terms)



Source: Bank of Korea

Fixed investment increased by 2.6 percent year-on-year with a significant rise in facilities investment, although construction investment declined slightly. Despite the spread of COVID-19, facilities investment, which plunged by 8.1 percent during the global financial crisis, exhibited a high upward trend of 6.8 percent from the previous year, centering on the IT sector, with an increase in non-face-to-face demand and investment in new sectors of economic growth. Construction investment declined by 0.1 percent year-on-year due to the continued trend of adjustment, led by building construction. However, the direct impact of the spread of the infectious disease on construction investment, such as construction disruption, was limited. Buoyed by increased investment in both R&D and other intellectual property products, investment in intellectual property products rose by 3.6 percent.

Figure II - 7. Fixed Capital Formation (in real terms)



Source: Bank of Korea

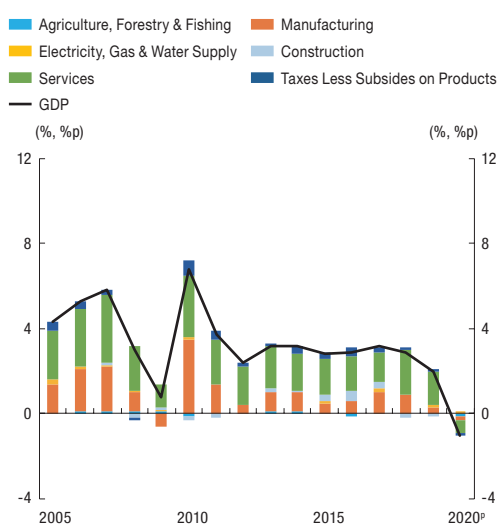
Exports of goods and services in real terms fell by 2.5 percent from the previous year. Despite an increase in the export of IT products, goods exports declined centering on non-IT products, such as automobiles, steel, machinery, and petrochemical products, in the aftermath of the global economic slowdown driven by the spread of the pandemic. Semiconductor exports climbed thanks to swelling non-face-to-face demand, while exports of automobiles dropped in terms of both completed automobiles and parts due to sluggish global demand and production disruptions at overseas plants. Exports of services also showed downward movement, particularly in tourism, with the implementation of border closures and restrictions on movement.

Imports of goods and services in real terms fell by 3.8 percent year-on-year as imports of goods decreased slightly and service imports declined significantly, centering on tourism and transportation services.

## Reduction in Production Across the Manufacturing and Service Sectors

An overview of production activities across various sectors in 2020 shows that production in the manufacturing and service sectors reversed to a decline due to the shock of the COVID-19 pandemic. Production in the construction industry sustained its downward trend since 2018.

**Figure II- 8. GDP Growth and Contributions by Economic Activity (in real terms)**



Source: Bank of Korea

Despite a solid upward trend in the IT sector, production in the manufacturing sector posted its first decline of 0.9 percent since the global financial crisis (minus 2.3 percent) due to sluggishness in non-IT sectors. By sector, production increased in industries such as computers, electronics and optical products, as well as semiconductors. Other manufacturing fields, however, generally slowed in line with the contraction in domestic and foreign demand caused by the spread of the pandemic.

**Table II- 1. Growth Rate of Manufacturing by Sector**

	1998	2008	2009	2018	2019 <sup>a</sup>	2020 <sup>b</sup>
Manufacturing	-7.1	3.5	-2.3	3.3	1.3	-0.9
Chemicals and Chemical Products	0.2	0.3	3.1	2.5	-0.2	1.1
Basic Metals	-9.3	-8.0	-4.3	-3.8	-0.9	-4.2
Fabricated Metal Products	-12.0	-9.5	-9.9	-1.3	-2.5	-7.3
Computer, Electronic, and Optical Products	29.3	9.2	5.9	11.4	6.2	4.1
Machinery and Equipment	-35.4	6.6	-7.9	0.7	-3.8	1.0
Transportation Equipment	-26.1	10.5	-15.3	-2.3	4.2	-9.6

Source: Bank of Korea

The service sector registered a negative growth rate (minus 1.1 percent) for the first time since 1998 (minus 2.4 percent). Ending the upward trend that continued even through the global financial crisis, the service sector declined as face-to-face sectors, such as wholesale and retail sales, food services and accommodation, and transportation, were notably sluggish due to the spread of the virus and the implementation of social distancing measures.

**Table II- 2. Growth Rate of Services by Sector**

	1998	2008	2009	2018	2019 <sup>a</sup>	2020 <sup>b</sup>
Services	-2.4	3.9	2.0	3.8	2.9	-1.1
Wholesale & Retail Trade, Accommodation and Food Services	-8.9	1.6	-0.5	2.9	1.1	-5.7
Transportation & Storage	-5.9	4.8	-4.5	3.7	0.4	-15.7
Finance & Insurance	-4.7	6.1	5.8	5.6	4.4	8.2
Business Activities	-8.8	5.8	1.6	3.8	2.7	-0.6
Human Health & Social Work	-3.8	3.7	7.8	8.2	8.7	1.2

Source: Bank of Korea



Production in the construction sector fell by 0.9 percent year-on-year with the continued adjustment trend in building construction. Production in the agriculture, forestry, and fishing sector marked a 3.4 percent decrease, while the electricity, gas, and water supply sector posted a 5.8 percent increase.

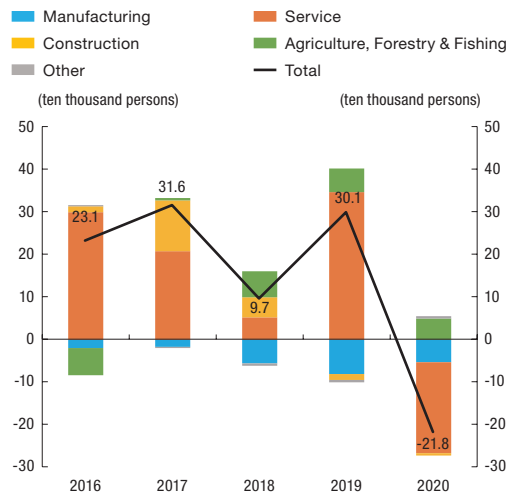
## (2) Employment and Wages

### Significant Decrease in the Number of Persons Employed

Overall employment conditions were sluggish due to the spread of the COVID-19 pandemic and social distancing measures. The number of persons employed decreased by 218,000, which is the biggest margin of decline since 1,276,000 seen during the 1998 Asian financial crisis.

By industry, the number of persons employed declined sharply in the service sector, mainly in industries requiring face-to-face interactions, such as accommodation and food service activities, wholesale and retail trade, and education, where the negative effects of COVID-19 were most concentrated. Employment in manufacturing continued its downward trend, owing to the delayed improvement of business conditions in some sectors such as automobiles and shipbuilding in the wake of deteriorating external conditions. In the construction industry, the number of persons employed remained at last year's level.

Figure II - 9. Changes in Employment Figures by Industry



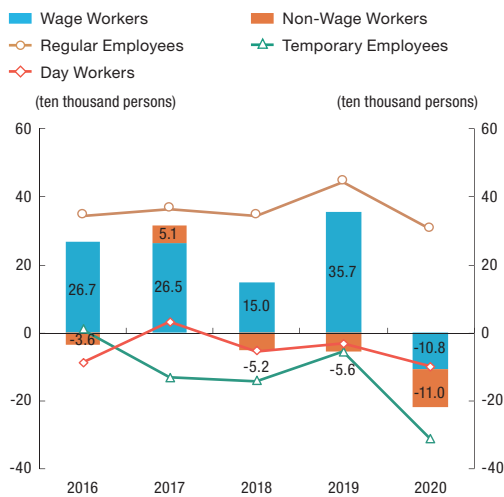
Source: Statistics Korea

By employment status, the number of temporary and day workers, and non-wage workers saw its downward trend widen significantly, while that of regular employees suffered a shrinkage in its margin of growth.

By age, the number of employees aged 30 to 59 expanded its decline greatly and those aged 15 to 29 reversed to a downward turn in employment, while the number of persons employed aged 60 or older sustained an upward trend.

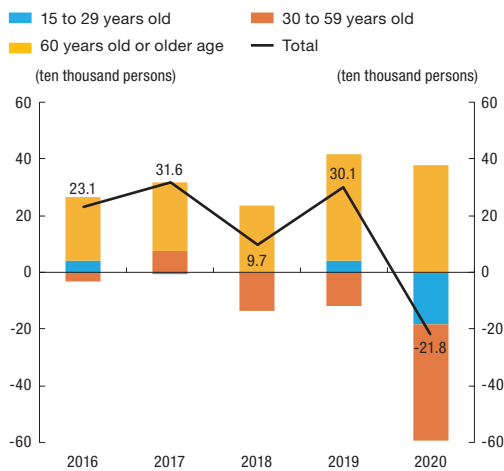
Driven by a drop in the number of persons employed, the employment rate decreased by 0.8 percentage points over the previous year. The total unemployment rate increased by 0.2 percentage points, year-on-year, to 4.0 percent. The youth unemployment rate, covering people aged 15 to 29, rose from a year earlier by 0.1 percentage points, to reach 9.0 percent.

**Figure II - 10. Changes in Employment Figures by Employment Status**



Source: Statistics Korea

**Figure II - 11. Changes in Employment Figures by Age**

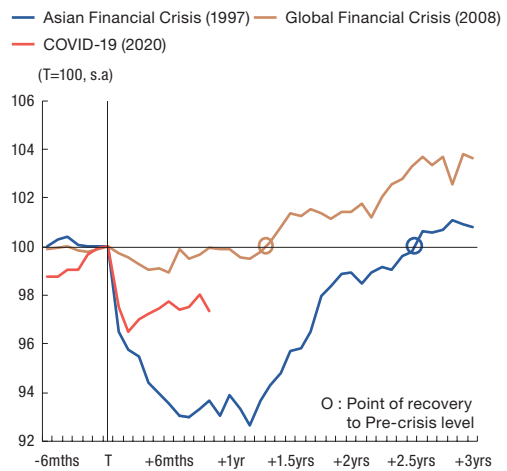


Source: Statistics Korea

The number of seasonally adjusted employed people following the spread of COVID-19 declined sharply in March and April 2020, and showed a modest recovery from May, but fell sharply again due to the resurgence of the pandemic in December. During the Asian financial crisis and the

global financial crisis, it took 31 months and 16 months, respectively, for the number of people employed to recover to pre-crisis levels. In the case of the COVID-19 shock, with the prolonged continuation of the pandemic, it is expected that it will take a considerable period of time for the number of employed people to recover to pre-pandemic levels.

**Figure II - 12. Employment Path in Each Crisis<sup>1)</sup>**



Note: 1) The starting points of the Asian financial crisis, the global financial crisis and the COVID-19 pandemic were Dec. 1997, Nov. 2008, and Feb. 2020, respectively.

Source: Statistics Korea

**Table II - 3. Employment-Related Indicators**

	2016	2017	2018	2019	2020
Economically-Active Population	2,742	2,775	2,790	2,819	2,801
Change Rate	1.0	1.2	0.5	1.0	-0.6
Participation Rate	62.9	63.2	63.1	63.3	62.5
Employed Persons	2,641	2,672	2,682	2,712	2,690
Change	23.1	31.6	9.7	30.1	-21.8
Unemployment Rate	3.7	3.7	3.8	3.8	4.0
(15 to 29 years old)	9.8	9.8	9.5	8.9	9.0
Employment Rate	60.6	60.8	60.7	60.9	60.1
(15 to 64 years old)	66.1	66.6	66.6	66.8	65.9

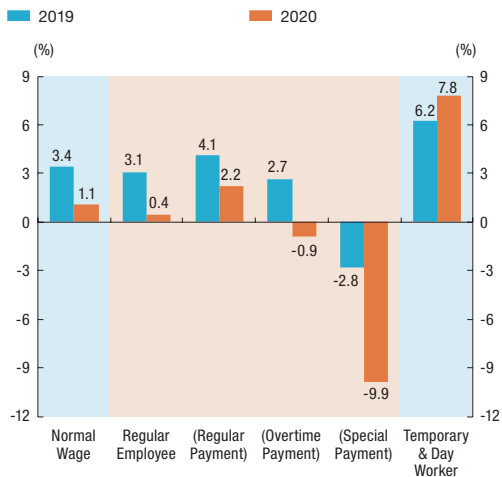
Source: Statistics Korea

## Sharp Decline in Wage Growth

Nominal wage growth was 1.1 percent, a significant decline compared to the 3.4 percent of 2019. By employment status, regular workers saw a sharp drop in wage growth due to a drastic reduction in special payment, driven by economic sluggishness stemming from the COVID-19 shock, while wage growth rose among temporary and day workers owing to a fall in the number of low-wage workers.<sup>11)</sup>

The growth rate for unit labor cost (non-farm basis) decreased slightly as nominal hourly wage growth saw a decline despite a slight rise in labor productivity growth.

**Figure II - 13. Wage Growth by Employment Status**



Source: Ministry of Employment and Labor

11) This is attributable to an increase in average income per person, the composition effect, as the number of temporary and day workers with relatively low wages declined in the wake of the COVID-19 shock.

**Table II - 4. Wage Indicators**

	2016	2017	2018	2019	2020
Nominal Wage <sup>1)</sup>	3.8	3.3	5.3	3.4	1.1
Real Wage <sup>2)</sup>	2.8	1.3	3.7	3.0	0.5
Nominal Hourly Wage <sup>3)</sup>	5.1	5.2	6.8	3.9	2.6
Labor Productivity <sup>4)</sup>	3.1	3.9	4.5	1.6	1.7
Unit Labor Costs <sup>5)</sup>	2.0	1.3	2.2	2.2	0.9

Notes: 1) Based on businesses employing at least one regular employee, non-farm basis.

2) Nominal wage/CPI.

3) Nominal wage/hours worked.

4) Real gross added value/(total employed persons x hours worked), non-farm basis.

5) Nominal hourly wage/labor productivity.

Sources: Ministry of Employment and Labor, Statistics Korea, Bank of Korea

## (3) Prices

### CPI Inflation remains subdued

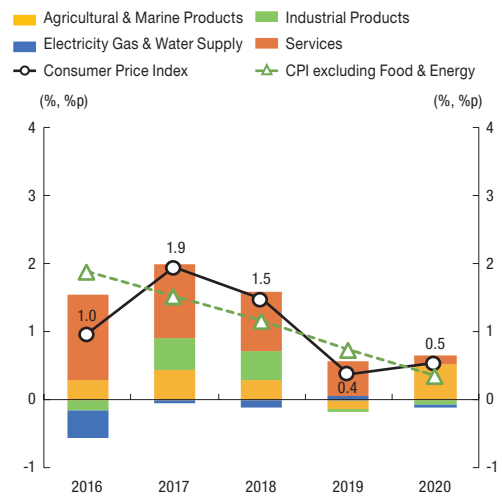
Consumer price inflation remained subdued in 2020, rising at the pace of mid-zero percent level two years in a row, at 0.5 percent in 2020 following 0.4 percent in the previous year. This was mainly driven by weaker demand-side inflationary pressure caused by the spread of COVID-19, a sharp decline in international oil prices, and increased downward pressure on inflation from government policies.

By item, the prices of agricultural, livestock, and fisheries products rose by 6.7 percent year-on-year as the prices of agricultural products increased sharply in the second half due to worsening weather conditions in the summer and the prices of livestock products rose substantially because of the increased household demand for meat after the spread

of COVID-19. Among industrial products, the petroleum product prices declined further from a year earlier (from minus 5.7 percent to minus 7.3 percent) as international oil prices dropped sharply in the aftermath of the pandemic, while prices of other industrial products excluding petroleum products exhibited an upward trend and rose by 0.8 percent year-on-year, which is close to the 0.7 percent of last year. Electricity, water, and gas charges fell by 1.4 percent from the previous year owing to a decrease in urban gas charges in the second half.<sup>12)</sup> Meanwhile, overall service price inflation registered 0.3 percent, significantly lower than the 0.9 percent of last year. Specifically, housing rental rates turned to an upward trend, but the prices for public services continued to decline significantly from minus 0.5 percent to minus 1.9 percent due to the government's support for telecommunication costs and its efforts to expand free high school education,<sup>13)</sup> and the increase in prices for personal services also slowed significantly (from 1.9 percent to 1.2 percent) centering on prices for face-to-face services such as travel, accommodation, and restaurants following the spread of the pandemic.

The growth of core inflation (CPI, excluding food and energy) stood at 0.4 percent, down from the 0.7 percent of 2019.

Figure II- 14. CPI Inflation & Core Inflation



Source: Statistics Korea

### Expansion of the Margin of Increase in Housing Sale Prices and Leasehold Deposit Prices

Despite the spread of COVID-19, housing sale prices<sup>14)</sup> jumped by 5.4 percent in 2020, recording a higher growth rate than the previous year. By region, housing sale prices in the Seoul metropolitan area shifted upward in the second half of 2019<sup>15)</sup> and continued their upward trend in 2020, thereby significantly expanding their growth rate. In the rest of the country, sale prices shifted to a rise in the first half of 2020<sup>16)</sup> and the upward trend accelerated in the second half.

12) The government cut urban gas charges for residential use by 11.2 percent from July 2020, reflecting the drop in international oil prices following the spread of COVID-19.

13) The expansion of free education for second-year high school students was implemented nationwide from April 2020, and in September 2020 free education, scheduled to be introduced for first-year high school students in March 2021, was implemented in many areas earlier than scheduled.

14) Based on the Monthly Housing Prices Trend Survey put out by the Korea Appraisal Board.

15) Within the Seoul metropolitan area, housing sale prices fell by 1.0 percent in the first half of 2019 and then rose by 1.4 percent in the second half.

16) Outside the Seoul metropolitan area, housing sale prices declined by 0.9 percent in the first half of 2019 and by 0.2 percent in the second half.

Leasehold deposit prices and monthly housing rental prices also saw their growth expand in the second half, registering high growth rates throughout the year.

**Table II - 5. Rate of Increase in Housing Prices and Housing Leasehold Deposits (compared to the last survey dates of the previous periods)**

	05-09 Average	10-14 Average	15-19 Average	2019	2020		
					Year	First-half	Second half
Housing Prices	5.7	1.6	1.3	-0.4	5.4	2.0	3.3
Seoul Metropolitan Area	9.1	-1.0	2.4	0.5	6.5	3.1	3.3
Non-Seoul Metropolitan Area	1.8	4.5	0.3	-1.1	4.3	1.0	3.4
Housing Leasehold Deposits	4.0	5.5	0.7	-1.3	4.6	1.1	3.4
Housing Monthly Rent Prices	..	..	-0.6 <sup>1)</sup>	-0.8	1.1	0.2	0.9

Note: 1) Average of 2016 to 2018 (starting in June, 2015).

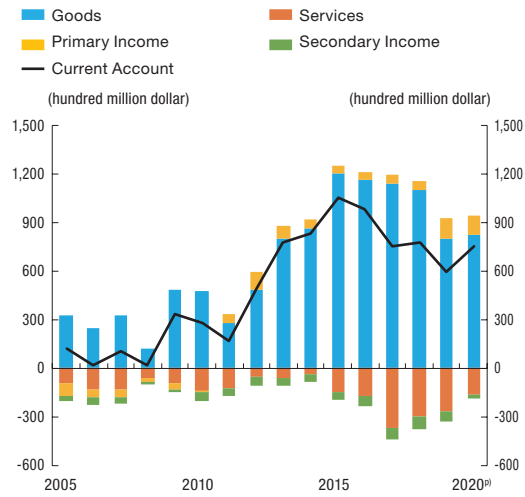
Source: Korea Appraisal Board

#### (4) Current Account

##### Expansion of the Current Account Surplus

Despite the spread of COVID-19, the current account in 2020 widened to a surplus of 75.3 billion dollars year-on-year.<sup>17)</sup> The goods account saw its scale of surplus slightly expanding as exports declined, particularly in non-IT products such as automobiles and steel, but imports fell further due to low oil prices. Led by a drop in the travel account deficit and the shift to a surplus in the transport account, the services account deficit narrowed. The primary income account posted a surplus similar to the previous year's level as income and payments decreased by a similar percentage.

**Figure II - 15. Current Account**



Source: Bank of Korea

##### Decline in Exports of Goods

Exports on a customs-clearance basis recorded 512.5 billion dollars, down by 5.5 percent from the previous year. However, despite the COVID-19 shock, the decline in exports fell by a much smaller margin than the minus 13.9 percent recorded during the global financial crisis, largely due to a rise in exports of IT products as key export items, which was bolstered by the spread of the digital economy and the expansion of non-face-to-face demand. In case of IT products, exports of display panels declined owing to a reduction in the domestic production. However, there was an increase in exports of semiconductors, led by demand for servers and mobile devices, as well as desktop and laptop computers, buoyed by the spread of remote working and online education. In terms of exports of non-IT sec-

17) The current account surplus in 2020 significantly exceeded levels seen during the global financial crisis (33.1 billion dollars), which is mainly attributable to the fact that the decline in exports was smaller than that during the global financial crisis.

tors, major products were sluggish overall due to a decline in exports among petroleum and chemical products due to a drop in oil prices, automobiles due to the slowdown in global demand and production disruptions following the spread of the pandemic, and steel and machinery due to the sluggish demand in downstream industries resulting from the economic downturn.

**Table II - 6. Exports by Major Item**

	2019		2020	
	% Change	% Shares in total	% Change	% Shares in total
IT Products	-19.7	<32.6>	3.8	<35.8>
Semiconductors	-25.4	<17.8>	5.4	<19.9>
Wireless Communication Equipment	-17.6	<2.6>	-6.4	<2.6>
Display Panels	-17.0	<3.8>	-12.2	<3.5>
Computers	-14.7	<1.6>	46.0	<2.5>
Non-IT Products	-5.0	<67.4>	-10.0	<64.2>
Automobiles	2.4	<12.0>	-14.1	<10.9>
Petroleum Products	-12.0	<7.6>	-40.2	<4.8>
Chemical Products	-8.9	<12.4>	-1.2	<13.0>
Machinery Products	-2.4	<10.4>	-8.1	<10.1>
Ships	-5.6	<3.6>	-2.0	<3.7>
Total Exports <sup>1)</sup>	-10.4	[5,422]	-5.5	[5,125]

Note: 1) Figures in square brackets are the total amount of exports (in hundreds of million USD).

Sources: Korea International Trade Association, Korea Customs Service

### Decline in Imports of Goods

Imports on a custom-clearance basis dropped by 7.1 percent over the previous year to a total value of 467.6 billion dollars. Imports of raw materials decreased, driven by crude oil and petroleum products in line with the decline in oil prices, while imports of consumer goods also showed a downward trend, led mainly by home appliance and non-durable

consumer goods, such as clothing. Imports of capital goods shifted to an increase centering around semiconductor equipment and semiconductors.

**Table II - 7. Imports by Major Item**

	2019		2020	
	% Change	% Shares in total	% Change	% Shares in total
Crude Material & Fuel	-9.0	<50.5>	-18.8	<44.1>
Capital Goods	-5.6	<32.8>	7.4	<37.9>
Electric-Electronic Machinery	0.1	<20.0>	4.6	<22.5>
Machinery-Precision Equipment	-16.2	<10.1>	14.2	<12.4>
(Semiconductor Manufacturing Equipment)	-44.6	<2.1>	62.8	<3.7>
Consumer goods	3.6	<16.8>	-0.4	<18.0>
Total Imports <sup>1)</sup>	-6.0	[5,033]	-7.1	[4,676]

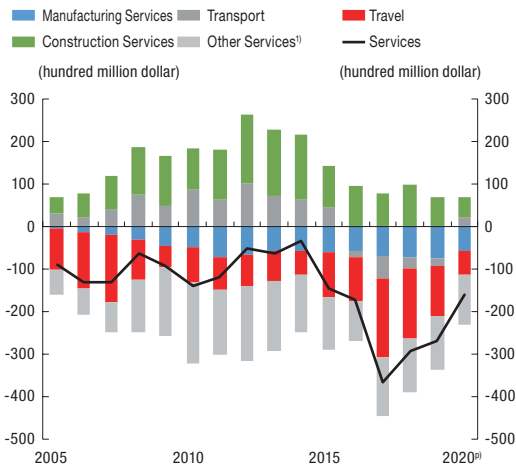
Note: 1) Figures in square brackets are the total amount of imports (in hundred millions of USD).

Sources: Korea International Trade Association, Korea Customs Service

### Decrease in the Services Account Deficit

The services account registered a deficit of 16.2 billion dollars, reducing its margin of deficit compared to 2019. The travel account witnessed its deficit narrow as payments decreased by a greater margin than income, although both income and payments dropped due to COVID-19. The deficit in the manufacturing services account shrank and the transport account swung to a profit as container freight rates recovered rapidly after the second half.

Figure II- 16. Services Account



Note: 1) Total of other services accounts including other business services, telecommunications, computer, and information services.  
Source: Bank of Korea

### (5) Regional Economic Trends

Regarding production activities by region, manufacturing production increased in the Seoul metropolitan area, boosted by an upswing in semiconductors, medicine and medical supplies, while showing a decline in other regions, particularly in steel, petrochemicals, oil refinery, and automobiles. Services production decreased across all regions due to sluggishness in the arts, sports, leisure, transport, warehousing, accommodations, and food services, resulting from the COVID-19 pandemic.

In terms of domestic demand trends,<sup>18)</sup> retail sales increased only in the Honam and Chungcheong regions despite central and local government policies to revitalize consumption, while showing a decline in other regions, including the Jeju region, which wit-

nessed a sharp drop in the number of tourists. The Business Survey Index (BSI) for facilities investment improved after a drastic drop in the first half due to the worsening of business conditions in the manufacturing industry, but still fell short of the reference value of 100 in all regions. In terms of construction investment, the total area of new construction projects increased in the Seoul metropolitan area thanks to an increase in new constructions of commercial buildings, while the Dongnam, Chungcheong, Honam, and Daegyeong regions also saw an increase, centering on residential buildings. In contrast, the Jeju region saw a sharp decline.

Exports showed a decline in most regions due to slow demand and production disruption resulting from the global spread of the pandemic. In particular, the Dongnam and Honam regions exhibited a double-digit decline driven by sluggishness in petrochemicals and at oil refineries. On the other hand, the Chungcheong region witnessed an increase, led by semiconductors.

In terms of employment conditions, the number of persons employed decreased in most regions, centering on face-to-face service industries greatly affected by COVID-19. However, the Chungcheong and Honam regions saw an increase, led mainly by the agriculture, forestry, and fishery industries. Unemployment rates dropped slightly in the Honam region compared to 2019, while rising in other regions.

Despite a sharp increase in prices of agri-

18) Trends in regional consumption, facilities investment and construction investment are estimated using retail sales indexes, the facilities investment BSI, and the total area under new construction.

culture, livestock, and marine products, consumer prices recorded a low rate of growth across all regions due to a decline in prices of petroleum products and a reduction in service charges in the wake of the government's policies related to education and communications.

Housing sale prices rose in most regions due to concerns over supply shortages and expectations of an increase in housing prices under the accommodative financial conditions. In particular, the Seoul metropolitan area and the Chungcheong region saw a huge increase with the addition of the government's real estate development projects. On the other hand, the Jeju region exhibited a downward trend owing to a rise in unsold housing units. Leasehold deposit prices rose across all regions excluding the Jeju area due to concerns over supply-demand imbalances.

**Table II - 8. Major Indicators by Region<sup>1)</sup>**

	Seoul Metropolitan	Dongnam	Chungcheong	Honam	Daegyeo- ng	Gangwon	Jeju
<b>Production</b>							
Manufacturing Production Index <sup>2)</sup>	6.9	-7.2	-3.3	-2.7	-7.8	-5.0	-5.2
Services production index <sup>2)</sup>	-0.5	-3.2	-3.0	-1.6	-3.6	-4.9	-10.4
<b>Demand</b>							
Retail Sales Index <sup>2)</sup>	-4.3	-1.3	0.8	1.7	-1.2	-0.7	-26.9
Facilities Investment BSI(Base=100)	90	83	87	86	75	87	91
Area of New Construction <sup>2)</sup>	18.2	7.2	16.1	3.4	9.7	0.0	-19.5
Exports <sup>3)</sup>	-2.6	-15.9	3.2	-11.1	-4.1	-3.1	3.9
<b>Employment</b>							
Changes in Number of Employed Persons <sup>4)</sup>	-9.9	-6.6	1.1	0.3	-4.7	-1.7	-0.4
Unemployment Rate	4.2	4.1	3.6	2.8	4.0	3.9	2.5
<b>Prices</b>							
CPI <sup>2)</sup>	0.6	0.4	0.5	0.6	0.2	0.6	0.4
Housing Sales Prices <sup>5)</sup>	6.5	4.8	8.3	2.3	3.4	2.0	-2.1
Housing Leasehold Deposit Prices <sup>5)</sup>	5.6	4.3	8.0	1.3	2.1	2.2	-1.6

Notes: 1) Seoul Metropolitan region includes Seoul, Incheon and Gyeonggi-do, The Dongnam region includes Busan, Ulsan and Gyeongsangnam-do. The Daegyeong region includes Daegu and Gyeongsangbuk-do.

2) Year-on-year rates of change.

3) Customs-clearance basis, year-on-year rates of change.

4) Year-on-year change (10 thousand persons).

5) Rates of change compared with last months of previous year.

Sources: Bank of Korea, Statistics Korea, Ministry of Land, Infrastructure and Transport, Korea Customs Service, Korea Appraisal Board



## 2. Financial and Foreign Exchange Markets

### A. International Financial Markets

#### Significant Decline in Long-Term Interest Rates

Long-term interest rates on a 10-year U.S. Treasury bond yield basis dramatically declined in March 2020,<sup>19)</sup> influenced by concerns about economic slowdown in the wake of the COVID-19 pandemic, in addition to the policy interest rate cuts and aggressive measures for liquidity infusion by the U.S. Federal Reserve.<sup>20)</sup> It fluctuated during the period from April to July 2020, with the coexistence of upside factors such as a resumption of economic activities, and downside factors such as the U.S.-China tensions<sup>21)</sup> and the resurgence of COVID-19, and then it displayed a gradual upward movement, bolstered by stronger-than-expected economic indicators, additional economic stimulus packages approved by the U.S. Congress<sup>22)</sup> and expectations of the development of a coronavirus vaccine.<sup>23)</sup> In the euro area, Germany's long-term rates

showed fluctuations, similar to U.S. long-term rates, and later widened the margin of decline owing to the stronger restrictions placed on movement following the resurgence of COVID-19 in the euro area and the strengthening of an accommodative monetary policy stance by the European Central Bank (ECB).

The Emerging Markets Bond Index Plus (EMBI+) spread dramatically rose in March due to a preference for safe assets in light of the spread of COVID-19, thus recording its highest level since the global financial crisis of 2008. It then sharply fell on the effects of aggressive policy responses taken by each government and their central banks, as well as expectations of a coronavirus vaccine, thereby resulting in a considerable narrowing of the margin of increase.

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19) However, Treasury bond rates temporarily rose by a large margin (+60bp) during the period from March 10 to 19, as the demand for U.S. dollar liquidity surged amid heightened risk aversion in international financial markets.

20) The U.S. Federal Reserve decided to lower the target range for the federal fund rate to 0 to 1/4 percent similar to the level set during the global financial crisis of 2008, during two unscheduled FOMC meetings (on March 3 and 15). It also announced unlimited Treasury bond and MBS purchases, and set up facilities to purchase assets such as CP, MMFs, corporate bonds and ABS, as well as a lending program to protect small and medium-sized businesses.

21) Tensions between the U.S. and China heightened due to a range of factors, such as: U.S. President Donald Trump's placement of the blame for the spread of COVID-19 on China and suggestion of the possibility of imposing tariffs on certain Chinese-made goods (April 30); the tightening of regulations on the Chinese company Huawei by the U.S. government (May 15); the enactment of the Hong Kong national security law in China (June 30); and, the passage of the China sanctions bill by the U.S. Congress in response to the Hong Kong national security law (July 2).

22) The U.S. Congress approved a total of five economic stimulus programs in 2020, including a package of about 2.2 trillion dollars on March 23 and a package of about 0.9 trillion dollars on December 21.

23) The U.S. Food and Drug Administration issued the emergency use authorization for a coronavirus vaccine developed by Pfizer on December 11 and by Moderna on December 18.

**Table II - 9. Major International Interest Rates and Risk Premiums (as of period-end)**

	2019	2020			
		I	II	III	IV
(% , bp)					
<b>Government Bond Yield</b>					
(10-year)					
(U.S.)	1.92	0.67	0.66	0.68	0.91
(Euro area)	-0.19	-0.47	-0.45	-0.52	-0.57
<b>Risk premium</b>					
(U.S.corporate bond spread) <sup>1)</sup>	195	394	290	271	222
(EMEs CDS premium) <sup>2)</sup>	173	347	195	230	150
(EMEs spread) <sup>3)</sup>	298	543	441	412	338

Notes: 1) Yield on 10-year corporate bonds(Baa).

2) Weighted average of 18 EMEs' CDS premium by Markit.

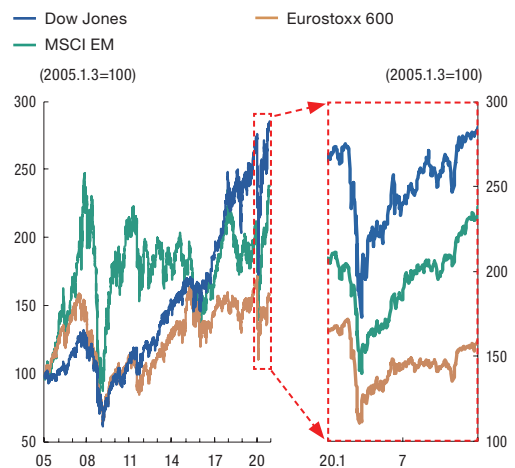
3) JP Morgan EMBI+(Emerging Markets Bond Index Plus).

Sources: Bloomberg, JP Morgan, Markit

### Global Stock Prices Rebound After a Plunge

The U.S. Dow Jones Industrial Average remained on an upward trend on the back of the announcement of favorable economic indicators and business performance in January and February 2020, hitting an all-time high.<sup>24)</sup> Entering March, however, it plummeted due to the strengthening of lock down in major countries resulting from the spread of COVID-19. It rapidly rebounded later, influenced by expectations of economic recovery in the wake of aggressive policy responses taken by the U.S. government and the Federal Reserve. In particular, it hit several record highs<sup>25)</sup> from November onward following the easing of uncertainties related to the U.S. presidential election, an additional economic stimulus package passed by the U.S. Congress, and the authorization of coronavirus vaccines. The STOXX Europe 600 Index showed a

broadly similar trend to that of the U.S. stock market, but declined by 4.0 percent from the end of the previous year, due to the slowdown in economic recovery in the second half of the year resulting from stronger restrictions on movement in major European countries. The MSCI Emerging Markets Index followed a similar pattern to stock prices of advanced economies, mainly influenced by changes in global risk aversion. However, from October onward, they saw the increase widening in line with expectations of improvements in global trade, thus recording a rise of 15.8 percent from the end of 2019.

**Figure II - 17. Stock Indexes in Major Advanced Economies & MSCI Emerging Markets Index**

Source: Bloomberg

### U.S. Dollar Weakens Against Euro and Yen

The U.S. dollar strengthened against the euro until mid-February, influenced by favor-

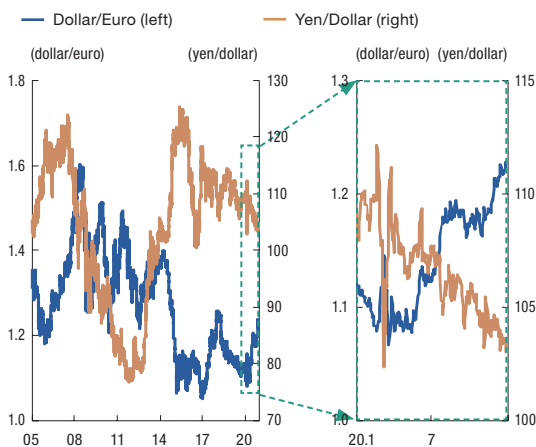
24) The U.S. Dow hit 29,551 on February 12.

25) The U.S. Dow closed at a record high of 30,606 at the end of 2020, up by 7.2 percent year-on-year. (The S&P 500 and NASDAQ also hit record highs, up by 16.3 percent and 43.6 percent, respectively, year-on-year.)

able U.S. economic indicators, and then rapidly fluctuated over a wide range with a mix of weakening factors, such as the U.S. Federal Reserve's policy rate cuts, and strengthening factors, such as heightened risk aversion resulting from the spread of COVID-19. From May onward, the currency reversed to a decline, affected by the proactive supply of liquidity by the U.S. Federal Reserve, and saw its downward trend widen further with the continued global preference for risky assets.

The U.S. dollar also fluctuated over a wide range against the yen in March, and then weakened, mainly influenced by the continued trend of accommodative monetary policy by the U.S. Federal Reserve.

