INTERNATIONAL MONETARY FUND

REPUBLIC OF KOREA

STAFF REPORT FOR THE 2021 ARTICLE IV CONSULTATION

March 2, 2021

KEY ISSUES

Context. Korea entered the COVID-19 pandemic with sound macroeconomic fundamentals and a resilient financial system. The initial outbreak led to a sharp decline in economic activity and employment and generated substantial economic slack. With the help of an effective COVID-19 containment strategy and comprehensive economic policy response, the overall impact was smaller than in peers, with real GDP growth in 2020 of -1.0 percent. The economy is projected to grow 3.4 percent in 2021, albeit at varying speeds across sectors, and with a high degree of uncertainty centered on the speed of normalization in the COVID situation. Public debt has risen and deficits have widened but remain at manageable levels. Credit continues to grow rapidly, financial markets have normalized quickly, and the financial sector has remained relatively sound to date despite the pandemic. The authorities are pursuing greener and more digital growth, along with a stronger social safety net, through the Korean New Deal.

Main policy recommendations. More accommodative fiscal and monetary policy would help the economy normalize faster, sustain affected small businesses, and bring discouraged workers back into the labor force.

- Fiscal policy should be the main instrument to provide support by taking a modestly positive or at least neutral stance in 2021, which could be achieved by raising targeted transfers to affected workers and firms, and accelerating public investment.
- Gradual fiscal consolidation can be undertaken once the recovery takes hold. Introducing a rules-based fiscal framework would provide a long-term anchor for the public finances.
- Additional monetary policy support would help underpin the recovery and bring inflation closer to the BOK's target more quickly, while financial stability risks can be addressed through macroprudential policies. These appear appropriately set at present but can be tightened further if household credit continues to rise sharply.
- Maintaining credit support measures as planned will help avoid a premature tightening of credit, especially for SMEs. As the economy recovers, the focus of support should shift from liquidity provision to targeted measures that promote corporate restructuring and solvency.
- The Korean New Deal rightly seeks to develop new growth drivers and increase inclusiveness. Complementary reforms to reduce entry barriers, stimulate innovation, and lower labor market rigidities can provide a further boost to potential growth.

Approved By
Kenneth Kang and Martin Kaufman

Virtual consultations took place from January 12–26, 2021. The mission team was Andreas Bauer (head), Si Guo, Sung Jin Kim, Sohrab Rafiq, and Andrew Swiston (all APD). Maksym Markevych (LEG), Ian Parry (FAD), and Anjum Rosha (LEG) participated in some meetings. Chang Huh, Byunghee Yoo, and Jinhyuk Yoo (all OED) joined the virtual meetings. Paola Castillo and Livia Tolentino contributed to the preparation of this report.

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PRE-COVID-19 CONTEXT

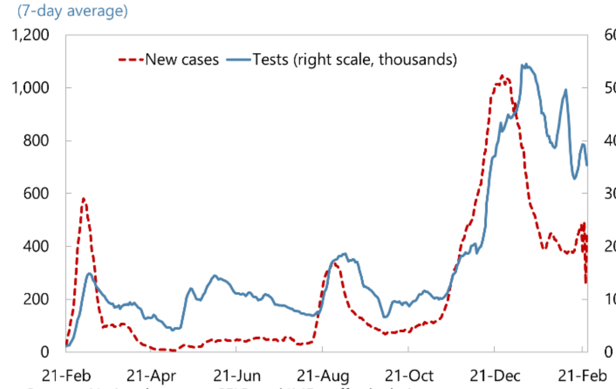
1. **The Korean economy entered the COVID-19 pandemic with sound macroeconomic fundamentals and high income but sluggish growth.** Public debt and borrowing costs were low and external vulnerabilities were well contained, with a net international creditor position, adequate reserves, and a flexible exchange rate. The recent FSAP pointed to some vulnerabilities from high private debt but found most parts of the financial system prudentially sound and resilient. While per capita incomes exceed $30,000, growth slowed to an average of 2.8 percent over the last five years, reaching only 2.0 percent in 2019. The resulting economic slack kept inflation well below the Bank of Korea's (BOK) two percent target.

2. **The country has been confronting some social challenges.** These include longstanding inequalities in the educational system and labor markets, especially for women, youth, and the elderly, as well as rising housing prices in metropolitan Seoul (home to about half the population). The Moon administration, in office since 2017, has substantially raised the minimum wage, expanded public sector jobs, and implemented measures to expand housing supply and contain speculative demand to ensure more equitable access. In line with past Fund recommendations, fiscal policy turned expansionary from 2019 onward with steps taken to strengthen social safety nets. However, progress on reducing rigidities in product and labor markets has been slower (Annex I). President Moon's party currently holds a majority in the National Assembly, with presidential elections due in March 2022 (presidents serve a single term).

RECENT ECONOMIC DEVELOPMENTS

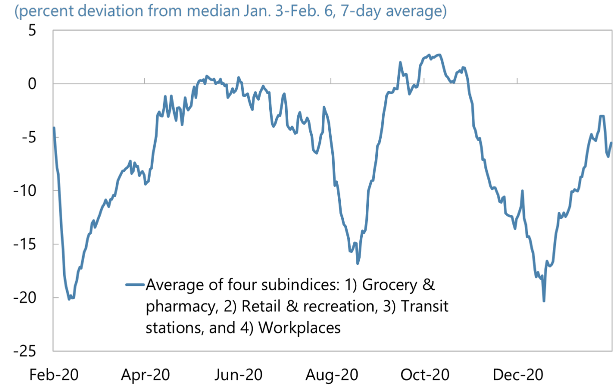
3. **Economic developments have been driven by the pandemic.** Infections first spiked in February (text figure), leading to a downturn in Q1-2020. This was exacerbated in Q2 by supply chain disruptions and reduced external demand stemming from an intensification of outbreaks in major trading partners. The authorities' comprehensive strategy to combat the virus helped bring new cases near zero by the summer (Box 1), which along with external re-opening helped the economy rebound in Q3 despite a small spike in infections. The recovery softened in Q4 as infections reached new highs and distancing measures were tightened (text figure), with real GDP growth for 2020 at -1.0 percent (Figure 1).

COVID-19 Cases and Testing
(7-day average)



Sources: National sources; CEIC; and IMF staff calculations.

Google Mobility Index
(percent deviation from median Jan. 3-Feb. 6, 7-day average)



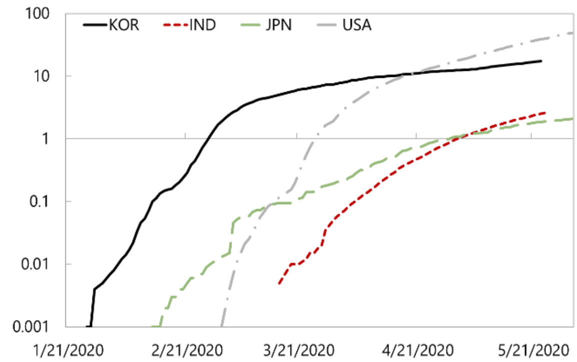
Sources: Google Mobility Reports; and IMF staff calculations.

Box 1. Korea's Health and Economic Response to the COVID-19 Outbreak[1]

Korea quickly brought the COVID-19 outbreak under control without imposing stringent lockdowns. Learning from the experience with MERS in 2015, the authorities had boosted pandemic preparedness, allowing them to rapidly deploy an effective containment strategy while minimizing business shutdowns and other restrictions:

- ***Testing.*** Extensive and timely testing was key to containing the virus' spread. The authorities aggressively ramped up testing capacity with fast-track approval for test kits and setting up quick diagnostic capabilities, such as drive-through and walk-through facilities. Korea reached a higher initial test density than peers, performing more than 300 thousand tests by late March 2020 (text figure).

Testing Response to Initial COVID-19 Outbreaks
(cumulative tests per thousand inhabitants, log scale)



Source: Our World in Data.

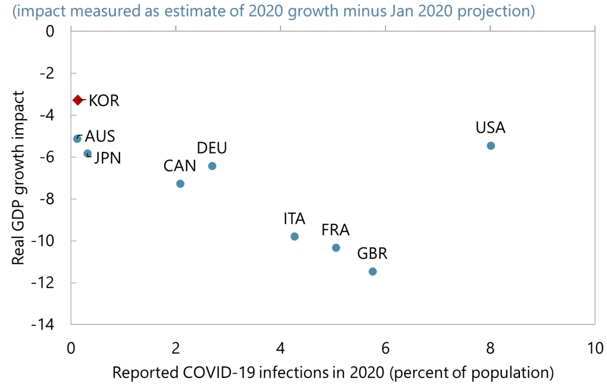
- ***Tracing.*** Data-driven epidemiological investigations were performed, using credit card transactions, GPS, and other data. Relevant anonymized information was disclosed to the public to track down potential infections. Digital tools (e.g., mobile apps) were widely deployed to facilitate contact tracing.

- ***Treatment.*** Korea established a triage to identify and hospitalize high-risk patients while isolating and monitoring those with mild symptoms at community treatment centers. The authorities rapidly secured additional beds and temporary isolation rooms with portable negative pressure devices.

An active coordinating role of the central government facilitated effective containment. The central government took the lead in cooperating and communicating with the private sector to accelerate test kit production, expand diagnostic networks, centralize COVID-related data, and develop digital tools, such as apps for quarantine/isolation management, for use at local levels. When necessary, the government also intervened in markets to address shortages of critical medical resources (e.g., masks) through centralized purchasing and prioritized distribution.

This approach, along with the proactive economic policy response, helped contain the economic impact. The impact, as measured by 2020 real GDP growth relative to pre-COVID projections, ranked as the mildest among G-20 advanced economies (text figure). This was facilitated by key aspects of the response:

COVID-19 Infections and Real GDP Growth Impact
(impact measured as estimate of 2020 growth minus Jan 2020 projection)



Sources: National sources; and IMF, *World Economic Outlook*.

- ***Targeted fiscal policy.*** Above-the-line fiscal support (2.9 percent of GDP) was not particularly large compared to other advanced economies, but was rolled out in phases as needs evolved, including through four supplementary budgets. Measures were mostly targeted toward disease control and prevention, and support to affected businesses and workers. Broad stimulus was avoided during the period of high uncertainty when its effect likely would have been low. The first emergency relief transfer to all households in May was well-timed with a decline in infections. This, along with the time-bound availability of these transfers, contributed to a marked pick-up in household spending.

Box 1. Korea's Health and Economic Response to the COVID-19 Outbreak (Concluded)

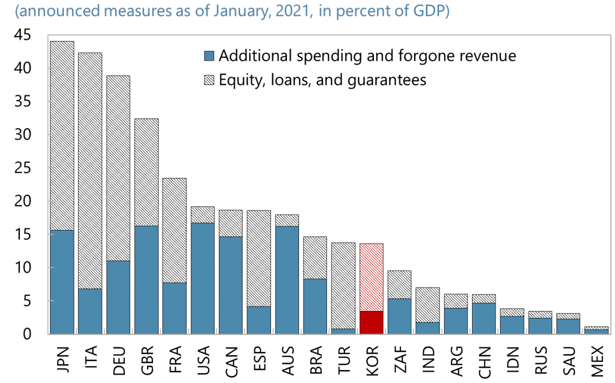
- ***Rapid market stabilization.*** In a context of high uncertainty and market jitters, the authorities rapidly deployed a number of financial facilities to help preserve stability, building on experience with such tools in previous episodes of stress. This included equity and bond market stabilization funds financed jointly by policy banks and private financial institutions. The Bank of Korea (BOK) conducted foreign exchange (FX) auctions tapping the U.S. Fed swap line, which helped ease U.S. dollar funding strains. The BOK also rolled out several novel measures, using unlimited repo operations to ensure sufficient systemic liquidity, and with the KDB (a policy bank) creating an SPV to purchase low-rated corporate bonds to address tightness in that market segment.
- ***Ample credit availability.*** The authorities early recognized the financing need of affected businesses, especially SMEs, for near-term debt service and additional working capital. As in previous downturns, the authorities provided standardized terms and regulatory incentives for a voluntary loan payment deferral program by financial institutions and rolled out credit facilities amounting to about 5.5 percent of GDP. These include fresh loans and guarantees to SMEs through public banks and private financial institutions, an industry stabilization fund to provide financing and facilitate restructurings of large firms in severely affected sectors, and an SPV to purchase SME working capital loans financed by the KDB.

[1] Prepared by Sung Jin Kim and Andrew Swiston. See the following for details; Ministry of Economy and Finance (2020), *"Tackling COVID-19, Health, Quarantine and Economic Measures: Korean Experience"*, and the Government of the Republic of Korea (2020), *"COVID-19, Testing Time for Resilience"* in *"Recovering from COVID-19: Korean experience"*.

4. **The authorities have used available policy space to cushion the economic effects of the pandemic, deploying a wide array of fiscal, monetary, and financial measures (Annex II; Figure 2).** Fiscal policy was eased, adding to an already expansionary stance of the original 2020 budget (text figure). Much of the discretionary support to households, workers, and SMEs was targeted to those most affected, through both expansion of existing programs and new measures. The overall fiscal balance for 2020 is estimated at -4.1 percent of GDP, with an estimated fiscal impulse of 2.6 percent of GDP. The BOK reduced its policy rate by 75 basis points, to 0.5 percent. The BOK also temporarily offered unlimited repos to ensure sufficient availability of liquidity and made some small government bond purchases to prevent market volatility, among other measures. Several lending and guarantee programs and other funds were implemented to ensure availability of credit—especially for SMEs—and stabilize financial markets. Some macro- and micro-financial regulations were also eased temporarily to ensure liquidity and lending capacity of financial institutions remained ample. Together these measures helped tide affected firms and workers through the shock, underpinning private consumption and investment.

Fiscal Response to the COVID-19 Crisis

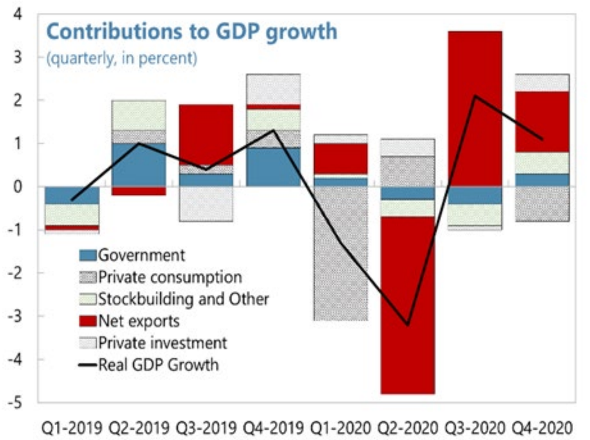
(announced measures as of January, 2021, in percent of GDP)



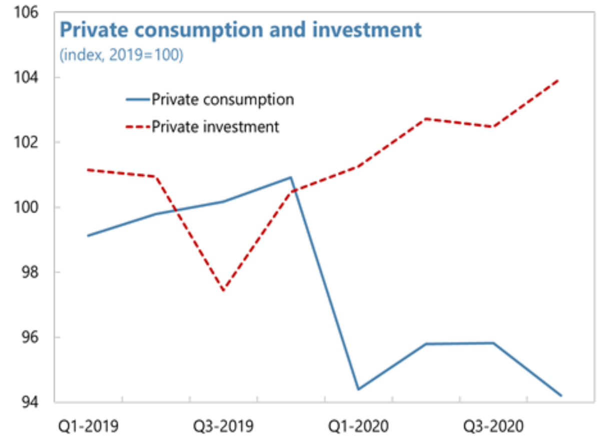
Sources: National authorities; and IMF staff calculations.

Figure 1. Activity, Employment, and Inflation

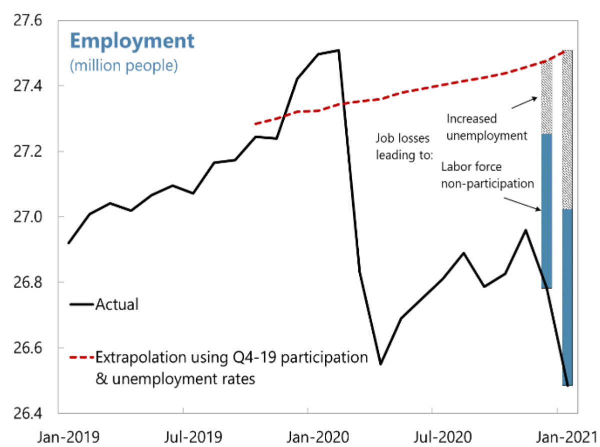
The economy is recovering from the H1-2020 contraction, driven by a rebound in exports.



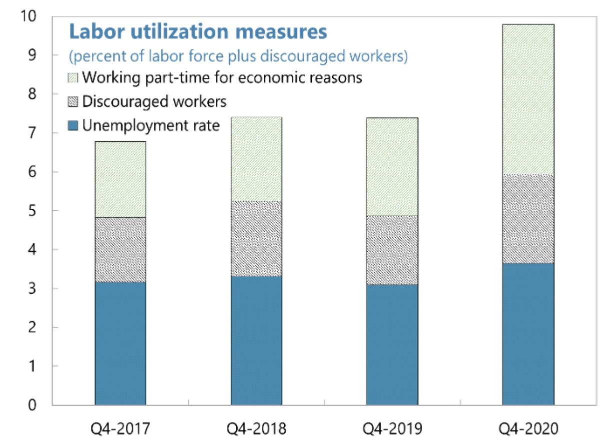
Investment is also buoyant as exporting firms expand facilities, while consumption remains well below pre-COVID levels.



