AMRO Annual Consultation Report

Indonesia - 2023

ASEAN+3 Macroeconomic Research Office (AMRO)

March 2024

Acknowledgements

1. This Annual Consultation Report on Indonesia has been prepared in accordance with the functions of AMRO to monitor and assess the macroeconomic status and financial soundness of its members; identify relevant risks and vulnerabilities; report these to member authorities; and if requested, assist them in mitigating these risks through the timely formulation of policy recommendations. This is being done in accordance with Article 3 (a) and (b) of the AMRO Agreement.

2. This Report is drafted on the basis of the Annual Consultation Visit (ACV) of AMRO to Indonesia, which was conducted in Jakarta, Indonesia, from November 20 to December 1, 2023 (Article 5 (b) of the AMRO Agreement). The AMRO ACV team was headed by Dr Sumio Ishikawa, Group Head and Lead Economist. The ACV members were Dr Thi Kim Cuc Nguyen, Country Economist for Indonesia; Ms Chunyu Yang, Economist; Mr Akifumi Fujii, Economist; Mr Somphone Changdabout, Associate; and Mr Thai Yangsingkham, Associate. AMRO Director Dr Kouqing Li and Chief Economist Dr Hoe Ee Khor participated in key policy meetings with the authorities. The AMRO Annual Consultation Report on Indonesia for 2023 was peer-reviewed by a group of economists from AMRO's Country Surveillance, Financial Surveillance and Fiscal Surveillance teams; endorsed by the Policy and Review Group; and approved by Chief Economist Dr Hoe Ee Khor.

3. The analysis in this Report is based on data and information available up to February 15, 2024.

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 ACV team wishes to thank the Indonesian authorities for their comments on this Report, as well as their excellent meeting arrangements during our visit.

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Executive Summary

Following firm growth in 2023, Indonesia's near-term growth outlook is supported by robust domestic demand backed by solid consumer confidence, a boost from election-related spending, and ongoing national strategic projects, including the new capital city. The authorities are encouraged to maintain policy synergy to ensure macro-financial stability and the recovery momentum amid ongoing global headwinds.

1. The Indonesian economy has continued to grow firmly amid external headwinds. Strengthening consumption and investment underpinned an economic expansion of 5.0 percent in 2023. Robust domestic demand backed by solid consumer confidence, election-related spending, and investment in national strategic projects, together with a recovery in exports, is expected to support a projected 5.2 percent growth in 2024.

2. Inflation has declined within the target range. Responding with a consistent policy mix, Bank Indonesia (BI) working in close policy synergy with the government, was able to anchor the headline consumer price index inflation to within 3.0±1 percent in 2023. In addition to energy subsidies, the government increased rice imports and strengthened inter-regional supply and distribution of necessity goods, especially food, to offset the impact of the El Niño on food production. The continued implementation of both supply and demand-side policies is expected to keep inflation within a lower target of 2.5±1 percent in 2024.

3. Trade surpluses, a tourism rebound and sustained foreign investment inflows have supported the external position. In addition, non-resident portfolio inflows resumed in most of 2023, except for August-October when risk aversion heightened, due to renewed concerns about a tighter-for-longer monetary policy by the US Federal Reserves. Gross international reserves increased to USD146.4 billion as at December 2023, sufficient to cover about 6.7 months of imports and 209 percent of short-term external debt.

4. External debt has moderated on the back of continued deleveraging by both the public and private sectors. External debt declined from 30.1 percent of GDP as of end-2022 to 29.7 percent as of end-2023. The share of short-term external debt has been manageable at about 17.2 percent of total external debt and 47.8 percent of gross reserves.

5. Bank loans have expanded further alongside the economic recovery; meanwhile, the banking sector remains sound with improved banks' asset quality and earnings. Bank loans grew robustly by 9.3 percent on average in 2023. Liquidity conditions have remained ample relative to pre-pandemic levels. Banks' asset quality and earnings improved, benefiting from an ongoing recovery in economic activity. At the same time, banks have continued to maintain high capital buffers and elevated provisions.

6. The state budget and state-owned enterprises (SOEs) have played a major role in financing infrastructure projects while private investment has contributed a modest share. However, highly leveraged construction SOEs have incurred cash flow mismatches and defaulted on debt obligations, in part due to a deterioration in revenues during the COVID-19 pandemic, and delays in project divestment. As a result, several SOEs have entered debt restructuring agreements with creditors and/or received capital injections from the government.

7. Bank Indonesia has strengthened its policy mix of monetary, macroprudential and payment systems to maintain stability and support sustainable economic growth. The central bank has raised the policy rate, maintained rupiah stability, strengthened monetary operations with the issuance of BI bills, known as SRBI, and enhanced financial deepening to anchor inflationary expectations and support the rupiah exchange rate. Efforts have been stepped up to enhance the efficiency of payment systems and promote local currency transactions. At the same time, the reserve requirement ratio has been further lowered for banks that lend to priority sectors and micro, small and medium enterprises (MSMEs), in line with BI's Macroprudential Liquidity Incentives Policy, known as KLM.

8. Better-than-budgeted revenue collection allowed the government to increase spending while keeping the fiscal deficit at below the ceiling of 3 percent of GDP in 2023 under the fiscal rule. The early adoption of a comprehensive tax reform package under the Harmonized Tax Law in 2021 contributed to a faster-than-expected fiscal consolidation in the past two years. The government is likely to pursue a neutral fiscal stance in 2024.

9. With domestic demand underpinning solid economic growth, Indonesia's near-term outlook could be affected by ongoing external headwinds. A sharp slowdown in major trading partners, especially China, could weigh on the recovery of Indonesia's exports. The risk of global food and energy price spikes remains on the back of El Niño and geopolitical tensions. While risk aversion has eased following the Fed's signaling the end of its interest rate hike cycle in December 2023, emerging markets, including Indonesia, might continue to experience capital flow volatility if the tight U.S. monetary policy is prolonged or if there are adverse spillovers from the U.S. presidential election. Indonesia faces structural challenges in its efforts to enhance economic resiliency and ensure a smooth transition to a green economy.

10. AMRO staff supports the current policy synergy among the authorities in keeping watch on global uncertainties. In a downside scenario where the global economy slows sharply, the authorities are encouraged to continue closely monitoring risks to macro-financial stability, while being ready to provide any needed support to shore up economic recovery.

11. The authorities should be prepared to tighten macroprudential policy tools when needed. The KLM policy and other macroprudential measures, such as the 100 percent loan-to-value ratio for mortgage loans and zero down payment policy for vehicle loans, could be tightened if credit growth continues to recover.

12. AMRO staff welcomes the authorities' efforts to deepen domestic financial markets. The introduction of new monetary policy instruments carrying competitive interest rates and tradable in the secondary market is expected to strengthen monetary operations and contribute to a deeper money market and attract portfolio inflows. Efforts to promote local currency transactions will facilitate trade and investment with regional peers and reduce excessive reliance on the U.S. dollar in trade financing.

13. The fiscal space could be further built up with revenue-enhancing measures to meet higher spending needs while upholding fiscal disciplines. For example, more value added tax could be collected by reducing exemptions and lowering the registration threshold, in line with progress in MSMEs' bookkeeping practices and the tax refund process. The integration of taxpayer identification numbers into the national identification system, and the implementation of a core tax system will enhance taxpayers' experience and improve tax administration efficiency. The new, more comprehensive taxpayer database will also allow the government to better focus policies on targeted groups.

14. Efforts to rationalize budget spending and prioritize growth-enhancing expenditures should be expedited. To provide more targeted support, the current energy subsidy policy should be replaced with direct cash transfers to vulnerable groups. Such a move will, in turn, enable the government to release fiscal resources for spending on education, healthcare, infrastructure and climate change mitigation. As far as public debt management is concerned, policy efforts to deepen the government bond market and broaden the investor base are crucial to enhancing access to financing and lowering government borrowing costs.

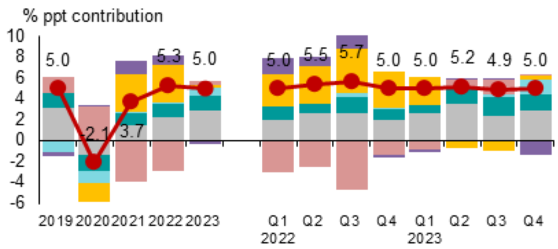
15. Structural reforms should be sped up. Economic and trade diversification policies should be supported by continued efforts to improve the investment climate and enhance the ease of doing business. A streamlined project implementation process will channel more private funds into infrastructure development. The authorities should continue to address the financial stress of construction SOEs to sustain their contribution to the infrastructure development agenda and mitigate potential impacts on banks' asset quality. Recent efforts to support a smooth transition to a green economy and narrow the financing gap to net zero emissions include the launch of a carbon trading platform and the Taxonomy for Indonesian Sustainable Finance. A roadmap to adopt the carbon tax with a cap-and-tax emission trading scheme should be coordinated with energy subsidy reforms.

A. Recent Developments and Outlook

A.1 Real Sector

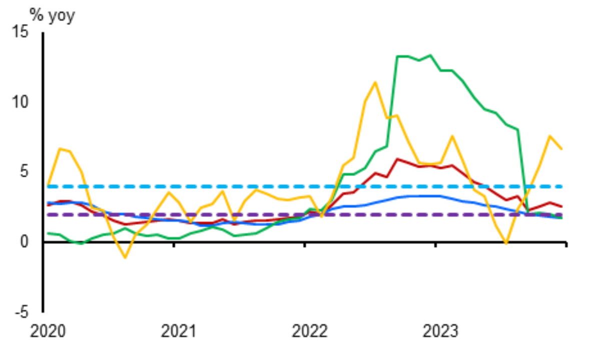
1. The Indonesian economy continued to grow firmly amid external headwinds. Real GDP growth softened from the previous year but still post a solid 5.0 percent in 2023. Resilient domestic consumption and strengthening investment have supported growth from the demand side (Figure 1). Strong public investment related to national strategic projects (PSNs), including development of the new capital city Nusantara, has supported investment amid a slowdown in private investment as investors adopt a "wait-and-see" attitude ahead of the presidential election in early 2024. Having contracted in the second and third quarters of 2023, exports rebounded in the final quarter of 2023, reflecting a recovery in external demand. From the supply side, GDP growth was driven by expanding industrial production and construction activity, as well as a continued recovery in the services sector, notably tourism-related services led by rebounding international tourist arrivals.[1] Labour market conditions continued to improve with the unemployment rate declining from 5.9 percent in 2022 to 5.3 percent in 2023, comparable to pre-pandemic levels. The economy is expected to grow by a faster pace of 5.2 percent in 2024 as domestic demand expands robustly, backed by resilient consumer confidence, election-related spending, and ongoing development of PSNs, while exports also recover led by improved demand from key trading partners.

Figure 1. Contribution to Real GDP Growth



Source: Statistics Indonesia; CEIC; AMRO staff calculations

Figure 2. Consumer Price Indices



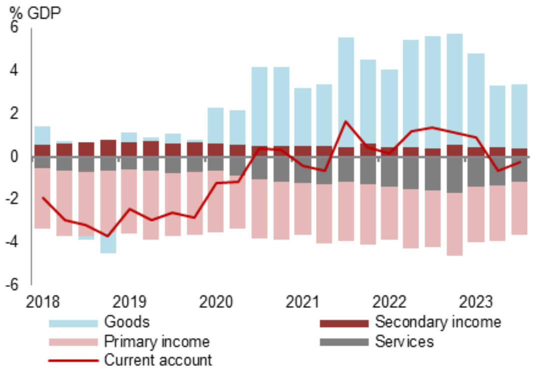
Source: Statistics Indonesia; CEIC; AMRO staff calculations
Note: Monthly data obtained up to December 2023.

2. Inflation has fallen within the target range. Lower food and administered prices underpinned a steady decline in headline CPI inflation from a peak of close to 6 percent in September 2022 to within the inflation target range of 3±1 percent starting June 2023 (Figure 2). Headline CPI inflation consequently averaged 3.7 percent in 2023, down from 4.6 percent in 2022.[2] On the demand side, Bank Indonesia (BI) has been consistently recalibrating its policy mix by hiking the policy rate since August 2022 along with other policy measures, in close policy synergy with the government,[3] to contain inflationary pressures and maintain stability of the Indonesian rupiah exchange rate, thereby mitigating potential imported inflation. Indeed, core CPI inflation has been kept low and stood at 1.8 percent at end-2023. From the supply side, the government stepped up rice imports and strengthened inter-regional supply and distribution of necessity goods, especially food, to alleviate the impact of El Niño conditions on food inflation, notably rice prices in recent months. The government has also

[1] The number of international tourist arrivals averaged about 950,000 monthly in the first 10 months of 2023, about 71 percent of the pre-pandemic (2018-2019) average.
[2] Headline CPI moderated to 2.6 percent as at December 2023, compared to 5.5 percent in December 2022.
[3] Policy synergy has been strengthened through the Central and Regional Inflation Control Teams (TPIPs and TPIDs), as well as the National Movement for Food Inflation Control (GNPIP) in various regions.

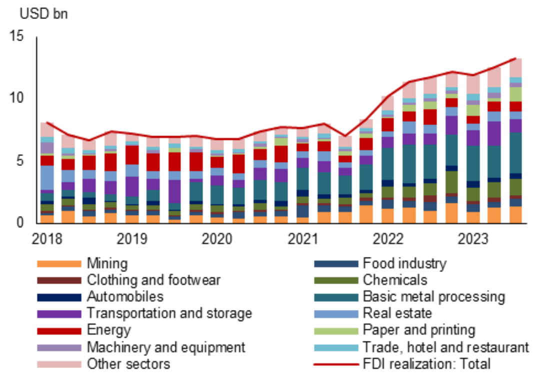
kept subsidized fuel prices unchanged after a one-time increase in 2022. The implementation of both supply and demand-side policies is expected to keep the headline CPI inflation within a lower target range of 2.5±1 percent in 2024.[4]

Figure 3. Current Account Balance



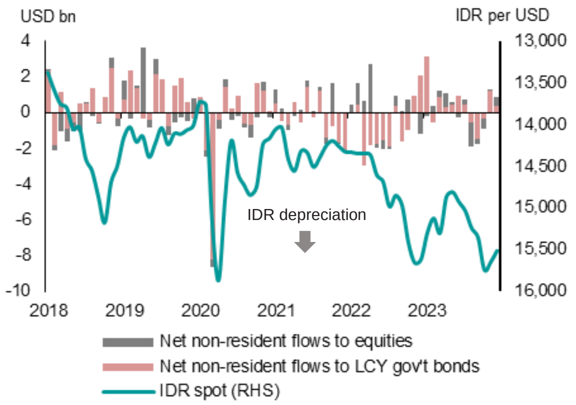
Source: Bank Indonesia; CEIC; AMRO staff calculations
Note: Quarterly data obtained up to Q3 2023.

Figure 4. FDI Realization



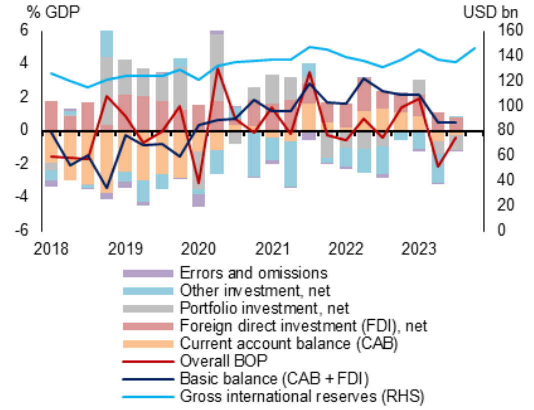
Source: Investment Ministry; CEIC; AMRO staff calculations
Note: Quarterly data obtained up to Q3 2023.

Figure 5. Net Non-resident Flows to Capital Markets and IDR Spot Rate



Source: Bank Indonesia; Ministry of Finance; Jakarta Stock Exchange; CEIC; AMRO staff calculations
Note: Monthly data obtained up to December 2023.

Figure 6. Overall Balance of Payments and Gross International Reserves



Source: Bank Indonesia; CEIC; AMRO staff calculations
Note: BOP data are on a quarterly basis and obtained up to Q3 2023. Gross international reserves data obtained up to December 2023.

A.2 External Sector

3. Trade surpluses, a tourism rebound, and foreign investment inflows have supported the external position. On the back of deteriorating terms of trade due to a significant fall in the prices of key export commodities, Indonesia's trade balance has weakened but still posted sizable surpluses. Sizeable trade surpluses, coupled with ongoing recovery in international tourist arrivals, have supported the current account balance, amid persistent primary income deficits (Figure 3). Likewise, foreign direct investment (FDI) has continued to flow into mining and metal processing, attracted by government incentives to promote the electric vehicle (EV) industry (Figure 4). Concerns about a higher-for-longer U.S. Federal Reserve funds rate regime and heightened geopolitical tensions triggered non-resident portfolio outflows and contributed to rupiah weakness between August and October 2023[5], which also happened broadly in other emerging markets. However, inflows to the domestic capital markets have since resumed, as risk aversion eased with the U.S. monetary policy pivot near end-2023

[4] Headline CPI averaged 3.7 percent in 2023, down from 4.6 percent in 2022 (It moderated to 2.6 percent as at December 2023, compared with 5.5 percent in December 2022). AMRO staff projects headline CPI will average 2.8 percent in 2024.
[5] The rupiah, having appreciated in early 2023, started to depreciate against the U.S. dollar from May and quickened the pace of depreciation in August-October. All in all, the rupiah depreciated about 7.8 percent against the U.S. dollar between May and October. It weakened about 5.2 percent in August-October alone.

(Figure 5). In addition, non-resident inflows into SRBIs totaled to IDR62.2 trillion in 2023. Gross international reserves increased to USD146.4 billion in December 2023, up from USD137.2 billion in December 2022 (Figure 6). The latest reserve position is sufficient to cover about 6.7 months of imports of goods and services, and 209 percent of short-term external debt.

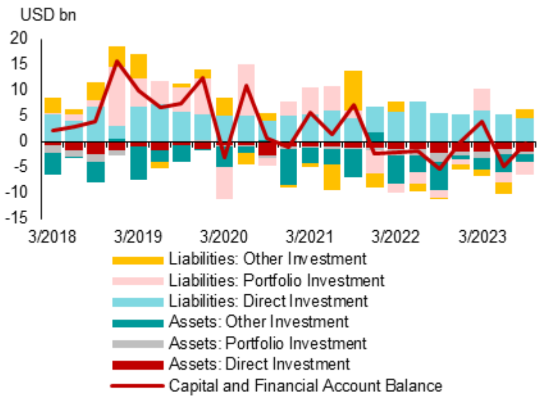
4. External debt has declined as both the public and private sectors reduced foreign currency borrowing. Foreign currency (FCY) borrowings by non-financial companies, notably state-owned enterprises (SOEs) and domestic private firms, declined further in 2023, in line with net outflows related to the private sector's portfolio liabilities. Likewise, the decrease in government external debt was driven by lower FCY bond issuances. Gross external debt moderated to 29.7 percent of GDP in December 2023, from 30.1 percent as at end-2022. The share of short-term external debt by remaining maturities has been manageable at about 17.2 percent of total external debt and 47.8 percent of gross reserves (Table 1).

Table 1. Gross External Debt: 2018-2023

in billions of USD, unless otherwise indicated	2018	2019	2020	2021	2022	2023			
	Dec	Dec	Dec	Dec	Dec	Mar	Jun	Sep	Dec
External debt: Total	375.4	403.6	416.9	414.0	396.5	403.1	396.3	394.2	407.1
External debt, % GDP	*36.0*	*36.1*	*39.3*	*34.9*	*30.1*	*30.1*	*29.3*	*28.9*	*29.7*
External debt: Government	183.2	199.9	206.4	200.2	186.5	194.0	192.5	188.3	196.6
o/w LCY bonds and notes held by non-residents	61.7	76.4	69.0	62.4	48.9	54.7	56.5	53.1	54.6
o/w FCY bonds and notes	66.3	69.1	77.7	81.3	82.0	83.0	80.7	79.9	81.8
o/w FCY loans	55.2	54.4	59.6	56.5	55.6	56.4	55.4	55.2	60.2
External debt: Bank Indonesia	3.1	3.0	2.9	9.0	9.2	9.4	9.3	9.4	13.4
External debt: Banks	34.4	35.2	33.6	32.9	33.9	33.3	32.3	32.9	33.1
External debt: Non-bank financial corporates	10.6	11.4	9.6	8.5	6.3	6.8	6.5	6.5	6.1
External debt: Non-financial corporates	144.2	154.1	164.5	163.4	160.7	159.7	155.7	157.1	157.8
o/w bonds and notes	35.5	39.1	46.9	48.5	48.4	48.3	46.0	45.6	45.1
o/w loans	95.5	100.0	104.9	99.5	97.7	96.8	96.2	98.6	100.4
o/w trade credit	12.0	13.7	11.0	13.7	13.1	13.1	12.2	11.7	11.1
o/w other borrowings	1.2	1.2	1.6	1.6	1.6	1.5	1.3	1.2	1.3
External debt: short-term by remaining maturities	60.2	63.3	65.1	59.4	66.6	67.3	62.9	65.5	70.0
in percent of total external debt	*16.0*	*15.7*	*15.6*	*14.4*	*16.8*	*16.7*	*15.9*	*16.6*	*17.2*
in percent of gross international reserves	*49.9*	*49.0*	*47.9*	*41.0*	*48.6*	*46.4*	*45.7*	*48.5*	*47.8*

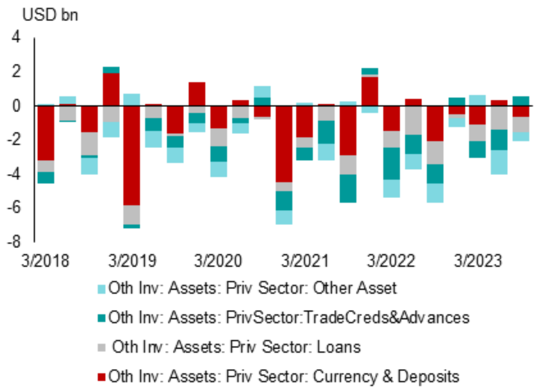
Source: Bank Indonesia; CEIC; AMRO staff calculations
Note: BI's increased external debt in 2021 was due to the IMF's additional SDR allocation.

Figure 7. Capital and Financial Account



Source: Bank Indonesia; CEIC; AMRO staff calculations
Note: Quarterly data obtained up to Q3 2023.

Figure 8. Other Investment Assets



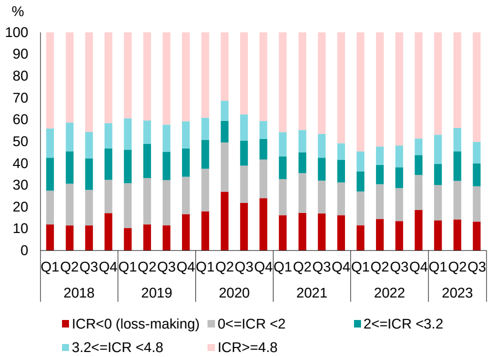
Source: Bank Indonesia; CEIC; AMRO staff calculations
Note: A negative value indicate an increase in residents' overseas assets and, by extension, BOP outflows. Quarterly data obtained up to Q3 2023.

5. Indonesian firms have continued to acquire assets abroad. Balance of payments data shows continued outflows associated with residents investing abroad in the form of direct and portfolio investment, as well as other investment assets in recent quarters (Figure 7). In particular, residents' "currency and deposits" account showed a net outflow in Q3 2023, reversing the net inflow observed in the previous quarter following BI's launch of FCY term deposits with market-competitive interest rates to attract foreign exchange proceeds from exporters of natural resources (Figure 8).[6] On a related note, FX repatriation regulations have been tightened, requiring exporters of natural resources to retain at least 30 percent of FX proceeds onshore for a minimum of three months upon repatriation, effective August 2023.[7]

A.3 Corporate and Banking Sector

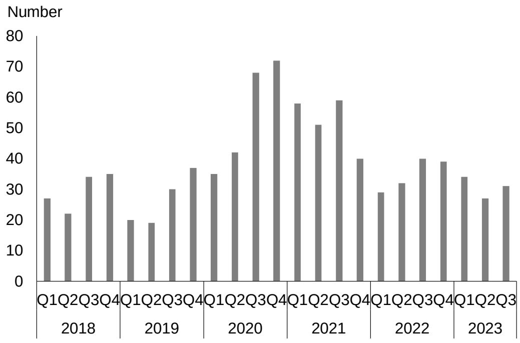
6. Listed firms' financial performance has generally improved, albeit with some divergence across sectors. More than half of listed companies reported improved earnings from the previous period as of Q3 2023.[8] The share of listed firms reporting an interest coverage ratio below 2 continued to decline to 29.4 percent at end-Q3 2023 from 34.6 percent at end-2022 (Figure 9). The number of listed firms reporting at least three consecutive quarters of negative earnings has shrunk further, from 39 in Q4 2022 to 31 in Q3 2023 (Figure 10). However, divergent developments are observed across sub-sectors (Figure 11). Those producing discretionary and necessity consumer goods have benefited from stronger domestic consumption and a tourism revival. Meanwhile, the real estate sector has recovered from the pandemic, albeit at a slower pace than other sectors.[9]

Figure 9. Composition of Listed Firms by ICR



Source: Bloomberg; AMRO staff calculations
Note: Interest coverage ratio (ICR) is calculated as the ratio of earnings before tax, depreciation and amortization (EBITDA) to total interest expenses. Quarterly data obtained up to Q3 2023.

Figure 10. Number of Listed Firms with Three Consecutive Quarters Negative Earnings



Source: Bloomberg; AMRO staff calculations
Note: Listed firms' earnings are before EBITDA. Quarterly data obtained up to Q3 2023.

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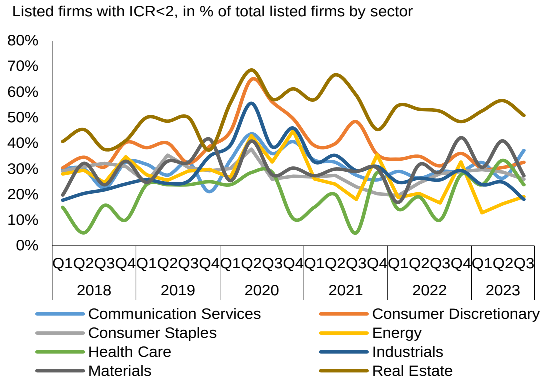
[6] That said, FCY term deposits placed with BI continued to increase, tripling to USD4.5 billion in November 2023 from USD 1.5 billion in August.

