INTERNATIONAL MONETARY FUND

IMF Country Report No. 23/185

MALAYSIA

2023 ARTICLE IV CONSULTATION—PRESS RELEASE; AND STAFF REPORT

June 2023

Under Article IV of the IMF's Articles of Agreement, the IMF holds bilateral discussions with members, usually every year. In the context of the 2023 Article IV consultation with Malaysia, the following documents have been released and are included in this package:

- A **Press Release**.
- The **Staff Report** prepared by a staff team of the IMF for the Executive Board's consideration on a lapse-of-time basis following discussions that ended on March 20, 2023, with the officials of Malaysia on economic developments and policies. Based on information available at the time of these discussions, the staff report was completed on April 19, 2023.
- An **Informational Annex** prepared by the IMF staff.

The IMF's transparency policy allows for the deletion of market-sensitive information and premature disclosure of the authorities' policy intentions in published staff reports and other documents.

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PRESS RELEASE

PR23/191

IMF Executive Board Concludes 2023 Article IV Consultation with Malaysia[1]

FOR IMMEDIATE RELEASE

Washington, DC – **June 1, 2023:** The Executive Board of the International Monetary Fund (IMF) concluded the Article IV consultation[2] with Malaysia on a lapse-of-time basis.[3]

Malaysia registered a strong post-pandemic recovery in 2022. Its strong macroeconomic policy frameworks, including a track record of fiscal prudence and a credible monetary policy framework, have served the country well. Growth reached 8.7 percent in 2022 driven by pent-up domestic demand following the reopening of the economy in April 2022 and strong export performance. However, the recovery remains uneven, with agriculture, mining, and particularly construction sectors remaining below pre-pandemic levels, and inequality has risen during COVID-19. While costly and untargeted spending on subsidies, the highest in Malaysia's history, helped suppress inflationary pressures, inflation remained broad-based and elevated at 3.4 percent for the year, despite recent signs of moderation. Inflation expectations, however, remained well anchored.

Macro policies appropriately transitioned to the post-pandemic tightening cycle in 2022. The Bank Negara Malaysia (BNM) increased the overnight policy rate (OPR) four times since May 2022 by a total of 100 bps to 2.75 percent and paused the tightening thus far in 2023 to allow for an assessment of the impact of past rate hikes. The 2023 Budget is appropriately contractionary, targeting a decline in the overall deficit from 5.6 percent of GDP in 2022 to 5.0 percent in 2023, and down to 3.2 percent of GDP by 2025.

Lower growth and elevated inflation define the near-term outlook. Growth is projected to moderate to 4.5 percent in 2023 reflecting largely the global external headwinds. Inflation is projected to remain elevated at 3.3 percent in 2023, with likely persistence in core inflation, amid a positive output gap, and evidence of a build-up of demand-side pressures. Over the medium term, the current account surplus is projected to widen as the pandemic-related travel restrictions are lifted, leading to an improvement of the services balance, and as imports moderate.

Executive Board Assessment

In concluding the Article IV consultation with Malaysia, Executive Directors endorsed the staff's appraisal as follows:

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[1] Data used in this report for staff analyses are as of March 21, 2023.

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

[3] The Executive Board takes decisions under its lapse-of-time procedure when the Board agrees that a proposal can be considered without convening formal discussions.

Malaysia registered a strong post-pandemic recovery in 2022. After a modest recovery in 2021, growth rebounded strongly in 2022 driven by pent-up domestic demand and resilient export performance, following the re-opening of the economy in April 2022. Malaysia's 2022 external position is preliminarily assessed to be stronger than warranted by fundamentals and desired policies.

Downside risks, mostly external, cloud the near-term outlook. External risks include the possibility of an abrupt global slowdown or recession, with an associated spike in global risk premia, capital outflows and sudden stop risks. Geo-economic fragmentation and geopolitical tensions resulting in a reconfiguration of trade, supply disruptions, and rising input costs among other disturbances, could negatively affect Malaysia's growth prospects. Staff urge the authorities to stand ready to manage downside risks and policy trade-offs, if and when warranted.

The gradual fiscal consolidation strategy set out in the 2023 Budget is appropriate, but it should be credibly underpinned by high-quality and durable measures. Staff advice on a path that involves a more significant consolidation over the medium term would put debt on a firm downward path. Staff welcome the progress made in finalizing the Fiscal Responsibility Act (FRA), a major reform expected to enhance governance and transparency and improve accountability and fiscal responsibility. Developing a medium-term revenue strategy remains an urgent priority for Malaysia, especially in light of Malaysia's significant spending needs under the 12MP and should be the cornerstone of the medium-term consolidation strategy. Phased and transparently communicated subsidy reform is overdue, alongside social safety nets reforms, which would help enhance external rebalancing.

Monetary policy should tighten further to bring the stance to a neutral position and BNM should continue to clearly communicate the rationale for its policy decisions, given the rapidly evolving landscape and high uncertainty. Tighter monetary policy will ensure inflation expectations remain well-anchored, while also creating space for monetary policy to respond to downside risks. The flexible exchange rate regime has served Malaysia well, and the authorities' continued commitment to exchange rate flexibility is welcome.

The authorities' commitment to safeguarding the stability of the financial sector is also welcome considering emerging risks. Enhanced monitoring, especially of highly leveraged entities and non-bank financial institutions, is warranted given increased risks from rising interest rates, tighter financial conditions, exchange rate depreciation, and weaker expected growth. Expanding the macroprudential toolkit should support these efforts. The Malaysian financial sector is well-equipped to navigate any potential increase in volatility and global risk aversion and there are no broad-based stability concerns.

The authorities' intentions under the 12MP to credibly enhance economic resilience, move toward net zero greenhouse gas emissions, and promote inclusive growth, is welcome. The start of the new government provides a timely opportunity to forge ahead with a concerted reform agenda. Robust governance and anti-corruption reforms, including the implementation of the strategies outlined in the National Anti-Corruption Plan, would strengthen the management of the public finances, and improve public sector service delivery.

Malaysia: Selected Economic and Financial Indicators, 2018–28

Nominal GDP (2022): US$407.9 billion
GDP per capita (2022, current prices): US$12,493
Unemployment rate (2022, period average): 3.8 percent
Population (2022): 32.7 million
Poverty rate (2019, national poverty line): 0.2 percent
Adult literacy rate (2019): 95.0 percent
Main domestic goods exports (share of total domestic exports, 2021): Machinery and Transport Equipment (39.2 percent), Miscellaneous Manufactured Articles (16.6 percent), and Manufactured Goods (10.8 percent).

					Est.	Proj.					
	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Real GDP (percent change)	4.8	4.4	-5.5	3.1	8.7	4.5	4.5	4.4	4.4	3.9	3.9
Total domestic demand	4.7	3.9	-4.9	3.6	9.4	3.7	5.1	4.5	4.4	4.0	3.9
Consumption	7.1	6.6	-2.6	2.5	9.9	4.1	5.6	4.2	4.2	3.7	3.6
Private consumption	8.0	7.7	-4.2	1.9	11.3	4.6	4.5	5.1	5.0	4.1	4.1
Public consumption	3.4	1.5	5.0	5.3	3.9	-9.3	5.8	1.8	1.1	0.5	-0.4
Private investment	4.3	1.6	-11.9	2.6	7.2	7.1	6.4	6.0	5.8	5.7	5.7
Public gross fixed capital formation	-5.0	-10.7	-21.2	-11.3	5.3	-10.0	8.6	4.5	3.5	2.9	3.0
Net exports (contribution to growth, percentage points)	0.4	0.7	-1.0	-0.3	-0.1	1.0	-0.2	0.1	0.2	0.2	0.2
Saving and investment (in percent of GDP)											
Gross domestic investment	23.9	21.0	19.7	22.3	23.9	24.3	24.3	24.9	25.1	25.1	25.2
Gross national saving	26.1	24.5	23.9	26.1	26.5	27.0	27.0	27.7	28.1	28.1	28.2
Fiscal sector (in percent of GDP) 1/											
Federal government overall balance	-3.7	-3.4	-6.2	-6.3	-5.6	-5.0	-4.6	-4.6	-4.6	-4.5	-4.4
Revenue	16.1	17.5	15.9	15.1	16.5	15.1	14.2	13.9	13.9	13.9	14.0
Expenditure and net lending	19.8	20.9	22.1	21.4	22.0	20.1	18.9	18.6	18.5	18.5	18.3
Tax refunds (Arrears) 2/		2.4									
Federal government non-oil primary balance	-5.3	-6.7	-7.5	-6.6	-7.8	-6.0	-4.8	-4.4	-4.1	-3.8	-3.4
Consolidated public sector overall balance 3/	-2.9	-3.4	-7.3	-4.3	-4.4	-6.9	-6.9	-6.7	-6.5	-6.5	-6.3
General government debt 3/	55.6	57.1	67.7	69.3	65.7	66.8	66.8	67.2	67.7	68.7	69.3
Of which: federal government debt	51.2	52.4	62.0	63.4	60.4	60.9	60.9	61.3	61.8	62.8	63.4
Inflation and unemployment (annual average, in percent)											
CPI inflation	1.0	0.7	-1.1	2.5	3.4	3.3	3.1	2.4	2.4	2.4	2.4
CPI inflation (excluding food and energy)	0.4	3.4	1.1	0.7	3.0	3.4	3.0	2.0	1.7	1.7	1.7
Unemployment rate	3.3	3.3	4.5	4.7	3.8	3.6	3.5	3.5	3.5	3.5	3.5
Macrofinancial variables (end of period)											
Broad money (percentage change) 4/	7.7	2.7	4.9	5.6	15.7	8.0	8.2	7.5	7.1	6.1	6.2
Credit to private sector (percentage change) 4/	8.3	4.9	4.0	3.8	4.4	8.0	8.2	7.5	7.1	6.1	6.2
Credit-to-GDP ratio (in percent) 5/ 6/	130.0	130.5	144.8	138.0	124.5	137.1	137.1	137.1	137.1	137.1	137.1
Overnight policy rate (in percent)	3.25	3.00	1.75	1.75	...	...	...	...	...	...	...
Three-month interbank rate (in percent)	3.6	3.3	1.9	2.0	...	...	...	...	...	...	...
Nonfinancial corporate sector debt (in percent of GDP) 7/	103.5	100.0	110.6	110.2	98.4	...	...	...	...	...	...
Nonfinancial corporate sector debt issuance (in percent of GDP)	2.0	1.8	2.3	2.6	...	...	...	...	...	...	...
Household debt (in percent of GDP) 7/	82.0	82.8	93.1	89.1	81.2	...	...	...	...	...	...
Household financial assets (in percent of GDP) 7/	176.0	179.3	204.6	192.3	167.9	...	...	...	...	...	...
House prices (percentage change)	2.5	1.8	1.2	1.9	...	...	...	...	...	...	...
Exchange rates (period average)											
Malaysian ringgit/U.S. dollar	4.04	4.14	4.19	4.14	4.40	...	...	...	...	...	...
Real effective exchange rate (percentage change)	4.2	-1.3	-3.5	-1.3	-1.5	...	...	...	...	...	...
Balance of payments (in billions of U.S. dollars) 5/											
Current account balance	8.0	12.8	14.1	14.2	10.7	12.1	13.2	14.6	16.4	18.0	19.1
(In percent of GDP)	2.2	3.5	4.2	3.8	2.6	2.7	2.7	2.8	2.9	3.0	3.0
Goods balance	28.4	30.1	32.7	41.2	38.5	38.7	41.1	43.2	46.1	48.4	51.6
Services balance	-4.3	-2.6	-11.2	-14.7	-10.3	-8.3	-10.7	-11.3	-11.6	-11.3	-12.4
Income balance	-16.1	-14.7	-7.4	-12.3	-17.4	-18.3	-17.2	-17.3	-18.2	-19.1	-20.1
Capital and financial account balance	2.8	-9.1	-18.5	3.0	3.3	-2.7	-8.2	-6.5	-8.6	-11.3	-12.4
Of which: Direct investment	2.5	1.6	0.7	6.9	3.6	3.1	3.9	4.1	4.3	4.5	4.7
Errors and omissions	-8.9	-1.7	-0.1	-6.1	-1.9	0.0	0.0	0.0	0.0	0.0	0.0
Overall balance	1.9	2.0	-4.6	11.0	12.1	9.4	5.0	8.1	7.7	6.7	6.7
Gross official reserves (US$ billions) 5/ 8/	101.4	103.6	107.6	116.9	114.7	124.0	129.0	137.2	144.9	151.6	158.3
(In months of following year's imports of goods and nonfactor services)	5.8	6.7	5.6	5.2	5.0	4.8	4.7	4.8	4.8	4.9	5.0
(In percent of short-term debt by original maturity)	103.7	108.9	117.6	120.3	105.0	106.0	105.9	106.2	106.4	108.2	110.2
(In percent of short-term debt by remaining maturity)	84.8	87.1	91.9	93.3	84.8	85.7	84.4	85.6	85.8	86.8	87.9
Total external debt (in billions of U.S. dollars) 5/ 8/	223.0	231.5	238.8	259.1	259.2	276.5	290.5	307.5	324.3	338.4	352.4
(In percent of GDP)	62.2	63.4	70.8	69.6	63.9	62.2	60.6	59.4	58.3	57.2	55.8
Of which: short-term (in percent of total, original maturity)	43.9	41.1	38.3	37.5	42.1	42.3	41.9	42.0	42.0	41.4	40.8
short-term (in percent of total, remaining maturity)	53.6	51.4	49.1	48.4	52.2	52.3	52.6	52.1	52.1	51.6	51.1
Debt service ratio 5/											
(In percent of exports of goods and services) 9/	10.6	10.9	13.6	10.7	10.1	10.6	11.5	11.2	10.9	10.6	10.7
(In percent of exports of goods and nonfactor services)	11.2	11.6	14.4	11.7	10.8	11.3	12.2	11.9	11.6	11.3	11.3
Memorandum items:											
Nominal GDP (in billions of ringgit)	1,448	1,513	1,418	1,545	1,788	1,931	2,090	2,246	2,405	2,552	2,712

Sources: Data provided by the authorities; CEIC Data; World Bank; UNESCO; and IMF, *Integrated Monetary Database,* and staff estimates.
1/ Cash basis. The authorities are planning to adopt accrual basis. For 2019, overall and primary balance includes the payment of outstanding tax refund (arrears) amounting to RM37 billion.
2/ Tax refunds in 2019 are allocated for payment of outstanding tax refunds.
3/ Consolidated public sector includes general government and nonfinancial public enterprises (NFPEs). General government includes federal government, state and local governments, and statutory bodies.
4/ Based on data provided by the authorities, but follows compilation methodology used in IMF's *Integrated Monetary Database*. Credit to private sector in 2018 onwards includes data for a newly licensed commercial bank from April 2018. The impact of this bank is excluded in the calculation of credit gap.
5/ IMF staff estimates. U.S. dollar values are estimated using official data published in national currency.
6/ Based on a broader measure of liquidity. Credit gap is estimated on quarterly data from 2000, using one-sided Hodrick-Prescott filter with a large parameter.
7/ Revisions in historical data reflect the change in base year for nominal GDP (from 2010=100 to 2015=100).
8/ The decrease in short-term debt by remaining maturity in 2017 was partly due to the implementation of an improved data compilation system that corrected previous overestimation.
9/ Includes receipts under the primary income account.

INTERNATIONAL MONETARY FUND

MALAYSIA

STAFF REPORT FOR THE 2023 ARTICLE IV CONSULTATION

April 19, 2023

KEY ISSUES

Context. Malaysia registered a strong economic recovery in 2022, backed by its well diversified economy, sound policy frameworks, and commodity exporter status. While monetary policy started a gradual post-pandemic normalization, record costly spending on fuel subsidies broadly kept inflationary pressures suppressed in 2022. Meanwhile, the new national unity government has signaled its commitment to the reform priorities outlined in the Twelfth Malaysia Plan (12MP) and the 2023 Budget to propel the economy toward net-zero greenhouse gas emissions and high-income status.

Economic Policy Recommendations. In view of the positive output gap and ongoing inflationary pressures, near-term policies should focus on accelerating the pace of policy tightening, while managing downside risks and trade-offs. Specifically:

- *Transitioning to fiscal policy consolidation:* The estimated fiscal impulse from the 2023 Budget is appropriately contractionary; a credible and gradual medium-term consolidation strategy should be underpinned by well-identified high-quality and durable measures aiming at increasing revenues while replacing broad-based subsidies with strengthened social safety nets, and targeted transfers to vulnerable people. Such consolidation should be underpinned by a medium-term revenue strategy.
- *Steering a disinflation strategy*: The monetary policy stance remains accommodative and should be tightened further to reach a neutral stance, to keep inflation contained and expectations well anchored. The tightening is warranted by still-elevated inflation, amid a positive output gap and evidence of a build-up of demand-side pressures.
- *Ensuring continued financial sector soundness.* The financial sector remains healthy but warrants stepped-up monitoring, especially of highly leveraged entities and non-bank financial institutions, given increased risks from rising interest rates, tighter financial conditions, exchange rate depreciation, and weaker expected growth. Expanding the macroprudential toolkit should support these efforts.
- *Lifting potential growth*: The start of a new government provides a timely opportunity to forge ahead with implementing the concerted policy agenda set out in the 12MP and the 2023 Budget, which is appropriately focused on enhancing broad-based productivity drivers, addressing climate change, promoting digitalization, and enhancing governance and anti-corruption reforms.

Approved By
Sanjaya Panth (APD) and Maria Gonzalez (SPR)

Mission dates: March 8–20, 2023. The mission met with the Deputy Governor of the Bank Negara Malaysia, the Secretary General of the Ministry of Finance, senior staff from various line ministries/public sector entities, and representatives from the private sector and civil society. Mission Team: Lamin Leigh (Head), Alexander Copestake, Kodjovi Mawulikplimi Eklou, Ghada Fayad, Shujaat Khan (all APD), Natalia Novikova (Resident Representative Singapore); Raja Anwar (Alternate Executive Director) joined the meetings. Sanjaya Panth joined the concluding meeting. Ganchimeg Ganpurev and Justin Flinner (both APD) assisted in the preparation of this report. Data used in this report for staff analyses are as of March 21, 2023, unless otherwise noted.

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APPENDICES

CONTEXT: RESILIENCE AMID UNPRECEDENTED GLOBAL FRAGILITY AND GEOPOLITICAL HEADWINDS

1. Malaysia registered a strong post-pandemic recovery in 2022, supported by its well diversified economy, its robust policy frameworks, and commodity exporter status. Its strong macroeconomic policy frameworks including a track record of fiscal prudence which has kept debt levels fairly contained and a credible monetary policy framework have served the country well. Costly and untargeted spending on subsidies, the highest in Malaysia's history, helped suppress inflationary pressures and the rising cost of living. The strong recovery was driven by pent-up domestic demand following the reopening of the economy in April 2022 and strong export performance.

2. However, some policy trade-offs are emerging in 2023 with an expected slowdown in growth, elevated inflation as well as high private debt. Elevated inflation amid a positive output gap will coincide with a more challenging growth outlook as external headwinds in key export markets spill over to Malaysia. Meanwhile, financial stability side effects from the needed monetary tightening to maintain price stability will need to be managed, given elevated household and corporate debt.

3. Malaysia's newly elected government thus faces the challenging task of ensuring policy continuity, coordination, and consistency in managing trade-offs and risks. The new government will need to navigate a shock-prone and fragmented global economy, while implementing the ambitious Twelfth Malaysia Plan (12MP) and the 2023 budget's MADANI vision under a narrow policy space.[1] The start of a new government provides an opportunity to forge ahead with a concerted policy agenda.

RECENT DEVELOPMENTS: A STRONG, YET UNEVEN, RECOVERY

4. Malaysia demonstrated strong growth momentum in 2022, but some sectors are still lagging. Reopening of international borders since April 2022, improving labor market conditions and ongoing policy support helped to boost Malaysia's domestic demand, and export performance remained resilient. Growth reached 8.7 percent in 2022, with private consumption growth accounting for 6.6 percentage points and with investment another 1.4 pp. Credit growth has been strong at 4.7 percent in December 2022, driven by households and supported by the labor market recovery. Goods' exports growth was broad-based, driven by strong demand for electrical and electronic products and supported by higher commodity prices. Exports growth was mostly directed to ASEAN countries, the US, and less so to China and the EU. Tourists are returning to Malaysia, but at still far below pre-pandemic trends. Agriculture, mining, and particularly construction sectors are

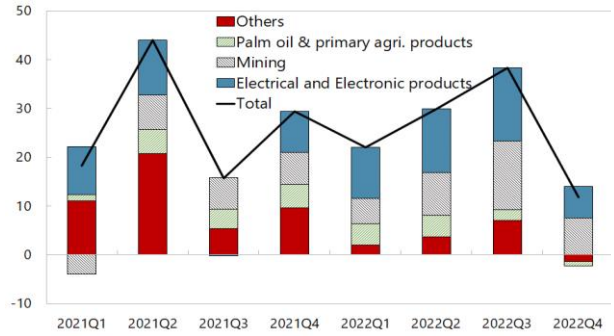
[1] Launched by the new PM Anwar Ibrahim, the MADANI policy framework articulates the concepts of sustainability, prosperity, innovation, respect, trust, and care and compassion.

lagging manufacturing and services, and inequality has risen during COVID.[2] In line with the uneven recovery, the labor market remains fragmented and has somewhat tightened.

Malaysia: Contribution to Growth of Goods Exports

Contribution to Exports Growth by Product

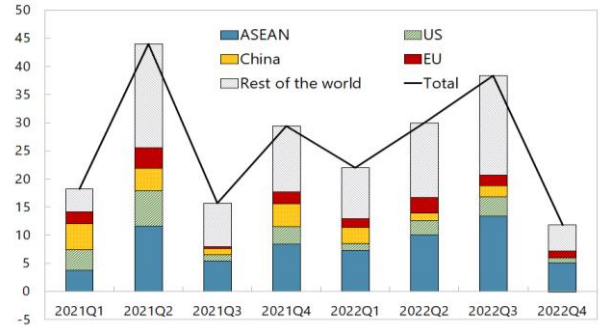
(Percent)



Sources: Haver and IMF staff calculations.

Contribution to Exports Growth by Country

(Percent)

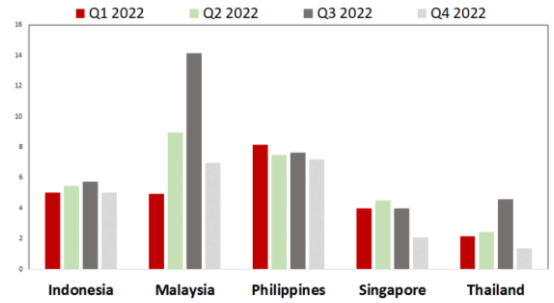


Sources: Haver and IMF staff calculations.

Macroeconomic Developments in ASEAN-5

ASEAN-5: Real GDP Growth

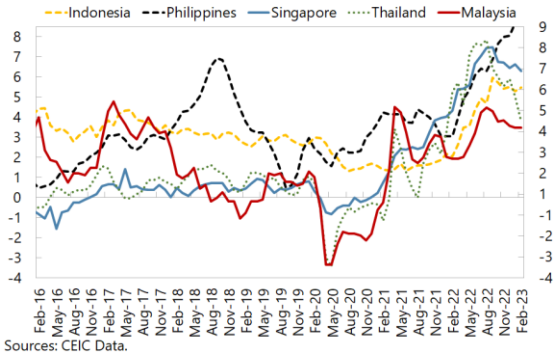
(Year-on-year, in percent)



Sources: Bloomberg, Haver, IMF Staff.

ASEAN-5: Headline Inflation

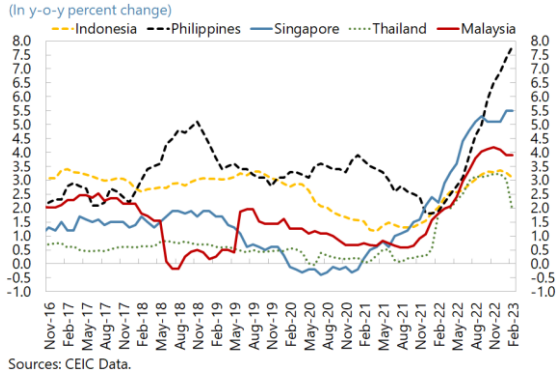
(In y-o-y percent change)



Sources: CEIC Data.

ASEAN-5: Core Inflation

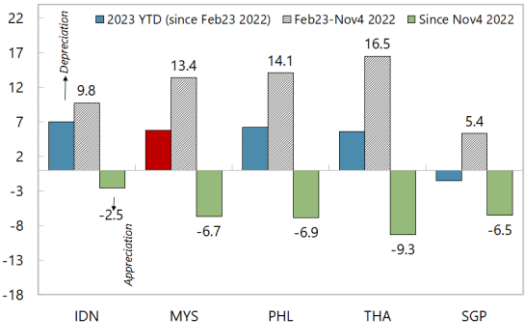
(In y-o-y percent change)



Sources: CEIC Data.

ASEAN-5: Currencies Post the Fed's November Decision

(percent change against USD)

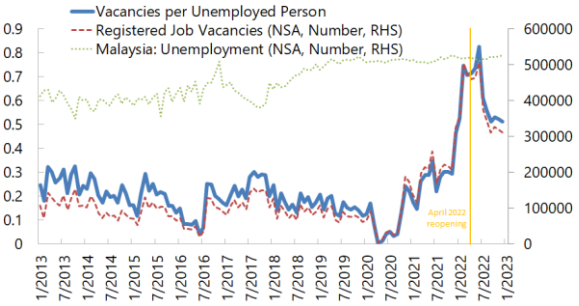


Sources: Haver and IMF staff calculations. Note: YTD = Mar 23 2023 for all.

[2] See CR22/126, Appendix X.

Malaysia: Labor Market Developments

Vacancies per Unemployed Person: Malaysia
(Number)

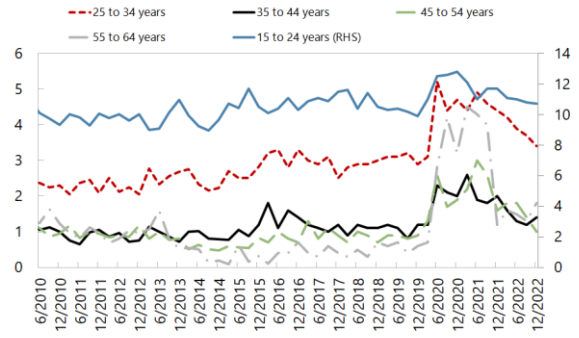


Source: Haver Analytics and IMF staff calculations.

Beveridge Curve: Malaysia

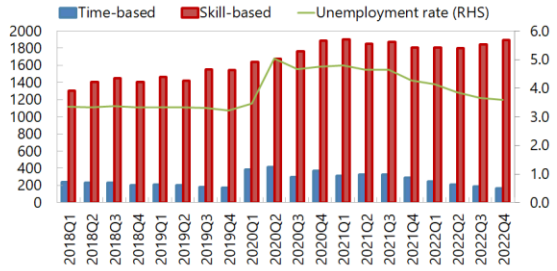
Source: Haver Analytics and IMF staff calculations. Note: COVID-19 period was taken for the time period where the number of daily new cases continued to increase in Malaysia. The peak was recorded in February 2022.

Unemployment Rate by Age Group
(in percent)



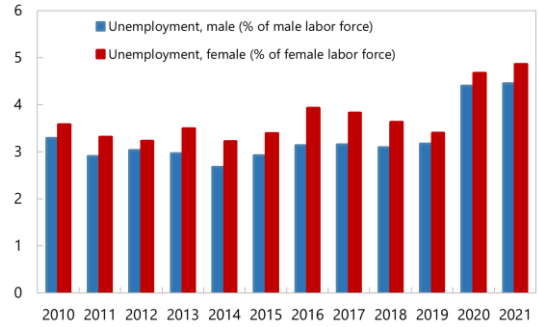
Sources: Department of Statistics; IMF staff

Underemployment and Unemployment
(Thousands of persons underemployed [LHS]; Percent of labor force [RHS])



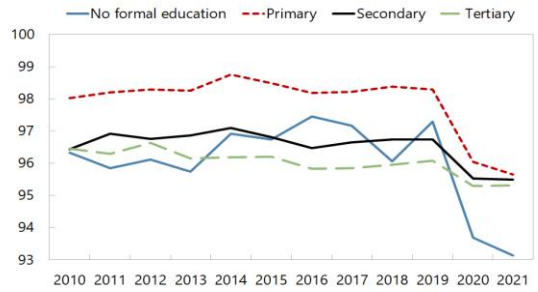
Sources: Department of Statistics, IMF staff calculations

Unemployment Rate by Gender
(in percent)



Sources: World Development Indicators and IMF staff.

Employment Rate by Education Level
(in percent)

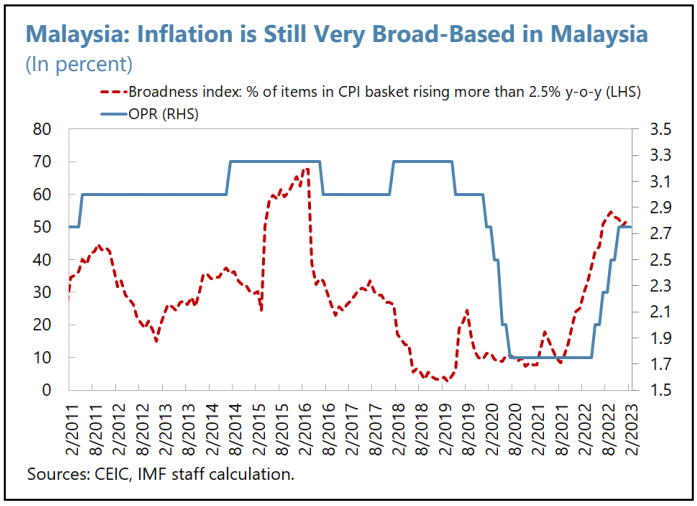


Sources: Department of Statistics and IMF staff calculation.

5. Notwithstanding strong export performance, following Russia's war on Ukraine, Malaysia faced significant external pressures, which have moderated in recent months. Portfolio investment witnessed a net outflow of US$3.4 billion in 2022Q2, mostly driven by a reduction in non-residents' holding of debt securities (US$3 billion). The ringgit depreciated by 11.5 percent against the US dollar between the start of the war in Ukraine and end-October 2022, but has regained some of its strength since November, resulting in a total depreciation of about 5 percent for the year. During this period, the uncovered interest parity (UIP) premium remained elevated, and movements in gross reserves data suggest that the BNM engaged in largely two-sided

FX interventions, supporting the ringgit following the war in Ukraine and building FX reserves while the ringgit appreciated later in the year. The size of the interventions, however, is estimated to be smaller compared to previous stress episodes.[3] Gross international reserves stood at US$114.7 billion at end-2022. Reserve coverage fell to 110.2 percent of the IMF's assessing reserve adequacy (ARA) metric, compared to 121.3 percent at end-2021, driven by a decline in gross reserves of US$2.2 billion and an increase in short-term external debt (Appendix IX).

6. After being on the rise for most of the year, headline inflation has started to moderate but remains elevated and broad-based; inflation expectations remained well anchored. Helped by existing price controls and record spending on subsidies, inflation in Malaysia did not surge in tandem with global food and commodity prices. Headline inflation peaked at 4.7 percent in August, before moderating to 3.7 percent in February 2023. And while the relentless acceleration in core inflation since the beginning of 2022 appears to have paused in December, it remains high, amid a positive output gap and signs that the Phillips Curve may have steepened (see Appendix I). Inflation expectations based on consensus forecasts remain however well-anchored. The pass-through to inflation from ringgit depreciation has been mitigated by the food and fuel subsidies, the small proportion (10 percent) of imported goods in the CPI basket, and the limited capacity of firms to pass higher costs to consumers. On the other hand, USD invoicing is prevalent in Malaysia (about 80 percent of exports and imports in 2019), and large and persistent depreciation could materially affect inflation in the future, particularly after the planned transition from broad to targeted subsidies (Appendices I and VI).

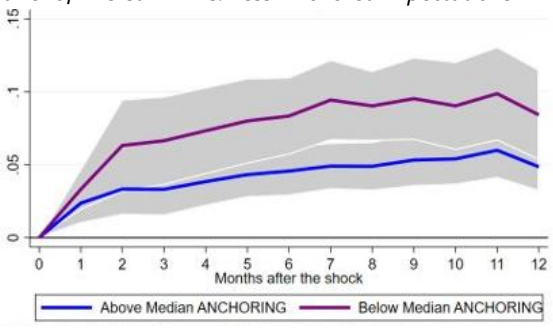


7. The 2022 Budget deficit target is estimated to have been met, as strong revenue performance from higher oil prices and the ongoing recovery offset increased spending on subsidies. With the headline deficit projected at 5.6 percent of GDP in 2022 vs. a deficit target of 6 percent and down from 6.3 percent in 2021, the fiscal impulse in 2022 is estimated to have been broadly neutral. Malaysia's oil-related revenues (including the doubling of the dividend from state oil company Petronas) and non-oil revenues overperformed due to much higher-than budgeted oil prices following the Ukraine war and the strong recovery. Total expenditure was higher than budgeted, mostly from significantly higher spending on subsidies. Federal government debt is projected to fall to 60.4 percent of GDP in 2022, driven by the jump in nominal GDP, remaining below the effective debt limit of 67.5 percent of GDP (Appendix II).

