ASEAN +3 MACROECONOMIC RESEARCH OFFICE

AMRO Annual Consultation Report

Korea – 2025

ASEAN+3 Macroeconomic Research Office (AMRO)

March 2026

Acknowledgments

1. This Annual Consultation Report on Korea has been prepared in accordance with the functions of AMRO to monitor, assess and report on its members' macroeconomic status and financial soundness, to identify relevant risks and vulnerabilities, and to assist them in the timely formulation of policy to mitigate such risks (Article 3 (a) and (b) of the AMRO Agreement).

2. This Report is drafted on the basis of the Annual Consultation Visit of AMRO to Korea on December 8-19, 2025 (Article 5 (b) of the AMRO Agreement). The AMRO Mission team was headed by Kian Heng Peh, Group Head and Lead Economist. Members included Jade Vichyanond, Country Economist for Korea; Wee Chian Koh, Back-up Economist; Bora Lee, Senior Economist; Byunghoon Nam, Senior Economist; and Justin Lim, Economist. AMRO Director Yasuto Watanabe and Chief Economist Dong He also participated in key policy meetings with the authorities. This AMRO Annual Consultation Report on Korea for 2025 was peer-reviewed by an economist group from AMRO's country surveillance, financial surveillance, fiscal surveillance and policy review teams; endorsed by Jiangyan Yu, Senior Economist, Policy and Review Group; and approved by Dong He, AMRO Chief Economist.

3. The analysis in this Report is based on information available up to December 31, 2025.

4. By making any designation of or reference to a particular territory or geographical area, or by using the term "member" or "country" in this Report, AMRO does not intend to make any judgments as to the legal or other status of any territory or area.

5. On behalf of AMRO, the Mission team wishes to thank the Korean authorities for their comments on this Report, as well as their excellent meeting arrangements and hospitality during our visit.

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Executive Summary

Since AMRO's last Annual Consultation Visit to Korea in November 2024, the martial law declaration in the subsequent month and the political gridlock that followed weighed heavily on the country's investor and consumer sentiment. GDP growth bottomed in the first quarter of 2025. Since then, the economy has started to recover in the wake of the June presidential election, which ushered in an administration that pursues a more proactive policy stance. The new government employed various policy levers to support the economy amid heightened global trade tensions, while also seeking to preserve external stability and cool the Seoul housing market, which has seen substantial price increases in recent months.

1. Korea's economy rebounded in 2025. The recovery has been underpinned by a rebound in private consumption, owing largely to the resolution of political gridlock and fiscal stimulus. Exports, particularly semiconductors, have provided additional momentum. Construction investment, however, remains a drag, mired in real estate project finance (PF) distress. Growth is projected to rise to 1.9 percent in 2026, gradually narrowing the negative output gap.

2. Inflation has remained well-anchored near the Bank of Korea's 2-percent target. Less volatile food prices and muted energy prices have helped keep inflation around the BOK's target. Looking ahead, inflation is forecast to remain stable, averaging around 1.9 percent in 2026.

3. The BOK has kept the policy rate on hold since May 2025. While both core and non-core inflation have been relatively well-anchored, the Base Rate has not been further cut due to the authorities' financial stability concerns stemming from rising house prices and household leverage. Moreover, bouts of exchange rate pressure in recent months have bolstered their case for maintaining the current monetary stance.

4. The external sector continues to be strong. The current account surplus increased further in 2025, driven largely by semiconductor exports. Net outflows in the financial account persisted on the back of residents' portfolio investments and direct investments abroad. Foreign reserves remain ample, at around 2.6 times short-term external debt. At the same time, the won exchange rate has been volatile and depreciated against major currencies, reflecting continued net capital outflows and portfolio reallocation by residents.

5. The government implemented two supplementary budgets in 2025 to support economic recovery. The managed fiscal deficit, which excludes the balance of social security funds (SSFs), is estimated at 4.3 percent of GDP, higher than the originally budgeted deficit of 2.8 percent and the actual deficit of 4.1 percent in 2024. The fiscal stance is assessed to have shifted to slightly expansionary after the supplementary budgets.

6. Although Korea's overall exports appear resilient, it is largely due to robust exports of semiconductors. Potential changes in the US tariffs on semiconductors could affect Korea's exports even amid the global AI boom. At the same time, Korea's non-semiconductor exports have been affected by US tariffs and will likely remain vulnerable. Moreover, growth

slowdowns in Korea's major trading partners may dampen global demand and the outlook for Korea's exports.

7. House price increases in certain districts in the capital region have raised concerns that prices may have risen beyond market fundamentals. Potential abrupt downward corrections could negatively impact the financial sector.

8. While NBFIs' exposure to PF loans has declined following restructuring efforts, and their capital and liquidity buffers remain adequate on average, lending to the construction and real estate sectors and NPL ratios for these sectors remain at relatively high levels. Given the continued weakness in the regional real estate markets, the pace of restructuring and resolution for the remaining higher-risk distressed projects among smaller regional NBFIs may moderate.

9. The current monetary policy stance is appropriate given the complex balance of risks. While output growth remains suboptimal and inflationary pressure appears contained, financial stability concerns stemming from rising house prices and household leverage, combined with an improved outlook following the US-Korea investment and trade agreement, warrant maintaining the current monetary setting in the near term. That said, further easing may be considered if downside risks to growth were to increase due to a deteriorating external environment.

10. Macroprudential measures to cool the housing market and contain household indebtedness should be complemented with more emphasis on adequate supply expansion. The imposition and tightening of mortgage loan limits, along with the reduction of LTV ratios, should help dampen housing demand. Meanwhile, the plan to expand housing stock over the next five years was a positive development on the supply side. To complement the intended expansion, it may be beneficial to consider relaxing restrictions on reconstruction and redevelopment in high-demand districts. A multipronged strategy that encompasses education, health and transport policies may be needed to alleviate demand-supply imbalance in the capital region's housing market in a sustainable manner.

11. The fiscal stance envisaged in the 2026 budget is broadly appropriate, with room for an expansionary fiscal shift should downside risks materialize. Korea retains moderate fiscal space, and with monetary policy constrained by lingering concerns over household debt and exchange rate stability, the authorities should swiftly deploy well-targeted fiscal measures if adverse shocks to growth emerge. Once economic stability is restored, these temporary measures should be phased out in a timely manner to maintain fiscal credibility. Moreover, the authorities are advised to establish a credible fiscal anchor and advance structural fiscal reforms to ensure long-term fiscal sustainability, given concerns about the persistently rising debt trend.

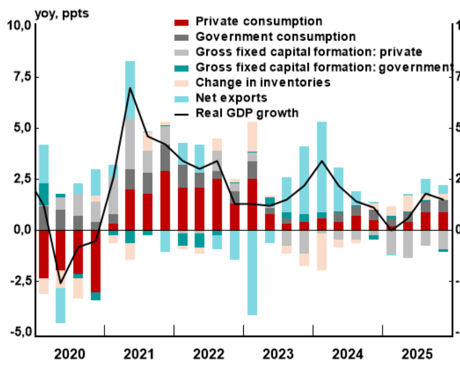
12. To maintain technological leadership and reinvent growth of the semiconductor industry, Korea needs to evolve from being the world's memory factory to becoming a full-spectrum semiconductor powerhouse. Korea is well-positioned to build on its past success by leveraging existing strengths, which include in-house knowledge and process technology, strong commercial R&D, and a deep talent pool of STEM graduates.

A. Recent Developments and Outlook

A.1 Real Sector Developments and Outlook

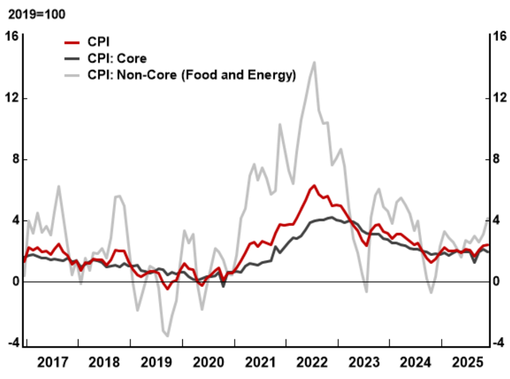
1. **After the martial law declaration in December 2024 triggered political gridlock, Korea's economy rebounded in 2025, supported by recovering private consumption and robust export performance.** Following the subdued growth of just 0.3 percent yoy in H1, the economy accelerated to 1.6 percent yoy in H2 (Figure 1). The recovery has been underpinned by a rebound in private consumption, which grew by 1.9 percent yoy in H2, compared to 0.7 percent yoy in H1, largely due to the resolution of political gridlock that began in late 2024 and fiscal stimulus measures, particularly universal cash transfers. Despite US tariff measures, exports remained a key growth driver, expanding robustly at 5.2 percent yoy in H2, propelled by strong demand for semiconductors, especially high-value memory chips used in AI-related investment. However, construction investment has contracted for the past several quarters, weighed down by ongoing distress in real estate project finance (PF).

Figure 1. GDP Growth



Source: Bank of Korea; Haver; AMRO staff calculations

Figure 2. Consumer Price Inflation



Source: Statistics Korea; Haver; AMRO staff calculations

2. **The economic recovery is expected to gain momentum in 2026, with GDP growth forecast to accelerate to 1.9 percent.** Private consumption growth is expected to rise gradually, supported by declining interest rates and improving consumer sentiment. The overall export outlook has improved following the US-Korea investment and trade agreement in November. Semiconductor exports are likely to remain resilient in the near term, supported by strong global demand for AI-related investment, although US tariffs will weigh on non-semiconductor exports. Facilities investment growth is expected to remain in positive territory over the coming quarters as semiconductor-related capital expenditure expands in tandem with export growth. Construction investment, benefiting from ongoing restructuring of PF loans and the government's increase in infrastructure expenditure, should begin to contribute positively, with rising construction orders already pointing to a gradual turnaround in the near term.[1]

3. **Inflation has remained well-anchored near the Bank of Korea's 2-percent target (Figure 2).** Less volatile food prices and muted global energy prices have helped keep inflation close to target throughout the year, averaging 2.1 percent in 2025. While services prices have risen slightly of late, this reflects supply-side factors—such as increases in input prices—rather than demand pressures, which remain subdued given the gradual recovery in private

[1] The extent to which these orders will translate to actual construction investment is uncertain given that a number of construction bids for SOC projects were unsuccessful due to low profitability.

consumption. Looking ahead, inflationary pressures appear contained. The universal cash transfer program is unlikely to have a significant impact on inflation given its limited size. Headline inflation is forecast to remain stable, averaging around 1.9 percent in 2026.

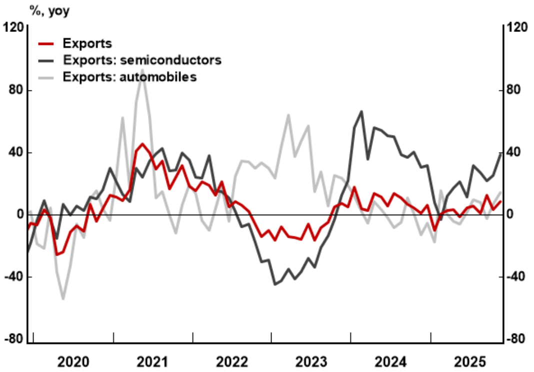
4. In spite of the economic recovery, employment growth remains modest and increasingly skewed toward older workers, with younger age groups continuing to face limited job opportunities. While job creation rose steadily in 2025, growth has been concentrated in health and social work, sectors dominated by low-paying jobs for senior workers. Manufacturing employment continues to contract, reflecting weaker production and export outlook, while construction employment remains in decline due to anemic construction investment. For the youngest cohort (15-29 years), employment growth continues to weaken as young people increasingly postpone graduation or wait for higher-quality job opportunities.

5. The BOK has kept the policy rate on hold since May 2025. After reducing the policy rate by a cumulative 100 basis points between October 2024 and May 2025, the BOK has kept rate on hold for the remainder of 2025. While both core and non-core inflation have been relatively well-anchored, the Base Rate has been held steady amid strengthening growth prospects, as well as financial stability concerns stemming from rising house prices in Seoul and household leverage. Moreover, bouts of exchange rate pressure in recent months have bolstered the case for maintaining the current monetary stance.

A.2 External Sector and Financial Sector

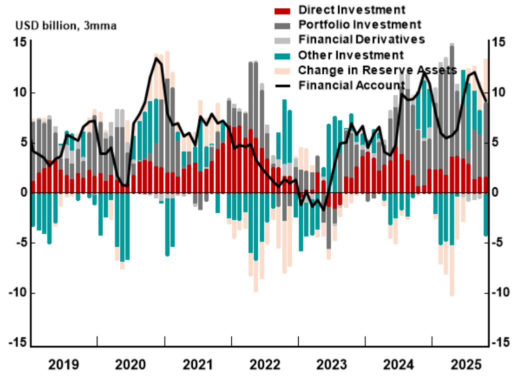
6. The external sector remains strong. The current account surplus increased further to 6.1 percent of GDP in the first three quarters of 2025, from 5.3 percent of GDP in 2024, driven largely by strong exports of semiconductors amid the global AI boom (Figure 3). The services account remains in deficit, as large outbound tourism expenditures and payments for foreign business services and fees more than offset revenues from Korea’s strong shipping and airlines services as well as K-culture exports. The primary income account surplus continues to rise steadily, reflecting higher investment income from Korea’s accumulated net foreign assets and outward FDI by large corporations. Net outflows in the financial account have persisted, driven by residents’ increasing portfolio investments—particularly in foreign equities—and sustained direct investment abroad (Figure 4). Meanwhile, non-resident portfolio inflows into Korea have increased, reflecting in part global investors’ greater portfolio diversification away from US assets. Foreign reserves remain ample, covering about 2.6 times short-term external debt, providing a substantial buffer against potential shocks.

Figure 3. Exports



Source: Korea Customs Service; MOTI; Haver; AMRO staff calculations

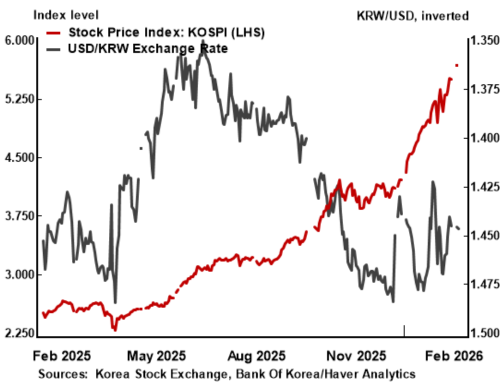
Figure 4. Financial Account



Source: Bank of Korea; Haver; AMRO staff calculations

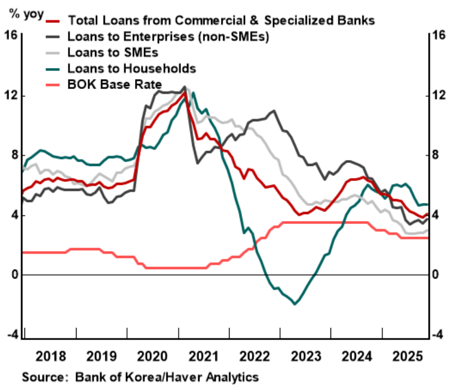
7. **At the same time, the Korean won has seen a volatile exchange rate, depreciating against major currencies.** According to the Bank for International Settlements (BIS), the won's real effective exchange rate (REER) at the end of October 2025 reached its weakest level in 16 years. Although the won strengthened against the US dollar in Q2 2025, in line with the broader US dollar depreciation trend, the currency experienced considerable weakness in Q4, reflecting continued overseas securities investment by domestic investors and co-movement with the depreciating Japanese yen (Figure 5).[2] While authorities have occasionally warned against "one-sided market expectation" to curb volatility, the won's weakness appears to have been driven largely by structural factors, such as the National Pension Service's portfolio diversification strategy and retail domestic investors' growing investment in foreign equity, particularly US equity. Despite the sustained weakness of the won exchange rate—which strengthened at the end of the 2025 following the authorities' suite of measures to support the currency—Korea's terms of trade improved on the back of rising semiconductor prices and muted global energy prices.[3]

Figure 5. KOSPI and USD/KRW



Source: Korea Stock Exchange; Bank of Korea; Haver; AMRO staff calculations

Figure 6. Loan Growth



Source: Bank of Korea; Haver; AMRO staff calculations

[2] Such co-movement could reflect a number of factors, including concerns over the planned capital outflows as a result of the agreements both Japan and Korea signed with the US on trade and investment.
[3] The authorities implemented a number of measures to stem downward pressure on the exchange rate, including suspending the foreign exchange stability levy for financial institutions, paying interest on excess foreign currency reserves, allowing exporters to borrow externally for working capital, promoting omnibus accounts for foreign investors, relaxing the forward exchange position limits for domestic subsidiaries of foreign banks, and extending the swap line between the BOK and the National Pension Service, among others.

8. **Notwithstanding the heightened global uncertainties, the financial market remains orderly amid intermittent bouts of volatility.**[4] The Korea Composite Stock Price Index (KOSPI) has risen markedly, driven by strong global demand for AI-related memory chips, improved investor sentiment following the resolution of the domestic political gridlock, and the Korea Strategic Trade and Investment Deal. The rally also drew support from the new administration's continued capital market reforms, which aim to strengthen corporate governance standards and reduce the longstanding "Korea discount" in Korean equities. Government bond yields have increased amid a shift in expectations regarding the future path of monetary policy, reflecting Korea's improving growth outlook.

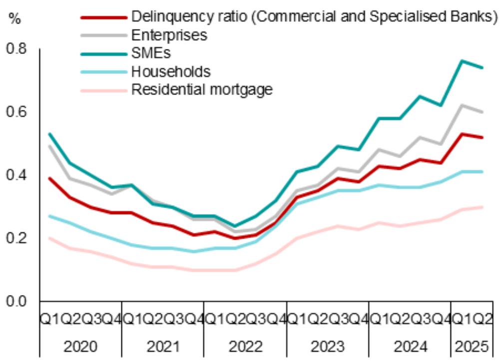
9. **Aggregate lending by financial institutions has decelerated, with corporate credit growth slowing sharply, while household borrowing has continued to expand modestly.** Total loan growth declined from 3.0 percent in Q3 2024 to 2.4 percent in Q3 2025, despite policy rate cuts that began in October 2024. This slowdown was driven primarily by corporate loans, reflecting weaker investment demand amid heightened domestic and external uncertainty as well as tighter credit screening as financial institutions strengthened prudential management. Corporate loan growth was significantly weaker among non-bank financial institutions (NBFIs), reflecting ongoing PF restructuring and lower funding demand from small construction companies and real estate firms. Although macroprudential measures have somewhat tempered the pace of household loan growth, persistent expectations of rising home prices in Seoul may have contributed to keeping household loan growth, at 4.7 percent in October 2025, above that of corporate loans.

10. **While corporate debt-servicing capacity has improved to some extent, credit quality among SMEs and NBFIs remains lackluster.** The debt-servicing capacity of listed companies has somewhat improved, as indicated by a decline in the proportion of firms with an interest coverage ratio (ICR) below 1. However, the average ICR for SMEs remains in negative territory, and as of Q2 2025, more than half (56.9 percent) of SMEs still have an ICR below 1. The average delinquency ratio of commercial and specialized banks inched up from 0.45 percent in Q3 2024 to 0.51 percent in Q3 2025, with SME loan delinquencies reaching 0.75 percent in Q3 2025, the highest among all loan categories. Asset quality pressures are more acute within NBFIs, where savings banks and credit cooperatives—which maintain high exposures to low-credit quality borrowers—recorded elevated substandard-and-below loan (SBL) ratios of 8.80 percent and 6.09 percent, respectively, as of Q3 2025.[5]

[4] The BOK's Financial Stability Index showed increased instability in the latter half of 2024 but indicated greater financial stability in 2025.

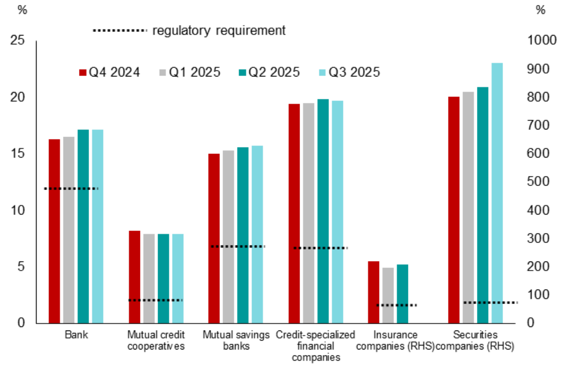
[5] As of Q3 2025, the SBL ratios were 0.57 percent for commercial and specialized banks, 0.98 percent for insurance companies, 4.10 percent for securities companies, and 2.15 percent for credit-specialized financial companies.

Figure 7. Loan Delinquency



Source: Financial Supervisory Services; CEIC; Haver; AMRO staff calculations

Figure 8. Capital Adequacy Ratio



Source: Financial Supervisory Services; AMRO staff calculations

11. **Overall, financial institutions maintain strong capital and liquidity.** Commercial and specialized banks have seen improved profitability, supported by an increase in derivatives-related income, partly offsetting the narrowing of net interest margins. As of end-Q3 2025, commercial banks and specialized banks maintained an average capital adequacy ratio (CAR) of 17.1 percent, well above minimum regulatory standards, and loan-loss provisions stood at a robust 164.8 percent of SBL loans. Their liquidity buffers remain adequate to withstand sudden deposit outflows, with both liquidity coverage ratios and net stable funding ratios exceeding 100 percent.

12. **Performances varied across savings banks and credit cooperatives.** Savings banks returned to profitability in 2025 after recording losses in 2024, largely owing to reduced credit costs as problem loans declined following pre-emptive provisioning linked to strengthened PF project viability assessments.[6] Credit cooperatives, by contrast, have been slower to resolve real estate-related distress and faced higher credit costs from defaults on PF loans, held mainly by small regional credit cooperatives. Meanwhile, all categories of NBFIs maintained average CARs well above statutory minimums. Loan-loss provisions and liquidity coverage ratios are adequate on average but relatively low for entities with significant PF exposure, particularly some smaller regional institutions.[7]

A.3 Real Estate Sector

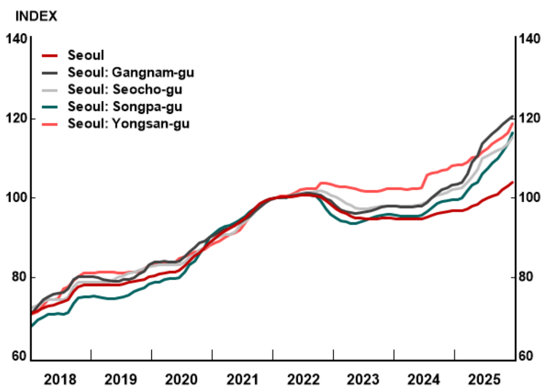
13. **The authorities have accelerated efforts to resolve distressed non-residential projects in non-capital regions, where market conditions remain weak.** Project viability evaluation criteria were revised in May 2024, and quarterly assessments have been conducted across the financial sector since June 2024 to identify projects for restructuring. Steady progress has been made; as of end-Q3 2025, KRW16.5 trillion of the KRW23.9 trillion in distressed PF loans had been resolved. The remaining stock consists largely of loans for small to medium-size nonresidential projects in non-capital areas, where weak business viability has hindered market-based resolution.

[6] Net income of savings banks in Q3 2025 reached KRW419.9 billion, compared with a loss of KRW397.4 billion in 2024.
[7] As of September 2025, the ratio of liquidity assets maturing within three months to liquidity liabilities maturing within three months was 126.6 percent for savings banks (regulatory minimum: 100 percent) and 92.0 percent for credit cooperatives (regulatory range: 80-90 percent).

14. **To prevent future PF crises, the authorities are strengthening prudential regulations by addressing the sector's high-guarantee, low-equity financing structure and raising required equity capital ratios.** Projects with higher equity contributions already benefit from reduced guarantee fees, and differentiated risk weights and provisioning requirements based on equity ratios have been introduced to incentivize greater equity participation.[8] These reforms will be implemented gradually—starting with new loans—with grace periods to accommodate prevailing market conditions and existing capital structures.

15. **Rising home prices in Seoul have prompted authorities to implement additional macro-prudential policies even as prices in areas outside the capital region remain largely stagnant amid oversupply.** Since mid-2024, anticipation of interest rate cuts, as reflected in falling mortgage interest rates, combined with a rush to borrow ahead of stricter lending regulations, particularly the stress debt-to-service ratio (DSR), has led to a surge in Seoul home prices (Figure 9).[9] The rally was further fueled by the easing of transaction permit rules in three affluent districts in February 2025. In response, the government reversed this easing and implemented a comprehensive set of demand and supply-side measures to cool the market. These included widening the scope of the stress DSR and subsequently tightening mortgage loan limits, lowering loan-to-value (LTV) ratios for regulated districts, expanding the number of regulated districts, and unveiling a five-year plan to increase housing stock in the capital region (Table 1). These measures have had some success in moderating price pressures and transaction activity, although challenges remain in stabilizing the market, particularly in speculative districts. Meanwhile, home prices outside the metropolitan area have remained relatively flat amid oversupply, as reflected in the high inventories of unsold units.

Figure 9. Seoul Home Prices



Source: Kookmin Bank; Haver; AMRO staff calculations

Table 1. Key Macroprudential Measures in 2025

Date	Measure
Jun 27, 2025	Limit on mortgage loans in the Seoul metropolitan area (KRW600 million)
Sep 7, 2025	- Plan to build 270,000 new houses in SMA every year during 2026-2030 - Reduction in the LTV ratio from 50 percent to 40 percent for regulated areas (4 districts)
Oct 15, 2025	- Other districts designated as regulated areas, with LTV ratio capped at 40 percent - Mortgage loan limits further tightened (KRW200-600 million)

Source: AMRO staff compilation

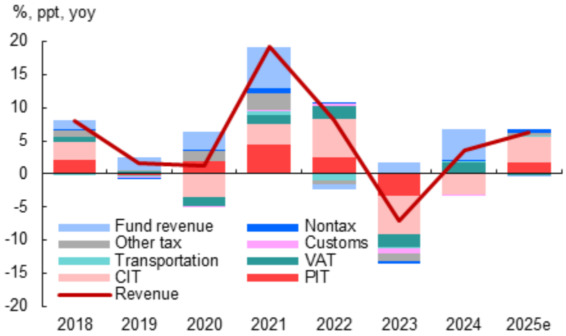
[8] 1) Discounted guarantee fees for developers in high equity ratio projects to incentivize stronger capitalization in PF projects 2) Regarding risk weights for banks, securities firms, insurance companies, savings banks, and credit-specialized financial companies, PF loan risk weights have historically been uniform (e.g. 100 percent or 150 percent), but reforms are being considered to stratify them (e.g. 100 percent, 120 percent, 150 percent) depending on equity ratio levels. 3) As for prudential and provisioning reforms, across all financial sectors, the project viability evaluation criteria will incorporate equity ratio thresholds, and regulations on loan loss provisions and other prudential standards will be revised accordingly.

[9] The phased implementation of the stressed DSR rule created an incentive for homebuyers to secure mortgages before the stricter lending conditions took full effect and homebuyers' borrowing capacity would be reduced, especially for high loan-to-income borrowers.