[7] Government Regulation 36 was issued in July 2023 and became effective in August. That said, exporters are required to repatriate FX proceeds within three months from the date of receipt. As such, the full impact of the regulation is likely to be felt from November onwards.

[8] According to OJK, out of 802 companies who submitted financial statements, 421 reported better earnings from last year. Notably, financials, consumer non-cyclicals, and property & real estate companies exhibited year-on-year improvements in profits in Q3 2023.

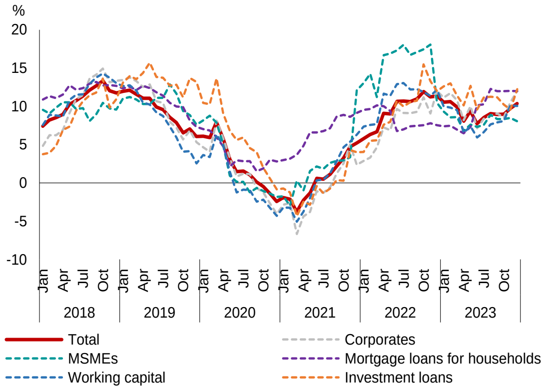
[9] The availability of Indonesia's property price data has been limited. According to a data series starting from 2018 published by Bank Indonesia, the residential property price in 18 cities in Indonesia increased moderately by 1.9 percent year-on-year on average in the first nine months of 2023, slightly up from a 1.8 percent growth recorded in 2022. Mortgage loans have increased in nominal terms but hovered around 3.3 percent of GDP, one among the lowest in the region (Thailand: 25.1 percent of GDP, Malaysia: 38.5 percent of GDP).

Figure 11. Listed Firms at Risk by Sector



Source: Bloomberg; AMRO staff calculations
Note: Quarterly data obtained up to Q3 2023.

Figure 12. Bank Loan Growth by Type of Loan



Source: OJK; BI; CEIC; AMRO staff calculations
Note: Monthly data obtained up to December 2023.

7. Bank lending continues to increase robustly across all segments and loan types along with the economic recovery, with BI's lending incentives supporting liquidity conditions. Overall credit growth continued to recover, averaging 9.3 percent in 2023 (Figure 12).[10] While the figure has moderated somewhat from 9.6 percent in 2022, it still signals robust credit expansion, matching the level recorded in 2019. However, in recent months, the growth of working capital loans has been lower than that of total credit. This is primarily because firms have been increasing loan repayments and relying on internal financing, drawing on the substantial deposits accumulated during the COVID-19 pandemic and avoiding higher lending rates. Liquidity conditions continued to normalize, reflected in a moderation of banks' excess reserves kept at BI, and a higher loan-to-deposit ratio (Figure 14). Nevertheless, liquidity conditions remain ample compared with pre-pandemic levels. To support bank lending to the economy, Bank Indonesia provides incentives in the form of reserve requirement ratio (RRR) discounts for banks that lend to selected sectors (downstreaming, housing, and tourism), and to micro, small, and medium enterprises (MSMEs, including ultra-micro lending) and to banks that meet the Macroprudential Inclusive Financing Ratio or RPIM target and green sectors, in line with the Macroprudential Liquidity Incentives Policy, known as KLM (Figure 13).[11]

8. The banking sector has been resilient, posting a stable non-performing loan (NPL) ratio, high capital buffers, elevated provisions, and robust earnings. Benefiting from the strengthened economic recovery, the size of restructured loans declined from IDR469 trillion or 7.3 percent of total loans outstanding at end-2022, to IDR266 trillion or 3.8 percent as of December 2023. The NPL ratio was also stable at 2.2 percent in December 2023 (Figure 15).[12] Loan-loss provisions have been sufficient to cover more than 210 percent of NPLs, while banks' capital adequacy ratio stood at 27.7 percent as of December 2023, one of the highest in the region (Figure 16). Banks' net interest margin improved to an average of 4.8 percent in 2023, driven by enhanced asset quality, loan expansion, and the repricing of lending rates. This supported the continued recovery of the return on assets (ROA), which averaged 2.7

[10] Data cover loans extended by commercial and rural banks, sourced from Bank Indonesia. For loans extended by commercial bank only, the growth stood at 10.4 percent as of December 2023 as reported by the Financial Services Authority (OJK).
[11] The KLM policy became effective in October 2023 to encourage banks to increase lending to selected sectors and MSMEs. BI allows banks that lend to selected sectors and MSMEs to enjoy a lower RRR. The maximum discount on the RRR was 400 basis points in October 2023. Before the KLM policy become effective, BI also provided macroprudential incentives to banks that lend to resilient sectors, growth drivers, slow starters, and MSMEs. The maximum discount on the RRR was initially set at 200 basis points in 2022, and later increased to 280 basis points in April 2023.
[12] Some banks have voluntarily reclassified non-viable restructured loans as NPLs, and forecast that the NPL ratio will only marginally increase after the loan restructuring program expires in March 2024.

percent, surpassing not only pre-pandemic levels but also the performance of regional peers (Figure 17).[13]

Figure 13. Maximum RRR Discounts based on Bank Lending to Specific Sectors and MSMEs

Macroprudential Incentives

Announcement Date: May-22
Effective Date: Sep-22

Sector	Threshold	Incentive (bps)
Resilient Sectors (14 sectors)	≥ 1%-6%	20
	> 6%-8%	30
	> 8%	40
Growth Drivers (25 sectors)	≥ 1%-4%	40
	> 4%-6%	50
	> 6%	60
Slow Starters (7 sectors)	≥ 1%-3%	30
	> 3%-4%	40
	> 4%	50
Maximum Incentives for Priority Sectors		150
MSME Sector	≥ 10%-20%	20
	> 20%-30%	30
	> 30%	50
Overall Maximum Incentives		**200**

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Announcement Date: Dec-22
Effective Date: Apr-23

Sector	Threshold	Incentive (bps)
Resilient Sectors (16 sectors)	≥ 5%-10%	20
	> 10%-15%	30
	> 15%	40
Growth Drivers (26 sectors)	≥ 3%-8%	40
	> 8%-10%	50
	> 10%	60
Slow Starters (4 sectors)	≥ 1%-3%	30
	> 3%-6%	40
	> 6%	50
Maximum Incentives for Priority Sectors		150
MSME Sector	≥ 10%-20%	10
	> 20%-30%	40
	> 30%-50%	60
	> 50%	100
Green Financing	> 0%-5%	15
	> 5%	30
Overall Maximum Incentives		**280**

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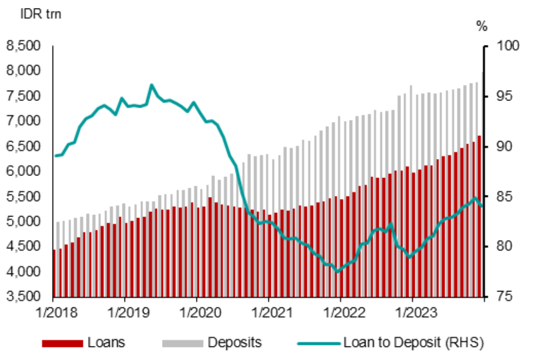
Macroprudential Liquidity Incentive Policy (KLM)

Announcement Date: Jul-23
Effective Date: Oct-23

Sector	Threshold	Incentive (bps)
Mineral and Coal Mining Sector	≥ 3%-7%	20
	> 7%	30
Agriculture Sector	≥ 3%-7%	60
	> 7%	80
Real Estate Sector	> 3%-7%	50
	>7%	60
Tourism (Hotel and Restaurants) Sector	> 3%-7%	25
	>7%	30
Maximum Incentives for Priority Sectors		200
MSME/KUR	≥ 10%-20%	10
	> 20%-30%	40
	> 30%-50%	60
	> 50%	100
Ultro Micro (Umi)	> 0%-3%	30
	>3%	50
Green Financing	> 0%-5%	30
	> 5%	50
Overall Maximum Incentives		**400**

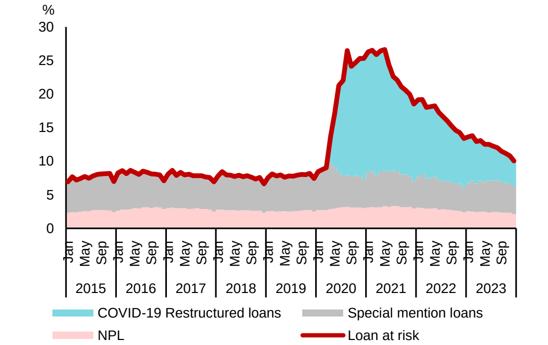
Source: Bank Indonesia

Figure 14. Bank Loans, Deposits, and Loan to Deposit Ratio



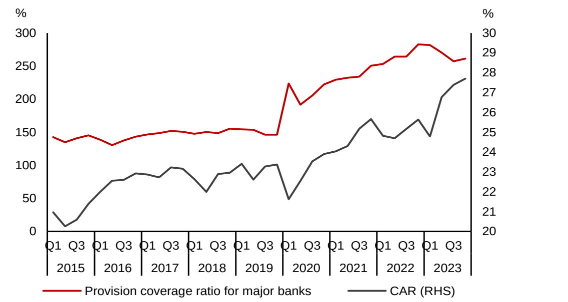
Source: OJK; BI; CEIC; AMRO staff calculations
Note: Monthly data obtained up to December 2023.

Figure 15. Banks' NPLs, Special Mentions and Restructured Loans



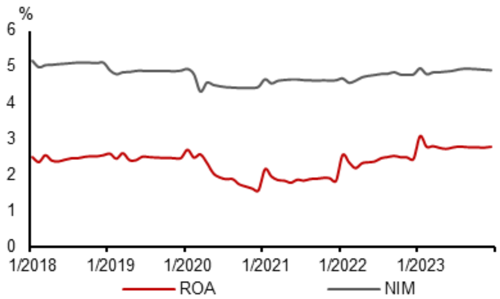
Source: OJK; BI; CEIC; banks' financial reports; AMRO staff calculations. Note: Monthly data obtained up to December 2023.

Figure 16. Capital Adequacy Ratio and Provision Coverage of NPLs



Source: OJK; BI; CEIC; Moody's; banks' financial reports; AMRO staff calculations
Note: The provision coverage of NPLs is calculated by AMRO staff members using the data of Bank Rakyat Indonesia (BRI), Bank Mandiri, Bank Central Asia (BCA), Bank Negara Indonesia (BNI), Bank CIMB and Bank Danamon. Quarterly data obtained up to Q4 2023.

Figure 17. Returns on Assets (ROA) and Net Interest Margins



Source: OJK; CEIC; AMRO staff calculations
Note: Monthly data obtained up to December 2023.

[13] According to BI's data, the banking industry's average lending rate for working capital and investment loans has picked up along with higher policy rates and bank deposit rates, albeit at a slower pace. That said, bank-level data suggests lending rates applicable to corporate loans have increased at a much faster pace than the cost of funds, resulting in an improved net interest margin.

9. Initiatives to boost infrastructure development are ongoing. The latest list of PSNs consists of 204 ongoing projects and 13 programs[14] with an estimated investment value of USD382.3 billion as of November 2023. More than 170 projects have been completed since 2016, with a total investment value of USD93.2 billion. Regarding the financing of infrastructure investment, the government expects about 65 percent of the financing of the PSNs to come from the private sector, with the remainder to be funded by SOEs and the government budget. However, some infrastructure and construction SOEs have experienced financial distress over the past few years. Having borrowed heavily to invest in infrastructure projects, these SOEs have incurred a cash flow mismatch and defaulted on their debts, mainly due to weak revenue collections during the pandemic and delays in divesting from the projects. The government has taken actions to alleviate the financial burden of these SOEs and keep them actively involved in infrastructure development. Several SOEs have entered debt restructuring agreements with creditors while Parliament has approved the government's proposed capital injections into some of them (Selected Issue 1).[15]

A.4 Monetary Sector

10. Bank Indonesia has strengthened its policy mix to maintain macroeconomic stability and support sustainable economic growth.

a. **Interest rate policy.** Similar to other emerging market (EM) currencies, the rupiah faced downward pressures amid renewed capital flow volatility starting in mid-2023.[16] Although inflation has moderated to within the central bank's target range, BI still maintained its policy rate, BI-Rate[17], at 6 percent to support the rupiah exchange rate stability and contain potential imported inflation. Being raised by 225 basis points in total since August 2022, BI-Rate was kept unchanged at 5.75 percent from February to October 2023, when it was raised by 25 basis points to 6 percent (Figure 18). The latest rate hike in October 2023 is said to have been pre-emptive and forward looking to support rupiah stabilization and mitigate the impact of imported inflation, thereby keeping inflation under control and within the target corridor of 3.0±1 percent in 2023 and 2.5±1 percent in 2024.

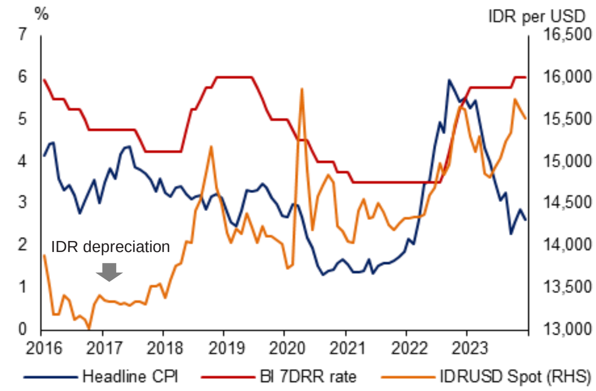
b. **FX intervention policy.** BI has continued its triple intervention policy, meaning intervention in the spot FX, domestic non-deliverable forward (DNDF) and secondary government bond markets, to maintain the stability of the rupiah exchange rate.

c. **Financial deepening policy.** BI has introduced more market-friendly financial products to deepen the money market and attract FX funds into the domestic market. Earlier this year, the central bank launched FX term deposits that offer market competitive interest rates to exporters of natural resources, to encourage them to retain FX earnings onshore. BI also started to issue Bank Indonesia rupiah securities (SRBI), a rupiah-denominated financial instrument with government bonds held by BI as the underlying asset, to absorb liquidity in replacement of reverse repos in monetary operations (Box A). SRBI carries fixed and market-competitive interest rates, and is hence tradable in the secondary market. The issuance is therefore expected to enhance the market liquidity and attract inflows from foreign investors. The central

[14] Most of these projects concern infrastructure such as toll roads, dams, railways, and power plants, while also including non-infrastructure projects such as smelters, industrial estates, tourism, and education.
[15] Two of the above-mentioned SOEs have undergone debt restructuring agreements with creditors and their loans have been classified as Stage 2 with increased provisions in some banks' books. Close monitoring is hence warranted to determine if these loans could be further downgraded to Stage 3 loans, or NPLs.
[16] The rupiah depreciated about 7.8 percent against the U.S. dollar between May and October 2023, with the pace of depreciation quickening between August and October. During the same period, the Malaysian ringgit and Thai baht also depreciated about 6.9 percent and 5.8 percent, respectively, while the Philippine peso and Singapore dollar lost about 2.8 percent and 3 percent of their nominal value against the U.S. dollar, respectively.
[17] BI has changed the name of its policy rate from BI 7-Day Reverse Repo Rate (BI7DRR) to BI-Rate since December 21, 2023, to strengthen monetary policy communication. The new name does not change the meaning or objectives of BI-Rate as the monetary policy stance, with operationalization still referring to BI reverse repo transactions with a tenor of seven days.

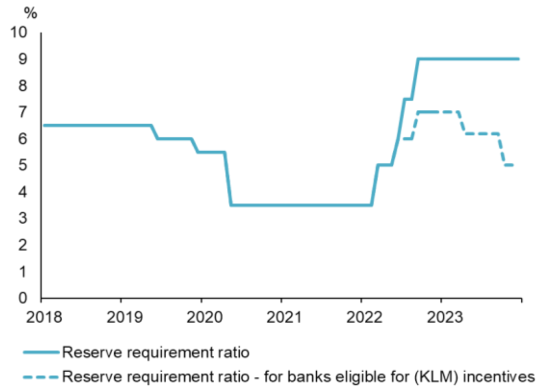
bank also issued Bank Indonesia foreign currency securities (SVBI) and Bank Indonesia foreign currency sukuk (SUVBI), which are collateralized by BI's FCY assets as underlying assets and are tradable in the secondary market**.**

Figure 18. Headline CPI, BI Policy Rate, and IDRUSD Spot Rates



Source: Bank Indonesia; BPS; CEIC; AMRO staff calculations
Note: Monthly data are up to December 2023.

Figure 19. Reserve Requirement Ratio



Source: Bank Indonesia; CEIC; AMRO staff calculations
Note: Monthly data are up to December 2023.

d. **Macroprudential policy.** To ensure sufficient liquidity to support the economy, BI has maintained an accommodative macroprudential policy. While the primary RRR is currently set at 9 percent, up from 3.5 percent during the pandemic, banks which meet BI's criteria for lending to selected sectors and businesses, namely, minerals and downstream industries, agriculture, tourism, housing, MSMEs, and green sectors, can enjoy an RRR as low as 5 percent from October 2023 (maximum incentives of 4 percent), compared with 6.2 percent previously (maximum incentives of 2.8 percent), in line with the strengthened KLM policy (Figure 19).[18] More recently, the central bank lowered the requirement on the Macroprudential Liquidity Buffer ratio (MPLB), essentially the secondary reserve requirement, by 100 basis points from 6 percent to 5 percent for conventional banks, and from 4.5 percent to 3.5 percent for shariah banks, effective December 2023. BI also extended the 100 percent loan-to-value (LTV) ratio for mortgage loans and zero down payment policy for vehicle loans by one more year until December 2024. Furthermore, BI maintained the Countercyclical Capital Buffer at zero percent and the Macroprudential Intermediation Ratio, or the loan to funding ratio, in the 84-94 percent range, and continued its policy to enhance the transparency of banks' prime lending rates.

e. **Payment system policy.** As for domestic payment systems, BI has elevated the Quick Response Indonesia Standard (QRIS) system with an innovative enhancement known as QRIS Tuntas, adding more features such as cash withdrawals, transfers and deposits. BI is also in the process of expanding the number of BI-FAST participants and other services including direct debit, bulk credit, and request for payment services.[19] The Indonesia Credit Card (KKI) initiative, launched in May 2023, has allowed the government to make digital payments for the purchase of goods and services at a zero percent fee, and its merchants or partners to enjoy lower fees compared to commercial credit cards. On cross-border payments, BI has continued to expand cooperation with other central banks to promote the use of local currency transactions (LCTs) notably for trade and investment activities (Selected Issue 2). As

[18] According to BI's estimate, the increased discount on RRR, effective October 2023, has injected additional liquidity of IDR138 trillion into banks.
[19] Direct debit is a financial transaction in which one party can collect payments from another party's bank account. This method is often used for recurring payments, such as utility bills, subscriptions, or loan repayments. Bulk credit refers to a payment process that handles multiple individual credit transactions simultaneously or in a single batch. It is commonly used for the payment of salaries, dividends, and vendor purchases. Request for Payment (RFP) services involve one party initiating a payment to another party, typically in the context of invoicing or bill payment.

for retail payments, Indonesia launched the cross-border QRIS payment linkages with Malaysia and Singapore in May and August 2023, respectively, in addition to a similar arrangement with Thailand in 2022. Meanwhile, a national task force, involving BI and line ministries, has been formed to expand LCT usage in Indonesia with partner countries.

A.5 Fiscal Sector

11. Solid revenue collection has allowed the government to increase budget spending while keeping the fiscal deficit below 3 percent of GDP in 2023.

a. **Revenue.** Strong income tax revenue and an increase in profits transferred from SOEs[20] contributed to the annual increase of 5.3 percent in revenue collection to IDR2,774 trillion in 2023, compared with a budgeted contraction of 6.6 percent. In addition, an increase in coal production royalty fees also lifted non-tax revenue from non-oil and gas natural resources despite declining coal prices.[21] Revenue collection as a percentage of GDP normalized from the previous year's high base due to tax reforms, economic recovery, and commodity price windfalls,[22] but remained elevated at 13.3 percent of GDP in 2023, higher than pre-pandemic levels.

b. **Expenditure.** To support growth and domestic demand, the government raised expenditure in the 2023 Budget Outlook to IDR3,124 trillion, up from the original Budget plan of IDR3,061 trillion, focusing on material and capital spending, energy subsidies[23], and regional transfers. The government provided support measures including a tax incentive for homebuyers, extension of a rice handout program, and increased cash handouts for low income households to cope with rising food prices.[24] Budget expenditure realization was preliminarily estimated at IDR3,122 trillion in 2023, in line with the revised budget and equivalent to 15.0 percent of GDP in 2023 (2022: 15.8 percent). Notably, the disbursement of regional transfers picked up pace, thanks to policy measures to boost local government spending, including the implementation of the central-regional government's fiscal relations law.[25]

c. **Fiscal balance.** The overall fiscal balance in 2023 is estimated at a deficit of 1.7 percent of GDP, lower than the 2.4 percent deficit recorded in the previous year and the 2023 Budget deficit of 2.8 percent. This marks the second year that the

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[20] A large share of the profits transferred from SOEs comes from state-owned banks, such as Bank Mandiri, BNI, BRI, and BTN, and from non-bank SOEs in sectors such as energy (oil and gas company Pertamina and electricity company PLN) and mining. The share contributed by infrastructure and construction SOEs discussed in paragraph 9 has been relatively small and hence their recent worse financial performance seems to have made more impact on the government's capital injections into these SOEs below the line.

[21] Government Regulation 26/2022

[22] Budget revenue increased to 13.5 percent of GDP in 2022, benefiting from tax reforms, notably a higher value-added tax rate from 10 percent to 11 percent, which was estimated to raise VAT collection by 0.2 percent of GDP in 2022. The reform also included a voluntary disclosure program that granted lower income tax rates for assets undeclared in the past, estimated to contribute a one-time increase in income tax collection equivalent to about 0.3 percent of GDP in 2022, and which broadened the tax base with an additional 250 thousand taxpayers joining the program with declared assets of IDR596 trillion, about 3 percent of 2022 GDP. As well, revenue windfalls were recorded in 2022 on the back of a commodity price boom, in addition to a recovery in economic activity after the pandemic.

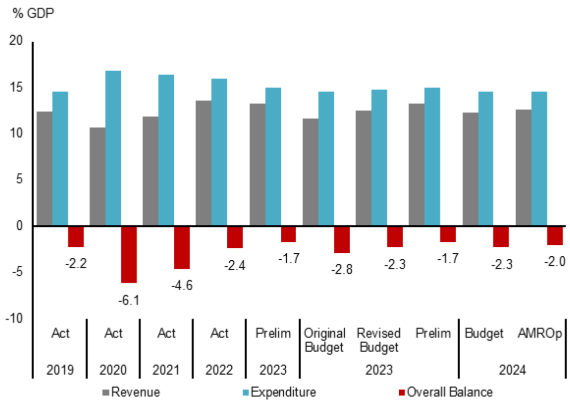
[23] In the form of compensation to state-owned oil and gas company Pertamina.

[24] The supports include rice assistance of 10kg provided to 21.3 million beneficiaries in 2023 and direct cash transfers of IDR200,000 per month given to 18.8 million beneficiaries in December 2023; increased interest subsidies to MSMEs under the people's business loans (KUR) program, which provides an additional KUR disbursement amount of IDR297 trillion; and VAT exemptions and reductions for new home transactions of less than IDR2 billion in value. These forms of policy support will cost the budget about IDR13.4 trillion during 2023-2024, which is less than 0.1 percent of GDP. The government expected the support measures would boost economic growth by about 0.06 percentage points in 2023 and by 0.13 percentage points in 2024.

[25] The Law was endorsed in 2021 and became effective in 2022. It intends to enhance local taxation powers, improve the quality of local government spending capacity, minimize vertical (central-subnational) and horizontal (among provinces and districts) fiscal imbalances, and harmonize fiscal and financial relations between central and subnational governments to optimise subnational public service delivery. In terms of local government spending capacity, the law requires a local government to spend at least 40 percent of its budget on infrastructure projects and at most 30 percent on personnel expenditure. To enhance vertical and horizontal equality, allocations for budget transfers to regional government and village funds have been redesigned and reformulated based on the performance of each local government.

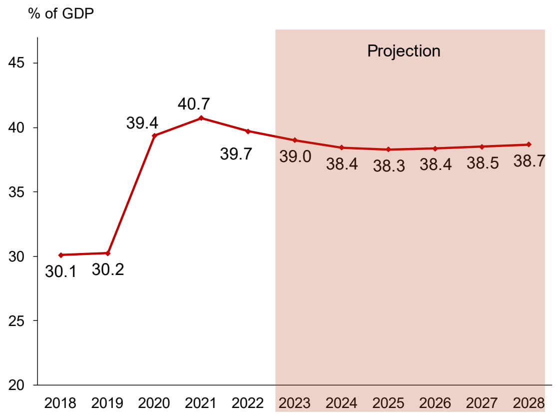
government has adhered to the fiscal rule that caps the fiscal deficit at 3 percent of GDP after a hiatus due to the pandemic (Figure 20).

Figure 20. Overall Budget Performance



Source: Ministry of Finance; CEIC; AMRO staff projections

Figure 21. Government Debt



Source: Ministry of Finance; CEIC; AMRO staff calculations

12. The fiscal stance is expected to be broadly neutral in 2024. Strengthened domestic economic activity is expected to underpin solid tax revenue collection despite continued normalization of revenue from the windfall in commodity prices in 2021-2022. In addition to the roll-out of online tax filing and payment over the past years, the implementation of a single identification number, or "Single ID", for individual taxpayers by replacing the current tax identification number (TIN) with the national ID number,[26] and the implementation of a new core tax system[27], will lower compliance costs for taxpayers and enhance tax administration efficiency. Expenditure as a percentage of GDP, meanwhile, is expected to remain broadly unchanged from the 2023 Budget Outlook, as the impact of higher personnel and subsidy spending, as well as regional transfers, is offset by lower material and capital spending. AMRO staff projects the fiscal balance to register a deficit of about 2 percent of GDP in 2024, compared with a targeted fiscal deficit of 2.3 percent of GDP in the budget. Against these backdrops, government debt is likely to moderate to 38.4 percent of GDP in 2024, from about 39.0 percent in 2023 and 39.7 percent in 2022 (Figure 21).