**Figure II - 18. USD/EURO and JPY/USD Exchange Rates**



Source: Bloomberg

## B. Domestic Financial Markets

### (1) Interest Rates

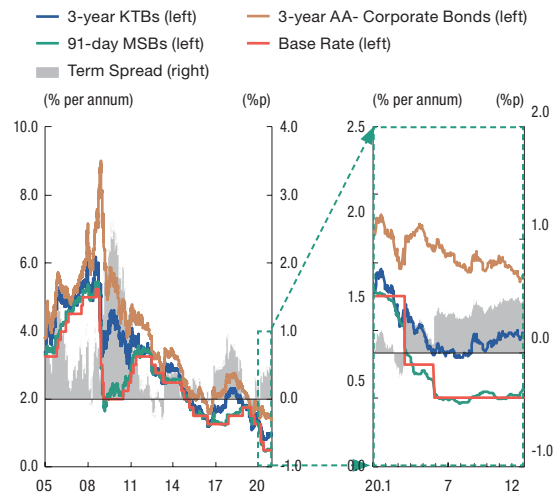
#### Decline in Domestic Long-Term Interest Rates

In 2020, the three-year Treasury bond yield plummeted and stood at 0.98 percent at the end of 2020, a significant decline of 38bp from the 1.36 percent seen at the end of 2019, due to the Base Rate cuts in response to the COVID-19 pandemic. In chronological order, in March, it rose thanks to the influence of the global financial market instability resulting from the global spread of COVID-19, but stabilized downward to a historic low of 0.795 percent on Aug. 5, owing to the Base Rate cuts of 50bp and 25bp in March and May, respectively, and the outright purchases of Treasury bonds by the Bank of Korea, as well as accommodative monetary policies in major countries. From mid-August onward, it rebounded substantially based on the increase in the U.S. interest rate in line with expectations of an expansion of economic stimulus packages in the U.S. and concerns over the supply-demand imbalance for Treasury bonds following the Korean government's announcement of its fourth supplementary budget and the budget proposal for 2021.

The yield on 91-day Monetary Stabilization Bonds fell sharply between March and May, influenced by Base Rate cuts, and then fluctuated generally at the 0.50 percent level of the Base Rate. The three-year corporate bond yield declined for the year, but fluctuated over a wide range depending on the situation of the COVID-19 pandemic and policy measures taken against it. The corporate bond spread

over the Treasury bond yield widened greatly<sup>26)</sup> as the corporate bond yield rose in March thanks to the influence of the COVID-19 pandemic. After July, however, the corporate bond credit spread reversed to a narrowing trend, thanks to the market stabilization measures implemented by the government and the Bank of Korea, and from November, the credit spread rapidly narrowed not only for prime bonds (AA-) but also for subprime bonds (A-), due to the development and distribution of COVID-19 vaccines in major countries and the ongoing support for subprime bonds through a special purpose vehicle (SPV) for purchasing domestic corporate bonds and commercial paper (CP). As of year-end 2020, the corporate bond credit spread for prime bonds (41bp) narrowed to a level last seen at the end of 2019 (42bp). The corporate bond credit spread for subprime bonds (146bp) also narrowed significantly compared to the highest level seen immediately after the COVID-19 outbreak, but the credit spread still remained far above the level seen at the end of 2019 (132bp).

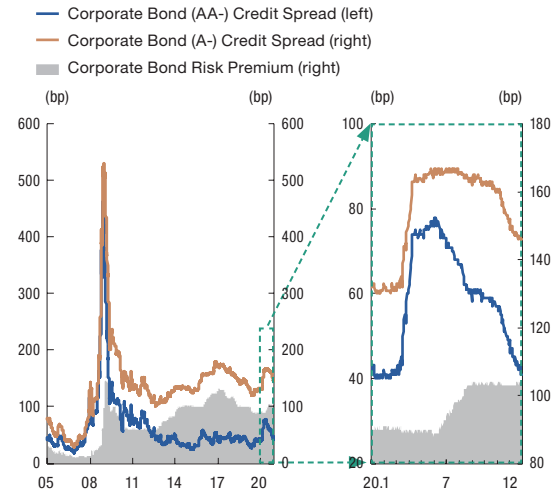
**Figure II- 19. Major Market Interest Rates & Term-Spread<sup>1)</sup>**



Note: 1) Yields difference between 3-year KTBs and Base Rate.

Sources: Korea Financial Investment Association, Bank of Korea

**Figure II- 20. Corporate Bond Credit Spreads<sup>1)</sup> & Risk Premiums<sup>2)</sup>**



Notes: 1) Yields difference between 3-year corporate bonds and 3-year KTBs.

2) Yields difference between 3-year A- corporate bonds and 3-year AA- corporate bonds.

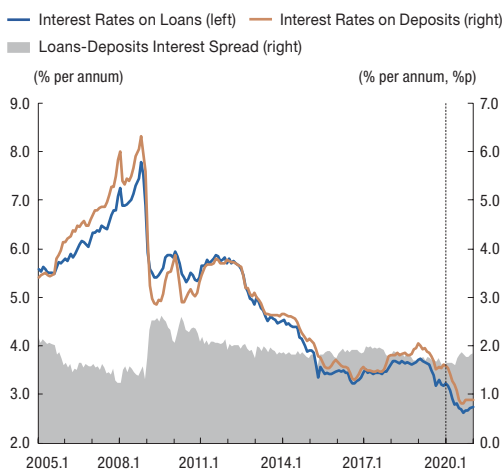
Source: Korea Financial Investment Association

26) However, the margin of its widening was substantially limited compared to the period when the credit spread widened rapidly during the global financial crisis.

## Decrease in Bank Lending and Deposit Rates

Interest rates on bank loans and deposits (based on a newly taken deposits) displayed a sharp fall with the Base Rate cuts and a decrease in market interest rates. In December 2020, the bank lending rates were 2.74 percent, a decline of 0.48 percentage points from the 3.22 percent seen in December of the previous year. In terms of borrower types, while corporate lending rates decreased by 0.63 percentage points to 2.73 percent in December 2020, household lending rates contracted by only 0.19 percentage points to 2.79 percent.<sup>27)</sup> Deposit rates in December 2020 were 0.90 percent, down by 0.70 percentage points from the 1.6 percent seen in December 2019. The margin of decline in deposit rates was greater, resulting in an increase in the spread between bank lending and deposit rates.

**Figure II - 21. Weighted Average Bank Interest Rates on Loans and Deposits**



Source: Bank of Korea

## (2) Stock Prices

### KOSPI Up Across Wide Range After Nose-dive

The Korea Composite Stock Price Index (KOSPI) fluctuated over a wide range, mainly influenced by developments of the COVID-19 pandemic at home and abroad. In chronological order, it fluctuated in a narrow range at the beginning of the year. In mid-February, the index nosedived by 35.0 percent<sup>28)</sup> due to the spread of COVID-19 and heightened concern about a global economic slowdown, recording the largest contraction since the global financial crisis of 2008.<sup>29)</sup> However, it rebounded by a large margin from late March, based on expectations of normalizing global economic activities thanks to aggressive responses from South Korea and major economies. The upward trend accelerated after November due to the easing of political uncertainty in the U.S., progress in the coronavirus vaccine rollout, and heightened expectations on the improved performance of major companies. It closed the year at 2,873, up by 30.8 percent from the same month of the previous year, surpassing the previous high from before the coronavirus pandemic.

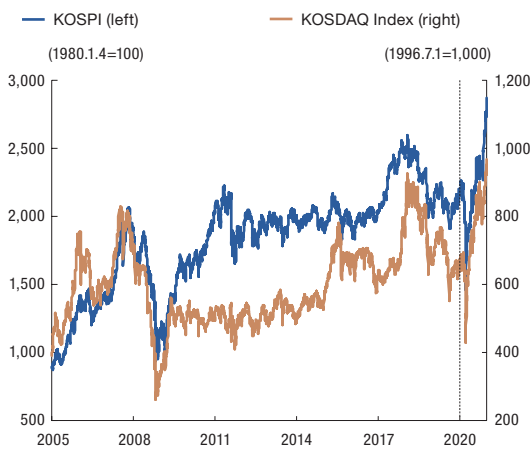
The KOSDAQ index, also affected by the COVID-19 pandemic, showed similar trends with the KOSPI. It closed the year at 980, up by 44.6 percent from the end of 2019.

27) This is mainly influenced not only by, the restricted decrease in long-term interest rates of bank bonds, the major reference rate of the fixed-rate mortgage loans, but also by bank efforts to keep household loans in check.

28) The KOSPI stood at 1,458 on March 19, 2020, down by 35.0 percent in only one month from the 2,244 seen on Feb. 14, 2020.

29) The KOSPI declined by 50.3 percent for five months during the global financial crisis of 2008 (from 1,889 on May 16, 2008, to 939 on Oct. 24, 2008).

Figure II- 22. KOSPI and KOSDAQ Indexes



Source: KOSCOM

### (3) Deposits and Loans at Financial Institutions

#### Significant Increases in Deposit-Taking at Banks

The margin of growth in deposit-taking at banks increased significantly compared to 2019. Money market deposit accounts expanded in scale three fold from the previous year, due to the acquisition of backup funds to guard against uncertainty among households and companies. On the other hand, time deposits shifted to a decline in response to reduced incentives from banks to attract time deposits, such as a decline in deposit rates, and the mitigation of the loan-to-deposit ratio rule and the liquidity coverage ratio (LCR) rule.

Deposit-taking by asset management companies saw a decreased margin of growth. Deposits into money market funds (MMFs) continued a steady increase, while sales of stock funds and bond funds turned to a de-

cline due to increased direct investment by individual investors and growing market vigilance for credit instruments. The growth rate of other funds was reduced by approximately half due to some hedge fund losses, suspensions of fund redemptions, and strengthened requirements for general investors, etc.

Meanwhile, deposits of non-banking institutions such as credit cooperatives showed a similar growth scale compared to 2019.

Table II- 10. Deposits at Financial Institutions (changes in deposits)

	2016	2017	2018	2019	2020
(trillion won)					
Deposits at Banks <sup>1)</sup>	80.8	79.5	91.6	106.3	188.4
Demand Deposits	60.2	34.0	10.9	65.9	189.3
Time&Savings Deposits	19.4	28.8	72.2	48.3	-14.4
Marketable Instruments <sup>2)</sup>	3.9	17.7	7.8	-14.6	14.6
Deposits at Asset Management Companies	47.6	27.9	53.8	98.6	42.2
MMFs	10.9	-7.0	-7.7	15.2	21.0
Stock-Type Funds	-7.7	4.2	7.3	2.5	-10.0
Bond-Type Funds	18.7	-8.6	6.4	15.7	-0.4
New Funds <sup>3)</sup>	29.6	45.3	48.3	68.0	33.4
Deposits at Mutual Savings Banks	6.6	6.9	8.6	6.1	13.2
Deposits at Credit Cooperatives <sup>4)</sup>	35.3	44.6	39.7	60.7	50.1

Notes: 1) Figures exclude deposits from bank, government, and non-residents.

2) CD, RP, cover bills, bank debentures.

3) Derivatives, real estate, indirect special-assets, mixed-asset funds.

4) Mutual credit companies, community credit cooperatives, credit unions.

Sources: Bank of Korea, Korea Financial Investment Association

#### Significant Expansion of Corporate Lending and Household Lending

In 2020, corporate loans increased by a considerable margin compared to 2019. In

the case of corporate loans by banks, large corporate loans took an upward turn due to increased demand for working capital and efforts to secure liquidity in line with the spread of COVID-19. Small and medium-sized enterprise (SME) loans also increased significantly as a result of financial support from the government and banks. Non-bank corporate loans also expanded their growth margins.

The growth margin for household loans also grew substantially. Deposit banks and other financial institutions provided loans to households at a much greater scale compared with 2019, while lending by non-bank depository institutions also turned to an upward trend. Mortgage loans by deposit banks increased their growth margin due to surging housing transactions nationwide, while demand for leasehold deposit loans continued to grow. Other loans by deposit banks expanded their growth margins as money demand for living and stock investments soared. Non-bank depository institutions also loaned more to households, reducing the decline in mortgage loans and enlarging the margin of increase for other loans as a result of increased loan demand for livelihood and business purposes. Other financial institutions also greatly expanded household loans, owing to increased demand for housing transactions and stock investment funds.

**Table II - 11. Loans by Financial Institutions**  
(changes in amounts during the period)

	(trillion won)				
	2016	2017	2018	2019	2020
Corporate Loans	43.1	72.2	81.8	90.2	169.6
Banks	23.9	40.4	46.7	47.7	110.8
Large Corporations	-9.9	-3.7	6.9	-1.8	20.9
SMEs	33.8	44.0	39.8	49.4	90.0
Non-Banks <sup>1)</sup>	19.3	31.8	35.1	42.5	58.8
Household Loans <sup>2)</sup>	131.9	100.0	76.8	57.9	125.6
Deposit Banks	53.7	43.3	52.4	54.6	82.2
Mortgage Loans	40.8	21.6	30.1	39.7	49.9
Other Loans	12.9	21.6	22.4	14.9	32.2
Non-Bank Depository Institutions <sup>3)</sup>	42.6	22.6	6.8	-4.5	7.6
Mortgage Loans	14.2	10.8	-3.9	-10.4	-4.0
Other Loans	28.4	11.8	10.7	6.0	11.6
Other Financial Institutions <sup>4)</sup>	35.5	34.1	17.5	7.8	35.9

Notes: 1) Based on loans by mutual credit companies, credit unions, community credit cooperatives, mutual savings banks.

2) Based on household credit statistics.

3) Mutual credit companies, credit unions, community credit cooperatives, mutual savings banks, trusts, and postal savings.

4) Insurance companies, pension funds, specialized credit financial companies, public financial institutions, etc.

Source: Bank of Korea, Financial Supervisory Service

#### (4) Foreign Exchange Market

##### Early Surge Followed by Prolonged Decline in USD/KRW Rate

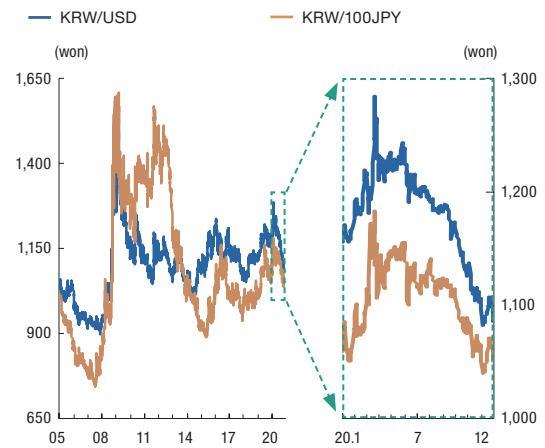
The USD/KRW exchange rate rose to 1,285.7 won<sup>30)</sup> in March, a record high since the end of the global financial crisis, owing to increased instability in international financial markets and to surging demand for U.S. dollars induced by the COVID-19 pandemic. Then it began to fall sharply under the influence of a new currency swap agreement between the Bank of Korea and the U.S. Federal Reserve

30) This was the highest level since July 14, 2009, when the rate peaked at 1,293.0 won.

and the foreign currency liquidity subsequently provided by the swap, as well as policy responses in major countries. While the U.S. dollar continued to weaken in the following months, the decline accelerated on several occasions: in June, when risk aversion was reduced in line with the resumption of economic activities in major countries; in September and October, due to favorable domestic economic indicators and a strong Chinese yuan amid that country's relatively rapid economic recovery; and in November and December, when uncertainties related to the U.S. presidential election subsided and expectations rose for additional economic stimulus measures and the development of a COVID-19 vaccine. At the end of 2020, the USD/KRW exchange rate stood at 1,086.3 won, down by 6.1 percent compared to the previous year-end.

The JPY/KRW exchange rate showed similar movements to the USD/KRW rate, as the investment sentiment changed in line with the spread of COVID-19, expectations of vaccine development, events in the U.S.-China trade dispute, the U.S. government's consideration of further stimulus measures, and the course of the U.S. presidential election. At the end of 2020, the JPY/KRW exchange rate (per 100 yen) was 1,051.1 won, down by 0.8 percent from the 1,059.6 won seen at the previous year-end (based on the basic exchange rate for customers set by KEB Hana Bank).

Figure II- 23. Korean Won Exchange Rates<sup>1)</sup>



Note: 1) The USD/KRW rate is closing price in the Seoul Foreign Exchange Market. The JPY rate is as quoted by Hana Bank.

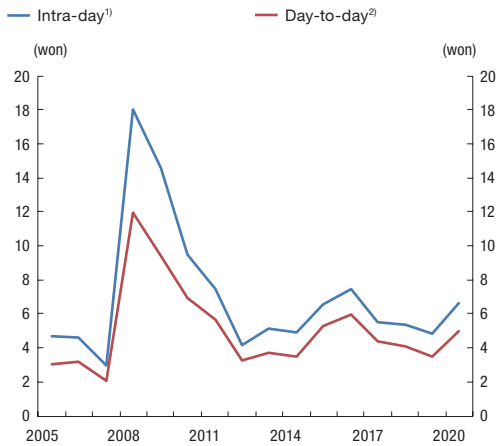
Sources: Bank of Korea, Hana Bank

In 2020, both intra-day and day-to-day volatility in the USD/KRW exchange rate increased to average 6.6 and 5.0 won, respectively, compared to 4.9 and 3.5 won in 2019, as the USD/KRW exchange rate dramatically changed due to the global financial market instability in March.<sup>31)</sup>

31) Intra-day volatility in the USD/KRW exchange rate reached its highest level at 49.9 won on March 19, 2020, a record high since the European financial crisis (100.7 won on October 4, 2011), while day-to-day volatility peaked at 40.0 won on March 19, 2020, a record high since the global financial crisis (58.7 won on April 30, 2009).



**Figure II - 24. USD/KRW Exchange Rate Volatility**



Notes: 1) Averages of the intra-day highest rate minus the intra-day lowest rate.

2) Averages of the absolute value of the day closing rate minus the previous day closing rate.

Source: Bank of Korea

### Rise in Foreign Exchange Swap Rate and Currency Swap Rate After Significant Decline

The foreign exchange swap rate<sup>32)</sup> with a three-month maturity declined dramatically in March and reached its lowest point since the global financial crisis<sup>33)</sup> due to an increase

in short-term foreign currency demand from securities companies<sup>34)</sup> amid heightened risk aversion caused by the spread of COVID-19. However, this trend later reversed due to foreign currency lending using funds from the currency swap agreement with the U.S. Federal Reserve and the positive spread between domestic and international interest rates.<sup>35)</sup> It finished the year at minus 0.04 percent, up by 0.88 percentage points compared to the end of 2019.

The currency swap rate<sup>36)</sup> with a three-year maturity plunged and turned negative in March for the first time since the global financial crisis due to heightened risk aversion and a decline in the swap rate amid a decrease in long-term interest rates, such as Treasury bonds. However, it saw its margin of decline narrow in the second half as foreign currency liquidity conditions improved and the Treasury bond yield rebounded, and finished the year at 0.31 percent, down by 0.41 percentage points compared to the end of 2019.

32) A foreign exchange swap is a transaction through which two parties exchange different currencies at a certain point in time at an agreed exchange rate. They then re-exchange the principals after a set period at the forward exchange rate that was determined when the relevant contract was concluded. The foreign exchange swap rate is expressed as the annualized rate (%) of the difference between the forward and spot exchange rates as against the spot exchange rate:  $\{(\text{Forward exchange rate} - \text{Spot exchange rate}) / \text{Spot exchange rate}\}$ .

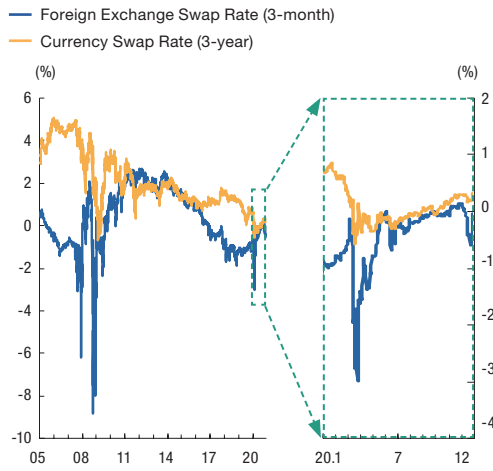
33) It registered minus 2.98 percent on March 24, 2020, the lowest point since December 24, 2008, when the figure stood at minus 3.38 percent.

34) A sharp decline in global stock prices led to an increase in demand for foreign currency among securities companies issuing Equity Linked Securities (ELS) to pay margin calls on futures contracts.

35) However, the foreign exchange swap rate temporarily fluctuated in December due to the year-end factor.

36) A currency swap resembles a foreign exchange swap in that two parties exchange different currencies and re-exchange the principals after a predetermined period of time. They differ, however, in that the period of maturity for the former usually exceeds one year, that the parties to a currency swap exchange interest payments during the contract period, and that the amount of principal exchanged through a currency swap is the same at the time of the initial exchange and at maturity. The currency swap rate refers to the spread over LIBOR of the fixed interest rate on the Korean won exchanged.

Figure II- 25. Foreign Exchange Swap Rate & Currency Swap Rate



Sources: Bank of Korea, Korea Money Brokerage Corp., Tullett prebon Money Brokerage Korea Ltd



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# III

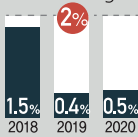
## Bank of Korea's Conduct of Its Business

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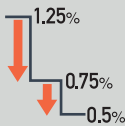
# Bank of Korea in 2020

## Monetary Policy

Set Inflation Target (CPI)



**Reviewed the Operating Status and Inflation Targeting**  
(June and December)



**Reduced the Base Rate**  
(March and May)



**Expanded the Bank Intermediated Lending Support Facility**



**Increased Liquidity Supply**

Full-allotment RP purchases  
RP purchases from non-bank financial institutions, etc.



**Stabilized the Treasury, Corporate Bond,  
and Commercial Paper Markets**

Launched the Corporate Bond-Backed Lending Facility (10 trillion won),  
Purchased Treasury Bonds (11 trillion won), and facilitated loans for  
Special Purpose Vehicles (SPV) designed to purchase corporate bonds and CPs

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## Financial Stability Mandate



### Enhanced Financial Stability Conditions Evaluation

Published the Financial Stability Report  
Held Financial Stability Meetings



### Stabilized the Foreign Exchange Market

Signed a currency swap agreement with the U.S. (USD 60 billion)  
Provided foreign currency loans through competitive auctions (USD 19.87 billion)



### Operated the Emergency Response System

Held an emergency meeting to inspect the financial and economic situation

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## Strengthened Research Activities and Internal & External Cooperation



Conducted Various Research Activities Including Effects of  
the Spread of COVID-19 on the Economy



### Expanded Non-Face-to-Face Public Communication

Facilitated social media activities  
Established the Digital BOK Money Museum



Actively Participated in Global Policy Cooperation Discussions  
Including Activities as a Member of the BIS Board of Directors

Global research exchanges via video conferences



# 1. Medium-term Strategies

The Bank of Korea dedicates its utmost efforts to fulfilling its objectives of securing price and financial stability, and to leading the stabilization and development of the national economy as the nation's central bank. To this end, it has annually identified and implemented a set of strategic priorities that define the overall operational objectives and priorities for

the Bank over the next three years. In accordance with these priorities, all departments establish and implement their own key business plans for the corresponding fiscal year.

The medium-term strategy in 2020 comprised of nine strategic objectives in the major business areas, and 35 related strategic plans. The following sections outline the key tasks and achievements of these strategic plans in different business areas.

**Table III- 1. Medium- Term Strategies in 2020**

<b>1 Enhancing Effectiveness of Monetary and Credit Policies</b>	<ul style="list-style-type: none"> <li>Upgrading analysis of monetary policy effects for optimal monetary policy decision-making</li> <li>Heightening effectiveness of inflation targeting operations</li> <li>Heightening effectiveness of monetary policy operation systems and policy instruments</li> <li>Strengthening communications for seamless implementation of monetary policy</li> </ul>	<b>6 Heightening Effectiveness of Foreign Exchange Reserve Operations</b>	<ul style="list-style-type: none"> <li>Ensuring stable operations of foreign exchange reserves</li> <li>Seeking effective investment strategies to respond to changes in market environments</li> <li>Expanding capabilities of foreign exchange reserve operations</li> </ul>
<b>2 Effectively Carrying Out of Policies for Financial Stability</b>	<ul style="list-style-type: none"> <li>Checking financial stability conditions and strengthening the function of suggesting policy alternatives</li> <li>Analyzing and studying financial stability and strengthening external cooperation</li> <li>Responding effectively to changes in global financial regulatory environments</li> </ul>	<b>7 Enhancing Efficient Supply and Reliability of Currency</b>	<ul style="list-style-type: none"> <li>Establishing stable currency supply and management system appropriate to changing currency supply and demand conditions</li> <li>Stepping up research into security features to prevent counterfeiting and response systems for forged banknotes</li> <li>Strengthening research related to currency issue systems and currency demand</li> </ul>
<b>3 Promoting Stability of Financial and Foreign Exchange Markets</b>	<ul style="list-style-type: none"> <li>Working to promote stability of financial and foreign exchange markets and enhancing their shock absorption capacities</li> <li>Stepping up monitoring of trends in financial and foreign exchange markets and analysis of current issues related to them</li> <li>Expanding financial safety nets</li> </ul>	<b>8 Strengthening Public Communications and International Cooperation</b>	<ul style="list-style-type: none"> <li>Strengthening public communications and improving quality of economics education</li> <li>Enhancing policy exchanges and cooperation with international forums, international organizations and other central banks</li> </ul>
<b>4 Ensuring Safety and Efficiency of Payment and Settlement Systems</b>	<ul style="list-style-type: none"> <li>Expanding infrastructure of payment and settlement systems</li> <li>Promoting payment and settlement innovation and development</li> <li>Strengthening oversight and policy functions of payment and settlement systems</li> </ul>	<b>9 Rationally Managing Organization and Human Resources</b>	<ul style="list-style-type: none"> <li>Enhancing efficiency of organizational operations and increasing accountability</li> <li>Improving risk management and strengthening crisis response capacity</li> <li>Enhancing specialties and task-specific capacities of staff members</li> <li>Reinforcing performance- and ability-based human resource management systems</li> <li>Rationally streamlining compensation and welfare systems</li> <li>Improving work infrastructure</li> <li>Systematically managing knowledge and information, and promoting information sharing</li> <li>Expanding and upgrading IT services</li> </ul>
<b>5 Strengthening Research Related to Current Economic Issues and Compiling More Statistics</b>	<ul style="list-style-type: none"> <li>Enhancing accuracy of economic analysis and forecasting</li> <li>Searching out pathways to sustainable growth</li> <li>Ensuring that new international statistical standards are applied and firmly established</li> <li>Developing and expanding statistics useful in economic forecasting and analysis</li> <li>Improving statistical services provided to the public</li> <li>Strengthening research exchanges at home and abroad</li> </ul>		

Source: Bank of Korea



## 2. Monetary Policy

The Bank of Korea devotes its utmost efforts to the sound development of the national economy by pursuing price stability and paying attention to financial stability as well, through the efficient establishment and implementation of monetary and credit policies. The Bank has selected inflation targeting as its operational framework for monetary policy, and even under its inflation-targeting regime, policy decisions are made based upon comprehensive consideration of issues such as economic growth and financial stability, in addition to inflationary conditions.

In order to effectively achieve its policy objectives, the Bank of Korea determines the Base Rate and also utilizes other policy instruments including lending and deposit facilities, open market operations, and the reserve requirement system. In particular, in 2020, the Bank adopted various lending support facilities and market stabilization measures in response to the COVID-19 crisis.

### A. Inflation Target

Since 2016, the Bank of Korea has set an inflation target of 2 percent, based on the year-on-year rate of increase in the consumer price index (CPI). The Bank implemented the “Inflation Target for 2019 Onwards” starting in 2019, which no longer specifies a period of its application while maintaining the inflation target at 2 percent, the same as in recent years (from 2016 to 2018).

The Bank operated its monetary policy to ensure that consumer price inflation would reach the inflation target over the medium term. Consumer price inflation in 2020 recorded an annual average of 0.5 percent, which shows a slow rising trend, due to the spread of COVID-19, and widely falls short of the inflation target following 2019.

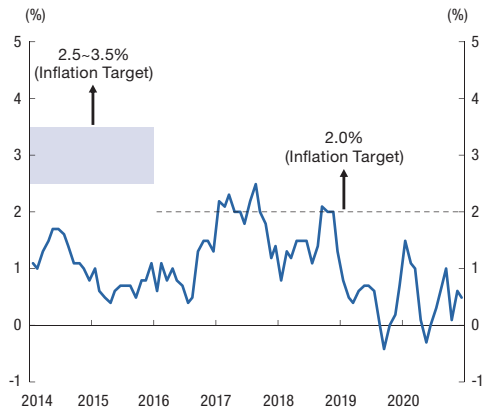
As usual, the Bank provided explanations of its implementation of monetary policy by issuing the Monetary Policy Report, a statutory report submitted to the National Assembly four times a year, and by having the Governor of the Bank of Korea attend sessions of the National Assembly to answer questions when requested. Furthermore, the Bank made efforts to enhance economic agents' understanding of overall inflation conditions by publishing a report examining the operating status of inflation targeting, and holding press conferences with the governor twice a year.

In 2020, the Bank reviewed any needs for improvements in the inflation targeting framework,<sup>37)</sup> and decided to maintain the current framework until the next review.

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37) When establishing the “Inflation Target for 2019 Onwards” in December 2018, the Bank of Korea made the decision to review any needs for improvements in the inflation targeting every two years.

**Figure III- 1. Inflation Target and CPI Inflation (year-on-year)**



Sources: Bank of Korea, Statistics Korea

## B. Base Rate

In 2020, the Bank of Korea expanded its accommodative monetary policy stance to support the recovery of economic growth and to help inflation stabilize at the 2% target over a medium-term horizon.<sup>38)</sup> In response to financial unrest and the slowdown in the real economy caused by the COVID-19 pandemic, the Bank cut the Base Rate on two occasions by a total of 0.75 percentage points, mitigating the macroeconomic downside risks and volatility in financial markets.

As the rapid spread of COVID-19 at home and abroad led to growing concerns over an economic slump and increased volatility in financial markets during the first half of 2020, the Bank held a special meeting of the Monetary Policy Board in March and lowered the Base Rate by 0.50 percentage points. This decision was made under the judgment that in terms of policy effects it would be more

appropriate to respond promptly through a special meeting instead of waiting until the next regular meeting, given the implementation of an expansionary fiscal policy including additional supplementary budgets, and policy rate cuts in major economies. Also in May, with the outlooks for economic growth and inflation largely adjusted downward, the Bank additionally lowered the Base Rate by 0.25 percentage points under the anticipation that the impacts of the COVID-19 pandemic would last longer.

In the second half of 2020, the Bank maintained the Base Rate at 0.50 percent per annum. The Bank took into account that, although uncertainties regarding the economic growth path remained high due to the COVID-19 pandemic, the slump in exports began to ease and it was necessary to monitor changes in economic and financial conditions and the effects of expansionary monetary and fiscal policies taken.

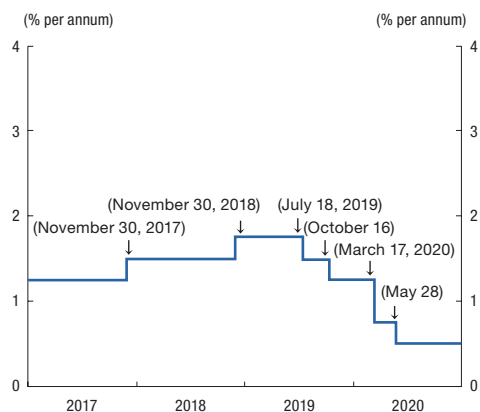
Since the spread of COVID-19, accommodative monetary policies, including the Base Rate cuts, have been generally smoothly transmitted to financial markets and have seemingly contributed to protecting the real economy from shrinking excessively due to the COVID-19 shock, as they improved financial conditions and prevented the negative-feedback mechanism between financial unrest and the deterioration of the real economy.

Meanwhile, although the economic slowdown caused by the COVID-19 pandemic worsened income conditions, heavy flows of funds into asset markets increased concerns

<sup>38)</sup> For more information, please see "Minutes of the Monetary Policy Board Meeting."

about the possibility of the buildup of financial imbalances such as an acceleration in household debt growth.

**Figure III- 2. Bank of Korea Base Rate**



Source: Bank of Korea

### C. Lending and Deposit Facilities

The Bank of Korea offers lending and deposit services to financial institutions as part of its role as a central bank responsible for monetary and credit policy. The Bank's credit businesses in 2020 included the Bank Intermediated Lending Support Facility, Liquidity Adjustment Loans and Intra-day Overdrafts, while its deposit businesses consisted of Current Account Deposits, Fund Adjustment Deposits and Monetary Stabilization Account Deposits.

As of the end of 2020, the balance of the Bank's won-denominated loans to financial institutions stood at 34.3 trillion won, up by 18.7 trillion won compared to the end of 2019.

**Table III- 2. Loans<sup>1)</sup> of Bank of Korea (as of year-end)**

(hundred million won)

	Outstanding		Change
	2019	2020	
Bank Intermediated Lending Support Facility	155,684	325,123	169,439
Loans to Special Purpose Vehicle for Purchasing Corporate Bonds and Commercial Paper <sup>2)</sup>	-	17,600	17,600
<b>Total</b>	<b>155,684</b>	<b>342,723</b>	<b>187,039</b>

Notes: 1) Excluding loans to government.

2) Limited company for corporate liquidity support organization.

Source: Bank of Korea

At the end of 2020, the volume of the Bank's deposits held totaled 156.6 trillion won, 23.1 trillion won higher than at year-end 2019. Among them, won-denominated deposits increased by 12.8 trillion won, and deposits in foreign currencies increased by 10.3 trillion won.

**Table III- 3. Deposits with Bank of Korea (as of year-end)**

(hundred million won)

	Outstanding		Change
	2019	2020	
Won Deposits	742,548	870,490	127,942
Financial institutions	697,229	833,391	136,162
Non-Resident <sup>1)</sup>	45,319	37,099	-8,220
Foreign Currency Deposits	592,908	695,469	102,561
<b>Total</b>	<b>1,335,456</b>	<b>1,565,959</b>	<b>230,503</b>

Note: 1) Won deposits of international organization, including the IMF.

Source: Bank of Korea

### Strengthening Support for Companies Affected by COVID-19 through the Bank Intermediated Lending Support Facility

During 2020, the Bank of Korea increased

the ceiling of its Bank Intermediated Lending Support Facility by 18 trillion won on three occasions, from the existing ceiling of 25 trillion won to 43 trillion won, to extend financial assistance to small businesses, and small or medium-sized enterprises (SMEs) that faced financial difficulties due to COVID-19.

Specifically, from March 9, the Bank increased the ceiling of its Bank Intermediated Lending Support Facility by 5 trillion won to support SMEs affected by COVID-19. In addition, using residual funds from the Program for the Stabilization of SME Lending, the Bank also raised the ceiling of its Support Program for New Growth Engine Development and Job Creation by 1 trillion won in order to strengthen support for companies with the potential to contribute to expanding new engines of economic growth and employment. In response to the greater extent of damage, from March 19, the Bank expanded the range of target businesses eligible for support<sup>39)</sup> and strengthened financial support to individual business owners and low-credit SMEs.<sup>40)</sup> Taking into account the persistent difficulties facing SMEs affected by the pandemic, the Bank once again increased the ceiling of its Bank Intermediated Lending Support Facility by 5 trillion won as of May 18.

From Oct. 5, the Bank of Korea provided additional financial assistance of 3 trillion won<sup>41)</sup> to small businesses affected by COVID-19, while increasing the ceiling of its support program for SMEs affected by COVID-19 by 3 trillion won from 10 trillion won to 13 trillion won and also extended its operation period for another six months.<sup>42)</sup> Moreover, the Bank raised the scale of support for capital investment<sup>43)</sup> in its Support Program for New Growth Engine Development and Job Creation by 2 trillion won, from 3 trillion won to 5 trillion won, with the aim of supporting start-ups, job-creating businesses, and materials, parts and equipment businesses, and also extended its operation period for another year.

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

As of the end of 2020, the total amount of the Bank Intermediated Lending Support Facility, reflecting the increased ceilings for each program, stood at 43.0 trillion won, including

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

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

41) The Bank is supporting 100 percent of bank loans to small businesses that are not under any distress, such as delinquent loans, capital impairment and closure, until the end of March 2021.

42) Accordingly, the operation period (based on the date of loan handling by banks) was extended from the end of September 2020 to the end of March 2021.

43) Effective October 1, 2019, the Bank decided to provide three trillion won in financial support to start-ups, job-creating businesses, and to materials, parts and equipment businesses for one year.

2.5 trillion won under the Support Program for Trade Financing, 13.0 trillion won under the Support Program for New Growth Engine Development and Job Creation, 5.5 trillion won under the Program for the Stabilization of SME Lending, 5.9 trillion won under the Support Program for Regional Enterprises, and 16.1 trillion won for ceiling reserves.

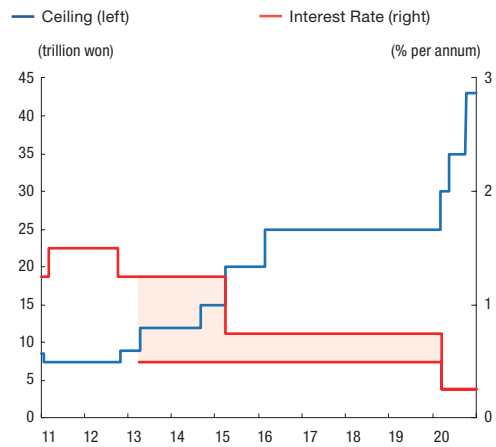
**Table III- 4. Ceiling and Interest Rates by Bank Intermediated Lending Support Facility Program<sup>1)</sup>**

Program	Ceiling		Interest Rate	
	Before	After		
Trade Financing Support	2.5	2.5	0.25	
New Growth Engine Development and Job Creation	10.0	13.0	0.25	
Stabilization of SME Lending	6.5	5.5	0.25	
Regional Enterprises	5.9	5.9	0.25	
Limited Reservation	Support for Companies Affected by COVID-19	-	13.0	0.25
	Support for Small Business	-	3.0	0.25
	Other	0.1	0.1	0.25
<b>Total</b>	<b>25.0</b>	<b>43.0</b>	<b>-</b>	

Notes: 1) As of end 2020.

Source: Bank of Korea

**Figure III- 3. Bank Intermediated Lending Support Facility Ceiling and Interest Rates**



Source: Bank of Korea

### Seeking Financial Market Stability through Special Loan

In order to deal with instability in the financial market and difficulties in corporate financing caused by the COVID-19 pandemic, the Bank of Korea expanded the range of eligible collateral for lending facilities, launched the Corporate Bond-Backed Lending Facility, and established a special purpose vehicle (SPV) to purchase corporate bonds and commercial paper, subsequently commencing loans to the SPV.