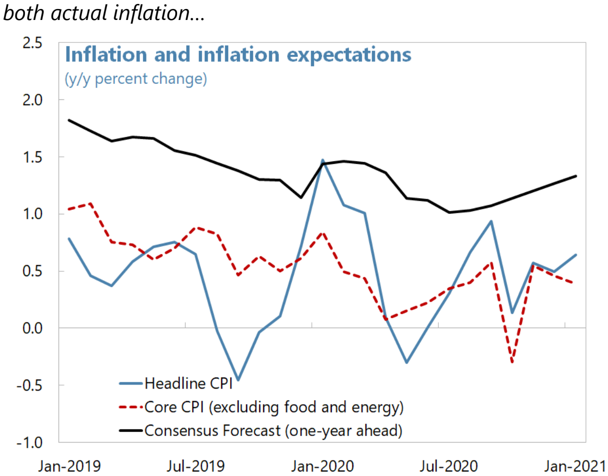
The labor market recovery has lagged, with a high proportion of those losing jobs exiting the labor force…



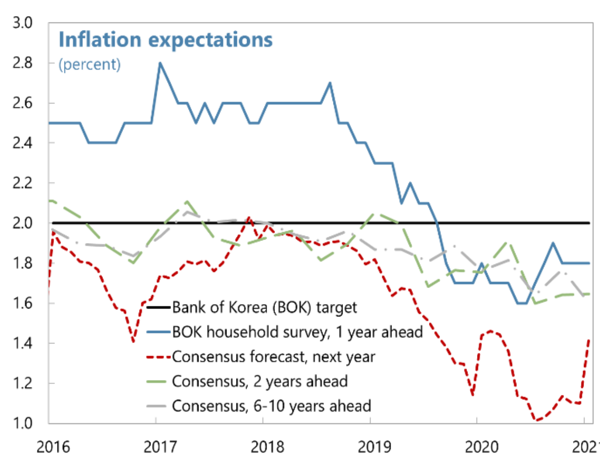
…and resulting in relatively high levels of labor underutilization, raising concerns about scarring.



Inflation has stabilized after a dip early in the COVID shock, but both actual inflation…



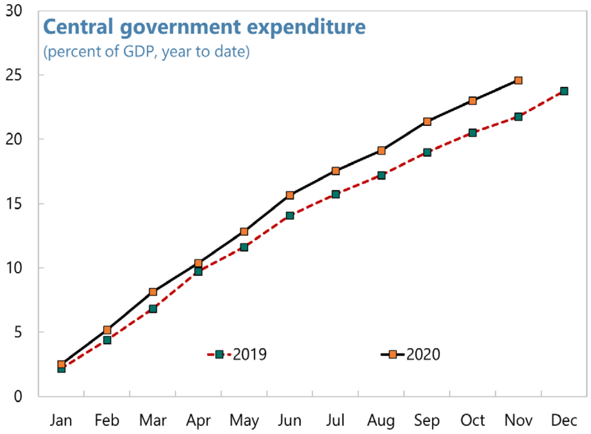
…and expectations are below the inflation target.



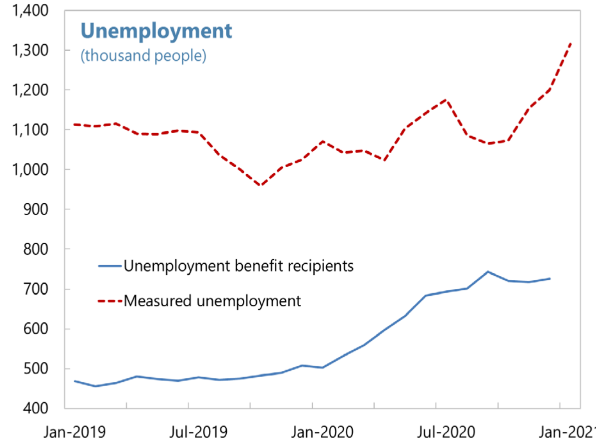
Sources: National sources; Haver Analytics; Consensus Forecasts; and IMF staff calculations.

Figure 2. Policy Response to the COVID-19 Pandemic

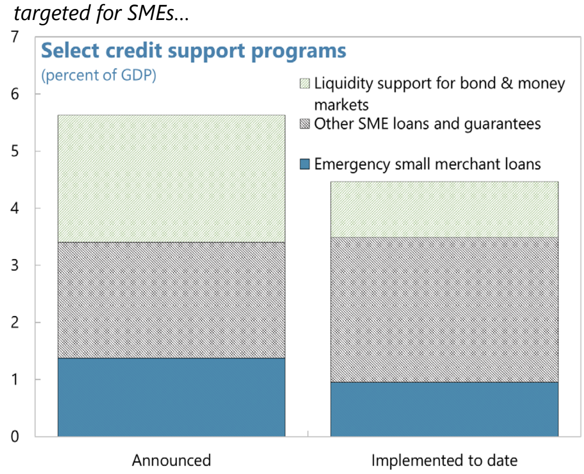
The government boosted expenditure for COVID mitigation and provided transfers to affected firms and households.



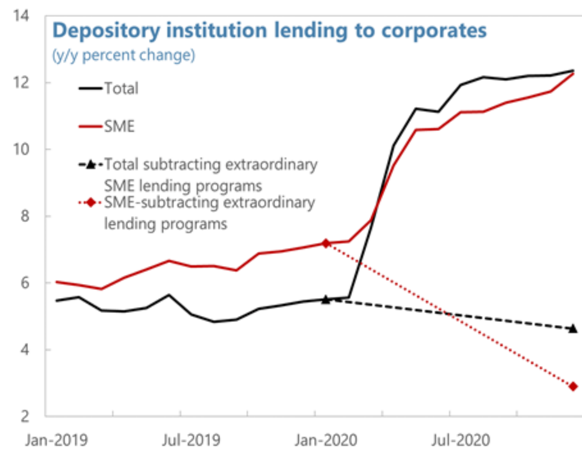
The expansion of unemployment benefits reached a large share of those looking for jobs.



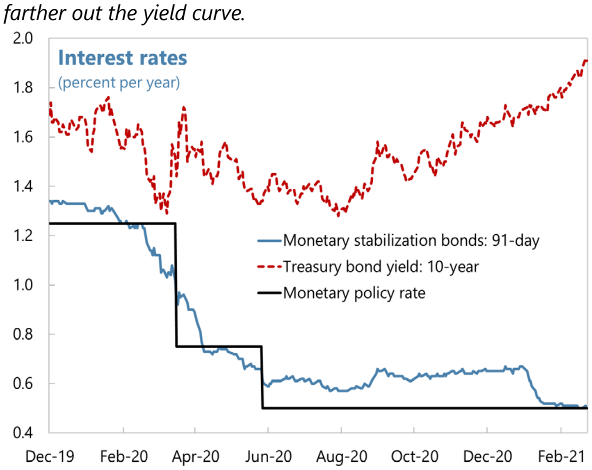
Credit support programs were substantial, especially those targeted for SMEs…



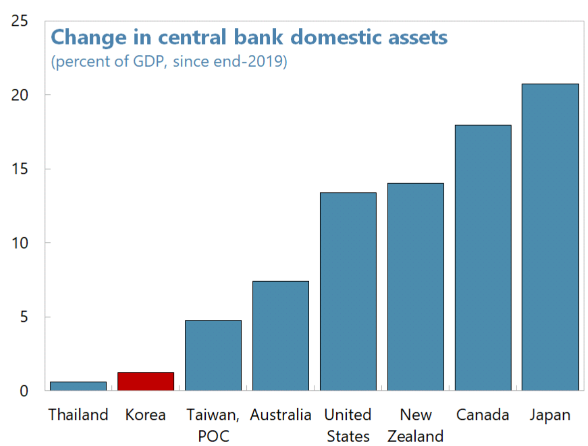
…which has helped boost credit flows.



Policy rate cuts have transmitted to short-term rates, but less so farther out the yield curve.



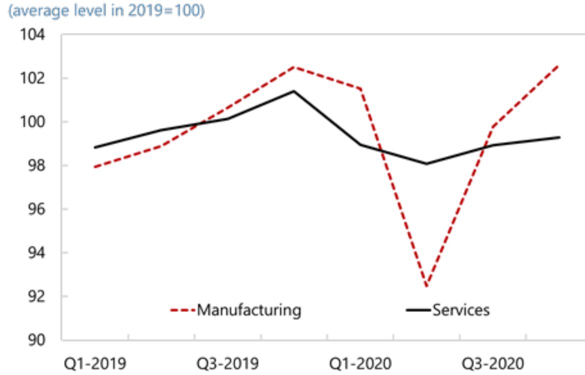
The expansion of the BOK balance sheet has been comparatively small.



Sources: National sources; Haver Analytics; and IMF staff calculations.

5. The recovery in economic activity has been uneven across sectors. Manufacturing and exports have rebounded strongly after falling due to the COVID-related collapse in trading partner imports (text figure). Tech exports are outperforming, reflecting pandemic-induced increases in online activities. This has supported buoyant business investment. By contrast, services activity has been sluggish, weighed down by still-depressed consumption.

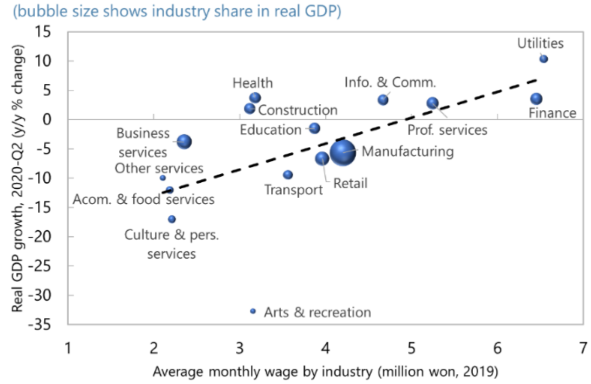
GDP by Industry
(average level in 2019=100)



Sources: Haver Analytics; and IMF staff calculations.

6. This "K-shaped" recovery is reflected in diverging outcomes at the firm and worker level. Performance among large, tech export-oriented firms has been strong, while the services sector where SMEs are more prevalent has lagged. Employment declined by one million jobs (-3.7 percent) in March-April 2020, and after a brief upturn has returned to this trough despite the recovery in headline economic activity. Most job losses have been experienced by "non-regular" workers, while employment of "regular" workers on open-ended contracts has held up. The shock's effects were also largest for lower-wage sectors and lower-income earners (text figure), falling more heavily on female and young workers. This also likely exacerbated inequality, though some of the near-term impact was offset by temporary transfers.

COVID-19 Shock Impact by Industry Wage Levels
(bubble size shows industry share in real GDP)



Sources: National sources; Haver Analytics; and IMF staff calculations.

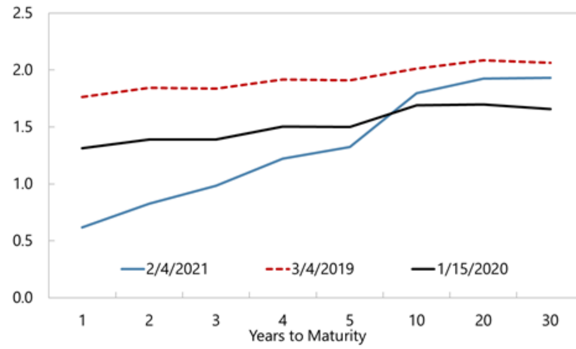
7. The downturn has resulted in a substantial amount of economic slack and contributed to persistently low inflation. Output remains lower than its pre-COVID level, with sizable slack reflected in employment and labor force participation remaining well below their previous peaks. With the decline in global energy prices, already-low headline inflation briefly turned negative in 2020. Despite recent rises in food and fuel prices, both headline and core inflation remain below 1 percent. Cumulative growth in 2019-20 of about 1 percent, below-trend employment and labor force participation, below-average measured capacity utilization in manufacturing, and overall low inflationary pressures, point to a negative output gap of around 2.5-3 percent of GDP in 2020.

8. Some financial market segments experienced stress after the initial COVID outbreak due to non-bank exposures, but stabilized subsequently. Brokerages guaranteeing asset-backed commercial paper experienced short-lived liquidity strains, and the cost of domestic dollar funding temporarily spiked due to tightening global dollar conditions and FX demand driven by margin calls on foreign investments made by local asset managers. Driven by search for yield, local asset managers have taken increasing exposures in overseas markets through the selling of structured financial products. The authorities have responded by taking steps to more tightly regulate the securities-brokerage sector and increase disclosures, particulaly firms not under a financial holding company.

9. Financial conditions have been generally kept accommodative since the COVID outbreak (Figure 3). Risk-free rates have fallen and the yield curve has steepened, aiding banks' net interest margins (text figure). Banks have passed on lower rates to both households and corporates, reflecting easier credit supply conditions. Capital market term and risk premia have also fallen reflecting reflationary expectations, policy easing, and portfolio inflows. These factors coupled with strong earnings growth for listed firms have helped contain the corporate default cycle and driven the equity market to record highs, aided by a short-selling ban and strong retail investor demand. This in turn has fueled strong IPO growth and contained firm leverage. However, spreads on low and sub-investment-grade corporate bonds remain somewhat above pre-pandemic levels.

Benchmark Government Bond Yield Curve

(percent)

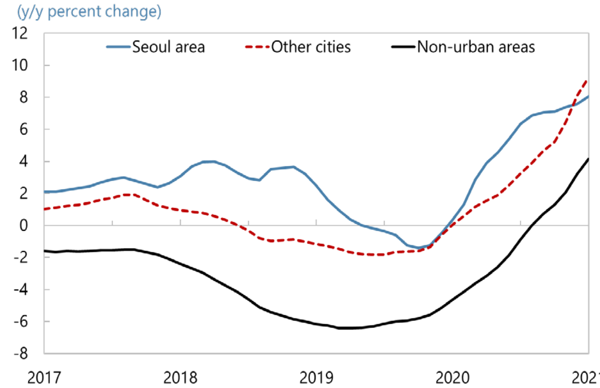


Sources: Datastream; and IMF staff calculations.

10. Credit growth has accelerated supported by policy measures, though risks are contained by the resilience of the banking system. Due to strong credit demand leverage (debt-to-GDP) gaps have widened to 6 percent for households and 4 percent for firms (Figure 4). Household debt in Korea is among the highest in the OECD at over 190 percent of net disposable income in 2019, much of it reflecting leverage against real estate. Pre-pandemic, around 15 percent (13 percent of GDP) of household debt was owed by liquidity-constrained households, and at risk from a snapback in lending rates. Despite government interventions, housing market transactions and prices have risen, particularly in greater Seoul (text figure), with signs of widening overvaluation (Figure 4). Bank non-core funding and FX risks are small, but bank profitability is structurally low due to a triad of lower growth, increasing competition from Fintech, and demographic factors. Bank provisioning has risen substantially since the COVID outbreak, albeit from low levels, with possible SME defaults posing some risks to balance sheets (Figure 5).[1] In mitigation, however, NPL ratios remain low and FSAP stress tests found the banking system to be resilient in macroeconomic shock scenarios that exceed the current downturn.

Apartment Purchase Prices

(y/y percent change)

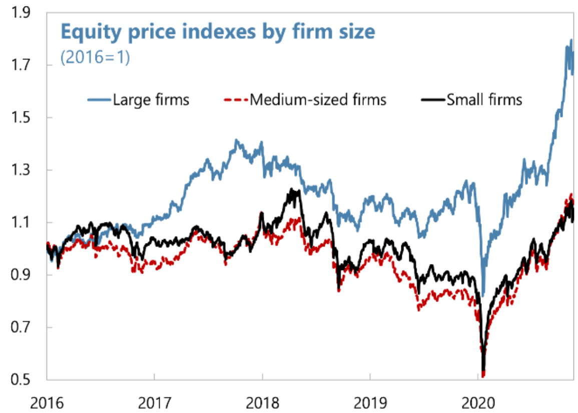


Sources: Haver Analytics; and IMF staff calculations.

[1] About 50 percent of SME debt (22 percent of GDP) was "at-risk" entering the outbreak. Firms with "debt at-risk" are those reporting current interest coverage ratios below one.

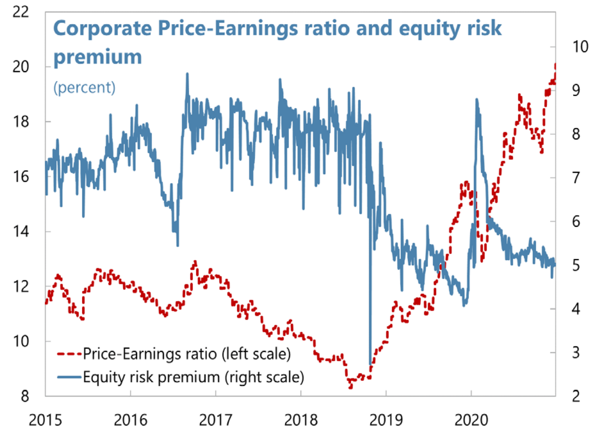
Figure 3. Financial Conditions Indicators

After an initial dip equity prices have rallied, particularly for larger corporates.

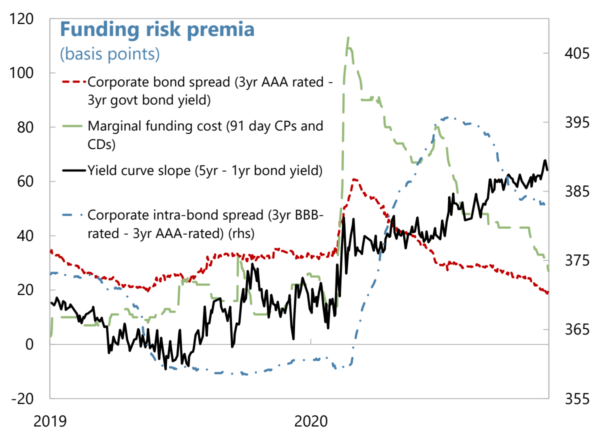


Sources: CEIC and IMF staff calculations.

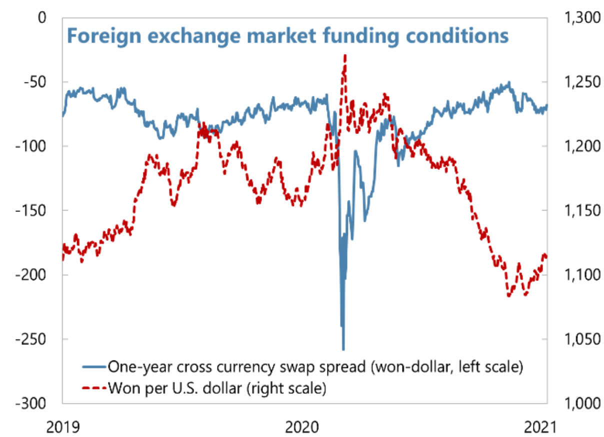
The long-term equity risk premium has fallen amidst greater risk appetite and the Price-Earnings ratio is near a record high.