13. Sustained fiscal prudence has helped the government contain its gross financing needs and ensure debt sustainability, as the central bank stopped buying government bonds in the primary market in 2023. A stronger-than-expected revenue performance allowed the government to lower its bond issuances via regular auctions to about IDR25 trillion per fortnight in 2023, less than the IDR38 trillion indicated in the budget. Even so, the actual budget deficit is estimated to be even smaller, leading to an excess in budget financing (SiLPA) of IDR11.9 trillion by end-2023.[28] Increased bond demand from non-bank domestic investors, notably institutional investors such as pension funds and insurance companies,

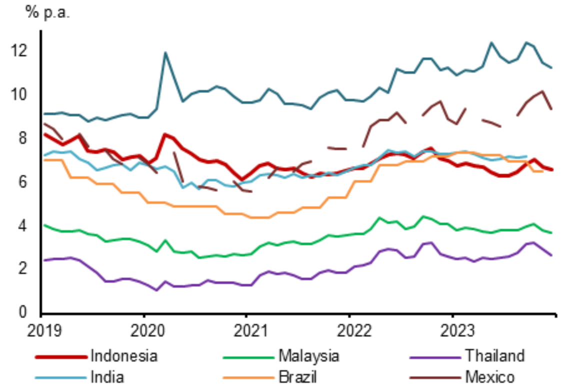
[26] In Indonesia, the national ID is individual-specific, and lifelong, and serves as fundamental data for public service administration. Additionally, for tax purposes, every citizen who registers and meets the criteria as a taxpayer is issued with a tax identification number (TIN). From the taxation perspective, allowing multiple IDs for administrative purposes means that some individuals may have not registered for a TIN even though they meet the requirements as taxpayers. The integration of all data under a single portal known as the Single Identification Number, or Single ID, will make it possible for the government to process its citizens' data more efficiently. The Single ID will also benefit taxpayers as they can use it for accessing tax services. For more information on this policy initiative, see IMF, 2023.

[27] The core tax administration system is an information technology system that provides integrated support to the implementation of the duties of the Directorate General of Tax (DGT) including business process automation covering the taxpayer registration process, processing of notifications and other tax documents, tax payment processing, support on audit documents and tax collection letters, and taxpayer accounting function. Efforts to develop the core tax system started in 2017 with the business process redesigned and its output used for the procurement process. While other countries' experiences indicate that core tax reform might take more than 10 years from planning to implementation, Ministry of Finance of Indonesia targets finishing the project by mid-2024, which meant it would have taken seven years. The implementation of a core tax system is expected to enhance the DGT capacity of data matching and risk management, and hence speed up the tax refund process.

[28] Based on the Ministry of Finance's preliminary fiscal data for 2023, AMRO staff estimates that about IDR44.8 trillion was withdrawn from fiscal reserves (SAL) to finance the budget in 2023. The SAL outstanding is hence estimated at IDR446 trillion as at end-2023, compared with about IDR479 trillion as at end-2022.

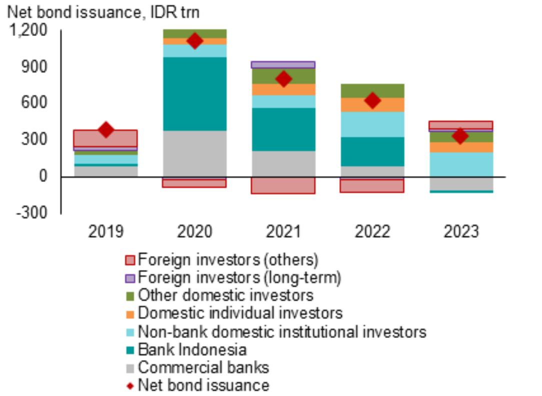
coupled with the return of foreign investors in 2023[29], underpinned a moderation in government bond yields even though commercial banks and to a lesser extent, BI, reduced their holdings in 2023 (Figures 22&23).

Figure 22. Government Bond Yields: Selected EMs



Source: CEIC; AMRO staff calculations
Note: Monthly data are up to December 2023, except for India (September), Brazil and Chile (November).

Figure 23. Net Bond Issuance Absorption



Source: Ministry of Finance; CEIC; AMRO staff projections

14. The government's gross financing needs in the medium term are forecast to be elevated relative to pre-pandemic levels but would remain below regional peers. This is in part due to the shorter maturity of government bonds privately placed with the central bank in 2020-2022 to finance budget spending related to the pandemic (Appendix 5: Debt Sustainability Analysis). BI and the Ministry of Finance entered into unprecedented agreements known as SKB II in 2020 and SKB III in 2021, whereby BI purchased government bonds in the primary market to fund pandemic-related budget spending. The size of BI's bond purchase via private placement was IDR397.6 trillion, IDR215.0 trillion, and IDR224.0 trillion in 2020, 2021 and 2022, respectively.[30] These bonds have tenors ranging between five and eight years, and are scheduled to mature from 2025 onwards, with the burden of debt repayment expected to peak in 2027-2028. To flatten the overall bond maturity profile and alleviate repayment pressure due to the shorter tenors of SKB II and III bonds, the Ministry of Finance has conducted debt switches directly with major bond holders such as the central bank and the Indonesia Deposit Insurance Corporation (LPS), and with other investors via the secondary market.[31]

15. The government has made international commitments to reduce carbon emissions in a bid to mitigate and adapt to climate change. In its Enhanced Nationally Determined Contribution (ENDC) submitted to the United Nations Framework Convention on Climate Change (UNFCCC) in 2022, Indonesia committed unconditionally to reducing the greenhouse gas (GHG) emissions by 31.9 percent by 2030, up from the original 29.0 percent (unconditionally)[32] and by 43.2 percent up from original 41.0 percent (conditional on international supports). The country also aimed to achieve net-zero emissions by 2060 or sooner. To reduce energy sector emissions, the government in coordination with key stakeholders including state-owned electricity generator and distributor PLN, sought to increase the share of renewable energy in the power mix to at least 23 percent in 2025 and

[29] Except between August and October.
[30] BI's holding of government bonds increased from IDR271 trillion as of end-2019 to IDR1,454 trillion as of end-2022, mainly because of these SKB II and III bonds. As of September 2023, BI's holding of government bonds moderated somewhat to IDR1,362 trillion, accounting for about 24.7 percent of total bonds outstanding.
[31] Debt-switching transactions aim to make the government bond maturity profile longer by switching near-matured bonds (source bonds) with new bonds with longer maturity (destination bonds). The government did a transaction with BI in December 2022 that switched bonds that would mature in 1-2 years with new bonds of 5-15 years tenor, with a total size of IDR23 trillion. In 2023, the government conducted a debt switch with LPS for IDR15 trillion. Meanwhile, the government conducted two debt switches with other investors via market mechanism in March and September 2023, for a smaller amount (of IDR5 trillion in total).
[32] This is expected to be fulfilled mostly via forest conservation and rehabilitation and development of natural forest and peat ecosystems, as well as raising the share of renewable energy in the energy mix and lower primary energy intensity.

31 percent in 2050, from its current 10.4 percent in 2022.[33] On the fiscal policy front, the government has given fiscal incentives to the green industry and its supply chain.[34] The government had planned to impose a carbon tax along with mandatory emission trading under a "cap and tax" scheme in April 2022. The implementation of the carbon tax has been delayed considering recent macroeconomic and fiscal conditions. Meanwhile emission trading has been made mandatory among large coal-fired power plants since February 2023.[35] Meanwhile, voluntary carbon trading started on the Indonesia Carbon Exchange, or IDX Carbon platform, in September 2023 (Appendix 6: Climate Change Clipboard).[36] This carbon market is expected to mobilize private funds to finance green transition in Indonesia. To provide financial institutions with guidance on how to identify and classify activities that can be considered green and/or aligned with decarbonization goals, the Financial Services Authority (OJK) launched its first green taxonomy in early 2022, known as Indonesia Green Taxonomy Edition 1.0[37] and more recently, the Taxonomy for Indonesian Sustainable Finance.[38] Adaptation efforts have been made to enhance the resiliency of the socio-economy and livelihood, as well as ecosystems and landscapes, aiming at reducing climate-related economic loss from IDR545 trillion to IDR263 trillion.[39]

[33] Based on National Energy General Plan (Presidential Regulation No. 22/2017). According to IESR Report on Indonesia Energy Transition outlook 2023, the share of renewable energy in Indonesia's primary energy mix was 10.4 percent in 2022, declined from 11.5 percent in 2021.

[34] Fiscal incentives are in the form of corporate tax holidays and allowances to investors in the EV industry and its related supply chains, such as electric battery production, VAT rate cut, property tax cut, luxury tax cut, import duty exemptions, vehicle tax cut, and EV purchase subsidy.

[35] Mandatory carbon trading starts with coal-fired power plants at the initial phase and is envisioned to be expanded to other sectors in subsequent phases.

[36] The National Carbon Exchange (IDX Carbon) serves as a carbon trading organizer that has obtained a business license from OJK. Participants in voluntary carbon trading are renewable energy companies, airlines, banks, and securities companies. The total trading volume was about 459,953 CO_2e tons and the price ranged from IDR60,000 to IDR70,000 per ton.

[37] Indonesia Green Taxonomy Edition 1.0 is structured based on Indonesia Standard Industrial Classification (KBLI) and categorized them as (i) green or activities with positive impacts on the environment and aligned with national environmental objectives, (ii) yellow or activities that are not significantly harmful to the environmental but still transitioning to better alignment with national environmental objectives, and (iii) red or activities which are environmentally harmful. There are 2,733 sub-sectors/group/business activities under the most detailed KBLI classification, or KBLI Level 5, and the Green Taxonomy Edition 1.0 has studied these activities and mapped 919 activities and clarified its threshold by line ministries. Among these 919 subsectors/groups/business activities, 15 have been categorized as green, 422 as yellow and the remaining 482 as red. (Source: OJK)

[38] The Indonesia Sustainable Taxonomy aims to accommodate energy transition activities that align with Paris Agreement principles. This taxonomy is interoperable with ASEAN Taxonomy for Sustainability Finance Version 2.

[39] specific adaptation measures have been included in the National Action Plan (NAP) on Climate Change Adaptation which has been mainstreamed into the National Medium-Term Development Planning (RPJMN 2020-2024) and are now under discussion to update into the next National Medium-Term Development Planning (RPJMN 2025-2029).

Box A. Overview of BI's New Monetary Policy Instruments[40]

The central bank started to issue Bank Indonesia rupiah securities (SRBI) from September 2023, as well as Bank Indonesia foreign currency securities (SVBI) and Bank Indonesia foreign currency sukuk securities (SUVBI) from November 2023, as new monetary operation instruments. The SRBI is denominated in rupiah with underlying assets of government securities[41] held by BI, while the SVBI is denominated in U.S. dollars with underlying assets of U.S. dollar global bonds held by BI. The SUVBI is the Sharia version of the SVBI, with underlying assets of U.S. dollar Sukuk held by BI (Table A1). All three instruments are offered through variable-rate tender auctions[42] with various tenors. The SRBI issued with tenors of six, nine, and twelve months, replaces the reverse repo of the same tenors (six, nine, and twelve months), while the SVBI replaces FX term deposits of the same tenors.[43] A new feature, in contrast to previous types of securities, is that the SRBI, SVBI and SUVBI can be traded and held by non-bank institutions and non-residents in the secondary market.[44]

Table A1. Comparison of Selected Monetary Policy Tools in Indonesia

	Instruments in rupiah			Instruments in U.S. dollar			
Tools	**Reverse repo SBN**	**SBI**	**SRBI**	**FX term deposit**	**FX swap**	**SVBI**	**SUVBI**
Full Name	State bonds reverse repo transaction	Bank Indonesia certificate	Bank Indonesia rupiah securities	FX term deposit	FX swap	Bank Indonesia FX securities	Bank Indonesia foreign currency sukuk
Objective	Liquidity absorption			Support exchange rate stability			
Type	Repo-based transaction	Issuance of securities	Issuance of securities	Term deposits	Currency Swap	Issuance of securities	Issuance of securities
Eligible collateral	Rupiah government bonds held by BI	No	No	No	No	No	No
Underlying asset	No	No	Rupiah government bonds held by BI	No	No	USD global bonds held by BI	USD Sukuk held by BI
Auction method	Fixed Rate Tender/Variable Rate Tender			Fixed Rate Tender/Variable Rate Tender			
Frequency of operation	Regular	Regular	Regular	Regular	Regular/Non-regular	Regular	Regular
Yield system	Simple Interest	Discount	Discount	Simple Interest	-	Discount	Discount
Minimum transaction	IDR1 billion	IDR1 billion	IDR1 billion	USD5 million	USD5 million	USD1 million	USD1 million
Auction participants	Commercial bank or intermediary institutions with monetary operations licensed			Commercial bank or intermediary institutions with monetary operations licensed			Islamic bank, Sharia business unit and intremediary institutions with monetary operations
Tradable	No	Yes (available to banks and non-banks; residents and non-residents)	Yes (available to banks and non-banks; residents and non-residents)	No	No	Yes (available to banks and non-banks; residents and non-residents)	Yes (available to banks and non-banks; residents and non-residents)
Tenor	1 day to 12 months	1 month to 12-months	1 week to 12-months; so far only issued 6-months, 9-months and 12-months	1 day to 12 months	1 day to 12 months	1-month to 12-months; so far only issued 1-month and 3-months	1-month to 12-months; so far only issued 1-month and 3-months

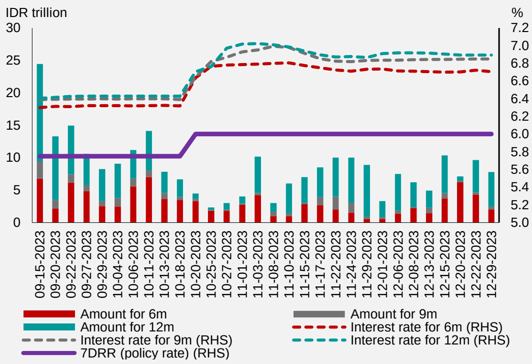
Source: BI, AMRO staff compilation

The interest rates of the SRBI and SVBI have been increasing since the first issuance. The SRBI has been sold at 30 auctions starting from mid-September to end-December, with a total amount of IDR254.5 trillion and an average auction size of IDR8.5 trillion, dominated by the longer-term tenor of 12-month. The interest rates were around 6.3-6.4 percent in September and early October, aligned with the long-term reverse repo they have replaced to ensure a smooth transition,[45] before increasing to 6.7–6.9 percent from mid-October, in line with the movement of BI policy rate

[40] This box is prepared by Yang Chunyu, Economist.
[41] The underlying asset does not serve as collateral; instead, it acts as the ceiling for the maximum outstanding amount of SRBI. The government securities refer to the State Securities (SBN), comprised of state bonds (SUN) and sharia state bonds (SBSN).
[42] The variable rate tender is a tender procedure whereby the counterparties bid both the amount and the price of the securities.
[43] It refers to the instrument for open market operation in foreign currency, not the FX term deposit for foreign exchange proceeds of export (TD Valas DHE). For the difference between these two items, please see https://www.bi.go.id/en/fungsi-utama/moneter/operasi-moneter/default.aspx.
[44] Eligible participants in the secondary market include but not limited to commercial banks, pension funds, insurance companies, mutual fund investors, fintech companies, and foreign investors.
[45] The last reverse repo for 6-month, 9-month and 12-month were conducted on August 18, 2023, with the interest rate at 6.31, 6.40, and 6.47 percent, respectively.

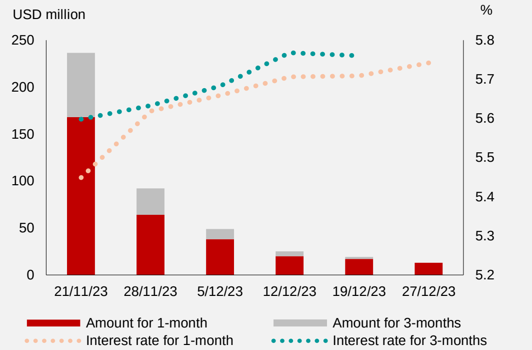
(Figure A1). SRBI transactions in the secondary market (outright and repo) have increased from a daily average of IDR1.88 trillion in 2023 to IDR2.94 trillion so far in 2024. Non-resident holdings accounted for more than 20 percent of total SRBI outstanding. For the SVBI, six auctions were held from mid-November to end-December, totalling USD434.5 million, dominated by the one-month tenor. The interest rates initially mirrored BI's FX term deposit rate[46] and slightly increased afterwards (Figure A2).

Figure A1. SRBI Auction Results



Source: BI

Figure A2. SVBI Auction Results



Source: BI
Note: There is no winning amount for the 3-months SVBI in the auction on December 27, 2023.

Compared with other instruments, the SRBI and SVBI offer certain strengths.

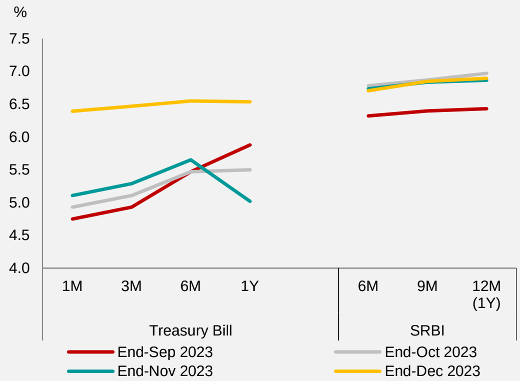
- **Firstly, the SRBI enhances autonomy in the central bank's monetary operation.** The reverse repo is constrained by the availability of treasury bills in the central bank's portfolio as it requires treasury bills as collateral (Gray and Pongsaparn, 2015). However, the operation twist conducted by BI since August 2022 may have led to BI holding fewer treasury bills as the central bank sold short-term instruments to buy long-term government bonds. Additionally, the IMOF's issuance of treasury bills has declined due to better fiscal performance in 2023, resulting in fewer treasury bills in the market. On the contrary, the SRBI can be issued regardless of the treasury bills in BI's portfolio as it does not require collateral, bringing autonomy in this sense. The only constraint is that the outstanding amount of SRBIs cannot exceed the total government securities held by BI, which are more than sufficient for the purposes of monetary operations.
- **Secondly, the SRBI serves to enhance money market development.** In recent years, BI has used SKB II and III bonds issued during the COVID-19 period as collateral for reverse repo, anticipating active trading of collateral in the secondary market. However, trading remains subdued, likely due to the floating rates on these bonds. The SRBI offers a solution to stimulate active trading, given its fixed interest rates. Increased trading in short-term securities will improve the effectiveness of the yield curve. Furthermore, with the development of the money market, monetary policy transmission has the potential to improve.
- **Thirdly, the SRBI and SVBI can help to attract more capital inflows and hence maintain rupiah exchange rate stability.** Currently, the SRBI offers higher interest rates than rupiah term deposits in banks, and SVBI rates are also higher U.S. dollar term deposit rates.[47] In fact, though most SRBI outstanding is held by commercial banks, foreign investors' holdings have increased to 16 percent in the issuance in November, up from 10 percent in October and 4.6 percent in September.[48]

Continued close coordination between the central bank and the Ministry of Finance/debt management office is crucial for the use of SRBI in monetary operations. The current literature points to a possible weakening of the central bank's balance sheet, resulting from expenses associated with these securities (Yi, 2014). However, the short term impact is expected to be limited,

[46] The last auction result on November 14, 2023, shows that the FX term deposit rates for 1-month and 3-months were 5.38 percent and 5.58 percent, respectively.
[47] The interest rates stand at 5.17 percent for 12-month rupiah term deposit and 4.19 percent for 3-month USD term deposit among commercial banks as of mid-December.
[48] Source: Various market analytical reports.

considering the relatively small size of SRBI (IDR392 trillion)[49] compared with the total financial assets related to monetary policy implementation, which amounted to IDR3,459 trillion in 2022. Additionally, the interests generated by government bonds can be used to partially offset the interest expenses of SRBI, which is different from the previous central bank bills, the Bank Indonesia certificate (SBI), which had no underlying assets. The current literature also indicates that when both the central bank and the government issue securities with overlapping tenors, and if the issuances are not well coordinated, they could overwhelm the local market capacity, and yield spreads, if any, could be misleading market indicator of the liquidity condition (Vajs, S., 2014). On a positive note, the yield spread between SRBI and treasury bills of overlapping tenors has narrowed significantly by end-2023 (Figure A3). Moving forward, the close coordination between the central bank and the Ministry of Finance/debt management office should be maintained.[50]

Figure A3. Yields for Treasury Bills and SRBIs



Source: BI; Tullett Prebon Information, Haver
Note: The yields for SRBI refer to the weighted average winning rates in auctions. For treasury bills, yields are based on quotes in the secondary market instead of auction rates due to the infrequent auctions and, consequently, limited samples.

References:

Bank Indonesia (2023). Press Release No. 25/233/Dkom Appendix 1 on Frequently Asked Questions.

Gray, M. S., & Pongsaparn, M. R. (2015). Issuance of Central Bank Securities: International Experiences and Guidelines. International Monetary Fund.

Nyawata, O. (2013). Treasury bills and/or central bank bills for absorbing surplus liquidity: the main considerations. Journal of International Commerce, Economics and Policy, 4(02), 1350011.

Vajs, S. (2014). Government debt issuance: issues for central banks. BIS Paper, (76d).

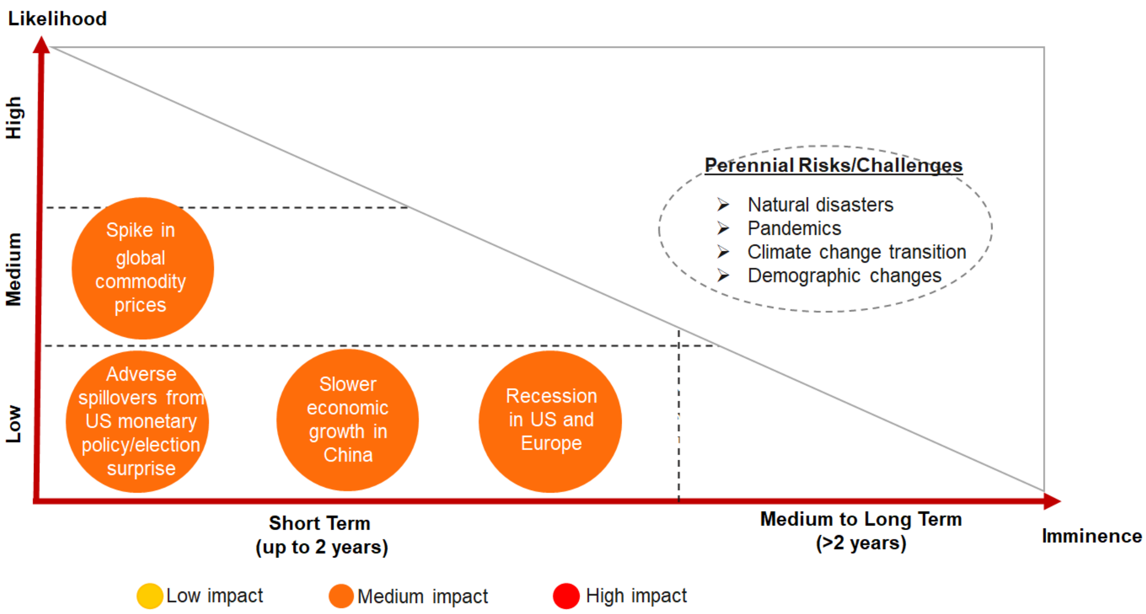
Yi, J. (2014). Treasury bills and central bank bills for monetary policy. Procedia-Social and Behavioral Sciences, 109, 1256-1260.

[49] Data are as of February 20, 2024 (Source: Bank Indonesia's Press Release dated February 21, 2024)
[50] For example, Vajs, S. (2014) points out that the government can share its short-term debt issuance plan with the central bank, so that the central bank can incorporate it in the estimate of how much liquidity is in the economy.

B. Risks, Vulnerabilities and Challenges

16. While domestic demand is expected to underpin solid economic growth, Indonesia's short-term outlook could be affected by ongoing external headwinds. A sharp slowdown in major trading partners, especially China, could weigh on the recovery of Indonesia's exports (Figure 24). The risk of global food and energy price spikes remains elevated on the back of the El Niño weather and geopolitical tensions. Risk aversion has eased as the Fed signaled the end of its interest rate hike cycle in December 2023; however, EMs, including Indonesia, may continue to experience capital flow volatility if the tight Fed monetary policy was further prolonged or if there are adverse spillovers from U.S. presidential election campaign. Indonesia faces structural challenges in its efforts to enhance economic resiliency and ensure a smooth transition to a green economy.

Figure 24. Indonesia's Downside Risk Map

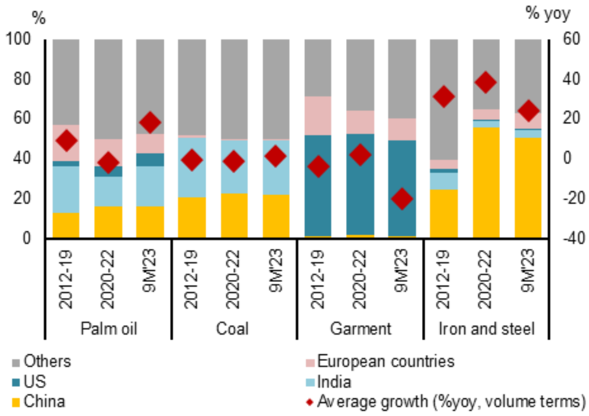


Source: AMRO

B.1 Near-term Risks

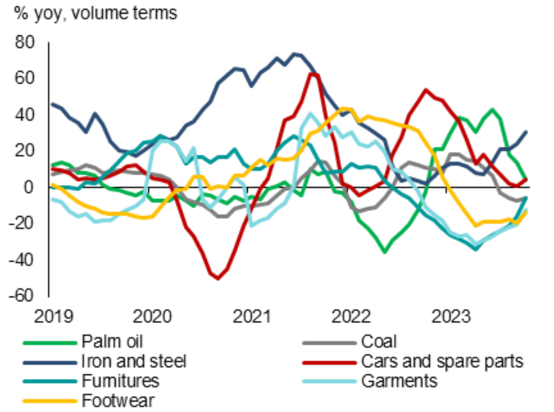
17. **The evolving global landscape will continue to influence Indonesia's growth prospects.** The recovery of the Chinese economy following the end of its zero-COVID policy and its re-opening in December 2022 was not as strong as initially expected; however, it supported demand for Indonesia's key commodities, notably coal, palm oil, iron and steel (Figure 25). This helped mitigate the impact of a contraction in exports of manufacturing goods, such as garments, footwear and furniture, notably to the US and European countries, on Indonesia's overall export performance in 2023 (Figure 26). AMRO staff's baseline scenario expects a recovery in exports, together with continued strengthening in domestic demand, to support an increase in Indonesia's GDP growth in 2024. That said, in an alternative scenario where a slowdown in China and a recession in the U.S. and Europe weigh down the global outlook, the weakness in global demand and trade could persist and delay the recovery in Indonesia's export performance.

