



REPUBLIC OF KOREA

May 2019

2019 ARTICLE IV CONSULTATION—PRESS RELEASE; STAFF REPORT; AND STATEMENT BY THE EXECUTIVE DIRECTOR FOR THE REPUBLIC OF KOREA

Under Article IV of the IMF's Articles of Agreement, the IMF holds bilateral discussions with members, usually every year. In the context of the 2019 Article IV consultation with the Republic of Korea, the following documents have been released and are included in this package:

- A **Press Release** summarizing the views of the Executive Board as expressed during its May 8, 2019 consideration of the staff report that concluded the Article IV consultation with the Republic of Korea.
- The **Staff Report** prepared by a staff team of the IMF for the Executive Board's consideration on May 8, 2019, following discussions that ended on March 12, 2019, with the officials of the Republic of Korea on economic developments and policies. Based on information available at the time of these discussions, the staff report was completed on April 22, 2019.
- An **Informational Annex** prepared by the IMF staff.
- A **Statement by the Executive Director** for the Republic of Korea.

The documents listed below have been or will be separately released.

Selected Issues

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IMF Executive Board Concludes 2019 Article IV Consultation with the Republic of Korea

On May 8, 2019, the Executive Board of the International Monetary Fund (IMF) concluded the Article IV consultation¹ with the Republic of Korea.

Korea's economy has strong fundamentals, but short-term growth is moderating. GDP growth fell to 2.7 percent in 2018, down from 3.1 percent in 2017. A global slowdown in trade and in the demand and prices for semi-conductors took a toll on equipment investment. Export growth deteriorated on the back of trade tensions and China's growth slowdown. The job market weakened, with employment growth dropping to 0.4 in 2018 from 1.2 percent in 2017, due to sluggish job creation by the private sector. Inflation pressures are weak. The year-on-year headline inflation rate declined to 0.5 percent in February 2019 and core inflation excluding food and energy was subdued, recording 1.1 percent year-on-year in February this year. Household leverage keeps increasing, albeit at a slower pace, creating concerns about financial risk. Imbalances in the economy—particularly weak domestic demand—have led to large current account surpluses. Fiscal policy was tight in 2018. The structural budget surplus is estimated to have increased by 0.4 percentage point compared to 2017, to 2.9 percent of GDP. The BOK increased its main policy rate by 25 basis points to 1.75 percent in November 2018 and has been on hold since.

Growth is projected to slide to around 2.6 percent in 2019. This slowdown is driven by an expected deterioration in external demand, while internal demand is anticipated to pick up, supported by fiscal policy. Export growth is projected to be weak reflecting a deteriorating tech cycle, and a slowdown in demand from China. Domestic consumption is expected to accelerate, helped by the fiscal stimulus embedded in the 2019 budget and a supplementary budget. Facility investment will continue to face headwinds from weaker trade, especially in demand for semiconductors. Construction investment is expected to stabilize to a level more in line with long-term trends. Economic slack will dissipate only gradually.

Potential growth has slowed down and its prospects are hampered by unfavorable demographics and slowing productivity growth, driven by structural weaknesses. Income equality and polarization are worsening, partly reflecting inadequate social protection as well as labor and product market duality. The government has focused on supporting income, creating jobs, and promoting innovation. It has strengthened social safety nets, substantially raised the minimum wage, supported SMEs to boost employment, and expanded public sector jobs.

¹ Under Article IV of the IMF's Articles of Agreement, the IMF holds bilateral discussions with members, usually every year. A staff team visits the country, collects economic and financial information, and discusses with officials the country's economic developments and policies. On return to headquarters, the staff prepares a report, which forms the basis for discussion by the Executive Board.

Executive Board Assessment²

Executive Directors noted that Korea's economy has strong fundamentals, supported by robust policy frameworks and a resilient financial system. Nevertheless, cyclical and structural headwinds amid the challenging global environment have hampered growth prospects with risks to the downside. Directors underscored the need for policies aimed at promoting balanced, private sector-led growth; fostering inclusion; and enhancing productivity.

Directors generally concurred that fiscal policy should remain expansionary into the medium term to support growth, job creation, and external rebalancing. They noted that Korea has ample fiscal space for additional stimulus, and in this context, broadly welcomed the planned supplementary budget and the authorities' readiness to take further action as necessary to achieve the growth target and strengthen social safety nets. Directors also saw a role for fiscal policy in promoting women and youth employment, enhancing active labor market policies, and supporting growth-enhancing structural reforms. In the longer term, tax reforms that aim to promote innovation and efficiency in resource allocation could further support growth. Directors also stressed the need for greater revenue mobilization to prepare for the aging population.

Directors agreed that monetary policy should remain accommodative. With inflation projected to remain below target and signs that inflation expectations have started to decline and the output gap remains negative, most Directors saw room for a further easing of monetary policy, while a few Directors emphasized the importance of preserving policy space and financial stability. Directors encouraged the authorities to rely more on targeted macroprudential policies to manage financial stability risks, including from the still high household indebtedness and possible house price corrections. They welcomed ongoing efforts to strengthen the regulatory and oversight frameworks.

Directors welcomed the continued commitment to a flexible exchange rate and the recent step to enhance transparency in foreign exchange policy. Policies and structural reforms that promote domestic demand and private investment would contribute to a further reduction of the current account surplus.

Directors emphasized that reforms in the labor and product markets are key to boosting potential growth. They encouraged measures to enhance flexibility and security (flexicurity) in the labor market to mitigate duality and create jobs in the private sector. They also recommended linking minimum wage increases to labor productivity growth and phasing out compensatory subsidies to small- and medium-sized enterprises. Directors encouraged further diversification of the manufacturing sector and liberalization of the services sector, including by easing the regulatory burden on firms, lowering barriers to entry, and reducing protection of existing firms. It is expected that the next Article IV consultation with the Republic of Korea will be held on the standard 12-month cycle.

² At the conclusion of the discussion, the Managing Director, as Chairman of the Board, summarizes the views of Executive Directors, and this summary is transmitted to the country's authorities. An explanation of any qualifiers used in summings up can be found here: <http://www.imf.org/external/np/sec/misc/qualifiers.htm>.

Korea: Selected Economic Indicators, 2017–20

	2017	2018	Projections	
			2019	2020
Real GDP (percent change)	3.1	2.7	2.6	2.8
Total domestic demand	5.1	1.7	2.8	3.3
Final domestic demand	4.7	1.6	2.6	3.9
Consumption	2.8	3.5	3.5	3.6
Gross fixed investment	8.6	-2.2	0.7	4.5
Stock building 1/	0.4	0.1	0.2	-0.5
Net foreign balance 1/	-1.7	1.2	-0.4	-0.3
Nominal GDP (in trillions of won)	1,730.4	1,782.3	1,852.8	1,937.0
Saving and investment (in percent of GDP)				
Gross national saving	36.0	34.9	34.2	33.7
Gross domestic investment	31.1	30.2	29.6	29.3
Current account balance	4.9	4.7	4.6	4.5
Prices (percent change)				
CPI inflation (end of period)	1.4	1.3	1.4	1.6
CPI inflation (average)	1.9	1.5	1.4	1.6
Core inflation (average)	1.5	1.2	...	...
GDP deflator	2.3	0.3	1.4	1.7
Real effective exchange rate	3.1	0.9	...	...
Trade (percent change)				
Export volume	5.3	7.2	2.3	2.7
Import volume	8.5	1.5	3.0	2.9
Terms of trade	-0.8	-6.5	0.9	0.7
Consolidated central government (in percent of GDP)				
Revenue	23.2	24.2	24.7	24.7
Expenditure	20.8	21.5	22.7	23.1
Net lending (+) / borrowing (-)	2.3	2.7	1.9	1.6
Overall balance	1.4	1.7	0.9	0.6
Excluding Social Security Funds	-1.1	-0.6	-1.4	-1.7
Money and credit (end of period)				
Overnight call rate	1.6	1.9	...	...
Three-year AA- corporate bond yield	2.7	2.3	...	...
M3 growth	6.6	7.2	...	...
Balance of payments (in billions of U.S. dollars)				
Exports, f.o.b.	580.3	625.4	638.5	660.3
Imports, f.o.b.	466.7	513.6	523.4	538.9
Oil imports	59.6	80.4	69.8	71.9
Current account balance	75.2	76.4	76.0	78.1
Gross international reserves (end of period) 2/	384.5	398.9	422.2	444.5
In percent of short-term debt (residual maturity)	227.2	226.8	232.8	237.9
External debt (in billions of U.S. dollars)				
Total external debt (end of period)	412.0	440.6	489.0	531.2
Of which: Short-term (end of period)	116.0	126.6	128.1	133.5
Total external debt (in percent of GDP)	26.9	27.2	29.5	30.5
Debt service ratio 3/	8.2	8.8	9.8	10.9

Sources: Korean authorities; and IMF staff estimates and projections.

1/ Contribution to GDP growth.

2/ Excludes gold.

3/ Debt service on medium- and long-term debt in percent of exports of goods and services.



REPUBLIC OF KOREA

STAFF REPORT FOR THE 2019 ARTICLE IV CONSULTATION

April 22, 2019

KEY ISSUES

Context: Korea's economy has strong fundamentals, but is facing cyclical and structural headwinds. Growth is projected to moderate to around 2.6 percent in 2019, reflecting weaker export growth and investment. Internal demand will be supported by fiscal policy. The output gap is negative and inflation pressures are weak. The current account surplus narrowed, but is expected to remain elevated in 2019. Potential growth will continue its decline, and polarization and inequality are concerns. Labor and product market duality persist. The government is focusing on supporting income, creating jobs, and promoting innovation.

Policy recommendations: Staff recommend an integrated package of macroeconomic, financial and structural policies to support growth, raise potential output, and reduce excess internal and external imbalances, while preserving financial stability.

To support short-term growth and contain risks:

- The authorities should provide more fiscal stimulus this year through a supplementary budget of more than 0.5 percent of GDP, while paying attention to fiscal efficiency. Additional measures should include higher spending on targeted safety nets, childcare, training and employment services.
- Monetary policy should be eased, as inflation is projected to remain below the target for this year and next, inflationary pressures are weak, signs are emerging that inflation expectations have started to decline, and the output gap is negative.
- While risks to financial stability appear well contained, household debt remains a source of vulnerability. Macroprudential policies should remain tight to preserve financial sector resilience.

To promote long-term, inclusive growth and job creation:

- Fiscal policy should remain expansionary in the medium-term, focusing on increasing social protection, boosting female labor force participation, and supporting growth-enhancing structural reforms.
- Flexicurity should be adopted as a basis for labor market policies.
- Public sector job creation should be linked to developing services that cannot be provided by the private sector. The minimum wage increase for next year should be set below labor productivity growth.
- Barriers to entry and the protection of incumbents in the product market need to be reduced further.

Approved By
**Kenneth Kang, Asia
 and Pacific
 Department and
 Martin Kaufman,
 Strategy and Policy
 Review**

Discussions were held in Seoul and Sejong during February 27 to March 12, 2019. The staff team included Tarhan Feyzioglu (Mission Chief), Sohrab Rafiq, Niels-Jakob Hansen, Rui Xu, Dongyeol Lee, (all APD), and Signe Krogstrup (RES). Joong Beom Shin (OED) participated in the discussions. Edda Zoli (APD) supported the mission from headquarters. Livia Tolentino and Medha Madhu Nair assisted in preparing this report.

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CONTEXT: CYCLICAL AND STRUCTURAL HEADWINDS TO GROWTH

1. **Short-term growth is slowing.** GDP growth dropped to 2.7 percent in 2018 from 3.1 percent in 2017. The global trade slowdown, particularly for semi-conductors, is taking a toll on equipment investment. Export growth is deteriorating on the back of trade tensions and China's slowdown. Inflation pressures are weak, and employment creation has been tepid. Household leverage keeps increasing, albeit at a slower pace, raising concerns about financial risk. Imbalances in the economy—particularly weak domestic demand—have led to large current account surpluses.
2. **Potential growth is declining on the back of persistent structural challenges.** Potential growth has fallen to below 3 percent, hindered by unfavorable demographics and slowing productivity, and is projected to drop steadily in the coming decades. Korea's working age share of the population peaked at 73.4 percent in 2016 and is expected to drop to 51.3 percent in 2050, depressing potential employment and growth. Total factor productivity growth has slowed, and the level remains about 65 percent of that in the U.S. in 2017.
3. **Duality in the labor and product markets persists.** In the labor market, there is a significant divide between regular and non-regular workers, which contributes to inequality and sluggish productivity growth. There is also a substantial productivity gap between the manufacturing and service sectors, as well as between small and large firms.
4. **Income inequality is becoming more pronounced.** While Korea's Gini coefficient is slightly above the OECD average, and in 2018 average monthly income among the bottom 20 percent of households dropped by 10.2 percent year-on-year, while for the top 20 percent it increased by 9.6 percent. This latest increase in household income disparity likely reflects labor market softness and the weakening of the economy. Old-age poverty is significantly higher than in the rest of the OECD. This greater income polarization partly reflects inadequate social protection.
5. **The government has focused on supporting income, creating jobs, and promoting innovation.** It has strengthened social safety nets, substantially raised the minimum wage, supported SMEs to boost employment, and expanded public sector jobs. It is also revising regulation to prop-up investment and start-ups and designing measures to promote fair competition between *chaebols* and smaller firms. The reform process faces some headwinds as the President's party lacks votes in parliament to pass laws unilaterally.

RECENT ECONOMIC DEVELOPMENTS

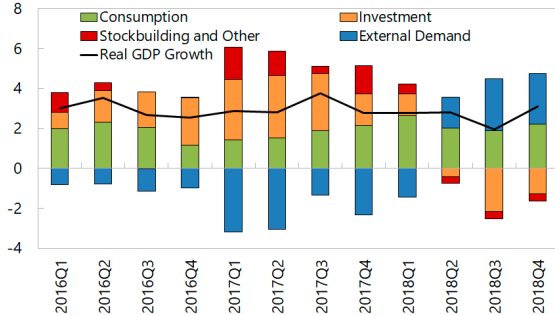
6. **The economy lost momentum in 2018.** GDP growth was 2.7 percent in 2018 down from 3.1 percent in 2017. The softening was driven by a contraction in equipment and construction investment (Figure 1). The slowdown in global trade, especially in semi-conductors, weakened equipment investment, while a maturing construction cycle and measures to contain household debt growth contributed to a decline in construction investment. Private consumption growth remained robust, supported by the minimum wage increase and increased transfers. Government

Figure 1. Korea: Recent Economic Developments

Domestic demand is slowing...

Contributions to GDP Growth

(In percent, Y-on-Y growth)

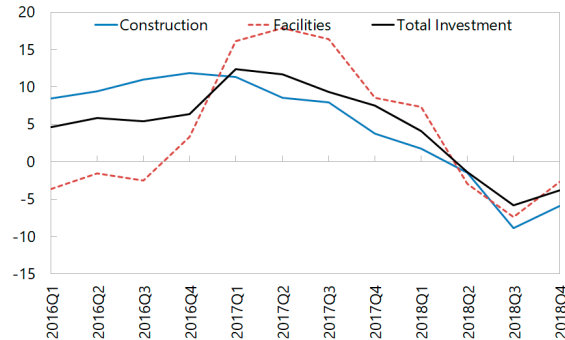


Source: CEIC Data Company Ltd.

... led by declining investment.

Total Investment

(In percent, Y-o-Y growth)

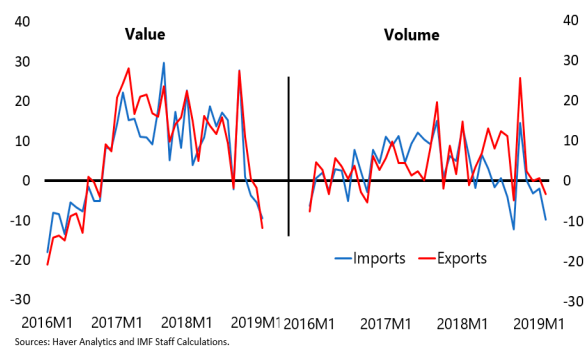


Source: CEIC Data Company Ltd.

Export and import growth have recently been easing.

Exports/Imports

(In percent, Y-o-Y growth)

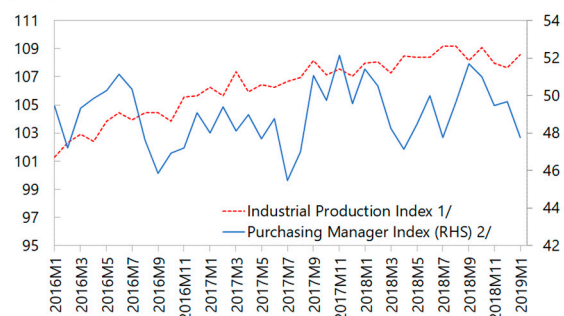


Sources: Haver Analytics and IMF Staff Calculations.

Leading and coincident indicators point to slowdown in manufacturing.

Industrial Production and Purchasing Manager Index

(Index)

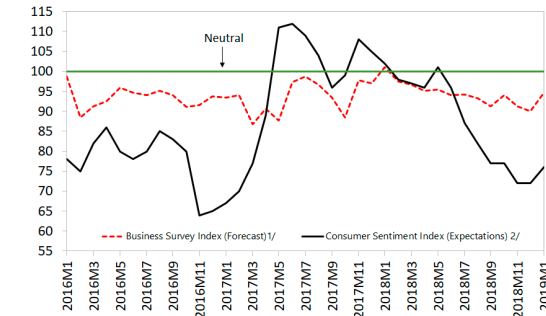


Source: Haver.
1/Base: 2014M1=100
2/SA, 50+=Expansion

Business and consumer sentiment have also softened.

Business and Consumer Sentiment

(Index)

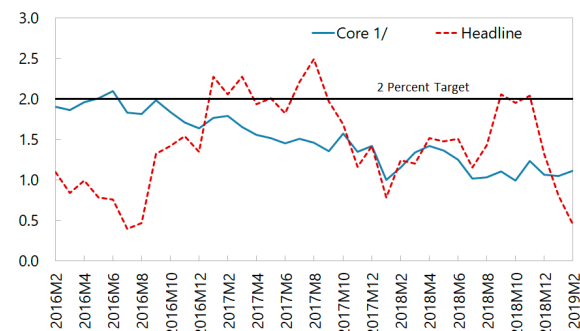


Source: CEIC Data Company Ltd.
1/ Seasonally adjusted. 2/ Expectations to Domestic Economic Situation.

Headline and core inflation remain subdued.

Inflation

(In percent, Y-o-Y growth)



Source: Haver Analytics.
1/ All items excluding food and energy.

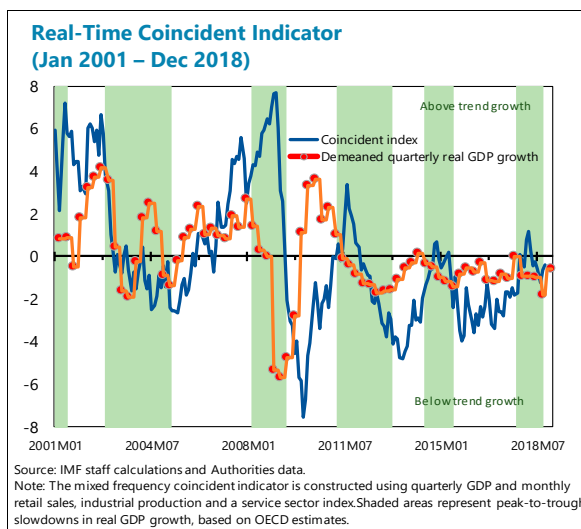
consumption accelerated. However, overall fiscal policy was tight (see paragraph 17). Export growth remained relatively solid up to Q3 but turned negative in Q4 (quarter-on-quarter), on the back of trade tensions and China's growth slowdown. In the first two months of 2019, exports have continued to decline.

7. The job market weakened. In 2018, employment growth dropped to 0.4 from 1.2 percent in 2017, led by weak private job creation. Employment rebounded in February 2019, driven mainly by the public sector and temporary jobs. The unemployment rate was 3.7 percent in February this year, close to the average in recent years, but discouraged job-seekers outside the labor force increased significantly—by 7.5 percent year-on-year. Youth unemployment was 10.5 percent in 2018, 0.2 percentage higher than the year before. The weakening in the labor market was particularly severe in low productivity sectors and among low skilled workers, likely reflecting both the slowing economic momentum and the sharp rise in the minimum wage in 2018–19.

8. Inflation remained low, despite a temporary spike. The year-on-year headline inflation rate declined to 0.5 percent in February 2019, led by falling oil and food prices. It had reached the Bank of Korea (BOK)'s inflation target of 2.0 percent only temporarily in late 2018, mainly due to an increase in energy and food prices. Core inflation excluding food and energy was subdued throughout 2018 and early 2019 recording 1.1 percent year-on-year in February this year. Barring a few short periods, inflation has undershot BOK's inflation target since 2012.

9. The current account surplus narrowed but remained large. The current account surplus was 4.7 percent of GDP in 2018, down from 4.9 percent in 2017 (Figure 2). Exports of goods grew slower than imports, and investment income narrowed and the deficit in employee compensation fell. On the other hand, the service balance strengthened on the back of a partial rebound of tourist arrivals from China. The decline in the current account surplus is explained by a larger fall in the saving rate than in the investment-to-GDP ratio.