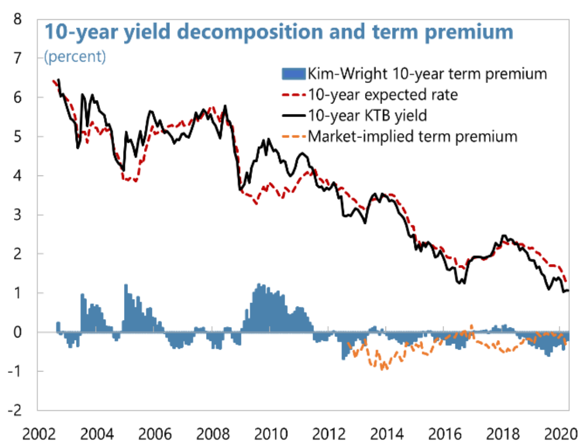
Risk premia returning to pre-COVID levels coupled with yield curve steepening is consistent with economic normalization.



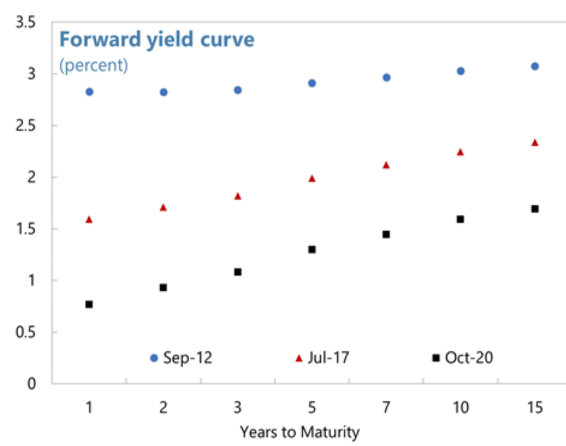
After tightening significantly, dollar funding conditions have also eased, and the won has appreciated against the US dollar.



In line with greater risk-taking the term premium is compressed, with yields driven by expectations of future short-term rates.



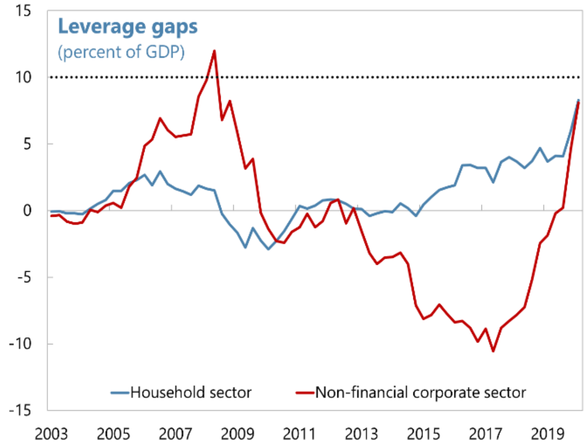
Markets are pricing in higher short-term rates, which together with compressed bond risk premia is suggestive of optimism.



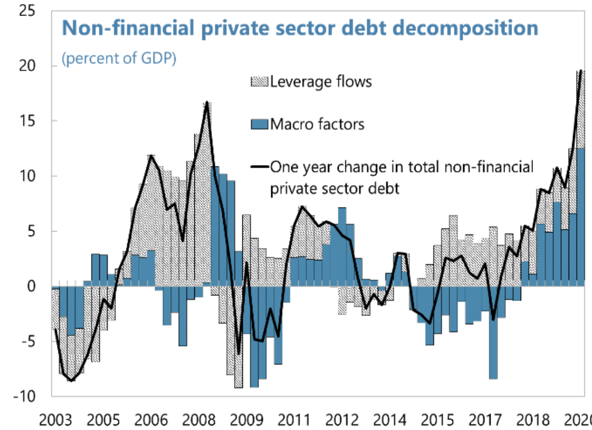
Sources: Haver Analytics; Starmine; DataStream; National sources; and IMF staff calculations.

Figure 4. Leverage Cycle Dynamics

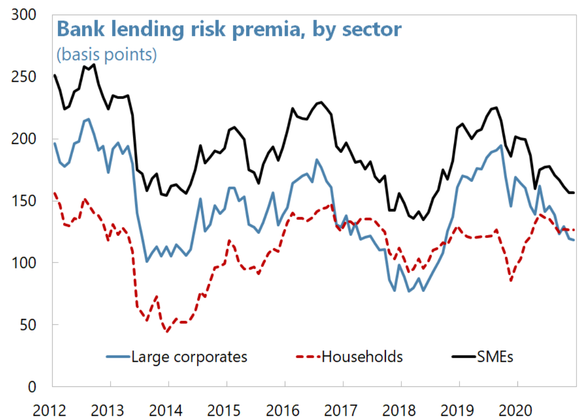
Leverage gaps for households and non-financial corporates continue to widen…



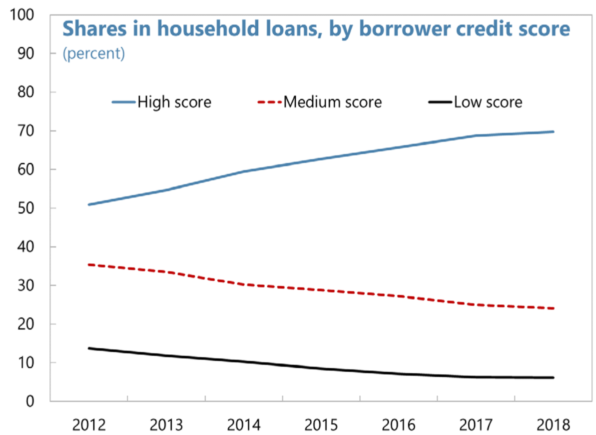
…driven by strong leverage flows independent of macro developments, suggestive of strong risk appetite.



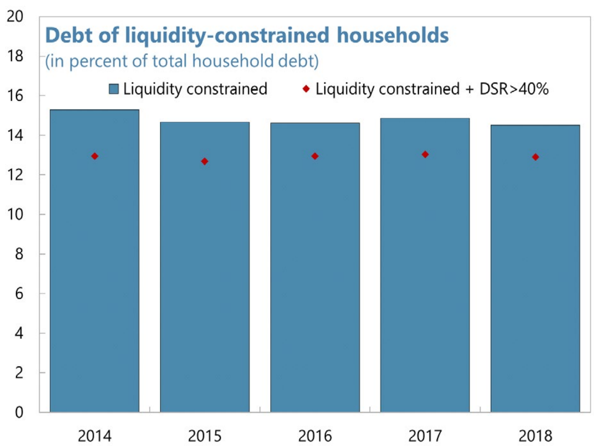
Aided by policy support, bank lending risk premia has fallen for households and corporates.



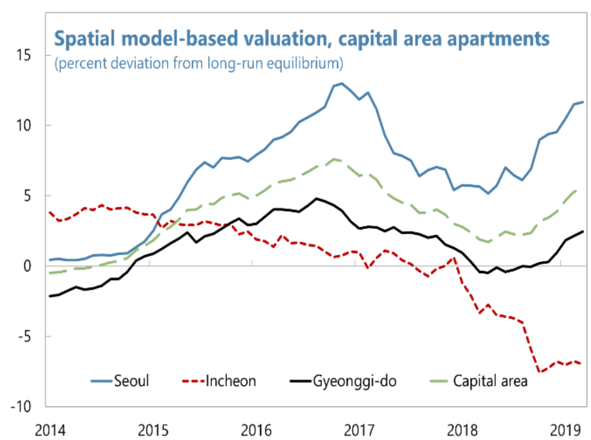
Risks from household debt are mitigated by a low share of subprime lending.



Nonetheless, there are some pockets of risks, including debt owed by liquidity-constrained households…



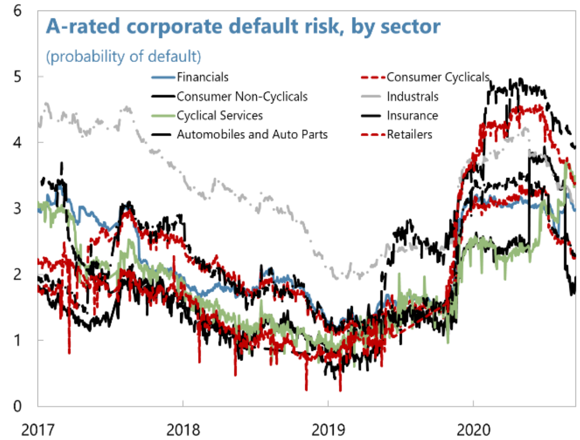
…as well as growing real estate price overvaluation in the Seoul metropolitan area.



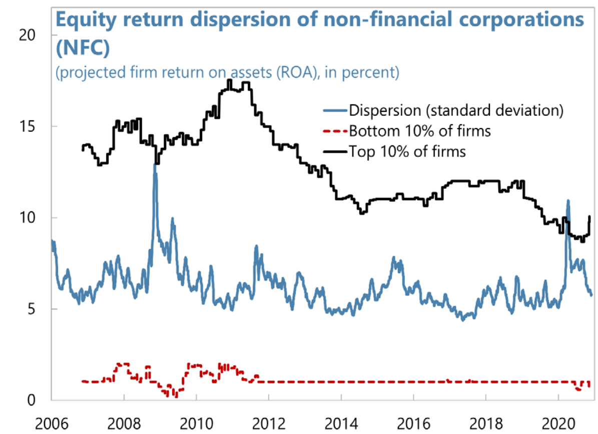
Sources: Korea Survey of Household and Living Conditions; National sources; and IMF staff calculations.

Figure 5. Corporate Balance Sheet Performance and Risk Indicators

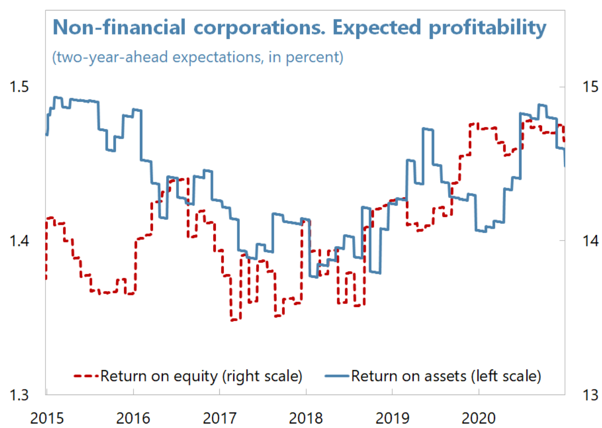
The corporate default cycle for large and medium firms has remained stable across sectors since the COVID outbreak.



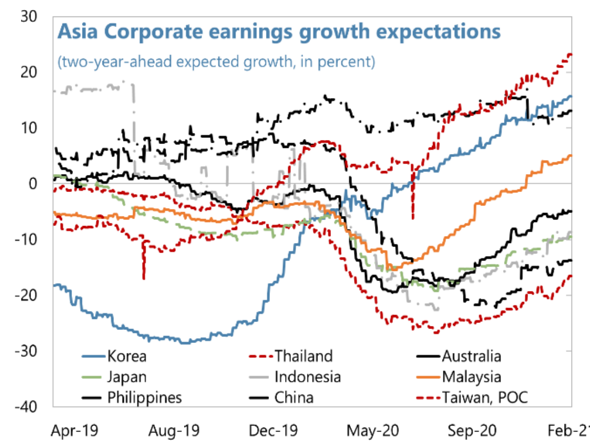
Dispersion in firm performance only briefly widened, a sign of limited corporate scarring for large and medium firms thus far.



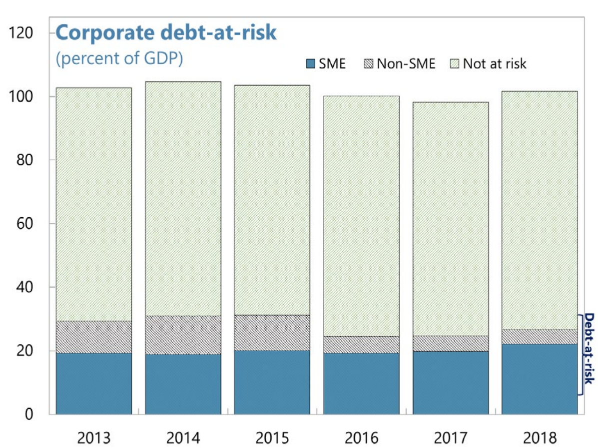
Post-COVID corporate performance expectations are for continued robust profitability.



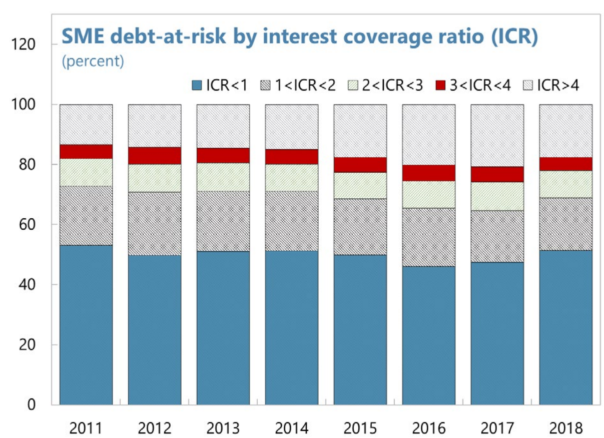
These beliefs are being driven by strong earnings forecasts for Korean corporates.



Nonetheless, around one quarter of non-financial corporate debt was at risk pre-COVID and is likely to have risen since…



…with most of the debt-at-risk owed by SMEs.



Sources: National sources; KIS Value; DataStream; Eikon; Haver Analytics; and IMF staff calculations.

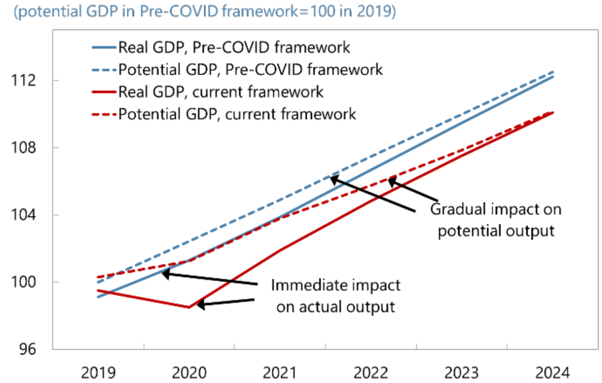
11. Preliminary estimates for 2020 suggest that the external position remained broadly in line with medium-term fundamentals and desirable policies (Annex III). Exports and imports declined sharply in the pandemic's initial stages amidst supply chain disruptions and shutdowns in trading partners. With exports rebounding since Q3-2020 and a narrower services deficit due to continued COVID-related travel restrictions, the current account balance rose to 4.6 percent of GDP in 2020 from 3.6 percent in 2019 (Figure 6). Over the medium term, the current account surplus is projected to narrow somewhat to 4.3 percent of GDP as domestic demand recovers and transitory factors stemming from the COVID shock recede. After initial equity outflows by nonresidents, overall capital flows in 2020 have been buoyant supported by bond inflows and a slowdown in outward investment by residents. Reflecting these developments, the won has appreciated, and is stronger than pre-COVID levels in both nominal and real effective terms. International reserves increased somewhat and remain adequate in comparison with the Fund's reserve adequacy metric.

OUTLOOK AND RISKS

12. The recovery is expected to accelerate, yet in a still-uneven manner. While the Q4-2020 surge in infections and tightening of distancing measures lowered household consumption and business sentiment, these factors have been gradually normalizing in Q1-2021. With the economies of major trading partners expected to rebound, exports and the related fixed investment are likely to remain key drivers of near-term growth. These factors suggest that the divergence in performance between exports and manufacturing on the one hand, and services and consumption on the other, is likely to persist, at least in the near term. Real GDP growth is projected to exceed its potential rate, at 3.4 percent in 2021 and 2.9 percent in 2022. This assumes a gradual COVID-19 normalization both domestically and externally with rollout of an effective vaccine in Korea through end-year. It builds in a drag from the fiscal impulse of -0.3 percent of GDP implicit in the 2021 budget, along with diminishing use of off-balance-sheet credit support. With output and employment below potential, inflation is forecast to rise modestly to 1.2 percent in 2021 on higher commodity prices, and is projected to remain below target for some time.

Actual and Potential Output

(potential GDP in Pre-COVID framework=100 in 2019)



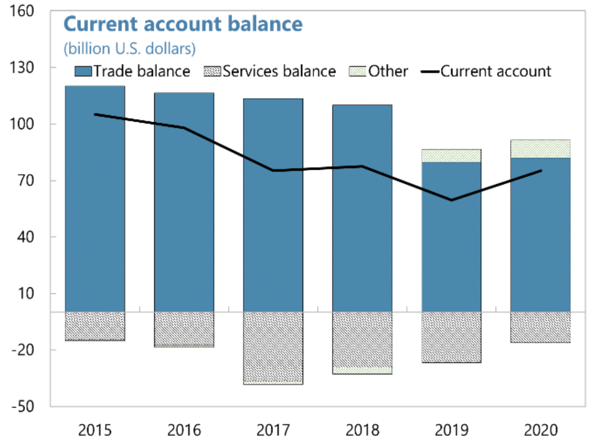
Source: IMF staff calculations.

13. The recovery would leave substantial economic slack into the medium term, running the risk of scarring. For the medium term, while there is a wide range of uncertainty, the pandemic is projected to add to the demographic-driven slowdown in potential growth through a few channels: 1) weakened corporate balance sheets weighing on investment and job creation; 2) subdued employment due to the high number of labor force exits; and 3) frictions as the economy adjusts to shifts in the sectoral composition of demand amidst rigidities in product and labor markets.[2] This implies that potential output would remain about 2.5–3 percent below the pre-shock path by 2025 (text figure)—albeit with a wide range of uncertainty. In the near term these factors are likely to weigh more on actual output, implying that the output gap would close only gradually through the medium term in the absence of substantial additional policy measures to stimulate demand.