From April 1,<sup>44)</sup> the Bank of Korea expanded the scope of securities eligible as collateral for its loans in order to expand the base for the provision of liquidity and to relieve the burden placed on banks that were required to provide collateral for BOK loans, if necessary.

44) Bonds issued by the Korea Deposit Insurance Corporation were added as collateral securities eligible for loans on April 14.

**Table III - 5. Eligible Collateral for Lending Facilities**

	Eligible Collateral for Lending Facilities	Note
Current	Treasury bonds, government-guaranteed bonds, monetary stabilization bonds (MSB)	
	MBSs issued by the Korea Housing Finance Corporation, debentures issued by three specialized banks <sup>1)</sup>	-
New	General bank debentures (including debentures issued by the National Agricultural Cooperative Federation and Nonghyup Bank, and by the National Federation of Fisheries Cooperatives and Suhyup Bank), bonds issued by nine public organizations <sup>2)</sup>	Effective until March 31, 2021

Notes: 1) The Korea Development bank, The Industrial Bank of Korea and the Export - Import Bank of Korea.

2) Korea SMEs and Startups Agency, Korea Gas Corporation, Korea Expressway Corporation, K-Water, Korea Electric Power Corporation, KORAIL, Korea Rail Network Authority, Korea Land and Housing Corporation, Korea Deposit Insurance Corporation.

Source: Bank of Korea

Furthermore, the Bank of Korea launched the Corporate Bond-Backed Lending Facility<sup>45)</sup> and it entered into effect on May 4 as a safety net for businesses, banks and non-bank financial institutions to anticipate the deterioration of financing conditions.<sup>46)</sup>

With the aim of supporting businesses facing financing difficulties in the credit securities market, the Bank of Korea set up a special purpose vehicle through which the Bank purchases corporate debt, including low-rated

corporate bonds and commercial paper,<sup>47)</sup> as a joint effort involving the government, the Bank of Korea, and the Korea Development Bank (KDB) on July 14. Furthermore, the Bank provided loans of 1.78 trillion won to the SPV on July 23. A total of 3 trillion won<sup>48)</sup> of the SPV was sourced through loans from the Bank, and 1.22 trillion won through the investment and subordinated loans from the KDB. The SPV began to purchase corporate bonds and commercial paper in earnest from July 24, and as of the end of 2020, the volume of corporate bonds and commercial paper purchased by the SPV reached 2.5 trillion won.

**Table III - 6. Purchasing Status of Corporate Bonds and CPs through SPVs by Credit Rating<sup>1)2)</sup>**

	(hundred million won, %)	
Credit Rating <sup>3)</sup>	Amount	Proportion
AA(A1)	5,400	21.9
A(A2)	13,551	54.8
BBB(A3)	5,760	23.3
Total	24,711	100.0

Notes: 1) As of the end of December 2020.

2) Based on nominal par value.

3) Letters in parentheses refer to CP credit ratings.

Source: Bank of Korea

45) The lending rate will be 85bp plus the 182-day MSB rate, eligible collateral will consist of prime corporate bonds (rated AA- or above) issued by non-financial enterprises with a remaining maturity of five years or less, and the ceiling will be 10 trillion won.

46) The operation period of the facility was extended from August 3, 2020, by three months on two occasions (November 3, 2020, to February 3, 2021).

47) Approximately 10 trillion won will be raised, consisting of 8 trillion won in primary loans extended by the Bank of Korea, 1 trillion won invested by the Korea Development Bank (the government), and 1 trillion won of subordinated loans extended by the KDB. The total amount can be expanded to up to 20 trillion won, if necessary.

48) The SPV will be financed through capital calls on four occasions and 3 trillion won was supplied in the first round.

## D. Open Market Operations

The Bank of Korea flexibly adjusted liquidity to maintain the call rate at the level of the Base Rate set by the Monetary Policy Board through the application of measures such as the issuance of Monetary Stabilization Bonds (MSBs), conducting transactions through Repurchase Agreements (RPs), and accepting term deposits in its Monetary Stabilization Account (MSA).

In order to ensure financial market stability after the outbreak of COVID-19, the Bank expanded the supply of liquidity by adopting measures such as full-allotment RP purchase and increased outright purchases of Treasury Bonds, while expanding liquidity provision channels by broadening the range of institutions and securities eligible for open market operations.

### Flexible Liquidity Adjustment and Systemic Improvements

In 2020, the scale of liquidity adjustment required on an average outstanding balance basis was 180.6 trillion won, down 6.6 trillion won from the previous year. This decline was attributable mainly to an increase in reserve demand caused by the growth in transferable deposits, in addition to a decline in the supply of reserves as currency issuance expanded. Therefore, the Bank responded in a direction that reduced the scale of MSB issuance and flexibly adjusted the scale of RP transactions and MSA deposits in response to short-term financial market conditions such as fluctuations in the supply and demand of reserves.

On an average outstanding balance basis,

the scale of MSB issuance and net reverse repos (reverse repos minus repos) respectively decreased by 5 trillion won and 2.5 trillion won year-on-year in response to the reduced scale of liquidity adjustment required. The reduced scale of net reverse repos was mainly because, in response to financial instability due to the early spread of COVID-19, non-regular RP purchases in March and full-allotment RP purchases between April and July resulted in a significant increase in repos. Meanwhile, MSA deposits increased by 0.9 trillion won on an average outstanding balance basis.

Table III - 7. Scale of Liquidity Adjustment of Open Market Operations (average basis)

(trillion won)

	2019	2020				
		Year	I	II	III	IV
Scale of Liquidity Adjustment Required	187.2	180.6	180.0	179.6	181.9	180.8
MSBs	168.1	163.1	161.6	164.0	166.4	160.3
Repos Net Outstanding	10.5	8.0	11.6	2.2	6.2	11.7
Reverse Repos	10.6	13.0	12.1	14.5	13.1	12.2
Repos	0.1	5.0	0.5	12.3	6.8	0.5
MSA	8.7	9.5	6.7	13.4	9.3	8.8

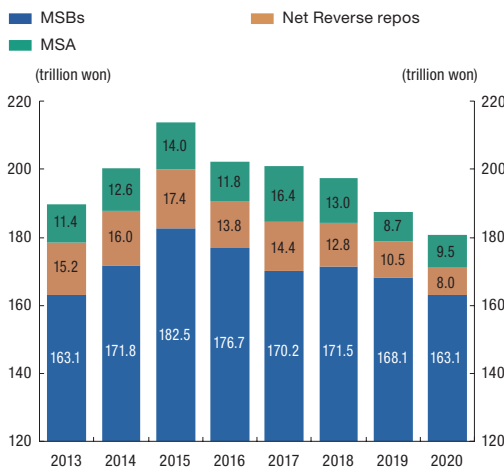
Source: Bank of Korea

As a result, the proportions of MSBs and MSA among instruments for open market operations rose from 89.8 percent and 4.6 percent, respectively, in 2019 to 90.3 percent and 5.3 percent in 2020. On the other hand, the proportion of net reverse repos decreased from 5.6 percent in 2019 to 4.4 percent in 2020.

Meanwhile, the launch of BOK-Wire+, the next generation financial networking system that launched in October, provided the Bank of Korea with the opportunity to continue its efforts to establish a market-oriented bidding system by providing real-time information

such as the bidding deadline to institutions participating in open market operation bidding. Furthermore, in consideration of the outlook of a downward trend in the scale of the liquidity adjustment required, the Bank extended the interval of deciding the ceiling of MSBs issued to six months from three months in December to create more flexible and efficient conditions for open market operations.

**Figure III - 4. Scale of Liquidity Adjustment of Open Market Operations<sup>1)</sup> (average basis)**



Note: 1) Excluding negotiated transaction with Korea Finance Corporation(3.48 trillion won, issued in 2014, redeemed in 2015) and the Korea Development Bank(3.45 trillion won, issued in 2015, redeemed in 2016).

Source: Bank of Korea

### Expanding the Liquidity Supply through the Adoption of a Full-Allotment RP Purchase Facility

In March 2020, the spread of COVID-19

pulled down equity prices across the world, expanding volatility in financial markets. This increased the need to provide greater liquidity to non-bank institutions facing difficulties in financing. Later in March, in particular, there was growing concern over short-term financial markets due to factors such as a rapid increase in demand from financial institutions including securities companies and the occurrence of a supply-demand discrepancy at the end of each quarter. Under these circumstances, the Bank of Korea provided 3.5 trillion won of liquidity to non-bank financial institutions on two occasions through non-regular purchases of RPs.<sup>49)</sup>

Furthermore, in order to ensure financial market stability and to support the timely implementation of the government's Financial Support Package, the Bank of Korea adopted a regular full-allotment RP purchase facility. This supplies the full liquidity needed by financial institutions at fixed interest rates by buying 91-day bonds at repo auctions once every week without any auction limit. As a result, the Bank provided 19.43 trillion won in total from April to July.<sup>50)</sup>

Such measures to increase the liquidity supply in the market improved financing at financial institutions including securities companies, and stabilized short- and long-term market rates.

49) Targeting mainly securities companies and KSFC, the bonds purchased in repo auctions amounted to 1 trillion won on March 19 and 2.5 trillion won on March 24.

50) At its initial introduction, a regular full-allotment RP purchase facility to supply an unlimited amount of liquidity was set to operate for three months from April to June. However, the Bank of Korea extended the operating period of the facility by one month to the end of July to alleviate the market shock that could arise from the full redemption of RPs.



## Expanding Liquidity Provision Channels

The Bank of Korea expanded the range of institutions eligible for open market operations, with a focus on non-bank financial institutions including securities companies to ensure the fast and extensive supply of liquidity. Seven institutions that were only eligible for Monetary Stabilization Bond transactions and four primary dealers were temporarily included as institutions eligible for RP transactions from April to July. Accordingly, the total number of institutions eligible for RP transactions increased substantially from 22 to 33 institutions.<sup>51)</sup>

Furthermore, to increase collateral capacity at financial institutions, the Bank temporarily expanded the range of securities eligible for open market operations in April for one year. Therefore, securities eligible for RP transactions were broadened to include debentures issued by three specialized banks,<sup>52)</sup> bank debentures,<sup>53)</sup> and bonds issued by nine public institutions,<sup>54)</sup> in addition to the existing Treasury bonds, government-guaranteed securities, Monetary Stabilization Bonds, and MBSs issued by the Korea Housing Finance Corporation.

In addition to the existing Treasury bonds and government-guaranteed securities, MBSs

issued by the Korea Housing Finance Corporation and debentures issued by three specialized banks were newly included as securities eligible for outright transactions.

Such efforts to expand the range of institutions and securities eligible for open market operations were intended to foster appropriate conditions for a smooth supply of large-scale liquidity through full-allotment RP purchase facilities, and expand liquidity supply channels by also allowing non-bank institutions to expand their utilization of credit securities such as bank debentures in addition to risk-free government bonds in the event that financial instability returns.

## Outright Purchases of Treasury Bonds

The Bank of Korea conducted outright purchases of Treasury bonds to resolve a supply-demand imbalance of Treasury bonds and acquire securities eligible for RP transactions while addressing the heightening volatility of market interest rates due to the spread of COVID-19. The Bank conducted outright purchases of Treasury bonds amounting to six trillion won in total on four occasions from March to the end of August 2020. In September, the Bank announced plans to expand its outright purchases of Treasury bonds as a preemptive response to any possible discrep-

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51) The eligibility of such institutions was valid until the end of July because institutions eligible for open market operations are determined annually in August. It was announced at the end of July that the number of newly qualified institutions for RP transactions (valid from August 1, 2020, to July 31, 2021) was increased to a total of 27 from the existing 22 of the previous year (selected as of the end of July 2019) by adding one domestic bank and four non-bank financial institutions.

52) KDB bonds, IBK bonds (SMIF bonds), KEXIM bonds.

53) Includes debentures issued by the National Agricultural Cooperative Federation and Nonghyup Bank and by the National Federation of Fisheries Cooperatives, and bonds from Suhyup Banks.

54) Korea Deposit Insurance Corporation, Korea SMEs and Startups Agency, Korea Gas Corporation, Korea Expressway Corporation, K-water, Korea Electric Power Corporation, KORAIL, Korea Rail Network Authority, and Korea Land and Housing Corporation.

ancy in the supply and demand of Treasury bonds and a consequent rise in volatility in long-term market interest rates caused by the government's increased issuance of Treasury bonds due to the provision of emergency disaster relief funds. The announcement aimed to inform the market in advance regarding the Bank's plan to conduct outright purchases of Treasury bonds with a total of around five trillion won from September to the year-end in the secondary market. The Bank purchased Treasury bonds of five trillion won on three occasions between September and November in line with the plan, with total purchases amounting to 11 trillion won as of the end of 2020.

### E. Monetary Policy Communication

The Bank of Korea continued its efforts to strengthen its communication with market participants and the public to enable economic players to further understand its monetary policy operations amid the COVID-19 crisis, and to enable them to form reasonable expectations about its policy direction.

First, as the Bank decided to review the status of inflation target operation twice per year starting in 2019, the Governor of the Bank of Korea attended a press conference in June and December 2020 and provided explanations of inflationary conditions, future forecasts, risk factors, and the Bank's policy direction. The Monetary Policy Report issued every quarter included detailed explanations of the conditions of monetary policy instruments operated by the Bank of Korea to cope with the impacts of COVID-19. The Bank of Korea

revised its General Principles of Monetary Policy Operation to enhance public awareness of its mandate concerning financial stability<sup>55)</sup> in consideration of recent changes in policy implementation conditions.

The Bank expanded its panel for external communication consisting of outside experts to reinforce feedback from its policy and administrative operations. The number of panel members was gradually increased from around 50 in 2019 to 200 in November 2020, and its membership composition added business and industry experts, and journalists, to the existing cohort of scholars, researchers, and financial experts. External opinions regarding monetary policy directions, major reports, and policy and administrative operations were collected in a timely manner by the expanded and diversified communication panel and reflected in the establishment of policy and administrative improvements.

Amid difficulties due to the pandemic, members of the Monetary Policy Board also made active efforts to enhance the public understanding of monetary policy. Most of-line activities including press conferences for accredited reporters or conferences for local companies that had been regularly held by the Bank were halted due to the spread of COVID-19, but the Bank strengthened new ways of communication, including hosting online contact-free conferences for participants from a diverse range of backgrounds, including college students, corporate executives and employees, and officials from research institutes.

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55) Languages regarding financial stability were revised to reflect how the Bank of Korea conducted its policy to handle concerns over financial and foreign exchange markets.

## Box III-1.

### Bank of Korea Policy Responses to COVID-19

In response to the financial unrest and the contraction of the real economy caused by the spread of COVID-19 across the globe, the

Bank of Korea cut the Base Rate and strengthened its support for companies affected by the pandemic, all while making active efforts to stabilize short- and long-term financial and foreign exchange markets. Furthermore, the Bank analyzed the effects of the COVID-19 pandemic and enhanced global cooperation and external communication through contact-free channels.

Table III- 8. Bank of Korea Policy Responses to COVID-19

(as of the end of 2020)

Category	Policy Response Measures		Key Details
Monetary Policy	Base Rate Cuts		■ 1.25% → 0.50% (0.75%p)
	Raised Ceiling on Bank Intermediated Lending Support Facility		■ Increase in ceiling: 25 trillion won → 43 trillion won (+18 trillion won) ■ Lending rate cut: from the 0.5% - 0.75% range → 0.25%
	Liquidity Supply	Carried out full-allotment RP purchases	■ Amount supplied: A total of 19.43 trillion won (expired at the end of July)
		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, 2.5 trillion won on March 24)
		Expanded the range of eligible collateral for lending facilities	■ The range of eligible collateral required for borrowing from the Bank's lending facilities was expanded
		Broadened the range of institutions and securities eligible for open market operations	■ The range of institutions eligible for RP transactions was broadened. (expired end-July) ■ The list of securities eligible for outright transactions and RP transactions was broaden
	Stabilization of Treasury, Corporate Bond, CP Markets	Launched the Corporate Bond-Backed Lending Facility	■ Ceiling: 10 trillion won. Operation Period: February 3, 2021 ■ Eligible Collateral: Prime corporate bonds (rated at least AA-) remaining maturity of five years or less
		Supported the credit market through an SPV that purchases corporate bonds and commercial paper	■ Size: 10 trillion won (The size can be expanded up to 20 trillion won in accordance with market conditions) ■ Size of the Bank's loan to SPV: 1.78 trillion won
		Performed outright purchases of Treasury bonds	■ Amount Purchased: A total of 11.0 trillion won (1.5 trillion won each in March, April, July, and August; 2.0 trillion won in September; 1.5 trillion won each in October and November)
	Financial Stability	Analysis Assessment of Macroeconomic Soundness	
Foreign Exchange Market Stabilization		Signed and renewed bilateral currency swap arrangements	■ Signed a 60 billion U.S. dollar bilateral currency swap arrangement with the U.S. Federal Reserve (Maturity: end-September 2021) ■ Expanded currency swap arrangements with People's Bank of China (around USD 59 billion) and the Reserve Bank of Australia (around USD 8.1 billion)
		Implemented competitive US dollar loan facility auctions	■ A total of 19.872 billion US dollar was supplied
		Raised the ceilings on FX derivatives positions of banks	■ Domestic banks (40% → 50%) and foreign bank branches (200% → 250%)

Financial Stability	Foreign Exchange Market Stabilization	Temporarily lifted the levy on financial institutions' non-deposit FX liabilities	<ul style="list-style-type: none"> <li>■ Banks, securities companies, credit card companies and insurance companies were exempted from the levy for three months (during the period between April and June 2020)</li> </ul>
		Supplied foreign currency liquidity through purchase of foreign currency bond repurchase agreements	<ul style="list-style-type: none"> <li>■ Bank of Korea will provide U.S dollar funding to domestic financial institutions through foreign currency bond repurchase agreements</li> <li>■ Eligible bonds: U.S. Treasury bonds (U.S. government agency bonds, if necessary)</li> </ul>
Currency Issuance	Responded to Currency Demand		<ul style="list-style-type: none"> <li>■ Increased amount of 50,000-won banknotes supply</li> </ul>
	Blocked any Potential Transmission of COVID-19 Through Cash		<ul style="list-style-type: none"> <li>■ Mandated that currency be stored in vault for at least two weeks before a banknote quality inspection</li> </ul>
Payment and Settlement Business	Expanded the Collateral Availability of Financial Institutions		<ul style="list-style-type: none"> <li>■ Lowered ratio of collateral for guaranteeing net settlements (70% → 50%)</li> <li>■ Expanded range of eligible collateral for guaranteeing net settlements</li> </ul>
Foreign Exchange and International Cooperation	Enhanced the Liquidity and Stability of Foreign Exchange Reserves		<ul style="list-style-type: none"> <li>■ Examined liquidity and stability of the foreign exchange reserves</li> <li>■ Ensured continuity in the management of foreign exchange reserves</li> </ul>
	Actively Participated in Global Policy Coordination		<ul style="list-style-type: none"> <li>■ Participation in BIS Central Bank Governors' meetings (14 occasions), IMF and World Bank Group meetings (two occasions)</li> <li>■ Participation in the meetings of G20 Finance Ministers and Central Bank Governors (Regular meetings: four occasions. Special meetings: three occasions), and the meetings of ASEAN+3 Finance Ministers and Central Bank Governors (one occasion) in cooperation with the government</li> </ul>
Research and Statistics	Analyzed the Effects of the Spread of COVID-19		<ul style="list-style-type: none"> <li>■ Examined the effects on world trade, production, consumption, export, employment, and prices, and structural changes in the economy</li> </ul>
	Maintained Global Research Exchanges via Video Conferences		<ul style="list-style-type: none"> <li>■ Participation in the Annual Meeting of the CERA, and the FMA Annual Meeting, hosting of the BOK-BOJ Research Workshop, etc.</li> </ul>
External Communications	Expanded Non-Face-to-Face Communication		<ul style="list-style-type: none"> <li>■ Establishment of policy response bulletin regarding COVID-19 at the Bank of Korea's website, active use of social media, livestreaming of press conferences, etc.</li> <li>■ Opening the Digital BOK Money Museum</li> </ul>

Source: Bank of Korea

### 3. Financial Stability

#### A. Analysis and Assessment of Macroprudential Stability

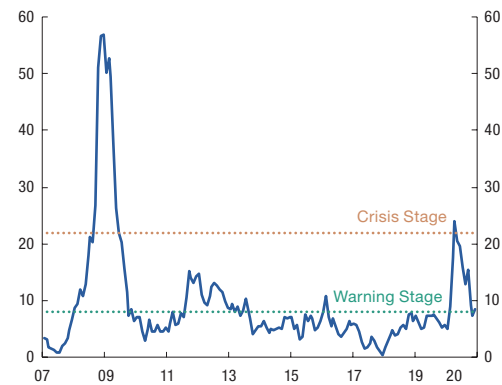
The Bank of Korea dedicated continuous efforts to ensure the faithful fulfillment of its duties related to financial stability, such as the comprehensive assessment of financial stability conditions in Korea and the suggestion of policy measures. In response to the potential for increased risks to financial stability following the spread of COVID-19, the Bank strengthened its monitoring of financial soundness and debt repayment capacity with a focus on the vulnerable areas of the household and business sectors, while examining the management soundness and resilience of financial institutions through joint inspections.

#### Evaluation of Financial Stability Conditions<sup>56)</sup>

With the accelerated spread of COVID-19 around the world as we entered March 2020, the financial system in Korea showed a degree of instability, such as greater volatility in financial and foreign exchange markets, and higher credit risk aversion. However, aggressive policy responses made by the government

and by the Bank of Korea, including market stabilization measures, brought about a quick recovery of stability in the financial system. As the growth of private credit accelerated with the sharp rise in both household and corporate debt over the course of responding to COVID-19, financial soundness in both the household and corporate sectors deteriorated somewhat due to a delay in the economic recovery and sluggish economic performance. The Financial Stability Index (FSI),<sup>57)</sup> indicating overall conditions within the financial system, temporarily reached a crisis stage in April and then fell continuously to close at a level slightly above the warning stage threshold (8.0) at the end of 2020.

Figure III- 5. Financial Stability Index (FSI)



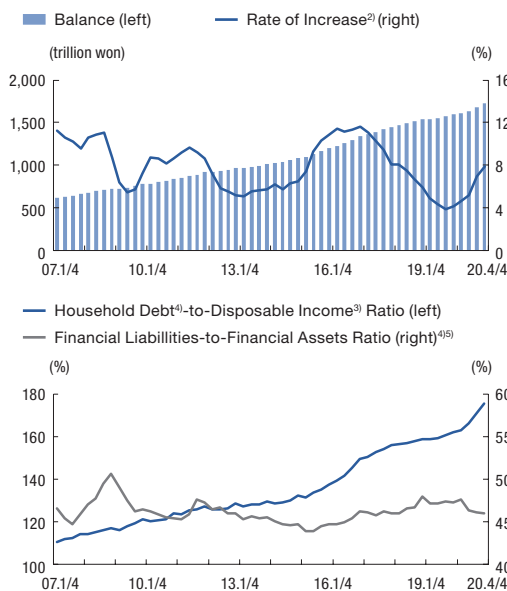
Source: Bank of Korea

56) The Bank has been holding its Financial Stability Meeting on a quarterly basis since 2017 in order for the Monetary Policy Board to evaluate financial stability conditions. In a bid to enhance communications related to its Financial Stability Meetings, the Bank distributes a press release and holds a press conference on the day of the meeting. Following the June and December meetings, the Bank submits a Financial Stability Report to the National Assembly on the day of its deliberation and approval, as per Article 96 (1) of the Bank of Korea Act.

57) This refers to a composite index (0-100) calculated by standardizing 20 monthly financial and six real-sector indicators (banks, financial markets, external economic conditions, the real economy, households, and corporations). It classifies conditions into three stages: normal, warning, or crisis. The “warning” stage means the nation is being influenced by internal and external shocks, but not to a significant degree, while the “crisis” stage means that internal and external shocks are having a significant influence on the nation. The “warning” and “crisis” stage thresholds are set at 8 and 22, respectively, using the “noise-to-signal ratio” method.

The private credit-to-nominal GDP ratio, an indicator of the level of private sector leverage, showed a dramatic increase, recording 215.5 percent (estimate) at the end of 2020, up by 18.4 percentage points from the same period in the previous year. This was attributable to the accelerated growth in private credit in the household and corporate sectors, while nominal GDP growth declined due to the prolonged COVID-19 pandemic. As the growth of household credit expanded both for home mortgage loans due to the rising demand for housing transactions and other loans, stagnant growth in terms of income in line with the continued economic slowdown increased the debt-servicing burden on households. However, the loan delinquency rate slightly declined, maintaining solid soundness of household debt.

**Figure III - 6. Household Credit<sup>1)</sup>**

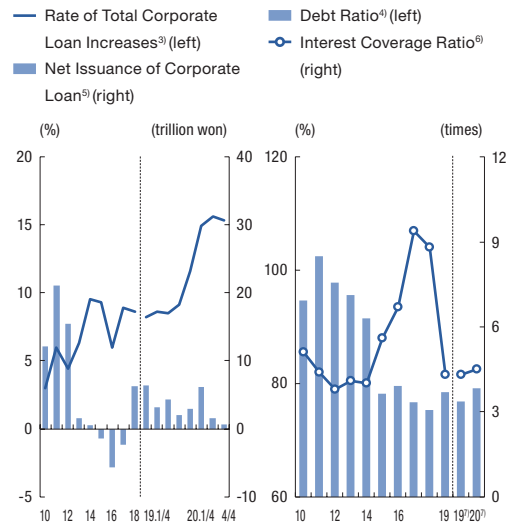


- Notes: 1) Household credit statistics basis.  
 2) Year-on-year basis.  
 3) Estimated figure for each quarterly income.  
 4) Estimated figure fourth quarter in 2020.  
 5) Based on the flow of funds statistics.

Source: Bank of Korea

Corporate credit rose considerably due to financial support measures in response to COVID-19 and due to corporate efforts to secure funding. The financial soundness of corporations worsened in general as growth and profitability declined on the impact of the prolonged COVID-19 pandemic.

**Figure III - 7. Corporate Credit<sup>1)</sup> and Financial Soundness<sup>2)</sup>**



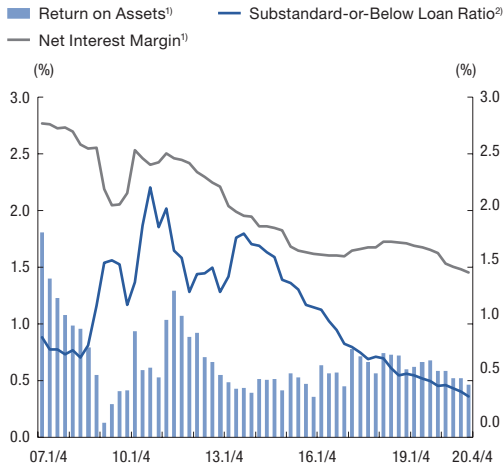
- Notes: 1) Based on loans to corporations (excluding financial and insurance companies) by deposit-taking banks (commercial banks, specialized banks, and foreign bank branches).  
 2) Based on a total of 2,248 companies, including listed and some unlisted companies, that submitted business reports.  
 3) Year-on-year basis.  
 4) Debt / equity, end-period basis.  
 5) Quarter basis (since 2019).  
 6) Operating income / interest expenses.  
 7) Based on the third quarter of each year.

Sources: Financial institutions' business reports, KIS-Value

With regard to financial institutions, particularly management conditions at commercial banks, their asset soundness improved despite a degree of slowdown in asset growth and a slight decline in profitability due to an increase in loan loss expenses. Management soundness at non-bank financial institutions remained favorable with asset soundness im-

proving in most sectors amid persistent asset growth.

**Figure III- 8. Commercial Bank Asset Quality and Profitability**



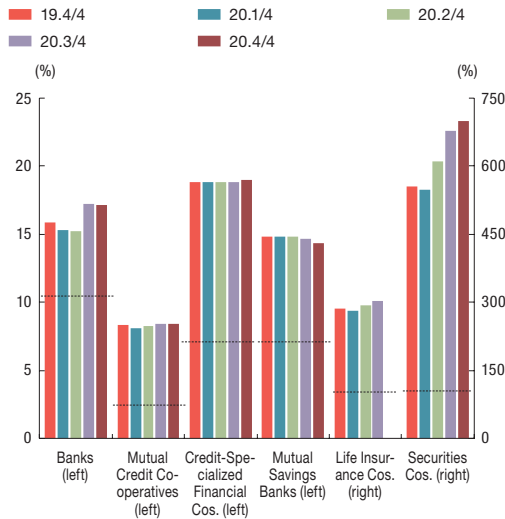
Notes: 1) Accumulated quarterly incomes annualized.  
2) End-period basis.

Sources: Commercial bank business reports

Meanwhile, the financial system’s resilience, described as its capacity to withstand domestic and external shocks, remained solid. As capital adequacy ratios at commercial banks rose owing to the early introduction of Basel III reforms, their ability to respond to liquidity conditions also generally remained favorable. Non-banking financial institutions greatly exceeded regulatory standards across most sectors. Even under the unusually stressful circumstances where an economic slowdown persisted and financial imbalances underwent adjustments, the average capital ratio across all financial sectors exceeded the regulatory levels, which indicates that the financial system’s resilience would remain at a favorable level. However, as some financial institutions with relatively low capital ratios may be vulnerable to shocks, additional attention needs to be paid to the possibility that insolvency at

such institutions could spread to other sectors. Meanwhile, Korea’s external payment capacity temporarily diminished over the course of its response to COVID-19, but recovered to a stable condition with a significant increase in foreign exchange reserves.

**Figure III- 9. Financial Institutions<sup>1)</sup> Capital Adequacy Ratios<sup>2)3)</sup>**



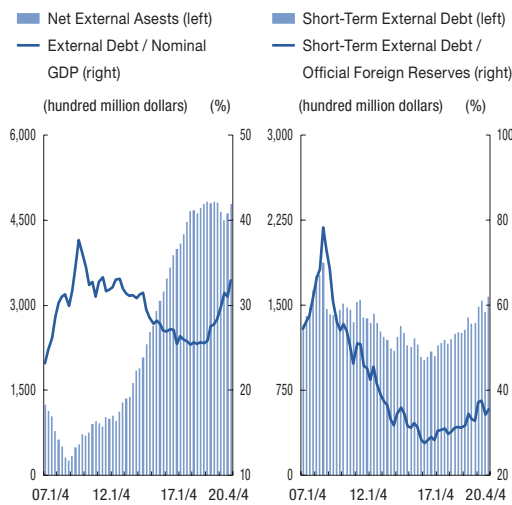
Notes: 1) Banks refer to commercial banks. Provisional value, fourth quarter 2020.

2) Total capital ratio of banks (10.5 %, 11.5 % for D-SIBs), net capital ratio of mutual credit cooperatives (2 % for supervisory standard; 4 % for MG community credit cooperatives and 5 % for Nonghyup), adjusted capital ratio of credit-specialized financial companies (7%; 8% for credit card companies), BIS capital ratio of mutual savings banks (7%; 8% for banks with total assets of 1 trillion won or more), risk-based capital ratio of insurance companies (100%), and net capital ratio of securities companies (100%).

3) Dotted lines show supervisory standards.

Sources: Business reports from financial institutions.

**Figure III- 10. External Debt-to-Nominal GDP Ratio<sup>1)</sup> and Short-Term External Debt-to-Official Foreign Reserves Ratio<sup>1)</sup>**



Note: 1) End-quarter basis.

Source: Bank of Korea

The Bank plans to examine financial stability conditions to guard against internal and external anxiety factors such as concerns over the resurgence of COVID-19 and the subsequent weakening of the global economic recovery. It will also closely examine the potential for credit risks to be realized, mainly in the vulnerable areas of the household and corporate sectors in the course of a discriminatory economic recovery amid high leverage in the private sector and heightened financial imbalances, as well as the possibility that any instability in the financial system may intensify due to the adjustment of asset prices in line with changes in risk preferences among economic participants.

### Implementation of Joint Examinations and Discussions of Domestic and International Financial Stability

In a bid to examine potential risk factors

that have accumulated in the financial system since the outbreak of COVID-19, the Bank of Korea carried out joint examinations of financial institutions, all while strengthening its regular monitoring of potential risks in the household and corporate sectors.

The Bank examined bank risk management conditions and management soundness regarding household and corporate loans, which sharply soared after the outbreak of COVID-19, all while analyzing the risk of accumulation of household debt and the possibility of rising defaults on real estate-related loans in line with heightened volatility in asset prices. In addition, liquidity conditions at households and corporations affected by the pandemic were monitored to examine risks related to the effects of the large-scale financial support that was implemented over the course of the pandemic response. Meanwhile, the Bank signed a memorandum of understanding (MOU) for business cooperation with the Korea Credit Information Services to promote the establishment of a microdata database of corporate loans in the overall financial sector, which lays the foundation for the effective regular monitoring of the corporate sector.

**Table III- 9. Bank of Korea's On-Site Joint Examination**

	(number)				
	2016	2017	2018	2019	2020 <sup>1)</sup>
Thematic examination	3	4	3	4	-
General examination	3	2	2	2	2

Note: 1) Joint inspections were suspended from January to September to help strengthen social distancing measures following the spread of COVID-19.

Source: Bank of Korea



In addition, the Bank of Korea attended the Meeting of Directors of Supervision of the South East Asian Central Banks (SEACEN) as a member institution of the Working Group on Banking Supervision (WGBS) to engage in discussions about financial stability issues across the Asia-Pacific region. It also participated actively in Supervisory Colleges<sup>58)</sup> organized by foreign supervisory authorities in major countries to discuss the changes in global management strategies, performance, and risk management at large foreign banks doing business in Korea, which together comprise a key set of information used to conduct joint inspections of domestic banks.

Meanwhile, the Bank also took part in the Macroeconomic Finance Meeting<sup>59)</sup> among relevant agencies and the Consultative Group for Managing Household Debt in order to evaluate the effects of domestic and overseas uncertainties caused by the spread of COVID-19 on the national financial and economic systems, and to explore response measures.

Internationally, the Bank actively participated in discussions at international standard-setting bodies for the purpose of information sharing and policy cooperation among countries. As a member institution of the Financial Stability Board (FSB) and the Basel

Committee on Banking Supervision (BCBS), the Bank monitored the vulnerability of global financial systems in the context of COVID-19 and shared policy responses to related issues. It also contributed to devising measures regarding emerging risks to financial stability, such as fintech, crypto-assets, and climate change. In terms of climate-related financial risks, the Bank also participated in an affiliated research group of the Network for Greening the Financial System (NGFS),<sup>60)</sup> a forum of central banks and supervisory organizations.

Furthermore, the Bank engaged in discussions about financial stability in the Asia-Pacific region as a member institution of the FSB Regional Consultative Group for Asia and of the Executives Meeting of East Asia & Pacific Central Banks (EMEAP) Working Group on Banking Supervision (WGBS).

## B. Foreign Exchange Market Stabilization Measures

The Bank of Korea implemented timely measures to provide foreign currency liquidity to financial institutions and businesses experiencing difficulties in foreign currency funding due to strains in the global financial markets, while flexibly operating the macroprudential stability system in the foreign exchange sector.

58) This refers to a consultative vehicle for information sharing and supervisory cooperation in which supervisors from international financial institutions in the home and host countries participate to effectively regulate and supervise such institutions.

59) This consultative body was created in July 2012 with membership comprised of deputies from a range of agencies, including the Bank of Korea, the Ministry of Economy and Finance, the Financial Services Commission, and the Financial Supervisory Service. Its regular and ad hoc meetings are chaired by the Vice Minister of Economy and Finance.

60) This is a voluntary forum established in December 2017 for the purpose of sharing best practices to manage financial risks related to climate and the environment, and for supporting the transition toward a sustainable economy. The Bank of Korea became a member in November 2019, and 83 central banks and supervisors had joined as of the end of December 2020.

## Provision of U.S. Dollar Funding through Swap Transactions With the U.S. Federal Reserve

In March 2020, the Bank signed a 60 billion dollar bilateral currency swap arrangement with the U.S. Federal Reserve amid surging demand for U.S. dollars due to expanded risk aversion in global financial markets. From the end of March to early May 2020, it conducted a total of six competitive U.S. dollar loan facility auctions using the proceeds of the swap transaction to supply 19.872 billion dollars of liquidity. Given that liquidity conditions in U.S. dollar funding improved across international financial markets from the end of March onward, coupled with the rapid stabilization of the domestic foreign exchange sector, the Bank sequentially recovered all the funds supplied through the competitive loan facility auctions by the end of July.

**Table III- 10. Supply and Withdrawal of Competitive U.S. dollar Loan Facility Auctions**

(hundred million USD)

Round	Supply	Withdrawal
March 31 (Round 1)	79.20 (84-day)	79.20 (June 25)
	8.00 (7-day)	8.00 (April 9)
April 7 (Round 2)	41.40 (84-day)	41.40 (July 2)
	2.75 (8-day)	2.75 (April 17)
April 14 (Round 3)	20.15 (83-day)	20.15 (July 9)
	0.10 (6-day)	0.10 (April 23)
April 21 (Round 4)	21.19 (84-day)	21.19 (July 16)
April 27 (Round 5)	12.64 (85-day)	12.64 (July 23)
May 6 (Round 6)	13.29 (83-day)	13.29 (July 30)
<b>Total</b>	<b>198.72</b>	<b>198.72</b>

Source: Bank of Korea

## Adjusting Macroprudential Policies for the Foreign Exchange Sector

In cooperation with the government, the Bank of Korea applied its macroprudential policies for the foreign exchange sector in a more flexible manner, in consideration of the foreign currency liquidity conditions facing financial institutions. As conditions of domestic foreign currency liquidity deteriorated in March due to the COVID-19 pandemic, the Bank raised the ceilings on the foreign exchange derivatives positions of banks by 25 percent<sup>61)</sup> and temporarily lowered the foreign exchange liquidity coverage ratio (LCR)<sup>62)</sup> by 10 percentage points (from 80 percent to 70 percent), to allow financial institutions to flexibly manage foreign currency funding. In addition, the macroprudential stability levy<sup>63)</sup>

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

62) The liquidity coverage ratio, introduced in January 2017 as an index to measure the foreign exchange soundness of financial institutions, refers to the proportion of high-quality liquid foreign currency assets to foreign currency net cash outflows over the next 30 days.