A.4 Fiscal Sector

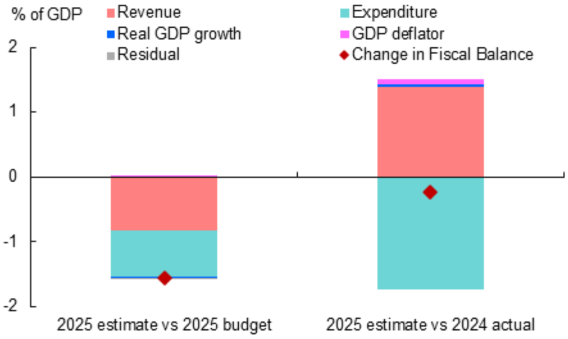
16. The government implemented two supplementary budgets in 2025 to support economic recovery, resulting in a persistently wide fiscal deficit. The supplementary budgets, introduced in May and July in 2025, focused on providing financial support to small businesses and distributing consumption vouchers to households to stimulate domestic demand.[10] As a result, fiscal spending growth in 2025 is estimated to have doubled compared to 2024. Meanwhile, tax revenues rebounded after two consecutive years of contraction, driven mainly by corporate income tax (CIT), reflecting strong business performance, and personal income tax (PIT), supported by robust employment growth and capital gains from offshore equity investments (Figure 10). However, with expansionary spending outpacing the revenue recovery, the managed fiscal deficit (which excludes the social security fund balance), is estimated at 4.3 percent of GDP, higher than the 2024 outturn of 4.1 percent (Figure 11). Government debt in 2025 is estimated to have risen to 49.3 percent of GDP, up from 46.0 percent in 2024.

Figure 10. Contribution to Change in Revenue



Source: Ministry of Economy and Finance; AMRO staff estimates
Note: "e" stands for AMRO estimates

Figure 11. Decomposition of Change in Fiscal Balance



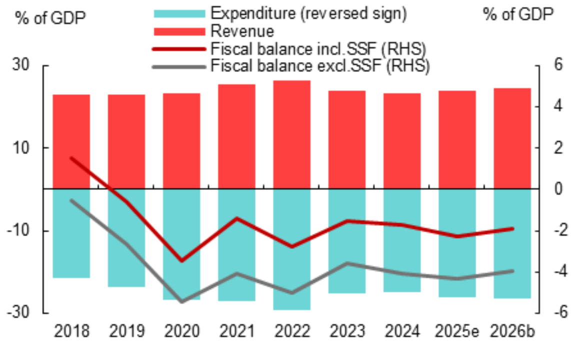
Source: Ministry of Economy and Finance; AMRO staff estimates
Noted: A positive (negative) change in the fiscal balance implies the actual fiscal balance in 2025 improved (deteriorated) over the fiscal balance in the 2025 initial budget or over the actual fiscal balance in 2024. A positive (negative) contribution of revenue implies the actual revenue in 2025 was higher (lower) than the budgeted revenue in 2025 or the actual revenue in 2024, while a positive (negative) contribution of expenditure implies the actual expenditure in 2025 was lower (higher) than the budgeted expenditure in 2025 or the actual expenditure in 2024.

17. The 2026 budget reflects a proactive fiscal policy. In contrast to the previous administration's focus on maintaining fiscal soundness, the new administration emphasizes the proactive use of fiscal policy to drive economic growth, aiming to establish a virtuous cycle of active fiscal stimulus, economic expansion and improved fiscal sustainability. At the same time, performance-oriented fiscal management will be enhanced by prioritizing investment in high-impact areas while restructuring wasteful and habitual expenditures. Key priorities of the 2026 budget include: (i) supporting technology-driven growth; (ii) promoting balanced regional

[10] The first supplementary budget, amounting to KRW13.8 trillion (0.5 percent of GDP), focused on: (i) supporting small businesses and vulnerable groups (KRW5.1 trillion); (ii) facilitating recovery from wildfires and strengthening disaster and emergency response systems (KRW3.3 trillion); (iii) responding to trade-related risks and advancing the AI ecosystem (KRW4.5 trillion); and, (iv) supporting the construction sector and other initiatives (KRW1.0 trillion). The second supplementary budget, totaling KRW31.8 trillion (1.2 percent of GDP), comprised: (i) measures to promote economic recovery through consumption vouchers, revitalization of the construction sector and investment in new industries (KRW17.3 trillion); (ii) debt relief programs for small businesses, support for vulnerable groups, and strengthening of the employment safety net (KRW4.2 trillion); and, (iii) revenue reductions (KRW10.3 trillion).

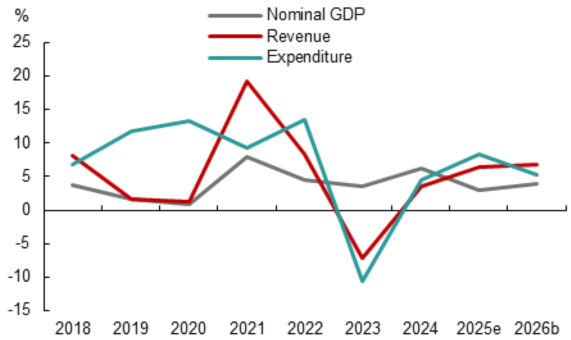
development and addressing demographic challenges; and, (iii) strengthening national security and diplomacy. The managed fiscal deficit in 2026 is budgeted at 3.9 percent of GDP, slightly lower than the 2025 estimate, with revenues expected to grow robustly in line with the economic recovery and spending aligned with these policy priorities (Figures 12 and 13). The fiscal stance in 2026 is assessed to be broadly neutral amid a still-negative output gap.

Figure 12. Fiscal Balance



Source: Ministry of Economy and Finance; AMRO staff estimates
Note: "e" stands for AMRO estimates and "b" represents the budget.

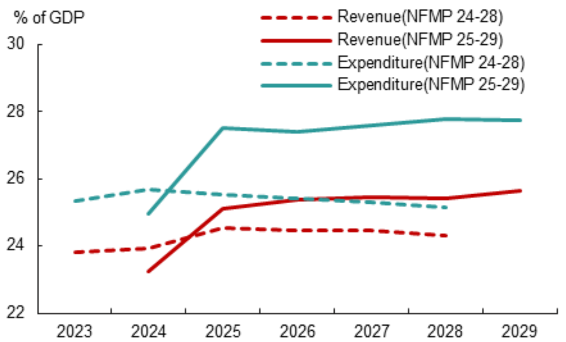
Figure 13. Revenue and Expenditure Growth



Source: Ministry of Economy and Finance; AMRO staff estimates
Note: "e" stands for AMRO estimates and "b" represents the budget.

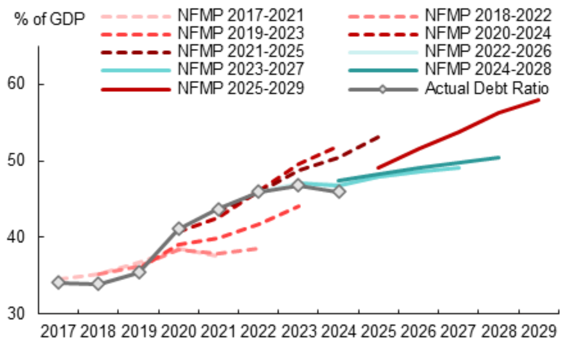
18. **Over the medium term, the National Fiscal Management Plan (NFMP) 2025–2029 envisages the continuation of an active fiscal policy stance.** The managed fiscal deficit is projected to remain above 4 percent of GDP, with both revenue and expenditure gradually increasing as a share of GDP. The revenue-to-GDP ratio is expected to rise gradually, mainly reflecting tax policy reforms, including a one percentage point increase in the CIT rate and a 0.05 percentage point hike in the securities transaction tax rate. The expenditure-to-GDP ratio is also expected to increase, driven primarily by mandatory spending, which is projected to account for 55.8 percent of total expenditure by 2029 (Figure 14). In terms of functional allocation, the NFMP prioritizes spending on research and development; industry, SMEs, and energy; as well as healthcare, welfare, and labor. Under the NFMP projections, the government debt-to-GDP ratio is expected to continue rising, reaching 58 percent by 2029 (Figure 15).[11]

Figure 14. NFMP Revenue and Expenditure Projections



Source: Ministry of Economy and Finance
Note: Revenue and expenditure in 2024 are based on the budget.

Figure 15. NFMP Government Debt Projections

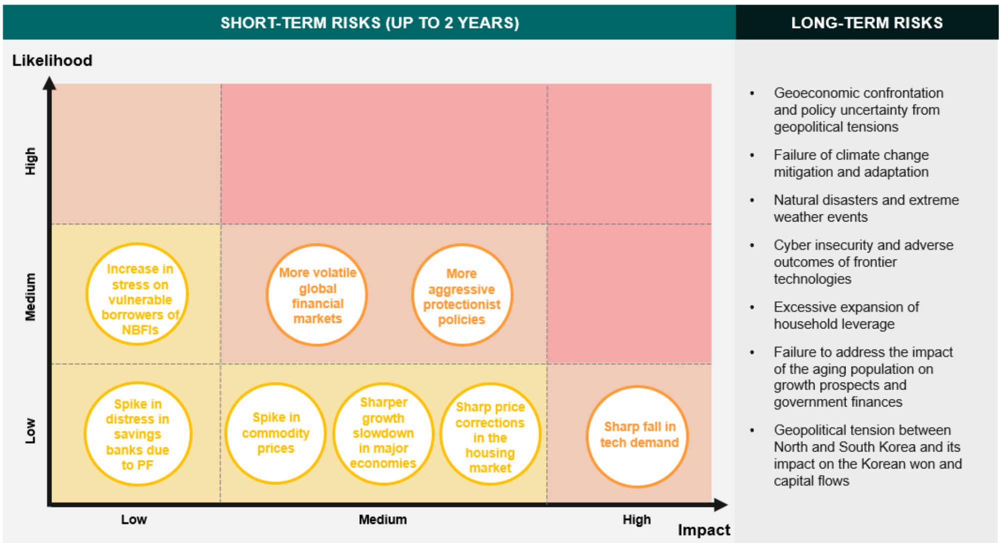


Source: Ministry of Economy and Finance
Note: Debt-to-GDP ratio projections in past NFMPs are recalculated using the rebased GDP.

[11] According to ARMO's estimates, the primary balances implied in the NFMP 2025-2029 range from –2.9 to –3.2 percent of GDP, while the debt-stabilizing primary balance is estimated at –0.4 to –0.8 percent of GDP. This implies that additional fiscal adjustment of about 2.1–2.6 percent of GDP would be required to stabilize the government debt ratio over the medium term.

B. Risks, Vulnerabilities, and Challenges

Figure 16. Country Risk Map: Korea



Source: AMRO staff

B.1 Near-term Risks to the Macro Outlook

19. A sharp slowdown in major economies, while unlikely, could pose significant risks to Korea's export outlook. Although Korea's overall export performance has remained resilient in recent months, it is largely due to robust exports of semiconductors—particularly high-value chips essential for investment in AI such as HBM and DDR5—which have yet to face US tariffs and whose demand remains strong despite weakness in other E&E segments such as flat panel displays and wireless communication devices. Looking ahead, any further escalation of US tariff policy toward Korea would pose substantial challenges to export performance. Moreover, a sudden weakening of the US economy, a growth deceleration in Europe, or lower-than-expected growth in China could dampen overall global demand and cloud Korea's near-term export outlook.

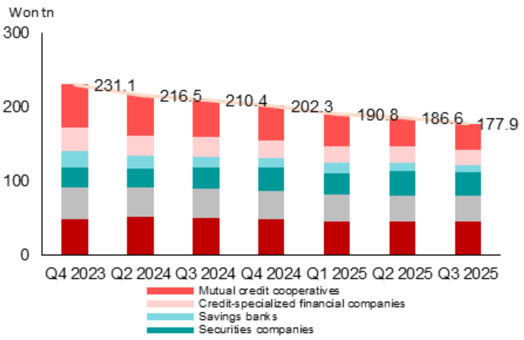
20. Potential US tariffs on semiconductors could dampen demand, disrupt global supply chains, and affect investment decisions. However, even if US tariffs on semiconductor imports were imposed, the impact on Korea is expected to be limited. Based on current indications, firms that are investing or have committed to invest in the US will be exempted from tariffs—in this case, Samsung's fabrication plant investments in Texas as well as SK Hynix's advanced packaging and R&D facilities in Indiana should qualify the two chip giants for exemptions. In addition, Korea's direct semiconductor exports to the US are minimal, as memory chips are mostly shipped to device manufacturers, assembly and packaging firms, and trading hubs in Asia. That said, if tariffs were broadened to include semiconductor manufacturing equipment and downstream electronics or displays—as in the case of steel and aluminum tariffs expanding to derivative products—the potential adverse impact could be significant.

21. Although inflationary pressure has moderated in recent months, upside risks to inflation remain from potential commodity price spikes, adverse weather and currency

depreciation. Given Korea's substantial reliance on imports to meet its energy needs, geopolitical tensions in the Middle East could drive up energy and other commodity prices.[12] Extreme domestic weather can also disrupt agricultural yields and push up food prices, a risk underscored by the heavy rainfall and extreme heat that affected several regions in 2025. Lastly, any significant weakening of the won can create pressure on the prices of imported goods and undermine the stabilization of inflation around the BOK's 2-percent target.

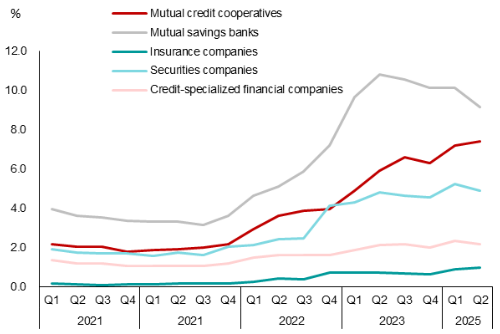
22. **Pockets of PF-related risk remain among smaller regional NBFIs amid ongoing weakness in regional real estate market**. Despite the decline in NBFIs' PF loan exposure from KRW181.8 trillion at end-2023 to KRW132.3 trillion in September following restructuring efforts, lending to the construction and real estate sectors remains sizeable as a share of total corporate loans, and NPL ratios for these sectors have continued to rise (Figures 17 and 18).[13] While larger savings banks generally maintain stronger capital buffers and more diversified portfolios, smaller regional savings banks and credit cooperatives with higher PF exposure tend to be more vulnerable to credit risk.[14] Given continued weakness in regional construction and real estate markets, the pace of restructuring and resolution for the remaining higher-risk distressed projects among NBFIs may slow down.[15]

Figure 17. PF Exposure



Source: FSS; AMRO staff calculations

Figure 18. NPL Ratio of NBFIs



Source: BOK; AMRO staff calculations

23. **Weaker domestic demand has intensified debt-servicing challenges for vulnerable borrowers, heightening credit risk in NBFIs with disproportionate exposure to these segments.** Debt-servicing capacity has deteriorated particularly among lower-credit firms and SMEs, whose financial conditions have worsened amid sluggish domestic demand recovery and subdued consumer sentiment. Self-employed business operators (SEBOs) and low-income households have become especially vulnerable.[16] As NBFIs maintain greater exposure to SMEs and vulnerable borrowers than banks,[17] their asset quality is more

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[12] About 67 percent of its crude oil and 37 percent of its total gas imports originate from the Middle East.
[13] As of 2Q 2025, the PF-related NPL ratio was 20.6 percent in savings banks and 29.5 percent in credit cooperatives.
[14] Saemaeul Geumgo, a major player in the credit cooperative sector, experienced a bank run in 2023 and, having made large provisions for PF defaults, posted a massive deficit of KRW1,328.7 billion as of June 2025, with its corporate loan delinquency rate reaching 13.0 percent. In addition, in the management performance evaluations of Saemaeul Geumgo, the number of cooperatives rated as distressed roughly doubled compared to the previous year.
[15] That said, systemic risk stemming from NBFIs remains limited, with their assets accounting for around 3.5 percent of the financial system.
[16] Vulnerable borrowers—defined as those with multiple debts and low income (bottom 30 percent) or low credit scores (≤ 664)—constituted 6.6 percent of households and 13.5 percent of SEBO as of Q3 2025, with the share of vulnerable SEBOs continuing its upward trend since the second half of 2022.
[17] By end of Q2 2025, the share of NBFIs loans held by vulnerable households and self-employed borrowers was 60.5 percent and 53.9 percent, respectively, indicating that these borrowers remain more reliant on NBFIs than on banks.

susceptible to economic downturns. By Q3 2025, the delinquency rate on corporate loans at NBFIs had climbed to 6.5 percent, up from 5.9 percent in Q2 2024 while the household loan delinquency rate rose from 2.1 percent to 2.3 percent over the same period, substantially exceeding corresponding delinquency rates at banks (0.6 percent for corporate loans and 0.4 percent for household loans as at Q3 2025).

24. Housing price corrections pose risks in both the capital region and non-capital areas, though the underlying vulnerabilities differ markedly. In the capital region, the continued increase of home prices in certain districts has raised concerns that valuations may have risen beyond market fundamentals, creating a potential for abrupt corrections that could adversely affect the financial sector. In non-capital regions, elevated inventories of unsold housing signal persistent oversupply, which could pressure developers to further lower prices, triggering another round of corrections and potentially delaying both PF resolution and the broader recovery of the construction industry.[18]

B.2 Longer-term Challenges and Vulnerabilities

25. Korea's semiconductor industry faces growing challenges from a confluence of factors. First, while Korea maintains global leadership in memory chips, its technological edge is narrowing as China's localization policies gain traction and competition from US chip manufacturers intensifies.[19] Second, Korea's semiconductor dominance is concentrated in memory, with limited diversification into logic and discrete, analog, and optoelectronics (DAO) chips, leaving the industry vulnerable to demand fluctuations and price swings inherent in the cyclical and commoditized memory market. Third, although Korea excels in semiconductor manufacturing, its fabless ecosystem remains relatively weak, trailing not only the US and Taiwan Province of China, but also China's rapidly growing firms specializing in mobile systems-on-chips (SoCs), AI accelerators, and electronic design automation tools. Fourth, Korea remains dependent on foreign intellectual property, advanced equipment, and critical minerals.[20] Rising geopolitical tension and the increasing use of export control could disrupt supply chains and Korea's capacity expansion in China. Although strategically positioned within both US and Chinese supply chains, Korea risks being caught in the crosshairs of US-China technology rivalry due to its strategic dependence on US technology alongside significant export exposure and major investments in China. Fifth, the return of industrial policy worldwide presents an additional challenge, as governments offer massive subsidies to support their own semiconductor industries, potentially eroding Korea's cost competitiveness.[21]

26. Foreign competition and rising global trade tensions are expected to continue pressuring Korea's automobile industry, particularly as the sector transitions toward

[18] A total of 160 construction companies closed down in Q1 2025—marking the highest number of closures in 14 years—amid elevated construction costs and weak regional real estate markets.
[19] China's ChangXin Memory Technologies (CXMT) was reported to have commenced mass production of 16-nanometer-class DDR5 DRAM while Yangtze Memory Technologies (YMTC) began mass production of 294-layer NAND flash. In the US, Micron is catching up in HBM and SanDisk is emerging as a key competitor in next-generation NAND flash technology.
[20] For example, China's near-monopoly on gallium and germanium, which are essential critical minerals for next-generation semiconductors, makes Korea particularly vulnerable to export restrictions for such commodities—according to the US Geological Survey, China produces around 98 percent and 60 percent of the world's gallium and germanium.
[21] Industrial policies include the US CHIPS and Science Act, the European Chips Act, China's Big Fund, Japan's Semiconductor Revitalization Strategy, and similar policies in India, Malaysia, Vietnam and the Middle East.

electric vehicles (EVs). Korean carmakers face intensifying competition from foreign rivals, especially Chinese manufacturers, in key segments such as EVs and hybrids. This poses a strategic challenge given the industry-wide shift toward eco-friendly vehicles and the importance of maintaining and expanding market share in non-US markets like the EU, where Chinese eco-friendly cars have already established a significant foothold. Meanwhile, the Korean automobile industry's substantial reliance on imported critical minerals, particularly for EV production, represents a supply chain vulnerability should unexpected export controls materialize.

27. Korea's shipbuilding industry also faces significant medium to long term challenges from foreign competition, environmental regulations and labor shortages. Over the past few years, taking advantage of the US shipbuilding's lack of capacity, major Korean shipbuilders have expanded their footprint on US soil to capitalize on strong demand for military and commercial vessels. More recently, the "Make American Shipbuilding Great Again" (MASGA) initiative, announced by the Korean government in July 2025 as part of the trade negotiations with the US, is expected to further deepen the bilateral partnership in shipbuilding. Despite these positive developments, Korea's shipbuilding industry faces several key challenges. First, China is rapidly closing the technological gap in high-value segments (e.g. LNG carriers) where Korea still holds sway. Second, increasing regulatory pressure globally is placing higher premium on environmentally friendly vessels, which are generally more technologically advanced and hence more costly to produce. Lastly, the Korean shipbuilding industry faces a shortage of skilled labor—supply gluts and corporate mismanagement during the 2010s led to large-scale layoffs, leaving the industry with an aging domestic workforce and a limited pipeline of young workers.

28. Household debt remains high and poses a continued drag on consumption growth, despite some deleveraging relative to GDP in recent years. On average, Korean households remain substantially leveraged—with household debt standing at 159.6 percent of disposable income as of end-2024—which could weigh on the recovery of private consumption. Nonetheless, household debt as a percentage of GDP has decreased from a high of 99.2 percent in Q3 2021 to 89.3 percent in Q3 2025.

29. Korea's shrinking labor force will continue to weigh on the country's growth potential and government finances. A confluence of factors—including high costs of living and childrearing, demanding work culture, and rising educational attainment and workforce participation among women—has led to a sharp decline in Korea's birthrate over recent decades, with the total population expected to fall by 8.9 percent from 51.7 million in 2024 to 47.1 million in 2050. More critically, the working-age population is projected to decline by 32.7 percent over the same period to 24.4 million, exerting pressure on the country's growth potential and government finances over the long term.

C. Policy Discussion and Recommendations

C.1 Calibrating the Macroeconomic Policy Mix while Ensuring Financial Stability

30. The current monetary policy stance is appropriate given the complex balance of risks. While output growth remains suboptimal and inflationary pressure appears contained, several factors warrant a pause in further easing. These include financial stability concerns stemming from rising house prices and household leverage, as well as exchange rate stability considerations. In addition, the improved outlook following the US-Korea investment and trade agreement has reduced the urgency of immediate policy support. That said, further easing may be considered if downside risks to growth were to increase. The BOK should remain vigilant and stand ready to recalibrate the monetary policy stance in response to unexpected shocks. Meanwhile, reductions in the lending rate for the Bank Intermediated Lending Support Facility, in line with policy rate cuts, should help ease funding conditions for financially distressed SMEs.[22] Moreover, AMRO welcomes the extension of the Temporary Special Support Program for SMEs until end-July 2026 in view of the need to help vulnerable SMEs sustain operations in the current low-growth environment.[23]

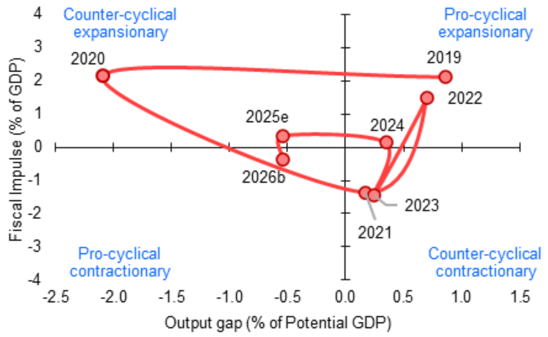
31. Macroprudential measures to cool the housing market and contain household indebtedness should be complemented with policies that address underlying supply constraints. The gradual implementation of the stress DSR rule, which began in February 2024, and the widening of its scope in July 2025 were welcome moves that help prevent excessive household leverage and prepare borrowers for interest rate volatility.[24] In 2025, the authorities introduced additional tightening measures on the demand side through the use of mortgage loan limits and LTV ratios and designation of certain areas as regulated districts, among others. These measures may, in the short term, help dampen housing demand in districts experiencing price increases while containing price pressures in other districts within the metropolitan area. On the supply side, the government's announcement of a plan to build 270,000 new houses annually in the capital region during 2026-2030 was a positive development to alleviate housing market pressure over the longer term. Going forward, to complement the existing expansion of housing supply, it may be beneficial to consider relaxing restrictions on reconstruction and redevelopment in sought-after districts, as well as releasing some greenbelt areas for housing development. Lastly, a multipronged strategy that encompasses education, health and transport policies may be needed to alleviate demand-supply imbalance in the capital region's housing market in a sustainable manner.

32. The fiscal stance envisaged in the 2026 budget is broadly appropriate, with room for an expansionary fiscal shift should downside risks materialize. A broadly neutral fiscal stance in 2026 is considered appropriate, as economic growth is projected to rebound—albeit still below potential—under the baseline scenario, and the elevated expenditure level in 2025 is planned to be maintained to sustain growth momentum (Figure 19). Nevertheless, fiscal policy should remain flexible and responsive to evolving conditions. Korea retains moderate fiscal space despite some narrowing in recent years, and with monetary policy constrained by lingering concerns over household debt and exchange rate stability, the authorities should swiftly deploy well-targeted fiscal measures should downside growth risks materialize, focusing support on the most affected segments of the economy (Figure 20). Once

[22] The Bank Intermediated Lending Support Facility provides low-interest loans, with one-month maturity, to banks based on their SME loan performances.
[23] The Temporary Special Support Program for SMEs was introduced in January 2024 to alleviate difficulties for SMEs amid high interest rates. Originally scheduled to last until end-July 2025, the program has subsequently been extended on two occasions, each time by six months.
[24] In 2025, the authorities introduced additional demand-side measures: imposing a mortgage loan limit of KRW600 million in June, subsequently tightening this limit (to as low as KRW200 million for properties in the highest price range) in October, reducing LTV ratios for regulated districts in September, and expanding the number of regulated districts in October.

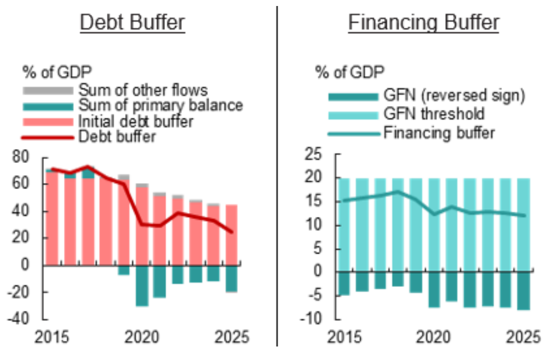
economic stability is restored, these temporary measures should be phased out in a timely manner to maintain fiscal credibility.

Figure 19. Fiscal Impulse and Output Gap



Source: Ministry of Economy and Finance; AMRO staff estimates
Note: "e" stands for AMRO estimates and "b" represents the budget.

Figure 20. Fiscal Space



Source: Ministry of Economy and Finance; AMRO staff estimates
Note: See AFPR 2025 for AMRO's fiscal space assessment framework.