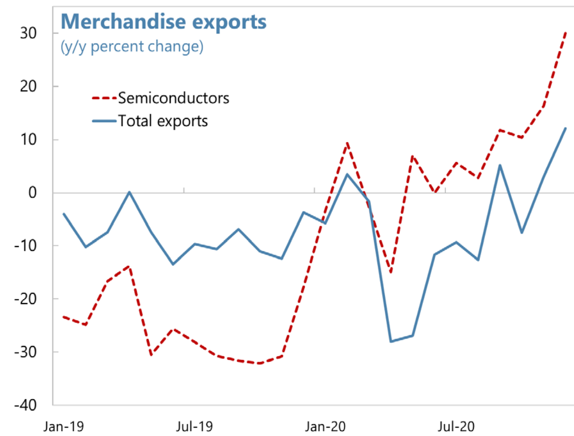
[2] See the Selected Issues Paper *"Assessment of Potential Output and the Output Gap"*.

Figure 6. External Sector Developments

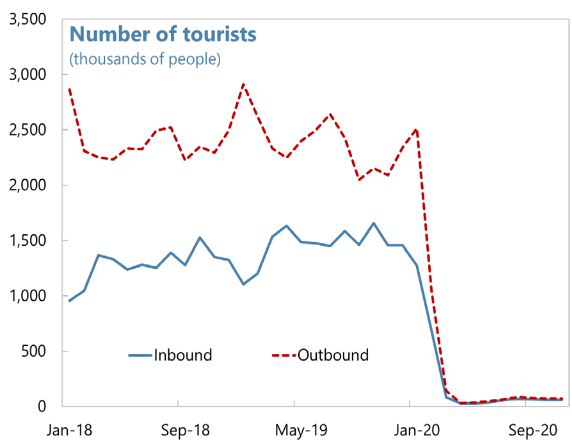
The current account surplus narrowed until 2019 but widened in 2020…



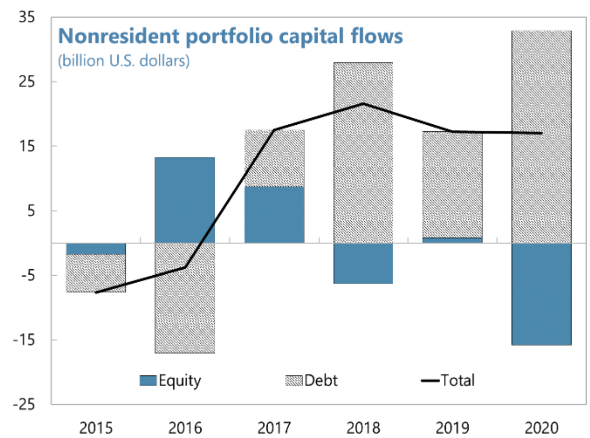
…as exports strongly rebounded from Q3-2020, driven by external demand for tech products.



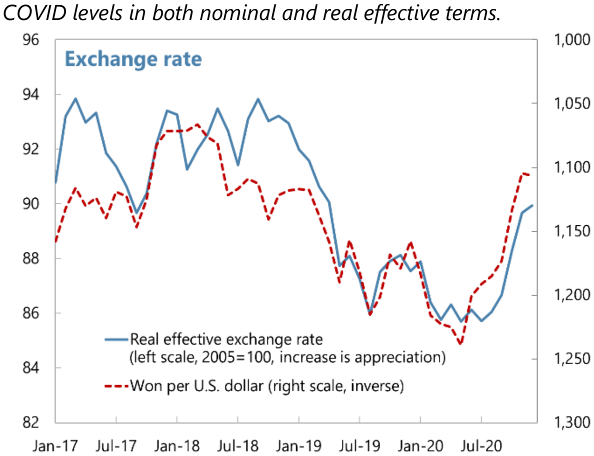
…and the services deficit narrowed due largely to COVID-19 travel restrictions.



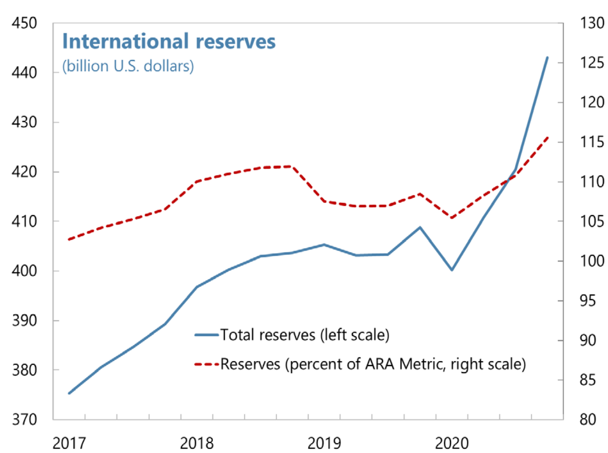
Nonresident portfolio flows remained relatively stable, with strong debt inflows outweighing some equity outflows in 2020.



After depreciating in H1-2020, the won has recovered pre-COVID levels in both nominal and real effective terms.



Reserves increased in 2020 and continue to remain adequate.



Sources: National sources; Haver Analytics; CEIC; and IMF staff calculations.

14. With this forecast assuming a gradual COVID-19 normalization, including rollout of an effective vaccine through end-year, uncertainty surrounding the outlook remains high (Annex IV). The risks to the outlook are broadly balanced, with COVID-related factors the principal risks in both directions. Renewed surges in infections and slower vaccinations—either domestically or abroad—are the largest downside risk, while growth could surprise to the upside in case of a faster-than-expected containment of the pandemic or continued resilient semiconductor demand spurring exports and investment. Other downside risks include second-round effects on consumption and investment from weakened household and SME balance sheets, and negative spillovers on the tech sector if trade tensions recur. Finally, a snapback in risk premia could trigger outflows and an asset price correction, impacting firms with large short-term gross financing requirements.

Authorities' Views

15. The authorities broadly agreed with staff's outlook for growth and inflation in 2021. They expected exports to continue to lead the recovery, with prospects for tech exports still strong, though dependent on COVID-19 developments globally. Regarding consumption, while recent data had been soft, policy measures would continue to provide support early in the year and a second-half boost from vaccination and re-opening could be expected. They agreed economic slack was sizable, emphasizing substantial uncertainty in estimates of the output gap and in the COVID-19 impact on potential growth given the unique nature of the pandemic. The authorities shared staff's views on inflation for 2021 in that some factors that had weighed it down last year, such as global oil prices and low demand in the services sector, could add to inflation in 2021.

16. The authorities noted that uncertainty surrounding the forecast remains high and agreed that COVID-19 developments were the biggest risk factor. They concurred that the possibility of additional outbreaks and the speed of vaccination presented both upside and downside risks—including from the pace of progress globally. They saw scope for pent-up demand to spur consumption as activities normalize and emphasized their ability and readiness to quickly deploy additional support if risks to growth began to materialize.

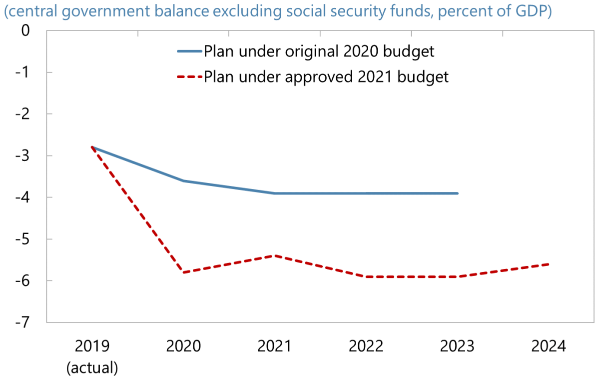
17. The authorities agreed with the bottom-line findings of the preliminary 2020 external sector assessment. While they reiterated their view that the EBA model does not fully capture some factors important for Korea—including the need to save more in view of future challenges arising from demographic change and possible reunification—they considered the external balance position to be in equilibrium.

POLICY DISCUSSIONS

Building on the successful response to the COVID-19 shock, the key policy priorities for the period ahead are to nurture the ongoing recovery and solidify the foundations for resilient, inclusive medium-term growth. Against the backdrop of sizable economic slack, remaining downside risks to the recovery, and available policy space, the benefits of taking a more accommodative stance to spur private demand would outweigh the risks, by helping the economy normalize faster, sustaining affected small businesses, and bringing discouraged workers back into the labor market. For the near term, somewhat easier fiscal and monetary policy than implied in the authorities' current plans is recommended. Credit support programs should be maintained until the recovery broadens across sectors and then be gradually phased out. Macroprudential policies should remain geared toward maintaining and building resilience. Structural policies can focus on implementing and complementing the Korean New Deal (KND), thus positioning the economy to take advantage of new drivers of growth in the post-COVID environment while strengthening the safety net.

A. Fiscal Policy

Authorities' Medium-Term Fiscal Plan
(central government balance excluding social security funds, percent of GDP)



Source: Ministry of Economy and Finance.

18. The 2021 budget implies some fiscal tightening relative to 2020 (text figure). The tightening is estimated to be about 0.3 percent of GDP after cyclical adjustment. This mainly reflects the essentially flat nominal overall expenditure growth in the 2021 budget as expiration of some temporary transfers ramped up in 2020 will offset higher spending in R&D, infrastructure, and the environment. These spending initiatives are partly attributable to the KND, a multi-year fiscal package with expenditures of about 1 percent GDP per year that aims to increase digital and green investment and strengthen the social safety net (Box 2). Spending was reallocated within the approved budget to provide immediate transfers of 0.5 percent of GDP (KRW 9.3tr) to affected firms and workers, and budget execution is being frontloaded.

19. A more expansionary fiscal stance for 2021 would be desirable. Korea has substantial fiscal space and sufficient administrative capacity to provide targeted fiscal support.[3] Fiscal policy is also likely to have a greater impact on private activity during this period of accommodative monetary policy and economic slack, and its impact on demand could help return discouraged workers to the labor force. These factors suggest that a modestly positive or at least neutral overall contribution of fiscal policy to the economy for 2021 would be appropriate.

[3] Staff's Debt Sustainability Analysis (Annex V) shows that central government debt is projected to rise from 36 percent of GDP in 2019 to about 62 percent of GDP in 2025, which is well within manageable levels. The projection is based on current policies and thus does not incorporate the impact of the proposed fiscal rule.

20. Given persisting heterogeneity in the impact of the pandemic on firms and households, policy measures should focus on supporting those who remain affected in a targeted manner and on preventing permanent scarring. An expansionary overall stance could be achieved by focusing direct support on sectors that are lagging in the recovery, expanding measures to enhance inclusion and equity. Possibilities include speeding up the expansion of social security programs to non-regular workers, temporarily extending the duration of unemployment benefits, strengthening job search support, increasing the basic pension for the lowest-income quintile (text table). In addition, where feasible, public investment projects (such as the green and digital projects under the KND) should be accelerated. Several of these measures would have the added benefit of providing a welcome boost to medium-term potential growth.

Main Labor Market Safety Net Measures in 2020

	Existing / New	Purpose / Beneficiaries	Measures in 2020	Staff Recommendation
Job Retention Program	Existing	Partial wage subsidies to prevent job losses	The government eased application requirements and increased the generosity of subsidies.	Consider returning to pre-COVID status after the COVID shock
Employment Insurance	Existing	Unemployed workers	Coverage was expanded to artists and people working in cultural industries. Some eligibility conditions (such as the job search and training requirements) were relaxed.	During the COVID shock: extend the duration (for young and mid-aged workers, and workers with shorter employment history) with reduced benefit. After the COVID shock: expand EI coverage to salaried workers with non-standard contracts.
Unemployment Assistance	New (for self-employed); Existing (for youth)	Unemployed workers	The government provided emergency unemployment assistance to self-employed, freelancers and youth who are not covered by the Employment Insurance Program.	As EI is expanded to more salaried workers, unemployment assistance can focus on non-salaried workers and training afterwards.
Subsidized Family Care Leave	New	Employees that apply for family care leave to care their children	The government provided a subsidy to applicants for (previously unpaid) family care leave.	Consider making the subsidy recurrent, at least for double-earner families.
Household Emergency Relief Program	New	All households	A one-off transfer was made for up to KRW 1 million for each household.	Untargeted transfers to households are recommended to be used only as last resort.

21. Gradual consolidation can be undertaken subsequently. Compared to the pre-COVID medium-term budget plan, average budget deficits for 2021-2024 are 1.8 percent of GDP higher. In contrast to the relatively flat deficit profile in the budget's medium-term fiscal outlook, the recommendation for an easier stance in 2021 can be followed by gradual consolidation in 2022–24 when the recovery is more advanced, without altering the envisaged cumulative deficit. This can be achieved as COVID-related spending unwinds and by following the longstanding IMF recommendation to begin raising the revenue-GDP ratio over the medium term.[4]

[4] See *Republic of Korea: 2019 Article IV Consultation*, IMF Country Report No. 19/132.

Box 2. The Korean New Deal[1]

The Korean New Deal (KND) is a national development strategy introduced in July 2020. It aims to mitigate the economic impact of the COVID shock, facilitate transformation toward a digital and green economy, and achieve greater inclusiveness. The KND includes three main pillars:

- *Digital New Deal.* Aims to further strengthen digital capacity and promote innovation, based on Korea's comparative advantage in information and communication technology. Projects focus on ICT infrastructure, such as the installation of 5G across the country supported by tax incentives and fee exemptions. AI and 5G technologies will also be promoted for data collection and utilization to build smart factories, digitalize library and educational materials, provide smart healthcare, and help the government better target safety net programs.
- *Green New Deal.* Aims to accelerate the transition towards a low-carbon economy and achieve net-zero carbon emissions by 2050. Key projects include investment in energy infrastructure that promotes energy efficiency and reduces emissions, such as renewable energy, green remodeling of school buildings and rental houses, installation of electronic vehicle charging facilities, and fuel subsidies for hydrogen vehicles.
- *Social safety net.* The KND seeks to reduce gaps in the employment insurance scheme through phased-in expansion of coverage to workers in non-standard forms of employment (e.g., artists and freelancers) and strengthen the safety net through relaxation of the eligibility criteria for the basic livelihood security benefits. It will also include the establishment of a "future-oriented" job training system to allow a smooth transition between occupations and nurture talent for innovation.

The Korean New Deal seeks to boost both public and private investment on these priorities. It envisages KRW 114 trillion (equivalent to 5.9 percent of 2019 GDP) in public spending and KRW 45.9 trillion in associated private investment during 2020-2025 (text table). To facilitate private investment, regulations applying to the utilities and transportation sectors, among others, are being streamlined.

Overview of Korean New Deal

		Public spending (trillion won)	
		2020-22	2020-25
Digital New Deal	Stronger integration of data, network and AI into the economy	12.5	31.9
	Digitalization of education infrastructure	0.6	0.8
	Smart medical instructure, remote working SMEs, online microbusiness	1.1	2.1
	Digitalization of public infrastructure	4.4	10.0
Green New Deal	Green transition of infrastructure	6.1	12.1
	Low-carbon and decentralized energy	10.3	24.3
	Innovation in green industry	3.2	6.3
Social Safety Net	Employment and social safety net	9.3	22.6
	Investment in human capital	1.5	4.0
Total		**49.0**	**114.1**

[1] Prepared by Si Guo. The box provides a summary of the Korean New Deal, based on *"The Korean New Deal – National Strategy for a Great Transformation"* published by the Korean government in July 2020.

22. To maintain transparency and ensure support for the budget, the government can explore ways to further enhance the disclosure of information about the use of public funds. This is especially relevant in the context of a rapid roll-out of relief spending during the COVID shock. Korea already publishes the key contents of public procurement contracts. Staff recommends that the authorities expand the disclosures to include beneficial ownership information of legal persons that have been awarded government procurement contracts. This would be facilitated by the implementation of relevant recommendations of the 2020 FATF/APG assessment and help prevent conflicts of interest in public procurement processes.[5]

23. Against the expected fiscal pressure from aging, the government has put forward a welcome proposal to anchor the public finances within a rules-based framework. The government has recently proposed a fiscal rule that features a gross debt anchor at 60 percent of GDP and a flexible consolidated deficit target of 3 percent of GDP.[6] The proposal also includes an escape clause that would suspend the application of the rule under extraordinary circumstances (such as wars, large disasters, and global economic crises) and a provision to temporarily ease the deficit target by 1 percent of GDP in case of a slowdown. The gross debt anchor is prudent from a debt sustainability perspective and appears broadly appropriate from the perspective of the optimal debt level literature. Because the deficit target under the proposed rule is unlikely to stabilize the debt near 60 percent of GDP, the scope for desirable countercyclical fiscal policy will hinge critically on the effectiveness of the "slowdown provision", for which operational details still remain to be finalized and specified in the implementing regulations. An expenditure rule—a path for annual ceilings on budgetary expenditure—in lieu of a deficit target could be considered to achieve some countercyclicality without reliance on a slowdown provision, albeit it would raise other implementation challenges such as the need for rule adjustments in response to major tax policy changes. To enhance the credibility of the proposed rule, staff recommends the designation of an independent institution (e.g. a fiscal council) to monitor, review and enforce it. Major modifications of the rule should be subject to National Assembly approval.

Authorities' Views

24. The authorities viewed near-term fiscal policy as sufficiently accommodative for the time being, while indicating readiness to provide additional support if conditions warranted. They emphasized that the 2021 budget was significantly more expansionary than the original 2020 budget and expected an additional boost from recent emergency transfers and frontloading of expenditure. They did not see additional support as necessary under the baseline, but given the

[5] The FATF/APG assessment (Immediate Outcome 5, recommended action (c)) notes that Korea should adopt mechanisms to ensure the accuracy of the basic and beneficial ownership information available on the various registers, such as by verifying information at the time of registration, conducting post-registration testing of records, and encouraging users (especially financial institutions and casinos) to report errors.

