



AMRO Annual Consultation Report

Malaysia – 2023

ASEAN+3 Macroeconomic Research Office (AMRO)

August 2023

Acknowledgments

1. This Annual Consultation Report on Malaysia 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 of AMRO to Malaysia from 15-26 May 2023 (Article 5 (b) of the AMRO Agreement). The AMRO Mission team was led by Dr. Runchana Pongsaparn, Group Head and Principal Economist. Members included Dr. Wee Chian Koh, Economist (Country desk); Ms. Diana del Rosario, Senior Economist; Dr. Andriansyah, Fiscal Specialist; and Ms. Pim-orn Wacharaprapapong, Economist. AMRO Director Dr. Kouqing Li and Chief Economist Dr. Hoe Ee Khor participated in key policy meetings with the authorities. This AMRO Annual Consultation Report on Malaysia for 2023 was peer-reviewed by an economist group from AMRO's country surveillance, financial surveillance and fiscal teams; endorsed by Mr. Jiangyan Yu, Senior Economist, Policy and Review Group; and approved by Dr. Hoe Ee Khor, AMRO Chief Economist.
3. The analysis in this Report is based on information available up to 30 June 2023.
4. By making any designation of or reference to a particular territory or geographical area, or by using the term "member" or "country" in this Report, AMRO does not intend to make any judgments as to the legal or other status of any territory or area.
5. On behalf of AMRO, the Mission team wishes to thank the Malaysian authorities for their comments on this Report, as well as their excellent meeting arrangements and hospitality during our visit.

Disclaimer: The findings, interpretations and conclusion expressed in this Report represent the views of the staff of ASEAN+3 Macroeconomic Research Office (AMRO) and are not necessarily those of its members. Neither AMRO nor its members shall be held responsible for any consequence from the use of the information contained herein.

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Executive Summary

1. The Malaysian economy rebounded strongly in 2022 driven by a strong recovery in domestic demand and robust export growth. Real GDP in 2022 grew 8.7 percent—the highest in 22 years—driving the output gap into positive territory for the first time since 2019. However, economic recovery from the pandemic remains uneven across sectors. Manufacturing has rebounded quickly, followed by a recovery in services, but agriculture, mining, and construction have lagged.

2. Growth is projected to moderate to 4.2 percent in 2023, reflecting strong external headwinds. The manufacturing sector and exports are likely to face headwinds from weaker global demand for electronics and commodities. Yet, growth momentum remains robust, supported by resilient domestic demand and strengthening tourism recovery owing to border reopening by regional economies.

3. Labor market conditions are improving. The unemployment rate fell to 3.5 percent in May 2023 from a pandemic peak of 5.3 percent in May 2020. Meanwhile, the labor force participation rate has soared to a record high of 70 percent. Nominal wages per worker have continued to grow, albeit at a slower rate than productivity growth. Although labor market conditions have improved, the vacancy-to-unemployed ratio remains relatively high.

4. Inflation has peaked and is expected to gradually decline in the near term. The increase in inflation was broad-based in 2022, both from the supply side—reflecting rising energy and food prices—as well as the demand side, spurred by the economic reopening. Inflation has been kept low by blanket subsidies and price controls. Headline inflation peaked at 4.7 percent in August 2022 and eased to 2.8 percent in May 2023. Core inflation has been more persistent, staying above headline inflation since October 2022.

5. The external sector remains strong despite portfolio investment outflows and a decline in foreign reserves. The goods trade surplus has continued to support the current account and foreign direct investment remains robust following the surge in investment approvals since 2021. Foreign reserves fell by USD4.2 billion from end-2021 to US\$112.7 billion in May 2023, but remain sufficient by standard international metrics, covering 1.0 time short-term external debt and 4.8 months of imports of goods and services.

6. Monetary policy normalization has been conducted at a gradual and measured pace. To tame the broad-based increase in inflation amid the strong economic rebound, Bank Negara Malaysia (BNM) has raised the Overnight Policy Rate (OPR) five times since May 2022, by a cumulative 125 basis points, bringing the OPR to 3.00 percent. At this level, the monetary policy stance remains slightly accommodative as implied by the Taylor rule.

7. The banking system remains sound and has continued to support credit growth. Based on AMRO's stress tests, banks have sufficient capital and liquidity buffers to withstand higher credit and interest rate risks. Loan impairments have remained low and stable despite the expiry of the loan moratorium. The recent bank failures in some advanced economies have not significantly impacted Malaysian banks.

8. The budget for 2023 indicates a policy shift from expansion to consolidation, even as it remains focused on addressing the high cost of living. Fiscal spending on subsidies and social assistance nearly tripled in 2022 due to rising commodity prices. Yet, the fiscal deficit

narrowed to 5.6 percent of GDP, supported by higher revenue receipts with the strong economic recovery. The fiscal deficit is projected to narrow to around 5 percent in 2023, mainly due to lower energy subsidies as commodity prices have moderated. Over the medium term, the government aims to narrow the fiscal deficit further to 3.2 percent of GDP in 2025.

9. Risks to the economic outlook are skewed to the downside in the near term, while risks to inflation are tilted to the upside. Short-term risks include lower-than-expected growth in major economies, renewed commodity price hikes, and tighter-than-expected global financial conditions. Over the medium term, escalating tensions between the U.S. and China could lead to global economic fracturing, with ramifications on trade and investment. In the long term, population aging, inadequate retirement savings, and risks from climate change may aggravate the fiscal burden and weigh on economic potential.

10. Policy priorities should focus on rebuilding fiscal space, managing elevated inflationary pressures, preserving financial stability, and addressing long-term structural challenges.

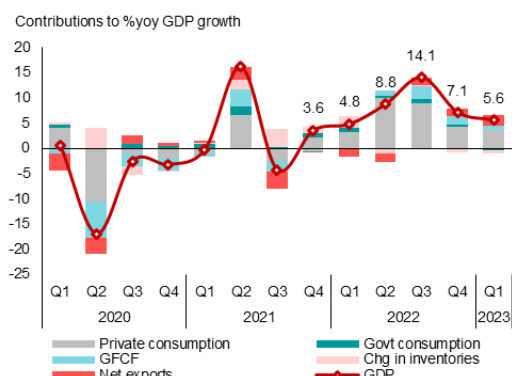
- **The intended pace of the government's fiscal consolidation is warranted and should be supported by tax reforms and a gradual removal of energy subsidies.** Achieving the medium-term fiscal target would be challenging without introducing major tax reforms. In this regard, the sales and services tax (SST) should be broadened in the near term as a precursor to the reintroduction of the goods and services tax (GST) in 2025 at a rate of possibly lower than 6 percent. A shift from regressive blanket subsidies to more targeted subsidies would be necessary to increase spending efficiency and provide space to strengthen social protection.
- **Monetary policy has scope for further tightening to keep elevated inflation from getting entrenched.** Against the backdrop of a positive output gap and sticky core inflation, there is room to raise the policy rate to contain inflation. This would also provide more policy space to respond to future adverse shocks while mitigating the risk of financial imbalances.
- **BNM should continue to build up foreign exchange (FX) reserves when market conditions allow.** While exchange rate flexibility should be maintained as a shock absorber, in a small open economy like Malaysia, FX interventions may be needed to avoid excessive exchange rate volatility. However, to be effective, such interventions need to be backed by strong external buffers. Despite FX reserves remaining adequate by international standards, given recent decline in net FX reserves due to FX interventions, it would be prudent to accumulate more reserves when conditions are opportune.
- **The authorities should continue efforts to pursue structural reforms to enhance competitiveness.** The economic policy directions of the new unity government, which assumed office in December 2022, are welcome. In particular, the authorities are encouraged to continue attracting high-quality foreign direct investments, strengthen workforce upskilling and reskilling programs in line with concerted efforts in building a digital economy, improve the adequacy and coverage of social protection, and speed up the implementation of policies to incentivize the shift to a low-carbon economy.

A. Recent Developments and Outlook

A.1 Real Sector Developments and Outlook

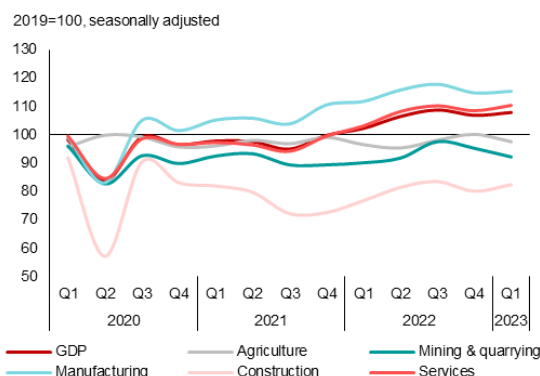
1. The Malaysian economy rebounded strongly in 2022 with some easing in momentum towards the end of the year; however, the recovery was uneven. A strong recovery in domestic demand, particularly private consumption, pushed GDP growth up to 8.7 percent in 2022—the highest in 22 years—from 3.3 percent in 2021.¹ Growth began to pick up in Q4 2021, following the gradual easing of pandemic-related restrictions, and accelerated further until Q3 2022 buoyed by strong consumer spending² and robust exports, with further support from the reopening of international borders³ (Figure 1). However, growth moderated in Q4 2022 through Q1 2023 as weakening global demand weighed on exports⁴ while the pandemic-related assistance measures were phased out⁵. Real GDP has surpassed pre-pandemic 2019 levels since Q4 2021, thanks to the strong recovery of the manufacturing and services sectors. Agriculture, mining and quarrying, and construction, on the other hand, remained below their 2019 output levels (Figure 2).

Figure 1. Contribution to Real GDP Growth



Source: Department of Statistics Malaysia (DOSM), AMRO staff calculations

Figure 2. Seasonally-adjusted Real GDP



Source: DOSM, AMRO staff calculations

2. Labor market conditions have improved in line with the economic recovery, although supply tightness is evident in certain segments. The unemployment rate has fallen considerably to 3.5 percent as of May 2023 compared to the pandemic peak of 5.3 percent in May 2020 (Figure 3). Nominal wages in both the manufacturing and services sectors have also continued to grow, albeit slower than productivity growth (Figure 4). Although labor market conditions have improved, the vacancy-to-unemployment ratio remains higher than prior to the pandemic (Figure 5). While employment growth is evident across all skill levels, vacancy rates are high in the skilled job categories in the manufacturing and services sectors. The underemployment rate among tertiary graduates⁶

¹ Growth in 2022 was well above expectations (AMRO: 7.3 percent; MOF: 6.5-7.0 percent).

² Private consumption in Q2 and Q3 2022 jumped 18.3 and 14.8 percent year-on-year (yoy), respectively, driven by pent-up demand, policy measures (e.g., EPF special withdrawal, government cash transfers, higher minimum wage), and improving labor market conditions. The strong growth also partly reflected base effects.

³ International borders were reopened on April 1, 2022. Tourist arrivals surpassed 50 percent of pre-pandemic levels in August 2022 and reached 85 percent by end-2022. Hotel occupancy rates improved to 47 percent as of Q3 2022, still below the pre-pandemic average of 60 percent.

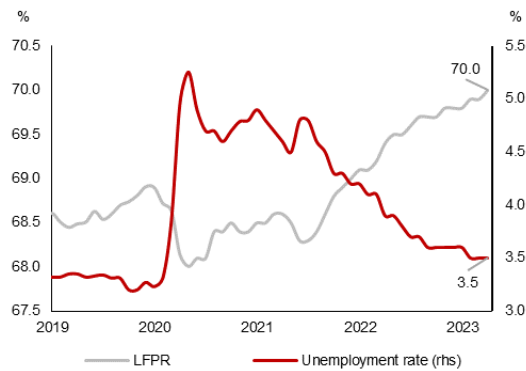
⁴ After registering double-digit growth throughout most of 2021 and 2022, exports growth fell to 5.9 percent yoy in December 2022 and plunged to -17.6 percent in April 2023 before recovering to -0.7 percent in May 2023. Manufacturing PMI output and new orders have remained in contractionary territory since September 2022.

⁵ While most financial measures expired by the end of 2021, the Financial Management & Resilience Program (URUS) ended in March 2022.

⁶ The underemployment rate refers to the share of tertiary-educated employed persons working in semi-skilled or low-skilled occupations. The underemployment rate was 37.4 percent as of Q1 2023 compared to 34.8 percent in Q4 2019.

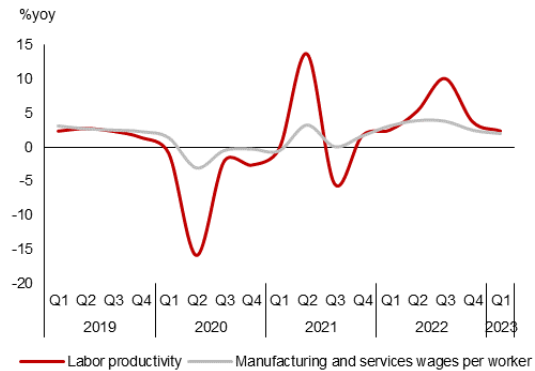
has increased from the already elevated levels prior to the pandemic, indicating the persisting mismatch between the demand for skilled jobs and supply of local talents. The Beveridge curve has shifted outward, suggesting a decline in the efficiency of the job matching process, even though the recovery in economic activity has induced a leftward movement along the curve (Figure 6).

Figure 3. Unemployment Rate and Labor Force Participation Rate (LFPR)



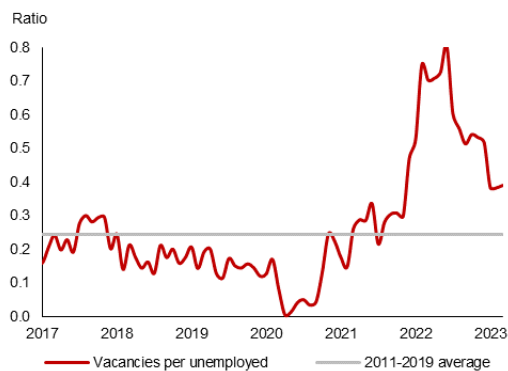
Source: DOSM

Figure 4. Nominal Wage and Productivity Growth



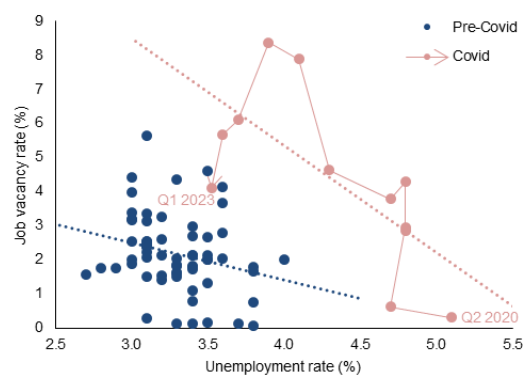
Source: DOSM, AMRO staff calculations

Figure 5. Job vacancy per unemployed person



Source: DOSM

Figure 6. Beveridge Curve



Source: DOSM, AMRO staff estimates

Note: Pre-COVID period refers to 2004Q1-2020Q1, and COVID period is 2020Q2-2023Q1.

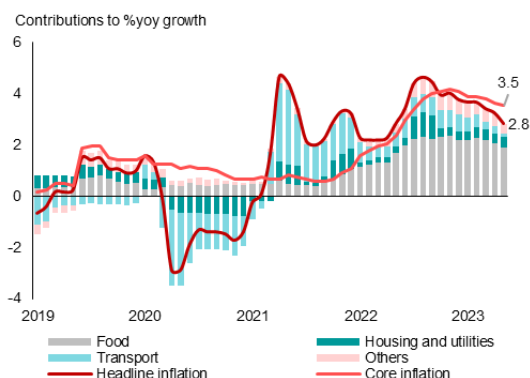
3. Blanket fuel subsidies and price controls have blunted the pass-through of surging global food and energy prices in 2022⁷, keeping Malaysia’s headline inflation low compared to ASEAN peers⁸; that said, core inflation has picked up and outpaced the headline since October 2022. Headline inflation peaked at 4.5 percent in Q3 2022 from a 2.5 percent average in 2021, before inching lower to 3.6 percent in Q1 2023 (Figure 7). Global supply chain bottlenecks, the surge in global commodity prices and the pass-through to domestic production costs, and the depreciation of the ringgit contributed to higher inflation in 2022, although these factors have begun to unwind since mid-2022. That said, production input costs remain high by historical standards. Demand-driven price pressures, reflected in pent-up demand from the lifting of containment measures, were also

⁷ AMRO staff estimates that headline inflation would have averaged 8.1 percent in 2022, compared to the actual average rate of 3.3 percent, if blanket fuel subsidies (i.e., RON95 and diesel prices fully floated) were not in place. Headline inflation would have peaked at 11.5 percent (yoy) in July 2022 (actual: 4.4 percent). The estimates are based on the direct effects of price increases on the “Fuels and lubricants for personal transport equipment” sub-index in the CPI basket.

⁸ Malaysia’s headline inflation was 3.3 percent in 2022 compared to 4.2 percent for Indonesia, 5.8 percent for the Philippines, and 6.1 percent for Singapore and Thailand.

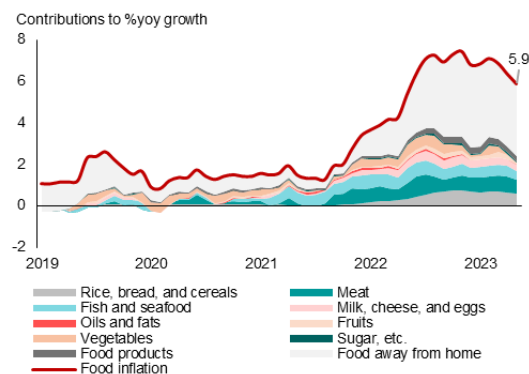
evident in core inflation rising from 0.7 percent in 2021 to 4.2 percent in Q4 2022. Core inflation eased somewhat to 3.5 percent in May 2023 although it has remained higher than headline inflation since October 2022. Energy prices have moderated in 2023 but food inflation (particularly food away from home) has remained stubbornly high (Figure 8), likely propped up by strong consumer spending and high input costs (see Selected Issue 1).

Figure 7. Headline and Core Inflation



Source: DOSM, AMRO staff calculations

Figure 8. Contribution to Food Price Inflation



Source: DOSM, AMRO staff calculations

4. Malaysia’s growth is expected to remain on track in 2023 despite a weak global economic outlook, driven primarily by firm domestic demand, which could keep inflation elevated. After an exceptionally strong growth outturn last year, Malaysia’s GDP growth is forecast to moderate to 4.2 percent in 2023, reflecting strong external headwinds. Although the manufacturing sector and exports are likely to face headwinds from weaker global demand for electronics and commodities, the services sector should continue to benefit from resilient domestic demand and tourism recovery from international border reopening.⁹ Improved labor market conditions, continued drawdown in excess household savings accumulated during the pandemic, and government subsidies and social assistance, should continue to support private consumption. In addition, the surge in approved investments since 2021 (Figure 9), particularly foreign direct investment (FDI) in the electrical and electronics (E&E) and telecommunications sectors, is expected to translate into higher realized investments, and provide a boost to technology-driven growth.¹⁰ AMRO staff estimates indicate that the negative output gap in 2020-21 turned positive to 0.8 percent in 2022 and 1.4 percent in 2023 (Figure 10).¹¹ The widening of the output gap could keep headline and core inflation elevated at over 3 percent in 2023. Still-elevated global energy and food prices are also expected to keep domestic production costs high, with some spillovers to consumer prices.

Authorities’ Views

5. The authorities broadly agree with AMRO staff’s assessment of the growth and inflation outlook. The authorities project growth to be between 4 and 5 percent in

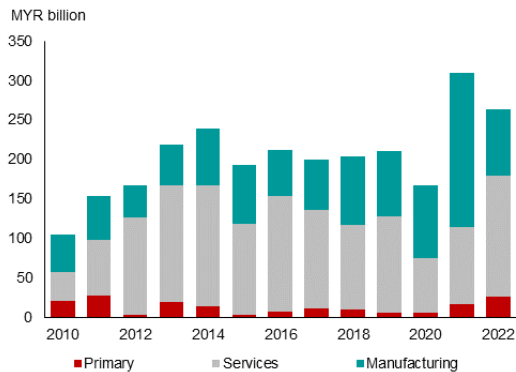
⁹ Despite a sharp slowdown in exports, GDP grew by 5.6 percent in Q1 2023, beating its pre-pandemic potential growth of 4.9 percent and on track to meet the 4.2 percent growth forecast in 2023. AMRO’s GDP nowcasting model for Malaysia showed GDP growth at 5.5 percent in Q1 2023.

¹⁰ Private investment, which had been lackluster during the pandemic, picked up significantly since Q2 2022 and nearly reached pre-pandemic levels at end-2022. Investment growth is also expected to be bolstered by the rollout of 5G infrastructure and the focus on automation and digitalization, as well as the recovery in construction activity as foreign labor shortages ease.

¹¹ The output gap estimates, derived from the production function approach, represent the midpoint of the estimated range of -0.1 to 1.7 percent in 2022, and 0.4 to 2.3 percent in 2023. Pandemic disruptions are estimated to have dampened Malaysia’s potential growth from 4.9 percent in the preceding decade (2010-2019) to about 1 percent in 2020 and 2021, before gradually improving to 3.4 percent in 2022 and 3.6 percent in 2023, within the BNM’s forecast range of 3.5-4.5 percent for 2023.

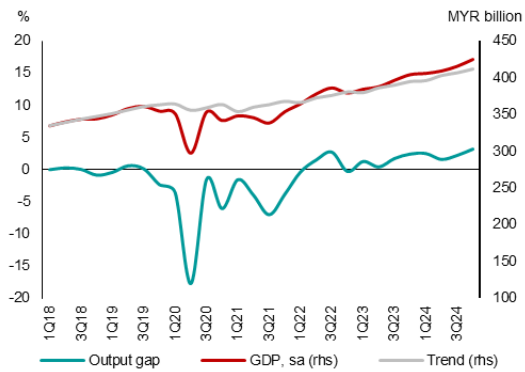
2023, supported by resilient domestic demand, while inflation is expected to be between 2.8 and 3.8 percent, with core inflation remaining elevated. The labor market is not tight in BNM's view, given that unemployment rate remains higher than pre-pandemic levels and labor supply is forthcoming, as evidenced by record-high labor force participation and the return of foreign workers.

Figure 9. Approved Investments



Source: DOSM, Malaysia Investment Development Authority (MIDA)

Figure 10. Output Gap



Source: DOSM, AMRO staff estimates

A.2 External Sector

6. A robust trade surplus and buoyant foreign investment inflows kept the external position strong in 2022. The trade surplus has been supported by favorable terms of trade and strong demand for Malaysia's exports of commodities, E&E products, and other manufactured goods. Robust merchandise trade and a narrower services deficit, as inbound travel resumed, supported the current account surplus despite the widening deficits in primary and secondary income accounts (Figure 11). At the same time, buoyant FDI (Figure 12) and a sharp rebound in other investment inflows drove the financial account into surplus, despite large portfolio investment outflows, particularly in bond markets, partly reflecting the impact of higher U.S. interest rates.¹²

7. Notwithstanding a strong external position, the ringgit depreciated against the U.S. dollar in 2022, in line with other regional currencies (Figure 13). BNM's gross international reserves fell from USD116.9 billion at end-2021 to USD105.2 billion in October 2022, but have recovered to USD112.7 billion as of end-May 2023 (Figure 14). After netting out BNM's short-term foreign currency liabilities, including its net short foreign exchange (FX) position, the net reserves amounted to USD73.9 billion as of end-May 2023.¹³ The level of gross reserves remains adequate to cover 1.0 time of short-term external debt.¹⁴

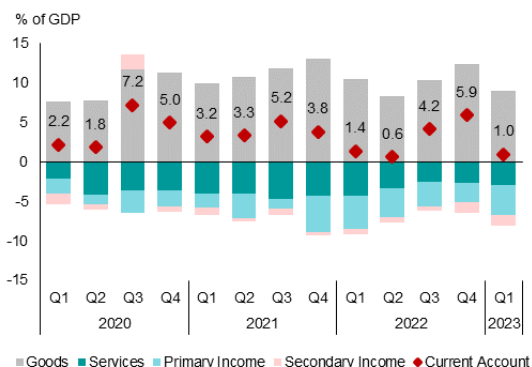
¹² Despite the sizable non-resident net outflows from bond markets (MYR7.8 billion) and larger gross government bond supply in 2022, the adjustments in government bond yields remained orderly and the magnitude of repricing was moderate compared to ASEAN-5 peers. This reflected the ability of domestic institutional investors in absorbing additional bond supply. The 10-year benchmark yield closed at 4.07 percent at end-2022, up 47 bps from end-2021. The share of non-resident holdings of government debt securities has fallen from around 36 percent in mid-2016 to 23.0 percent as of April 2023, partly due to the clampdown on offshore FX trading in late-2016, particularly in the non-deliverable forward (NDF) market, to address rising speculative pressures on the ringgit.

¹³ Amid large outflows, BNM's FX operations intensified in H2 2022 to mitigate excess volatility and preserve orderly market conditions. AMRO's exchange rate market pressure index showed similarly sized reserve drawdowns among regional peers amid currency depreciation pressures.

¹⁴ Reserves are also sufficient to cover 4.8 months of imports of goods and services, 22 percent of broad money, and 109 percent of IMF's Assessing Reserve Adequacy (ARA) metric.

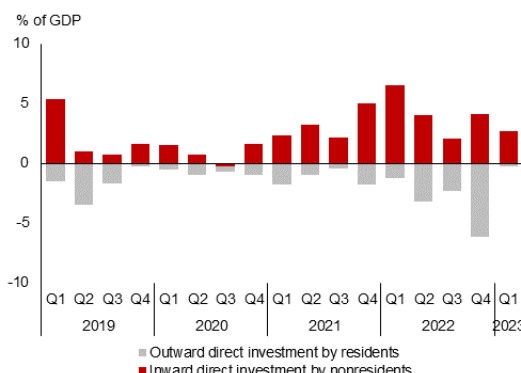
The relatively low reserve cover is mitigated by the profile of short-term external debt liabilities and the significant holdings of liquid external assets.¹⁵

Figure 11. Current Account Balance



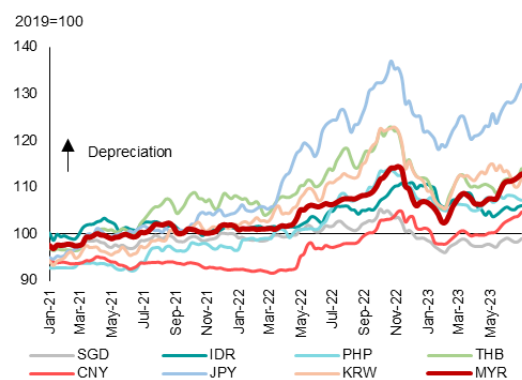
Source: BNM, DOSM, AMRO staff calculations

Figure 12. Direct Investment



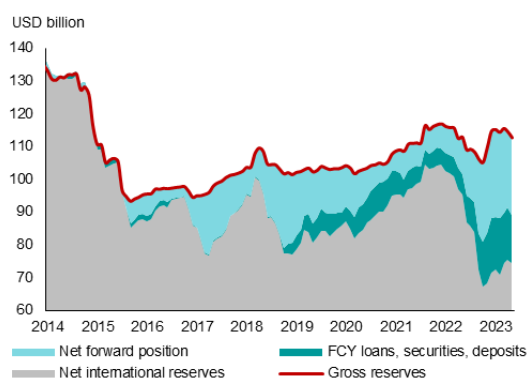
Source: BNM, DOSM, AMRO staff calculations

Figure 13. Regional Currencies vs. US Dollar



Source: BNM, Haver Analytics, National authorities, AMRO staff calculations

Figure 14. BNM's International Reserves Position



Source: BNM

Authorities' Views

8. BNM clarified that the increase in the net short FX position from its FX swap operations is partly due to onshore banks' demand for ringgit liquidity to meet funding needs. At the same time, FCY deposits also increased owing to the surge in the trade surplus. Banks can deposit the excess USD liquidity with BNM at market-determined interest rates.

A.3 Monetary Condition and Financial Sector

9. The Monetary Policy Committee (MPC) of BNM started to normalize the monetary policy stance in May 2022 to curb rising inflationary pressures amid the strong economic rebound following the lifting of COVID-19 restrictions. The Overnight Policy Rate (OPR) was raised in four 25 basis-point increments to 2.75 percent between May and November 2022. The OPR was kept on hold at the January and March 2023 MPC meetings to take stock of the economic impact of last year's policy rate increases. BNM resumed monetary policy normalization in May 2023, raising the OPR by 25 basis points

¹⁵ Most of the debt is held by banking institutions and around a third consists of interbank borrowings within the same banking group, which reduces rollover risk. BNM's FX reserves also only make up less than a quarter of Malaysia's external assets, and the rest of the assets can be used by other financial and non-financial institutions to service their respective external liabilities without drawing on BNM's FX reserves.