10. Capital inflows to the bond market have been resilient, while equity prices have corrected. Despite heightened volatility in global financial markets in the second and third quarters of 2018, portfolio inflows rose by around 21 percent to USD 21.1 billion, compared to the previous year.¹ The increase reflected a shift in the composition of capital flows, as a surge in inflows into Korean debt securities outweighed portfolio equity outflows in response to increased volatility. While the Korean won is not considered a safe-haven currency, the episode was suggestive of occasional safe-haven patterns in the demand for Korean debt securities which helped reduce pressures on the won. The outflows from portfolio equity instead contributed to a correction in equity prices of around 20 percent in 2018. Beginning in 2019, last year's trends were somewhat reversed, reflecting global trends, with an outflow from debt securities more than offset by an inflow in portfolio equities.

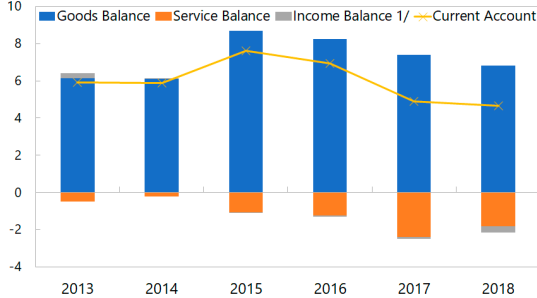


¹ See the Working Paper "Recent Shifts in Capital Flows Pattern in Korea: An Investor Base Perspective" (forthcoming).

Figure 2. Korea: Recent External Developments

The current account continued to narrow...

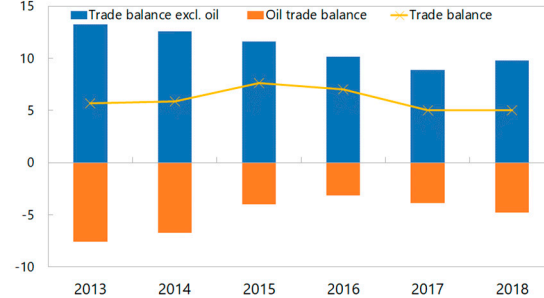
Current Account
(in percent of GDP)



Sources: CEIC Data Company Ltd.; IMF staff estimates.
1/ The sum of the primary and secondary income balance.

... while the trade-balance excluding oil increased.

Trade Balance and Oil Imports
(In percent of GDP)

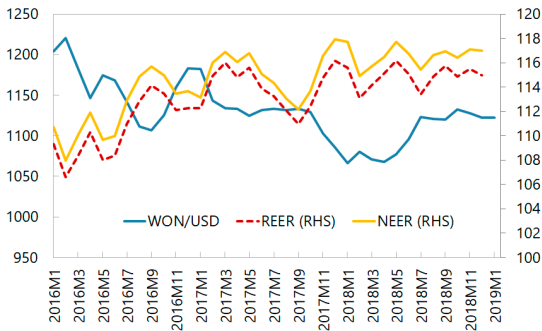


Notes: The oil trade balance does not include products related to oil.
Sources: CEIC Data Company Ltd.; IMF staff estimates.

The REER appreciated slightly.

Exchange Rates

(REER and NEER 2010=100; WON/USD)

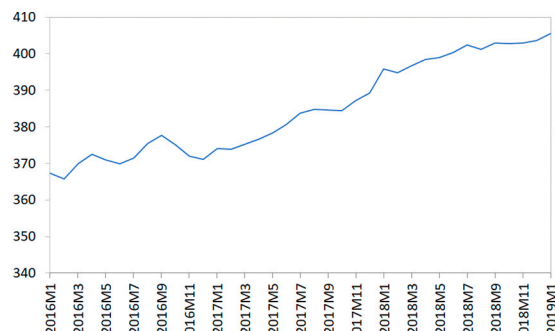


Sources: IMF APDCORE database; Haver Analytics

Reserve accumulation has continued.

Reserves

(USD Billions)

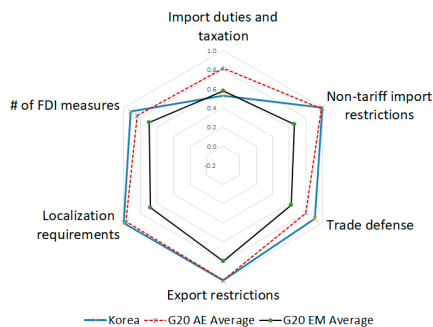


Source: CEIC Data Company Ltd.

Korea has relatively few trade restrictions ...

Trade Restrictive Measures 1/

(0=least open country in G20; 1=most open country in G20)

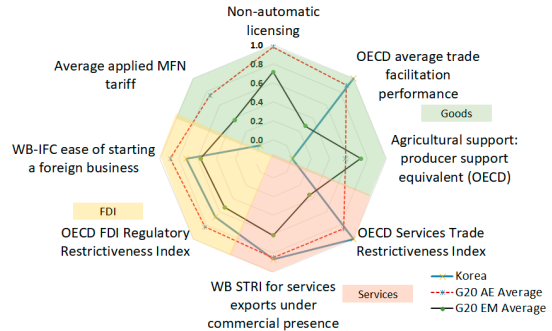


Sources: OECD; Global Trade Alert; World Bank.
Note: 1/ Policies adopted since 2008.

... with exceptions for tariffs.

Overall Trade and FDI Regime

(0=least open country in G20; 1=most open country in G20)



Sources: OECD; World Bank; IMFWP18/32; WTO; UNCTAD TRAINS.

11. Intervention in the forex market appears to have been limited. In 2018 foreign exchange reserves increased by USD 14 billion (4 percent), reaching USD 399 billion end of year (24.6 percent of GDP). Net intervention, however, is estimated to have been limited with spot intervention (increasing reserves) roughly offsetting the change in the forward position. According to the data published by the authorities, Korea sold USD 187 million on a net basis in 2018H2, including both the spot and forward market. FX intervention appears to have been limited to address disorderly market conditions. The Korean won has been on a gradual appreciating trend since 2013, and in REER terms it appreciated by nearly 1 percent (2018 average compared to 2017 average) (Figure 2).

12. Korea's external position in 2018 is assessed to be moderately stronger than warranted by medium term fundamentals and desirable policy settings. The current account gap is estimated at 1.7 percent of GDP, with a range of 0.7 to 2.7 percent of GDP (Annex I). This reflects excessive saving, including for precautionary purposes, as well as relatively weak private investment.

13. Loan growth to households is slowing, but risks from household debt remain.

Household credit growth was 5.8 percent (year-on-year) in 2018 Q4, down from 8.1 percent in the corresponding period in 2017 (Figure 3). Lending from the non-bank financial institutions (NBFCs) to households slowed significantly, with credit growing at 3.1 percent compared with 8.7 percent a year earlier. These developments reflect weakening credit demand and a deceleration in credit supply following the implementation of tighter regulations. Nevertheless, household debt-to-disposable income ratio increased to 162.1 percent in 2018 Q3 from 159.8 percent at the end of 2017. About 69 percent of outstanding household debt is at variable rate. However, the increased borrowing by households has been primarily used to accumulate assets, helping maintain balance sheet strength. Nationwide house price growth has remained stable and in line with implied long-run fundamentals, but continued to increase sharply in certain geographic areas until October (Figure 3). Bank credit growth to the corporate sector is moderate, at around 5 percent. Instead, lending from the NBFC to corporate real-estate related activities is growing more strongly, at just over 30 percent, possibly reflecting a migration of loans from household to firms to circumvent prudential regulation. The proportion of unsecured banks loans in total loans fell by around 1 percentage point in 2018 to 29.9 percent. Aggregate corporate leverage remains high at around 101 percent of GDP, with significantly higher ratios in the construction and shipping sectors. A sudden adverse price adjustment or a softening in real-estate demand could result in rising delinquencies for construction related loans.

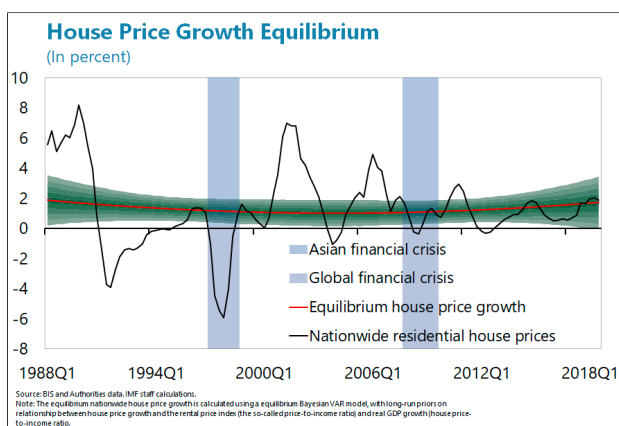
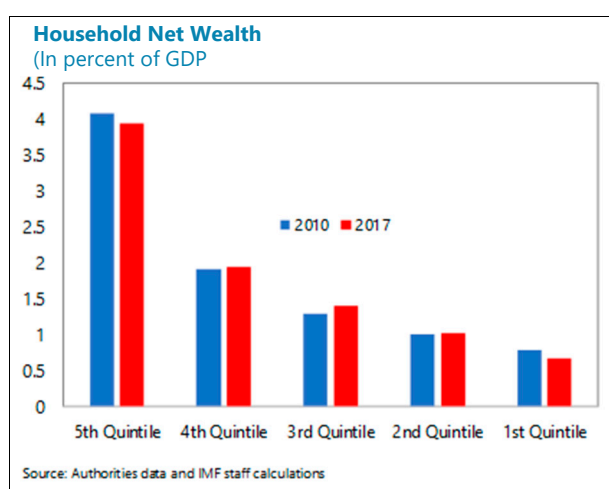
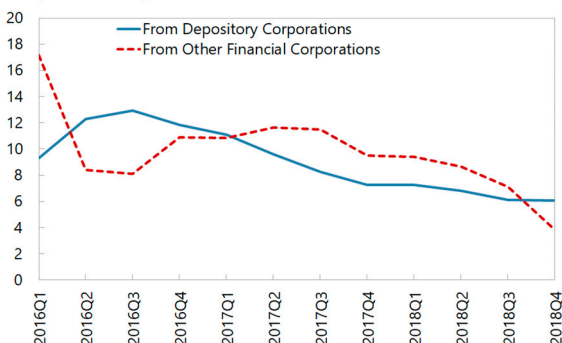


Figure 3. Korea: Recent Financial Developments

Credit growth to households has slowed...

Credit Growth to Households

(In percent, Y-o-Y growth)

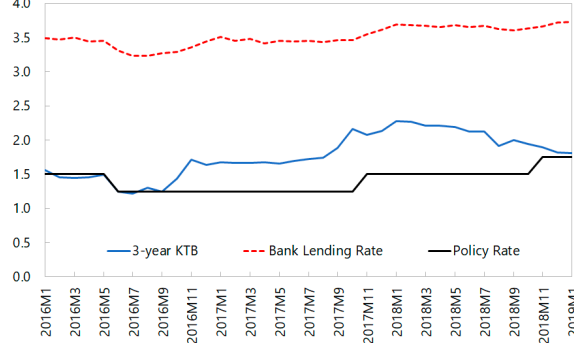


Source: Haver Analytics.

... with interest rates moving only slightly

Interest Rates

(In percent)

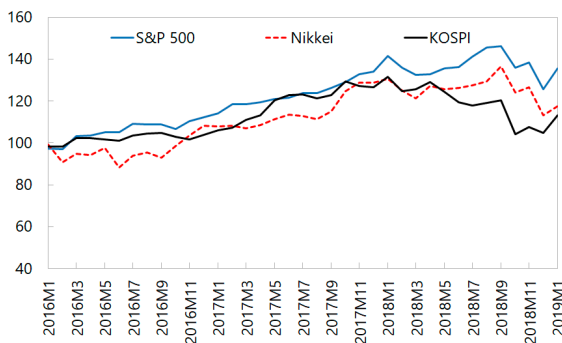


Source: CEIC Data Company Ltd.

Stock market movements have been broadly in line with global developments.

Stock Markets

(Jan. 2015=100)

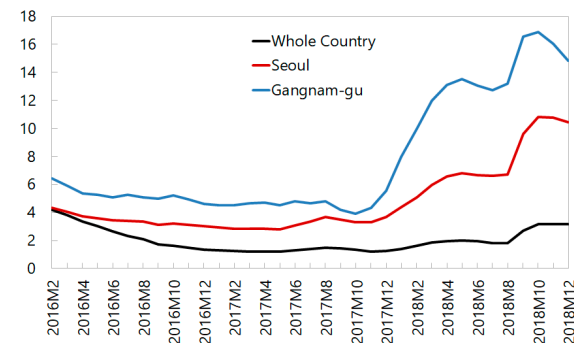


Source: IMF APDCORE database.

Housing price inflation is high in certain areas, but stable nationwide.

Housing Price Inflation: Apartments and Jeonse Rent Index

(year-on-year growth, percent)

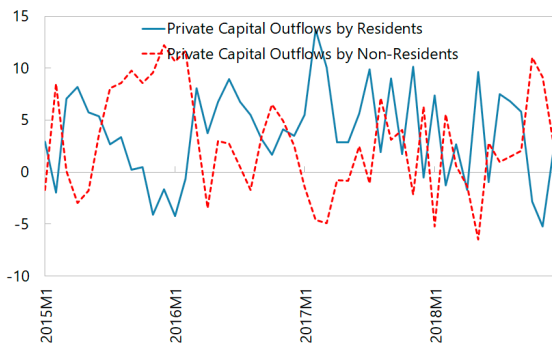


Source: CEIC, IMF Staff Calculations

Capital flows were broadly stable.

Capital Flows

(in billions of U.S. dollars)

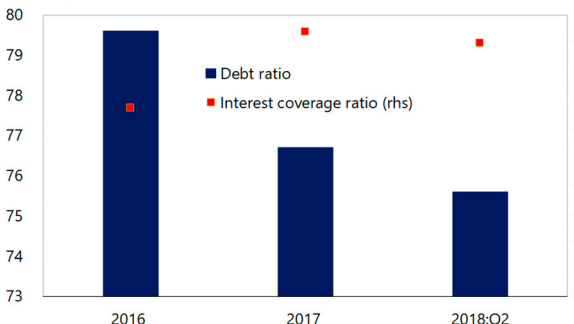


Sources: Haver Analytics; IMF staff calculations.

Average corporate leverage in Korea remains high and is concentrated in capital-intensive industries.

Corporate Vulnerabilities

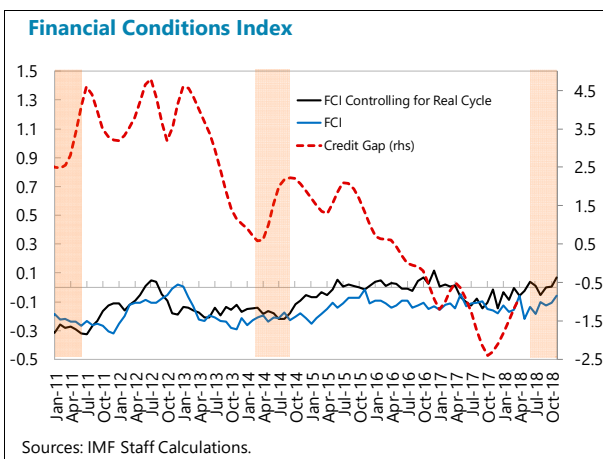
(In percent)



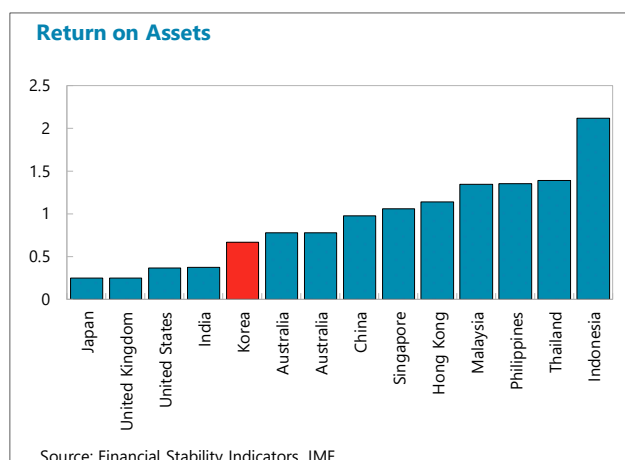
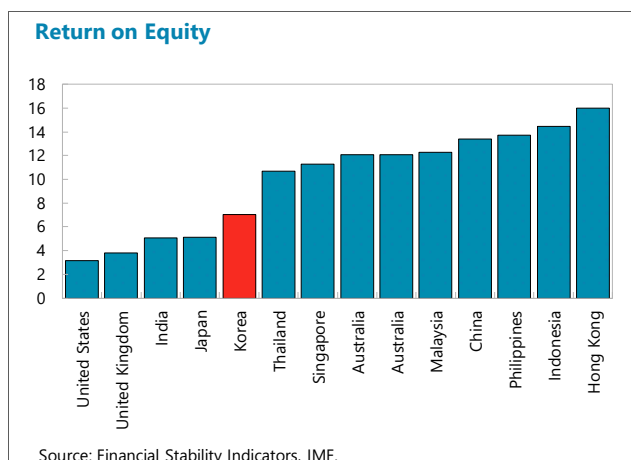
Source: Author of Bank

14. Overall financial conditions are neutral.

A financial conditions index, which generally measures the ease of obtaining new financing, constructed by staff, suggests that financial conditions remained roughly unchanged by end-2018. The credit-to-GDP gap was negative in 2018. Nevertheless, compressed risk premia raise the possibility of small changes in the global environment eliciting an outsized financial market response (Figure 4). While household leverage has continued to grow, risks to overall financial conditions remain contained.²



15. The banking sector appears to be well capitalized with sizable liquidity buffers in place. Banks’ capital ratios are well above regulatory minimums, at 16.1 percent in Q3 2018. Banking system liquidity is improving, with the loan-to-deposit ratio at 97.7 percent and expected to edge lower as loan growth moderates. Banks’ reliance on wholesale funding for their domestic activities appears relatively low, and foreign assets continue to exceed liabilities, reducing the risk of currency mismatches. Bank asset quality is good, with a non-performing loan ratio of 0.54 percent. However, with a return-on-assets (ROA) at about 0.6 percent in 2017, Korean banks’ profitability lag that of regional peers. Average indicators of financial soundness for non-bank financial institutions are also strong, although NPL ratios at around 2 percent have tended to be higher than for banks.



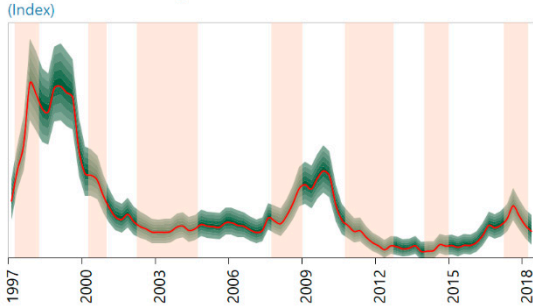
16. Corporate restructuring has progressed unevenly. Overall firm debt-to-equity ratios have continued to decline, reaching 75.6 percent in June 2018, about 1 percentage point lower than at the end of 2017. Restructuring efforts have resulted in sharp fall in the debt-to-equity ratio in the shipbuilding industry in mid-2018 (-22.6 percentage points) compared to the end of 2017. However, the debt-to-equity ratio in the shipping industry has risen by 30.7 percentage points, due to increased borrowings to raise operating funds. Sluggish trends in the shipping industry has delayed some restructuring. The Policy Bank Recapitalization Fund setup in 2016 has expired, without it being withdrawn and with no plans to restart it.

² See Selected Issues Paper “Korea: Are Financial Conditions at Risk?”.

Figure 4. Korea: Market Conditions, Risk Premia and Financial Stress

Macro uncertainty has remained subdued since the political unrest in 2017, during which time uncertainty spiked.

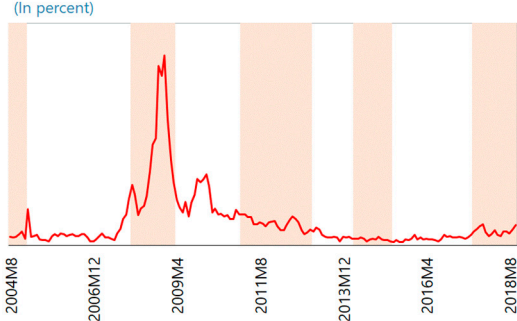
Macro Uncertainty



Source: IMF Staff Calculations.
Note: Shaded area represents the Asian Financial Crisis and the Global Financial Crisis. The estimate is conceived using a Bayesian VAR model with common factor volatility. Shaded represent peak-to-trough cycles in real GDP growth.

Credit risks, as measured by the perceived solvency of financial institutions, remains low...