33. **AMRO commends the authorities' efforts to expedite the liquidation and restructuring of distressed PF projects as well as their structural reform initiatives**. Since July 2024, more than 70 percent of distressed PF loans have been liquidated or restructured under strengthened project viability assessments and proactive engagement by financial institutions. Measures introduced to address the structural weaknesses—notably low capital contributions by PF developers and excessive guarantee by construction companies-- are expected to improve project stability and curb indiscriminate project launches. Looking ahead, given the continued weakness in regional real estate and construction markets and the potential for further distress, sustained monitoring of savings banks and credit cooperatives with high concentrations of distressed PF exposure is essential. In addition, in pursuing capital-strengthening structural reforms for PF projects, the authorities should proceed gradually with sufficient transition periods to minimize market disruption.

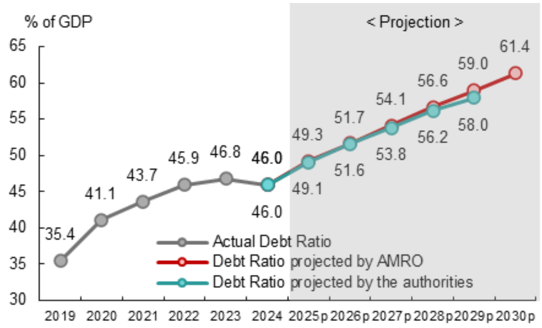
34. **Strengthening supervisory oversight of risk management in NBFIs with concentrated exposures to SMEs, SEBOs, and vulnerable borrowers is essential to safeguard financial stability**. By their nature, NBFIs such as savings banks and credit cooperatives maintain high concentrations of lending to SMEs, SEBOs, and vulnerable borrowers, leaving them more susceptible to economic downturns and interest rate shocks. Prolonged weak domestic demand and persistent downturns in regional construction and real estate markets have further weakened the debt servicing capacity of these borrowers, undermining the asset quality at these NBFIs. In response, the authorities announced the 'Plan to Enhance the Role of Savings Banks' in March 2025 to improve the soundness and competitiveness of savings banks.[25] Looking ahead, supervisory authorities should ensure that these NBFIs strengthen credit screening standards and rigorously maintain risk management indicators, such as loan loss provisions and capital adequacy ratios. Over the longer term, given deteriorating regional business conditions amid population decline and sustained weakness in regional property markets, proactive restructuring of smaller NBFIs may be needed to contain the risk of distress contagion across the broader financial sector.

[25] The 'Plan to Enhance the Role of Savings Banks' comprises expanding financial supply for mid-to-low credit borrowers, mitigating metropolitan credit concentration, advancing tailored credit scoring systems, and temporarily relaxing M&A criteria to facilitate swift, market-led restructuring.

C.2 Safeguarding Long-term Fiscal Sustainability

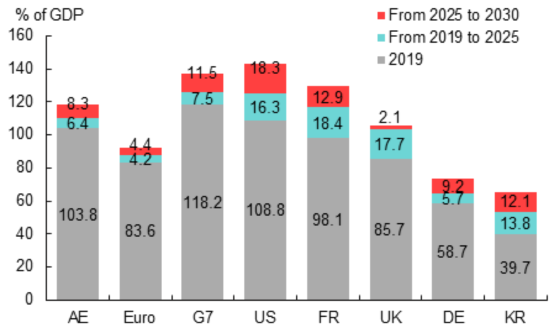
35. Although the medium-term government debt-to-GDP ratio is projected to remain relatively low, its rapid upward trajectory and long-term sustainability pose concerns. Over the medium term, the debt ratio is projected to remain below the indicative threshold of 85 percent of GDP suggested by the IMF for advanced economies (Figure 21 and Appendix 5). However, the rapid pace and substantial size of the increase of the debt ratio since 2019 is concerning.[26] Korea's debt-to-GDP ratio has risen by 14 percentage points since 2019 and is expected to rise by another 12 percentage points over the next five years, according to the AMRO's projection (Figure 22). Over the longer term, the debt ratio is projected to continue rising, surpassing 85 percent by 2040 if no policy adjustments are made and assuming the primary balance remains constant at its 2030 level (Box A). Moreover, given mounting spending pressure, particularly from population aging, the debt ratio is expected to increase even further without corrective fiscal measures.

Figure 21. Medium-term Government Debt Projections



Source: Ministry of Economy and Finance; AMRO staff estimates
Note: "p" stands for projections

Figure 22. General Government Debt in Advanced Economies



Source: IMF World Economic Outlook (WEO); AMRO staff estimates
Note: Government debt-to-GDP ratio projections are from the IMF WEO, except for Korea, which is based on AMRO projections.

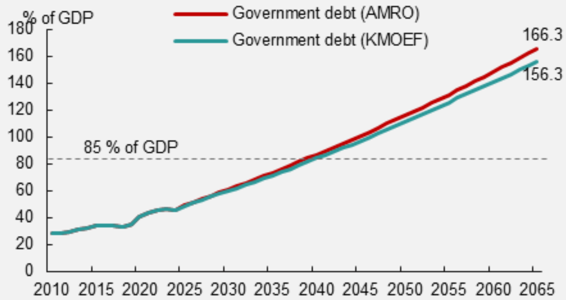
Box A. Fiscal Adjustment Needed to Maintain Long-term Sustainability Until 2070[27]

The government debt-to-GDP ratio is projected to continue rising in the absence of fiscal adjustments (Figure A.1). Under AMRO's baseline scenario, the debt ratio is expected to exceed 60 percent by 2030, with the primary deficit remaining around 3 percent of GDP. If this primary deficit persists without policy changes, the debt ratio would continue its upward trajectory—surpassing 85 percent by 2040, 100 percent by 2045, and reaching 166.3 percent by 2065, slightly above the Korean government's own long-term fiscal projections.[28] This reflects a primary balance far below the debt-

[26] In addition, the composition of government debt has also become less favorable, as the share of deficit-financed debt rose from 56.4 percent in 2019 to 69.4 percent in 2024, while the share of asset-backed debt declined from 43.6 percent to 30.6 percent—mainly reflecting the early redemption of foreign exchange stabilization fund bonds in 2023 and 2024.
[27] Prepared by Byunghoon Nam, Senior Economist
[28] The long-term macroeconomic projections and assumptions are as follows: 1) Real GDP growth converges to potential growth, consistent with the assumptions used in Korea's long-term fiscal projections; 2) GDP deflator inflation remains at 1.5 percent, assuming CPI inflation stays within the target range; 3) Effective interest rates reflect a neutral policy rate of 2 percent over the long term; and 5) Other debt-creating flows incorporate a gradual increase in local government debt, broadly in line with trends observed over the past decade.

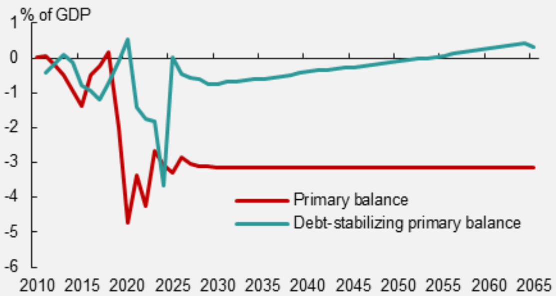
stabilizing level (Figure A.2). Moreover, spending pressures from an aging population would place additional upward pressure on debt if the primary deficit does not improve.[29]

Figure A.1. Government Debt-to-GDP Projections



Source: Ministry of Economy and Finance: AMRO staff estimates

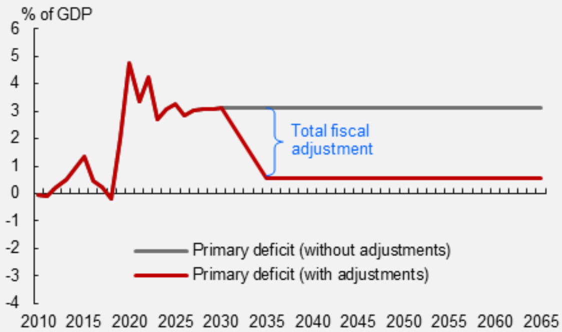
Figure A.2. Primary Balance and Debt-stabilizing Primary Balance



Source: Ministry of Economy and Finance: AMRO staff estimates

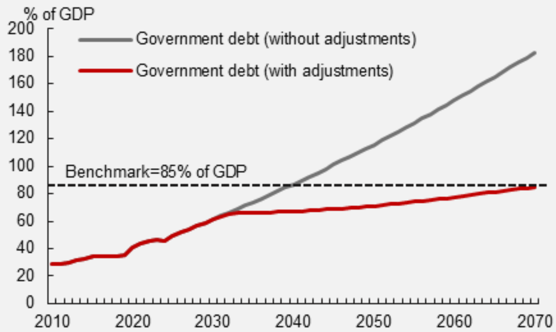
Stabilizing the debt ratio at a desired level until 2070 would require commensurate fiscal adjustment. For example, suppose the government aims to stabilize the debt ratio at 85 percent over the next 40 years. If it undertakes a constant annual fiscal adjustment over five years from 2031 to 2035 and makes no additional adjustments thereafter, the required adjustment would be 0.52 percent of GDP per year, totaling 2.58 percent of GDP over five years (Figures A.3 and A.4). This represents gradual medium-term consolidation (as opposed to one-time sharp adjustment) to secure long-term sustainability.

Figure A.3. Primary Deficits with and without Fiscal Adjustments Starting from 2031



Sources: Ministry of Economy and Finance: AMRO staff estimates
Note: The primary deficit is assumed to be reduced evenly from 2031 to 2035 to achieve the debt-to-GDP ratio of 85 percent in 2070.

Figure A.3. Debt-to-GDP with and without Fiscal Adjustments Starting from 2031

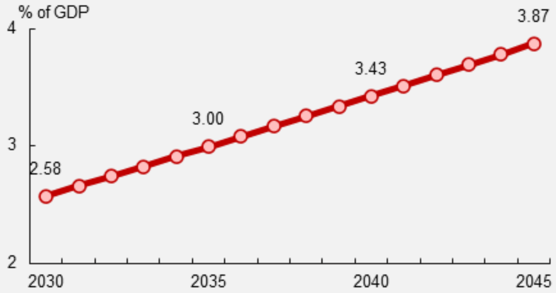


Sources: Ministry of Economy and Finance: AMRO staff estimates
Note: The primary deficit is assumed to be reduced evenly from 2031 to 2035 to achieve the debt-to-GDP ratio of 85 percent in 2070.

The longer fiscal consolidation is delayed, the larger the required adjustment becomes. AMRO staff simulations show that the five-year cumulative adjustment required rises steadily the longer the start year is postponed (Figure A.5). Beginning in 2030, the total adjustment required is 2.58 percent of GDP, but delaying the start by ten years—beginning in 2041—raises the total adjustment to 3.43 percent of GDP. This simple exercise underscores a clear principle: the later fiscal consolidation is initiated, the more abrupt and costly the required adjustment will be.

[29] Based on AMRO's estimates using a panel regression of social protection and health expenditure on the old-age dependency ratio and GDP per capita for advanced economies, the additional fiscal costs from population aging in 2065 relative to 2030 are estimated at 10.6 percent of GDP.

Figure A.5. Total Fiscal Adjustment Needs with Different Starting Years



Sources: Ministry of Economy and Finance: AMRO staff estimates
Note: Total fiscal adjustment needs refer to the change in primary balance over five years starting from the indicated year, to achieve the debt-to-GDP ratio of 85 percent in the following 40 years.

36. **The authorities should continue to explore fiscal disciplines and rules to better anchor fiscal policy and ensure long-term sustainability**. The Korean government's practice of publishing long-term fiscal projections over a 40-year horizon every five years under status quo assumptions is commendable, as it helps identify emerging fiscal risks and promotes informed policy discussions on safeguarding sustainability. Building on these projections, the government should establish a credible fiscal anchor to strengthen long-term fiscal sustainability and enhance fiscal risk management. While the previously proposed fiscal rule, which aimed to cap the managed fiscal deficit at below 3 percent of GDP, remains under discussion in the National Assembly, the authorities should consider other mechanisms to strengthen fiscal disciplines that can effectively guide medium-term and annual fiscal policy toward achieving long-term objectives. Once the economy returns to a stable growth path, the necessary fiscal adjustments to achieve these targets should be implemented without delay to prevent the need for more abrupt and costly adjustments later (Box A).[30]

37. **Fiscal consolidation should be comprehensive, incorporating measures to enhance revenue collection, restructure spending, and improve efficiency**. The government's initiative to foster a virtuous cycle between active fiscal policy and economic growth is appropriate, provided that resources are allocated and disbursed efficiently. Strengthening public financial management frameworks, particularly performance management systems, especially at the local level, remains essential to achieving this efficiency. Given the sizeable fiscal adjustment needed to ensure sustainability amid rising spending pressure, fiscal consolidation should encompass both revenue-enhancing and expenditure-optimizing measures.

- **Continued rationalization of tax incentives alongside broader tax policy reforms**. Korea's tax expenditure management framework is exemplary, comprising the annual Tax Expenditure Report, ex ante Preliminary Feasibility Study (PFS), and periodic review and restructuring of sunset incentives. These efforts should be further strengthened to ensure

[30] According to AMRO's simulation based on its long-term fiscal projections, the total fiscal adjustment—measured as the required improvement in the primary balance—would rise substantially the longer consolidation is delayed. Assuming the long-term target is to maintain the government debt-to-GDP ratio below 85 percent over the next 40 years, and that fiscal adjustments are implemented evenly over a five-year period, the total adjustment required would amount to 2.6 percent of GDP if consolidation begins in 2030 but would increase to 3.4 percent of GDP if it is delayed until 2040.

compliance with the tax expenditure ceiling by terminating tax incentives that have already achieved their intended policy objectives or have proven to be less effective.[31] In parallel, broader discussions on tax policy reforms to fundamentally enhance revenue mobilization should be expedited. The recent tax revisions that take into account the principles of ability-to-pay, equity, and policy effectiveness are therefore commendable. Going forward, more proactive policy dialogue on tax policy reforms—including the introduction of new taxes and the adjustment of tax rates—is recommended, with due consideration of practical readiness and public acceptability.[32]

- **Restructuring of mandatory spending**. While comprehensive reviews and reallocations in recent years have helped manage discretionary spending, mandatory spending, which accounts for more than half of total expenditure, has remained largely untouched. More concerted policy efforts are therefore needed to restructure mandatory spending programs in line with evolving structural challenges. As highlighted in previous AMRO Annual Consultation Reports (ACRs), mandatory transfers to local education should be thoroughly reviewed and restructured to ensure more efficient public resource allocation amid a declining school-age population.[33] Possible policy options include reducing the share of domestic tax revenue earmarked for local education or expanding the permissible scope of local education grants beyond primary and secondary education to cover tertiary and lifelong learning, as well as upskilling and reskilling programs in emerging national strategic industries such as artificial intelligence (AI).

- **Enhancement of effectiveness and efficiency of local finances (Annex 5)**. Given that local governments ultimately account for about half of general government expenditure, enhancing the effectiveness and efficiency of local fiscal policy is essential.[34] While fiscal decentralization and fiscal autonomy of local governments should be respected as mandated by the Constitution, the mechanisms to align local public resource allocation with national priorities should be strengthened, supported by a clearer division of responsibilities between the central and local governments.[35] In addition, given the frequent formulation of supplementary budgets and the large volume of carryovers and unused appropriations, the budgeting processes of the central and local governments

[31] According to the National Finance Act, the tax expenditure ratio—defined as the total amount of tax exemptions and reductions divided by the tax revenue before exemptions and reductions—should be kept below the average of the tax expenditure ratios over the previous three years plus 0.5 percentage points.
[32] For example, given that the introduction of virtual asset taxation has been postponed to 2027 anticipating virtual asset trading to be gradually stabilized as the Virtual Asset User Protection Act was in its early stage of implementation, as well as aligning with international information-sharing frameworks, Crypto-Asset Reporting Framework (CARF), the authorities should strengthen system readiness through close coordination and cooperation with key stakeholders to ensure smooth implementation. In addition, discussions on raising the VAT rate, which remains low compared with other advanced economies, could be pursued with due consideration of the economic and fiscal implications and accompanied by mitigating measures, such as targeted subsidies or vouchers, to alleviate potential adverse effects on vulnerable groups.
[33] Currently, 20.79 percent of domestic tax revenue should be assigned to local education offices for primary and secondary education. The mandatory transfer to local education entails several issues: (i) it does not reflect the shrinking school-age population, resulting in a significant increase in per capita transfers; (ii) it is restricted to primary and secondary education, distorting resource allocation within education sector; (iii) it hampers overall resource allocation, limiting the fiscal policy in meeting other important spending needs.
[34] As of 2023, local governments and local education offices accounted for 49.2 percent of total public expenditure, after incorporating the local allotment tax, local education grants, and national subsidies ultimately spent by local entities.
[35] Except for exclusive state functions such as national defense, foreign affairs and unification, and telecommunications, most areas of public spending are shared between the central and local governments. For national subsidy projects jointly financed by the central and local governments, the cost-sharing ratio is determined as the national subsidy rate. However, only about 10 percent of these programs have their subsidy rates stipulated by law, while the remainder are determined on an ad-hoc basis during the annual budget process. Furthermore, discussions and decisions on sectoral resource allocations by the central and local governments are generally conducted independently, with limited coordination between them.

should be better synchronized.[36] The planning and spending capacity of local governments, particularly at the municipal and district levels, should also be strengthened to ensure more effective fiscal management and timely budget execution.[37]

- **Social insurance reforms**. Social insurance facing medium to long-term financial risks should be reformed early to ensure fiscal sustainability while continuing to provide essential support to the public.[38] AMRO welcomes the parametric pension reforms implemented in March 2025, which will raise the contribution rate from 9 percent to 13 percent. However, continued discussions on structural reforms are warranted to further strengthen the sustainability of the pension fund while safeguarding old-age income security. In particular, transitioning from defined-benefit to defined-contribution schemes, could be considered to maintain long-term sustainability amid evolving demographic and economic conditions. Furthermore, to ensure adequate old-age income without overburdening the public pension system, Korea's multi-pillar pension framework, comprising contributory, social, occupational and personal pensions, should be further developed and strengthened.

C.3 Addressing Structural Issues to Safeguard Long-term Prospects

38. **Korea's ambitious semiconductor strategy, aimed at evolving from being the world's memory factory to becoming a full-spectrum semiconductor powerhouse, is an essential step to reinventing industrial growth.** Korea is well positioned to build on its past success by leveraging existing strengths: in-house knowledge and process technology, strong commercial R&D, and a deep talent pool of STEM graduates. In this regard, Korea's semiconductor strategies provide clarity in moving from a memory giant to a semiconductor powerhouse, built around fiscal support to encourage private sector-led investment, clustering of the "K-Semiconductor Belt" in Gyeonggi Province to integrate suppliers, technological upgrading beyond memory, as well as workforce development.

39. **However, Korea's fabless ecosystem remains underdeveloped, participation of SME suppliers is limited, and the talent pipeline is becoming a bottleneck.** The authorities could consider incorporating the following elements in the strategy to further strengthen Korea's competitive edge:

- ***Consolidate memory leadership***: Continue to provide fiscal incentives, such as R&D and investment tax credits, to encourage firms to invest in next-generation memory technologies and capture premium niches such as AI data centers, cloud and high-performance computing, automotive electronics, and industrial applications.
- ***Diversify beyond memory***: Drive diversification by implementing policies to expand logic and foundry capacity in advanced nodes and nurture homegrown chip design firms. For instance, developing government-supported IC design parks equipped with

[36] The budgeting process of local governments is shorter than that of the central government and is often delayed due to their heavy reliance on intergovernmental transfers—both block grants and national subsidies—from the central government. As a result, supplementary budgets are formulated frequently.
[37] In 2023, the budget execution rates of municipal and district governments ranged from 66.8 to 88.9 percent, compared with around 95 percent for metropolitan/provincial and central governments. The shares of carryovers and unused appropriations reached up to 25.7 percent and 17.2 percent, respectively.
[38] According to the Ministry of Economy and Finance's long-term fiscal projections, the National Pension Fund and Private Teachers' Pension Fund are expected to be depleted by 2064 and 2047, respectively. The Government Officials' Pension Fund and Military Personnel Pension Fund are already running deficits financed by the general budget. In addition, the National Health Insurance and Long-Term Care Insurance funds are projected to be depleted by 2033 and 2030, respectively, in the absence of reform measures.

shared electronic design automation (EDA) tools and subsidized access to prototyping facilities to reduce costs while fostering a collaborative ecosystem.

- ***Focus on servicification:*** Promote increased participation in the services segments by capturing more value through integration and customization. This can include supporting the development of subscription-based access to memory capacity for hyperscalers and cloud providers, as well as HBM optimization services tailored to specific AI models. In addition, the government can establish structured programs for Korean firms to export their expertise and provide technology transfer to ASEAN economies that are now upgrading from back-end to higher-value semiconductor roles. These programs can include certified consultancy schemes in process integration, smart manufacturing, advanced packaging, and workforce training academies.
- ***Increase supply chain resilience:*** Diversify suppliers of critical equipment and materials beyond the US and Japan to reduce geopolitical choke points, as well as accelerate the development of a competitive domestic semiconductor equipment and materials ecosystem. In addition, the government can support Korean semiconductor firms in establishing joint ventures or co-investment frameworks to build fabs in partner countries, such as ASEAN economies, to reduce single-country concentration and exposure to export-control shifts.
- ***Strengthen the talent pipeline and industry-academia linkages:*** Korea ranks among the top performers in STEM subjects but faces mounting demographic pressure. Attracting and retaining global science and technology professionals will be complementary to building its local talent pool. In addition, increased focus on entrepreneurship with STEM in universities will equip students with skills to turn technical knowledge into real-world solutions. Korea's spending on R&D is among the world's highest, largely led by large firms in the private sector. Future technological breakthroughs would require more basic research capabilities, necessitating increased collaboration between industry and universities, as well as partnerships with leading institutions in the US, EU, and ASEAN+3.

40. As for the automobile and shipbuilding industries, it is essential to focus on strategic product segments and enhance supply chain resilience. With EVs likely to supplant ICE (i.e. conventional) automobiles over the longer term, Korean automakers can increase competitiveness by developing next-generation batteries to regain leadership in a market that has shifted from premium nickel-based batteries to cost-effective lithium iron phosphate (LFP) batteries and leveraging the country's strength in design, luxury, and safety features with a view to targeting the premium segment.[39] In addition, efforts on enhancing Korea's EV supply chain resilience are essential, including investing in mineral and battery production in partner countries and participating in multilateral alliances to secure access to critical components. In the shipbuilding sector, it is imperative that Korea continue to innovate across other technical aspects of LNG carriers to maintain its competitive edge. Second, Korea should continue allocating resources to developing dual-fuel vessels, a rapidly growing segment driven by increasingly stringent environmental standards.[40] Lastly, it is important for

[39] Examples of next-generation batteries include solid-state and sodium-ion batteries.
[40] In particular, it may be beneficial to focus on dual-fuel vessels based on ammonia and hydrogen, which are relatively new level playing fields across the world.

Korea to continue automating its shipbuilding industry to preserve cost competitiveness and address labor shortages.

41. Continued policy efforts to overcome Korea's demographic challenges remain crucial. It is critical that the authorities continue to evaluate and recalibrate existing demographic policies. A multi-pronged strategy, encompassing financial and non-financial incentives and structural reforms, is essential to address low-fertility rates, rapid population aging, and labor shortages. Financial incentives such as *bogeumjari* housing loans are commendable, as is direct cash support for childbirth and childrearing expenses.[41, 42] Extension of effective retirement ages and workplace reforms that enable better work-life balance can help raise labor force participation. Furthermore, relaxation of immigration and foreign worker policy should be considered to address the projected decline in the country's workforce and mitigate regional decline amid continued migration of the younger population into Seoul. Such reforms should be complemented by efforts to better integrate foreign workers and immigrants into Korean society to maximize their economic and social contributions.

42. AMRO welcomes the authorities' continued efforts to advance capital market development and reorient resources toward more productive sectors. Introduced in 2024, the Corporate Value-up program aims to improve capital efficiency and increase shareholder returns; since its expansion, dividend payouts and share-buyback volumes have been rising. Furthermore, the new administration has completed the first and second rounds of amendments to the Commercial Act and is now pursuing a third round, with the goal of bolstering investor confidence through enhanced corporate governance standards.[43] At the same time, to facilitate foreign investors' market access, the authorities will enable 24-hour foreign exchange trading from 2026 and establish an offshore won settlement institution, allowing foreign market participants to freely settle in Korean won from offshore locations.[44] Going forward, continued efforts to build an investment environment aligned with global standards will not only expedite Korea's inclusion in the MSCI Developed Markets Index but also deepen and internationalize Korea's foreign exchange and capital markets.

43. Korea's proactive pursuit of carbon neutrality by 2050 underscores the role of climate transition as a catalyst for sustainable growth and enhanced economic resilience. AMRO commends Korea's broad efforts toward carbon neutrality by 2050 and its strengthened climate commitment, reflected in the new target of 53–61 percent reduction in net emissions from 2018 levels by 2035.[45] Through the Fourth ETS Master Plan, the government aligned the emissions cap with the enhanced Nationally Determined Contribution and introduced stronger incentives for firms' mitigation efforts to support competitiveness. In parallel, the Fourth National Climate Change Adaptation Plan enhances adaptation capacity through infrastructure upgrades, AI-enabled early warning systems, and targeted support for

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[41] *Bogeumjari* loans are subsidized mortgage loans for certain groups of borrowers, such as lower-income households, non-speculative homebuyers, newly married couples and households with multiple children.
[42] The total amount of cash support available from birth to the age of eight—covering the child allowance and other cash benefits—can add up to around KRW30million per child.
[43] The scope of directors' fiduciary duty has been extended to shareholders, with the proportion of independent directors on the board increased to one third and the "3 percent rule" applied to the election of outside directors, thereby enhancing minority shareholder protection and strengthening board functions to improve governance transparency.
[44] Previously, won-denominated transactions were conducted only in the onshore market. Going forward, foreign financial institutions will be allowed to maintain won accounts domestically and directly manage won funds.
[45] The 2035 greenhouse gas reduction target (Nationally Determined Contribution, NDC), established in November 2025, requires a 53-61 percent reduction in national greenhouse gas net emissions by 2035 compared to 2018 levels.

vulnerable groups and industries. Looking ahead, it will be important to accelerate renewable energy deployment—given Korea's share remains well below the OECD average—through streamlined permitting and greater grid investment,[46] while also enhancing investor confidence by preparing an ISSB-aligned sustainability reporting roadmap that strengthens corporate disclosure and supervisory frameworks. At the same time, support for carbon-intensive industries and vulnerable groups should be scaled up through expanded reskilling programs and stronger social safety nets to ensure a just and inclusive transition.

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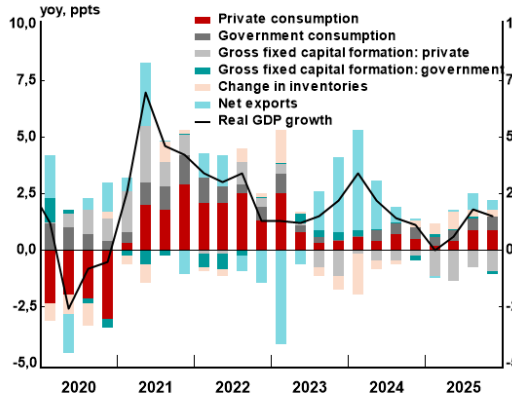
[46] Korea's renewable energy made up 10.6 percent of the country's power generation mix in 2024, lagging far behind the averages of the OECD (34.9 percent).