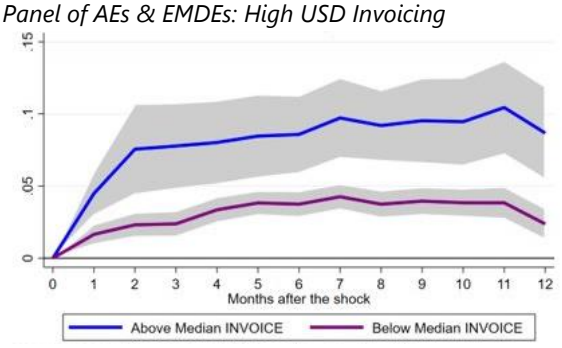
[3] Given that the authorities do not publish FXI data, staff used estimates of this year's FXI from Adler et al. (2021) and changes in reserves as a proxy for the assessment of the direction of FXI.

Malaysia: Exchange Rate Pass-Through Estimates

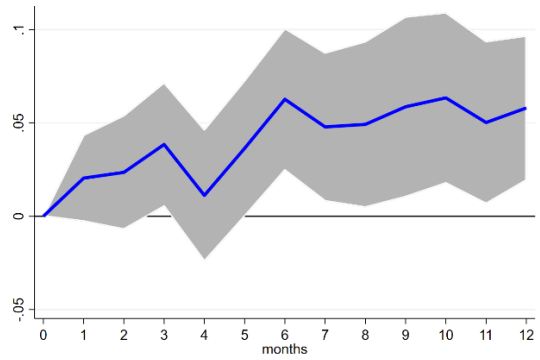
Panel of AEs & EMDEs: Less Anchored Expectations



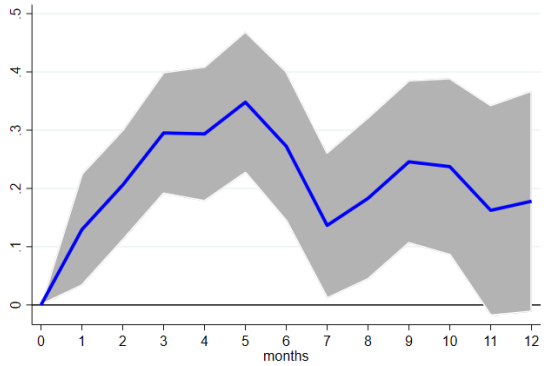
Panel of AEs & EMDEs: High USD Invoicing



Malaysia: Full Sample (1992m1-2021m12)



Malaysia: Sample Since 2015 (2015m1-2021m12)



Notes: the top two graphs show the response of headline CPI to a 1 percent increase (depreciation) in the local currency against USD among a panel of 45 advanced economies and emerging markets. The two groups in each case are defined by countries above/below above the median level of (top left panel) the degree to which inflation expectations are well anchored, or (top right panel) the share of imports that are invoiced in dollars. The shaded areas include one standard error above/below the central estimate. The bottom two graphs restrict the sample to just Malaysia. See Appendix I for full details of the estimations.
Source: IMF staff calculations.

8. The 2023 Budget is appropriately contractionary. It foresees a decline in the overall deficit from 5.6 percent of GDP in 2022 to 5.0 percent in 2023. The Budget promises continued and improved cash assistance to vulnerable households, ramping up development expenditures, and tax incentives to strategic industries (aerospace, electronics) and goals (green transition for instance through adoption of electrical vehicles, and reduction of carbon emissions; digitalization; food security). Though clearly stating no plans to currently re-instate the GST amid high food inflation and low wages, it introduces several progressive revenue measures such as a capital gains tax, luxury goods tax, excise duty on nicotine products, and higher tax rates for higher income individuals, but

Text Table. Malaysia: Key Fiscal Indicators
(In Percent of GDP)

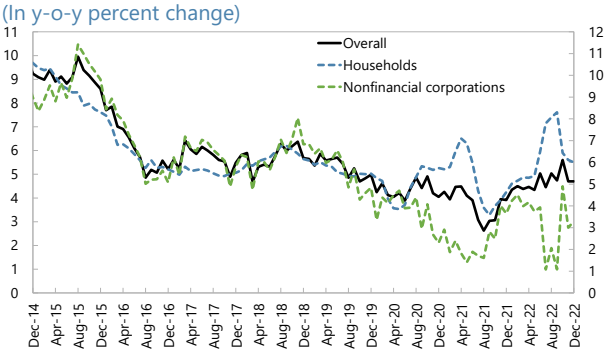
	2021	Est. 2022	Proj. 2023
Revenue and grants	15.1	16.5	15.1
of which oil-related revenues	2.8	4.6	3.4
Expenditure and net lending	21.4	22.1	20.0
of which COVID-related spending	2.4	1.7	0.0
of which subsidies	1.5	3.8	3.0
Overal balance	-6.3	-5.6	-5.0
Memorandum items			
Fiscal impulse	0.9	0.5	-1.5

also tax cuts for SMEs and lower- and middle-income households that overall are about revenue-neutral in 2023. Lower expenditure in 2023 reflects the expiry of the COVID fund and a declining—yet elevated—subsidy bill, driven by lower commodity prices, and limited energy price liberalization towards end-2023. The bulk of the subsidy reform is more likely to materialize in 2024, and to be fleshed out in the 2024 Budget. The budget reinforces the authorities' commitment to fiscal consolidation with a clearly stated deficit target of 3.2 percent of GDP in 2025, achieved through measures to gradually enhance revenue mobilization and reduce spending leakages, and a shift towards a targeted subsidy mechanism, without however any specificity on the measures, in terms of yields nor reform timeframes. The Budget also reiterated plans to develop a medium-term revenue strategy.

9. Monetary policy's gradual tightening path since May 2022 was paused in January and March 2023, and financial conditions have recently loosened. The BNM increased the overnight policy rate (OPR) four times since May by a total of 100 bps to 2.75 percent, to adjust the degree of accommodation as there is no longer need for historically low OPRs. The BNM highlighted in its November MPC statement that the rate hike was a pre-emptive adjustment to manage the risks of excessive demand fueling inflationary pressures. In its latest two statements, where the tightening cycle was unexpectedly paused, to allow an assessment of past rate hikes, the BNM reiterated its commitment to continue to calibrate the policy stance balancing price stability and sustainable growth concerns. Financial conditions tightened significantly during most of 2022, spurred largely by worries of continued aggressive Fed tightening, but have eased more recently as the USD weakened against the ringgit.

Malaysia: Bank Credit to Private Sector

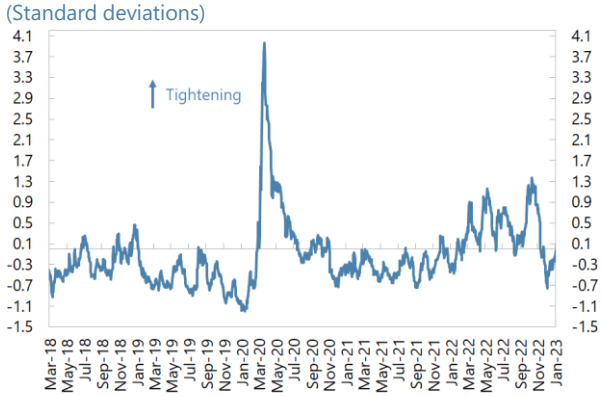
(In y-o-y percent change)



Note: The growth rates have been adjusted by staff to account for the re-classification of a non-bank to bank in April 2018.
Sources: IMF, *Integrated Monetary Database*; and IMF staff calculations.

Malaysia: Daily Financial Conditions Index

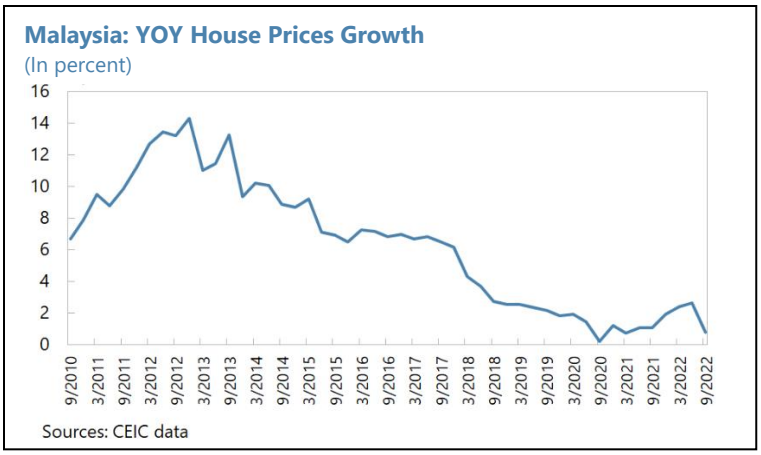
(Standard deviations)



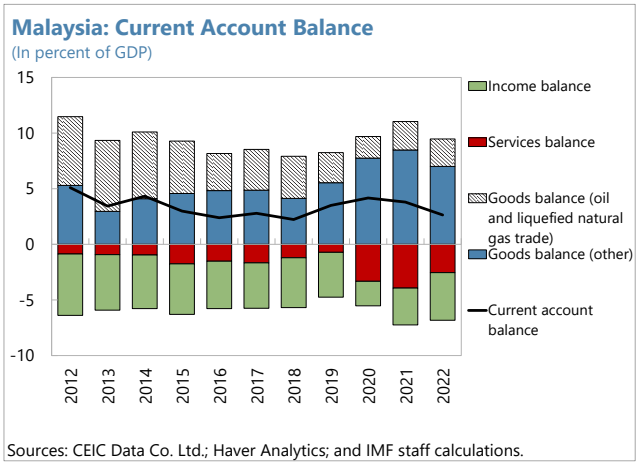
Sources: Bloomberg LP and IMF staff calculations.

10. The financial system continues to record healthy capital and liquidity positions, while the housing market recovery continues. The banking sector total capital ratio stood at 18.8 percent, with common equity tier 1 of 15.0 percent, well above minimum requirements. Banks rely on well-diversified deposit base, and liquidity coverage ratio was 154 percent as of Q4 2022. Asset quality continued to hold up, with nonperforming loans (NPL) at 1.7 percent of total loans in 2022Q4. The share of household debt under repayment assistance has declined significantly from 18.8 percent in December 2021 to 1.9 percent of outstanding banking system and development

financial institutions loans as of December 2022. In addition, the loan loss coverage ratio (including regulatory reserve) remained healthy at 118.2 percent in December-2022, while earnings continue to improve. The recovery of the banking system profitability continued, supported by a pick-up in lending activity and lower credit costs. The insurers and takaful operators (ITO) have strong capital adequacy ratio at 226 percent and with excess capital buffers above the regulatory minimum. The housing market continued to improve supported by the expiring home ownership campaign, the resumption of economic activities although price growth has been on a declining trend since almost a decade ago, the labor market recovery and the support measures for first-time home buyers. The Malaysian financial sector has limited direct exposure with troubled US and European banks and is well-equipped to navigate any potential increase in volatility and global risk aversion.



11. Malaysia's external position in 2022 is preliminarily assessed to be stronger than warranted by fundamentals and desired policies (Appendix III). The current account surplus declined to 2.6 percent of GDP in 2022, compared to 3.8 percent in the previous year. With the growth in imports, due to a rebound in domestic demand and a buildup of inventory buffers by firms to mitigate risks of supply chain disruptions, the goods balance slightly declined, as import growth outpaced export growth. The services balance also improved, following the reopening of the economy. The deterioration of the current account, however, was driven by a widening of the income deficit, due to increased outflows associated with direct investment income and outward remittance, which had slowed during the pandemic. Adjusting for both cyclical and country-specific temporary factors, Malaysia's residual current account gap is assessed in the range of 3-4 percent of GDP.[4] Low public healthcare expenditure, which is an indicator for weak social safety nets, and relatively looser fiscal policy in the rest of the world contributed to Malaysia's excess current account surplus.



12. Economic policies have been broadly consistent with past Fund advice. The authorities are anchoring fiscal policy on their medium-term consolidation objective. Monetary policy has been

[4] The assessment is preliminary pending a complete analysis in the forthcoming July 2023 External Sector Report.

data dependent and the BNM's initiation of the post-pandemic normalization cycle is broadly in line with past advice. The authorities continue to indicate their commitment to exchange rate flexibility as the first line of defense against external shocks. Steady progress is being made on structural reforms although the pandemic has laid bare pre-existing vulnerabilities, most notably weak social safety nets.

OUTLOOK: LOWER GROWTH AMID LINGERING INFLATIONARY PRESSURES ON THE HORIZON

13. Lower growth and elevated inflation define the near-term outlook. Growth is projected to moderate to 4.5 percent in 2023 largely reflecting the consequence of global external headwinds. The output gap is estimated to have turned positive in 2022, driven primarily by strong domestic demand (Figure 1 Panel 2). At 3.4 percent in 2022, inflation is projected to remain elevated at 3.3 percent in 2023, with likely persistence in core inflation, amid a positive output gap, and evidence of a build-up of demand-side pressures (Appendix I).

14. The outlook is uncertain; risks are tilted to the downside and mostly external. (Appendix IV):

- **External risks**: include the possibility of an abrupt global slowdown or recession, including in Malaysia's largest trading partners, with an associated spike in global risk premia, capital outflows and sudden stop risks. Monetary policy miscalibration could lead to a new cycle of aggressive tightening of monetary policy by major central banks leading to rapidly tightening financial conditions with implications for domestic balance sheets. As a commodity exporter, Malaysia is also vulnerable to commodity price shocks and associated volatility. Geo-economic fragmentation could also negatively affect Malaysia's growth prospects (Appendix V).

- **Domestic risks**. Fiscal risks from contingent liabilities could materialize and could necessitate additional measures to ensure medium-term fiscal sustainability.[5] The new government also faces the challenge of managing a diverse coalition with competing agendas.

Authorities' Views

15. The authorities broadly agreed with staff's assessment of the outlook and risks. They see growth between 4 and 5 percent in 2023, reflecting strong domestic demand – supported by strong economic fundamentals, improvements in employment prospects, policy support for vulnerable households and resurgent tourism-related activities – as well as continued capital spending in manufacturing and services sectors, against a backdrop of moderate external demand. The authorities expect inflation in 2023 to be between 2.8 percent and 3.8 percent in 2023, reflecting stable commodity prices which would be partly offset by persistence in core inflation. The authorities remain vigilant on potential upside risks from fluctuations in exchange rates and other supply-related factors. The authorities do not consider the labor market to be tight (while

[5] See Appendix II.

acknowledging that it has strengthened), pointing to still-elevated unemployment and forthcoming labor supply among other metrics,[6] and expect the negative output gap to close in mid-2023 and turn positive in the second half of the year.

16. The authorities also consider the primary risks to the outlook to be external. They see downside risks from weaker global growth and tighter monetary policy by major central banks in response to prolonged global inflation. Volatility in global financial conditions, a prolonged Ukraine conflict, and/or continued supply chain disruption would also weigh on their central growth forecast. With respect to geo-economic fragmentation, the authorities primarily focused on potential gains in mild scenarios in which Malaysia benefits from trade diversion and 'China Plus One' strategies, pointing to recent investment inflows from multinationals. Nonetheless, the authorities also recognized the elevated uncertainty associated with potential fragmentation risks and highlighted recent policy adaptations to increasingly attract high value-added, complex, and digital-sector production to Malaysia. Like in previous consultations, the authorities continue to express reservations about the EBA model given its large unexplained residual.

POLICIES TO TIGHTEN WHILE MANAGING TRADE-OFFS AND DOWNSIDE RISKS

A. Fiscal Policy: Time to Pivot Toward Sustainability, Rebuild Buffers, and Lay the Foundations for a Long Overdue Subsidy Reform

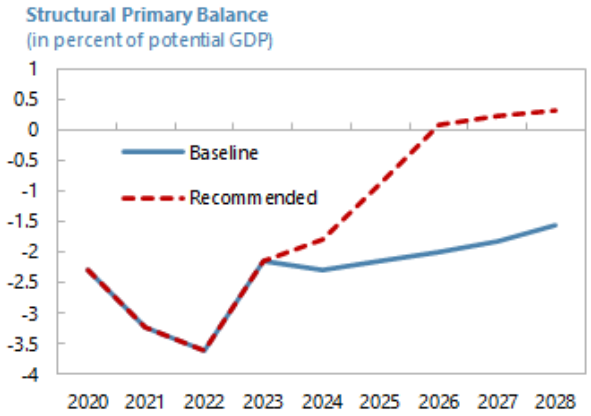
17. A gradual and credible medium-term fiscal consolidation is warranted to put debt on a firm downward path. Limited fiscal buffers, firmly positive output gaps projected in the next few years, and large contingent liabilities support the need for Malaysia to rest on the recovery to rebuild a significant buffer against the debt limit (Appendix II). Staff recommended path validates the 2023 Budget consolidation trajectory until 2025. It involves a more significant consolidation over the medium term, that would put debt on a firm downward path. While staff welcome the progressive changes in income tax rates, some of the proposed measures in the pipeline might not be able to generate the needed revenue streams. Achieving the latter requires identifying further high-quality and durable revenue measures, which composition and yields should be grounded by a medium-term revenue strategy as well as through savings from transitioning to targeted subsidies. The gradual consolidation path would help safeguard the recovery in the near term against the backdrop of an uncertain global outlook.

18. The authorities should finalize the Fiscal Responsibility Act (FRA), which constitutes an important cornerstone to enhancing fiscal sustainability, preserving macroeconomic stability and strengthening governance. The draft is now scheduled to be tabled in parliament by Q3 2023 following delays due to the pandemic and more recently to the elections. The key objectives include

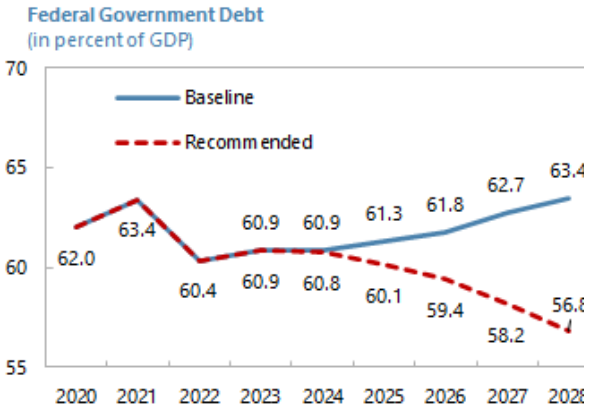
[6] BNM Economic and Monetary Review 2022, Analytical Approaches to Assessing Labor Market Conditions and Implications to Monetary Policy.

prudent debt, sustainable fiscal balance, and effective fiscal risk management, including the strengthening of the governance of government-linked companies. It incorporates most elements of a modern principles-based fiscal responsibility law (text chart) with adequate transparency provisions, including several new reports such as mid-year budget performance report and a tax expenditure statement. It is also consistent with previous Fund advice on incorporating provisions of exceptional circumstances/shocks justifying temporary deviations from targets, following ad hoc adjustments to the debt limit during the pandemic. It also appropriately includes provisions to publish a comprehensive fiscal risk statement, and to ensure a rigorous process for granting and monitoring of government guarantees, with the aim of decreasing the government's exposure to such guarantees.

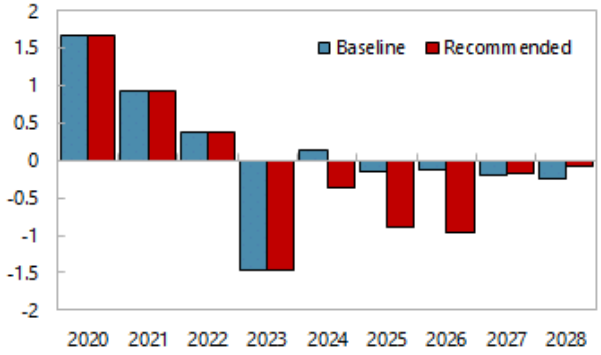
Malaysia: Fiscal Policy: Baseline and Proposed Staff Advice[1]



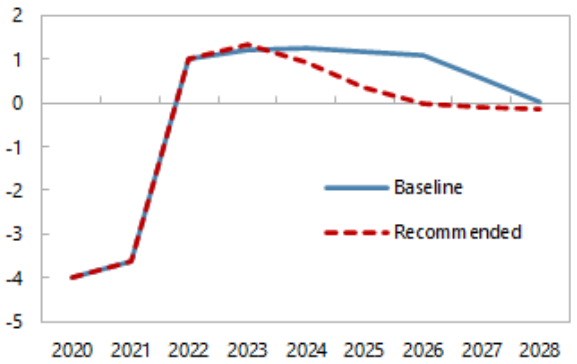
Sources: IMF staff calculations.



Sources: IMF staff calulcations.

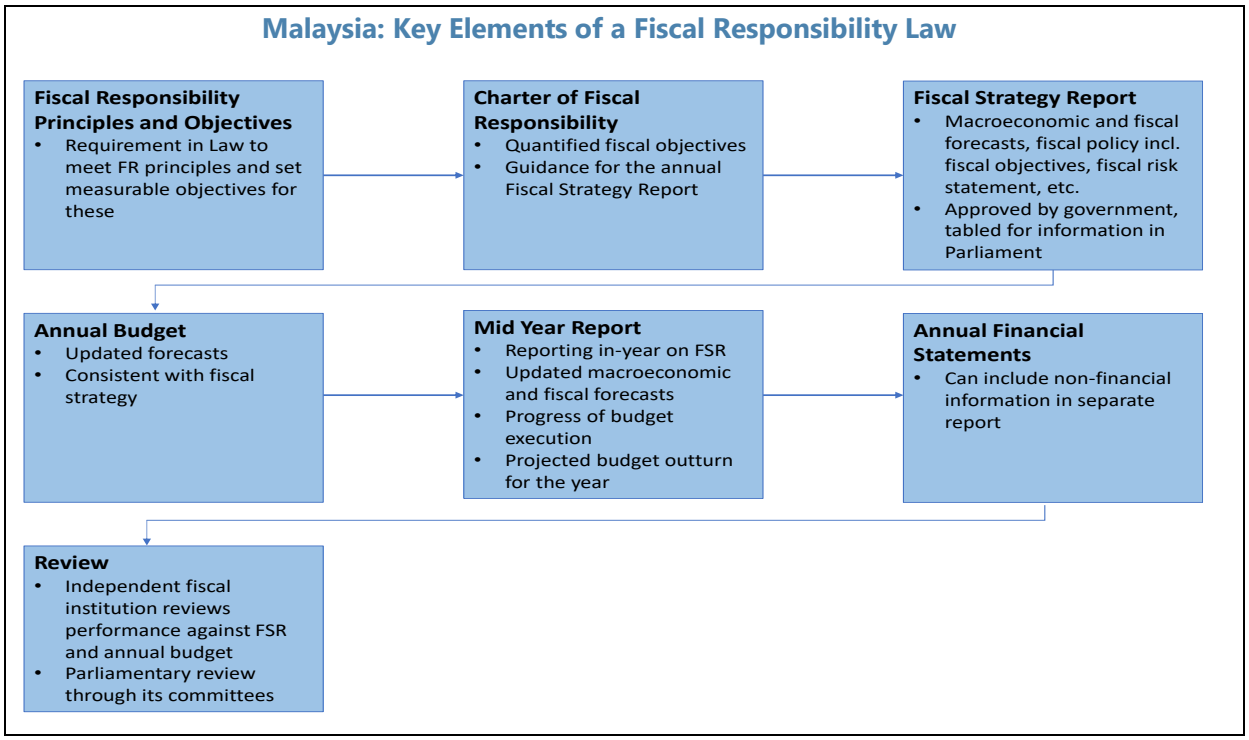


Sources: IMF staff calculations.

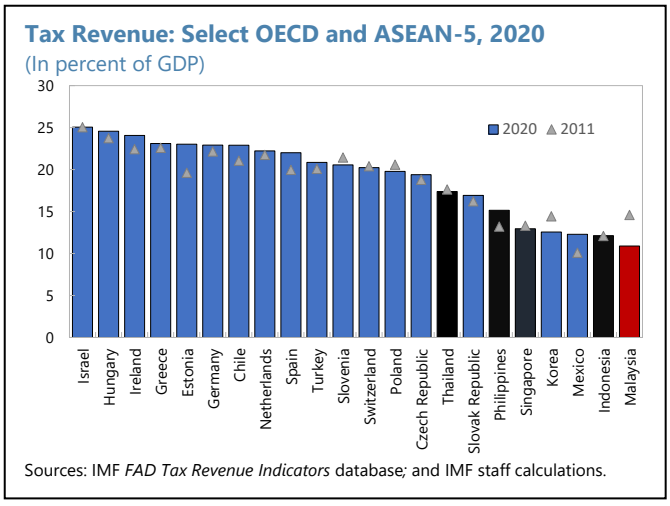


Sources: IMF staff calculations.

[1] Staff's baseline projections are guided by the team's best understanding of the authorities' policy intentions articulated in the 2023 Budget, reflect a gradual decline in the fiscal deficit over the medium term and is passive in the sense that no specific reform measures are incorporated.

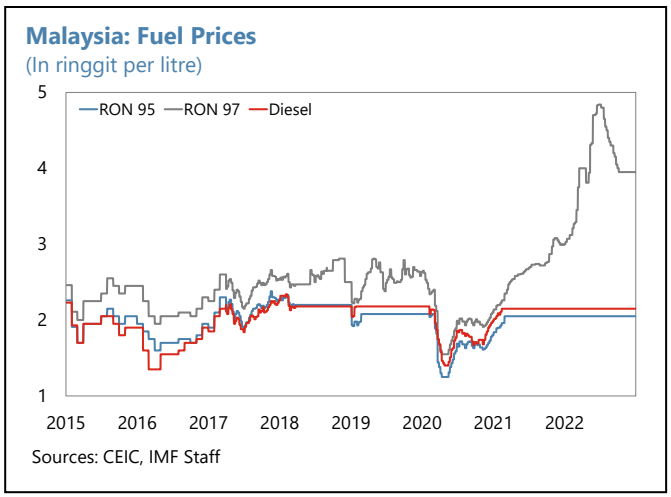


19. Developing a medium-term revenue strategy (MTRS) remains an urgent priority for Malaysia. At about 11 percent of GDP in 2021, Malaysia's tax revenues are the lowest among its ASEAN-5 and OECD peers and have been declining. The 2023 Budget committed to improving revenue collection by minimizing leakages and enhancing tax compliance, guided by the adoption of a MTRS, however it lacks specific medium-term revenue-enhancing measures and a timeline for the MTRS. With no plans to reinstate the GST this year, the preparatory work for its reintroduction should be promptly initiated to lay the ground for effectively activating this indispensable source of revenue, consistent with staff's call for enacting high-quality and durable measures (paragraph 17). The government should consider the introduction of a carbon tax, which based on staff estimates could generate 1 to 3 percent of GDP per year in fiscal revenues by 2030. Staff urge the authorities to prioritize the development of a MTRS including the necessary quantitative underlying work in determining gaps and identifying goals, in light of Malaysia's significant spending needs under the 12MP and its ambition to achieve high income status. In that respect, the authorities' request for technical assistance from the Fund on the MTRS is a very encouraging first step and bodes well with Capacity Development (CD)-surveillance integration.



Sources: IMF *FAD Tax Revenue Indicators* database; and IMF staff calculations.

20. A phased and transparently communicated subsidy reform is long overdue in Malaysia, alongside social safety nets (SSN) reforms (Appendix VI). Energy subsidy bills in Malaysia have often constituted a large share of government spending, reaching over 20 percent of current expenditures in periods of high commodity prices. Drawing on past country reform experiences, subsidy reform should be: (i) part of a *comprehensive reform plan* with clear long-term objectives, on which stakeholders are consulted to ensure buy-in; (ii) *implemented gradually both across time and products optimally starting with those with lower weight in consumption baskets of low-income consumers (such as Diesel),* (iii) including through an automatic pricing mechanism, which in Malaysia is instead used to calculate needed subsidies, to depoliticize the setting of energy prices, (iv) accompanied by *mitigating cash transfers targeted at low-income households for instance through the established BKM cash assistance program* coupled with needed SSN reform in Malaysia;[7] *(v) mindful of country circumstances*, with moderating oil prices and solid, though weaker growth considered more favorable conditions for successful subsidy reform; and (vi) underpinned by a *far-reaching and transparent communication strategy* that is clear about the costs of subsidies and the benefits of reform, with that implemented successfully during the 2014 subsidy reform in Malaysia serving as a starting point.



Authorities' Views

21. The authorities re-affirmed their commitment to gradual fiscal consolidation and to implementing fiscal reforms. They agreed that the medium-term deficit target of 3.2 percent of GDP in 2025 should be achieved mainly through revenue measures (1.1 pp of GDP) and through savings from the planned subsidy reform (0.7 pp of GDP). Revenue measures in the pipeline include planned enhancements of the current sales and services tax (SST), introduction of an income tax on the digital economy, and building on past efforts such as the introduction of the tax identification number, continued improvements in tax administration, and taxpayers' awareness and compliance. Additional revenue mobilization from the capital gains tax, luxury goods tax, and from introducing a MTRS could be realized on top of what is assumed in the consolidation path. Reinstating an improved version of GST, which the authorities agree is superior to the SST, as well as introducing a carbon tax, firmly remain in the pipeline but are more likely in the medium term to ensure effective and well-communicated implementation. In that respect, the authorities are keen on developing a MTRS, on which work is ongoing, that would ensure the proper composition, sequencing, and calibration of short- and longer-term revenue measures against development spending needs.

[7] See Appendix VII of CR 21/53 for an assessment of social protection in Malaysia. Main findings are that benefits are low, coverage is insufficient, and with a non-negligible share accruing to households in higher income deciles.

Subsidy reform is expected to be initiated late 2023 primarily through the ongoing phasing out of electricity subsidies and gradual liberalization of select fuel prices, with further details to be unveiled in the 2024 Budget. Following public consultations with stakeholders, the authorities are mindful of the need for (i) gradualism to address its potential inflationary effect, (ii) clarity on the use of associated savings, and (iii) complementing the reform with needed social safety net enhancements and compensatory transfers to low-income and vulnerable households.

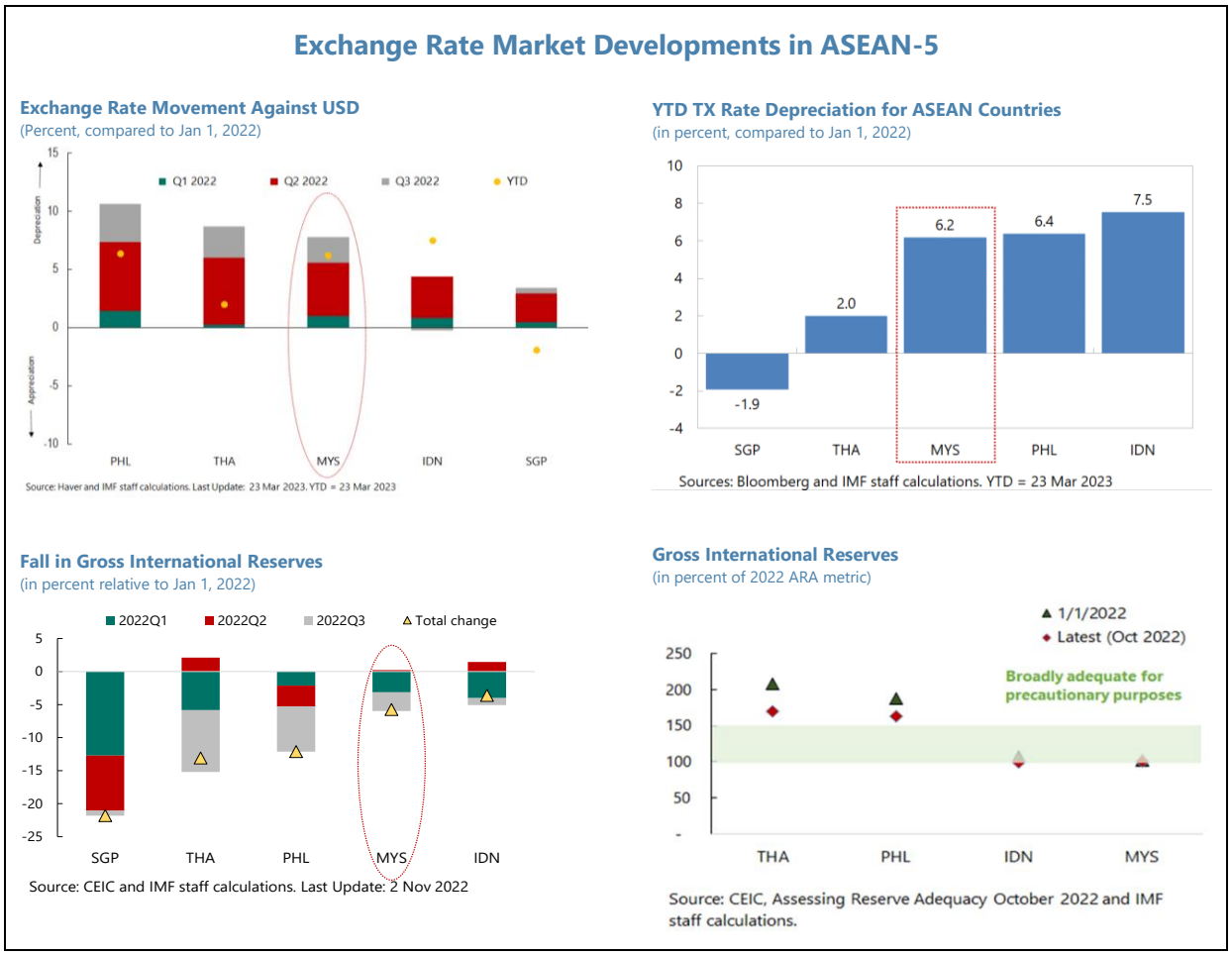
B. Monetary and Exchange Rate Policies: Further Policy Tightening and Raising the Bar on Communication Given High Uncertainty

22. Monetary policy should tighten further to bring the stance to neutral and BNM should clearly communicate the rationale for its policy decisions amid high uncertainty. Staff estimates of the neutral real rate suggest that monetary policy currently remains accommodative. The still elevated core inflation, amid a positive output gap, and evidence of a build-up in demand-side pressures, suggest the need for monetary policy to shift to a neutral stance now to keep inflation contained and expectations anchored. The magnitude and pace of subsequent tightening should remain data dependent given the high uncertainty.[8] Staff analysis suggests that the short-term output costs of monetary policy tightening (i.e., the sacrifice ratio) are low in Malaysia due in part to the high openness of the economy. Staff analysis also suggests that monetary policy transmission could be weakened and further delayed (longer lags) in the environment of high inflation, thus requiring early action (Appendix VII). Such tightening in the face of upside risks to inflation should be clearly communicated with particular attention to the uncertainties influencing the outlook and how these uncertainties are incorporated into policy decisions. This would minimize undue market volatility and help markets achieve a better comprehension of the BNM's policy objectives and the rationale for its policy decisions.