63) The macroprudential stability levy was suspended in the second quarter of 2020. Scheduled to be imposed in 2020 (for 2019), the levy was adjusted to allow for payment in installments. In other words, the ratio of installment

imposed on financial institutions was temporarily reduced.

### **Introduction of Foreign Currency Liquidity Supply Facility Through Transactions of Foreign Currency Bond Repurchase Agreements**

As part of its efforts to secure new policy instruments to stabilize the foreign exchange market in preparation for the possibility of increased volatility in international financial markets, the Bank of Korea launched a new foreign currency supply system by purchasing foreign currency bonds under repurchase agreements in competitive auctions in September 2020 in concert with the government. This measure allows the Bank of Korea to supply U.S. dollar liquidity by purchasing U.S. Treasury bonds via repurchase agreements from domestic financial institutions, including banks, insurance firms, and securities firms, for a specific period, using South Korea's foreign exchange reserves. This facility is expected to contribute to preventing instability in fund demand and supply from triggering systemic risks in the foreign exchange market at times when the foreign exchange intermediary function of banks weakens due to anxiety in financial markets.

### **C. Expansion of Multilayered Financial Safety Nets**

#### **Signing a Currency Swap Agreement with the U.S. Federal Reserve and Extending Swap Deals with China and Australia**

The Bank also continued its efforts to reinforce multi-layered financial safety nets, by broadening currency swap networks with major central banks, for example. First, the Bank signed a 60 billion dollar currency swap agreement with the U.S. Federal Reserve<sup>64</sup> in March 2020 to supply U.S. dollar liquidity to the domestic foreign exchange market, which greatly contributed to resolving the shortage of foreign currency liquidity following the spread of COVID-19 and to stabilizing financial markets. In October, it renewed its currency swap arrangement with the People's Bank of China by increasing the volume and period of that agreement.<sup>65</sup> This move strengthened the safety net to facilitate trade with China, one of Korea's main trading partners, even in times of global financial market instability, and reduced the uncertainty associated with maturity. In addition, the Bank extended the period of its currency swap agreement with the Reserve Bank of Australia and expanded its volume by 20 percent in February. The maturity of other swap agreements with Malaysia and Indonesia was extended in February and March, respectively, which allowed Korea's swap network with major trading partners to be operated in a more stable manner.

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payments, which was set at 5:5 across two occasions, was adjusted to 1:9, and the due date for the second round of payment was extended by two months.

64) The contract period was six months, and the contract was extended twice (in July and December) to September 2021.

65) The volume of the swap agreement was increased from 360 billion yuan/64 trillion won to 400 billion yuan/70 trillion won, and the period was extended from three years to five years.

## Improvement in the Effectiveness of Financial Safety Nets Across the Region

The Bank of Korea strove to improve the effectiveness of financial safety nets across the region. The Bank contributed to the amendment of the Chiang Mai Initiative Multilateralization (CMIM), a multilateral currency swap agreement between ASEAN+3 members that took effect on June 23, 2020, by actively participating in discussions about improving the CMIM. The key points of the amendment include the extension of the duration of financial support, the development of a conditionality framework, and the enhancement of the cooperative mechanism with the IMF. The Bank also actively participated in the CMIM test run,<sup>66)</sup> which was conducted to raise the CMIM's operational readiness and to regularly inspect its capacity to respond to financial crises across the region.

**Table III - 11. Current Status of Korea's Currency Swap Agreements**

Type	Counterparty	Maximum Amount (USD basis <sup>1)</sup> )	Most Recent Signing/ Extension	Maturity
Local Currency swaps	USA	USD 60 billion	Dec. 2020	Sep. 2021
	Canada	No maximum amount	Nov. 2017	Unspecified
	Switzerland	CHF 10 billion /KRW 11.2 trillion	Feb. 2018	Mar. 2021
		(about USD 10.6 billion)		
	China	CNY 400 billion / KRW70 trillion	Oct. 2020	Oct. 2025
		(about USD 59 billion)		
	Indonesia	IDR 115 trillion /KRW 10.7 trillion	Mar. 2020	Mar. 2023
		(about USD 10 billion)		
	Australia	AUD 12 billion /KRW 9.6 trillion	Feb. 2020	Feb. 2023
		(about USD 8.1 billion)		
Malaysia	MYR 15 billion /KRW 5 trillion	Feb. 2020	Feb. 2023	
	(about USD 4.7 billion)			
UAE	AED 20 billion /KRW 6.1 trillion	Apr. 2019	Apr. 2022	
	(about USD 5.4 billion)			
U.S. dollar swaps	CMIM	USD 38.4 billion <sup>2)</sup>	Jul. 2014	—

Notes: 1) Based on the exchange rates when the initial currency swap agreements or their extensions were concluded.

2) The total amount of CMIM is 240 billion dollars, and Korea's contribution and the maximum amount it can draw is 38.4 billion dollars (16%).

Source: Bank of Korea

66) The CMIM test run conducted this year was its 11th round and involved actual transactions of funds for the purpose of testing the precautionary line. The test was conducted under a scenario where two central banks requested currency swap funds and other ASEAN+3 members, including Korea, provided the requested funds.

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## Box III-2.

### Signing a Currency Swap Agreement with the U.S. Federal Reserve and Liquidity Supply

After COVID-19 started to spread across the nation from January 2020 onward, strains in the foreign exchange market intensified as we entered March. In particular, after March 10, the crunch in the global dollar funding market caused by factors such as disruptions in the normally high-liquidity U.S. Treasury market triggered chaotic situations in the Korean foreign exchange market, including a surge in foreign exchange rates and a plunge in foreign exchange swap rates.

As part of policy coordination among major central banks in response to strains in the global dollar funding market in the wake of the COVID-19 pandemic, the Bank of Korea signed a bilateral currency swap agreement with the U.S. Federal Reserve<sup>67)</sup> in March 2020. The volume of the currency swap was expanded to 60 billion dollars, two times higher than the previous swap volume contracted with the U.S. Federal Reserve during the global financial crisis of 2008. The domestic financial market immediately responded

to the announcement of the currency swap agreement, with stock prices rebounding and the won-dollar exchange rate falling<sup>68)</sup> as a result of alleviated concerns over any dollar shortage.

The Bank then conducted competitive U.S. dollar loan facility auctions using the proceeds of the swap transaction with the U.S. Federal Reserve, to provide U.S. dollar liquidity to the Korean foreign currency market. From April to July 2020, a total of 19.872 billion dollars was supplied through six auctions. The average bid rate of successful bidders (84-day) fell significantly over the course of the auctions, from 0.9080 percent in the first round to 0.2941 percent in the sixth round. After the supply of currency swap funding, the domestic foreign exchange sector quickly stabilized, with exchange rate volatility falling and domestic foreign country liquidity conditions improving.<sup>69)</sup>

Entering the second half of the year, risk preference sentiment in global financial markets recovered, while the global dollar funding market and the Korean foreign exchange market showed stable movements in general. However, considering the persistence of uncertainties surrounding COVID-19, the Bank of Korea and the U.S. Federal Reserve extended the duration of the currency swap agreement by six months on two occasions (in

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67) On March 19, 2020, the U.S. Federal Reserve announced the signing of bilateral currency swap arrangements with nine central banks, including the Bank of Korea, to alleviate crunches in the global dollar funding market. The volume of these arrangements reached 60 billion U.S. dollars (with Korea, Australia, Singapore, Sweden, Brazil, and Mexico) and 30 billion U.S. dollars (with Norway, Denmark, and New Zealand). The duration of the arrangements is at least six months.

68) The KOSPI rose by 7.4 percent and the USD/KRW exchange rate fell by 3.1 percent on March 20, a day after the announcement of the signing of a currency swap agreement with the U.S. Federal Reserve.

69) The foreign exchange swap rate (3 months) rose by 109bp from minus 141bp in March to minus 32bp in May.

70) The volume and terms of the currency swap were the same as before and only the contract period was extended to March 31, 2021, and September 30, 2021, respectively.

July and December)<sup>70)</sup> in a bid to make a pre-emptive response to any potential recurrence of the global crunch for U.S. dollars.

**Table III- 12. Details of Competitive U.S. Dollar Loan Facility Auctions Using the Proceed of Swap Transactions with the U.S. Federal Reserve**

(hundred million USD, %)

Date	Tenor	USD Amount Offered	USD Amount Allocated	Bid Rate <sup>1)</sup>
March 31	84-day	100	79.20	0.9080
	7-day	20	8.00	0.5173
April 7	84-day	70	41.40	0.5323
	8-day	15	2.75	0.4819
April 14	83-day	35	20.15	0.3567
	6-day	5	0.10	0.3300
April 21	84-day	35	21.19	0.3386
	6-day	5	0.00	-
April 27	85-day	40	12.64	0.3348
May 6	83-day	40	13.29	0.2941
<b>Total</b>	-	<b>365</b>	<b>198.72</b>	<b>-</b>

Note: 1) Weighted average bid rate of successful bidders.

Source: Bank of Korea

## 4. Currency Issuance

As the sole agency in Korea with the authority to issue legal tender, banknotes, and coins, the Bank of Korea is tasked with providing the public with currency services necessary for economic activities. The Bank strived to ensure a stable currency supply by actively responding to the high currency demand among the public following the spread of COVID-19. In addition, the Bank issued the Coins of Korea set in order to celebrate its 70th anniversary, and four types of national park commemorative coins receiving positive responses from the public. Furthermore, the Bank made multifaceted efforts to create an environment in which the public can use currency with a sense of confidence and security by using various media channels to promote the prevention of counterfeit or forged banknotes from entering circulation and by selecting and rewarding those who contributed to the arrest of counterfeiters. It also facilitated the effective performance of its currency issuance and circulation duties in cooperation with financial institutions, the Korea Minting, Security Printing & ID Card Operating Corporation (KOMSCO), and other relevant institutions.

### A. Issuance

#### Responding to Currency Demand

In 2020, the Bank of Korea issued new currency amounting to a total value of 36.5 trillion won, while withdrawing 14.6 trillion won in currency for removal from circulation. Consequently, as of year-end 2020, the value of currency in circulation totaled 147.6 trillion

won, up by 17.4 percent from the end of 2019. By denomination, the amount of 50,000-won banknotes and 10,000-won banknotes in circulation increased considerably compared to the end of 2019, while 5,000-won banknotes and coins showed a downward trend.

**Table III - 13. Banknotes and Coins Issued, Withdrawn and Outstanding by Denomination<sup>1)</sup>**

(hundred million won)

	2020			End of 2020 Outstanding
	Issuance(A)	Withdrawal(B)	Net Issuance(A-B)	
Banknotes <sup>2)</sup>	364,725	145,932	218,793	1,450,610 (17.8)
50,000 won	252,155	60,998	191,157	1,245,101 (18.1)
10,000 won	107,345	79,815	27,530	174,878 (18.7)
5,000 won	2,302	2,323	-20	14,140 (-0.1)
1,000 won	2,923	2,797	126	16,311 (0.8)
Coins <sup>2)</sup>	270	483	-213	24,958 (-0.8)
<b>Total</b>	<b>364,995</b>	<b>146,415</b>	<b>218,580</b>	<b>1,475,569 (17.4)</b>

Notes: 1) Figures in parentheses refer to percentage changes compared with the end of previous year.

2) Includes banknotes with denominations of 500 won or lower, coins with denominations of 5 won or lower, and commemorative banknotes and coins.

Source: Bank of Korea

KOMSCO produced and supplied 770.4 million individual banknotes and coins for the Bank, which is 7 percent higher than at the end of 2019. The number of banknotes increased by 43.2 percent, owing primarily to the increase in 50,000-won notes, while the number of coins dropped by 49.9 percent, mainly due to the general decrease in demand for coins. The total value of produced currency amounted to 17.5 trillion won, a significant increase of 192.5 percent year-on-year.

**Table III- 14. Production of Banknotes and Coins<sup>1)</sup>**

	Number(million)		Value(hundred million won)	
	2019	2020	2019	2020
Banknotes <sup>2)</sup>	440.0 (-32.3)	630.0 (43.2)	59,600 (-58.9)	174,600 (193.0)
Coins <sup>2)</sup>	280.3 (91.7)	140.4 (-49.9)	112 (-66.9)	76 (-32.1)
Total	720.3 (-9.5)	770.4 (7.0)	59,712 (-58.9)	174,676 (192.5)

Notes: 1) Figures in parentheses refer to percentage changes compared with the end of previous year.

2) Excludes commemorative banknotes and coins.

Source: Bank of Korea

### Issuance of the "Coins of Korea" Set and Four Types of National Park Commemorative Coins for the 70th Anniversary of the Bank of Korea's Foundation

In celebration of the 70th anniversary of its foundation, the Bank of Korea issued the "Coins of Korea" set to commemorate the historical footsteps taken by Korea's central bank. The coin set was produced with the same design, material, diameter, and weight as general coins for cash usage, but it is a high-quality coin set that has greatly improved the clarity of the design through a special processing technique and comprises the first set to be issued to the general public since the establishment of the Bank.

**Figure III- 11. Coin Set Celebrating the 70th Anniversary of Bank of Korea's Foundation**



Source: Bank of Korea

Meanwhile, on September 24, 2020, the Bank of Korea issued four new types of commemorative coins in the National Parks of Korea series, which was launched in 2017, one each for Woraksan, Gyeryongsan, Hallasan and Taeanhaean national park, with the aim of widely promoting the exquisite natural beauty of Korea and the importance of ecological preservation. These commemorative coins are scheduled to be issued as a series through to 2023.

**Figure III- 12. Commemorative Coins Issued in 2020**

Type	Design		Materials/ Specifications
	Obverse	Reverse	
Korea National Park, Woraksan			- Silver 99.9% - Diameter 40mm - Weight 31.1g
Korea National Park, Gyeryongsan			
Korea National Park, Hallasan			
Korea National Park, Taeanhaean			

Source: Bank of Korea



## B. Circulation

### Raising Awareness to Deter Counterfeiters

The Bank of Korea conducted a variety of promotional campaigns to deter the production and circulation of counterfeit currency by utilizing public advertisements posted on public transportation, such as on buses, high speed KTX trains, and subways, as well as through contests open to the public and online ads. The Bank also hosted its seventh UCC Currency Protection Campaign Contest, granting prizes to eight out of the 86 videos submitted to the competition. Commendations were also given out twice, in the first and second halves of 2020, to two police stations that contributed to the arrest of counterfeiters.

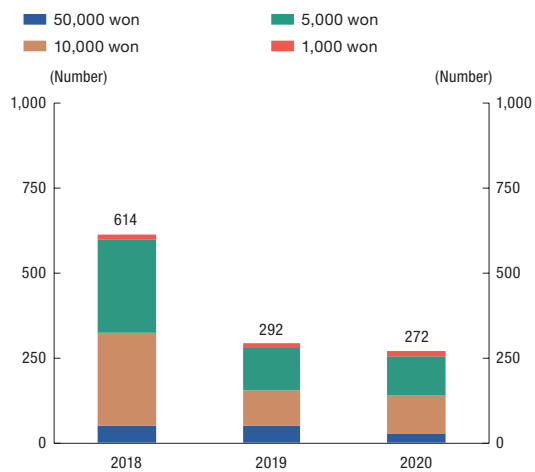
The total number of counterfeit items discovered in 2020 was 272 notes, a decrease of 20 from the 292 notes found in 2019, which marked the lowest since 1998 when related statistics were first published. This is considered to be the result of the continued reinforcement of various public relations efforts to heighten the ability to identify counterfeit banknotes among financial institutions and the public amid the sluggish use of banknotes for face-to-face commerce stemming from the spread of COVID-19.

Figure III- 13. Winners of the Youth UCC Contest for the Currency Protection Campaign (Nov. 5, 2020)



Source: Bank of Korea

Figure III - 14. Counterfeit Banknotes Detected



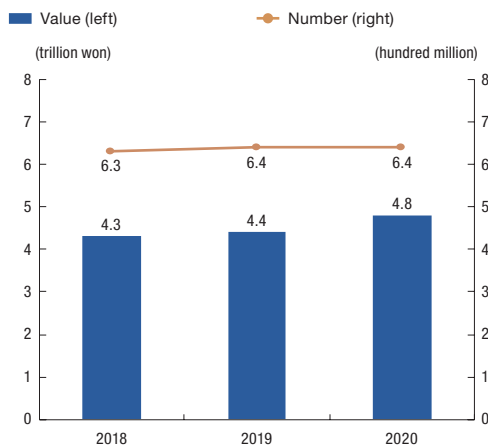
Source: Bank of Korea

### Efforts to Enhance the Quality of Cash in Circulation

The Bank of Korea has actively endeavored to maintain a high quality of cash in circulation by sorting through the cash collected from financial institutions and individuals and eliminating notes and coins that are unfit for recirculation due to contamination or damage. Throughout 2020, a total of 642.6 million

notes and coins, valued at 4.8 trillion won, were identified as unfit and were destroyed. By currency type, the destroyed cash comprised of 684.8 million individual banknotes valued at 4.8 trillion won and 34.1 million individual coins valued at 3.0 billion won. The value of damaged notes and coins exchanged through the Bank of Korea during the year by individuals totaled 10.7 billion won, up by 3.3 billion won from the 7.4 billion won recorded in 2019. Moreover, in consideration of the COVID-19 situation, the Bank of Korea has carried out a non-face-to-face promotional campaign on desktops and laptops, mobile devices, and on outdoor electronic billboards to promote the clean use of cash, as well as distributing videos, and distributed press releases that encouraged the public to have proper cash-handling habits.

Figure III- 15. Destruction of Banknotes and Coins



Source: Bank of Korea

### Guarantee of the Right to Use Cash

In 2020, the Bank of Korea carried out promotional campaigns to guarantee the right to use cash to ensure that the use of cash is not

excluded as a means of payment and settlement in commercial transactions, marking the first of such efforts. This is because, amid the recent increase in cases where some restaurants or large supermarkets refused to accept cash, there has been a growing need to prevent disadvantages faced by financially or socially vulnerable groups, including the elderly and foreign workers, such as their exclusion from consumption activities or financial alienation. The Bank plans to continue its activities to guarantee the right to use cash in order to prevent various adverse effects from arising due to Korea's advancement toward a cashless society, and to remind the public of the importance of allowing the use of cash.

Figure III- 16. Poster Promoting the Guarantee of the Right to Use Cash



Source: Bank of Korea

## C. External Cooperation

The Bank of Korea continued to enhance its cooperation with the Korea Customs Service, the Korean National Police Agency, KOMSCO, and the National Forensic Service through frequent exchanges, the sharing of information, and regular meetings concerning trends and characteristics in counterfeit detection, at seminars and workshops. In November 2020, the Bank officially participated in a counterfeit expert group consisting of counterfeit detection specialists from institutions such as the Bank of Korea, the Korea Federation of Banks, the National Intelligence Service, and commercial banks, in order to strengthen its activities and to prevent the public from suffering any damages caused by counterfeit notes. The Bank also analyzed the current methods and standard of counterfeit production by examining counterfeit notes provided by the Prosecutors' Office after investigations and trials.

## Box III-3.

### Bank of Korea's Performance of Banknote Issuance in Response to the Spread of COVID-19

With the rapid spread of COVID-19 amid persistent low interest rates, preferences for safe assets among economic entities expanded, which resulted in a sharp hike in demand for 50,000-won banknotes as a means of cash reserves and value storage. Accordingly, concerns arose among financial institutions over the shortage of operating funds in 50,000-won banknotes. In response, the Bank of Korea endeavored to ensure a stable supply of 50,000-won banknotes, while closely monitoring changes in the demand for banknotes. In particular, the Bank took active measures to address the spike in demand for banknotes, such as increasing the quantity of orders for 50,000-won banknotes and ensuring the early delivery of new notes from KOMSCO.

Meanwhile, the Bank of Korea exerted efforts to prevent the spread of the virus through cash in the process of currency circulation. As such, cash received from financial institutions was sorted through a banknote quality inspection<sup>71)</sup> process after being stored in a vault for at least two weeks in consideration of the period of survival for the virus, and the disposal of contaminated cash was actively promoted by applying more stringent standards during the inspection process.

In addition, the Bank actively carried out currency replacement services for the public even amid the prolonged COVID-19 situation, not only to ensure the rapid replacement of damaged or contaminated currency, but also in consideration of the close link between its function of currency replacement and the livelihood of the public. In 2020, the number of replacements conducted through currency replacement counters was about 330,000, down by about 40,000 compared to 2019. However, in the case of bulk coins,<sup>72)</sup> which are often used in everyday business activities such as car washes, the Bank exchanged 36.0 million coins last year, a sharp increase compared to 2019 (23.5 million coins).

In addition, as part of measures to cope with the spread of COVID-19, the Bank strengthened its promotional campaigns through the distribution of press releases to ensure that the public could recognize and practice the vital habit of proper currency usage. For instance, the Bank endeavored to prevent the improper

Table III - 15. Net Issuance of 50,000-Won Banknotes

(trillion won)

	2016	2017	2018	2019	2020
Issuance	22.8	25.6	25.0	26.7	25.2
Withdrawal	11.4	14.8	16.9	16.1	6.1
Net issuance	11.5	10.8	8.1	10.7	19.1

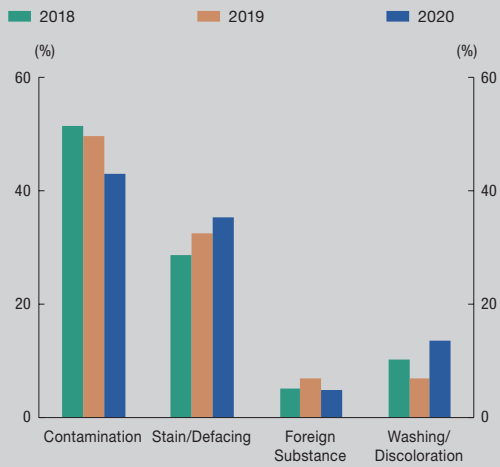
Source: Bank of Korea.

71) The Bank of Korea carries out a banknote quality inspection of cash received from financial institutions and cash withdrawn following cash replacement and receipts of Treasury bonds, by checking the serial number of notes and their denomination, extracting counterfeit currency, and sorting usable notes from damaged notes, in order to enhance the quality of cash in circulation and to help prevent the circulation of counterfeit notes.

72) "Bulk coins" refers to more than 2,000 pieces of 500-won coins, 2,500 pieces of 100-won coins, 2,500 pieces of 50-won coins, or 5,000 pieces of 10-won coins.

handling of currency by actively informing the public about a more-than-twofold rise in cases of currency damage resulting from fire or discoloration by people who attempted to disinfect currency using microwave ovens or washing machines in fear of some possible COVID-19 infection.

Figure III- 17. Major Cause of Banknote Damage



Source: Bank of Korea

## 5. Payment and Settlement Business

The Bank of Korea plays a pivotal role in the operation and development of payment and settlement systems in accordance with the Bank of Korea Act. The Bank operates BOK-Wire+, a real-time gross settlement (RTGS) system that processes large-value funds transfers, while providing intraday liquidity support to financial institutions suffering temporary shortages of settlement liquidity. The Bank also oversees the domestic payment and settlement systems as a whole, and works to improve their operating processes in an effort to ensure their safety and efficiency,<sup>73)</sup> all while strengthening cooperation with international organizations. In particular, with a view to promoting the stability of financial markets by coping with the spread of COVID-19 in 2020, the Bank exerted policy efforts including the reduction of the collateral-to-net-debit cap ratio for guaranteeing net settlements and the expansion of the scope of collateral.

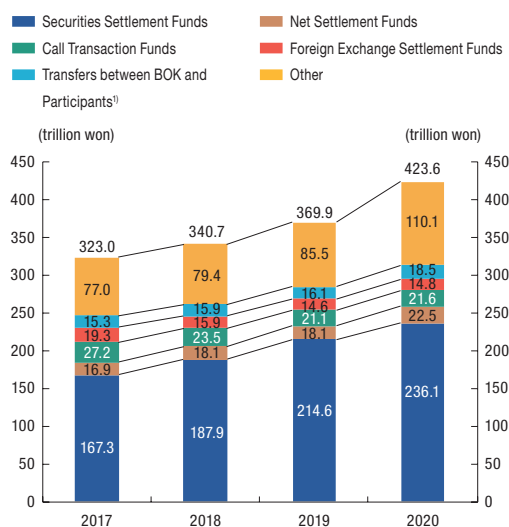
### A. Operation of BOK-Wire+

#### Continued Increase in the Amount of Korean Won Funds Transfers

During 2020, the average daily value of Korean won funds transfers through BOK-Wire+ totaled 423.6 trillion won, up by 14.5 percent from 2019. By type of settlement funds, securities settlement funds continued their upward trend following the previous year, centering

on inter-institutional repo transactions. Net settlement funds increased significantly compared to 2019, particularly in the banking network, including internet banking. The amount of funds for call transactions and foreign exchange settlement funds switched to an increase from the decrease in 2019.

Figure III - 18. BOK-Wire+ Funds Transfer Values (daily average)



Note: 1) Includes payments on government and public bond transactions, Treasury funds transfers, and BOK loans.

Source: Bank of Korea

#### Intraday Liquidity Support

In order to prevent the spread of settlement risks across BOK-Wire+ as a whole due to settlement delays and gridlock caused by temporary liquidity shortages at participants, the Bank of Korea supplies BOK-Wire+ participants with settlement funds to cover temporary intraday liquidity shortages. In 2020,

73) This refers to the central bank's responsibility to conduct monitoring and regular or ad hoc assessments to enhance safety and efficiency in the payment and settlement systems, as well as to implement improvements in the systems as needed.

the amount of the Bank's intraday liquidity provision averaged 3,486.2 billion won per day, up by 14.3 percent from 2019. Specifically, the amount of intraday overdraft support<sup>74)</sup> averaged 603.0 billion won daily, up by 39.6 percent from the previous year, while that of intraday RP<sup>75)</sup> was a daily average of 2,883.2 billion won, up by 10.1 percent from 2019.

**Table III- 16. Supply of Intraday Liquidity**  
(daily average)

	(billion won, %)			
	2018	2019	2020	Change <sup>2)</sup>
Intraday Overdrafts <sup>1)</sup>	328.5	432.1	603.0	+39.6
Intraday Repos	2,147.9	2,618.1	2,883.2	+10.1
<b>Total</b>	<b>2,476.4</b>	<b>3,050.2</b>	<b>3,486.2</b>	<b>+14.3</b>

Notes: 1) Based on average net intraday overdraft balance obtained after subtracting the balances of the deposit accounts used exclusively for settlement from the daily overdraft amounts.

2) A percentage change from 2019 to 2020.

Source: Bank of Korea

## B. Oversight and Risk Management

### Assessment of Financial Market Infrastructure

The Bank of Korea conducts assessments of systemically important payment and settlement systems in accordance with the Principles for Financial Market Infrastructures (FMIs)<sup>76)</sup> (PFMI)<sup>77)</sup> etc.,<sup>78)</sup> and recommends improvement measures to address any gaps or shortcomings. In 2020, the Bank conducted assessments of Check Clearing Services, the Interbank Funds Transfer System, and the Electronic Banking Systems, which are important settlement systems operated by the Korea Financial Telecommunications and Clearings Institute (KFTC), as well as the Open Banking Systems, which began operations in December 2019. Assessment results indicated that the settlement systems operated by the KFTC complied with most of the principles in the PFMIs. However, in terms of the Open Banking Systems, there was a need

74) This refers to credit provided to banks by the Bank of Korea on the condition of intraday redemption, with the objective of addressing temporary intraday liquidity shortages.

75) To shift the BOK-Wire+ settlement of funds for securities transactions to an earlier time in the trading day, and to mitigate the concentration of settlement around closing time, a system for intraday liquidity support through the use of repo-type instruments was established under Article 81-2 "Support to Settle Temporary Shortages" of the Bank of Korea Act on February 20, 2012, targeting the Korea Exchange and financial investment companies.

76) Financial Market Infrastructures (FMIs) refer to payment and settlement systems used by economic entities for purposes of making regular payments and clearing, or settling or recording financial transactions. They consist of systemically important payment systems (PSs), central counterparties (CCPs), central securities depositories (CSDs), securities settlement systems (SSSs), and trade repositories (TRs).

77) The PFMIs are the international standards for payment and settlement systems that were set and published in April 2012 by the Committee on Payments and Market Infrastructures (CPMI) of the BIS, in partnership with the International Organization of Securities Commissions (IOSCO). The PFMIs were established in response to major issues that had emerged due to the global financial crisis regarding the need for structural reforms of the over-the-counter derivatives markets and the strengthening of international standards for the operation of financial market infrastructures.

78) As supplementary guidelines to the PFMIs, the CPMI-IOSCO has enacted additional international standards, including the Guidance on Cyber Resilience for Financial Market Infrastructures in June 2016, the Recovery of Financial Market Infrastructures in July 2017, and the Resilience of Central Counterparties (CCPs) in July 2017.

to improve some safeguards in the clearing and settlement stages, such as systems to cope with settlement failures, a system overhaul including participation standards, and the management of operational risks.

### **Joint Examinations of Payment and Settlement Activities of Financial Institutions**

To review the appropriateness of financial institution payment and settlement activities, the Bank of Korea and the Financial Supervisory Service conducted joint examinations of two domestic banks and one<sup>79)</sup> financial investment company.

The results of the examination showed that the domestic banks were properly managing their payments and settlements, including the management of their intraday liquidity. However, they were advised to designate a recovery time objective (RTO) per their business continuity plan (BCP), as well as to include procedures to immediately report the occurrence of any system failure to institutions that operate payment and settlement systems (the Bank of Korea, KFTC, etc.) in their internal guidelines for responding to IT failures.

In the case of financial investment companies, the Bank inspected the status of the implementation of funds transfers and the management of settlement liquidity. Furthermore, the Bank examined the status of the establishment and operation of the BCP in preparation for any possible closure of its

headquarters resulting from COVID-19, while simultaneously monitoring the management status of operational risks, including the operation of computer systems.

### **C. Improvement of Payment and Settlement Systems**

#### **Operation of Next-Generation BOK-Wire+**

The Bank of Korea completed the development of its next-generation BOK-Wire+ system, a project initiated in 2015, and successfully began operating the system in October 2020. Since its first operation in 1994, the system had become more complex over a long period of time as it incorporated new components, including a hybrid settlement system, a server access method, the delivery versus payment (DvP) method, and an intraday RP system, all of which had raised the need for an overhaul. In response, the Bank revamped the system with a focus on an improved settlement method to reduce the need for liquidity, reorganized the settlement accounts, expanded supply channels for intraday overdrafts, and improved the efficiency of the DvP method. The launch of the next-generation BOK-Wire+ is expected to enhance the convenience of fund transfers for participating institutions and to improve the overall efficiency and safety of the system.

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79) During 2020, the Bank of Korea conducted only one joint examination of financial investment companies due to the spread of COVID-19, whereas one is ordinarily conducted three times a year. Instead, the Bank reinforced monitoring activities of the liquidity situation of these companies in response to the expansion of volatility in financial markets.



## Improvement of Rules of Participation in Payment and Settlement Systems

In light of changes in the payment and settlement environment such as the diversification of payment system providers and the outbreak of COVID-19, the Bank of Korea improved the rules of participation in the retail payment system and BOK Wire+ with a view to facilitating innovation and enhancing safety at the same time.

Above all, the Bank established a consistent retail payment system participation policy that is applied consistently to all participants in anticipation of potential participation by non-financial institutions, including fintech companies. In order to ensure the safety of payment and settlement systems while expanding its openness as a principle, the Bank, under the general principle of “same business, same risk, same rules,” clarified the method of participation in a way that allows institutions wishing to participate in the retail payment system to directly participate in net settlements upon satisfying certain requirements, while other institutions are allowed to participate indirectly.<sup>80)</sup>

Furthermore, in order to ensure the smooth implementation of settlements even in the

event of a disaster such as COVID-19, the Bank strengthened the safety of BOK-Wire+ by improving the rules of participation, including making it mandatory for participants to additionally install BOK-Wire+ terminals in alternative workplaces.

## Measures in Response to the Spread of COVID-19

In April 2020, the Bank of Korea devised countermeasures in the field of payments and settlements to promote the stability of financial markets in response to the spread of COVID-19. Among other things, the Bank lowered the collateral-to-net debit cap ratio from 70 percent to 50 percent of the net transfer limit, which financial institutions are required to pay the Bank to guarantee net settlements among them. In addition, the Bank gradually postponed its previously announced plan to increase the ratio by 10 percentage points each year, with the aim of managing credit risks in accordance with international standards (PFMIs).<sup>81)</sup> As a result, the total amount of securities for use as collateral that financial institutions were required to pay to the Bank fell by about 10.1 trillion won in total, which had the effect of providing an equivalent amount of liquidity to financial markets.

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80) Institutions that satisfy all of the following requirements are allowed to directly participate in net settlements: 1. Have established a legal basis for the implementation of fund transfers; 2. Be subject to reserve deposits and the Bank of Korea's supply of settlement liquidity; 3. Be subject to joint examinations, including data submission, from the Bank of Korea and the Financial Supervisory Service; and, 4. Have the ability to manage net settlement risks. Other institutions are allowed to participate indirectly through agent banks.

81) The Principles for Financial Market Infrastructures (PFMIs) require an FMI to maintain financial resources sufficient to cover its credit exposure to each participant. (Principle 4. Credit Risk: An FMI should effectively measure, monitor and manage its credit exposures to participants and those arising from its payment, clearing, and settlement processes. An FMI should maintain sufficient financial resources to cover its credit exposure to each participant fully with a high degree of confidence.)

**Table III- 17. Collateral-to-Net Debit Cap Ratio for Guaranteeing Net Settlements**

(%)							
	Previous	2020.4	2020.8	2021.8	2022.8	2023.8	2024.8
Before	70	70	80	90	100	100	100
After		50	50	70	80	90	100

Source: Bank of Korea

The Bank also lessened the financial institution burden of providing securities for use as collateral by temporarily broadening the scope of securities eligible for use as collateral to guarantee net payments, to include debentures issued by the National Agricultural Cooperative Federation and Nonghyup Bank, and by the National Federation of Fisheries Cooperatives, and Suhyup Bank, general bank debentures, and bonds issued by nine public organizations, from May 25, 2020, until March 31, 2021.

**Table III- 18. Scope of Securities Eligible for Use as Collateral for Guaranteeing Net Settlements**

Before Change	After Change	Effective Date
<ul style="list-style-type: none"> <li>Bonds issued or guaranteed by the government, BOK Monetary Stabilization Bonds, KHF MBS, KDB bonds, IBK bonds, and KEXIM, and bonds temporarily designated by the Bank of Korea governor in case of emergency</li> </ul>	Same as left column	Permanent
N / A	<ul style="list-style-type: none"> <li>Debentures issued by the National Agricultural Cooperative Federation and Nonghyup Bank, and by the National Federation of Fisheries Cooperatives and Suhyup Bank, general bank debentures, and bonds issued by nine public organizations<sup>1)</sup></li> </ul>	From May 25, 2020, to March 31, 2021

Note: 1) KEPCO, Korea Expressway Corporation, Korea Gas Corporation, Korea Land & Housing Corporation, KORAIL, Korea Rail Network Authority, K-Water, Korea SMEs & Startups Agency, and Korea Deposit Insurance Corporation.

Source: Bank of Korea

## Strengthening Research on Innovation in Payment and Settlement Systems

The Bank actively carried out research into innovations with regard to payment and settlement systems, such as central bank digital currencies (CBDCs), crypto assets, and distributed ledger technology (DLT).

With respect to CBDCs, in order to preemptively cope with future changes in the payment and settlement environment, which could increase the need for the adoption of a CBDC, the Bank newly established an organization dedicated to research and technology concerning CBDCs within its Payment & Settlement Systems Department in February 2020 and initiated research on CBDCs in earnest. In particular, in April 2020 a plan to build and conduct a CBDC pilot system was established to identify the core performance of CBDCs and related systems in a limited virtual environment. Accordingly, in July 2020 the Bank reviewed the definitions and implementation technology of design requirements for CBDCs, and based on that review, it is now pursuing a CBDC business process analysis and conducting external consultations. In line with the results of the consultation project, the Bank plans to build and conduct a CBDC pilot system in a virtual environment in 2021. Furthermore, with a view to reviewing expected legal issues in the event of adopting a CBDC and any necessary amendments to the Bank of Korea Act or to relevant laws and regulations, the Bank formed a legal advisory group in June 2020 and commissioned an external agency to carry out a related study.

Meanwhile, in April 2020 the Bank completed a DLT proof-of-concept (PoC) that imple-

ments the DvP method by adopting DLT. In addition, the Bank reviewed the current status and direction of regulations related to crypto assets such as stablecoins, and also participated in discussions related to the regulation of stablecoins among central banks in major countries and at international organizations.

#### **D. International Cooperation**

The Bank of Korea successfully completed its term as chair of the Working Group on Payments and Market Infrastructures (WG-PMI) under the Executives' Meeting of East Asia-Pacific Central Banks (EMEAP), a position in which it had served for four years, since 2016.

Also, as a member of the BIS Committee on Payments and Market Infrastructures (CPMI), the consultative body that sets international standards for payments and settlements, the Bank actively participated in major global discussions. The Bank shared progress on the CBDC pilot program promoted by the Bank and introduced the implementation of the Account for Change Deposit Service, which allows customer to deposit sums of change into their bank accounts, were introduced abroad. Furthermore, the Bank exerted active efforts to reflect the situation in Korea and other Asian countries more broadly by participating in the drafting of taskforce reports on improving international payment services, which has recently emerged as a global issue.