Figure 25. Key Exports: Market Composition and Growth



Source: Statistics Indonesia; CEIC; AMRO staff calculations
Note: The data gives the average of each period.

Figure 26. Export Growth in Volume



Source: Statistics Indonesia; CEIC; AMRO staff calculations
Note: Monthly data obtained up to October 2023.

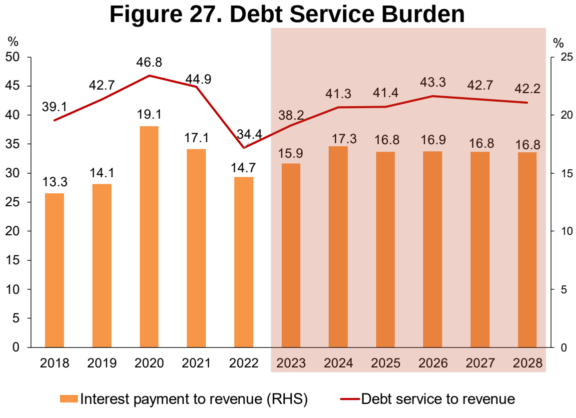
18. Upside risks to inflation remain, led by possible spikes in global oil and food prices again. While Indonesian pump prices for subsidized fuels, namely, Pertalite or RON90 and diesel, have been kept unchanged after a one-time adjustment in September 2022, the price of non-subsidized fuels, notably Pertamax or RON92 and Pertamina Dex or RON95, was lifted between August and October 2023, in parallel with an increase in global oil prices on the back of the OPEC+ announcement of production output cuts and the outbreak of Middle East tensions. A further extension of oil supply cuts and/or an escalation in geopolitical tensions might lead to more spikes in global oil prices, putting pressure on Indonesia's domestic fuel prices. As far as food inflation is concerned, Indonesia has experienced increased rice prices especially from the beginning of 2023, and these prices could remain elevated on the back of prolonged El Niño weather conditions and additional export restrictions on food staples among major rice producers. Notably, food prices could spike in early 2024 when the demand is expected to be ramped up during the Ramadan religious month, while the rice harvest likely be delayed due to the dry weather condition.

19. Capital flow volatility and elevated borrowing costs might persist. Indonesian financial markets had witnessed non-resident outflows in August-October 2023, as risk aversion heightened on the back of uncertainties regarding higher-for-longer Fed funds rate. Although such concerns have gradually eased, capital flow volatilities and high borrowing costs might persist if U.S. monetary policy remains restrictive for longer, or if the global geopolitical tensions remain elevated. As far as the government's debt servicing is concerned, the interest payment burden has moderated from the pandemic peak of 19 percent of budget revenue but is expected to remain high at 16-17 percent over the next few years (Figure 27). A further spike in government bond yields, as happened between August and October, could push up the interest payment burden. While the domestic lending rates have remained stable for MSMEs and household/consumption loans, they have increased among corporate loans and may rise further.[51] On a positive note, adverse impacts on the corporate sector's borrowing costs could be mitigated to some extent by the recent reduction in their external debt. In addition, lower external debt, elevated foreign reserves, and a wider range of policy tools, have underpinned Indonesia's resilience to external headwinds. This is supported by

[51] According to BI's data, the banking industry's average lending rate for working capital and investment loans has picked up along with higher policy rates and bank deposit rates, albeit at a slower pace. That said, bank-level data suggests the lending rates of corporate loans have increased much faster compared with consumption or MSME loans.

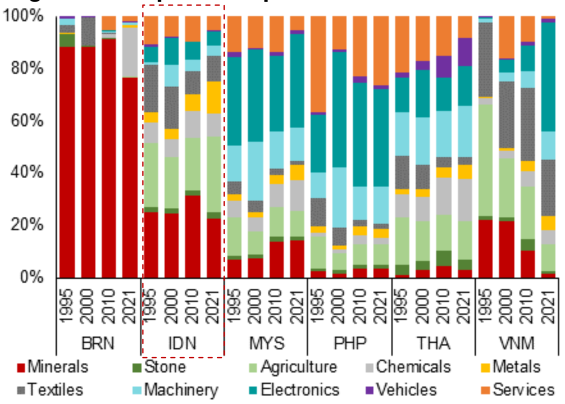
the close synergy among the central bank and government agencies to balance between maintaining macroeconomic stability and sustaining economic growth.

Figure 27. Debt Service Burden



Source: CEIC; Mandiri Sekuritas; IMOF; AMRO staff calculations
Note: Data for 2023-2028 are AMRO staff projections.

Figure 28. Export Composition: Selected ASEAN



Source: The Atlas of Economic Complexity, AMRO Staff Calculations
Note: BRN stands for Brunei Darussalam, IDN – Indonesia, MYS – Malaysia, PHP – the Philippines, THA – Thailand, and VNM – Vietnam.

B.2 Medium to Long-term Challenges

20. Indonesia faces structural challenges in its efforts to enhance economic resiliency and ensure a smooth transition to a green economy.

a. **Economic and trade diversification.** Indonesia has made progress in diversifying its economy and trade, and in increasing the value added to its resource sector. For example, efforts to develop downstream activities in the metal processing industry from 2014-2018 have led to a recent increase in exports of iron and steel, notably stainless steel, and a higher share of metal in total export value (Figure 28). That said, the Global Economic Diversification Index (EDI) Report 2023 indicates that the Indonesian economic, trade and revenue structure remains resource-based relative to several other countries of the Association of Southeast Asian Nations (ASEAN),[52] which could make Indonesia more vulnerable to commodity price shocks. Likewise, the ranking of Indonesian export complexity and diversity has been lower than regional peers according to the Atlas of Economic Complexity (Figure 29).[53]

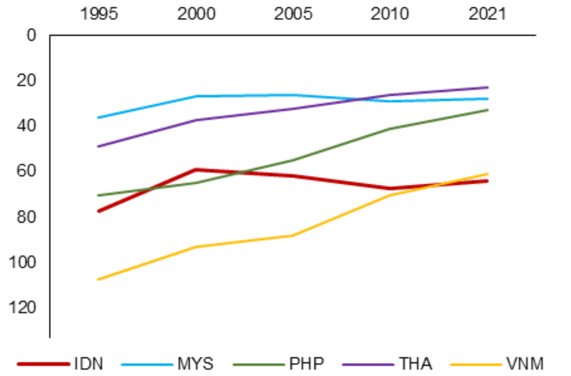
b. **Infrastructure development and connectivity enhancement.** Indonesia has been carrying out a large-scale infrastructure development agenda over the past decade. While it has achieved significant progress in terms of connectivity enhancement and logistical cost reduction, the need for infrastructure development remains huge. Participation of the private sector via public-private partnership (PPP) is still modest, resulting in the government budget and SOEs playing a major role in financing past infrastructure projects. The total financing requirement for national strategic projects

[52] The Global EDI was developed and first published in 2022 by the Dubai-based Mohammed bin Rashid School of Government (MBRSG) in consultation with global thought leaders and experts, such as the World Bank, International Monetary Fund, Organization for Economic Cooperation and Development, and United Nations Conference on Trade and Development. Since 200, the EDI has been measuring and ranking 90 countries on the extent of their economic diversification from a multidimensional angle, exploring diversification of economic activity, international trade and diversification of government revenues away from a dependence on natural resources or commodity revenue. According to the report released in 2023, Indonesia's EDI improved from 92.0 in 2000 to 96.7 in 2021. That said, its score was lower than several other ASEAN countries, including Malaysia (EDI in 2021: 103.7), the Philippines (104.4), Singapore (123.6) and Thailand (107.6). Source: Global Economic Diversification Index Report 2023.

[53] Harvard Growth Lab's Atlas of Economic Complexity publishes the Economic Complexity Index, a ranking of about 133 countries with reliable data based on how diversified and complex their export basket is. Countries that are home to a great diversity of productive know-how, particularly complex specialized knowledge, can produce a great diversity of sophisticated products. Source: https://atlas.cid.harvard.edu/rankings.

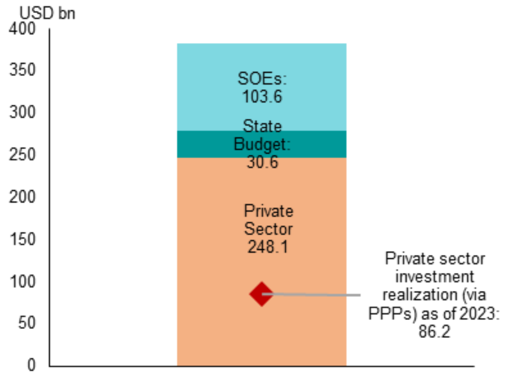
(PSNs) is estimated at USD382.3 billion, of which 65 percent is expected to come from the private sector, with the remaining amount from SOEs (27 percent) and the State Budget (8 percent) (Selected Issue 1). That said, among those projects that are expected to be financed by the private sector, only one-third have materialized (Figure 30). Limited budget resources and recent financial difficulties experienced by SOEs in the construction and infrastructure business may adversely affect the infrastructure financing landscape.

Figure 29. Economic Complexity Index: Selected ASEAN Countries



Source: Harvard Growth Lab (The Atlas of Economic Complexity).
Note: IDN stands for Indonesia, MYS – Malaysia, PHP – the Philippines, THA – Thailand, and VNM – Vietnam. Source: Asian Bonds Online Database

Figure 30. Estimated PSN Financing Requirements and Realization via PPPs



Source: Coordinating Ministry of Economic Affairs (KPPIP); Indonesia Presentation Book (November 2023); AMRO staff calculations.

c. **Smooth transition to a green economy**. Significant investments will be required to achieve Indonesia's decarbonization commitments. The government has estimated the need for at least IDR4,001 trillion (USD281 billion) from 2020-2030, or IDR343.6 trillion annually for mitigation action in order to achieve the NDC target for 2030. The government has so far allocated around 3.9 percent of the State Budget, or about IDR93.8 trillion annually, to address climate change, with the actual realization averaging IDR83.8 trillion between 2016 and 2021, about 3.5 percent of the State Budget. A larger financing amount, of more than USD1 trillion, is reportedly needed to achieve the net-zero emission target by 2060 or sooner (Appendix 6: Indonesia's Climate Change Clipboard). Considering the country's limited fiscal resources, demand from other developmental priorities, and the small domestic capital market, it will be challenging to secure sufficient funds to support a smooth transition to a green economy.

C. Policy Discussions and Recommendations

C.1 Continuing Policy Synergy

21. AMRO staff supports the central bank's current policy mix in light of ongoing global uncertainties to maintain stability and support sustainable economic growth. The central bank has appropriately increased the policy rate, managed exchange rate volatility, and strengthened monetary operations with SBRI issuances, and enhanced financial deepening to anchor inflationary expectations and support rupiah stability. At the same time, the macroprudential policy has been relaxed to provide targeted support to the economy, along with ongoing efforts to strengthen the efficiency of payment systems. As the risk of renewed spikes in global food and fuel prices, as well as capital flow volatility in EMs, persists, the maintenance of the current monetary policy stance might be warranted for the time being.

22. In an adverse scenario with a slower-than-expected growth in major trading partners, enhanced synergy among the authorities may be needed. Under such scenario, the authorities are encouraged to closely monitor risks to macroeconomic and financial stability, while consideration could be given to providing targeted fiscal support, and strengthening the central bank's policy mix to maintain stability and support sustainable economic growth. A shift towards an easing monetary policy by the Fed is expected to be positive for EM currencies, and provide room for their central banks to lower interest rates in supporting the domestic economy if necessary.

23. AMRO staff welcomes the authorities' efforts to deepen the domestic financial markets. BI has introduced various financing instruments denominated in the rupiah and foreign currencies, including FX term deposits, SRBI, SVBI and SUVBI, with competitive interest rates and other pro-market features such as being tradeable in the secondary market. These instruments provide more options for investors, which include not only foreign investors but also exporters of natural resources that are now required to retain part of their FX earnings onshore. Clarity on tax treatment of these instruments might help bolster the trading activity in the secondary market.

24. The promotion of local currency transactions is expected to facilitate regional trade and investment and contribute to stability of the rupiah exchange rate in the long run. Indeed, such efforts will support the development of local currency markets via enhanced transaction efficiency, and facilitate intra-region trade and investment. This will gradually reduce risks arising from excessive reliance on the U.S. dollar in trade financing, and mitigate adverse spillovers from shifts in Fed policy and changes in the U.S. dollar exchange rate. Ongoing efforts to deepen the FX hedging market, including the development of FX swaps and DNDF instruments for different currencies other than the U.S. dollar, are expected to lower LCT fees. Campaigns to raise awareness among companies about the benefits of LCTs are recommended. As far as retail payment systems are concerned, AMRO staff welcomes Indonesia's leading efforts in expanding cross-border QR payments with regional peers (Figure 31).

Figure 31. Indonesia's Cross-Border Payment Network Map

	Local Currency Swap				Local Currency Settlement Framework			Cross-border (QR) payment			
	Start Year	Latest Renew	LCY Amounts (IDR trillion)	Equivalent USD (billion)	Progress	Start Year	Expansion Year (Only for the established LCSF)	Progress	Pilot	Implement	Counterpart QR payment
Singapore	2018	2022	100	6.7	Signed MoU	2022		Yes		2023	NETs/Paynow
Malaysia	2019	2022	28	1.9	Established	2018	2021	Yes	2022	2023	DuitNow QR
Thailand					Established	2018	2020	Yes	2021	2022	PromptPay
Philippine					Established	2019					
China	2009	2022	550	37.0	Established	2021		Developing			
Korea	2014	2023	115	7.7	Signed MoU	2023					
Japan	2015	2021	339	22.8	Established	2020	2021	Developing			JPQR
India								Developing			
Australia	2015	2022	100	6.7							

Source: BI, AMRO staff compilations
Note: The LCSF between Indonesia and Korea is scheduled to take effect in 2024.

25. The authorities should be prepared to tighten macroprudential policy measures when needed. The loan restructuring program, which has been extended from March 2023 to March 2024 for selected sectors, should end as planned, with the recovery well entrenched. The latest KLM policy has narrowed down the priority sectors and made their classification clearer. Furthermore, the KLM policy and other macroprudential measures, such as the 100 percent LTV ratio for mortgage loans and zero down payment policy for vehicle loans, should be reviewed if credit growth continues to recover.

C.2 Enhancing Policy Space

26. The fiscal space could be further built up with revenue-enhancing measures to meet higher spending needs while maintaining investor confidence. The government's latest medium-term fiscal framework projects the fiscal deficit will moderate gradually to 2.0-2.3 percent by 2027. This is expected to underpin a decline in government debt from 39.7 percent of GDP in 2022 to 36.8-38.1 percent in 2027, slightly lower than AMRO staff projections (Appendix 5: Debt Sustainability Analysis).[54] The early adoption of a comprehensive tax reform package as in the Harmonized Tax (HPP) Law in 2021 has contributed to faster-than-expected fiscal consolidation in the past two years. While efforts on fiscal consolidation are commendable and the current fiscal stance is appropriate, they may constrain the government's ability to step up expenditures on growth-enhancing projects, such as capital spending for infrastructure development, unless more revenue could be raised. Indeed, there is considerable room to enhance tax revenue which has hovered at a relatively low 10 percent of GDP.[55] As the increase in the VAT rate from 10 percent to 11 percent in 2022 and further to 12 percent in 2025 has been in the right direction, VAT collection could be enhanced further by reviewing and reducing exemptions, including the VAT registration threshold in tandem with progress in MSMEs' bookkeeping practices and an improved VAT refund process, to alleviate the compliance burden on MSMEs.[56] Ongoing tax administration reforms, notably the Single ID number launch and core tax system implementation, will lower taxpayers' compliance costs, increase the efficiency of revenue collection, and contribute to stronger transparency and trust. In addition, a more comprehensive taxpayers' database connecting to the National ID database will allow the government to strengthen the targeting of its policies. Regarding global tax initiatives under the OECD/Group of 20 (G20) Inclusive Framework (IF), Indonesia issued Regulation 55 in 2022 to incorporate an IF two-pillar approach[57] in domestic legislations. Timely follow-up regulations, especially to introduce a qualified domestic minimum top-up tax, will be crucial for Indonesia to reap the benefits of these initiatives and minimize their adverse impacts once they become effective in 2024.[58]

27. **Efforts to rationalize budget spending and prioritize growth-support expenses should be expedited.** The government has appropriately shifted the budget focus from pandemic-related relief packages to measures that support people's purchasing power as higher fuel and food prices pushed up inflation after the pandemic. This shift, coupled with a higher interest payment burden, has led to a lower share of regional transfers and other discretionary expenses, including capital spending, in total expenditure. To make the subsidy policy more targeted and mitigate its impact on the budget when oil price rises, in 2022 the government tapered fuel subsidies by raising the prices of several subsidized fuels, and

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[54] The GDP growth assumption in the medium-term fiscal framework is higher than AMRO staff projections. For instance, the GDP growth assumption for 2027 in the Medium-term Fiscal Framework (MTFF) is 5.7-6.4 percent, compared with the AMRO staff projection of 5.2 percent.
[55] Gupta and Jalles (2022) estimated Indonesia's tax capacity at 18.4 percent of GDP, indicating a potential increase of about 7.4 percentage points from the current level of about 11 percent.
[56] Starting from 2014, an Indonesian company or individual/entrepreneur is considered a taxable enterprise if its annual sales turnover exceeds IDR4.8 billion, equivalent to about USD320,000, which is high compared with regional peers. The threshold applicable in the Philippines and Thailand being about USD60,000 equivalent, for examples. The review of the VAT registration threshold is also in line with a plan to remove the final income tax rate of 0.5 percent of gross revenue, which currently applies to resident taxpayers whose gross revenue do not exceed IDR4.8 billion by 2025. The individual taxpayers will be subject to personal income tax rates in line with their income levels and corporate taxpayers will be subject to income tax rate of 22 percent by then.
[57] The two-pillar approach consists of (i) Pillar One, which aims to reallocate taxing rights from residence jurisdictions to market jurisdictions where sales and users are located, irrespective of MNEs' physical presence; and (ii) Pillar Two, which ensures that MNEs contribute their fair share of tax revenues to countries where they generate profits by imposing a global minimum corporate income tax. (Source: AMRO, 2024).
[58] Indonesia expected to apply Pillar Two regulations in 2024. It also planned to publish implementing legislation in 2023, but not before publication of the OECD's GloBE Implementation Framework. (Source: WTS Global).

increased cash handouts and welfare subsidies for lower-income households. Fuel and electricity subsidy reforms should be expedited by replacing the blanket subsidy with direct cash transfers to vulnerable groups.[59] This will also enable the government to rebalance the budget toward growth-enhancing expenditures, including spending on education, health care, infrastructure and climate change mitigation.

28. AMRO staff encourages an active debt management strategy in the medium term. Gross financing needs are projected to remain high over the next five years, when the government bonds purchased by BI in 2020-2022 to finance pandemic-related expenditure start to mature. An AMRO preliminary scenario exercise indicates that the government's gross financing needs in the medium term can be met through continued debt refinancing and strengthened demand from foreign investors. In an adverse scenario where foreign investors ' demand has yet to recover strongly, it is recommended to make judicious use of fiscal reserves (SAL) which have accumulated since the pandemic, to pay down debt and lower bond supply to the market.[60] Policy efforts to deepen the capital market and broaden the investor base, along with implementation of the Omnibus Law on Development and Strengthening of Financial Sector which was endorsed in 2022, are important to enhance fiscal policy space through better access to financing and the lowering of government borrowing costs in the medium to long-term.[61]

C.3 Accelerating Structural Reforms

29. The effectiveness of economic and trade diversification policies will be supported by continued efforts to improve the investment climate and enhance the ease of doing business in Indonesia. The government has actively rolled out various policies to promote higher value-added downstream activities in recent years, notably the development of an EV ecosystem. Examples of such support measures include a ban on raw ore exports[62] and fiscal incentives to both EV firms and consumers.[63] Indonesia has seen increased FDIs from Korean and Chinese investors, among others, in its nickel industry, primarily focused on electric battery production and related supply chains.[64] The successful development of an EV industry will depend on the ability to continue attracting sufficient FDI inflows to EV manufacturing,[65]

[59] In AMRO Annual Consultation Report 2022, AMRO staff suggested that the pace of subsidy reform could speed up along with a strengthened capacity to target vulnerable groups going forward. In so doing, the authorities would need to expand the integrated database of social welfare by connecting it with other government databases, such as the tax database, to better screen eligibility conditions.
[60] The fiscal reserves (SAL) outstanding increased significantly during the pandemic, from IDR213 trillion in 2019 to IDR479 trillion in 2022. The government is estimated to have withdrawn about IDR45 trillion from the fiscal reserves in 2023 to finance the budget, compared to the budgeted IDR70 trillion. For 2024, SAL usage is budgeted at IDR51 trillion.
[61] According to debt sustainability analysis conducted by AMRO staff, elevated borrowing costs have been one main driver of government debt dynamics. Lowering borrowing costs would hence help shrink the government debt stock and enhance debt sustainability in the future.
[62] The Indonesian government banned the export of nickel ores as early as in 2014, while some ore with concentration below 1.7 percent could legally be exported between 2017 and 2019. Most recently, any export of nickel ore has been banned as of January 2020, requiring nickel to be processed domestically for export. (Source: International Energy Agency, 2022).
[63] Since 2019, the government had rolled out incentives targeting EV manufacturers, transport firms and consumers. These incentives included lower import tariffs on machinery and materials used in EV production and tax holiday benefits for a maximum of 20 years to EV manufacturers investing at least IDR100 billion (to USD6.5 million) in the country. The VAT rate on EVs was lowered from 11 percent to 1 percent. Most recently, the government provided price subsidies for buyers of electric motorbikes, capped at 200,000 motorbikes in 2023. Source: ASEAN briefing; Indonesia Business Post.
[64] For example, Chinese investors are engaged in two major nickel mining and smelting initiatives located in Sulawesi. LG Energy and the Hyundai Motor Group have embarked on the development of Indonesia's first battery cell plant, designed to have capacity of 10 gigawatt-hours, with an investment value of USD1.1 billion. LG Energy is also constructing a USD3.5 billion smelter in Central Java with the capacity to produce 150,000 tons of nickel sulfate annually. Source: ASEAN briefing; Indonesia Presentation Book September 2023.
[65] Several car manufacturers are planning EV production in Indonesia, but still at a modest scale. Mitsubishi Motors has allocated USD375 million to expanding production so as to start EV manufacturing. Neta, a subsidiary of China's Hozon New Energy Automobile, has initiated the process of accepting EV orders and is gearing up for local production in 2024. Other two manufacturers, Wuling Motors and Hyundai, have relocated some of their production activities to Indonesia to qualify for full tax incentives. Source: ASEAN briefing.

and to secure demand for EV products in both domestic and foreign markets.[66] Policy measures to promote investment and trade should also go hand in hand with efforts to improve labor market conditions and enhance the ease of doing business in Indonesia. One example of the latter is the expansion of the Online Single Submission (OSS) system in line with the Omnibus Law on Job Creation in 2020, which helped streamline business registration and licensing procedures.

30. Infrastructure development should continue. As Indonesia still has a huge demand for infrastructure, efforts to attract private-sector funds should be continued. In doing so, fair risk allocation backed by a strong legal framework is the key, which has been pursued through PPP and limited concession schemes in Indonesia. The implementation process of PPP projects of smaller scale could be streamlined. The authorities should continue to address the financial stress of SOEs in the infrastructure and construction sector with the right business model to support for their contributions to the infrastructure development agenda and mitigate potential impacts on banks' asset quality. Enhanced internal governance and external supervision of SOEs would help improve their management and strategies, paying due consideration to their business strengths and financial soundness. To alleviate SOEs 'debt burden, further divestment from the completed projects should be considered. Government support that enhances projects' bankability and sustainability could be in the form of land acquisition support, viability gap funding[67], availability payments[68], capital injections, and loan guarantees. Fiscal support to infrastructure projects with significant economic benefit but with low commercial viability could be strengthened along with efforts to enhance fiscal space by improving revenue collections and deepening domestic capital markets.

31. AMRO staff supports the government commitment to step up its policy efforts on climate change. On the financing front, in addition to the 100 percent LTV for green property loans and zero down payment policy for EV loans, the KLM policy has strengthened incentives for banks to provide more green financing.[69] The launch of carbon trading in 2023 is a positive step towards facilitating carbon emission pricing and carbon tax implementation. A road map to adopt the carbon tax along with a cap-and-tax emission trading scheme should be prepared in coordination with the energy subsidy reform agenda.

Authorities' Views

32. The authorities broadly agree with AMRO's assessment. On the monetary policy, they elaborate on the introduction of SRBI as a pro-market monetary instrument which can effectively replace reserve repos using government bonds (RR SBN) in monetary operations, while at the same time, attracting portfolio inflows to strengthen the resilience of the Indonesian economy against the impact of global spillovers. They also highlight that the SRBI is traded actively in the secondary market, as reflected in non-residents holding more than 20 percent of SRBI outstanding. SRBI transactions in the secondary market (outright and

[66] Regarding exports, Indonesian companies might not be able to benefit from U.S. tax credits when exporting nickel and other critical commodities used in EV production to the U.S., due to the absence of a free trade agreement. According to the U.S. Inflation Reduction Act in 2022, minerals used for EV battery production must be extracted/processed in the U.S. or in one of its free trade partners. In the Indonesian domestic market, the rate of EV adoption remains low due to concerns about the availability of EV charging infrastructure, after-sales services and battery power, in addition to cost considerations.
[67] Within the ambit of viability gap funding, the government may allocate up to 49 percent of construction costs to enhance the commercial viability of a given project.
[68] An availability payment is a type of payment sometimes used for PPP projects. Under this arrangement, the client (government) makes fee payments to the project company. Once the project is completed, a predetermined amount is periodically paid as long as the project is ready for use (available), regardless of whether the project is actively in use. It helps improve the viability of public projects (such as infrastructure, school campuses, and hospital buildings) that may not be commercially viable without such support.
[69] Under the KLM policy, a bank providing loans to green sectors that exceed 5 percent of its total loans outstanding will now be eligible for an RRR incentive of up to 50 basis points, up from 30 basis points previously.

repo) have increased from a daily average of IDR 1.88 trillion in 2023 to IDR 2.94 trillion so far in 2024, meeting the objective to strengthen money market deepening efforts and support foreign capital inflows to Indonesia. The authorities will continue monitoring the global and domestic conditions. The adjustment in the central bank's monetary policy stance will depend on the development of key indicators, such as a strengthened rupiah, well-controlled inflation, and supportive credit for domestic financing. Regarding Indonesia's exposure to external shocks, the authorities highlight that the Indonesian economy has proven resilient to uncertain global economic challenges, as inflows to the domestic capital market have been encouraged by solid economic fundamentals and improved risk perception among investors.