Appendices

Appendix 1. Selected Figures for Major Economic Indicators

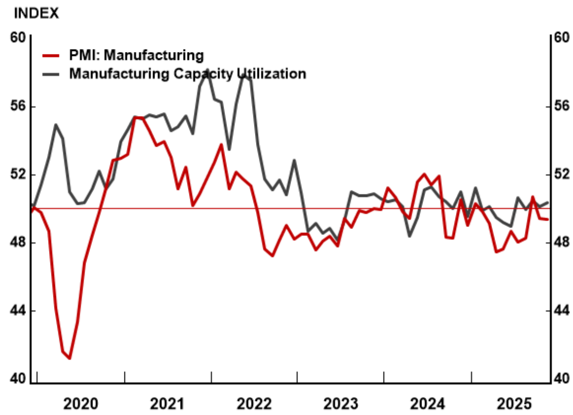
Figure 1.1. Real Sector

Growth appears to be on a recovery path, supported by a rebound in private consumption and resilient exports.



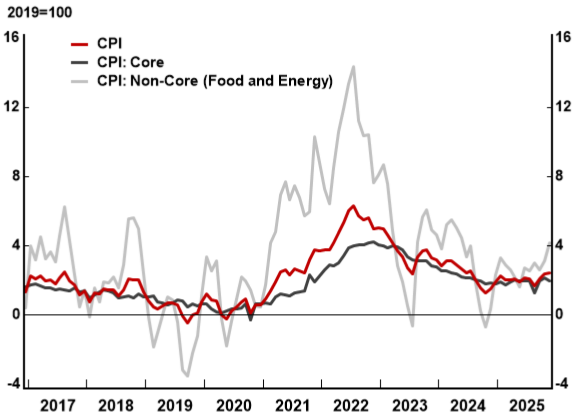
Source: Bank of Korea; Haver; AMRO staff calculations

The near-term outlook for the economy appears positive, with continued growth in manufacturing.



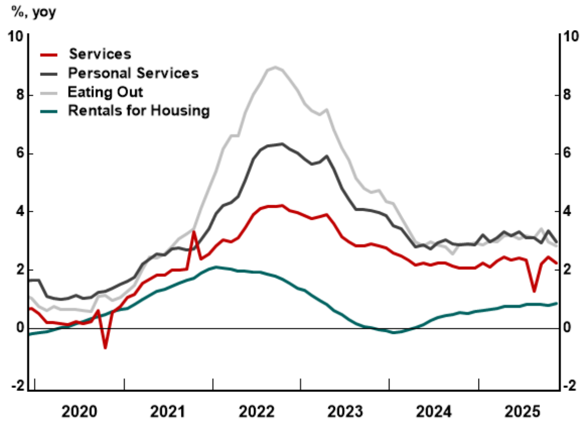
Source: S&P; Haver; AMRO staff calculations

Inflation has been well-anchored thanks to subdued food and oil prices.



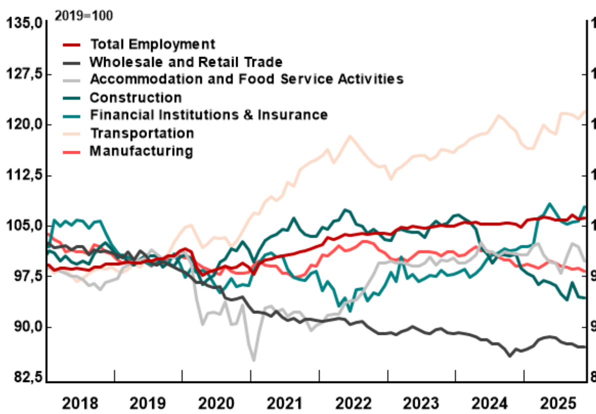
Source: Statistics Korea; Haver; AMRO staff calculations

Despite a slight rise in the costs of eating out, services inflation is relatively stable.



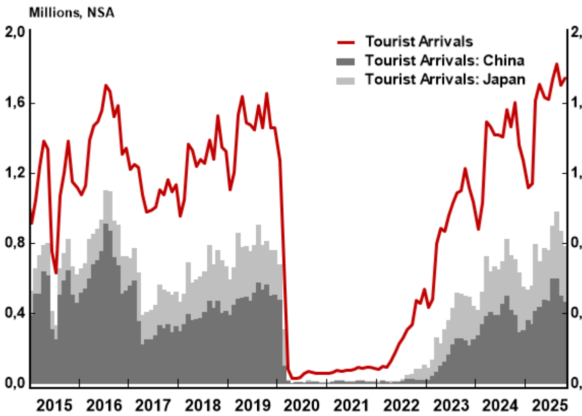
Source: Statistics Korea; Haver; AMRO staff calculations

Employment growth continues to be modest, with continued contractions in construction.



Source: Statistics Korea; Haver; AMRO staff calculations

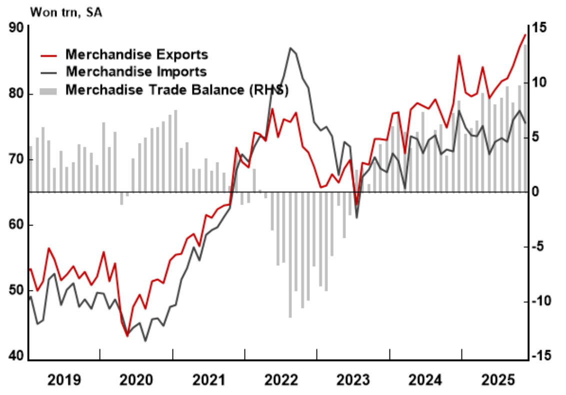
Inbound tourism is growing robustly on the back of foreigners' interest in Korean culture.



Source: KNTO; Haver; AMRO staff calculations

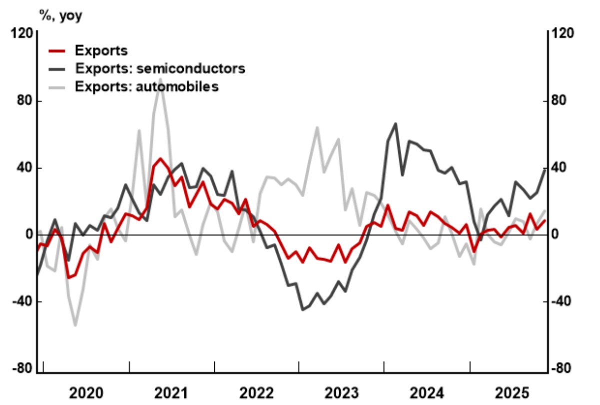
Figure 1.2. External Sector

Trade surpluses in recent months have benefited from robust growth in exports…



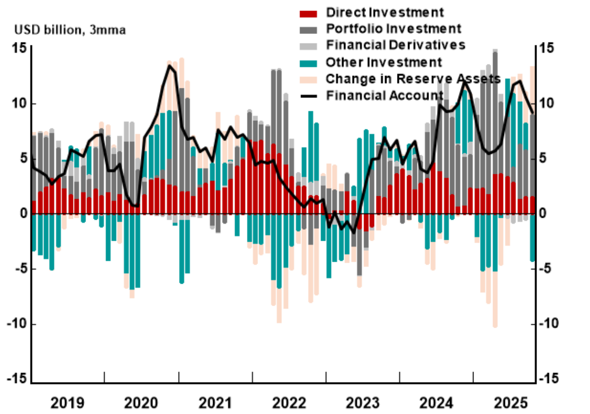
Source: Korea Customs Service; Haver; AMRO staff calculations

… particularly of semiconductors thanks to strong demand for high-value memory chips.



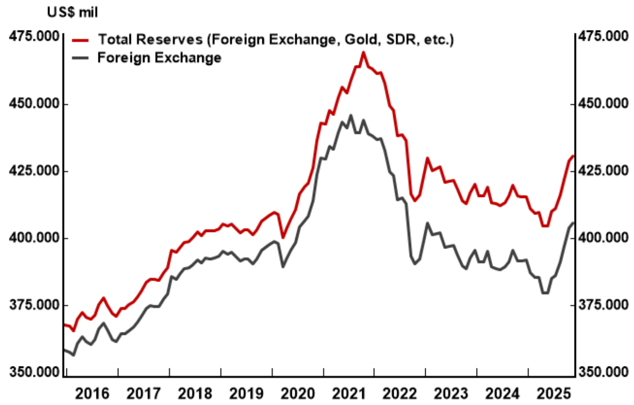
Source: Korea Customs Service; MOTI; Haver; AMRO staff calculations

Net outflows in the financial account persisted, driven by residents' portfolio investments and direct investments abroad



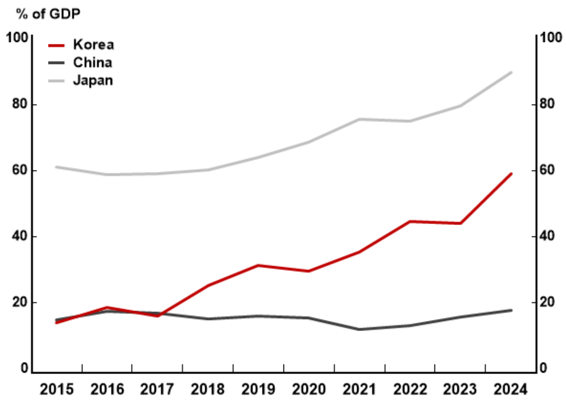
Source: Bank of Korea; Haver; AMRO staff calculations

With capital outflows roughly offsetting current account surpluses, foreign reserve movements have been relatively small.



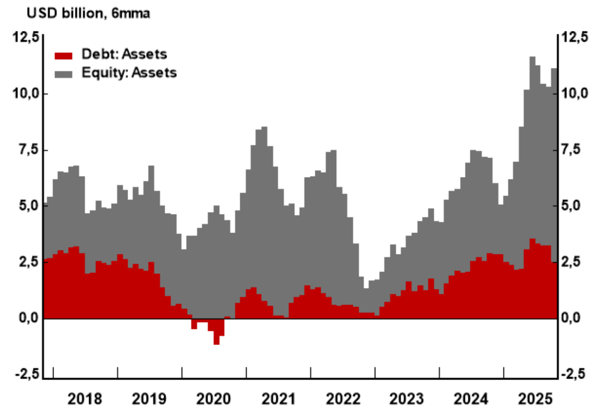
Source: Bank of Korea; Haver; AMRO staff calculations

The net international investment position has been strengthening over the years.



Source: IMF; Haver; AMRO staff calculations

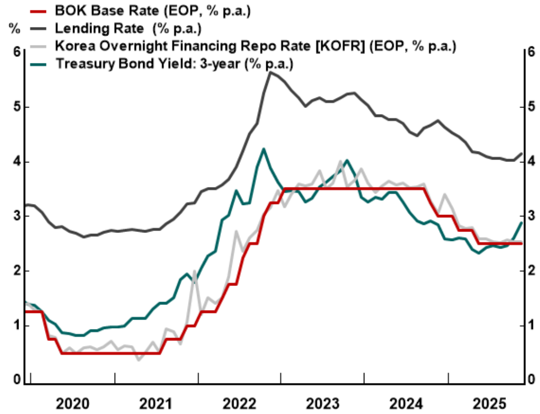
The sharp increase in residents' outflows was due to equity investment, particularly in the US stock market.



Source: FSS; Haver; AMRO staff calculations

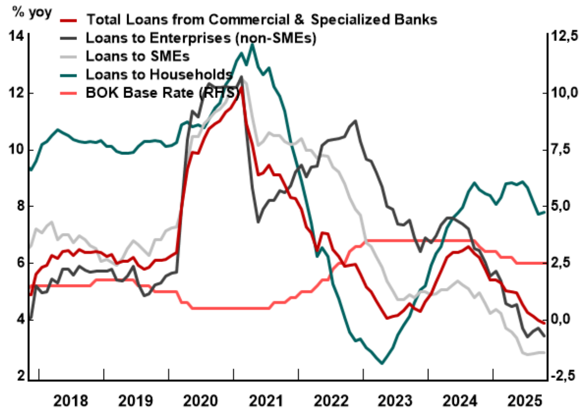
Figure 1.3. Monetary and Financial Sector

The BOK has kept the policy rate on hold since May 2025 amid concerns over rising house prices and exchange rate stability considerations



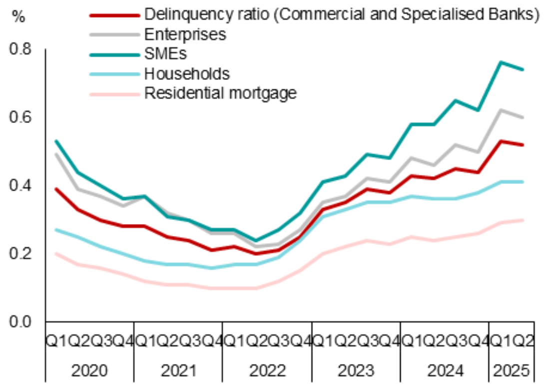
Source: BOK; Korea Securities Depository; Haver; AMRO staff calculations

Loan growth has been falling, as corporate loans remained subdued while household loan growth increased modestly.



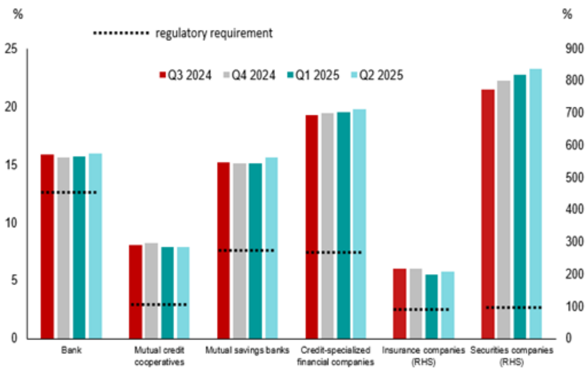
Source: BOK; Haver; AMRO staff calculations

Despite the increase over the past few years, the delinquency ratios remain relatively low…



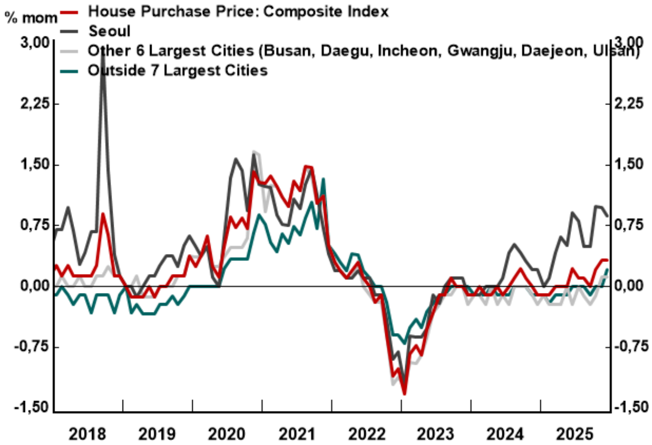
Source: FSS; CEIC; Haver

…and capital adequacy ratios remained well above statutory minimums across all types of institutions.



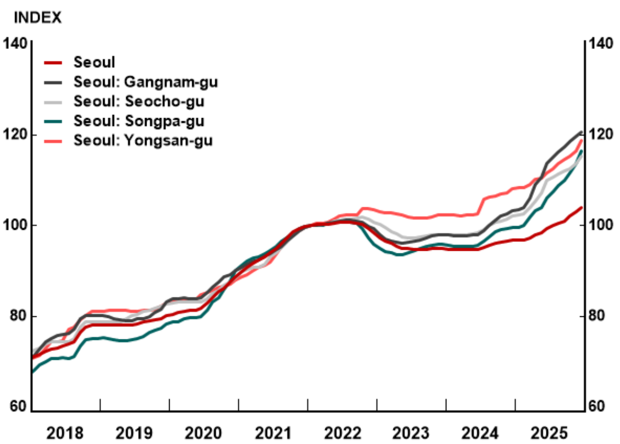
Source: FSS; AMRO staff estimates

Unlike elsewhere in the country, house prices in Seoul have been rising considerably…



Source: Kookmin Bank; Haver; AMRO staff calculations

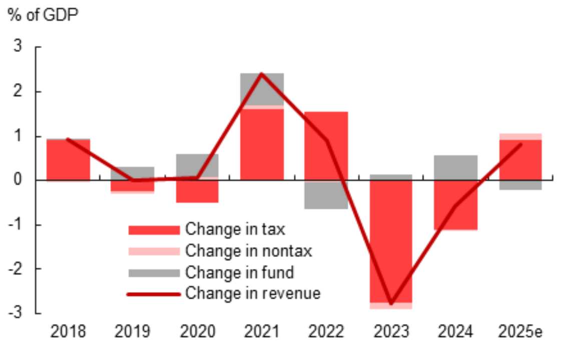
…particularly in several key districts.



Source: Kookmin Bank; Haver; AMRO staff calculations

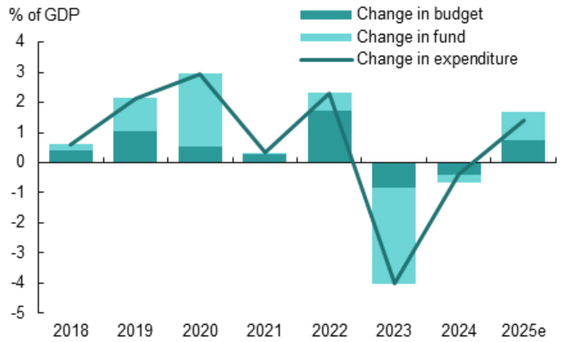
Figure 1.4. Fiscal Sector

In 2025, revenue as a percentage of GDP is projected to increase, mainly due to a revenue rebound driven by CIT and PIT…



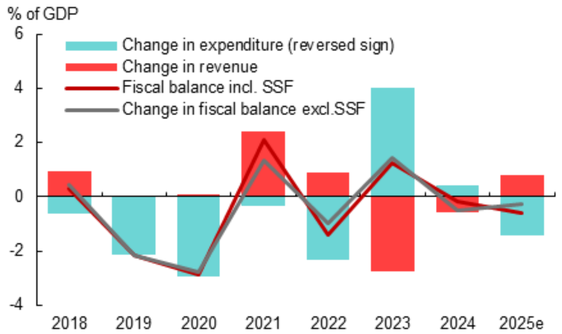
Source: Ministry of Economy and Finance; AMRO staff estimates

…while expenditure as a percentage of GDP is also expected to increase, reflecting fiscal stimulus measures from two supplementary budgets.



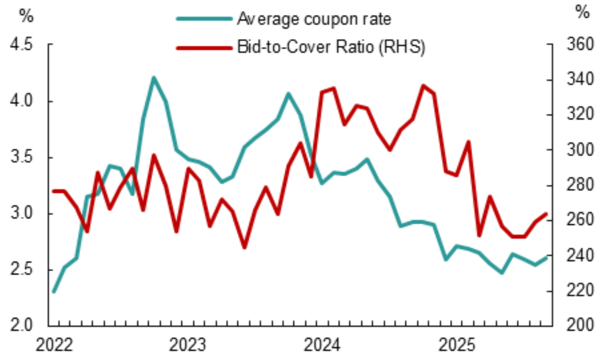
Source: Ministry of Economy and Finance; AMRO staff estimates

The fiscal deficit, excluding SSFs, is estimated to rise slightly from 4.1 percent of GDP in 2024 to 4.3 percent of GDP in 2025.



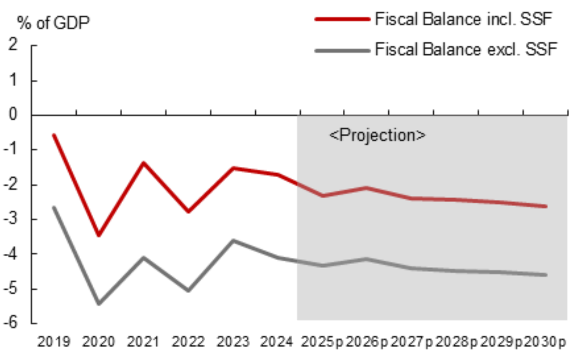
Source: Ministry of Economy and Finance; AMRO staff estimates

Average borrowing costs of KTB have been stable in 2025 amid robust demand for KTB.



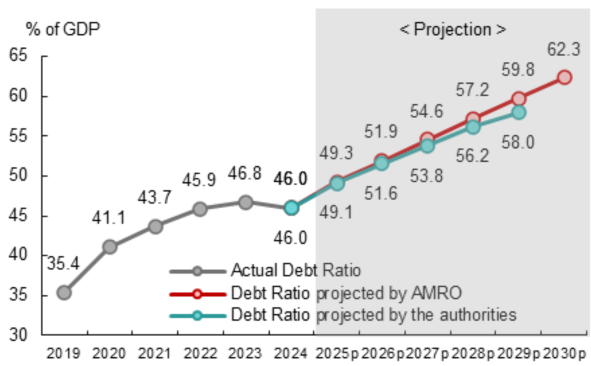
Source: Ministry of Economy and Finance

The fiscal deficit, excluding SSFs, is budgeted at 4.1 percent of GDP and expected to remain above 4 percent of GDP over the medium term.



Source: Ministry of Economy and Finance; AMRO staff estimates

The government debt-to-GDP ratio is projected to continue rising, exceeding 60 percent in 2030.



Source: Ministry of Economy and Finance; AMRO staff estimates

Appendix 2. Selected Economic Indicators for Korea

	2021	2022	2023	2024	2025e	2026p
National income and prices	(in percent change unless specified)					
Real GDP	4.6	2.7	1.6	2.0	1.0	1.9
Final consumption	4.2	4.2	2.0	1.4	1.7	2.0
Private sector	3.7	4.2	2.0	1.1	1.3	1.8
Public sector	5.6	4.0	1.9	2.1	2.8	2.5
Gross capital formation	4.1	0.1	0.1	-2.3	-1.7	0.1
Construction	-0.2	-3.5	-0.5	-3.3	-9.9	1.8
Facilities investment	10.2	-0.3	-0.2	1.7	2.0	1.5
Intellectual property products	6.5	7.8	0.2	1.2	2.9	1.0
Exports	10.8	3.9	3.4	6.8	4.1	2.2
Exports of goods	10.9	3.9	2.1	6.4	3.1	1.6
Exports of services	10.4	3.8	10.5	9.0	9.3	5.5
Imports	10.2	4.2	3.0	2.5	3.8	1.2
Imports of goods	12.5	4.7	-0.9	1.3	2.1	0.9
Imports of services	0.3	1.5	22.7	7.3	10.0	2.1
Labor Market						
Unemployment rate (in percent, period average)	3.7	2.9	2.7	2.8	2.6	2.6
Labor force participation rate (in percent, period average)	62.8	63.9	64.3	64.5	64.7	64.7
Prices						
Consumer price inflation (period average)	2.5	5.1	3.6	2.3	2.1	1.9
Core inflation, excluding food and energy (period average)	1.4	3.6	3.4	2.2	1.9	1.9
External sector	(in billions of US dollars unless specified)					
Current account balance	83.9	23.2	32.5	100.0	123.1	111.9
(in percent of GDP)	4.3	1.3	1.8	5.3	5.8	5.9
Trade balance	79.7	18.3	44.6	110.9	138.1	113.0
(in percent of GDP)	4.1	1.0	2.4	5.9	5.9	5.9
Services, net	-9.0	-10.8	-30.7	-29.4	-34.5	-24.4
Primary income, net	19.3	19.8	25.2	26.8	27.9	27.4
Secondary income, net	-6.1	-4.1	-6.6	-8.3	-8.4	-4.1
Financial account balance	63.6	54.9	35.0	99.6	124.3	93.1
(in percent of GDP)	3.3	3.1	1.9	5.3	6.3	4.9
Direct investment (net)	43.9	40.8	13.1	36.9	25.4	50.7
Portfolio investment (net)	19.4	25.8	8.3	45.6	87.7	38.9
Other investment (net)	0.4	-19.1	14.0	7.3	4.3	-0.3
Overall balance	14.8	-27.9	-3.0	-2.7	-4.5	18.8
(in percent of GDP)	0.8	-1.5	-0.2	-0.1	-0.5	1.0
Gross official reserves	463.1	423.2	420.1	415.6	428.1	446.9
(in months of imports of goods & services)	8.0	6.3	6.5	6.6	6.6	6.7
Short-term external debt (in percent of international reserves)	35.7	39.3	32.4	35.3	36.5	35.0
Fiscal Sector	(In percent of GDP)					
Total revenue	25.7	26.6	23.8	23.3	24.1	24.7
Total expenditure	27.0	29.4	25.4	25.0	26.4	26.6
Fiscal balance including Social Security Funds	-1.4	-2.8	-1.5	-1.7	-2.3	-1.9
Fiscal balance excluding Social Security Funds	-4.1	-5.0	-3.6	-4.1	-4.3	-3.9
Public debt	43.7	45.9	46.8	46.0	49.3	51.6
Monetary and financial sector	(In percent unless specified)					
Domestic credit (BIS, in percentage change)	10.4	5.5	3.4	1.4	4.5	…
Broad money (KRW trillion)	3,385	3,640	3,735	3,897	4,081	…
Substandard-and-below loan ratio (BIS) 1/	0.5	0.4	0.5	0.5	0.6	…
Capital adequacy ratio (BIS) 1/	16.5	16.0	16.6	16.3	17.1	…
Memorandum items:						
Exchange rate (KRW per US$, average)	1,144	1,291	1,306	1,380	…	…
Exchange rate (KRW per US$, end of period)	1,186	1,267	1,289	1,470	…	…
Nominal GDP (in KRW trillion)	2,222	2,324	2,409	2,557	…	…
Nominal GDP (in US$ billion)	1,942	1,799	1,845	1,875	…	…

Source: Korean authorities; Bank for International Settlements; CEIC; AMRO staff projections (p)
Note: Dark gray denotes AMRO projections.
Domestic credit data as of end-March 2025, broad money data as of end-November 2025, and substandard-and-below loan ratio and capital adequacy ratio data as of end-June 2025.
1/ Commercial banks only.