Meanwhile, in November 2020 the Bank hosted an international conference to discuss the feasibility of introducing RTGS-based fast payment system. Professionals from the European Central Bank (ECB) and from the

National Bank of Hungary participated in this conference. The two central banks shared their experience on the introduction and operation of their fast payment systems based on Real Time Gross Settlement Systems (RTGS).

## 6. Foreign Exchange and International Cooperation

### A. Foreign Exchange

The Bank of Korea dedicated continuous efforts to preemptively identify global risk factors and to enhance its emergency response capacity, with the aim to stabilize the foreign exchange market. It also successfully implemented measures such as disclosing the details of its market stabilization efforts, in an effort to increase the transparency of its foreign exchange policies, all while collaborating with the government to alleviate unreasonable regulations concerning foreign exchange.

#### **Efforts to Stabilize Foreign Exchange Markets in Response to Domestic and Overseas Risk Factors**

In 2020, global financial markets saw frequent spikes in market volatility for various reasons, including the spread of COVID-19 and the U.S.-China trade dispute. In an effort to minimize any negative effects of such factors on the domestic foreign exchange sector, more specifically, the won-dollar exchange rate, the Bank of Korea closely monitored potential risks in global financial markets, all while conducting market stabilization measures in a timely manner in times of heightened market volatility.

In particular, in March 2020 when the

spread of COVID-19 led to heightened anxiety in global financial markets and the domestic foreign exchange sector, the Bank of Korea activated its 24-hour emergency response system in conjunction with its overseas representative offices to closely monitor the future development of COVID-19 and other countries' policy responses. Meanwhile, it examined and discussed the effects of COVID-19 on the domestic foreign exchange sector and relevant countermeasures, including at meetings of its Monetary and Financial Task Force.<sup>82)</sup> In addition, according to the emergency response plan established in advance for the foreign exchange sector, aggressive responses were taken in a timely manner to stabilize the foreign exchange sector, such as providing liquidity using the proceeds of the currency swap agreement with the U.S. Federal Reserve and adjusting macroprudential policies for the foreign exchange sector.

Meanwhile, the Bank has enhanced communication with the government and market participants to smoothly operate macroprudential policy measures in the foreign exchange sector. It took part in the Macroeconomic Finance Meeting to engage in an in-depth discussion of current conditions in global financial markets and the need to reform the foreign exchange system. It also closely communicated with market players as a way to enhance the ripple effects of market stabilization policies such as adjusting macroprudential policies for the foreign exchange sector and providing U.S. dollar liquidity by

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82) These included six meetings of the Monetary and Financial Task Force. (The meeting agenda included the effects of the FOMC meetings at the U.S. Federal Reserve, the impact of Iran's retaliatory attack against the U.S., etc.) These also included three financial and economic condition review meetings. (The meeting agenda were the plunge in stock and oil prices in major countries, the results of the U.S. presidential election, etc.)

purchasing U.S. Treasury bonds via repurchase agreements in competitive auctions.

### Implementing a Plan to Enhance Transparency of Foreign Exchange Policy

The Bank of Korea has been announcing the details of its market stabilization measures since March 2019 as a means to reduce potential market misunderstanding about the operation of its foreign exchange policy and to raise the credibility of policy, all in line with the Plan to Enhance the Transparency of Foreign Exchange Policy that was established by the Bank in cooperation with the government in May 2018.<sup>83)</sup> In 2020, the details of net foreign currency transactions by foreign exchange authorities from the fourth quarter of 2019 to the third quarter of 2020 were announced on a quarterly basis.

**Table III- 19. Net Transactions by Foreign Exchange Authorities**

(hundred million USD)

First Stage (semiannual)		Second Stage (quarterly)				
2H of 2018	1H of 2019	3Q 2019	4Q 2019	1Q 2020	2Q 2020	3Q 2020
-1.87	-38.00	-28.70	0.00	-58.51	-3.45	0.00

Source: Bank of Korea

83) In the first phase, details of net foreign exchange transactions by foreign exchange authorities were disclosed on a semi-annual basis until the first half of 2019, and in the second phase, the announcement interval was reduced to a quarterly basis from the third quarter of 2019.

84) A consignment contract is permitted between foreign exchange agencies and companies defined under the Commercial Act, which enables customers to order exchanges of foreign currencies and receive the currencies through various channels including airlines, duty-free shops, convenience stores, and courier companies. Meanwhile, small-value overseas remittance services are permitted to be provided through diverse platforms such as nearby financial institutions (post offices, etc.) and ATMs.

85) Where any obscurity or gap in the laws and regulations is identified with regard to its application to new services of foreign currency exchanges and remittances, a business operator may receive the answer to an inquiry to verify regulations within 30 days. In a case where a regulatory exemption is needed urgently, such a exemptions is permitted across the entire business sector through a decree from the Minister of Economy and Finance.

86) The main content includes expanding the business scope of foreign exchange transactions including foreign currency exchanges and remittances by non-banking financial companies (securities companies, credit card

### Improving the Foreign Exchange Transaction System

In cooperation with the government, the Bank of Korea relaxed regulations on foreign exchange transactions in 2020 in order to support the innovation of foreign exchange services for the public. Specifically, the Bank participated in meetings with institutions regarding deregulation in the foreign exchange sector and meetings with supervisory authorities, where it actively made a range of proposals. As a result, it made many achievements, such as vitalizing non-face-to-face services in foreign currency exchanges and remittance,<sup>84)</sup> introducing a system in which regulations on new businesses are identified and exempted quickly,<sup>85)</sup> expanding the provision of foreign exchange services,<sup>86)</sup> simplifying transaction procedures, and increasing supervisory efficiency.

### B. Reserve Management

The Bank of Korea manages the national foreign exchange reserves, which are comprised of the country's external payment reserve assets of last resort, based on the prin-

principle of enhancing profitability while placing a top priority on securing safety and liquidity. In order to preserve the value of its invested assets, the Bank places tight restrictions on investing in low credit-rated assets, where the principal and interest may not be recovered. The Bank maintains a high level of liquidity in the foreign exchange reserves by investing its foreign exchange reserves in assets that can be promptly liquidated in global financial markets. Meanwhile, it also endeavors to enhance profitability by employing effective investment strategies in response to changes in global financial market trends.

### Scale and Composition of the Foreign Exchange Reserves

As of the end of 2020, Korea's foreign exchange reserves totaled 443.1 billion dollars, higher by 34.3 billion dollars than at the end of the previous year. The country's foreign exchange holdings, which include securities and deposits, and account for the majority of the foreign exchange reserves, amounted to 430.1 billion dollars, up by 32.2 billion dollars from the previous year-end. Its Special Drawing Rights (SDRs) and IMF position recorded 3.4 billion dollars and 4.8 billion dollars, respectively, while it held 4.8 billion dollars in gold, the same level as at the end of 2019.

**Table III - 20. Composition of Foreign Exchange Reserves (as of year-end)**

	(million USD)			
	2018	2019(A)	2020(B)	Change (B-A)
Foreign exchange reserves	403,694	408,816	443,098	34,282
Foreign exchange	393,332	397,876	430,117	32,241
SDR	3,427	3,352	3,371	18
Reserve position in IMF	2,140	2,793	4,815	2,022
Gold	4,795	4,795	4,795	0

Source: Bank of Korea

### Tranching Reserve Assets

The Bank of Korea separates its foreign exchange reserves into a short-term liquidity tranche and an investment tranche, in accordance with the purpose of holding each tranche. The investment tranche is divided into an internally-managed tranche and an externally-managed tranche.

The short-term liquidity tranche is invested principally in short-term financial instruments, such as short-term treasury bonds and deposits, since they incur minimal transaction costs and can be liquidated immediately for timely responses to frequent influxes or outflows of foreign exchange, or for temporary demand for foreign exchange faced by the Bank in its operation of the foreign exchange reserves.

In order to obtain stable profits while ensuring a high level of liquidity, the Bank invests its internally-managed investment tranche in

companies, etc.), and introducing a preliminary review procedure concerning registration requirements for foreign exchange businesses in the event of splits or mergers at fintech companies.

short- and long-term bonds, such as government bonds, agency bonds, corporate bonds and Asset-Backed Securities (ABSs), which are denominated in major foreign currencies. Meanwhile, in cases where the balance of the short-term liquidity tranche shows significant change in its size owing to flows in and out of the foreign exchange reserves, the Bank swiftly transfers foreign exchange reserves between the two tranches in order to appropriately maintain the size of the short-term liquidity tranche.

The externally-managed investment tranche, comprising of stocks as well as of bonds, is entrusted to the Korea Investment Corporation (KIC) and to major domestic and international asset management companies to enhance profitability by using their market expertise and through the diversification of investment methods.

At the end of 2020, 5.1 percent of the Bank's foreign exchange reserves were managed in the short-term liquidity tranche, 73.9 percent in the internally-managed investment tranche, and 21.0 percent in the externally-managed investment tranche.

**Table III - 21. Percentage Shares in Foreign Assets<sup>1)</sup> (as of year-end)**

	2018	2019 (A)	2020 (B)	Change (B-A)
(% , %p)				
<b>1.By Purpose</b>				
Short-term liquidity tranche	5.3	4.6	5.1	0.5
<b>Investment tranche</b>				
Internally managed	76.4	74.6	73.9	-0.7
Externally managed	18.3	20.8	21.0	0.2
<b>2.By currency</b>				
U.S. dollars	69.8	69.1	67.7	-1.4
Others	30.2	30.9	32.3	1.4
<b>3.By Asset class</b>				
Deposits	5.0	5.0	7.1	2.1
<b>Securities</b>				
Government bonds	42.9	44.6	44.5	-0.1
Agency bonds	18.0	15.8	14.4	-1.4
Corporate bonds	13.7	13.4	13.6	0.2
ABS	12.8	12.5	11.5	-1.0
Equities	7.6	8.7	8.9	0.2
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>-</b>

Note: 1) This table is a break-down of the "foreign exchange" item in Table III-20 owned by Bank of Korea.

Source: Bank of Korea

### **Efforts to Enhance Liquidity and Safety of Foreign Exchange Reserves Amid the Spread of COVID-19**

Global financial markets saw their volatility expanding significantly<sup>87)</sup> in the first half of 2020 due to factors such as a plunge in global stock prices and interest rates due to concerns over a slowdown in the real economy in the wake of the spread of COVID-19, but rebounded quickly on the back of accommodative monetary policy measures by major central banks such as interest rate cuts and liquidity supply, in addition to the large-scale

87) The U.S. S&P 500 Index rose by 68 percent by the end of the year after a 34 percent plunge in February and March, to record a 15 percent increase year-on-year.

economic stimulus packages implemented by many governments. Under these circumstances, the Bank of Korea made an aggressive response to the domestic demand for foreign currency funding by selling its bond holdings in March when anxiety in the financial market intensified. In terms of managing its foreign exchange reserves, the emphasis was placed on securing liquidity by increasing the proportion of high-quality liquid government bonds in preparation for the potential continuation of market anxiety.

As the financial market remained stable in the second half of the year on the effects of a gradual rise in stock prices due to expectations of an economic recovery after COVID-19, the Bank normalized the management of foreign exchange reserves based on its initial management plan.

With regard to the tranches, the size of the short-term liquidity tranche generally expanded to increase liquidity, while the size of the investment tranche declined. Within the investment tranche, the proportion of risky assets increased, influenced by stock price hikes in major countries.

As for the currency composition, the Bank contracted its proportion of U.S. dollar holdings compared to the previous year as the U.S. dollar weakened due to the accommodative monetary policy of the U.S. Federal Reserve and due to weak preferences for safe assets in the second half of the year.

In terms of asset classes, the Bank allocated more of its assets to deposits to increase liquidity, while reducing the share of its holdings in agency bonds and Asset-Backed Se-

curities (ABSs). As global investor sentiment improved in the second half of the year due to alleviated volatility in financial markets, the Bank slightly increased the share of its holdings in corporate bonds and stocks.

### **Strengthening Risk Management of Foreign Exchange Reserves**

The Bank of Korea strengthened the risk management of its foreign exchange reserves in response to increased volatility in global financial markets due to the COVID-19 pandemic.

In line with the spread of anxiety across financial markets after the outbreak of COVID-19, the Bank frequently evaluated the safety and liquidity of its foreign exchange reserves through stress tests, while working on a contingency plan for each potential scenario, and conducting emergency response training such as on its IT and settlement systems.

In terms of organizational management, the Bank installed and operated night desks in its Head Office as a way to supplement the business of its foreign offices, which were under restrictions due to the spread of COVID-19. It also strived to ensure the continuity of its businesses regarding the management of foreign exchange reserves by adopting a remote working and distributed working policy for key personnel in the areas of transactions, settlement, and IT systems.

In addition, the Bank boosted the timeliness and coherence of its risk management of foreign exchange reserves by computerizing the management of various risk limits and indicators and improving the fund settlement pro-



cess, which are relevant in managing foreign exchange reserves.

### Support for the Development of the Domestic Finance Industry through the Use of Domestic Financial Institutions

The Bank of Korea has been boosting the domestic finance industry by actively selecting domestic financial institutions as trading partners and external asset management companies to manage its foreign exchange reserves.

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In 2020, the Bank conducted transactions of foreign bonds with five domestic securities companies in the course of its internal management of foreign exchange reserves, while entrusting parts of its investment in Chinese stocks (440 million dollars) and advanced country stocks (600 million dollars) to three domestic asset management companies.

The Bank plans to continuously use domestic financial institutions, taking into consideration their growing capacity for reserves management by monitoring aspects such as their management performance.

**Table III - 22. Use of Domestic Financial Institutions in Reserve Management**

Classification	Product	Institutions <sup>1)</sup>	Size	Date of Commencement
Transactions of foreign currency-denominated bonds	Government bonds, agency bonds, corporate bonds	Securities companies (5)	10.7 billion dollars <sup>2)</sup>	January 2018
External management of equities	Chinese equities	Asset management companies (3)	440 million dollars <sup>3)</sup>	June 2012
	Advanced countries equities	Asset management companies (2)	600 million dollars <sup>3)</sup>	April 2019

Notes: 1) Numbers in parentheses refer to the number of trading eligible institutions.

2) Amount of transactions in 2020.

3) Entrusted amount.

Source: Bank of Korea

### Increasing Investment in ESG Assets

Meanwhile, the Bank of Korea has been gradually expanding its range of ESG investments,<sup>88)</sup> which is focused on the sustainability of investment targets. As of the end of 2020, it invested 1.08 billion dollars in ESG-related stocks through the external management of its foreign exchange reserves, along with 4.38 billion dollars in ESG-related bonds including the Green Bond. It plans to gradually expand the volume of ESG investments by comprehensively considering the growing trend of global ESG investing, strengthening public accountability of the foreign exchange reserves, and overall investment performance.

88) This refers to a kind of investment method that considers non-financial aspects, such as environmental, social, and governance categories, as main factors in terms of social responsibility investment and sustainable investment in investment decision-making.

**Table III- 23. Investment in ESG-related Assets**

(hundred million USD)

Management	Instruments	Size <sup>1)</sup>
Internal	Bonds	34.9
	Equities	10.8
External	Bonds	8.9
	<b>Total</b>	<b>54.5</b>

Note: 1) Based on market value.

Source: Bank of Korea

### Strengthening International Cooperation on Foreign Exchange Reserves Management

The Bank of Korea enhanced its international cooperation by continuing to take part in discussions about issues related to foreign exchange reserves management with international organizations and overseas central banks.

In 2020, the Bank sought consultations from major international organizations, such as the World Bank, the IMF, and the BIS, on the appropriateness of its method of determining the currency composition of its foreign exchange reserves. The consultation results showed that its current method was generally in accordance with global best practices.

In addition, the Bank exchanged opinions on recent global trends in the management of foreign exchange reserves through conference calls with the Federal Reserve Bank of New York and the Australian Office of Financial Management (AoFM), while providing employees of the State Bank of Vietnam with an opportunity to learn from the Bank's experiences of foreign exchange reserves management.

## C. International Cooperation

The Bank of Korea quickly identified and responded to global economic and financial conditions and policies in major countries through global cooperation channels after the spread of COVID-19. It also continued to actively carry out bilateral and multilateral cooperation and exchanges in a virtual manner to fulfill Korea's responsibilities in line with its elevated international status.

The Bank endeavored to boost policy coordination with the international financial community and to promote Korea's national interests by participating actively in meetings of international organizations and consultative bodies, such as the G20, the IMF and the BIS, including its Board of Directors. It also played a leading role in the activities and discussions of consultative bodies in the Asia-Pacific region, including ASEAN+3, SEACEN, and EMEAP.

### Active Participation in Global Policy Coordination

The Bank of Korea participated actively in global discussions to coordinate policies at international organizations and consultative bodies, through which it voiced Korea's position while contributing to the formulation of policy responses to address global financial issues.

At the BIS central bank governors' meetings (on 14 occasions), and at the IMF and World Bank Group meetings (on two occasions), the Bank took active part in discussions related to medium- and long-term policy challenges and financial and economic issues such as the

impact of COVID-19 and its countermeasures. Through these meetings, the Bank strove to reflect Korea's position during the policy coordination process of the international financial community. In particular, it participated in the BIS Board of Directors, which is essentially the top decision-making body of the BIS, contributing to determining the medium- and long-term strategy and policy direction of the BIS, and helped in quickly identifying economic and financial issues in major countries and strengthening policy cooperation and coordination.

In collaboration with the Korean government, the Bank also participated in G20 meetings of finance ministers and central bank governors (on four occasions) and those of deputy finance ministers and central bank deputy governors (on five occasions), together with special G20 meetings of finance ministers and central bank governors (on three occasions) that were hosted in consideration of the special circumstances caused by the outbreak of COVID-19. At those meetings, the Bank discussed issues such as responses to COVID-19, recovery of the global economy, Debt Service Suspension Initiative(DSSI), and Common Framework for debt treatments beyond the DSSI. Furthermore, it participated actively in discussions about issues in the financial sector, including: enhancing cross-border payments, financial regulations and supervision, financial inclusion and stablecoins; principles to ensure quality infrastructure investment; and, international tax challenges caused by digitalization.

**Table III - 24. Main Themes of International Forums (2020)**

Forums	Main Themes
• Bimonthly BIS Meetings (January; Basel/ March to July, September, November; video conference)	Global financial and economic issues, non-bank financial intermediation, cross-border payments, big data and central banks, BIS' medium-term strategy, etc.
• IMF and World Bank Group Meetings (April, October; video conference)	World economic outlook, global financial stability conditions, global policy challenges in responding to COVID-19, IMF's and WB's measures to support member countries, etc.
• G20 Finance Ministers' and Central Bank Governors' Meetings (February; Riyadh/ April, July, October; video conference/ March, November; special video conference)	Response to COVID-19 and global economic recovery, debt service suspension initiative(DSSI) and common framework for debt treatments beyond the DSSI, enhancing cross-border payments, financial regulations and supervision, financial inclusion, stablecoins, principles for quality infrastructure investment, international taxation, etc.

Source: Bank of Korea

### Strengthening Regional Financial Cooperation

The Bank of Korea actively participated in discussions of financial and economic issues at international organizations and consultative bodies across the Asia-Pacific, including at the ASEAN+3, EMEAP and SEACEN meetings, to strengthen financial cooperative relationships among regional member countries.

First of all, in collaboration with the government, the Bank participated in meetings of ASEAN+3 finance ministers and central bank governors<sup>89)</sup> (on one occasion), those of deputy finance ministers and central bank

89) The meeting, initially scheduled for May 2020, was delayed until September due to COVID-19 and was eventually hosted via a video conference. The meeting is cohosted each year by one country among the 10 ASEAN member countries and by one among Korea, China and Japan. Japan and Vietnam co-chaired the meeting in 2020, and

deputy governors (on two occasions), and working-level meetings (on three occasions) to bolster the effectiveness of financial support by playing a leading role in approving the amendment of the Chiang Mai Initiative Multilateralization (CMIM), which reflects a hike in the IMF-delinked portion of the CMIM and the institutionalization of local currency contribution.

The Bank also participated in meetings of EMEAP central bank governors (on two occasions), special conference calls (on two occasions), and of central bank governors/financial supervisory directors (on one occasion), along with a meeting of SEACEN central bank governors (on one occasion), all in order to discuss the impact of COVID-19 and the future outlook, and to share the Bank's opinion and experience on pending issues including digitalization and CBDCs. In addition, as a member institution of the Advisory Committee of the SEACEN Executive Committee,<sup>90)</sup> the Bank engaged in making decisions on major issues related to the operation of the SEACEN Center.

**Table III - 25. Main Themes of Asia-Pacific Regional Forums (2020)**

Forums	Main Themes
23rd ASEAN+3 Finance Ministers' and Central Bank Governors' Meeting (September; video conference)	Regional and global financial and economic trends, measures to enhance financial cooperation within the region, etc.
20th Trilateral Finance Ministers' and Central Bank Governors' Meeting (September; video conference)	Potential risk factors in each country's economic and financial markets, plans for financial cooperation between Korea, China and Japan, etc.
25th EMEAP Governors' Meeting I (August; video conference)	COVID-19, and the challenges facing central banks, etc.
25th EMEAP Governors' Meeting II, 9th Informal Meeting of EMEAP Governors and Heads of Supervisory Authorities (November; video conference)	Economic outlook and long-term impact of COVID-19, central bank digitalization, role of the banking sector in sustainable finance, etc.
56th SEACEN Governors' Conference (December; video conference)	Opportunities and challenges in adopting CBDCs, etc

Source: Bank of Korea

### Enhancing the Sharing of Policy Experiences with Central Banks in Emerging Markets

The Bank of Korea passed on many of its policy experiences related to the responsibilities of a central bank, such as monetary policy, financial stability, foreign exchange policy, and management of foreign exchange reserves, in order to support the financial development of emerging markets and developing economies, thereby further strengthening its cooperative relationships with central banks in those countries.

Korea and Brunei will do so in 2021.

90) With the aim to support the reform of the organization and the wage structure, and to deliberate on the recruitment of new personnel under the Executive Director of the SEACEN Centre. The committee is composed of the central banks from Korea, Indonesia, Malaysia, Papua New Guinea, the Philippines, Thailand and Sri Lanka.

The Bank worked to improve the management methods of its Knowledge Partnership Program (KPP)<sup>91</sup> by reducing the preparation period and extending the execution period of the project in order to stably carry out exchanges and cooperation with central banks, despite constraints imposed on face-to-face exchanges owing to the COVID-19 crisis, and to improve the utilization of policy advisory reports.

In particular, following Mongolia in 2017, Uzbekistan was added to the Knowledge Partnership Program as a way to expand the target range of the projects, which were previously focused on Southeast Asia, to include North Asian countries, too. In addition, in order to discuss methods to enhance exchanges and cooperation, it hosted a conference of central banks with six countries from the North Asian region<sup>92</sup> at the 2020 International Forum for Northern Economic Cooperation, which was organized by the Presidential Committee on Northern Economic Cooperation on October 30, 2020.

**Table III - 26. BOK–Knowledge Partnership Program (KPP) (2020)**

Country	Main Topic
Vietnam	Enhancing the legal framework on FX reserves management and the process of FX reserves investment
Cambodia	Monetary operations and FX policy
Mongolia	Monetary policy strategy in the presence of frequent supply disturbances and external shocks
Nepal	Financial stability: Institutional aspects and implications of macroprudential policy
Sri Lanka	Macroprudential framework, policy and data collection
Uzbekistan	Liberalization of capital market and FX policy

Source: Bank of Korea

The Bank also held a joint training course online with the SEACEN Centre in November for employees of member country central banks.

**Table III - 27. Online Training Co-hosted with the SEACEN Centre (2020)**

Theme	No. of Participants
Monetary and Macroeconomics Policy in the COVID-19 Era (November 16 to 20)	41 Participants from 14 countries

Source: Bank of Korea

### Expansion of Subscriptions and Contributions to International Financial Institutions

During 2020, the Bank of Korea paid a total of 290.92 million dollars (261.78 million dollars in subscriptions, 29.14 million dollars in

91) The BOK-KPP is a policy advisory and technical support program designed to share the Bank's business knowledge, policy implementation experiences, and Korea's experiences in developing its own financial system and infrastructure, with central banks from emerging markets and developing countries.

92) These include Kazakhstan, Kyrgyzstan, Turkmenistan, Uzbekistan, Mongolia, and Belarus.

contributions) at the government's request for subscriptions and contributions to international financial institutions and consultative bodies in accordance with the Act on the Measures for the Admission to International Financial Institutions. Specifically, the reasons behind this increase in subscriptions and contributions in 2020 included a subscription to the 18th Replenishment of the International Development Association (IDA), a subscription related to the new accession to the Central American Bank for Economic Integration (CABEI), and a subscription to the replenishment of the African Development Fund (AfDF). As a result, the Bank's subscriptions and contributions to international financial institutions totaled 17.2 billion dollars as of the end of 2020.

Meanwhile, as of year-end 2020, the Bank's total loans to the IMF amounted to 969.97 million SDRs. These loans included 143.35 million SDRs in lending through the New Arrangements to Borrow (NAB), and loans of 826.62 million SDRs through the borrowing agreement of the Poverty Reduction and Growth Trust (PRGT).<sup>93)</sup> In 2020, the total amount of loans outstanding was 552.51 million SDRs higher than the previous year, in line with the loan increase of 597.56 million SDRs through the PRGT borrowing agreement, which the loans through the NAB decreased by 45.05 million SDRs.

**Table III - 28. Subscriptions & Contributions to International Financial Institutions (as of year-end)**

	(million USD)		
	2019 (A)	2020 (B)	Change (B-A)
<b>Subscriptions</b>	<b>15,916</b>	<b>16,178</b>	<b>262</b>
IMF	11,861	11,861	0
IBRD	287	311	24
IDA	1,982	2,136	154
ADB	293	293	0
AfDB-AfDF	504	539	35
AIIB	748	748	0
CABEI	0	34	34
Other	241	256	15
<b>Contributions</b>	<b>976</b>	<b>1,005</b>	<b>29</b>
IMF	72	78	6
IBRD	34	34	0
ADB-ADF	648	671	23
IDB-MIF	161	161	0
IIC	40	40	0
Other	21	21	0
<b>Total</b>	<b>16,892</b>	<b>17,183</b>	<b>291</b>

Source: Bank of Korea

**Table III - 29. Loans to IMF (as of year-end)**

	(million SDR)				
	2019 (A)	In 2020		2020 (B)	Change (B-A)
		Loan	Repayment		
NAB	188	0	45	143	-45
PRGT	229	600	2	827	+598
<b>Total</b>	<b>417</b>	<b>600</b>	<b>47</b>	<b>970</b>	<b>+553</b>

Source: Bank of Korea

93) This is an agreement between the IMF and individual countries that is designed to arrange concessional financial support for Low Income Countries (LICs). Korea signed the agreement in 2011, and made its first loan to this fund in 2013.

## 7. Research and Statistics

### A. Research Activities

The Bank of Korea conducts extensive research to support the establishment and enforcement of effective monetary and credit policies. These efforts span a wide range of topics regarding all aspects of the domestic and international economy, including growth, inflation, employment, and the global economy. Particularly in 2020, the Bank took a closer look at the economic effects of the COVID-19 crisis and examined the possibility of structural change in the domestic and international economy.

#### (1) Head Office Research Activities

##### Analyzing Key Pending Issues in the Korean Economy

In 2020, the Bank of Korea primarily focused its research related to pending economic issues on analyzing the effects of the spread of COVID-19 on the global and domestic economy. The Bank investigated the transmission channels through which the spread of COVID-19 could affect the global economy, based on past outbreaks of contagious diseases and trade relationships between major economies,<sup>94)</sup> and examined the major chang-

es in world trade caused by the pandemic, including the contraction of trade in services and the reorganization of the global value chain (GVC).<sup>95)</sup>

The Bank also examined the impacts of the COVID-19 pandemic on various areas of the domestic economy. After an analysis, it was determined that COVID-19 is adversely impacting the domestic economy through the contraction of domestic demand and trade in goods and services, and through the disruption of manufacturing production.<sup>96)</sup> The Bank explored the possibility that the prolonged continuation of the COVID-19 pandemic would make it difficult for consumer sentiment to recover due to the continuous contraction in the consumption of face-to-face services and the delayed improvement of employment and income conditions.<sup>97)</sup> Meanwhile, the Bank assessed changes in export conditions since the outbreak of COVID-19 through the examination of changes in global demand and the state of the semiconductor industry.<sup>98)</sup>

The Bank intensively analyzed pending issues in the employment sector, given the significant impact of COVID-19 on employment. Firstly, the Bank's findings showed that employment vulnerability was found to be relatively higher for the low-paid and low-educated, and that the number of employed persons mostly declined in vulnerable jobs.<sup>99)</sup>

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94) The Effects of the Spread of COVID-19 on the Global Economy (Economic Outlook Report, February 2020).

95) Major Characteristics of Recent World Trade and Future Outlook (International Economic Review, December 2020).

96) The Effects of the COVID-19 Outbreak on the Real Economy (Monetary Policy Report, March 2020).

97) Examination of Factors Limiting Private Consumption Following Ongoing Spread of COVID-19 (Monetary Policy Report, September 2020).

98) Examination of Export Environment Following Global Spread of COVID-19 and Assessment of Outlook (Monetary Policy Report, June 2020).

99) Measurement and Assessment of Employment Vulnerability Following COVID-19 (BOK Issue Note, August 2020).

Moreover, it was assessed that the recent exponential increase in the number of temporarily laid-off persons may impede the recovery of the employment rate in the future.<sup>100)</sup>

With regard to prices, the spread of COVID-19 served as a downward factor on domestic market prices, led by demand-sensitive sectors such as face-to-face service items.<sup>101)</sup> It was also identified that lockdown measures taken in major advanced economies generally led to a decrease in inflation rates. The findings showed that the decrease in oil prices and the expansion of free school education, along with the spread of COVID-19, also contributed to slowing any growth in consumer prices.

Meanwhile, the Bank carried out an in-depth analysis regarding structural economic changes at home and abroad that may be expected in the aftermath of the COVID-19 crisis. According to the analysis, there is a high likelihood of structural economic changes at the global level, such as slow growth in world trade and a rapid shift in industry structures following the crisis.<sup>102)</sup> It was assessed that economic growth imbalances between countries and between socioeconomic classes could continue in the future,<sup>103)</sup> and the heightened

rate of household savings may remain fixed in place.<sup>104)</sup> The Bank also examined the possibility of an acceleration in population aging due to the negative impacts of the current crisis on marriage and childbirth.<sup>105)</sup>

The Bank of Korea examined structural changes in the Korean economy that have been under way since before the outbreak of COVID-19. The Bank identified factors such as an aging population that have contributed to a decrease in the level of household consumption and suggested policy responses.<sup>106)</sup> Furthermore, it was assessed that changes in Korea's global value chain (GVC) participation structure, such as its increasing proportion of exports to China, contributed to the slowdown in exports following the global financial crisis.<sup>107)</sup>

Continued efforts were made to enhance the accuracy in the estimation and outlook of economic conditions. The Bank developed and utilized a model for the spread of infectious diseases in consideration of the high uncertainty concerning the path of growth caused by the COVID-19 crisis. As part of its efforts to elevate the consistency of model analysis, the Bank constructed a macro-econometric model (BOK20) that reflects recent changes in

100) Current Status and Assessment of Temporarily Laid-off Persons (BOK Issue Note, September 2020).

101) Analysis of the Effects of COVID-19 on Prices (BOK Issue Note, November 2020).

102) Economic Structure Changes and Their Effect on the Korean Economy Following the COVID-19 Crisis (BOK Book, June 2020).

103) Assessment of Economic Growth Imbalances after the COVID-19 Crisis (BOK Issue Note, December 2020).

104) Possibility of a Rise in the Household Saving Rate Following COVID-19 (Monthly Statistical Bulletin, November 2020).

105) Examination of Demographic Changes in the Post COVID-19 Era (BOK Issue Note, December 2020).

106) Analysis of Factors Affecting Recent Changes in the Propensity to Consume and Their Implications (Monthly Statistical Bulletin, February 2020).

107) Impacts of Changes in Korea's Global Value Chain (GVC) Participation Structure on Its Exports (Monthly Statistical Bulletin, December 2020).



the economic structure, including monetary policy endogeneity and increased uncertainty.

### **Strengthening Research by the Economic Research Institute**

The Economic Research Institute conducted in-depth research into pending economic issues at home and abroad, as well as medium- and long-term research and investigations. In particular, its intensive research capacity was dedicated to analyzing timely subjects such as the economic effects of the spread of COVID-19<sup>108)</sup> and changes in the economic structure<sup>109)</sup> in the post-COVID era.

The institution published results of research into not only major economic issues such as risk factors in financial and foreign exchange markets,<sup>110)</sup> real estate,<sup>111)</sup> monetary policy,<sup>112)</sup> and industrial policy,<sup>113)</sup> but also on emerging financial or economic issues including digital currencies.<sup>114)</sup> Furthermore, the institution provided policy reference material to improve the economic structure in the medium and long term by conducting research into pending structural issues, including labor productivity,<sup>115)</sup> growth,<sup>116)</sup> and changes in the GVC.<sup>117)</sup> In addition, the institution steadily presented the results of academic and theoretical research<sup>118)</sup> using forecasting models<sup>119)</sup>

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108) Discussions on Major Macroeconomic Issues Related to COVID-19 and Their Implications (BOK Issue Note, July 2020), Effects of the COVID-19 Pandemic on the Global Value Chain (GVC) and Their Implications (BOK Issue Note, August 2020), Three Major Issues of COVID-19 Related to the Labor Market and Response Measures (BOK Issue Note, September 2020).

109) Directions of Global Industrial Trade Policy and Their Implications in the Post-COVID Era (BOK Issue Note, June 2020).

110) The Effects of Foreign Exchange Operation on the Stabilization of Exchange Rate Volatility in Korea (BOK Working Papers, February 2020), Network-Based Measures of Systemic Risk in Korea (BOK Working Papers, March 2020), Cross-Border Trade Credit and Trade Flows during Financial Crises (BOK Working Papers, June 2020), Corporate Financial Constraints in Korea after the Global Financial Crisis (Monthly Statistical Bulletin, October 2020), Credit Market Frictions and Coessentiality of Money and Credit (BOK Working Papers, November 2020), Dynamic Relationship between Foreign Capital Inflow and Inflation: Evidence from Eight Small Open Economies in Asia (BOK Working Papers, December 2020).

111) House Prices and Household Consumption in Korea (BOK Working Papers, May 2020), Consumption Dynamics and a Home Purchase (BOK Working Papers, December 2020).

112) Impacts of Population Aging on Real Interest Rates (BOK Working Papers, January 2020), The Excess Sensitivity of Long-term Interest Rates and Central Bank Credibility (BOK Working Papers, December 2020).

113) Export and Productivity: An Analysis of Plant-Level Data (BOK Working Papers, September 2020), The Determinants of a Firm's Exit from Exporting: Evidence from Korean Manufacturing Firms (BOK Working Papers, September 2020).

114) Central Bank Digital Currency, Tax Evasion, Inflation Tax, and Central Bank Independence (BOK Working Papers, December 2020).

115) The Role of Human Capital in Explaining Labor Productivity Growth in Korea Since 2001 (BOK Working Papers, April 2020), An Analysis of the Factors of the Slowdown in Manufacturing Labor Productivity after the Global Financial Crisis (BOK Issue Note, June 2020), The Effects of Marginal Corporations on Korea's Manufacturing Labor Productivity (BOK Issue Note, July 2020).

116) The Effects of Industrial Restructuring on Employment and Growth (BOK Working Papers, June 2020), A Slowdown in GDP Trend Growth in Korea (BOK Working Papers, January 2021).

117) The Effects of Global Value Chains on Economic Growth and Their Changes after the Global Financial Crisis (BOK Working Papers, May 2020).

118) Macroeconomic and Financial Market Analyses and Predictions through Deep Learning (BOK Working Papers,

and state-of-the-art analytical methods, while continuously carrying out research into North Korea's economy.<sup>120)</sup>

### Expanding the Global Research Network and Exchanges

The Bank of Korea devoted continuous efforts to increasing its research capability and international research cooperation while minimizing risks related to the global research network and exchanges amid the COVID-19 pandemic.

First of all, the Bank decided to cancel the Bank of Korea International Conference 2020 before the global outbreak of COVID-19, and also canceled the Bank of Korea International Conference 2021 in order to avoid related risks.

Meanwhile, the Bank of Korea continued its endeavor to enhance global research via video conferences. The Bank co-hosted two meetings consisting of the 2020 Annual Meeting of CEBRA in September and the KAFA session of the 2020 FMA Annual Meeting with the Korea-America Finance Association, in October. The Bank contributed to increasing its re-

search and investigation capabilities by hosting such meetings for high-quality lectures and discussions on economic theories and conducting exchanges with research institutes at home and abroad. In December, the Bank hosted the BOK-BOJ Research Workshop<sup>121)</sup> where presentations and discussions on a diverse range of topics were exchanged, sharing research achievements and knowledge between the two central banks.

The Bank also actively conducted joint studies with renowned scholars at home and abroad on themes such as monetary policy, financial stability, and macro-prudence. Such joint research activities have improved the Bank's research capacity related to pressing domestic and international economic issues, and have steadily strengthened its global research network.

### Boosting Internal Joint Research Activities

In an attempt to adapt to the new financial economic environment, the Bank of Korea strove to improve its research and investigation performance system and effectively conduct collaborative research involving outsourced research services and different divi-

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September 2020).

119) Estimating Korea's Monthly GDP and Forecasting Korea's GDP: An Unobserved Component VECM and Gibbs Sampling Approach (BOK Working Papers, January 2020), Common Factor Augmented Forecasting Models for the U.S. Dollar-Korean Won Exchange Rate (BOK Working Papers, February 2020), Vulnerable Growth: A Revisit (BOK Working Papers, October 2020).