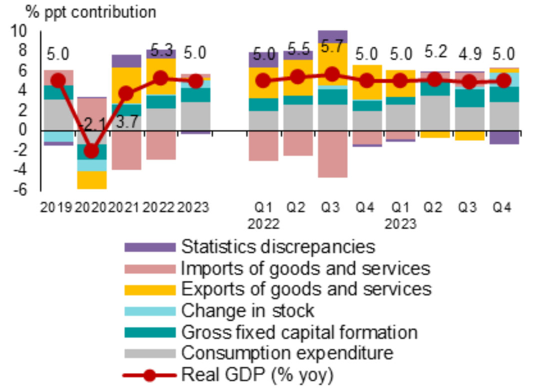
33. The authorities also elaborate on their efforts on the climate change front. The recently-launched Taxonomy for Indonesian Sustainable Finance has been a response to the dynamics and development of national and international sustainable finance. The Taxonomy, which is also aligned with decarbonization goals, aims to address several challenges related to handling and financing climate change efforts, implementing the transition to net zero emissions, and efforts to achieve Sustainable Development Goals. In addition, the authorities will continue to enhance access to potential funding from international climate funds, including the Green Climate Fund, Adaptation Fund, and Global Environment Facility to support the nation's green transition. The authorities believe that internal support in the form of grants and concessional loans will also smoothen the transition to a green economy. Indonesia persistently pursues the development and advancement of special mission vehicles to mobilize and catalyze climate change financing, particularly from private sector, through blended finance mechanism such as Indonesia Environment Fund, Energy Transition Mechanism Country Platform, and SDG Indonesia One. With just transition being crucial, Indonesia has committed to deploying just energy transition by Strategic Environmental and Social Assessment (SESA) as an integral part of energy transition.

Appendices

Appendix 1. Selected Figures for Major Economic Indicators

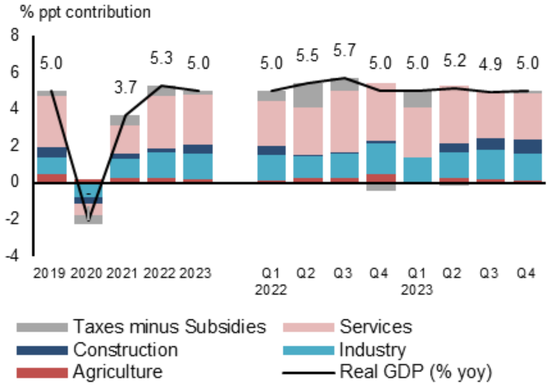
Figure 1.1. Real Sector

Resilient domestic consumption and strengthening investment supported growth in 2023, as external demand started to ease.



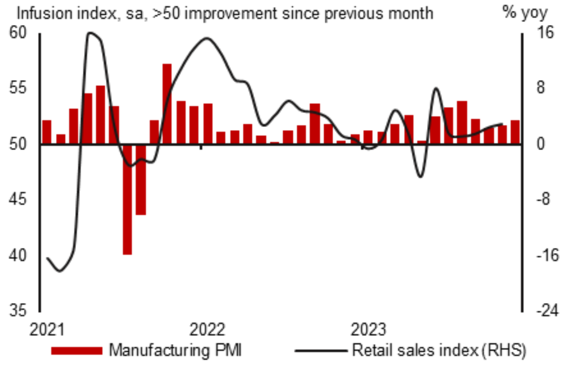
Source: Statistics Indonesia (BPS); CEIC; AMRO staff calculations
Note: 2023-2024 data are AMRO staff projections.

From the supply side, growth was underpinned by expanding industrial production and construction, and continued recovery in the services sector.



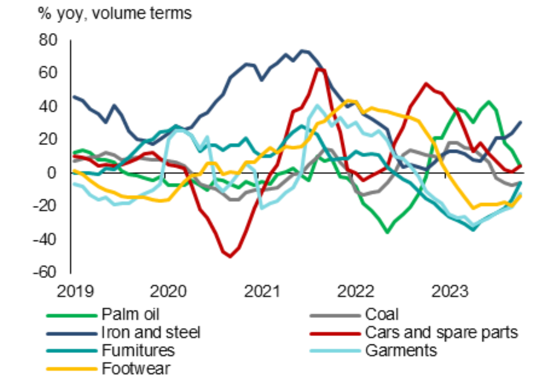
Source: BPS; CEIC; AMRO staff calculations

High frequency data indicate resilient domestic demand supported an expansion in manufacturing...



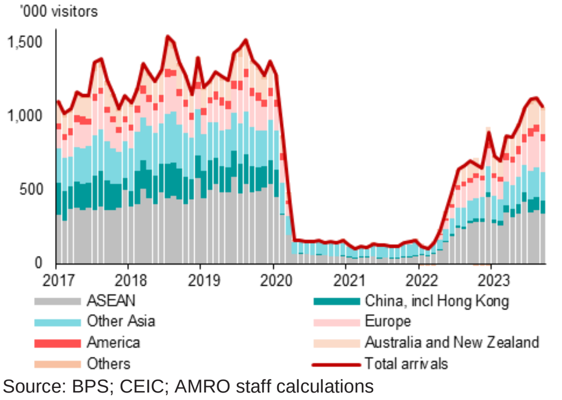
Source: Bank Indonesia (BI); S&P Global; AMRO staff calculations
Note: Monthly data obtained up to December 2023 for PMI, and November 2023 for retail sale index.

… as exports broadly weakened.



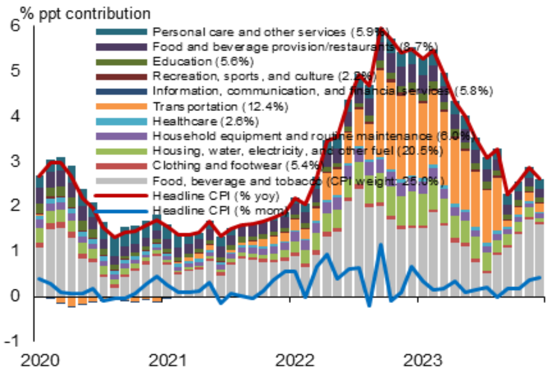
Source: BPS; CEIC
Note: Monthly data obtained up to October 2023.

International visitor arrivals continued to recover, especially among non-Chinese tourists.



Source: BPS; CEIC; AMRO staff calculations
Note: Monthly data are up to September 2023.

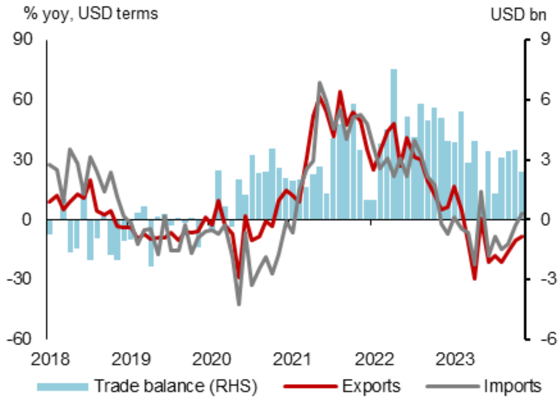
Headline CPI moderated due to lower food prices and more recently, lower fuel and transportation inflation, and well-anchored core inflation.



Source: BPS; CEIC; AMRO staff calculations
Note: Monthly data are up to December 2023.

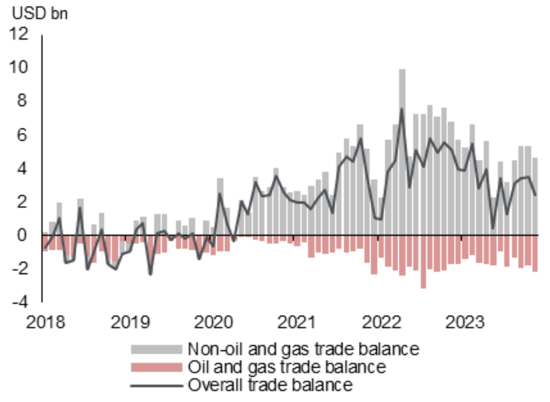
Figure 1.2. External Trade

Both exports and imports contracted, albeit at an easing pace in recent months…



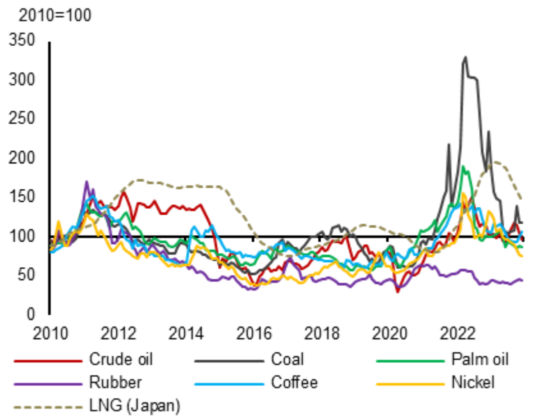
Source: BPS; AMRO staff calculations
Note: Monthly data obtained up to November 2023.

… and trade surpluses moderated but remained sizeable.



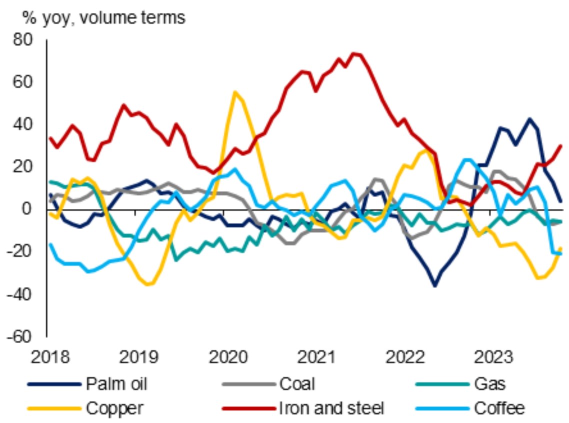
Source: BPS; AMRO staff calculations
Note: Monthly data obtained up to November 2023.

The contraction in export value was driven by a sharp fall in commodity prices …



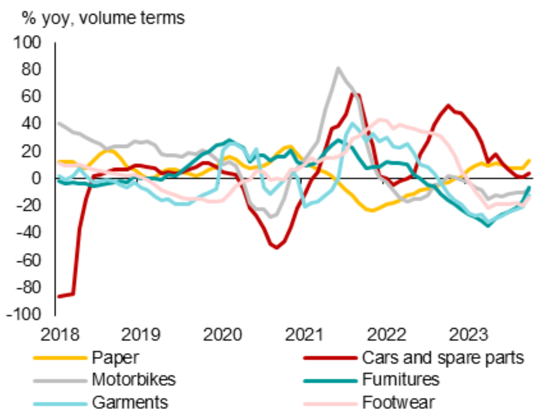
Source: World Bank; CEIC; AMRO staff calculations
Note: Monthly data obtained up to December 2023. LNG stands for liquefied natural gas.

… and recent easing volume in key commodities (except iron and steel)…



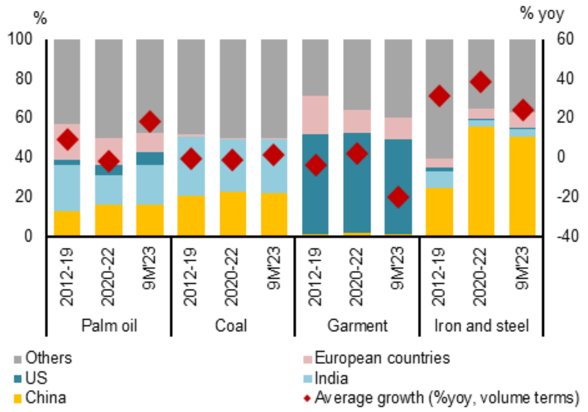
Source: BPS; AMRO staff calculations
Note: Monthly data are up to October 2023.

… as well as manufacturing products.



Source: BPS; AMRO staff calculations
Note: Monthly data are up to October 2023.

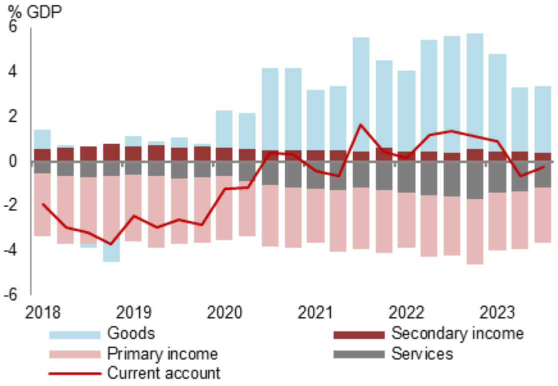
On a positive note, imports of key commodities from China and India remained solid as demand elsewhere waned.



Source: BPS; AMRO staff calculations

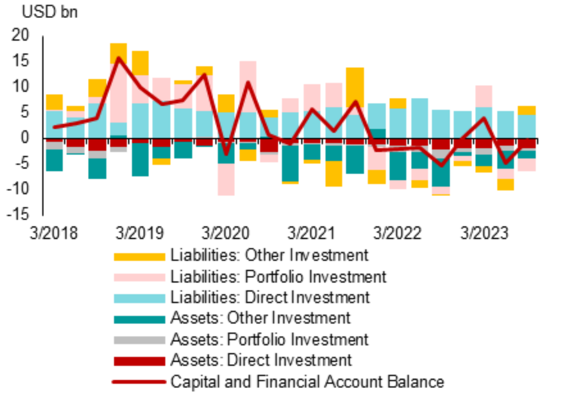
Figure 1.3. External Sector

The current account balance reversed to a small deficit since Q2 2023, as the trade surplus narrowed.



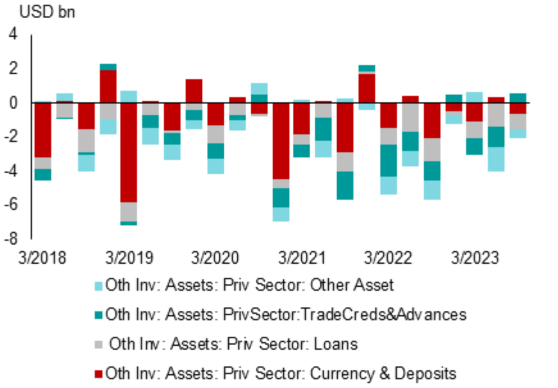
Source: Bank Indonesia; CEIC; AMRO staff calculations
Note: Quarterly data obtained up to Q3 2023.

FDI inflows supported the financial account as the domestic private sector reduced external borrowings and acquired assets overseas…



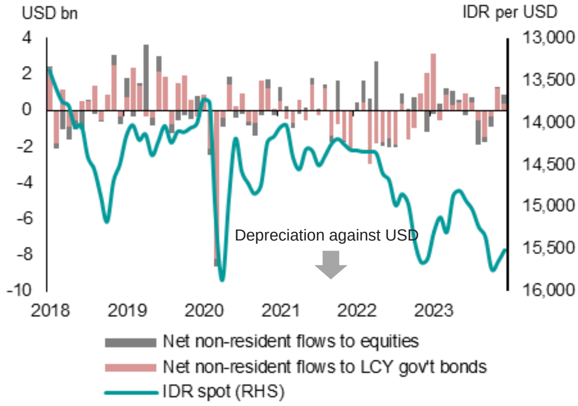
Source: BI; CEIC; AMRO staff calculations
Note: Quarterly data obtained up to Q3 2023.

… albeit repatriating some FX earnings onshore, following BI's launch of FX term deposits.



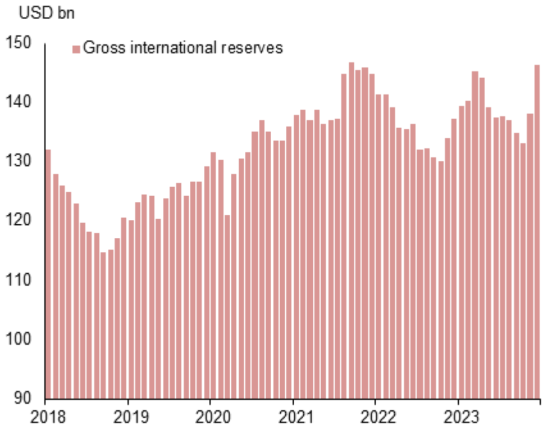
Source: BI; CEIC; AMRO staff calculations
Note: Quarterly data obtained up to Q3 2023.

Domestic capital markets experienced outflows during August-October 2023, as risk aversion increased on expectations of a higher-for-longer Fed funds rate.



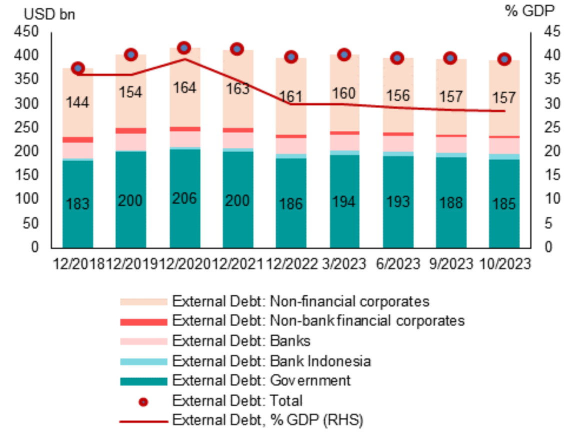
Source: Ministry of Finance; BI, CEIC; AMRO staff calculations
Note: Monthly data obtained up to December 2023. Exchange rate data are monthly averages.

Gross international reserves increased significantly in December 2023.



Source: BI; CEIC; AMRO staff calculations
Note: Monthly data obtained up to December 2023.

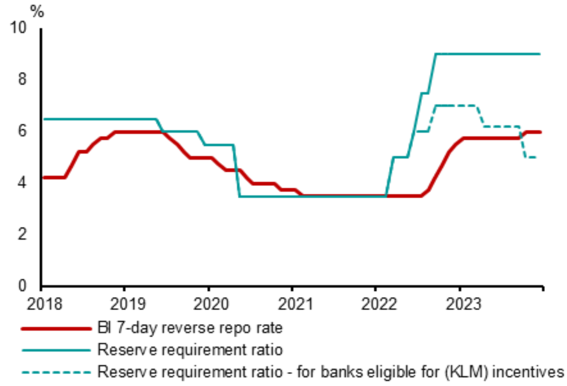
External debt continued to moderate as both private and public sectors reduced external borrowings.



Source: BI; CEIC; AMRO staff calculations

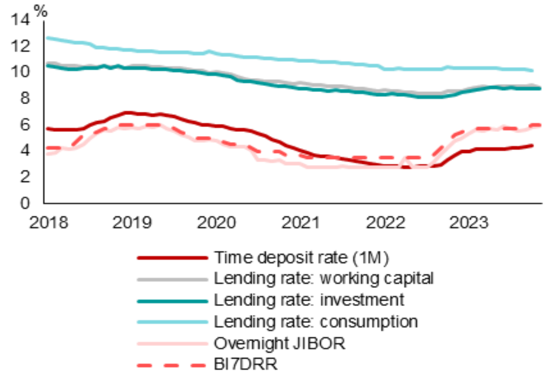
Figure 1.4. Monetary and Banking Sector

BI maintained elevated interest rate policy, while relaxing the KLM policy providing RRR-related liquidity incentives in 2023.



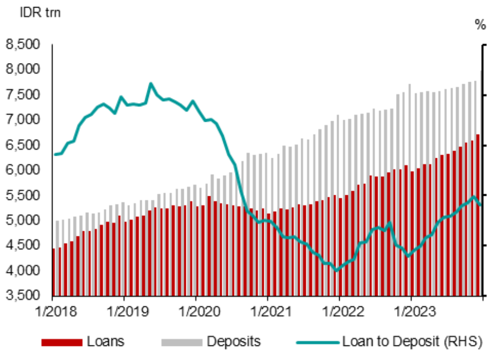
Source: BI; CEIC
Note: Monthly data obtained up to December 2023.

Interbank and deposit rates trailed the policy rate; lending rates for working capital and investment loans edged up but to a much lesser extent.



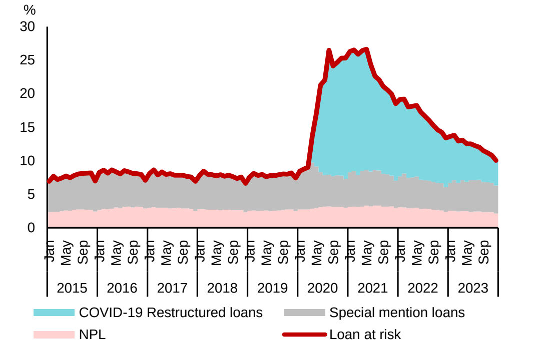
Source: BI; CEIC; AMRO staff calculations
Note: Monthly data obtained up to November 2023.

Loan to deposit picked up but remained below the pre-pandemic levels.



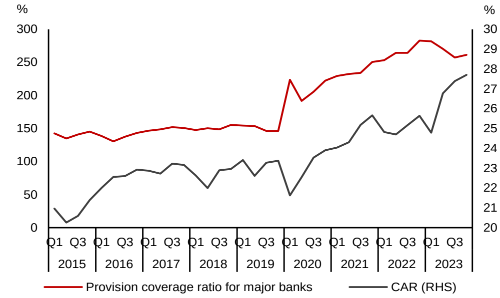
Source: OJK; BI; CEIC; AMRO staff calculations
Note: Monthly data obtained up to December 2023.

NPLs have been stable and pandemic-related restructured loans continued to moderate in 2023.



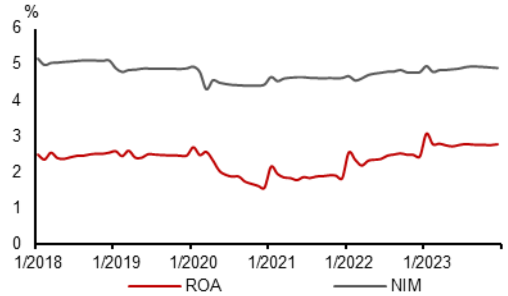
Source: OJK; BI; CEIC; banks' financial reports; AMRO staff calculations
Note: Monthly data obtained up to December 2023.

At the same time, banks maintained strong capital buffers and elevated provisioning.



Source: OJK; BI; CEIC; Moody's; banks' financial reports; AMRO staff calculations
Note: The provision coverage of NPLs is calculated by AMRO staff members using the data of Bank Rakyat Indonesia (BRI), Bank Mandiri, Bank Central Asia (BCA), Bank Negara Indonesia (BNI), Bank CIMB and Bank Danamon. Quarterly data obtained up to Q4 2023.

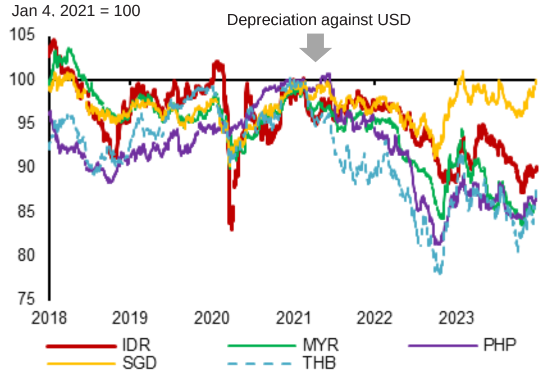
Banks' overall funding costs increased but remained contained relative to a pick-up in lending rates, which coupled with positive loan growth, underpinned improved profitability.



Source: OJK; CEIC; AMRO staff calculations
Note: Monthly data obtained up to December 2023.

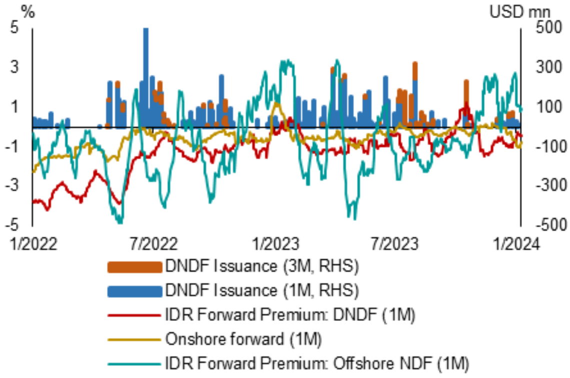
Figure 1.5. Forex and Financial Markets

Downward pressures on the rupiah, as with other regional currencies, have eased following Fed's signal of end of rate hikes in end-2023.



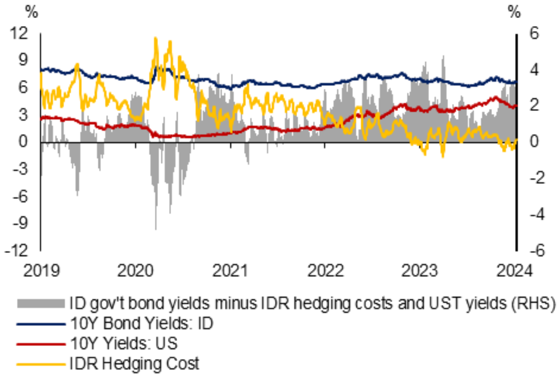
Source: CEIC; AMRO staff calculations
Note: Daily data obtained up to end-2023.

BI continued its intervention in the DNDF market…



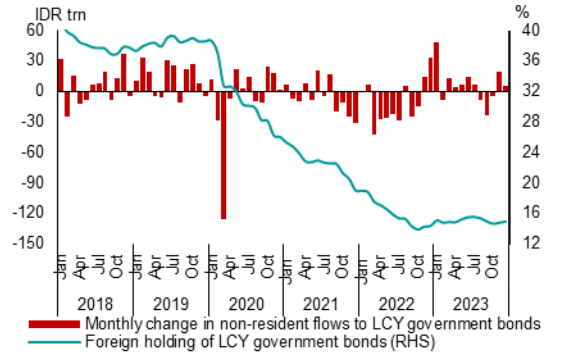
Source: Bloomberg; BI; CEIC; AMRO staff calculations
Note: Daily data obtained up to early January 2024. The forward premium is calculated as the annualized difference between the forward and spot rates of a currency. A negative value indicates an expected depreciation in the currency in the future.

… to contain rupiah hedging costs and support the attractiveness of rupiah-denominated assets.