Appendix 3. Medium-term Projections for Korea

	2024	2025e	2026p	2027p	2028p	2029p
National income and prices	(in percent change unless specified)					
Real GDP	2.0	1.0	1.9	1.9	1.9	1.9
Final consumption	1.4	1.7	2.0	1.8	1.8	1.8
Private sector	1.1	1.3	1.8	1.7	1.7	1.7
Public sector	2.1	2.8	2.5	2.2	2.2	2.2
Gross capital formation	-2.3	-1.7	0.1	1.6	1.6	1.6
Construction	-3.3	-9.9	1.8	1.9	1.9	1.9
Facilities investment	1.7	2.0	1.5	1.4	1.4	1.4
Intellectual property products	1.2	2.9	1.0	0.9	0.9	0.9
Exports	6.8	4.1	2.2	2.3	2.3	2.3
Exports of goods	6.4	3.1	1.6	2.2	2.2	2.2
Exports of services	9.2	9.7	5.5	2.6	2.6	2.6
Imports	2.5	3.8	1.2	1.9	1.9	1.9
Imports of goods	1.3	2.1	0.9	1.8	1.8	1.8
Imports of services	7.2	10.1	2.1	1.9	1.9	1.9
Labor Market						
Unemployment rate (in percent, period average)	2.8	2.6	2.6	2.6	2.6	2.6
Labor force participation rate (in percent, period average)	64.6	64.7	64.7	64.7	64.7	64.7
Prices						
Consumer price inflation (period average)	2.3	2.1	1.9	2.0	2.0	2.0
Core inflation, excluding food and energy (period average)	2.2	1.9	1.9	1.9	1.9	1.9
External sector	(in billions of US dollars unless specified)					
Current account balance	100.0	123.1	111.9	120.4	129.3	138.7
(in percent of GDP)	5.3	5.8	5.9	6.0	6.1	6.4
Trade balance	110.9	138.1	113.0	121.6	130.6	140.0
(in percent of GDP)	5.9	5.9	5.9	6.0	6.2	6.4
Services, net	-29.4	-34.5	-24.4	-25.8	-26.9	-27.9
Primary income, net	26.8	27.9	27.4	29.0	30.2	31.3
Secondary income, net	-8.3	-8.4	-4.1	-4.4	-4.5	-4.7
Financial account balance	99.6	124.3	93.1	97.7	104.2	110.5
(in percent of GDP)	5.3	6.3	4.9	4.8	5.0	5.1
Direct investment (net)	36.9	25.4	50.7	50.7	50.7	50.7
Portfolio investment (net)	45.6	87.7	38.9	42.7	46.1	53.7
Other investment (net)	7.3	4.3	-0.3	-0.5	3.2	1.1
Overall balance	-2.7	-4.5	18.8	22.8	25.1	28.2
(in percent of GDP)	-0.1	-0.5	1.0	1.1	1.2	1.3
Gross official reserves	415.6	428.1	446.9	469.7	494.8	522.9
(in months of imports of goods & services)	6.6	6.6	6.7	7.2	7.4	7.6
Short-term external debt (in percent of international reserves)	35.3	36.5	35.0	33.3	33.3	33.3
Fiscal Sector	(In percent of GDP)					
Total revenue	23.3	24.1	24.7	24.7	25.1	25.1
Total expenditure	25.0	26.4	26.6	27.0	27.4	27.5
Fiscal balance including Social Security Funds	-1.7	-2.3	-1.9	-2.3	-2.3	-2.4
Fiscal balance excluding Social Security Funds	-4.1	-4.3	-3.9	-4.3	-4.4	-4.4
Public debt	46.0	49.3	51.6	54.4	57.0	59.4
Monetary and financial sector	(In percent unless specified)					
Domestic credit (BIS, in percentage change)	1.4	4.5	…	…	…	…
Broad money (KRW trillion)	3,897	4,081	…	…	…	…
Memorandum items:						
Exchange rate (KRW per US$, average)	1,380	1,452	…	…	…	…
Exchange rate (KRW per US$, end of period)	1,470	1,435	…	…	…	…
Nominal GDP (in KRW trillion)	2,557	2,635	…	…	…	…
Nominal GDP (in US$ billion)	1,875	1,814	…	…	…	…

Source: Korean authorities; Bank for International Settlements; CEIC; AMRO staff projections (p)
Note: Dark gray denotes AMRO projections.
Domestic credit data as of end-March 2025 and broad money data as of end-November 2025.

Appendix 4. Balance of Payments

	2021	2022	2023	2024	2025e	2026p
	(in billions of U.S. dollars unless specified)					
Current account balance	83.9	23.2	32.5	100.0	123.1	111.9
Trade balance	79.7	18.3	44.6	110.9	138.1	113.0
Services, net	-9.0	-10.8	-30.7	-29.4	-34.5	-24.4
Primary income, net	19.3	19.8	25.2	26.8	27.9	27.4
Secondary income, net	-6.1	-4.1	-6.6	-8.3	-8.4	-4.1
Capital account	-0.2	0.0	0.0	0.0	0.3	0.0
Financial account (+ indicates net outflows)	63.6	54.9	35.0	99.6	124.3	93.1
Direct investment (net)	43.9	40.8	13.1	36.9	25.4	50.7
Portfolio investment (net)	19.4	25.8	8.3	45.6	87.7	38.9
Other investment (net)	0.4	-19.1	14.0	7.3	4.3	-0.3
Overall balance	14.8	-27.9	-3.0	-2.7	-4.5	18.8
Memorandum items:						
Current account balance (In percent of GDP)	4.3	1.3	1.8	5.3	5.8	5.9
Gross reserves (USD billion)	463.1	423.2	420.1	415.6	428.1	446.9
(In months of imports of goods and services)	8.0	6.3	6.5	6.6	6.6	6.7
Short-term external debt (in percent of international reserves	35.7	39.3	32.4	35.3	36.5	35.0
Nominal GDP (USD billion)	1,942	1,799	1,845	1,875	1,814	…

Source: Korean authorities; Bank for International Settlements; CEIC; AMRO staff projections (p)
Note: Dark gray denotes AMRO projections.

Appendix 5. Statement of General Government Operations

	2020	2021	2022	2023	2024	2025p
Revenue	23.3	25.7	26.6	23.8	23.3	24.1
Tax	13.9	15.5	17.0	14.3	13.2	14.1
Personal Income Tax	4.5	5.1	5.5	4.8	4.6	
Corporate Income Tax	2.7	3.2	4.5	3.3	2.4	
Value-added Tax	3.2	3.2	3.5	3.1	3.2	
Transportation Tax	0.7	0.7	0.5	0.4	0.4	
Customs Duty	0.3	0.4	0.4	0.3	0.3	
Other tax	2.5	2.9	2.6	2.3	2.2	
Nontax	1.3	1.4	1.3	1.2	1.2	1.3
Fund revenue	8.1	8.8	8.2	8.3	8.9	8.6
Expenditure	26.7	27.0	29.4	25.4	25.0	26.4
Mandatory spending (excl. Interest)	11.6	11.9	13.5	12.6	12.1	12.8
Interest payments	0.7	0.7	0.8	0.9	1.0	1.1
Domestic	0.7	0.7	0.8	0.9	1.0	1.1
External	0.0	0.0	0.0	0.0	0.0	0.0
Discretionary spending	14.4	14.5	15.0	11.9	11.6	12.5
Fiscal Balance						
Fiscal Balance incl. SSF	-3.5	-1.4	-2.8	-1.5	-1.7	-2.3
Primary Balance incl. SSF	-2.8	-0.7	-2.0	-0.6	-0.7	-1.2
Fiscal Balance excl. SSF	-5.4	-4.1	-5.0	-3.6	-4.1	-4.3
Primary Balance excl. SSF	-4.7	-3.4	-4.2	-2.7	-3.1	-3.3
Public debt	41.1	43.7	45.9	46.8	46.0	49.3
Domestic debt	40.7	43.2	45.4	46.3	45.5	48.8
External debt	0.5	0.5	0.5	0.5	0.5	0.5

Source: Ministry of Economy and Finance; AMRO staff estimates
Note: Numbers in gray denote AMRO estimates.
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Appendix 6. Debt Sustainability Analysis[47,48]

Korea's public debt-to-GDP ratio is projected to continue rising, accompanied by a gradual increase in gross financing needs (GFNs) (Table 1). Real GDP growth is expected to rebound in 2026 and remain around its potential level thereafter, averaging 1.9 percent over 2026–2030. The effective interest rate is projected to decline gradually after 2027, reflecting the policy rate's convergence toward its neutral level amid inflation staying within the target range. The fiscal deficit excluding social security funds (SSFs) is expected to stay above 4 percent of GDP, reflecting the government's continued emphasis on an active fiscal stance over the medium term. The debt ratio will continue to rise, driven by the primary deficit and positive real interest rate, offsetting the downward contribution from real growth (Figure 1). GFNs as a share of GDP will also increase gradually, owing to the persistently large primary deficit and the redemption of sizable volumes of KTBs issued during the pandemic (Figure 1).

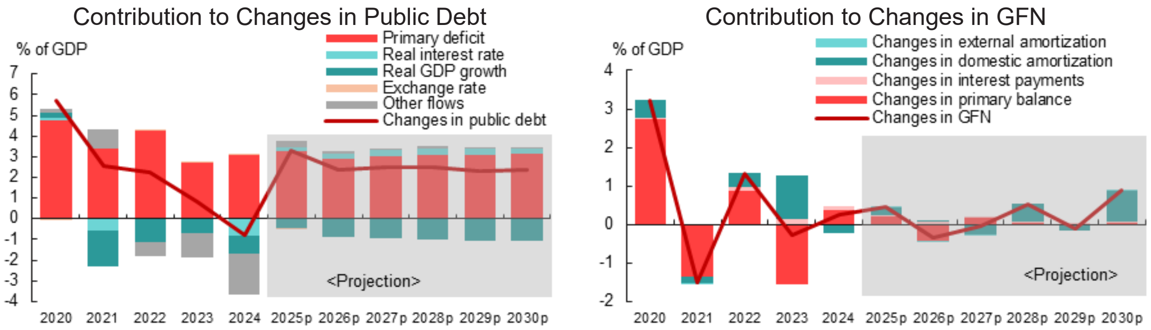
The standard Debt Sustainability Analysis (DSA) suggests a low overall risk to public debt sustainability (Figure 4). Both the public debt-to-GDP ratio and GFNs have remained below their indicative thresholds over the past five years and are projected to stay below them under the baseline and all stress test scenarios (Figure 2). Even under a combined macro-fiscal shock, the debt ratio would peak at around 68.7 percent, while the GFN would rise to 10.6 percent of GDP. In addition, market perceptions of sovereign risk remain favorable, as reflected in low bond yield spreads, and the debt structure—characterized by low external and short-term shares—remains sound (Figure 3). Nonetheless, the continued upward trajectory of the debt ratio warrants close monitoring and sustained policy discussions to ensure long-term fiscal sustainability.

Table 1. Macroeconomic and Fiscal Indicators

	2020	2021	2022	2023	2024	2025p	2026p	2027p	2028p	2029p	2030p
Macroeconomic indicators (Percent)											
Real GDP growth	-0.7	4.6	2.7	1.6	2.0	1.0	1.9	1.9	1.9	1.9	1.9
GDP deflator	1.6	3.2	1.8	2.0	4.1	2.0	1.8	1.7	1.7	1.7	1.7
Effective interest rate	2.0	1.8	1.9	2.1	2.3	2.4	2.4	2.3	2.3	2.2	2.2
Fiscal indicators (Percent of GDP)											
Revenue	23.3	25.7	26.6	23.8	23.3	24.0	24.7	24.8	25.2	25.2	25.3
Expenditure	26.7	27.0	29.4	25.4	25.0	26.3	26.7	27.0	27.4	27.5	27.7
Fiscal balance excluding SSF	-5.4	-4.1	-5.0	-3.6	-4.1	-4.3	-4.0	-4.2	-4.3	-4.3	-4.4
Primary balance excluding SSF	-4.7	-3.4	-4.2	-2.7	-3.1	-3.3	-2.9	-3.1	-3.1	-3.1	-3.1
Public debt	41.1	43.7	45.9	46.8	46.0	49.3	51.7	54.1	56.6	59.0	61.4
Gross financing needs	7.6	6.1	7.5	7.2	7.4	7.9	7.6	7.5	8.1	8.0	8.8

Source: Ministry of Economy and Finance; AMRO staff projections (p)

Figure 1. Public Debt and GFN Dynamics

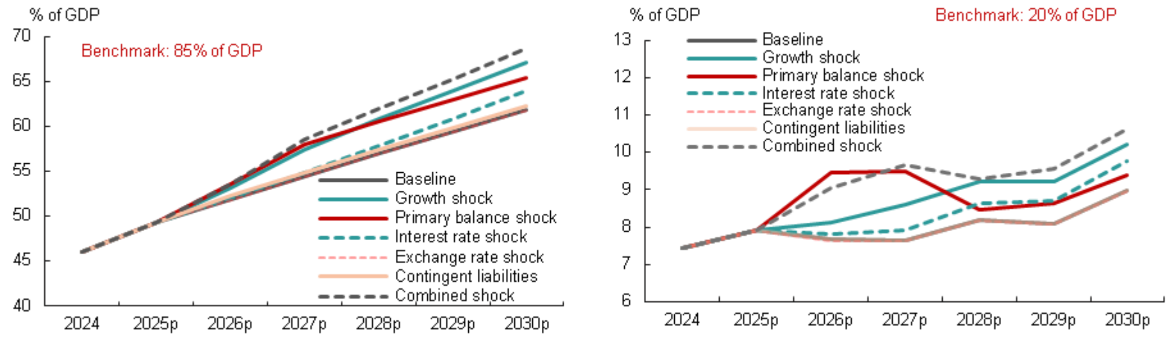


Source: Ministry of Economy and Finance; AMRO staff projections (p)

[47] Prepared by Byunghoon Nam, Senior Economist
[48] Public DSA for Korea covers national government debt (central and local governments) excluding SSFs. As of end-2023, general government debt was at 50.5 percent of GDP on an accrual basis, while national government debt amounted to 46.8 percent of GDP on a cash basis.

Figure 2. Macro-fiscal Stress Test

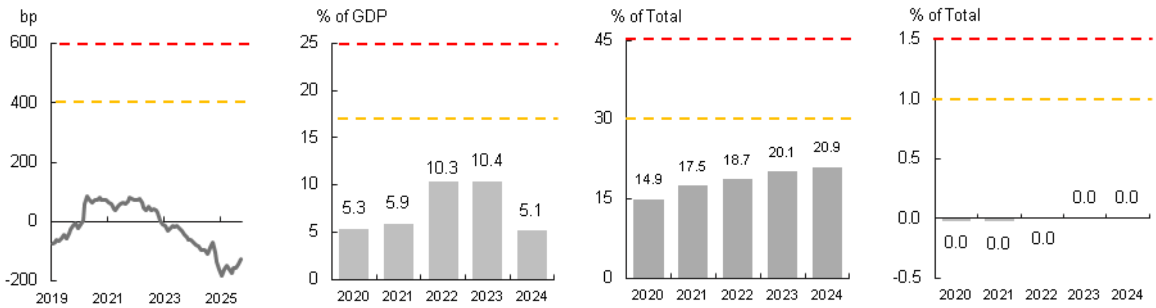
Stress Test for Public Debt | Stress Test for GFN



Source: Ministry of Economy and Finance; AMRO staff projections (p)
Note: The scenarios for the stress test are as follows: 1) Real GDP growth shock: one standard deviation, or a -1.5 percentage point shock to 2026 and 2027; 2) Primary balance shock: one standard deviation, or a -1.8 percent of GDP shock to 2026 and 2027; 3) Interest rate shock: a +2.1 percentage point shock from 2026; 4) Exchange rate shock: a one-time +6.6 percentage point shock in 2026; 5) Contingent liability shock: a one-time 0.4 percent of GDP shock in 2024, by recognizing government guaranteed debt as of end-2024; 6) Combined shock: a combination of growth (half size), primary balance (half size), interest rate and exchange rate shocks.

Figure 3. Debt Profile Vulnerabilities

Bond Yield Spread | External Financing Requirement | Public Debt Held by Nonresidents | Change in Short-term Debt Share



Source: Ministry of Economy and Finance, AMRO staff estimates
Note: 1) – – – Lower early warning (50 percent of benchmark), – – – upper early warning (75 percent of benchmark); 2) Bond yield spreads are computed using the difference between Korean treasury bonds (KTBs) and US Treasury notes at 10-year maturities; 3) External financing requirements = current account deficit + amortization of public external debt + amortization of private external debt; 4) Public debt held by nonresidents is approximated by the share of KTBs held by non-residents out of total central government debt; 4) Short-term debt is based on the original maturity.

Figure 4. Heat Map of Public Debt Sustainability

Source: AMRO staff estimates
Note: For Public Debt and Gross Financing Needs, the cell is highlighted in green if the benchmark is not exceeded under any shock or the baseline, yellow if exceeded under a specific shock but not the baseline, and red if exceeded under the baseline; 2) For Debt Profile, the cell is highlighted in green if the country value is less than the lower early warning benchmark, red if it exceeds the upper early warning benchmark, and yellow if it lies between the lower and upper early warning benchmarks.

Appendix 7. Climate Clipboard[49]

A. Environmental risks

Sources of risk	Potential macro-financial impacts
• Heat wave • Flooding	• Compared to the past 30 years, it is projected that by the late 21st century, summers in Korea may last 19 days longer and winters 18 days shorter. Heatwave days may rise from 10.1 to 35.5 annually with over 30% of summer classified as heatwaves. (**The Third National Climate Change Adaptation Plan (2021-2025)**, Dec 2020). A 1°C rise in average temperature is estimated to lead a decline in long-term real value-added growth by 1.73% to 9.84% across industries such as construction, finance, and real estate. (BOK (2023), "**Analysis of Korea's Climate Change Physical Risks on the Real Economy**") • By the end of the 21st century, overall precipitation in Korea is projected to increase (+5.5~13.1%) leading to potentially severe flooding. Over the past decade ('09~'18), economic losses due to property damage from natural disasters amounted to 3.4 trillion won, with recovery costs estimated to be 2 to 3 times higher. Typhoons and heavy rainfall accounted for 87.7% of total damage, making weather-related disasters the primary cause of economic losses. (**The Third National Climate Change Adaptation Plan (2021-2025)**, Dec 2020). Long term real GRDP growth is projected to fall by 2.54% for every 1-meter increase in annual precipitation (BOK (2023), "**Analysis of Korea's Climate Change Physical Risks on the Real Economy**")

B. Transition risks

Sources of risk	Potential macro-financial impacts
• Accelerated transition to renewable energy • Structural adjustment of carbon-intensive industries • Strengthened climate regulations • Introduction and expansion of carbon pricing	• The regulation of greenhouse gas emissions can increase corporate production costs, resulting in inflationary pressures and higher prices for carbon-intensive products such as energy and steel, which reduces household purchasing power. (BOK (2021), "**BOK's Response to Climate Change**") • Carbon-intensive industries like oil refining and steel manufacturing can face declining profitability, leading to stranded assets and reduced investment, which decreases productivity. (BOK (2021), "**BOK's Response to Climate Change**") • The high-carbon manufacturing sector accounts for a significant share of financial exposure in Korea, posing risks to the financial system. Transition risks could lower domestic banks' capital adequacy ratio by 2.6–5.8 percentage points by 2050 compared to 2020 levels. (BOK (2021), "**Transition Risks and Financial Stability**")

C. Adaptation framework and strategies

Adaptation framework	Key initiatives/strategies	Estimated financing needs
• **National Framework Plan for Carbon Neutrality and Green Growth** (Mar 2023) • **The Fourth National Climate Change Adaptation Plan (2026-2030)** (Dec 2025)	Implementation of climate change adaptation in Korea focuses on the following areas: • Strengthen monitoring and forecasting systems for climate crises. • Enhance water security and establish rapid disaster response systems. • Develop technologies for infectious diseases and climate-resilient living spaces. • Promote sustainable agriculture and fisheries environments. • Build a protection framework for populations vulnerable to climate change.	• 19.4 trillion KRW over the period 2023-2027 (0.8 percent of GDP in 2023) **Financing sources** • Annual budgets

Mitigation response framework and strategies

Nationally Determined Contribution (NDC)	National framework/strategies	Estimated financing needs
• 2030 Nationally Determined Contribution (NDC) aims to reduce GHG emissions by 40% from 2018 levels to 436.6 million tons in 2030	NDC Road map on Mitigation 2023-27: • Energy Transition: Reduce coal power, and expand nuclear and renewable energy. • Industry: Develop low-emission technologies and support companies with funding and subsidies. • Buildings: Mandate zero-energy buildings and promote green remodeling.	• 54.6 trillion KRW over the period 2023-2027 (2.3 percent of GDP) **Financing sources**

[49] Prepared by Bora Lee, Senior Economist

• Korea's newly established 2035 NDC target in 2025 sets a 53%-61% reduction in emissions from 2018 levels by 2035	• Transport: Expand electric and hydrogen vehicles, decarbonize transport, and enhance public transit. • Agriculture: Advance smart farms, low-carbon technologies and low-methane livestock feed. • Waste: Minimize waste and boost recycling, including solar panel waste. • Hydrogen: Advance green hydrogen technology and infrastructure, and diversify hydrogen mobility.	• Annual budgets • Revenue from the emissions trading system • Issuance of green bonds/ private ESG bonds

E. Enabling regulations for climate resilience

E.1. Legal frameworks	E.2. Fiscal framework
• **Presidential Commission on Carbon Neutrality and Green Growth** was established in 2021 as the 2050 Carbon Neutrality Commission, restructured in 2022 to coordinate Korea's climate strategies and achieve carbon neutrality • The framework Act on Carbon Neutrality and Green Growth for Coping with Climate Crisis was enacted in 2021 to provide legal support for achieving carbon neutrality by 2050. • In August 2024, the Constitutional Court ruled that the government's failure to specify concrete greenhouse gas reduction targets or implementation plans for the period 2031–2049 infringed upon the rights of youth and future generations, and ordered the law to be amended accordingly.	• From 2023 to 2027, Korea's budget for carbon neutrality and green growth is estimated to grow by 11.5% annually, outpacing the government's average budget growth of 8% over the past five years (**National Framework Plan for Carbon Neutrality and Green Growth,** Mar 2023)

E.3. Carbon pricing frameworks

- The Emissions Trading Scheme, launched in 2015, reduces carbon emissions by dividing companies into free and paid permit allocations. Initially 100% free (first phase, 2015-2017), paid allocations began in 2018, (second phase, 2018-2020) expanding to 10% by 2021 (third phase, 2021-2025). In the power sector will be gradually raised to 50 percent by 2030 (4th phase, 2026–2030)

E.4. Sustainable finance frameworks

Green Finance to Support 2050 Zero Carbon Goals (Jan 2021)

- Public sector: doubling investments (from current 6.5% to about 13%) in green sectors by state-backed institutions, forming green financing teams, and establishing a consultative body for collaboration.
- Private sector: developing a K-taxonomy for green industries, introducing uniform guidelines, and piloting green bonds.
- A climate risk management plan will assess the impact of carbon-intensive industries on financial institutions.
- Improved corporate environmental disclosures; revised stewardship codes; formulation of an environmental impact evaluation model; and building a networking platform for green enterprises and investors.

E.5. Financial system

Initiatives	Guidelines	Status
1. Taxonomy	• **Korea Taxonomy Guideline** (Dec 2024)	• The Korean Green Taxonomy defines green activities supporting environmental goals, provides criteria to attract capital while preventing greenwashing, and aids in verifying projects for green finance.
2. Risk management assessments	• **Financial Supervisory Service's Climate Risk Amendment** (Dec 2022) • **BOK's Climate Risk Analysis** • **Climate stress tests held by FSS, BOK and domestic financial institutions** (Mar 2025)	• Climate Risk Guidelines: Updated to international standards, with regular implementation assessments of domestic financial institutions. • Stress Tests: The FSS and BOK analyzed the effects on economic growth and financial-sector losses under scenarios with and without active carbon-reduction measures and set supervisory directions for climate-related risks accordingly.
3. Climate-related disclosures	• **Korea Exchange ESG Disclosure Guidelines** (Jan 2021) • **Promotion of ESG Information Disclosure** (Oct 2023)	• The FSC promotes voluntary ESG disclosure by all companies listed in the Korea Exchange with plans for phased mandatory implementation. • The activation of sustainability reporting: (after 2026) voluntary disclosure activation → mandatory for companies of a certain size → mandatory for all KOSPI-listed companies.
4. Data availability	• **Ministry of Trade, Industry, and Energy's Sustainable Management Support Center** • **Electronic Disclosure System (DART)**	• The Sustainable Management Support Center under the MTIE publishes sustainability reports that include major achievements and plans related to the ESG management activities of companies. • The FSS requires listed companies to disclose ESG and climate data via the Data Analysis, Retrieval and Transfer (DART) system.
5. Capacity building	• **Korea Financial Training Institute** • **Global cooperation**	• The Korea Financial Training Institute provides training to financial institutions on climate change response strategies, ESG investment principles and climate risk management. • The government and BOK collaborate with international organizations and private entities to share experiences with the aim of developing climate policies tailored to Korea.

F. Potential opportunities from low-carbon transition

- **Attract large-scale investments and develop technologies** in renewable energy sectors such as solar, wind, and hydrogen.
- **Reduce energy consumption across industries** by improving energy efficiency.
- **Promote eco-friendly agriculture** such as smart farming and reduce carbon emissions in the agricultural sector through low-carbon agricultural systems.

Appendix 8. Data Adequacy for Surveillance Purposes: Preliminary Assessment

Criteria/Key Indicators for Surveillance	Data Availability(i)	Reporting Frequency/Timeliness(ii)	Data Quality(iii)	Consistency(iv)	Others, if Any(v)
National Account	Yearly and quarterly data for the production, expenditure, and income approaches are available.	Quarterly data is released within one month after the reference quarter ends (for the first preliminary estimate, excluding income-approach data).	√	√	-
Balance of Payments (BOP) and External Position	Monthly BOP data is available in detail.	Monthly BOP data is released about two months after the reference period, while quarterly International Investment Position data is released within two months after the reference period.	√	√	-
Central Government Budget/External Debt	Monthly data on central government public finance is available, while quarterly external debt data is available in detail.	Monthly data on central government public finance is released within four months after the reference period, while quarterly data on external debt is released within two months after the reference period.	√	√	-
Inflation, Money Supply and Credit Growth	Data on monthly inflation, money supply and credit growth is available.	Monthly inflation data is released within one month after the reference period, while data on money supply and credit growth is released within two months of the end of the reference period.	√	√	-
Financial Sector Soundness Indicators	Available	Monthly data is released within one to two months after the reference period, while quarterly data is available three months after the reference period.	√	√	-
Housing Market Indicators	Monthly data is available for house prices, transaction volume, construction activity, and supply-demand conditions.	Monthly data is released within one month after the reference period.	√	√	-

Source: AMRO staff compilation. This preliminary assessment will form the "Supplementary Data Adequacy Assessment" in the EPRD Matrix.

Note:
(i) Data availability refers to whether the official data is available for public access by any means.
(ii) Reporting frequency refers to the periodicity with which the available data is published. Timeliness refers to how up to date the published data is relative to the publication date.
(iii) Data quality refers to the accuracy and reliability of the available data, taking into account the data methodologies.
(iv) Consistency refers to both internal consistency within the data series itself and its horizontal consistency with other data series of either the same or different categories.
(v) Other criteria might also apply, if relevant. Examples include but are not limited to potential areas of improvement for data adequacy.

Annexes: Selected Issues

1. Tariffs, Tech Controls, and Techno-nationalism: Korea's Semiconductor Industry in an Era of Sanctions and Strategic Competition[50]

Korea's semiconductor industry has driven decades of economic growth, but memory-dominated exports make the economy highly sensitive to global technology cycles. Rising US tech controls, potential tariffs, and the return of industrial policy globally have increased strategic risks. Domestic constraints—including limited chip design talent, weak industry-academia collaboration, and underdeveloped SMEs—challenge efforts to diversify into logic and high-value segments. Sustaining Korea's global technological leadership will require coordinated policies, innovation incentives, and strategic diplomacy.