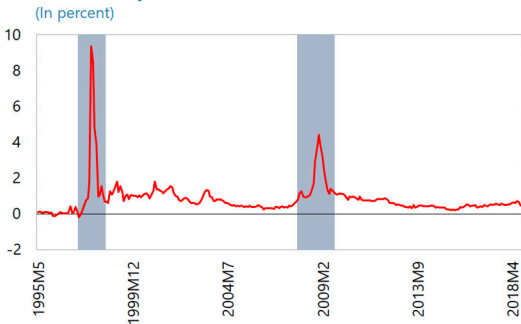
TED spread



Source: IMF Staff Calculations.
Note: Shaded areas represent peak to trough cycles in real GDP growth.

...consistent with a compressed corporate bond spread.

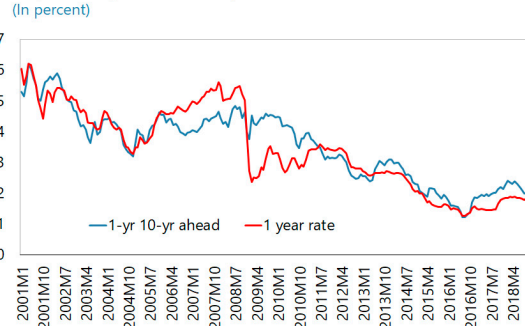
Excess Corporate Bond Premium



Source: IMF Staff Calculations.
Note: Shaded area represents Global Financial Crisis.

Markets expect short-term rates to stay low over the medium-term, aided by low inflation expectations.

Implied 1-year rate 10 years ahead



Source: IMF Staff Calculations

However, recent tightening in monetary policy has pushed up long-term yields and the term premia...

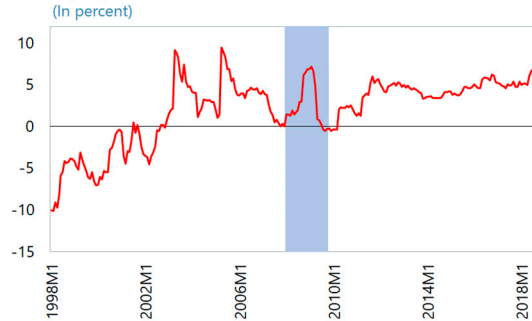
Term Premia



Source: IMF staff calculations
Note: Shaded area represents the Global Financial Crisis. Shaded area represents peak-to-trough cycles in real GDP growth.

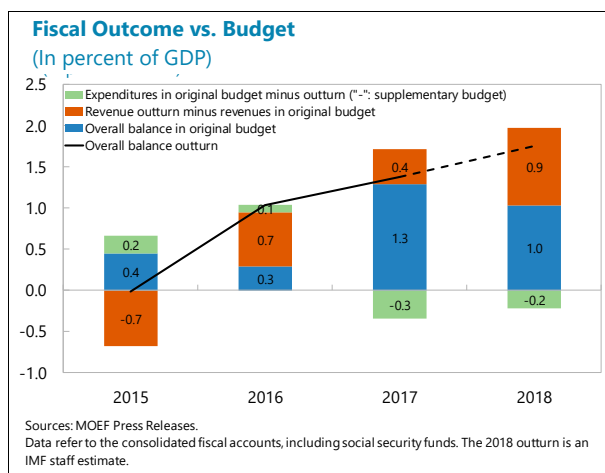
...which has had a small impact on investors willingness to bear risk.

Equity Risk Premium



Source: IMF Staff Calculations.
Note: Shaded area represents the Global Financial Crisis.

17. Fiscal policy was tight in 2018. The structural budget surplus increased by 0.4 percentage point compared to 2017, to 2.9 percent of GDP. Net lending (consolidating central government and social security fund accounts) recorded a surplus of 2.7 percent of GDP in 2018, also up by 0.4 percentage point. Revenue overperformance more than offset higher welfare spending, including through a supplementary budget of 0.2 percent of GDP in support of youth employment. Last year revenue overperformance was mainly driven by corporate income taxation from stronger-than-expected corporate earnings as well as taxes on property and equity assets. Since 2016, revenue outturns have been significantly higher than envisaged in the budget, widening budget surpluses, despite the introduction of supplementary budgets.



18. The BOK increased its main policy rate by 25 basis points to 1.75 percent in November 2018 and has been on hold since. For the November 2018 hike, the BOK cited financial imbalances. Subsequently, BOK justified its decision to stay on hold, pointing out that a continued accommodative monetary stance remained appropriate as inflationary pressures were projected to remain subdued.

OUTLOOK AND RISKS

19. Growth is expected to decline to around 2.6 percent in 2019. This reflects slowing external demand, while internal demand is anticipated to pick up, supported by fiscal policy. Export growth is projected to be weak on the back of a deteriorating tech cycle, and a slowdown in China. The impact of potential trade diversion toward Korea from the China-U.S. trade conflict is expected to only partially compensate for the overall slowdown of exports to China. The contribution of net exports to growth is projected to turn negative, while the current account surplus will be 4.6 percent of GDP. Domestic consumption is expected to accelerate, helped by the fiscal stimulus embedded in the 2019 budget and a supplementary budget. Staff assume a supplementary budget of 0.3 percent of GDP and unchanged monetary policy in baseline growth projections. Facility investment will continue to face headwinds from weaker trade, especially in demand for semiconductors. Construction investment is expected to stabilize to a level more in line with long-term trends.

20. Economic slack will dissipate only gradually. Staff's estimate of the output gap—the difference between actual and potential real GDP—remain negative at around -0.4 to -1.1 for 2019, notwithstanding substantial uncertainty around these estimates (Box 1). As the economy moves toward potential over the forecast horizon, labor market utilization will increase, and the output gap will close only gradually, keeping downward pressure on prices. Potential growth is projected to be around 2.7-2.6 through the projection period.

Box 1. Labor Market Slack and the Output Gap¹

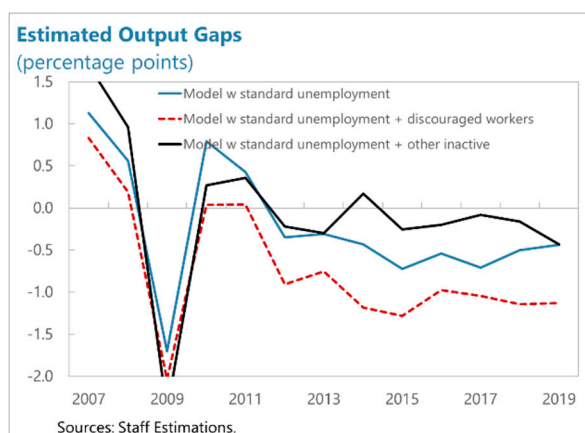
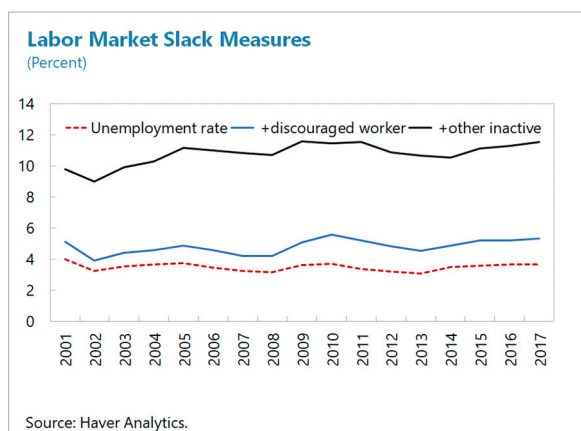
To inform policy stance, we estimate an output gap for Korea using a multivariate filter (MVF), modified to better reflect labor market conditions. The output gap is defined as the difference between the actual and potential output, which is the maximum level of output an economy can produce without generating inflationary pressure (Okun, 1962).

An MVF provides an output gap estimate through a system of economic equations. Our methodology is consistent with the substantial literature using MVFs to estimate output gaps (see Blagrove et al. 2015 for one recent example). Such filters provide output gap estimates through data on which economic structure from theoretical relationships is imposed.

We use a MVF that links the output gap and the degree of slack in the labor market. The premise for the approach is that labor market utilization can be used to better assess whether the economy is operating above or below potential. A labor market operating above potential will create an upward pressure on wages leading to inflation, and vice versa. Therefore, we impose an equation that links labor market slack and output through a production function. Specifically, the equation links the output gap to a labor market gap and a Total Factor Productivity (TFP) gap. The latter can inter alia be taken to measure the degree of capital utilization.

How to measure labor market slack matters. Usually labor market utilization is measured through regular unemployment. This concept is relatively well defined, but may not fully capture the degree of slackness in the labor market. Importantly, it does not account for workers outside the labor force that are ready and able to take employment (“discouraged workers”). Therefore, we use various measures for labor market slack: (i) regular unemployment, (ii) regular unemployment augmented with discouraged workers, and (iii) regular unemployment augmented with persons classified inactive for unspecified reason (i.e. reasons other than childcare, house-keeping, schooling, old age, or disability).

The estimation method yields an output gap for 2019 in the range of -0.4 to -1.1 percent. All three measures deliver an output gap of around -2 percent in 2009. The measure based on regular unemployment becomes positive in 2010-11 before it widens to around 0.7 in 2017 and then starts to close. For the measure with discouraged workers, however, the measure was zero in 2010-11, widens until 2015 and then stabilizes around -1 percent. The measure augmented with other inactive hovers slightly below zero since 2011. All gaps are projected to close at the end of the projection period. The estimations are subject to substantial uncertainty in model parameters, model selection, and underlying data.



¹ See Selected Issues Paper “Labor Market Slack and the Output Gap.”

21. Inflation is projected to remain below BOK's target this year and the next. Core inflation will also remain subdued owing to persistent slack in the economy. Headline inflation will be kept low, at 1.4 percent year-on-year, by the cut in oil consumption taxes as well as declining oil and food prices. Inflation will converge only gradually toward target in the medium-term, as the output gap closes.

22. Risks to this baseline are tilted to the downside (Annex II).

- **External.** Rising protectionism and retreat from multilateralism and/or weaker-than-expected global growth could adversely impact exports and dampen investment more than anticipated. A sustained decline in global risk appetite could result in capital outflows and tighter financial conditions in Korea.
- **Domestic.** House prices could soften and weaken household balance sheets and a further slowdown in economic growth could reduce household incomes, resulting in higher household delinquencies and financial stress and worsen external imbalances. Another large minimum wage hike could hinder employment creation. Inflation expectations could substantially weaken, creating further downward pressures on demand and inflation. Prolonged slack in the economy, associated with weak domestic demand and external imbalances, could also lead to low inflation and excessive reliance on monetary easing, increasing financial stability risks. Upside risks include a larger supplementary budget than included in staff's baseline, and additional monetary stimulus, which would boost growth. Faster than anticipated progress in relations with North Korea could have a positive impact on investment and consumer sentiment, while there is also a risk that geopolitical tensions related to North Korea may reemerge.

23. In the medium term, growth is projected to increase as the output gap closes. This will be led by recovering investments and stronger domestic consumption. As the economy rebalances toward domestic demand, the current account will edge down to around 4.4 percent of GDP in the end of the projection period.

Authorities' Views

24. The authorities broadly agreed with staff's outlook for growth. They foresaw a stronger contribution from external demand than staff in 2019, but agreed that Korea was not insulated from the challenging global environment. However, they emphasized that Korea's resilience has increased as geopolitical tensions has receded. They stressed the role of the supplementary budget in supporting growth. They also pointed to the relatively stable financial market performance during recent periods of global volatility. The BOK assessed overall financial conditions as accommodative, and believed they should continue to be wary of financial imbalances especially related to sustained household credit demand and elevated levels of household leverage. The direct impact from the ongoing trade tensions on Korea was assessed to be limited, given the small share of Korean export to China that ultimately reach the United States. In their view, the recent weakening in exports reflects a general slowdown in demand from China and global trade rather than the impact of trade tensions. The BOK's inflation forecast was in line with staff's, and the authorities saw the risk of a continued decline in expectations as low.

25. BOK expressed reservations about staff's output gap assessment. They estimated the output gap to be only slightly negative. They noted that differences in the assessment of the output gap between BOK and staff were mainly caused by staff's estimation of potential growth in 2010, though both parties' estimates of potential growth have been almost the same since then. In addition, they stressed the high degree of uncertainty, given that the model was estimated on a short time period, the parameters were not specific enough for Korea, and the results depended on the indicator of labor market slack used. They also noted that relying on labor market variables to gauge business market conditions in Korea could be misleading, given the unstable relationship between the business cycle and employment.

26. The authorities expressed reservations about the preliminary 2018 external sector assessment. They considered the external balance position to be in equilibrium and argued that the IMF model did not consider some Korea-specific factors, including the need to save more in view of future challenges arising from demographic change and possible reunification.

POLICY DISCUSSION

A. Supporting Short-Term Growth and Containing Risks

A more expansionary fiscal stance and a firmly accommodative monetary stance are needed to boost growth and inflation and reduce excess external imbalances. Macroprudential policies should be appropriately tight to preserve financial stability.

27. The 2019 budget envisages an increase in government spending. Expenditure is expected to rise by 8.5 percent compared to the 2018 outcome, reflecting an increase in spending on safety nets (including unemployment benefits by 16.2 percent), measures to support employment, and higher spending on childcare. Staff project revenues to rise by nearly 6 percent, assuming some revenue overperformance compared to the approved 2019 budget, in light of recent trends.

28. Additional fiscal easing is needed in 2019 and beyond. Assuming a supplementary budget of 0.3 percent of GDP, staff project the overall balance to decline by 0.8 percentage point to 0.9 percent of GDP (net lending to 1.9 percent of GDP), and the structural balance to decline by 0.7 percentage point from 2018, to 2.2 percent of GDP. As the output gap is expected to remain negative, in addition to front-loading spending, the authorities should allow automatic stabilizers to fully operate. Moreover, staff recommend that the supplementary budget be more than 0.5 percent of GDP. Overall, the government should aim to reduce the structural balance as a share of GDP by at least 1 percentage point in 2019. With a debt-to-GDP ratio of around 40 percent of GDP, Korea has substantial fiscal space for such expansion. This will also be consistent with the government's plans to follow a more expansionary fiscal policy in the coming years (see paragraph 43).

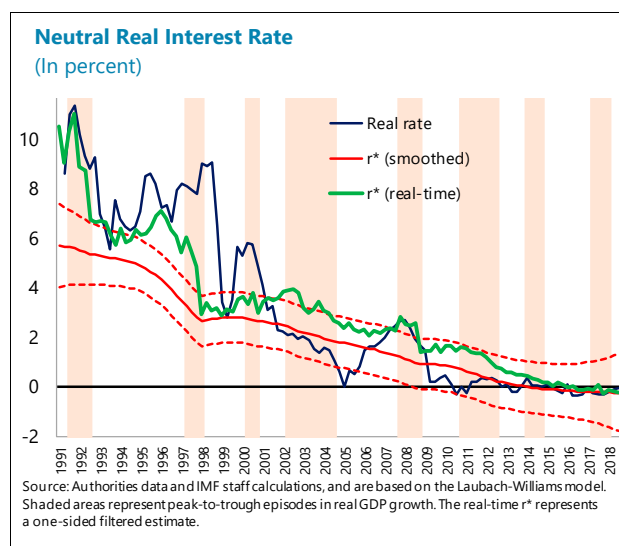
29. Equally important, the additional spending should be fiscally efficient and aim at enhancing social safety nets and boosting long-term growth. It should focus on expanding

targeted transfers to the most vulnerable, childcare spending to support female participation in the labor market, as well as training and employment services to foster new hiring (see paragraph 44).

30. Monetary policy should be eased.

The output gap is assessed to be negative; inflation is projected to stay below the BOK's target this year and next; inflationary pressures are weak, and there are signs that inflation expectations have started to decline. Staff neutral real interest rate estimates suggest it has fallen in past decades and reached levels close to zero, reflecting global interest rate trends as well as domestic productivity and demographic developments (Box 2).³ Since the real policy rate is around zero, the current policy rate is close to the neutral rate. The BOK should ease monetary policy to ensure a firmly

accommodative stance to support demand and inflation and prevent a further weakening in inflation expectations. Bringing inflation back to target will also help lift nominal interest rates and put more distance to the lower bound, which will create more policy space for addressing possible future negative shocks.



31. Macroprudential policies, rather than monetary policy, should be used to manage financial risks in Korea.

The BOK is in a difficult position to balance the two mandates (2 percent inflation and financial stability) using the interest rate and macroprudential policies. Currently, their use of monetary policy to contribute to financial stability is working against the need to raise the inflation rate. Instead, the BOK can satisfy its financial stability mandate via its seat on the cross agency Macroprudential Analysis Council. Staff estimates suggest that targeted macroprudential instruments rather than monetary policy have been effective in reducing financial risks in Korea (Box 3).⁴ Given high household debt, much of it linked to variable rates, at this juncture a tighter monetary stance would place headwinds on economic growth and raise household and corporate balance sheets stress, increasing financial risks. Well-tailored macroprudential policies have fewer unintended consequences for other sectors of the economy and would help relieve the burden on monetary policy of targeting multiple objectives.

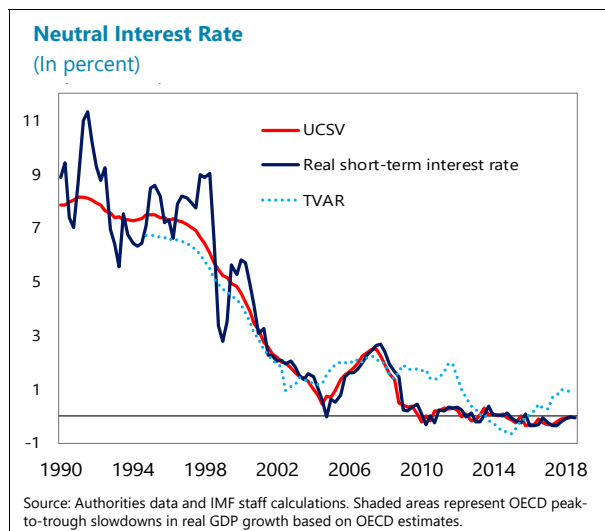
³ See the Working Paper "The Neutral Real Interest Rate in Korea: Trends, Drivers and Implications" (forthcoming).

⁴ See Selected Issues Paper "Evolution of Macroprudential Policies in Korea."

Box 2. Korea's Neutral Real Interest Rate

The level of the neutral real interest rate is an important factor in assessing, calibrating and communicating the monetary policy stance and space. Following the literature, we define the neutral real interest rate as the level of the real rate at which full employment is achieved while inflation remains stable. If the realized real policy interest rate is below this level, the monetary policy stance is considered to be accommodative and demand is stimulated, and vice-versa.

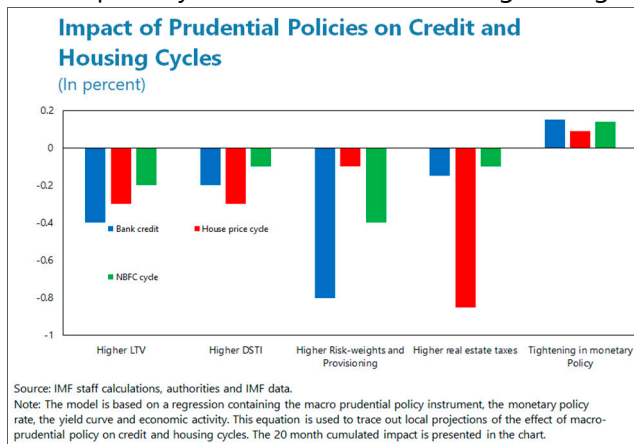
Estimates of the neutral rate suggest that it has fallen to close to zero in Korea. The red and blue lines in the chart show estimates of the neutral rate from an unobserved components model with stochastic volatility (UCSV) and a time-varying model (TVAR), respectively, based on quarterly data. The nominal interest rate deflated with core inflation is also presented. Both models point to a trend decline in the neutral rate since the Asian financial crisis and current very low levels. Estimates using a standard semi-structural Kalman filtering approach (Laubach and Williams 2003, 2015) lead to similar results.



The decline in the neutral rate reflects a mix of global factors, demographic developments and productivity trends, while risk aversion, market power and income inequality may also have played a role. Projected trends in these drivers suggest that the neutral rate is likely to stay low in the next decades. High financial openness transmits persistently low global real interest rates to Korean financial markets. Ongoing aging of Korea's population supports high desired saving, while weak productivity is associated with lower investment, in turn lowering the neutral real interest rate.

The real policy rate is close to the neutral rate, although there is a degree of uncertainty. Based on the most recent core inflation readings, the real policy rate stood at 0.45 percent in February 2019. Based instead on assumed inflation expectations close to the BOK's target of 2 percent, the real policy rate would currently stand at -0.25 percent.