(bps) to 3.00 percent, in view of still-elevated core inflation amid firm domestic demand and to mitigate the risk of widening financial imbalances.

10. The policy rate hikes in 2022 have been transmitted effectively to bank deposit and lending rates, while there are signs of tightened liquidity in certain segments of the interbank market. The rates on fixed deposits have increased by 92-99 bps between April 2022 and March 2023, in line with the 100-bps increase in the OPR in the same period.¹⁶ Such near-complete pass-through reflects strong competition for bank funding amid robust loan growth¹⁷ and demand for higher rates from depositors in search of higher yields. On the lending side, the weighted average lending rate rose by 95 bps.¹⁸ Interbank rates across all tenures also increased in line with the OPR hikes, but the Kuala Lumpur Interbank Offered Rate (KLIBOR) rose significantly more at the longer tenures. The 3-month KLIBOR-OPR spread jumped to an all-time high of 93 bps in December (Figure 15) due to greater demand for liquidity among banks in order to maintain ample liquidity buffers, following shifts in depositor behavior toward shorter-term fixed deposits in anticipation of further OPR increases (see Selected Issue 2).¹⁹ At year-end, the seasonal spike in demand for liquidity also contributed to higher interbank rates.²⁰

11. The banking system has continued to support economic activity through robust credit growth. Outstanding loan growth picked up from 4.4 percent at end-2021 to peak at 6.8 percent in August 2022 before easing to 4.8 percent in May 2023 (Figure 16). Loans to households posted robust growth throughout 2022, mainly for purchase of residential properties and vehicles, while credit card spending also rose significantly in H2 2022.²¹ The expansion in household loans led to an increase in the stock of household debt.²² Corporate loan growth has rebounded since H2 2022 after a sharp contraction the previous year, whereas growth of micro, small, and medium enterprises (MSME) loans, mainly for working capital purposes, has moderated after a strong pick-up in 2021.²³ The share of non-performing loans (NPLs) remained low at 1.80 percent as of May 2023, only 0.12 percentage point higher than at end-2021 (Figure 17).²⁴ The increase has been mostly driven by an uptick in impairments of household and MSME loans, in part due to the expiration of loan assistance programs in 2021-2022. Meanwhile, the share of Stage 2 loans (i.e., loans with higher credit risk) fell to 8.8 percent at end-2022 from 11.0 percent at end-2021, in line with the decline in loans under repayment assistance. Pockets of

¹⁶ Fixed deposits account for the largest share (46 percent) of the banking sector's deposit base.

¹⁷ Bank loans grew on average 6.1 percent year-over-year in H2 2022, slightly faster than deposit growth of 5.3 percent.

¹⁸ Floating-rate loans account for half of household loans and three-quarters of SME loans. Going forward, the impact on monetary policy transmission from the introduction of the new Standardized Base Rate (SBR) for floating-rate loans in August 2022 should be assessed.

¹⁹ Compared to the average of 28 bps between 2004-2021. Although the spread has narrowed to 45 bps as of June 2023, developments in the KLIBOR and interbank liquidity should be monitored closely. The trend shift to shorter-term fixed deposits resulted in a weakening of the liquidity coverage ratios (LCR) of certain banks in H2 2022, such as Islamic banks, and banks had to source liquidity elsewhere to maintain their LCRs.

²⁰ Banks typically demand greater liquidity at year-end to strengthen compliance of regulatory requirements. At the same time, the regulatory flexibility to allow banks' holdings of Malaysian Government Bonds (MGS) and Malaysian Government Investment Issues (MGI) as part of SRR compliance expired at the end of 2022 after its introduction in March 2020.

²¹ Policy measures such as stamp duty exemptions and discounts for first-time home buyers and sales and service tax exemption on the purchase of motor vehicles supported the demand for household loans.

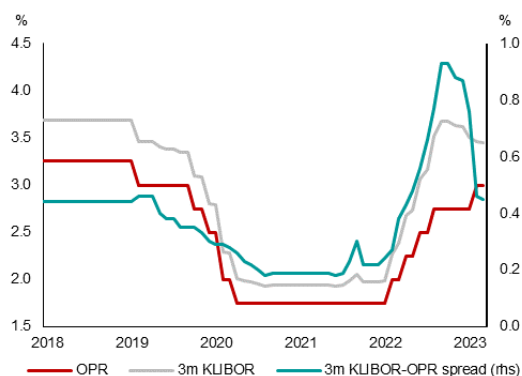
²² Household debt—with residential property loans the largest component—has continued to expand but has not outpaced the growth in nominal GDP. As such, household debt-to-GDP declined to 81.2 percent in 2022, from 88.9 percent in 2021, but remains among the highest in the region. Currently, borrowers earning less than MYR3,000 monthly hold a smaller proportion of floating-rate loans (41.9 percent compared to overall household at 49.7 percent) and is relatively less exposed to the risk of higher interest rates.

²³ In terms of sector distribution, service-related sectors such as wholesale and retail trade, hotels and restaurants, transportation, and information-communications saw the highest loan growth, likely supported by the easing of mobility restrictions.

²⁴ This partly reflected the write-off of a legacy loan in the transportation and storage sector in December 2022, for the purpose of constructing a warehouse. The NPL ratio in November 2022 was 1.83 percent.

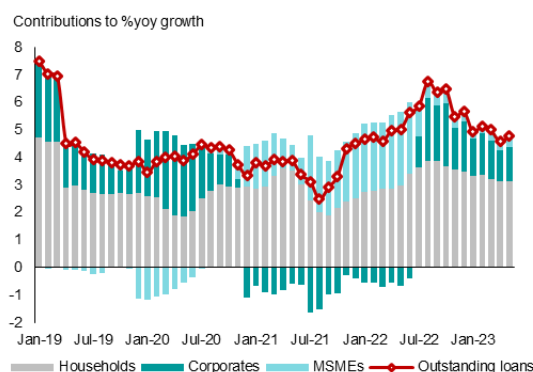
vulnerabilities remain not only in the household and MSME sectors, but also the commercial property sector, which is facing an oversupply situation (Figure 18).

Figure 15. Key Policy and Interbank Interest Rates



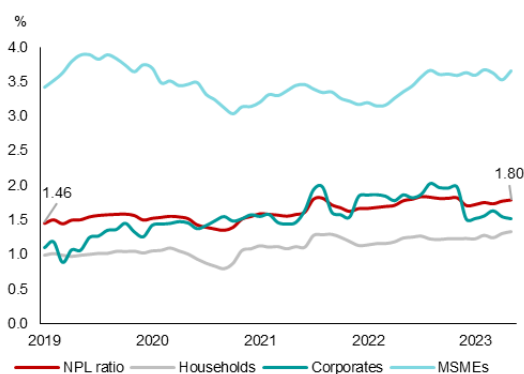
Source: BNM

Figure 16. Banking System Loans



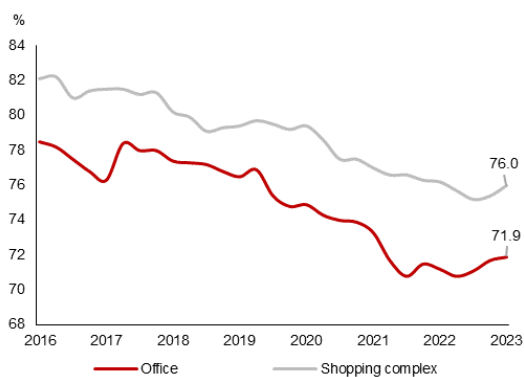
Source: BNM, AMRO staff calculations

Figure 17. Non-performing Loans



Source: BNM

Figure 18. Commercial Property Occupancy Rate



Source: National Property Information Centre (NAPIC)

12. The banking system has sufficient buffers to withstand credit and interest rate risks. Risks to loan impairment from tighter financial conditions are mitigated by strong capital buffers in the banking system. As of May 2023, the capital adequacy ratio (CAR) and the common equity tier 1 (CET1) capital ratio stood at 18.3 percent and 14.6 percent, respectively—which are comparable to regional peers, and well above the regulatory thresholds of 10.5 percent and 7.0 percent (inclusive of the capital conservation buffer). That said, investors tend to expect emerging market (EM) banks to maintain capital ratios well above the regulatory minimum; falling below these thresholds could prompt a sell-off.²⁵ Recent bank failures in some advanced economies did not have a significant impact on Malaysian banks. Equity prices and CDS spreads of Malaysian banks have held up well compared to their US and European counterparts. Moreover, AMRO’s stress tests show that most Malaysian banks have sufficient buffers to weather mark-to-market losses from debt securities holdings in the event of severe interest rate shocks (see Box A).²⁶ Banks

²⁵ Based on AMRO’s engagement with market analysts, a CET1 threshold of 13 percent is said to apply for big EM banks with foreign operations, while a lower threshold of 12 percent applies for smaller EM banks. AMRO’s reverse stress-testing exercise shows that loan impairments would need to rise to more than 7 percent before the CET1 ratio falls below 13 percent.

²⁶ AMRO staff conducted a stress test on the eight largest local banks to assess the impact on bank capital in adverse scenarios where interest rates rise significantly, for example, due to stronger-than-expected inflation or capital flight. The stress test assumes a 1.5 percent upward shift in the yield curve, which would be the largest year-over-year change in 10-year government bond yields since 2009. The exercise shows that the CET1 ratio would fall but remain above the regulatory threshold of 7 percent for all banks. However, the CET1 ratio would fall below 12 percent for two banks, which together account for around 12 percent of total banking system’s assets.

have strong liquidity positions to buffer liquidity stress, with a system-wide liquidity coverage ratio and net stable funding ratio of over 150 and 110 percent, respectively.

Authorities' Views

13. BNM explained that the spike in the OPR-KLIBOR spread is a temporary phenomenon. The tighter interbank market conditions towards end-2022 were mainly a result of greater competition for funding among banks approaching year-end to improve regulatory ratios. Although flexibility in the Statutory Reserve Requirement (SRR) also ended at the end of 2022, BNM does not think that SRR compliance contributed to the tightness as banks were aware of the expiry. In response to market needs, BNM injected more liquidity into the system via FX swaps and repo operations. The spread has already reverted to normal levels.

A.4 Fiscal Sector

14. While inflation has been kept low, this has come at a substantial fiscal cost from the implementation of blanket price subsidies and price controls. Government allocation for subsidies and social assistance nearly tripled to MYR67.4 billion in 2022 (Figure 19) as a wide array of measures were rolled out to protect consumers' purchasing power from the rise in cost pressures.²⁷ On the revenue front, higher commodity prices resulted in a better-than-expected revenue collection reflecting higher petroleum income tax and a larger PETRONAS dividend. The strong domestic economic performance and one-off revenue, derived from the Prosperity Tax and the Special Voluntary Disclosure Program (SVDP) administered by the Royal Malaysia Customs Department, also contributed to higher revenue collection. However, the higher revenue could only partially offset the spending on subsidies and social assistance. As a result, the fiscal deficit rose to MYR99.5 billion from the initial MYR97.5 billion target. Nonetheless, with higher-than-expected economic growth, the deficit declined to 5.6 percent of GDP in 2022 (Figure 20), compared to the initial target of 6.0 percent and the 2021 deficit of 6.4 percent.

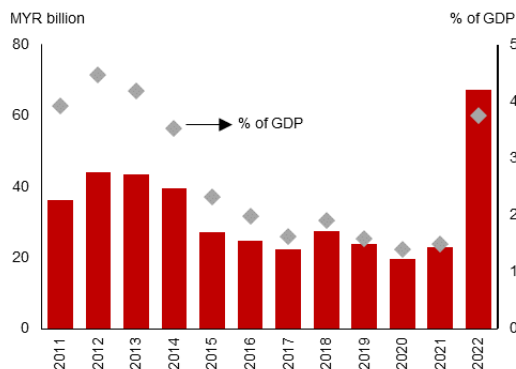
15. The fiscal deficit is projected to narrow further in 2023, indicating a shift to a contractionary fiscal stance, even as the 2023 budget remains focused on addressing the high cost of living. The fiscal deficit is projected to narrow to 5.1 percent in 2023 from 5.6 percent of GDP in 2022, broadly in line with the government's estimate of 5.0 percent, on account of reduction in the subsidy bill due to the decline in commodity prices, and the termination of the COVID-19 Fund as Malaysia transitions to endemicity. However, the 2023 budget remains sizeable at 20.4 percent of GDP²⁸, and is focused on maintaining support for the people to cope with the rising cost of living, strengthening the social safety net, and enhancing the MSME ecosystem. The budget also increases the allocation for development expenditure to finance investment projects under the 12th Malaysia Plan. On the revenue side, the government plans to introduce a luxury goods tax, impose excise duties on liquid nicotine used in e-cigarettes and vapes, propose another

²⁷ The amount of MYR67.4 billion was nearly four times the initial budget allocation and three times higher than in 2019-2021. The increase was attributed primarily to the enlarged fuel subsidy bill as a result of the surge in global crude oil prices. Greater subsidies for cooking oil in response to the increase in palm oil prices in H1 2022 as well as the introduction of subsidies to poultry farmers in tandem with the price controls for chicken and eggs that were necessitated by higher input costs, also contributed to the increase. Moreover, the COVID-19 Fund covered electricity subsidies and cash assistance for low-income and vulnerable groups.

²⁸ The 2023 budget was re-tabled by the new unity government on February 24, 2023. The initial budget of MYR372.3 billion tabled by the previous administration on October 7, 2022 was neither debated nor approved in parliament as the lower house was dissolved due to the 15th General Election.

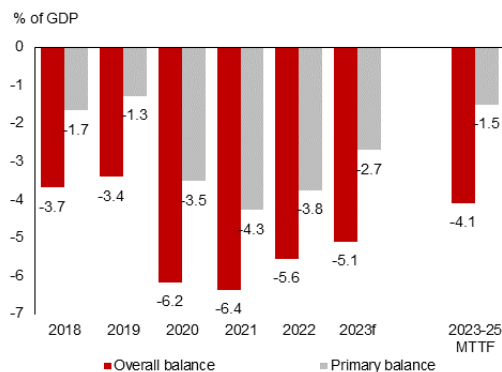
round of SVDP with full penalty waiver, and improve the progressivity of income tax²⁹. However, the goods and services tax (GST) will not be reintroduced in 2023. Under the Medium-Term Fiscal Framework (MTFF) 2023-2025, the fiscal deficit is targeted to narrow to 3.2 percent of GDP by 2025, which requires a fiscal adjustment of 1.9 percent of GDP over the next two years.

Figure 19. Fiscal Spending on Subsidies and Social Assistance



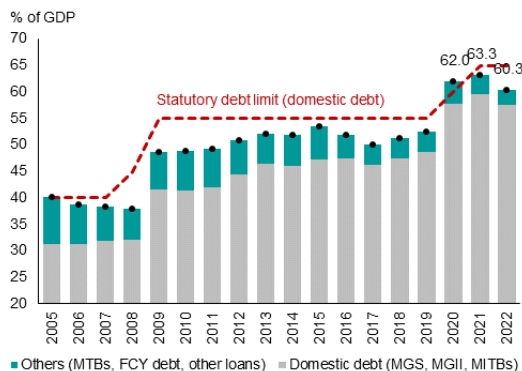
Source: DOSM, MOF, AMRO staff calculations

Figure 20. Overall and Primary Fiscal Balance



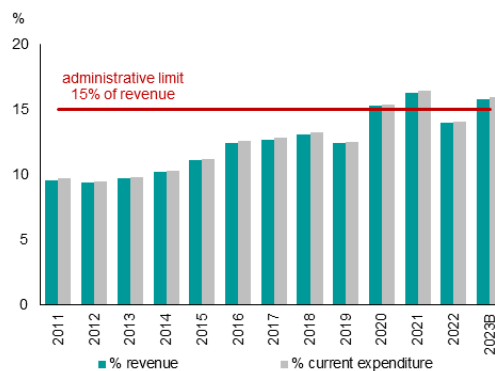
Source: DOSM, MOF, AMRO staff estimates

Figure 21. Federal Government Debt



Source: DOSM, MOF, AMRO staff calculations

Figure 22. Debt Service Charges



Source: MOF, AMRO staff calculations

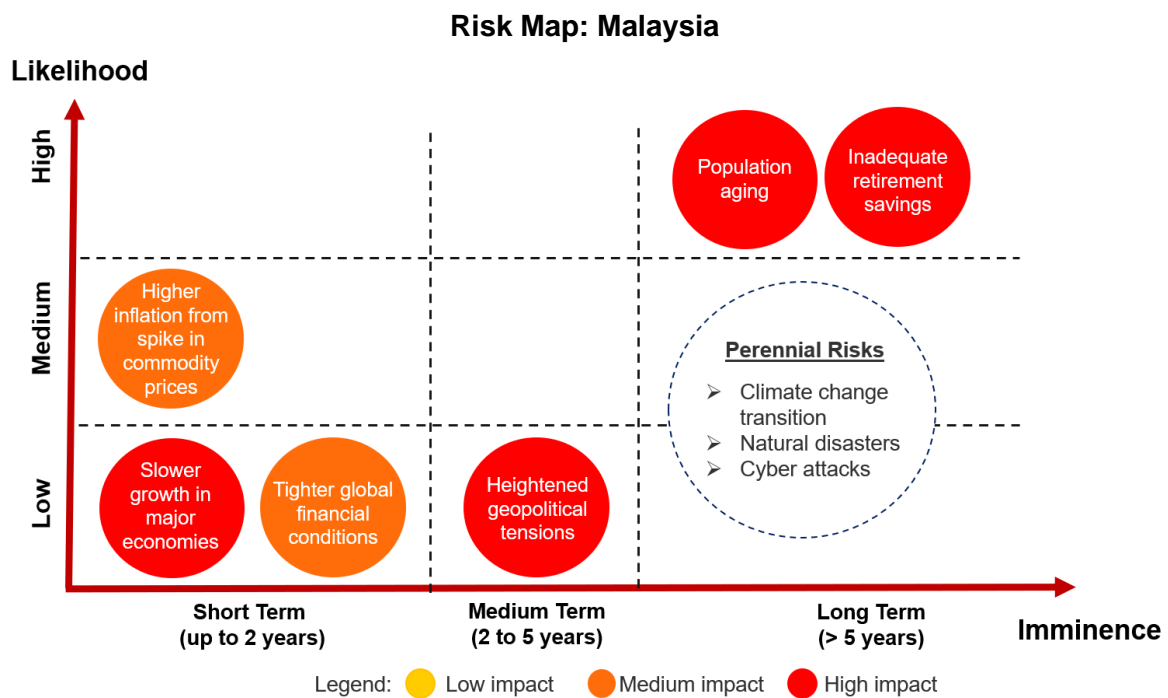
16. Total government debt is projected to increase this year before declining from 2024 onwards, but it will still be relatively high in the medium term. AMRO staff project government debt to reach 61.4 percent of GDP in 2023, higher than 2022’s 60.3 percent (Figure 21). The debt is subsequently expected to decline in 2024 and stabilize at 58 percent in the medium term, which is still relatively high compared to ASEAN peers. Meanwhile, statutory debt is projected to increase to 58.9 percent of GDP in 2023 from 57.6 percent in 2022, but will remain below the ceiling (see Figure 1.5 in Appendix 1).³⁰ Debt service payments are projected to rise in 2023 to 16.0 percent of government revenue—above the administrative limit of 15 percent—due to the high debt incurred during the pandemic (Figure 22). The government debt comprises predominantly of local currency

²⁹ Taxation will be more progressive as income tax rates for individuals in the MYR35,000-100,000 annual income range is reduced by 2 percentage points, whereas the tax rates for those earning over MYR100,000 is increased by 0.5 to 2 percentage points.

³⁰ The statutory debt ceiling (which applies to MGS, MGII, and MITB) was temporarily raised from 55 percent to 60 percent in August 2020 and later to 65 percent of GDP from October 2021 until end-2022. The government maintains the 65 percent of GDP statutory debt ceiling through the gazettelement by way of an Order which took effect on January 1, 2023.

bonds, a significant share of which is held by non-residents.³¹ Including other government liabilities, total government debt and liabilities at end-2022 are estimated at 80.7 percent of GDP.³² This includes the 1Malaysia Development Berhad (1MDB) bond of USD3 billion that matured in March 2023, for the repayment of which the 2023 budget has allocated funds.

B. Risks, Vulnerabilities and Challenges



Source: AMRO staff

Short term Risks

17. Risks to Malaysia's growth outlook are skewed to the downside, arising from a possibly sharper-than-expected slowdown in the U.S and a slower pace of recovery in China. With inflation in the U.S. still well above the 2 percent target, the Federal Reserve is committed to maintaining its tight monetary policy stance, notwithstanding the recent banking sector turmoil which has led to tighter credit conditions. Sustained high borrowing costs and tighter financial conditions could trigger a much sharper slowdown in the U.S. economy than currently envisaged. At the same time, there is a possibility of a slower pace of recovery in China, either due to weak consumer sentiment that constrains the recovery in consumer spending, or prolonged weakness in the real estate sector that dampens investor confidence. Weaker economic prospects in the world's largest economies would weigh on global demand and be a drag on Malaysia's goods and services exports.³³

18. Risks to the inflation outlook are tilted to the upside owing to a mix of external and domestic factors. On external factors, additional cuts to oil production by OPEC could

³¹ As at end-2022, only 2.7 percent of the government debt were denominated in foreign currency, 10.4 percent were at tenors up to 1 year, and 22.2 percent of ringgit-denominated debt securities were held by non-residents.

³² The liabilities are financial obligations from committed guarantees, 1MDB debt, and the project commitments under public-private partnership and private financing initiatives. Total liabilities amounted to MYR366.3 billion (20.4 percent of GDP) in 2022.

³³ The U.S. is Malaysia's third largest export destination, with total exports of MYR167.1 billion in 2022.

lead to an increase in global oil prices. The implications for domestic fuel prices would depend on the extent of revisions to the subsidies on key retail fuel prices. At the same time, further shocks to global food prices, including the possibility of El Niño occurring in H2 2023³⁴, would place greater pressure on Malaysia's food inflation and domestic living costs. Global fertilizer prices have remained elevated, and a renewed spike in the price of natural gas and coal, which are key feedstocks in fertilizer production, risks reducing global crop yields and pushing up food prices. As a net importer of food and fertilizers, Malaysia is vulnerable to adverse shocks to global food supply despite subsidies and price controls on daily essentials such as chicken, eggs, sugar, flour, and cooking oil. As for domestic factors, the continued recovery of the tourism sector and pick-up in investment activity could lead to tighter labor supply. Wages may rise as a result, but the risk of excessive pressures on inflation are deemed to be limited as labor productivity continues to improve. However, the inflation outlook faces upside risks from further increases in the minimum wage³⁵, and the planned rationalization of price controls and subsidies as part of the government's efforts to enhance spending efficiency.

19. High inflation over an extended period could raise cost-of-living concerns, with implications for the fiscal position and economic stability. For one, elevated food inflation would seriously affect the cost of living, especially for the bottom 40 (B40) and middle 40 (M40) percent of households, for whom food accounts for a greater proportion of expenditure and income compared to high-income households.³⁶ Consequently, the disproportionate impact on low-income households would require greater allocation for social assistance by the government, placing pressure on the fiscal balance and hampering efforts to restore fiscal buffers. More broadly, persistently high inflation could erode consumers' purchasing power and adversely affect private consumption, a key driver of economic growth.

20. Tighter-than-expected global financial conditions could trigger a rise in funding cost in the bond market. For the government, the possibility of rising sovereign bond yields would lead to higher borrowing costs, which—in addition to a declining trend in tax revenue collection (Figure 23) and an increasing trend of committed operating expenses, especially emoluments and retirement charges—allow little room for discretionary spending to protect consumer welfare and increase long-term growth potential. Additionally, a sharp tightening of global financial conditions could lead to large portfolio investment outflows, particularly by non-residents who hold a significant share of the bonds (Figure 24), and higher bond yields, given the need for large government bond issuance to finance the deficit. The tighter financial conditions could also increase rollover risks of the corporate sector, where debt stood at 97.6 percent of GDP at end-2022. To a certain extent, however, risks of domestic bond market stress is mitigated by Malaysia's large domestic institutional investor base, led by social security institutions and mutual

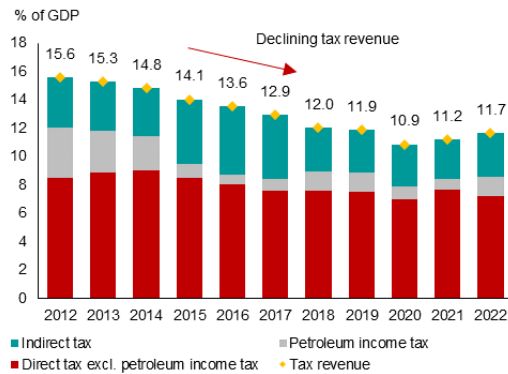
³⁴ The World Meteorological Organization forecasts that there is a 90 percent probability of an El Niño event during H2 2023, which would typically lead to drier than normal conditions across Southeast Asia and result in a fall in food production and a jump in prices.

³⁵ The minimum wage was increased by 20 percent from MYR1,200 to MYR1,500 in May 2022, with the exemption of enterprises with less than five employees that are only required to implement the minimum wage hike in July 2023.

³⁶ For the B40 group, food accounted for 22.8 percent of the average household consumption expenditure and 17.9 percent of income in 2019. As for the M40 group, food accounted for 17 percent of expenditure and 10.5 percent of income in the same period. In comparison, the top 20 percent of households (T20) only spent 11.8 percent of their total consumption expenditure on food, equivalent to 5.9 percent of their average income in 2019 (Sources: Household Expenditure Survey Report; Household Income and Basic Amenities Survey Report).

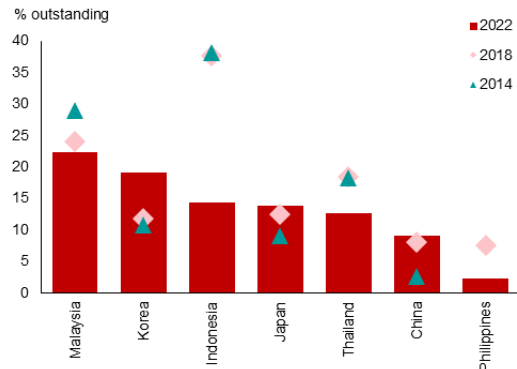
funds. In addition, in times of severe bond market stress, BNM has the power to step in to support secondary market functioning (see Box B).

Figure 23. Tax Revenue



Source: DOSM, MOF, AMRO staff calculations

Figure 24. Non-Resident Holdings of Local Government Bonds



Source: AsianBondsOnline, BNM

Note: Data for 2014 for Philippines not available.

Medium- to Long-Term Risks

21. Global economic fracturing could fundamentally reshape economies and markets, posing challenges to cross-border financial flows, technology transfers, and supply chain security. The strategic rivalry and escalating tension between the U.S. and China could lead to a fracturing of the global economy into ideological blocs centered on the two nations, with ramifications for trade and investment. The global economy is expected to be worse off in a fractured world³⁷, and at the same time, an environment of much higher uncertainty would increase risk premia and weigh on investment. Nonetheless, the macroeconomic effects at the country level would be more nuanced.³⁸ In particular, Malaysia and other ASEAN countries could benefit from the reconfiguration of supply chains over the medium- to long-term.³⁹ Other ongoing geopolitical tensions include the conflict between Russia and Ukraine, which could push commodity prices higher if tensions escalate.

22. The shortage of skilled labor and Malaysia's ageing population could hold back the realization of the strong FDI pipeline. High-skilled occupations account for less than 30 percent of Malaysia's total jobs, with the bulk of the jobs in the semi-skilled category.⁴⁰ The high vacancy rates in the high-skilled category suggest that employment opportunities are not met by the existing supply of local talents. There is also a high degree of job mismatch, as reflected in the large proportion of underemployment among tertiary-educated employees at 37 percent. This critical shortage of skilled labor, without appropriate and timely policy responses, could hold back the realization of the strong pipeline of FDI commitments. Malaysia's aging population and the decline in the growth of

³⁷ Global output is estimated to be about 1 percent lower after five years (relative to no fragmentation scenario) and 2 percent in the long term (IMF World Economic Outlook, April 2023).