1. **Korea's structural transformation over the past four decades has shifted the economy from labor-intensive manufacturing toward capital- and technology-intensive production, with semiconductors emerging as the central pillar of export growth.** Beginning in the 1980s and accelerating after the Asian Financial Crisis, industrial upgrading was driven by sustained investment in electronics, engineering skills, and process technologies, enabling Korean firms to move up global value chains. Semiconductor exports rose from low single-digit shares of total exports in the early 1990s to 24.4 percent in 2025, overtaking traditional heavy industries such as shipbuilding, petrochemicals, and autos (Figure A1.1). Chip exports rose 22.2 percent to an all-time high of USD173.4 billion in 2025, and the semiconductor ecosystem—including materials, equipment, logistics, and construction—accounted for an estimated 7–8 percent of GDP and a materially larger share of manufacturing investment. This transition has lifted productivity and wages but has also increased macroeconomic sensitivity to global technology cycles, capital spending, and external trade conditions, rendering the sector macro-critical for growth, employment, and fiscal revenues.

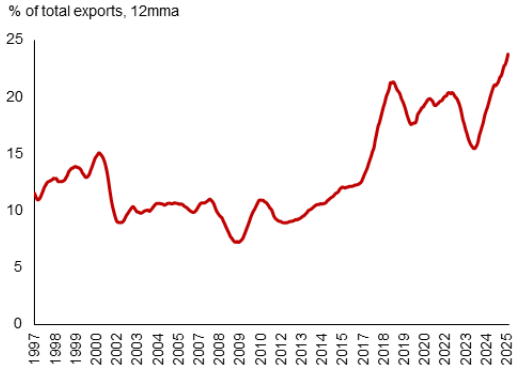
2. **Korea's semiconductor sector is highly concentrated in memory products and dominated by a small number of firms, exposing the economy to pronounced boom-bust cycles and macroeconomic volatility.** Memory chips constitute about **two-thirds of Korea's total semiconductor exports**, compared with much lower shares in economies with stronger logic or foundry segments (Figure A1.2). Samsung Electronics and SK Hynix together account for roughly three-quarters of global DRAM supply and over half of NAND flash production, positioning Korea as the dominant global memory producer but leaving exports heavily skewed toward a single product segment. Memory markets are inherently cyclical: DRAM and NAND prices can swing sharply in response to supply-demand imbalances and inventory adjustments, with historical episodes showing declines of 40–60 percent during downturns and rapid rebounds during supply-constrained periods (Figure A1.3).[51] Advanced fabrication is extremely capital-intensive, with modern fabs costing USD15–25 billion per facility, meaning investment cycles are large and procyclical.

3. **Korea's semiconductor industry faces elevated geopolitical and demand risk due to heavy reliance on China as both a key export destination and a major production base.** China (including Hong Kong) has consistently absorbed around 60 percent of Korea's semiconductor exports over the past decade, reflecting its role as both a final market and an assembly hub within regional value chains (Figure A1.4). At the same time, a substantial share of Korean memory manufacturing capacity is located in mainland China, including major DRAM and NAND facilities operated by Samsung Electronics and SK Hynix, which together

[50] Prepared by Wee Chian Koh, Senior Economist
[51] DRAM contract prices surged by 170 percent year-on-year in Q3 2025 due to AI-demand outpacing supply.

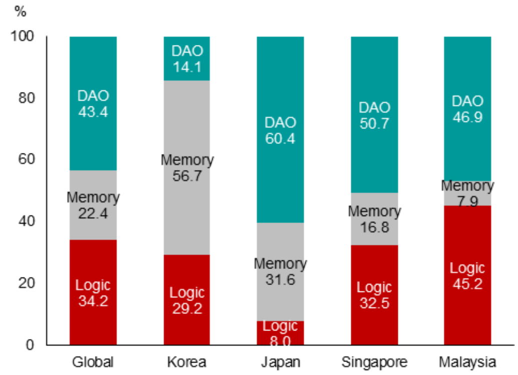
account for an estimated 30–40 percent of their respective global output.[52] This dual exposure heightens vulnerability to China's cyclical demand fluctuations, industrial substitution policies, and potential trade disruptions. It also complicates strategic production planning, as firms must balance commercial incentives to maintain scale in China against rising regulatory and political risks associated with operating advanced technology facilities in jurisdictions subject to expanding export controls.

Figure A1.1. Share of Korea's semiconductor exports



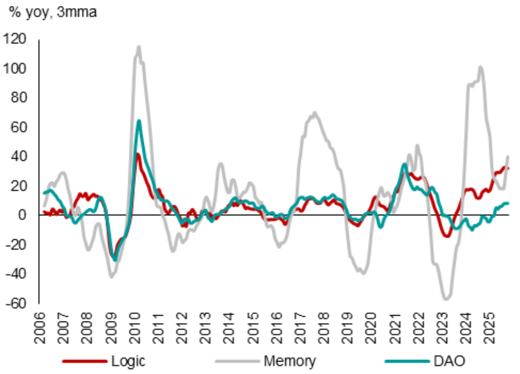
Source: CEIC, Ministry of Trade, Industry and Energy, AMRO staff calculations

Figure A1.2. Composition of semiconductor exports in selected economies



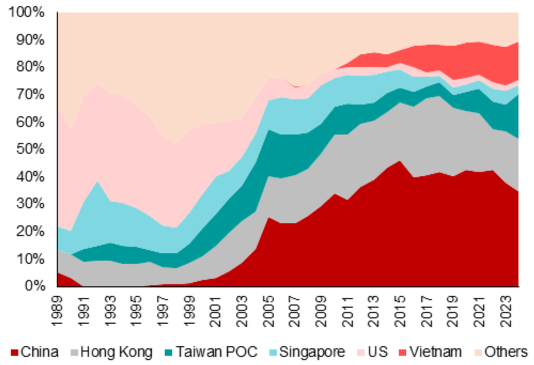
Source: S&P Global Atlas, UN Comtrade, AMRO staff calculations
Note: Shares are 2019 to 2024 average. DAO refers to discrete, analog, and others (including optoelectronics and sensors).

Figure A1.3. Global semiconductor sales by product



Source: World Semiconductor Trade Statistics; AMRO staff calculations.
Note: DAO refers to discrete, analog, and others (including optoelectronics and sensors).

Figure A1.4. Share of Korea's semiconductor exports to major markets



Source: S&P Global Atlas, UN Comtrade, AMRO staff calculations

4. Expanding technology controls imposed by the United States and allied economies are increasingly shaping where Korean firms can invest, upgrade, and deploy advanced manufacturing capabilities. Export restrictions on advanced semiconductor manufacturing equipment, electronic design automation (EDA) software, and AI-related chips limit the ability of Korean firms to upgrade China-based facilities beyond mature process nodes, effectively segmenting production networks by geography.[53] Although

[52] According to industry reports, SK Hynix's fab in Wuxi produces roughly 35-40 percent of the company's total DRAM output, while its Dalian facility (acquired from Intel) accounts for about 35-37 percent of its NAND flash production. Samsung's Xian facility produces roughly 30-40 percent of its global NAND flash memory output.

[53] The US has progressively tightened export controls to restrict China's access to advanced semiconductor technology on national security grounds. Beginning with broad measures in 2022 targeting advanced logic chips, AI accelerators, and manufacturing tools, the US Commerce Department's Bureau of Industry and Security (BIS) expanded the controls to include DRAM chips of 18 nm half-pitch or less, NAND flash with more than 128 layers, and key equipment and software used in advanced fabrication and AI systems. These rules use the Foreign Direct Product Rule (FDPR) to limit shipments of US and foreign-produced items incorporating US technology to Chinese facilities.

temporary waivers have allowed continued operation of existing fabs, their periodic renewal creates policy uncertainty that discourages long-term capital investment and impedes technology migration.[54] Compliance with extraterritorial regulations has also raised operational complexity and costs, as firms must establish parallel supply chains, segregated engineering teams, and differentiated IT systems. These frictions weaken scale efficiencies and lengthen product development cycles in an industry where time-to-market is critical and where delays in process upgrades can erode competitiveness, particularly in fast-moving segments such as high-bandwidth memory (HBM) and advanced packaging.

5. **Potential US tariffs on semiconductors remain a material downside risk for Korea and could prove more damaging if extended to downstream electronics and display products.** Direct tariffs on chips would affect only a portion of Korea's shipments to the US, since a significant share of Korean memory is exported to China, Taiwan Province of China, and ASEAN economies for assembly and integration. Moreover, Samsung and SK Hynix are expanding US production capacity, which could qualify for firm-specific tariff exemptions based on current indications.[55] However, the greater vulnerability lies in potential tariffs on downstream products—such as servers, smartphones, PCs, networking equipment, and automotive electronics—where Korean chips are embedded but final goods are assembled abroad, particularly in China and Southeast Asia. In such cases, tariffs would reduce end-market demand, compress margins across the value chain, and indirectly cut orders for Korean memory and components even if the chips themselves are not directly taxed. This effect is magnified by the structure of memory demand: hyperscale data centers, consumer electronics, and EVs account for a large share of global consumption, and demand in these segments is highly price-elastic and sensitive to capital and consumer spending. Moreover, downstream tariffs would interact with inventory dynamics—original equipment manufacturers (OEMs) typically respond to demand shocks by drawing down existing stock before placing new orders—amplifying short-term volume declines for memory suppliers. As a result, while US localization of some production reduces headline tariff exposure, broad-based tariffs on electronics would transmit through global supply chains and materially weaken Korean semiconductor exports, capital spending, and profits, reinforcing the sector's already procyclical contribution to Korea's business cycle.

6. **Rising techno-nationalism and subsidy competition are reshaping global investment incentives, increasing the risk of inefficient capacity allocation and fiscal burdens.** Major economies have launched large-scale semiconductor support programs, including the US CHIPS Act, the EU Chips Act, and China's multiyear state-backed funds, collectively amounting to well over USD200 billion in announced public commitments. In response, Korea has expanded tax credits, infrastructure subsidies, and financial assistance, with total announced semiconductor support now exceeding KRW30 trillion (about USD23 billion). The Korean government also plans to launch a KRW150 trillion National Growth Fund (about USD100 billion) to support strategic industries, including semiconductors and AI. This initiative aims to boost technological capabilities, industrial value chains, and strategic self-sufficiency. While such measures are intended to preserve competitiveness and attract strategic investment, they also encourage geographically fragmented production and reduce the role of market-based location decisions. This raises the risk of global overcapacity during downturns, compressing margins and potentially lowering long-run returns on capital, while

[54] The US has also revoked or restricted "validated end-user" waivers that previously allowed Samsung Electronics, SK Hynix, and other foreign firms to ship US-origin tools to their China fabs, requiring individual annual licenses instead.
[55] Samsung is building an advanced fab in Taylor, Texas, and has operational fabs in Austin, Texas. SK Hynix has announced plans to build an advanced packaging facility in West Lafayette, Indiana. Both firms are recipients of US Department of Commerce subsidies under the US Chip Act. US President Trump has mentioned that firms that invest or commit to invest in the US will be exempted from tariffs.

simultaneously increasing contingent liabilities for public finances should investment projects underperform.

7. **Strong AI-driven demand presents a near-term structural opportunity for Korea's leading memory producers, particularly in high-bandwidth memory (HBM).** The rapid expansion of generative AI, cloud computing, and high-performance computing (HPC) applications has sharply increased HBM content per server. HBM demand is growing at an estimated 40–50 percent annually, outpacing conventional DRAM growth, and Korean producers—Samsung Electronics and SK Hynix—collectively dominate global HBM supply. These products command significantly higher margins than standard DRAM, supporting earnings and internal cash flows for reinvestment. However, competitors in the US and China are emerging in this segment.[56] Sustaining technological leadership will require continued R&D investment, advanced packaging integration, and alignment with logic chip roadmaps.

8. **Korea is strategically pursuing diversification into logic and foundry segments to reduce dependence on memory, but the transition is constrained by structural and external factors.** Korea's semiconductor industrial policy aims to build an integrated value chain that includes design, IP development, and advanced logic production, rather than relying primarily on commoditized memory exports. However, the strategy faces domestic bottlenecks. Despite world-class process engineering, Korea faces a shortage of expertise in chip architecture, system-level integration, and AI-hardware co-design, which limits its ability to move beyond memory into high-margin logic and packaging-intensive segments. Coordination among fabless firms, system integrators, and research institutions remains limited, reducing opportunities for technology spillovers and slowing commercialization of new designs. The domestic SME ecosystem is also underdeveloped, with few specialized suppliers for advanced materials, semiconductor chemicals, and niche equipment, creating dependence on imports and exposing the sector to supply chain disruptions.[57] Externally, competition from TSMC and Intel in the global foundry market further narrows the window for Korea to capture premium logic market share.[58]

9. **Addressing Korea's barriers to diversification into logic and foundry markets requires a coordinated set of policies informed by successful international models and tailored to Korea's context.**

- ***Closing the chip design talent gap.*** While Korea has some foundational programs in semiconductor education with industry linkages, they tend to focus more on manufacturing and memory process skills. Priority should be given to embedding curricula on semiconductor design, verification, and system architecture across multiple universities, creating dedicated industry-linked master's and PhD programs, and establishing dual-track training pathways with internships at major firms. Alongside

[56] US firm Micron Technology has been increasing its presence in the HBM market and is projected to capture roughly 20-25 percent of HBM capacity as it ramps production and expands packaging and testing facilities, supported by US Chip Act incentives. In **China**, domestic memory firm ChangXin Memory Technologies (CXMT) and Huawei are working to develop HBM and advanced stacking capabilities, supported by government investment.

[57] In July 2019, Japan imposed export controls on three key semiconductor and display materials—fluorinated polyimide, photoresists, and high-purity hydrogen fluoride—forcing Korea to seek alternative suppliers. Korea remains highly dependent on these critical inputs.

[58] Taiwan Province of China's TSMC dominates global contract chipmaking at leading nodes, accounting for over 90 percent of production at leading nodes, and provides logic foundry services to major fabless companies, including Apple, AMD, and NVIDIA. American firm Intel is investing heavily in advanced logic capacity in the US and Europe, aiming to capture market share in AI accelerators and high-performance computing chips.

strengthening the domestic talent pipeline, the government can consider relaxing current immigration policies to selectively attract foreign design talent.[59]

- *Enhancing industry-academia collaboration.* Many existing collaborations are oriented toward *applied research in materials and processes*, not *design ecosystems*. To reduce the translational gap between university research and industrial logic design, Korea can adapt models that have successfully bridged academic research with commercial production by co-funding targeted R&D, co-locating researchers with firms, and incentivizing joint IP generation.[60] To accelerate logic and AI chip development, Korea can consider adopting shared IP and design programs, similar to those in the US and Taiwan Province of China.[61]
- *Strengthening the SME ecosystem.* Experience from Taiwan Province of China and Japan demonstrates that ecosystem density—rather than sheer fab scale—drives long-term competitiveness. Korea could increase investment in shared pilot lines, advanced packaging testbeds, reliability labs, and pre-competitive R&D platforms, which would reduce entry costs for SMEs. Additionally, targeted support for upstream suppliers of wafers, specialty chemicals, and equipment can reduce dependence on imported inputs, mitigating exposure to export controls and global supply chain disruptions.
- *Competing with dominant foundry leaders.* Korea needs strategic alliances and differentiated value propositions—such as specialization in certain logic segments (automotive, IoT, AI accelerators) and co-investment frameworks similar to TSMC's Open Innovation Platform, which aggregates ecosystem partners around common design rules and process technologies.

10. **Strategic diplomacy is essential for Korea to sustain semiconductor competitiveness amid growing geopolitical fragmentation.** Given the industry's dual dependence—on China as a major export market and on US-allied countries for advanced fabrication equipment and design tools—Korean firms and policymakers should actively engage in multilateral forums to mitigate supply chain and policy risks. This includes participation in supply-chain governance initiatives, export-control harmonization agreements, and semiconductor-specific trade frameworks, which can reduce regulatory uncertainty, prevent unilateral restrictions from disrupting production, and facilitate cross-border investment. By cultivating strong relationships with both technology-leading allies and key customer markets, Korea can balance access to critical tools and markets, secure preferential treatment in joint R&D and infrastructure projects, and ensure that strategic partners remain aligned on technology transfer and export policies. For instance, the recent Korea Strategic Trade and Investment Deal with the US includes provisions to ensure that semiconductor trade terms are no less favorable than those offered to major competitors, illustrating how such engagement can reduce uncertainty. Strategic diplomacy, complemented with domestic ecosystem development and talent initiatives, can help Korea sustain technological

[59] In April 2025, the Korean government introduced a "Top-Tier Visa" and associated high-skill immigration pathways to attract global experts in semiconductors, AI, and other advanced industries. Under this program, foreign professionals with advanced degrees from top global universities, significant work experience at leading companies or research institutions, and competitive salaries can obtain a long-term residency visa, with eligibility for permanent residency after three years, easing settlement and family relocation. However, the criteria are relatively stringent and only nine visas have been issued as of October 2025.
[60] Examples include Germany's Fraunhofer Institutes and US SEMATECH consortia.
[61] The US SEMATECH consortium pools semiconductor design resources across companies and universities, while the TSMC Open Innovation Platform provides universities and SMEs access to commercial EDA tools, reference flows, and design libraries to speed tape-outs and reduce barriers to entry.

leadership, maintain investment momentum, and manage geopolitical risks in an increasingly fragmented global semiconductor landscape.

2. Korea’s Shipbuilding Industry: Developments and Prospects Ahead[62]

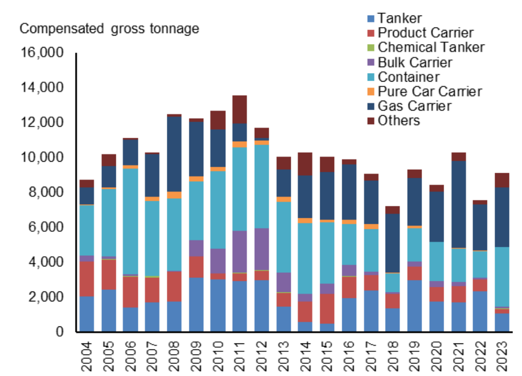
Since around 2020, the global shipbuilding market has been on an upturn on the back of robust global trade growth, ship replacement demand due to stricter environmental standards, and continued modernization of naval fleets amid geopolitical tensions. While this upturn, along with Korea’s growing cooperation with the US shipbuilding industry, should help Korea propel ship constructions in the near term, several challenges lie ahead, including competition from Chinese shipyards, complexity in producing environmentally friendly vessels, and labor shortages.

Developments

1. **Strong government support, particularly during the 1960s and 1970s, was instrumental in laying the foundation for Korea’s shipbuilding industry.** Before the 1960s, the industry had limited scope, focusing on repairing US warships. A pivotal moment came in the 1960s and 1970s on the back of the government’s push to develop several capital-intensive heavy industries, which included shipbuilding.[63] Thanks to measures such as preferential lending rates, tax holidays, government guarantees for foreign loans, construction of specialized industrial infrastructure, and establishment of research institutes, Korea’s shipbuilding expanded steadily throughout the next few decades, becoming one of the country’s key export engines by the turn of the millennium.

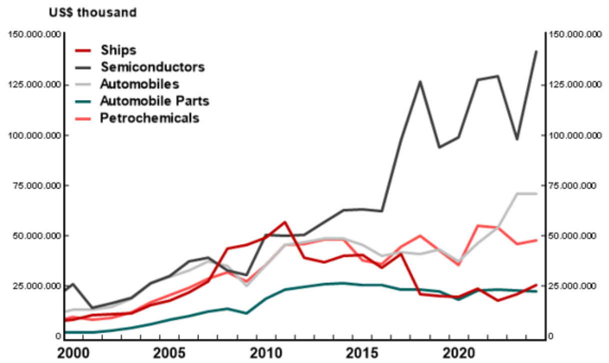
2. **Korean ship exports rose rapidly from 2000 to the early 2010s, when the country became the world’s largest shipbuilder.** Strong global trade growth in the 2000s and Korean shipbuilders’ reputation for quality and advanced technology helped the industry grow robustly, with large containers and gas carriers such as liquefied natural gas (LNG) and liquefied petroleum gas (LPG) carriers constituting the lion’s share of ships constructed (Figure A2.1). At its peak in 2011, shipbuilding overtook semiconductors as the country’s top exports, and Korea secured most of the global LNG carrier orders (Figure A2.2).

Figure A2.1. Ships Constructed



Source: Korea Maritime Institute; CEIC; AMRO staff calculations

Figure A2.2. Key Export Items



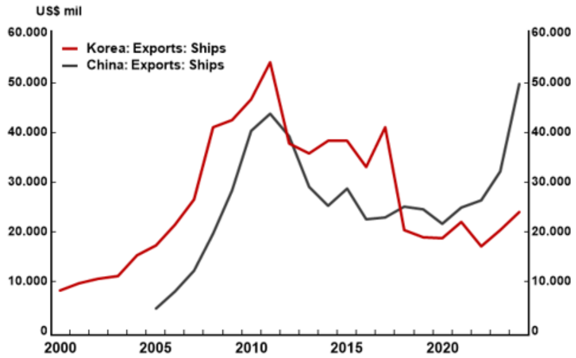
Source: MOTIE; Haver; AMRO staff calculations

3. **Since 2011, Korea’s ship exports began to decline on the back of a global shipping market downturn following the Global Financial Crisis (GFC) and China’s rapid rise in shipbuilding capacity.** In the aftermath of the GFC, a slump in global trade

[62] Prepared by Jade Vichyanond, Senior Economist
[63] One of the key initiatives was President Park Chung-hee's Heavy and Chemical Industry (HCI) project in 1973, which aimed to provide comprehensive support for six industries identified as fundamental for Korea’s development: steel, non-ferrous metals, machinery, shipbuilding, electronics, and petrochemicals.

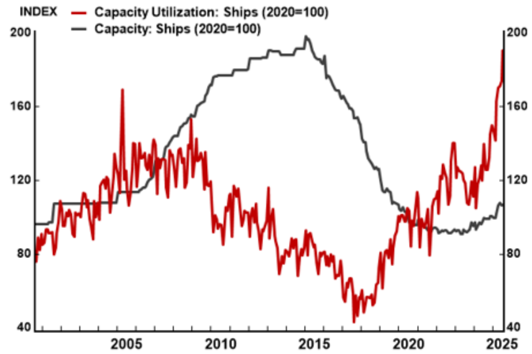
precipitated a downturn in ship demand worldwide. While ship exports of major shipbuilding economies declined, China employed various tools to resuscitate the industry, ranging from government support to corporate strategies (e.g. competitive pricing and rapid delivery), which enabled it to overtake Korea in ship exports by the late 2010s (Figure A2.3). Meanwhile, in response to competition from China and subdued global demand, extensive consolidation took place in Korea's shipbuilding industry in the form of mergers, bankruptcies, and government-led restructuring efforts, as reflected in a sharp drop in shipbuilding capacity (Figure A2.4). In the process, Korea started to focus even more on high-value ships, such as LNG and LPG carriers and other types of eco-friendly ships.[64]

Figure A2.3. Ship Exports: Korea and China



Source: General Administration of Customs; Haver; AMRO staff calculations

Figure A2.4. Shipbuilding Capacity and Utilization Rate



Source: Statistics Korea; Haver; AMRO staff calculations

Prospects Ahead

4. **Since around 2020, the global shipbuilding market has been on an upturn—driven by robust global trade growth, ship replacement demand due to stricter environmental standards, and continued modernization of naval fleets amid geopolitical tensions—which should help support Korean shipbuilding in the near to medium term.** With maritime transport being responsible for about 90 percent of world freight, the post-pandemic rebound in global trade has helped support demand for container ships, bulk carriers, and tankers. Meanwhile, ship replacement demand due to increasingly stricter environmental standards—some of the key environmental regulations are those set by the International Maritime Organization (IMO), such as the Energy Efficiency Design Index (EEDI), the Energy Efficiency Existing Ship Index (EEXI), and the Carbon Intensity Indicator (CII)—is supporting demand for advanced eco-friendly ships, such as dual-fuel vessels that rely on ammonia and hydrogen (Table A2.1). Lastly, sustained geopolitical tensions underscore the need for continued modernization of defense forces, including naval fleets. The current upturn in global ship demand is reflected in the recovery of Korea's shipbuilding industry, with the bulk of outstanding orders being for high-value vessels such as LNG carriers (Figure A2.5).

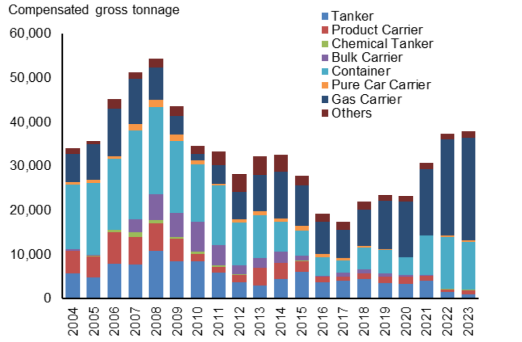
[64] LNG and LPG carriers are dual-fuel vessels by design and are thus considered eco-friendly, although not as eco-friendly as those using ammonia and hydrogen.

Table A2.1. Key Environmental Standards Set by the International Maritime Organization

Regulation	Details
Energy Efficiency Design Index (EEDI) (effective 2013)	• Promotes the use of more energy efficient equipment and engines for the design of new ships • Requires a minimum energy efficiency level per capacity-mile (e.g. ton-mile) for different ship type and size segments
Energy Efficiency Existing Ship Index (EEXI) (effective 2023)	• Similar to EEDI but applies to existing ships
Carbon Intensity Indicator (CII) (effective 2023)	• Operational indicator for energy efficiency

Source: IMO; AMRO staff compilation

Figure A2.5. Outstanding Ship Orders



Source: Korea Maritime Institute; CEIC; AMRO staff calculations

5. **In addition, cooperation with the US presents another significant opportunity for Korean shipbuilders.** In late July 2025, as part of the trade negotiations with the US, the Korean government announced the "Make American Shipbuilding Great Again" (MASGA) initiative, a $150-billion fund—in the form of investments, loans, and guarantees—to revive the US shipbuilding industry. According to the plan, Korean shipbuilding companies will expand their presence in the US—by setting up new shipyards and modernizing existing ones, training the US workforce, re-establishing supply chains, and conducting maintenance, repair, and overhaul (MRO), among others—in both commercial and military shipbuilding.[65] Furthermore, even before the MASGA announcement, major Korean shipbuilders had been investing in the US over the past few years, leveraging Korea's expertise to expand their footprint on US soil.[66]

6. **The industry however faces a number of key challenges at this juncture, including competition from Chinese shipyards, complexity in producing environmentally friendly vessels, and labor shortages.** First, China is rapidly closing the technological gap in high-value ship segments currently dominated by Korean shipbuilders, and this domination is for the most part only due to Korea's superior technology in fuel efficiency. In addition, China's cheaper labor costs make it challenging for Korean companies to compete, particularly in an industry as labor-intensive as shipbuilding. Second, increasing regulatory pressure globally is placing higher premium on environmentally friendly vessels, which are generally more technologically complex and hence more costly to produce. Lastly, the Korean shipbuilding industry faces a shortage of skilled labor since 2010, when supply gluts and corporate mismanagement have led to large-scale layoffs. As a result, the industry is left with an aging domestic workforce and faces challenges in attracting young workers, which are increasingly turning away from "3D" (difficult, dangerous, and dirty) work such as construction and shipbuilding.