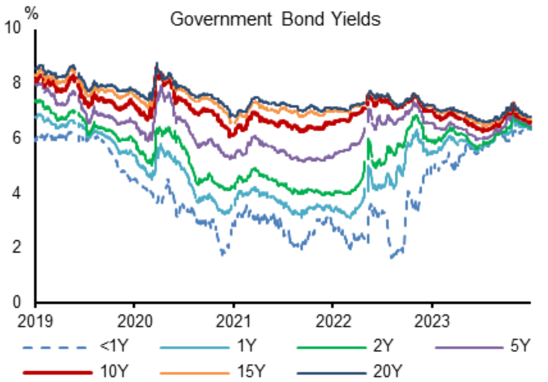
Source: Bloomberg; BI; Ministry of Finance; CEIC; AMRO staff calculations
Note: Daily data obtained up to early January 2024. The rupiah hedging cost is calculated as the three-month offshore NDF-implied interest rate.

Non-resident inflows to the government bond market have resumed since November 2023, as risk aversion eased…



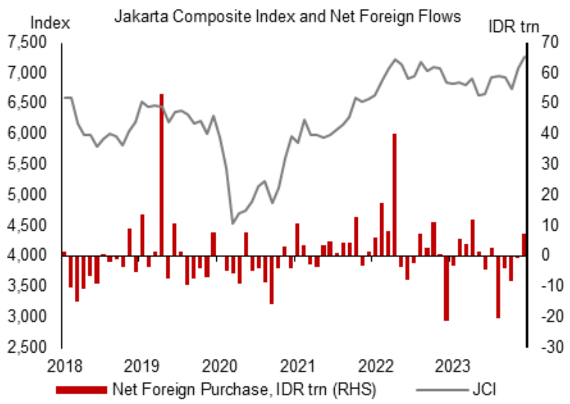
Source: Indonesia Bond Pricing Agency; CEIC
Note: Daily data obtained up to December 2023.

... which was consistent with a moderation in government bond yields in recent months.



Sources: Ministry of Finance; AMRO staff calculations
Note: Daily data obtained up to end-2023.

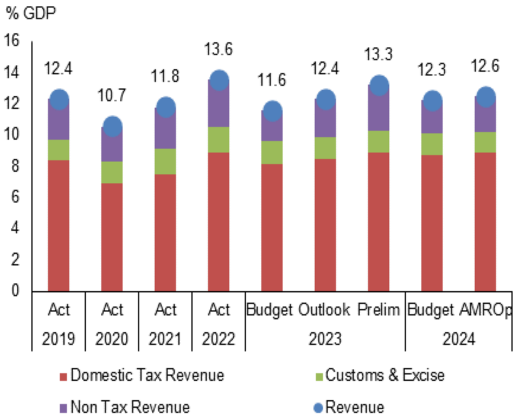
Likewise, non-residents have returned to net purchase Indonesian equities lately.



Source: Jakarta Stock Exchange; CEIC; AMRO staff calculations
Note: Monthly data obtained up to December 2023.

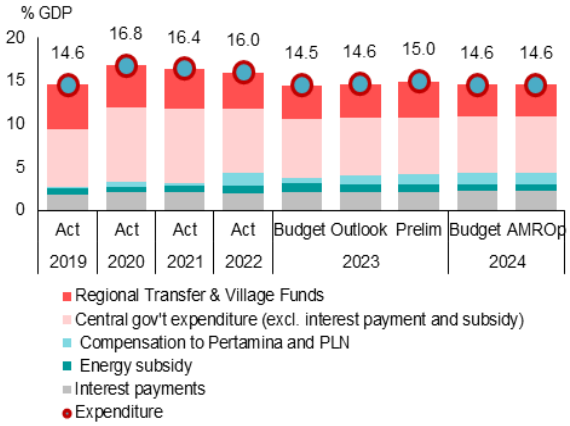
Figure 1.6. Fiscal Sector

Revenue performance was supported by solid domestic tax revenue and transfer of SOE profits, as commodity windfalls waned…



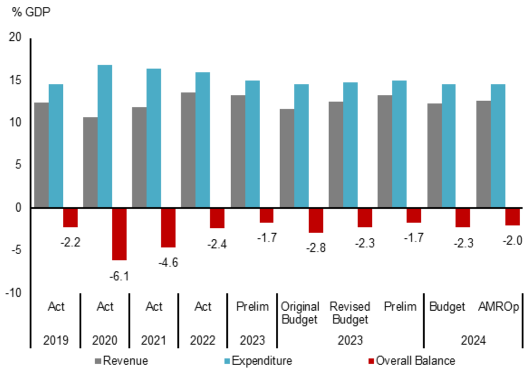
Source: Ministry of Finance; CEIC; AMRO staff calculations
Note: AMROp stands for AMRO staff projections.

… allowing the government to increase spending…



Source: Ministry of Finance; CEIC; AMRO staff calculations
Note: Budget and Outlook data are announced by Ministry of Finance. AMROp stands for AMRO staff projections.

… while maintaining fiscal consolidation …



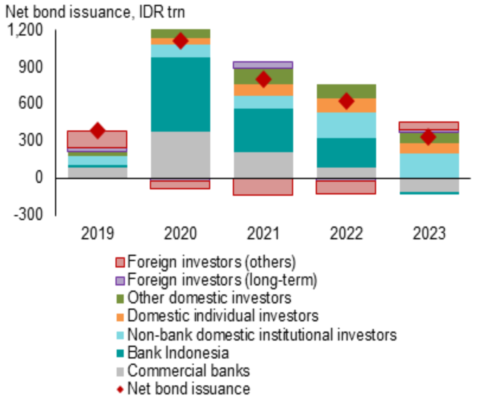
Source: Ministry of Finance; CEIC; AMRO staff projections
Note: AMROp stands for AMRO staff projections.

… and lowering gross bond issuances vis-a-vis its original plan in 2023.

in IDR trillion, unless otherwise indicated	2019	2020	2021	2022	2023	
	Act	Act	Act	Act	Original Budget	Prelim
Gross financing needs	868	1,477	1,368	1,019	1,330	1,058
Principal repayment	475	425	450	452	556	620
Interest payments	276	314	344	386	441	440
Primary deficit	73	634	432	74	157	-92
Investment financing (SOE capital injection)	44	105	143	107	176	90
Gross bond issuance	902	1,532	1,302	1,054	1,193	838
Gross IDR bonds	753	1,373	1,144	941	1,044	748
Auctions	681	761	797	585	911	602
Average bond issuance per two weeks	*28*	*32*	*33*	*24*	*38*	*25*
Retail bonds	48	77	97	107	96	128
Private placement	24	535	250	248	38	18
o/w with Bank Indonesia	*0*	*398*	*215*	*224*	*0*	*0*
Gross FCY bonds	149	159	158	112	149	90

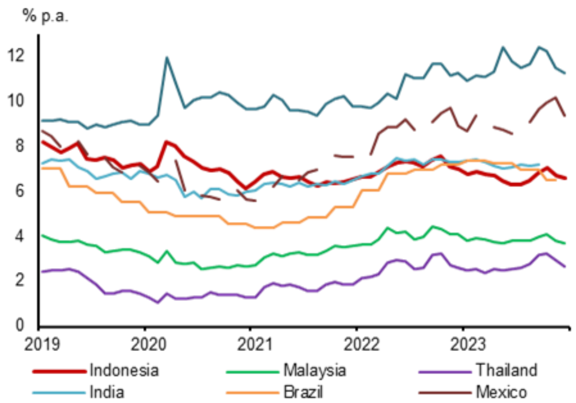
Source: Ministry of Finance; AMRO staff calculations

Net bond issuance was aborbsed by domestic non-bank and foreign investors as BI and commercial banks reduced their holdings…



Source: Ministry of Finance; Bank Indonesia; CEIC; AMRO staff calculations

… supporting a broadly lower borrowing cost in 2023, except in August-October when risk aversion heightened.



Source: National Authorities; CEIC; AMRO staff calculations
Note: Monthly data are up to December 2023, except for India (September), Brazil and Chile (November).

Appendix 2. Selected Economic Indicators

	2019	2020	2021	2022	2023	2024**
Real GDP (percent change yoy)	5.0	-2.1	3.7	5.3	5.0	5.2
Household consumption	5.0	-2.6	2.0	4.9	4.8	5.0
Government consumption	3.3	2.1	4.2	-4.5	2.9	3.5
Gross fixed capital formation	4.5	-5.0	3.8	3.9	4.4	5.5
Exports	-0.5	-8.4	18.0	16.3	1.3	3.4
Imports	-7.1	-17.6	24.9	14.7	-1.6	1.8
Balance of payments (percent of GDP)						
Current account balance	-2.7	-0.4	0.3	1.0	-0.1	-0.3
Trade balance	0.3	2.7	3.7	4.8	3.4	2.7
Oil and gas	-0.9	-0.5	-1.1	-1.9	-1.4	-1.1
Non-oil and gas	1.2	3.2	4.8	6.6	4.9	3.8
Service trade balance	-0.7	-0.9	-1.2	-1.5	-1.3	-0.7
Exports	2.8	1.4	1.2	1.8	2.4	2.7
o/w travel	1.5	0.3	0.0	0.5	1.0	1.6
Imports	3.5	2.3	2.4	3.3	3.7	3.4
o/w travel	1.0	0.2	0.0	0.5	0.9	1.0
Primary income balance	-3.0	-2.7	-2.7	-2.7	-2.6	-2.7
Secondary income balance	0.7	0.6	0.5	0.5	0.4	0.4
Financial account balance	3.3	0.7	1.1	-0.7	0.6	1.3
Direct investment (net)	1.8	1.3	1.5	1.4	1.1	1.4
Portfolio investment (net)	2.0	0.3	0.4	-0.9	0.2	0.6
Other investment (net)	-0.5	-0.9	-0.9	-1.2	-0.6	-0.7
Overall balance	0.4	0.2	1.1	0.3	0.5	1.0
Central government (percent of GDP)*						
Revenue and grant	12.4	10.7	11.8	13.5	13.3	12.6
Expenditure	14.6	16.8	16.4	15.8	14.9	14.6
Budget balance	-2.2	-6.1	-4.6	-2.4	-1.7	-2.0
Central government debt	30.2	39.4	40.7	39.7	39.0	38.4
Money and credit (percent change yoy)						
Broad money	6.5	12.5	14.0	8.4	3.5	8.9
Private sector credit	6.2	-1.8	6.7	9.9	10.7	9.5
Memorandum Items:						
Headline inflation (yoy, end of period)	2.7	1.7	1.9	5.5	2.6	2.5
Headline inflation (yoy, period average)	3.0	2.0	1.6	4.2	3.7	2.8
BI Policy Rate	5.00	3.75	3.50	5.50	6.00	-
Exchange rate (rupiah/USD, period avg)	14,237	14,582	14,308	14,850	15,255	-
Exchange rate (rupiah/USD, end of year)	14,018	14,173	14,329	15,615	15,416	-
Gross foreign reserves (USD bn)	129.2	135.9	144.9	137.2	146.4	162.2
External debt (percent of GDP)	36.1	39.3	34.9	30.1	29.7	28.3
Nominal GDP (USD bn)	1,119	1,059	1,187	1,319	1,369	1,476
Nominal GDP (IDR trn)	15,833	15,443	16,977	19,588	20,892	22,747

Source: BPS; Bank Indonesia; Ministry of Finance; CEIC; AMRO staff calculations
Note: */ Fiscal data for 2023 are AMRO staff estimates based on preliminary realization data announced by Ministry of Finance. **/ Data for 2024 are AMRO staff projections.

Appendix 3. Balance of Payments

in % of GDP, unless otherwise indicated	2019	2020	2021	2022	2023
Current Account	-2.7	-0.4	0.3	1.0	-0.1
Goods	0.3	2.7	3.7	4.8	3.4
Exports	15.1	15.4	19.6	22.2	19.0
Oil	0.4	0.3	0.5	0.6	0.6
Gas	0.7	0.5	0.6	0.7	0.6
Non-Oil & Gas	14.0	14.6	18.5	20.9	17.8
Imports	14.7	12.7	15.9	17.4	15.6
Oil	1.7	1.1	1.8	2.8	2.4
Gas	0.2	0.3	0.4	0.4	0.3
Non-Oil & Gas	12.7	11.4	13.7	14.3	12.9
Services	-0.7	-0.9	-1.2	-1.5	-1.3
Primary Income	-3.0	-2.7	-2.7	-2.7	-2.6
Secondary Income	0.7	0.6	0.5	0.5	0.4
Capital Account	0.0	0.0	0.0	0.0	0.0
Financial Account	3.3	0.7	1.1	-0.7	0.6
Direct Investment, net	1.8	1.3	1.5	1.4	1.1
Portfolio Investment, net	2.0	0.3	0.4	-0.9	0.2
Other Investment, net	-0.5	-0.9	-0.9	-1.2	-0.6
Net Error & Omissions	-0.1	-0.1	-0.2	0.0	-0.1
Overall Balance	0.4	0.2	1.1	0.3	0.5
Memorandum items:					
International reserves (USD bn)	129.2	135.9	144.9	137.2	146.4
External debt	36.1	39.3	34.9	30.1	29.7
Exchange rate (rupiah/USD)	14,237	14,582	14,308	14,850	15,255
Nominal GDP (USD bn)	1,119	1,059	1,187	1,319	1,369

Source: Bank Indonesia; BPS; CEIC; AMRO staff calculations

Appendix 4. General Government Budget Performance and Budget Financing

in IDR trillion, unless otherwise indicated	2019	2020	2021	2022	2023	
	Act	Act	Act	Act	Original Budget	Prelim
Revenues and grants	**1,961**	**1,648**	**2,011**	**2,636**	**2,463**	**2,774**
% yoy	*1*	*-16*	*22*	*31*	*-6.6*	*5.2*
Tax revenues	1,546	1,285	1,548	2,035	2,021	2155
% yoy	*2*	*-17*	*20*	*31*	*-0.7*	*5.9*
Income tax	772	594	697	998	935	1091
% yoy	*4*	*-23*	*17*	*43*	*-6.3*	*9.3*
VAT	532	450	552	688	743	733
% yoy	*-1*	*-15*	*23*	*25*	*8.1*	*6.6*
Excise	172	176	196	227	245	227
% yoy	*8*	*2*	*11*	*16*	*8.2*	*0.0*
Import-export tariff	41	37	74	91	58	68
% yoy	*-11*	*-11*	*101*	*23*	*-36.5*	*-25.7*
Non-tax revenues	409	344	459	596	441	618
% yoy		*-16*	*33*	*30*	*-25.9*	*3.8*
Non-tax revenues from natural resources	155	97	150	269	196	253
% yoy		*-37*	*54*	*80*	*-27.1*	*-5.9*
Profits transferred from SOEs	81	66	31	41	49	90
% yoy		*-18*	*-54*	*33*	*20.9*	*121.2*
Expenditure	**2,309**	**2,595**	**2,786**	**3,096**	**3,061**	**3,122**
% yoy	*4*	*12*	*7*	*11*	*-1.1*	*0.8*
Central government expenditure	1,496	1,833	2,001	2,280	2,247	2,241
% yoy	*3*	*22*	*9*	*14*	*-1.5*	*-1.7*
Personnel	376	381	388	402	443	433
% yoy	*8*	*1*	*2*	*4*	*10*	*7.5*
Material	334	422	530	426	377	418
% yoy	*-4*	*26*	*26*	*-20*	*-12*	*-1.9*
Capital spending	178	191	240	241	209	259
% yoy	*-3*	*7*	*25*	*0*	*-13*	*7.6*
Interest payment	276	314	344	386	441	440
% yoy	*7*	*14*	*9*	*12*	*14*	*13.8*
Social assistance	112	203	174	162	149	147
% yoy	*33*	*80*	*-14*	*-7*	*-8*	*-9.3*
Subsidies	202	196	242	253	299	271
o/w: direct energy subsidies	137	97	140	172	211	185
Other expenditure	12	120	80	404	329	276
o/w: compensation to Pertamina and PLN	7	91	48	293	126	250
Regional transfers and village funds	813	763	786	816	815	881
% yoy	*7.3*	*-6.2*	*3.0*	*3.9*	*-0.2*	*8.2*
Budget deficit (-)/surplus (+)	**-349**	**-948**	**-775**	**-460**	**-598**	**-348**
% of GDP	*-2.2*	*-6.1*	*-4.6*	*-2.4*	*-2.8*	*-1.7*
Budget financing	402	1,192	872	584	598	348
Gross financing needs	**868**	**1,477**	**1,368**	**1,019**	**1,330**	**1,058**
Principal repayment	475	425	450	452	556	620
Interest payments	276	314	344	386	441	440
Primary deficit	73	634	432	74	157	-92
Investment financing (SOE capital injection)	44	105	143	107	176	90
Gross bond issuance	**902**	**1,532**	**1,302**	**1,054**	**1,193**	**838**
Gross IDR bonds	**753**	**1,373**	**1,144**	**941**	**1,044**	**748**
Auctions	681	761	797	585	911	602
Average bond issuance per two weeks	*28*	*32*	*33*	*24*	*38*	*25*
Retail bonds	48	77	97	107	96	128
Private placement	24	535	250	248	38	18
o/w with Bank Indonesia	*0*	*398*	*215*	*224*	*0*	*0*
Gross FCY bonds	**149**	**159**	**158**	**112**	**149**	**90**

Source: Ministry of Finance; CEIC; AMRO staff calculations
Note: */ 2023 budget realization data is preliminary.

Appendix 5. Debt Sustainability Analysis[70]

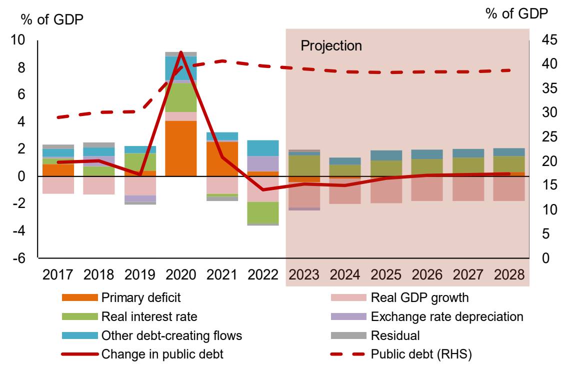
Indonesia's government debt is projected to moderate from the pandemic peak and stay below 40 percent of GDP in the medium term. Government debt rose sharply from about 30 percent of GDP before the pandemic to 39.4 percent in 2020 and 40.7 percent in 2021, mainly driven by larger fiscal deficits as revenue collection fell amid a surge in budget spending related to pandemic-relief measures. The early adoption of tax reform measures, along with recovering economic activities and commodity price windfalls, supported a strong rebound in revenue collection and fiscal consolidation after the pandemic, and a moderation in government debt to 39.7 percent of GDP in 2022, and further to 39.0 percent in 2023. In AMRO staff's baseline scenario, the debt to GDP ratio is projected to hover around 38.7 percent by 2028 (Table 5.1). Solid economic growth and contained primary deficits backed by continued tax reforms and enhanced tax administration are expected to offset the impact of elevated borrowing costs and investment financing[71] on the debt level (Figure 5.1).

Table 5.1. Macroeconomic and Fiscal Indicators

	2018	2019	2020	2021	2022	2023p	2024p	2025p	2026p	2027p	2028p
Macroeconomic indicators (%)											
Real GDP growth	5.2	5.0	(2.1)	3.7	5.3	5.0	5.2	5.2	5.2	5.2	5.2
GDP deflator	3.8	1.6	(0.4)	6.0	9.6	1.5	3.6	2.6	2.6	2.5	2.5
Headline Inflation	3.2	3.0	2.0	1.6	4.2	3.7	2.8	2.5	2.5	2.5	2.5
Effective interest rate	6.5	6.2	6.6	5.7	5.6	5.7	6.1	6.0	6.0	6.0	6.0
Fiscal indicators (% GDP)											
Revenue	13.1	12.4	10.7	11.8	13.5	13.3	12.6	12.8	12.7	12.7	12.7
Expenditure	14.9	14.6	16.8	16.4	15.8	14.9	14.6	14.8	15.0	15.0	15.1
Fiscal balance	(1.8)	(2.2)	(6.1)	(4.5)	(2.3)	(1.7)	(2.0)	(2.0)	(2.2)	(2.3)	(2.4)
Primary balance	(0.0)	(0.4)	(4.1)	(2.5)	(0.3)	0.4	0.2	0.1	(0.1)	(0.2)	(0.3)
Public debt	30.1	30.2	39.4	40.7	39.7	39.0	38.4	38.3	38.4	38.5	38.7
Gross financing needs	5.6	6.0	9.8	8.7	5.5	5.1	5.8	5.9	6.3	6.2	6.2

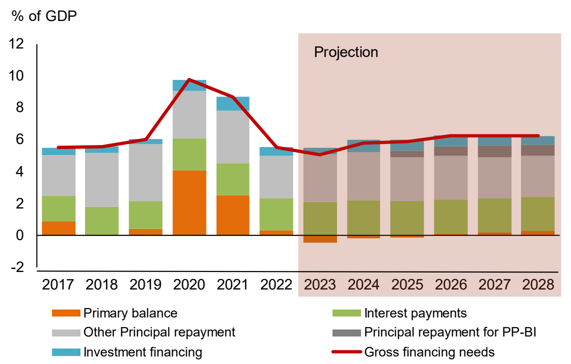
Source: BI, BPS, IMOF, CEIC, AMRO staff estimates
Noted: The macroeconomic and fiscal indicators for 2023-2028 are based on AMRO staff estimates and projections.

Figure 5.1. Government Debt Dynamics



Source: Ministry of Finance, AMRO staff estimates
Note: Other debt-creating flows consist mainly of investment financing and excess budget financing (SiLPA) that is accumulated into fiscal reserves netting out fiscal reserve (SAL) usage and proceeds from SOE privatization and other state asset sales.

Figure 5.2. Gross Financing Needs and Components



Source: Ministry of Finance, AMRO staff estimates
Note: The principal repayment for PP-BI is the amortization of government bonds privately placed at BI during 2020-2022 to fund pandemic-related expenses. "Other principal repayment" is the amortization of other bonds and loans.

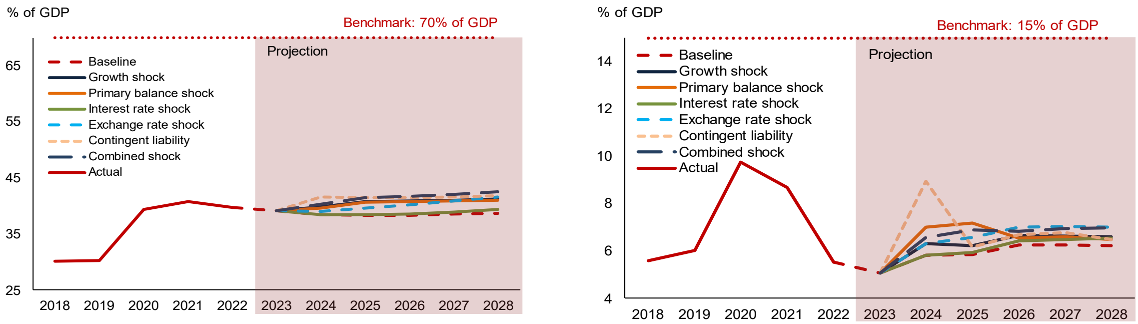
The government's gross financing needs have moderated from the pandemic peak but are projected to stay elevated compared with pre-pandemic levels. Gross financing needs (GFNs), having surged in 2020-2021 due to enlarged primary deficits, are estimated to moderate to about 5.1 percent of GDP in 2023. That said, GFNs might increase gradually to about 5.9 percent of GDP by 2025, and further to 6.2 percent by 2028, higher than pre-pandemic levels (Table 5.1). This is mainly driven by the amortization of government bonds which were bought by the central bank through private placements in 2020-2022 to finance

[70] Prepared by Somphone Changdabout, Associate, and Thi Kim Cuc Nguyen, Deputy Group Head and Senior Economist.
[71] Investment financing is used for capital injection into SOEs and public service agencies. It was increased from IDR44 trillion in 2019 to IDR105 trillion and IDR90 trillion in 2020 and 2023 respectively.

pandemic-related spending.[72] The amortization will start in 2025 and peak in 2027-2028 (Figure 5.2). At the same time, fiscal primary deficits are projected to be contained backed by ongoing revenue-enhancing reforms and solid economic growth.[73] The impact of the higher debt burden incurred during the pandemic, on government borrowing costs has been mitigated by a burden sharing agreement under which the central bank remunerates fully or partially the interest income on government bonds.[74] Efforts to flatten the debt maturity profile and reduce bunching in the bond repayment schedule, including through debt switches, are also expected to keep GFN increases over the next few years under control.[75]

Figure 5.3. Macro-fiscal Stress Test

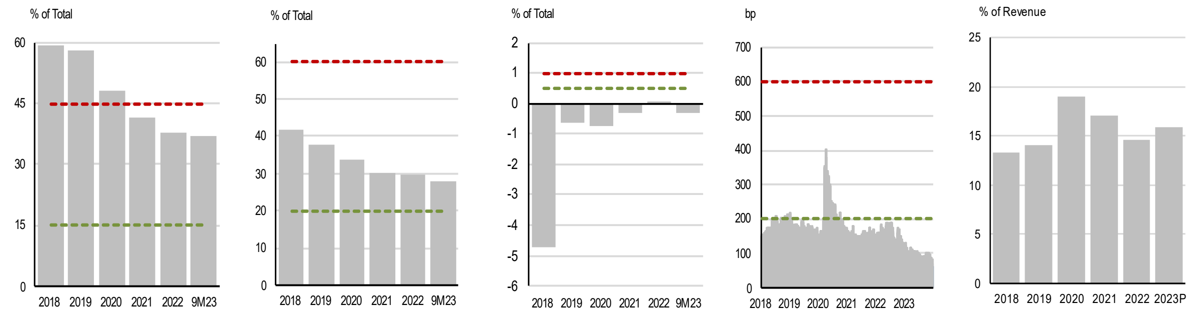
a. Stress Test for Public Debt b. Stress Test for GFNs



Source: Ministry of Finance, AMRO staff estimates
Note: The scenarios for the stress test are as follows: 1) Real GDP growth shock: one standard deviation, or a -2.3 percentage point shock to 2024 and 2025; 2) Primary balance shock: one standard deviation, or a -1.2 percentage point shock to 2024 and 2025; 3) Interest rate shock: a +1.5 percentage point shock from 2024; 4) Exchange rate shock: a one-time +5 percentage point shock in 2024; 5) Contingent liability shock: a one-time shock of 3 percentage points of GDP in 2024; and 6) Combined shock: a combination of growth (half size), primary balance (half size), interest rate, and exchange rate shocks.