[6] The debt and deficit limits would be "soft" limits governed by the formula: {Government debt / 60%} * {Consolidated fiscal balance / (-3%)} ≤ 1. See the Selected Issues Paper *"Fiscal Rules in Korea—Some Considerations"* for further detail and discussion.

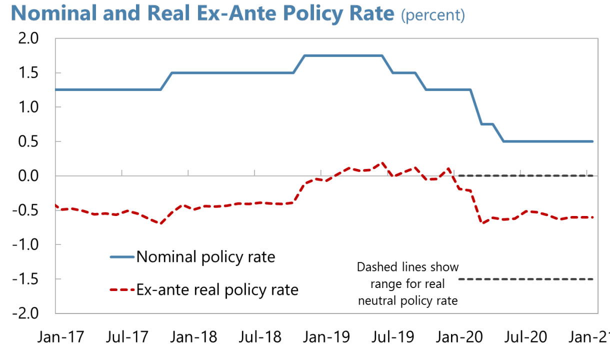
uncertainty surrounding the outlook noted they would take discretionary action if necessary. They agreed that any further stimulus should be targeted to the sectors lagging in the recovery.

25. The authorities reiterated their commitment to prudent medium- and long-term fiscal management, supported by the proposed fiscal rule. Against the backdrop of expected fiscal pressures from rapid population aging, the proposed rule would help contain the pace of future debt increases. The authorities agreed on the usefulness of establishing a council to oversee its implementation, provided that they retain full latitude to formulate and amend the budget. They also firmly believed that the fiscal authority should fully govern material modifications of the rule. On their choice of a deficit-based operational rule, the authorities were confident that the proposal would allow for countercyclical policy through the flexibility built into the formula and a planned "economic slowdown" provision that would be specified through regulation, after passage by the National Assembly. The authorities felt that their design had advantages over other approaches to ensure countercyclicality, such as an expenditure rule, including better compatibility with possible revenue policy changes in the future.

B. Monetary Policy and the FX Market

26. The policy rate has been brought to historically low levels in nominal terms, albeit this reflects to some extent declines in inflation expectations and the neutral rate. Staff analytical work using a variety of approaches finds a plausible range for the real neutral policy rate of 0 to -1.5 percent. With one-year inflation expectations between 1.1 and 1.8 percent, the real ex-ante policy rate is just below the midpoint of the estimated neutral range (text figure). Taking estimation uncertainty and the overall credit and financial conditions into account, staff assesses the current monetary stance as moderately accommodative.

Nominal and Real Ex-Ante Policy Rate (percent)



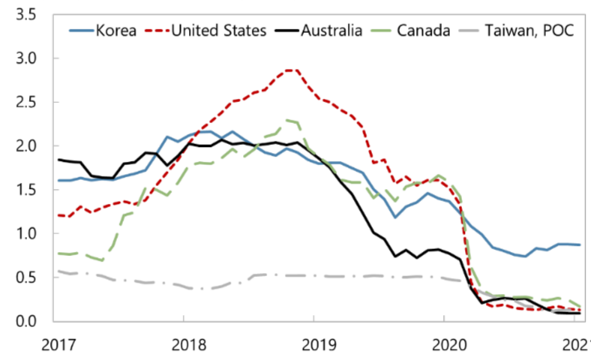
Sources: Bank of Korea; Consensus Forecasts; Haver Analytics; and IMF staff calculations.
Note: The ex-ante real policy rate is calculated as the nominal policy rate minus 1-year-ahead inflation expectactions from Consensus Forecasts. For the range of the neutral rate see S. Rafiq, "What's in the (R)-Stars for Korea?", forthcoming IMF Working Paper.

27. Given the still-tentative recovery, sizable economic slack, and inflation well below target, a more firmly accommodative near-term stance would seem desirable. This would support the recovery in private domestic demand and help avoid a cliff in lending as support from credit facilities diminishes, while macroprudential policies can be geared to addressing financial stability risks (see below). With long-term inflation expectations below target, staff also sees up-front easing as reducing the risks of entrenching an environment of below-target expectations and low-for-long interest rates.

28. Additional near-term accommodation can be provided through a number of instruments. It could be achieved through a modest further easing of the policy rate, using the remaining space above zero and putting Korea's rate in line with advanced economy peers. With financial markets pricing in some policy tightening within the next two years there is also scope for the BOK to narrow yields through forward guidance that policy would not be tightened until actual inflation is near the target (text figure).[7] Forward guidance would also help policy expectations to adjust as the anticipated duration of pandemic-related effects on the economy changes. Finally, the BOK could act to ease credit conditions in a more targeted way, further expanding its Bank Intermediated Lending Support Facility (BILSF) or corporate bond/commercial paper SPV.

Government Bond Yields

(two-year yields, percent, monthly average)



Sources: Haver Analytics; and IMF staff calculations.

29. If downside risks materialize, unconventional policies could be deployed and scaled up. Unlimited support through repo operations has provided an effective backstop during a period of high uncertainty and could be reintroduced if concerns over financial system liquidity arise. Because of the structurally low profitability of banks, negative rates appear less suited for Korea. With a majority of government securities held by the domestic financial sector, expanded BOK purchases—possibly through a program of yield curve control (YCC)—could increase lending and boost markets through the portfolio channel. Any asset purchase program would need to be accompanied by clear communication about its rationale and objectives.

30. The exchange rate has continued to move flexibly, with intervention limited to preventing disorderly market conditions, and the authorities are taking steps to deal with potential sources of market volatility. FX intervention in H1-2020 was $6.2 billion (net sales, excluding temporary use of the Fed swap line) but returned to zero in 2020-Q3.[8] Easing of the leverage cap on banks' FX derivatives positions and temporary exemption of the levy on FX funding helped reduce initial strains on dollar funding and liquidity.[9] The authorities recently announced welcome plans to strengthen FX liquidity regulations and monitoring for non-banks and improve

[7] Previous analytical work emphasized the need to enhance communication on how the inflation target would be reached. See K. Clinton and others, "Strengthening the Monetary Policy Framework in Korea," IMF Working Paper 19/103.

[8] Reserves nevertheless increased by $11.7 billion through 2020-Q3, due to interest on reserves and valuation gains from reserve assets not denominated in U.S. dollars.

[9] The 2020 FSAP found that these tools, which are classified by the Fund as CFM/MPMs, have been helpful in improving banks' resilience to FX shocks and reducing FX maturity mismatches. The authorities should periodically review their continued effectiveness and whether there are alternative measures that directly address the systemic financial risks but are not designed to limit capital flows.

the FX policy framework by launching an interagency FX macroprudential council.[10] The authorities have also created a facility, to be activated in times of stress, that enables banks and non-bank financial institutions to obtain FX funding through repos of high-quality FX-denominated securities.

Authorities' Views

31. The BOK viewed that its current accommodative monetary policy stance is appropriate, considering macroeconomic and financial stability conditions in a comprehensive manner. While acknowledging sizable economic slack and below-target inflation, the BOK viewed the benefits of additional policy rate cuts as being outweighed by the potential stability risks of a further loosening in financial conditions that could result. The BOK expected excess capacity to diminish more quickly than staff did and inflation expectations to continue to rise gradually. While the BOK acknowledges the availability of other macroprudential policy tools, it viewed that, under its mandate for price stability and financial stability, it should also pay close attention to the accumulation of financial imbalance risks arising from loose financial conditions.

32. If downside risks materialize in the near term, the BOK saw ample scope for support through its existing targeted instruments. The BILSF and the corporate bond/commercial paper SPV were seen as having successfully channeled credit to affected borrowers, and recent expansion and easing of terms could be repeated if conditions warranted. Regarding its purchases of KTBs, the BOK emphasized that the aim was to avoid market volatility upon news of increased supply and not to more broadly loosen financial conditions. While viewing the possibility of another systemic liquidity squeeze as highly unlikely, the BOK agreed that unlimited repo operations and other liquidity measures could be quickly deployed in such circumstances. The BOK did not anticipate conditions arising that would call for considering quantitative easing or other unconventional policy tools.

33. The authorities stressed their commitment to exchange rate flexibility and limiting FX intervention to preventing disorderly market conditions. They believed the recent steps to strengthen FX prudential measures would contribute to market stability, and they would continue monitoring and reviewing policy settings as appropriate. The recently established FX repo facility was intended as a backstop to be activated when needed, in order to permit the market to meet FX needs in most circumstances.

[10] Existing FX prudential regulations and monitoring center largely on the banking sector. To mitigate the risk of FX pressures driven by the non-bank sector, as experienced at the onset of the pandemic, the authorities will (i) enhance monitoring of FX exposures of non-banks (including FX funding capacity and FX asset-liability maturity mismatch); (ii) require securities firms to hold liquid assets for more than 20 percent of their structured products related to foreign assets; (iii) conduct FX liquidity stress tests on securities firms and insurers, and; (iv) set up an FX macro-prudential council to discuss adjustments in FX macro-prudential policies and improve FX policy coordination between various government agencies.

C. Financial Sector Policy

34. Credit support measures should be maintained until the recovery broadens across sectors, and some of the tools to support SMEs should be sharpened. With loan officer surveys signaling tighter lending standards and more than KRW 50tr in loan deferrals coming due in the first half of 2021 alone, the objective is to avoid a corporate lending cliff, especially for SMEs. The BOK's BILSF, which is bank-intermediated and thus involves viability screening, can be expanded as needed. The authorities should also keep the conditions and focus under review to facilitate utilization of some emergency credit facilities with unused balances, such as the *Key Industry Stabilization Fund,* the *Emergency Lending Program for Small Merchants*, and the *Working Capital Support Program*. Some continued risk sharing through instruments such as partial loan guarantees may also be needed to help maintain bank lending to firms in the hardest hit sectors as loan deferrals expire. Moreover, the authorities may need to consider solvency support, including through equity and quasi-equity instruments, for viable firms with severely weakened balance sheets due to the pandemic shock.[11] Once the recovery broadens, a gradual withdrawal of support will be appropriate to facilitate necessary resource reallocation and avoid distortions, including in trade-related sectors. Relevant financial indicators to be taken into account when calibrating the withdrawal include the evolution of banks' lending standards, projected/budgeted lending growth by banks and other financial institutions, and indicators of corporate financial health, in particular the recovery in operating revenues across different sectors.

35. The macroprudential stance appears broadly proportionate to risks but should be tightened further if household credit continues to rise sharply. Financial stability risks from rising household leverage gaps are mitigated by relatively low LTV ratios, a low incidence of subprime lending, and rising shares of secured and fixed-rate amortizing lending. FSAP stress tests —applying a more severe economic shock than the current downturn—also suggest that household and non-financial corporate balance sheets are relatively resilient.[12] Nonetheless, the recent tightening in prudential limits and bank risk management processes on unsecured household lending was appropriate as these were partly being used as a source of financing for the equity market. Staff analysis for Korea shows that borrower-based prudential policies that constrain leverage are effective in moderating downside risks to future house price growth and containing probabilities of household debt default (see below figures).[13] To maintain resilience therefore, the authorities

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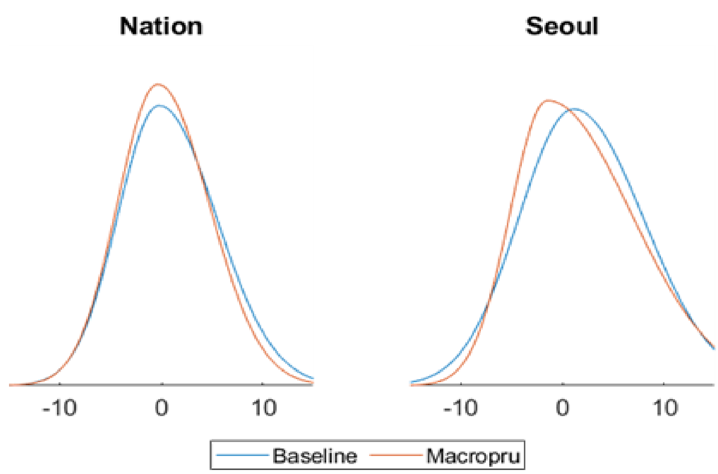
[11] See A. Bauer and others, "Flattening the Insolvency Curve: Promoting Corporate Restructuring in Asia and the Pacific in the Post-C19 Recovery," IMF Working Paper 21/16.

[12] See *Republic of Korea: Financial Sector Assessment Program-Technical Note-Non-Financial Balance Sheet Vulnerabilities and Risks to Financial Stability:* https://www.imf.org/en/Publications/CR/Issues/2020/09/18/Republic-of-Korea-Financial-Sector-Assessment-Program-Technical-Note-Non-Financial-Balance-49750.

[13] The impact of prudential policies is likely greater in Seoul than elsewhere as (i) the city contains more than half of Korea's entire housing stock by value; (ii) the real estate price per square foot is highest in Seoul, and therefore where households are most leveraged, and; (iii) there is a significant real estate supply shortage. Also see "Evolution of Macroprudential Policies in Korea," in *Republic of Korea: Selected Issues*, IMF Country Report No. 19/133, which examined the impact of individual macroprudential policies on Korean house prices and found adjustments in the LTV ratio and stamp duty to be particularly effective.

should consider tightening borrower-based measures that constrain leverage for real-estate purchases if lending growth in the household segment does not relent, while being mindful of any possible impacts on short-term growth and household credit market inclusion. Measures could include applying the DSR ceiling at the individual borrower level and raising stamp duties and capital gains taxes for real estate purchases in areas considered overvalued. With banks approaching their prudential loan-to-deposit ceilings, a more targeted approach to tilt the composition of credit away from households could also be considered by further reducing the weight applied to corporate credit. Where there are concerns about credit inclusion, some borrower-based macroprudential tools could become more forward-looking in their calibration by factoring in a borrower's net present income stream across the entire life cycle. As recommended in the FSAP, a Sectoral Countercyclical Capital Buffer (SCCyB) should be introduced (set at zero initially) to augment the existing macroprudential toolkit. The buffer could be activated in case of further widening leverage gaps, to help strengthen banking sector resilience against household debt risks.[14]

Real Apartment Price Growth: The Effect of Tighter Macroprudential Measures



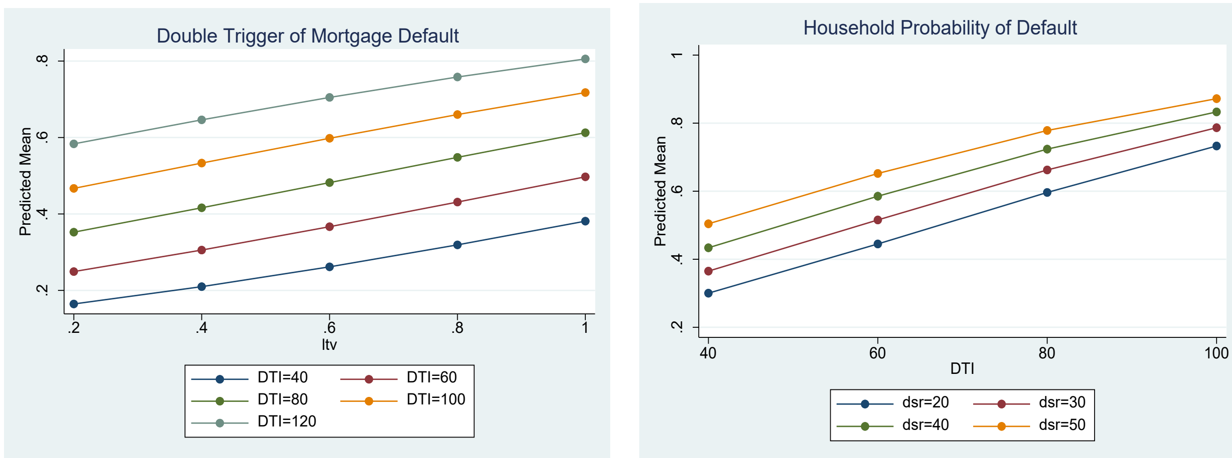
Source: IMF staff calculations.

Notes: Panels show the probability density functions for the year-on-year growth in real apartment prices nationwide (left) and in Seoul (right). X-axis: Annual percent change in real apartment prices, one year ahead. Baseline: The estimated unconditional distribution. Macropru: The baseline plus the estimated effect of a 10 point tightening in LTV and DTI limits. Estimation sample: 1992Q4-2019Q1.

36. Realigning supply-demand balance in the housing market will require complementing macroprudential curbs with further steps to boost supply. Staff welcomes the authorities' efforts to increase housing supply and improve urban infrastructure and transport connectivity in rural areas to alleviate demand pressures in prime neighborhoods. Further measures to increase housing supply in metropolitan areas through facilitating greater involvement of the private sector should be prioritized, including through easing price caps on pre-construction apartment sales and streamlining regulatory requirements.

[14] See *Republic of Korea: Financial Sector Assessment Program-Technical Note-Macroprudential Policy Frameworks and Tools:* https://www.imf.org/en/Publications/CR/Issues/2020/09/18/Republic-of-Korea-Financial-Sector-Assessment-Program-Technical-Note-Macroprudential-Policy-49749.

Impact of Borrower-Based Macroprudential Policies on Household Debt Default Risks



Source: IMF staff calculations.

Notes: Panels show the Korean household probability of debt default based on micro household balance sheet data for different balance sheet leverage indicators; debt service ratio, loan-to-value, and debt-to-income ratios. The data shows that higher LTV, DSR and DTI ratios are associated with a greater probability of debt default for households. Macroprudential policies that therefore constrain these ratios will lower debt default risks for households.

37. **Efforts to strengthen systemic resilience and address risks in the non-bank sector should continue.** In line with FSAP recommendations, continued strengthening of the prudential and supervisory approach for policy banks will be important given their prominent role in the crisis response through expanded lending to adversely affected sectors. Given remaining downside risks and the importance of capital buffers for loss absorption and credit supply, staff welcomes the authorities' supervisory guidance for banks on limiting dividend distributions, based on stress test results, through H1-2021. Risks related to asset managers are being addressed through the prudential tightening in their leverage and liquidity ratios, the introduction of mandatory stress testing, and approval of the Consumer Protection Act to reduce the incidence of mis-selling of structured products. As COVID-19 potentially accelerates asset managers' diversification strategies, these regulations should be revisited and adjusted as market conditions dictate. Finally, the current supportive financial conditions provide a window of opportunity to remove the ban on short selling, as this would improve price discovery, and re-sensitize and improve the ability of market participants to manage their risk-taking. Concerns about equitable access for all investors are most efficiently addressed through strengthening of sanctions for violations, stepping up monitoring, and enhancing the role of market-makers in providing opportunities for retail investors to participate in short-selling.