7. **Looking ahead, strategic investment in certain segments and addressing labor-related issues will be essential in safeguarding the future of Korean shipbuilding.** In the LNG carrier segment, other than fuel efficiency, it is vital that Korea continue to develop other technical aspects of LNG carriers to maintain competitiveness, such as cargo hold (i.e. how

[65] Military vessels include naval warships, diesel-electric submarines, semi-submersible ships and unmanned surface vessels.
[66] Hanwha acquired Philly Shipyard in June 2024 and so far has secured three MRO contracts for US Navy ships. In April 2025, HD Hyundai announced a partnership with Huntington Ingalls, the largest American defense shipbuilder, to improve shipbuilding productivity and advance the digital transformation of shipyards. Two months afterward, HD Hyundai announced a cooperation with Edison Chouest Offshore to build LNG dual-fuel containers.

to securely hold, insulate, and transport heavy, extremely cold LNG).[67] Second, given rising ship replacement demand due to increasingly stringent environmental standards, Korea should continue allocating resources to further development of dual-fuel vessels, particularly ammonia- and hydrogen-based dual-fuel vessels. In developing such technology, ongoing support from the government such as the KRW2-trillion "K-Shipbuilding Super Gap Vision 2040" public-private initiative is crucial, especially in view of substantial government support received by shipbuilding industries in competitor countries. As far as manpower is concerned, Korea has made substantial progress in automating its shipbuilding industry—recently, the industry has successfully showcased robots performing deck welding, one of the most challenging tasks to automate due to uneven surfaces and obstacles such as pipes—and should continue to invest in labor-saving technologies given the increasing urgency of manpower shortage. Lastly, it is vital that the authorities periodically calibrate foreign worker restriction policies to be in line with the industry's demands—in this regard, the recent removal of a separate quota for shipbuilding within the E-9 foreigner worker visa category may need to be reviewed to minimize labor supply shortage in the industry.

[67] The current gold standard for cargo hold technology in LNG carriers is one developed by a French firm and used by almost all Korean and Chinese shipbuilders.

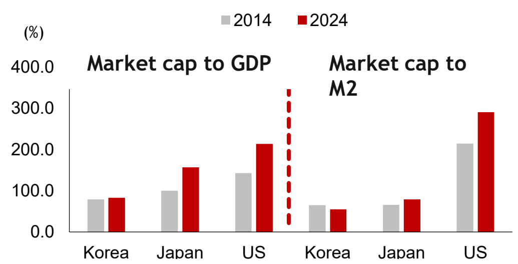
3. Revitalizing Korean Stock Markets[68]

Korea's equity market has long faced structural undervaluation despite strong economic fundamentals, reflecting persistently low capital efficiency, weak corporate governance, and limited shareholder returns. To address these challenges, the authorities have implemented a broad reform agenda—including the Value-Up program, Commercial Act and tax reforms, and measures to improve foreign investor access—which has supported a strong rebound in equity prices in 2025. Going forward, ensuring that these valuation gains extend to small and mid-sized firms will require sustained firm-level efforts to improve return on equity and institutional support to maintain investor confidence.

Korea Discount and Structural Causes

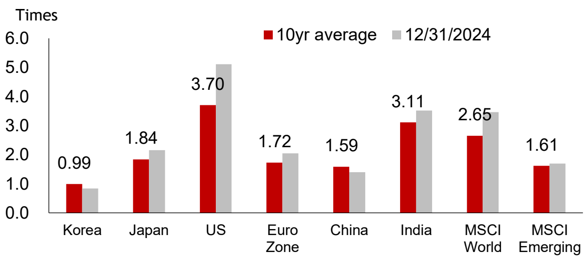
1. **Korea's equity market has long suffered from a structural undervaluation, often referred to as the "Korea Discount."** Despite the country's advanced level of economic development and market liquidity comparable to developed markets, Korean equities remain underappreciated globally and continue to be classified by MSCI as an emerging market. Over the past decade, Korea's ratios of market capitalization to GDP and to M2 have stagnated or declined, while those of major advanced economies such as the US and Japan have expanded markedly (Figure A3.1). The KOSPI's price-to-book ratio (PBR) has remained persistently low — averaging around 0.99 over the past 10 years — far below the averages of 2.65 for 23 advanced economies and 1.61 for 24 emerging markets (Figure A3.2). Most KOSPI-listed companies continue to trade below their book value, reflecting a deep and prolonged undervaluation of Korean equities.

Figure A3.1. Market Cap to GDP and M2



Source: BOK; Bank of Japan; Federal Reserve Board; Haver; CEIC ; AMRO staff calculations

Figure A3.2. Price-to-Book Ratio

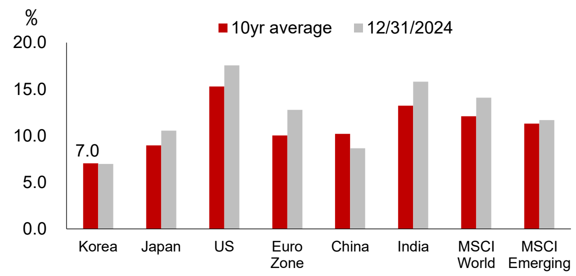


Source: Bloomberg

2. **Key reasons cited for the lackluster equity performance include low capital productivity, weak corporate governance, and insufficient shareholder returns.** Over the past decade, the average return on equity (ROE) of Korean firms hovered around 7 percent—lower than major peers—suggesting inefficient capital utilization (Figure A3.3). In Korea's conglomerate-affiliated firms, known as "chaebol groups," controlling shareholders often play a dominant role in corporate governance, leading to conflicts of interest between majority and minority shareholders. As a result, minority shareholder protection and board independence have been assessed as relatively weak. The average dividend payout ratio, at 31.3 percent over the past 10 years, also remains low, reflecting firms' persistent reluctance to return profits to shareholders (Figure A3.4).

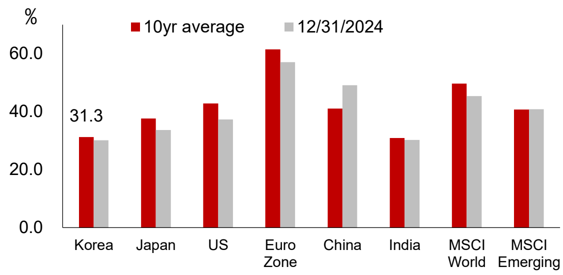
[68] Prepared by Bora Lee, Senior Economist

Figure A3.3. Return on Equity



Source: Bloomberg

Figure A3.4. Dividend Payout Ratio

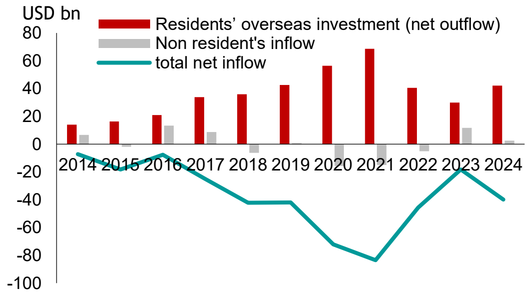


Source: Bloomberg

Initiatives to Revitalize Korea's Stock Markets

3. **As domestic and foreign investors have turned away from the equity market and capital has increasingly concentrated in real estate, the government has recognized the resulting drag on economic dynamism.** Foreign investors have remained hesitant to enter the Korean market due to relatively low return expectations compared with global peers. As a result, domestic firms face higher funding costs stemming from depressed valuations, which constrain their ability to secure external financing for new-growth investments. At the same time, limited shareholder-return policies such as dividends and share buybacks have led many domestic investors to turn to overseas equity markets (Figure A3.5). Moreover, a long-standing perception of housing as a safe asset has further compounded these dynamics, channeling excessive capital into real estate and restricting inflows into equities.[69] In response, the government has launched a multi-pronged policy initiative aimed at enhancing corporate value and improving capital market accessibility to attract both domestic and foreign investment into the equity market.

Figure A3.5. Equity Flows of Residents and Nonresidents



Source: BOK

4. **In early 2024, the government introduced the Corporate Value-Up Program[70] to encourage listed companies to voluntarily formulate and disclose value-up plans.** Firms voluntarily set both financial and non-financial targets—such as dividend payout ratios, share buybacks and cancellations, board composition, and ESG improvements—and disclose specific actions to achieve them. The authorities have moved beyond simple recommendations by actively supporting firms' voluntary efforts to enhance corporate value,

[69] As of end-2024, total household credit amounted to KRW 1,925.9 trillion, of which KRW 1,300.2 trillion (67.5 percent) consisted of housing-related loans

[70] Korea's Value-Up program draws reference from Japan's experience. In Japan, even after the structural reorganization of its stock market, around 50 percent of Prime Market and 60 percent of Standard Market listed companies continued to record ROEs below 8 percent and PBRs below 1, raising concerns over weak capital profitability and growth potential. In response, the Tokyo Stock Exchange (TSE) announced in March 2023 its policy statement titled "Action to Implement Management that is Conscious of Cost of Capital and Stock Price," calling on listed companies with PBRs below 1× to make voluntary efforts to enhance corporate value.

providing incentives to high-performing participants and promoting stable capital inflows through the Korea Value-Up Index and related ETFs (Table A3.1).[71] Since the introduction of the program in May 2024, corporate value-up disclosures have rapidly expanded, led by large-cap companies. As of end 2025, a total of 171 firms had publicly announced corporate value-up plans, representing 44.5 percent of the Korean stock market's total market capitalization.

Table A3.1. Corporate Value-Up Guidelines

Category	Description
Objective	A leap forward for the Korean stock market through voluntary shifts to a corporate culture oriented toward shareholder value
Timeline	Feb 2024: Announcement of 'Corporate Value-Up Disclosure to Support the Takeoff of the Korean Stock Market' May 2024: Publication of Value-Up Guidelines and launch of value-up disclosure system Nov 2024: Listing of Value-Up Index ETF, ETN and index futures
Key Features of Corporate Value-Up Disclosure	Definition: Listed firms voluntarily establish future growth strategy that aims to enhance shareholder returns, improve capital efficiency, boost growth potential and strengthen market valuation Scope: All firms listed on KOSPI and KOSDAQ Frequency: At least once a year
Incentives for Value-Up Disclosing Firms	➢ Recognized value-up companies receive benefits such as preferential treatment in exemplary taxpayer selection and inclusion priority in the Korea Value-Up Index. ➢ Related financial institutions have created a joint KRW500 billion Value-Up fund to invest in Value-Up Index ETFs and component stocks, and in Value-Up disclosing companies not included in the index. ➢ Tax incentives to promote value-up efforts • Companies that expand shareholder returns receive a 5% corporate income tax credit on the amount of increased shareholder return. • Shareholders of such companies pay a reduced separate taxation rate on increased dividend income. ➢ A White Paper is published as an annual review to assess participation and implementation of the Value-Up initiative, analyze whether it has led to actual improvements in investment indicators, and strengthen communication with the market. ➢ The Value-Up program provides support for listed companies, disclosure training, one-on-one consulting and English translation to help listed companies implement their Value-Up plans effectively.
Korea Value-Up Index / ETF	Constituents: 100 representative companies by industry Rebalancing frequency: Annually Selection criteria: Market representativeness, profitability, shareholder return, valuation quality and high capital efficiency

5. **To strengthen internal corporate governance, the first and second amendments to the Commercial Act have been completed, and a third round of reform is under way.** Initial amendments to the Commercial Act strengthened protections for minority shareholders and enhanced the functioning of boards of directors, while reinforcing the independence of audit committees to improve overall corporate governance transparency. Complementing these measures, tax law amendments introduced separate taxation of dividend income, with the aim of encouraging higher dividend payouts and promoting equity investment through tax incentives. Under the ongoing third round of reform, efforts are focused on mandating the cancellation of treasury shares, thereby reducing the risk that controlling shareholders use treasury stock to entrench their control (Table A3.2).

[71] Incentives for high-performing participants, such as eased accounting and disclosure requirements, preferential inclusion in the Korea Value-Up Index, and related tax incentives

Table A3.2. Commercial Act Amendments

Phase	Clause / Topic	Before Amendment	After Amendment	Effective Date
1st Phase (Jul 2025)	Establishment of directors' fiduciary duty to shareholders	Subject of fiduciary duty: the company only	Subject of fiduciary duty: the company and shareholders	Jul 2025
	Introduction of independent directors and expansion of their appointment ratio in listed companies	Ratio of outside directors was a quarter or more	Change of term "outside director" to "independent director," and revision of ratio of independent directors on board to at least a third	Jul 2026
	Strengthening of the combined 3% rule in the appointment or removal of audit committee members in listed companies	In the case of the controlling shareholder, the aggregated 3% rule applies only when appointing or removing audit committee members who are inside directors	For the controlling shareholder, the aggregated 3% rule applies at the appointment or removal of audit committee members, with the addition of independent directors	Jul 2026
	Electronic shareholders' meeting	Statute not enacted	Mandatory for large listed companies	Jan 2027
2nd Phase (Aug 2025)	Mandatory cumulative voting rights in listed companies	Opt-out permitted by articles	Mandatory for firms with assets more than KRW2 trillion	Aug 2026
	Expanded separate election of audit committee members	Only one member separately elected	At least two must be separately elected	Aug 2026
3rd Phase (Planned)	Mandatory cancellation of treasury shares	Voluntary	Must be cancelled immediately or within one year after acquisition	
Revisions to Tax Incentives (Dec 2025)	Dividend tax benefits	If the combined total of interest and dividend income exceeds KRW20 million, it becomes part of comprehensive income and may be taxed at up to 45%	Separate taxation for high-dividend firms: ≤20mn 14%, 20mn-300mn 20%, 300mn-5bn 25%, >5bn 30%	Apr 2026

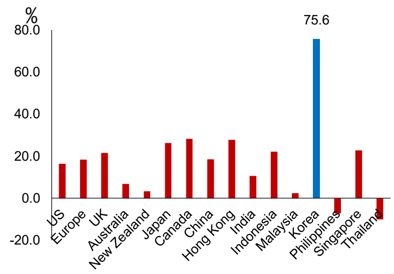
6. **To enhance foreign investors' access to the Korean capital market, authorities have implemented wide-ranging regulatory reforms since late 2023 to align the domestic framework with global standards.** The 30-year-old foreign investor registration requirement was abolished, enabling investors to open securities accounts without prior registration using legal entity identifiers (LEIs) or passport numbers. Regulations on over-the-counter derivatives transactions by non-residents were eased to improve convenience and operational efficiency. In addition, onshore foreign-exchange trading hours were extended to 2am (KST) to increase global accessibility of the Korean won. Mandatory English disclosures for key corporate filings have also been expanded since 2024 to improve information access for international investors. To strengthen the equity market's global credibility, the dividend distribution process was revised—requiring companies to set dividend amounts before the record date—and short-selling was resumed to enhance market functioning and transparency (Table A3.3).

Table A3.3. Measures to Enhance Foreign Investment Environment

Policy / System	After Enhancements	Effective Date
Abolition of Foreign Investor Registration System	Foreign investors can trade on domestic listed securities without needing LEI registration or an approval number	Dec 2023
Operational Convenience for Integrated Account Management	Reduced reporting frequency from real-time to once per month	Dec 2023
Improving Convenience of Over-the-counter Transactions for Foreign Investors	Expands types of OTC trades under post-reporting instead of pre-approval	Dec 2023
Mandatory English Disclosure	Requires large KOSPI firms to disclose in English within three business days	Jan 2024
Improved Dividend Procedures	Improves dividend procedures: reforms the process of "fixing the dividend record date (typically Dec 31) before determining the dividend amount" to a procedure of "determining the dividend amount first, then fixing the record date," thereby establishing an institutional basis that enables investment decisions based on known dividend amounts	2024 (at regular general meeting)
Extended FX Market Hours	Extended hours from 0900-1530 to 0900-0200 the next day	Jul 2024
Resumption of Short-Selling	Resumed short-selling for KOSPI 200 and KOSDAQ 150 constituent stocks after 17 months (since Nov 6, 2023), and for all other listed stocks after about five years (since Mar 16, 2020)	Mar 2025

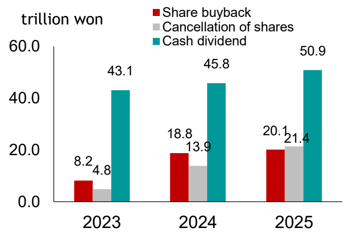
7. **These multi-faceted policy packages represent meaningful progress in addressing the root causes of the so-called Korea Discount from multiple angles.** Since July 2025, net foreign inflows have increased, and Korean equities have recorded one of the highest returns among major global markets, rising 75.6 percent in 2025 (Figure A3.6). Corporate efforts to enhance value are also reflected in improving shareholder-return indicators (Figure A3.7). Over the past three years, both cash dividends and share cancellations have steadily risen. As a result, the Korea Value-Up Index rose 89.4 percent in 2025, outperforming the KOSPI by 13.8 percentage points (Figure A3.8).

Figure A3.6. Stock Index Return by Country as of end-Dec 2025



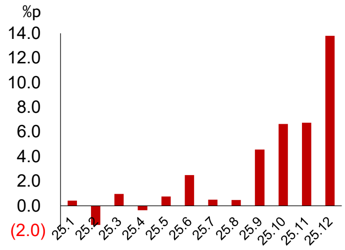
Source: Bloomberg

Figure A3.7. Trend in Shareholder Returns



Source: Korea Exchange (KRX)

Figure A3.8. Excess Return of Korea Value-Up Index over KOSPI

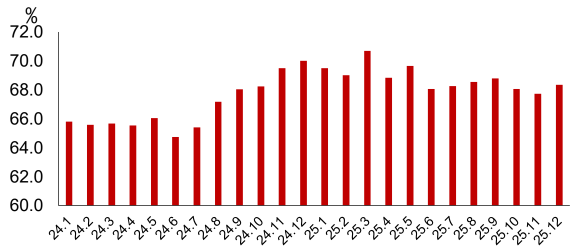


Source: KRX; AMRO staff calculations

Challenges and the Way Forward

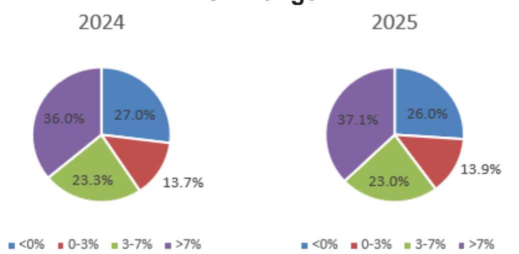
8. **Nevertheless, a substantial portion of listed firms continue to trade below a PBR of 1, and undervaluation remains entrenched among smaller and mid-sized companies, suggesting that the reform initiative will require time to gain full traction across the market.** While the average PBR of Korean stocks stood at 1.35 as of end-2025, around 70 percent of individual stocks still trade below a PBR of 1, and more than 60 percent of firms record ROE levels below the long-term average of 7 percent (Figures A3.9 and A3.10). This indicates that recent gains in headline indices have been driven largely by a narrow group of large-cap outperformers, rather than broad-based improvements in underlying capital efficiency. Samsung Electronics and SK Hynix together accounted for about half of the increase in total KOSPI market capitalization in 2025. Participation in the Value-Up Program remains correspondingly limited. As of end-2025, only 171 firms—around 6 percent of listed companies—had joined the program, of which 64 percent were large-cap firms with market capitalization exceeding KRW 1 trillion, while only nine were small firms. This underscores that the initiative has yet to gain meaningful traction among small and mid-sized companies.

Figure A3.9. Proportion of KOSPI Firms with PBR <1



Source: Bloomberg

Figure A3.10. Distribution of KOSPI Firms by ROE Range



Source: Bloomberg; AMRO staff calculations

9. **Continued efforts are needed to ensure that stock market gains translate into real economic activity and contribute to a virtuous cycle of growth.** The stock market rally in 2025 was driven by expectations of higher shareholder returns, supportive government policies, and improvements in corporate earnings. To achieve more fundamental and sustainable improvements in the equity market, the following policy actions are necessary.

- A framework should be established that enables corporate profitability and growth to improve on a sustained basis, allowing ROE to rise structurally over the long term. Firms should enhance capital efficiency through the restructuring of low-return and non-core businesses and the rebalancing of business portfolios, while improving the quality of equity through shareholder return policies such as dividends and share buybacks. In addition, stronger corporate governance and greater management accountability for capital efficiency would help ensure that ROE improvements prove durable and sustainable, rather than driven by short-term earnings gains.
- Institutional foundations should be strengthened to ensure that stock price gains translate into tangible real-economy outcomes, including higher corporate investment and job creation. Targeted financial support, tax incentives, and regulatory reforms for high-potential innovative industries will help ensure that capital market vitality spreads to the broader real economy. In parallel, stronger institutional mechanisms are needed to ensure the timely exit of zombie firms from the stock market, as their continued presence distorts capital allocation, exacerbates investor losses, and erodes market confidence.
- The ongoing value-up initiative should be institutionalized as a long-term program, rather than a one-off policy, by building sustained trust among market participants. To this end, the disclosure of corporate governance assessment results would allow investors to directly compare and evaluate corporate transparency, while enhanced support for mid-sized and small firms with limited disclosure capacity would help broaden the value-up program beyond large corporates. To promote constructive oversight of corporate management, further strengthening the stewardship code is warranted to encourage more active shareholder engagement by pension funds and asset managers.

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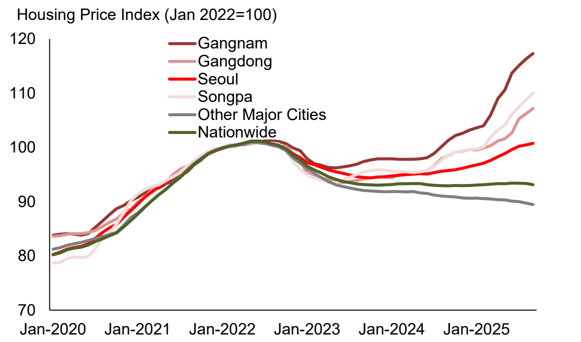
4. Assessing the Effectiveness of Korea's Macroprudential Measures[72]

Property prices in the Seoul Metropolitan Area (SMA), especially in key high-demand districts, rose sharply in 2025. In response, the Korean authorities implemented several rounds of macroprudential measures to cool the housing market. This Selected Issue assesses the effectiveness of Korea's macroprudential tightening on Seoul's housing prices, drawing on past tightening, and discusses the related policy implications.

Context

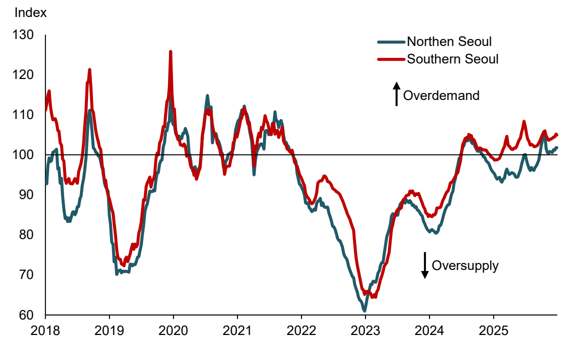
1. **Property prices in Seoul have surged in 2025 amid easing financing conditions and a notable shift in homebuyers' preference.** Notwithstanding the domestic political uncertainty in the first half of 2025, as well as geopolitical and trade tensions, housing prices in the SMA increased sharply, driven by strong demand in key Seoul districts such as Gangnam, Seocho, and Songpa. This stands in stark contrast to housing markets outside the SMA, where prices have declined slightly over the same period (Figure A4.1). The rise in prices in SMA reflects a combination of looser financial conditions – lowered interest rates and strong appreciation of the equity markets, an accelerating shift in homebuyers' preferences toward housing in Seoul, and expectations of continued price appreciation, which have contributed to rising housing demand relative to supply (Figure A4.2) (BOK, 2025).

Figure A4.1. Housing Price



Source: Korea Real Estate Board
Note: Other Major Cities refer to the six metropolitan cities of Busan, Daegu, Incheon, Gwangju, Daejeon, and Ulsan

Figure A4.2. Apartment Sales Price Supply and Demand



Source: Korea Real Estate Board
Note: The index indicates that values above 100 signify excess demand, while values below 100 indicate excess supply.

2. **In response to these developments, the authorities implemented a comprehensive package of demand- and supply-side measures (Table A4.1).** On the demand side, credit-based measures —including tighter mortgage loan limits, reductions in loan-to-value (LTV) ratios, and an expansion of debt-service-ratio (DSR) requirements to cover *jeonse* loans — were the primary tools used to dampen housing demand. In addition, the re-introduction and expansion of land registration permit requirements for home purchases were aimed at curbing speculative demand, notably by imposing a minimum two-year owner-occupancy obligation. On the supply side, the authorities announced a large-scale housing development plan in SMA to address persistent shortages in new housing supply.

[72] Prepared by Justin Lim, Economist

Table A4.1. Macroprudential Measures Implemented in 2025

Measures	Land Permit	Mortgage Loan Limit	*Jeonse* loans	LTV	Loan Maturity	Housing Supply
March	Re-implemented for key districts in Seoul					
June		Loan limit capped at KRW 600m for SMA	Prohibition of *jeonse* loans with conditional ownership transfer	Prohibition of lending for additional home purchases in regulated areas (LTV =0)	Reduced to within 30 years	
Sept			*Jeonse* loan limits are reduced	LTV ratio reduced from 50 to 40 percent in regulated areas		1.35 million of new houses in SMA to be built in 2026-2030
October	Expanded to cover all districts in Seoul and selected areas in Gyeonggi	Loan limit caps are further reduced and differentiated by property value	DSR requirements implemented for *jeonse* loans			

Source: BOK, FSC, Korea Research Institute for Human Settlement (KRIHS) and AMRO staff compilation

Empirical Framework and Findings

3. **An empirical approach is used to assess the effectiveness of Korea's macroprudential measures by using the local projection method (Jordà 2005) drawn from past macroprudential tightening.** Korea's past macroprudential policy action data from 2006 to 2024 is obtained from the IMF's Integrated Macroprudential Policy (IMaPP) database. This approach involves estimating a series of monthly regressions of the log-difference in property prices between periods $t+h$ and $t{-}1$ ($y_{t+h} - y_{t-1}$) on a macroprudential tightening measure at time t, over a 24-month time horizon (h = 0,1,2…., 24), to assess the cumulative effect of the tightening on property prices over this period. Specifically, we estimate:

$$y_{t+h} - y_{t-1} = \alpha_h + \beta_h Tighten_t + \sum_{l=1}^{6} \gamma_l \Delta y_{t-l} + \sum_{k=-6}^{6} \delta_k \Delta Controls_{t+k} + \sum_{m=1}^{2} \eta_m (X_{t+h} - X_{t-1}) + \zeta_h \Delta LTV_{t-h} + \varepsilon_h,$$

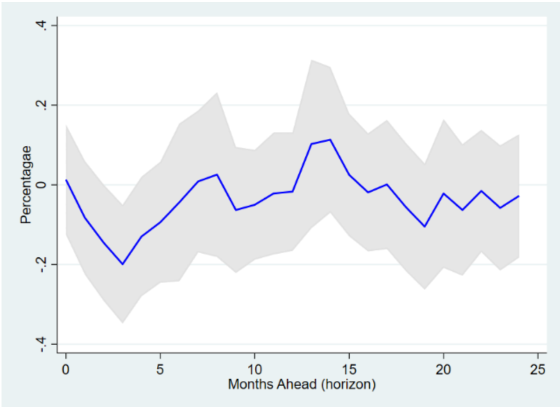
where $Tighten_t$ is a dummy variable that takes value 1 for a tightening measure and 0 otherwise, $\sum_{l=1}^{6} \gamma_l \Delta y_{t-l}$ are the lagged dependent variables, while $\sum_{k=-6}^{6} \delta_k \Delta Controls_{t+k}$ accounts for changes in macroprudential measures over a six-month window surrounding the tightening episode at time t, that is, covering the six months preceding and up to six months following the tightening measure, and $\sum_{m=1}^{2} \eta_m (X_{t+h} - X_{t-1})$ denotes a vector of fundamentals determinants over the time horizon h, including change in policy rate and industrial production growth. ΔLTV_{t-h} captures the magnitude of adjustments to the average LTV ratio to account for the intensity of the LTV tightening.