120) The Effects of Dollarization on Inflation and Exchange Rates in North Korea (BOK Working Papers, January 2020), Economic Policy Changes in North Korea: A Text Mining Approach to *Economic Research* (BOK Working Papers, February 2020), The Effects of North Korea's Mineral Exports on Various Imports (BOK Working Papers, March 2020), Study of Informal Finance in North Korea, with Analysis and Evaluation (BOK Working Papers, July 2020), Estimating Long-Term Economic Growth in North Korea: 1956 - 1989 (BOK Working Papers, July 2020), Estimating Capital Stock in North Korea and Its Implications (BOK Working Papers, November 2020).

121) The Bank has held joint research workshops with the Institute for Monetary and Economic Studies at the Bank of Japan on an annual basis since 2017, alternating the role of host.

sions within the organization. To this end, it convened four research committee meetings<sup>122)</sup> during the year for the overall coordination of its research activities. Such efforts allowed the Bank to identify key research themes and monitor the progress of ongoing outsourced research services and domestic and overseas joint research activities, along with research activities involving different divisions of the Bank.

In order to effectively respond to the research demand concerning urgent policy issues, the Bank of Korea also devoted efforts to linking its research capacity organically under difficult policy conditions caused by COVID-19. The Bank shared information about rapidly changing domestic and global economic conditions through cooperative efforts involving different divisions, and searched for policy measures to stabilize the current crisis through an in-depth analysis of its effects on the domestic economy. In order to elevate the quality of research and investigation data, the Bank plans to further encourage research activities involving different divisions of the Bank in the future.

## **(2) Research Activities by Regional Branches**

The functions of the Bank of Korea's regional branches include monitoring the condition of regional finances and the local real economies, compiling a diverse range of statistics, and analyzing key issues related to Korea's various regional economies. In addition to

helping regional economies achieve steady growth, all of these functions are required by the Head Office for the establishment of national monetary and credit policies, as well as the pursuit of financial stability. The regional branches also work to promote research cooperation within their respective communities, including among pertinent institutions, universities, and local governments, by hosting seminars and forums on major issues associated with their respective regional economies. These activities help regional communities to explore policy tasks and establish relevant plans. Particularly in 2020, the regional branches prepared, provided, and released reference material including the impacts of the spread of COVID-19 on local economies and their policy responses.

### **Enhancing the Monitoring of Regional Economies**

The Bank's regional branches conducted in-depth monitoring of regional economies through surveys on corporations and related institutions. They participated in publishing the quarterly Regional Economic Report, which contained the results of this monitoring and related analyses, in order to provide the Head Office with the information needed to implement its monetary and credit policies. The regional branches have also been conducting regular or ad hoc monitoring of seven major manufacturing industries consisting of semiconductors, automobiles, petrochemicals, steel, displays, ships, and smartphones. The monitoring results were reported to the rele-

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122) The research committee meetings are attended by the chairperson (the BOK's senior deputy governor), the vice chair (the deputy governor of the BOK Economic Research Institute), and 12 operating committee members (director generals of major departments at the Bank of Korea).

vant departments at the Head Office, which contributed to the policy establishment process. The Bank strengthened its monitoring of local economies and major pending issues by including the monitoring results in the Field Report section of the Regional Economic Report.

The regional branches regularly compile and provide a range of survey statistics for each region, such as the Business Survey Index (BSI), the Consumer Survey Index (CSI), data about loans and deposits at financial institutions, and financial statements from corporations. These are all essential for understanding the status of regional economies and for policy-making by regional governments.

### **Analyzing Major Issues Facing Regional Economies**

The Bank's regional branches examined the principal vulnerabilities hampering sustainable and stable economic growth in their local economies. Following their in-depth research into pressing regional economic issues, they suggested pertinent alternatives and dedicated diligent efforts as local think tanks.

In 2020, the regional branches prepared reports of diverse research on themes such as: the expansion of innovative engines of economic growth in the local economy; analyses of pressing issues facing regional economies, such as inspection data regarding the effects of the spread of COVID-19 on local economies, the growth of online shopping, and the

introduction of local gift certificates; reviews of the operational outcome of support funds granted to companies affected by COVID-19; and, in-depth research analyses from the medium- and long-term perspective into local consumption structures and demographic changes. Such reports<sup>123)</sup> were also provided to their respective communities.

Furthermore, in response to various local research demands, the regional branches conducted joint research projects with external experts and published papers<sup>124)</sup> to provide basic materials for policy establishment. Such papers include “An Analysis and Promotion Strategy of Industrial Competitiveness in the Northern Area of Gyeongbuk Province”, “An Analysis of Connections Between Large Corporations and SMEs in Gyeonggi Province & Balanced Development Measures”, and “Forecasting Sedentary and Visiting Populations Using Location-based Data and Analysis of Economic Effects”.

### **Strengthening Research Exchanges With Regional Communities**

The Bank of Korea's regional branches actively participated in exchanges with pertinent institutions, universities, and local governments using various contact-free means of communication, despite constraints on face-to-face contact due to the spread of COVID-19.

In 2020, the COVID-19 pandemic led to a large-scale contraction of the domestic and global economies, while bringing about rapid

123) In 2020, the Bank's regional branches conducted 79 independent research projects, among which four were joint research projects carried out through cooperation among different regional branches.

124) In 2020, the regional branches carried out 21 joint research projects with external experts.

changes in economic conditions and accelerating the shift toward a contact-free economy with the proliferation of remote working and education. In response to these changes, the Bank's regional branches were active in hosting seminars<sup>125)</sup> on improving regional economic development in the post-COVID era and on exploring and incubating emerging industries as engines of economic growth. Through these seminars, they attempted to contribute to the formulation of strategies and policies for securing sustainable growth in their respective regional economies. The regional branches also hosted numerous Regional Economy Forums<sup>126)</sup> on pressing issues concerning regional economic revitalization and related policy tasks, particularly with a focus on providing financial support to SMEs and small businesses, and identifying causes of discrepancy between production and distribution in the area. These forums served as venues for sharing knowledge and information about pertinent topics and for improving communication with regional communities.

Moreover, the regional branches prepared policy reference materials related to regional economic trends in response to the COVID-19 pandemic, which were provided to local government meetings in a timely manner, thereby contributing to the establishment of policy responses.

Meanwhile, the regional branches operated the Select Area Research Program<sup>127)</sup> to target

areas with no regional branch of the Bank or those within a regional branch's jurisdiction that face specific needs concerning research, monitoring or cooperation as an administrative or economic center for the region, with the aim to formulate policies tailored to these selected areas.

### **(3) Research Activities at Overseas Representative Offices**

The Bank of Korea's overseas representative offices endeavored to conduct research and investigation and analyze trends<sup>128)</sup> on the economies within their respective jurisdictions and to provide the Head Office with timely information<sup>129)</sup> collected through exchanges with their host country's central banks, international organizations, and finance and economics experts.

Particularly in 2020, since there were radical changes in the economic and financial environment, such as the spread of COVID-19, Brexit negotiations, and the U.S. presidential election, the Bank's overseas representative offices constantly monitored changes in the economic conditions in their jurisdictions and subsequent aftereffects in terms of production, consumption, and employment, reporting their findings to the pertinent departments at the Head Office. They also closely examined the policies of various central banks and governments and prepared analysis reports.

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125) In 2020, the regional branches held five seminars on regional economies.

126) In 2020, the regional branches hosted 20 Regional Economy Forums.

127) As of the end of 2020, 12 regional branches were operating as part of the Select Area Research Program, targeting 15 selected areas.

128) In 2020, the overseas representative offices prepared 109 research and trend analysis reports.

129) In 2020, the overseas representative offices prepared 538 local timely information reports.

In a situation where face-to-face exchanges were difficult, the Bank's overseas representative offices maintained and expanded their local networks and collected information related to major issues by actively hosting and participating in web seminars and video conferences.

## B. Compilation of Statistics

As a key agency for the compilation of national statistics, the Bank of Korea generates 18 nationally approved sets of statistics, including traditional monetary and financial statistics, such as currency, liquidity, interest rates on deposits and loans, and household credit. The approved statistics also include five main national accounts - Gross Domestic Product (GDP), Input-Output (I-O) Tables, National Balance Sheet (B/S), Flow of Funds, and Balance of Payments (BOP) - as well as other statistics, such as International Investment Position (IIP), Producer Price Index (PPI), Export and Import Price Indices (EPI and IPI), Financial Statement Analysis (FSA), Business Survey Index (BSI) and Consumer Survey Index (CSI).

In particular, although there were growing difficulties in the collection of base data and management of staff in charge of statistical compilation due to the spread of COVID-19, the Bank managed to publish official statistics without delay while ensuring their accuracy. In order to respond to statistical demands and the current compilation environment, the Bank also conducted research into utilizing a diverse range of data in its compilation of statistics, such as news reports, credit card transaction data, and POS scanner data, through which the Bank promoted the development of

up-to-date economic indicators.

The Bank also continued to facilitate statistical cooperation with international organizations, academia, and the government, while rebuilding the Economic Statistics System (ECOS) in earnest in order to strengthen statistical services for the public.

**Table III - 30. National Statistics Compiled by Bank of Korea**

Category	Description
National Accounts	Gross Domestic Product (GDP), Balance of Payments, Input-Output (I-O), Flow of Funds, National Balance Sheet (B/S) <sup>1)</sup> , International Investment Position (IIP), External Assets in Debt Instruments and Debt.
Money and Finance	Monetary and Financial Statistics
Household and Micro Statistics	Survey of Household Finance and Living Conditions <sup>2)</sup>
Price index	Producer Price Index (PPI), Export and Import Price Indices (EPI and IPI)
Corporation Statistics	Financial Statement Analysis
Economic Sentiment	Business Survey Index (BSI), Consumer Survey Index (CSI), Economic Sentiment Index (ESI)
Financial Stability	Loan Officer Survey on Financial Institution Lending
Payment and Settlement	Statistics on Payments and Settlements
Other	Survey of Financial Literacy Competencies <sup>3)</sup>

Notes: 1) Jointly with Statistics Korea.

2) Jointly with Statistics Korea, Financial Supervisory Service.

3) Jointly with Financial Supervisory Service.

Source: Bank of Korea

## Ensuring Statistical Improvement and Expansion

The Bank of Korea has devoted efforts to enhancing its accuracy in the compilation of statistics that reflect recent economic conditions, such as changes in industry structures and advanced production technology. The Bank also improved convenience and access for users by segmenting established accounts and creating new items.

The Bank responded to the demand for the establishment of pertinent policies for corporate loans and medium-sized enterprises through the breakdown of detailed data for each corporation type, such as categorizing a deposit bank's industry-specific loans into corporations and non-corporations, and the compilation of FSA statistics on those enterprises. The Bank also retroactively compiled data on the overseas sector of the Flow of Funds that has been collected since 2009, in accordance with the reorganization of the Balance of Payments and Foreign Investment Statistics, which enhanced statistical consistency between national accounts.

The Bank also continued to compile quarterly production and income accounts by institutional sector, Detailed Securities Statistics, Detailed Flow of Funds (From-Whom-to-Whom Tables), and Overseas Securities Investment Statistics (the Coordinated Portfolio Investment Survey) in order to reflect the

recommendation of DGI-2,<sup>130)</sup> led by organizations such as the G20 and the IMF.

The Bank of Korea also conducted a sample reorganization in order to increase the reflection of reality in its Business Survey Index (BSI). The Bank set its population as companies that reported their corporate tax in 2018, carried out a sample reorganization, and then released the outcomes of its statistical compilation based on the new sampling in August after a pilot investigation.

## Strengthening of Domestic and International Statistical Cooperation

Under circumstances where it was hard to convene face-to-face meetings due to the spread of COVID-19, the Bank of Korea enhanced domestic and international statistical cooperation via non-face-to-face video conferences.

The Bank hosted "The Bank of Korea Statistics Forum" in November, with the aim to study new forms of statistics and acquire new theories and techniques. At the forum, participants engaged in discussions on deep learning-based speech classification models, research methodology to prepare economic sentiment indicators using economic news, and related case studies. The Bank also invited external experts in a seminar on the trends and application of linguistic intelligence technology, thereby contributing to the develop-

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130) The Data Gap Initiative, launched at the G20 summit in London in 2009, refers to an international statistics development and improvement project being led by major international organizations, including the BIS and the ECB, as well as G20 members, under the leadership of the IMF and the FSB. The first phase of the Data Gap Initiative (DGI-1), on CDS, structuralization and non-bank financial institutions' cross-border exposure, was carried out from 2010 to 2015. The second phase (DGI-2), covering derivative products, overseas direct investment and the sharing of statistics, has been in progress since 2016 and is scheduled to be completed in 2021.

ment of a pertinent research network.

Meanwhile, the Bank sought to forge closer cooperative relationships with domestic statistics-related institutions, such as by hosting the Statistics Cooperation Meeting in collaboration with Statistics Korea. The Bank also participated in international meetings hosted by major international organizations and central banks in key countries, and discussed measures for the stable establishment and implementation of new international standards for statistics and pertinent key issues.

### **Improving Economic Statistics Services**

Over the course of the year, the Bank of Korea provided 42 “Lectures on Economic Statistics Indexes” at universities and public institutions in order to enhance public understanding of economic statistics. The lectures took place using a diverse range of methods, including online lectures, in line with the phase-based guidelines for social distancing.

While operating the ECOS, the Bank expanded international statistics, enhanced data consistency through the transition of web page standards and the adoption of an automatic verification function, and improved user convenience by reflecting survey results of statistics users as much as possible.

Meanwhile, the project of constructing a new economic statistics system, which commenced in April 2020, aims to increase productivity in the compilation of statistics and provide user-friendly statistics services and is scheduled for completion by the first half of 2022.



## 8. Treasury and Securities Business

### A. Treasury

The Bank of Korea, as the bank of the government, is tasked with the management of the receipt and disbursement of Treasury funds, and extends credit to the government. The Bank holds Treasury funds, such as national taxes, as Government Deposits, disburses funds from this account based on the government's needs, and provides temporary loans to the government when the government faces a fiscal shortage. In addition, these transactions are accounted in accordance with the government accounting system<sup>131)</sup> and verified against government data. In order to ensure the effective processing of Treasury funds, the Bank of Korea has also established and currently operates the Treasury Network.

#### Receipt and Disbursement of Treasury Funds

Receipts from taxes and other government revenues are processed by the Bank of Korea, treasury agencies, the Post Office, and other agencies<sup>132)</sup> designated for such purposes. Whereas treasury agencies deposit receipts from general taxpayers, the Bank deposits the government's idle funds and funds from the issuance of Treasury bonds. In 2020, national treasury receipts through all national treasury

agencies totaled 448 trillion won, while receipts directly deposited in the Bank amounted to 1,637 trillion won.

Most payments of Treasury funds are conducted via real-time electronic transfers. Upon receiving a request from a designated official to transfer Treasury funds, the Bank disburses them into the creditor's accounts through financial institutions on a real-time basis. The Bank also makes payments for the operation of idle funds and redemption of Treasury bonds. In 2020, the amount of Treasury funds paid through creditor accounts stood at 853 trillion won.

**Table III - 31. Receipts & Disbursements of Treasury Funds**

	2018	2019(A)	2020(B)	(trillion won) Change (B-A)
<b>Total Receipts</b>				
Receipts Through Treasury Agencies	438	444	448	5
Receipts Through Government Deposits <sup>1)</sup>	1,391	1,551	1,637	87
<b>Total Disbursement</b>				
Disbursement Through Creditor Accounts	667	725	853	128
Disbursement Through Government Deposits <sup>1)</sup>	1,141	1,258	1,219	-39

Note: 1) Includes collection and operation of idle funds, issuance and redemption of Treasury bonds, and transfers between government accounts.

Source: Bank of Korea

131) In Korea, the government accounting system is divided into a cash basis, which records income and expenses according to cash flow under the National Finance Act, and an accrual accounting basis, which records transactions using double entry book-keeping as they occur under the National Accounting Act. The Bank of Korea handles cash basis accounting only.

132) Since 2008, the Korea Financial Telecommunications and Clearings Institute (KFTC) has been designated as an agency with the authority to receive Treasury funds through credit cards.

## Current Status of Treasury Agencies

To improve convenience for taxpayers, the Bank of Korea designates branches of financial institutions that meet certain requirements as treasury agencies to be entrusted with the business of receiving taxes and other government revenues. Depending on the type of contract, treasury agencies can be classified as Type A, which are designated directly by the Bank of Korea, and Type B, which are designated indirectly as agencies by their federations.<sup>133)</sup> As of the end of 2020, there were 16,998 treasury agencies, down by 165 from the previous year-end. National treasury receipts via treasury agencies totaled 427 trillion won, similar to the level from 2019.

**Table III- 32. Status of Treasury Agencies<sup>1)</sup> & Receipts Value**

(number, trillion won)

		2019(A)	2020(B)	Change (B-A)
Number	Treasury Agencies Type A	6,849(22)	6,572(22)	-277
	Treasury Agencies Type B	10,314( 6)	10,426( 6)	112
	Total	17,163(22)	16,998(22)	-165
Receipts Value	Treasury Agencies Type A	410	408	-2
	Treasury Agencies Type B	17	19	2
	Total	427	427	0

Notes: 1) Figures in parentheses are numbers of institutions.  
Source: Bank of Korea

## Operation of the Treasury Network

In order to carry out tasks related to Treasury funds, the Bank has established and operated the Treasury Network since 2003, which links the Bank of Korea's computer systems with the government's Digital Budget and Accounting System (dBrain), and the computer systems of financial institutions and the Korea Financial Telecommunications and Clearings Institute (KFTC). The Bank enhances the system's efficiency by making the majority of Treasury fund payments via real-time electronic transfers through the Treasury Network, which facilitates the rapid operation of fiscal funds. This is further improved by handling a massive volume of data, for example, regarding the receipt of Treasury funds and national tax refunds, through a batch process at a fixed time once per day.

With the aim of heightening the stability of its treasury business operations managed through the Treasury Network, the Bank conducts annual simulation-based training programs. In particular, it examines whether organizations included in the Treasury Network are able to operate the treasury business through alternative means, such as via e-mail or the Disaster Recovery Center,<sup>134)</sup> in the event of a failure of their computer systems.

There were a total of 419,000 cases per day of receipts and disbursements of Treasury funds through the Treasury Network in 2020, amounting to a total of 19.7 trillion won in

133) Type A includes branches of banks, while Type B applies to branches of mutual credits, credit unions, community credit cooperatives, and mutual savings banks.

134) This is a backup computer system to handle Treasury business operations in the event of emergencies that lead to failures in the main systems.

monetary value and increasing in the number of cases and value by 2.6 percent and 8.4 percent, respectively, over the previous year. This was primarily due to an expansion of Treasury funds disbursement.

**Table III - 33. Treasury Network Transactions**  
(daily average)

		(thousand occurrences, trillion won, %)		
		2019	2020	Change(%)
Number	Real-time Electronic Transfers	44.5	49.6	11.5
	File Transfers (Treasury Receipts)	364.0	369.7	1.6
	(National tax refunds)	313.1	312.9	-0.1
		51.0	56.8	11.5
	Total	408.5	419.3	2.6
Value	Real-time Electronic Transfers	16.1	17.6	9.3
	File Transfers (Treasury Receipts)	2.1	2.1	1.6
	(National Tax Refunds)	1.8	1.8	0.1
		0.3	0.3	10.4
	Total	18.2	19.7	8.4

Source: Bank of Korea

### Temporary Loans to the Government

Based on resolutions of the Monetary Policy Board, the Bank of Korea sets and manages a ceiling on its credit extended to the government. The ceiling for 2020 was 40 trillion won, unchanged from the previous year.

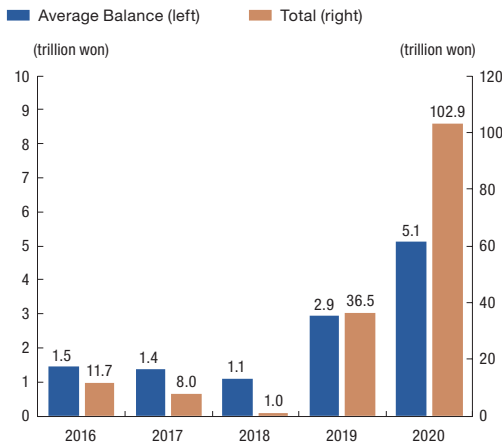
**Table III - 34. Ceilings on Loans to Government**

	(billion won)		
	2019(A)	2020(B)	Change (B-A)
Treasury Single Account	30,000	30,000	-
Public Capital Management Fund	8,000	8,000	-
Special Account for Grain Management	2,000	2,000	-
Total	40,000	40,000	-

Source: Bank of Korea

In 2020, the Bank provided 5.1 trillion won in temporary loans to the government on an average balance basis, up 2.2 trillion won from 2019. On a cumulative basis, loans to the government increased by 66.4 trillion won, from 36.5 trillion won to 102.9 trillion won. This was attributable to expanded government demand for loans to cover a temporary fiscal shortage caused by, for example, the time discrepancy between the receipt and disbursement of taxes, and changes in tax revenues while governmental expenditures, including a supplementary budget, expanded.

Figure III- 19. Loans to Government



Source: Bank of Korea

## B. Securities

To facilitate the effective operation of its monetary and credit policies, the Bank of Korea issues Monetary Stabilization Bonds and buys, sells, and lends government and public bonds. The Bank is also entrusted by the government with the authority to issue, redeem, and register Treasury bonds and bills.

In 2020, a total of 174.5 trillion won worth of Korea Treasury Bonds (KTBs)<sup>135)</sup> was issued through competitive auction, and 59.2 trillion won's worth was redeemed. As a result, the value of Korea Treasury Bonds (KTBs) in circulation totaled 726.8 trillion won as of year-end 2020. With regard to Korea Treasury Bills,<sup>136)</sup> a total value of 45.3 trillion won was issued through competitive bidding in 2020, the full amount of which was redeemed by the end of the year.

Table III- 35. Issuance & Redemption of Korea Treasury Bonds

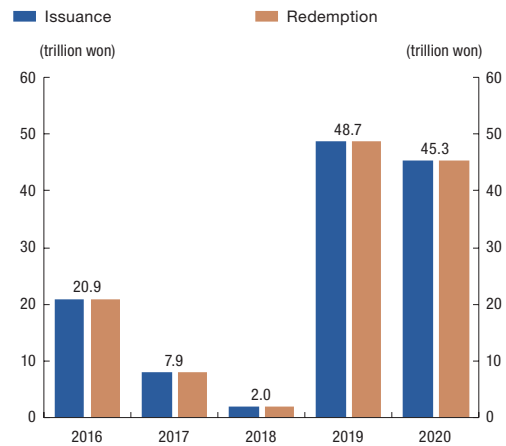
(trillion won)

	End of 2019 Outstanding	2020		End of 2020 Outstanding
		Issuance (A)	Redemption (B)	
Korea Treasury Bonds (KTBs)	611.5	174.5	59.2	726.8
3-year	47.4	35.1	19.8	62.7
5-year	99.3	34.0	24.2	109.1
10-year <sup>1)</sup>	217.6	45.9	14.1	249.4
20-year	124.8	13.0	1.1	136.7
30-year	115.8	42.3	0.0	158.1
50-year	6.6	4.2	0.0	10.8

Note: 1) Including inflation-linked KTB (Korea Treasury Bond) with 10-year maturity.

Source: Bank of Korea

Figure III- 20. Issuance & Redemption of Korea Treasury Bills



Source: Bank of Korea

Meanwhile, like many central banks in other major countries,<sup>137)</sup> the Bank of Korea provides securities custody services in order to support investment in Korean bonds by for-

135) Korea Treasury Bonds(KTBs) are government bonds issued for the purpose of the receipt or disbursement of medium- and long-term government funds.

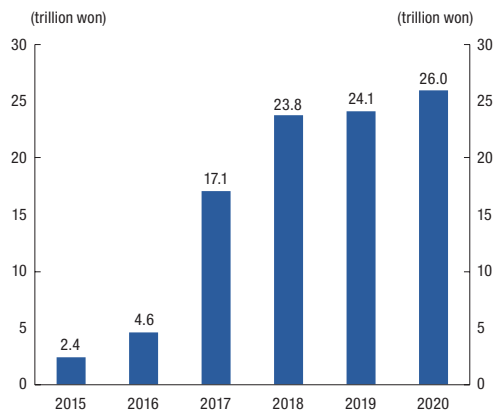
136) Korea Treasury Bills are short-term bonds that the government issues to secure financing from the market and to compensate for temporary shortages caused by seasonal factors throughout the fiscal year.

137) Central banks that provide securities custody services for foreign central banks and international financial institu-

eign central banks and international financial institutions. As of the end of 2020, the Bank had entered into securities custody agreements with five foreign central banks and one international financial institution for Treasury bonds and MSBs amounting to 26.0 trillion won. It provided services including the safe-keeping and settlement of securities, receipt of principal and interest, and management of transactions.

In an effort to bolster international cooperation, it has also participated in international conferences<sup>138)</sup> for central banks that provide securities custody services.<sup>139)</sup>

**Figure III - 21. Investment through BOK Securities Custody Services (end of year)**



Source: Bank of Korea

## C. Fund Management

Under the Bank of Korea Act and other related legislation, the Bank is entrusted by the government to operate and manage various funds, including the Public Capital Management Fund, the Fund for Repayment of Public Funds, and the Saving Bounty Fund for Lump-Sum Savings in Farming and Fishing Households.<sup>140)</sup>

The Omnibus Account of the Public Capital Management Fund raised 268.1 trillion won during 2020 through the issuance of Treasury bonds, receipts of principal and interest on deposits, which was paid out in redemptions of principal and interest on Treasury bonds and deposited into the General Account and the Foreign Exchange Stabilization Fund. The Treasury Loan Account raised 0.5 trillion won through the receipt of principal and interest on loans, which was used on loans for national projects and other purposes. The Loan Account redeemed all of its obligations on foreign financing loans and provided services only for the collection of re-lending loans.

The Fund for Repayment of Public Funds raised 10.2 trillion won over the year, partly in transfers from Public Capital Management Fund deposits, and was used for the redemption of debts.

tions include the U.S. Federal Reserve Bank of New York (FRB NY), the European Central Bank (ECB), the Bank of England (BOE), the Bank of Japan (BOJ), the People's Bank of China (PBOC), the Reserve Bank of Australia (RBA), the Banque de France (BDF), the Deutsche Bundesbank (DBB), the Bank of Canada (BOC), and De Nederlandsche Bank (DNB).

138) International forums for central banks in major countries that provide securities custody services and the Bank for International Settlement (BIS) have been held regularly every year since 2013.

139) For more details about the Bank of Korea's securities custody services, please refer to Box III-4 Bank of Korea Securities Custody Services.

140) Specifically, the Bank carries out the collection of revenues, payment of disbursements, and accounting related to these tasks.

**Table III- 36. BOK's Government Fund Management Business**

Fund Name	Objective of Establishment and Major Features
Public Capital Management Fund	<p>Established in 1994 integrate and manage surplus funds and to efficiently manage the issuance and redemption of Treasury Bonds. The Fund is comprised of the Omnibus Account, the Treasury Loan Account, and the Loan Account.</p> <ul style="list-style-type: none"> <li>• The Omnibus Account raises funds through the issuance of Treasury Bonds and utilizes them for the redemption of principal and interest on Treasury Bonds and for deposits in other accounts or funds, including the General Account.</li> <li>• The Treasury Loan Account manages the lending and collection of funds necessary for improving national welfare and supporting major industries.</li> <li>• The Loan Account manages the withdrawal and redemption of financing loans introduced under public agreements with international cooperation organizations, foreign governments, or foreign corporations.</li> </ul>
Fund for Repayment of Public Funds	<p>Founded in 2003 to facilitate the redemption of debts incurred during financial restructuring. Founded by the Korea Deposit Insurance Corporation and the Korea Asset Management Corporation.</p> <p>The fund contributed a total of 49 trillion won from 2003 to 2006, and in this regard, it is scheduled to redeem all of its obligations by 2027 through funds transferred from the General Account and Net Budget surplus.</p>
Savings Bounty Fund for Lump-Sum Savings of Farming and Fishing Households	<p>Established in 1986 to provide a savings bounty to farmers and fishery workers participating in the lump-sum savings program for farming and fishing households.</p> <p>The fund raises funds through annual contributions from the Bank of Korea and the government.</p>

Source: Bank of Korea

The Savings Bounty Fund for Lump-Sum Savings in Farming and Fishing Households raised a total of 67.7 billion won over the year, including 33.9 billion won from the government and 33.9 billion won from the Bank. It was used to provide savings bounties to farmers and fishers officially registered with Lump-Sum Savings in Farming and Fishing Households.<sup>141)</sup> As of the end of 2020, the total number of subscribers was 267,000 households.

Meanwhile, in order to enhance the returns of the three funds, the Bank invested temporary idle funds into short-term financial products, such as those in the Money Market Deposit Account (MMDA) and the RP.

**Table III- 37. Fund Management and Operation**

	(billion won)		
	2019(A)	2020(B)	Change (B-A)
Public Capital Management Fund			
Omnibus Account	178,418	268,085	89,667
Treasury Loan Account	602	470	-132
Loan Account	100	219	119
Fund for Repayment of Public Funds	8,458	10,223	1,765
Saving Bounty Fund for Lump-Sum Savings of Farming and Fishing Households	71	68	-3

Source: Bank of Korea

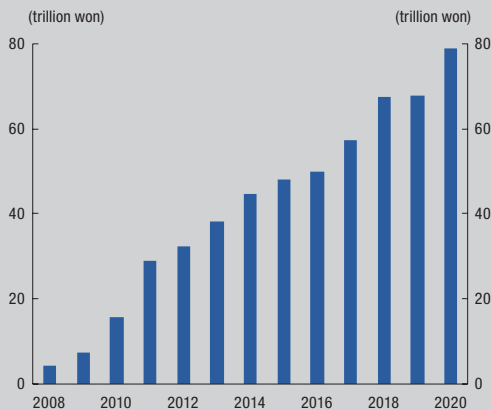
141) The Savings Bounty Fund for Lump-Sum Savings in Farming and Fishing Households provides payments of additional interest at rates ranging from 0.9 to 1.5 percent per year (and 3.0 to 4.8 percent per year for low-income households) as a savings bounty to savers at maturity.

## Box III-4.

### Bank of Korea Securities Custody Services

The volume of Korean bonds held by foreign public financial institutions, such as foreign central banks and international financial institutions, significantly increased from 4.4 trillion won at the end of 2008 to 78.8 trillion won at the end of 2020.

**Figure III- 22. Volume of Korean Bonds Held by Foreign Public Financial Institutions**



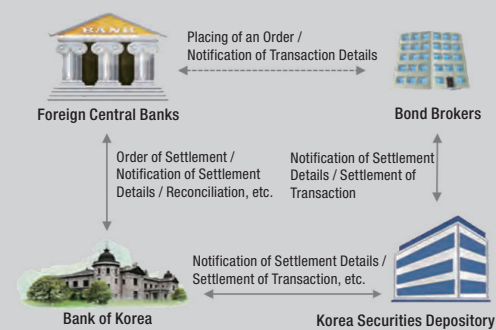
Source: Bank of Korea

The Bank of Korea has been providing securities custody services since 2015 on the grounds that investments in Korean bonds by foreign public financial institutions will help stabilize Korea's financial and foreign exchange markets, as their investments are made for public purposes, such as the management of national foreign reserves, and since the level of capital inflow and outflow will remain low. Foreign public institutions that invest in Korean bonds tend to prefer the

services of the Bank of Korea, which is safer and more reliable than private service providers.

Specifically, when foreign central banks, international financial institutions, and foreign governments invest in Korean Treasury bonds, Treasury bills, and Monetary Stabilization Bonds, the Bank of Korea enters into a business agreement with the institution and provides services, including the safekeeping of bonds, the receipt of principal and interest, the settlement of the securities and funds involved in securities transactions, withholding tax, and transaction management. The Bank currently provides securities custody services to five foreign central banks and one international financial institution.

**Figure III- 23. Structure of BOK Securities Custody Services**



Source: Bank of Korea

The Bank's securities custody services encourage stable, long-term investment from foreign public financial institutions by reducing investment-related risk. Furthermore, they contribute to the stability of financial and foreign exchange markets by strengthening the monitoring of capital flows.

Since 2013, the Bank has regularly participated in international conferences for central banks from major countries that provide securities custody services, including the U.S., the U.K. and Japan, in an effort to strengthen international cooperation while sharing business operational experiences and discussing policy tasks.

With the advancement of financial globalization, the importance of the Bank's securities custody services is expected to grow. Accordingly, the Bank of Korea will continuously strive to provide stable services and to improve its business operations.



## 9. External Communications

The Bank of Korea has been strengthening its communications with the public by diversifying its communication channels so as to enhance public understanding and trust toward the Bank as the country's central bank. In particular, during 2020, the Bank endeavored to expand the quantity and quality of its communication with the public through non-face-to-face methods, such as social media and through the online Money Museum, all due to the spread of COVID-19.

In addition, the Bank took active part in activities such as volunteer work to fulfill its social responsibility as a central bank. It also operated online and offline economic educational programs to promote financial literacy among the general public.

### A. Expansion of Public Communication

The Bank of Korea has been striving to communicate actively with the public by utilizing a range of communication channels, including the publication and distribution of research materials, the hosting of various conferences and events, maintaining its official website and social media channels and operating the Bank of Korea Money Museum.

First, the Bank distributed 412 periodicals and issued 366 press releases and other press reference materials, including its Monthly Statistics Bulletin, BOK Working Papers, and Global Economy Focus reports. These publications discuss research and analysis on the economic impacts of current issues, such as COVID-19 or the U.S. presidential election, as well as major operations of the Bank of Korea, including monetary policy and financial stability.

The Bank also worked steadily to solicit a wide range of opinions from the general public concerning its policies and operations. The Bank has conducted the corporate reputation survey<sup>142)</sup> among the general public and experts on a regular basis, and continued to collect opinions from external experts concerning its major reports, including the Annual Report and Monetary Policy Report, as well as on major policies such as Base Rate adjustments, subsequently reflecting such opinions in its policy establishment and operation.

In addition, the Bank held the "Monetary Policy Workshop"<sup>143)</sup> to share opinions with academic specialists on current financial and economic issues including the impact of the COVID-19 pandemic on the Korean economy, and to foster interest and understanding toward the operations of the Bank.<sup>144)</sup>

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142) The survey is conducted annually by a polling organization, and the positive opinions of the general public and experts concerning the Bank's faithful performance of its roles as a central bank in 2020 increased to 46.2 percent and 72.7 percent, respectively, from 38.1 percent and 68.0 percent in 2019.

143) The workshop was held on a non-face-to-face basis, and was participated in by a total of 28 professors from 23 universities nationwide.

144) The regular "Monetary Policy Challenge" and "Video UCC Contest for Approachable Economy-Related Stories" events were canceled to prevent the spread of COVID-19 that could result from face-to-face contact among a large number of people.

The Bank of Korea continued to work on strengthening its communication with the public through its website and social media channels in line with the increase in demand for non-face-to-face communications following the COVID-19 outbreak.

First, the Bank created a menu subsection called “Policy Responses to COVID-19” at its website so that the public could easily access related content, while expanding the scope of content on its integrated website by launching the Digital Money Museum and establishing a website to introduce the history of the Bank of Korea to commemorate the 70th anniversary of its founding. In order to enhance user convenience, the Bank also set up an online application system for users to exchange coins in bulk, and set up an online reservation system at the Bank of Korea Money Museum for individual visitors.

Table III - 38. Visitors to BOK's Main Website

	(thousand persons)		
	2018 <sup>1)</sup>	2019	2020
Visitors	2,861	4,336	6,069

Note: 1) The integrated website launched on May 16, 2018.

Source: Bank of Korea

In addition to these efforts, the Bank strove to promote its social media presence in keeping with the changing media landscape. The Bank used its official social media accounts to host quizzes, such as “Basic Detection of Counterfeit Banknotes” and “Development of Korea’s Economy and the Bank of Korea”, to introduce its operations and history. It also made efforts toward two-way communication through a “commenting event” on its social media profiles by collecting questions in the comments sections that had been posted by the general public regarding the Bank’s recruitment process, and then posting a series of video clips titled “How to Work for the BOK”

Figure III - 24. BOKonomy : The Post COVID-19 Era and Korea's Economy



Source: Bank of Korea

on its YouTube channel, in which Bank employees replied to the questions. Furthermore, the Bank made a remarkable achievement in significantly increasing the number of views and subscribers at its YouTube channel by regularly uploading user-friendly video clips produced in a conversational format, such as “BOKonomy: The Post-COVID-19 Era and Korea’s Economy” and “Economic Made Easy” to provide accessible explanations of publications and reports published by the Bank.

In response to the COVID-19 pandemic, the Bank sought and supported a communication method for the changed environment by providing a livestreaming service for its press conferences on Monetary Policy Decisions and press releases through its YouTube channel.

**Table III- 39. Social Media Operated by BOK<sup>1)</sup>**

	YouTube	Face- book	Twitter	Kakao story
Inception	July 2013	August 2014	August 2014	October 2014
Contents (number of posts)	901	1,720	1,555	1,273
Subscribers/Fol- lowers	24,900	15,090	1,957	9,939

Note: 1) As of year-end.  
Source: Bank of Korea

In addition to its permanent exhibition, the Bank of Korea Money Museum held a currency exhibition titled “Eurasian Currency Tour by Train,” while its gallery organized a feature exhibition titled “The Scent of Ink.” Such efforts broadened the Bank’s communication with the general public through the medium of currency and art. In an effort to enhance visitor convenience and understand-

ing of the exhibitions, the Bank operated a weekend course and classes for children at the museum, but due to the repeated closures and limited operations of the museum following the COVID-19 outbreak, the Money Museum only hosted 31,000 visitors in 2020, down by 246,000 from the 277,000 hosted in the previous year. In order to complement the constrained public opening of the Money Museum due to the prolonged COVID-19 pandemic, the museum has launched a contact-free service based on online content since May 2020.