Authorities' Views

38. **The authorities noted that they would continue to closely monitor financial stability risks and further tighten prudential policies if necessary.** The authorities view household debt as a significant risk to financial stability, noting that the recent tightening of regulations on unsecured lending was driven partly by concerns that such borrowing was being used as financing for the

equity market. The authorities remained concerned about the rapid growth of mortgage loans and housing prices in some areas despite an already relatively tight macroprudential policy stance. They acknowledged the importance of complementing macroprudential policies with measures that expand housing supply, particularly in the Greater Seoul area, such as those announced in August 2020 and February 2021. However, they did not view the easing of price ceilings on apartment pre-sales as an effective tool to spur housing supply, viewing these restrictions also as a tool to preserving housing affordability. In this context, the government has introduced a new measure—provision of incentives for landowners—to promote supply in urban areas.

39. The authorities concurred with the staff assessment that the overall financial system remains resilient, while remaining committed to addressing remaining vulnerabilities promptly. They acknowledged the importance of banks maintaining strong capital positions to deal with any possible weakening of asset quality when credit support is phased out, extending the supervisory guidance that limits dividend distribution for banks shortly after the conclusion of the Article IV discussions. The authorities believe their plan to address FX risks arising from structured financial products and activities of non-bank financial firms will help make the market more resilient to episodes of external stress. Finally, the authorities indicated that they are taking steps to level the playing field between retail investors and institutional investors, prior to the planned lifting of the short-selling ban in May.

40. The authorities agreed with staff on the need to maintain credit facilities until the economic recovery is firmed up. Despite the normalization in credit markets, the authorities are committed to using the remaining room under existing support facilities and if necessary, expanding some facilities like the BILSF and enhancing the attractiveness of others to avoid a premature tightening of credit, especially for SMEs.

D. Structural Policy

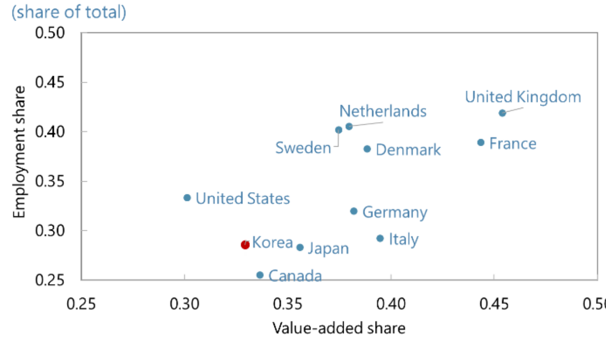
41. The main structural priorities are to reposition the economy for shifts in the post-pandemic environment while ensuring vulnerable groups are protected. Against the backdrop of possible post-COVID structural shifts in the composition of demand, an environment conducive to the reallocation of resources will be critical to allow dynamic new firms and industries to absorb labor and capital from areas where demand is sluggish. This calls for addressing longstanding rigidities in Korea's product and labor markets. Meanwhile, to avoid exacerbating existing inequalities amidst a rapid pace of change, social safety nets should be strengthened to protect the vulnerable.

42. The KND seeks to foster new growth drivers in the post-COVID environment, increase inclusiveness, and make economic activity greener (Box 2). These objectives are consistent with addressing some of the above challenges. The aim to promote digitalization throughout the economy should help close longstanding productivity gaps in the services sector, especially among small firms. Given the size of government spending on the KND relative to the macroeconomy (one percent of GDP per year), complementary steps to induce large-scale private investment in support of the KND's objectives will be critical to realize a significant growth impact. To that end, the authorities have created a New Deal Fund that will invest private and public funds in priority projects and sectors and established a task force to identify and pursue implementation of legal and institutional reforms to facilitate the KND's objectives.

43. The KND should be complemented with a set of broader structural reforms that can provide an additional boost to potential growth. This includes further efforts at lowering legal barriers to entry and startup costs, and simplifying complex and burdensome regulations, which would create a more favorable environment for investment by younger firms in emerging industries such as digital medicine and biotechnology. These reforms, along with lowering regulatory barriers to competition, would facilitate job-rich growth in the services sector more broadly where productivity growth has lagged that of the manufacturing sector and of advanced-economy peers, resulting in a relatively small share of skill-intensive services in total employment and activity (text figure).[15] Korea has also made efforts to enhance growth prospects through deeper integration in regional supply chains through its planned participation in the Regional Comprehensive Economic Partnership and is discussing several additional free trade agreements.

High Skill-Intensive Services Shares Across Countries

(share of total)



Sources: EU KLEMS; World KLEMS; and IMF staff calculations.
Notes: The figure compares Korea with other high-income countries when they had the *same GDP per capita* that Korea had in 2018. "High skill-intensive" sectors include finance and insurance; real estate; professional, scientific, and technical services; business facilities management and support; rental and leasing; education; and human health and social work.

44. The authorities have strengthened the insolvency system and could take additional steps to facilitate post-pandemic corporate restructuring. The FSAP found Korea's insolvency framework generally capable of efficient corporate reorganization and debt restructuring.[16] Welcome measures have been taken recently to broaden access to the simplified insolvency process for SMEs and accord seniority to post-commencement financing when a firm enters liquidation. To cope with a potential rise in cases as temporary support programs taper off, further helpful steps would include promoting out-of-court solutions under the Corporate Restructuring Promotion Act—which are not widely utilized, developing indicators for triage of SMEs and standardized options for their resolution, and adopting pending FSAP recommendations to clearly delineate duties of directors and bar *ipso facto* clauses in executory contracts.

[15] See *Republic of Korea: 2019 Article IV Consultation*, IMF Country Report No. 19/132.

[16] See *Republic of Korea: Financial Sector Assessment Program-Technical Note-Insolvency and Creditor Rights*: https://www.imf.org/en/Publications/CR/Issues/2020/09/18/Republic-of-Korea-Financial-Sector-Assessment-Program-Technical-Note-Insolvency-and-Creditor-49748.

45. The COVID-19 shock has underscored the importance of strengthening the social safety net and reducing labor market duality. With employment falling more among "non-regular" workers, who are also more likely to be young or female, the shock could exacerbate existing inequalities (text figure). Temporary interventions during the pandemic helped to mitigate these effects, while illustrating the need for permanent reforms. In this regard, welcome steps are being taken to broaden coverage of basic livelihood security programs and the employment insurance system, and to increase job matching assistance through allowances and training as planned in the KND. These measures will complement previous efforts to make growth more inclusive (through increased minimum wages, earned-income tax credits, and basic pensions) and have the added benefit of strengthening Korea's automatic stabilizers. Reducing labor market rigidity by making regular contracts more flexible remains a critical need.[17] This can be pursued once the economy recovers or alternatively flexibility could be applied only to new hires to facilitate implementation.

Employment Impact by Group

(y/y percent changes; columns show Jan. 2021, dots show Sep. 2020)

Sources: IMF staff calculations.

*Non-regular workers include temporary and daily salary workers, as well as non-salary workers.

46. Enhancing carbon pricing will be important to help deliver on the green pillar of the KND and achieve Korea's broader climate objectives. Korea has pledged to cut greenhouse gas emissions by 37 percent below the "Business as Usual" baseline by 2030 and aims to become carbon neutral by 2050. Achieving the 2030 pledge will require a substantial increase in allowance prices in Korea's emissions trading system from current levels of about $20/ton.[18] Pricing can be enhanced by aligning emissions caps with the 2030 mitigation target and underpinning the system with a robust and rising price floor. Additional revenue from higher carbon pricing and greater auctioning of allowances could be used to compensate vulnerable groups for higher energy prices, support R&D and investment in climate-smart technology, and lower the tax burden on labor and capital income.[19] The KND includes several measures to increase the shares of renewable power generation and electric vehicles, improve energy efficiency of infrastructure, and support innovation in green industry. While most of these measures involve public investment or subsidies, further steps could reinforce incentives for mitigation and green investment. Revenue-neutral fee/rebate schemes for vehicles and power generators with above/below average emission rates could play a key role, without imposing a tax burden on the average household or firm or fiscal cost to the government.

[17] See J. Schauer, "Labor Market Duality in Korea," IMF Working Paper WP/18/126.

[18] See the Selected Issues Paper *"Fiscal Policies to Strengthen Korea's Climate Mitigation Strategy"* for further detail.

[19] Strengthened carbon pricing would also lessen the likelihood of border adjustments applied by the EU to Korean exports.

Authorities' Views

47. The authorities emphasized the potential boost to growth from the KND and acknowledged the desirability of complementary product market reforms. The KND is viewed as helping the economy capitalize on the rising role of digitalization and foster other new growth drivers in the services sector. The authorities underscored enhancements to corporate governance and the overall competitive environment from recent reforms to the Commercial Act and the Fair Trade Act. They saw regulatory sandboxes as an effective method to spur innovation and noted ongoing efforts to identify other areas for streamlining regulations.

48. The authorities agreed with staff on the importance of strengthening the social safety net and reducing labor market duality. With the increase in welfare-related spending in recent years and the assistance measures deployed in 2020, they view progress as substantial, and aim to further expand the coverage of social safety programs going forward. Considering COVID-19 is threatening employment stability, the authorities stressed that policy measures aiming at labor market stability should be prioritized over those to increase flexibility, as the latter were best pursued once the economy had recovered from the COVID-19 shock and would require intense dialogue between the government, labor unions and corporate representatives.

49. On climate change, the authorities appreciated staff's analysis of possible tools to strengthen mitigation policies. They acknowledged the importance of carbon pricing to achieve Korea's climate goals but noted that the required increase would be more moderate than implied in the stylized staff calculations as additional mitigation tools can be deployed. In this context, they are assessing the macroeconomic impact of various possible mitigation policies.

STAFF APPRAISAL

50. Korea has weathered the COVID-19 pandemic shock comparatively well. The authorities appropriately used available policy space to counter the macro-financial effects of the COVID-19 pandemic. The comprehensive policy response was facilitated by Korea's sound macroeconomic fundamentals entering the shock and helped to cushion the impact on affected households and firms, limit market volatility, and sustain credit flows. This contributed to keeping Korea's downturn modest relative to peers.

51. The economy is recovering, albeit in an uneven manner. In the near term, the economy is projected to grow at an above-trend rate, from a starting point of substantial economic slack. Exports, investment, and manufacturing have recovered more quickly than activity in the services sector and employment. There is larger-than-usual uncertainty surrounding the outlook, centered on the pace of re-opening and vaccination progress, both domestic and externally.

52. Against this backdrop, the policy priorities for the period ahead are to nurture the recovery and solidify the foundations for resilient, greener, and more inclusive growth. Near-term fiscal and monetary policies could be more accommodative than implied in the authorities' current plans. This would help the economy normalize faster, sustain affected small businesses, and bring discouraged workers back into the labor market.

53. Fiscal policy should aim at a more expansionary stance in 2021 than implied by the budget. There is scope for raising targeted transfers to adversely affected workers and firms and accelerating public investment plans in 2021 to support the recovery, aiming for a fiscal stance that is modestly positive or at least neutral in terms of the overall contribution to the economy. This expansion can be offset by gradual consolidation in subsequent years. The government has taken a welcome initiative to anchor the public finances in a rules-based framework. Successful implementation of the proposed framework will require putting in place an effective mechanism to enable counter-cyclical policies in the event of typical downturns.

54. Monetary policy was appropriately eased in 2020 and there is merit for some additional accommodation to help underpin the recovery and bring inflation closer to the BOK's target. This could be achieved through a number of instruments, including a modest further policy rate easing, forward guidance on the likely course of monetary policy, and facilities targeted toward supporting credit to SMEs.

55. The exchange rate should continue to move flexibly, with intervention limited to preventing disorderly market conditions. Prudential measures taken to strengthen FX liquidity management of non-banks and the establishment of a FX repo facility by the BOK are welcome steps to strengthen systemic resilience against FX funding shocks. Preliminary analysis, adjusting for transitory factors, suggests that the external position in 2020 was broadly in line with the level implied by medium-term fundamentals and desirable policies.

56. Given the lingering impact of the pandemic, the authorities are appropriately avoiding a premature winding down of credit support programs, especially for SMEs. As the economy recovers more broadly, the focus of policy interventions should shift from liquidity provision to measures that promote corporate restructuring and solvency support.

57. The financial system has remained resilient overall and macroprudential policies appear appropriately set to mitigate risks. While several factors mitigate risks to financial stability from high household debt, the authorities should be prepared to tighten policies further if household credit continues rising sharply. The authorities' cautious approach to dividend distributions by banks has helped preserve capital buffers for credit supply. Resuming short selling in the equity market would enhance price discovery and re-sensitize investors to two-way risks, while retail investor protection is best addressed through the strengthening of regulation, which the authorities are pursuing.

58. The KND represents a welcome strategy to develop new growth drivers and increase inclusiveness. Complementary reforms to reduce entry barriers, stimulate innovation, and tackle remaining labor market rigidities can provide a further boost to potential growth. Strengthening carbon pricing to provide robust incentives for green investment will also be important to achieve the objectives of the green pillar of the KND and Korea's ambitious mitigation goals.

59. It is recommended that the next Article IV consultation be held on the standard 12-month cycle.

Table 1. Korea: Selected Economic Indicators, 2018–26

				Projections					
	2018	2019	2020	2021	2022	2023	2024	2025	2026
Real GDP (percent change)	2.9	2.0	-1.0	3.4	2.9	2.6	2.4	2.3	2.3
Total domestic demand	2.0	1.2	-1.3	1.9	3.3	2.6	2.4	2.2	2.2
Final domestic demand	1.7	1.1	-0.8	1.9	3.3	2.6	2.4	2.3	2.2
Consumption	3.7	2.9	-2.4	1.2	4.0	2.6	2.4	2.3	2.3
Gross fixed investment	-2.2	-2.8	2.6	3.2	2.0	2.6	2.4	2.1	1.9
Stock building 1/	0.3	0.2	-0.5	0.1	0.0	0.0	0.0	0.0	0.0
Net foreign balance 1/	1.0	1.0	0.4	1.6	-0.3	0.2	0.2	0.2	0.3
Potential output	2.7	2.6	1.0	2.5	1.9	2.0	2.1	2.2	2.3
Output gap (percent of potential GDP)	-0.3	-0.8	-2.7	-1.8	-0.9	-0.3	-0.1	0.0	0.0
Saving and investment (in percent of GDP)									
Gross national saving	36.0	35.0	36.2	36.6	35.8	35.7	35.7	35.7	35.6
Gross domestic investment	31.5	31.3	31.6	32.8	32.0	31.7	31.5	31.4	31.3
Current account balance	4.5	3.6	4.6	3.8	3.9	4.1	4.2	4.2	4.3
Prices (percent change)									
CPI inflation (end of period)	1.3	0.7	0.5	1.2	1.0	1.3	1.5	1.7	2.0
CPI inflation (average)	1.5	0.4	0.5	1.4	0.8	1.3	1.5	1.7	2.0
Core inflation (average)	1.2	0.7	0.4	…	…	…	…	…	…
GDP deflator	0.5	-0.9	1.1	0.0	0.7	1.2	1.6	1.6	1.8
Real effective exchange rate	1.0	-4.6	-1.9	…	…	…	…	…	…
Consolidated central government (in percent of GDP)									
Revenue	22.9	23.0	22.9	22.8	23.0	23.1	23.2	23.3	23.3
Expenditure	20.4	22.6	25.7	25.1	25.5	25.7	25.7	25.6	25.3
Net lending (+) / borrowing (-)	2.6	0.4	-2.8	-2.2	-2.5	-2.6	-2.5	-2.3	-2.1
Overall balance	1.6	-0.6	-4.2	-3.6	-3.9	-3.9	-3.7	-3.5	-3.1
Excluding Social Security Funds	-0.6	-2.8	-6.1	-5.5	-5.8	-5.8	-5.5	-5.2	-4.8
Cyclically-adjusted balance	2.6	0.6	-2.1	-1.8	-2.3	-2.5	-2.4	-2.3	-2.1
Fiscal impulse (+ is expansionary)	-0.3	2.1	2.6	-0.3	0.5	0.2	-0.1	-0.1	-0.3
General government debt	40.0	42.2	48.7	52.8	57.0	60.9	64.3	67.3	69.6
Money and credit (end of period)									
Overnight call rate	1.9	1.4	0.5	…	…	…	…	…	…
Three-year AA- corporate bond yield	2.3	1.9	2.2	…	…	…	…	…	…
Credit growth	7.9	9.0	9.2	4.3	4.0	3.9	3.9	4.0	4.1
Balance of payments and external balance sheet (in billions of U.S. dollars)									
Exports, f.o.b.	626.3	556.7	516.6	596.9	615.7	643.6	678.0	715.4	752.6
Imports, f.o.b.	516.2	476.9	434.7	518.1	529.6	550.0	576.4	609.1	641.6
Current account balance	77.5	59.7	75.3	67.4	72.4	79.2	86.0	90.3	95.3
Export volumes (percent change)	3.3	0.5	-0.5	10.5	3.1	3.7	3.4	3.3	3.3
Import volumes (percent change)	2.0	-0.8	0.0	7.7	4.5	3.9	3.6	3.3	3.1
Gross international reserves (end of period) 2/	398.9	404.0	438.3	440.8	443.2	447.6	451.3	455.0	457.3
In percent of short-term debt (residual maturity)	218.7	207.9	193.3	204.3	200.4	197.4	193.4	190.1	186.6
Total external debt (in percent of GDP)	25.6	28.4	33.3	31.3	31.1	31.0	31.0	31.0	31.0

Sources: National sources; and IMF staff estimates and projections.

1/ Contribution to GDP growth.

2/ Excludes gold.