4. **While near-term price pressures may have moderated following the implementation of these measures in the short term, their longer-term impact is less clear**. Estimates suggest that a tightening measure lowers house prices by about 0.1 percent on average over a two-year period per policy action, although the estimates are not statistically significant (Figure A4.3a). By contrast, the estimated impact is almost twice as large and is statistically significant for the pre-2017 period (Figure A4.3b). This suggests diminishing

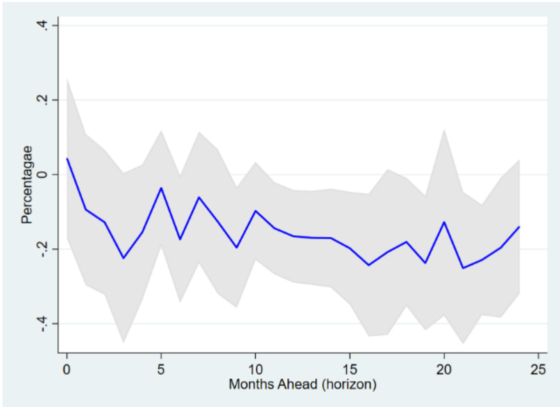
marginal effectiveness as these measures were progressively tightened over time, reflecting endogenous behavioral responses – most notably, homebuyers' substitution away from bank borrowing to other financing sources (Alam et al, 2025 and Biljanovska et al, 2023).

Figure A4.3. Local Projection: Cumulative Response of Seoul's House Prices to Macroprudential Policy Tightening

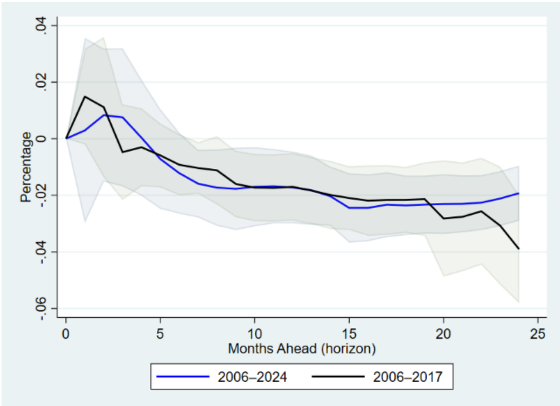
a) All Measures, 2006 - 2024



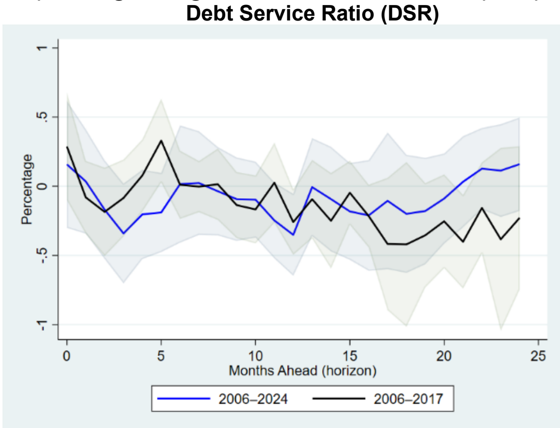
b) All Measures, 2006 - 2017



c) A 1-ppt Reduction in the LTV Ratio



d) A Tightening of Debt Service-to-Income (DTSI) / Debt Service Ratio (DSR)



Source: IMF Integrated Macroprudential Policy (iMaPP) Database, AMRO staff calculations
Note: The lines display the coefficients of cumulative responses of Seoul's house price over the 24 months following a tightening in macroprudential policy. The grey shaded areas to 1.96 standard deviations.

5. Further regression analysis suggests that reductions in the LTV ratio have had a more lasting impact on house prices. A closer examination of Korea's most frequently used macroprudential tools—namely the LTV and debt-service ratio (DSR)—also suggests diminishing effects over time (Figures A4.3c and A4.3d). House prices initially rose in the first three to six months following an LTV tightening, reflecting the tendency for authorities to tighten policy during periods of rapid price appreciation (IMF, 2019a). However, the dampening effects become more evident and persistent thereafter – estimates including the post-2017 period indicate that a 10-percentage point reduction in the LTV ratio is associated with an average decline in house prices of about 0.2 percent, compared with roughly 0.4 percent in the pre-2017 period, consistent with findings from other studies on Korea (IMF, 2019b). By contrast, a tightening of the DSR ratio is estimated to reduce house prices by about 0.2 percent within the first 12 months, but its impact becomes less clear beyond that point.

Conclusion and Policy Implications

6. **Overall, the empirical evidence suggests that Korea's macroprudential tightening has helped temper housing demand pressures.** The results point to a clear pattern of diminishing marginal effectiveness, particularly in the post-2017 period, as repeated use of similar instruments appears to have induced behavioral adaptation and policy circumvention. Among the main tools, LTV-based measures appeared to have delivered comparatively more persistent effects than DSR tightening, though even these impacts are modest relative to the scale of recent price increases. Notwithstanding these findings, studies have shown that combining LTV, DSR, mortgage loan limits and other instruments more effectively curbs excessive household leverage, supports banking sector resilience, and stabilizes housing markets while mitigating policy circumvention and overall systemic risk (Choi et al, 2025, Durante et al, 2025 and ECB, 2023). Accordingly, the authorities should continue to adopt a broad range of relevant macroprudential tools to address housing demand, rather than relying on any single instrument, irrespective of the instruments' relative effectiveness.

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5. Fiscal Decentralization in Korea: Challenges and Policy Implications [73]

Fiscal decentralization in Korea is characterized by independently managed central and local finances that are nonetheless closely interconnected through sizeable intergovernmental transfers. After consolidating these transfers, local governments ultimately execute nearly half of total public spending, making the effectiveness and efficiency of local fiscal management a critical element of overall fiscal performance. This Selected Issue reviews central–local shares in revenue, expenditure, and sectoral allocation; identifies challenges in local fiscal planning and execution; and outlines policy implications to improve the strategic allocation and performance of local public finances.

Relationship Between Central Local Finances

1. In Korea, although central and local government finances are operated independently, they are closely interconnected through intergovernmental transfers (Figure A5.1). Local governments and local education authorities manage their fiscal policies and operations independently under the principle of local autonomy, as stipulated by the Constitution. Intergovernmental transfers—comprising the local allotment tax, local education grant, and national subsidies to local governments—serve as key channels linking central and local finances.[74] Meanwhile, metropolitan/provincial governments also make transfers to the corresponding provincial/metropolitan education offices within the same jurisdiction.[75]

- Local allotment tax is a central government transfer to local governments aimed at guaranteeing local fiscal resources and alleviating fiscal imbalances. It consists of 19.24 percent of the total domestic tax revenue of the corresponding fiscal year, the entire comprehensive real estate tax revenue, and 45 percent of the excise tax levied on tobacco.
- Local education grant is a central government transfer intended to support the establishment and operation of educational institutions and education administrative bodies, promoting balanced educational development across regions. It is funded by 20.79 percent of the total domestic tax revenue and a portion of the education tax.
- National subsidies to local governments are transfers provided to support nationally mandated functions and policy-priority projects or to deliver fiscal assistance. These subsidies are tied to specific purposes and conditions, and must be spent exclusively on predefined projects, generally requiring matching funds from local governments.
- Transfers from local governments to education offices are local statutory and non-statutory contributions intended to partially finance provincial education and academic affairs using resources from the local general account. These transfers are funded by sources such as local education tax, tobacco consumption tax, and other provincial and metropolitan tax revenues.

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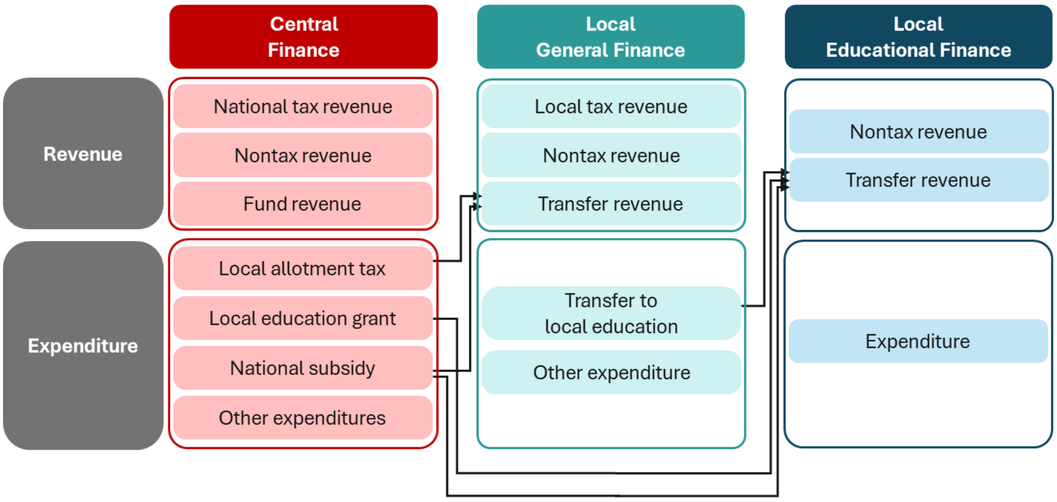
[73] Prepared by Byunghoon Nam, Senior Economist

[74] In addition, the Local Extinction Response Fund, which provides support to regions experiencing population decline, was introduced in 2022.

[75] Beyond the horizontal transfer from metropolitan/provincial governments to their corresponding education offices, fiscal transfers among local governments include vertical transfers whereby metropolitan/provincial governments support municipal and district governments through adjustment grants and provincial/municipal subsidies. Furthermore, to address horizontal fiscal disparities among local governments at the same administrative tier, the Regional Coexistence and Development Fund was established in 2010.

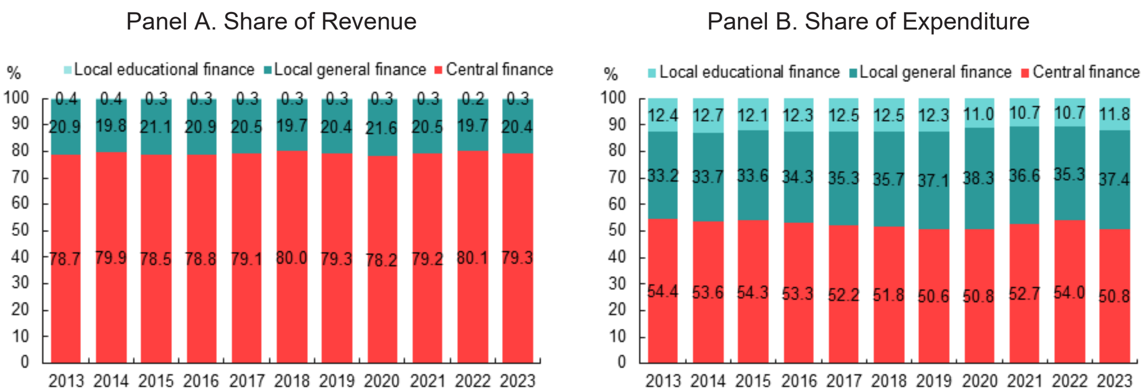
Figure A5.1. Relationship Between Central and Local Finances



Source: Ministry of Economy and Finance; Ministry of Interior and Security; Ministry of Education; AMRO staff illustration

2. **Korea's fiscal revenues rely heavily on the central government, whereas fiscal spending is split more evenly between central and local authorities**. Based on the 2023 final settlement, the shares of consolidated fiscal revenue—adjusted for intergovernmental transfers and classified by the authority that actually collects the revenue—stood at central finance : local general finance : local education finance = 79.3: 20.4: 0.3 percent. Meanwhile, the shares of consolidated fiscal expenditure—also adjusted for intergovernmental transfers and classified by the authority that ultimately executes the spending—were 50.8 : 37.4 : 11.8 percent, respectively (Figure A5.2). Given the large share of consolidated expenditure ultimately executed by local governments, it is critical to assess the allocative and technical efficiency of local fiscal spending.

Figure A5.2. Shares of Central and Local Governments in Consolidated Revenue and Expenditure

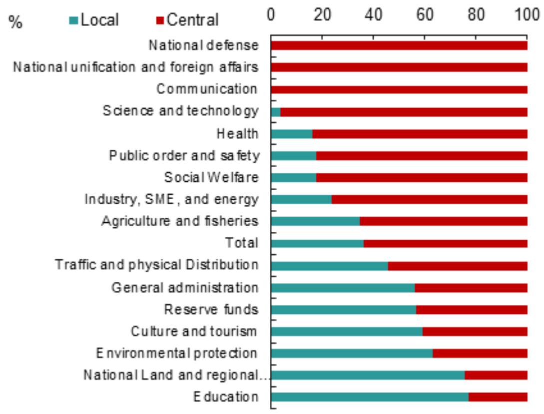


Source: Ministry of Economy and Finance; Ministry of Interior and Security; Ministry of Education; AMRO staff estimates
Note: 1) Data are based on the settlement; 2) Consolidation of central and local government revenue and expenditure follows AMRO staff estimates: (i) Transfers from the central to local governments are excluded from central finance expenditure and local general finance revenue; (ii) Transfers from the central government to local education are excluded from central finance expenditure and local education finance revenue; (iii) Transfers from local general finance to local education finance are excluded from local general finance expenditure and local education finance revenue.

Sectoral Resource Allocation

3. **The distribution of consolidated fiscal expenditure across the 16 major functional program areas broadly aligns with Korea's central–local functional assignment structure** (Figure A5.3). Aside from functions that are exclusively national—such as defense, foreign affairs and unification, and communications—most expenditure areas are shared between the central and local governments, with relative shares reflecting the characteristics of each function. Education, regional development, environment, and culture and tourism are primarily delivered by local governments, while science and technology, social welfare, health, public order and safety, and industry, SMEs and energy are largely managed by the central government in line with national priorities. Transport and logistics, agriculture–forestry–fisheries, and general administration are joint responsibilities, financed and implemented by both levels of government.

Figure A5.3. Shares of Central and Local Finances in Sectoral Expenditure, 2025 Budget



Source: Ministry of Economy and Finance; Ministry of Interior and Security; Ministry of Education; AMRO staff estimates
Note: 1) Data are based on the initial budgets; 2) Sectoral classification of expenditure is based on 16 sectors adopted by the Korean authorities; 3) Sectoral expenditures are estimated by AMRO staff: (i) Local allotment tax is excluded from general administration of central finance; (ii) Local education grant is excluded from education of central finance; (iii) Transfers from local general finance to local education finance are excluded to avoid double-counting; (iv) National subsidies are excluded from each sectoral expenditure of local governments, with only the portion funded by local governments included; 4) Estimated shares may be subject to inaccuracies due to discrepancies between central and local initial budgets for the same items.

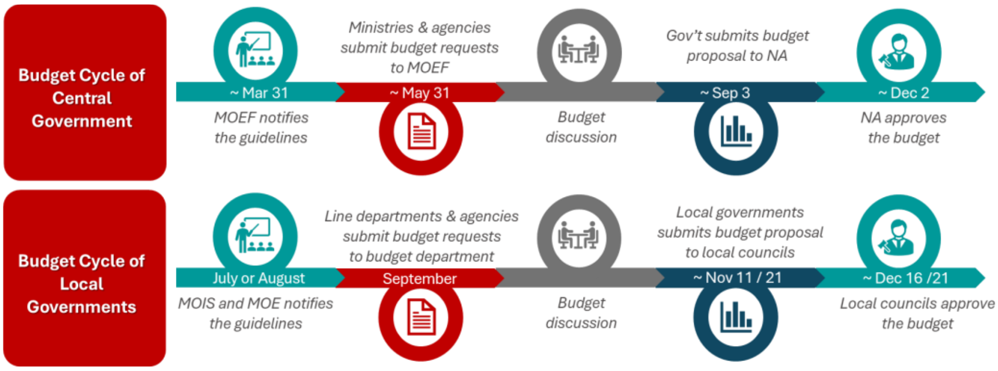
4. **The discussion on nation-wide sectoral resource allocation strategy is insufficient, and the matching rates for national subsidy projects remain unclear**. The central government's sectoral resource allocation is generally discussed at the National Fiscal Strategy Meeting chaired by the President, and medium-term strategic priorities and sectoral resource allocation directions are set in the NFMP. Local governments determine their sectoral resource allocation independently through their medium-term local fiscal plans, although national subsidies create a de facto linkage by influencing local spending choices. However, a comprehensive national-level sectoral allocation discussion under a consolidated fiscal framework—integrating central and local fiscal plans—is insufficient. In addition, while national subsidy projects require cost-sharing between the central and local governments, only 121 out of more than 1,300 national subsidy projects have legally mandated standard subsidy rates explicitly defined in legislation. For the remainder, rates are set case-by-case under individual laws or determined during annual budget formulation and parliamentary deliberations, resulting in low transparency and limited ex-ante predictability.

Fiscal Planning of Local Governments

5. **The budgeting process of local governments is shorter than the central government and often delayed**. The central government budget formulation involves (i) issuance of budget guidelines followed by line ministries/ agencies preparing and submitting budget requests (≈2 months); (ii) budget negotiations and reviews between the budget authority and line ministries/agencies to finalize the government budget proposal (≈3 months);

and (iii) deliberation and approval by the National Assembly (≈3 months). Local governments follow procedurally similar stages with functional counterparts—line departments (equivalent to ministries/agencies), budget departments (equivalent to the central budget authority), and local councils (equivalent to the National Assembly). Yet, local formulation phases are typically compressed to ≈1 month per stage, a period that, even accounting for smaller budget sizes, is often insufficient for comprehensive reviews and deliberation (Figure A5.4). This compression reflects the reality that local budgets remain highly dependent on central transfers, including block grants and national subsidies, forcing local governments to sequentially trail the central schedule. As a result, local budget approvals are often delayed beyond the fiscal year, and local provisional budget mechanisms have been activated repeatedly, unlike at the central level where such arrangements have never been used.

Figure A5.4. Budget Cycles of Central and Local Governments



Source: Ministry of Economy and Finance; Ministry of Interior and Security; Ministry of Education; AMRO staff illustration

6. **Supplementary budgets are formulated frequently in local governments**. This is partly unavoidable due to misalignment of central and local budgeting cycles. Cycle mismatches produce gaps between the transfer amounts the central government records as expenditure and the transfer revenues local governments record in their budgets, requiring ex-post corrections through supplementary budgeting. In practice, the National Assembly frequently approves the central budget after the statutory deadline, creating significant uncertainty for local budget planning, which depends heavily on intergovernmental transfers. In addressing the cycle mismatches, local block transfers—including the local allotment tax and local education grant—are provisionally disbursed at around 90–95% of expected amounts before central budget approval, with the remainder to be transferred after approval. This sequential settlement mechanism inevitably leads to multiple supplementary budget rounds. Other key reasons for supplementary budgets include (i) realization of net budget surplus, (ii) ex-post settlement of increases in central transfers from the prior year, (iii) unexpected revenue sources, and (iv) in-year program adjustments during execution. While supplementary budgets offer fiscal flexibility, frequent revisions raise concerns over transparency, allocative efficiency, planning credibility, and spending discipline, potentially weakening the consistency and reliability of local fiscal plans.

Budget Execution of Local Governments

7. **The budget execution of local governments tends to be weaker than that of the central government**. Local governments' execution rates have consistently underperformed those of the central government, with an average gap of around 10 percentage points over

the past decade (Figure A5.5).[76] The relatively low execution rates reflect larger carry-overs and unused appropriations in both local governments and local education offices (Figure A5.6). Weak disbursement capacity is particularly pronounced among municipal and district governments, as evidenced by excessive carry-overs and unused appropriations, although performance varies widely across entities (Figures A5.7 and A5.8). In 2023, their execution rates ranged from 66.8 to 88.9 percent, while carry-over ratios ranged from 4.0 to 25.7 percent and unused appropriation ratios from 2.2 to 17.2 percent.

Figure A5.5. Budget Execution Rates of Central Local Governments

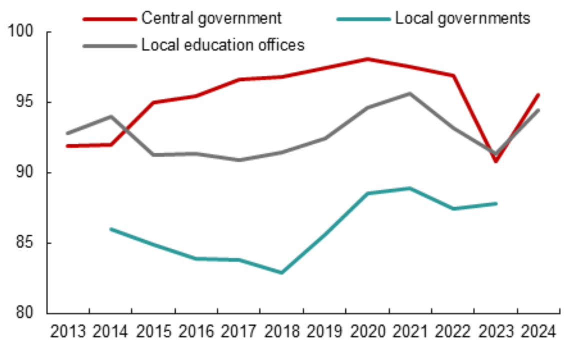
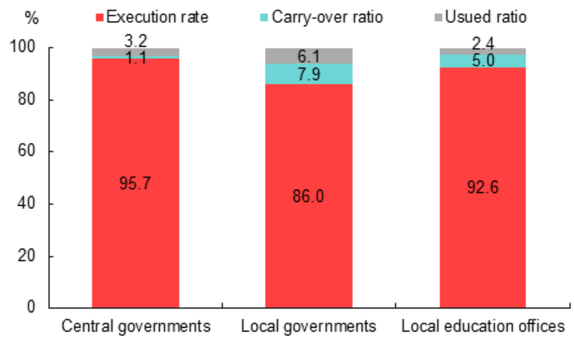


Figure A5.6. Execution Rates, Carry-over Ratios, and Unused Ratios: 2014–2023 Average



Source: Ministry of Economy and Finance; Ministry of Interior and Security; Ministry of Education; AMRO staff estimates
Note: 1) On a gross basis, including all internal transactions; 2) The execution rate is the share of actual disbursement relative to the total authorized budget (the sum of the approved budget and the carry-over from the previous year); 3) The carry-over ratio is the share of the amount carried over to the following year relative to the total authorized budget; 4) The unused ratio is the share of unused appropriations relative to the total authorized budget, where unused appropriations are calculated by subtracting disbursement and the following year's carry-over from the total authorized budget.

Figure A5.7. Execution Rate and Carry-over Ratio of Individual Local Governments, 2023

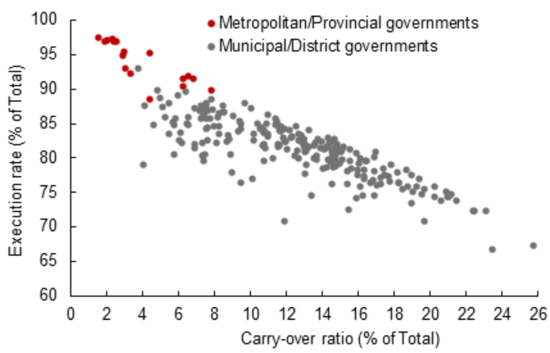
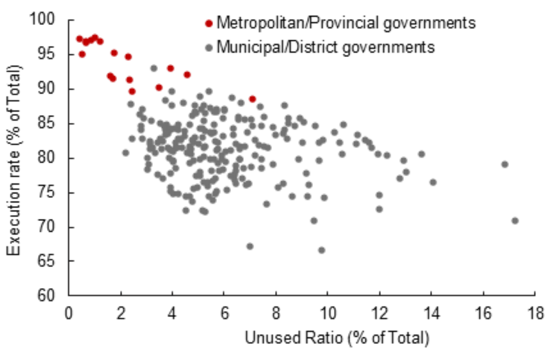


Figure A5.8. Execution Rate and Unused Ratio of Individual Local Governments, 2023



Source: Ministry of Economy and Finance; Ministry of Interior and Security; Ministry of Education; AMRO staff estimates

8. **Limited planning and implementation capacity—combined with the frequent use of supplementary budgets—constrains the timely execution of fiscal spending, thereby reducing the effectiveness and efficiency of fiscal policy**. Anecdotal evidence also highlights structural weaknesses, including mismatches between budgeting and project readiness and inefficient planning practices. For instance, in national subsidy projects, local governments are sometimes required to appropriate budgets before completing pre-implementation procedures, leading to projects that cannot begin and are automatically carried over. In other cases, although funds should be appropriated in stages, local councils

[76] Execution rates in 2023 declined markedly as unused appropriations were intentionally increased—including reductions in transfers to local governments and education—in response to sizable revenue shortfalls relative to the budget.

may demand full-amount appropriations upfront, creating misalignment between project execution timelines and budget management.

Policy Discussions

9. Mechanisms to better align local public resource allocation with national priorities should be strengthened. Given the increasingly complex policy environment and the growing role of local governments in executing public spending, a clearer division of responsibilities between the central and local governments is essential. One option is to institutionalize a nationwide strategic resource allocation discussion—covering consolidated expenditure that integrates both central and local finances—within the National Fiscal Strategy Meeting, with the participation of representatives of local governments. Such a platform would help coordinate sectoral priorities, reduce fragmentation, and ensure that local spending decisions reflect national strategies. In parallel, discussions on balanced regional development, taking into account each region's endowments and strategic direction, could be anchored within a broader national priority-setting framework to enhance policy coherence across levels of government. In addition, presetting cost-sharing ratios (matching rates) for national subsidy projects based on project characteristics would improve accountability, transparency, and predictability in fiscal management at both the central and local levels.[77]

10. The budgeting processes of the central and local governments should be better synchronized to reduce the need for frequent supplementary budgets and to allow sufficient lead time for planning and implementation. Although local budgets inevitably follow the central budget cycle due to their heavy reliance on intergovernmental transfers, there remains room to enhance coordination and predictability. For example, because block grants—the local allotment tax and local education grant—change only marginally during government budget formulation and parliamentary deliberation, the central government could communicate preliminary block grant totals to MOIS and MOE earlier in the budget cycle. These agencies could then begin allocating funds across local governments in advance, with minor adjustments made later once the central budget is finalized. Such an approach would reduce sequential delays, improve planning certainty, and contribute to more efficient and timely local budget formulation.

11. Strengthening the planning and spending capacity of local governments—particularly at the municipal and district levels—is critical for improving fiscal management and timely budget execution. Priority should be placed on enhancing performance management systems, ensuring that evaluations from project implementation and execution outcomes, including execution timeliness, are incorporated systematically into the following year's budget formulation. Improving the feedback loop between performance results and budget decisions would help reduce structural bottlenecks that contribute to low execution rates, excessive carry-overs, and inefficient project sequencing. Capacity building efforts, supported by the central ministries and specialized institutions in local public finance, can further equip local officials with the skills required for project appraisal, procurement planning, monitoring, and execution management. Strengthening these capabilities would

[77] For example, preset cost-sharing ratios between the central and local governments for national subsidy projects could broadly reflect the existing central-local expenditure shares by function or sector, as illustrated in Figure A5.3.

enhance the credibility and effectiveness of local fiscal operations and contribute to more efficient service delivery.

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