23. The exchange rate should continue to serve as a shock absorber. FX intervention (FXI) is not a substitute for needed policy adjustment and should not be used to lean against exchange rate pressures that are driven by fundamentals. That said, there is a role for FXI as needed to address disorderly market conditions (DMC) and to respond to large and relevant shocks when well-identified and costly frictions are present, including as these dominate the economic benefits of letting the exchange rate remain as the sole shock absorber and may themselves give rise to DMC (see paragraphs 33-34). Frictions-based FXI could be used to: (1) address premia from arbitrage frictions in shallow FX markets; (2) counter financial stability risks from FX mismatches; and (3) preserve price stability when exchange rate changes risk de-anchoring inflation expectations. Staff analysis suggests that with the exception of a somewhat shallow market (as suggested by the UIP premium and bid-ask spread) (1), there is no material evidence of frictions of the types in (2) and (3) in Malaysia. Persistent use of FX sales is also costly in terms of impeding FX market development, dampening policy credibility, and depleting reserves. In that respect, opportunistic reserve

[8] Although the ringgit has started regaining its strength, its rapid depreciation over several months can still entail large inflationary pressures given that the pass-through from depreciation to prices may be larger and faster than for appreciations (see Appendix I).

accumulation would be appropriate during risk-on episodes, given the lower reserve coverage (paragraph 5 and text chart below), but this should not interfere with the needed real exchange rate appreciation over the medium term, given that Malaysia's external position is preliminarily assessed to be stronger than warranted by fundamentals. The BNM's ongoing steps to liberalize and deepen the FX market are welcome. In this context, existing CFMs should be gradually phased out with due regard to market conditions.[9] Publication of FXI data (with an appropriate lag to guard against market sensitivities) could enhance communication and strengthen the commitment to the monetary policy framework.



Authorities' Views

24. The BNM stressed its commitment to price stability and a flexible exchange rate regime. The BNM concurred with the staff assessment that the monetary policy stance remains accommodative and that inflation expectations are well-anchored. The BNM noted that a gradual and measured approach to calibrating monetary policy is designed to avoid overtightening amid closely watched receding inflation albeit with some persistence and moderating global growth and

[9] See IMF Country Report 20/57 and CR 22/126 for a fuller discussion of the measures assessed as CFMs.

is carefully communicated to market participants. The BNM did not see financial stability risks to monetary policy tightening based on stress test results. However, its estimate of the sacrifice ratio was larger compared to staff and could be higher in case of nonlinearity in the Phillips curve. The BNM highlighted that its ongoing work on monetary policy transmission suggests an important role for asset price and interest rate channels. While a flexible exchange rate continues to play the role of shock absorber, the BNM views occasional FX interventions aiming to smooth excessive volatility in the ringgit as necessary. The BNM also argued that some of the measures that staff classify as CFMs have contributed to strengthen onshore intermediation and remain critical for the development and resilience of the domestic financial market, consistent with the mandate of the BNM.

25. The authorities view BNM's FX reserves to be adequate and expect external debt to remain manageable. They noted that BNM's FX reserves declined in the face of external pressures last year due to Fed's policy tightening and outflow of portfolio investment, but recovered in the latter part of the year, as external pressures eased. The BNM also stated that its short forward position, while being above historical levels, does not pose any significant risks, and that FX swaps were used by the banks to manage ringgit liquidity needs. The authorities noted that Malaysia's external debt remains sustainable due to multiple mitigating factors, including (i) large share of ringgit-denominated external debt (one-third of total external debt); (ii) about two-third of FX-denominated external debt being subject to prudential requirements; and (iii) large share of medium-term debt. They noted that while short-term external debt had increased, it reflected banks' liquidity operations and interbank borrowings which are governed by prudential frameworks, and did not pose any major risks to debt sustainability.

C. Financial Sector Policies: Enhancing Resilience Amid Rapidly Evolving New Risks and Changing Landscape

26. The financial system appears resilient, with systemic financial risks contained. BNM's stress testing, incorporating shocks from a tightening in global and domestic financial conditions, ringgit depreciation and protracted macroeconomic stresses show that banks would remain able to support the economy, with post-shock aggregate capital ratios at end-2023 remaining comfortably above regulatory minimum levels. Non-bank financial institutions (NBFIs), including insurers and takaful operators are expected to remain resilient to potential impact of increased financial market volatility despite sizeable exposures to market risks from their bond and equity holdings, based on BNM stress testing. The BNM should maintain strong supervision of lending standards and continue to enhance monitoring of risks build-up, including due to higher interest rates amid weakening of growth momentum, as well as potential spillovers from financial stress in China's property sector.[10] Also, the BNM should continue to carefully monitor profitability of insurance and takaful operators (ITOs), as well as potential new credit risk related to the growing buy-now-pay-later (BNPL) schemes.

[10] Banks' exposures to Chinese developers are however currently small (0.1 percent of total financial institutions' exposures to businesses as of 2022Q4).

27. Close monitoring of household balance sheets is warranted given rising interest rates and slight erosion in financial assets. Though still high, household debt is now closer to pre-pandemic levels at 81.2 percent of GDP as of 2022Q4 (2019Q4: 82.8), about 60 percent of which in housing loans.[11] About 78 percent outstanding of household debt, and almost all mortgage debt, is at floating rates and thus will be sensitive to rate hikes. Overall median borrower debt service ratios (DSR) for outstanding loans stand at 37 percent. Despite a 100bps increase in OPR since May 2022, median DSR for overall household borrowers only increased marginally amid favorable income and labor market conditions. The authorities should also continue the development of strong preventive ex ante measures (such as advice to debtors and informal debt restructuring) and strong personal debt enforcement tools, as well as addressing ex post debt, including personal bankruptcy liquidation and bankruptcy repayment plans to support orderly deleveraging.

28. The authorities' focus on microprudential supervision could be complemented by expanding the range of macroprudential tools and imposing future affordability analysis at loan origination, to smooth policy trade-offs and enhance the ability to mitigate financial stability risks. The BNM maintains strong microprudential supervision of lending standards in financial institutions through for instance an enhanced framework for risk-based pricing of loans as well as prudent underwriting and affordability assessments. However, while there are no signs of pressures from the housing market, rapid changes in the financial cycle could arise, and staff recommend pre-emptively expanding the toolkit with macro-prudential tools that can be swiftly and transparently adjusted to mitigate emerging risks. The BNM had introduced loan-to-value (LTV) caps for the third and above outstanding housing loans for individuals and for all housing loans for non-individuals as well as prudential measures that apply to all housing loans such as higher risk-weights for loans with LTV levels of 90 percent and above. These can be complemented by sector-wide LTVs on first and second properties and debt-service-to-income limits for all income groups to prevent potential risks given the sizeable share of floating rate loans and rising interest rates. Broadening the macroprudential toolkit, including with tools that could help tame the price-financial stability trade-offs as rate hikes pose risks in a context of significant floating rate mortgages, and thereby allow monetary policy to deal with price stability, especially given suggestive evidence on the asset price channel being relatively muted in Malaysia (Appendix VII). Banks could also impose a requirement to stress test borrowers' affordability with higher interest rates at loan origination to dampen further growth of household debt.

29. Corporate balance sheets are also susceptible to rising interest rates as well as exchange rate depreciation and global fragmentation risks, which call for further strengthening of corporate surveillance. Interest coverage ratios for the corporate sector are above pre-pandemic levels and liquidity ratios remain strong as of 2022Q2. However, labor shortages (in construction, agriculture, and manufacturing) as well as rising input costs could weigh on the financial condition of the corporate sector. Corporates with large external borrowings (about 90 percent of corporates' external borrowings, excluding intercompany loans and trade credit exposures) are either naturally or financially hedged. Those more susceptible to exchange rate

[11] BNM Financial Stability Review-Second Half 2022.

volatility have minimal domestic debt and thus pose limited direct risk to financial stability (Appendix IX). Moreover, with global fragilities and geo-economic fragmentation risks (Appendix V), and Malaysia's high integration with global value chain trade, staff recommend that the BNM continue to enhance its existing corporate surveillance by looking at additional balance sheet risk indicators, including susceptibility to abrupt shifts in supply chains.

30. The authorities are encouraged to continue to build on the important steps to enhance the AML/CFT framework. In 2020, the authorities conducted the fourth iteration of their National Risk Assessment, which identified money laundering trends relating to beneficial ownership and domestic politically-exposed-persons (PEP)s. They have made some progress in their ongoing legislative initiatives and efforts to improve made in compliance with requirements related to PEPs through policy documents issued by BNM. The Companies (Amendment) Bill, an update to the 2016 Companies Act which is the legal basis for the country's beneficial ownership transparency framework, is currently being drafted, and is expected to be passed by Q3 2023. The amended Companies Act should be line with the beneficial ownership transparency requirements in the revised Financial Action Task Force standards (Recommendation 24) enacted in March 2022. Staff urge further action on the full implementation of the beneficiary ownership (BO) guideline. Strengthening beneficial ownership transparency can also support ongoing efforts to enhance tax compliance.[12] The BNM should continue expanding its collaboration with Inland Revenue Board on the combatting tax related offences to incorporate the sharing of beneficial ownership information. Further strengthening of ongoing measures to address areas identified in the National Risk Assessment including BO and domestic PEPs and continuing to monitor the implementation of requirements consistently with the FATF standards remain the key priorities. Furthermore, given that the role of professional enablers was identified as a key AML/CFT challenge, staff strongly encourage the authorities to volunteer for the assessment of facilitation of transnational corruption in the 2024 Article IV consultation.

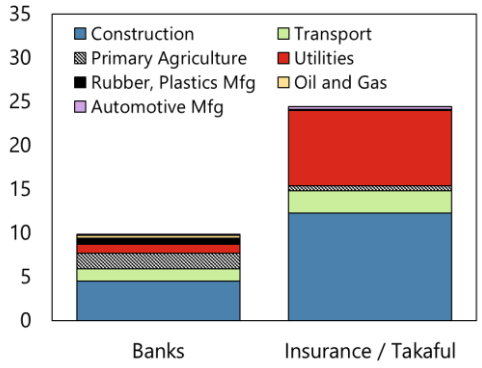
31. Malaysian financial institutions have sizable assets that could be exposed to climate-related physical and transition risks and achieving the country's emission targets will require billions of dollars of investments and significant private funding (Appendix X). Malaysia faces significant climate risks, particularly flooding, cyclones and chronic heat stress. At the same time, transition towards net zero target by 2050, will undoubtedly have significant economic implications, including for the financial sector, given large share of carbon-intensive sectors (BNM's Financial Sector Blueprint 2022-2026). In 2022, financial institutions started reporting their exposures in line with the Climate Change and Principle-based Taxonomy (CCPT), which aims to facilitate classification of economic activities, improve quality and coverage of reporting. Staff also welcome the planned Climate Risk Stress Testing exercise in 2024, to provide an assessment of the resilience of financial institutions, including for non-banks, to both physical and transition risks (Appendix X).

[12] See Funds Guidance on Beneficial Ownership Transparency: Berkhout, Richard, and Fernando, Francisca, eds. 2022. Unmasking Control: A Guide to Beneficial Ownership Transparency. Washington, DC: International Monetary Fund.

Authorities' Views

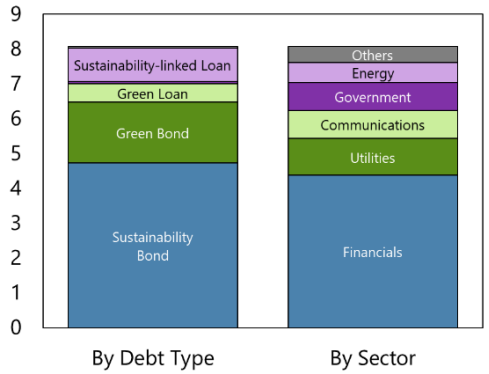
32. The authorities broadly agree with staff assessment of financial stability and emphasized that the financial sector remains sound. Both banks and NBFIs have strong buffers, with limited risks stemming from the NBFIs. Banks' asset quality has turned out better than expected, and provisions remain adequate. The authorities noted that household debt remains elevated and low-income households may have weak buffers amid earlier EPF withdrawals. However, the share of debt exposures held by low-income households in total bank loans is relatively small. Despite elevated credit risks in certain sectors, the strong recovery in the economy is a mitigating factor and the financial sector has enough buffer to absorb sizable shocks and remains resilient. The authorities view the current macro prudential toolkit to be appropriate with an ongoing focus on ensuring effective operational arrangements. The BNM stressed that direct exposures to troubled US and European banks are limited, and that the financial sector is well-equipped to navigate any potential associated increase in volatility and global risk aversion. The BNM, in coordination with other agencies, continues work to ensure financial stability and building foundation for financial sector preparedness for managing green transition, including implementation of CCPT, development of disclosure guidelines and climate stress test scheduled in 2024.

Malaysia: Exposures of FIs to Sectors Potentially Exposed to Climate Change
(In percent of total loans / assets)



Source: Bank Negara Malaysia, IMF Staff Calculations. Notes: For Banks, loan exposures are shown, as of June 2022 . For Insurance / Takaful, total asset exposures are shown, as of 2019.

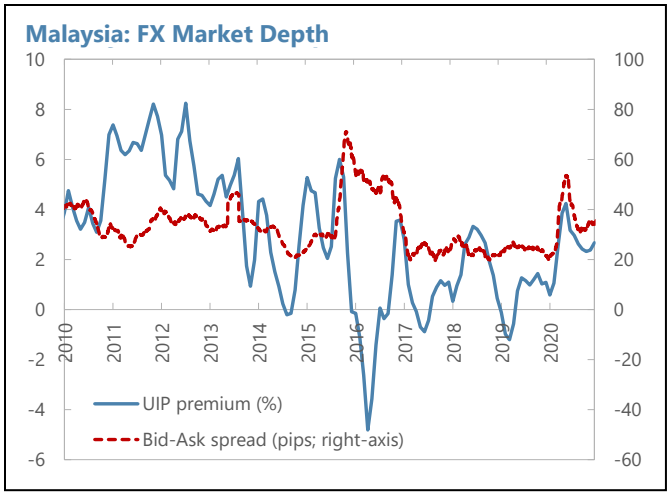
Malaysia: Sustainable Debt Issuance
(In billions of US dollars, cumulative from 2017)



Source: BloombergNEF, IMF Staff Calculations. Notes: For issuances by debt type, social bond issuances are denoted in **gray** ($47 million), sustainability-linked bond issuances are denoted in **purple** ($71 million).

D. Policies in Downside Risk Scenarios

33. In a global environment rife with downside risks, the authorities should have contingency policy plans. Two adverse scenarios tailored to Malaysia's characteristics (including shallow FX markets and a positive UIP premium) and initial conditions (Appendix VIII) are considered: scenario-1, a risk-off shock generated by a protracted slowdown in China and scenario 2, a stagflationary shock in the US.



34. A coordinated and integrated approach to monetary, fiscal, and exchange rate policies to respond to such downside shocks can help alleviate policy trade-offs. Staff's analysis finds FXI can provide additional space for monetary policy to spur domestic demand in scenario-1 and can help limit the interest rate hike necessary to contain inflation and limit ringgit depreciation, thereby reducing the decline in output in scenario-2.[13] Fiscal policy is also shown to play a complementary role to monetary and exchange rate policy, if deployed in a coordinated manner. In this regard, the analysis also finds that the removal of generalized subsidies when energy prices decline would limit the inflationary impact of such a policy change. The ongoing collaborative BNM-Fund work on the operationalization of the Integrated Policy Framework (IPF) underscores the benefits of integrating CD and surveillance work.

Authorities' Views

35. The authorities highlighted the increasing transaction volumes and generally smooth functioning of the domestic FX market. Overall, liquidity is assessed to be strong, with the flexible exchange rate continuing to play the role of a shock absorber. However, the BNM intervenes occasionally, and largely in a two-sided manner, to facilitate price discovery during periods of excessive volatility. On depth of FX markets, they highlighted the many steps taken to liberalize FX policy and deepen the market.[14] The authorities appreciated the flexibility in the use of FXI offered by the frictions-based approach of the IPF, in contrast to the past Fund advice that limited the use of FXI to addressing disorderly market conditions. They also noted that further refinements to the Quantitative IPF model, particularly its fiscal and commodities block, would allow it to better capture the peculiarities of the Malaysian economy and help improve its efficacy in studying alternative policy mix.

E. Structural Policies: Implementation of the 12MP, Amid External Headwinds and Narrow Policy Space

36. Coordinated implementation of policies under the 12MP umbrella are needed to minimize residual scarring from the pandemic, boost productivity, and address inequality.[15]

[13] Our analysis suggests that in the absence of risk-off shocks, the effectiveness of FXI would likely be diminished.

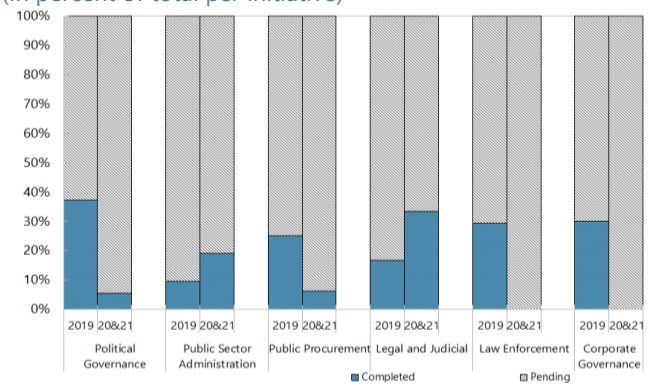
[14] See CR 22/126.

[15] Staff advice on structural issues, including labor market policies, remains guided by the analytical work done in the 2022 Article IV Consultation that covered economic scarring, distributional issues and climate mitigation and adaptation. See CR 22/126.

These include, reforming labor markets, elevating the level of education, encouraging broad-based productivity drivers, boosting the digital economy and pushing its climate policies including in the financial sector. Active labor market policies to upskill workers dislocated by the pandemic could incentivize movement from informal to formal employment, thus facilitate reallocation of resources and limit scarring. Staff recommend upgrading the social protection system to support inclusive recovery, including expanding its coverage, addressing its fragmentation, and raising benefits to adequate levels, which would support external rebalancing given high private savings. This would go hand in hand with the planned subsidy reform and targeted cash transfers to vulnerable segments of the population. Digitalization remains an important pillar of the authorities' financial sector development strategy. Improving digital financial literacy while taking into account cybersecurity, data privacy, and financial integrity issues would complement efforts toward a wider adoption of digital financial service in fostering sustainable financial inclusion consistently with the BNM's Financial Sector Blueprint (2022-2026) strategy. Full and successful delivery of the measures outlined in the 12MP could raise medium-term growth above the staff baseline.

37. Progress on implementing anti-corruption and governance reforms has stalled, and it is critical to reinvigorate the reform momentum under the new government's pledge to combat corruption. Around 53 percent of the initiatives outlined in the 2019–2023 National Anti-Corruption Plan (NACP) had been implemented across 6 priority areas as of end-December 2022. Most of the progress was achieved in 2019, and much less so in the pandemic years. Passing the FRA will be a major first step in anchoring in legislation key fiscal governance reforms. The authorities should promptly reinvigorate the implementation and legislation of the NACP strategies to rekindle consumer and investor confidence and to underpin sustainable economic growth, given synergies as the payoff of structural reforms tend to be larger when governance is strong.[16] Priority should be given to reforming public procurement, to enhance its efficiency and transparency and thus maximize the return on the planned increase in public investment as in the 12MP, and to ensuring the operational independence of anti-corruption institutions. In that respect, the 2023 Budget focus on reforming government procurement including through a call for a prompt enactment of the 2019 Government Procurement Act, is very welcome.

Malaysia: Progress on Implementation of NACP Measures
(In percent of total per initiative)



Sources: "2020 and 2021 Progress Report on the National Anti-Corruption Plan (NACP) 2019-2023"

Authorities' Views

38. A mid-term review of the 12MP is expected to be tabled in parliament in October this year. On climate, their view is that the energy crisis in 2022 heightened the need to accelerate the energy transition, and in that respect Bursa Malaysia launched a voluntary carbon exchange market in Dec 2022. Malaysia is also positioning itself as a hub for offshore carbon capture and storage,

[16] See October 2019 World Economic Outlook, Chapter 3.

aligned with the National Energy Policy, 2022 – 2040, which serves as the foundation for the ongoing energy transition aimed at achieving Low Carbon Nation Aspiration by 2040 in line with 12MP. On social protection, the authorities acknowledged the need for further work to address the system's shortcomings and highlighted the peculiarities of Malaysia's pension system that allowed significant withdrawals during and after the pandemic. The authorities remain focused on the need to raise labor productivity, targeting annual labor productivity growth per worker under the 12 MP that is 2.5 percent higher than under its predecessor. Upgrading school infrastructure is a feature of the MADANI reform agenda, alongside further training for teachers on virtual instruction and audits of online classrooms to maintain standards.

39. The authorities continue to emphasize their commitment to further enhancing governance and strengthening anti-corruption institutions. They expect about 90 percent of the initiatives laid out in the NACP to be completed by end-2023, and an updated progress report is expected to be published by Q3 2023. Out of the important initiatives under the preview of the Malaysia Anti-Corruption Commission (MACC), continued progress has been achieved on the goal to make it mandatory for public sector institutions to develop Organizational Anti-Corruption Plans through dedicated educational workshops. Work is ongoing on further improving the code of ethics governing asset declaration requirements for Administrative Members and on developing a code of ethics for asset declarations by Members of Parliament as well as on strengthening both the 2009 Witness Protection Act and the 2011 Whistle Blower Protection Act. While there is high-level political support for developing a new NACP as a continuation of the current one, there are thus far no concrete plans or actions on that front.

STAFF APPRAISAL

40. Malaysia registered a strong post-pandemic recovery in 2022. After a modest recovery in 2021, growth rebounded strongly in 2022 driven by pent-up domestic demand and resilient export performance, following the re-opening of the economy in April 2022. Malaysia's 2022 external position is preliminarily assessed to be stronger than warranted by fundamentals and desired policies.

41. Downside risks, mostly external, cloud the near-term outlook. External risks include the possibility of an abrupt global slowdown or recession, with an associated spike in global risk premia, capital outflows and sudden stop risks. Geo-economic fragmentation and geopolitical tensions resulting in a reconfiguration of trade, supply disruptions, and rising input costs among other disturbances, could negatively affect Malaysia's growth prospects. Staff urge the authorities to stand ready to manage downside risks and policy trade-offs, if and when warranted.

42. The gradual fiscal consolidation strategy set out in the 2023 Budget is appropriate, but it should be credibly underpinned by high-quality and durable measures. Staff advice on a path that involves a more significant consolidation over the medium term would put debt on a firm downward path. Staff welcome the progress made in finalizing the Fiscal Responsibility Act (FRA), a major reform expected to enhance governance and transparency and improve accountability and fiscal responsibility. Developing a medium-term revenue strategy remains an urgent priority for Malaysia, especially in light of Malaysia's significant spending needs under the 12MP and should be

the cornerstone of the medium-term consolidation strategy. Phased and transparently communicated subsidy reform is overdue, alongside social safety nets reforms, which would help enhance external rebalancing.

43. Monetary policy should tighten further to bring the stance to a neutral position and BNM should continue to clearly communicate the rationale for its policy decisions, given the rapidly evolving landscape and high uncertainty. Tighter monetary policy will ensure inflation expectations remain well-anchored, while also creating space for monetary policy to respond to downside risks. The flexible exchange rate regime has served Malaysia well, and the authorities' continued commitment to exchange rate flexibility is welcome.

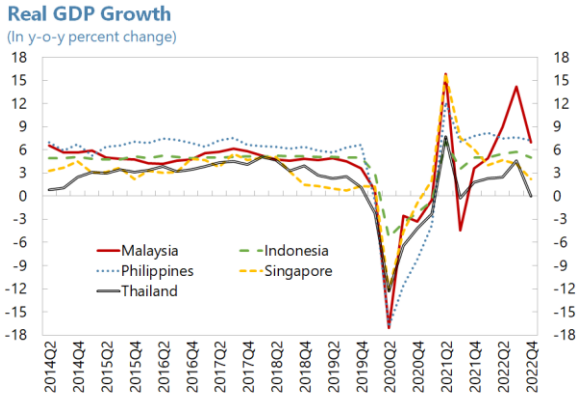
44. The authorities' commitment to safeguarding the stability of the financial sector is also welcome considering emerging risks. Enhanced monitoring, especially of highly leveraged entities and non-bank financial institutions, is warranted given increased risks from rising interest rates, tighter financial conditions, exchange rate depreciation, and weaker expected growth. Expanding the macroprudential toolkit should support these efforts. The Malaysian financial sector is well-equipped to navigate any potential increase in volatility and global risk aversion and there are no broad-based stability concerns.

45. The authorities' intentions under the 12MP to credibly enhance economic resilience, move toward net zero greenhouse gas emissions, and promote inclusive growth, is welcome. The start of the new government provides a timely opportunity to forge ahead with a concerted reform agenda. Robust governance and anti-corruption reforms, including the implementation of the strategies outlined in the National Anti-Corruption Plan, would strengthen the management of the public finances, and improve public sector service delivery.

46. It is recommended that the Article IV consultation with Malaysia be held on the standard 12-month cycle.

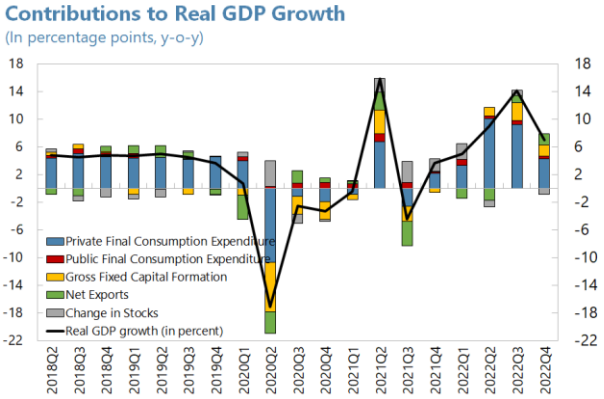
Figure 1. Malaysia: Growth and Exports

Growth has picked up following the reopening in early 2022…



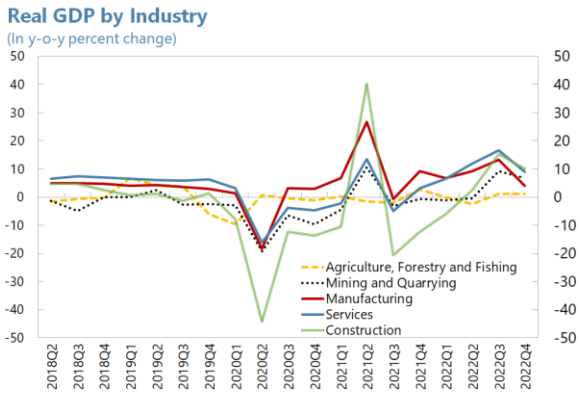
Sources: CEIC Data.

…led by private consumption, investment and net exports.



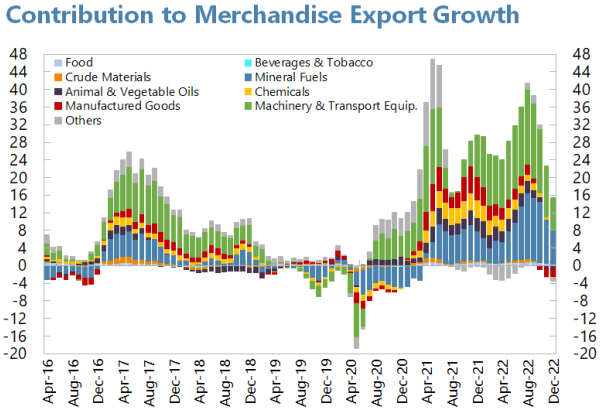
Sources: MYS Dept. of Statistics, Haver Analytics, and IMF staff calculations.

Manufacturing has returned to pre-pandemic growth rates



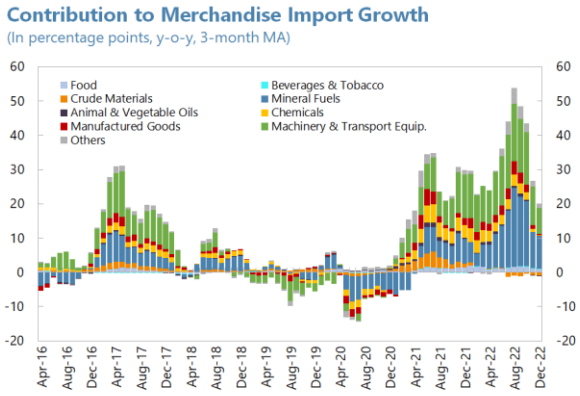
Sources: MYS Dept. of Statistics, Haver Analytics, and IMF staff calculations.

…driven by machinery and fuel exports…



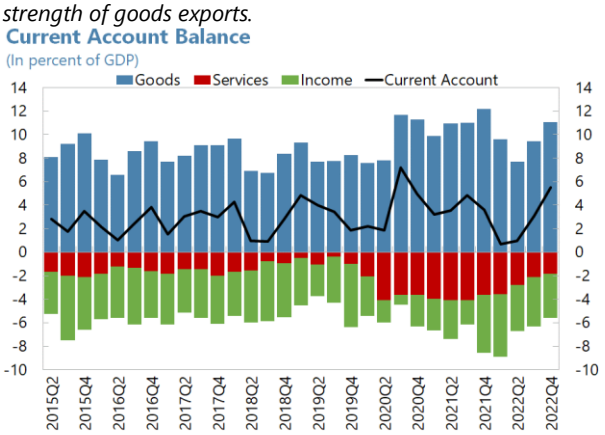
Sources: MYS Dept. of Statistics, Haver Analytics, and IMF staff

…which also boosted imports of intermediate inputs.



Sources: MYS Dept. of Statistics, Haver Analytics, and IMF staff calculations.

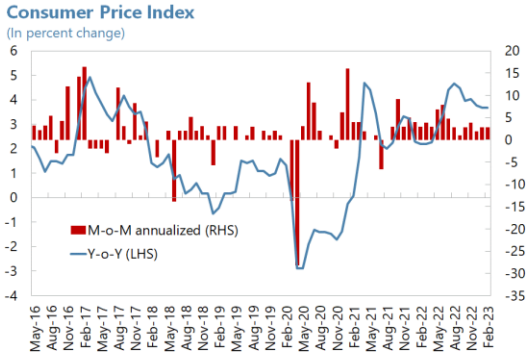
Malaysia retains a current account surplus, reflecting the strength of goods exports.



Sources: MYS Dept. of Statistics, CEIC Data, and IMF staff calculations.