³⁸ For instance, China-aligned countries could suffer from limited technology transfer and financial inflows from advanced economies. On the other hand, these countries could have a relatively secure supply of raw materials and intermediate inputs. In the case of Malaysia, it has benefited from an increase in FDI in strategic sectors, such as semiconductors and telecommunications, in recent years.

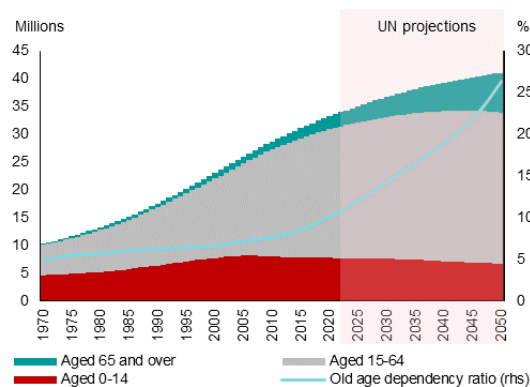
³⁹ Simulations using AMRO's large-scale dynamic stochastic general equilibrium (DSGE) model shows that there are spillover losses for Malaysia from a US-China technology decoupling, but these would be more than offset by gains from supply chain reconfigurations over the medium- to long-term (6-10 years). This assumes that the affected parts of the technology industries in China will be gradually transferred to countries under the "Belt and Road" cooperation.

⁴⁰ Based on the World Economic Forum's Human Capital Report 2015, the top 10 countries with the largest share of high-skilled employment have a share of at least 47 percent. Luxembourg tops the list with a 59.6 percent share of high-skilled employment, followed by Singapore at 54.7 percent.

working age population (Figure 25) are also challenges that could hinder the country's competitiveness in attracting FDI.⁴¹

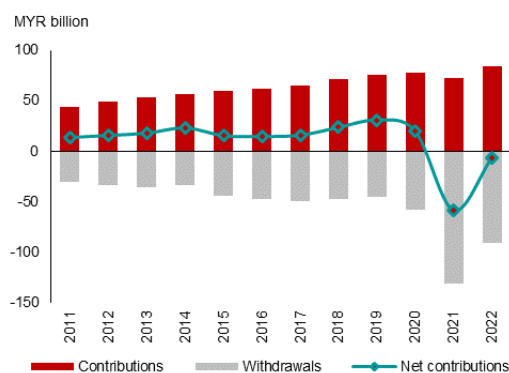
23. Further income shocks would aggravate the already alarmingly low level of retirement savings and increase financial vulnerabilities over the long term. Recent drawdowns in retirement savings have put many at risk of not being able to meet basic retirement needs. Members' retirement savings have been depleted after four rounds of withdrawals from the Employees Provident Fund (EPF) that were approved during the pandemic (Figure 26).⁴² As of end-2022, more than two-thirds (71 percent) of EPF's active contributors aged 55 and below, did not meet the basic savings target of MYR240,000.⁴³

Figure 25. Population and Old Age Dependency



Source: DOSM, United Nations

Figure 26. EPF Contributions and Withdrawals



Source: EPF, AMRO staff estimates

24. Malaysia faces physical and transition risks from climate change that require a whole-of-nation approach towards climate adaptation and mitigation. Physical risks pertain to extreme climate events, such as floods and tropical cyclones, to which Malaysia has a greater exposure than the global average, according to the INFORM Risk Index. According to the World Bank, floods have occurred more frequently in the past two decades than in earlier periods, and the large majority of Malaysia's annual losses from natural hazards—estimated by the United Nations Office for Disaster Risk Reduction (UNDRR) at USD1.3 billion or 0.3-0.4 percent of GDP per annum—are attributable to flooding.⁴⁴ Separately, the prevalence of energy subsidies and significant reliance on fossil fuels earnings for fiscal revenue and exports presents challenges for Malaysia in achieving its net-zero greenhouse gas (GHG) emissions commitment by 2050. To this end, necessary adaptation and mitigation measures must be designed, with a view to address the near- to long-term risks of climate change, and with strong commitment from all stakeholders—starting from the government down to private sector firms and households.

⁴¹ The United Nations (UN) defines a country as an aging nation when 7 percent or more of the population has reached the age of 65 and above. According to population data by the UN, Malaysia breached the 7 percent threshold in 2020. Growth of the working age population has also fallen from about 3 percent in the early 2000s to 1.3 percent on average in 2018-2022.

⁴² Total withdrawals from the schemes—i-Lestari (2020), i-Sinar (2020), i-Citra (2021), and special withdrawal (2022)—amounted to more than MYR145 billion (equivalent to 8.1 percent of 2022 GDP).

⁴³ The proportion of active members who had reached the basic savings target of MYR240,000 by age 55 had declined to 29 percent in 2022, from 36 percent in 2020. In addition, more than half of those aged under 55 had savings of less than MYR10,000 following the four rounds of special EPF withdrawals.

⁴⁴ The UNDRR estimate appeared in the then UNISDR Annual Report 2014. A more recent event—the severe flooding in Klang Valley and other states in mid-December 2021 through early 2022—has been estimated by the Department of Statistics Malaysia (DOSM) to have cost overall losses of similar magnitude, at MYR6.1 billion or 0.4 percent of GDP.

C. Policy Discussions and Recommendations

C.1 Calibrating Fiscal Support and Strengthening Fiscal Sustainability

25. AMRO staff welcomes the authorities' efforts to accelerate the pace of fiscal consolidation while giving due consideration to protecting the poor from rising living costs. Although the fiscal deficit is projected to narrow in 2023, it will remain elevated at above MYR90 billion (more than 5 percent of GDP) for the third straight year, posing financing challenges as global financial conditions tighten. In this regard, staff support the government's medium-term fiscal consolidation plan to reduce the budget deficit to 3.2 percent of GDP by 2025. Making subsidies more targeted is necessary to reduce the burden on the government budget; in doing so, an actionable implementation plan should be in place. Subsidy reforms should include a fuller pass-through of global energy and food prices to domestic prices (see Selected Issue 3) and a strengthened capacity to provide targeted support to vulnerable groups. Subsidies and social assistance can be consolidated into a comprehensive social protection program. This program would require the integration of social welfare databases with other government databases, such as tax and road transportation, to enhance the screening of the population meeting the eligibility conditions.

26. The intended pace of fiscal consolidation can be achieved through tax reforms, with a proper assessment of their impact on economic growth. In light of the declining tax-to-GDP ratio⁴⁵, AMRO staff welcomes revenue-enhancing measures announced in the 2023 budget, such as introducing a luxury tax, imposing a qualified domestic minimum top-up tax to partly implement the global minimum tax reform, and exploring a capital gains tax for unlisted company shares from 2024. However, achieving the 3.2 percent of GDP fiscal deficit target in 2025 would require support of major tax reforms. In this regard, the authorities should consider broadening the sales and services tax (SST) in the near term, as a precursor to the reintroduction of the GST in 2025 at a rate of possibly lower than 6 percent.⁴⁶ Other tax reforms include the re-introduction of the estate and inheritance tax, adopting a carbon tax, and extending the coverage of sugar tax. These can be complemented by ongoing efforts to improve revenue collection capacity, including enhancing tax administration.

27. The ongoing institutional reforms are expected to enhance spending efficiency and safeguard fiscal discipline. AMRO staff welcomes the plan to enact the Fiscal Responsibility Act (FRA) and the Government Procurement Act (GPA) to improve transparency and institutionalize the sound management of public finances. The ongoing comprehensive public expenditure reviews, including efforts to improve spending efficiency and minimize leakages and wastages, should continue to facilitate a rebalancing toward the government's spending priorities. For instance, savings from rationalizing subsidies can be used to enhance social protection.⁴⁷ Fiscal adjustments through expenditure measures should also consider long-term issues, such as population aging and climate change. Moreover, staff encourage the authorities to proceed with a plan to periodically publish a tax expenditure report as an initial step toward establishing a comprehensive cost-benefit

⁴⁵ A decline from 15.6 percent of GDP in 2012 to 11.2 percent in 2021, before increasing slightly to 11.7 percent in 2022 due to high petroleum-related revenue.

⁴⁶ The GST, levied at 6 percent, was introduced in April 2015 but was abolished in June 2018 in favor of the SST. As a broad-based consumption tax, GST can generate more tax revenue compared to SST.

⁴⁷ The government instructed each ministry and agency to save at least 5 percent from the remaining operating expenditure as of July 2022 to support efforts to alleviate the higher cost of living.

framework for assessing the economic benefits of tax expenditure, such as the case of fiscal incentives that have been introduced to attract FDI.

28. AMRO staff recommends the authorities to continue with efforts to improve the comprehensiveness and quality of their public debt management, including contingent liabilities. Comprehensive and transparent medium-term fiscal adjustment plans are essential to sound public debt management practices. Therefore, the authorities should prepare and publish their fiscal adjustment plans with specific measures to achieve the targets stated in the MTFF 2023-2025.⁴⁸ Regular stress tests of the government debt portfolio should also include committed and contingent liabilities to assess their impacts on fiscal stability, in particular the likelihood that the government has to provide public financing to cover the liabilities. It is also important to improve financial oversight of entities that receive guarantees from the government.

Authorities' Views

29. The MOF concur with AMRO staff's assessment of the fiscal position. The MOF agrees that although the blanket subsidies and price controls have helped to contain inflation, they are unsustainable and should be gradually phased out. The government is working on integrating key databases across government agencies and finetuning the targeted fuel subsidy mechanism. The MOF also agree that the revenue base needs to be broadened to meet MTFF targets. It is considering broadening the SST or reintroducing GST at a lower rate, although the latter is more likely in the medium term. There is an upside to revenue realization than what is assumed in the consolidation path, as the collection of the new luxury goods tax and capital gains tax have not been factored in. The FRA and GPA are under review and should be tabled in parliament in the second half of this year or latest by the end of 2024.

C.2 Charting an Optimal Monetary Policy Path

30. Monetary policy has scope to be tightened to keep the presently elevated inflation from getting entrenched. AMRO staff welcome the resumption of monetary policy normalization in May 2023. That said, AMRO's augmented Taylor Rule model indicates room for another 25-50 bps hike in the OPR in 2023 (Figure 27), from the current level of 3.00 percent, based on staff's growth (and corresponding output gap estimates) and inflation projections as well as assumptions on the U.S. Federal Funds rate by end-2023.⁴⁹ Further rate hikes may be warranted given that core inflation remains elevated, reflecting strong demand pressures (Figure 28). The broadening of the economic recovery, as travel and tourism services gain more traction, and the positive output gap, could sustain the momentum in core inflation, which has proven stickier than headline inflation. However, given the downside risks to the growth outlook, further tightening should be carefully evaluated based on evolving macroeconomic conditions.

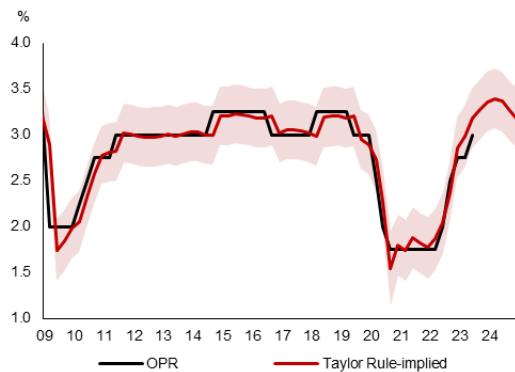
31. The monetary policy response should also be complemented with strengthened surveillance of underlying inflationary drivers. The authorities should monitor closely the drivers behind the stickiness of core inflation against the backdrop of

⁴⁸ In addition to a fiscal deficit target of 3.2 percent of GDP by 2025, the MTFF 2023-25 is also targeting revenue collection of 15.1 percent of GDP and sets expenditure ceiling of 19.2 percent of GDP over the three-year period.

⁴⁹ The implied policy rate path assumes that the Fed Funds target rate peaks at 5.00-5.25 percent in Q2 2023, before a 25-bps reduction in Q3 2023 and another 50-bps reduction in Q4 2023, leaving the Fed Funds target rate unchanged from end-2022 at 4.25-4.50 percent by end-2023.

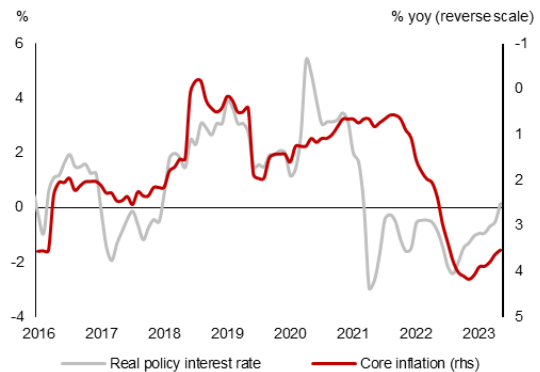
potentially strong demand-pull inflation. At the same time, the prominence of cost-push pressures underscores the need for a broader policy response that includes supply-side measures, such as increasing the hiring of foreign workers in industries with labor shortage and ensuring sufficient supply of agricultural inputs and key food items.

Figure 27. Overnight Policy Rate (OPR) and Taylor Rule-implied Policy Rate



Source: BNM, AMRO staff estimates
Note: The shaded areas are the range of the Taylor Rule-implied policy rate (+/- 1 standard deviation).

Figure 28. Real Policy Interest Rate and Core Inflation



Source: BNM, DOSM, AMRO staff calculations
Note: Real policy interest rate is the difference between OPR and inflation in the same period.

32. AMRO staff observes that considerations underpinning recent monetary policy decisions could have been communicated with greater clarity. The decision to keep the policy rate steady in January 2023 and the timing of the resumption of the policy rate hike in May 2023 surprised most analysts. This is because the pause in January may have appeared somewhat inconsistent with inflationary developments that were in line with references to ‘demand price pressures and still-elevated cost factors’ in the September and November 2022 MPC statements, while the rate hike in May followed indications of easing inflation against the backdrop of better-than-expected growth. The May MPC statement also introduces ‘future financial imbalances’ as a new risk factor taken into consideration behind the rate hike, with limited elaboration on the nature and imminence of such risk. While MPC statements are generally concise, BNM could further provide some elaboration given the importance of clarity in its communication. This would allow market participants to better align expectations of future interest rates with the monetary policy stance.

Authorities’ Views

33. BNM emphasized that the likelihood of a wage-price spiral is very low. BNM is paying close attention to the underlying drivers of inflation and the transmission from labor supply tightness to excessive wage pressures is assessed to be limited. This reflects structural features of Malaysia’s labor market, such as low collective wage bargaining power due to limited unionization as well as the high prevalence of low-wage foreign workers with weak labor rights.

34. BNM highlighted that in addition to the MPC statements, it engages directly with different segments of the economy. Depending on the audience’s familiarity with economic concepts and issues, BNM uses various channels to communicate the rationale for its monetary policy decisions, such as through MPC statement snapshots, social media, radio, and outreach events.

C.3 Preserving Financial Stability in the Post-pandemic Era

35. While exchange rate flexibility should be maintained as a shock absorber, the judicious use of FX interventions to reduce excessive FX volatility would require a strong foreign reserves buffer. Higher interest rates can alleviate exchange rate depreciation pressures and help stem foreign capital outflows⁵⁰; nonetheless, monetary policy's key priority should be to maintain price stability that is supportive of growth. In a small open economy like Malaysia, FX interventions may be needed to avoid excessive volatility of the ringgit. However, to be effective, such FX interventions need to be backed up by strong external buffers. BNM is encouraged to continue building its foreign reserves when market conditions allow, such as during periods of rapid ringgit appreciation and/or strong capital inflows. This will reduce the share of gross foreign reserves that is derived from FX deposits and net short forward positions, which have reached record levels to date. The lower level of net reserves, despite gross reserves remaining sufficient by international standards, could make Malaysia more susceptible to adverse market sentiments during periods of heightened risk aversion. However, such risk is somewhat contained as around 40 percent of the portfolio liabilities would not pose an immediate claim on reserves.⁵¹

36. BNM should continue to inject liquidity through open market operations (OMOs) to address liquidity tightness and ensure orderly market function across the yield curve. In H2 2022, the interbank market experienced some tightness especially in longer tenors of three to six months. The tightness resulted from many factors, including an increase in banks' demand for term funding to meet regulatory requirements. AMRO staff commends BNM's efforts in liquidity injection via repo and FX swap operations. Going forward, BNM should continue to closely monitor developments in liquidity conditions across tenors and groups of participants. Also, a mix of OMOs should continue to be deployed to address issues in certain segments of the market and, if necessary, at the overall level. A clear communication of the central bank's liquidity management policy can also help alleviate concerns over potential liquidity stress.

37. Further development of the repo market will help strengthen the market mechanism in effectively allocating liquidity across different market segments. Activities in the repo market remain muted, in part due to frictions from the lack of common standards for margining and haircut practices across counterparties. As a result, banks prefer to adjust their liquidity positions directly with BNM instead of trading among themselves. Thus, the repo market should be further developed, as a more active and liquid repo market can ensure efficient liquidity distribution, enhance market resilience in times of stress, and improve risk management among banks. AMRO staff commends BNM's ongoing effort on this front. In addition, when market conditions allow, BNM can revisit its open-market operations framework to reduce reliance on BNM's facilities and promote more market activities.

38. BNM should continue to engage closely with market participants to ensure that the government's bond issuance plan is in line with market demand. Doing so

⁵⁰ Past AMRO research shows that non-resident holdings of Malaysian government bonds are sensitive to interest rate differentials. The ringgit tends to weaken against the USD during episodes of non-resident net outflows.

⁵¹ As of end-March 2023, about 22 percent of portfolio liabilities consist of bonds and notes issued abroad by banks and corporations. Banks are subject to prudential and regulatory requirements by BNM. Corporations are subject to BNM approval requirements ensuring the debt is backed by FCY earnings or sufficiently hedged. Another 18 percent of the portfolio liabilities are government domestic bonds held by stable long-term non-resident investors (central banks, government, pension funds, and insurance companies).

will not only reduce the likelihood of bond supply and demand mismatch, but also lower government funding cost.⁵² To facilitate consultation with market participants, BNM can consider communicating the government's bond issue size in advance, such as on a quarterly basis, in addition to the existing auction schedule that is already broadcasted.

39. Pockets of vulnerabilities and imbalances exist in the financial system which call for continued vigilance and a constant review of the macroprudential framework and related measures. AMRO staff commend BNM for its proactive efforts to broaden its prudential regulatory and supervisory framework, including conducting timely stress-testing exercises to assess financial system soundness and potential spillovers during the recent banking turmoil in the US and Europe. Notwithstanding the strength of the domestic banking system, pockets of vulnerabilities could be identified. These include the large demand-supply imbalance in the property market⁵³ and the high level of household debt, which could affect banking system stability if NPLs were to rise significantly, given that household debt, inclusive of property loans, account for about 60 percent of banks' loan portfolio. To address household debt, the regulatory limit on the debt service ratio (DSR) of 60 percent⁵⁴ has been imposed for borrowers that are more likely to be vulnerable to financial strains. Additionally, the rapid expansion of buy-now-pay-later (BNPL) schemes should be regulated to prevent excessive debt burden among the households. The proposed Consumer Credit Act, when enacted, will be important to ensure BNPL providers comply with prudential and conduct standards.⁵⁵ In addition to this, staff commend the authorities' intensified efforts to improve national financial literacy to enhance customers' knowledge and awareness in their financial decisions and transactions.

Authorities' Views

40. BNM maintains the view that gross reserves remain adequate and usable for its FX operations. In addition, BNM can call upon decentralized reserves during periods of risk aversion. Only a quarter of the country's external assets are held by BNM as FX reserves; the rest are held by private and quasi-public financial and non-financial institutions, which can be used to service their liabilities without having to draw down on BNM's reserves. That said, BNM understands the need to build reserve buffers when there is an opportune time, considering the costs and benefits of doing so.

C.4 Spearheading Structural Reforms to Boost Economic Potential

41. A comprehensive effort to upgrade the workforce and digitalize the economy is urgently needed for Malaysia to maintain its competitiveness in attracting high-value FDI. The efforts of the authorities to spur FDI have begun to pay off, with record-high investment approvals in technology-related sectors. Demand for skilled labor will increase as Malaysia moves toward a more knowledge-based, high-technology, and high-value-added economy. In this regard, the 35 percent increase in the development expenditure allocation for education and training under the 2023 budget is highly welcome, with the aim to enhance technical and vocational education and training (TVET) programs and provide professional and skills programs, among others. Such initiatives would require close

⁵² For example, investors tend to prefer short-term securities over long-term bonds during periods of heightened risk aversion. An expansion in the T-bills outstanding limit will allow the government flexibility to meet investors' demand and reduce pressures on long-term yields.

⁵³ The number of unsold residential and commercial units fell 18 percent in Q4 2022 but remained 16 percent higher than 2015-2019 average.

⁵⁴ This is part of the Policy Document on Responsible Financing. Financial institutions are also expected to adopt a more prudent DSR level depending on the borrower's level of income, cost of living, and other relevant factors.

⁵⁵ The majority of BNPL providers are outside of BNM's regulatory purview.

collaborations between learning institutes, training providers, and industries to ensure that the workforce pool is equipped with the skills that match evolving industry needs. Related to this, the government is on track to advance the National Fourth Industrial Revolution (4IR) Policy to encourage the adoption of new technologies such as automation, robotics, and artificial intelligence among the workforce and businesses in Malaysia. Doing so would allow Malaysia to leverage on the new growth opportunities from the 4IR.

42. The entry into force of CPTPP is expected to allow Malaysia to benefit from access to new markets. The Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP) came into force for Malaysia in November 2022, and it will broaden its access to Canada, Mexico, and Peru—countries which Malaysia previously did not have any free trade agreements with. Earlier, in March 2022, the Regional Comprehensive Economic Partnership (RCEP) agreement entered into force for Malaysia. These mega trade deals are expected to benefit Malaysian companies through integration into global value chains. The authorities can assist local businesses to reap these benefits, including organizing public outreach programs and developing practical guides on operational procedures.

43. Social protection systems should be strengthened to improve their coverage and adequacy. Although social assistance programs have been broadened by increasing the income eligibility threshold during the pandemic, there is scope to further improve the targeting and adequacy of government assistance, especially for those not covered by social insurance, such as the self-employed and those in the informal sector (see Selected Issue 4). In addition, recent ad-hoc stimulus measures during the pandemic such as allowing four rounds of special EPF withdrawals, have sharply eroded retirement savings of the lower income groups, with implications for adequacy of pension during old age.⁵⁶ The government and relevant agencies are encouraged to review and enhance the existing social protection systems to reduce inequality and poverty.

44. AMRO staff strongly supports Malaysia's ongoing adaptation and mitigation efforts, and encourages the swift passage of legislation to strengthen the country's climate commitments. Staff welcomes the government's plan to speed up the tendering process for flood mitigation projects, which are part of the MYR15 billion long-term climate adaptation strategy through 2030. The appropriations in the 2023 budget toward disaster readiness as well as environmental and biodiversity conservation are also welcome. Various initiatives are underway to encourage the shift from fossil fuel to low-carbon energy, such as incentives to spur the adoption of electric vehicles, and enabling and facilitating climate-related financing by the private sector. Malaysia has also announced several climate related blueprints in line with its efforts to reduce GHG emissions (see Appendix 5). Staff supports the country's plan to introduce the Climate Change Act in the near future.

Authorities' Views

45. The authorities are committed to addressing the long-term challenges facing Malaysia. The authorities reinforced the need to attract high-quality investments under the

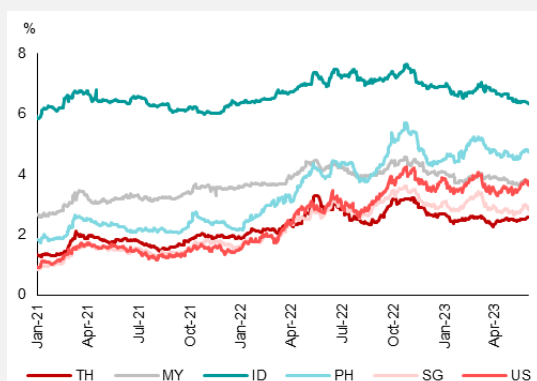
⁵⁶ The median EPF savings of the B40 group fell 70 percent to MYR577 as at December 2022, from MYR2,434 in April 2022. Meanwhile, the median savings of the M40 group declined 34 percent to MYR19,926 from MYR30,113 over the same period. By contrast, the T20 group managed to grow their median savings by 9 percent to MYR152,964 from MYR140,440 previously.

New Investment Policy, prepare the workforce to be future-ready through reskilling and upskilling, expedite efforts in digitalization, strengthen social protection, and push ahead with developing climate policies.

Box A. Assessing the Impact of Rising Interest Rates on the Malaysian Banking System⁵⁷

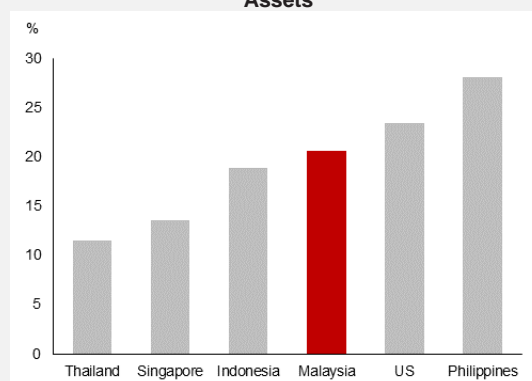
The failure of Silicon Valley Bank (SVB) has sparked concerns over the impact of rising interest rates on banks' capital due to losses in bond investments, which can engender a deterioration in banks' capital and depositors' confidence, triggering a run on deposits. The concern is also relevant and timely in the ASEAN+3 region amid the rising interest rate environment since 2022. Spillovers from tighter global financial conditions coupled with domestic policy rate hikes have led to significant increases in government bond yields across the ASEAN-5 economies, by around 50 basis points (bps) in Malaysia and Indonesia, to over 200 bps in the Philippines in 2022 (Figure A1). Although bond yields have started to trend down in 2023, upside risks remain, both from remaining possibility of further rate hikes to address persistent inflation and heightened risk aversions from financial stability concerns in the major economies.

Figure A1. 10-year Government Bond Yields



Source: Haver Analytics, National authorities

Figure A2. Share of Debt Securities to Banking System Assets

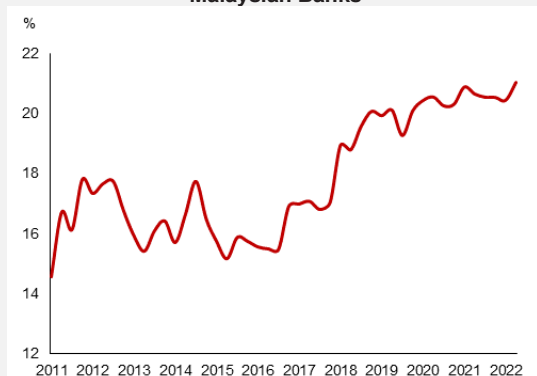


Source: Haver Analytics, National authorities

Malaysian Banks' Bond Holdings

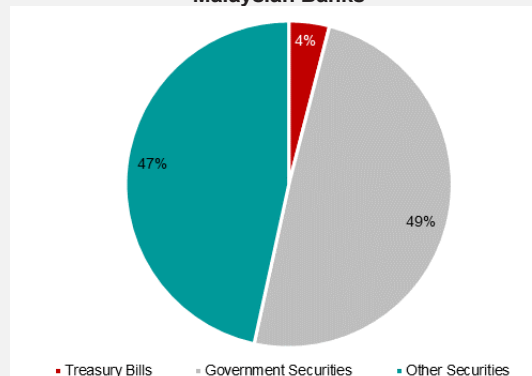
Malaysian banks hold less share of debt securities compared to U.S. banks and the interest rate risk is partially mitigated by bond holding structure. Malaysian banks' share of debt securities to total banking sectors' asset stood at 21 percent at end-2022, which is below the US but higher than ASEAN-5 peers except for the Philippines (Figure A2). The share of debt securities holdings increased by 6 percentage points as of end-2022, from 15 percent in 2015 (Figure A3). Around half of the holdings are government securities and treasury bills, which are more immune to sharp yield repricing than corporate debt securities, thanks to the developed and liquid secondary market as well as solid domestic investor base. Moreover, around 40 percent of bond holding are in the hold-to-maturity (HTM) portfolio, which helps reduce the fluctuations in the reported value of the bond portfolio (Figure A4 and A5).