Figure 5.4. Debt Profile Vulnerabilities

a. Public Debt Held By Non-residents | b. Public Debt in Foreign Currency | c. Chang in Short-Term Debt | d. EMBI Global Spread | e. Interest Payments



Source: CEIC; Haver, Ministry of Finance; AMRO staff estimates
Note: 1) --- Lower early warning (50 percent of the benchmark), --- upper early warning (75 percent of the benchmark); 2) Short-term debt is based on the original maturity.

[72] Bank Indonesia and the Ministry of Finance entered into unprecedented agreements in 2020-2021, known as SKB II and III, whereby BI bought government bonds in the primary market to finance budget spending related to the COVID-19 pandemic. The size of BI's bond purchase via private placement was IDR397.6 trillion, IDR215.0 trillion, and IDR207.4 trillion in 2020, 2021, and 2022, respectively, equivalent to (2.6 percent, 1.3 percent, and 1.1 percent of GDP for the respective years). These bonds were issued at below the market rate (of three-month reverse repo rates), and BI would give the full interest income to the government for IDR397.6 trillion of bonds issued in 2020, IDR58 trillion in 2021, and IDR40 trillion in 2022. In addition, BI also shared the interest cost of government bonds issued at market rates in 2020 to finance the pandemic relief package of IDR177 trillion for MSMEs and the corporate sector.
[73] Primary deficits are projected to narrow to 0.2 percent of GDP on average in 2027-2028, compared with 0.4 percent between 2017 and 2019.
[74] According to AMRO staff's preliminary estimates, the government could have enjoyed annual savings from interest payments of about IDR45 trillion on average, equivalent to about 0.2 percent of GDP, comprising interest payments remunerated/shared by the central bank, explicit interest cost savings due to the issuing of bonds to BI at below market rates, and (iii) implicit cost savings from lower bond yields compared to without the private placements at BI.
[75] The share of short-term debt by remaining maturities declined from about 10 percent of total government debt in 2017-2019 to about 7 percent since 2020, which is consistent with the lengthening of debt maturity from 8.6 years to 11.6 years during the same timeframe. According to AMRO staff's preliminary estimate, such changes in the debt maturity profile would help level off debt repayment (excluding government bonds privately placed at BI under SKB II and III) by 0.4-0.5 percentage points of GDP by 2028.

A standard stress test finds the overall risk to Indonesia's debt sustainability to be manageable. Government debt and GFNs are projected to remain well below the indicative benchmarks of 70 percent and 15 percent of GDP,[76] respectively, in the baseline and all stress test scenarios over the next five years (Figures 5.3a, b). Several positive changes are observed in the government debt profile that help reduce its vulnerabilities to future shocks (Figure 5.4, Table 5.2). Notably, the share of debt held by non-residents and debt in foreign currencies have declined steadily, lowering the debt exposure to exchange rate risks and higher U.S. dollar borrowing costs (Figures 5.4a, b). The rollover risk is also contained, as the share of short-term debt has decreased over time (Figure 5.4c). Moreover, market perception of sovereign risk continues to be low, as indicated by the EMBI spread (Figure 5.4d). Meanwhile, interest payments have moderated from the pandemic peak but are still elevated compared with pre-pandemic levels (Figure 5.4e).

Table 5.2. Heatmap of Public Debt Sustainability

		2018	2019	2020	2021	2022	2023p	2024p	2025p	2026p	2027p	2028p
Public Debt												
Gross Financing Needs												
Debt Profile	Public Debt Held by Non-residents											
	Public Debt in Foreign Currency											
	Change in Short-term Debt											
	Market Perception of Sovereign Risk											

Source: AMRO staff estimates
Note: 1) For Public Debt and Gross Financing Needs, the cell is highlighted in green if the benchmark is not exceeded under all shocks or the baseline, yellow if exceeded under any 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 benchmark.

[76] The benchmarks for market access countries were used by the International Monetary Fund (IMF) prior to 2022 and have been adopted by AMRO staff.

Appendix 6. Climate Change Policy Clipboard[77]

<table>
<tr><th>Item</th><th>Sub-item</th><th colspan="5">Note</th></tr>
<tr><td rowspan="14">Nationally Determined Contribution (Enhanced NDC, Sep 2022)</td><td>Emission reduction target</td><td colspan="5">• 31.89 percent (unconditional) of business-as-usual (BAU) scenario by 2030
• 43.20 percent (conditional on international support) of BAU scenario by 2030</td></tr>
<tr><td rowspan="8">Emission reduction target by sector</td><td rowspan="2">(Unit: ton of CO_2e or Mt-CO_2e[78])</td><td rowspan="2">2010</td><td colspan="3">2030</td></tr>
<tr><td>BAU</td><td>Unconditional</td><td>Conditional</td></tr>
<tr><td>Forestry and other land uses</td><td>647</td><td>714</td><td>214</td><td>-15</td></tr>
<tr><td>Energy</td><td>453</td><td>1,669</td><td>1,311</td><td>1,223</td></tr>
<tr><td>Agriculture</td><td>111</td><td>120</td><td>110</td><td>108</td></tr>
<tr><td>Waste</td><td>88</td><td>296</td><td>256</td><td>253</td></tr>
<tr><td>Industrial processes and product use</td><td>36</td><td>70</td><td>63</td><td>61</td></tr>
<tr><td>Total</td><td>1,335</td><td>2,868</td><td>1,954</td><td>1,630</td></tr>
<tr><td rowspan="5">Energy mix target</td><td></td><td colspan="2">2025</td><td colspan="2">2050</td></tr>
<tr><td>New and renewable energy</td><td colspan="2">at least 23%</td><td colspan="2">at least 31%</td></tr>
<tr><td>Oil</td><td colspan="2">less than 25%</td><td colspan="2">less than 20%</td></tr>
<tr><td>Coal</td><td colspan="2">minimum 30%</td><td colspan="2">minimum 25%</td></tr>
<tr><td>Gas</td><td colspan="2">minimum 22%</td><td colspan="2">minimum 24%</td></tr>
<tr><td>Long-term commitments</td><td></td><td colspan="5">• Long-term Strategy for Low Carbon and Climate Resilience 2050 (LTS-LCCR) indicates the target of reaching peak GHG emissions in 2030 with a net sink in forestry and land uses, and then rapidly progressing toward net-zero emissions in 2060 or sooner, during which coal-fired power plant (CFPPs) will be retired naturally.
• Presidential Regulation (PR) 112 in 2022 laid the groundwork for CFPPs to be retired earlier than its natural lifetime. The PR clearly instructs the ministry of energy mineral resource to produce an early retirement roadmap, limiting all operating CFPPs up until 2050, whilst also considering renewable energy to fill the void.</td></tr>
<tr><td>Energy transition initiatives</td><td></td><td colspan="5">• Renewable energy: geothermal, hydro, solar, wind, and biomass.
• Electric vehicle (EV) adoption: targeted to have 13 million electric two-wheelers and 2.2 million electric cars by 2030.
• Clean (biodiesel) mandate: raised mandatory blending ratio for biodiesel has been raised from 30% (B-30) to 35% (B-35) in August 2023, with a plan to increase to 40% (B-40) over the next few years.</td></tr>
<tr><td rowspan="3">Financing</td><td>Financing needs</td><td colspan="5">• Indonesia needs at least IDR4,001 trillion(USD281 billion) cumulatively from 2020-2030 or IDR343.6 trillion annually for mitigation actions so as to achieve the NDC target in 2030 (Enhanced NDC, Sep 2022).
  ○ The government allocates around 3.9 percent of the State Budget or IDR93.8 trillion annually to address climate change (Oct 2023).
• Indonesia needs more than USD1,000 billion in financing to achieve net-zero emissions (NZE) by 2060 or earlier.</td></tr>
<tr><td rowspan="2">Available sources</td><td colspan="5">[Government budget]
• The IMOF implements Climate Budget Tagging both at national and regional levels to determine the budget's contribution to climate change issues.
• Annual government expenditure on climate change averaged IDR81.4 trillion between 2016 and 2021, accounting for 3.5 percent of total expenditure. This is slightly lower than the government's committed allocation of 3.9 percent.</td></tr>
<tr><td colspan="5">[International supports]
• Between 2016 and 2019, Indonesia received financial support of USD1.57 billion based on bilateral agreements, and USD1.53 billion based on multilateral agreements.</td></tr>
</table>

[77] This appendix was prepared by Thai Yangsingkham, Associate, with input contributions from Nguyen Thi Kim Cuc, Deputy Group Head and Senior Economist.
[78] Mt-CO2e: Metric tons of carbon dioxide equivalent.

		[Climate funds] • Global Environment Facility (GEF): focused on projects related to biodiversity, climate change, and land degradation. • Green Climate Fund (GCF): established within the framework of the United Nations Framework Convention on Climate Change. • Climate Investment Funds (CIF): allocated funds to the energy and forestry sector. • Just Energy Transition Partnership for Indonesia (JETP-ID): established on the sidelines of the G20 Summit in Bali, Indonesia in 2022 between Indonesia and members of the International Partners Group (IPG) which included the governments of Japan and the United States, focusing on renewable energy.
		[Green bonds/sukuks] • The government has issued sovereign green sukuk in the global markets since 2018, and retail green sukuk in the domestic market since 2019. • The private sector has issued project-based corporate green sukuk bonds since 2022.
Enabling framework for climate change financing	Taxonomy	• The Financial Services Authority (OJK) launched its first green taxonomy in early 2022, known as Indonesia Green Taxonomy Edition 1.0, to provide financial institutions with guidance on how to identify and classify activities that can be considered green. • OJK also issued the Taxonomy for Indonesian Sustainable Finance in February 2024, aiming to facilitate the financing of transition activities which are aligned with decarbonization goals.
Carbon pricing	Carbon tax	• The Harmonized Tax Law in 2021 includes a carbon tax alongside mandatory emission trading under a cap-and-tax scheme with a minimum tariff of IDR30,000 per Mt-CO_2e. The implementation was originally scheduled for April 2022 but has been postponed. • To prepare for the carbon tax implementation, the government is drafting regulations on a carbon tax implementation roadmap and carbon tariff imposition which need to be approved by and consulted with Parliament, respectively.
	Carbon trading	Under the cap-and-tax scheme, the government will first set a cap on the emission of each emitter and then impose a tax when an emitter emits more than allowed. Indonesia's cap-and-tax scheme will offers a tax deduction if an emitter buys carbon market allowances from another emitter's unused allowances or utilizes carbon offset certificates earned when the emitter invests in voluntary emission reduction projects. As carbon tax has not been implemented yet, an emitter who emits more than allowed has to buy carbon market allowances or earn carbon offset certificates to offset excessive emissions. Primary market • Mandatory carbon trading was launched in February 2023 among 99 (large) CFPPs, which account for 86 percent of national CFPP capacity. • The government decides the emission cap and allocates the emission allowance, which is equivalent to 100 percent of the emission cap in the first year. CFPPs whose emission exceeds the cap can purchase emission allowances from others with emission below the cap or use offset to achieve compliance. • As the carbon tax has yet to be implemented, to penalize non-compliance, the government will lower the emission allowance given to CFPPs that exceed the emission cap but have not purchased offsetting emission allowance, to 75 percent of the emission cap from the second year onwards. • Mandatory carbon trading is expected to gradually expand to other sectors, depending on sector readiness. Secondary market • Carbon units that can be traded on the Indonesia Carbon Exchange are carbon credits (SPE-GRK) and emission allowances (PTBAE-PU). • Carbon units traded on the Indonesia Carbon Exchange are

		required to undergo registration with both the National Registry (under Ministry of Environment and Forestry) and the Indonesia Carbon Exchange prior to trading. • Carbon trading through the Indonesia Carbon Exchange is under the supervision of the OJK. • Voluntary carbon trading started on September 26, 2023 with a total trading volume of 459,953 tons of CO2 equivalent at a price range of IDR69,000 - IDR77,000 per ton of CO2 equivalent. Trading participants are renewable energy companies (suppliers/sellers), travel companies (i.e., airlines), banks, and nonbank financial institutions such as securities companies (buyers). Purchasing carbon credits is one strategy for these companies to achieve their commitment to reducing emissions and fulfilling environmental, social, and governance (ESG) goals in line with the thresholds provided by relevant ministries. To reduce emissions in line with the threshold set by the government, sectors required to meet the NDC target are given allowances to trade emissions. However, the trading volume remains limited.
Potential opportunities		• Energy Transition Mechanism, which consist of phasing out/down coal fired power plants (for example, via carbon capture and storage technology), investment in renewable energy and transmission • <u>Manufacturing of EVs and parts</u>

Source: AMRO Annual Consultation Report on Indonesia (2022); OJK; Ministry of Finance of Indonesia; other various sources

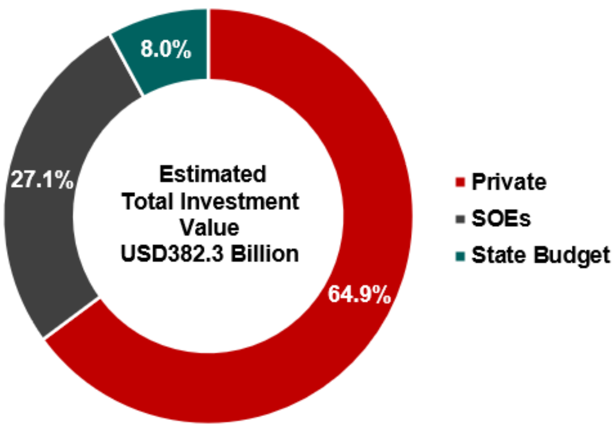
Annexes: Selected Issues

1. Financial Performance of Infrastructure/Construction SOEs and Implications[79]

This selected issue focuses on recent financial difficulties encountered by state-owned enterprises (SOEs) in the infrastructure and construction business, and assesses the implications on the fiscal landscape and banking sector, so as to gauge the sustainability of infrastructure development in Indonesia. Infrastructure and construction-related SOEs have assumed a pivotal role in Indonesia's national strategic projects (PSNs)[80] and are expected to contribute about USD103.6 billion, equivalent to 27.1 percent of total spending needs. Nevertheless, some SOEs have grappled with financial stress since the onset of the pandemic. Two such enterprises have undergone debt restructuring agreements with creditors, while Parliament has approved the government making capital injections into some SOEs to bolster infrastructure development.

1. More than 170 PSNs have been successfully completed since 2016, buoyed by robust backing from SOEs in the infrastructure and construction business as well as allocations from the government budget. During the same period, the proportion of finalized PSNs financed through private-sector initiatives and/or public-private partnerships (PPPs) has remained modest. As of November 2023, USD86.2 billion has been invested via PPPs, which was only about one-third of the total investment expected from the private sector (Figure A1.1). To increase private-sector involvement, the government has made persistent endeavors to attract private capital by streamlining project implementation processes, including facilitating smoother land acquisition and expediting electronic licensing. In the meantime, SOEs and government budget allocations have been pivotal contributors to infrastructure development, particularly in projects deemed less commercially viable. For instance, the government assigned the Trans Sumatra Toll Road Project — to be the nation's longest toll road — to an SOE wholly owned by the government. In recognition of the project's low viability, the government extended various forms of support to the SOE, including capital injections and government guarantees.

Figure A1.1 Planned Share of PSN Funding Sources



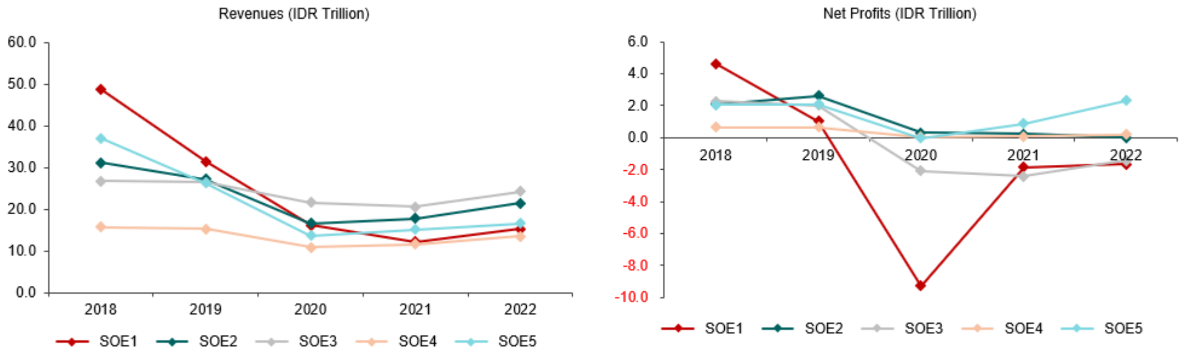
Source: KPPIP, AMRO staff compilation
Note: The total investment value and each share are estimated by KPPIP.

2. That said, the majority of infrastructure and construction-related SOEs have borne the brunt of the pandemic, with their revenues, profits and dividends languishing below pre-pandemic levels, which requires persistent capital infusions from the government

[79] Prepared by Akifumi Fujii, Economist.
[80] As of November 2023, PSNs comprised 204 projects and 13 programs, totaling USD382.3 billion.

into certain SOEs. The revenues and net profits of certain SOEs continue to languish at levels not exceeding half of pre-pandemic benchmarks, with the SOEs grappling with downward pressures arising from heightened inflation and escalating interest rates (Figure A1.2). The recent downturn in company performance has caused a pause in dividend payments to the government, their major shareholder, whereas the cumulative amount of capital injections from the government has escalated (Figure A1.3). Notably, the government has increased capital injections into the aforementioned SOE in tandem with the progress of the Trans Sumatra Toll Road Project, for which the government has directly appointed the company as the project's operator.

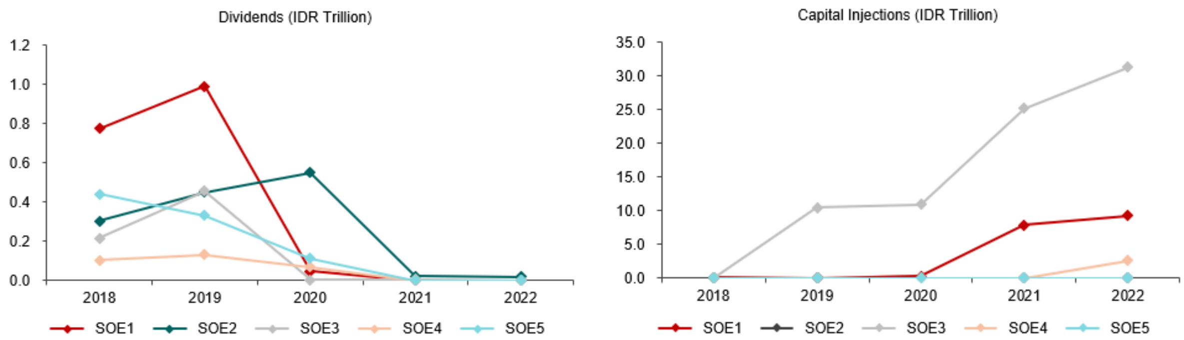
Figure A1.2 Revenues and Net Profits of Select SOEs



Source: SOE Annual Reports, AMRO staff compilation

Source: SOE Annual Reports, AMRO staff compilation

Figure A1.3 Dividends and Capital Injections of Select SOEs

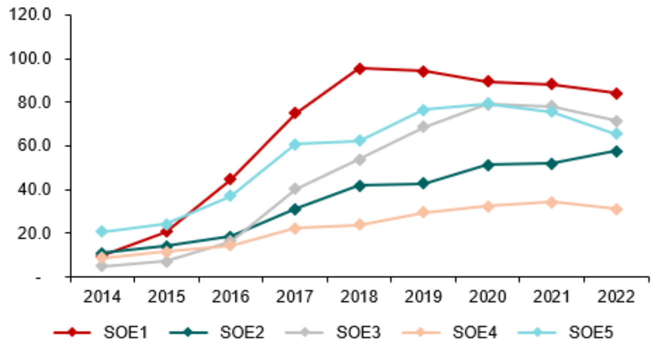


Source: SOE Annual Reports, AMRO staff compilation

Source: SOE Annual Reports, AMRO staff compilation

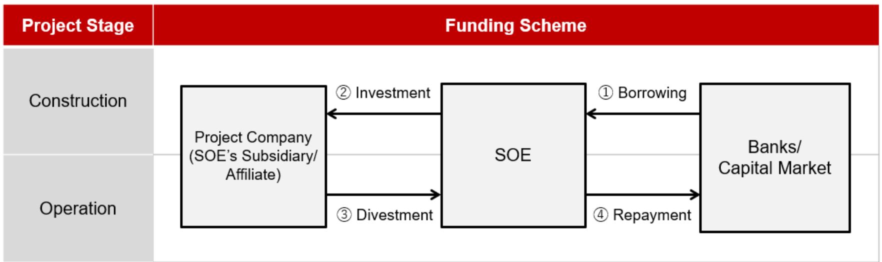
3. The pandemic has caused the failure of two infrastructure and construction-related SOEs, which had expanded their business by assuming excessive leverage. In response to government initiatives dating back to 2014, these SOEs aggressively embraced infrastructure projects, and increased their leverage profile (Figure A1.4). Moreover, they not only functioned as construction contractors but also took on the role of owner operators. This was a deviation from their core business which is project construction, as these SOEs have little experience owning and operating infrastructure projects such as toll roads, railroads, and so on. To infuse equity into these projects, they resorted to borrowing funds from both banks and the capital market, with the expectation that the ensuing debts could be repaid upon divestment from the completed projects (Figure A1.5). Furthermore, a number of construction contracts were structured on a turnkey basis with a bullet payment on completion of the project, which implies that payments for capital expenditures and margins could be collected only upon project completion, and not commensurate with construction progress.

Figure A1.4 Total Liabilities of Select SOEs



Source: SOE Annual Reports, AMRO staff compilation

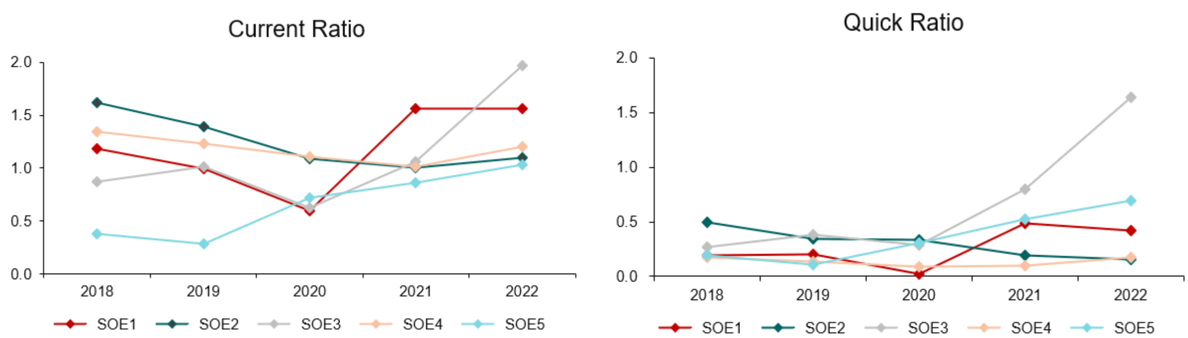
Figure A1.5 Funding Scheme for Equity Investment



Source: AMRO staff compilation

4. Pandemic-induced disruptions, in the form of construction delays and reduced infrastructure demand, caused a cash flow mismatch in these SOEs, preventing them from servicing their debt. Construction delays during the pandemic unexpectedly decreased revenues from their construction business under the turnkey contracts. Furthermore, the investment returns did not materialize as envisaged, as divestment values were lowered by a slower-than-expected recovery in infrastructure demand. Consequently, the mismatch in cash flow exacerbated their current ratio[81] and quick ratio[82] (Figure A1.6), and caused them to default on their debt obligations. Two of these infrastructure and construction-related SOEs have undergone debt restructuring with creditors, while Parliament has approved the government-proposed capital injections, including an allocation for one of the distressed SOEs.

Figure A1.6 Current Ratio and Quick Ratio of Select SOEs



Source: SOE Annual Reports, AMRO staff compilation

Source: SOE Annual Reports, AMRO staff compilation

[81] The current ratio is calculated by dividing an SOE's total current assets by its total current liabilities.
[82] The quick ratio is calculated by dividing an SOE's cash and cash equivalents by its total current liabilities.

5. The recent financial distress among the infrastructure and construction-related SOEs has had only limited impact on both the fiscal and financial sectors. Given the historically modest contributions of these SOEs' dividends to government revenues, the fiscal repercussions of their recent financial distress are deemed limited (Figure A1.7).[83] Capital infusions into SOEs, denoted as "investment financing" and treated as "below-the-line" items, have the potential to raise the debt-to-GDP ratio in gross terms[84] by increasing gross financing needs. However, their influence on the gross debt stock appears contained, as evidenced by the aggregate capital injections of IDR59.2 trillion in 2022, constituting about 0.3 percent of GDP (Figure A1.8). Other forms of fiscal support, including availability payments,[85] viability gap funding[86] and government guarantees, have been judiciously administered in accordance with pertinent fiscal rules.[87] Given the moderate loan exposures of major banks to the distressed SOEs[88] and the banking sector's robust loan-loss provisions, which exceeds 270 percent of non-performing loans, the likelihood of adverse spillovers to the banking sector currently remains low. Nonetheless, given the substantive role that these SOEs play in infrastructure development, vigilance over their financial robustness and business strategies is imperative to safeguard their ongoing contributions to the infrastructure development agenda.

Figure A1.7 Share of Dividends from Select SOEs

(IDR Trillion)	2018	2019	2020	2021	2022
Dividends from SOEs	45.1	80.7	66.1	30.5	40.6
o/w from SOE1	0.8	1.0	0.0	0.0	0.0
SOE2	0.3	0.4	0.5	0.0	0.0
SOE3	0.2	0.5	0.0	0.0	0.0
SOE4	0.1	0.1	0.1	0.0	0.0
SOE5	0.4	0.3	0.1	0.0	0.0

Source: BPK RI, SOE Annual Reports, AMRO staff calculations
Note: For calculation purposes, each infrastructure and construction SOE is assumed to be held 100 percent by the government, notwithstanding the actual variability in government ownership across these SOEs.