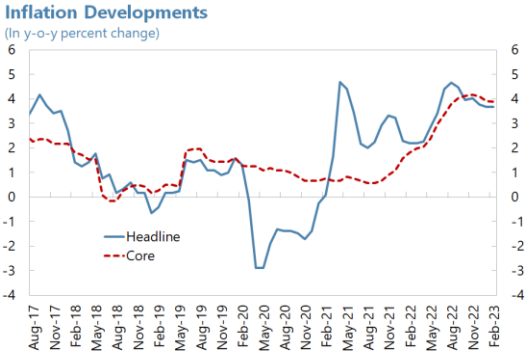
Figure 2. Malaysia: Inflation and Domestic Resource Constraints

Inflation has picked up in recent months, following the reopening of the economy…



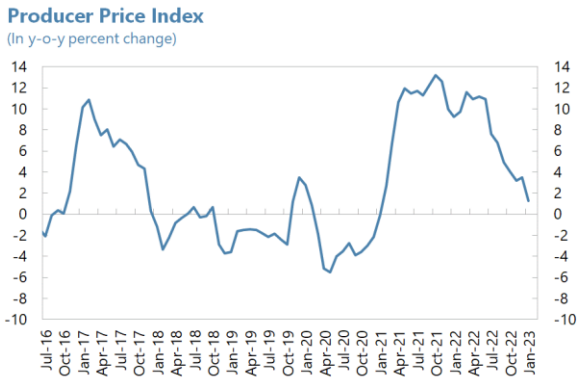
Sources: CEIC Data, MYS Dept. of Statistics, and IMF staff calculation.

…with headline moderating but core still rising in the latest data.



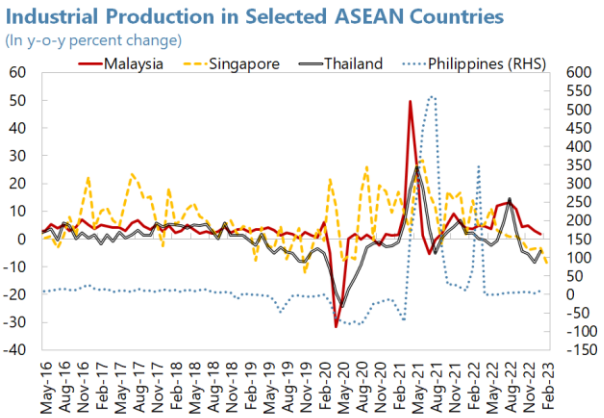
Sources: CEIC Data, MYS Dept. of Statistics, and IMF staff calculations.

Producer prices, elevated through 2021 and early 2022, have started to decline.



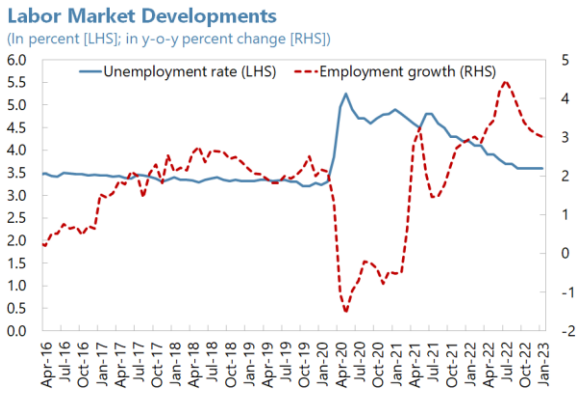
Sources: CEIC Data, and MYS Dept. of Statistics.

Industrial production has been strong relative to the region…



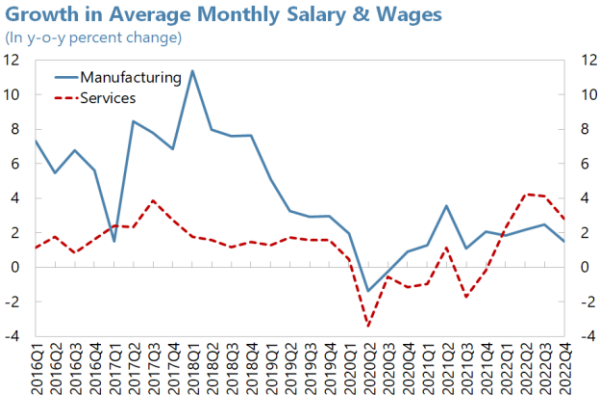
Sources: CEIC Data.

…and the labor market has somewhat tightened…



Sources: CEIC Data.

…with wages picking up particularly in the services sector as the economy has reopened.

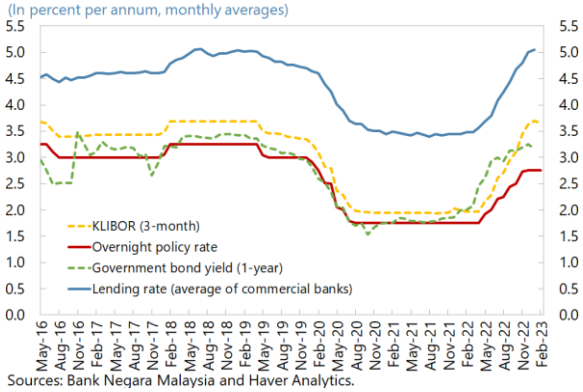


Sources: MYS Dept. of Statistics, Haver Analytics, and IMF staff calculation.

Figure 3. Malaysia: Monetary Developments

The BNM has started a gradual normalization with a cumulative rate hike of 100bps since May 2022…

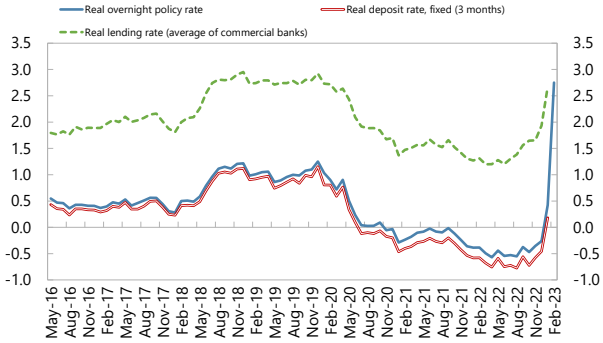
Interest Rates
(In percent per annum, monthly averages)



Sources: Bank Negara Malaysia and Haver Analytics.

…with real policy rate and real deposit rate becoming positive after being in negative territory.

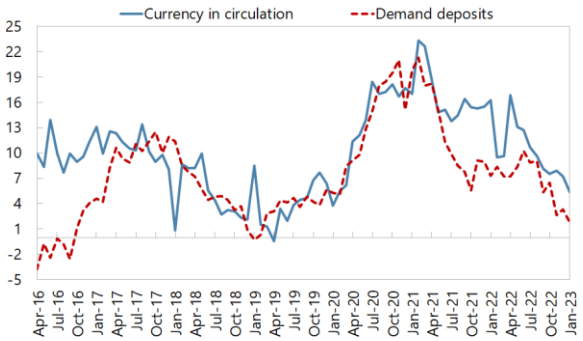
Real Interest Rates
(In percent per annum, monthly averages)



Note: Real rates are obtained by adjusting for inflation expectations of 1-year ahead.
Sources: Bank Negara Malaysia, Haver Analytics, Consesus Economics, and IMF staff calculations.

Demand deposits and currency in circulation have decreased…

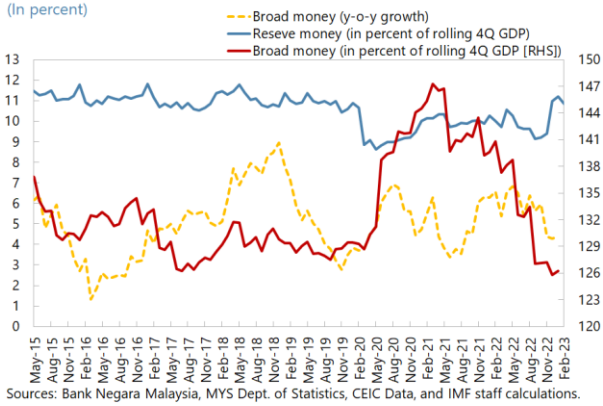
Demand Deposits and Currency in Circulation
(In y-o-y percent change)



Sources: Bank Negara Malaysia, CEIC Data, and IMF staff calculations.

…partly driving the decline in broad money growth.

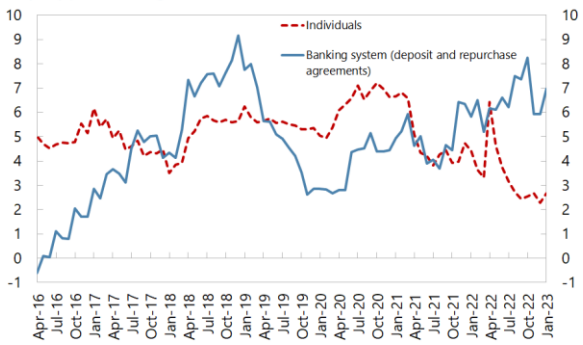
Monetary Aggregates at Depository Corporations level
(In percent)



Sources: Bank Negara Malaysia, MYS Dept. of Statistics, CEIC Data, and IMF staff calculations.

Individuals' deposit in the banking system have decreased

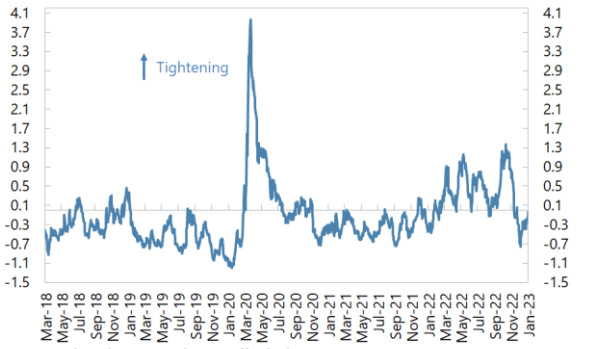
Banking System Deposit & Repurchase Agreement Growth
(In y-o-y percent change)



Sources: Bank Negara Malaysia, CEIC Data, and IMF staff calculations.

… while after tightening amid US aggressive monetary policy, financial conditions have started easing driven by stronger ringgit and narrower USD debt spreads.

MYS: Daily Financial Conditions Index
(Standard deviations)



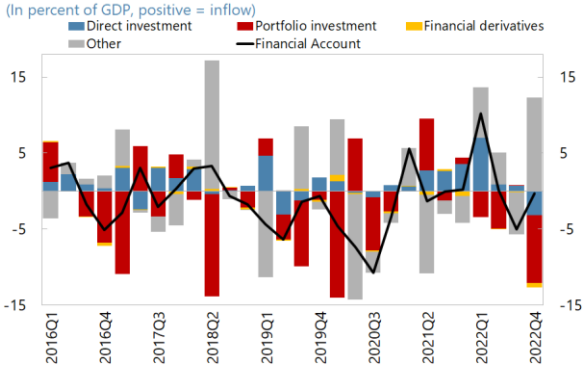
Sources: Bloomberg LP and IMF staff calculations.

Figure 4. Malaysia: Capital Flows

Capital inflows reversed following the War in Ukraine and monetary policy normalization in AEs…

Financial Account Balance, Net

(In percent of GDP, positive = inflow)

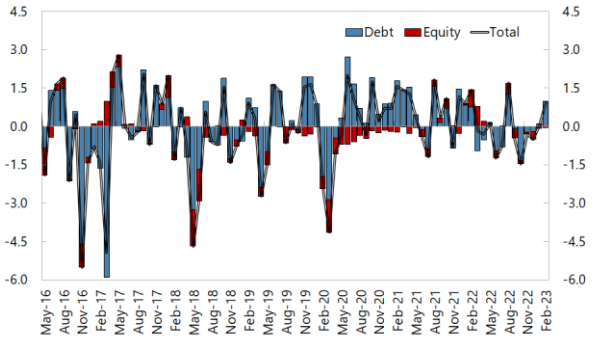


Sources: MYS Dept. of Statistics, CEIC Data, and IMF staff calculations.

… as portfolio debt witnessed outflows…

Nonresident Portfolio Capital Flows

(In billions of USD)

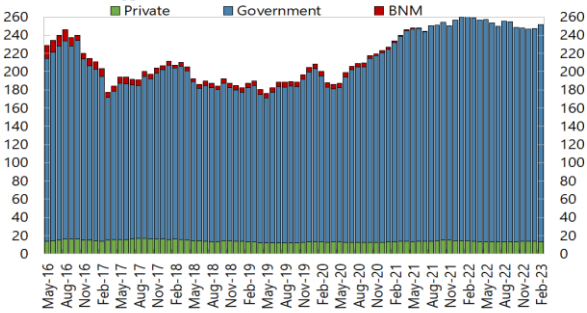


Note: Based on staff estimates from debt and equity markets data.
Sources: Bank Negara Malaysia, Bursa Malaysia, CEIC Data, and IMF staff calculations.

… leading to a decline in foreign holdings of ringgit-denominated government securities.

Foreign Holdings of Local-Currency Debt Securities

(In billions of Ringgit)

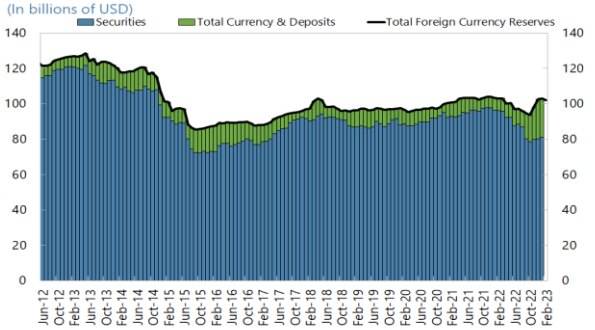


Sources: Bank Negara Malaysia, CEIC Data, and IMF staff calculations.

In the face of strong external pressures, BNM's gross FX reserves declined significantly in 2022.

Official Foreign Currency Reserves

(In billions of USD)

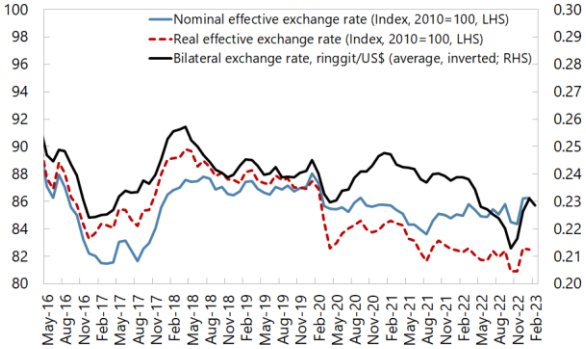


Sources: Bank Negara Malaysia, CEIC Data, and IMF staff calculations.

The ringgit depreciated sharply against the US dollar following the war in Ukraine; however, it has regained some of its strength in recent months.

Exchange Rates

(Increase = appreciation)

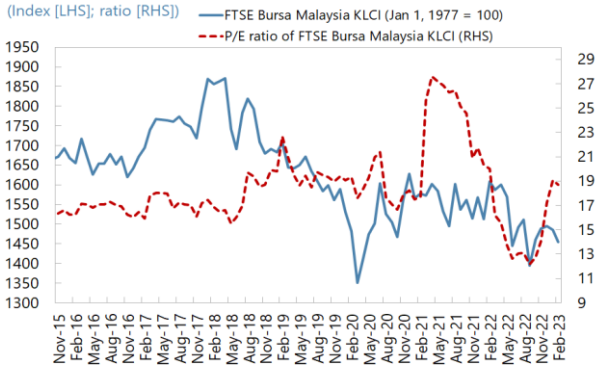


Source: IMF, *International Financial Statistics*

The stock market remained volatile and closed in losses as of end-October 2022.

Stock Market Performance

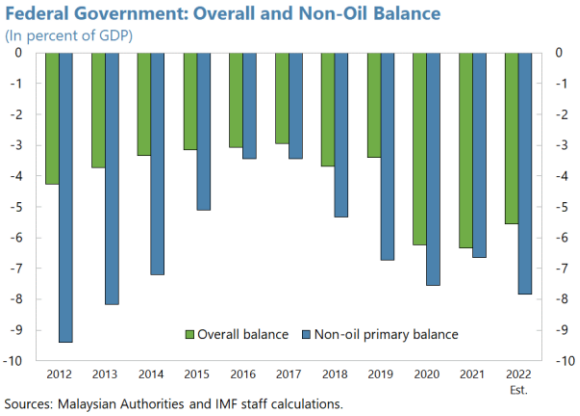
(Index [LHS]; ratio [RHS])



Sources: Bursa Malaysia and CEIC Data.

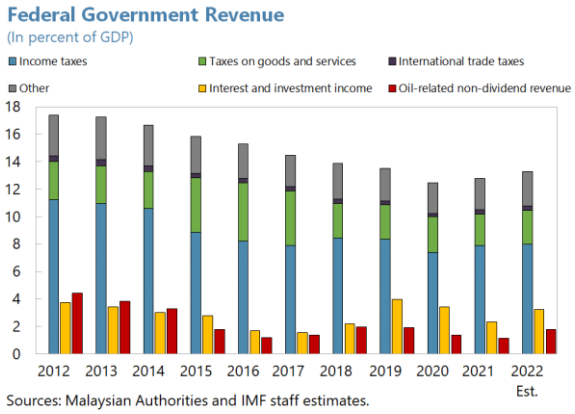
Figure 5. Malaysia: Fiscal Policy Developments

Following a large widening during the pandemic, the deficit is slowly narrowing.



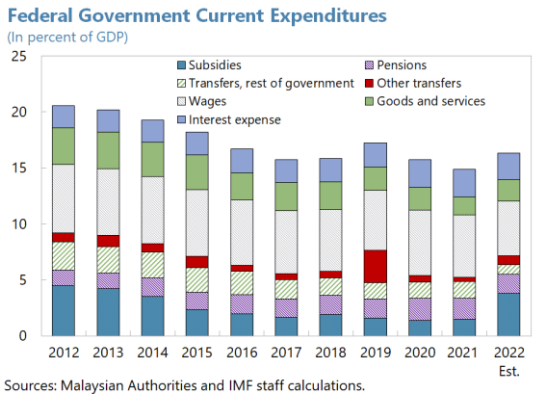
Sources: Malaysian Authorities and IMF staff calculations.

Revenues increased in 2022 driven by higher commodity prices and the strong economic recovery.



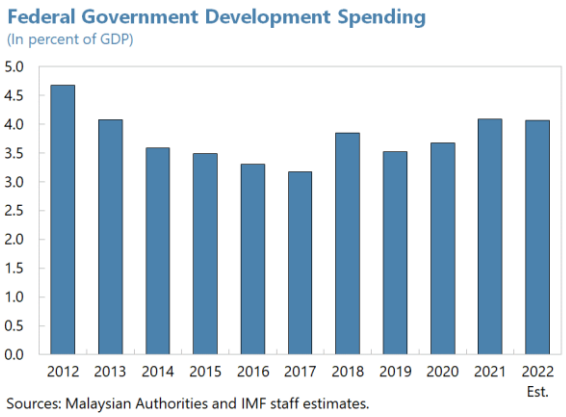
Sources: Malaysian Authorities and IMF staff estimates.

Current expenditures also increased mainly driven by spending on subsidies and social assistance.



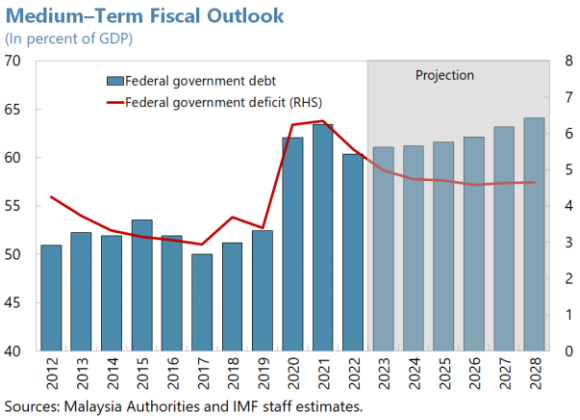
Sources: Malaysian Authorities and IMF staff calculations.

Development expenditure continued with a rising trend since 2019.



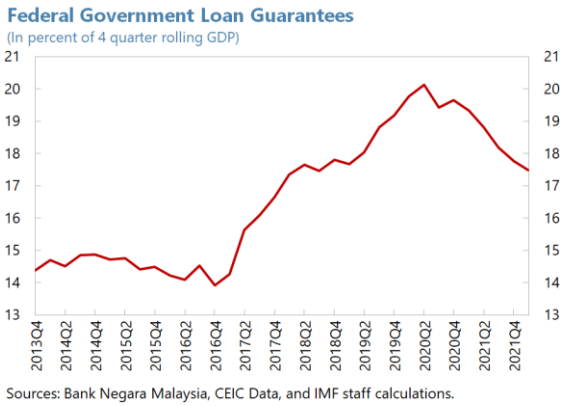
Sources: Malaysian Authorities and IMF staff estimates.

The baseline medium-term outlook sees the deficit slightly improving and debt stabilizing at high levels.



Sources: Malaysia Authorities and IMF staff estimates.

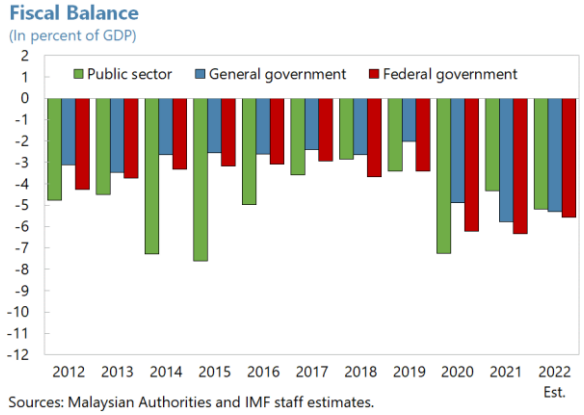
Government guarantees have started moderating from pandemic highs.



Sources: Bank Negara Malaysia, CEIC Data, and IMF staff calculations.

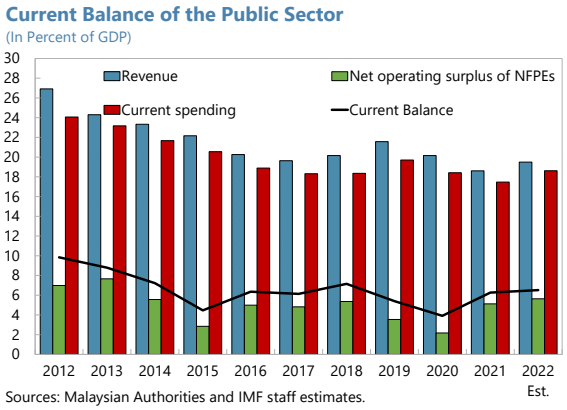
Figure 6. Malaysia: Public Sector Fiscal Stance and Prospects

The non-financial public sector deficit has been slightly improving following large increase due to pandemic.



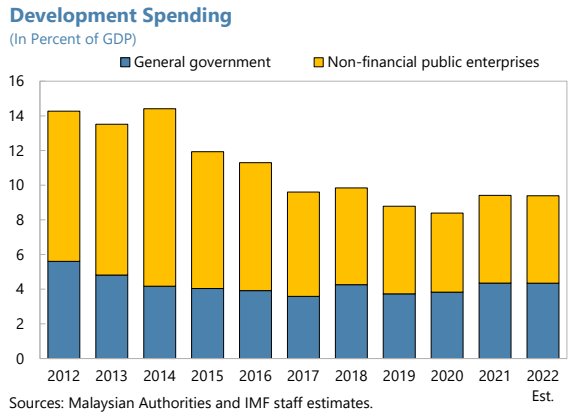
Sources: Malaysian Authorities and IMF staff estimates.

Public companies' surpluses have been sustained.



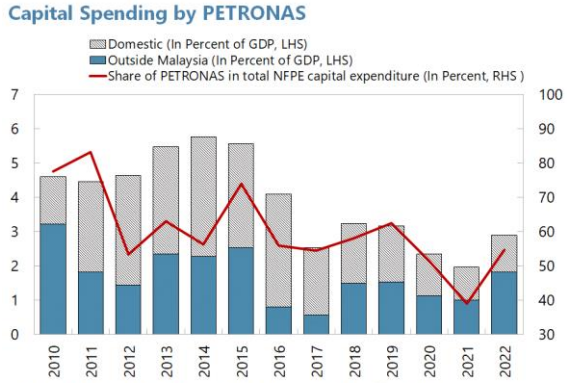
Sources: Malaysian Authorities and IMF staff estimates.

General government development spending has recently picked up…



Sources: Malaysian Authorities and IMF staff estimates.

…with Petronas' share lower than before.



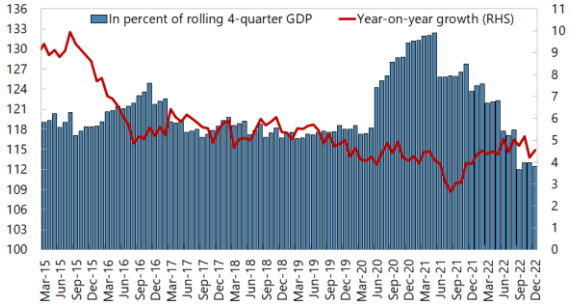
Sources: PETRONAS; Malaysian Authorities; and IMF staff calculations.

Figure 7. Malaysia: Financial Sector Developments

Credit to private sector as share of GDP decreased as GDP recovered further.

Bank Credit to Private Sector

(In percent [LHS]; in y-o-y percent change [RHS])

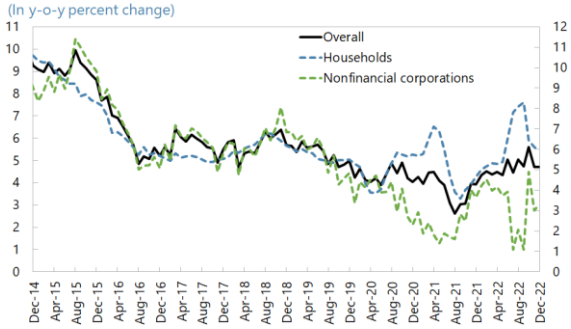


Note: The growth rates have been adjusted by staff to account for the re-classification of a non-bank to bank in April 2018.
Source: IMF, *Integrated Monetary Database*; MYS Dept. of Statistics; CEIC Data; & IMF staff

... Private credit growth was driven by households.

Bank Credit to Private Sector

(In y-o-y percent change)

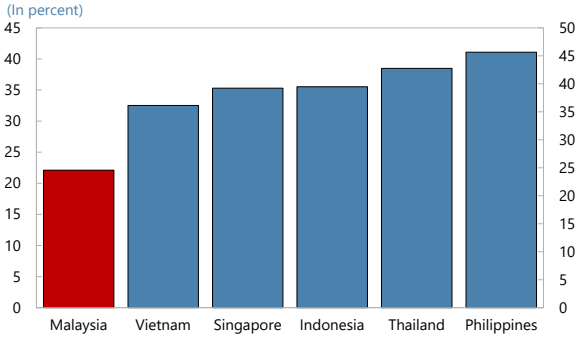


Note: The growth rates have been adjusted by staff to account for the re-classification of a non-bank to bank in April 2018.
Sources: IMF, *Integrated Monetary Database*; and IMF staff calculations.

Corporate leverage continues to compare favorably to peers.

Corporate Debt-to-Equity Ratio, 2021

(In percent)

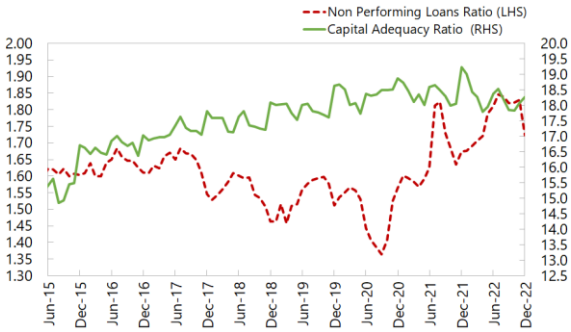


Note: Values presented are median values for nonfinancial sector.
Sources: IMF, *Corporate Vulnerability Indicators*.

The banking system remains well capitalized while non-performing loans have picked up but remain low.

Bank NPLs and Capital Buffers

(In percent)

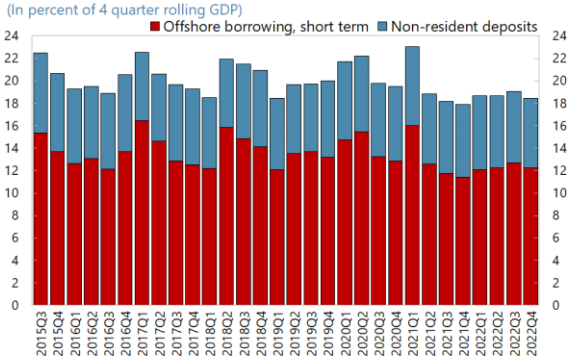


Sources: Bank Negara Malaysia and CEIC Data.

The banking system continues to rely on short-term external debt.

Bank Short Term Debt

(In percent of 4 quarter rolling GDP)

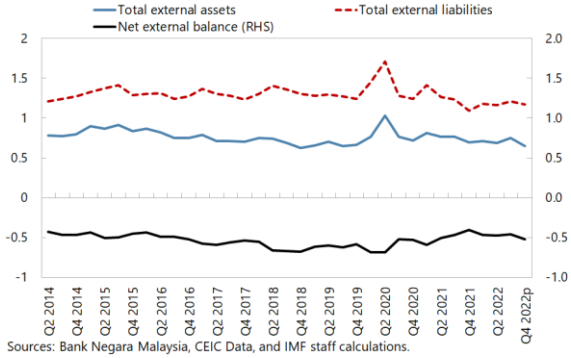


Sources: Bank Negara Malaysia, CEIC Data, and IMF staff calculations.

Banks' net external asset position remains weak.

Banking System: External Assets and Liabilities

(in percent of nominal GDP)

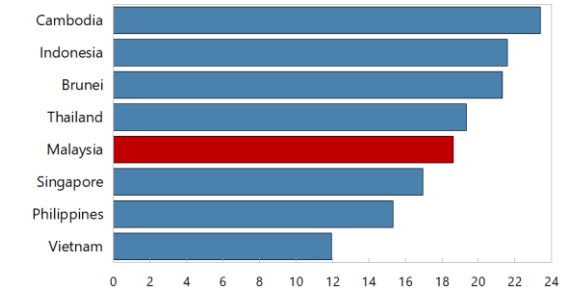


Sources: Bank Negara Malaysia, CEIC Data, and IMF staff calculations.

Figure 8. Malaysia: Financial Soundness Indicators

Malaysian Banks remain with relatively strong capital buffers

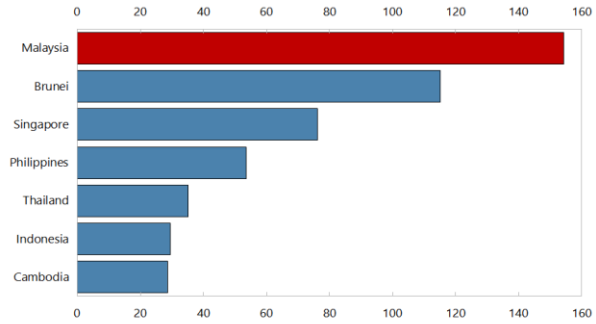
Regulatory Capital to Risk-Weighted Assets
(In percent)



Note: All except for Philippines as of 2022Q3; Philippines as of 2022Q2.
Source: IMF, *Financial Soundness Indicators.*

while liquidity continues to provide stronger cover for short-term liabilities relative to peers.

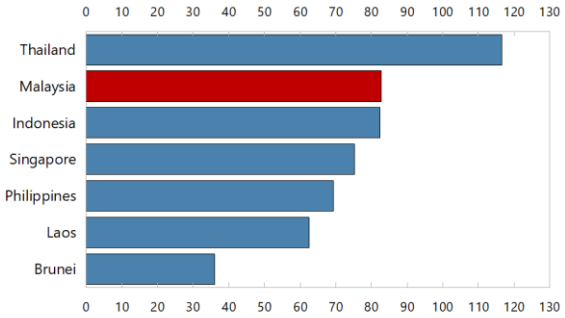
Liquid Assets to Short-Term Liabilities
(In percent)



Note: Cambodia, Philippines, and Thailand as of 2022Q2; Brunei & Indonesia as of 2022 Q1; and Malaysia as of 2021Q3.
Source: IMF, *Financial Soundness Indicators.*

Lending in proportion of deposits remains moderate and in line with peers.

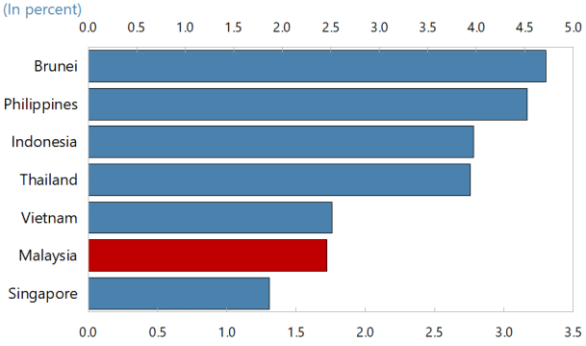
Loans to Deposits Ratio for Commercial Banks
(In percent, end of period)



Note: Malaysia, Philippines, Singapore, and Thailand as of 2022Q4; Brunei and Indonesia as of 2022Q3, and Laos as of 2020Q4. Source: CEIC Data.

... and asset quality remains high.