Figure A3. Share of Debt Securities to Assets of Malaysian Banks



Source: BNM

Figure A4. Composition of Debt Securities Held by Malaysian Banks



Source: BNM

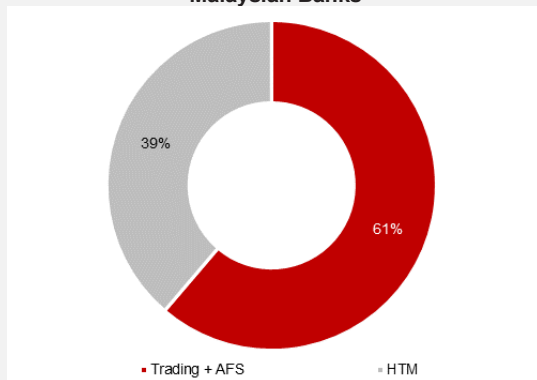
⁵⁷ Prepared by Pim-orn Wacharaprapong.

Stress Testing Exercise

AMRO conducted a stress test on Malaysian banks to assess the impact of higher interest rates on mark-to-market value of banks' bond portfolio and implications on banks' capita. The exercise focused on the eight largest local Malaysian banks, with the CET1 ratio ranging between 13 and 18 percent at the end of 2022. The stress test considered the impact on the value of bond holdings in the trading and available-for-sale portfolios only. Two risk scenarios were considered. First, a "mild scenario" with a 50-bps upward parallel shift in the yield curve, which is comparable to the net change in 10-year Malaysian Government Securities (MGS) yield in 2022. Second, a "worst-case scenario" with a 150-bps upward parallel shift in the MGS yields, the largest rise on a year-on-year basis ever recorded since 2009.

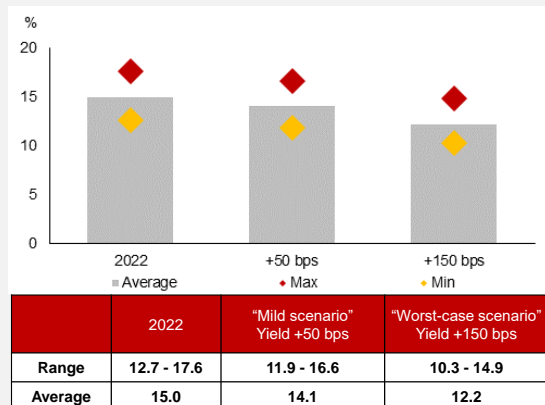
AMRO's stress test results show potential vulnerability in the event of a large interest rate increase. The loss from lower bond prices is proportional to the size of each bank's holding of trading and available-for-sales (AFS) bonds. In the mild scenario, the CET1 ratio would fall between 0.3 to 1.3 percent across 8 banks, while the average CET1 ratio would decline from 15.0 to 14.1 percent (Figure A6). Given limited exposure to interest rate risks, Malaysian banks are expected to withstand such a moderate rise in bond yields. However, in the worst-case scenario, the CET1 ratio would fall between 0.8 to 4 percent, with the average CET1 ratio declining to 12.2 percent. Although all banks would still meet the regulatory minimum CET1 ratio of 7 percent, two of them would see the ratio drop below 12 percent, which could raise some concerns among investors who expect emerging market banks to maintain higher capital than the regulatory minimum.⁵⁸ One important caveat of this stress test is that it assumes equal duration for all banks' bond investment at seven years, which is the duration of total government bonds and bills outstanding in April 2023. Thus, for banks with shorter bond investment duration, the impact from interest rate shock will be overestimated in this stress test.

Figure A5. Composition of Debt Securities Held by Malaysian Banks



Source: BNM, AMRO staff calculations
Note: AFS refers to available-for-sale, HTM refers to hold-to-maturity.

Figure A6. Stress Test Results on the CET1 Ratio



Source: AMRO staff estimates

The stress test serves as a reminder that despite the relatively limited exposure to debt securities among Malaysian banks, they can come under pressure if bond yields rise sharply. A rapid or sizable decline in the capital ratios can cause a deterioration in investors' confidence, which may trigger an equity selloff or deposit withdrawals. Lessons learned from the SVB episode suggest that banks can be forced to liquidate part of their HTM portfolios at a loss if faced with liquidity stress, and such losses from the sale of HTM portfolio will add to the MTM impact on trading and AFS bonds captured in the stress test.

Central banks and regulators play an important role in helping banks safeguard the risks from extreme market movements. Close supervision to ensure prudent interest rate risk management framework, regular stress testing exercise, as well as swift lender-of-last-resort action in providing needed liquidity and market interventions, have proved to be effective in restoring confidence and containing the possibility of systemic risks.

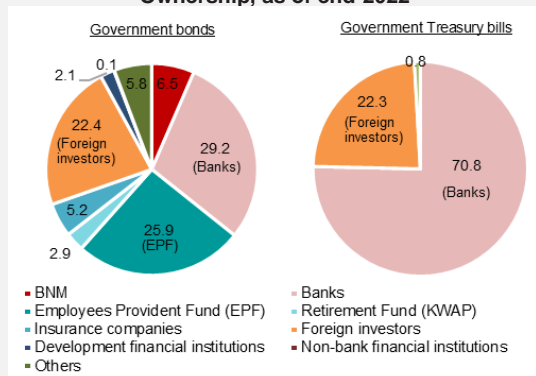
⁵⁸ Based on AMRO's engagement with market analysts, a CET1 threshold of 13 percent is said to apply for big EM banks with foreign operations, while a lower threshold of 12 percent applies for smaller EM banks.

Box B. Financing the 2023 Federal Government Budget Deficit⁵⁹

The government’s annual budget deficits have been financed primarily via local currency bond issuance. The ringgit-denominated share of government debt has been stable at 97 percent since 2010. Of the MYR1.1 trillion debt issued domestically as of end-March 2023, 50 percent is in Malaysian Government Securities (MGS, or conventional bonds), 46 percent in Malaysian Government Investment Issues (MGII, or Islamic bonds), and nearly 4 percent in Treasury bills. Meanwhile, foreign currency bonds amounted to MYR29.5 billion as of March 2023, within the statutory limit of MYR35 billion, and accounted for nearly 3 percent of the total debt.

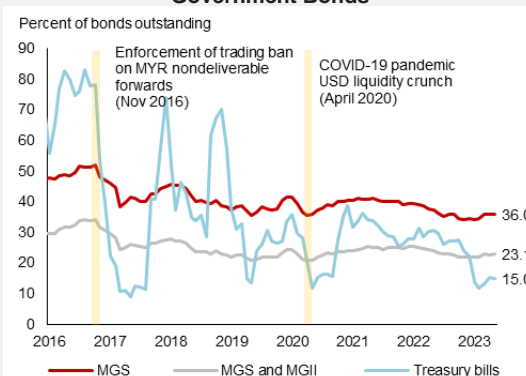
The main holders of sovereign bonds (MGS and MGII) are banks, social savings institutions led by the Employees Provident Fund (EPF), and non-resident investors—altogether accounting for 81 percent of total (Figure B1). The insurance companies, Bank Negara Malaysia (BNM), development financial institutions (DFIs), and asset management companies primarily hold the rest of the MGS and MGII. The banking institutions have become the primary holders of Treasury bills with the steady decline in non-resident holdings from 2016 (Figure B2).

Figure B1. Domestically-issued Government Debt by Ownership, as of end-2022



Source: BNM
Note: BNM’s share includes bond holdings under repo agreement. BNM’s outright holdings of government bonds only amounted to 1.3 percent of MGS and MGII outstanding at end-2022.

Figure B2. Nonresident Holdings of Local Currency Government Bonds



Source: BNM

The 2023 budget entails a large financing need that will likely be predominantly funded by domestic bond issuance as in previous years. AMRO staff forecasts a budget deficit of 5.1 percent of GDP (MOF: 5.0 percent) in 2023, entailing a deficit financing need of MYR98.2 billion. This year will be the fourth year of unusually large financing need by the government, the amount having grown 1.7–1.9 times in 2020–2023 compared to 2018–2019 levels. As in previous years, the deficit will be predominantly financed via ringgit debt issuance.

The large supply of debt securities this year can be absorbed by Malaysia’s bond market, given that domestic institutional investors hold sizable investable assets. Key local players in the bond market—banks, social security institutions, and insurance companies—have MYR1.6 trillion in accumulated assets, of which only 14 percent are held in ringgit-denominated government debt securities (Figure B3). There will be room and opportunities for further investment by these institutional investors, especially in a risk event. Non-resident investors hold a considerable proportion of government bonds, as Malaysian bonds offer relatively higher yields than emerging Asian peers and the bond market is deep and liquid enough to suit their needs (see related annexes in the 2020 and 2022 consultation reports for further discussion).

The absorptive capacity of domestic bond investors is critical in a tail risk event, as the large domestic investor base can moderate the spike in bond yields. AMRO staff consider an extreme risk scenario, where global risk aversion prompts sharp non-resident outflows, is combined with a robust domestic economy in which banks pare down sovereign bond purchases to fund faster loan growth. This risk event results in a bond market sell-off, pushing bond yields higher; at the same time,

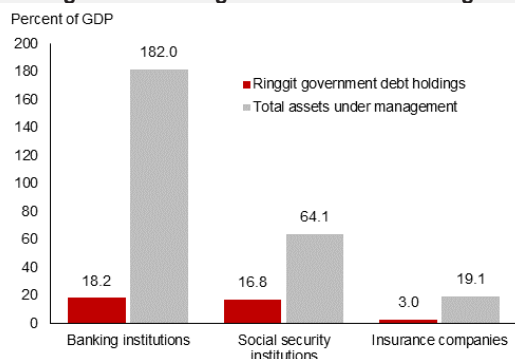
⁵⁹ Prepared by Diana del Rosario.

it offers a buying opportunity for non-bank domestic investors. That is, attractive valuations are likely to draw increased allocations by the EPF, insurance companies, DFIs, and fund management companies, to account for over 90 percent of this year’s net issuance, as elaborated below:

- **EPF’s ability to absorb greater bond supply this year is bolstered by an improved financial position.** EPF contributions are expected to improve in 2023 as the labor market continues to recover. At the same time, fund withdrawals are likely to ease and return to pre-pandemic levels after the expiry of the pre-retirement withdrawal facilities in 2020-2022. On balance, AMRO staff estimates EPF’s accumulated contributions to increase by 5 percent in 2023 to MYR1.1 trillion. As of end-2022, 26 percent of the accumulated contributions were invested in local currency sovereign bonds, compared with an average of 23 percent in 2017-21. A strategic management decision to increase this share to 28 percent, albeit higher than the allocation of the world’s leading pension fund of Japan,⁶⁰ amounts to MYR33 billion in purchases—in line with the purchased amount in 2022.
- **The yield pick-up is also likely to attract insurance companies toward long-tenor ringgit bonds that match their liabilities.** For instance, sovereign bond purchases of MYR16 billion by the insurance industry would bring bond holding to 20 percent of end-2022 industry assets from 15 percent at end-2022. Despite their large asset size, insurance companies only hold 5 percent of outstanding government bonds, as they tend to prefer the higher yields offered by government-guaranteed bonds and highly rated corporate bonds.
- **If needed, BNM has room to increase its bond holdings before hitting the 10 percent purchase limits in the primary and secondary markets.** Inclusive of its reverse repo agreements, BNM held 6.5 percent of bonds outstanding at end-2022 and increasing the share to 8 percent in 2023 implies bond purchases of MYR22 billion for an estimated MYR1.1 trillion sovereign bond market. Its outright holding of government bonds only amounted to 1.2 percent of outstanding stock as of April 2023, leaving room for additional purchases.
- **Development and other non-bank financial institutions also have scope to increase bond holdings.** Bringing DFIs’ holding back to 2017–2018 levels of 3 percent of outstanding stock from 2 percent at end-2022 is estimated to result in MYR11 billion of bond purchases in 2023. As for other FIs, increasing their holding to 6.5 percent—close to the 2020 level—from 5.8 percent at end-2022 implies an estimated MYR13 billion of bond purchases in 2023.

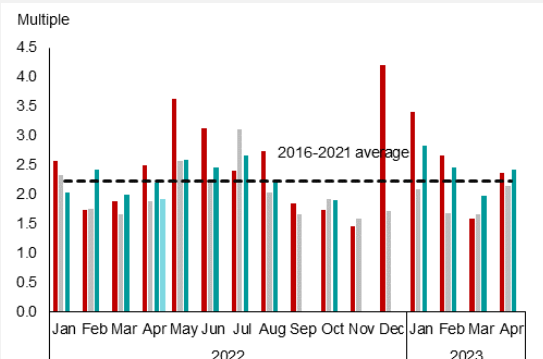
But while the market can easily absorb new bond supply, the price at which the debt securities are sold is equally crucial. To this end, the BNM engages with large investors like the EPF to gauge their preferences and requirements in formulating the annual bond issuance calendar. The large supply of bonds in the market is also being managed through the use of private placements, usually for long-dated bonds that pension funds prefer to hold. Bid-to-cover ratios indicate generally healthy demand (Figure B4). Still, large bond supply can drive up interest rates, and the growing debt burden serves as a reminder to rebuild fiscal buffers without compromising growth.

Figure B3. Domestic Institutional Investors: Ringgit Sovereign Debt Holding vs Assets Under Management



Source: BNM via CEIC; media reports; AMRO staff estimates
Note: Holdings data are as of end-March 2023, while assets data are as of end-2022, except for KWAP as of end-2021.

Figure B4. Bid-to-Cover Ratios



Source: BNM via Haver Analytics
Note: Bars refer to bond issuances in a given month, which can vary in terms of tenor and size.

⁶⁰ Japan’s [Government Pension Investment Fund](#) (GPIF) has a 26.1 percent allocation to domestic bonds out of JPY191.5 trillion (USD1.3 trillion) as of end-2022.

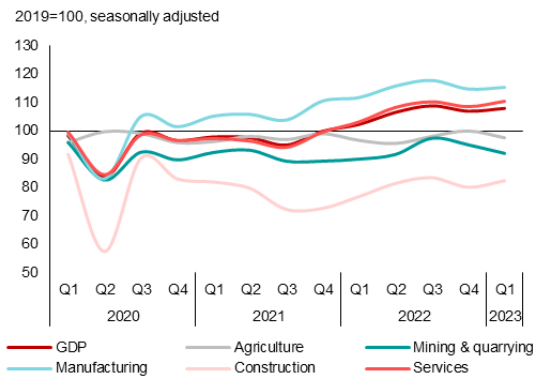
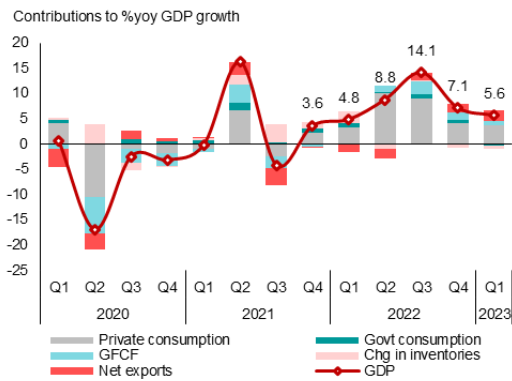
Appendices

Appendix 1. Selected Figures for Major Economic Indicators

Figure 1.1. Real Sector

The Malaysian economy rebounded strongly last year, largely driven by pent-up domestic demand following the reopening of the economy in April 2022.

However, growth has been uneven, with manufacturing first to recover followed by services, while agriculture, mining, and construction remained relatively weak.

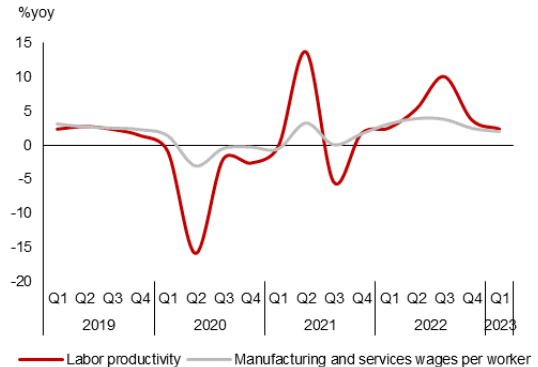
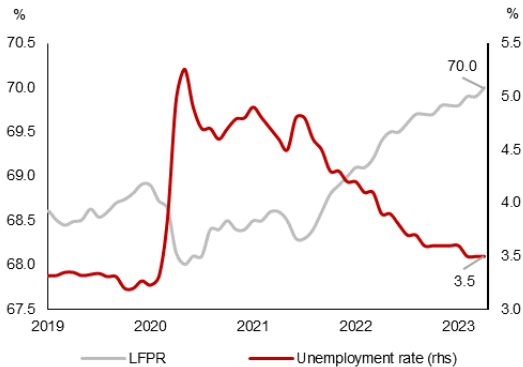


Source: Department of Statistics Malaysia (DOSM), AMRO staff calculations

Source: DOSM, AMRO staff calculations

Labor market conditions are improving, with the unemployment rate approaching pre-pandemic levels while labor force participation reached a record high.

Nominal wages per worker have continued to grow, albeit slower than productivity growth.

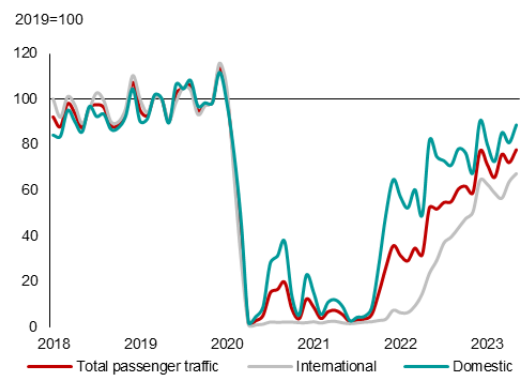
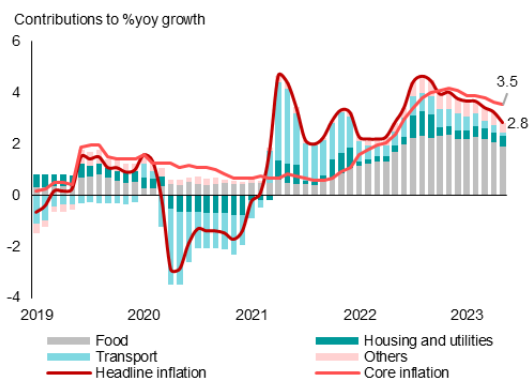


Source: DOSM

Source: DOSM, AMRO staff calculations

Inflation has peaked and continues to moderate, but core inflation is proving stickier than headline.

The recovery of inbound tourism, especially from China's reopening, will be a boost to the economy.

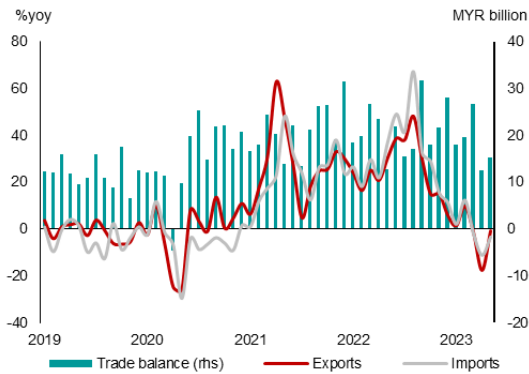


Source: DOSM, AMRO staff calculations

Source: Malaysia Airport Holdings Berhad, AMRO staff calculations

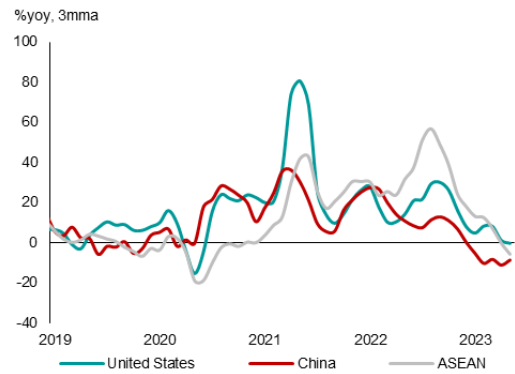
Figure 1.2. External Sector

Export growth has slowed markedly since end-2022 due to weak external demand, but trade surplus remains robust.



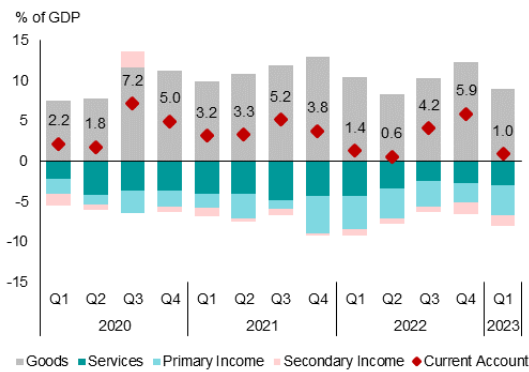
Source: DOSM, AMRO staff calculations

Goods exports to China have not picked up after China's reopening, partly reflecting the services-driven nature of China's recovery.



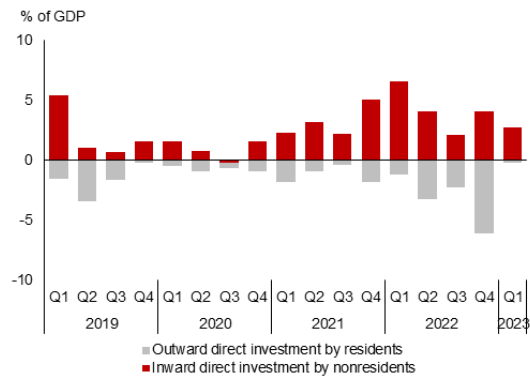
Source: DOSM, AMRO staff calculations

Goods trade has supported the current account surplus as the deficit in other components widened.



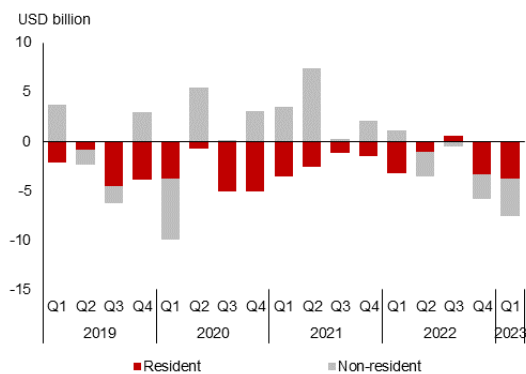
Source: BNM, DOSM, AMRO staff calculations

FDI has been robust over the past two years, outpacing residents' overseas direct investments.



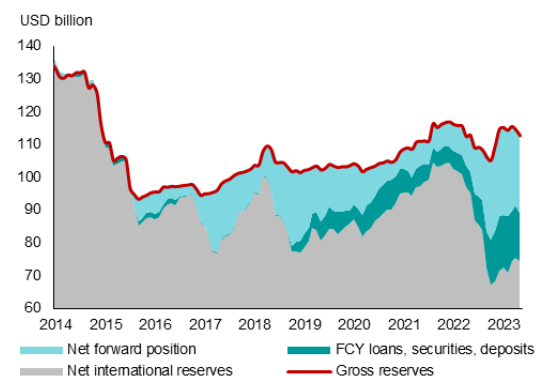
Source: BNM, DOSM, AMRO staff calculations

Both resident and non-resident portfolio investment outflows have intensified since Q4 2022.



Source: BNM

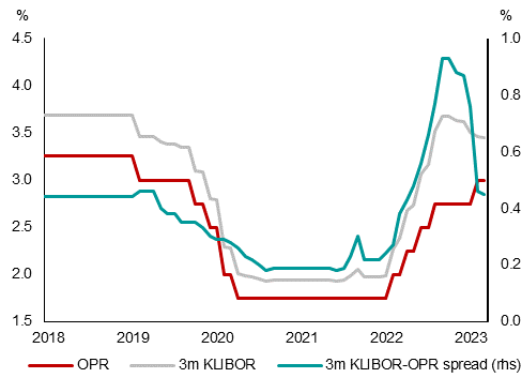
BNM's gross and net international reserves fell sharply in H2 2022 but have recovered somewhat.



Source: BNM

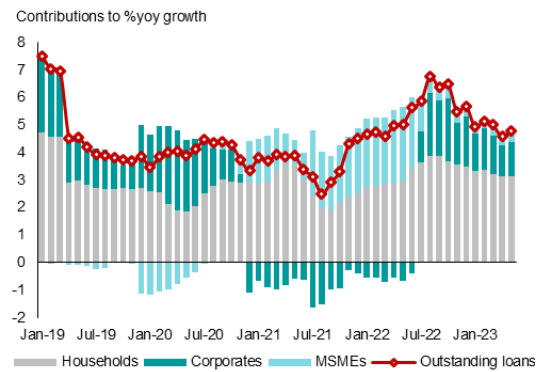
Figure 1.3. Financial Sector

Policy rate hikes since May 2022 were quickly transmitted to deposit and lending rates, but the increases in interbank rates were more pronounced.



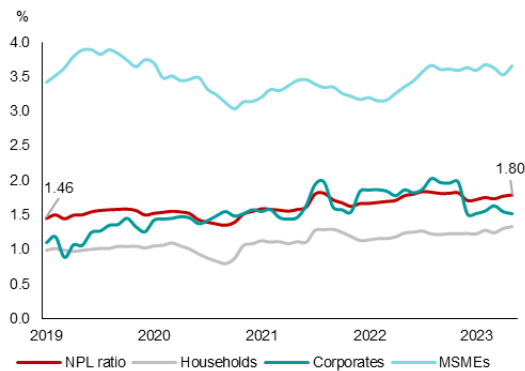
Source: BNM

Despite the increase in lending rates, credit growth remained robust to support pent-up demand.



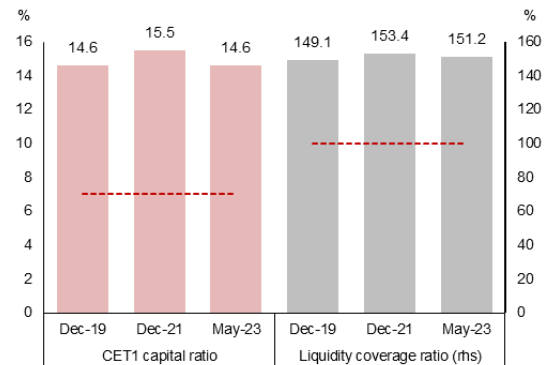
Source: BNM, AMRO staff calculations

Loan impairments have only seen a slight uptick after the expiration of loan moratoriums.



Source: BNM

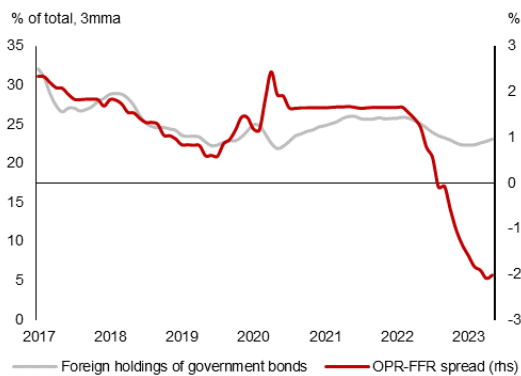
The banking system has sufficient capital and liquidity buffers to withstand higher credit and interest rate risks.



Source: BNM

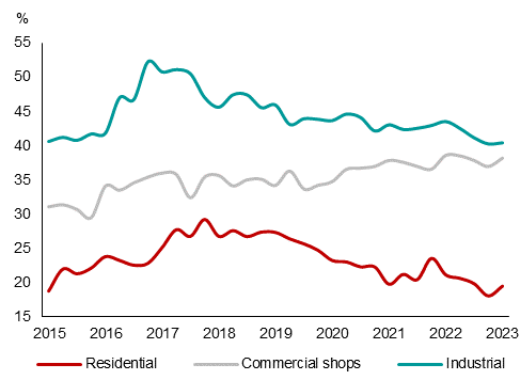
Note: The red dashed lines refer to the regulatory minimum ratios. For CET1 the minimum is 7.0 percent (inclusive of the 2.5 percent capital conservation buffer), while for LCR the minimum is 100 percent.

Non-resident holdings of domestic government bonds have remained broadly stable despite the sharp narrowing of the OPR-Fed funds rate spread.