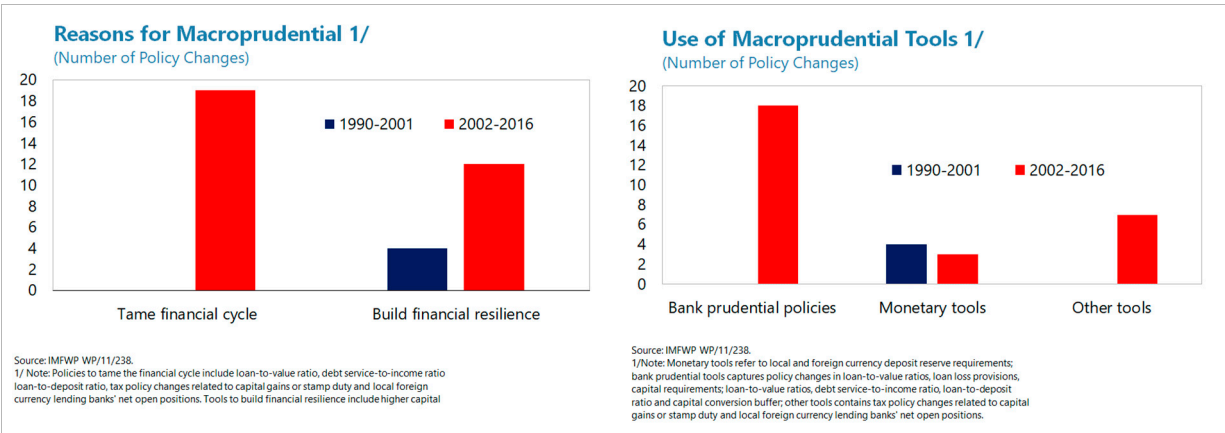
32. Regulatory reforms are addressing financial stability risks and strengthening the resilience of the financial system. Latest measures adopted by the authorities include tightening of the loan-to-value (LTV) and debt-to income (DTI) ratios, which target credit demand. A debt service ratio (DSR) limit covering all forms of debt was also introduced for banks in mid-2018 and will be extended to NBFs in the second half of 2019. According to authorities' estimates, the 40 percent DSR for banks will lower household debt growth by around 1 percentage point. Higher property taxes were introduced to curb speculative activity. To tackle the interest rate risk from household



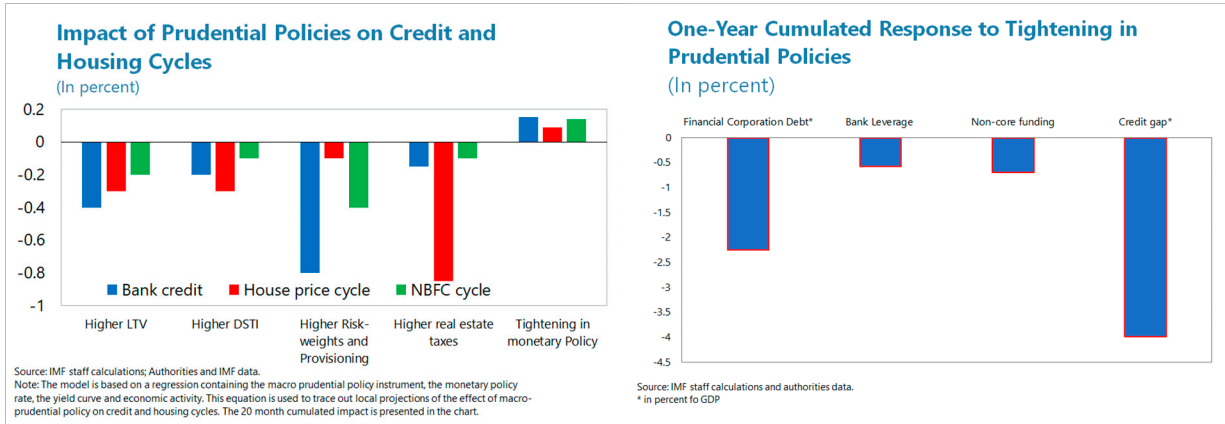
Box 3. Evolution of Macroprudential Policies in Korea

Korea has been at the forefront in using macroprudential policies to manage financial conditions. These policies have been effective in moderating credit and house price cycles and should continue to be used as a first line of defense to contain systemic financial risks.

The use of macroprudential tools to control financial risks in Korea has grown over the past two decades. A database of macroprudential policies shows a move away from monetary macroprudential tools to broader borrower-based prudential instruments in Korea, including loan-to-value ratios, limits on currency and maturity mismatches, and adjustments in risk weights. There are several reasons for this shift: (i) reserve requirements have lost their importance as monetary policy tools after the BOK adopt interest rate policy and inflation targeting; (ii) growing recognition that financial cycles, such as housing credit and house prices are less synchronized with real and inflation cycles in Korea and; (iii) a shift toward explicit macroprudential objectives following the Asian financial crisis.



Estimates suggest that borrower-based macroprudential measures have been effective in taming credit cycles. Changes in loan-to-value limits and risk-weighting have the largest impact on the credit cycle. Real estate-specific measures, such as raising real estate-related taxes or tightening the loan-to-value ratio, have a greater impact on real estate price inflation. The empirical evidence indicates that LTV and DSTI enhance the banking system's resilience to house price and income shocks, and effectively dampen the procyclicality of credit and asset price growth in Korea. Estimates also suggest that when real and financial cycles are aligned monetary and macroprudential policy actions tend to complement one another.



Bank-based prudential policies reduce financial vulnerabilities while creating financial space. Tightening bank-based prudential measures, including capital conversion buffer, reserve requirements, loan loss provisioning and changes in capital requirements, eventually results in lower bank leverage and reduced non-core funding. Financial corporation debt and the credit gap also decline.

debt at floating rates, the authorities have been incentivizing fixed rate loans and capped the stressed DTI at 80 percent for banks.⁵ Measures were also introduced to enhance the resilience of the financial system, particularly against risks from household debt. The risk-weighting of loans with LTVs above 60 percent was increased from 35 to 50 percent in June 2018. A household-based counter-cyclical capital buffer will be adopted in 2020. A corporate LTD ratio will also be introduced to ensure that corporate loans are financed from stable funding sources. The authorities also recently introduced a capital surcharge for life insurance companies that do not fully hedge their long-term foreign assets, which aims to minimize currency mismatches.

33. The macroprudential policy stance should be kept tight to contain risks from high household debt and support financial sector resilience. Staff welcome the broadening and strengthening of macroprudential policies designed to discourage property speculation and insulate the banking sector from adverse shocks in household income and real-estate prices. The authorities should closely monitor and supervise potential leakages from the recent tightening in prudential policies. The forthcoming Financial Sector Assessment Program (FSAP) missions will evaluate the effectiveness of Korea's financial system oversight framework and assess adequacy of current prudential policies in mitigating systemic risks.

34. The leverage cap on banks' foreign exchange derivatives positions and the levy on foreign exchange funding should be evaluated on an ongoing basis. These measures, which constitute a CFM/MPM according to the IMF's Institutional View on capital flows, were introduced after the global financial crisis to prevent excessive build-up of short-term external liabilities and contain banks' currency mismatch risks. The authorities should consider alternative measures that directly address the systemic financial risks but are not designed to limit capital flows, also in light of the recent overhaul of the framework with regard to FX and liquidity measures.

35. The exchange rate should continue to move flexibly, with intervention limited to addressing disorderly market conditions. Data on FX interventions (in net trading volume) for the second half of 2018 were posted on the website of the BOK in March 2019. The next posting will be in September 2019, reporting net interventions in the first half of 2019. Afterwards, intervention records will be posted on a quarterly basis with a one-quarter reporting lag. Staff welcome the publication of data on FX intervention.

36. Korea will undergo a joint assessment of its AML/CFT regime by the Financial Action Task Force and Asia Pacific Group on money laundering in 2019. The assessment will examine, among other things, the transparency of legal persons and arrangements and whether the competent authorities can obtain adequate and accurate beneficial and legal ownership information in a timely fashion.

⁵ Banks are required to calculate the stressed-DTI ratio of each borrower by adding stressed interest rates—at least 100 basis points—to market interest rates should a borrower apply for a new floating rate mortgage loan. Banks are not allowed to grant a new mortgage loan if the stressed-DTI ratio breaches an 80 percent ceiling.

Authorities' Views

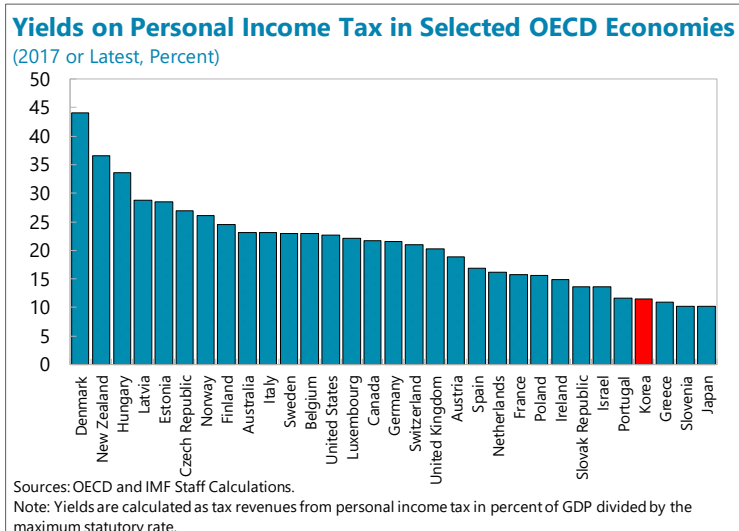
37. The authorities viewed fiscal policy in 2019 as expansionary. They emphasized that the expenditure increase this year would be the highest since 2000. Moreover, to support the economy they plan to frontload spending in the first half of the year. The authorities did not expect significant revenue over-performance in 2019 as stronger-than-expected corporate income would be unlikely this year. Moreover, the Earned Income Tax Credit has been expanded. Considering weak economic data thus far in 2019, the authorities committed to take necessary measures to achieve their growth target of 2.6-2.7 percent, including introducing a substantial supplementary budget to boost job creation, further enhance social safety nets, and address fine dust pollution. Moreover, part of the 2018 revenue overperformance will be transferred to local governments in 2019 for additional spending. The major public institutions will increase their investment by KRW 9.5 trillion (0.5 percent of GDP) in 2019. In addition, government dividends from investment in corporations in the amount of KRW 1.5 trillion won (0.1 percent of GDP) will be reinvested. Private-public partnership will be strengthened further. The authorities agreed that the fiscal stimulus should be efficiently spent and aimed at enhancing potential growth.

38. BOK regarded the current monetary policy stance as still accommodative. They agreed that the neutral real interest rate in Korea has declined as in other advanced economies, but underscored the high uncertainty in estimating the neutral rate. They stressed that their monetary policy stance has continued to be accommodative when judged against the range of their own neutral rate estimates. They also presented a broad set of information, including their own financial conditions index to support their view. Given their assessment of an accommodating stance, they noted that current macroeconomic trends and financial stability risks should be considered in a balanced manner. The BOK also pointed out that cutting the policy rate would further reduce policy space to address possible future severe negative shocks needs to be considered.

39. BOK viewed inflation expectations as well anchored. They stressed that Korea's undershooting of the inflation target for the past five years was primarily due to supply-side shocks, including the fall in oil prices, and institutional factors, such as the government's stronger welfare policies which affected administered prices. The BOK's underlying inflation indicators excluding these factors rose close to the 2 percent target last year. The BOK also mentioned that recent signs of decline in consumers' inflation expectations were modest and partly reflected a restructuring of the sample of consumer survey respondents in September 2018, and the aforementioned supply side factors which were expected to reverse.

40. BOK stressed that their mandate included financial stability. They emphasized that while macroprudential measures were effective in specific markets, the build-up of financial imbalances including the increase in general risk-taking behavior across the economy should be contained with a policy mix including monetary policy. In their view, using a mix of macroprudential and monetary policies, is more effective in addressing financial stability risks.

41. The authorities were of the view that borrower-based macroprudential policies have been effective in reducing and containing household debt growth. However, they noted that household debt continues to rise more than income. Their target is for it to grow in line with nominal GDP in the mid-to-long-term. The authorities considered the cap on banks' foreign exchange derivative positions necessary. They saw it crucial to contain any excessive increase in short-term foreign debts.



42. The authorities stressed that they adhere to the principle that the exchange rate is determined by the market. They clarified that intervention policy in foreign exchange market was limited to episodes of disorderly market conditions. They noted that exchange rate flexibility would continue.

B. Promoting Long-Term, Inclusive Growth and Job Creation

To reinvigorate long-term growth, foster inclusion, and narrow external imbalances, the authorities should implement ambitious reforms, focusing on three areas: ensuring that fiscal policy supports long-term growth, strengthening social protection on a sustained basis, and addressing rigidities in product and labor markets to enhance resource allocation and productivity.

Fiscal Policy

43. Fiscal policy should maintain an expansionary stance over the medium term to support inclusive growth and reduce excessive external imbalances. The authorities plan to raise government expenditure in the medium-term, which will be accompanied by a decline in the fiscal surplus. The 2018-22 National Fiscal Management Plan envisages an increase in fiscal expenditure by about 7 percent per year, on average. Revenues are projected by staff to increase by 4.7 percent, on average, per year. Assuming a supplementary budget of 0.3 percent of GDP in 2019, the structural balance is expected to decline from 2.9 percent of GDP in 2018 to 0.9 percent of GDP in 2022. Staff recommend that the government further reduce the structural balance toward zero in the coming years.

44. The additional fiscal spending should focus on fostering social protection, boosting long-term growth and supporting growth-enhancing structural reforms. The authorities plan to strengthen social safety nets, buttress job creation, and foster innovation. Staff support increasing spending on targeted transfers to the vulnerable. Fiscal spending should also focus on training and job services to prop employment, as well as childcare and child benefits to buttress female labor

force participation and fertility. Fiscal measures can also play an important role in facilitating the implementation of reforms to make the labor and product markets more flexible (see below). Staff simulations indicate that, for example, an expansion in childcare spending by 0.25 percent of GDP, and an increase in Active Labor Market Policies spending by 0.5 percent of GDP, accompanied by labor and product market reforms would boost output by more than 6 percent in 10 years. Staff caution against using transfers to SMEs to preserve jobs indefinitely. Given the large number of fiscal programs in support of SMEs, it would be important to regularly monitor and periodically review their impact. Rather than providing subsidies based only on firm size, focus should be on firms that are more likely to experience improvements in productivity and long-term profitability and produce long-lasting employment gains, such as young and innovative firms.⁶

45. Tax reforms could help support long-term growth. Increasing the neutrality of corporate income taxation with respect to financing sources would enhance resource allocation. Currently, the effective marginal tax rate on equity financing in Korea is estimated to be 40 percentage points higher than that on debt financing. This is a disadvantage for innovative firms—especially start-ups—that tend to rely on equity, rather than debt, for R&D investment. Options to eliminate the distortions arising from corporate debt bias include allowance for corporate equity system or a cash flow tax. Consideration should also be given to adjusting the progressive corporate income tax rate schedule to avoid tax-induced fragmentation of integrated business activities and under-reporting of income.

46. Fiscal challenges from the aging population will require greater revenue mobilization in the longer term. Outlays for pensions and healthcare are set to rise by 10-16 percent of GDP by 2060. While future spending could be partly lowered through an increase in the retirement age and possibly other expenditure cutting measures, the debt-to-GDP ratio will move on an unsustainable trajectory with unchanged revenues. Korea's tax revenue-to-GDP ratio is one of the lowest in the OECD, providing ample room for expansion. Higher revenues could be achieved in the longer term by broadening the tax base. Yields on the personal income tax are low in international comparison, due to significant tax deductions. Tax expenditure on personal income tax increased by more than 40 percent from 2012 to 2017 and was more than 25 percent of personal income tax revenues in 2017. While personal income tax deductions aim to achieve important policy objectives, there will be a need to reassess their effectiveness and costs in the longer term. Tax expenditure on industry, including SMEs, which represented about 30 percent of total tax expenditure in 2017, will also need to be reviewed. The VAT base could also be broadened to cover all new real estate supplies (including the value of land) and fee-based financial services. Depending on the comprehensiveness of these base-broadening measures, it may still be necessary to raise some tax rates, notably the VAT which is relatively low at only 10 percent.

Labor Markets Reforms

47. “Flexicurity” should be adopted as the basis for labor market policies to boost employment and reduce labor market duality. Flexicurity involves three pillars: (i) more flexibility

⁶ See Selected Issue chapter “What Fiscal Policy Can Do to Increase Employment in Korea.”

for regular workers; (ii) a strong and inclusive safety net for the unemployed; and (iii) Active Labor Market Policies. The fundamental principle of “flexicurity” is that it protects workers rather than jobs. The authorities are developing policies that cover some of the pillars, notably an expansion in unemployment insurance. Only by eventually implementing all three pillars can an adequate balance between incentives, support, and protection be assured.

48. Measures should be geared toward more flexibility in employment protection regulation for regular workers.

For this category regulation is stricter than the OECD average. Korea has particularly tight restrictions on dismissal of regular workers. To strengthen job creation, the ability to dismiss regular workers for performance and other economic reasons should be eased. Staff analysis also suggests that rigid labor market regulations are particularly harmful to female employment. Increased flexibility will have to be accompanied by adequate unemployment benefits to provide sufficient safety nets. Active Labor Market Policies should also be enhanced. Currently, the focus is on creating jobs directly through subsidies, while spending on training and employment services is relatively low. Active Labor Market Policies should also support labor reallocation from ailing corporate sectors toward more productive ones, while ensuring sufficient incentives to job search. Active Labor Market Policies would need to be carefully monitored and evaluated to ensure effectiveness.

49. Efforts to encourage the participation and leadership of women in the labor market should continue.

Korea’s female labor force participation is one of the lowest in advanced economies—20 percentage points below the best performers. The gender pay gap in Korea is one of the highest in the OECD, with women earning only 63 percent of what men earn. Women take up just 10.5 percent of management positions, compared to the OECD average of 31 percent. Significant growth gains would be obtained by boosting Korea’s FLFP rate further. If FLFP were to rise to close the gap with Korea’s male labor force participation by 2035, women work would boost real GDP by more than 7 percent, in spite of the significant decline in working age population (Box 4). There is scope to further increase spending on early childhood education and care. Additional measures could include promoting shared parental leave, implementing the reduction in working hours, and fostering a working culture supportive of flexible-working arrangements.

50. Boosting youth employment is another priority. Korea’s youth employment is about 10 percentage points below the OECD average. To support youth employment, existing measures such as specialized vocational schools (Meister schools), the work-study dual system, and internships could be strengthened. This entails a more active collaboration with businesses and ensuring the quality of placements, to guarantee accumulation of on-the-job skills and enhance career prospects.

51. The government should be cautious about expanding public employment to create jobs. The government is planning to expand public sector jobs by 810,000 by 2022, partly by converting non-regular public-sector workers into regular employment. Public sector job creation should be linked to developing services that cannot be provided by the private sector. Moreover, in creating public jobs the impact on public sector productivity should be considered. The authorities should also conduct an analysis of public-private sector wage differential to inform hiring conditions in the public sector to minimize the risk of crowding out private jobs.

Box 4. Output Gains from Increasing Female Labor Force Participation in Korea

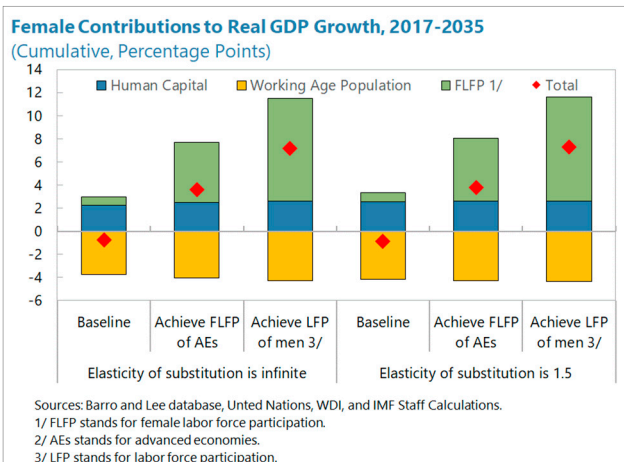
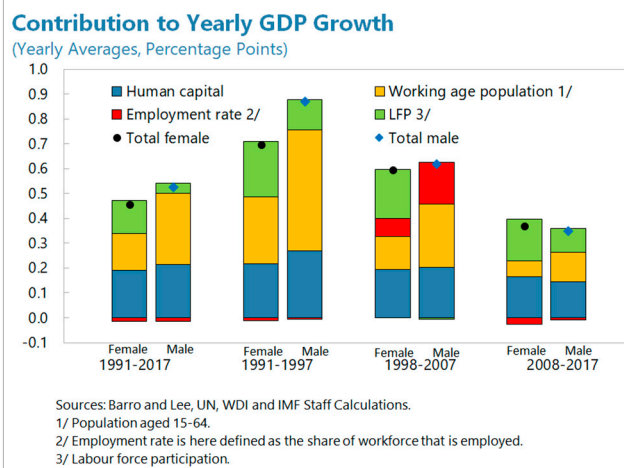
With fast aging population and declining productivity growth, Korea faces key challenges in raising long-term growth. To what extent can increased female participation in the labor market contribute to Korea’s growth?

The growth impact of female labor force participation (FLFP) can be assessed in a growth accounting framework. This decomposes a country’s growth rate into the contributions of labor input, human capital, physical capital, and the efficiency with which various factors are combined. Typically, growth accounting does not make a distinction between male and female labor in the production function, implicitly assuming that the elasticity of substitution (ES) between the two is infinity. However, recent estimates by Ostry and others (2018) indicate strong complementarities between women and men in production, with the ES ranging between 0.2 and 3.8. Hence, departing from the literature, we develop a growth accounting framework where labor and human capital are disaggregated by gender, assuming a CES production function.