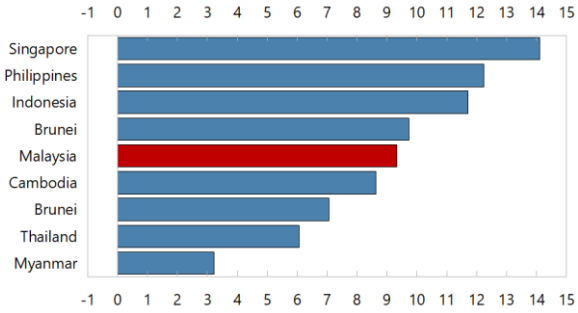
Nonperforming Loans to Total Gross Loans
(In percent)



Note: Malaysia & Philippines as of 2022Q4; Brunei, Indonesia. Thailand, and Vietnam as of 2022Q3; and Singapore as of 2019Q4. Source: IMF, *Financial Soundness Indicators.*

Banks remain profitable...

Return on Equity
(In percent)



Note: Brunei, Cambodia, Indonesia, Malaysia, & Thailand as of 2022Q3; Philippines as of 2022Q2; Myanmar and Vietnam as of 2021Q4; and Singapore as of 2019Q4.
Source: IMF, *Financial Soundness Indicators.*

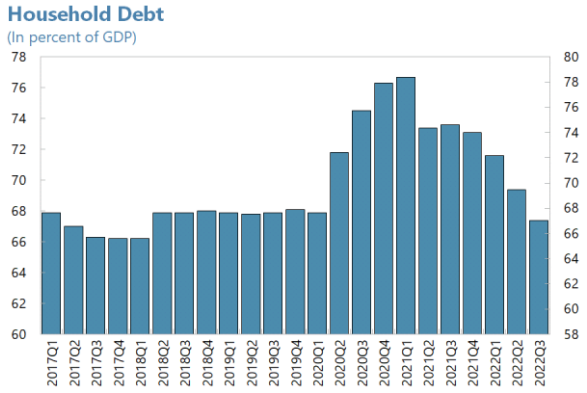
...and profitability should continue to recover as interest rate spreads pick up.

Interest Rate Spreads for Commercial Banks
(In percent)

Note: The interest rate spread is defined as difference between the average lending rate and the average savings deposits rate.
Sources: Bank Negara Malaysia, CEIC Data, and IMF staff calculations.

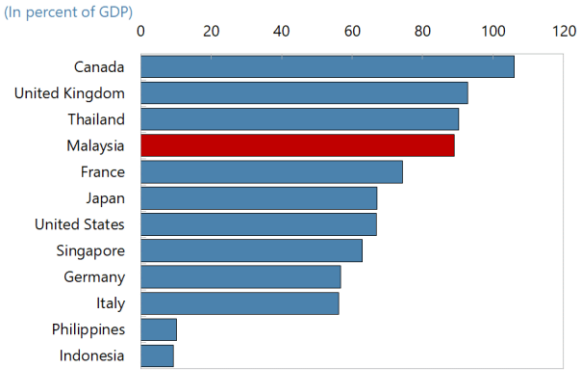
Figure 9. Malaysia: Household Debt

Household debt has moderated as share of GDP …



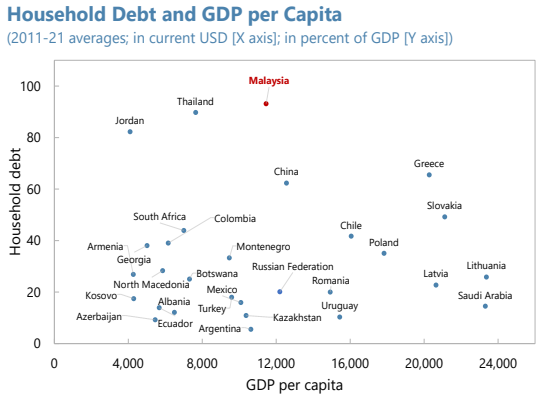
Sources: CEIC Data and Bank Negara Malaysia.

… but remains high compared to peers.



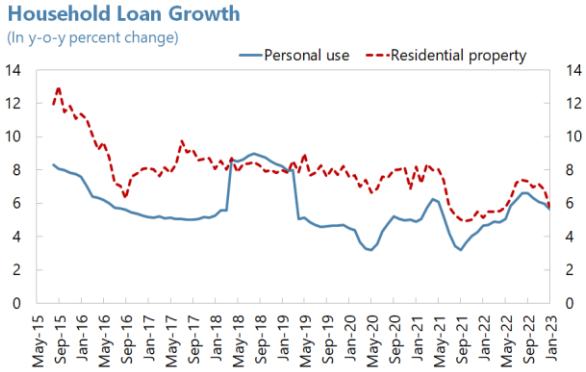
Sources: CEIC Data, *Global Economic Monitor*.

…and above the levels observed in countries with similar GDP per capita.



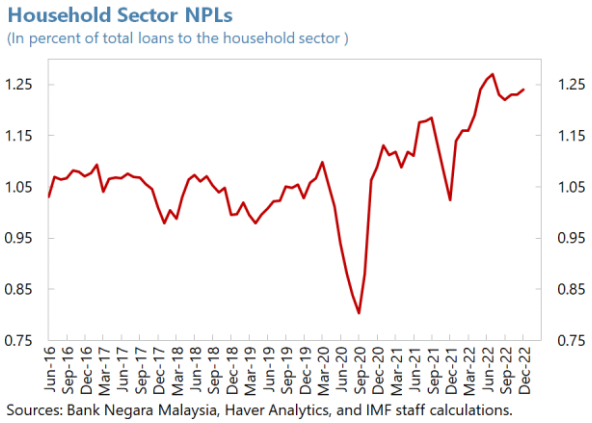
Sources: CEIC Data, *Global Economic Monitor*.

Household loans picked up both for personal use and housing…



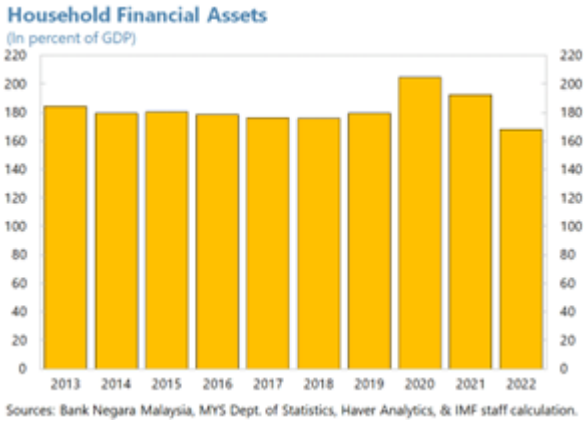
Note: This chart is for household loan in the banking system only. Presented growth rates have been adjusted by staff to account for the re-classification of a non-bank to bank in April 2018.
Sources: CEIC Data, Bank Negara Malaysia (BNM), and IMF staff calculations.

…While household non-performing loans after a decline on the back of loan moratoria have picked up but remain low…



Sources: Bank Negara Malaysia, Haver Analytics, and IMF staff calculations.

…and household financial assets decreased slightly.



Sources: Bank Negara Malaysia, MYS Dept. of Statistics, Haver Analytics, & IMF staff calculation.

Table 1. Malaysia: Selected Economic and Financial Indicators, 2018–28

Nominal GDP (2022): US$407.9 billion
GDP per capita (2022, current prices): US$12,493
Unemployment rate (2022, period average): 3.8 percent

Population (2022): 32.7 million
Poverty rate (2019, national poverty line): 0.2 percent
Adult literacy rate (2019): 95.0 percent

Main domestic goods exports (share of total domestic exports, 2021): Machinery and Transport Equipment (39.2 percent), Miscellaneous Manufactured Articles (16.6 percent), and Manufactured Goods (10.8 percent).

					Est.	Proj.					
	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Real GDP (percent change)	4.8	4.4	-5.5	3.1	8.7	4.5	4.5	4.4	4.4	3.9	3.9
Total domestic demand	4.7	3.9	-4.9	3.6	9.4	3.7	5.1	4.5	4.4	4.0	3.9
Consumption	7.1	6.6	-2.6	2.5	9.9	4.1	5.6	4.2	4.2	3.7	3.6
Private consumption	8.0	7.7	-4.2	1.9	11.3	4.6	4.5	5.1	5.0	4.1	4.1
Public consumption	3.4	1.5	5.0	5.3	3.9	-9.3	5.8	1.8	1.1	0.5	-0.4
Private investment	4.3	1.6	-11.9	2.6	7.2	7.1	6.4	6.0	5.8	5.7	5.7
Public gross fixed capital formation	-5.0	-10.7	-21.2	-11.3	5.3	-10.0	8.6	4.5	3.5	2.9	3.0
Net exports (contribution to growth, percentage points)	0.4	0.7	-1.0	-0.3	-0.1	1.0	-0.2	0.1	0.2	0.2	0.2
Saving and investment (in percent of GDP)											
Gross domestic investment	23.9	21.0	19.7	22.3	23.9	24.3	24.3	24.9	25.1	25.1	25.2
Gross national saving	26.1	24.5	23.9	26.1	26.5	27.0	27.0	27.7	28.1	28.1	28.2
Fiscal sector (in percent of GDP) 1/											
Federal government overall balance	-3.7	-5.9	-6.2	-6.3	-5.6	-5.0	-4.6	-4.6	-4.6	-4.5	-4.4
Revenue	16.1	17.5	15.9	15.1	16.5	15.1	14.2	13.9	13.9	13.9	14.0
Expenditure and net lending	19.8	20.9	22.1	21.4	22.0	20.1	18.9	18.6	18.5	18.5	18.3
Tax refunds (Arrears) 2/		2.4									
Federal government non-oil primary balance	-5.3	-6.7	-7.5	-6.6	-7.8	-6.0	-4.8	-4.4	-4.1	-3.8	-3.4
Consolidated public sector overall balance 3/	-2.9	-3.4	-7.3	-4.3	-4.4	-6.9	-6.9	-6.7	-6.5	-6.5	-6.3
General government debt 3/	55.6	57.1	67.7	69.3	65.7	66.2	66.2	66.6	67.2	68.1	68.8
Of which: federal government debt	51.2	52.4	62.0	63.4	60.4	60.9	60.9	61.3	61.8	62.8	63.4
Inflation and unemployment (annual average, in percent)											
CPI inflation	1.0	0.7	-1.1	2.5	3.4	3.3	3.1	2.4	2.4	2.4	2.4
CPI inflation (excluding food and energy)	0.4	3.4	1.1	0.7	3.0	3.4	3.0	2.0	1.7	1.7	1.7
Unemployment rate	3.3	3.3	4.5	4.7	3.8	3.6	3.5	3.5	3.5	3.5	3.5
Macrofinancial variables (end of period)											
Broad money (percentage change) 4/	7.7	2.7	4.9	5.6	15.7	8.0	8.2	7.5	7.1	6.1	6.2
Credit to private sector (percentage change) 4/	8.3	4.9	4.0	3.8	4.4	8.0	8.2	7.5	7.1	6.1	6.2
Credit-to-GDP ratio (in percent) 5/ 6/	130.0	130.5	144.8	138.0	124.5	137.1	137.1	137.1	137.1	137.1	137.1
Overnight policy rate (in percent)	3.25	3.00	1.75	1.75	...	...	...	...	...	...	...
Three-month interbank rate (in percent)	3.6	3.3	1.9	2.0	3.6	...	...	...	...	...	...
Nonfinancial corporate sector debt (in percent of GDP) 7/	103.5	100.0	110.6	110.2	98.4	...	...	...	...	...	...
Nonfinancial corporate sector debt issuance (in percent of GDP)	2.0	1.8	2.3	2.6	...	...	...	...	...	...	...
Household debt (in percent of GDP) 7/	82.0	82.8	93.1	89.1	81.2	...	...	...	...	...	...
Household financial assets (in percent of GDP) 7/	176.0	179.3	204.6	192.3	167.9	...	...	...	...	...	...
House prices (percentage change)	2.5	1.8	1.2	1.9	...	...	...	...	...	...	...
Exchange rates (period average)											
Malaysian ringgit/U.S. dollar	4.04	4.14	4.19	4.14	4.40	...	...	...	...	...	...
Real effective exchange rate (percentage change)	4.2	-1.3	-3.5	-1.3	-1.5	...	...	...	...	...	...
Balance of payments (in billions of U.S. dollars) 5/											
Current account balance	8.0	12.8	14.1	14.2	10.7	12.1	13.2	14.6	16.4	18.0	19.1
(In percent of GDP)	2.2	3.5	4.2	3.8	2.6	2.7	2.7	2.8	2.9	3.0	3.0
Goods balance	28.4	30.1	32.7	41.2	38.5	38.7	41.1	43.2	46.1	48.4	51.6
Services balance	-4.3	-2.6	-11.2	-14.7	-10.3	-8.3	-10.7	-11.3	-11.6	-11.3	-12.4
Income balance	-16.1	-14.7	-7.4	-12.3	-17.4	-18.3	-17.2	-17.3	-18.2	-19.1	-20.1
Capital and financial account balance	2.8	-9.1	-18.5	3.0	3.3	-2.7	-8.2	-6.5	-8.6	-11.3	-12.4
Of which: Direct investment	2.5	1.6	0.7	6.9	3.6	3.1	3.9	4.1	4.3	4.5	4.7
Errors and omissions	-8.9	-1.7	-0.1	-6.1	-1.9	0.0	0.0	0.0	0.0	0.0	0.0
Overall balance	1.9	2.0	-4.6	11.0	12.1	9.4	5.0	8.1	7.7	6.7	6.7
Gross official reserves (US$ billions) 5/ 8/	101.4	103.6	107.6	116.9	114.7	124.0	129.0	137.2	144.9	151.6	158.3
(In months of following year's imports of goods and nonfactor services)	5.8	6.7	5.6	5.2	5.0	4.8	4.7	4.8	4.8	4.9	5.0
(In percent of short-term debt by original maturity)	103.7	108.9	117.6	120.3	105.0	106.0	105.9	106.2	106.4	108.2	110.2
(In percent of short-term debt by remaining maturity)	84.8	87.1	91.9	93.3	84.8	85.7	84.4	85.6	85.8	86.8	87.9
Total external debt (in billions of U.S. dollars) 5/ 8/	223.0	231.5	238.8	259.1	259.2	276.5	290.5	307.5	324.3	338.4	352.4
(In percent of GDP)	62.2	63.4	70.8	69.6	63.9	62.2	60.6	59.4	58.3	57.2	55.8
Of which: short-term (in percent of total, original maturity)	43.9	41.1	38.3	37.5	42.1	42.3	41.9	42.0	42.0	41.4	40.8
short-term (in percent of total, remaining maturity)	53.6	51.4	49.1	48.4	52.2	52.3	52.6	52.1	52.1	51.6	51.1
Debt service ratio 5/											
(In percent of exports of goods and services) 9/	10.6	10.9	13.6	10.7	10.1	10.6	11.5	11.2	10.9	10.6	10.7
(In percent of exports of goods and nonfactor services)	11.2	11.6	14.4	11.7	10.8	11.3	12.2	11.9	11.6	11.3	11.3
Memorandum items:											
Nominal GDP (in billions of ringgit)	1,448	1,513	1,418	1,545	1,788	1,931	2,090	2,246	2,405	2,552	2,712

Sources: Data provided by the authorities; CEIC Data; World Bank; UNESCO; and IMF, *Integrated Monetary Database,* and staff estimates.

1/ Cash basis. The authorities are planning to adopt accrual basis. For 2019, overall and primary balance includes the payment of outstanding tax refund (arrears) amounting to RM37 billion.

2/ Tax refunds in 2019 are allocated for payment of outstanding tax refunds.

3/ Consolidated public sector includes general government and nonfinancial public enterprises (NFPEs). General government includes federal government, state and local governments, and statutory bodies.

4/ Based on data provided by the authorities, but follows compilation methodology used in IMF's *Integrated Monetary Database* . Credit to private sector in 2018 onwards includes data for a newly licensed commercial bank from April 2018. The impact of this bank is excluded in the calculation of credit gap.

5/ IMF staff estimates. U.S. dollar values are estimated using official data published in national currency.

6/ Based on a broader measure of liquidity. Credit gap is estimated on quarterly data from 2000, using one-sided Hodrick-Prescott filter with a large parameter.

7/ Revisions in historical data reflect the change in base year for nominal GDP (from 2010=100 to 2015=100).

8/ The decrease in short-term debt by remaining maturity in 2017 was partly due to the implementation of an improved data compilation system that corrected previous overestimation.

9/ Includes receipts under the primary income account.

Table 2. Malaysia: Indicators of External Vulnerability, 2018–22

	2018	2019	2020	2021	2022 1/
Financial indicators					
General government debt (in percent of GDP) 2/	55.6	57.1	67.7	69.3	65.7
Broad money (end of period, year-on-year percent change) 3/	7.7	2.7	4.9	5.6	15.7
Private sector credit (end of period, year-on-year percent change) 3/	8.3	4.9	4.0	3.8	4.4
3-month interest rate (percent, 12-month average) 4/	3.7	3.5	2.4	1.9	2.6
External indicators 5/					
Goods exports, f.o.b. (percent change, 12-month basis, in U.S. dollars terms) 6/	10.4	-4.1	-5.9	27.0	13.8
Goods imports, f.o.b. (percent change, 12-month basis, in U.S. dollars terms) 6/	11.4	-5.7	-8.5	27.2	18.1
Current account balance (12-month basis, in billions of U.S. dollars) 6/	8.0	12.8	14.1	14.2	10.7
Current account balance (12-month basis, in percent of GDP)	2.2	3.5	4.2	3.8	2.6
Capital and financial account balance (12-month basis, in billions of U.S. dollars) 6/	2.8	-9.1	-18.5	3.0	3.3
Gross official reserves (in billions of U.S. dollars)	101.4	103.6	107.6	117.0	114.7
In months of following year's imports of goods and nonfactor services 6/	5.8	6.7	5.6	5.2	5.0
As percent of broad money 3/ 6/	23.2	22.8	22.2	23.7	21.2
As percent of monetary base 3/ 6/	269.8	271.9	270.7	298.2	314.9
Total short-term external debt by: 6/ 7/					
Original maturity (in billions of U.S. dollars)	97.9	95.2	91.5	97.2	109.2
Remaining maturity (in billions of U.S. dollars)	119.7	118.9	117.2	125.3	135.3
Original maturity to reserves (in percent)	96.5	91.9	85.0	83.0	95.2
Original maturity to total external debt (in percent)	43.9	41.1	38.3	37.5	42.1
Remaining maturity to reserves (in percent)	117.9	114.8	108.8	107.1	118.0
Remaining maturity to total external debt (in percent)	53.6	51.4	49.1	48.4	52.2
Total external debt (in billions of U.S. dollars) 6/ 7/	223.0	231.5	238.8	259.1	259.2
Of which: public sector (medium- and long-term (MLT))	71.7	76.0	85.6	94.7	84.3
Total external debt to exports of goods and services (in percent) 6/ 8/	85.5	91.1	108.4	92.4	81.0
External amortization of MLT debt to exports of goods and services (in percent) 6/ 8/	8.6	8.6	10.8	9.1	8.8
Financial market indicators					
Kuala Lumpur Composite Index (KLCI), end of period	1,691	1,589	1,627	1,568	1,512
10-year government securities yield (percent per annum, average)	4.1	3.6	2.8	3.3	3.3

Sources: Haver Analytics; CEIC Data Co. Ltd.; data provided by the authorities; and IMF, *Integrated Monetary Database* and staff estimates.

1/ Latest available data or IMF staff estimates.

2/ Gross debt. General government includes the federal government, state and local governments, and the statutory bodies.

3/ Based on data provided by the authorities, but follows compilation methodology used in IMF's Integrated Monetary Database.

4/ Kuala Lumpur interbank offer rate.

5/ Based on balance of payments.

6/ IMF staff estimates. U.S. dollar values are estimated using official data published in national currency.

7/ Includes offshore borrowing, nonresident holdings of ringgit-denominated securities, nonresident deposits, and other short-term debt.

8/ Includes receipts under the primary income account.

Table 3. Malaysia: Balance of Payments, 2018–28 1/

				Est.	Proj.						
	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
	(In billions of U.S. dollars)										
Current account balance	8.0	12.8	14.1	14.2	10.7	12.1	13.2	14.6	16.4	18.0	19.1
Goods balance	28.4	30.1	32.7	41.2	38.5	38.7	41.1	43.2	46.1	48.4	51.6
Exports, f.o.b.	205.7	197.3	185.7	235.8	268.4	267.7	295.5	310.1	324.5	339.6	352.7
Imports, f.o.b.	177.3	167.2	153.0	194.7	230.0	229.0	254.4	266.9	278.5	291.2	301.1
Services balance	-4.3	-2.6	-11.2	-14.7	-10.3	-8.3	-10.7	-11.3	-11.6	-11.3	-12.4
Receipts	40.2	41.1	22.1	20.9	31.6	40.0	43.9	48.2	52.0	56.2	60.4
Payments	44.6	43.7	33.3	35.6	41.9	48.2	54.6	59.4	63.5	67.5	72.8
Primary income	-11.2	-9.5	-6.8	-10.0	-14.4	-13.4	-12.0	-11.6	-11.5	-11.7	-12.2
Secondary income	-4.9	-5.2	-0.6	-2.3	-3.0	-4.9	-5.3	-5.7	-6.7	-7.4	-7.9
Capital and financial account balance	2.8	-9.1	-18.5	3.0	3.3	-2.7	-8.2	-6.5	-8.6	-11.3	-12.4
Capital account	0.0	0.1	-0.1	-0.1	-0.1	0.0	0.0	0.0	0.0	0.0	0.0
Financial account	2.8	-9.2	-18.4	3.1	3.4	-2.7	-8.2	-6.5	-8.6	-11.3	-12.4
Direct investment	2.5	1.6	0.7	6.8	3.9	3.1	3.9	4.1	4.3	4.5	4.7
Portfolio investment	-12.2	-7.8	-11.8	4.5	-11.7	-2.7	-2.3	-4.5	-5.8	-6.1	-6.1
Other investment	12.53	-3.0	-7.4	-8.2	11.1	-3.2	-9.7	-6.0	-7.1	-9.8	-10.9
Errors and omissions	-8.9	-1.7	-0.1	-6.1	-1.9	0.0	0.0	0.0	0.0	0.0	0.0
Overall balance	1.9	2.0	-4.6	11.0	12.1	9.4	5.0	8.1	7.7	6.7	6.7
Gross official reserves	101.4	103.6	107.6	116.9	114.7	124.0	129.0	137.2	144.9	151.6	158.3
In months of following year's imports of goods and nonfactor services	5.8	6.7	5.6	5.2	5.0	4.8	4.7	4.8	4.8	4.9	5.0
In percent of short-term debt 2/ 3/	84.8	87.1	91.9	93.3	84.8	85.7	84.4	85.6	85.8	86.8	87.9
	(In percent of GDP)										
Current account balance	2.2	3.5	4.2	3.8	2.6	2.7	2.7	2.8	2.9	3.0	3.0
(Excluding crude oil and liquefied natural gas)	-1.5	0.8	2.2	1.2	0.2	1.3	1.3	1.3	1.5	1.6	1.6
Goods balance	7.9	8.2	9.7	11.0	9.5	8.7	8.6	8.3	8.3	8.2	8.1
Exports, f.o.b.	57.3	54.0	55.0	63.2	66.1	60.1	61.6	59.8	58.3	57.3	55.7
Imports, f.o.b.	49.4	45.8	45.3	52.2	56.6	51.4	53.0	51.5	50.0	49.1	47.6
Services balance	-1.2	-0.7	-3.3	-3.9	-2.5	-1.9	-2.2	-2.2	-2.1	-1.9	-2.0
Primary income	-3.1	-2.6	-2.0	-2.7	-3.6	-3.0	-2.5	-2.2	-2.1	-2.0	-1.9
Secondary income	-1.4	-1.4	-0.2	-0.6	-0.7	-1.1	-1.1	-1.1	-1.2	-1.3	-1.3
Capital and financial account balance	0.8	-2.5	-5.5	0.8	0.8	-0.6	-1.7	-1.2	-1.6	-1.9	-2.0
Direct investment	0.7	0.4	0.2	1.8	1.0	0.7	0.8	0.8	0.8	0.8	0.7
	(Annual percentage change)										
Memorandum items:											
Goods trade											
Exports, f.o.b., value growth (in U.S. dollars) 1/	10.4	-4.1	-5.9	27.0	13.8	-0.3	10.4	5.0	4.6	4.6	3.9
Export volume growth 4/	5.5	-1.6	1.4	14.5	6.7	2.0	3.8	3.7	3.5	3.6	3.3
Imports, f.o.b., value growth (in U.S. dollars) 1/	11.4	-5.7	-8.5	27.2	18.1	-0.4	11.1	4.9	4.3	4.6	3.4
Import volume growth 4/	3.1	-3.2	-2.8	18.6	19.4	3.8	4.8	4.1	4.0	3.8	3.8
Terms of trade	-0.4	1.1	-3.9	11.8	10.3	-0.9	0.2	0.2	0.1	0.0	0.1
Net international investment position 1/											
(In billions of U.S. dollars)	-17.5	-9.5	20.1	20.3	14.3	...	...	...	...	...	...
(In percent of GDP)	-4.9	-2.6	5.9	5.5	3.5	...	...	...	...	...	...

Sources: Data provided by the authorities; and IMF staff estimates.

1/ Information presented in this table is based on staff estimates using official data published in national currency.

2/ Based on IMF staff estimates of short-term external debt by remaining maturity.

3/ The decrease in short-term debt by remaining maturity in 2017 was partly due to the implementation of an improved data compilation system that corrected previous overestimation.

4/ Export and import volume growth in 2015-2018 is calculated using official export and import volume indices (2010=100).

Table 4. Malaysia: Medium-Term Macroeconomic Framework, 2018–28 1/

				Est.			Proj.				
	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Real sector (percent change)											
Real GDP growth	4.8	4.4	-5.5	3.1	8.7	4.5	4.5	4.4	4.4	3.9	3.9
Total domestic demand	4.7	3.9	-4.9	3.6	9.4	3.7	5.1	4.5	4.4	4.0	3.9
Of which: Private consumption	8.0	7.7	-4.2	1.9	11.3	4.6	4.5	5.1	5.0	4.1	4.1
Public consumption	3.4	1.5	5.0	5.3	3.9	-9.3	5.8	1.8	1.1	0.5	-0.4
Private investment	4.3	1.6	-11.9	2.6	7.2	7.1	6.4	6.0	5.8	5.7	5.7
Public gross fixed capital formation	-5.0	-10.7	-21.2	-11.3	5.3	-10.0	8.6	4.5	3.5	2.9	3.0
Output gap (in percent) 2/	0.6	0.1	-4.0	-3.6	1.0	1.2	1.3	1.2	1.1	0.5	0.0
Consumer prices (period average)	1.0	0.7	-1.1	2.5	3.4	3.3	3.1	2.4	2.4	2.4	2.4
Consumer prices, excluding food and energy (period average) 2/	0.4	3.4	1.1	0.7	3.0	3.4	3.0	2.0	1.7	1.7	1.7
GDP deflator	0.6	0.1	-0.8	5.7	6.5	3.3	3.5	3.0	2.6	2.2	2.2
Saving and investment (in percent of GDP)											
Gross domestic investment	23.9	21.0	19.7	22.3	23.9	24.3	24.3	24.9	25.1	25.1	25.2
Private, including stocks	16.7	14.8	14.5	17.9	19.8	20.7	20.6	21.1	21.4	21.3	21.3
Of which: gross fixed capital formation	17.0	16.7	15.7	15.0	14.2	15.9	16.2	16.6	17.0	17.5	18.1
Public	7.2	6.2	5.2	4.3	4.0	3.6	3.7	3.8	3.8	3.8	3.8
Gross national saving	26.1	24.5	23.9	26.1	26.5	27.0	27.0	27.7	28.1	28.1	28.2
Private 3/	18.9	16.5	19.9	19.8	20.0	23.7	23.5	24.4	24.8	24.8	24.7
Public 3/	7.2	8.0	4.0	6.3	6.6	3.3	3.6	3.3	3.3	3.4	3.5
Fiscal sector (in percent of GDP)											
Federal government											
Revenue	16.1	17.5	15.9	15.1	16.5	15.1	14.2	13.9	13.9	13.9	14.0
Tax	12.0	11.9	10.9	11.2	11.7	11.3	11.2	11.1	11.2	11.3	11.4
Nontax	4.1	5.5	5.0	3.9	4.8	3.8	3.0	2.8	2.7	2.6	2.5
Expenditure and net lending	19.8	20.9	22.1	21.4	22.0	20.1	18.9	18.6	18.5	18.5	18.3
Current	15.9	17.4	18.4	17.3	18.0	14.9	13.7	13.6	13.6	13.6	13.4
Development	3.9	3.5	3.7	4.1	4.1	5.0	5.2	5.0	4.9	4.9	4.9
Overall balance	-3.7	-5.9	-6.2	-6.3	-5.6	-5.0	-4.6	-4.6	-4.6	-4.5	-4.4
Cyclically-adjusted balance (in percent of potential GDP) 2/	-4.8	-5.3	-4.8	-5.7	-5.9	-4.5	-4.8	-4.8	-4.7	-4.6	-4.4
Nonoil and gas primary balance	-5.3	-6.7	-7.5	-6.6	-7.8	-6.0	-4.8	-4.4	-4.1	-3.8	-3.4
Federal government debt	51.2	52.4	62.0	63.4	60.4	60.9	60.9	61.3	61.8	62.8	63.4
Balance of payments (in billions of U.S. dollars) 2/											
Goods balance	28.4	30.1	32.7	41.2	38.5	38.7	41.1	43.2	46.1	48.4	51.6
Services balance	-4.3	-2.6	-11.2	-14.7	-10.3	-8.3	-10.7	-11.3	-11.6	-11.3	-12.4
Income balance	-16.1	-14.7	-7.4	-12.3	-17.4	-18.3	-17.2	-17.3	-18.2	-19.1	-20.1
Current account balance	8.0	12.8	14.1	14.2	10.7	12.1	13.2	14.6	16.4	18.0	19.1
(In percent of GDP)	2.2	3.5	4.2	3.8	2.6	2.7	2.7	2.8	2.9	3.0	3.0
Capital and financial account balance	2.8	-9.1	-18.5	3.0	3.3	-2.7	-8.2	-6.5	-8.6	-11.3	-12.4
Of which: Direct investment	2.5	1.6	0.7	6.9	3.6	3.1	3.9	4.1	4.3	4.5	4.7
Errors and omissions	-8.9	-1.7	-0.1	-6.1	-1.9	0.0	0.0	0.0	0.0	0.0	0.0
Overall balance	1.9	2.0	-4.6	11.0	12.1	9.4	5.0	8.1	7.7	6.7	6.7
International trade in goods (annual percent change) 2/											
Goods exports, f.o.b. (in U.S. dollars terms)	10.4	-4.1	-5.9	27.0	13.8	-0.3	10.4	5.0	4.6	4.6	3.9
Goods imports, f.o.b. (in U.S. dollars terms)	11.4	-5.7	-8.5	27.2	18.1	-0.4	11.1	4.9	4.3	4.6	3.4
Terms of trade	-0.4	1.1	0.6	6.0	6.6	2.0	0.2	0.0	0.8	0.4	1.0
Gross official reserves (in billions of U.S. dollars) 3/	101.4	103.6	107.6	116.9	114.7	124.0	129.0	137.2	144.9	151.6	158.3
(In months of following year's imports of goods and nonfactor services)	5.8	6.7	5.6	5.2	5.0	4.8	4.7	4.8	4.8	4.9	5.0
(In percent of short-term debt by original maturity) 2/	103.7	108.9	117.6	120.3	105.0	106.0	105.9	106.2	106.4	108.2	110.2
(In percent of short-term debt by remaining maturity) 2/	84.8	87.1	91.9	93.3	84.8	85.7	84.4	85.6	85.8	86.8	87.9
Total external debt (in billions of U.S. dollars) 2/ 3/	223.0	231.5	238.8	259.1	259.2	276.5	290.5	307.5	324.3	338.4	352.4
(In percent of GDP)	62.2	63.4	70.8	69.5	63.8	62.1	60.5	59.3	58.2	57.1	55.7
Short-term external debt (percent of total, original maturity)	43.9	41.1	38.3	37.5	42.1	42.3	41.9	42.0	42.0	41.4	40.8
Short-term external debt (percent of total, remaining maturity)	53.6	51.4	49.1	48.4	52.2	52.3	52.6	52.1	52.1	51.6	51.1
Debt-service ratio 2/ 3/											
(In percent of exports of goods and nonfactor services)	11.2	11.6	14.4	11.7	10.8	11.3	12.2	11.9	11.6	11.3	11.3
Net international investment position (in billions of U.S. dollars) 2/	-17.5	-9.5	20.1	20.3	...	...	...	...	...	...	...
Memorandum items:											
Nominal GDP (in billions of ringgit)	1,448	1,513	1,418	1,545	1,788	1,931	2,090	2,246	2,405	2,552	2,712

Sources: Data provided by the authorities; and IMF staff estimates.

1/ Period ending December 31.

2/ IMF staff estimates. U.S. dollar values are estimated using the official data published in national currency.