Source: BNM, Federal Reserve Bank of St. Louis, AMRO staff estimates

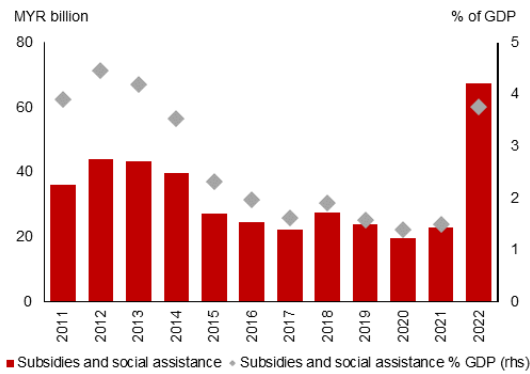
Overhang rates have trended lower for residential and industrial property but not for commercial property.



Source: National Property Information Centre, AMRO staff estimates
Note: Overhang refers to units that have received certificates of completion and compliance but remain unsold for more than nine months after launch.

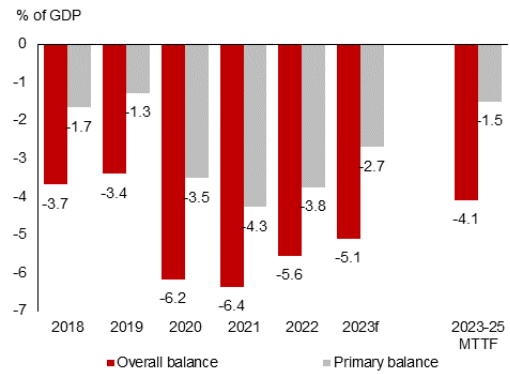
Figure 1.4. Fiscal Sector

Fiscal spending on subsidies and social assistance in 2022 swelled to a record high, mainly due to the sharp increase in fuel subsidies for RON95 and diesel.



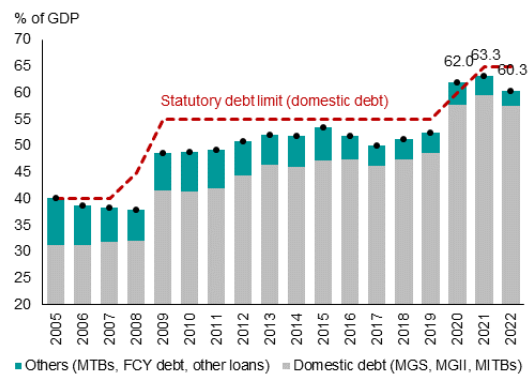
Source: DOSM, MOF, AMRO staff calculations

Fiscal consolidation is expected to gain momentum in the medium term, with the fiscal deficit targeted to narrow to 3.2 percent of GDP in 2025.



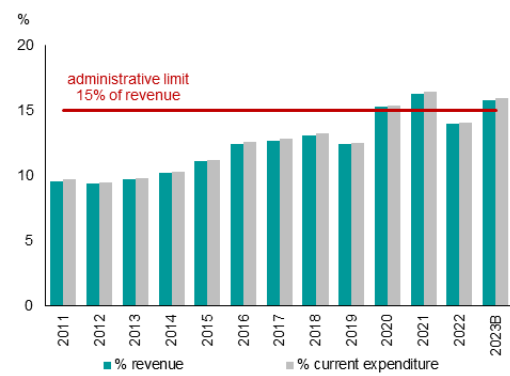
Source: DOSM, MOF, AMRO staff estimates

Statutory debt remains comfortably below the debt ceiling, which provides some space for fiscal support should downside risks materialize.



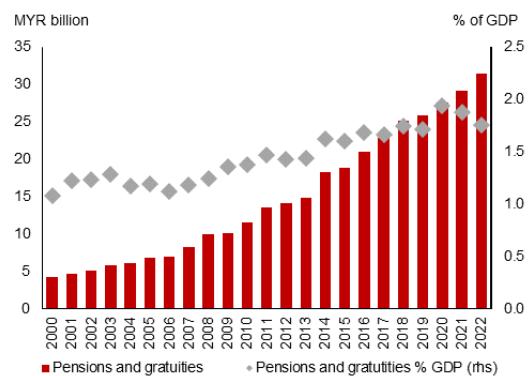
Source: DOSM, MOF, AMRO staff calculations

Fiscal buffers need to be rebuilt to lower debt interest payments, which are projected to breach the administrative limit of 15 percent of revenue in 2023.



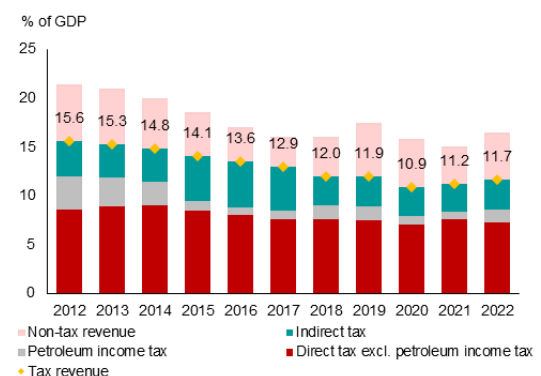
Source: MOF, AMRO staff calculations

Moreover, pensions will continue to make up an increasing share of the budget as civil servants retire.



Source: DOSM, MOF, AMRO staff calculations

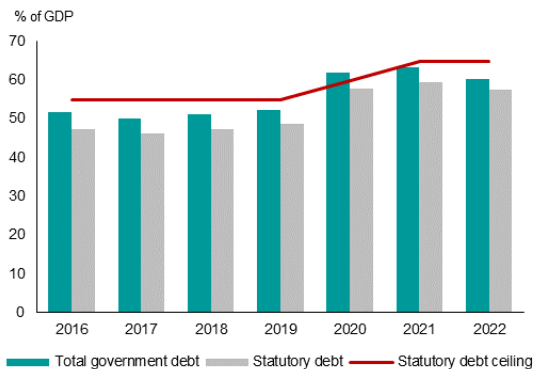
The revenue base needs to be broadened to arrest the trend decline in the tax ratio.



Source: DOSM, MOF, AMRO staff calculations

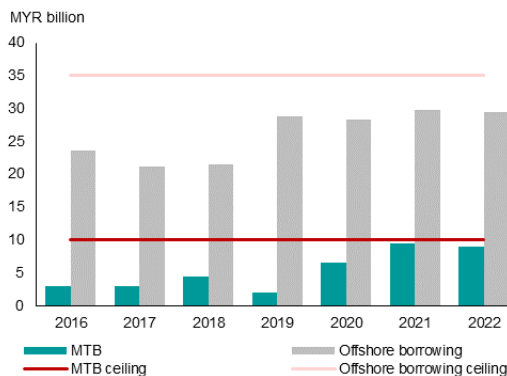
Figure 1.5. Debt Sustainability Analysis

With higher-than-expected economic growth, the Federal government debt ratio decreased in 2022, while the statutory debt ceiling has been maintained at 65 percent of GDP.



Source: DOSM, MOF, AMRO staff calculations

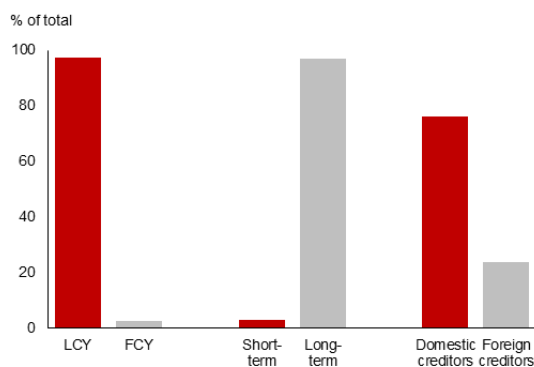
Offshore borrowings and treasury bill stocks are still below their corresponding statutory limits.



Source: BNM, DOSM

Note: MTB refers to Malaysian Treasury Bills.

Non-residents hold a significant share of the government debt, while FX risk is low.



Source: MOF, AMRO staff calculations

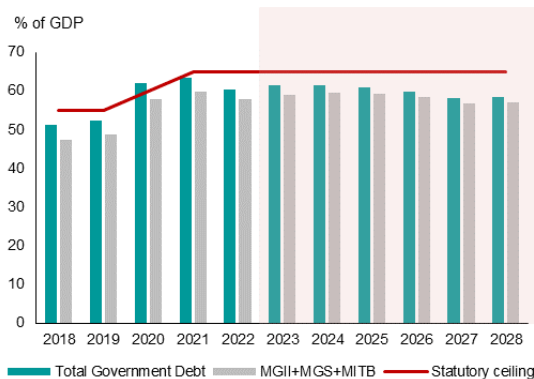
Note: LCY (FCY) refers to local (foreign) currency-denominated debt; short- and long-term are based on remaining maturity.

The fiscal deficit is expected to narrow in the medium term but remain short of the 3.2 percent of GDP target in 2025 unless major tax reforms are implemented.

	2023	2024	2025	2026	2027	2028
Real GDP growth (%)	4.2	5.2	4.8	4.8	4.7	4.7
GDP Deflator (%)	2.9	2.2	2.1	2.1	2.2	2.2
Revenue	15.0	14.0	13.6	13.2	12.9	12.7
Tax	11.2	10.9	10.9	10.8	10.7	10.6
Non-tax	3.8	3.0	2.7	2.4	2.2	2.1
Expenditure	20.1	18.1	17.4	17.0	16.7	16.6
Current expenditure	15.1	13.9	13.5	13.2	12.9	12.7
Development expenditure	5.0	4.2	4.0	3.8	3.8	3.9
Overall balance	-5.1	-4.2	-3.9	-3.8	-3.8	-3.9
Primary balance	-2.7	-1.8	-1.5	-1.4	-1.4	-1.5

Source: DOSM, MOF, AMRO staff projections

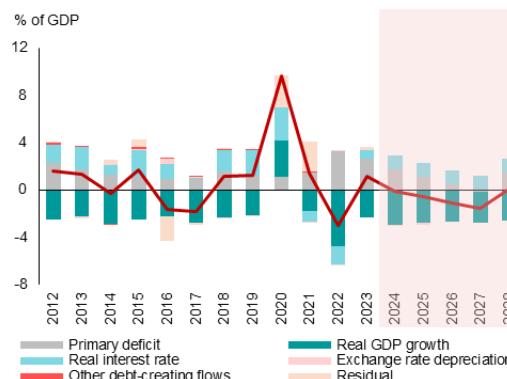
Under the baseline scenario, the government debt will continue to remain below the statutory debt ceiling.



Source: DOSM, MOF, AMRO staff projections

Note: MGII: Malaysian Government Investment Issues, MGS: Malaysian Government Securities, MITB: Malaysian Islamic Treasury Bonds

Government debt could be pushed up by the primary deficit and real interest rate, despite expectations of robust GDP growth.



Source: DOSM, MOF, AMRO staff projections

Appendix 2. Selected Economic Indicators for Malaysia

	2019	2020	2021	2022	Projections	
					2023	2024
Real sector and prices	(in percent change, unless specified)					
Real GDP	4.4	-5.5	3.3	8.7	4.2	5.2
Private consumption	7.7	-3.9	1.9	11.2	5.1	4.9
Government consumption	1.5	4.1	6.4	4.5	1.8	2.6
Gross fixed capital formation	-2.1	-14.4	-0.8	6.8	5.9	6.0
Exports of goods and services	-1.0	-8.6	18.5	14.5	-1.5	6.3
Imports of goods and services	-2.4	-7.9	21.2	15.9	-2.2	6.4
Labor market	(in percent, annual average)					
Unemployment rate	3.3	4.5	4.6	3.9	3.5	3.4
Prices	(in percent change, unless specified)					
Consumer price inflation (period average)	0.7	-1.2	2.5	3.3	3.1	2.6
Core inflation (period average)	1.1	1.1	0.7	3.0	3.3	2.5
GDP deflator	0.1	-0.8	5.7	6.4	2.9	2.2
External sector	(in billions of U.S. dollars, unless specified)					
Current account balance	12.8	14.1	14.5	12.5	14.9	18.5
(in percent of GDP)	3.5	4.2	3.9	3.1	3.4	3.9
Goods balance	30.1	32.7	42.9	42.3	39.8	41.8
Exports	197.3	185.7	242.8	281.3	272.9	294.7
Imports	167.2	153.0	199.9	239.1	233.1	252.9
Services balance	-2.6	-11.2	-15.8	-12.8	-8.7	-8.6
Receipts	41.1	22.1	21.3	31.9	38.2	40.9
Payments	43.7	33.3	37.1	44.7	46.9	49.5
Primary income, net	-9.5	-6.8	-10.2	-13.5	-12.0	-10.0
Secondary income, net	-5.2	-0.6	-2.3	-3.4	-4.2	-4.7
Financial account balance	-9.2	-18.4	3.9	2.8	-8.0	-7.6
Direct investment, net	1.6	0.7	7.5	3.6	7.6	4.7
Direct investment assets	-7.5	-3.3	-12.8	-11.1	-11.6	-14.6
Direct investment liabilities	9.1	4.0	20.3	14.7	19.2	19.2
Portfolio investment, net	-7.8	-11.8	4.5	-11.5	-8.6	-2.5
Portfolio investment assets	-11.3	-14.4	-8.6	-6.9	-10.8	-9.1
Portfolio investment liabilities	3.5	2.6	13.2	-4.6	2.2	6.5
Other investment, net	-2.8	-7.5	-7.6	11.2	-6.8	-5.0
Overall balance	2.0	-4.6	11.0	12.1	4.2	6.5
Official reserves asset (end-period)	103.6	107.6	116.9	114.6	115.9	118.5
(in months of goods & services imports)	5.8	6.6	6.1	5.0	5.0	4.7
Total external debt (in percent of GDP)	62.6	67.6	69.7	63.9	63.8	63.5
Short-term external debt (percent of total)	41.1	38.3	37.4	42.1	39.3	38.5
Short-term external debt (ratio to international reserves)	1.1	1.2	1.2	1.0	1.1	1.0
Fiscal sector (National Government)	(in percent of GDP)					
Government revenue	17.5	15.9	15.1	16.4	15.0	14.0
Government expenditure	21.0	22.1	21.5	22.0	20.1	18.1
Fiscal balance	-3.3	-6.2	-6.4	-5.5	-5.1	-4.2
Primary balance	-1.2	-3.7	-3.9	-3.2	-2.7	-1.8
Government debt	52.4	62.0	63.3	60.3	61.4	61.2
Monetary sector	(in percent change, end-period unless specified)					
Broad money	3.5	4.0	6.4	4.3	4.0	4.6
Private sector claims	4.4	3.5	3.8	3.8	3.8	4.6
Loans	4.2	3.2	4.5	4.2	3.7	4.5
Securities	5.7	6.0	-0.7	1.2	4.4	5.2
Memorandum items:						
Exchange rate (MYR per USD, average)	4.14	4.20	4.14	4.40	-	-
Exchange rate (MYR per USD, eop)	4.09	4.01	4.18	4.41	-	-
Nominal GDP (in billions of U.S. dollar)	365.2	337.5	373.8	407.0	438.5	472.2
GDP per capita (in U.S. dollar)	11,213.1	10,309.0	11,475.6	12,451.0	13,373.0	14,366.5
Brent crude oil price (U.S. dollar per barrel)	64.0	42.3	70.4	99.8	80.0	75.0

Source: National authorities, AMRO staff estimates and projections

Appendix 3. Balance of Payments

	2016	2017	2018	2019	2020	2021	2022
	(in billions of ringgit, unless specified)						
Current account balance (I)	29.9	38.3	32.3	52.9	59.1	60.2	55.1
Goods balance	102.0	117.1	114.6	124.7	137.5	177.6	186.0
Exports, f.o.b.	686.9	801.4	830.1	817.3	780.5	1,005.8	1,238.2
Imports, f.o.b.	584.8	684.3	715.5	692.5	643.0	828.2	1,052.2
Services balance	-18.9	-22.9	-17.5	-10.9	-47.2	-65.7	-56.4
Receipts	147.6	159.4	162.4	170.2	93.0	88.1	140.3
Payments	166.5	182.2	179.9	181.1	140.1	153.7	196.7
Primary income, net	-34.6	-38.7	-45.1	-39.5	-28.5	-42.2	-59.4
Secondary income, net	-18.6	-17.3	-19.7	-21.4	-2.7	-9.6	-15.1
Capital account (II)	0.1	0.0	-0.1	0.4	-0.4	-0.5	-0.5
Financial account (III) (+ indicates net inflows)	-0.2	-4.7	11.4	-38.0	-77.4	16.2	12.4
Direct investment, net	13.8	16.2	10.1	6.6	3.1	31.1	15.9
Overseas direct investment	-42.2	-24.2	-23.4	-31.2	-13.8	-53.2	-48.9
Foreign direct investment	56.0	40.4	33.5	37.7	16.9	84.3	64.9
Portfolio investment, net	-14.2	-15.4	-49.4	-32.4	-49.6	18.8	-50.6
Portfolio investment assets	-15.0	-19.4	-12.0	-46.9	-60.7	-35.8	-30.5
Portfolio investment liabilities	0.8	4.1	-37.4	14.5	11.1	54.6	-20.1
Financial derivatives, net	-0.8	-0.2	1.0	-0.5	0.4	-2.3	-2.2
Other investment, net	1.0	-5.3	49.7	-11.7	-31.3	-31.4	49.2
Net errors and omission (IV)	-23.9	-17.1	-35.9	-6.8	-0.6	-30.3	-13.6
Overall balance (= I + II + III + IV)	5.9	16.4	7.8	8.4	-19.3	45.7	53.4
Change in Reserve Assets	-5.9	-16.4	-7.8	-8.4	19.3	-45.7	-53.4
Memorandum items:							
Current account balance (in percent of GDP)	2.4	2.8	2.2	3.5	4.2	3.9	3.1
Official reserve assets (in billions of U.S. dollar)	94.5	102.4	101.4	103.6	107.6	116.9	114.6
In months of goods & services imports	6.3	5.7	5.6	5.8	6.6	6.1	5.0
Changes in official reserve assets (in billions of U.S. dollar)	-0.8	7.9	-1.0	2.2	4.0	9.3	-2.3
Exchange rate (MYR per USD, average)	4.15	4.30	4.04	4.14	4.20	4.14	4.40
Nominal GDP (in billions of U.S. dollar)	301.3	319.1	358.8	365.2	337.4	373.8	407.0

Source: BNM, DOSM, AMRO staff calculations

Appendix 4. Federal Government Budget

	2016	2017	2018	2019	2020	2021	2022
Federal government	(in billions of ringgit, unless specified)						
Revenue (I)	212.4	220.4	232.9	264.4	225.1	233.8	294.4
Tax revenue	169.3	177.7	174.1	180.6	154.4	173.7	208.8
Direct	109.6	116.0	130.0	134.7	112.5	130.1	153.5
Direct: Income	99.6	105.2	119.2	123.2	101.8	118.4	139.3
Companies	63.6	64.5	66.5	63.8	50.1	79.8	82.1
Petroleum	8.4	11.8	20.1	20.8	12.8	11.6	23.4
Individuals	27.6	28.9	32.6	38.7	39.0	27.1	33.8
Direct: Others	10.0	10.9	10.9	11.5	10.7	11.7	14.1
Stamp duty	5.7	5.7	5.9	6.2	5.5	6.3	8.0
Others	4.3	5.2	4.9	5.3	5.2	5.3	6.1
Indirect	59.7	61.6	44.0	45.8	41.9	43.6	55.3
Export duties	1.0	1.4	1.7	1.1	0.7	2.1	2.6
Import duties	2.9	2.8	2.9	2.7	2.3	2.6	3.2
Excise duties	11.7	10.1	10.8	10.5	9.9	10.2	12.6
Goods and services Tax (GST)	41.2	44.3	20.2	0.0	0.0	0.0	0.0
Sales tax	0.1	0.0	4.0	15.4	14.8	13.6	16.3
Service tax	0.1	0.0	1.5	12.3	12.0	12.0	15.1
Others	2.7	3.0	2.9	3.8	2.2	3.0	5.6
Non-tax revenue	40.0	39.5	51.1	79.8	62.0	51.1	79.6
Petroleum royalty	3.7	4.4	5.2	5.8	4.2	3.7	6.0
Investment interest and returns	21.4	21.6	31.9	60.1	46.1	35.0	58.2
PETRONAS dividend	16.0	13.0	26.0	54.0	34.0	25.0	50.0
Non-revenue receipts	3.1	3.2	7.7	4.0	8.6	8.9	6.0
Expenditure (II = III + V - VI + VII)	250.8	260.7	286.3	315.9	312.7	332.5	393.8
Current expenditure (III)	210.2	217.7	231.0	263.3	224.6	231.5	292.7
Emoluments	73.1	77.0	80.0	80.5	83.0	85.9	87.8
Retirement charges	21.0	22.8	25.2	25.9	27.5	29.1	31.4
Debt service charges (IV)	26.5	27.9	30.5	32.9	34.5	38.1	41.3
Domestic	25.7	27.2	29.9	32.2	33.8	37.3	40.6
External	0.7	0.7	0.7	0.7	0.7	0.8	0.7
Supplies and services	30.1	34.7	35.3	31.5	29.3	24.9	34.7
Subsidies	24.7	22.4	27.5	23.9	19.8	23.0	67.4
Asset acquisition	0.7	0.5	0.4	0.8	0.6	0.6	0.8
Others	34.1	32.4	32.0	67.8	29.8	29.9	29.4
Development expenditure (V)	42.0	44.9	56.1	54.2	51.4	64.3	71.6
Defence and security	4.8	5.3	4.9	5.6	5.8	7.5	8.2
Economic services	25.1	24.2	36.1	31.3	28.7	31.3	39.1
Social services	10.4	12.4	12.9	14.5	13.8	22.6	21.1
General administration	1.6	2.9	2.2	2.8	3.0	2.9	3.1
Loan recovery (VI)	1.3	1.9	0.8	1.6	1.3	1.0	1.4
COVID-19 Fund (VII)					38.0	37.7	31.0
Current balance (I - III)	2.2	2.7	1.9	1.1	0.5	2.2	1.7
In percent of GDP	0.2	0.2	0.1	0.1	0.0	0.1	0.1
Overall balance (I - II)	-38.4	-40.3	-53.4	-51.5	-87.6	-98.8	-99.5
In percent of GDP	-3.1	-2.9	-3.7	-3.4	-6.2	-6.4	-5.6
Primary balance (I - II + IV)	-11.9	-12.5	-22.8	-18.6	-53.1	-60.7	-58.2
In percent of GDP	-1.0	-0.9	-1.6	-1.2	-3.7	-3.9	-3.2
Memorandum item:							
Oil and gas-related revenue (in percent of total revenue)	14.6	15.7	23.4	31.7	24.9	18.4	28.0
Brent crude oil price (U.S. dollar per barrel)	44.0	54.4	71.1	64.0	42.3	70.4	99.8
Nominal GDP (in billions of ringgit)	1,249.7	1,372.3	1,447.8	1,512.7	1,418.5	1,548.9	1,791.4

Source: DOSM, MOF, AMRO staff calculations

Appendix 5. Climate Clipboard—Risks, Responses, and Opportunities⁶¹

A. Physical risks																																			
Exposure/ Sources of risk	Potential macro-financial impact																																		
<ul style="list-style-type: none"> Floods (acute, chronic) Droughts (acute) Tropical cyclones (acute) 	<ul style="list-style-type: none"> Estimated losses amounting to 0.3–0.4 percent of GDP due to flooding, via damages to public assets and infrastructure, residential property, vehicles, manufacturing & business premises, and agriculture Lower palm oil yields due to droughts, resulting to a weakening of the external position (palm oil exports account for over 20 percent of the goods trade surplus in 2018–2021) Increase in subsidies and social assistance in order to mitigate economic losses, thereby holding back fiscal consolidation and the rebuilding of fiscal buffers 																																		
B. Transition risks																																			
Sources of risk	Potential macro-financial impact																																		
<ul style="list-style-type: none"> Removal of blanket energy subsidies Establishment of domestic carbon pricing instruments Phasing out of coal-fired power plants to shift to cleaner energy sources Imposition of a carbon border tax by advanced economies 	<ul style="list-style-type: none"> Increased inflation from subsidy rationalization, with transport accounting for 14.6 percent of the consumer price index Reduction in fiscal revenue from lower fossil fuel-related exports (petroleum revenue accounts for over 20 percent of total fiscal revenue) Weakened external position owing to loss in competitiveness of fossil fuel exporters (oil and gas exports account for 23 percent of the goods trade surplus) Lower growth prospects owing to increased inflation and weaker exports Potential weakness in financial system soundness owing to increased credit risks from weaker growth and increased incidence of stranded assets 																																		
C. Adaptation response framework and strategies																																			
Adaptation framework	Key initiatives/strategies	Estimated financing need and sources																																	
<ul style="list-style-type: none"> National Adaptation Plan (NAP) (under development, may be completed within the next 1-2 years) NAP is meant to ensure that climate change adaptation is mainstreamed into Malaysia's development plan. 	<ul style="list-style-type: none"> Implementation of climate change adaptation in Malaysia focuses on the management of water resources and security, coastal resources, agriculture and food supply, urban and infrastructure resilience, public health, forestry, and biodiversity, and key adaptation cross-sectoral areas <p>Latest initiatives:</p> <ul style="list-style-type: none"> MYR15 billion Flood Mitigation Plan until 2030 Ecological Fiscal Transfer to state governments for biodiversity conservation to be increased to MYR150 million in 2023, from MYR70 million in 2022 MYR150 million allocation for National Disaster Management Agency in 2023 	<ul style="list-style-type: none"> USD2.155 billion between 2020 and 2059 under a very high GHG emission scenario (ESCAP) 																																	
		<table border="1"> <thead> <tr> <th>Domestic</th> <th>External</th> </tr> </thead> <tbody> <tr> <td> <ul style="list-style-type: none"> Annual budgets </td> <td> <ul style="list-style-type: none"> Global Environment Facility MOF is engaging with the UN Green Climate Fund for funding support </td> </tr> </tbody> </table>	Domestic	External	<ul style="list-style-type: none"> Annual budgets 	<ul style="list-style-type: none"> Global Environment Facility MOF is engaging with the UN Green Climate Fund for funding support 																													
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D. Mitigation response framework and strategies																																			
Nationally Determined Contribution (NDC)	National framework / Strategies	Estimated Financing and sources																																	
<ul style="list-style-type: none"> Unconditional reduction of economy-wide GHG emissions intensity (per unit of GDP) of 45 percent in 2030 relative to 2005 level (Jul 30, 2021) The above target consists of a 10 percent increase from the earlier submission in 2015, where unconditional GHG reduction was 35 percent and another 10 percent was conditional upon receipt of climate finance, technology transfer and capacity building from developed countries The above target also expands GHG coverage from 3 to 7—in addition to carbon dioxide (CO₂), methane (CH₄), and nitrous oxide (N₂O), the target covers hydrofluorocarbons (HFCs), perfluorocarbon (PFCs), sulphur hexafluoride (SF₆), and nitrogen trifluoride (NF₃) 	<ul style="list-style-type: none"> NDC Roadmap (to be released in 2023) <ul style="list-style-type: none"> ➢ Roadmap maps out the pathway to the NDC target in 2030 Long-term Low Emission Development Strategies (LT-LEDS) (to be released in 2023) <ul style="list-style-type: none"> ➢ LT-LEDS outlines strategies and actions for GHG mitigation, particularly for the main economic sectors, that will be the basis to reach net-zero as early as 2050 (Economic Outlook 2023, published in Oct 2022) <p>Sources of GHG emissions in Gg CO₂ eq</p> <table border="1"> <thead> <tr> <th>Sector</th> <th>2019</th> <th>% of total</th> </tr> </thead> <tbody> <tr> <td>Energy</td> <td>259,326.11</td> <td>78.5</td> </tr> <tr> <td>Main activity electricity and heat production</td> <td>109,768.85</td> <td>33.2</td> </tr> <tr> <td>Transport</td> <td>64,973.10</td> <td>20.0</td> </tr> <tr> <td>Manufacturing and construction</td> <td>33,578.18</td> <td>10.2</td> </tr> <tr> <td>Industrial Processes and Product Use (IPPU)</td> <td>32,853.80</td> <td>9.9</td> </tr> <tr> <td>Agriculture, Forestry and Other Land Use (AFOLU) – Agriculture</td> <td>9,921.71</td> <td>3.0</td> </tr> <tr> <td>Waste</td> <td>28,256.59</td> <td>8.6</td> </tr> <tr> <td>Total</td> <td>330,358.21</td> <td>100.0</td> </tr> <tr> <td>AFOLU – Land Use, Land Use Change and Forestry (LULUCF)</td> <td>-214,714.54</td> <td>-65.0</td> </tr> <tr> <td>Total (including LULUCF)</td> <td>115,643.68</td> <td>35.0</td> </tr> </tbody> </table> <p>Source: Malaysia Fourth Biennial Update Report (December 2022)</p>	Sector	2019	% of total	Energy	259,326.11	78.5	Main activity electricity and heat production	109,768.85	33.2	Transport	64,973.10	20.0	Manufacturing and construction	33,578.18	10.2	Industrial Processes and Product Use (IPPU)	32,853.80	9.9	Agriculture, Forestry and Other Land Use (AFOLU) – Agriculture	9,921.71	3.0	Waste	28,256.59	8.6	Total	330,358.21	100.0	AFOLU – Land Use, Land Use Change and Forestry (LULUCF)	-214,714.54	-65.0	Total (including LULUCF)	115,643.68	35.0	<ul style="list-style-type: none"> USD 3 billion (1 percent of GDP) of yearly investment to achieve net zero by 2050 (BCG, WWF) The Low Carbon Nation Aspiration 2040 indicates total investments of MYR9.2 billion per year, of which MYR4.3 billion will be borne by the government Expanding renewable energy capacity requires USD375–415 billion of investment through 2050 (IRENA)
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<p>Long-term commitment</p> <ul style="list-style-type: none"> Achieve net zero emissions by 2050, at the earliest 	<p>Key sectoral strategies and initiatives</p> <ul style="list-style-type: none"> National Energy Policy 2022–2040 (Sep 2022) <ul style="list-style-type: none"> ➢ Aims to move towards a cleaner energy mix by encouraging the development, commercialization, and adoption of green technologies ➢ Part of the national energy policy, the Low Carbon Nation Aspiration 2040 targets a higher level of urban public transport modal share and electric vehicle penetration (38 percent by 2040 from <1 percent in 2018), 																																		

⁶¹ Prepared by Diana del Rosario. The author thanks Aziz Durrani, Marthe Hinojales, and Li Lian Ong for suggested inputs.