**Table III- 40. Visitors to BOK Money Museum<sup>1)</sup>**

	(thousand persons)		
	2018	2019	2020
Visitors	264	277	31

Note: 1) Includes currency exhibition rooms at regional branches.  
Source: Bank of Korea

The Bank of Korea also strove to alleviate public inconvenience through polite and prompt responses to questions and complaints related to its operations, including its foreign exchange reviews, currency supply, and monetary policy.

**Table III- 41. Number of Complaints Received & Processed<sup>1)</sup>**

	(occurrences)		
	2018	2019	2020
Acceptance	1,234	1,385	1,420
Settlement	1,234	1,385	1,420

Note: 1) Subject to change, due to ex-post registration of complaints on the complaint processing ledger.  
Source: Bank of Korea

In addition to these efforts, even during the COVID-19 pandemic, Bank employees continued to take part in activities that contribute to

society, centering on contact-free fundraising, in order to fulfill the Bank's social responsibilities as a central bank. By refraining from face-to-face volunteer activities, the Bank conducted various activities that contributed to society. For instance, it raised funds for a free lunchbox program for the underprivileged, and launched a new project to provide vehicles to welfare groups in need of replacements for their old vehicles.

## B. Strengthening Economic and Financial Education

The Bank of Korea devoted efforts to effectively delivering its diverse range of economic education programs to the general public as a means of fostering rational decision-making capacities and improving the understanding of its major policies. In particular, in response to the changes of internal and external condi-

tions following the COVID-19 pandemic, the Bank greatly expanded its digital education programs, such as video content and online training courses.

The Bank produced video clips for the "Bank of Korea Friday Lecture" consisting of a lecture with a focus on economic issues that are aimed at college students and the general public, and uploaded them to its website and YouTube channel. Meanwhile, "Special Lectures on Management and Economics" and the "Economy of Technique Seminar" were established as regular courses during the academic year at Seoul National University of Science and Technology. In addition, "Macro-Financial Policy" was launched at Kookmin University. Since March when the social distancing level was tightened due to the COVID-19 pandemic, the Bank has provided the lectures online in the form of video recordings.

Figure III - 25. Provision of Vehicles by Bank of Korea Volunteering Group (Nov. 12, 2020)



Source: Bank of Korea

“Economic Lectures for Youth”, which is based on “The Economics Education Volunteers Program”<sup>145)</sup> to provide teenagers with education about the economy, and “Economy Training Courses for Teachers” were operated as live video lectures. In order to further promote financial inclusion<sup>146)</sup> among vulnerable social groups, the Bank participated in economic education programs for recipients of unemployment benefits, and helped with the economic education activities that the pertinent authorities undertake to support North Korean refugees in adapting to life in a market economy.

As in-person education was suspended due to the COVID-19 pandemic, in-person economic education in 2020 encountered some hardships, such as a substantial downturn in its performance compared to that in the previous year. In light of this, the Bank made stringent efforts to continue its economic education activities by expanding its range of high-quality content and by launching live video lectures.<sup>147)</sup>

**Table III- 42. On-site Economic Education Performance<sup>1)</sup>**

	(events, attendance)		
	2018	2019	2020 <sup>2)</sup>
Youths	749 (33,659)	773 (29,615)	45 (2,123)
General Public	587 (34,261)	710 (45,755)	139 (5,986)
Total	1,336 (67,920)	1,483 (75,370)	184 (8,109)

Notes: 1) Figures in parentheses are total number of people who have attended.

2) Including video lectures.

Source: Bank of Korea

To facilitate the economic education via media such as books and video clips, the Bank revised its economic education textbook, and produced 19 videos and 2 motion graphics clips.

The Bank completely revised “Bank of Korea’s Basic Ideas of Economy”, which is aimed at the general public, so as to make it more approachable and enjoyable for a general readership. Chapters were supplemented with the latest related issues, along with examples and graphs to enhance readability. The content of the chapters on the financial market and monetary policy was also reinforced to facilitate its usage as a textbook for economic education by the central bank. In line with the trend of learners’ increasing demand for education through media, the Bank produced and distributed video clips based on 10 major

145) Introduced in April 2013 as a means of meeting the increasing social demand for economic education, this new program selects qualified college students to teach courses about the economy at the K-12 level.

146) This refers to all relevant activities aimed at improving financial literacy and access to financial services across all segments of society, including financially-underprivileged groups, such as multicultural families and North Korean refugees.

147) For more details about the development of economic educational content, please refer to Box III-6 Expanding Diverse Online Education Channels.

topics addressed in the book. In order to promote learner interest, the videos were created in the form of conversations between Bank employees and a professor from the Office of Economic Education, and were provided to teachers who participated in the Economy Training Courses as reference material to be used.

In addition, the Bank strengthened its internal and external cooperation as a means to carry out effective public economic education. The Bank actively participated in international discussions on economic education held by the OECD International Network on Financial Education (INFE)<sup>148)</sup> as a means to identify the latest international trends in economic education and to reflect them in setting a direction for the Bank's economic education activities. The Bank also participated in discussions on domestic economic education, and strengthened exchanges and cooperation with pertinent authorities such as the Ministry of Economy and Finance and the Financial Supervisory Service.

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148) Established in May 2008, the OECD International Network on Financial Education (INFE) is a specialized agency under the Organization for Economic Co-operation and Development (OECD) for the purposes of exchanging information between countries and developing international standards and best practices related to financial and economic education.

## Box III-5.

### Commemorative Projects for the 70th Anniversary of Bank of Korea

In commemoration of the 70th anniversary of its founding, the Bank of Korea carried out a variety of projects in order to enhance the public's interest in and understanding of the Bank's history and operations, as well as to improve public access to the Bank.

The Bank published "Bank of Korea: A Seventy-Year History" to retrace the course of the development of the domestic economy and the history of the Bank of Korea over the past 70 years, and regarded this as an opportunity to prepare for the Bank's future changes and challenges. The publication was written in an approachable way by comprehensively describing the history of the central bank system along with the Bank's monetary and credit policies throughout the development of the domestic economy and financial sector.

In line with an era of new media and trends, such as the advancement of social media, the Bank sought to approach the public in a familiar manner by producing user-friendly contents. The TV documentary "Central Bank in the Era of Chaos", coproduced with the Educational Broadcasting System, was presented as a trilogy and addressed relatively heavy topics such as the central bank's operations, roles, and history in an approachable and effective way to be used as promotional and educational contents. An online cartoon series titled "The World We Dreamed Of", written by Seong-yeon Yu, was also uploaded to Naver, one of Korea's top internet portals, in order to communicate with young people. The online cartoon series illustrated the process by which the Bank of Korea carries out its policies in cartoon form, which contributed to raising the younger generation's awareness of the Bank. In addition, the Bank provided key domestic institutions with a leaflet that summarizes the Bank's history, major policies, and operations in order to provide the public with easy access to such information.

Meanwhile, the Bank also established the "70th Anniversary Commemorative Website" to improve user convenience. The website included commemorative contents such as the TV documentary series and the online cartoon, to enhance public access to information, and attracted the public's interest by providing useful information, such as the history of the Bank and changes in Korean currency. The Bank also hosted a 70th anniversary quiz on its social media profiles to expand opportunities for the public to participate directly.

Figure III- 26. Bank of Korea: A seventy-Year History



Source: Bank of Korea

Figure III - 27. TV Documentary, “The Central Bank in the Era of Chaos”



Source: Bank of Korea

The Bank of Korea will continue to make diligent efforts to enhance its communications with the public through various channels.

Figure III - 28. 70th Anniversary Commemorative Website



Source: Bank of Korea



## Box III-6.

### Expanding Diverse Online Educational Channels

The Bank of Korea endeavored to expand diverse online educational channels including contents development and video lectures in consideration of the difficulty in conducting in-person economic education following the COVID-19 crisis.

The Bank produced and posted video clips and motion graphics on its website and YouTube channel to enable the public to understand the economy in a more approachable way.

Figure III - 29. Ep.1 “What is Money” from the video series Economics Made Easy



Source: Bank of Korea

First of all, the Bank created 10 video clips of Economic Made Easy series based on the major topics addressed in the book “Basic Idea of Economy”, which was published by the Bank. The video clips dealt with complex topics that the public may find difficult to understand, such as financial markets or monetary policies, in the form of a Q&A session. The “Secret of Prices”, which was produced alongside the

Economics Made Easy video series, focuses on prices, which is a popular topic in the educational field. It explained many aspects of prices with a focus on teenagers as the target audience by examining changes in purchasing power and the difference between prices and inflation by using the example of a bowl of noodles. With a huge increase in online classes at schools and other educational institutes, 8 series of “card news”, made earlier, made into video clips that provide explanations of key economic indicators, such as interest rates and exchange rates, in order to be utilized in online classes. In addition, 2 episodes, “Robinson Crusoe” and “Gulliver’s Travels,” were added to tales related to the economy found in famous literary works that was launched in 2019 to provide explanations of economic-related concepts found in world literature.

Figure III - 30. Motion Graphics, “Robinson Crusoe”



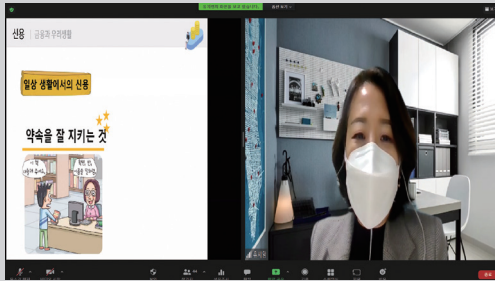
Source: Bank of Korea

Meanwhile, the Bank started livestreaming video lectures to interact with learners in a contact-free context. “Specialized Lectures for College Students” and “Economy Training Courses for Teachers” were provided as online classes using a video conference system, and garnered positive feedback from participants.

In the future, the Bank of Korea plans to

enhance its interactive education for the public, even in a contact-free context, through the production of educational content across diverse forms, and through the delivery of video lectures.

Figure III - 31. Contact-Free “Economy Training Course for Elementary School Teachers”



Source: Bank of Korea



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# IV

## Management Status

1. Organization Management	121
2. Financial Status	134

# Management Status in 2020

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## Organizational Structure



### Launched the Office of Digital Innovation

Research on the application method of new technologies, establishment of data governance, expansion of digital infrastructure



### Strengthened the Digital Currency Research Team

Research and international cooperation on central bank digital currencies (CBDCs)



### Reorganized the Next-Generation Accounting and Settlement System Establishment Team

Transferring the Operation Team to the Information Technology Department

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## Organization Management Methods



### Promoted the Establishment of BOK 2030

Expansion of the policy arena and policy instruments, enhancement of research quality, digital innovation, restructuring of management systems



### Formulated a Response to COVID-19

Setting up the COVID-19 Response Taskforce and its business continuity plans, operating the work-from-home system



### Improved and Expanded IT Systems

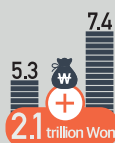
Establishment of the next-generation accounting and settlement system, video conference system, digital workspace, etc.

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## Financial Status



Assets



Net income



Disposal of Net income

# 1. Organization Management

During 2020, the Bank of Korea established and restructured its internal organizations to promote digital innovation and IT business in order to enhance its key capabilities and swiftly respond to changes in the internal and external environments. In addition, the Bank undertook an effective overhaul of the organizations whose workload and significance had decreased, in order to ensure its efficient organizational management.

## A. Organizational Structure

### Promoting Bank-Wide Digital Innovation

In line with a growing need to actively integrate the recently thriving field of information and communications technology (ICT) into policy operation and internal management, the Bank of Korea launched the Office of Digital Innovation in July 2020 to take full charge of implementing a digital transformation.

The Office of Digital Innovation was established under the direct supervision of the Deputy Governor in charge of the Planning & Cooperation Department to ensure the Bank-wide implementation of the digital transformation and the coordination of inter-departmental interests. The Office of Digital Innovation consists of the Digital Innovation Planning Team, the New Digital Technology Section, and the Data Service Team. The Office is responsible for conducting research into: the application of new technologies such as AI and Big Data to policy implementation and internal management; establishing data governance policies and strategies; and, ac-

quiring the latest digital infrastructure.

### Strengthening the Central Bank Digital Currency (CBDC) Research Team

The Bank of Korea expanded its research team related to central bank digital currencies (CBDCs) in February 2020 so as to take preemptive action against changes in internal and external conditions with regard to the payment and settlement systems, such as the expansion of private digital currencies or a decrease in the demand for cash. In accordance with ongoing research and discussions on CBDCs, centering on foreign central banks in the U.S., Sweden and elsewhere in Europe, and China, the Bank supported relevant groups and employees so that research into CBDCs could be conducted smoothly. The Bank abolished the Digital Innovation Research Section in the e-Finance Research Team of the Payment & Settlement Systems Department, and then formed the Digital Currency Research Team along with the Technology Section within the team. In the future, the Bank of Korea plans to cooperate closely with other major countries by conducting case studies on foreign central bank CBDC-related technology reviews and sharing the research results.

### Reorganizing the Team for the Establishment of a Next-Generation Accounting and Settlement System

With the decay of the base technology for the accounting and settlement system originally set up in 1999 and the increasing complexity of the system, the Bank of Korea established a Next-Generation System Development Taskforce under the Planning & Cooperation Department in February 2018

in order to advance the development of a next-generation accounting and settlement system. As the installation of the newly-developed system entered into the testing phase in February 2020, the Bank conducted an organizational overhaul by placing the Next-Generation System Development Taskforce, which was in charge of the development of the system, under the Information Technology Department in charge of system operations in July 2020. As the new, latest IT-based system entered into full operation in October 2020, it is expected to improve operator and user convenience as well as work processes.

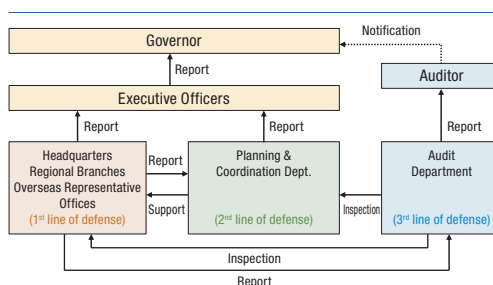
## B. Organization Management Methods

The Bank of Korea effectively invested the resources saved through the reorganization of its internal groups with a reduced workload and significance into the promotion of new projects and other areas requiring functional enhancement. By improving work processes and examining its human resource management methods and work performance, the Bank abolished the Personal Information Protection Section in the Information Technology Department and the Financial Stability Information Section in the Financial Stability Department, and reformed the Cash Services Section in the Currency Department into the Cash Services Facility Improvement Section, and the Big Data Statistics Research Section in the Economic Statistics Department became the Statistics Research Section.

## Strengthening Operational Risk Management

The Bank of Korea manages operational risks<sup>149)</sup> using the Three Lines of Defense (3LoD) model. Each department or branch, as the “first line of defense”, appoints as its operational risk manager a deputy director general under whose supervision risk management activities are carried out to identify and prevent potential risks in advance, and to ensure the capacity for a rapid response in case of emergency. As the “second line of defense”, the centralized unit established in the Planning & Coordination Department handles bank-wide operational risks and business continuity management through monitoring, planning and coordinating all relevant operations. In addition, the Audit Department, the “third line of defense”, performs the role of assuring the adequacy of risk management and internal controls at the levels of the first and second lines of defense through internal audits.

Figure IV- 1. Operational Risk Management Structure of Bank of Korea



Source: Bank of Korea

149) Operational risks are due to inadequate internal processes or systems, failures to properly manage employees, or external events that could hinder an organization's achievement of its goals, cause financial losses, or damage its reputation.

Operational risk management is performed systematically based on the Risk Register.<sup>150)</sup> The Risk Register is a list that specifies control activities to preemptively identify and manage risks that could occur during the performance of operational tasks. It is updated annually to reflect changes in domestic and overseas working conditions and incidents within and outside of the Bank.

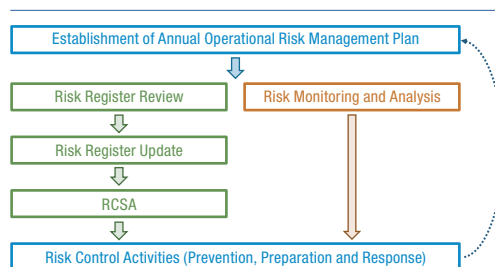
Every year, each department at the Bank of Korea implements a Risk and Control Self-Assessment (RCSA) based on the Risk Register, so as to identify and prevent various potential risks that could arise in their operational processes, while the Planning & Cooperation Department examines the relevant risks through the monitoring and analysis of incidents occurring within and outside the Bank.

The Bank also participated actively in the International Operational Risk Working Group (IORWG)<sup>151)</sup> to share experiences and best practices related to operational risks and business continuity management with central banks of various member countries.

Meanwhile, the Bank of Korea establishes its business continuity plans to be able to respond effectively to various risk factors, such as cyber attacks, natural disasters, and the spread of infectious diseases, and frequently supplements the plans by, for example, conducting scenario-based simulation exercises.

During 2020, in response to the spread of

**Figure IV- 2. Flow Chart of BOK's Operational Risk Management**



Source: Bank of Korea

COVID-19, the Bank formed the “COVID-19 Response Taskforce,” with the Senior Deputy Governor appointed as the head of the taskforce in January 2020, and focused on preventing the spread of COVID-19 infections and securing the capacity for business continuity in the event of confirmed cases of COVID-19 detected within the Bank. In February 2020, the Bank formulated its business continuity plan against the COVID-19 pandemic, and then frequently examined and complemented the plan in accordance with the severity of the COVID-19 pandemic and changes in the government’s preventive measures. Based on the business continuity plan, the Bank introduced and operated a flexible working hours system, including measures such as working from home, distributed work, and adjusted working hours, and altered its operational methods in order to minimize face-to-face contact.

150) Introduced in 2015 to systematically link the risk management and auditing tasks, the Risk Register specifies perceived risks in related departments, and includes the anti-corruption index, evaluations of the likelihood and impact of risks, as well as other related control activities.

151) The IORWG has more than 100 member institutions, such as central banks, the BIS, and the IMF. The Bank of Korea joined the IORWG in December 2011.



### C. Establishment of Medium- and Long-Term Strategic Plan

On June 12, 2020, the Bank of Korea publicly announced the “Medium- and Long-Term Strategic Plan BOK 2030” in commemoration of the 70th anniversary of its founding.

Considering the circumstances facing the Bank of Korea at home and abroad, there have been growing calls for the central bank to use unconventional policy instruments in line with the unprecedented coincidence of crises, such as low growth, low prices, and the COVID-19 pandemic. In spite of the mounting financial imbalances at home and abroad, the Bank possesses insufficient policy instruments to ensure financial stability. Consequently, the difficulty of policy implementation is predicted to increase. In addition, there are public expectations for the Bank to provide effective policy measures and in-depth studies into major challenges with broad impacts on our economy and society, such as a low fertility rate, an aging population, and climate change. Along with the pursuit of digital innovation, which aims to actively adopt many aspects of the recently thriving field of information and communications technology (ICT) into both its policy operations and internal management, the Bank must also improve its management system in a direction so as to enhance personnel expertise, organizational synergy, and work efficiency, all in order to flexibly deal with changes in the internal and external environment.

In consideration of such circumstances, the Bank of Korea’s medium- and long-term development strategy BOK 2030 established a vision that represents its goals for the next

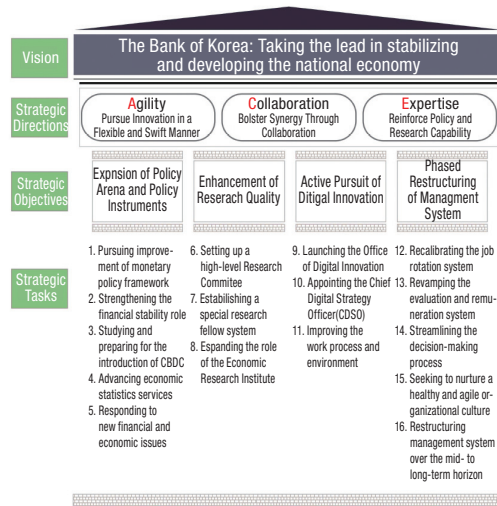
10 years, summarized as “The Bank of Korea: Taking the Lead in Stabilizing and Developing the National Economy.” In addition, since the achievement of this vision will require a solid foundation of both policy and research capabilities, the Bank presented a strategic direction summarized as “Agility, Collaboration, Expertise.” BOK 2030 is composed of four strategic objectives for each of the four key sectors of policy, research and studies, digital innovation, and management and personnel, with 16 detailed strategic tasks to achieve these four strategic objectives.

First, with regard to the policy sector, the Bank will expand the policy arena and policy instruments to proactively respond to the rapidly changing policy environment, and seek diverse policy measures through research into new financial and economic issues. With regard to the research and studies sector, the Bank will move beyond the department-oriented and top-down research practices and instead explore bank-wide policy issues and conduct in-depth studies in a collaborative way, while also striving to enhance research quality through research support based on ICT and digital innovation. With regard to the digital innovation sector, the Bank will integrate various data accumulated within the Bank, and actively adopt digital technologies such as Big Data and blockchain in order to utilize such huge volumes of data. With regard to the management and personnel sector, the Bank will proceed with the innovation of its management system through several phases over a medium- to long-term horizon in order to institute fundamental changes, including the evaluation and remuneration system.

Since the second half of 2020, the Bank of

Korea has smoothly carried out its organizational overhaul, including launching the Office of Digital Innovation, amending relevant rules, and constructing infrastructure to facilitate BOK 2030.

Figure IV- 3. “BOK 2030” Strategic Plan



Source: Bank of Korea

## D. Education and Training

### Planning a Program to Improve Training Efficiency

The Bank of Korea established its 2020 training plan with a focus on improving the efficiency of training operations, as there were some unavoidable limits to group training sessions, and the training organization was partially downsized, following the introduction of a 52-hour work week.

To prevent trainees at regional branches from traveling on the weekends, most schedules for group training sessions were reduced from a three-to-four-day session to

a two-to-three-day session, and liberal arts courses were minimized in the curriculum. In addition, the Bank attempted to diversify the training operation methods in order to sufficiently compensate for the unavoidable downsizing of schedules and courses. The Bank strengthened the flipped learning system that trainees study the training content online in advance before participating in the short-term intensive group training courses, and launched several job training courses as open classes to provide opportunities for all employees who are interested in voluntarily participating.

The Bank also adjusted parts of the training program to strengthen linkages between occupational training and work, as well as to satisfy the needs of training participants. In view of the opinions on and demand for the training courses, which were collected via a survey of all employees and the internal advisory body “Curriculum Council”, several courses with limited demand were abolished, such as “Advanced Job Training Courses” and “Law and Economics”, which had invited renowned professors from overseas. The advanced mathematics program was scaled down through the removal of several subjects, including “Stochastic Processes” and “Differentiation Equations”. Meanwhile, in the organizational development training program, the career advancement course and the capacity-building course, which mostly overlap in content, were changed to be operated biennially in order to alleviate the burden of participating in training and to advance smoothly through the overall training schedule.

In addition, the Bank strove to strengthen the linkage between training and work while

improving training efficiency, by including case studies and practical exercises in training programs for every course, if possible.

### **Training Operation in Response to the COVID-19 Pandemic**

Due to the rapid spread of COVID-19 around the world in 2020, it was almost impossible to operate group or face-to-face training sessions as originally planned. The Bank of Korea endeavored to improve the expertise and job competency of its employees under these restricted circumstances by promptly expanding the equipment and infrastructure required to operate untact training sessions, while taking relevant action such as changing the training schedule and method and thoroughly implementing preventive action against the spread of COVID-19.

First, in the case of job training courses, the Bank readjusted the schedules of the courses that had been planned at the beginning of the year, according to their importance and urgency, and from the second half of the year, when the untact training environment was ready, most of the job training courses were operated as online courses that trainees could undertake remotely. Meanwhile, in the case of the organizational development training program that was deemed necessary to be conducted as a face-to-face group training session in consideration of its content and objectives, parts of the program were operated by adjusting the schedule to follow the social distancing guidelines set by the government and to comply with strengthened preventive measures including a strict ban on outsider entry. In spite of these efforts, most of the training sessions that had been planned for

the first half of the year were unavoidably canceled, and consequently, only 57 percent of the job and organizational development training program was performed, compared to the original plan established at the beginning of the year.

In the case of the overseas training program, as traveling abroad became practically impossible, the Bank attempted to complement at least some parts of the training through online sessions. The Bank identified online training programs related to the Bank's duties, which were offered by major training institutes such as the Centre for Central Banking Studies and the Central Banking Training, and then replaced its overseas training program with these online programs. The Bank also provided its employees with timely information on various webinars hosted by other institutes including the IMF-Singapore Regional Training Institute (STI). Meanwhile, the Bank attempted to encourage its employees to actively participate in the training sessions by establishing a standard for its online overseas training program to be undertaken by trainees at home, and providing training credits and an equipment rental services.

Furthermore, the Bank continued to improve the user environment, for example, by restructuring the video player within the Smart Learning System, which is an online educational system for its employees. Along with the expansion of new content such as "Applied Data Analysis" and "Money, Banking and Financial Markets", the Bank also contributed to reforming outdated content, including "Theory and Application of Statistics Techniques Using Excel".

## Operation of a Training Program to Enhance Organizational Capabilities and Establish a Sound Organizational Culture

The Bank of Korea operated its organizational development training program with a focus on strengthening organizational capabilities, management and communication competency, and cultivating organizational values. While expanding the lecture time in media response training courses for middle and senior employees, the Bank also operated “Coaching Leadership” and “Empowerment” programs, offering a balanced curriculum along with other programs relevant to stress management, health care, communication between generations, and conflict management.

In addition, by launching an training course for newly hired general employees, the Bank operated a variety of programs in order to contribute to the improvement of the general employees’ understanding and sense of belonging toward the organization.

Furthermore, the Bank continued to implement other programs such as its leadership-oriented knowledge content program and e-learning training to reinforce communication with an aim to enhance its members’ managerial leadership, insight, and communication skills, while operating substantive retirement preparation training programs to enhance the life planning and social adaptability of its employees after retirement.

### E. Human Resources Operation

The Bank of Korea continued its efforts to implement a fair recruitment process to secure outstanding talent with expertise and

job competency, as well as basic capabilities, including a sense of duty as central bank employees and cohesion as members of an organization. It also strove to operate its human resources so as to respond to social expectations.

During 2020, the Bank of Korea recruited a total of 110 employees, including 55 new junior economists (G5), maintaining the number of new hires at more than 100 since 2015. This is mainly attributable to changes in the medium- and long-term workforce supply and demand, such as the recent retirement of employees.

Table IV- 1. Number of New Hires per Year<sup>1)</sup>

	(persons, %)					
	2015	2016	2017	2018	2019	2020
Junior Economist	70	64	70	59	59	55
Assistant	20	30	30	19	17	20
Security	5	7	21	38	39	24
Others	9	3	8	13	11	11
<b>Total</b>	<b>104</b>	<b>104</b>	<b>129</b>	<b>129</b>	<b>126</b>	<b>110</b>
Male	54	50	69	95	53	53
Female	50	54	60	34	73	57
(%)	(48.1)	(51.9)	(46.5)	(26.4)	(57.9)	(51.8)

Note: 1) Based on recruitment year.  
Source: Bank of Korea

The Bank also made continuous efforts to enhance fairness in its recruitment process. It continued to implement its blind hiring process, which removes information such as an applicant’s sex, educational background, and alma mater from the application form, and expanded the participation of external committee members in the interview process.

The Bank devoted active efforts to increas-

ing professionalism and openness in its human resources management. It hired a total of 11 external specialists and economists including Ph.D.-level researchers, CBDC experts, and climate change specialists. It also made efforts to recruit experienced experts by selecting 14 candidates with prior professional work experience when hiring administrative staff (C3).

The Bank worked to recruit new employees with a focus on promoting social equity by hiring talented personnel from the provinces in accordance with its Provincial Talent Employment Quota, specialized vocational high school graduates through a separate screening process, and persons with disabilities through another separate screening process.

Meanwhile, the proportion of female managers at the Bank has continued to rise, and in particular the proportion of female managers above a G4 grade reached its highest-ever level, standing at 19.3 percent as of year-end 2020.

**Table IV- 2. Number of Female Managers<sup>1)</sup> at Bank of Korea**

	(persons, %)					
	2000	2005	2010	2018	2019	2020
Female managers	35	76	90	210	230	251
Proportion <sup>2)</sup>	3.6	7.1	8.2	16.4	17.8	19.3

Notes: 1) Female staff of G4 grade or higher.

2) Proportion of female managers among total managers.

Source: Bank of Korea

## F. Expansion of Corruption Prevention and Culture of Integrity

To ensure a high level of integrity and credibility commensurate with the public's ex-

pectations, the Bank of Korea made stringent efforts to expand its organizational culture of integrity and anti-corruption by, for example, expanding the relevant infrastructure and strengthening the provision of education about integrity.

First of all, according to the Improper Solicitation and Graft Act, in order to raise the awareness among employees regarding the conduct of outside lectures, etc. and to improve their overall consciousness concerning law-abiding behavior, the Bank established penalty standards for violations, reflecting the standards of the "Bank of Korea Employee Code of Conduct." In addition, the Bank established its "Guidelines for Conducting Outside Activities for Bank of Korea Employees," which specify the guidelines and matters that employees should be aware of and report when conducting outside activities, in order to reinforce the transparency and autonomy of their outside activities.

To enhance employees' understanding of the Improper Solicitation and Graft Act and the Employee Code of Conduct, and to raise awareness of the principle of integrity, the Bank also designated the first business day of each month as Integrity and Anti-Solicitation Day and regularly posted relevant content on the Bank's intranet and website. In response to the COVID-19 pandemic, it also provided online education to all employees on integrity, anti-corruption, and the Improper Solicitation and Graft Act in order to promote an organizational culture of integrity.

As part of efforts to enhance the external transparency and credibility of its major projects, the Bank appointed two experienced,

independent, external specialists as Integrity Ombudspersons and actively reflected their advice and evaluations related to areas such as facility management services for the Bank's Head Office and regional branches.

The Bank of Korea will continue to make every effort to maintain its integrity as a central bank by satisfying the public's high expectations of integrity and credibility.

## G. Improvement and Expansion of IT Systems

During 2020, the Bank of Korea completed the development of the Next-Generation Accounting and Settlement System, which had been ongoing for three years, while improving and expanding its IT systems to effectively handle the COVID-19 pandemic, as well as changes in internal and external circumstances including the advancement of information technology.

First, by early 2020, the Bank finalized key development phase of system design and programming of the Next-Generation Accounting and Settlement System, which started in 2018, despite difficulties in carrying out the project due to the spread of COVID-19. Furthermore, following the integration test and migration test phases involving the Head Office, regional branches, and other financial institutions, the Bank successfully achieved its goal to place the Next-Generation Accounting and Settlement System into operation on Oct. 12, 2020.

Second, the Bank expanded its remote access system infrastructure to support the work-from-home and the distributed work

arrangements that were implemented Bank-wide due to the spread of COVID-19. It also provided IT services so as to ensure prompt and stable operations even amid the pandemic, by establishing a video conference system to be able to smoothly hold conferences with other institutions at home and abroad.

Third, the Bank of Korea established the Digital Workspace to promote the systematic accumulation and sharing of business information and collaboration, as well as to respond to the rapidly changing internal and external work environments. Pilot operations of the Digital Workspace were conducted in five departments including the Communications Department and the Information Technology Department.

Fourth, the Bank further advanced the research platform that was established in 2019 to support research tasks, and officially commenced the operation of the platform in June 2020. The Bank also established a data portal through an advancement project, and adopted a high-performance analysis server, advanced analysis and visualization tools for diverse data analysis, while expanding the existing Data Analysis Team devoted to data analysis into the Office of Digital Innovation in response to rapid developments in digital innovation.

Fifth, the Bank of Korea pursued in earnest the establishment of the New Economic Statistics System to improve its statistics compilation process and the quality of the public's access to economic statistics since April 2020. The New Economic Statistics System is planned to be established over two years, and its Phase 1 development will be completed in

2021, followed by its Phase 2 development.

Sixth, the Bank of Korea expanded its IT infrastructure and strengthened its Cyber Security System to ensure the stable operation and improvement of its overall IT systems. Outdated servers and communication devices were replaced with new ones, and the coverage of cyber threat detection and analysis devices was expanded in response to increasingly intelligent and sophisticated cyber threats. In addition, the Bank examined the status of personal information management to prevent the infringement of personal data, and provided relevant education on an ongoing basis.

#### H. Construction of an Integrated Annex

The Bank of Korea is currently proceeding with the construction of an integrated annex to reinforce the safety and security of its Head Office<sup>152)</sup> as an institution of national importance.

The project commenced on Dec. 5, 2019, and includes the demolition of the first annex, the construction of an integrated annex (16 aboveground levels, four underground levels), and the remodeling of the main building and the second annex.

The foundation work on the construction project took place in 2020. The first annex was demolished to be merged into an integrated annex, and the underground engineering work proceeded accordingly. In order to prevent any damage to the Bank of Korea Money Museum (Historical Site No. 280) resulting from the underground work, the underground

water level was constantly maintained, and the diaphragm wall method was adopted to build underground walls while causing only minimal vibrations. The framework of the first ground level was completed as of year-end 2020, and the underground level work is smoothly underway using a top-down construction method in which a structure is built by first conducting underground excavations.

In addition, the existing design for the integrated annex was improved to enhance the construction quality. For example, the on-site daycare was expanded in line with government policy. Departments in charge of relevant tasks were placed closely to each other in consideration of operational functions and efficiency. Structural modifications were made to reinforce its resilience, and the integrated lobby was renovated to improve its symbolism and utility.

Frame construction will be completed in 2021, along with most of the internal and external finishing processes. The Bank will supervise the smooth implementation of the construction project by closely monitoring its internal and external risk management. The construction of the integrated annex will be completed in the first half of 2022.

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152) The Bank of Korea Head Office consists of five buildings: the original building (completed in 1912), the main building (1987), the first annex (1964), the second annex (1932), and the Sogong Annex (1965).

Figure IV- 4. Aerial View of Bank of Korea's Integrated Annex



Source: Bank of Korea

Figure IV- 5. Construction Site of Bank of Korea's Integrated Annex (as of January 2021)



Source: Bank of Korea



## Box IV-1.

### Launch of the Office of Digital Innovation

In commemoration of the 70th anniversary of its founding, the Bank of Korea established and publicly announced its medium- and long-term development strategy of BOK 2030 for the next 10 years. BOK 2030 pointed to an urgent need for the Bank to actively adopt digital technology in every aspect of its business, from its policy operations to its internal management, in order to maintain its status as a policy institution in the rapidly changing digital economy. In the same vein, the strategy suggested the active pursuit of digital innovation as one of its strategic objectives. Accordingly, in July 2020, the Bank of Korea launched the Office of Digital Innovation as an organization dedicated to promoting digital innovation. The Office of Digital Innovation is pursuing rapid digital innovation, focusing on the Bank's businesses and strategic consistency with BOK 2030. In addition, practical changes leading to enhanced policy capacity require a new methodology that enables identifying the need for business-centric innovation through collaboration across departments and working in a flexible and agile manner.

Table IV- 3. Relationship between Strategic Direction of BOK 2030 and Operational Direction of Office of Digital Innovation

<b>Flexible and Prompt Response (Agility)</b>	Pursuit of digital innovation in a flexible and agile manner <ul style="list-style-type: none"> <li>• Reinforcing the flexibility and agility of both decision making and operational processes in relation to digital innovation</li> <li>• Advancing digital strategies to strike a balance between rapid digital innovation and stable system operation</li> </ul>
<b>Collaboration and Synergy (Collaboration)</b>	Promotion of digital innovation within the Bank and support for its seamless establishment <ul style="list-style-type: none"> <li>• Ensuring the seamless establishment of digital innovation and practical changes in BOK operations by identifying demand for digital innovation through collaboration and communication</li> <li>• Maximizing utility and sharing through the systematic management of data assets within the BOK</li> </ul>
<b>Expertise, Preemptive Policy Capacity (Expertise)</b>	Reinforcement of organizational capacity through digital innovation <ul style="list-style-type: none"> <li>• Reinforcing policy capacity based on data and objective grounds</li> <li>• Advancing platform for data analysis and enhancing analytical capacity</li> <li>• Improving research capacity and operational efficiency using new digital technologies</li> </ul>

Source: Bank of Korea

The Office of Digital Innovation fulfills the following functions as an organization for innovation.

First, the Office of Digital Innovation, as a section in charge of digital innovation, has the responsibility of coordinating various departments in planning and implementing the process of the digital innovation strategy, as well as detecting and managing risk in the implementation process. In this process, it will exert efforts to achieve both swift digital innovation and the stable operation of various systems through close collaboration with other departments, including the Information

Technology Department. As the section designated for the bank-wide data management, it establishes and implements the medium- and long-term data strategy, and supports data-related bank-wide decision-making and consultation processes with the purpose of facilitating data-related collaboration and expanding data usage and sharing.