3/ The decrease in short-term debt by remaining maturity in 2017 was partly due to the implementation of an improved data compilation system that corrected previous overestimation.

Table 5. Malaysia: Summary of Federal Government Operations and Stock Positions, 2018–28

	2018	2019	2020	2021	Proj. 2022	2023	2024	2025	2026	2027	2028
I. Statement of Government Operations 1/					(In billions of ringgit)						
Revenue	232.9	264.4	225.1	233.8	294.4	291.5	297.3	313.3	334.7	355.9	378.6
Taxes	174.1	180.6	154.4	173.7	208.8	218.3	235.1	249.4	269.2	288.8	309.7
Direct taxes	130.0	134.7	112.5	130.1	153.5	164.1	176.3	186.8	202.5	218.1	234.9
Indirect taxes	44.0	45.8	41.9	43.6	55.3	54.1	58.8	62.6	66.7	70.7	74.8
Non-tax revenue	58.8	83.8	70.7	60.0	85.6	73.2	62.2	63.8	65.6	67.1	68.9
Investment income	31.9	60.1	48.7	36.0	58.2	47.9	35.2	35.5	35.9	36.3	36.7
Other revenue	26.9	23.8	22.0	24.1	27.4	25.3	27.1	28.3	29.6	30.8	32.2
Expenditure and net lending	286.3	316.0	313.7	331.2	395.2	385.4	393.9	417.6	445.0	471.5	496.7
Current expenditure, including COVID fund	230.5	262.6	261.2	267.2	321.2	288.2	285.6	305.8	327.7	346.9	364.4
Expense	230.5	262.6	226.1	230.9	291.9	288.2	285.6	305.8	327.7	346.9	364.4
Compensation of employees	80.0	80.5	83.0	85.9	87.8	90.8	98.0	105.8	114.3	123.4	130.6
Use of goods and services	35.3	31.5	29.3	24.9	34.7	32.0	34.6	37.4	40.3	43.6	47.0
Interest	30.5	32.9	34.5	38.1	41.3	46.1	52.5	59.7	65.6	71.3	76.8
Subsidies and social assistance	27.5	23.9	19.8	23.0	67.4	58.6	33.7	31.7	31.5	27.8	23.9
Grants and transfers	30.9	66.0	28.9	29.1	28.9	29.1	33.2	35.0	36.9	38.6	40.5
Social benefits and other expense	26.3	27.7	30.6	29.9	31.9	31.5	33.6	36.2	39.1	42.2	45.6
COVID fund 2/			35.1	36.3	29.3	0.0					
Wage subsidies			13.0	9.0	2.3						
Social transfers			16.2	15.9	7.9						
Other spending			6.0	11.4	19.1						
Net acquisition of nonfinancial assets (incl. COVID spending) 3/	55.8	53.3	52.5	64.0	74.0	97.2	108.4	111.8	117.3	124.5	132.3
Gross operating balance	2.4	1.8	-1.0	2.8	2.4	3.3	11.7	7.4	7.0	9.0	14.2
Net lending/borrowing	-53.4	-51.5	-88.6	-97.5	-100.9	-93.9	-96.6	-104.4	-110.3	-115.6	-118.1
Tax refunds (Arrears) 4/											
Overall fiscal balance (authorities' definition) 1/	-53.4	-51.5	-88.3	-96.7	-99.5	-95.9	-96.6	-104.4	-110.3	-115.6	-118.1
					(In percent of GDP)						
Revenue	16.1	17.5	15.9	15.1	16.5	15.1	14.2	13.9	13.9	13.9	14.0
Taxes	12.0	11.9	10.9	11.2	11.7	11.3	11.2	11.1	11.2	11.3	11.4
Direct taxes	9.0	8.9	7.9	8.4	8.6	8.5	8.4	8.3	8.4	8.5	8.7
Indirect taxes	3.0	3.0	3.0	2.8	3.1	2.8	2.8	2.8	2.8	2.8	2.8
Non-tax revenue	4.1	5.5	5.0	3.9	4.8	3.8	3.0	2.8	2.7	2.6	2.5
Investment income	2.2	4.0	3.4	2.3	3.3	2.5	1.7	1.6	1.5	1.4	1.4
Other revenue	1.9	1.6	1.6	1.6	1.5	1.3	1.3	1.3	1.2	1.2	1.2
Expenditure and net lending	19.8	20.9	22.1	21.4	22.1	20.0	18.9	18.6	18.5	18.5	18.3
Current expenditure, including COVID fund	15.9	17.4	18.4	17.3	18.0	14.9	13.7	13.6	13.6	13.6	13.4
Expense	15.9	17.4	15.9	14.9	16.3	14.9	13.7	13.6	13.6	13.6	13.4
Compensation of employees	5.5	5.3	5.9	5.6	4.9	4.7	4.7	4.7	4.8	4.8	4.8
Use of goods and services	2.4	2.1	2.1	1.6	1.9	1.7	1.7	1.7	1.7	1.7	1.7
Interest	2.1	2.2	2.4	2.5	2.3	2.4	2.5	2.7	2.7	2.8	2.8
Subsidies and social assistance	1.9	1.6	1.4	1.5	3.8	3.0	1.6	1.4	1.3	1.1	0.9
Grants and transfers	2.1	4.4	2.0	1.9	1.6	1.5	1.6	1.6	1.5	1.5	1.5
Social benefits and other expense	1.8	1.8	2.2	1.9	1.8	1.6	1.6	1.6	1.6	1.7	1.7
COVID fund 2/			2.5	2.3	1.6	0.0					
Wage subsidies			0.9	0.6	0.1						
Social transfers			1.1	1.0	0.4						
Other spending			0.4	0.7	1.1						
Net acquisition of nonfinancial assets (incl. COVID spending) 3/	3.9	3.5	3.7	4.1	4.1	5.0	5.2	5.0	4.9	4.9	4.9
Gross operating balance	0.2	0.1	-0.1	0.2	0.1	0.2	0.6	0.3	0.3	0.4	0.5
Net lending/borrowing	-3.7	-3.4	-6.2	-6.3	-5.6	-4.9	-4.6	-4.6	-4.6	-4.5	-4.4
Tax refunds (Arrears) 4/											
Overall fiscal balance (authorities' definition) 1/	-3.7	-3.4	-6.2	-6.3	-5.6	-5.0	-4.6	-4.6	-4.6	-4.5	-4.4
II. Stock Positions					(In billions of ringgit)						
Federal government debt	741.1	793.0	879.6	979.8	1,079.3	1,175.2	1,271.9	1,376.2	1,486.5	1,602.1	1,720.2
(In percent of GDP)	51.2	52.4	62.0	63.4	60.4	60.9	60.9	61.3	61.8	62.8	63.4
Memorandum items:											
Structural balance (in billions of ringgit) 5/	-68.8	-80.2	-67.9	-88.8	-105.4	-87.2	-100.0	-107.5	-113.5	-117.4	-118.4
Structural balance (percent of potential GDP) 5/	-4.8	-5.3	-4.6	-5.5	-6.0	-4.6	-4.8	-4.8	-4.8	-4.6	-4.4
Structural primary balance (percent of potential GDP) 5/	-2.7	-3.1	-2.3	-3.2	-3.6	-2.2	-2.3	-2.2	-2.0	-1.8	-1.5
Primary balance (percent of GDP)	-1.6	-1.2	-3.8	-3.8	-3.3	-2.6	-2.1	-2.0	-1.9	-1.7	-1.5
Nonoil and gas primary balance (percent of GDP) 5/	-5.3	-6.7	-7.5	-6.6	-7.8	-6.0	-4.8	-4.4	-4.1	-3.8	-3.4
Oil and gas revenues (percent of GDP)	3.8	5.5	3.8	2.8	4.6	3.4	2.7	2.4	2.2	2.0	1.9
General government debt (percent of GDP) 6/	55.7	57.2	67.9	69.3	65.7	66.2	66.2	66.6	67.2	68.1	68.8
General government balance (percent of GDP) 6/	-2.6	-2.0	-4.9	-5.8	-5.9	-4.6	-4.5	-4.5	-4.5	-4.4	-4.3
Public sector balance (percent of GDP)	-2.9	-3.4	-7.3	-4.3	-4.4	-6.9	-6.9	-6.7	-6.5	-6.5	-6.3
Nominal GDP (in billions of ringgit)	1,448	1,513	1,418	1,545	1,788	1,931	2,090	2,246	2,405	2,552	2,712

Sources: Data provided by the Malaysian authorities; and IMF staff estimates.

1/ Cash basis. The authorities plan to adopt accrual basis by 2021.

2/ The authorities established a dedicated COVID-19 trust fund where they channeled proceeds from borrowing needed to finance the additional spending on COVID-19 relief measures. All such expenditures are appropriated through the fund.

3/ Net acquisition of nonfinancial assets include lending and loan repayment to and from other government related entities. In 2020, it includes RM4bln of COVID-related projects.

4/ Tax refunds in 2019 are allocated for payment of outstanding tax refunds.

5/ Structural (primary) balance removes one-off revenues and tax refunds in 2019, while nonoil and gas primary balance does not exclude tax refunds in 2019.

6/ General government includes federal government, state and local governments, and statutory bodies. Public sector includes general government and nonfinancial public enterprises.

Table 6. Malaysia: Depository Corporations, 2018–22 1/

	2018	2019	2020	2021	2022
	(In billions of ringgit; end of period)				
Net foreign assets	306.1	287.3	312.1	353.9	354.3
Foreign assets	584.0	582.8	601.0	659.8	677.7
Foreign liabilities	277.9	295.5	289.0	305.9	323.4
Net domestic assets	1,518.5	1,585.9	1,651.5	1,718.0	2,041.1
Net domestic credit	2,026.9	2,119.0	2,249.3	2,349.9	2,349.9
Net credit to nonfinancial public sector	195.0	197.5	250.5	278.3	278.3
Net credit to central government	170.9	173.4	226.8	254.4	299.2
Net credit to state & local government	1.9	1.9	1.4	1.7	1.9
Net credit to nonfinancial corporations	22.1	22.2	22.2	22.3	22.3
Credit to private sector 2/	1,741.3	1,826.0	1,898.2	1,970.9	2,058.3
Net credit to other financial corporations	90.6	95.4	100.6	100.9	116.7
Capital accounts	439.4	473.2	515.6	540.5	560.5
Other items (net)	-68.9	-64.1	-85.4	-95.1	-95.1
Broad money 3/	1,810.8	1,859.3	1,949.7	2,058.1	2,381.5
Narrow money	454.1	479.9	556.1	626.0	724.4
Currency in circulation	94.5	100.6	118.4	136.7	146.6
Transferable deposits	359.6	379.3	437.7	489.3	577.8
Other deposits	1,314.0	1,343.2	1,361.0	1,403.8	1,722.5
Securities other than shares	42.7	36.1	32.6	28.3	36.0
	(Contributions to 12-month growth in broad money, in percentage points)				
Net foreign assets	-1.6	-1.0	1.3	2.1	0.0
Net domestic assets	9.4	3.7	3.5	3.4	15.7
Memorandum items:					
Broad money (12-month percent change)	7.7	2.7	4.9	5.6	15.7
Currency in circulation (12-month percent change)	2.3	6.5	17.7	15.5	7.2
Credit to private sector (12-month percent change)	8.3	4.9	4.0	3.8	4.4
Money multiplier (broad money/narrow money)	4.0	3.9	3.5	3.3	3.3

Sources: Data provided by the Malaysian authorities; and IMF, *Integrated Monetary Database* and staff calculations.
1/ Based on data provided by the authorities, but follows compilation methodology used in IMF's Integrated Monetary Database.
2/ Actual data as provided by the Malaysian monetary authorities in the Integrated Monetary Database.
3/ Broad money does not equal the sum of net foreign assets and net domestic assets due to non-liquid liabilities, primarily at the other depository corporations.

Table 7. Malaysia: Banks' Financial Soundness Indicators, 2017–2022Q1

	2017	2018	2019	2020	2021Q4	2022Q1
	(In percent; end of period)					
Capital adequacy						
Regulatory capital to risk-weighted assets	17.8	18.1	18.6	18.9	19.2	18.3
Regulatory Tier 1 capital to risk-weighted assets	15.0	14.6	15.1	15.7	16.0	15.1
Asset quality						
Nonperforming loans net of provisions to capital 1/	6.5	5.1	5.5	5.5	5.1	5.6
Nonperforming loans to total gross loans	1.5	1.5	1.5	1.6	1.5	1.6
Earnings and profitability						
Return on assets	1.4	1.4	1.5	1.1	1.2	1.5
Return on equity	10.3	9.9	10.2	7.5	8.4	9.6
Interest margin to gross income	61.1	61.0	57.8	58.1	61.4	58.3
Non-interest expenses to gross income	43.2	42.0	42.3	42.5	44.5	37.9
Liquidity						
Liquid assets to total assets (liquid asset ratio)	22.0	21.9	21.6	22.0	22.7	22.8
Liquid assets to short-term liabilities	138.3	143.2	149.1	148.2	153.4	150.5
Loan to fund ratio	83.9	83.1	83.2	82.5	81.2	81.4
Liquidity coverage ratio	134.9	143.2	149.1	148.2	153.4	150.5
Sensitivity to market risk						
Net open position in foreign exchange to capital	6.1	5.5	4.2	5.2	4.0	4.3
Sectoral distribution of total loans to nonbanking sector						
Residents	0.0	0.0	0.0	0.0	0.0	0.0
Other financial corporations	0.0	0.0	0.0	0.0	0.0	0.0
General government	0.0	0.0	0.0	0.0	0.0	0.0
Nonfinancial corporations	0.0	0.0	0.0	0.0	0.0	0.0
Other domestic sectors	0.0	0.0	0.0	0.0	0.0	0.0
Nonresidents	0.0	0.0	0.0	0.0	0.0	0.0

Sources: Bank Negara Malaysia; and IMF, *Financial Soundness Indicators* database.

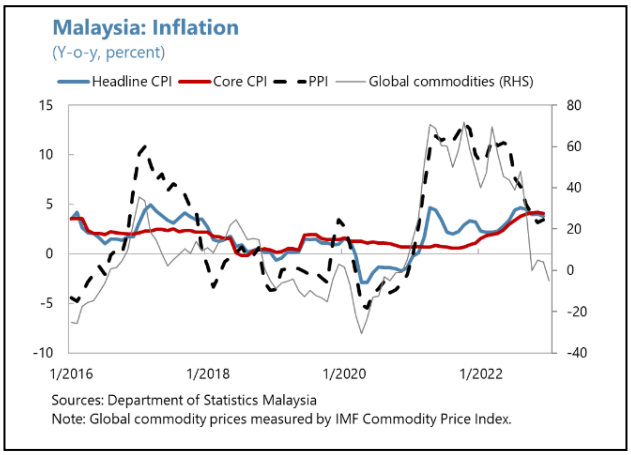
1/ Loans are classified as nonperforming if payments are overdue for three months or more. Total loans include housing loans sold to Cagamas Berhad. Net nonperforming loans exclude interest-in-suspense and specific provisions. There is a methodology change since 2018 following the implementation of Malaysian Financial Reporting Standards (MFRS) 9.

Appendix I. Drivers of Inflation in Malaysia[1]

Both headline and core inflation remain elevated in Malaysia. While global commodity prices have normalized, domestic demand remains strong and the labor market is tight. This annex first assesses the drivers of recent trends and finds evidence of a sharp build-up of demand-side pressures through 2022. It then considers additional forces that could influence inflation over the medium term, including the potential for pass-through from exchange range fluctuations under a liberalized subsidy regime.

A. Supply and Demand Drivers of Recent Trends

1. Headline inflation rose sharply after Malaysia exited from COVID restrictions in April 2022 and remains elevated. While extensive price controls and record spending on subsidies helped suppress inflation, the Phillips Curve steeped through mid-2022 (Figure 1 Panel 1), but this has not generated second-round effects in manufacturing wages (Panel 2) and medium-term inflation expectations remain well anchored (Panel 3). Services inflation in particular increased sharply (Panel 4), reflecting a structural rotation of demand away from durables as the economy reopened to tourism, mass entertainment and other previously restricted activities. The labor market tightened as a result (Panel 5), putting upward pressure on wages particularly in the services sector (Panel 6).



2. To assess the drivers of inflation more systematically, we use a structural vector autoregression (SVAR) approach to decompose demand and supply drivers. For each of eight emerging markets and developing economies in Asia with suitable data, we use variation in quarterly GDP and CPI to identify orthogonal supply and demand shocks. Intuitively, we model each of the output and inflation series to be a function of four elements: (i) a constant, (ii) their own past histories, (iii) demand shocks, which are characterized by movements of both GDP and CPI in the same direction, and (iv) supply shocks, which are characterized by movements of GDP and CPI in opposite directions. By imposing definitions (iii) and (iv) on the data, we use the two observed time series (GDP and CPI) to extract the two unknown series (demand shocks and supply shocks).[2]

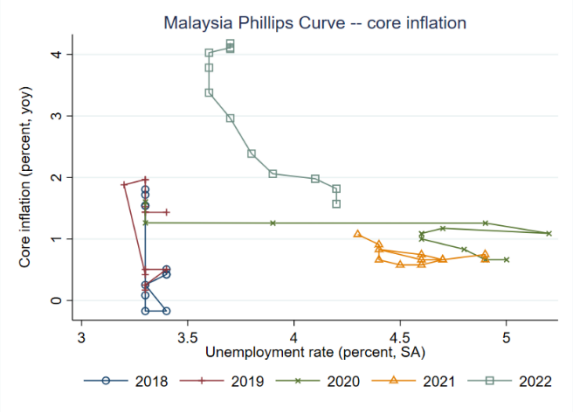
3. We find that Malaysia's inflation in 2022 was predominantly driven by demand shocks. While supply-pressures have moderated since the height of the pandemic, demand pressures increased upon reopening, with a particularly large impact in 2022 Q3 (Figure 2 Panel 1). Extracting this demand-driven component of CPI for all countries in the panel, we see that increasing demand pressures were widespread across the region in 2022 and as such were not specific to just Malaysia.

[1]Prepared by Alexander Copestake, with support from Chris Redl and Melih Firat in APD's Regional Studies Division (RSD).

[2]A formal description of the decomposition approach is provided in the Technical Annex at the end of this appendix.

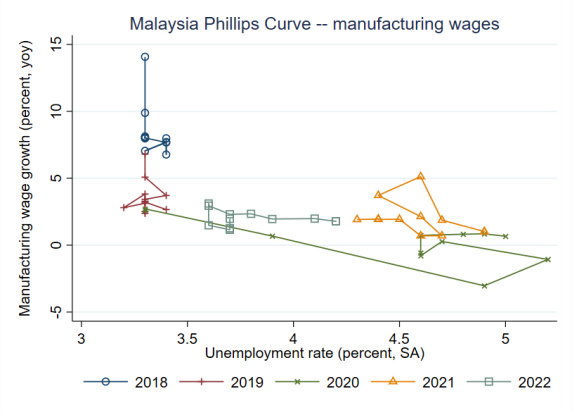
Figure 1. Malaysia: Inflation Context

Core Inflation and Unemployment
(Percent)



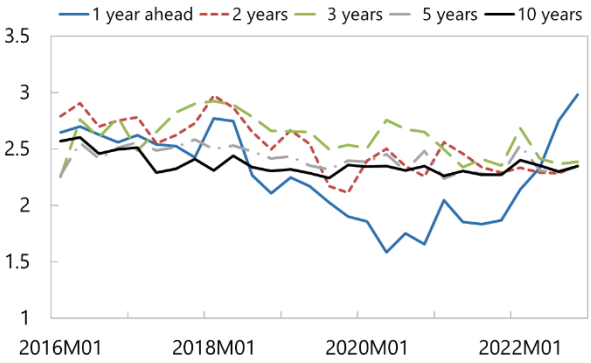
Source: Department of Statistics Malaysia, Haver Analytics.

Manufacturing Wage Growth and Unemployment
(Percent)



Source: Department of Statistics Malaysia, Haver Analytics.

Inflation Expectations
(Percent)

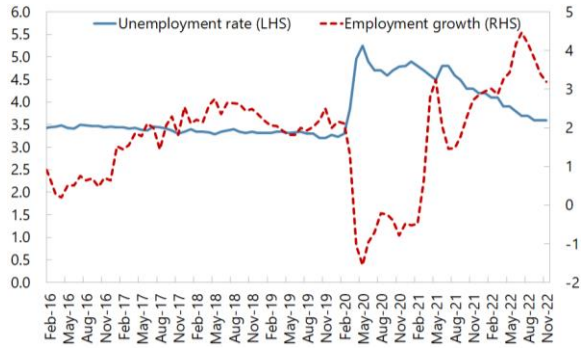


Source: Consensus Economics.

Inflation by Category
(Percent, y-o-y SA)

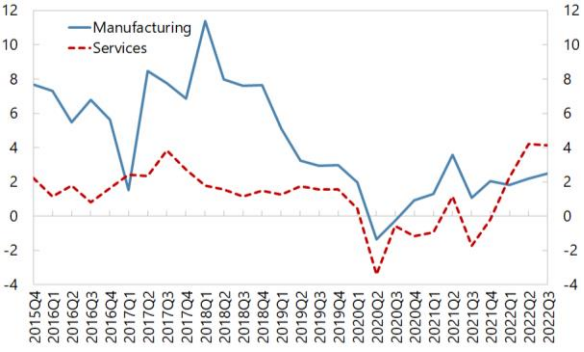
Source: Department of Statistics Malaysia, Haver Analytics.

Labor Market Developments
(Percent [LHS]; y-o-y percent change [RHS])



Source: CEIC data.

Growth in Average Monthly Salary and Wages
(Percent change, y-o-y)

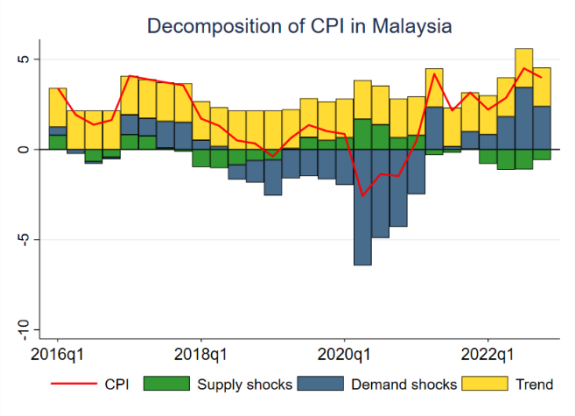


Source: Department of Statistics Malaysia, Haver Analytics.

Figure 2. Malaysia: Supply vs. Demand Drivers of Inflation

Decomposition of CPI in Malaysia

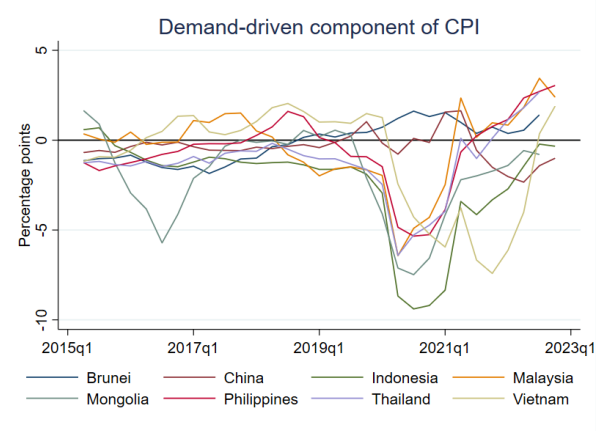
(Percent)



Source: Department of Statistics Malaysia, IMF staff calculations.

Demand-driven component of CPI across countries

(Percentage points of CPI)



Source: national authorities, IMF staff calculations.

B. Potential Drivers of Inflation in the Medium Term

4. Looking ahead, several additional factors could pose upside risks to inflation in Malaysia over the medium term. Increased support in the 2023 Budget for low-income groups with higher marginal propensity to consume could contribute additional demand-side pressure. On the supply side, the Budget also includes an intention to transition away from the current generalized fuel subsidies, increasing the potential for external cost pressures to feed through into significantly higher consumer prices. Where Malaysian consumers were relatively insulated in 2022, they could therefore face significantly higher impacts from future episodes of elevated commodity prices or shipping costs (Carrière-Swallow and others, 2023). An escalation of global trade tensions which results in increased geoeconomic fragmentation (as discussed in Appendix V) could also exacerbate supply chain issues. Indeed, recent work using measures of trade uncertainty has found that uncertainty alone is associated with higher import prices, even when controlling for changes in actual trade barriers (Ahir, Bloom and Furceri, 2022; IMF, 2022).

5. Recent and future depreciations of the ringgit could place further pressure on inflation, particularly once subsidies are phased out. While the large depreciation of the ringgit in 2022 has mostly reversed since November 2022, cross-country empirical evidence suggests that the pass-through from depreciation to prices may be larger and faster than for appreciations (Caselli and Roitman, 2016; Delatte and Lopez-Villavicencio, 2012), so there may nonetheless be a net impact in the short term. While the proportion of imported goods in the CPI basket is relatively small in Malaysia (20 percent), reducing the direct effect, USD invoicing is relatively extensive, at approximately 80 percent of exports and imports in 2019 (Boz et al., 2022), increasing indirect potential pass-through to consumers via domestic supply chains. To gauge the potential impacts of future depreciation episodes on Malaysia more systematically, we first draw on a panel of 45 advanced and emerging markets and run the following local projection model:

$$\Delta\pi_{j,t+h} = \beta_h^g \cdot \mathrm{X_g} \cdot \Delta ER_{j,t} + \sum_{l=1}^{12} \theta_l^{\pi} \pi_{j,t-l} + \sum_{l=1}^{12} \theta_l^{ER} \Delta ER_{j,t-l} + \sum_{l=0}^{12} \theta_l \pi_{j,t-l}^{oil} + \sum_{l=0}^{12} \theta_l^{Food} \pi_{j,t-l}^{food} + \sum_{l=0}^{12} \theta_l^{OutputGap} OutputGap_{j,t} + \sum_{l=0}^{12} \theta_l^{WorldGap} WorldGap_t + \delta_j + \epsilon_{j,t}$$

where β_h^g is the response of inflation to 1 percent depreciation in local currency against USD in country j in group g at horizon h months, and we control for lags of the exchange rate, global oil and food prices, the country's own output gap and the global output gap. Group g is defined as those countries whose average level of some variable X is above the cross-country median. Figure 3 Panels 1 and 2 respectively show the results where X is the extent to which inflation expectations are well anchored, from Choi et al. (2022), and the extent to which trade is invoiced in dollars, from Boz et al. (2022). Malaysia has below-median expectations anchoring and above-median USD invoicing, both of which are associated with higher exposure to depreciation-driven pass-through inflation.

6. We find that a one percent depreciation in MYR/USD is associated with between 0.05 and 0.2 percentage points of inflation over 12 months. To obtain these Malaysia-specific estimates, we focus on the Malaysia-only time series and run the similar regression:

$$\Delta\pi_{t+h} = \beta_h \cdot \Delta ER_t + \sum_{l=1}^{2} \theta_l^{\pi} \pi_{t-l} + \sum_{l=1}^{2} \theta_l^{ER} \Delta ER_{t-l} + \sum_{l=0}^{2} \theta_l \pi_{t-l}^{oil} + \sum_{l=0}^{2} \theta_l^{Food} \pi_{t-l}^{food} + \sum_{l=0}^{2} \theta_l^{OutputGap} OutputGap_t + \sum_{l=0}^{2} \theta_l^{WorldGap} WorldGap_t + \epsilon_t$$

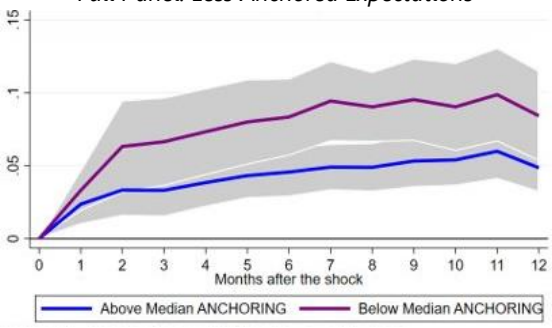
where we limit the lags to two rather than twelve given the lack of the panel dimension, trading off weaker controls for a Malaysia-specific estimate. The results are shown in Figure 3 Panels 3 and 4. In the maximum sample, a one percent depreciation in MYR/USD corresponds to a 0.05 percentage point increase in inflation over 12 months. In the shorter sample since the latest round of subsidy reforms in 2014, pass-through is higher at 0.2 percentage points, and also faster, rising to above 0.3 percentage points over the first five months. In all four cases, the impacts are weak but relatively persistent, with most not peaking for at least ten months. The historical Malaysia-specific estimates include the suppressing effects of the current subsidies, so constitute a lower bound for potential pass-through effects in a post-transition regime.

C. Conclusions

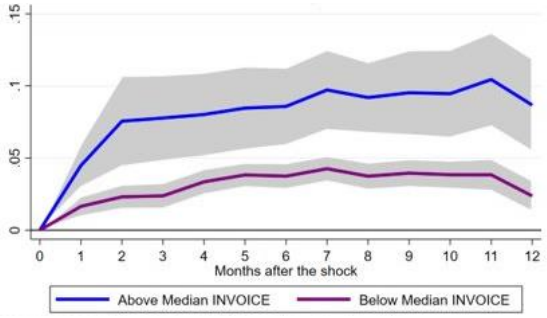
7. Malaysia faces significant inflation pressures, which will require judicious policy responses. We find evidence of demand-pull inflationary pressure built up through 2022, which supports the withdrawal of accommodative monetary policy and a potential continuation into restrictive territory. Looking ahead, reform to the subsidy regime would increase upside risks to the

Figure 3: Malaysia: Response of Headline CPI to a 1 Percent Depreciation vs. USD

Full Panel: Less Anchored Expectations



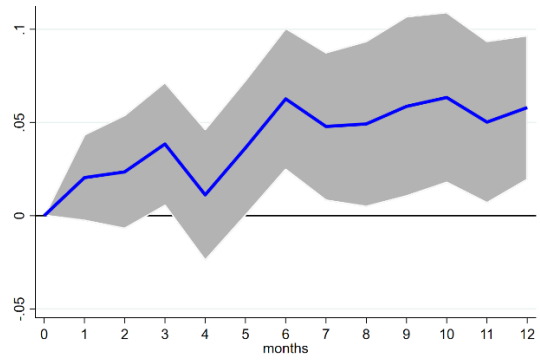
Full Panel: High USD Invoicing



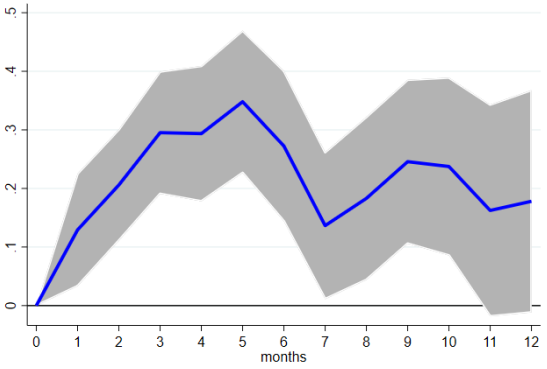
Source: IMF staff calculations.

Notes: The graphs above show the response of headline CPI to a 1 percent increase (depreciation) in the local currency against USD in group g among a panel of 45 advanced economies and emerging markets. Group g is defined as being above the median level of (left panel) the degree to which inflation expectations are well anchored, or (right panel) the share of imports that are invoiced in dollars. The local projection model controls for twelve lags of each of CPI, the exchange rate, global oil and food prices, and estimated output gaps for each country and the world. The shaded area includes one standard error above/below the central estimate.

Malaysia: Full Sample (1992m1-2021m12)



Malaysia: Sample Since 2015 (2015m1-2021m12)



Source: IMF staff calculations.

Notes: The graphs above show the response of headline CPI to a 1 percent increase (depreciation) in the MYR/USD exchange rate, in a local projection model which controls for two lags of each of CPI, the exchange rate, global oil and food prices, and estimated output gaps for Malaysia and the world. The shaded area includes one standard error above/below the central estimate.

medium-term inflation outlook which will need to be carefully managed and would support a gradualist approach to subsidy reform. Targeted fiscal support may be required to shield low-income households from external price shocks. Furthermore, if supply shocks prove to be sustained, monetary policy should be ready to act to prevent a de-anchoring of inflation expectations.