	<p>increased share of alternative low carbon fuels in heavy vehicles and marine transport, and enhanced energy efficiency in industrial, commercial, residential sectors</p> <ul style="list-style-type: none"> ➢ The Aspiration also entails a higher level of renewable energy (RE) penetration from 7.6 gigawatts (GW) in installed RE capacity in 2018 to 18.4 GW by 2040, implying an increase in RE share from 25 percent in 2022 (8.7 GW) to 40 percent (18.0 GW) in 2035 	
E. Enabling regulations for climate resilience		
E.1. Legal framework	E.3. Carbon pricing frameworks	E.4. Sustainable finance frameworks
<ul style="list-style-type: none"> • Legal framework serves as the foundation for the Climate Change Act (currently in drafting stage and expected to be enforced in 2–3 years) • Twelfth Malaysia Plan, 2021-2025 (Sep 2021) indicates that formulation of a climate change legislation to increase coordination and enhance effectiveness of climate actions at all levels 	<ul style="list-style-type: none"> • Conducting a feasibility study on carbon pricing, such as carbon tax and the Emission Trading Scheme (Twelfth Malaysia Plan, 2021-2025) • Launched Bursa Carbon Exchange (BCX) in December 2022, to grow Malaysia's voluntary carbon market (VCM) ecosystem <ul style="list-style-type: none"> ➢ Inaugural auction on March 16, 2023 of nature-based and technology-based carbon credits from Cambodia and China, respectively, saw 14 successful bidders from local corporates ➢ Government announced MYR10 million seed funding to encourage domestic issuance of carbon credits in BCX on March 8, 2023 ➢ Key initiatives in 2023 include the deployment of a platform for spot trading and clearing of off-market transactions (2023 Q3), and development of a VCM Handbook to promote domestic development of carbon projects (Oct 5) 	<ul style="list-style-type: none"> • Sustainable and Responsible Investment Sukuk Framework (Aug 2014) <ul style="list-style-type: none"> ➢ Aims to facilitate creation of an ecosystem that promotes sustainable and responsible investing (SRI), while leveraging on Malaysia's developed sukuk market; SRI sukuk have a broader reach, accessible to both conventional and non-Islamic investors • Sustainable and Responsible Investment linked (SRI-linked) Sukuk Framework (Jun 2022) • ASEAN Green Bond Standards (Nov 2017); ASEAN Sustainability Bond Standards (Oct 2018); ASEAN Sustainability-linked Bond Standards (Oct 2022) <ul style="list-style-type: none"> ➢ USD9.1 billion of outstanding green, social (no issuance), sustainable, and sustainability-linked bonds of March 2023; local currency issuance accounted for 71 percent of total, equivalent to 1.5 percent of the local currency bond market (AsianBondsOnline) ➢ No transition bond framework, with its development contingent on the release of a global transition bond principle by the International Capital Market Association (ICMA)
E.2. GHG accounting framework		
<ul style="list-style-type: none"> • National GHG accounting framework (to be determined) <ul style="list-style-type: none"> ➢ Framework provides a consistent approach to assess GHG emissions across entities and sectors, and at the national level ➢ Development of country-specific GHG emission factors for key sectors is being considered, to provide a basis for the nationwide GHG accounting framework • Measurement of emissions at the country level follows the guidelines by the Intergovernmental Panel on Climate Change (IPCC), but accounting frameworks vary at the entity level 		
E.5. Financial system		
Initiatives	Guidelines	Status
1. Taxonomy	<ul style="list-style-type: none"> • Financial institutions (FIs): Climate Change and Principle-based Taxonomy (CCPT) (Apr 2021) • Capital market: Principles-Based Sustainable and Responsible Investment Taxonomy for the Malaysian Capital Market (Dec 2022) 	<ul style="list-style-type: none"> • Submission of half-yearly reports by FIs to BNM since July 2022 <p>Summary of latest report:</p> <ul style="list-style-type: none"> ➢ FIs were able to classify 94.5 percent of total new loans approved in 2022 H2, and 70.5 percent of outstanding loans as at end-2022. ➢ In 2022 H2, 56 percent of new loans were classified in the climate-transitioning categories, less than 10 percent as climate supporting, and the balance were classified in the watchlist categories. ➢ The taxonomy for the capital market is aligned with the CCPT but is voluntary. Instead, disclosure of climate-related financial information would be mandatory.
2. Risk management assessments	<ul style="list-style-type: none"> • Climate Risk Management and Scenario Analysis (Nov 2022) • 2024 Climate Risk Stress Testing Exercise: Discussion Paper (Jun 2022) 	<ul style="list-style-type: none"> • Industry-wide climate risk stress testing (CRST) exercise to be made mandatory in 2024
3. Climate-related financial disclosures	<ul style="list-style-type: none"> • Task Force on Climate-related Financial Disclosures (TCFD) Application Guide for Malaysian Financial Institutions (Jun 2022) 	<ul style="list-style-type: none"> • Mandatory disclosure based on TCFD recommendations to commence in 2024
4. Data availability	<ul style="list-style-type: none"> • Published the Climate Data Catalogue (Dec 2022) as a starting point of reference to address climate and environmental data needs of the financial sector 	<ul style="list-style-type: none"> • BNM is working with relevant parties to improve access by FIs to the data that have been identified in the Data Catalogue
5. Capacity building	<ul style="list-style-type: none"> • Various initiatives being led by the Joint Committee on Climate Change (JC3) 	<ul style="list-style-type: none"> • Ongoing pilot projects, such as greening SME value chains • Established SME Focus Group to increase awareness and help SMEs better manage the low-carbon transition
F. Potential opportunities from the low-carbon transition		
<ul style="list-style-type: none"> • Carbon capture and storage 	<ul style="list-style-type: none"> • Manufacturing of electric vehicles (EVs) and parts 	<ul style="list-style-type: none"> • Investments in the renewable energy industry value chain

Source: National authorities, media reports, AMRO staff

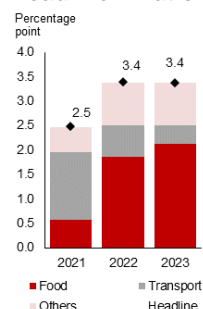
Annexes: Selected Issues

1. The Role of Food Prices in Malaysia's Headline Inflation⁶²

While headline inflation has begun to ease, food inflation is proving to be relatively sticky. This selected issue assesses the transmission of rising global food prices to domestic food and headline inflation and assess the transmission to Malaysia's headline inflation arising from global and domestic food price dynamics. It concludes with some policy considerations to manage cost-push factors driving Malaysia's food inflation.

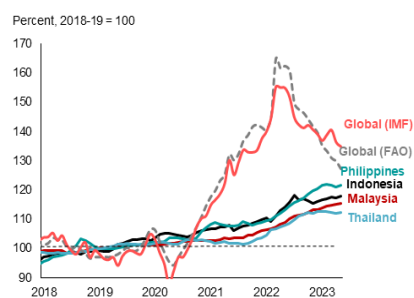
1. Food prices have become a major driver of headline inflation and are proving to be relatively sticky. Malaysia's food prices have driven the increase in headline inflation since 2022 (Figure A1.1). Following the spike in food prices in H2 2022, the contribution of food to headline inflation has increased dramatically from 24 percent in 2021 to 55 percent in 2022 and 62 percent in January-April 2023. After peaking in Q2 2022, global food prices fell by nearly 10 percent year-on-year between November 2022 and April 2023 (Figure A1.2). However, the decline has yet to manifest in Malaysia's food inflation, which has stayed at over 6 percent in 2023 to date (Figure A1.3). Both food-away-from-home and food-at-home prices have been stubbornly high, buoyed by elevated prices of grains, meat, dairy products, eggs, fruits, and other food products as well as strong consumer demand (see Figure 8 in the main text).

Figure A1.1. Composition of Headline Inflation



Source: DOSM, AMRO staff calculations

Figure A1.2. World and ASEAN-4: Food Prices, Seasonally-adjusted



Source: Food and Agricultural Organization (FAO), IMF, national authorities via Haver Analytics, AMRO staff calculations

Figure A1.3. Prices of Food and Major Food Types



Source: DOSM, AMRO staff calculations

2. Empirical analysis reveals the delayed but persistent transmission of global food price shocks to Malaysia's headline inflation. A vector autoregression (VAR) model is estimated to quantify the impact of global crude oil and food price shocks to Malaysia's headline inflation (separately, to food inflation), while controlling for the effects of aggregate demand—proxied by the output gap—and trade-weighted exchange rate changes. Shocks are identified via Cholesky decomposition following the order of variables as enumerated above. The VAR is estimated using data from January 2000 to March 2023 with a lag order of two. Results reveal the following:

- Global food price shocks are transmitted to Malaysia's headline inflation with a five-month delay and persist for 12 months (Figure A1.4). These findings suggest that the spike in global food prices in Q2 2022 is still being transmitted to domestic inflation, and the impact of the shock will only start dissipating in Q3 2023.

⁶² Prepared by Diana del Rosario.

- The impact of global food price shock on food inflation is more benign than on headline inflation. Global food price shocks are transmitted more slowly to domestic food inflation, 11 months after the shock. They are also less persistent, lasting for only three months, up to the 14th month from the shock. The difference between the impact on food and on headline inflation suggests that global food price shocks can cause a broadening of price pressures in Malaysia, over and above its direct impact on consumer food prices.
- In terms of magnitude, the VAR model indicates that a 10 percent increase in global food prices will lead to an average of 0.6 ppt increase in Malaysia’s headline inflation (Figure A1.5). This finding implies that the 25 percent increase in the FAO food price index in Q2 2022 would have increased Malaysia’s headline inflation by 1.5ppts on average for one year from Q3 2022.
- By comparison, a 10 percent crude oil price shock has a smaller impact on headline inflation (0.2 ppt)—justified by the smaller weight of transport (14.6 percent) relative to food (28.4 percent) in Malaysia’s consumer price index. The shock is also transmitted faster and less persistently, lasting for five months, compared to food price shocks that can persist for one year. Crude oil price shocks are transmitted directly in local transport and utility costs, while global food price shocks can take time to filter through to consumer prices as they pass through multiple stages of the food supply chain. Price controls and subsidies on energy and key food items keep the impact of global commodity price shocks on Malaysia’s inflation lower than most ASEAN+3 peers (Figure A1.5).

Figure A1.4. Headline Inflation: Response Profile to a 10 Percent Shock

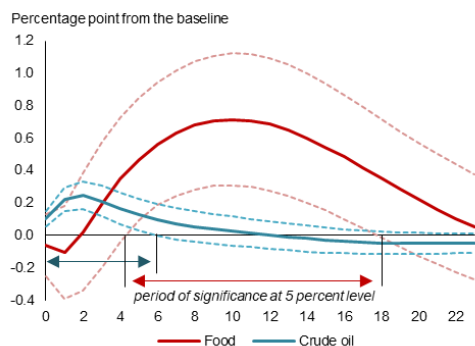
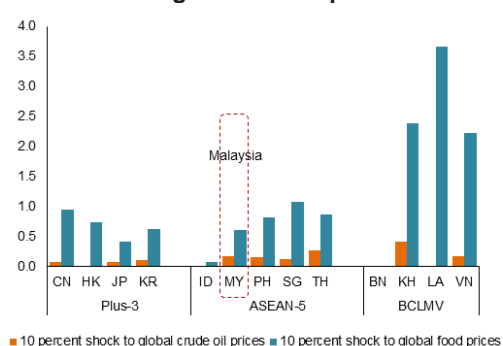


Figure A1.5. ASEAN+3 Headline Inflation: Average Shock Response



Source: BIS, FAO, national authorities via Haver statistics, AMRO staff calculations

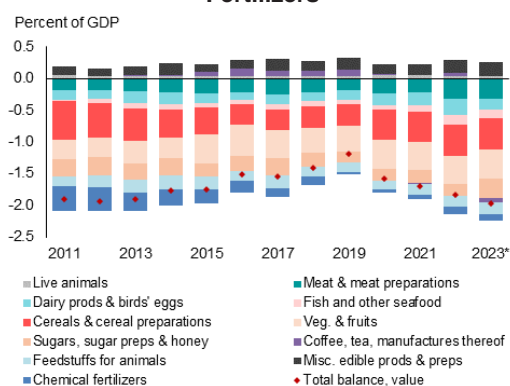
Note: CN=China; HK = Hong Kong, China; JP = Japan; KR = Korea; ID = Indonesia; MY = Malaysia; PH = Philippines; SG = Singapore; TH = Thailand. Malaysia’s average impact estimates in Figure A1.5 correspond to the period of significance presented in Figure A1.4. See [del Rosario and Wynn \(2023\)](#) for information about the modelling specifications.

3. While near-term inflationary pressures are set to ease on the back of recent declines in global food prices, odds of Malaysia’s inflation surprising to the upside are still high. For one, the [World Bank](#) food price index is expected to decline by 6 percent between April 2023 and end-2024, but will remain 45 percent above its 2018-19 levels; and this year, the real price index will be at its second highest level since 1975, exceeded only by 2022. Global developments in food commodity prices have implications on a net food importer nation like Malaysia. (Figure A1.6). Near-term risks to the price outlook are tilted to the upside due to the following factors:

- **An unravelling of the Black Sea Grains Initiative.** The Initiative has successfully relieved the disruption in global food supply following the Ukraine war, by facilitating

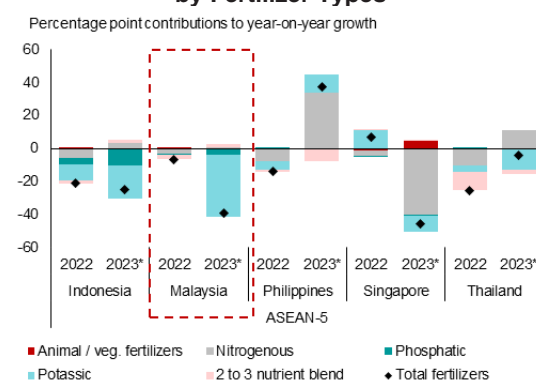
Ukraine’s exports of grains and fertilizers out of key Black Sea ports since July 2022. However, the fate of the deal remains uncertain so long as the Ukraine war continues.

Figure A1.6. Trade Balance for Food and Fertilizers



Source: BNM, DOSM, AMRO staff calculations
Note: 2023* refers to data for Q1 2023 only.

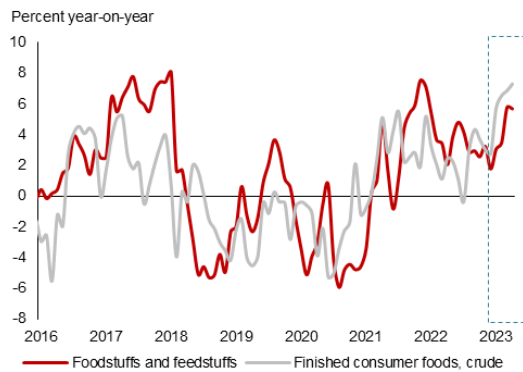
Figure A1.7. ASEAN-5: Fertilizer Import Volume by Fertilizer Types



Source: S&P Global Market Intelligence Global Trade Atlas, AMRO staff estimates
Note: 2023* refers to data from January to May 2023 for Singapore and Thailand; to April for Indonesia and Malaysia; and to March for the Philippines (March).

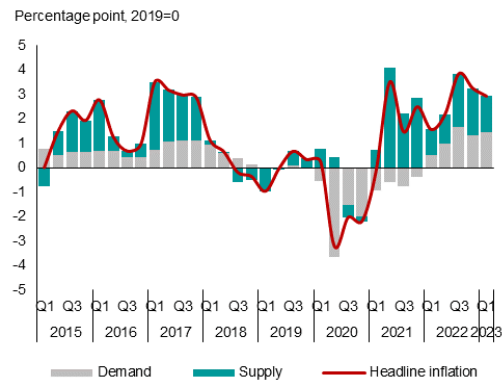
- Occurrence of El Nino conditions in the latter half of 2023 through early 2024.** [Climate scientists](#) have announced that potentially strong El Niño conditions have emerged since June 2023. El Niño could lead to record high temperatures globally, and increased risk of drought in Southeast Asia, India, Australia, and parts of the Amazon and southern Africa, which can wreak havoc on crop yields.
- Reduction in fertilizer usage, including in Malaysia.** The [International Fertilizer Association](#) estimates that global fertilizer consumption decreased by nearly 3 percent in 2021 and 5 percent in 2022 due to poor fertilizer affordability, as fertilizer prices rose faster than crop prices. Reduced fertilizer usage can affect the supply of corn, wheat, rice, and other grains and push up grain prices. Malaysia also relies on the global market for two-thirds of its fertilizer usage, and its imported volume of fertilizers fell by 6.5 percent in 2022 (Figure A1.7). Fertilizer imports fell by another 39 percent year-on-year in the first four months of 2023 on the back of the sharp decline in potassium-based fertilizers following supply constraints from major producers, Russia and Belarus. While the decline in fertilizer usage can fall due to reasons such as a reduction in the cultivated area due to flooding incidences, it nonetheless warrants monitoring for possible declines in domestic crop yields and attendant impact on food inflation. Already, the producer price for foodstuff and feedstuff as well as for crude finished consumer goods (e.g., eggs and fresh vegetables) gathered pace in the first four months of 2023 (Figure A1.8).
- Demand-driven price pressures.** Supply-side factors aside, inflationary pressures could continue to hold up on robust private consumption. Thus far, both service and food-away-from-home inflation rates, which are indicative of demand-driven price pressures, have slowed down, though still running at historically elevated rates (Figure A1.3). VAR modeling using sign restrictions also indicates that both demand and supply shocks are contributing Malaysia’s recent inflation prints (Figure A1.9).

Figure A1.8. Producer Price Inflation for Food-related Items



Source: DOSM, AMRO staff calculations

Figure A1.9. Historical Decomposition of Headline Inflation by Demand and Supply Shocks



Source: National authorities via Haver Analytics, AMRO staff estimates

Note: Results from a sign-restricted vector autoregression model with two variables: output gap (detrended real GDP using the Hodrick-Prescott filter) and inflation rate. The shocks are identified following the assumption that demand shocks push up output and inflation, whereas supply shocks lower output but push up inflation. Data are in quarterly frequency. See del Rosario and Wynn (2023) for information about the modelling specifications.

4. Administrative measures, in tandem with monetary policy, are crucial to manage inflationary pressures. While monetary policy can primarily address demand-driven price pressures, cost-push factors driving inflation should be dealt with from the supply side. In this regard, authorities are advised to consider the following in managing supply-side price pressures in the near term:

- **Engage closely with farmer groups.** The government should continuously engage with stakeholders in the agriculture sector in order to identify appropriate support measures for farmers and provide timely solutions to potential constraints in domestic food production. For instance, it is important that the agriculture and fisheries sectors, especially small-scale farmers, are afforded necessary assistance in securing imported feeds, fertilizers, and other key inputs at reasonable rates.
- **Speed up disbursement of financial assistance.** Existing subsidies and incentives provided to small-scale farmers should be disbursed in a timely manner. Likewise, the persistence of elevated food prices warrants continued financial assistance to low-income households so that the higher living costs do not inhibit their participation in the economic recovery.
- **Ease labor shortages in the food-producing segments of the agriculture sector.** To prevent additional bottlenecks to domestic food production and inflation, instances of worker shortages in the food crop, livestock, and fisheries sectors should be immediately addressed, such as by facilitating the return of foreign workers. Vacancy rates in the agriculture sector have increased from below 6 percent in 2018-2019 to 6.5-6.6 percent in 2022 through 2023 Q1.
- **Gradual phase out of subsidies and price controls.** Against the risk backdrop, plans to rationalize fuel subsidies and lift price controls for chicken and eggs should be timed carefully to prevent such adjustments from adding to overall inflation. The easing of headline inflation can provide the opportunity to start unwinding price controls; but savings from the subsidy bill should be channeled to ease the cost burden on low-income households and other vulnerable groups.

Over the medium term, efforts should be taken to strengthen Malaysia's food security by boosting domestic production, building up food reserves, and diversifying the sources of imported food products.

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2. Assessment of Liquidity Conditions Amid Monetary Policy Normalization⁶³

As BNM began normalizing monetary policy in Q2 2022, signs of liquidity tightening emerged in certain segments of the money market and the banking system, particularly towards the end of 2022, drawing the attention of market participants. While recent data indicate a return to pre-crisis conditions, it is worthwhile to draw lessons from the episode. This selected issue aims to assess liquidity conditions in the money market and the banking system along with their driving forces, before providing a discussion on policy implications. The liquidity tightening episode during end-2022 will be of particular focus.

Liquidity Conditions in the Money Market and the Banking System

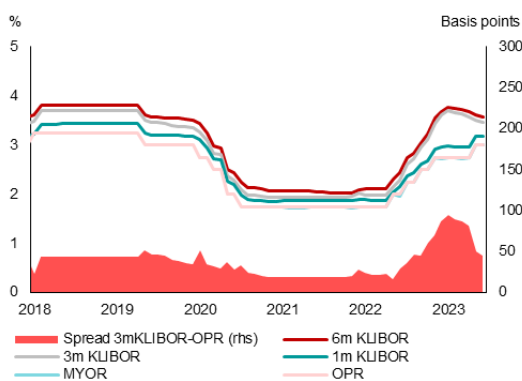
1. **Following a steady increase in the Overnight Policy Rate (OPR) in H2 2022, the spread between term KLIBOR and OPR widened substantially, signaling a tightening in interbank lending conditions at longer tenors.** BNM began normalizing monetary policy in May 2022 as the pace of economic recovery stabilized and the need for monetary accommodation declined. The Monetary Policy Committee (MPC) raised the OPR at four consecutive meetings between May and December 2022, bringing it to 2.75 percent from 1.75 percent. In the same period, the Malaysia Overnight Rate (MYOR) moved closely with the OPR. However, interest rates at longer tenors, specifically the Kuala Lumpur Interbank Offered Rate (KLIBOR) at tenors three months and above, rose by more than 150 bps (Figure A2.1). As a result, the spread between the 3m-KLIBOR and the OPR widened to 100 basis points (bps) at the end of 2022, compared to an average of 20 bps in H1 2022 prior to the OPR normalization and 45 bps between 2015-2019. The spread has narrowed to 45 bps recently as of June 2023. While a larger spread could partly be attributed to market expectations of further OPR hikes, it also reflects some tightness in liquidity conditions, especially at longer tenors.

2. **Tighter liquidity conditions towards the end of 2022 were also reflected in a reduction in net liquidity absorption by BNM.** Figure A2.2 shows the outstanding amount of BNM's operations both on liquidity absorption (positive) and injection (negative). These open market operations are used to manage short-term liquidity in the banking system so that the short-term market interest rates move in line with the policy rate⁶⁴. The net balance of these operations reflects the aggregate liquidity position of the banking system. That is, when the banking system, on aggregate, has more short-term liquidity than needed, which could push down market rates, BNM will absorb such excess liquidity by its net borrowing from the banking system. In contrast, when the system has a liquidity shortage, BNM will be a net lender of liquidity to prevent market rates from rising. Prior to 2022, BNM's net position was consistently on the absorption side, indicating sizable excess liquidity in the system. However, in 2022, the amount of net absorption declined substantially from MYR111 billion to MYR10 billion—reflecting a reduction in excess liquidity, which may contribute to higher funding costs.

⁶³ Prepared by Pim-orn Wacharaprapapong.

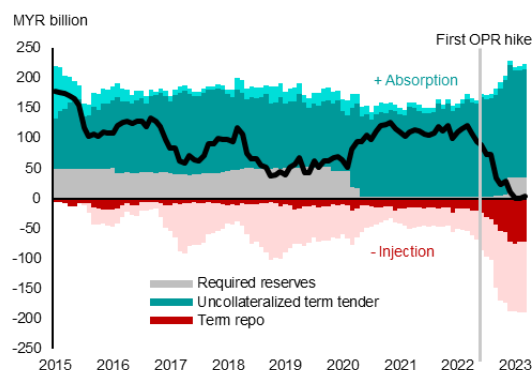
⁶⁴ The term "liquidity" in this Selected Issue refers to the cash balance that banks have in their accounts at BNM, which is used for interbank settlements and settlements with BNM. The aggregate liquidity in the banking system depends on many factors, such as the growth of cash in circulation, changes in Statutory Reserve Requirements, changes in the government balance at BNM, and purchases or sales of assets by BNM, including those involving foreign currency reserves. If there is more liquidity in the system than needed, banks with surplus liquidity will try to lend those funds, pushing the interbank lending rates down. To prevent that, BNM will conduct open market operations to borrow and reduce excess liquidity, to ensure that market interest rates are aligned with the policy rate.

Figure A2.1. Short-term Interest Rates and KLIBOR-OPR Spread



Source: BNM

Figure A2.2. Outstanding Liquidity Operations of BNM



Source: BNM, AMRO staff estimates

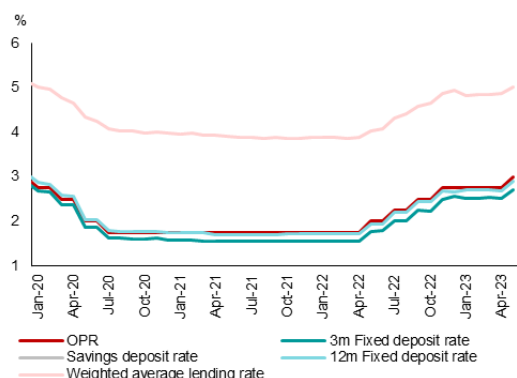
Table 1 BNM's Open Market Operations Tools

Instrument type	Tools	Tenor	Counterparties	Frequency
Absorption	Uncollateralized term tender	Overnight – 6M	Banks	Daily / weekly
	Interbank bills (local currency)	1M – 1Y		As needed
	Outright bond sales	-		As needed
Injection	Term repo	Up to 1Y	Banks	Regular auctions
	Buy/Sell FX swaps	Varies		As needed
	Outright bond purchase	-		As needed
Standing Facilities	Standing reverse repo facility	Overnight	Banks	Daily
	Standing deposit facility			

Source: BNM

3. **Signs of stronger competition for funding were observed in the prompt increase in fixed deposit rates.** Between May and December 2022, 3-month and 12-month fixed deposit rates rose by 99 and 94 bps, respectively, close to the 100-bps increase in OPR. Discussions with market participants suggested that the competition for term deposits intensified in H2 2022 and contributed to the increase in interest rates (Figure A2.3). Due to such competition, a few smaller banks saw a decline in their net interest margins in 2022.