Female contribution to Korea’s growth has risen over the past decades, thanks to women’s higher participation in the labor market and increases in their human capital. The growth decomposition indicates that in the last decade the female contribution to growth has slightly exceeded that of men, even though the population of males in their working age increased more than that of women. This result is even stronger if the ES is assumed to be low.

Despite recent progress, though, Korea’s FLFP rate remains relatively low. It was around 58.6 percent in 2017, almost 20 percentage points below that of men, and 11 percentage points below the average of other advanced economies. On the bright side, though, Korea’s human capital of women, based on average years of education from the Barro and Lee database, was estimated to be very close to that of men in 2017, and above the average of other advanced economies.

Significant growth gains would be obtained by boosting Korea’s FLFP rate further. Under a baseline scenario in which FLFP increases at the same rate as the average of the past 10 years, between 2017 and 2035 the output generated by females would fall, as the impact of the expected decline in the female population of working age more than offsets the rise in FLFP.¹ Instead, if Korea’s FLFP rate were to reach the average rate of other advanced economies by 2035, women’s work would add nearly 4 percent to GDP over the period, in spite of the decline in female working age population. If FLFP were to rise to close the gap with Korea’s male labor force participation by 2035, women work would boost real GDP by more than 7 percent.



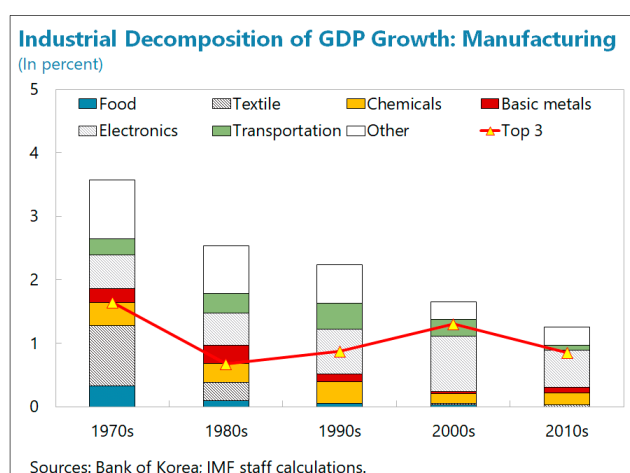
¹ Projections for the female population are from the UN, and projections for female human capital are based on the Barro-Lee database.

52. Future large increases in the minimum wage will likely have adverse side effects on employment. As part of the government strategy to support income, the minimum wage was raised by 10.9 percent for 2019, following a 16.4 percent increase in 2018. The hike for 2019 is significantly larger than the expected labor productivity increase. This will likely bring the ratio of minimum to average wage to around 46 percent, well above the OECD average of 41 percent (in 2017), likely hurting employment of low-skilled labor (Figure 5). The government set up a Job Stabilization Fund to subsidize eligible SMEs to dampen the impact of the minimum wage increase and preserve some jobs, with a fiscal cost of about KRW 2.5 trillion (0.1 percent of GDP) in 2018, and KRW 2.8 trillion (0.1 percent of GDP) expected for 2019. A new minimum wage determination mechanism is being designed to ensure better representation of labor market groups and better reflect economic circumstances. Staff welcome this initiative and look forward to its implementation. Next year the minimum wage increase should be set below labor productivity growth to partially mitigate the adverse effects on employment. Targeted fiscal instruments (such as in-work tax credits) would be more appropriate measures for addressing in-work poverty while not adversely affecting employment. Subsidies to the SMEs facing increased labor costs should be phased out.

53. The new regulation on maximum working hours will be beneficial. In 2018, Korea amended the Labor Standards Act to lower maximum weekly working hours from 68 to 52.⁷ The objective is to improve work-life balance, as Korea's average hours worked per employee are the second highest in the OECD and about 19 percent above the OECD average. The reduction in working hours could support workers' well-being and possibly contribute to higher productivity, employment and fertility. It will be important to monitor implementation to ensure an effective and widespread decline in hours worked across sectors and assess the implications for firms and productivity.

Product Market Reforms

54. Policy efforts to diversify the manufacturing sector should be expedited. Korea's manufacturing sector is highly concentrated, particularly compared to peers. The electrical and electronic equipment industry has contributed almost half of the growth in the manufacturing sector since early 2000s.⁸ The dominant industries are highly interconnected with other domestic industries via upstream/downstream linkages, and with foreign markets via export/import linkages. Moreover, these industries are dominated by few large firms. Staff analysis suggests that tighter vertical and trade linkages have increased the vulnerability of the economy

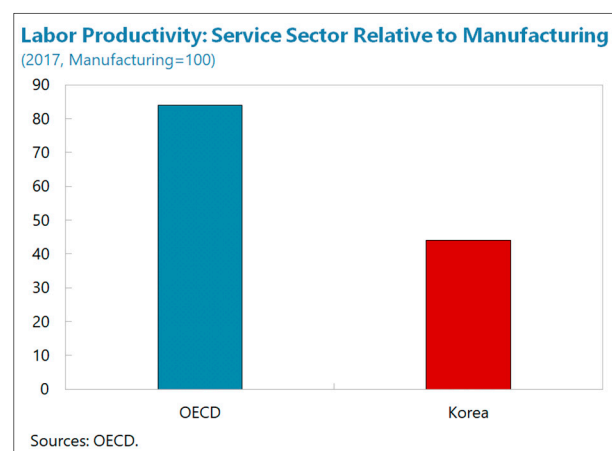


⁷ See the Selected Issues chapter "Implementing Maximum Working Hours: International Practices."

⁸ See the Selected Issues chapter "Industrial Structure and Its Macroeconomic Implications in Korea."

to domestic and external shocks.⁹ The authorities' ongoing efforts to promote fair competition between large corporations and smaller firms and foster innovation especially in SMEs are welcome initiatives, which should help reduce these vulnerabilities.

55. Deregulating the non-manufacturing sector could help boost long term growth, spur domestic demand, and help reduce external imbalances in the short run. Product market regulations are more restrictive relative to most other OECD economies, even though Korea has undertaken substantial product market deregulation in the past (Box 5).¹⁰ Some incumbents are protected through legal barriers to entry and antitrust exemptions, while startups face relatively high entry costs and some administrative burden. Explicit barriers to trade and foreign investments are also high relative to peers, which could act to further close the business environment off from competition. Staff analysis indicates that additional reforms could significantly boost GDP and productivity, (Box 5) as well as the contribution of the non-manufacturing sector to growth, increasing diversification. Such reforms could also help reduce the current account surplus through higher investments. The government initiative to create regulatory sandboxes (i.e. speeding up the process of obtaining approval to launch new products) is a useful move in this regard. In addition, competition could be promoted by reducing the tax costs of firm entry as well as remaining administrative burdens and legal barriers for entry in some industries. Consideration could also be given to enhancing foreign competition by reducing tariffs and domestic co-financing requirements for foreign investments.



56. Corporate restructuring is necessary to support long-term growth. Rapid implementation of the strategy for financial and operational restructuring of distressed firms is critical to allow the reallocation of resources toward more productive and profitable sectors. Social spending should be used to cushion the impact on affected workers and help reallocate them to other activities. Subsidies and tax expenditures to SMEs should be reviewed and focused on spurring innovation rather than protecting jobs with very low productivity. Subsidies should not be given based on firm size, but rather on firm age and scope for long-run productivity increases.

57. Staff encourage the authorities to enhance some aspects of data reporting. Over the medium term they could consider moving to SDDS Plus, which is the highest tier of the IMF Data Standards Initiatives, aimed particularly at economies with systematically important financial sectors. Also, the authorities should improve the timeliness of financial soundness indicators and general government operations data reporting.

⁹ See the Working Paper "Trade Linkages and International Business Cycle Comovement: Evidence from Korean Industry Data" (forthcoming).

¹⁰ See the Working Paper "Advancing Growth through Product Market Reforms in Korea" (forthcoming).

Box 5. Advancing Growth Through Product Market Reforms¹

Product market regulations in Korea remain among the strictest compared to OECD peers despite recent liberalizations. There are barriers to international trade and foreign investment, given relatively high tariffs, restrictions on foreign startups, and regulation.

State control is high as the government has strong control over state owned enterprises (SOEs), remain involved in business operations through regulation, and Korea is among the OECD countries with the highest degree of price controls. There are also remaining barriers to entrepreneurship given administrative procedures, a complex licensing and permit system, and relatively high startup costs.

The literature suggests that product market reforms can increase productivity through more competition:

- **First**, reforms can improve allocative efficiency between firms in the economy. More competition will better align output prices with the marginal costs of inputs, which in turn will improve the allocative efficiency of resources.
- **Second**, reforms can improve resource efficiency within existing firms. More competition in a certain market segment can induce firms to reduce slack, inter alia as cost reduction will also be more profitable in a market with a high price sensitivity.
- **Third**, reforms can spur innovation. Intensified competition can induce firms to speed up their innovation, and adoption of recent technologies, to avoid being pushed out of the market by new entrants.

Firm level evidence suggests that past product market reforms in Korea have improved productivity and innovation. Analysis of firm level data in Korea finds that past product market liberalizations have been associated with (i) higher employment, (ii) higher labor productivity, and (ii) higher spending on Research and Development.

A modelling exercise suggests that Korea could gain significantly from further product market liberalizations. A Dynamic Stochastic General Equilibrium (DSGE) model with product market frictions (Cacciatore et al, 2016) is calibrated to Korea. This model is used to analyze the impact of a 50 percent decline in barriers to entry bringing the level in line with the OECD average (see Table). In the model, the reform decreases unemployment by 0.5 percent, and boosts output per worker by 7 percent in the long run as high productive firms enter and low productive firm exits.

Consumption also increases by 6.6 percent in the long run, reflecting higher employment and wages, but in the short run consumption falls as higher firm profitability induces more investment in capital. Higher firm profitability also attracts foreign capital, in the short run leading to a weaker current account of up to 1.5 percent of GDP.

Selected Product Market Regulation Components for Korea

Korea's rank from 1 (most strict) to 35 (least strict) 1/

Overall score		8
State control	Governance of state-owned enterprises	4
	Price controls	2
Overall score		10
Barriers to Entrepreneurship	Licence and permits for corporations	10
	Administrative burdens	8
	Legal barriers to entry	12
	Antitrust exemptions	10
	Barriers in network sectors	4
Overall score		2
Barriers to trade & investment	Barriers to FDI	6
	Tariff barriers	1
	Barriers to trade facilitation	7
Overall score		4

1/ Rank is among OECD countries.

Source: OECD, Product Market Regulation Database (Assessed November 2018).

Long Run Effect of a 50 percent Decline in Barriers to Entry

Output (in percent)	Consumption (in percent)	Real Wage (in percent)	Unemployment (in pct points)
6.8	6.6	6.3	-0.5

Source: Staff calculations.

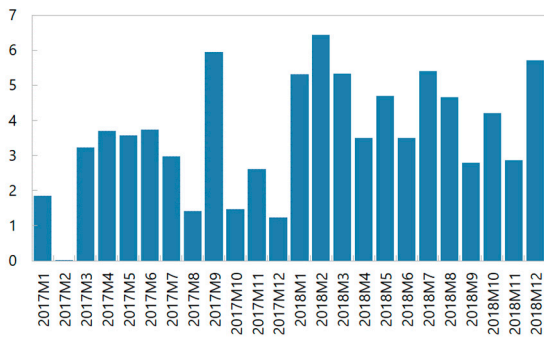
¹ See the Working Paper "Advancing Growth through Product Market Reforms in Korea" (forthcoming).

Figure 5. Korea: Minimum Wage Increase

Wages increased markedly in 2018Q1 on the back of the hike in the minimum wage...

Average Wages

(In percent, Y-on-Y growth, Seasonally Adjusted)

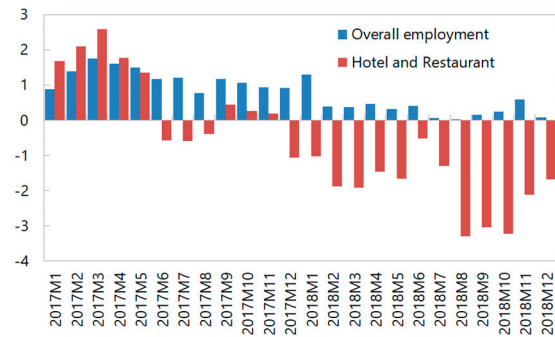


Source: Haver Analytics.

... as employment growth weakened in low-productive sectors.

Employment

(In percent, Y-on-Y Growth)

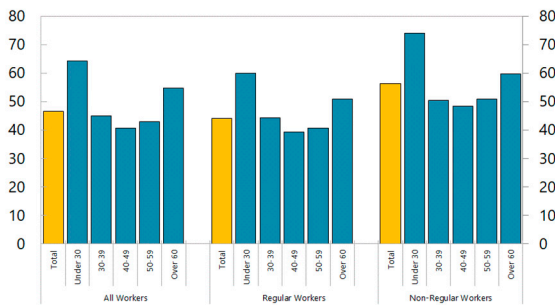


Source: Haver Analytics.

The ratio of minimum to average wage is markedly high in youth and elderly age groups

Minimum Wage to Average Wage: By Age

(Based on 2018 data*, Ratio)



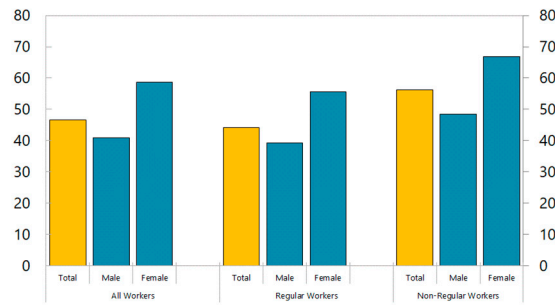
Sources: KOSIS and IMF Staff Calculations.

Note: The growth rate used for 2018 estimates was calculated by taking the average of the y-o-y growth in wages (index) from Jan 2018 to Sep 2018 (last available data point).

... and is also higher for females.

Minimum Wage to Average Wage: By Gender

(Based on 2018* data, Ratio)



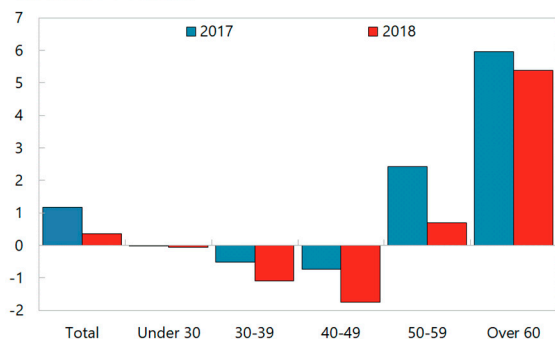
Sources: KOSIS and IMF Staff Calculations.

Note: The growth rate used for 2018 estimates was calculated by taking the average of the y-o-y growth in wages (index) from Jan 2018 to Sep 2018 (last available data point).

Employment weakened in all age groups in 2018, except for the elderly...

Employment by Age

(In Percent, Y-o-Y Growth)

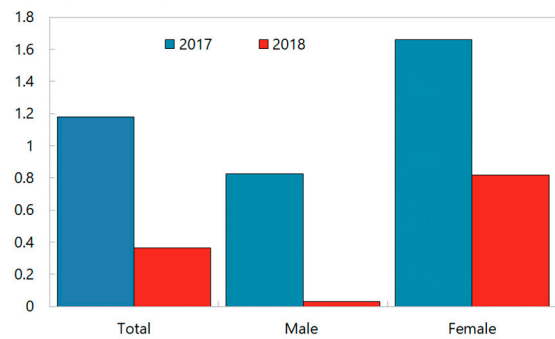


Source: Haver Analytics.

... and the substantial weakening of employment growth was observed for both male and female.

Employment by Gender

(In Percent, Y-o-Y Growth)



Source: Haver Analytics.

Authorities' Views

58. The authorities agreed that medium-term fiscal expansions should focus on enhancing social protection and labor productivity. They stressed that the 2018-22 National Fiscal Management plan envisages a 10.3 percent annual increase in welfare, health and employment spending. This involves large expansions in spending on basic livelihood security (17.3 percent annual increase), vulnerable groups (15.8 percent increase), the elderly (15.4 percent increase), and women, family and youth (11.2 percent increase). The authorities agreed that the programs to support SMEs should be regularly reviewed to ensure a positive effect on productivity. Current programs have been recalibrated based on regular assessment. Additional measures are being designed to promote productivity growth in SMEs.

59. The authorities recognized the need to reform the tax system and increase revenues in the longer term. They agreed on the need to increase neutrality of corporate income taxation, but were concerned about the feasibility of staff's suggestions, including introducing an allowance for corporate equity system. They also had concerns that reducing the number of corporate income tax rates would aggravate the burden for SMEs. Instead, they would be in favor of streamlining existing tax reductions and exemptions to avoid distortions in corporate resource allocations. They cautioned against additional tax cuts as they did not see convincing evidence of their effectiveness. The authorities shared staff's concerns on long term fiscal sustainability due to the aging population. They planned to broaden the tax base very gradually.

60. The authorities viewed the proposed expansion of public employment as necessary to improve living standards and service the aging population. They emphasized that Korea's public employment is only 9 percent of total employment, far behind the OECD average of 21.3 percent. As the population ages, more public service would be needed to improve citizens' welfare.

61. The authorities agreed with the need to move in the direction of "flexicurity" on the labor market. They noted that introduction of further Active Labor Market Policies are a high priority for the government. They argued that the general direction of the recent minimum wage increases was correct, and pointed out that they are monitoring their impact. A bill has been submitted to parliament aimed at improving the minimum wage setting framework. The new mechanism will ensure appropriate representation of workers, employers, and government and better reflect economic conditions. The authorities also sympathized with the idea that the compensation of small businesses for minimum wage increases should be temporary.

62. The authorities agreed on the need to ease the regulatory burden for firms. They pointed to the recent introduction of regulatory sandboxes for selected sectors as a first important step in this direction. They also emphasized the need to boost innovation in start-ups.

STAFF APPRAISAL

63. Korea is facing cyclical headwinds to growth, in addition to longer-term structural challenges. Growth has slowed and the negative output gap will close only gradually. Long-term

growth is hindered by adverse demographics and slowing productivity growth. Income inequality and polarization are worsening, partly reflecting inadequate social protection and labor and product market duality. Korea's external position is assessed to be moderately stronger than warranted by medium term fundamentals and desirable policy settings.

64. A supplementary budget of more than 0.5 percent of GDP should be introduced this year, and fiscal policy should remain expansionary in the medium-term. This would support growth, job creation and reduce external imbalances. Korea has substantial fiscal space to aim for a zero-structural balance in the medium run without a risk to debt sustainability. Fiscal measures should focus on strengthening social protection, boosting female labor force participation, enhancing Active Labor Market Policies, and supporting growth-enhancing structural reforms. Staff caution against using transfers to SMEs to preserve jobs indefinitely. In the longer term, fiscal challenges from the aging population will necessitate greater revenue mobilization.

65. Monetary policy should be eased. Inflation is projected to remain below the inflation target at least this year and the next, inflationary pressures are weak, there are signs that inflation expectations have started to decline, and the output gap is negative. The exchange rate should continue to be allowed to move flexibly, with intervention limited to addressing disorderly market conditions.

66. Financial risks should be managed through macroprudential policies, rather than monetary policy. Macroprudential policies can effectively slow the growth in household leverage, which is the main financial risk. They should remain tight to contain risks from household debt and sustain financial sector resilience.

67. To mitigate duality and support job creation, Korea should adopt “flexicurity” in the labor market. This requires more flexibility for regular workers; a strong and inclusive safety net for the unemployed; and effective Active Labor Market Policies. Implementing all these three pillars is critical. Public sector job creation should be linked to developing services that cannot be provided by the private sector. The minimum wage increase for next year should be below labor productivity growth to lessen adverse effects on employment. Compensatory subsidies to SMEs should be phased out. Policies should also focus on strengthening female labor force participation and leadership.

68. Policy efforts to diversify the manufacturing sector and promote service sector liberalization should be expedited. To promote diversification and support long-term growth, the regulatory burden for firms should be eased. This requires further lowering barriers to entry and reducing protection of incumbents. This could be done by further lowering the startup costs and legal barriers for firm entry. Administrative burdens for firms could also be reduced further. Foreign competition could be enhanced by further trade and investment liberalization, including through reducing tariffs and domestic co-financing requirements for foreign investments.