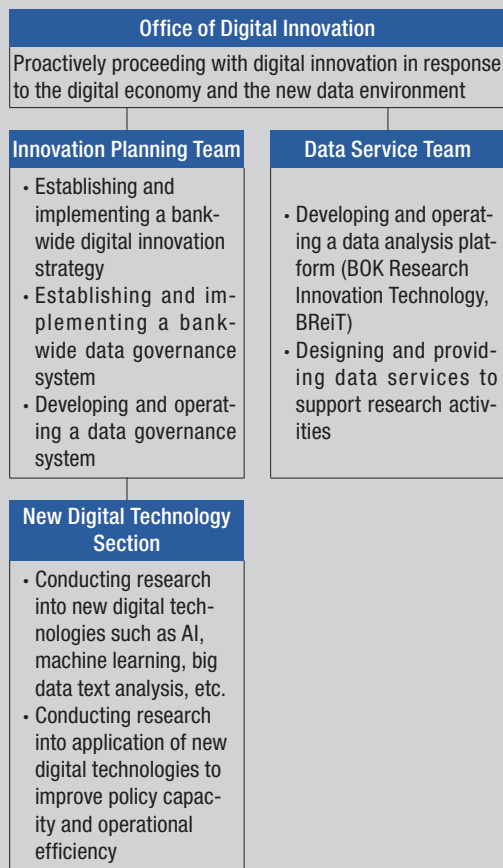
Second, the Innovation Planning Team enhances the systematic management and usage of data assets within the Bank, while establishing and operating the data governance framework.<sup>153)</sup>

Third, the Data Service Team is in charge of developing and operating the Bank's internal data analysis platform, referred to as BOK Research Innovation Technology (BReiT). In particular, it is striving to expand the analysis content by actively reflecting each department's demands for data analysis and providing an advanced data analysis service.

Fourth, the New Digital Technology Section serves to explore and implement projects applying novel technologies to the Bank's business through interdepartmental collaboration and communication with a focus on each user department's needs, and then share the outcomes of each project within the Bank. In particular, it conducts research into the application of artificial intelligence (AI), machine learning, and new types of data to improve the accuracy of the economic growth forecast and detect potential risk in the Korean economy and financial markets. It also explores

methods such as task automation to enhance efficiency across the Bank's overall operations.

**Figure IV- 6. Office of Digital Innovation, Organizational Chart**



153) It refers to a series of activities to set out the data policy and standardized procedures and to monitor the implementation status of the policy and standards, based on the perception of data as a strategic asset of the organization, and clarified authority and responsibility for data-related decision making.

## 2. Financial Status

The Bank of Korea, in principle, issues banknotes and coins based on its currency-issuing authority, and manages the issued currency through loans to financial institutions and the government, as well as through purchases of government bonds. Given the significant increase in the inflow of foreign currency, however, the Bank absorbs liquidity by issuing Monetary Stabilization Bonds (MSBs) and holds foreign exchange reserves in order to maintain market liquidity at an appropriate level. Accordingly, the Bank's assets are largely made up of foreign currency securities and deposits from banks, while its liabilities are mainly composed of currency issued, MSBs issued, and deposits.

Consequently, the profits and losses of the Bank of Korea are significantly influenced by the difference between the coupon rate for MSBs and the rate of return on foreign assets, as well as by foreign exchange rates.

The Bank's capital consists of legal and voluntary reserves, as well as undivided earned surplus for term. Meanwhile, in accordance with Article 99 of the Bank of Korea Act, 30 percent of the net profits of the Bank are allocated to the legal reserve,<sup>154)</sup> and some of the residual net profits can be set aside for the voluntary reserve for specific purposes, with the approval of the government. After the allocation, the remaining net profits are paid to the General Revenue Account of the Government.

### Assets

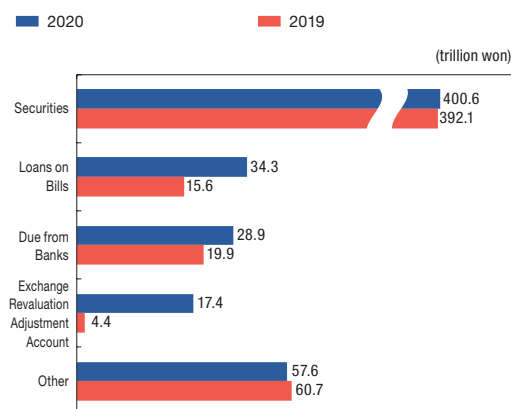
As of the end of 2020, the total assets of the Bank of Korea stood at 538,730.4 billion won, an increase of 46,155.6 billion won from the previous year-end level of 492,574.8 billion won. The growth in total assets is attributable to the rise in securities due to increased purchases of Treasury bonds following the Bank of Korea's policy measures against the spread of COVID-19, as well as to the significant rise in loans on bills due to the increased ceiling on the Bank Intermediated Lending Support Facility and the increase in loans to the special purpose vehicle (SPV) to purchase corporate bonds and commercial paper.

By type of asset, securities were worth 400,648.0 billion won, increasing by 8,588.1 billion won from the previous year-end, while loans on bills and due from banks were worth 34,272.3 billion won and 28,872.1 billion won, respectively, increasing by 18,703.9 billion won and 8,974.1 billion won from the previous year-end figures. The exchange revaluation adjustment account on the asset side also increased by 12,993.3 billion won, owing to the decrease in the USD/KRW exchange rate.

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154) With the revision of the Bank of Korea Act in 2011, the amount to be allocated to the legal reserve was adjusted from 10 percent to 30 percent of net profits.

**Figure IV- 7. Assets<sup>1)</sup> (main item) (as of year-end)**



Note: 1) Total assets amounted to 539 trillion won, an increase of 46 trillion won from the previous year-end level of 493 trillion won.

Source: Bank of Korea

## Liabilities and Capital

The total liabilities of the Bank of Korea at the end of 2020 amounted to 516,559.1 billion won, an increase of 42,508.9 billion won from the previous year-end level of 474,050.2 billion won. The increase in total liabilities is attributable to the rise in currency issued with the rising preference for stable assets among economic entities, influenced by the COVID-19 pandemic amid the ongoing trend of low interest rates, as well as the increased scale of monetary stabilization accounts and securities sold under repurchase agreements in order to control liquidity.

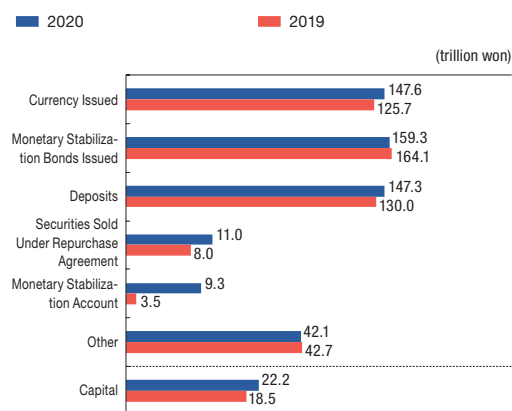
By type of liability, currency issued, deposits, and securities sold under repurchase agreements stood at 147,556.9 billion won, 147,345.9 billion won, and 11,000.0 billion won, respectively, increasing by 21,858.0 billion won, 17,300.3 billion won, and 3,000.0 billion won from the previous year-end. The monetary stabilization bonds issued were

worth 159,257.0 billion won, declining by 4,805.3 billion won from the previous year-end.

As of the end of 2020, the total capital of the Bank increased by 3,646.7 billion won from the previous year-end level of 18,524.6 billion won to 22,171.3 billion won.

By type of capital, the reserve increased by 1,593.9 billion won, and the undivided earned surplus (net income) increased by 2,052.8 billion won.

**Figure IV- 8. Liabilities and Capital<sup>1)</sup> (major item) (as of year-end)**



Note : 1) Total liabilities amounted to 517 trillion won, an increase of 43 trillion won from the previous year-end level of 474 trillion won.

Source: Bank of Korea

## Income and Expenses

In 2020, the Bank's net income increased by 2,052.8 billion won from the previous year-end level of 5,313.1 billion won to 7,365.9 billion won, mainly due to an increase in the profit from sales of foreign currency securities caused by a decline in international interest rates and a rise in foreign stock prices, as well as a decline in the interest on monetary stabi-

lization bonds issued due to the Base Rate cut.

Operating revenue increased by 3,437.2 billion won from the previous year to 19,819.2 billion won as the profit on sales of securities increased by 4,070.4 billion won, although the interest on securities decreased by 1,217.1 billion won.

Operating expenses increased by 600.8 billion won from the previous year to 9,652.0 billion won as the loss on sales of securities and miscellaneous interest paid increased by 929.7 billion won and 712.6 billion won, respectively, although the interest on MSBs issued decreased by 892.1 billion won.

## Disposal of Net Profits

Regarding the disposal of the net income, which totaled 7,365.9 billion won in 2020, 2,209.8 billion won was allocated to the legal reserve, 34.1 billion won was voluntarily reserved as a contribution to the Bounty Fund for Raising Lump-Sum Savings of Farming and Fishing Households, and the remaining 5,122.0 billion won was transferred to the General Revenue Account of the Government.

Table IV- 4. Income and Expenses

(billion won)

Subject	2019(A)	2020(B)	Change(B-A)
Total revenue	16,428.8	19,865.4	3,436.6
Operating revenue	16,382.0	19,819.2	3,437.2
(Interest on Securities)	(8,392.0)	(7,174.9)	(-1,217.1)
(Profit on Sales of Securities)	(5,827.4)	(9,897.8)	(4,070.4)
Non-Operating Income	46.8	46.1	-0.7
Total Expenses	9,071.6	9,676.4	604.8
Operating Expenses	9,051.2	9,652.0	600.8
(Interest on Monetary Stabilization Bonds)	(3,137.2)	(2,245.1)	(-892.1)
(Loss on Sales of Securities)	(2,443.1)	(3,372.8)	(929.7)
Non-Operating Expenses	20.4	24.4	4.0
Income Before Income Taxes	7,357.2	10,189.0	2,831.8
Income Taxes (-)	2,044.1	2,823.1	779.0
Net Income	5,313.1	7,365.9	2,052.8

Source: Bank of Korea

## Independent Auditor's Report

The Governor,  
Bank of Korea

### Opinion

We have audited the financial statements of Bank of Korea (the Bank), which comprise the balance sheet as of December 31, 2020, and the statement of income, statement of changes in equity and statement of appropriation of earned surplus for the year then ended, and notes to the financial statements, including a summary of significant accounting policies and other explanatory information.

In our opinion, the accompanying financial statements present fairly, in all material respects, the financial position of the Bank as of December 31, 2020 and its financial performance and its changes in equity and earned surplus for the year then ended in accordance with the Accounting Regulations enacted under Article 8 of Bank of Korea Act and Article 33 of the Bank's Articles of Incorporation (the Accounting Regulations of the Bank).

### Basis for opinion

We conducted our audit in accordance with Korean Standards on Auditing. Our responsibilities under those standards are further described in the *Auditor's responsibilities for the audit of the financial statements* section of our report. We are independent of the Bank in accordance with the ethical requirements that are relevant to our audit of the financial statements in the Republic of Korea and have fulfilled our other ethical responsibilities in accordance with these requirements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

### Emphasis of matter

Without qualifying our opinion, we draw attention to Note 1 to the financial statements, which states that the financial statements of the Bank have been prepared in accordance with the Accounting Regulations of the Bank and generally accepted accounting principles and practices that apply to matters not specified in the Accounting Regulations of the Bank.

### Other matter

The financial statements for the year ended December 31, 2019 were audited by Ernst & Young Han Young Accounting Corporation who expressed an unmodified opinion on those statements on February 27, 2020.

### Responsibilities of management and those charged with governance for the financial statements

Management is responsible for the preparation and fair presentation of these financial statements in accordance with the Accounting Regulations of the Bank, and for such internal control as management determines is necessary to enable the preparation of the financial statements that are free from material misstatement, whether due to fraud or error.

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Nexia International is a leading worldwide network of independent accounting and consulting firms, providing comprehensive portfolio of audit, accountancy, tax and advisory services.

In preparing the financial statements, management is responsible for assessing the Bank's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless management either intends to liquidate the Bank or to cease operations, or has no realistic alternative but to do so.

Those charged with governance are responsible for overseeing the Bank's financial reporting process.

#### **Auditor's responsibilities for the audit of the financial statements**

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with Korean Standards on Auditing will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements.

As part of an audit in accordance with Korean Standards on Auditing, we exercise professional judgment and maintain professional skepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Bank's internal control.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.
- Conclude on the appropriateness of management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Bank's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Bank to cease to continue as a going concern.
- Evaluate the overall presentation, structure and content of the financial statements, including the disclosures, and whether the financial statements represent the underlying transactions and events in a manner that achieves fair presentation.

We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

*Nexia Samduk*

February 23, 2021

This audit report is effective as of February 23, 2021, the independent auditor's report date. Accordingly, certain material subsequent events or circumstances may have occurred during the period from the date of the independent auditor's report to the time this report is used. Such events and circumstances could significantly affect the accompanying financial statements and may result in modifications to this report.

Table IV- 5. Balance Sheets (as of December 31, 2020 and 2019)

(million won)

	2020	2019
<b>Assets</b>		
I. Current Assets	517,448,550	471,954,912
1. Cash	-	-
2. Gold and Silver Bullions	5,216,697	5,551,371
3. Holdings of Special Drawing Rights	3,667,368	3,881,477
4. Securities (Note 2)	400,648,018	392,059,859
a. National Bonds	25,939,881	16,723,089
b. Government Guaranteed Securities and Others	-	-
c. Foreign Securities	374,708,136	375,336,770
5. Due From Banks (Note 3)	28,872,071	19,897,967
a. Due From Banks Current	22,145,299	16,911,309
b. Due From Banks On Time	6,726,772	2,986,658
6. Overdraft	-	-
7. Liquidity Adjustment Loans	-	-
8. Bills Discounted	-	-
9. Loans on Bills (Note 4)	34,272,315	15,568,425
10. Loans on Securities (Note 4)	-	59
11. Securities Bought Under Resale Agreement (Note 5)	-	443,023
12. Loans on Government (Note 4)	213,000	313,000
13. Loans on International Finance Organization	1,519,959	668,381
14. Foreign Exchange	65,309	72,238
15. Agencies	2,186,814	2,054,379
16. Inter-Office Account	-	-
17. Other Assets	40,786,999	31,444,733
(Exchange Revaluation Adjustment Account)	(17,379,820)	(4,386,530)
II. Non-Current Assets	21,281,839	20,619,849
1. Investment Assets	20,676,073	20,102,520
a. Investment (Note 6)	12,938,554	12,383,661
b. Securities on Investment	7,728,607	7,711,243
c. Telecommunication Usage Rights	48	48
d. Miscellaneous Subscription Rights	8,864	7,568
2. Tangible Assets	530,585	511,460
3. Intangible Assets	75,182	5,869
<b>Total Assets</b>	<b>538,730,389</b>	<b>492,574,761</b>



	2020	2019
<b>Liabilities</b>		
I. Current Liabilities	508,628,706	466,150,268
1. Currency Issued	147,556,869	125,698,873
2. Monetary Stabilization Bonds issued (Note 7)	159,256,957	164,062,268
3. Monetary Stabilization Account	9,250,000	3,500,000
4. Government Deposits	6,213,551	3,722,048
5. Deposits	147,345,917	130,045,640
a. Checking Deposits	74,042,782	65,102,108
b. Settlement Deposits	-	-
c. Liquidity Adjustment Deposits	60,000	1,182,500
d. Temporary Deposits	3,696,211	4,470,196
e. Due to Banks On Demand	69,546,924	59,290,836
f. Other Foreign Deposits	-	-
6. Securities Sold under Repurchase Agreement (Note 8)	11,000,000	8,000,000
7. Allocations of Special Drawing Rghts	3,767,790	3,849,613
8. Inter-Office Account	-	-
9. Other Liabilities	24,237,622	27,271,826
(Exchange Revaluation Adjustment Account)	(-)	(-)
II. Non-Current Liabilities	7,930,384	7,899,884
1. Borrowings	-	-
2. Reserve for Retirement Allowances	201,778	188,642
3. Liabilities to International Monetary Institute	7,728,607	7,711,242
<b>Total Liabilities</b>	<b>516,559,090</b>	<b>474,050,152</b>
<b>Capital</b>		
I. Surplus	22,171,299	18,524,609
1. Earned Surplus	22,171,299	18,524,609
a. Legal Reserve	11,367,675	9,773,747
b. Voluntary Reserve	3,437,768	3,437,768
c. Undivided Earned Surplus for Term	7,365,855	5,313,094
<b>Total Capital</b>	<b>22,171,299</b>	<b>18,524,609</b>
<b>Total Liabilities and Capital</b>	<b>538,730,389</b>	<b>492,574,761</b>

Table IV- 6. Income Statement (for the years ended December 31, 2020 and 2019)

	(million won)	
	2020	2019
I. Operating Revenue	19,819,233	16,381,991
1. Interest Received and Discount Fees	9,438,237	10,233,111
(1) Interest on Securities (Note 9)	7,174,936	8,391,961
(2) Interest on Deposits	94,424	258,616
(3) Interest on Overdraft	107	4
(4) Discount Fees on Domestic Bills	-	-
(5) Interest on Loans on Bills	77,760	94,153
(6) Interest on Loans on Securities	32,770	4
(7) Interest on Liquidity Adjustment Loans	17	6
(8) Interest on Securities Bought Under Resale Agreement	45,927	45,132
(9) Interest on Loans on Government	47,177	34,944
(10) Interest on Loans on International Finance Organization	1,928	6,360
(11) Miscellaneous Interest Received	1,963,191	1,401,931
2. Commissions Received	140,686	126,811
3. Profit on Sales of Securities	9,897,804	5,827,352
4. Gain on Redemption of Monetary Stabilization Bonds	-	1,418
5. Profit on Foreign Exchange Transaction	342,506	193,299
6. Profit on Gold and Silver Bullions	-	-
II. Operating Expenses	9,651,962	9,051,201
1. Interest Expense and Discount Fees	5,345,908	5,752,954
(1) Interest on Deposits	1,177,922	1,227,000
(2) Interest on Monetary Stabilization account	65,247	141,929
(3) Interest on Monetary Stabilization Bonds issued	2,245,058	3,137,165
(4) Interest on Securities Sold Under Repurchase Agreement (Note 10)	98,083	199,882
(5) Interest on Borrowings	-	-
(6) Miscellaneous Interest Paid	1,759,598	1,046,978
2. Commissions Paid	165,341	182,331
3. Loss on Sales of Securities	3,372,767	2,443,115
4. Loss on Redemption of Monetary Stabilization Bonds	114,691	62,155

	2020	2019
5. Loss on Foreign Exchange Transaction	11,519	-
6. Loss on Gold and Silver Bullions	-	-
7. International Financial Institutions Contribution	31,704	24,688
8. Banknote and Coin Manufacturing Expenses	111,446	99,308
9. Provision for Severance Pay	35,326	29,994
10. Depreciation Expense	26,549	26,915
11. Amortization of Intangible Assets	4,842	4,831
12. General and Administrative Expenses	431,869	424,910
III. Operating Income	10,167,271	7,330,790
IV. Non-Operating Income	46,139	46,842
1. Income from Disposal of Assets	10,401	1,947
2. Miscellaneous Profits	35,738	44,895
V. Non-Operating Expense	24,447	20,439
1. Donation	10,000	10,000
2. Loss from Disposal of Assets	13,390	9,541
3. Miscellaneous Loss	1,057	898
VI. Income Before Income Taxes	10,188,964	7,357,192
VII. Income Taxes	2,823,108	2,044,098
VIII. Net Income	7,365,855	5,313,094

**Table IV- 7. Statements of Changes in Equity (for the years ended December 31, 2020 and 2019)**

(million won)

	Capital	Earned Surplus	Total
I. Balance as at January 1, 2019	-	15,461,113	15,461,113
II. Payment to General Revenue Account of the Government		-2,214,203	-2,214,203
III. Contribution to Fund for Farming and Fishing Households		-35,395	-35,395
IV. Net income		5,313,094	5,313,094
V. Balance as at December 31, 2019	-	18,524,609	18,524,609
VI. Balance as at January 1, 2020	-	18,524,609	18,524,609
VII. Payment to General Revenue Account of the Government		-3,685,294	-3,685,294
VIII. Contribution to Fund for Farming and Fishing Households		-33,872	-33,872
IX. Net income		7,365,855	7,365,855
X. Balance as at December 31, 2020	-	22,171,299	22,171,299

Table IV- 8. Statements of Appropriation of Earned Surplus (for the years ended December 31, 2020 and 2019)

(million won)

	2020	2019
I. Undivided Earned Surplus	7,365,855	5,313,094
1. Balance at Beginning of Year	-	-
2. Net Income	7,365,855	5,313,094
II. Appropriation of Earned Surplus	7,365,855	5,313,094
1. Legal Reserve	2,209,757	1,593,928
2. Voluntary Reserve	34,112	33,872
a. Contribution to Fund for Farming and Fishing Households	(34,112)	(33,872)
b. Reserve for Specific Purposes	(-)	(-)
3. Payment to General Revenue Account of the Government	5,121,987	3,685,294
III. Undivided Earned Surplus to be Carried Over to Subsequent Year	-	-

# Notes to the financial statements

## 1. Significant accounting policies

### A. Basis of preparation

Except in the case specifically articulated by related laws and regulations, the presented financial statements have been prepared in accordance with the Accounting Regulations enacted under Article 8 of Bank of Korea and Article 33 of the Bank's Articles of Incorporation. The generally accepted accounting principles shall apply upon matters not determined by the Accounting Regulations of the Bank. Meanwhile, considering the insignificance of cash flow information to the functions of the Bank as a central bank, statements of cash flow have not been prepared. In addition, the statements of appropriation of earned surplus have been separated from the notes and reported as separate financial statements in consideration of their significance.

### B. Recognition and measurement of assets and liabilities

Assets are recognized at the date of acquisitions and liabilities are recognized when obligated. Assets are not assessed at the fair values but recorded at the acquisition cost or the amortized cost in the balance sheet.

#### (1) Securities

Debt securities are measured at the amortized cost while equity securities are measured at the acquisition cost. The Bank applies the specific identification method to debt securities and the moving average method to equity securities when calculating the acquisition cost to recognize the realized gains or losses on sales of the securities.

#### (2) Investment assets

Investment assets are measured at the acquisition cost.

### C. Recognition of revenues and expenses

Revenues and expenses are recognized on the accrual basis.

### D. Foreign exchange translation and recognition of profits and losses on foreign exchange transactions

## **(1) Foreign exchange translation**

Assets and liabilities denominated in foreign currencies are translated into Korean won applying the exchange rate or the arbitrage rate at the end of the reporting period. The gains and losses on the translation are not recognized in profit or loss but as a foreign exchange revaluation adjustment account which is a deferred account. Revenues and expenses denominated in foreign currencies are translated into Korean won applying the exchange rate at the date of the transaction.

## **(2) Recognition of profits and losses on foreign exchange transactions**

Profits and losses on foreign exchange transactions are determined by the difference between the Korean won equivalent received from the sales of foreign currency and the equivalent value of purchase cost of the foreign currency.

## **E. Transactions under resale and repurchase agreement**

Transactions under resale and repurchase agreement are loan and borrowing transactions secured by securities. Purchasing securities under resale agreement is accounted for as securities bought under resale agreement and selling securities under repurchase agreement is accounted for as securities sold under repurchase agreement on the Balance Sheet.

## **F. Depreciation of tangible assets and amortization of intangible assets**

### **(1) Tangible assets**

Buildings are depreciated using the straight-line method, while other tangible assets are depreciated on the declining balance method. Tangible assets are presented on the Balance Sheet at the acquisition cost less accumulated depreciation.

### **(2) Intangible assets**

Development costs are amortized based on straight-line method whereas software is amortized using declining balance method and presented on the Balance Sheet at the acquisition cost less accumulated amortization.

## **G. Reserve for retirement allowances**

Reserve for retirement allowances of the Bank under the retirement policy shows an accrued estimation for retirement at the end of the reporting period. Under the National Pension Scheme of Korea, the Bank transferred a certain portion of retirement allowances for employees to the

National Pension Fund. The amount transferred to the National Pension Fund and the plan assets for the retirement pension which is under the Employee Retirement Benefit Security Act is reflected in the financial statements as a reduction of the reserve for retirement allowances.

## H. Income taxes

Income taxes comprise the current tax expense calculated for the periods in accordance with statutory corporate tax regulations and the regional tax added to the corporate income tax.

## 2. Securities

Details of securities as of December 31, 2020 and 2019 as follows

(won)

Description		2020	2019
Subject	Type		
National Bonds	Korean Treasury bonds	25,939,881,384,189	16,723,089,441,763
Government Guaranteed Securities and Others	-	-	-
Foreign Securities	Foreign government bonds, other	374,708,136,406,076	375,336,769,632,006
Total		400,648,017,790,265	392,059,859,073,769

## 3. Due from Banks

Details of due from banks as of December 31, 2020 and 2019 as follows

(won)

Description		2020	2019
Subject	Institutions		
Due From Banks Current	Foreign financial institutions	22,145,298,688,106	16,911,309,130,597
Due From Banks On Time	Foreign financial institutions	6,726,772,026,721	2,986,657,966,724
Total		28,872,070,714,827	19,897,967,097,321



## 4. Loans

Details of loans as of December 31, 2020 and 2019 as follows

(won)

Description		2020	2019
Subject	Debtors		
Loans on Bills	Local financial institutions	34,272,315,000,000	15,568,425,000,000
Loans on Government	Ministry of Economy and Finance	213,000,000,000	313,000,000,000
Loans on International Finance Organizations	IMF	1,519,959,119,142	668,380,632,403
Securities Loans	Local financial institutions	-	59,003,440
Total		36,005,274,119,142	16,549,864,635,843

## 5. Securities Bought under Resale Agreement

Details of securities bought under resale agreement as of December 31, 2020 and 2019 as follows

(won)

Description		2020	2019
Subject	Counterparty		
Securities Bought Under Resale Agreement	-	-	-
Foreign Securities Bought Under Resale Agreement	Foreign Financial Institutions	-	443,023,020,000
Total		-	443,023,020,000

## 6. Investment

Details of investments as of December 31, 2020 and 2019 as follows

(won)

Description		2020	2019
Subject	Investee		
Local investment	Export-Import Bank of Korea	1,165,000,000,000	1,165,000,000,000
	Korea Housing Finance Corporation	645,000,000,000	645,000,000,000
	Subtotal	1,810,000,000,000	1,810,000,000,000
Off-Shore investment	International financial organizations	11,128,553,904,998	10,573,660,933,234
Total		12,938,553,904,998	12,383,660,933,234

## 7. Monetary Stabilization Bonds Issued

Details of monetary stabilization bonds as of December 31, 2020 and 2019 as follows

(won)

Description	2020	2019
Coupon Bonds	146,786,957,302,301	152,172,267,998,487
Discount Bonds	12,470,000,000,000	11,890,000,000,000
Total	159,256,957,302,301	164,062,267,998,487

## 8. Securities Sold under Repurchase Agreement

Details of securities sold under repurchase agreement as of December 31, 2020 and 2019 as follows

(won)

Description		2020	2019
subject	Counterparty		
Securities Sold Under Repurchase Agreement, in KRW	Local financial institutions	11,000,000,000,000	8,000,000,000,000
Foreign Securities Sold Under Repurchase Agreement	Foreign financial institutions	-	-
Total		11,000,000,000,000	8,000,000,000,000

## 9. Interest on Securities

Details of interest on securities as of December 31, 2020 and 2019 as follows

(won)

Description	2020	2019
Interest on Securities in KRW	455,327,562,843	429,806,158,714
Interest on Foreign Securities	6,719,608,758,641	7,962,154,892,211
Total	7,174,936,321,484	8,391,961,050,925

## 10. Interest Expenses on Securities Sold under Repurchase Agreement

Details of Interest Expenses on Securities Sold under Repurchase Agreement as of December 31, 2020 and 2019 as follows

(won)

Description	2020	2019
Interest Expenses on Securities Sold Under Repurchase Agreement in KRW	90,533,166,001	166,794,129,245
Interest Expenses on Foreign Securities Sold Under Repurchase Agreement	7,549,736,031	33,087,853,997
Total	98,082,902,032	199,881,983,242

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# Appendix

1. Organization Chart of Bank of Korea
2. Contributing Departments & Authors by Section

# 1. Organization Chart of Bank of Korea (As of December 31, 2020)



Notes : 1) Busan, Daegu & Gyeongbuk, Gwangju & Jeonnam, Jeonbuk, Daejeon & Chungnam, Gangwon, Incheon, Jeju, Gyeonggi, Gyeongnam, Gangnam 2) Busan, Daegu & Gyeongbuk, Gwangju & Jeonnam, Daejeon & Chungnam, Incheon 5) Jeju \* [ ] Divisions, ( ) Teams, < > Teams in Economic Research Institute

Operational Risk Team, External Affairs Team, Organization Team, Budget & Accounting Team
Coordination Team, Regional Economies Team
General Legal Affairs Team
Team
Team, Data Service Team
Coordination Team, Communications Management Team, New Media Team, BOK Money Museum Team
Education Team, Education Team
IT Team, IT Quality Management Team, Information Systems Division(Management Information Systems Team, Policy Information Systems Team) IT Infrastructure Division(Main-System Team, Network Team) Accounting Information System Division (Accounting Systems Team, Payment & Settlement Systems Team)
Human Resources Team, Human Resources Management Team, Payroll & Welfare Team, Labor Relations Team, Expense Accounting Team
Facilities Administration Team, Procurement Service Team
Security Team, Security Administration Team
Program Design & Management Team, Administration & Support Team, Faculty Team
Economic Research Team, Economic Activities Analysis Team, Macroeconomic & Fiscal Research Team, International Trade Research Team, Labor Market Research Team, Inflation Research & Forecasting Team, Inflation Analysis Team), Macroeconomic Modeling Division(Model Forecasting Team, Macroeconomic Model Study Team),Global Economy Research Division(U.S. & Europe Economies Team, Asia-Pacific Economies Team, China Economies Team)
Economic Survey Team, Statistics Information Team, Monetary & Financial Statistics Division(Monetary & Financial Statistics Team, Flow of Funds Team, Balance of Payments Account Position Team, Corporate Statistics Team), National Accounts Division(National Accounts Coordination Team, National Expenditure Statistics Team, Input-Output Statistics Team, Price Statistics Team)
Systemic Risk Analysis Team, Financial Stability Analysis Team, International Financial Regulation Team, Financial System Analysis Division(Bank Analysis Team), Financial Stability Research Division(Financial Stability Research Team, Financial System Research Team)
Commercial Bank Team I, Commercial Bank Team II, Specialized Bank Team
Coordination Team, Credit & Reserves Policy Team, Monetary Policy Analysis Team, Monetary Policy Communication Team, Monetary Policy Research Division(Monetary & Credit Policy Framework Research Team)
Market Operations Team, Money Markets Team,Financial Markets Research Team, Capital Markets Division(Fixed Income Markets Team, Equity Markets & Corporate Finance)
Payment Systems Research Team, Payment Systems Management Team, Loans & Settlements Team,Payment Systems Oversight Division(Payment Systems Stability Team, Payment Systems Management Team), e-Finance Division(e-Finance Planning Team, e-Finance Research Team), Digital Currency Research Team
Cash Services Team
Cash Services Team, Cash Processing Team I, Cash Processing Team II, Currency Research Team
Coordination Team, Foreign Exchange Accounting Team, Foreign Exchange Market Team, International Finance Division(Capital Flows Analysis Team, International Finance Research Team), Foreign Exchange Business Division(Foreign Exchange Review Team, Foreign Exchange Investigation Team, Foreign Exchange Information Management Team)
Representative Office, Frankfurt Representative Office, Tokyo Representative Office, London Representative Office, Beijing Representative Office
International Organizations Team, Regional Organizations Team, Financial Cooperation Team, International Cooperation Division(International Relations Support Program Team)
Reserve Investment Division(Reserve Management Planning Team, Risk Management Team, External Fund Management Team I, External Fund Management Team II), Reserve Investment Division(Treasuries Portfolio Team I, Treasuries Portfolio Team II, Credit Portfolio Team, Asset-Backed Securities Portfolio Team), Reserve Management Support Division(Settlement System Team)
International Economics Team, International Economics Team, Macroeconomics Team, Micro & Institutional Economics Team, North Korean Economy Team
General Administration Team <sup>1)</sup> , Regional Economy Research Division(Planning & Financial Research Team, Economic Research Team) <sup>2)</sup> , Regional Economic Research Team <sup>3)</sup> , Credit, Reserves & Administration Team, Cash Processing Team <sup>4)</sup> , Cash Processing Section <sup>5)</sup>
Policy Making & Operation Audit Team, Foreign Reserve Management & International Business Audit Team, Research & Statistics Audit Team, IT

<sup>1)</sup> Seoul, Jeonbuk, Daejeon & Chungnam, Chungbuk, Gyeonggi, Ulsan, Pohang, Gangnam  
<sup>2)</sup> Seoul, Jeonbuk, Daejeon & Chungnam, Chungbuk, Gyeonggi, Ulsan, Pohang, Gangnam  
<sup>3)</sup> Mokpo, Jeonbuk, Chungbuk, Incheon, Gangneung, Ulsan, Pohang  
<sup>4)</sup> Busan, Daegu & Gyeonggi, Gwangju & Jeonnam, Daejeon & Chungnam, Gangwon, Jeju, Gyeonggi  
<sup>5)</sup> Mokpo, Jeonbuk, Chungbuk, Incheon, Gangneung, Ulsan, Pohang



## 2. Contributing Departments & Authors by Section

Section	Author	
<b>I. Overview of Bank of Korea</b>		
1. History and Mission	Monetary Policy Dept.	Kim, Hyo Son
2. Organization		
A. Monetary Policy Board	Monetary Policy Board	Chung, Sung Whan
B. Executive Officers and Auditor	Secretariat	Han, Seung Hyeok
C. Departmental Organization and Responsibilities	Planning & Coordination Dept.	Cheon, Jae-Jung
<b>II. Economic Trends</b>		
1. Real Economy		
A. Global Economy	Research Dept.	Bahk, Byeong-geol
B. Domestic Economy	Research Dept.	Lim, Junhyuk Lee, Nayoon Lee, Good Geon Hwang, Soobin Yoo, Minjung Kim, Youn Kyeong
2. Financial and Foreign Exchange Markets		
A. International Financial Markets	Office of Branch Affairs International Dept.	Koo, Byungsoo Han, Jae Chan
B. Domestic Financial Markets	Financial Markets Dept. International Dept.	Lee, Eun Ji Kim, Dae Seok
<b>III. Bank of Korea's Conduct of Its Business</b>		
1. Medium-term Strategies	Planning & Coordination Dept.	Kim, Hyunhee
2. Monetary Policy		
A. Inflation Target	Research Dept. Monetary Policy Dept.	Lee, Jiwon Bae, Jung Min
B. Base Rate	Monetary Policy Dept.	Bae, Jung Min Lee, Eun Kook
C. Lending and Deposit Facilities	Payment & Settlement Financial Markets Dept.	Song, Yun Jeong Yoon, Tae Young
D. Open Market Operations	Monetary Policy Dept.	Bae, Jung Min
E. Monetary Policy Communication	Monetary Policy Board Communication Dept.	Chung, Sung Whan Jung, You Mi



Section	Author	
3. Financial Stability		
A. Analysis and Assessment of Macroprudential Stability	Financial Stability Dept.	Cho, Hangseo Kim, Min Seo
B. Foreign Exchange Market Stabilization Measures	International Dept.	Han, Jae Chan
C. Expansion of Multilayered Financial Safety Nets	International Affairs Dept.	Ahn, Sung Hee
4. Currency Issuance		
A. Issuance	Currency Dept.	Oak, Jihun Lee, Tae Gum Jeong, Hee Sook
B. Circulation	Currency Dept.	Oak, Jihun Cho, Sung Wook
C. External Cooperation	Currency Dept.	Cho, Sung Wook
5. Payment and Settlement Business		
A. Operation of BOK-Wire+	Payment & Settlement Systems Dept.	Jeong, Hyerim
B. Oversight and Risk Management	Payment & Settlement Systems Dept.	Jeong, Hyerim
C. Improvement of Payment and Settlement Systems	Payment & Settlement Systems Dept.	Jeong, Hyerim
D. International Cooperation	Payment & Settlement Systems Dept.	Jeong, Hyerim
6. Foreign Exchange and International Cooperation		
A. Foreign Exchange	International Dept.	Han, Jae Chan Kim, Dae Seok Cho, Ji Eun
B. Reserve Management	Reserve Management Group	Nam, Seok Won
C. International Cooperation	International Affairs Dept.	Ahn, Sung Hee
7. Research and Statistics		
A. Research Activities	Research Dept. Economic Research Institute Office of Branch Affairs	Lee, Yongdae Cho, Yu Jeong Lee, Jae Won
B. Compilation of Statistics	Economic Statistics Dept.	Lee, Hyemin
8. Treasury and Securities Business		
A. Treasury	Office of Treasury & Debt Securities	Koh, Taeho
B. Securities	Office of Treasury & Debt Securities	Shin, Sung Wook
C. Fund Management	Office of Treasury & Debt Securities	Shin, Sung Wook
9. External Communications		
A. Expansion of Public Communication	Communications Dept.	Jung You Mi Jang, Youn Kyung Lee, Jun Ho
B. Strengthening Economic and Financial Education	Planning & Coordination Dept. Office of Economic Education	Kim, Kwang Ryong Seo, Ha Na

Section	Author	
<b>IV. Management Status</b>		
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B. Organizational Management Methods	Planning & Coordination Dept.	Cheon, Jae-Jung Yun, Se Jin Lee, Young ho Kim, Hyunhee
C. Establishment of Medium- and Long- Term Strategic Plan	Planning & Coordination Dept.	
D. Education and Training	Bank of Korea Academy	Shin, Yeongseok
E. Human Resources Operation	Management Officer	Cho, Ju Yeon
F. Expansion of Corruption Prevention and Culture of Integrity	Management Officer	Ha, Ji Won
G. Improvement and Expansion of IT systems	Information Technology Dept.	Kim, Eun Jung
H. Construction of an Integrated Annex	Construction Project Management Office	Rhew, Chuljong
2. Financial Status	Planning & Coordination Dept.	Bae, Moon Sun
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1. Organization Chart of Bank of Korea	Planning & Coordination Dept.	Cheon, Jae-Jung
2. Contributing Departments&Authors by Section	Communications Dept.	Jung, You Mi
<b>Planning and Coordinating</b>	Communications Dept.	Jung, Heung Soon Han, Sang Woo Jung, You Mi

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