Table 2. Korea: Balance of Payments, 2018–26
(In billions of U.S. dollars, unless otherwise indicated, BPM6 sign)

				Projections					
	2018	2019	2020	2021	2022	2023	2024	2025	2026
Current account balance	77.5	59.7	75.3	67.4	72.4	79.2	86.0	90.3	95.3
Goods balance	110.1	79.8	81.9	78.8	86.1	93.6	101.6	106.3	111.0
Exports	626.3	556.7	516.6	596.9	615.7	643.6	678.0	715.4	752.6
Imports	516.2	476.9	434.7	518.1	529.6	550.0	576.4	609.1	641.6
Services balance	-29.4	-26.8	-16.2	-18.7	-21.0	-22.4	-23.4	-23.8	-24.1
Primary income	4.9	12.9	12.1	12.8	13.0	13.9	14.4	14.8	15.9
Secondary income	-8.2	-6.1	-2.5	-5.4	-5.7	-5.8	-6.5	-7.0	-7.4
Capital account balance	0.3	-0.2	-0.3	-0.3	-0.3	-0.3	-0.3	-0.3	-0.3
Financial account balance 1/	59.0	57.6	59.7	64.6	69.6	74.5	82.0	86.2	92.6
Portfolio investment	47.4	42.4	41.5	43.7	46.5	49.7	53.1	56.4	61.3
Direct investment	26.0	25.6	23.3	26.0	28.4	30.8	33.7	37.0	40.6
Financial derivatives	-1.5	6.2	4.2	-4.5	-3.0	-6.4	2.3	-1.5	-2.6
Other investment	-13.0	-16.7	-9.2	-0.6	-2.3	0.4	-7.0	-5.7	-6.7
Net errors and omissions	-1.3	-0.5	2.2	0.0	0.0	0.0	0.0	0.0	0.0
Reserves and related items	17.5	1.5	17.4	2.5	2.5	4.4	3.7	3.7	2.4
				(In percent of GDP)					
Current account balance	4.5	3.6	4.6	3.8	3.9	4.1	4.2	4.2	4.3
Goods balance	6.4	4.8	5.0	4.4	4.6	4.8	5.0	5.0	5.0
Services balance	-1.7	-1.6	-1.0	-1.0	-1.1	-1.1	-1.1	-1.1	-1.1
Primary income	0.3	0.8	0.7	0.7	0.7	0.7	0.7	0.7	0.7
Secondary income	-0.5	-0.4	-0.2	-0.3	-0.3	-0.3	-0.3	-0.3	-0.3
Capital account balance	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Financial account balance 1/	3.4	3.5	3.7	3.6	3.7	3.8	4.0	4.1	4.2
Portfolio investment	2.7	2.6	2.5	2.4	2.5	2.5	2.6	2.7	2.8
Direct investment	1.5	1.6	1.4	1.5	1.5	1.6	1.7	1.7	1.8
Financial derivatives	-0.1	0.4	0.3	-0.3	-0.2	-0.3	0.1	-0.1	-0.1
Other investment	-0.8	-1.0	-0.6	0.0	-0.1	0.0	-0.3	-0.3	-0.3
Net errors and omissions	-0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0
Reserves and related items	1.0	0.1	1.1	0.1	0.1	0.2	0.2	0.2	0.1
Memorandum items:									
Gross reserves minus gold	398.9	404.0	438.3	440.8	443.2	447.6	451.3	455.0	457.3
(in months of imports of goods and services)	7.4	8.0	9.7	8.4	8.2	8.0	7.7	7.3	7.0
External debt	441.2	467.0	542.4	560.9	582.2	605.9	631.9	659.2	687.7
(in percent of GDP)	25.6	28.4	33.3	31.3	31.1	31.0	31.0	31.0	31.0
Short-term external debt (inc. trade credits)	125.6	134.5	157.5	162.4	167.9	173.4	180.0	186.1	191.8

Sources: National sources; and IMF staff estimates and projections.
1/ Excludes reserves and related items.

Table 3. Korea: Statement of Central Government Operations, 2018–26

			Estimates			Projections			
	2018	2019	2020	2021	2022	2023	2024	2025	2026
				(In trillions of won)					
Revenue	435.6	441.1	440.3	454.1	474.6	494.4	516.8	537.7	560.3
Tax revenue	293.6	293.5	285.5	298.0	311.9	324.9	339.8	353.5	368.4
Social contributions	76.6	80.5	81.6	84.4	89.2	92.5	96.2	100.1	104.2
Of which: Social security contributions	64.9	69.6	74.5	76.1	80.4	83.4	86.7	90.2	94.0
Other revenue	65.3	67.2	73.3	71.7	73.6	77.0	80.8	84.1	87.7
Expenditure	386.9	434.0	493.3	498.2	526.0	549.7	571.7	591.5	610.0
Expense	377.9	407.9	484.7	489.8	517.6	541.4	563.3	583.2	601.7
Net acquisition of nonfinancial assets	9.0	26.1	8.6	8.4	8.3	8.3	8.3	8.3	8.3
Net lending (+) / borrowing (-)	48.7	7.2	-52.9	-44.1	-51.3	-55.3	-54.8	-53.9	-49.7
Less: Policy lending	17.5	19.2	27.0	27.2	28.7	28.5	28.1	26.3	24.4
Overall balance	31.2	-12.0	-79.9	-71.2	-80.0	-83.7	-83.0	-80.2	-74.1
Less: Social Security Fund (SSF) balance	41.7	42.4	37.0	38.7	40.3	40.1	40.1	40.5	40.9
Managed balance									
(overall balance excl. SSF)	-10.6	-54.4	-117.0	-110.0	-120.3	-123.8	-123.0	-120.6	-115.0
				(In percent of GDP)					
Revenue	22.9	23.0	22.9	22.8	23.0	23.1	23.2	23.3	23.3
Tax revenue	15.5	15.3	14.9	15.0	15.1	15.2	15.3	15.3	15.3
Social contributions	4.0	4.2	4.2	4.2	4.3	4.3	4.3	4.3	4.3
Of which: Social security contributions	3.4	3.6	3.9	3.8	3.9	3.9	3.9	3.9	3.9
Other revenue	3.4	3.5	3.8	3.6	3.6	3.6	3.6	3.6	3.6
Expenditure	20.4	22.6	25.7	25.1	25.5	25.7	25.7	25.6	25.3
Expense	19.9	21.3	25.2	24.6	25.1	25.3	25.3	25.2	25.0
Net acquisition of nonfinancial assets	0.5	1.4	0.4	0.4	0.4	0.4	0.4	0.4	0.3
Net lending (+) / borrowing (-)	2.6	0.4	-2.8	-2.2	-2.5	-2.6	-2.5	-2.3	-2.1
Less: Policy lending	0.9	1.0	1.4	1.4	1.4	1.3	1.3	1.1	1.0
Overall balance	1.6	-0.6	-4.2	-3.6	-3.9	-3.9	-3.7	-3.5	-3.1
Less: Social Security Fund balance	2.2	2.2	1.9	1.9	2.0	1.9	1.8	1.7	1.7
Managed balance									
(overall balance excl. SSF)	-0.6	-2.8	-6.1	-5.5	-5.8	-5.8	-5.5	-5.2	-4.8
				(In percent of GDP)					
Memorandum items:									
Primary balance	2.1	-0.1	-3.3	-2.6	-2.7	-2.7	-2.5	-2.2	-2.2
Cyclically adjusted balance	2.6	0.6	-2.1	-1.8	-2.3	-2.5	-2.4	-2.3	-2.1
Central government debt	34.3	36.4	43.2	47.3	51.5	55.4	58.8	61.8	64.1
General government debt	40.0	42.2	48.7	52.8	57.0	60.9	64.3	67.3	69.6

Sources: Ministry of Economy and Finance; and IMF staff estimates and projections.

Table 4. Korea: Financial Soundness Indicators

	2017	2018	2019	2020 1/
Banks				
Capital to assets	8.0	8.0	7.8	7.4
Regulatory capital to risk-weighted assets	15.2	15.4	15.3	14.6
Regulatory Tier 1 capital to risk-weighted assets	13.1	13.3	13.2	12.7
Non-performing loans net of provisions to capital	1.7	1.3	1.2	1.2
Non-performing loans to total gross loans	0.4	0.3	0.3	0.2
Return on assets	0.7	0.8	0.7	0.7
Return on equity	8.5	9.8	8.9	9.3
Interest margin to gross income	58.7	72.7	76.2	65.9
Non-interest expenses to gross income	65.6	75.5	75.2	56.6
Liquid assets to total assets (liquid asset ratio)	29.9	31.2	32.2	33.0
Liquid assets to short term liabilities	101.2	114.5	110.0	101.9
FX dominated loans to total loans	10.9	10.9	11.0	11.6
Net open position in foreign exchange to capital	-0.98	0.04	0.11	-0.30
Net equity position to capital	21.8	21.4	21.0	21.3
Non-bank Financial Institutions				
Assets to total financial system assets	19.8	19.8	21.1	21.1

Source: National authorities.

1/ 2020-Q2.

Annex I. Follow-Up on Past IMF Recommendations

	2019 Article IV Consultation Recommendations	Actions Since 2019 Article IV Consultation
Fiscal policies	Fiscal policy should remain expansionary into the medium term to support growth, job creation and external rebalancing.	Fiscal policies have been expansionary, as the overall balance declined by 2.2 percent of GDP in 2019 and another 3.5 percent of GDP in 2020.
	Strengthen social safety nets and active labor market programs.	The basic pension was increased and an unemployment benefit for youth was introduced. The Korean New Deal envisages plans to increase the coverage of employment insurance and basic livelihood security programs, as well as job training programs.
	Greater revenue mobilization to prepare for the aging population.	After the increase in corporate and personal income tax rates in 2018, the top personal income tax rate will further rise from 42% to 45% in 2021.
Monetary and financial policies	Monetary policy should remain accommodative.	The policy rate was cut in four steps between July 2019 and May 2020 by 125 basis points in total.
	Financial risks should be managed through macroprudential policies, rather than monetary policy.	Prudential limits on mortgage loans and unsecured household lending have been tightened.
Structural policies	Enhance flexibility and security (flexicurity) in the labor market to mitigate duality and foster private sector job creation.	Increased coverage of employment insurance is planned under the Korean New Deal. Regarding flexibility, hours worked limits have been tightened. There have been no major changes to the restrictive employment protections applied to workers on open-ended contracts.
	Better align minimum wage increases with labor productivity growth.	The minimum wage increased by 2.9 percent in 2020 and 1.5 percent in 2021, broadly in line with productivity growth, following a 10.9 percent increase in 2019.
	Diversify the manufacturing sector and liberalize the services sector, by easing the regulatory burden on firms, lowering barriers to entry, and reducing protections to existing firms.	The Korean New Deal aims to foster new drivers of growth through investment in the digital and green economy and streamlining of applicable regulations. The overall regulatory environment, including that applicable to services, broadly continues in place.

Annex II. Key Economic Policies in Response to COVID-19

Budgetary Fiscal Measures

- *Supplementary budgets in 2020*. Four supplementary budgets approved for a net total of 2.9 percent of GDP:
  - March 17 (0.6 percent of GDP, net): Spending on disease prevention and treatment, loans and guarantees for affected businesses, and support for affected households and local economies.
  - April 30 (0.4 percent of GDP, net): Emergency relief transfers to households.
  - July 3 (1.4 percent of GDP, net): Spending on credit support programs, wage support programs for firms, COVID-19 health response, and Korean New Deal projects, among other measures; downward adjustment in revenue projection.
  - September 22 (0.4 percent of GDP, net): Spending to support SMEs, employment, low-income households, and daycare costs, among other measures.
- *Emergency transfers from 2021 budget*. December 29, 2020 (0.5 percent of GDP, zero net as it was a reallocation within the 2021 budget). Emergency relief transfers to firms and workers.

Monetary Policy

- *Policy interest rate*. Reduced by 75 basis points to 0.5 percent in two steps (March and May).
- *Liquidity provision*. Repo operations available in unlimited amounts at the policy rate plus 10 basis points (April-July). Eligible participants and securities for repos and open market operations were temporarily expanded.
- *Bond purchases*. BOK acquired KRW 6 trillion in four one-off purchases (March-August 2020) and KRW 5 trillion under a plan announced for September-December 2020. Announced plans to acquire up to KRW 7 trillion in February-June 2021.

Support for Credit and Financial Markets

- *Small business/SME lending and guarantee programs*. Various programs through policy banks and commercial banks for up to KRW 65.5 trillion (initiated February-May 2020, expanded January 2021). BOK increased ceiling on bank-intermediated SME lending facility by KRW 18 trillion in three steps (March, May, and October).
- *Bond market stabilization fund*. Invest up to KRW 10 trillion in corporate bonds, bank debentures, and commercial paper, with option of expanding to KRW 20 trillion (April). Other measures to support fixed-income securities markets include liquidity support for securities firms, programs for corporate bond underwriting and refinancing, and support of primary collateralized bond obligation issuance.

- *Corporate bond-backed lending facility.* Temporary BOK facility to provide loans to financial institutions with high-quality bonds as collateral, up to KRW 10 trillion (April).
- *Special purpose vehicle for fixed-income instruments.* Funded by Korea Development Bank and BOK, to purchase corporate bonds, commercial paper, and short-term debts. Instruments with credit ratings from AA to BBB are eligible. Established for KRW 10 trillion, can be expanded to up to KRW 20 trillion (July).
- *Equity market stabilization fund.* Invest up to KRW 10.7 trillion in equities, funded by public and private financial institutions (April).
- *Key industry stabilization fund.* Established fund to provide support of up to KRW 40 trillion through loans, payment guarantees, and other investments under conditions that could include maintaining employment, limiting dividend payouts, and restructuring, among others (May).
- *Trade financing.* Extend maturity of trade credit and raise ceiling for export insurance, among other measures, for a total of up to KRW 36 trillion (April).
- *Regulatory measures.* Temporarily permitted loan-to-deposit ratio above regulatory ceilings for various institutions (April 2020-June 2021). Temporarily lowered total liquidity coverage ratio to 85 percent from 100 percent (April 2020-March 2021). Temporarily prohibited short selling of equity shares (March 2020-May 2021).

FX Funding

- *Fed swap line.* Swap line with U.S. Federal Reserve for US$60 billion (March).
- *Leverage cap on FX derivative positions for banks.* Raised existing limits by 25 percent (March).

- *Levy on financial institutions' non-deposit FX liabilities.* Temporarily set at zero (April-June).
- *FX liquidity coverage ratio.* Temporarily lowered to 70 percent from 80 percent (April 2020-March 2021).
- *BOK repo facility.* Created a facility to be activated in times of stress, for financial institutions to repo FX-denominated securities with the BOK.

Annex III. External Stability Assessment

<table>
<tr><td colspan="7">Overall Assessment: On a preliminary basis, and adjusting for transitory factors, recent developments suggest that the external position in 2020 remained broadly in line with the level implied by medium-term fundamentals and desirable policies. The CA surplus widened from the 2019 level on account of a recovery in exports, lower oil prices, and narrowing of the service sector deficit, and is projected to narrow slightly over the medium term as domestic demand recovers and transitory factors related to the COVID-19 shock recede. However, this assessment is subject to uncertainty given the preliminary nature of data for 2020 and the impact of the COVID-19 crisis. The final assessment will be provided in the 2021 External Sector Report.

Potential Policy Responses: To support activity following the COVID-19 outbreak, the authorities have deployed fiscal and monetary stimulus, of which a substantial part is expected to be temporary. Ensuring that the external position remains in line with medium-term fundamentals will require continued accommodative fiscal and monetary policies, as well as structural policies to stimulate investment and facilitate rebalancing of the economy toward services and other new growth drivers. Desirable reforms include reducing barriers to firm entry and investment, deregulating the non-manufacturing sector, and strengthening the social safety net to lessen the need for precautionary saving across sectors. Reforms in some of these areas are contained in the authorities' Korean New Deal, to be implemented over the next five years. The exchange rate should remain market determined, with intervention limited to preventing disorderly market conditions.</td></tr>
<tr><td>Foreign Asset and Liability Position and Trajectory</td><td colspan="6">Background. The NIIP has been positive since 2014. Data for 2020 imply that Korea's NIIP was 27.1 percent of GDP, with gross liabilities at 91.8 percent of GDP, of which around one-third was gross external debt. The NIIP declined by about 3 percent of GDP from the 2019 level, largely reflecting valuation effects resulting from a sharp rally in domestic equity prices in the second half of 2020. The NIIP is projected to rise to about 50 percent of GDP in the medium term, on the back of CA surpluses and search-for-yield activity by financial institutions driven by asset accumulation for old-age consumption.

Assessment. The positive NIIP is a source of external sustainability. Foreign asset holdings are diversified, with around 43 percent held in equity or debt securities. About 60 percent of foreign assets are denominated in U.S. dollars, implying won depreciation could have positive valuation effects. The structure of liabilities limits vulnerabilities, with equity and direct investment accounting for around 60 percent of total liabilities.</td></tr>
<tr><td>2020 (% GDP)</td><td>NIIP: 27.1</td><td>Gross Assets: 118.9</td><td>Debt Assets: 27.3</td><td>Gross Liab.: 91.8</td><td colspan="2">Debt Liab.: 29.2</td></tr>
<tr><td>Current Account</td><td colspan="6">Background. The CA surplus in 2020 widened to 4.6 percent of GDP from 3.6 percent in 2019, driven by a rebound in exports since 2020:Q3 and a narrowing of the services deficit due to COVID-19 travel restrictions. The CA surplus has been trending down from the peak of 7.2 percent of GDP in 2015, reflecting a fall in savings, particularly for the household sector, and increase in the investment-to-GDP ratio. Over the medium term, the CA surplus is projected to narrow slightly to 4.3 percent of GDP as export demand and the service sector balance normalize.