Figure A2.3. Deposit and Lending Rates



Source: BNM

Figure A2.4. Loan and Deposit Growth



Source: BNM, AMRO staff calculations

Drivers of Liquidity Tightness in H2 2022

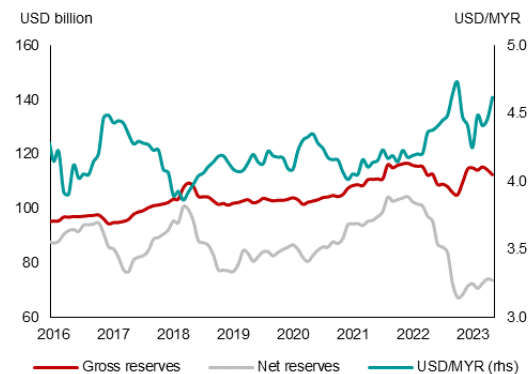
4. **First, a strong economic recovery in 2022 led to an increase in the demand for loans, and hence, a greater funding need for banks.** After the relaxations of pandemic-related restrictions in mid-2022, loan growth began to outpace the growth of deposits in H2 2022 (Figure A2.4), driven mainly by loans to households. As a result, the loans-to-funds ratio gradually edged up from under 81 percent in Q4 2021 to 82.4 percent as of end-2022 and has remained near 82 percent (Figure A2.5). The demand for funding to support robust loan growth has led to strong competition for deposits, evident from the rapid increase in fixed deposit rates as noted earlier.

Figure A2.5. Loans to Fund Ratio



Source: BNM

Figure A2.6. BNM's International Reserves and USD/MYR Exchange Rate



Source: BNM

5. **Second, OPR normalization in 2022 took place against the backdrop of declining excess liquidity in the interbank market.** As shown in Figure A2.2, aggregate excess liquidity in the banking system declined in 2022. This was mainly due to BNM's net sales of foreign reserves which led to a decline in bank liquidity. BNM's net foreign reserves, which excludes FCY deposits and net forward position, fell by USD33 billion in 2022. AMRO staff estimates that the decline could be driven by around USD30 billion in sales of foreign exchange by BNM, and roughly USD3 billion in valuation loss.⁶⁵ Based on this, around MYR130 billion of liquidity was drained from the interbank market through forex sales by BNM, as part of its efforts to smooth ringgit volatility (Figure A2.6). Additional liquidity drain resulted from the growth in cash-in-circulation, which increased by MYR12 billion in tandem with the expansion in economic activities (Figure A2.7).

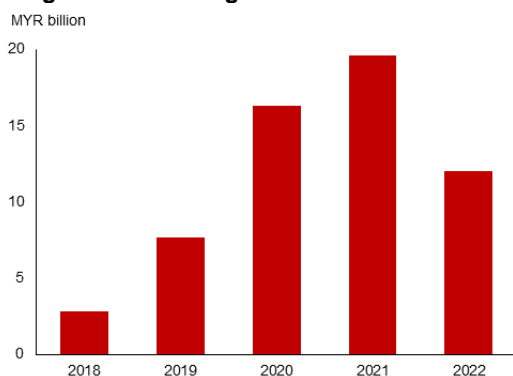
6. **The rising interest rate in H2 2022 also triggered a shift in banks' deposit structure, which pushed banks to strengthen their liquidity positions.** As the MPC signaled its stance to normalize OPR, institutional depositors who tend to be interest-sensitive, began shifting their term deposit placements toward shorter tenors, such as one-two months, in anticipation of higher rates in the future (Figure A2.8). The shortening of term deposit duration, which was especially pronounced among banks that rely more on wholesale deposit—such as Islamic banks (Figure A2.9)—caused a decline in the Liquidity Coverage Ratio (LCR)⁶⁶. The average LCR of commercial banks fell from 157 as of end-2021 to 145 in Q3 2022. Likewise, the LCR for Islamic banks fell from 144 to 127 in the same period (Figure A2.10). For some banks, the LCR dropped to nearly 120 percent.

⁶⁵ AMRO staff estimated the size of foreign exchange valuation changes in Malaysia's net reserves using IMF's Composition of Officials Foreign Exchange Reserves (COFER) data, which provides the share of world's central banks' foreign reserves in different currencies. No data is available for BNM's official reserves specifically; this estimate provides only an approximation.

⁶⁶ The LCR is calculated by dividing the high-quality liquid assets (HQLA) by the total net cash outflows over a 30-day stress period. The shortening of funding duration could lead to an increase in the net cash outflows, and hence, lower LCR.

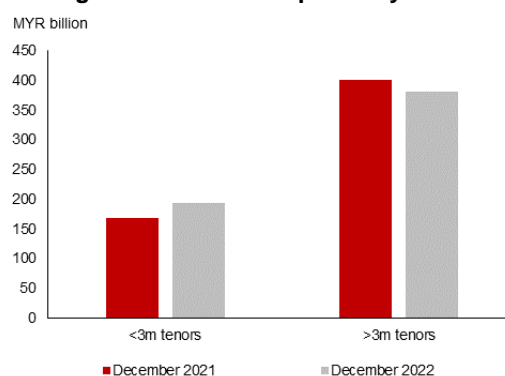
Although the ratios have remained well above the regulatory threshold of 100, banks have acted pre-emptively to restore LCR by borrowing term liquidity to maintain high LCR following their prudential safeguard. The increased demand for term funding added to the tightness in money market liquidity conditions in H2 2022. However, more recently in 2023, the ratios have improved steadily among both commercial and Islamic banks, suggesting that liquidity positions have begun to stabilize as the interest rate has approached its cycle peak.

Figure A2.7. Change in Cash in Circulation



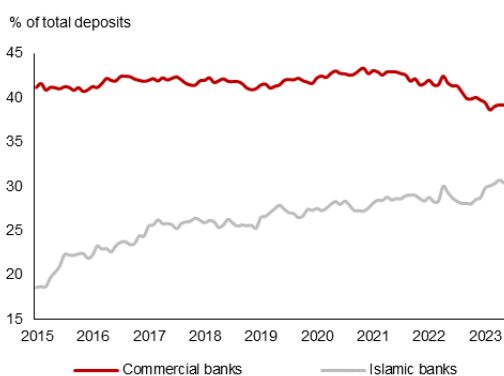
Source: BNM

Figure A2.8. Fixed Deposits by Tenor



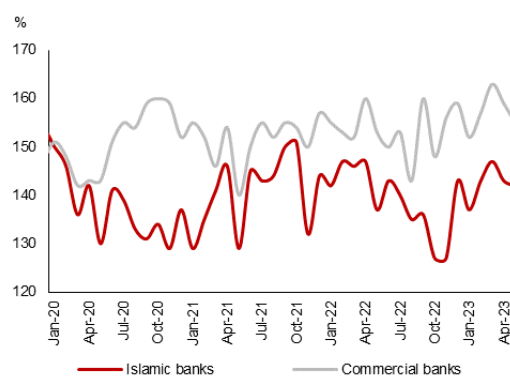
Source: BNM

Figure A2.9. Share of Individual Deposits



Source: BNM, AMRO staff calculations

Figure A2.10. Liquidity Coverage Ratio



Source: BNM

7. Amid tightening liquidity conditions and the growing demand for term liquidity, banks have faced difficulties in meeting their liquidity needs in the interbank money market due to market frictions. Participants in the interbank money market shared that generally repo market lending activities are largely muted. One reason for this is the absence of standard market practice for repo transactions, such as haircut rates and margining practices, which makes it costly and cumbersome for banks to deal with multiple counterparts. In addition, some banks do not have a Global Master Repurchase Agreement contract, which is needed for repo transactions. At the same time, banks are also hesitant to borrow on a clean basis because of the high capital charges they will incur. Given these frictions, banks with liquidity shortage in H2 2022 faced difficulties meeting their demand through the interbank money market, leading to higher interbank market rates.

8. Finally, the expiration of Statutory Reserve Requirement (SRR) flexibility at the end of 2022 added to banks' demand for liquidity. The SRR flexibility rule, which allowed financial institutions to use Malaysian Government Securities (MGS) and Malaysia Government Investment Issues (MGII) to meet SRR requirements starting May 2020,

expired in December 2022. Upon its expiration, the banking system, on aggregate, needed an additional MYR34 billion in cash to deposit with BNM in place of MGS and GII. This additional demand added to the already-tight financing conditions at around year-end and in January 2023.

Policy Responses and Discussions

9. **In response to liquidity tightness in the market, BNM ramped up liquidity injection in H2 2022.** BNM supplied MYR102 billion to the market between May 2022 and March 2023, slightly more than half of which was via buy/sell USD swaps. The remaining injection was through repo operations, which grew significantly from May 2022 (Figure A1.2 above). This liquidity injection by BNM was necessary to offset the drain on liquidity from forex intervention operations to ensure sufficient liquidity in the banking system.

10. **BNM should continue to inject liquidity into the market when needed to ensure effective OPR transmission and to avoid over-tightening.** Amid the recent reduction in banking system liquidity, BNM should continue to monitor changes in liquidity conditions and be prepared to provide liquidity when needed. This will help with the orderly functioning of the money market and support a smooth monetary policy transmission. Indeed, active liquidity management carried out by BNM gradually eased liquidity conditions and narrowed the spread between 3M-KLIBOR and OPR in Q1 2023 (Figure A2.1). Going forward, if of the need for liquidity injection becomes persistent, in addition to the repo and FX swap windows that address short-term liquidity needs, BNM could consider using long-term liquidity injection tools such as outright government bond purchase in the secondary market.

11. **BNM should step up efforts in the medium term to promote repo market development to ensure more efficient liquidity allocation through market mechanisms.** A liquid and accessible repo market will improve market resilience in time of liquidity stress and reduce short-term rate volatility. Furthermore, the reduced presence of BNM as market-maker will reinforce better liquidity risk management among banks. To this end, the Financial Markets Committee, led by BNM, should continue to engage with market participants to understand and address remaining challenges in the repo market. BNM can take the lead in setting standard repo practices to facilitate such transactions among market participants. Finally, the Open Market Operations (OMO) framework can be adjusted to incentivize banks to transact more in the market. For example, BNM can consider limiting access to OMO windows to a subset of counterparties or primary dealers. The primary dealers will become market makers and be responsible for providing liquidity to other banks.

12. **Although liquidity conditions in Malaysia are now improving with the OPR nearing its peak, this episode provides a useful lesson for regulators and market participants in Malaysia and elsewhere.** After a decade of ultra-low interest rates and persistent liquidity surplus in both advanced and emerging markets, liquidity tightening in the Malaysian money market is a reminder for banks to be vigilant about liquidity management. This is particularly important when interest rates start to rise. For central banks, the episode stresses the importance of close monitoring of market behaviors, a well-functioning interbank market, and a flexible but effective OMO framework.⁶⁷

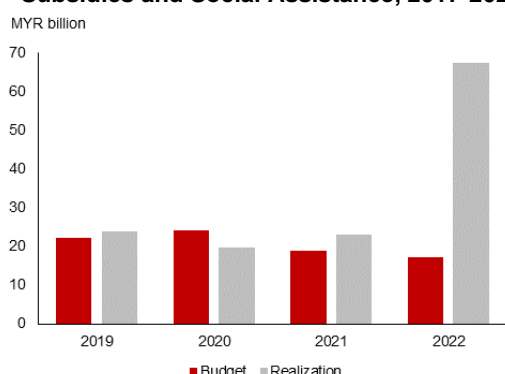
⁶⁷ See BNM's box article on the Bank's toolkit to support banking system liquidity and financial market liquidity. (https://www.bnm.gov.my/documents/20124/10644344/qb23q1_en_box1.pdf)

3. Malaysia’s Energy Subsidies Reform and Potential Impact on Inflation and Fiscal Costs⁶⁸

Blanket fuel subsidies and price controls played an important role in containing inflationary pressures in Malaysia in 2022. At the same time, social assistance programs were also utilized to protect low-income families from a decline in purchasing power. However, the subsidies and social assistance came at the expense of large fiscal costs. Several attempts have been made to reform energy subsidies in order to reduce fiscal burden and economic distortion. This selected issue explains how energy subsidies are implemented in Malaysia, what attempts have been made to reform energy subsidies, and the potential impact of fuel subsidy reforms on inflation as well as the implications on the budget.

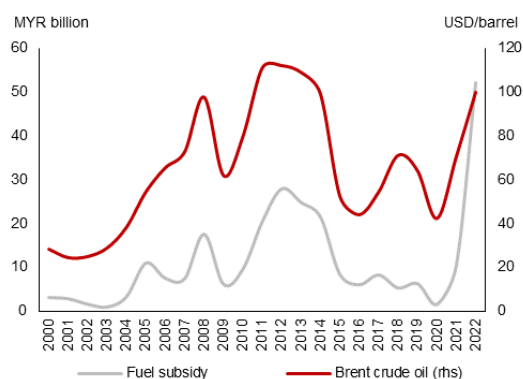
1. **In 2022, fiscal spending on subsidies and social assistance hit a historical high level following a sharp rise in oil prices.** The realized subsidies and social assistance spending of MYR67.36 billion in 2022 was three times higher than its initial allocation in the 2022 budget of MYR17.35 billion and the outlays in 2019-2022 (Figure A3.1). The size of fuel subsidies for petrol, diesel, and liquified petroleum gas (LPG)—the bulk of the government’s subsidy cost—surged to MYR52 billion in 2022, in line with the sharp increase in crude oil prices (Figure A3.2). Malaysia’s fuel subsidies per person were the second highest in ASEAN+3 economies (Figure A3.3).⁶⁹

Figure A3.1. Budget Allocation and Realization of Subsidies and Social Assistance, 2017-2022



Source: MOF
Note: For 2022, the realization figure is preliminary.

Figure A3.2. Fuel Subsidy and Crude Oil Price



Source: MOF, World Bank, AMRO staff estimates

Energy Pricing and Subsidy Schemes

2. **The Malaysian government currently subsidizes unleaded RON95 petrol and Euro 2M diesel.** A blanket fuel subsidy scheme is being implemented where every vehicle with a Malaysian-registered plate, regardless of the financial background of the owner, can buy subsidized fuels.⁷⁰ The government has set a maximum price of MYR2.05 per liter for RON95 and MYR2.15 for diesel since February 2021. Meanwhile, the prices of unsubsidized fuels, such as RON97 petrol, fully reflect international market prices (Figure A3.4).

3. **Fuel subsidies are given in the form of sales taxes exemption and subsidy payments to oil producers.** In addition to exempting the sales tax, the subsidy is paid

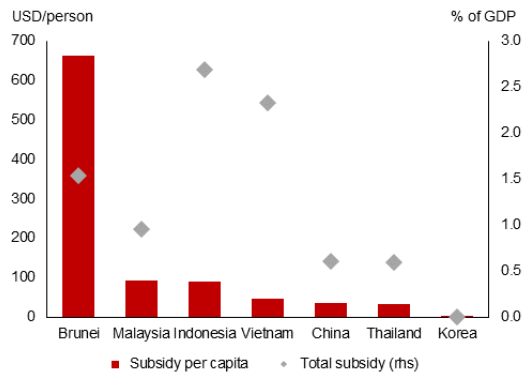
⁶⁸ Prepared by Andriansyah and Wee Chian Koh.

⁶⁹ In terms of the percentage of GDP, however, Malaysia’s fuel subsidies constituted 0.9 percent, lower than the fuel subsidy spending in Brunei Darussalam, Indonesia, and Vietnam.

⁷⁰ Foreign-registered vehicles have not been allowed to buy subsidized fuels in Malaysia since August 1, 2010.

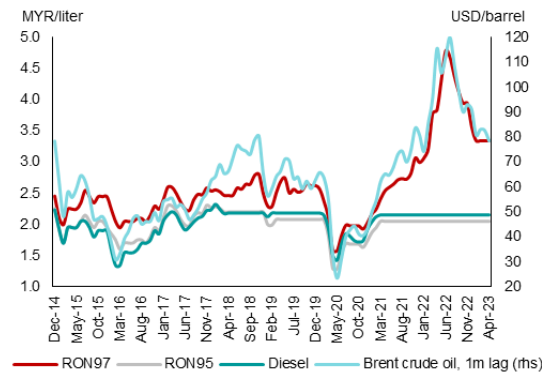
when the market fuel prices are higher than the subsidized retail prices. With the market prices for RON95 and diesel are estimated at MYR3.22 and MYR3.45 per liter, respectively,⁷¹ the subsidy cost per liter is about MYR1.17 for RON95 and MYR1.30 for diesel.⁷² The market prices for fuels in Malaysia are determined by an automatic pricing mechanism (APM) introduced in 1983 and announced weekly. However, because the market prices are now higher than the subsidized prices, the APM is a fuel subsidy formula rather than a market pricing one.

Figure A3.3. Fossil Fuel Subsidies in Selected ASEAN+3 Economies, 2021



Source: IEA Fossil Fuel Subsidies Database
Note: The IEA uses the price-gap approach to estimate energy subsidies by comparing average consumer prices with reference prices reflecting the total supply cost. The estimates may differ from official numbers used by authorities.

Figure A3.4. Fuel and Brent Crude Oil Prices, 2015-2023



Source: DOSM, World Bank, AMRO staff estimates

4. The APM aims to stabilize retail fuel prices and ensure that fuel producers receive market prices. The fuel pricing formula, regulated by the Ministry of Domestic Trade and Cost of Living, is as follows:

$$\text{Fuel price} = \text{Product cost} + \text{Alpha} + \text{Operational cost} + \text{Oil company margin} + \text{Petrol dealer margin} + \text{Sales tax}$$

The product cost is based on the Mean of Platts Singapore (MOPS), and Alpha is the difference between the MOPS price and the actual price paid by Malaysian oil companies.⁷³ Meanwhile, operational cost, consisting of transport and marketing costs, is set at MYR0.0954 per liter for the Peninsular, MYR0.0898 for Sabah, and MYR0.0813 for Sarawak. The fuel price structure also has two profit margin components: the margin for oil companies set at MYR0.05 per liter for petrol and MYR0.0225 for diesel, and the margin for petrol stations set at MYR0.15 for petrol and MYR0.10 for diesel. Lastly, sales tax can be imposed with a maximum amount of MYR0.5862 and MYR0.1964 per liter for petrol and diesel, respectively.

5. Subsidized LPG prices also follow the APM. The subsidized LPG, sold at MYR1.90 per kg for cylinder size 10 kg, 12 kg, or 14 kg, can only be bought by domestic

⁷¹ These unsubsidized prices are based on the prices of old for foreign-registered vehicles at the pilot project fuel stations in Padang Besar and Wang Kelian in Perlis, as of February 2023 (<https://www.nst.com.my/news/nation/2023/02/880126/after-perlis-non-subsidised-fuel-stations-be-expanded-other-border-towns>).

⁷² There is a two-tier pricing system for diesel where those sold for public transport vehicles are subsidized, whereas those sold to factories and businesses are not.

⁷³ MOPS is a benchmark index of average prices of refined petroleum products and is more responsive to local demand for fuel products compared to crude oil prices, which tend to have a one-month lag time in reflecting the cost of products due to the time taken for refining and transporting. Meanwhile, Alpha acts as a buffer for the oil companies to cover the extra costs if they buy petroleum products higher than the MOPS prices.

consumers, especially households that are not connected to a centralized gas network. The government pays the difference between the actual market and subsidized prices to six appointed LPG suppliers. For instance, the current subsidy cost of LPG 14kg is MYR27.79, with an actual price of MYR54.39 and the subsidized price of MYR26.6. The selling consumer price can be higher than the subsidized price because sellers include a delivery fee.

6. **Electricity tariffs for most customer groups in Malaysia are still subsidized.**⁷⁴

The electricity tariff is determined by the Imbalance Cost Pass-Through (ICPT) system, i.e., a mechanism under the Incentive-Based Regulation framework that allows the electricity tariff to reflect changes in fuel and other generation-related costs.⁷⁵ There are two main ICPT components: (i) the Fuel Cost Pass-Through, reflecting the changes in the fuel costs; and (ii) the Generation Specific Cost Pass-Through, reflecting the changes in other generation-specific costs such as power purchase agreements. The following formula determines the electricity subsidy cost:

$$\text{Electricity subsidy} = (\text{Actual tariff rate} - \text{ICPT rate by customer category}) \times \text{Electricity consumption in kWh}$$

The ICPT rate differs for domestic and non-domestic customers.⁷⁶ The ICPT charges are subtracted (rebate) or added (surcharge) from the billed amount. A six percent service tax is also charged to the final bill for domestic customers with monthly consumption above 600 kWh.

Energy Subsidy Reforms

7. **Malaysia has been undertaking various energy subsidy reforms through subsidy rationalization or price reforms (Figure A3.5).** The major energy subsidy reforms started with the introduction of the APM for petroleum products in 1983, where the government tried to balance the interests of consumers and producers by maintaining prices at affordable level at the consumer level and ensuring the producers received the market prices. Recently, the government also indicated plans to announce a targeted fuel subsidy mechanism during the tabling of the 2024 budget⁷⁷ and end electricity subsidies for households with high electricity consumption⁷⁸. The key issues of implementing energy subsidy reforms are the timing to minimize the economic impact and the mechanism to ensure subsidies are targeted and progressive⁷⁹. Other key lessons learned from past subsidy reform efforts are the importance of gradual implementation, mitigation measures, effective communication, and transparent price adjustment (Bergaoui, 2014).

⁷⁴ There are three electricity customer categories, i.e., domestic, commercial (three tariff classes), and industrial (four tariff classes).

⁷⁵ The ICPT is calculated every six months against the corresponding baseline costs in the Base Tariff. Bills with minimum charges and with negative current charges are not subject to ICPT surcharges or rebates.

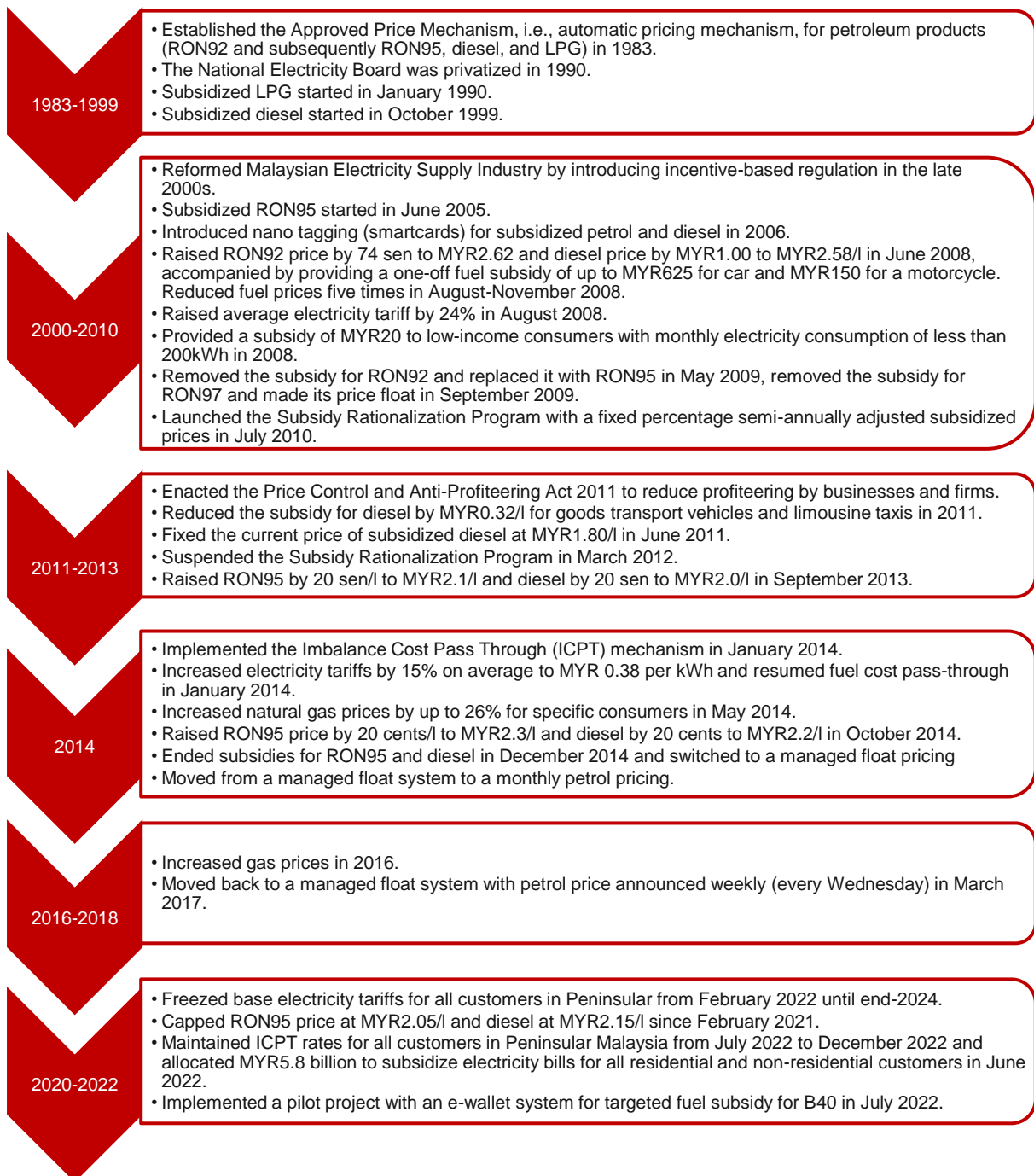
⁷⁶ For the January 1 to June 30, 2023 ICPT implementation period, all domestic customers will receive a rebate of MYR0.02/kWh. A MYR0.037/kWh surcharge will apply to non-domestic (commercial and industrial) low voltage customers, while medium and high voltage customers will face a surcharge of MYR0.20/kWh.

⁷⁷ The mechanism may include the usage of identification cards or the car's engine capacity as part of screening of eligibility conditions (<https://www.thestar.com.my/news/nation/2023/05/25/targeted-fuel-mechanism-subsidy-almost-finalised>).

⁷⁸ <https://www.nst.com.my/news/nation/2023/05/909584/no-more-subsidy-high-household-electricity-use-says-pm>.

⁷⁹ In addition to reducing the fiscal burden, the reforms are to ensure more optimal use of the budgetary resources, mainly because the benefits are enjoyed disproportionately by high-income households. The Ministry of Finance estimated that 35 percent of the fuel subsidies in 2022 was enjoyed by the T20, while the B40 received only 24 percent (<https://theedgemalaysia.com/node/657124>). Meanwhile, BNM (2015) estimated that T20 received 42 percent of the fuel subsidy in 2009, while B40 only received 4 percent.

Figure A3.5. Primary Energy Subsidy Reforms, 1983-2022



Source: AMRO staff compilations

8. At this juncture, however, energy subsidy rationalization and price reforms have yet to be fully implemented largely due to their potential impact on inflation which requires appropriate timing. The devil is in the details with regard to actual implementation. The impact of energy reforms needs to be quantified to facilitate the planning and phasing. The following section assesses the impact of fuel price reform on inflation and fiscal costs based on different scenarios.⁸⁰

⁸⁰ The analysis focuses on the fiscal savings from fuel subsidy reform and excludes the impact on revenue.

The Impact of Fuel Price Reforms on Inflation and Fiscal Expenditure

9. **The timing of fuel subsidy reforms should be considered carefully due to its socioeconomic impact, including inflation.** Fuel subsidy rationalization, particularly through fuel price reforms, will increase energy prices and eventually affect the prices of other goods and services. Therefore, the timing of fuel subsidy reforms is crucial due to its impact on consumers' purchasing power and consumption decisions. The impact on inflation can be mitigated by providing targeted assistance to affected households and businesses. Considering the importance of public trust because fuel subsidy reforms are essentially a political problem (McCulloch 2023), the reforms must be structured, transparent, and supported by good communication. The subsidy reforms should also be integrated into broader structural issues, like climate change. Integrating fuel subsidy reform with the climate change agenda will level the playing field for green and renewable energy alternatives.

10. **Fuel subsidy reforms can be carried out with a gradual pass-through of global energy to domestic prices.** A smoothing approach could prevent significant price shocks by gradually increasing subsidized fuel prices over an extended period. We consider the impact of several scenarios of fuel subsidy reform on inflation:

- i. Baseline: no change in fuel subsidies;
- ii. Immediate: 100 percent pass-through starting in 2024;
- iii. Staggered: 50 percent pass-through starting in 2024, followed by an additional 50 percent pass-through in 2025; and
- iv. Gradual: 5 percent increase in pass-through every month starting in 2024.