69. Staff recommend that the next Article IV consultation be held on the standard 12-month cycle.

Table 1. Korea: Selected Economic Indicators, 2017–24

	2017	2018	Projections					
			2019	2020	2021	2022	2023	2024
Real GDP (percent change)	3.1	2.7	2.6	2.8	2.9	2.8	2.9	2.9
Total domestic demand	5.1	1.7	2.8	3.3	3.1	3.1	3.3	3.3
Final domestic demand	4.7	1.6	2.6	3.9	3.1	3.1	3.3	3.3
Consumption	2.8	3.5	3.5	3.6	3.2	3.3	3.5	3.5
Gross fixed investment	8.6	-2.2	0.7	4.5	2.8	2.8	2.9	2.9
Stock building 1/	0.4	0.1	0.2	-0.5	0.0	0.0	0.0	0.0
Net foreign balance 1/	-1.7	1.2	-0.4	-0.3	0.0	-0.1	-0.2	-0.2
Nominal GDP (in trillions of won)	1,730.4	1,782.3	1,852.8	1,937.0	2,026.1	2,120.8	2,225.8	2,340.8
Saving and investment (in percent of GDP)								
Gross national saving	36.0	34.9	34.2	33.7	33.4	33.2	33.0	32.7
Gross domestic investment	31.1	30.2	29.6	29.3	29.0	28.8	28.5	28.3
Current account balance	4.9	4.7	4.6	4.5	4.4	4.4	4.5	4.5
Prices (percent change)								
CPI inflation (end of period)	1.4	1.3	1.4	1.6	1.7	1.8	1.9	2.0
CPI inflation (average)	1.9	1.5	1.4	1.6	1.7	1.8	1.9	2.0
Core inflation (average)	1.5	1.2	...	...	...	...	...	...
GDP deflator	2.3	0.3	1.4	1.7	1.7	1.8	2.0	2.2
Real effective exchange rate	3.1	0.9	...	...	...	...	...	...
Trade (percent change)								
Export volume	5.3	7.2	2.3	2.7	3.8	3.6	3.5	3.5
Import volume	8.5	1.5	3.0	2.9	4.0	4.0	4.0	4.0
Terms of trade	-0.8	-6.5	0.9	0.7	0.3	0.3	0.2	0.4
Consolidated central government (in percent of GDP)								
Revenue	23.2	24.2	24.7	24.7	24.6	24.5	24.5	24.5
Expenditure	20.8	21.5	22.7	23.1	23.5	23.7	23.7	23.7
Net lending (+) / borrowing (-)	2.3	2.7	1.9	1.6	1.2	0.8	0.8	0.8
Overall balance	1.4	1.7	0.9	0.6	0.2	-0.2	-0.2	-0.2
Excluding Social Security Funds	-1.1	-0.6	-1.4	-1.7	-2.0	-2.3	-2.1	-2.0
Money and credit (end of period)								
Overnight call rate	1.6	1.9	...	...	...	...	...	...
Three-year AA- corporate bond yield	2.7	2.3	...	...	...	...	...	...
M3 growth	6.6	7.2	...	...	...	...	...	...
Balance of payments (in billions of U.S. dollars)								
Exports, f.o.b.	580.3	625.4	638.5	660.3	691.6	724.2	756.9	795.2
Imports, f.o.b.	466.7	513.6	523.4	538.9	563.6	590.4	618.6	650.3
Oil imports	59.6	80.4	69.8	71.9	73.0	74.6	77.1	80.1
Current account balance	75.2	76.4	76.0	78.1	79.8	85.1	91.2	95.8
Gross international reserves (end of period) 2/	384.5	398.9	422.2	444.5	467.2	492.5	519.9	548.9
In percent of short-term debt (residual maturity)	227.2	226.8	232.8	237.9	241.9	247.0	253.1	259.8
External debt (in billions of U.S. dollars)								
Total external debt (end of period)	412.0	440.6	489.0	531.2	576.2	623.1	671.8	722.4
Of which: Short-term (end of period)	116.0	126.6	128.1	133.5	139.8	146.1	152.1	158.0
Total external debt (in percent of GDP)	26.9	27.2	29.5	30.5	31.5	32.3	33.0	33.6
Debt service ratio 3/	8.2	8.8	9.8	10.9	11.2	11.5	12.0	12.4

Sources: Korean authorities; and IMF staff estimates and projections.

1/ Contribution to GDP growth.

2/ Excludes gold.

3/ Debt service on medium- and long-term debt in percent of exports of goods and services.

Table 2. Korea: Balance of Payments, 2015–20

(In billions of U.S. dollars, unless otherwise indicated, BPM6 sign)

	2015	2016	2017	2018	Projections	
					2019	2020
Current account balance	105.1	97.9	75.2	76.4	76.0	78.1
Goods balance	120.3	116.5	113.6	111.9	115.1	121.5
Services balance	-14.6	-17.3	-36.7	-29.7	-29.7	-33.7
Primary income	4.5	4.6	5.3	2.8	1.8	2.4
Secondary income	-5.0	-5.8	-7.0	-8.5	-11.2	-12.0
Capital account balance	-0.1	0.0	0.0	0.2	0.2	0.2
Financial account balance 1/	90.7	92.2	80.1	53.0	52.9	56.0
Portfolio investment	49.5	67.0	57.9	43.9	42.7	44.0
Direct investment	19.6	17.8	16.2	24.4	26.1	27.8
Financial derivatives	1.8	-3.4	-8.3	-1.3	-3.0	-2.8
Other investment	19.8	10.9	14.3	-14.0	-12.8	-13.0
Net errors and omissions	-2.3	1.9	9.2	-6.1	0.0	0.0
Reserves and related items	12.1	7.6	4.4	17.5	23.3	22.3
Reserve assets (increase +)	12.1	7.6	4.4	17.5	23.3	22.3
					(percent of GDP)	
Current account balance	7.6	6.9	4.9	4.7	4.6	4.5
Goods balance	8.7	8.2	7.4	6.9	7.0	7.0
Services balance	-1.1	-1.2	-2.4	-1.8	-1.8	-1.9
Primary income	0.3	0.3	0.3	0.2	0.1	0.1
Secondary income	-0.4	-0.4	-0.5	-0.5	-0.7	-0.7
Capital account balance	0.0	0.0	0.0	0.0	0.0	0.0
Financial account balance	6.6	6.5	5.2	3.3	3.2	3.2
Portfolio investment	3.6	4.7	3.8	2.7	2.6	2.5
Direct investment	1.4	1.3	1.1	1.5	1.6	1.6
Financial derivatives	0.1	-0.2	-0.5	-0.1	-0.2	-0.2
Other investment	1.4	0.8	0.9	-0.9	-0.8	-0.7
Net errors and omissions	-0.2	0.1	0.6	-0.4	0.0	0.0
Reserves and related items	0.9	0.5	0.3	1.1	1.4	1.3
Reserve assets (increase +)	0.9	0.5	0.3	1.1	1.4	1.3
Memorandum items:						
Gross reserves minus gold	363.2	366.3	384.5	398.9	422.2	444.5
(in months of imports of goods and services)	8.1	8.7	7.8	7.5	7.7	7.8
External debt	396.1	382.2	412.0	448.8	489.0	531.2
(in percent of GDP)	28.6	27.0	26.9	27.7	29.5	30.5
Short-term external debt (inc. trade credits)	104.3	104.8	116.0	122.6	128.1	133.5
Nominal GDP (U.S. dollars)	1382.8	1414.8	1530.8	1619.8	1656.7	1744.4

1/ Excludes reserves and related items.

Sources: Korean authorities; and IMF staff estimates and projections.

Table 3. Korea: Statement of Central Government Operations, 2017–20

	Estimate		Projections	
	2017	2018	2019	2020
(In trillions of won)				
Revenue	400.7	431.6	457.2	478.9
Tax revenue	265.4	293.6	311.0	325.8
Social contributions	69.7	73.1	76.0	79.5
<i>Of which: Social security contributions</i>	60.5	63.5	66.0	69.0
Other revenue	65.6	64.9	70.1	73.6
Expenditure 1/	360.5	383.6	421.3	447.4
Expense	350.7	375.2	413.1	439.4
Net acquisition of nonfinancial assets	9.8	8.4	8.2	8.0
Net lending (+) / borrowing (-)	40.2	48.0	35.9	31.5
Less: Policy lending	16.1	16.8	18.5	19.6
Overall balance	24.0	31.2	17.5	11.9
Less: Social Security Fund balance	42.5	41.8	44.2	44.0
Overall balance excluding Social Security Funds	-18.5	-10.6	-26.7	-32.1
Net acquisition of financial assets	66.9	79.9	59.9	52.5
Domestic	65.6	78.3	58.7	51.4
Currency and deposits	-1.3	-1.6	-1.2	-1.1
Loans	66.9	79.9	59.9	52.5
Others	0.0	0.0	0.0	0.0
Foreign	1.3	1.6	1.2	1.0
Currency and deposits	0.0	0.0	0.0	0.0
Loans	1.3	1.6	1.2	1.0
Monetary gold and SDR	0.0	0.0	0.0	0.0
Net incurrence of liabilities	26.8	32.0	23.9	21.0
Domestic	26.8	32.0	23.9	21.0
Foreign	0.0	0.0	0.0	0.0
Loans	0.0	0.0	0.0	0.0
(In percent of GDP)				
Revenue	23.2	24.2	24.7	24.7
Tax revenue	15.3	16.5	16.8	16.8
Social contributions	4.0	4.1	4.1	4.1
<i>Of which: Social security contributions</i>	3.5	3.6	3.6	3.6
Other revenue	3.8	3.6	3.8	3.8
Expenditure	20.8	21.5	22.7	23.1
Expense	20.3	21.1	22.3	22.7
Net acquisition of nonfinancial assets	0.6	0.5	0.4	0.4
Net lending (+) / borrowing (-)	2.3	2.7	1.9	1.6
Less: Policy lending	0.9	0.9	1.0	1.0
Overall balance	1.4	1.7	0.9	0.6
Less: Social Security Fund balance	2.5	2.3	2.4	2.3
Overall balance excluding Social Security Funds	-1.1	-0.6	-1.4	-1.7
Memorandum items:				
Primary balance (trillion won)	21.3	34.3	20.3	18.4
In percent of GDP	1.2	1.9	1.1	1.0
Structural balance (trillion won)	43.3	51.4	40.0	34.7
In percent of GDP	2.5	2.9	2.2	1.8
Structural primary balance (trillion won)	24.4	37.7	24.3	21.6
In percent of GDP	1.4	2.1	1.3	1.1
Nominal GDP (trillion won)	1,730.4	1,782.3	1,852.8	1,937.0
Central government debt (trillion won)	627.4	651.8	678.5	710.6
In percent of GDP	36.3	36.6	36.6	36.7
General government debt (trillion won)	688.0	714.2	743.4	778.4
In percent of GDP	39.8	40.1	40.1	40.2

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

1/ A supplementary budget of 0.3 percent of GDP is assumed in 2019.

	Korea										Overall Assessment
Foreign asset and liability position and trajectory 2018 IIP (% GDP)	<p>Background. The net international investment position (NIIP) has been positive since 2014 and rising gradually since 2010. In December 2018, it reached about 25 percent of GDP, with gross liabilities totaling 68 percent of GDP, of which about 27 percent of GDP was gross external debt.</p> <p>Assessment. The positive NIIP strengthens external sustainability and should increase further as the current account (CA) is projected to remain in surplus. Risks from currency mismatches are lower than before the global financial crisis (GFC), as short-term external liabilities of banks, which rose to relatively high levels before the GFC, declined back to below pre-crisis levels.</p>										<p>Overall Assessment <i>The external position in 2018 was assessed to be moderately stronger than warranted by medium term fundamentals and desirable policy settings. This reflects excessive saving, including for precautionary purposes, as well as relatively weak private investment.</i></p>
	NIIP	25.5	Gross assets	93.8	Debt Assets	27.6	Gross Liab.	68.3	Debt Liab.	25.4	
Current account CA Assessment 2018	<p>Background. The CA surplus narrowed further in 2018, from the peak of 7.6 percent of GDP in 2015. This decline from 4.9 percent of GDP in 2017 to 4.7 percent in 2018 mainly reflected: (i) a decline in the good trade balance, as the terms of trade worsened substantially, and (ii) a decline in the income balance, reflecting in part increased dividend payouts from firms. The service balance increased owing to a less negative transportation balance and a rebound in tourist arrivals. From an investment-saving perspective, the narrowing of the current account is explained by larger fall in the savings rate than in the investment-to-GDP ratio.</p> <p>Assessment. The EBA model estimates the 2018 cyclically adjusted CA surplus to be 4.4 percent of GDP, and the CA norm to be in the range 1.7 to 3.7 percent of GDP. In line with the EBA estimates, staff assesses the CA gap midpoint of 1.7 percent of GDP with a range of 0.7 to 2.7 percent of GDP. Identified policy gaps from significantly tighter than desired fiscal policy and relatively low social spending are key contributors to the CA gap. The latter acts to increase precautionary savings, and thus the CA, through lack of access to social safety net.</p>										<p>Potential Policy Responses Significantly more expansionary fiscal policy to boost domestic demand in the short and longer run will help to reduce imbalances, given the substantial fiscal space. This will also contribute to a recalibration of the policy mix, thereby gradually reducing reliance on monetary policy. Structural policies should also play an important role by facilitating rebalancing of the economy toward services and supporting domestic demand growth. These include strengthening the social safety net to lessen incentives for precautionary savings and addressing bottlenecks to investment. The exchange rate should remain market determined, with intervention limited to addressing disorderly market conditions.</p>
	Actual CA	4.7	Cycl. Adj. CA	4.4	EBA CA Norm	2.7	EBA CA Gap	1.7	Staff Adj.	0.0		Staff CA Gap	1.7
Real exchange rate	<p>Background. The REER appreciated by 1.0 percent in 2018, thus continuing a gradual appreciating trend since 2013 (up about 10 percent since 2013). As of February 2019, the REER weakened by about 1.2 percent relative to the 2018 average.</p> <p>Assessment. The EBA REER regression models suggest gaps ranging from -5.2 (for the REER-Level model) and +3.4 (for the REER-Index model). Staff assesses the REER in 2018 to have been undervalued in the range 2 to 8 percent, which is derived by applying the estimated semi-elasticity of 0.36 to the staff-assessed CA gap.</p>										
Capital and financial accounts: flows and policy measures	<p>Background. Net capital outflows have been relatively stable over the medium term despite significant shifts in composition. In the 2018, they decreased to 4.3 percent of GDP from 5.5 percent of GDP in 2017. Non-resident portfolio inflows surged to \$21.1 billion as foreigners continued to sharply expand purchases of debt securities. On the other hand, non-residents sold USD 6 billion worth of equities (on a net basis), contributing to a correction in equity prices of around 20 percent in 2018.</p> <p>Assessment. The present configuration of net and gross capital flows appears sustainable over the medium term. Korea has demonstrated the capacity to absorb short term capital-flow volatility in magnitudes occurred over the last few years.</p>										
FX intervention and reserves level	<p>Background. Korea has a floating exchange rate. FX intervention appears to have been two-sided since early 2015, based on staff estimates. Staff estimates that total net intervention in 2018 was limited, with spot interventions roughly offsetting the change in the forward position. Reserves increased steadily from 2009 through mid-2014, remained broadly stable through 2016, and have increased slightly since. In 2018, reserves increased by \$14.4 billion including valuation effects. At end-2018, total reserves stood at \$404 billion (24.9 percent of GDP).</p> <p>Assessment. Intervention appears to have been limited to address disorderly market conditions since 2015. Foreign exchange reserves were around 110 percent of the IMF's composite reserve adequacy metric in end-2018, which provides sufficient buffer against a wide range of possible external shocks. According to staff estimations net intervention since 2016 has been slightly negative.</p>										

Annex II. Risk Assessment Matrix¹

	Source of Risk (Relative likelihood is parenthesis)	Potential Impact on Korea	Policy Response
Global Risks			
Rising protectionism and retreat from multilateralism.	In the near term, escalating and sustained trade actions threaten the global trade system, regional integration, as well as global and regional collaboration. Additional barriers and the threat of new actions reduce growth both directly and through adverse confidence effects (increasing financial market volatility). In the medium term, geopolitical competition and fraying consensus about the benefits of globalization lead to economic fragmentation and undermine the global rules-based order, with adverse effects on growth and stability (High) .	High Heightened trade tensions could significantly weaken export growth and lead to greater equity market volatility given that Korea is a relatively open economy. This could trigger capital outflows and weaken the currency.	Additional fiscal expansion and a cut in the monetary policy rate to support domestic demand. Maintain a flexible exchange rate to help mitigate adverse macroeconomic and market effects. Support multilateral efforts to promote global trade and strengthen the multilateral trading system.
Sharp tightening of global financial conditions.	This causes higher debt service and refinancing risks; stress on leveraged firms, households, and vulnerable sovereigns; capital account pressures; and a broad-based downturn. The tightening could be a result of: <ul style="list-style-type: none"> Market expectation of tighter U.S. monetary policy triggered by strong wage growth and higher than-expected inflation (Low). Sustained rise in risk premium in reaction to concerns about debt levels in some euro area countries; a disorderly Brexit; or idiosyncratic policy missteps in large emerging markets (Medium). 	Medium Policy surprises could increase volatility in the financial markets that would undermine confidence and trigger capital outflow.	Rely on a flexible exchange rate as the main shock absorber. Macro-prudential policies could be eased if needed to help limit spillovers into the domestic financial system.
Weaker-than-expected global growth.	The global growth slowdown could be synchronized as weakening outlooks in the U.S., Europe and China feed off each other and impact on earnings, asset prices and credit performance:		
	<ul style="list-style-type: none"> U.S.: Confidence wanes against a backdrop of a long expansion with stretched asset valuations, rising leverage, and unwinding of the fiscal stimulus, leading to abrupt closure of the output gap rather than a smooth landing (Medium) 	Medium Korean exports would be adversely affected by a slowdown in external demand. Second-round effects could also be significant as a U.S. slowdown would impact global growth and market sentiment.	Maintain accommodative fiscal and monetary policies and a flexible exchange rate.
	<ul style="list-style-type: none"> Europe: In the near term, weak foreign demand makes euro area businesses delay investment, while faltering confidence reduces private consumption. Adverse financial market reaction 	Medium Volatility could increase in the global financial markets. Korea could	Maintain accommodative fiscal and monetary policies, and a flexible exchange rate. Continue efforts to diversify export markets

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). The RAM reflects staff views on the source of risks and overall level of concern as of the time of discussions with the authorities. Non-mutually exclusive risks may interact and materialize jointly.

	to debt sustainability concerns further dampens growth. A disorderly Brexit could cause market disruption with negative spillovers. In the medium term, disregard for the common fiscal rules and rising sovereign yields for high-debt countries test the euro area policy framework, with adverse impact on confidence and growth (High).	experience capital outflows. Korean exports would be adversely affected by a slowdown in external demand.	and the manufacturing base through structural policies.
	<ul style="list-style-type: none"> • China: In the short term, intensification of trade tensions and/or a housing market downturn prompt a slowdown, which is not fully offset by policy easing. Deleveraging is delayed and financial stresses, including capital outflow and exchange rate pressures, emerge. In the medium term, insufficient progress in deleveraging and rebalancing reduces growth and raises the probability of a larger disruptive adjustment. There would be negative spillovers on the global economy through trade volumes, commodity prices, and financial markets (Medium). 	<p style="text-align: center;">High</p> China is Korea's largest trading partner making Korea vulnerable to a slowdown in China. Second-round effects could also be significant as a China slowdown would impact global growth and market sentiment.	Additional fiscal expansion and a cut in the monetary policy rate to support domestic demand. Maintain a flexible exchange rate to help mitigate adverse macroeconomic and market effects. Continue efforts to diversify export markets and the manufacturing base through structural policies.
Cyber-attacks	Cyber-attacks on critical global financial, transport or communication infrastructure and broader private and public institutions trigger systemic financial instability or widespread disruptions in socio-economic activities (Medium).	<p style="text-align: center;">Medium</p> Volatility could increase in the global financial markets. Korea could experience capital outflows. Korean exports would be adversely affected by a slowdown in external demand	Maintain accommodative fiscal and monetary policies and a flexible exchange rate.
Domestic Risks			
High household debt	House prices could soften and weaken household balance sheets, and a further slowdown in economic growth could reduce household incomes, resulting in higher household delinquencies and financial stress that could create a further drag on growth (Medium).	<p style="text-align: center;">Medium</p> Domestic demand could be weaker than anticipated.	Maintain accommodative fiscal and monetary policies. Use macroprudential policies to limit risks to the banking system.
Policy easing (upside risk)	Additional fiscal and monetary stimulus would support growth (Medium)	<p style="text-align: center;">Medium</p> Domestic demand would be stronger than anticipated.	
Faster than anticipated progress in relations with North Korea (upside risk)	Faster than anticipated progress in relations with North Korea could have a positive impact on investment and consumer sentiment (Low).	<p style="text-align: center;">Large</p> Domestic demand could be higher than anticipated.	Prepare plans on how to support North Korea, in cooperation with the international community.