D. Technical Annex

8. This section provides a formal explanation of the method for deriving supply and demand shocks, which are the then used to decompose headline inflation into supply- and demand-driven components. Following Kilian and Lütkepohl (2017), within each country we stack output and inflation into a vector Y_t which is a function of a constant c, two lags of itself and an error term E_t with variance Σ:

$$Y_t = c + B_1 Y_{t-1} + B_2 Y_{t-2} + E_t \quad (1)$$

Assuming that each component of E_t is homoscedastic and serially uncorrelated and defining A_0 as the square root of Σ, then $A_0^{-1} E_t = U_t$ where $VAR(U_t) = I$, i.e., U_t are orthogonal shocks. We could then write Y_t as a function of a constant, its own past history and the uncorrelated shocks as required:

$$Y_t = c + B_1 Y_{t-1} + B_2 Y_{t-2} + A_0 U_t \quad (2)$$

While there are an infinite number of ways of calculating this matrix square root A_0, we need to impose restrictions on its coefficients to ensure that the resulting series U_t has the correct interpretation – i.e., that the demand shock component rises when both GDP and CPI rise, and the supply shock rises when GDP falls but CPI rises (after controlling for the constant and lagged terms in each case). Specifically, rewriting equation (2) in component form where S_t are supply shocks and D_t are demand shocks

$$\begin{pmatrix} GDP_t \\ CPI_t \end{pmatrix} = \begin{pmatrix} c_1 \\ c_2 \end{pmatrix} + \begin{pmatrix} b_{11}^1 & b_{12}^1 \\ b_{21}^1 & b_{22}^1 \end{pmatrix} \begin{pmatrix} GDP_{t-1} \\ CPI_{t-1} \end{pmatrix} + \begin{pmatrix} b_{11}^2 & b_{12}^2 \\ b_{21}^2 & b_{22}^2 \end{pmatrix} \begin{pmatrix} GDP_{t-2} \\ CPI_{t-2} \end{pmatrix} + \begin{pmatrix} a_{11} & a_{12} \\ a_{21} & a_{22} \end{pmatrix} \begin{pmatrix} S_t \\ D_t \end{pmatrix} \quad (3)$$

we impose the sign restrictions:

$$\begin{pmatrix} GDP_t \\ CPI_t \end{pmatrix} = \begin{pmatrix} c_1 \\ c_2 \end{pmatrix} + \begin{pmatrix} b_{11}^1 & b_{12}^1 \\ b_{21}^1 & b_{22}^1 \end{pmatrix} \begin{pmatrix} GDP_{t-1} \\ CPI_{t-1} \end{pmatrix} + \begin{pmatrix} b_{11}^2 & b_{12}^2 \\ b_{21}^2 & b_{22}^2 \end{pmatrix} \begin{pmatrix} GDP_{t-2} \\ CPI_{t-2} \end{pmatrix} + \begin{pmatrix} + & + \\ - & + \end{pmatrix} \begin{pmatrix} S_t \\ D_t \end{pmatrix} \quad (4)$$

Intuitively, positive supply and demand shocks both increase output, but supply shocks reduce inflation whereas demand shocks increase it.

To find a matrix A_0 that satisfies these restrictions, we begin with a Cholesky decomposition of Σ, which provides an initial candidate $\tilde{A}_0$. We then jitter this by a random matrix Q to generate a new candidate $\hat{A}_0 = \tilde{A}_0 Q$, where Q is a random orthogonal matrix such that the key property that $\hat{A}_0 \hat{A}_0^{-1} = \Sigma$ is preserved. Q is generated in line with Rubio-Ramírez et al. (2010), who use QR-factorization of a matrix of $N \times N$ standard normal variables to effectively draw Q from a uniform distribution over the space of orthogonal matrices. We repeat this process with new draws of Q until we find a candidate $\hat{A}_0$ that satisfies the sign restrictions in equation (4).

With this process for generating viable A_0 coefficients in hand, we can estimate the overall VAR. For this we use a standard numerical Bayesian approach, specifically Gibbs sampling. Define $b = vec(B)$ as the vectorization of all the model coefficients, and rewrite equation (1) as $Y_t = X_t B + E_t$ for simplicity, where $X_t = \{1, Y_{t-1}, Y_{t-2}\}$. We set a starting value Σ_0 equal to the identity matrix, then draw a first attempt b_1 from a multivariate normal distribution $f(b|\Sigma)$ with mean $\hat{b} = vec((X'X)^{-1}(X'Y))$ and variance $\hat{v} = \Sigma_0 \otimes (X'X)^{-1}$. We next draw a first attempt at the variance Σ_1 from an inverse Wishart distribution $f(\Sigma|b)$ with scale parameter $(Y - XB_1)'(Y - XB_1)$ and T degrees of freedom, where B_1 is b_1 reshaped so that it is conformable with X_t. We then use these estimated B_1 and Σ_1 to calculate the historical division of inflation between supply and demand shocks and store the estimates. We then repeat these previous two steps 1000 times (discarding the first 100 iterations to remove the influence of the initial estimate Σ_0) and take the mean value of the coefficients across the remaining iterations to generate our overall estimates.

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Appendix II. Sovereign Risk and Debt Sustainability Analysis

Malaysia is at a moderate overall risk of sovereign stress. Under current policies, debt is projected to gradually rise over the medium and long term. Medium-term liquidity risks as analyzed by the GFN Finance ability Module are moderate. Large contingent liabilities increase fiscal risks. Malaysia should accelerate important fiscal reforms such as developing a medium-term revenue strategy to put debt on a firm downward path and reduce risks.

1. Baseline macro-fiscal assumptions. The macroeconomic and policy assumptions follow the team's baseline projections. Real growth reached 8.7 percent in 2022 and is projected to moderate to 4.5 percent in 2023. The fiscal deficit is expected to decrease to 5.6 percent in 2022, below the 2022 Budget deficit target. Under current policies, the deficit is projected at 5 percent in 2023 as per 2023 Budget, and to average at 4.5 percent of GDP over 2024-28, remaining at 4.6 percent in 2025, above the authorities' deficit target of 3.2 percent of GDP.

2. Debt limit. The issuances and management of Malaysia's federal government debt are governed under several legislations according to the types of instruments. First, a domestic debt ceiling is defined for three types of instruments: Malaysia Government Securities (MGS), Malaysia Government Investment Issues (MGII), and Malaysia Islamic Treasury Bills (MITBs) taken together. The debt limit for MGS+MGII+MITBs has been raised in 2020 and 2021 from 55 percent of GDP to 60 then to 65 percent of GDP, to allow for increased borrowing to finance COVID-related spending and for the planned scaling-up of public investment as per the 12th Malaysia Plan. Second, the debt limit for the Malaysia Treasury Bills (MTBs) and offshore borrowing stands at RM10 billion and RM35 billion, respectively. The effective debt ceiling for federal government debt then considers all the limits above. Baseline debt is projected to remain below those limits.

3. Realism. Realism analysis does not point to major biases: median forecast errors for the medium-term primary deficit and public debt projections are neither optimistic nor pessimistic.

4. Risks and Mitigating Factors. Relatively high and gradually rising debt levels under the baseline erode fiscal buffers and leave Malaysia exposed to shocks. Debt servicing costs (ratio of interest expense to total revenues) is projected to rise above the 15 percent threshold imposed by the authorities' administrative rule. However, debt has remained below the authorities' effective debt limit. Existing vulnerabilities include sizable external financing requirements and large contingent liabilities,[1] which could exacerbate risks. However, relatively high share of long maturity and local currency debt as well as the existence of large domestic institutional investors are mitigating factors. Long-term debt risks are moderate. They are related to anticipated increases in pension costs, large amortization needs given Malaysia's long debt maturity implying an increase in GFN outside the perimeter of the projected period, and to climate adaptation and mitigation given Malaysia's climate goals and exposure risks.

[1] Prepared by Ghada Fayad. Malaysia's contingent liabilities include government loan guarantees (GG) granted to non-financial government-related entities to execute mainly infrastructure and other strategic projects. As of 2022, GG amounted to 17.8 percent of GDP, with a weighted average maturity at 10.9 years. About 65 percent of all GG (11.5 percent of GDP) are committed, whereby the government provides financial assistance in the form of temporary cash flow support during construction, working capital assistance, interest repayment or subsidies to ongoing projects.

Figure 1. Malaysia: Risk of Sovereign Stress

Horizon	Mechanical signal	Final assessment	Comments
Overall	…	Moderate	The overall risk of sovereign stress is moderate, reflecting moderate levels of vulnerability in the medium-, and long-term horizons.
Near term 1/			
Medium term	Low	Moderate	Medium-term risks are assessed as moderate against a mechanical low signal on the basis of authorities' medium-term consolidation plans, though specific measures have not been identified and adjustment effort remains below staff's recommended path.
Fanchart	Moderate	…	
GFN	Moderate	…	
Stress test	…	…	
Long term	…	Moderate	Long-term risks related to pension demographics, large amortization needs, and climate adapation and mitigation appear moderate.
Sustainability assessment 2/	Not required for surveillance countries	Not required for surveillance countries	
Debt stabilization in the baseline			No

DSA summary assessment

Commentary: Malaysia is at a moderate overall risk of sovereign stress. Under current policies, debt is projected to gradually rise over the medium and long term, driven in part by Malaysia's long-standing revenue weakness. Medium-term liquidity risks as analyzed by the GFN Finance ability Module are moderate. Large contingent liabilities increase fiscal risks. Malaysia should accelerate important fiscal reforms such as developing a medium-term revenue strategy to put debt on a firm downward path and reduce risks.

Source: Fund staff.

Note: The risk of sovereign stress is a broader concept than debt sustainability. Unsustainable debt can only be resolved through exceptional measures (such as debt restructuring). In contrast, a sovereign can face stress without its debt necessarily being unsustainable, and there can be various measures—that do not involve a debt restructuring—to remedy such a situation, such as fiscal adjustment and new financing.

1/ The near-term assessment is not applicable in cases where there is a disbursing IMF arrangement. In surveillance-only cases or in cases with precautionary IMF arrangements, the near-term assessment is performed but not published.

2/ A debt sustainability assessment is optional for surveillance-only cases and mandatory in cases where there is a Fund arrangement. The mechanical signal of the debt sustainability assessment is deleted before publication. In surveillance-only cases or cases with IMF arrangements with normal access, the qualifier indicating probability of sustainable debt ("with high probability" or "but not with high probability") is deleted before publication.

Figure 2. Malaysia: Debt Coverage and Disclosures

						Comments
1. Debt coverage in the DSA: 1/	CG	GG	NFPS	CPS	Other	
1a. If central government, are non-central government entities insignificant?					0	

2. Subsectors included in the chosen coverage in (1) above:

	Subsectors captured in the baseline	Inclusion	
1	Budgetary central government	Yes	
2	Extra budgetary funds (EBFs)	No	Not applicable
3	Social security funds (SSFs)	Yes	
4	State governments	No	
5	Local governments	No	
6	Public nonfinancial corporations	No	
7	Central bank	No	
8	Other public financial corporations	No	

CPS, NFPS, GG: expected, CG

3. Instrument coverage:	Currency & deposits	Loans	Debt securities	Oth acct. payable 2/	IPSGSs 3/

4. Accounting principles:	Basis of recording		Valuation of debt stock		
	Non-cash basis 4/	Cash basis	Nominal value 5/	Face value 6/	Market value 7/

5. Debt consolidation across sectors:	Consolidated	Non-consolidated

Color code: chosen coverage; Missing from recommended coverage; Not applicable

Reporting on Intra-Government Debt Holdings

Issuer \ Holder	Budget. central govt	Extra-budget. funds	Social security funds	State govt.	Local govt.	Nonfin. pub. corp.	Central bank	Oth. pub. fin corp	Total
1 Budget. central govt									0
2 Extra-budget. funds									0
3 Social security funds									0
4 State govt.									0
5 Local govt.									0
6 Nonfin pub. corp.									0
7 Central bank									0
8 Oth. pub. fin. corp									0
Total	0	0	0	0	0	0	0	0	0

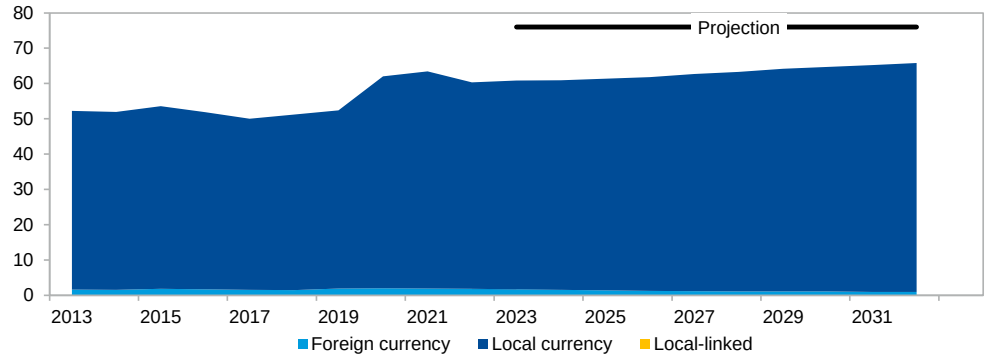
CPS, NFPS, GG: expected, CG

1/ CG=Central government; GG=General government; NFPS=Nonfinancial public sector; PS=Public sector.
2/ Stock of arrears could be used as a proxy in the absence of accrual data on other accounts payable.
3/ Insurance, Pension, and Standardized Guarantee Schemes, typically including government employee pension liabilities.
4/ Includes accrual recording, commitment basis, due for payment, etc.
5/ Nominal value at any moment in time is the amount the debtor owes to the creditor. It reflects the value of the instrument at creation and subsequent economic flows (such as transactions, exchange rate, and other valuation changes other than market price changes, and other volume changes).
6/ The face value of a debt instrument is the undiscounted amount of principal to be paid at (or before) maturity.
7/ Market value of debt instruments is the value as if they were acquired in market transactions on the balance sheet reporting date (reference date). Only traded debt securities have observed market values.

Commentary: Debt coverage is federal or central government, consistent with the data on government debt reported by the authorities. This definition of debt covers more than 90 percent of general government debt. However, it does not include local and state governments and statutory bodies which typically receive explicit government guarantees. Malaysia's contingent liabilities include government loan guarantees (GG) granted to non-financial government-related entities to execute mainly infrastructure and other

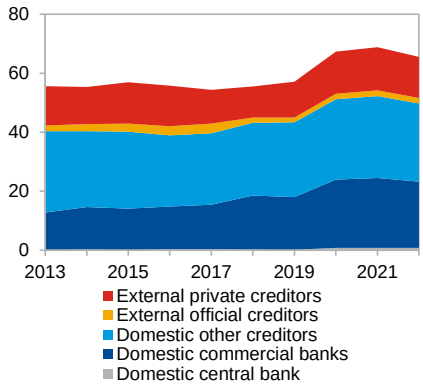
Figure 3. Malaysia: Debt Structure Indicators

Debt by Currency (percent of GDP)



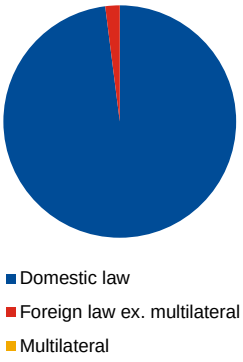
Note: The perimeter shown is central government.

Public Debt by Holder (percent of GDP)



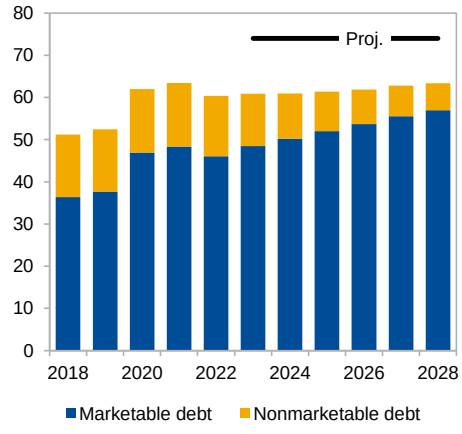
Note: The perimeter shown is central government.

Public Debt by Governing Law, 2022 (percent)



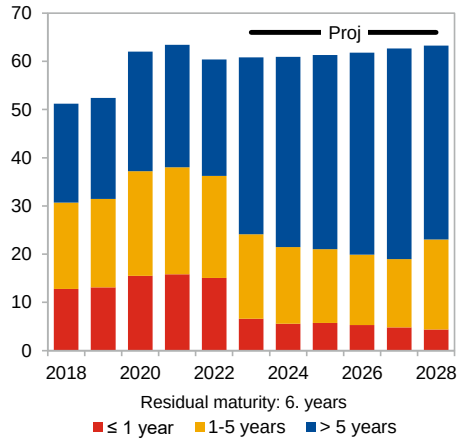
Note: The perimeter shown is central government.

Debt by Instruments (percent of GDP)



Note: The perimeter shown is central government.

Public Debt by Maturity (percent of GDP)



Note: The perimeter shown is central government.

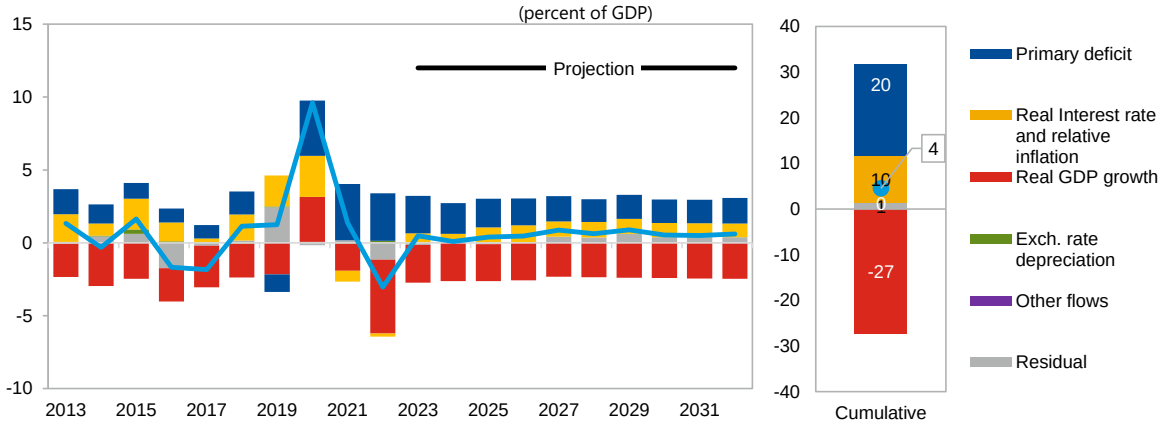
Commentary: Domestic creditors held about 73 percent of public debt in 2021. About 90 percent of external debt (and 97 percent of overall debt) is issued in local currency. The main domestic creditors are the Employees Provident Fund and commercial banks. All public debt, with the exception of Sukuk bonds, is governed by domestic law. A large proportion of debt is issued at longer maturities, as part of the government's debt management objective to reduce rollover risks by lengthening the issuance tenure to establish a well-spread maturity profile.

Figure 4. Malaysia: Baseline Scenario

(Percent of GDP unless indicated otherwise)

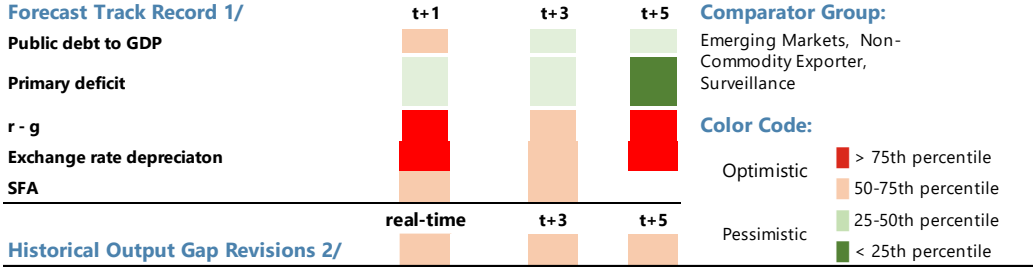
	Actual	Medium-term projection						Extended projection			
	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Public debt	60.4	60.8	60.9	61.3	61.8	62.7	63.3	64.2	64.7	65.2	65.8
Change in public debt	-3.0	0.5	0.1	0.4	0.5	0.9	0.6	0.9	0.5	0.5	0.6
Contribution of identified flows	-1.9	0.6	0.1	0.5	0.4	0.5	0.2	0.3	0.2	0.1	0.2
Primary deficit	3.3	2.6	2.1	2.0	1.9	1.7	1.6	1.6	1.6	1.6	1.7
Noninterest revenues	16.5	15.1	14.2	14.0	13.9	13.9	13.9	13.9	13.9	13.9	13.8
Noninterest expenditures	19.7	17.7	16.3	15.9	15.8	15.7	15.5	15.6	15.5	15.5	15.6
Automatic debt dynamics	-5.1	-1.9	-2.0	-1.5	-1.4	-1.3	-1.3	-1.4	-1.4	-1.5	-1.5
Real interest rate and relative inflation	-0.2	0.6	0.6	1.1	1.2	1.1	1.1	1.0	1.0	1.0	0.9
Real interest rate	-0.2	0.6	0.6	1.0	1.2	1.0	1.0	1.0	1.0	0.9	0.9
Relative inflation	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Real growth rate	-5.1	-2.6	-2.6	-2.5	-2.6	-2.3	-2.4	-2.4	-2.4	-2.4	-2.5
Real exchange rate	0.1	…	…	…	…	…	…	…	…	…	…
Other identified flows	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Contingent liabilities	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other transactions	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Contribution of residual	-1.2	-0.1	0.0	-0.1	0.0	0.4	0.4	0.6	0.4	0.4	0.4
Gross financing needs	11.6	10.6	10.8	9.8	9.9	9.5	8.8	8.5	9.2	8.4	8.2
of which: debt service	8.3	8.0	8.7	7.9	8.0	7.7	7.3	6.9	7.6	6.8	6.4
Local currency	n.a.	7.9	8.7	7.8	8.0	7.7	7.2	6.8	7.6	6.8	6.4
Foreign currency	n.a.	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
Memo:											
Real GDP growth (percent)	8.7	4.5	4.5	4.4	4.4	3.9	3.9	3.9	3.9	3.9	3.9
Inflation (GDP deflator; percent)	4.5	3.2	3.6	2.8	2.6	2.9	2.9	2.9	2.9	2.9	2.9
Nominal GDP growth (percent)	15.7	8.0	8.2	7.5	7.1	6.1	6.2	6.0	6.3	6.3	6.3
Effective interest rate (percent)	4.1	4.3	4.6	4.7	4.7	4.7	4.7	4.6	4.5	4.4	4.4

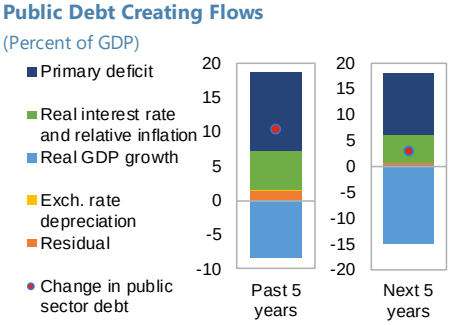
Contribution to Change in Public Debt

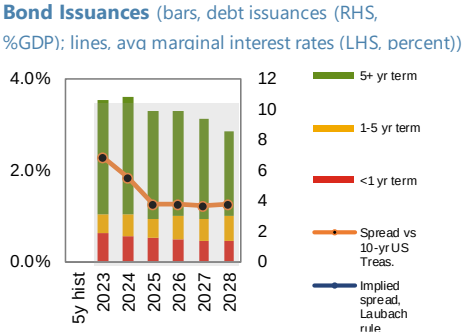


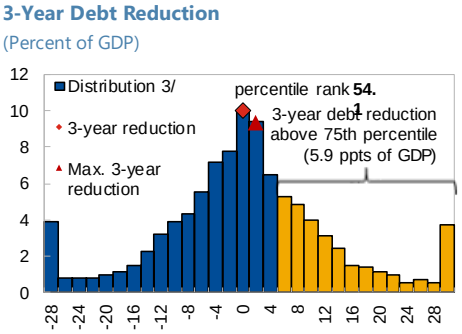
Staff commentary: Public debt will gradually rise over the forecast horizon, reflecting reflecting a primary deficit that remains about 2 ppts of GDP above its debt stabilizing level in 2032.

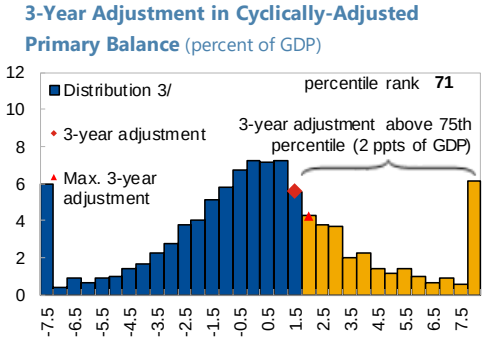
Figure 5. Malaysia: Realism of Baseline Assumptions

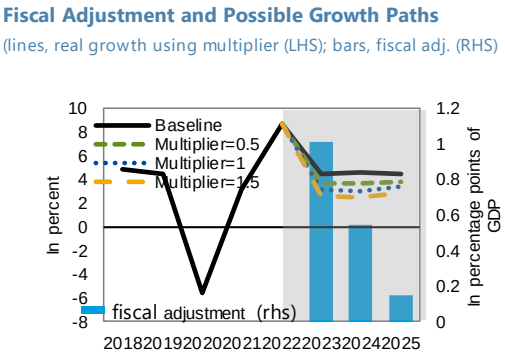


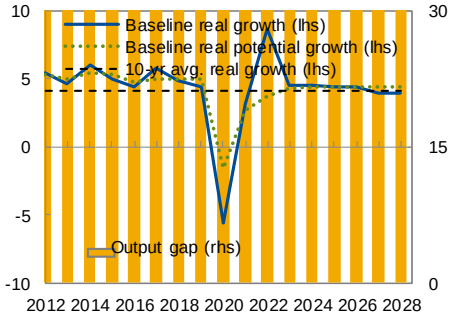












Commentary: Realism analysis does not point to major biases: median forecast errors for the medium-term primary deficit and public debt projections are neither optimistic nor pessimistic. The baseline does not incoporate any medium-term fiscal consolidation effort, beyond the budget year.

Source : IMF Staff.

1/ Projections made in the October and April WEO vintage.

2/ Data cover annual obervations from 1990 to 2019 for MAC advanced and emerging economies. Percent of sample on vertical axis.

3/ Starting point reflects the team's assessment of the initial overvaluation from EBA (or EBA-Lite).

Figure 6. Malaysia: Medium-Term Risk Analysis

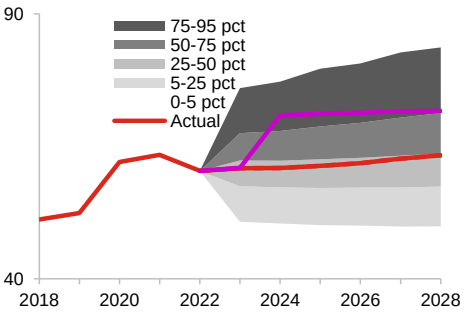
Debt Fanchart and GFN Financeability Indexes

(percent of GDP unless otherwise indicated)

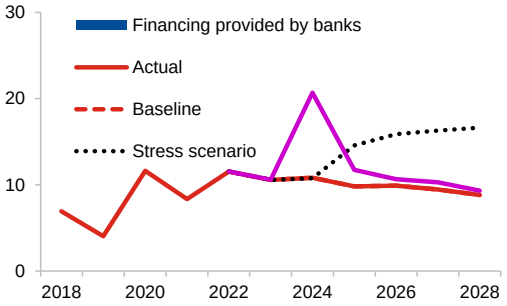
Module	Indicator	Value	Risk index	Risk signal	Emerging. Econ., Com. Exp, Surveillance (0 25 50 75 100)
Debt fanchart module	Fanchart width	33.8	0.5	...	
	Probability of debt not stabilizing (pct)	61.9	0.5	...	
	Terminal debt level x institutions index	23.4	0.5	...	
	Debt fanchart index	**...**	**1.5**	**Moderate**	
GFN finance-ability module	Average GFN in baseline	9.9	3.4	...	
	Bank claims on government (pct bank assets)	11.2	3.6	...	
	Chg. in claims on govt. in stress (pct bank assets)	3.6	1.2	...	
	GFN financeability index	**...**	**8.2**	**Moderate**	

Legend: Interquartile range; Malaysia

Final Fanchart (pct of GDP)



Gross Financing Needs (pct of GDP)

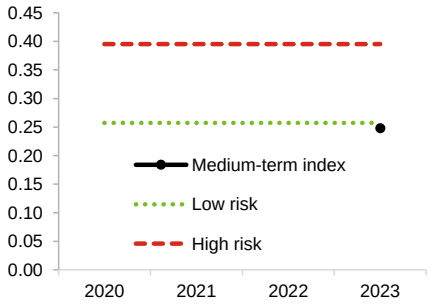


Triggered stress tests (stress tests not activated in gray)

Banking crisis | Commodity prices | Exchange rate | Contingent liab. | Natural disaster

Medium-Term Index

(index number)



Medium-Term Risk Analysis

	Low risk threshold	High risk threhsold	Weight in MTI	Normalized level
Debt fanchart index	1.1	2.1	0.5	0.3
GFN finaceability index	7.6	17.9	0.5	0.2
Medium-term index (MTI)	0.3	0.4	...	0.2, Low

Prob. of missed crisis, 2023-2028 (if stress not predicted): 9.1 pct.

Prob. of false alarm, 2023-2028 (if stress predicted): 42.0 pct.

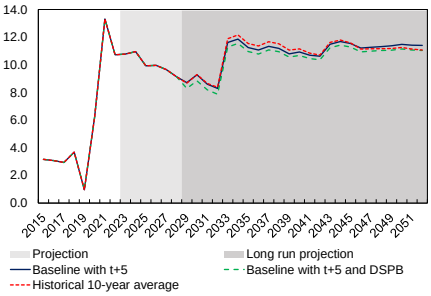
Commentary: The two medium-term tools, the Debt Fanchart Module and the GFN Financeability Module, suggest moderate levels of risk.

Figure 7. Malaysia: Long-Term Modules

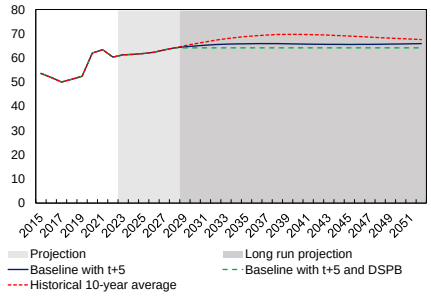
Large Amortization

Projection	Variable	Risk Indication
Medium-term extrapolation	GFN-to-GDP ratio Amortization-to-GDP ratio Amortization	
Medium-term extrapolation with debt stabilizing primary balance	GFN-to-GDP ratio Amortization-to-GDP ratio Amortization	
Historical average assumptions	GFN-to-GDP ratio Amortization-to-GDP ratio Amortization	
Overall Risk Indication		

GFN-to-GDP ratio



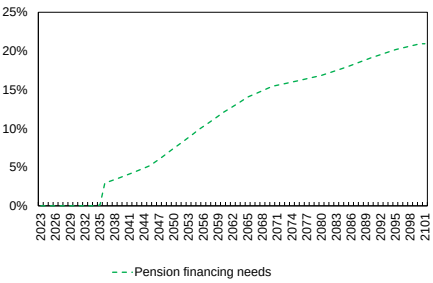
Total Public Debt-to-GDP Ratio



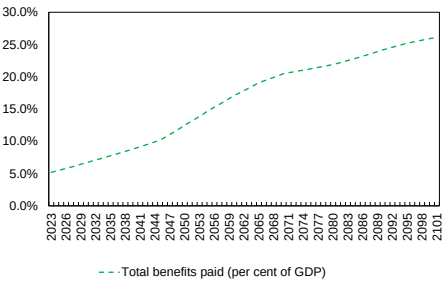
Demographics: Pension

Permanent adjustment needed in the pension system (pp of GDP per year)	To keep pension assets positive for:		
	30 years	50 years	Until 2100
	3.23%	7.74%	12.83%

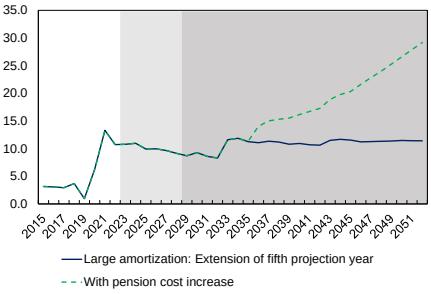
Pension Financing Needs



Total Benefits Paid



GFN-to-GDP Ratio



Total Public Debt-to-GDP Ratio

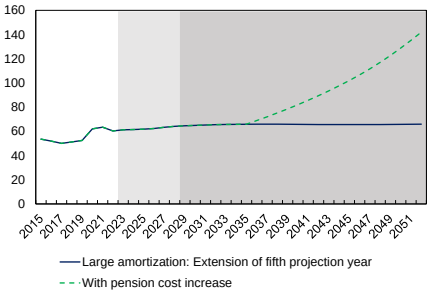
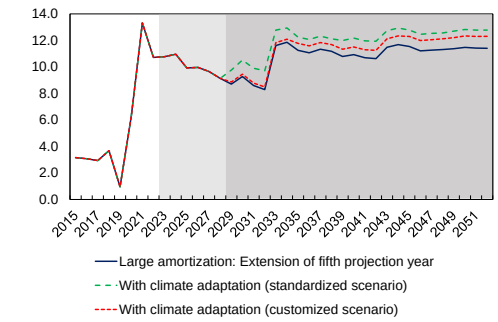


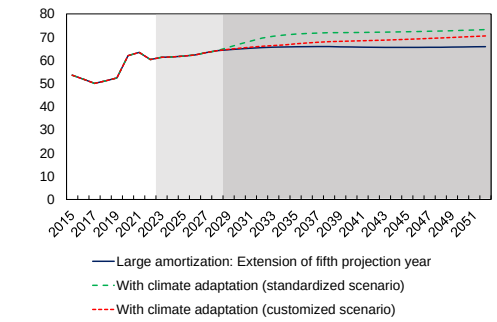
Figure 7. Malaysia: Long-Term Modules (concluded)

Climate Change: Adaptation

GFN-to-GDP Ratio

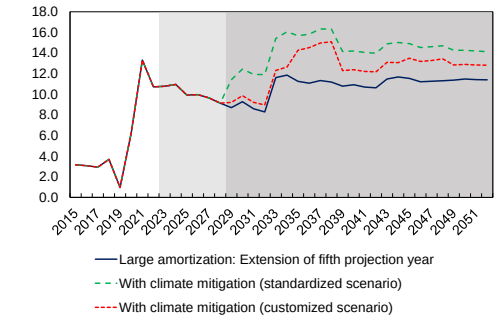


Total Public Debt-to-GDP Ratio

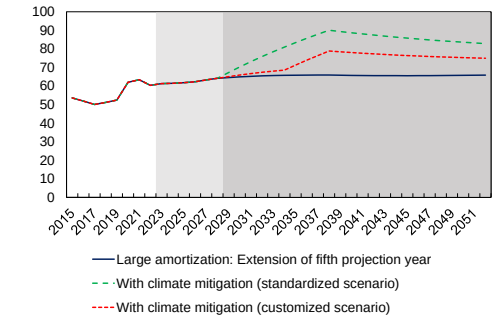


Climate Change: Mitigation

GFN-to-GDP Ratio



Total Public Debt-to-GDP Ratio



Appendix III. External Sector Assessment[1]

Overall Assessment: *Malaysia's external position in 2022 is preliminarily assessed to be stronger than the level implied by medium-term fundamentals and desirable policies.* The current account surplus, after strengthening due to pandemic-related exports, narrowed in 2022 because of a rebound in domestic demand, inventory accumulation by firms to mitigate the risk of future supply-chain disruptions, and a widening primary income deficit. Over the medium-run, the current account surplus is projected to widen as the pandemic-related travel restrictions are lifted, leading to an improvement of the services balance, and as imports moderate.