Assessment. The EBA model estimates the cyclically adjusted CA to be 4.4 percent of GDP. The CA norm is estimated at 3.6 percent of GDP, with a standard error of 0.9 percent of GDP. After accounting for transitory factors arising from the COVID-19 shock (in the tourism and oil sectors), staff estimates the 2020 CA gap midpoint to be 0.0 percent of GDP. The relative policy gap contribution is estimated at 1.9 percent of GDP, however this is driven mainly by large exceptional fiscal stimulus in the rest of the world relative to Korea, and not expected to persist over the medium term.</td></tr>
<tr><td>2020 (% GDP)</td><td colspan="6">CA: 4.6 | Cycl. Adj. CA: 4.4 | EBA Norm: 3.6 | EBA Gap: 0.8 | COVID-19 Adj.: -0.8 | Other Adj.: 0.0 | Staff Gap: 0.0</td></tr>
<tr><td>Real Exchange Rate</td><td colspan="6">Background. Following sustained appreciation during 2015–18, the REER depreciated in 2019 by around 4.5 percent, with the REER returning to its 2015 level. The REER depreciated further in the first half of 2020 before recovering somewhat more recently. Overall, the average REER for 2020 has depreciated by about 2 percent relative to the 2019 average.

Assessment. The staff CA gap implies a REER gap of 0 percent (applying an estimated elasticity of 0.36). The EBA REER index model estimates a REER undervaluation of 3.6 percent, while the REER level model estimates a 11.8 percent undervaluation. Staff uses the estimated CA gap for its assessment given the better fit of the EBA CA model. Consistent with the staff CA gap, staff assesses the REER to be in the range of -3 to 3 percent with a midpoint of 0.</td></tr>
<tr><td>Capital and Financial Accounts: Flows and Policy Measures</td><td colspan="6">Background. Net FDI and portfolio outflows have declined since 2017, when outflows peaked at 4.6 percent of GDP. Portfolio outflows were 3.6 percent of GDP in 2020, reflecting further portfolio diversification and institutional investors' continued search for yield. Net FDI and portfolio outflows comprised the bulk of the 2020 financial account (1.4 and 2.5 percent of GDP, respectively), whereas other investments (net) recorded inflows (0.6 percent of GDP). Despite non-resident equity outflows in the first half of the year, overall capital flows have remained relatively stable in 2020, supported by portfolio debt inflows and a slowdown in outward FDI.

Assessment. The present configuration of net and gross capital flows appears sustainable over the medium term. In recent years, including in the context of the COVID-19 shock, Korea has demonstrated ample capacity to absorb short-term capital flow volatility.</td></tr>
<tr><td>FX Intervention and Reserves Level</td><td colspan="6">Background. Korea has a floating exchange rate. FX intervention appears to have been two-sided since early 2015, based on staff estimates and published data. As of end-2020, reserves stood at 27 percent of GDP reflecting legacy accumulation with valuation gains in 2020 from non-USD denominated assets. FX intervention data released by the Bank of Korea shows that it sold a net US$5.9 billion (0.4 percent of GDP) in the first quarter of 2020 amidst depreciation pressures on the won. Net intervention was close to zero in the second and third quarter. During March-May 2020, the Bank of Korea temporarily drew US$20 billion from the US$60 billion swap line established with the Federal Reserve.

Assessment. Since 2015, intervention appears to have been limited to preventing disorderly market conditions. As of end-2020, FX reserves were around 115 percent of the IMF's composite reserve adequacy metric which, together with access to the Federal Reserve swap facility, provides enough buffer against a wide range of possible external shocks.</td></tr>
</table>

Annex IV. Risk Assessment Matrix[1]

Risks	Likelihood	Impact of Risk (High, Medium, Low)	Policy Response
Unexpected shift in the Covid-19 pandemic. **Downside.** • **Asynchronous progress.** Limited access to, and longer-than-expected deployment of, vaccines in some countries—combined with dwindling policy space—prompt a reassessment of their growth. • **Prolonged pandemic.** The disease proves harder to eradicate (e.g., due to new virus strains, short effectiveness of vaccines, or widespread unwillingness to take them), requiring costly containment efforts and prompting persistent behavioral changes rendering many activities unviable. For countries with policy space, prolonged support—while needed to cushion the economy—exacerbates stretched asset valuations, fueling financial vulnerabilities.	Medium	**High (downside):** Recovery would be more uneven and scarring deeper. Need for greater fiscal and monetary support could exhaust policy space.	Provide additional fiscal support to affected firms and workers; further ease monetary policy, including through larger asset purchase program to support liquidity in bond markets and the transmission of monetary policy; provide liquidity support to banks; expand financial facilities in place to maintain credit flows.
Upside. • **Faster containment.** Pandemic is contained faster than expected due to the rapid production and distribution of vaccines, boosting confidence and economic activity.	Medium	**Medium (upside):** Strong confidence impact in the near term; activity recovers faster than expected over the medium term and limits scarring.	Begin process of unwinding crisis measures while avoiding a hasty withdrawal of support that risks undermining the recovery
Sharp rise in global risk premia exposes financial and fiscal vulnerabilities. A reassessment of market fundamentals (e.g., in response to adverse Covid-19 developments) triggers a widespread risk-off event. Risk asset prices fall sharply and volatility spikes, leading to significant losses in major non-bank financial institutions. Higher risk premia generate financing difficulties for leveraged firms (including those operating in unviable activities) and households, and a wave of bankruptcies erode banks' capital buffers. Financing difficulties extend to sovereigns with excessive public debt, leading to cascading debt defaults.	Medium	**Medium:** Vicious circle of tighter financial conditions, higher risk aversion, deleveraging, and lower growth.	Extend market stabilization measures already in place; expand BoK asset purchase program to support liquidity in bond markets, compress risk premia, and strengthen the transmission of monetary policy; and provide liquidity support to banks.

1 The Risk Assessment Matrix (RAM) shows events that could materially alter the baseline path (the scenario most likely to materialize in the view of IMF staff). The relative likelihood is the staff's subjective assessment of the risks surrounding the baseline ("low" is meant to indicate a probability below 10 percent, "medium" a probability between 10 and 30 percent, and "high" a probability between 30 and 50 percent).

Risks	Likelihood	Impact of Risk (High, Medium, Low)	Policy Response
Accelerating de-globalization. Despite renewed efforts to reach multilateral solutions to existing tensions, geopolitical competition leads to further fragmentation. Reshoring and less trade reduce potential growth.	Medium	**Medium:** Given that Korea is an open economy, trade restrictions to re-shore and protect supply chains could reduce exports and growth.	Engage in support for the multilateral rules-based trading system and advocate trade liberalization.
Domestic Risks			
Non-financial corporate (NFC) and/household balance sheet stress. Around 50 percent of SME debt is at-risk, with the sector employing around 70 percent of the workforce. Household debt is among the highest in the OECD. Balance sheet stress could soften house prices and push SMEs into insolvency, leading to a slowdown in economic growth. This could result in higher loan delinquencies, lower credit flows, and additional negative feedback on growth.	Medium	**High:** Recovery would be more uneven and scarring deeper.	Maintain accommodative fiscal and monetary policies. Use macroprudential policies to limit risks to the banking system.
Progress in normalizing relations with North Korea (*upside risk*). Faster than anticipated progress in relations could have a positive impact on investment and consumer sentiment.	Low	**High:** Domestic demand could be higher than anticipated.	Prepare plans on how to support North Korea, in cooperation with the international community.

Annex V. Public Debt Sustainability Analysis

Figure 1. Baseline Scenario
(In percent of GDP unless Otherwise Indicated)

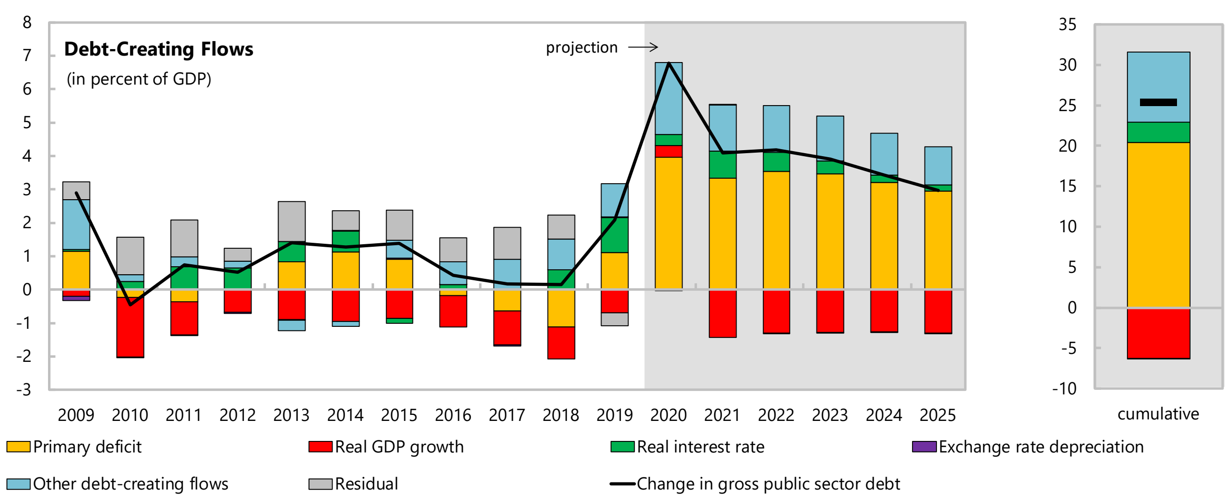
Debt, Economic and Market Indicators [1/]

	Actual			Projections					
	2009-2017 [2/]	2018	2019	2020	2021	2022	2023	2024	2025
Nominal gross public debt	31.2	34.3	36.4	43.2	47.3	51.5	55.4	58.8	61.8
Public gross financing needs		2.7	5.0	8.0	7.1	7.0	6.7	6.3	5.8
Real GDP growth (in percent)	3.2	2.9	2.0	-1.0	3.4	2.9	2.6	2.4	2.3
Inflation (GDP deflator, in percent)	2.0	0.5	-0.9	1.1	0.0	0.7	1.2	1.6	1.6
Nominal GDP growth (in percent)	5.3	3.4	1.1	0.1	3.5	3.6	3.8	4.0	4.0
Effective interest rate (in percent) [4/]	3.2	2.3	2.1	2.0	2.0	2.0	2.0	2.0	2.0

As of February 01, 2021		
Sovereign Spreads		
EMBIG (bp) 3/		-
5Y CDS (bp)		27
Ratings	Foreign	Local
Moody's	Aa2	Aa2
S&Ps	AA	AA
Fitch	AA-	AA-

Contribution to Changes in Public Debt

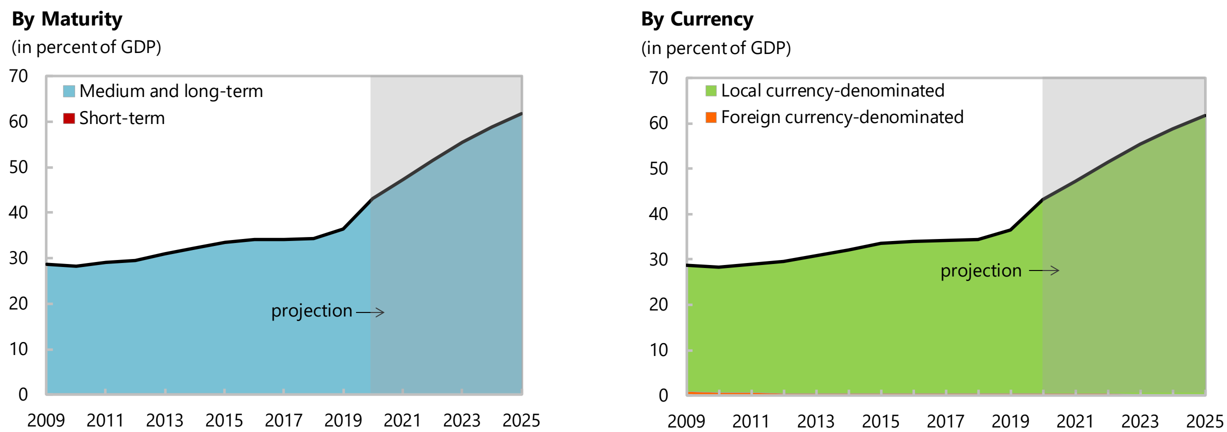
	Actual			Projections							
	2009-2017	2018	2019	2020	2021	2022	2023	2024	2025	cumulative	debt-stabilizing primary balance [9/]
Change in gross public sector debt	0.9	0.2	2.1	6.8	4.1	4.2	3.9	3.4	3.0	25.3	
Identified debt-creating flows	0.1	-0.6	2.5	6.8	4.1	4.2	3.9	3.4	3.0	25.4	
Primary deficit	0.3	-1.1	1.1	4.0	3.3	3.5	3.5	3.2	2.9	20.4	0.0
Primary (noninterest) revenue and grants	17.6	19.5	19.4	19.0	19.0	19.1	19.2	19.3	19.4	115.1	
Primary (noninterest) expenditure	17.9	18.4	20.5	23.0	22.3	22.7	22.7	22.5	22.3	135.5	
Automatic debt dynamics [5/]	-0.6	-0.4	0.4	0.7	-0.6	-0.7	-0.9	-1.0	-1.1	-3.7	
Interest rate/growth differential [6/]	-0.6	-0.4	0.3	0.7	-0.6	-0.7	-0.9	-1.0	-1.1	-3.7	
Of which: real interest rate	0.3	0.6	1.0	0.3	0.8	0.6	0.4	0.2	0.2	2.5	
Of which: real GDP growth	-0.9	-1.0	-0.7	0.4	-1.4	-1.3	-1.3	-1.3	-1.3	-6.2	
Exchange rate depreciation [7/]	0.0	0.0	0.0	...	...	...	...	...	...	...	
Other identified debt-creating flows	0.4	0.9	1.0	2.2	1.4	1.4	1.3	1.3	1.1	8.7	
Please specify (1) (negative)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Contingent liabilities	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Policy lending and other adjustment terms	0.4	0.9	1.0	2.2	1.4	1.4	1.3	1.3	1.1	8.7	
Residual, including asset changes [8/]	0.8	0.7	-0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	



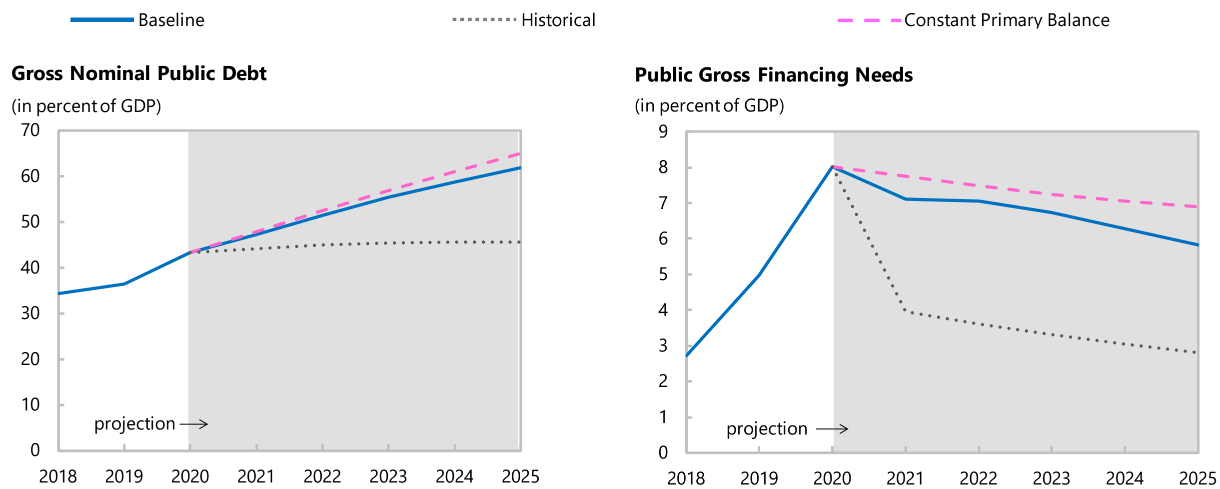
Source: IMF staff.
1/ Public sector is defined as central government.
2/ Based on available data.
3/ Long-term bond spread over U.S. bonds.
4/ Defined as interest payments divided by debt stock (excluding guarantees) at the end of previous year.
5/ Derived as [(r - π(1+g) - g + ae(1+r)]/(1+g+π+gπ)) times previous period debt ratio, with r = interest rate; π = growth rate of GDP deflator; g = real GDP growth rate;
a = share of foreign-currency denominated debt; and e = nominal exchange rate depreciation (measured by increase in local currency value of U.S. dollar).
6/ The real interest rate contribution is derived from the numerator in footnote 5 as r - π (1+g) and the real growth contribution as -g.
7/ The exchange rate contribution is derived from the numerator in footnote 5 as ae(1+r).
8/ Includes asset changes and interest revenues (if any). For projections, includes exchange rate changes during the projection period.
9/ Assumes that key variables (real GDP growth, real interest rate, and other identified debt-creating flows) remain at the level of the last projection year.

Figure 2. Composition of Public Debt and Alternative Scenario

Composition of Public Debt



Alternative Scenarios



Underlying Assumptions

(in percent)

Baseline Scenario	2020	2021	2022	2023	2024	2025
Real GDP growth	-1.0	3.4	2.9	2.6	2.4	2.3
Inflation	1.1	0.0	0.7	1.2	1.6	1.6
Primary Balance	-4.0	-3.3	-3.5	-3.5	-3.2	-2.9
Effective interest rate	2.0	2.0	2.0	2.0	2.0	2.0
Constant Primary Balance Scenario						
Real GDP growth	-1.0	3.4	2.9	2.6	2.4	2.3
Inflation	1.1	0.0	0.7	1.2	1.6	1.6
Primary Balance	-4.0	-4.0	-4.0	-4.0	-4.0	-4.0
Effective interest rate	2.0	2.0	2.0	2.0	2.0	2.0

Historical Scenario	2020	2021	2022	2023	2024	2025
Real GDP growth	-1.0	3.3	3.3	3.3	3.3	3.3
Inflation	1.1	0.0	0.7	1.2	1.6	1.6
Primary Balance	-4.0	-0.1	-0.1	-0.1	-0.1	-0.1
Effective interest rate	2.0	2.0	2.1	2.1	2.2	2.2

Source: IMF staff.