Annex III. Public Debt Sustainability Analysis

Korea Public Sector Debt Sustainability Analysis (DSA) - Baseline Scenario

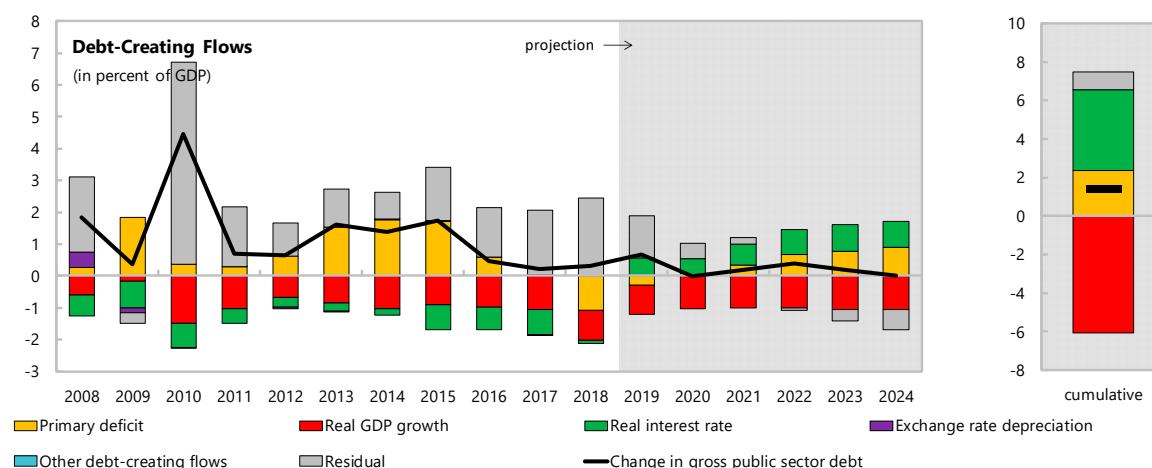
(in percent of GDP unless otherwise indicated)

Debt, Economic and Market Indicators^{1/}

	Actual			Projections						As of March 29, 2019	
	2008-2016 ^{2/}	2017	2018	2019	2020	2021	2022	2023	2024	Sovereign Spreads	
Nominal gross central government debt	30.9	36.3	36.6	37.3	37.2	37.4	37.8	38.0	38.0	EMBIG (bp) 3/	-60
Gross financing needs	5.8	4.3	4.4	3.5	3.9	5.2	5.7	5.3	5.9	5Y CDS (bp)	32
Real GDP growth (in percent)	3.1	3.1	2.7	2.6	2.8	2.9	2.8	2.9	2.9	Ratings	Foreign Local
Inflation (GDP deflator, in percent)	2.0	2.3	0.3	1.4	1.7	1.7	1.8	2.0	2.2	Moody's	Aa2 Aa2
Nominal GDP growth (in percent)	5.2	5.4	3.0	4.0	4.5	4.6	4.7	4.9	5.2	S&Ps	AA AA
Effective interest rate (in percent) ^{4/}	3.8	2.4	3.0	3.0	3.2	3.6	4.0	4.3	4.5	Fitch	AA- AA-

Contribution to Changes in Public Debt

	Actual			Projections						cumulative	debt-stabilizing primary balance ^{9/}
	2008-2016	2017	2018	2019	2020	2021	2022	2023	2024		
Change in gross central government debt	1.5	0.2	0.3	0.7	0.0	0.2	0.4	0.2	0.0	1.4	
Identified debt-creating flows	-0.4	-1.8	-2.1	-0.6	-0.5	0.0	0.4	0.5	0.7	0.5	
Primary deficit (excluding Social Security Fund)	1.0	0.0	-1.1	-0.3	0.0	0.3	0.7	0.8	0.9	2.4	
Primary (noninterest) revenue and grants	16.8	17.8	18.8	19.2	19.3	19.2	19.1	19.1	19.1	115.1	
Primary (noninterest) expenditure	17.8	17.8	17.7	18.9	19.2	19.5	19.8	19.9	20.0	117.5	
Automatic debt dynamics ^{5/}	-1.4	-1.9	-1.0	-0.3	-0.5	-0.4	-0.2	-0.2	-0.2	-1.9	
Interest rate/growth differential ^{6/}	-1.4	-1.8	-1.1	-0.3	-0.5	-0.4	-0.2	-0.2	-0.2	-1.9	
Of which: real interest rate	-0.5	-0.8	-0.1	0.6	0.6	0.7	0.8	0.8	0.8	4.2	
Of which: real GDP growth	-0.9	-1.0	-0.9	-0.9	-1.0	-1.0	-1.0	-1.1	-1.1	-6.1	
Exchange rate depreciation ^{7/}	0.0	0.0	0.0	...	...	...	...	...	...	...
Other identified debt-creating flows	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Net privatization proceeds (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	
Please specify (2) (e.g., ESM and Euroarea loan)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Residual, including asset changes ^{8/}	1.8	2.1	2.4	1.3	0.5	0.2	-0.1	-0.4	-0.6	0.9	



Source: IMF staff.

1/ Public sector is defined as central government.

Data refer to the central government excluding the Social Security Fund (SSF) as the central government balance excluding the SSF drives the debt dynamics. The SSF accounts are in surplus and the SSF is accumulating assets. Data on other parts of the general government are not included as they become available with a significant lag.

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 $(r - \pi(1+g) - g + ae(1+r))/(1+g+\pi+g\pi)$ 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 $r - \pi(1+g)$ 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.

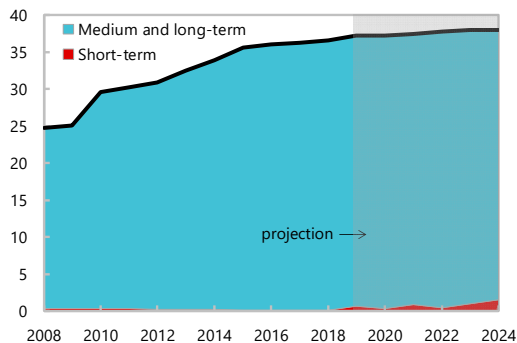
9/ Assumes that key variables (real GDP growth, real interest rate, and other identified debt-creating flows) remain at the level of the last projection year.

Korea Public DSA - Composition of Public Debt and Alternative Scenarios

Composition of Public Debt

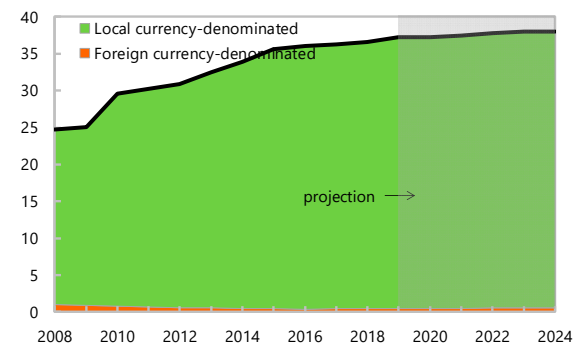
By Maturity

(in percent of GDP)



By Currency

(in percent of GDP)



Alternative Scenarios

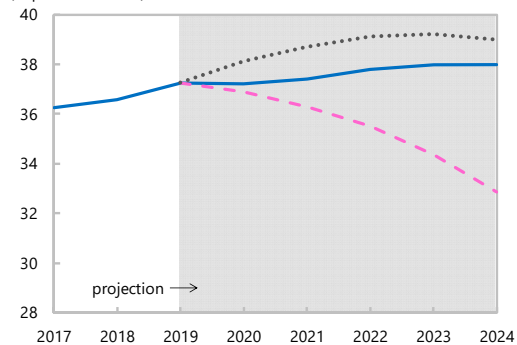
— Baseline

..... Historical

- - - Constant Primary Balance

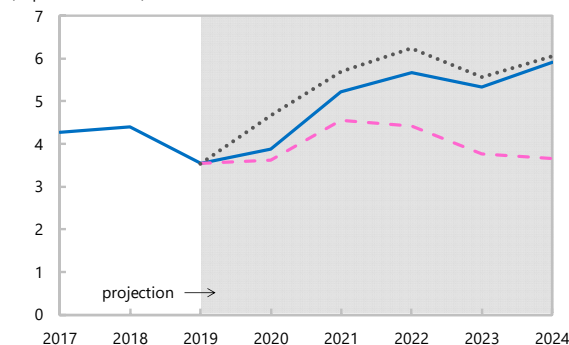
Gross Nominal Public Debt

(in percent of GDP)



Public Gross Financing Needs

(in percent of GDP)



Underlying Assumptions

(in percent)

Baseline Scenario	2019	2020	2021	2022	2023	2024
Real GDP growth	2.6	2.8	2.9	2.8	2.9	2.9
Inflation	1.4	1.7	1.7	1.8	2.0	2.2
Primary Balance	0.3	0.0	-0.3	-0.7	-0.8	-0.9
Effective interest rate	3.0	3.2	3.6	4.0	4.3	4.5

Constant Primary Balance Scenario	2019	2020	2021	2022	2023	2024
Real GDP growth	2.6	2.8	2.9	2.8	2.9	2.9
Inflation	1.4	1.7	1.7	1.8	2.0	2.2
Primary Balance	0.3	0.3	0.3	0.3	0.3	0.3
Effective interest rate	3.0	3.2	3.6	4.0	4.3	4.5

Historical Scenario	2019	2020	2021	2022	2023	2024
Real GDP growth	2.6	3.1	3.1	3.1	3.1	3.1
Inflation	1.4	1.7	1.7	1.8	2.0	2.2
Primary Balance	0.3	-0.8	-0.8	-0.8	-0.8	-0.8
Effective interest rate	3.0	3.2	3.5	3.9	4.1	4.3

Source: IMF staff.

Annex IV. External Sector Sustainability

Figure 1. Korea External Debt Sustainability: Bound Tests 1/ 2/
(External debt in percent of GDP)

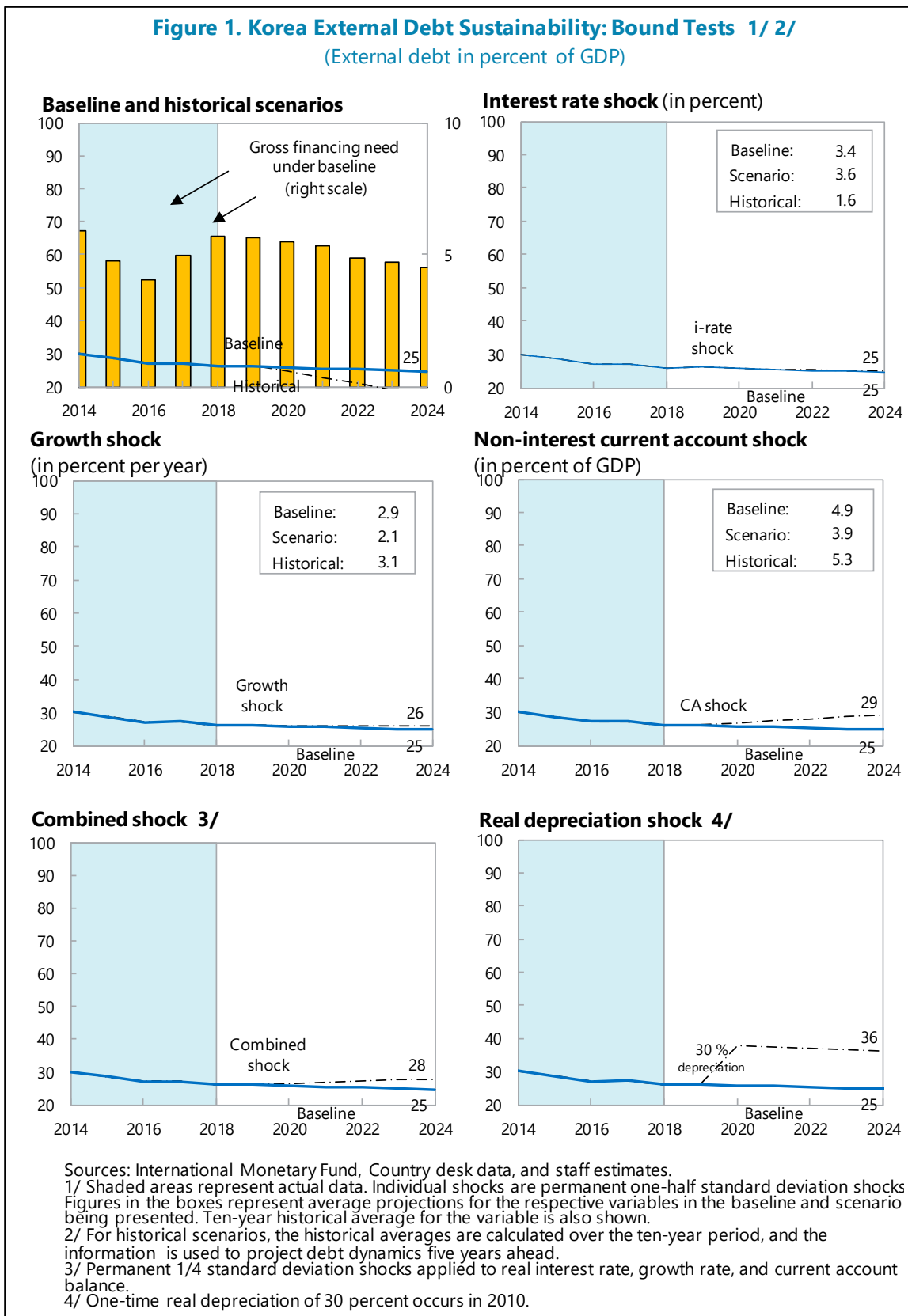


Table 1. Korea External Debt Sustainability Framework, 2014-2024

(In percent of GDP, unless otherwise indicated)

	Actual					Projections						Debt-stabilizing non-interest current account 6/ 0.9
	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	
Baseline: External debt	30.1	28.7	27.0	26.9	27.2	26.2	25.8	25.5	25.2	25.0	24.7	
Change in external debt	-2.4	-1.4	-1.6	-0.1	0.3	0.1	-0.4	-0.2	-0.3	-0.2	-0.2	
Identified external debt-creating flows (4+8+9)	-7.6	-5.5	-7.3	-6.9	-5.8	-4.5	-4.1	-3.7	-3.7	-3.4	-3.1	
Current account deficit, excluding interest payments	-6.5	-8.1	-7.4	-5.5	-5.3	-5.4	-5.2	-4.9	-4.9	-4.7	-4.6	
Deficit in balance of goods and services	-5.9	-7.6	-7.0	-5.0	-5.1	-5.5	-5.4	-5.3	-5.3	-5.1	-5.0	
Exports	51.4	46.3	42.9	43.8	44.7	43.6	42.9	42.8	42.6	42.2	41.8	
Imports	45.5	38.7	35.9	38.8	39.7	38.1	37.5	37.6	37.3	37.1	36.8	
Net non-debt creating capital inflows (negative)	0.9	1.5	0.3	0.4	0.6	0.7	0.9	1.0	1.2	1.3	1.4	
Automatic debt dynamics 1/	-1.9	1.0	-0.2	-1.8	-1.0	0.2	0.3	0.2	0.1	0.1	0.1	
Contribution from nominal interest rate	0.5	0.4	0.4	0.4	0.6	0.8	1.0	0.9	0.8	0.8	0.8	
Contribution from real GDP growth	-1.0	-0.9	-0.8	-0.8	-0.7	-0.6	-0.7	-0.7	-0.7	-0.7	-0.7	
Contribution from price and exchange rate changes 2/	-1.4	1.5	0.2	-1.5	-1.0	...	...	...	...	...	...
Residual, incl. change in gross foreign assets (2-3) 3/	5.2	4.1	5.8	7.0	4.7	4.7	3.6	3.5	3.3	3.1	2.9	
External debt-to-exports ratio (in percent)	58.5	61.8	63.3	63.0	58.8	60.1	60.1	59.6	59.1	59.1	59.2	
Gross external financing need (in billions of US dollars) 4/	83.5	65.9	57.6	76.6	93.1	94.5	97.1	98.2	95.0	96.6	97.0	
in percent of GDP	5.9	4.8	4.1	5.0	5.7	5.6	5.5	5.3	4.9	4.7	4.5	
						10-Year	10-Year					
Scenario with key variables at their historical averages 5/						26.2	24.6	22.8	21.1	19.1	17.1	-0.1
Key Macroeconomic Assumptions Underlying Baseline						Historical Average	Standard Deviation					
Real GDP growth (in percent)	3.3	2.8	2.9	3.1	2.7	3.1	1.4	2.5	2.8	2.8	2.9	2.9
GDP deflator in US dollars (change in percent)	4.6	-4.7	-0.6	5.6	3.8	2.1	6.7	-0.3	2.1	1.8	2.5	2.3
Nominal external interest rate (in percent)	1.7	1.4	1.4	1.6	2.5	1.6	0.4	3.3	3.9	3.5	3.2	3.2
Growth of exports (US dollar terms, in percent)	0.5	-11.7	-5.3	10.4	8.1	4.2	13.7	0.5	3.3	4.5	5.0	4.2
Growth of imports (US dollar terms, in percent)	-0.8	-16.7	-5.1	16.9	8.3	3.4	17.4	-0.1	3.5	4.8	4.7	4.6
Current account balance, excluding interest payments	6.5	8.1	7.4	5.5	5.3	5.3	1.9	5.4	5.2	4.9	4.9	4.7
Net non-debt creating capital inflows	-0.9	-1.5	-0.3	-0.4	-0.6	-0.5	1.1	-0.7	-0.9	-1.0	-1.2	-1.3

1/ Derived as $[r - g - r(1+g) + ea(1+r)] / (1+g+r+gr)$ times previous period debt stock, with r = nominal effective interest rate on external debt; r = change in domestic GDP deflator in US dollar terms, g = real GDP growth rate, e = nominal appreciation (increase in dollar value of domestic currency), and a = share of domestic-currency denominated debt in total external debt.
2/ The contribution from price and exchange rate changes is defined as $[-r(1+g) + ea(1+r)] / (1+g+r+gr)$ times previous period debt stock. r increases with an appreciating domestic currency ($e > 0$) and rising inflation (based on GDP deflator).
3/ For projection, line includes the impact of price and exchange rate changes.
4/ Defined as current account deficit, plus amortization on medium- and long-term debt, plus short-term debt at end of previous period.
5/ The key variables include real GDP growth; nominal interest rate; dollar deflator growth; and both non-interest current account and non-debt inflows in percent of GDP.
6/ Long-run, constant balance that stabilizes the debt ratio assuming that key variables (real GDP growth, nominal interest rate, dollar deflator growth, and non-debt inflows in percent of GDP) remain at their levels of the last projection year.

Annex V. Main Recommendations from the 2017 Article IV Consultation and Follow Up

- 1. The 2017 Article IV consultation with the Republic of Korea was concluded by the Executive Board on January 17, 2018.**
- 2. Executive Directors considered that long-term growth faces challenges from aging population, slowing productivity growth, and rising income inequality,** partly reflecting weak social protection, and labor and product market duality.
- 3. Directors agreed that well-calibrated macroeconomic policies and bold structural reforms aimed at tackling the economy's structural problems was key** to laying the foundations for sustained and inclusive long-term growth.
- 4. Directors commended the authorities for following a prudent fiscal policy, which has helped build buffers.** They agreed that fiscal policy should be expansionary to enhance social safety net, support short and long-term growth, and reduce imbalances. Many Directors highlighted that a more expansionary stance was warranted given the ample fiscal space. A number of Directors, however, shared the authorities' cautious approach to increasing public expenditures. For the longer term, Directors agreed fiscal challenges from the aging population would necessitate additional revenue mobilization.
- 5. Directors agreed that monetary policy should remain accommodative as inflationary pressures were likely to remain subdued.** They recommended that monetary policy credibility could be enhanced by strengthening communication of policy intentions. This involved clarifying the BOK's policy reaction function that describes the conditions under which it will adjust policy rates in the future.
- 6. Directors emphasized that the exchange rate should continue to be allowed to move flexibly, with intervention limited to addressing disorderly market conditions.** A few Directors encouraged publication of the intervention data.
- 7. Directors welcomed that the financial system was sound and that macroprudential policies were effectively addressing financial stability challenges,** including from high household debt. They encouraged the authorities to remain vigilant to emerging risks, especially from non-bank financial institutions.
- 8. Directors emphasized that structural reforms to mitigate duality in the labor market and support job creation were necessary to increase productivity and foster inclusive growth.** They agreed that efforts should be geared towards more flexibility for regular workers; a strong and inclusive safety net for the unemployed; and active labor market policies. While there was scope to expand public sector jobs, Directors underscored that this should be approached cautiously. Moreover, they agreed that the minimum wage should be increased with care going forward, and any compensatory subsidy to small- and medium-size enterprises should be temporary.

9. To support youth employment, Directors noted that existing measures, such as vocational schools, the work-study dual system, and internships, could be strengthened.

Policies should also focus on strengthening female labor force participation and leadership.

10. Directors considered that the regulatory burden for firms should be eased, especially in the service sector.

They highlighted that government policy towards SMEs should prioritize fostering growth and innovation, rather than shielding weaker firms. Additionally, Directors noted that there was scope to better design and coordinate R&D support.

11. The authorities have put in place measures to safeguard financial stability and reduce income inequality.

- Macprudential measures were tightened and higher property taxes were introduced to contain risks in the housing sector. LTVs and DTIs were lowered. A debt service ratio (DSR) limit covering all forms of debt was introduced for banks in mid-2018 and will be extended to NBFCs in 2019. The risk-weighting of loans with LTVs above 60 percent was increased from 35 to 50 percent in June 2018.
- Data on FX interventions (in net trading volume) for the second half of 2018 were posted on the website of the BOK in March 2019. The next posting will be in September 2019 reporting net interventions in the first half of 2019. Afterwards, intervention records will be posted on a quarterly basis with a one-quarter reporting lag.
- A supplementary budget of KRW3.8 trillion (0.2 percent of GDP) was approved in May 2018. The extra spending was used to boost youth employment through business subsidies. Welfare spending was expanded further in the 2019 budget. A tax revision bill was approved, which included an expansion of earned income tax credit to the bottom 32.5-50 percent of earners and in the eligibility of child tax credit.