Figure A1.8 Share of Capital Injections into Select SOEs

(IDR Trillion)	2018	2019	2020	2021	2022
Capital Injections into SOEs	3.6	17.8	31.3	71.2	59.2
o/w into SOE1	0.1	0.0	0.3	7.9	9.3
SOE2	0.0	0.0	0.0	0.0	0.0
SOE3	0.0	10.5	11.0	25.2	31.4
SOE4	0.0	0.0	0.0	0.0	2.7
SOE5	0.0	0.0	0.0	0.0	0.0

Source: BPK RI, SOE Annual Reports, AMRO staff calculations
Note: For calculation purposes, each infrastructure and construction SOE is assumed to be held 100 percent by the government, notwithstanding the actual variability in government ownership across these SOEs.

[83] A substantial portion of dividends comes from state-owned banks along with non-banking SOEs in the energy and electricity sector, exemplified by Pertamina and PLN.
[84] That said, the debt-to-GDP ratio in net terms will not change, as the government acquires financial assets (i.e., shares issued by SOEs) in return for investment financing.
[85] Within the framework of availability payments, the government disburses a predetermined fee to the project entity, contingent upon the project's preparedness for utilization (availability), irrespective of its current operational status.
[86] Within the ambit of viability gap funding, the government may allocate up to 49 percent of construction costs to enhance the commercial viability of a given project.
[87] For instance, in accordance with the pertinent legislative and regulatory frameworks, the government is required to maintain the combined fiscal deficit at below 3 percent of GDP. The government has consistently adhered to the fiscal deficit threshold, with the exception of the pandemic period from 2020 to 2022.
[88] As per Moody's Investors Service, state-owned banks, such as BNI, BSI, BMRI and BRI, are primary creditors to a distressed SOE. However, their respective exposures to the said SOE constitute a nominal fraction, ranging from 1-2 percent of the respective total gross loans as of end-2022.

References

Investor Relations Unit (IRU), Republic of Indonesia. 2023. "Republic of Indonesia Presentation Book – November 2023". https://www.bi.go.id/en/iru/presentation/Documents/Republic%20of%20Indonesia%20Presentation%20Book%20-%20November%20%202023.pdf

Ministry of Finance, Republic of Indonesia. 2023. "Medium Term Debt Management Strategy 2023-2026".

2. Indonesia's Efforts in Promoting Cross-border Local Currency Transactions[89]

This selected issue delves into Indonesia's recent initiatives to promote cross-border transactions in the local currency. In addition to local currency swap arrangements that Bank Indonesia has signed with the central banks of neighbouring countries, a local currency settlement framework has been established or is under discussion between Indonesia and its neighbours in recent years, aiming to facilitate trade and investment. Another notable initiative is the cross-border QR payment system, designed to enhance the efficiency of payments made overseas by individuals. This selected issue describes the mechanisms behind these three arrangements and the ecosystem of local currency transactions, at the same time analysing the close economic ties between Indonesia and its neighbours, to provide a discussion of potential benefits of these local currency transaction arrangements.

1. **Indonesia has been promoting the usage of the local currency (LCY) in its cross-border transactions with neighboring countries in recent years.** This initiative aims to reduce reliance on the greenback and broaden the scope of international payments through local currency transactions (LCTs). It encompasses three key aspects: establishing or renewing local currency swap arrangements, establishing and expanding the local currency settlement framework (LCSF), and promoting cross-border QR payment linkages (Table A2.1). Indonesia has also formed a national task force in September 2023 to promote the use of the rupiah in bilateral transactions, involving the participation of Bank Indonesia (BI), the Ministry of Finance (MOF), Financial Services Authority (OJK), Indonesia Deposit Insurance Corporation (IDIC), and other ministries.

Table A2.1. Indonesia's LCT Arrangements with Other Countries

	Local Currency Swap (LCS)				Local Currency Settlement Framework (LCSF)			Cross-border QR Payment			
	Start Year	Latest Year of Renewal	LCY Amounts (IDR trillion)	Equivalent USD (billion)	Progress	Start Year	Expansion Year (Only for the established LCSF)	Progress	Pilot	Implement	Counterpart QR payment
Singapore	2018	2022	100	6.7	Signed MoU	2022		Yes		2023	NETs/Paynow
Malaysia	2019	2022	28	1.9	Established	2018	2021	Yes	2022	2023	DuitNow QR
Thailand					Established	2018	2020	Yes	2021	2022	PromptPay
Philippines					Established	2019					
China	2009	2022	550	37.0	Established	2021		Developing			
Korea	2014	2023	115	7.7	Signed MoU	2023					
Japan	2015	2021	339	22.8	Established	2020	2021	Developing			JPQR
India								Developing			
Australia	2015	2022	100	6.7							

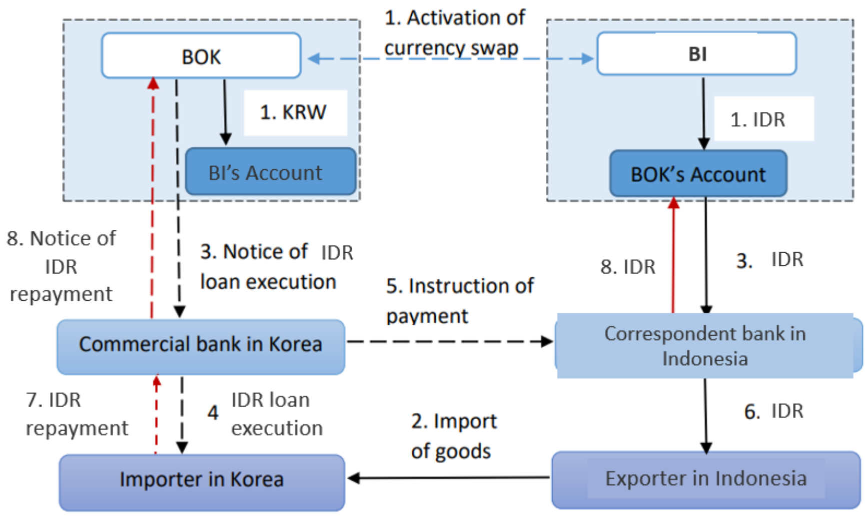
Source: Bank Indonesia, AMRO staff compilation
Note: The LCSF between Indonesia and Korea is scheduled to be implemented in 2024.

2. **Local currency swap arrangements emerged in the aftermath of the Global Financial Crisis.** These bilateral agreements enable a central bank of one country, such as Bank of Korea (BOK), to sell a specified amount of its LCY, in this case the Korean won, to another central bank, for example BI, in exchange for the other central bank's currency, the Indonesian rupiah, at the prevailing market exchange rate (Figure A2.1), to address the short-term liquidity shortage. In practice, BI will open an account for BOK and transfer rupiah to the account, and agrees to buy back rupiah at the same exchange rate on a specified future date, while also receiving interest from BOK at a predefined rate. (Steil, et al, 2021). The recipient central bank, in this case BOK, can then lend the rupiah to Korean importers via domestic commercial banks in Korea (Figure A2.1). Actual rupiah transmission to Indonesian exporters will be made from the BOK account in BI via correspondent banks in Indonesia. In doing so,

[89] Prepared by Yang Chunyu, Associate Economist.

the local currency swap arrangement can facilitate trade and investment in rupiah with countries, such as Korea, which does not have enough rupiah liquidity. Such a swap arrangement can also maintain market confidence. BI had established a local currency swap arrangement with China in 2009 and subsequently set up similar arrangements with Korea, Japan, Australia, Singapore, and Malaysia. It is worth noting that the symbolic aspect of local currency swap arrangements is often more significant than their actual application, as local currency swap arrangements in Indonesia are rarely activated.

Figure A2.1. Illustration of Local Currency Swap Arrangement from Perspective of Exporter in Indonesia



Explanation of arrows: The solid arrow indicates the flow of money or goods. The dotted arrow indicates the flow of transaction information):

1. The BOK and BI activate the currency swap arrangement and deposit the respective currencies in the counterparty's account held with themselves, that is, the BOK places Korean won in BI's account and the BI, rupiah in BOK's account).
2. An importer in Korea imports goods from an exporter in Indonesia with the condition of settlement in IDR and applies for a rupiah-denominated loan from a commercial bank in Korea.
3. The commercial bank in Korea applies for an IDR loan with the BOK. The BOK reviews the application and transfers rupiah funds from the BOK's account in BI to the Korean bank's account with its agent bank (correspondent bank) in Indonesia.
4. The commercial bank in Korea signs a rupiah loan contract with the importer.
5. The commercial bank in Korea instructs its correspondent bank in Indonesia to transfer the rupiah funds to the account of the exporter in Indonesia.
6. The correspondent bank in Indonesia makes payment to the exporter in rupiah.
7. The importer in Korea repays the rupiah loan at maturity. If the market liquidity returns to normal, the importer in Korea would be using the Korean won revenue to buy rupiah from commercial banks. In case liquidity is not available, the importer in Korea can request the commercial bank to roll over the rupiah loan.
8. The bank in Korea collects the importer's rupiah loan and transfers the rupiah funds to the BOK's account with BI through its correspondent bank in Indonesia.

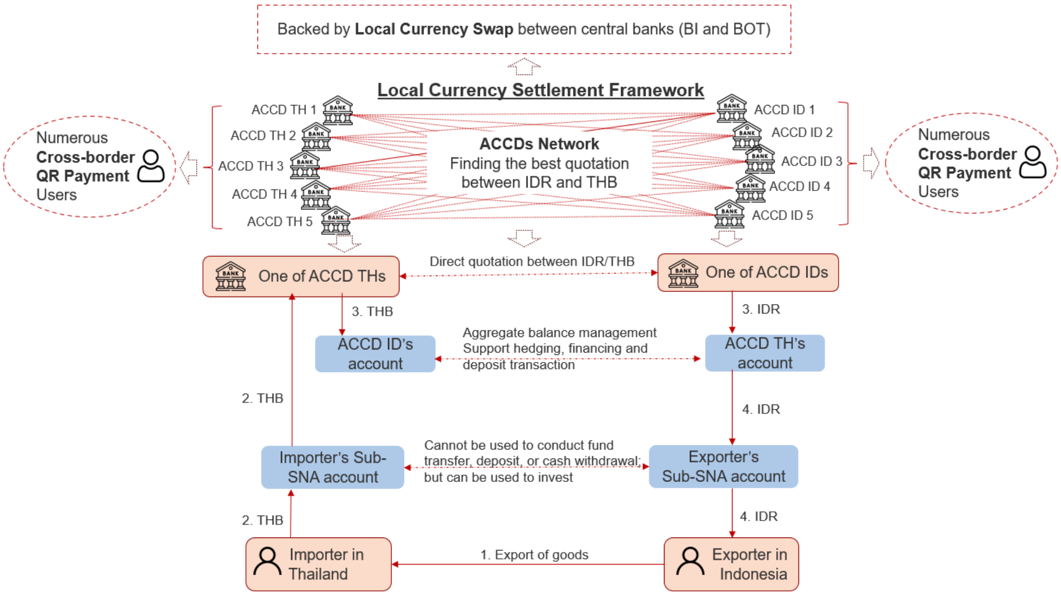
Source: Bank of Korea, Sussangkarn et al (2019), AMRO staff compilation
Note: This illustration uses the arrangement between Bank Indonesia and Bank of Korea as an example, and it also applies to the arrangement between Bank Indonesia and other central banks.

3. **The local currency settlement framework (LCSF) is an initiative that is designed to directly boost the use of LCY** (Watanabe and Wang, 2019).[90] Under the LCSF, the key feature is the role of Appointed Cross Currency Dealers (ACCDs). Selected financial institutions, mostly banks, are designated as ACCDs and are allowed to offer a range of financial services to local businesses. These services include direct quotations between the

[90] By definition, local currency settlement settles a bilateral transaction between two countries that is conducted in the respective currency of each country where the settlement is conducted within their jurisdiction.

rupiah and other LCYs, hedging, financing, and deposit transactions. For example, under the LCSF between Indonesia and Thailand, there are 12 ACCDs from Indonesia and 11 ACCDs from Thailand. Each Indonesian ACCD needs to open an account with every Thailand ACCD, and vice versa. Whenever an Indonesian ACCD requires Thai baht, it solicits and compares quotations from all of Thailand's ACCDs, and is able to choose the most favorable price (Figure A2.2).[91]

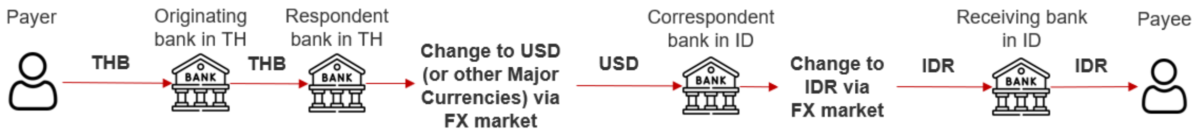
Figure A2.2. Illustration of Local Currency Settlement Framework Mechanism



Source: AMRO Staff illustration, Flaticon
Note: This illustration uses the arrangement between Indonesia and Thailand as an example, and it also applies to the arrangement between Indonesia and other countries

4. **In this way, the development of the LCSF is expected to lead to the gradual formation of a quotation network and a spot market, which could significantly reduce transaction costs.** Before the LCSF was introduced, no direct currency exchange market existed among local currencies. Consequently, in most cases, trade needed to be conducted through the U.S. dollar. This conventional cross-border payment system (Figure A2.3) was always accompanied by unclear FX rates, uncertain incoming fees,[92] high operational costs, limited transparency on the status of payments, and long processing times (Auer and Holden, 2021).

Figure A2.3. Illustration of Conventional Cross Boarder Payment System



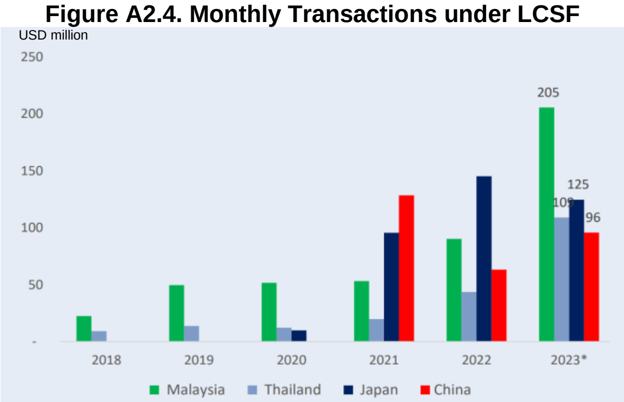
Source: AMRO staff illustration, Haene & Holden (2021), Flaticon
Note: This illustration uses the transaction between Indonesia and Thailand as an example, and it also applies to the transaction between Indonesia and other countries.

[91] In the example of the local currency swap, the two central banks exchange LCY using the market exchange rate, usually the weighted average exchange rate among major commercial banks. However, under the LCSF, the ACCD bank from Indonesia can choose a favorable exchange rate, which is highly likely to be better than the weighted average exchange rate.

[92] The reasons for unclear FX rates and uncertain fees may stem from several aspects. 1) Profit margin: cross-border payments typically pass through several intermediary banks before reaching the recipient. Every intermediary bank involved in cross-border transactions often seek to make a profit. They may include a margin in the exchange rate, which is not always clearly disclosed to end-users. This can result in a less favorable rate or uncertain fees for the payer or recipient. 2) Lack of standardization: there is no standardized system for cross-border payments, and different financial institutions may use different methods for determining exchange rates. This lack of standardization can contribute to confusion and opacity. 3) Delayed processing: cross-border payments may take time to process, and during this time, exchange rates can fluctuate. The rate at which the payment is ultimately executed might differ from the rate initially quoted.

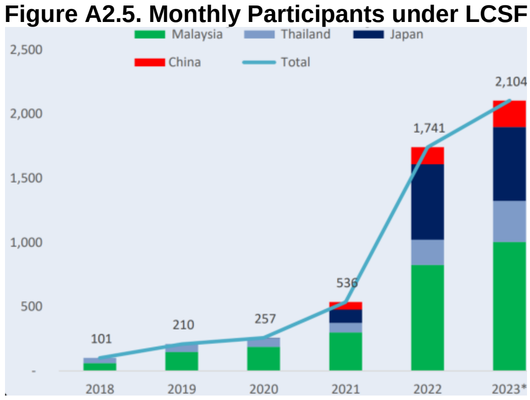
5. **Since early 2018, Indonesia has established the LCSFs with four ASEAN countries as well as with China, Japan, and Korea (Table A2.1).** It has also expanded the existing framework with several countries to include additional functions. These expansions involve incorporating DNDF as a hedging instrument, broadening the scope of eligible users to include individuals, and expanding eligible transactions to cover direct investment, income and transfer, in addition to trade. Overall, local currency transactions under LCSFs in Indonesia reached USD4.1 billion in 2022, a significant increase from USD2.5 billion in 2021. In the first half of 2023, local currency transactions under LCSFs reached USD3.2 billion, averaging USD535 million per month (Figure A2.4). The number of LCSF customers grew substantially, from 101 customers in 2018 to around 2,104 customers per month in 2023[93] (Figure A2.5).

Figure A2.4. Monthly Transactions under LCSF



Source: BI
Note: The data for 2023 is as of June 2023.

Figure A2.5. Monthly Participants under LCSF



Source: BI
Note: The data for 2023 is as of June 2023.

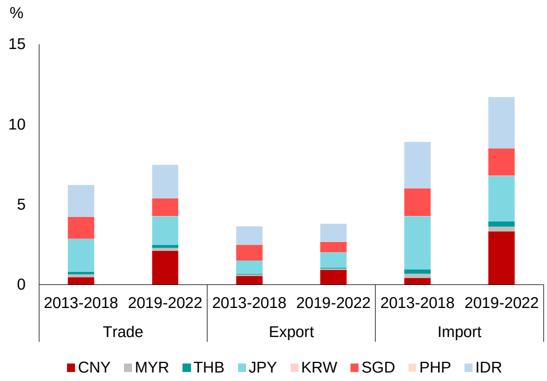
6. **While the LCSF is more beneficial to companies, the introduction of the cross-border QR payment linkage brings payment efficiency to numerous individual customers.** In the digital era, using QR codes for domestic payments is common, and very popular in Indonesia. However, to make sure QR code payments can be made internationally, e-payment companies typically have to negotiate individually with various foreign merchants, like what China's Alipay has done in recent years,[94] a time-consuming effort with high negotiation costs. As BI is promoting cross-border QR payments at the national level, the time and negotiation costs can be reduced significantly. Now, a QR payment code from any e-payment company in Indonesia can be recognized in Thailand, Malaysia or Singapore (Table A2.1), and people from these three countries can freely make QR payments in Indonesia.[95]

7. **The transaction cost of the cross-border QR payment linkage is lower than the conventional cross-border payment system, thanks to the support of the LCSF.** Without cross-border QR payment linkages, a user who is withdrawing cash or conducting transactions overseas must convert the rupiah to U.S. dollars before further conversion to other LCYs. This process would incur a transaction fee of 2.5-5 percent of the total transaction value. However, with cross-border QR payment linkages, the rupiah can be directly transferred using the ACCD network without involving U.S. dollars (Figure A2.2), thereby reducing the transaction fee to around 2 percent of the total value.[96]

[93] The data for 2023 is as of June 2023.
[94] See Alipay's Management Rules for Overseas Acquirers: https://global.alipay.com/docs/ac/Platform/mk3vtg; and another related article: https://www.globepay.co/2019/07/25/what-are-the-advantages-of-alipay/
[95] It is worth noting that unlike countries which may have multiple and segmented QR codes, BI has rolled out a unified QR code across Indonesia, the Quick Response Code Indonesia Standard (QRIS), which makes it much easier to cooperate with other countries.
[96] This information is based on the AMRO's mission's interview with one e-wallet company in Indonesia during the interim visit in 2023.

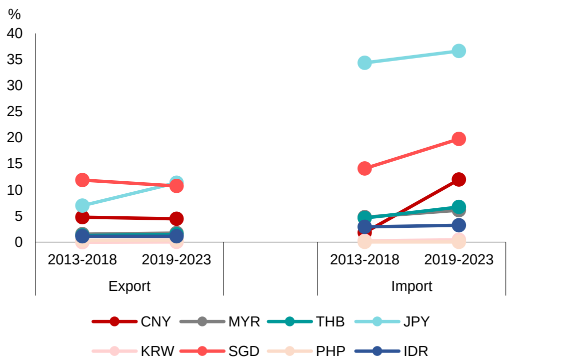
8. **Although there is still a long way to go in reducing reliance on the U.S. dollar, BI's efforts have led to a steady increase in the usage of LCY among neighboring countries.** The U.S. dollar remains entrenched as the preferred currency, even when other countries possess comparable economic fundamentals (Gopinath and Stein, 2021). However, the share of the rupiah and other LCYs related to the LCSF, including the Chinese renminbi, Malaysian ringgit, Thai baht, Japanese yen, Korean won, Singapore dollar and Philippine peso ("LCSF currencies"), has increased, especially in the import trade (Figure A2.6). As a result, the combined share of LCSF currencies and rupiah usage increased to 7.5 percent in total trade during 2019-2022, up from 6.2 percent during 2013-2018. Similarly, in imports, the share rose to 11.7 percent from 8.9 percent in the same period. Specifically, LCY usage with certain countries makes up a significant share in trade, particularly in imports from Japan, Singapore and China. Additionally, LCY usage has recorded notable increases in the case of Malaysia and Thailand in recent years (Figure A2.7). All of these are likely positively related to the implementation of the LCSF.

Figure A2.6. LCSF Currencies and Rupiah Usage in Indonesia's Trade



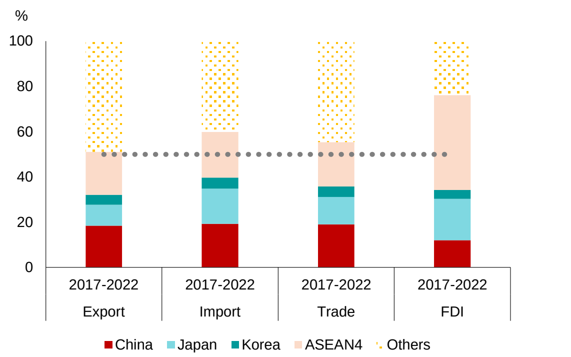
Source: BI, AMRO staff calculations

Figure A2.7. Share of LCY Usage in Trade with Specific Countries



Source: BI, AMRO staff calculations
Note: The share equals to the specific currency used in export or import divided by the total value of exports or imports between Indonesia and the corresponding country. One exception is the share of rupiah, which is calculated by rupiah usage in export or import divided by total export or import value.

Figure A2.8. Exports, Imports, Trade and FDI by Country



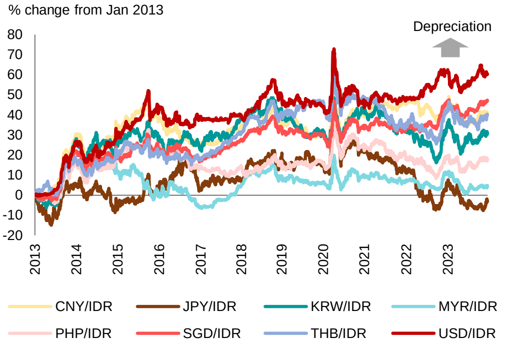
Source: BI, AMRO staff calculations
Note: 1) ASEAN4 comprises Malaysia, Thailand, Singapore and the Philippines. 2) The dotted line represents the 50 percent mark.

9. **With the wider usage of the LCSF and cross-border QR payment linkages, corporate trade and investment could be further facilitated.** The seven countries with which Indonesia has LCSFs account for a significant share of the total trade volume and FDI (Figure A2.8). As LCYs are increasingly used at the macro-level, the trend can gradually mitigate adverse spillovers from U.S. monetary policy and reduce fluctuations of the rupiah exchange rate against the U.S. dollar. The rupiah exchange rate is more stable with other

regional currencies than with the U.S. dollar (Figure A2.9). At the micro-level, the LCSF provides additional choices for companies in terms of invoicing, settlement, trade financing and other business operations, and will reduce the cost of currency exchange transactions in the long run.

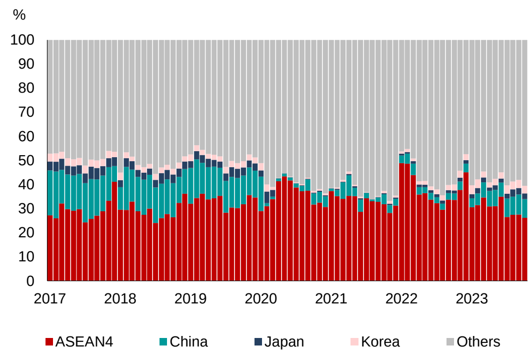
10. **SMEs and consumers will benefit as more people use cross-border QR payment linkages.** While Indonesia has established cross-border QR payment linkages with only three countries to date, discussions for cooperation are ongoing with other countries in the region. The more popular this linkage becomes, the more small businesses, especially those in tourism, can benefit, as tourists from the region constitute a significant share of total tourist arrivals (Figure A2.10). Furthermore, Indonesian consumers can also experience the benefits of digitalization when traveling abroad, especially if they have e-wallets but not bank accounts.

Figure A2.9. The Change of Rupiah to Several Currencies from 2013



Source: BI, AMRO staff calculations

Figure A2.10. Tourist Arrivals by Country



Source: Statistics Indonesia, AMRO staff calculations
Note: ASEAN4 comprises Malaysia, Thailand, Singapore and the Philippines.

References:

Bank of Korea (2012). Press Release on Introduction of Korea-China Currency Swap-Financed Trade Settlement Facility.

Steil, B., Della Rocca, B., & Walker, D. (2021). Central bank currency swaps tracker. https://www.cfr.org/article/central-bank-currency-swaps-tracker

Sussangkarn, C., Shimizu, J., Feng, L., Kim, S., Han, B., Lee, J. Y., & Wang, H. (2019). Local Currency Contribution to the CMIM. AMRO Research Collaboration Program. https://amro-asia.org/local-currency-contribution-to-the-chiang-mai-initiative-multilateralisation/

Watanabe, Yasuto, and Hongbo Wang. (2019). An Introduction to AMRO Collaborative Research: Can Local Currencies be Used in East Asia's Regional Financing Arrangement for Liquidity Support? AMRO Blog. https://amro-asia.org/an-introduction-to-amro-collaborative-research-can-local-currencies-be-used-in-east-asias-regional-financing-arrangement-for-liquidity-support/

R Auer, P Haene and H Holden, "Multi-CBDC arrangements and the future of cross-border payments," BIS Papers, no 115, March 2021. https://www.bis.org/publ/bppdf/bispap115.htm

Gopinath, Gita, and Jeremy Stein. 2021. "Banking, Trade, and the Making of a Dominant Currency." The Quarterly Journal of Economics 136 (2): 783–830.

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