The baseline scenario assumes that RON95 and diesel prices will be fixed at MYR2.05 and MYR2.15, respectively, until the end of our forecast period, i.e., end 2025. RON97, on the other hand, will continue to be freely floated and co-move with crude oil prices. The price forecasts for Brent crude oil are based on the futures price for each contract month through end 2025.⁸¹ In the “immediate” scenario, the price of RON95 will jump to MYR2.66 per liter in January 2024; in the “staggered” scenario the price will increase to MYR2.36 per liter in January 2024 and MYR2.57 per liter in January 2025; and in the “gradual” scenario the price will rise by about MYR0.03 per liter per month starting January 2024 and reach MYR2.52 per liter in August 2025. The price of diesel follows a similar trajectory.

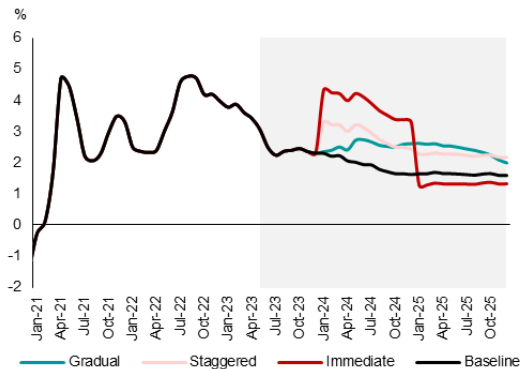
11. **The impact on inflation is greatest if fuel prices are floated immediately, while the impact is more modest if fuel prices are increased gradually.** In the “immediate” scenario, headline inflation is estimated to jump to a peak of 4.3 percent year-on-year (yoy) in January 2024 (baseline: 2.3 percent; December 2023: 2.3 percent), and in the “staggered” scenario, inflation is estimated to increase and peak at 3.3 percent (Figure A3.6). By contrast, in the “gradual” scenario inflation will rise slowly and peak at 2.7 percent in mid-2024.

12. **However, there is a trade-off between inflation and fiscal costs.** Fiscal savings from fuel subsidy reform are largest when fuel prices are floated immediately (Figure A3.7). This would entail lower fiscal spending of MYR24.0 billion in 2024-2025 relative to baseline. A staggered implementation of fuel subsidy reform is estimated to generate fiscal savings

⁸¹ Downward-sloping futures curve from USD76.13 per barrel in August 2023 to USD69.53 in December 2025.

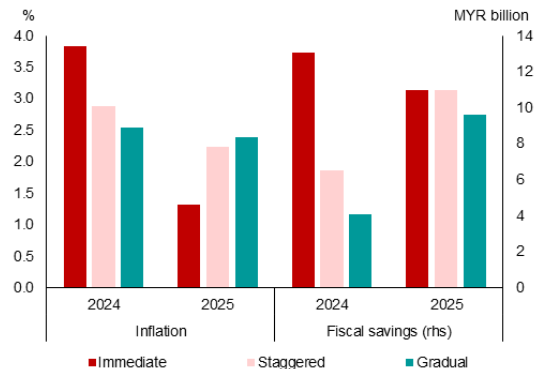
of MYR17.5 billion during the same period, whereas a gradual removal of fuel subsidies is estimated to reduce fiscal costs by MYR13.8 billion.

Figure A3.6. Impact of Fuel Subsidy Reform on Headline Inflation



Source: DOSM, AMRO staff estimates
Note: Grey shaded area denotes forecast period.

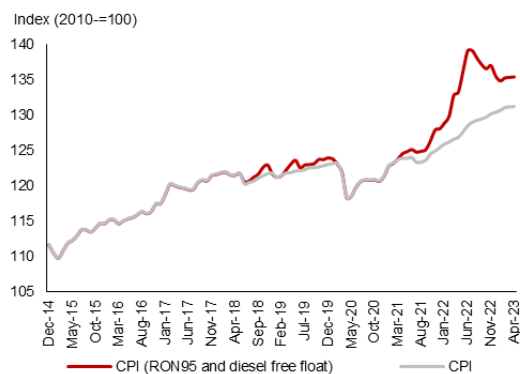
Figure A3.7. Trade-off Between Inflation and Fiscal Costs



Source: AMRO staff estimates

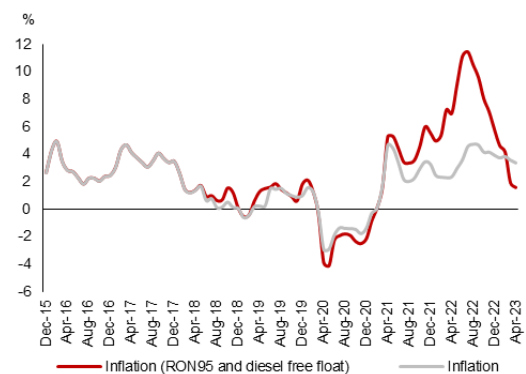
13. **The impact on inflation, as well as fiscal savings, from removing fuel subsidies could be much larger if global energy prices were to spike again.** For instance, if the prices of RON95 and diesel had been freely floated during the COVID-19 pandemic, headline inflation would have averaged 8.1 percent in 2022, with a peak of over 11 percent (yoy) in June and July when Brent crude oil prices surpassed USD120 per barrel (Figures A3.8 and A3.9). At the same time, the fiscal cost of fuel subsidies would be lower by MYR40.7 billion.

Figure A3.8. Comparison of Actual and Counterfactual CPI



Source: DOSM, AMRO staff estimates

Figure A3.9. Comparison of Actual and Counterfactual Headline Inflation



Source: DOSM, AMRO staff estimates

Policy implications

14. **Energy subsidy reforms, with the ultimate objective of abolishing energy subsidies, are crucial for strengthening the fiscal position and allowing for a rebuilding of fiscal space and a more efficient allocation of scarce fiscal resources. It would appear that a staggered approach via targeted subsidies would be a good compromise.** Removing fuel subsidies immediately would result in larger fiscal savings, but inflation would also be higher. On the other hand, gradually phasing out fuel subsidies would generate smaller fiscal savings and limited impact on inflation. The staggered implementation of fuel subsidy removal takes the middle ground in terms of its effect on

inflation and fiscal costs. However, the staggered approach also implies that, before ending fuel subsidies completely, they should be more targeted by restricting the beneficiaries to only those who meet certain criteria that apply to the lower income groups, such as fuel consumption level, type and engine size of cars, and income levels.

15. **There are two initial steps to make energy subsidies more targeted.** First, there should be a clear definition of inefficient energy subsidies and how to measure them. All forms of subsidy, including production subsidies, should be included in the definition and then calculated. Second, there should be feasible methods to ensure that only low-income groups can buy subsidized fuels at petrol stations to reinforce the fundamental principle that subsidies should be targeted at the low-income groups.

16. **Energy subsidy reform should be considered as an integral part of the overall social protection scheme, of which the databases are crucial for effective implementation.** In addition, because energy subsidy reforms are usually combined with cash transfers to maximize welfare gains for the poor and vulnerable groups, subsidy programs can be consolidated into a comprehensive social protection program. Savings from subsidy reforms can be used to support social protection programs. This effort, however, should be supported by integrating social welfare databases, such as the centralized e-Kasih system, with other government databases, such as tax and road transportation databases, to enhance the screening of eligibility conditions.⁸²

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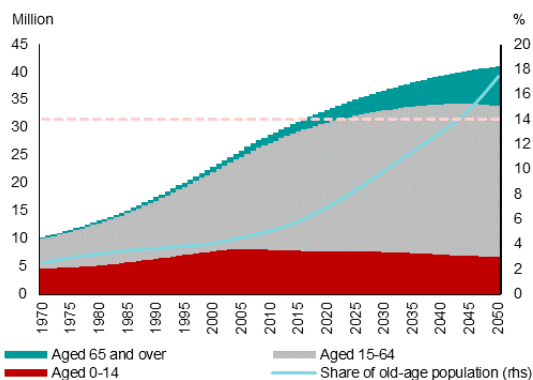
⁸² The government plans to utilize the National Utility Database (PADU) as a central integrated database hub to make subsidies more targeted (<https://www.themalaysianinsight.com/s/448540>).

4. Old-age Income Security in Malaysia: The Current State of Retirement Schemes⁸³

Malaysia's problem of insufficient income security at old age is compounded by a rapidly aging population. The early withdrawals of retirement savings allowed during the pandemic have exacerbated the already alarming inadequacy of retirement funds for most people, especially the lower income groups. The Employees Provident Fund (EPF) scheme provides limited coverage of the labor force and most members' savings are inadequate for a dignified retirement, whereas the sustainability of civil service pensions is a concern due to rapidly rising liabilities. Against this backdrop, this selected issue highlights the challenges faced by retirement schemes in terms of coverage, adequacy, and fiscal sustainability, and discusses policy options to address these challenges.

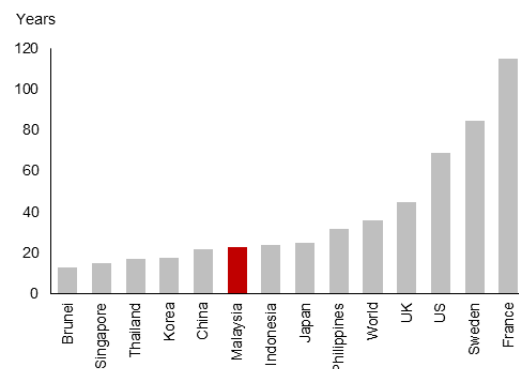
1. **Malaysia's population is aging rapidly.** The share of the Malaysian population aged 65 years and older surpassed 7 percent in 2020, meeting the conventional international definition of an aging society (Figure A4.1). It is projected that by 2045 Malaysia will become an aged nation (more than 14 percent of its population aged 65 years and older). The pace of increase over this 25-year period is faster than in many countries (Figure A4.2). A larger proportion of elderly is likely to result in higher government expenditure to cover the expected rising cost of healthcare and pensions. Moreover, it will create labor shortages and increase the risk of insufficient old-age income.

Figure A4.1. Population Projections



Source: DOSM, United Nations

Figure A4.2. Years Taken from Aging to Aged



Source: United Nations

2. **The aging population is driven by falling fertility rates and rising longevity.** Malaysia's total fertility rate (TFR) has been trending downwards, from 6.4 births per woman in 1960 to 3.4 in 1990, and 1.8 in 2021—below the replacement rate⁸⁴ (Figure A4.3). The TFR of the Malays is higher than the Chinese and Indians but is also experiencing a declining trend. Malaysians are also living longer, with average life expectancy of 74.9 years in 2021, up from 71.3 years in 1990 and 56.5 years in 1960 (Figure A4.4).

Old-age Retirement Schemes in Malaysia

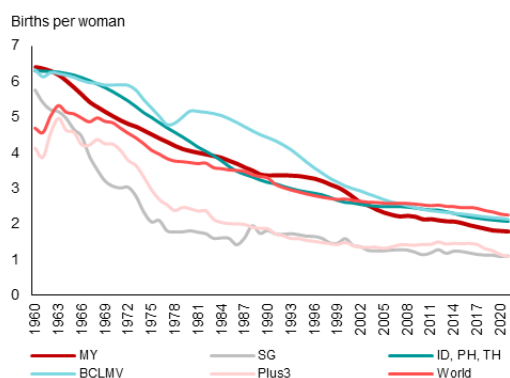
3. **The two largest government-mandated old-age retirement schemes are the EPF and the Civil Service Pension.** The EPF is a national mandatory defined-contribution scheme for private sector employees and non-pensionable public sector employees, but

⁸³ Prepared by Wee Chian Koh.

⁸⁴ A TFR of 2.1 children per woman generates broad stability in population numbers and is referred to as the replacement fertility rate.

optional for self-employed, informal sector workers, and foreign workers.⁸⁵ EPF members can withdraw their savings as a lump-sum payout at age 55, which is earlier than the official retirement age of 60. The Civil Service Pension is a non-contributory defined-benefit scheme for civil servants, who will receive a lifelong monthly pension after retirement at age 60.⁸⁶ There is a separate defined-contribution pension scheme for the armed forces; however, the fund does not provide any annuity payment but a lump-sum amount upon retirement. Private retirement schemes also exist in Malaysia, but enrolment in them is very low.⁸⁷ For the elderly who are very poor, the government provides financial assistance under *Bantuan Warga Emas* administered by the Department of Social Welfare (JKM).⁸⁸

Figure A4.3. Fertility Rate



Source: National authorities, United Nations, World Bank
Note: BCLMV – Brunei, Cambodia, Lao PDR, Myanmar, Vietnam;
ID, PH, TH – Indonesia, Philippines, Thailand; MY – Malaysia; SG – Singapore, Plus3 – China, Japan, Korea.

Figure A4.4. Life Expectancy at Birth



Source: National authorities, United Nations, World Bank

4. **The current retirement schemes have limited coverage.** As of March 2023, there were 8.45 million active members contributing to the EPF. Meanwhile, about 1.6 million civil servants are covered by the Civil Service Pension. The civil service distinguishes between Contract of Service (COS) and Contract for Service (CFS); workers under CFS are not eligible to receive pensions, despite being formally employed. Informal sector workers and those outside the labor force are not covered by any form of mandatory social protection. In total, the EPF and Civil Service Pension schemes cover about 60 percent of the labor force and 40 percent of the working age population (Figure A4.5). Malaysia’s retirement scheme coverage is lower than that in its regional peers (Figure A4.6).

5. **The retirement savings of EPF members are inadequate.** The proportion of active members who meet the age-specific basic savings level has declined significantly, from 34.5 percent in 2019 to 29.5 percent as of March 2023. About 50 percent of members under the age of 55 have savings of less than MYR10,000 against the basic level of MYR240,000. This reflects the unprecedented level of early withdrawals allowed during the COVID-19 pandemic. Between 2020 and 2022, early withdrawals amounted to MYR145.4 billion from the four initiatives: *i-Lestari* (MYR20.8 billion), *i-Citra* (MYR21.3 billion), *i-Sinar* (MYR58.7 billion), and special withdrawal (MYR44.6 billion). As a result, the net contributions to EPF turned negative in 2021 and 2022 (Figure A4.7), while EPF’s assets

⁸⁵ Employees contribute 11 percent of their monthly salary to their EPF account, while employers contribute 13 percent for those earning MYR5,000 and below, and 12 percent for monthly salaries above MYR5,000.

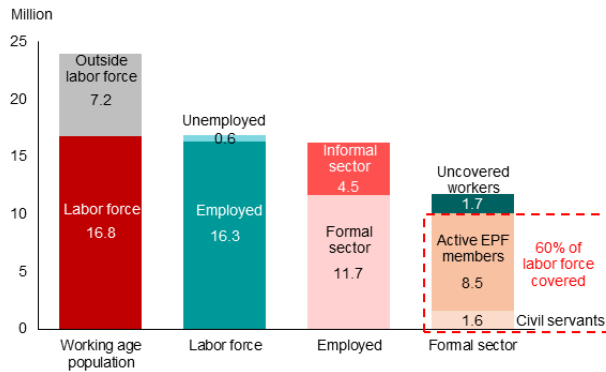
⁸⁶ The government contributes 5 percent of the annual budgeted emolument, while statutory bodies and government agencies contribute 17.5 percent of their pensionable employees’ basic salary to the Retirement Fund Incorporated (KWAP). KWAP manages the contributions, but pension payments are made by the Ministry of Finance (MOF).

⁸⁷ In 2022 there were 557,000 PRS members, covering 3.3 percent of the labor force. The PRS framework is regulated and governed by the Securities Commission Malaysia.

⁸⁸ BWE provides monthly cash assistance of MYR500. In 2021 there were 139,400 recipients (4 percent of population aged 60 and over) under BWE.

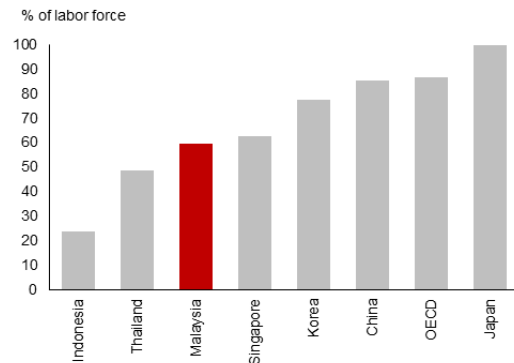
under management fell for the first time in its history in 2022. The median savings of the B40⁸⁹ EPF members plunged 76 percent to MYR577 at end-2022, from MYR2,434 in April 2020 (Figure A4.8). The M40 saw their median savings fall 34 percent to MYR19,926 over the same period, whereas the savings of the T20 rose 9 percent to MYR152,964.

Figure A4.5. Retirement Scheme Coverage in Malaysia



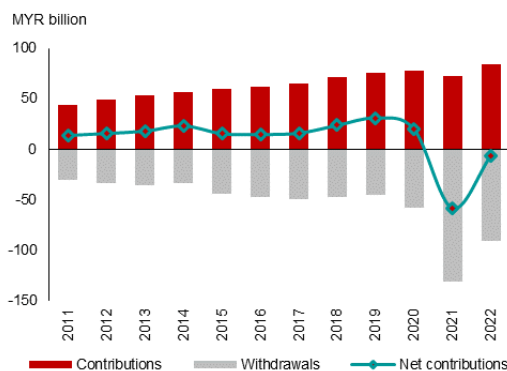
Source: DOSM, EPF, PSD, AMRO staff estimates

Figure A4.6. Coverage of Pension Schemes



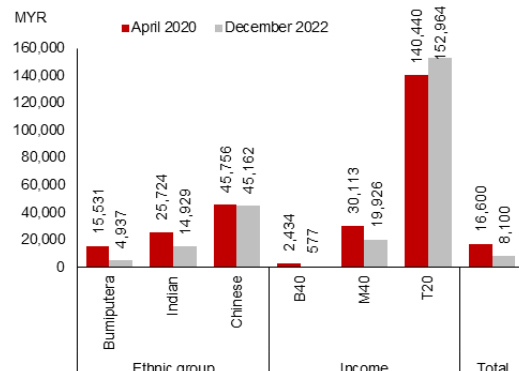
Source: EPF, ILO, OECD, AMRO staff estimates

Figure A4.7. EPF contributions and withdrawals



Source: EPF, AMRO staff estimates

Figure A4.8. Median EPF Savings by Group



Source: EPF, AMRO staff estimates

6. **The inadequacy of retirement savings reflects Malaysia’s low wage structure, a relatively large informal sector, a low minimum withdrawal age and low financial literacy.** Inadequate retirement savings is not a new phenomenon in Malaysia; the pandemic has merely exacerbated pre-existing structural challenges. Wages in Malaysia are relatively low, even when adjusted for differences in productivity levels across countries (Figure A4.9). Malaysia also has a lower labor share of income than benchmark peers despite its economy being more labor-intensive than the peers. Many workers do not contribute to the EPF on a regular basis due to intermittent formal work and underemployment—of the 15.79 million EPF members as of March 2023, 7.34 million were inactive. Moreover, EPF members can withdraw all their savings from Account 2 at age 50 and from Account 1 at age 55, well before the official retirement age of 60.⁹⁰ The minimum withdrawal age is low by international standards and has resulted in Malaysia having among the widest life expectancy vs. pension age gap⁹¹ in the region (Figure A4.10). According to

⁸⁹ B40 here refers to the bottom 40 percent income group of EPF members, M40 refers to the middle 40 percent, and T20 the top 20 percent.
⁹⁰ Monthly contributions are placed into two accounts: 70 percent in Account 1, which is the main retirement account from which withdrawals are restricted until age 55; and 30 percent in Account 2, which can be used to make pre-retirement withdrawals such as for housing, education, and medical purposes, as well as performing Hajj.
⁹¹ The pension age is defined as the normal age of eligibility of retirement schemes without penalty. In the case of Malaysia, this is 55 years as workers can withdraw fully from EPF although civil servants only receive pensions at age 60. In some countries, the pensionable age for men and women are different (e.g., China, Vietnam); the one for men is used in these cases.

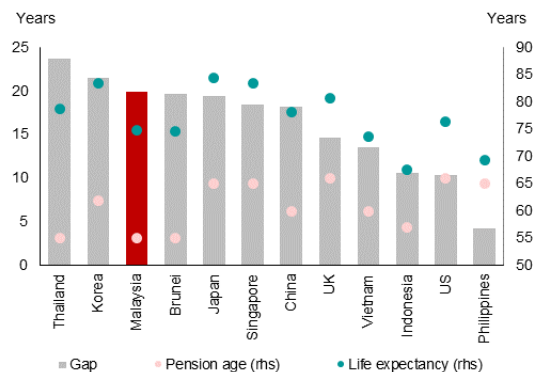
the EPF, a majority of members will likely deplete their savings within five years. This is in part due to poor financial literacy among Malaysians—only 36 percent of adults are financially literate, compared to 57 percent in the U.S., 59 percent in Singapore, and 67 percent in the U.K.⁹²

Figure A4.9. Ratio of Wages to Productivity and Share of Labor Income



Source: ILO, National authorities, AMRO staff estimates

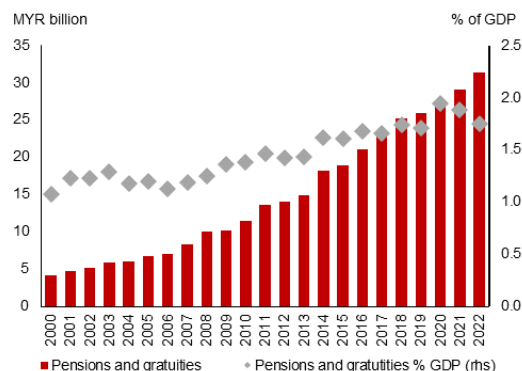
Figure A4.10. Gap Between Life Expectancy and Pension Age



Source: ILO, OECD, World Bank, AMRO staff estimates

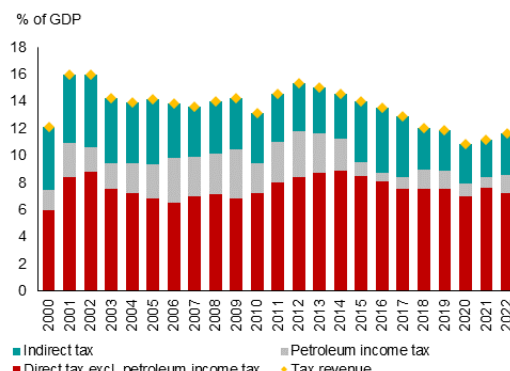
7. Although civil service pensioners suffer less in terms of inadequacy, the fiscal sustainability of the scheme may be a concern. The income replacement ratio of civil service pensioners is relatively high, especially when compared to the majority of EPF members. The lowest pension amount for service of at least 25 years is MYR1,000,⁹³ and the pension amount is capped at 60 percent of last-drawn salary. Pensioners also enjoy automatic increment of 2 percent annually and a lump-sum gratuity payment upon retirement, both of which are exempt from income tax. In addition, they receive free lifetime medical care. However, the generosity of the Civil Service Pension scheme comes at high fiscal cost. It is fully funded by government revenue, and pension liabilities will continue to rise due to the growth in the public sector workforce (Figure A4.11). At the same time, tax revenue has trended lower (Figure A4.12), rendering the sustainability of the scheme a concern.

Figure A4.11. Government Spending on Pensions and Gratuities



Source: MOF, AMRO staff calculations

Figure A1.12. Government Tax Revenue



Source: MOF, AMRO staff calculations

⁹² S&P Global FinLit Survey. <https://gflec.org/initiatives/sp-global-finlit-survey/>.

⁹³ By comparison, EPF's basic savings requirement at age 55 is MYR240,000, equivalent to MYR1,000 per month for 20 years. However, less than two-fifths of EPF active members aged 51-55 can meet this target.

Policy Options to Increase Old-age Income Security

8. **Major reforms are needed to improve the coverage and adequacy of retirement schemes.** Coverage can be expanded by considering the following measures:

- **Broaden mandatory EPF coverage.** Ideally, this would involve legislative mandates to extend social protection coverage beyond the formal sector. In the meantime, EPF should continue to encourage voluntary contributions from uncovered segments, such as by organizing roadshows to reach out to the self-employed and gig economy workers to educate them on the benefits of retirement saving.
- **Introduce a compulsory national social insurance pension scheme.** This is a defined-contribution scheme to strengthen old-age income security by ensuring a lifetime minimum pension amount upon retirement, linked to the poverty line. The social pension will differ from the EPF scheme, in that it will be aimed at providing a floor for old-age income, whereas EPF savings are meant to provide income replacement. The government can ensure continuity in contributions to the social pension scheme by subsidizing contributions for the poor and vulnerable groups and temporarily topping up for those affected by severe income shocks. This policy recommendation has been proposed by Khazanah Research Institute (KRI 2021).
- **Review the eligibility criteria for elderly assistance.** At present, BWE covers around 4 percent of the elderly population and disbursements make up only about 0.2 percent of total government expenditure. Eligibility for BWE can therefore be broadened to include more elderly poor, with tiered financial assistance according to household income and household size. To minimize inclusion or exclusion errors, JKM's beneficiary registry should be integrated with the databases of other government agencies to coordinate eligibility checks and records of aid recipients.

Adequacy can be improved by adopting these policy options:

- **Align the EPF full withdrawal age with the official retirement age.** Doing so would extend the accumulation period of the EPF savings by five years, thereby increasing post-retirement income. For instance, EPF members aged 50-54 years with incomes at the B40 threshold could extend the sufficiency of their accumulated savings by an additional three years if they defer withdrawals and continue to contribute until age 60 (BNM 2023).
- **Extend the retirement age to beyond age 60.** In light of rising longevity, employees who are able and willing to work should have an option to continue working after the age of 60. The official retirement age could be extended beyond 60 and aligned with increasing life expectancy.
- **Increase mandatory and voluntary contributions.** The employer and/ or employee contribution rates can be raised to increase retirement savings, but the benefits will have to be weighed against higher labor costs for the employer and lower disposable incomes for employees. Nonetheless, given EPF's consistent track record of generating competitive returns, this proposal can be carefully evaluated to improve financial security. The EPF should also continue to encourage voluntary contributions beyond statutory requirements. Third parties are allowed to make payments to a member's account,⁹⁴ and the maximum annual voluntary

⁹⁴ Top-ups can be conveniently done via the *i-Akaun* mobile app.

contribution limit has been increased to MYR100,000 from MYR60,000. In addition, the government can provide more incentives to encourage participation in private pensions. This can include raising the tax relief amount for employees and increasing the tax deductions for employers on contributions to employees' PRS. However, given the generally lower returns from PRS investments, most people will be enticed to contribute to their EPF accounts instead.

- **Introduce annuity payouts in place of lump-sum withdrawals.** Since most people who withdraw fully from their savings deplete them within a few years, it would be prudent to consider replacing lump-sum withdrawals with fixed monthly payouts. Those with sufficient retirement savings can withdraw the excess savings over the minimum amount required to sustain the annuity payouts.
- **Ringfence savings from further withdrawals for those who utilized the early withdrawal facilities during the pandemic.** Members who have drawn down their savings should replenish them before any more pre-retirement withdrawals are allowed. This is not a punitive measure but is meant to safeguard the remaining savings and rebuild the buffers that were used during the pandemic. In this regard, members are encouraged to top up their accounts whenever possible. The government can also consider topping up the accounts of vulnerable groups; a portion of the cash handouts could be channeled towards rebuilding retirement savings.
- **Address structural issues, particularly low wages and low financial literacy.** Some measures have been taken to increase wages, such as the upward revision of minimum wages, most recently to MYR1,500 in May 2022. However, sustainable increases in income require higher labor demand for quality labor. The New Investment Policy, with aims to create high-skilled high-paying jobs by attracting high-value investments, coupled with initiatives to boost local workforce capability are steps in the right direction. Efforts at advancing financial literacy should be strengthened to actively reach out to the community at all levels.

9. **The sustainability of civil service pensions may not be assured without addressing the trend decline in tax revenue.** Tax reforms should include more progressive income taxes and broadening indirect taxation by lifting sales and services tax (SST) exemptions on non-essential items and reintroducing the goods and services tax (GST), among others. That said, given the non-contributory nature of the civil service pension scheme that is directly funded from the budget, a shift towards a defined-contribution scheme akin to the EPF would be more fiscally sustainable in the long run. Many countries have taken steps to harmonize civil service pensions and private sector social security schemes by providing similar benefits. New public sector hires could be enrolled under the EPF scheme or in a new civil service defined-contribution scheme.

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