REPUBLIC OF KOREA

STAFF REPORT FOR THE 2019 ARTICLE IV CONSULTATION —INFORMATIONAL ANNEX

April 22, 2019

Prepared By

Asia and Pacific Department

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FUND RELATIONS

(As of March 31, 2019)

Membership Status: Joined August 26, 1955; Article VIII

General Resources Account

	SDR Million	Percent Quota
Quota	8,582.70	100.00
Fund holdings of currency (exchange rate)	7,267.41	84.68
Reserve tranche position	1,315.29	15.32
Lending to the Fund		
New arrangements to borrow	255.60	

SDR Department

	SDR Million	Percent Allocation
Net cumulative allocation	2,404.45	100.00
Holdings	2,422.89	100.77

Outstanding Purchases and Loans

None

Financial Arrangements (In SDR Million)

Type	Date of Arrangement	Expiration Date	Amount Approved	Amount Drawn
Stand-by	Dec. 04, 1997	Dec. 03, 2000	15,500.00	14,412.50
Of which SRF	Dec. 18, 1997	Dec. 17, 1998	9,950.00	9,950.00
Stand-by	Jul. 12, 1985	Mar. 10, 1987	280.00	160.00
Stand-by	Jul. 08, 1983	Mar. 31, 1985	575.78	575.78

Projected Obligations to Fund¹

(SDR Million; based on existing use of resources and present holdings of SDRs)

	2019	2020	2021	2022	2023
Principal	0.0	0.0	0.0	0.0	0.0
Charges/interest	0.04	0.04	0.04	0.04	0.04
Total	0.04	0.04	0.04	0.04	0.04

1/ When a number has overdue financial obligations outstanding for more than three months, the amount of arrears will be shown in this section.

Exchange Rate Arrangement:

Korea's exchange rate system is classified as "free floating" de jure. It has been classified de facto as "floating" since 2009. Over 1997–2008, the exchange rate was classified as "free floating" ("independently floating" under the older classification system). Korea maintains exchange

restrictions for security reasons, in accordance with UN Security Council Resolutions, which have been notified to the Fund under the procedures set forth in Executive Board Decision 144 (52/51).

FSAP and ROSC Participation:

An FSAP update, requested by the authorities, was conducted in April and July 2013. The missions included an assessment of various financial sector standards; the soundness of the financial sector, including vulnerability to macroeconomic shocks; and the crisis preparedness and management framework of Korea. The Financial System Stability Assessment (FSSA) report for the 2013 assessment has been published (Country Report No. 14/126) and is available on the web at:

<http://www.imf.org/external/pubs/cat/longres.aspx?sk=41569.0>

FAD: Discussions on fiscal transparency were held in Seoul during June 2000, and a report was drafted and finalized in November 2000, with input from APD staff. The report has been published and is available on the web through the following link:

<http://www.imf.org/external/np/rosc/kor/fiscal.htm>.

STA: Discussions on Korea's data dissemination practices against the IMF's Special Data Dissemination Standard (SDDS) were held in Seoul during December 2009, and a Report on the Observance of Standards and Codes (ROSC) was drafted and finalized in July 2010. The report has been published and is available on the web through the link:

<http://www.imf.org/external/pubs/ft/scr/2010/cr10229.pdf>

Technical Assistance:

FAD: A technical assistance mission on government finance statistics took place in Seoul during the period November 8–19, 2010. A mission visited Seoul during August 31–September 16, 2005 to provide technical assistance on the reform of tax policy and administration. A technical assistance mission visited Seoul during January 8–19, 2001 to evaluate current practices in budgeting and public expenditure management and to provide advice on setting up a medium-term fiscal framework.

MCM: Technical assistance missions visited Seoul to provide advice on financial holding company supervision and derivatives regulation during December 8–17, 2008, on measures to deepen the money market during December 4–14, 2007, on strengthening the debt management function and further development of the government securities market during September 20–October 2, 2006, on the reform and development of the foreign exchange market during March 30–April 13, 2006, and on macroprudential and derivatives supervision during October 27–November 7, 2005.

STA: Technical assistance missions visited Seoul during March 29–April 12, 2000 to provide advice on balance of payments and external debt statistics, with a view toward improving the recording of financial derivatives and developing an international investment position statement, and during November 28–December 11, 2007 on the GFSM 2001 framework. Two missions to support reforms

related to government finance statistics visited Korea during November 28–December 11, 2007 and November 8–19, 2010, respectively.

Resident Representative:

The resident representative office in Seoul was opened in March 1998 and was closed in September 2008.

STATISTICAL ISSUES

As of April 11, 2019

I. Assessment of Data Adequacy for Surveillance
<p>General: Data provision is adequate for surveillance.</p>
<p>National Accounts: The overall structure of the national accounts follows the recommendations of the 2008 <i>System of National Accounts</i>. Chain-linked (reference year 2010) and nominal GDP estimates are compiled using the production and expenditure approaches; nominal GDP estimates are also compiled using the income approach. The estimation method for expenditure components, which had used the commodity flow method before the revision to reference year 2005, adopted the direct estimation method, in which each expenditure component is measured directly. The size of the informal sector has not been measured.</p>
<p>Consumer Price Index: The Consumer Price Index (CPI) covers 92.9 percent of total households of Korea; it excludes farming and fishing households. The geographical coverage, which includes 37 urban areas, should be extended to rural areas. The consumption basket is updated every five years with a plan to move to a three-year update cycle; currently, expenditure weights are derived from the 2017 <i>Household Income and Expenditure Survey</i>. The CPI index adopts both geometric means and the ratio of arithmetic means. The geometrics means should be used for all unweighted aggregation. The missing prices of products, except for the seasonal items, are imputed by the price movements of similar products of the same item in the same geographic area. However, the CPI could be improved further by imputing missing prices of the seasonal items rather than carrying forward the last reported prices.</p>
<p>Producer Price Index: The Producer Price Index (PPI) covers all domestic industrial activities and a large segment of service activity. It excludes exported products, however, because the Export Price Indexes are compiled separately in Korea. The rebased PPI (2010 = 100) employs 2008 SNA concepts and definitions for the record and valuation of the prices and weights. The PPI could be improved by making more use of imputing missing prices using the prices of similar commodities, rather than carrying forward the last reported price. The simple geometric average and the weighted geometric average are employed in the elementary level index compilation. The PPI classification by activity conforms to the KSIC, which is itself based on the International Standard Industrial Classification (ISIC)—with slight modifications only to reflect local considerations. The Korean commodity classification used for the PPI does not conform to the Central Product Classification (CPC) and one based on the CPC should be adopted as soon as possible.</p>
<p>Government Finance Statistics: Two sets of government finance statistics (GFS) are compiled for the central government, one using national definitions and the other using internationally recognized standards based on <i>GFSM 2001</i>. The Korean authorities resumed reporting consolidated GFS data on the general government for publication in the 2015 <i>Government Finance Statistics Yearbook (GFSY)</i> which include general government operations and a full balance sheet. The general government data are compiled with significant lags (the latest available data are for 2016), mainly due to the lack in timely source data for the local governments. While high frequency data for central government</p>

operations are disseminated under the SDDS, these data are not yet reported for inclusion in the *International Financial Statistics (IFS)*.

Financial Sector Data: Monetary and financial statistics (MFS) compiled by the Bank of Korea (BOK) broadly follow the IMF's *Monetary and Financial Statistical Manual*. Both liabilities and assets in foreign currencies are converted into Korean Won at the previous business day's trading volume weighted average rate prevailing on the balance sheet date. The data are revalued monthly with the exception of monetary gold, which is revalued on a semi-annual basis. The BOK reports monetary data for the central bank and other depository corporations using the standardized report forms (SRFs) The BOK does not report data for other financial corporations.

Korea regularly reported *Financial Soundness Indicators (FSIs)* to the IMF for dissemination on its website. Quarterly FSI data and metadata are available to the public through the IMF's website at: <http://fsi/FSIHome.aspx#Country>. Dissemination of the 2018 data has been delayed due to concerns about the quality of the data reported. Going forward, the Korean authorities should shift to more timely provision of quarterly FSI data to the Fund with a time lag in line with the average in advanced G20 economies of no more than 4 months.

External Sector Statistics: The BOK currently compiles the BOP and IIP statistics consistent with the Balance of Payment and International Investment Position Manual, sixth Edition (BPM6) analytical framework (see <http://ecos.bok.or.kr/>). The BOK adopted the BPM6 in March 2014.

The quality of the quarterly external debt statistics, including periodicity and timeliness, have been improving since 2006. In early 2007, the BOK switched from annual to quarterly reporting of the International Investment Position. Data dissemination on international reserves and foreign currency liquidity meets the SDDS specifications. Since April 2006, the authorities have disseminated foreign reserves data on a monthly basis rather than twice a month, as had been done since 1997. However, some BOP and IIP data lack consistency.

Korea reports balance of payments and IIP data for the *IFS* (quarterly data) and the *Balance of Payments Statistics Yearbook* (annual data) publications.

II. Data Standards and Quality

Korea has subscribed to the Fund's Special Data Dissemination Standard (SDDS) since September 1996, and it uses SDDS flexibility options for the timeliness of general government operations, central government operations, and analytical accounts of the banking sector data. Korea is also availing itself of a relevant flexibility option for the coverage of exchange rates.

A Data ROSC reassessment was published in July 2010.

Korea—Table of Common Indicators Required for Surveillance
(As of March 29, 2019)

	Date of Latest Observation	Date Received	Frequency of Data ⁷	Frequency of Reporting ⁷	Frequency of Publication ⁷	Memo Items:	
						Data Quality – Methodological Soundness ⁸	Data Quality – Accuracy and Reliability ⁹
Exchange Rates	3/28/2019	3/28/2019	D	D	D		
International Reserve Assets and Reserve Liabilities of the Monetary Authorities ¹	Feb. 2019	Feb. 2019	M	M	M		
Reserve/Base Money	Jan. 2019	Jan. 2019	M	M	M	O, O, O, LO	O, O, O, O, O
Broad Money	Jan. 2019	Jan. 2019	M	M	M		
Central Bank Balance Sheet	Jan. 2018	Jan. 2018	M	M	M		
Consolidated Balance Sheet of the Banking System	Jan. 2018	Jan. 2018	M	M	M		
Interest Rates ²	3/28/2019	3/28/2019	D	D	D		
Consumer Price Index	Feb. 2019	Feb. 2019	M	M	M	O, O, O, O	O, O, LO, O, O
Revenue, Expenditure, Balance and Composition of Financing ³ – General Government ⁴	Dec. 2017	Mar. 2019	NA	NA	NA	O, O, O, O	O, O, N/A, O, NA
Revenue, Expenditure, Balance and Composition of Financing ³ – Central Government	Feb. 2019	Apr. 2019	M	M	M		
Stocks of Central Government and Central Government-Guaranteed Debt ⁵	Dec 2017	Mar. 2019	M	M	M		
External Current Account Balance	Feb. 2019	March 2019	M	M	M	O, LO, LO, LO	O, O, O, O, O
Exports and Imports of Goods and Services	Feb. 2019	March 2019	M	M	M		
GDP/GNP	Q4 2018	Q4 2018	Q	Q	Q	O, O, O, O	O, O, LO, O, LO
Gross External Debt	Q4 2018	Q4 2018	Q	Q	Q		
International Investment Position ⁶	Q4 2018	Q4 2018	Q	Q	Q		

¹ Any reserve assets that are pledged or otherwise encumbered should be specified separately. Also, data should comprise short-term liabilities linked to a foreign currency but settled by other means as well as the notional values of financial derivatives to pay and to receive foreign currency, including those linked to a foreign currency but settled by other means.

² Both market-based and officially determined, including discount rates, money market rates, rates on treasury bills, notes and bonds.

³ Foreign, domestic bank, and domestic nonbank financing.

⁴ The general government consists of the central government (budgetary funds, extra budgetary funds, and social security funds) and state and local governments.

⁵ Including currency and maturity composition.

⁶ Includes external gross financial assets and liability positions vis-à-vis nonresidents.

⁷ Daily (D); weekly (W); monthly (M); quarterly (Q); annually (A); irregular (I); and not available (NA).

⁸ Reflects the assessment provided in the data ROSC or the Substantive Update (published in July 2010, and based on the findings of the mission that took place during December 09–22, 2009) for the dataset corresponding to the variable in each row. The assessment indicates whether international standards concerning concepts and definitions, scope, classification/sectorization, and basis for recording are fully observed (O); largely observed (LO); largely not observed (LNO); not observed (NO); and not available (NA).

⁹ Same as footnote 8, except referring to international standards concerning source data, statistical techniques, assessment and validation of source data, and revision studies.

**Statement by Nam-Duk Heo, Alternate Executive Director for Republic of Korea,
Joong Beom Shin, Senior Advisor to Executive Director,
and Gwibeom Kim, Advisor to Executive Director
May 8, 2019**

On behalf of the Korean authorities, we would like to thank staff for the candid and constructive discussion and policy dialogue during the 2019 Article IV consultations. The authorities broadly agree with staff's assessment and policy recommendations. The Korean economy has strong economic fundamentals with a stable financial system, low public debt, and ample foreign exchange reserves. Amid the challenging global environment, Korea is facing cyclical headwinds with risks tilted to the downside.

Outlook and Risks

External uncertainties such as US-China trade tensions and a global slowdown in the tech cycle, especially for semi-conductors which account for about 21 percent (customs clearance basis in 2018) of Korea's exports, has dampened both exports and facility investment. Along these trends, compounded by base effects in government investment, growth in Q1 of 2019 unexpectedly dipped 0.3 percent (Q on Q). The temporary drop in government investment was mainly driven by slow budget execution in Q1 this year due to delays in bidding and contracting, compared to the large increase in government spending in Q4 of 2018¹ following last year's supplementary budget.

The Korean authorities still see this year's growth target of 2.6-2.7 percent as achievable. While private consumption remains solid, they expect a steady rise in export volumes from the second half of this year. Policy efforts are also being made to boost the economy including through expansionary fiscal spending and multi-pronged investment stimulus measures. Furthermore, they have committed to closely monitoring economic conditions and taking additional actions as necessary.

Fiscal Policy

Fiscal policy will remain expansionary in accordance with staff's recommendation. The increase in expenditure of 9.5 percent in the 2019 budget is at the highest level since the global financial crisis. Furthermore, the government has frontloaded spending, committing 61 percent of the budget in the first half of this year. To improve spending efficiency, budget execution is being thoroughly monitored and assessed to feed into the budget adjustment in the following year.

A supplementary budget bill of KRW 6.7 trillion or 0.4 percent of GDP was also submitted to

¹ Government spending increased by 18 percent (Q on Q) in Q4 of 2018.

the National Assembly last month. The size of this supplementary budget could seem smaller than those in past years, but if it is combined with grants already disbursed to local governments² in early April (10.5 trillion KRW), the additional fiscal support beyond the original budget would amount to around 0.9 percent of GDP. This extra budget will support measures to ensure public safety against fine dust pollution and disasters. It will also prevent downside risks from materializing in the early stages by propping up exports and investments, job creation and strengthening the social safety net.

The authorities are of the view that fiscal sustainability could be strengthened with additional revenue mobilization, mainly by broadening tax bases. On staff's suggestion to increase the neutrality of corporate income taxation to enhance resource allocation, the authorities take a cautious position, in that it should be reviewed across the whole tax system more holistically, taking country-specific circumstances into account.

Monetary Policy and Financial Sector

The authorities consider the current policy rate supportive and accommodative. The Bank of Korea (BOK) has conjectured that the output gap has been slightly negative. The difference between the output gaps estimated by the BOK and the IMF is attributable to the IMF's overestimation of potential GDP for 2010. The BOK plans to closely monitor any changes to financial and economic conditions at home and abroad and take a data-dependent approach in managing monetary policy.

Korea's financial system has performed well with the subsequent implementation of the Basel III framework and regular stress tests for the financial market. The BOK and the Financial Supervisory Services have implemented regular stress tests to monitor the loss-absorbing capacity of the financial system against potential risk factors given financial institutions' interconnectedness.

Efforts are being made to contain the rapid growth of household debt utilizing diverse macroprudential measures (MPMs). The BOK underscored that, while the MPMs are effective in specific markets, using a mix of the MPMs and monetary policy would be much more effective in addressing overall financial stability risks. Key policy goals include managing household debt growth, supporting vulnerable borrowers, and improving household loan structures from floating-rate interest-only to fixed-rate amortizing payment. The authorities intend to maintain household debt growth at around the rate of nominal GDP growth over the mid-to-longer term. On top of the loan-to-value and debt-to-income ratios, they have introduced the debt service ratio as a controlling indicator for the banking sector, and it is also expected to be applied to non-banking sectors in June 2019.

² According to National Finance Act, around 40 percent of excess domestic tax revenues are supposed to be distributed to the local government.

The authorities also remain vigilant to monitor property prices linked to the financial market. While overall housing market risks are currently being contained with tightened MPMs, the government will continue its policy efforts to maintain market stability—focusing on suppressing the speculative demand, supporting occupiers for purchasing their own house, and implementing targeted measures by region.

External Sector

The current account surplus is expected to decline gradually. The authorities note staff's assessment that Korea's external position in 2018 is moderately stronger than warranted by medium term fundamentals and desirable policy setting. They expect staff to keep refining the model and reflect country specific factors such as rapid population aging and potential reunification costs in assessing the external position. They also have concerns over staff's view on FX macroprudential measures. A levy on non-deposit foreign currency liabilities and a leverage cap on FX derivatives have helped prevent excessive build-up of short-term debt and lengthen the maturity structure of debt. These measures are not residence-based and were never intended to limit capital flows, rather to reduce systemic risks in the financial market. In this context, they clearly need to be classified as MPMs under the Fund's Institutional View.

From March this year, Korea has begun to disclose FX market intervention data to enhance the transparency of its foreign exchange policy. The data for the second half of last year were posted on the website of the BOK in end-March this year and the BOK will keep up these postings going forward.³

Structural Policies

One of Korea's key policies is promoting innovation to boost productivity. The authorities implemented a law on a regulatory sandbox that is pre-permissive and post-regulatory. They expect to make many successful cases from the regulatory sandbox starting this year. The authorities have also focused on supporting finance, taxation, and regulatory changes in four major service sectors such as tourism; healthcare; smart-logistics; arts and entertainment contents (i.e. K-contents). In addition, R&D investment, particularly in driverless cars and artificial intelligence, has increased in preparation for the fourth industrial revolution. Tax benefits will also be given on private fifth-generation (5G) network investments. The Korean government launched a task force for innovative growth in April. Moreover, the authorities support the restructuring of insolvent companies promptly, with three major principles—holding large shareholders responsible, sharing the burden among stakeholders, and ensuring companies make tough decisions to survive on their own.

³ From July 2018 to June 2019, biannual data for net purchases of foreign assets will be revealed with a time lag of 3 months, and afterwards (from July 2019) quarterly data will be provided within 3 months.

Korea continues to promote labor market stability and flexibility through social dialogue and compromise. The authorities support transforming irregular workers into regular ones, while strengthening the social safety net through measures such as unemployment benefits and further improving active labor market policies—including public employment services and vocational training—which is also emphasized in the selected issue paper. They encourage adopting a performance-based payment system over seniority-based salaries. In addition, they also concur with staff that 52 working-hours per week would be beneficial in terms of workers' well-being, productivity, female labor supply, and fertility.

The Korean government is putting in every effort to ensure the smooth implementation of the minimum wage policy. Since there is a relatively high portion of low-wage workers (receiving less than two-thirds of median income) in Korea, with comparably lower social expenditures, the minimum wage plays an important role in correcting inequality and boosting domestic consumption. In the meantime, the authorities are trying to cushion the adverse impact on production by providing temporary financial support to the self-employed and to SMEs that may experience difficulties from the minimum wage increase. A bill to introduce a new minimum wage setting mechanism with two sub-committees (i.e. the range-setting committee and the decision-making committee) is currently being discussed at the National Assembly. The former will consist of experts who will set the upper and lower bands of the minimum wage, based on objective indicators. The latter will make the final decision within the range, enhancing the objectivity and rationality of the minimum wage and encouraging wider social acceptance.

Expanding public sector jobs is necessary to provide quality public services in an aging society. The share of public employment in Korea is lower than half of the OECD average. The authorities plan to increase public employment particularly in understaffed areas like security and welfare, where the private sector cannot replace it easily.

Tackling low fertility and aging is one of the top policy priorities. The authorities have laid out a basic plan for addressing the low birth rate and aging society, which is renewed every five years. In February, the authorities released the third basic plan with a variety of policy measures. Coverage of maternity benefits and a subsidy for shortening working hours for childcare have been expanded. They plan to increase paid parental-leave days for spouses at the time of childbirth and establish more daycare centers in the workplace to further facilitate female labor force participation. In addition, a new governmental task force will investigate the impact of the demographic change on employment, budget, welfare, education, and industrial structure in order to enhance the adjustability of the economy and prepare comprehensive policy responses for the future.