Potential Policy Responses: In the near-term, flexibility of exchange rate should be preserved to facilitate external adjustments that are driven by fundamentals. Over the medium term, policies should be implemented to strengthen social safety nets and public healthcare, including through a reorientation of fiscal spending. Structural policies should be implemented to encourage private investment and improve productivity growth, including through a reduction in the skills mismatch, improvements in the quality of education, measure to improve access to credit for SMEs.

Foreign Asset and Liability Position and Trajectory	**Background.** Malaysia's NIIP has averaged about 1 percent of GDP over the last decade, increasing to 5.5 percent at end-2021, supported by strong current account surpluses during the pandemic that helped increase reserve assets. As of end-2022, NIIP declined to 3.5 percent of GDP, primarily due to a decline in reserve assets, even as the outflow of portfolio investment led to a decline in portfolio liabilities. Total external debt declined to 64 percent of GDP in 2022, compared to 70 percent at end-2021, and remains manageable. One-third of external debt is ringgit-denominated, hence, not exposed to valuation risks. Short-term external debt, which accounts for 42.1 percent of external debt, is also manageable, as most of it is either in the form of intragroup borrowing (among banks and corporations, and largely stable) or trade credits (backed by export earning). **Assessment.** Malaysia's NIIP is expected to increase over the medium term, supported by the projected CA surpluses. Malaysia's balance sheet strength, along with exchange rate flexibility and increased domestic investor participation, would help support resilience to a variety of shocks, including outflows associated with external liabilities.						
2022 (% GDP)	NIIP: 3.5	Gross Assets: 124.5	Reserve Assets: 28.1	Gross Liab.: 121.0	Debt Liab.: 24.1		
Current Account	**Background.** After averaging about 12 percent in the first decade of this century, Malaysia's current account (CA) surplus has narrowed in the last decade, driven by strong domestic demand and a decline in national savings. In 2021, the surplus was 3.8 percent of GDP, bolstered by a strong goods surplus, due to external demand for pandemic-related exports, that more than offset a large services deficit because of COVID-19-related travel restrictions. Current account surplus declined to 2.6 percent of GDP in 2022, as the growth in imports exceeds the growth in exports, despite an improvement in the services balance driven by the removal travel restrictions. The growth in imports was largely driven by the rebound in domestic demand and firms building inventories to mitigate the risk of future supply-chain disruptions. In addition, the income account registered a higher deficit, as investment income of foreign investors in Malaysia exceeded the investment income of Malaysian firms' investments abroad, and as outward remittances increased. **Assessment.** The EBA CA model estimates a cyclically adjusted CA balance of 1.9 percent of GDP and a norm of -0.6 percent, implying a model-assed CA gap of 2.5 percent. After adjusting for the transitory effects of lower travel receipts (1.1 percent), higher transport costs (0.1 percent), and lower outflow of remittances (-0.2 percent), staff assess a CA gap in the range of 3.0–4.0 percent, with a midpoint estimate of 3.5 percent. Relative policy gaps partly explain the CA gap, with weaker social safety nets, proxied by health care expenditure, increase in BOP reserve assets, and looser fiscal policies adopted by the rest of the world relative to Malaysia contributing positively (0.6 percent, 0.6 percent, and 0.2 percent, respectively) to the excess surplus, and stronger credit growth contributing negatively (-0.8 percent). The CA surplus is expected to grow over the medium term, as tourism recovers and improves the services balance.						
2022 (% GDP)	CA: 2.6	Cycl. Adj. CA: 1.9	EBA Norm: -0.6	EBA Gap: 2.5	COVID-19 Adj.: 1.0	Other Adj.: 0.0	Staff Gap: 3.5
Real Exchange Rate	**Background.** The ringgit witnessed strong external pressures following the war in Ukraine, but these pressures have moderated in recent months. Between the start of the war in Ukraine and end-October 2022, the ringgit depreciated about 12 percent against the US dollar, but has strengthened since November, resulting in a depreciation of about 5 percent for the year. Over the year, the real effective exchange rate (REER) depreciated by 1.4 percent, even as the nominal effective exchange rate appreciated by 0.5 percent, as inflation in Malaysia was lower compared to its major trading partners. **Assessment.** Using a semi-elasticity of 0.51, the staff assessed CA gap implies a REER undervaluation of 6.9 percent in 2022. The REER index and level models estimate Malaysia's REER to be undervalued by 25.2 percent and 29.3 percent, respectively. This implies that, over the medium term, Malaysia's REER needs to appreciate to narrow the CA gap. Staff assess the REER to be undervalued in the range of 5.8–7.9 percent, with a midpoint estimate of 6.9 percent.						
Capital and Financial Accounts: Flows and Policy Measures	**Background.** Since the global financial crisis, Malaysia has experienced periods of significant capital flow volatility, largely driven by portfolio flows in and out of the local-currency debt market, in response to both the change in global financial conditions and domestic factors. **Assessment.** Continued exchange rate flexibility and macroeconomic policy adjustments, such as those prescribed by the IMF's Integrated Policy Framework, are necessary to manage capital flow volatility. CFM measures should be gradually phased out, with due regard for market conditions.						
FX Intervention and Reserves Level	**Background.** Gross international reserves, which had increased to US$116.9 billion by end-2021, declined to US$114.7 billion by end-2022. Against the backdrop of large external pressures, reserves decreased significantly following the war in Ukraine, but recovered during the latter half of the year, as external pressures eased. **Assessment.** Based on the IMF's composite reserve adequacy metric (ARA), reserves declined to about 110 percent of ARA at end-2022, above the adequacy threshold of 100 percent, but significantly lower than 121 percent of ARA at the end of the previous year. This decline is partly driven by an increase in the short-term external debt. The reserve coverage declined to 5 months of prospective imports, or about 85 percent of short-term debt. Staff assess that BNM engaged in largely two-sided FX interventions over the year. FX interventions should continue to be limited to preventing disorderly market conditions.						

[1] Prepared by Shujaat Khan. The assessment is preliminary, pending a complete analysis in the forthcoming July 2023 External Sector Report.

Appendix IV. Risk Assessment Matrix[1]

Risks	Likelihood and Transmission	Expected Impact of Risk	Recommended Policy Responses
Conjunctural Risks			
Abrupt growth slowdown or recession in China	**Medium** Greater-than-expected economic disruptions from COVID resurgence, rising geopolitical tensions, and/or a sharper-than-expected slowdown in the property sector disrupt economic activity	**Medium** China is Malaysia's largest trading partner. Staff estimated in the 2012 Spillover Report that a 1 percentage point investment slowdown in China would reduce Malaysia's growth by 0.6 percentage points. The impact would be compounded by spillover effects in other Asian countries strongly integrated with both China and Malaysia, particularly ASEAN countries.	The exchange rate should be the first line of defense to absorb the shock, using reserves to smooth excessive volatility. Targeted fiscal policy support can also play some role in minimizing scarring impact, although fiscal buffers are limited. Structural policies could be implemented to minimize scarring and rebalance growth towards domestic demand.
Monetary policy miscalibration.	**Medium** Amid high economic uncertainty and volatility, major central banks slow monetary policy tightening or pivot to loosen monetary policy stance prematurely, de-anchoring inflation expectations and triggering a wage-price spiral in tight labor markets.	**Medium/High** Impact on Malaysia would be through the narrowing difference in the interest rate as central banks enter a new tightening cycle, the resulting outflows and depreciation of the Ringgit and, through the upward pressure on the bond yields but also resulting weak external demand. High public debt is a vulnerability. Limited external financing and weak workers bargaining power are mitigating factors.	Monetary policy should be calibrated to balance the trade-off between supporting growth, taming inflation and managing capital outflows. With limited fiscal buffers, any temporary fiscal expansion should be well targeted and anchored in a credible medium term fiscal consolidation plan. Liquidity support (including FX) could be provided. Temporary outflow CFMs could be also considered under imminent crisis circumstances, as part of a broader policy package in line with the Fund's institutional view (IV).
Commodity price volatility.	**High** A succession of supply disruptions (e.g., due to conflicts and export restrictions) and demand fluctuations (e.g., reflecting China reopening) causes recurrent commodity price volatility, external and fiscal pressures.	**Medium** Commodity price volatility by inducing higher uncertainty could weigh on economic activity and put pressure on fiscal policy given reliance on oil revenues.	Rebuild fiscal buffers amid uncertainties and fiscal reforms to continue reducing the reliance on oil revenues, such as broad-based taxes, are critical. Investment in infrastructure and other productivity-boosting structural reforms could also help.
Structural Risks			
Deepening geoeconomic fragmentation.	**High** Broader and deeper conflict(s) and weakened international cooperation lead to a more rapid reconfiguration of trade and FDI, supply disruptions, technological and payments systems fragmentation, rising input costs, financial instability, a fracturing of international monetary and financial systems, and lower potential growth.	**Medium/High** With a highly open economy and as a key player in global supply chains of semi-conductors, reconfiguration of trade and supply disruptions threaten to negatively impact the economic activity through its impact on the manufacturing/Electronics sector.	A continued careful and orderly reopening of the economy especially targeting sectors well integrated into the global value chains would help mitigate the impact of this shock.

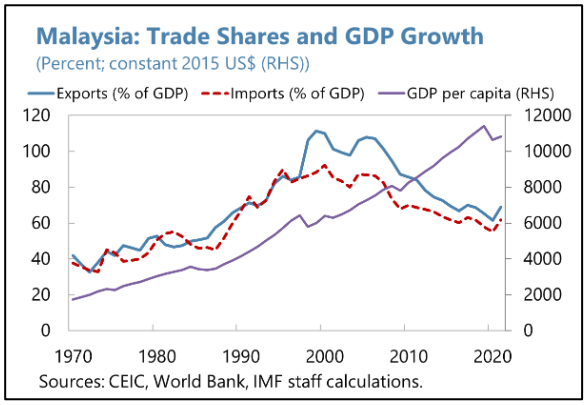
[1] Prepared by Kodjovi Eklou. The Risk Assessment Matrix (RAM) shows events that could materially alter the baseline path (the scenario most likely to materialize in the view of IMF staff). The relative likelihood of risks listed is the staff's subjective assessment of the risks surrounding the baseline ("low" is meant to indicate a probability below 10 percent, "medium" a probability between 10 and 30 percent, and "high" a probability of 30 percent or more). The RAM reflects staff views on the source of risks and overall level of concern as of the time of discussions with the authorities. Non-mutually exclusive risks may interact and materialize jointly.

Risks	Likelihood and Transmission	Expected Impact of Risk	Recommended Policy Responses
Structural risks (continued)			
Extreme climate events.	**Medium** Extreme climate events cause more severe than expected damage to infrastructure (especially in smaller vulnerable economies) and loss of human lives and livelihoods, amplifying supply chain disruptions and inflationary pressures, causing water and food shortages, and reducing growth.	**Medium** Severe flood events could destroy infrastructure and capital and necessitate relief and recovery spending, negatively impacting output and reducing further fiscal space.	Continue and accelerate the development and implementation of mitigation and adaptation plans, including 12MP improvements to early warning systems and disaster response measures.
Fiscal risks from public debt and contingent liabilities (Short- to medium-term).	**Medium** Realization of risks would have adverse consequences for fiscal policy, raising the sovereign's financing cost and requiring even stronger fiscal adjustment to restore fiscal sustainability.	**Medium/High** Higher financing costs for the sovereign; a relatively high public debt; and realization of contingent liabilities would exacerbate concerns about public debt sustainability and could lead to an adverse feedback loop of spikes in domestic interest rates and exit of foreign investors.	The authorities' ability to mount countercyclical responses would be boosted by medium-term fiscal consolidation most notably through a medium-term revenue strategy (MTRS). Continued progress in reforming fiscal institutions can mitigate the impact, including improving the fiscal risks management framework and publication of annual fiscal risks statement, along with increased transparency of GLC operations.
Cyberthreats	**Medium** Cyberattacks on critical domestic physical or digital infrastructure (including digital currency and crypto ecosystems) trigger financial and economic instability.	**Medium/High** Disruptions in secure remote work from home, theft of personal information, SWIFT fraud, hacked crypto-asset exchanges, and business disruptions across the supply chain could materialize.	Continued investment in the cyber security strategy. Existing IT security frameworks could be strengthened, and new lines of defense could be built to eliminate the risk of such attacks and minimize their impact in line with the recent FinTIP.

Appendix V. Malaysia's Exposure to Geo-Economic Fragmentation[1]

Global economic integration has been a core driver of growth for Malaysia and other Asian emerging markets in recent decades. Increased geopolitical tensions, heightened by Russia's invasion of Ukraine, therefore raise concerning questions. This annex first provides an overview of Malaysia's current linkages to the potential poles of a fragmented global economy, with a focus on trade and financial interlinkages. It then draws on recent literature to highlight the potential impacts on Malaysia of a range of possible fragmentation scenarios. In the short term, weaker external demand and lower investment due to higher uncertainty could be partially offset by gains from FDI 'friend-shoring'. In the starkest fragmentation scenarios, where Malaysia is unable to continue benefitting from simultaneous trade with opposing poles, Malaysia faces significant long-run costs.

A. Malaysia's Current Trade and Financial Linkages



1. Trade integration has been a core component of Malaysia's rapid growth over recent decades. Malaysia's rapid development in the 1980s and 1990s coincided with a takeoff in both exports and imports, as Malaysia connected to emerging global value chains. While the export share of GDP has declined since 2000, it remains above 60 percent, with broad spillovers to the rest of the economy through input markets. Malaysia's deep integration with global value chains is particularly pronounced in the electronics sector, in which foreign value added constitutes more than half of gross exports (Figure 1, Panel 1). The benefits of such integration have been widely documented in the theoretical and empirical literature, and include higher productivity, higher quality output and higher wages, resulting from specialization, economies of scale, increased investment, and knowledge spillovers (see, for example, Krugman, 1979; Grossman and Helpman, 1991; Melitz, 2003; Verhoogen, 2008; Bustos, 2011).

2. Malaysia has strong trade ties to all three of China, the US and Europe. For instance, in 2020 14.5 percent of Malaysia exports went to China, 12.7 percent to the USA, and 11.1 percent to Europe (source: CEPII BACI). Similarly, 26 percent of imports came from China, 6.3 percent from the USA, and 9.1 percent from Europe. While Malaysia has only a small amount of direct trade with Russia, its volume of trade with both China and the USA is large compared to the rest of ASEAN and Asia more broadly (Figure 1, Panel 2). This exposes Malaysia to potential negative repercussion in some geoeconomic fragmentation scenarios, as discussed below.[2]

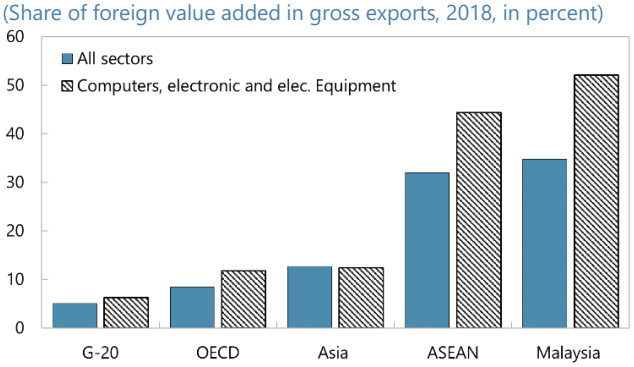
[1]Prepared by Alexander Copestake. This annex leverages the recent APD work on geoeconomic fragmentation in the October 2022 Asia and Pacific Regional Economic Outlook.

[2] We follow Aiyar et al. (2023) in defining geoeconomic fragmentation as a policy-driven reversal of global economic integration, often guided by strategic considerations (e.g., national security, sovereignty, autonomy). This excludes reversals due to autonomous changes (e.g., shifts in technology/preferences), or policies motivated primarily by prudential concerns (e.g., macro-prudential measures).

Figure 1. Malaysia: Global Value Chain Participation and Trade Partners

Interdependent High-Tech

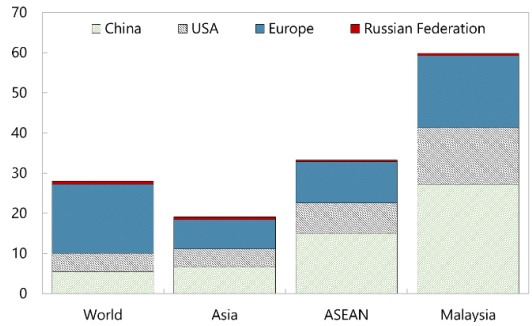
(Share of foreign value added in gross exports, 2018, in percent)



Sources: OECD TiVA and IMF staff calculations.

Total Volumes of Trade

(In percent of GDP, 2021)



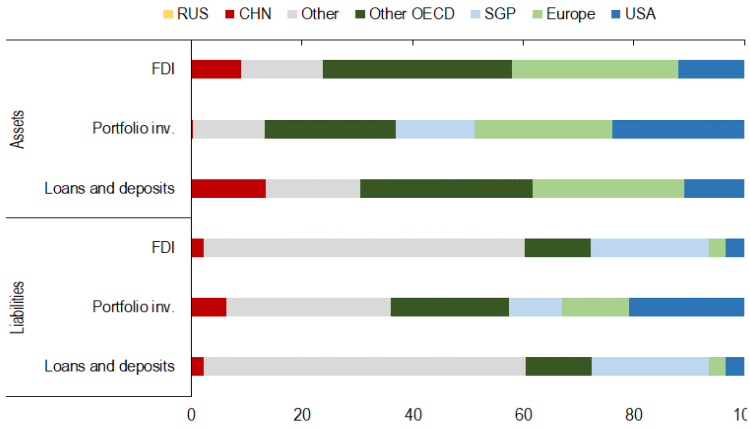
Sources: UN Comtrade, IMF WEO, and IMF staff calculations.

Note: Asia bars use data for economies available in TiVA, specifically AUS, JPN, KOR, NZL, BRN, KHM, CHN, IND, IDN, HKG, LAO, MYS, MMR, PHL, SGP, TWN, THA, and VNM.

3. Malaysia's financial integration is more skewed toward the USA and Europe. In addition to Malaysia's own assets potentially being exposed to fragmentation, Malaysia's ability to take on liabilities is an important element of future export-led growth. Foreign direct investment has broad benefits, including raising productivity and increasing the quality and sophistication of products that can be produced domestically and for export (see, for example, Javorcik, 2004; Bajgar and Javorcik, 2020, Javorcik et al, 2017). Likewise, the ability to receive investment in the form of both debt and equity is an important driver of firm growth. Geopolitical considerations that shift capital between blocs of countries could therefore have repercussions for Malaysia. However, Malaysia's financial integration is more skewed towards the USA and Europe than is its trade integration. Malaysia's outward foreign investment is predominantly directed towards the USA, Europe, and the rest of the OECD (see chart). This is also the case for inward foreign investment, which is somewhat more widely spread across a range of source countries. Even so, the macro-financial impacts of geopolitical tensions between other countries could have indirect spillover impacts effects (Chiţu and others, 2022; IMF, 2022a). A flare-up in tensions that caused a sudden reversal of cross-border flows could increase banks' funding costs and reduce credit provision to the private sector, particularly in emerging markets (IMF, 2023a). Over the longer term, financial fragmentation could reduce international risk diversification, increasing exposure to shocks and exacerbating macro-financial volatility.

Malaysia: Composition of Malaysia's Foreign Assets and Liabilities

(Percent, 2020)

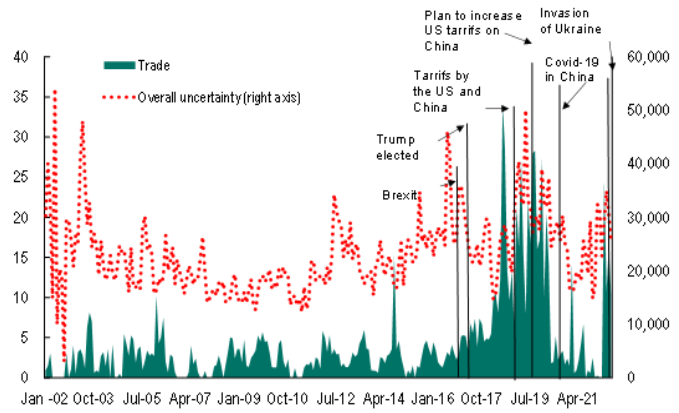


Sources: BIS, Coordinated Direct Investment Survey, Coordinated Portfolio Investment Survey, and IMF staff calculations.

B. Uncertainty, Investment and Friend-Shoring

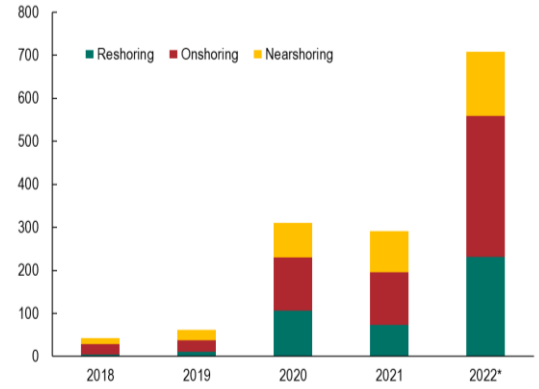
4. Trade-related uncertainty has increased substantially in recent years, reflecting elevated tensions between major economies (see chart). Key commodities and technologies, particularly fuel and semi-conductors, are increasingly central to both economic competition and national security and have been at the center of several waves of sanctions. Given the importance of both these sectors in Malaysia's production and export portfolios, the knock-on effects to Malaysia could be substantial. Uncertainty discourages firms from making long-term investments, including those required to enter competitive export markets (Caldara et al., 2019; Handley and Limao, 2022). A one-standard deviation-increase in trade uncertainty, roughly equivalent to the increase seen in the early 2018 as tensions between the USA and China built up to new tariffs, tends to reduce national investment by around 2.5 percent over three years (IMF, 2022b). At the firm level, investment falls by around 5 percent over the same period, with particularly large effects in emerging markets with high openness to trade, as in Malaysia.

Malaysia: Trade Uncertainty
(LHS: Contribution to the index; RHS: Overall index)



Source: Ahir, Bloom and Furceri (2022).

Malaysia: Mentions of Key Terms in Corporate Presentations
(Number)



Source: Bloomberg Document Search & Analytics. Note: Number of times specific terms are mentioned in transcripts from corporate presentations. For 2022, numbers are rescaled based on data available as of August.

5. Multi-national firms are responding to elevated uncertainty by reconfiguring their geographic footprint. Variants of the concept of 'reshoring' – moving supply chains closer to home, and away from countries with uncertain future trade relationships – have become increasingly prevalent in corporate presentations (see chart). Malaysia could potentially benefit from Western firms seeking to diversify their production away from China, but a key uncertainty is the extent to which supply chains readjust and potentially revert to previous configurations as China emerges from the pandemic. Furthermore, as China pivots away from investment-led growth to a more consumption-focused model, the incentive for multinationals to maintain a significant production presence on the mainland may reassert itself, given the size of the addressable market.

6. For Malaysia, the balance of this negative levels effect (on investment quantity) and positive reallocation effect (on investment location) is not yet clear. The extent to which locating production capacity in Malaysia is considered an effective substitute for additional production capacity in China is subject to substantial uncertainties, not least the potential for tensions between the US and China to spill over onto other prominent export-oriented manufacturing economies in Southeast Asia. Turning to trade flows, recent estimates also find limited evidence so far for trade diversion effects of US-China trade tensions (Cigna and others, 2022; Choi and Nguyen, 2021). However, long-run outcomes of fragmentation – once uncertainty is resolved and new groupings have hardened – could involve significant changes. As a first approximation, in the next section we illuminate a range of potential hypothetical scenarios by drawing on recent literature quantifying the economic effects of trade fragmentation.

C. Illustrative Quantification of Long-Run Trade Fragmentation Scenarios

7. This section provides an overview of existing estimates of the potential impact of both mild and severe trade decoupling scenarios on Malaysia. Figure 2 Panel 1 shows the results of simulations in Cerdeiro et al. (2021), who simulate technological decoupling in a trade model with heterogeneous firms and sectoral misallocation, building on Caliendo and others (2017). They calibrate the model with data from 26 sectors across 190 countries and impose an increase in non-tariff barriers such that trade flows of high-tech goods between hubs fall at least 95 percent. In the baseline case of technological decoupling between China and the US (first row of Figure 2 Panel 1), Malaysia benefits from trade diversion as it continues to trade with both hubs, with potential output increasing by 0.4 percent. This gain rises to 4.4 percent if the whole of the OECD joins the US side.[3]

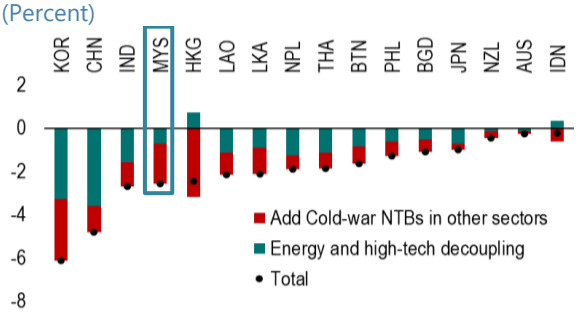
Figure 2. Malaysia: GDP Losses in Illustrative Fragmentation Scenarios

Impact on Potential Output, By Scenario
(Percent)

Hubs	Preferential attachment?	Asia				
		CHN	JPN	KOR	MYS	VNM
China | U.S.	No	-0.6	0.1	0.1	0.4	0.0
	Yes	-1.4	-1.0	-2.0	-1.5	-0.6
China | OECD	No	-2.8	-0.7	-2.9	4.4	0.4
	Yes	-3.9	-0.6	-3.0	-0.5	-0.6
China | U.S. | Germany	No	-0.9	0.2	0.5	1.1	0.1
	Yes	-2.0	-1.1	-2.3	-2.1	-0.5

Source: Cerdeiro et al. (2021).

GDP Losses Across Countries
(Percent)



Source: IMF (2022b), based on the model by Caliendo and others (2017) and Eora data.

8. In a severe fragmentation case, where hub countries force non-hub countries to 'pick a side' and stop trading with other hubs, Malaysia faces significant net costs. The second row of Figure 2 Panel 1 shows the case in which non-hub countries are constrained to only trade high-tech goods with the hub with which they have greatest total trade (denoted by 'preferential attachment').

[3] A tripolar world where Germany is an illustrative third pole, shown in row 5 of Figure 4 Panel 1, is an intermediate case.

In the bipolar China-US scenario, Malaysia now faces costs of 1.5 percent of potential output, and -2.1 percent in the more fractured tripolar scenario (row 6). The cost of this preferential attachment is reduced to 0.5 percent if the pole to which Malaysia attaches is larger, as is the case in the OECD scenario (row 4) in which almost all countries (except China) join the same pole.

9. Recent work (IMF, 2022b) extends this model to include restrictions on energy and other sectors and updates the potential poles in the light of Russia's invasion of Ukraine. The green bars in Figure 2 Panel 2 shows the GDP losses resulting from a scenario where global trade in energy and high-tech goods divides between those countries that (A) voted for the March 2, 2022 UN General Assembly motion to condemn Russia's invasion of Ukraine, and (B) those countries that voted against the motion or abstained. Malaysia again faces costs of approximately 0.5 percent of GDP, with the larger costs (relative to Panel 1) from the additional fragmentation of energy markets being offset by the larger coalition (as more many more countries than just the OECD voted to condemn). Finally, the red bars in Figure 2 Panel 2 show the result from an even more severe fragmentation scenario, in which trade barriers are extended to all sectors. Specifically, non-tariff barriers in other sectors (non high-tech, non energy) are increased between blocs until they reach a level equivalent to the maximum restrictiveness that prevailed at the height of the Cold War. In this hypothetical scenario, Malaysia faces a cost of approximately 2.5 percent of GDP, illustrating the significant potential costs of stark fragmentation scenarios, where Malaysia is no longer able to benefit from simultaneous trade with both sides. When compared to other Asian economies, Malaysia's position of trading with both poles thus exposes Malaysia to relatively large potential costs in stark fragmentation scenarios.

D. Additional Channels and Complexities

10. The impact of geoeconomic fragmentation on Malaysia could be affected by several additional channels and is subject to further uncertainties (Aiyar et al., 2023). Firstly, the models above abstract from investment dynamics, so do not account for changes to capital accumulation which could impact productivity in the medium and long term. Increased geostrategic tensions could reduce global knowledge-sharing, FDI and technology diffusion, reversing positive innovation and productivity spillovers and potentially leading to much larger output losses from fragmentation, particularly in emerging markets and developing economies (IMF, 2023b; Branstetter et al., 2018; Bloom et al., 2016). This could be compounded by a reduction in migration, raising labor costs in receiver countries and reducing potential remittance income in sender countries (Banerjee and Duflo, 2007; Islamaj and Kose, 2022). Lastly, a reduction in global cooperation to provide global public goods such as climate change mitigation or pandemic preparedness could have significant negative repercussions for Malaysia (see, for instance, CR22/126 Appendix VIII on climate change and CR21/53 Appendices I and II on COVID). Costs arising from these additional channels would reduce the gains from trade diversion described in the previous section under 'no preferential attachment' and would exacerbate the losses under 'preferential attachment'.

11. While the simulations above compare equilibria under different fragmentation scenarios, the adjustment dynamics are also highly uncertain. The immediate costs of fragmentation could be significantly higher than the long run impacts, as firms and workers take

time to reoptimize (Boehm, Levchenko, and Pandalai-Nayar, forthcoming; Bolhuis, Chen, and Kett, forthcoming). Similarly, agglomeration and coordination effects could create non-linearities, such that it is very hard to predict when a particular tipping point will be reached and a critical mass of firms or workers will choose to relocate. Finally, the alignment of each country, and hence the overall fragmentation pattern that emerges, can change rapidly in response to unforeseen geopolitical events. Indeed, some alternative patterns of fragmentation based on measures of trade intensity or historical geopolitical alignment (see, for instance, IMF 2023b) instead place Malaysia in the non-US pole, highlighting its precarious position with substantial exposure to both sides. In this complex and uncertain environment, tailoring policy appropriately will require continuous engagement with key stakeholders and monitoring of warning signs to identify risks early and respond expeditiously.

E. Conclusions

12. Stark fragmentation outcomes pose a significant risk to the global value chains that have been major drivers of Malaysia's development. Malaysia's integration with both poles in potential geoeconomic fragmentation scenarios leaves it particularly exposed in cases where tensions are sufficiently high that such countries are forced to trade sensitive goods with only one pole or the other. Increased geopolitical tensions could also reduce global knowledge-sharing, migration flows, and the provision of important global public goods, with further potential negative repercussions for Malaysia. Given these many channels, as well as the unpredictability of future geopolitical configurations, there is a high degree of uncertainty around the potential impacts of geoeconomic fragmentation on Malaysia, which itself hinders efforts to prepare.

13. Malaysia can play a role in mitigating geoeconomic fragmentation globally, while also adapting to minimize the negative effects on its economy. Policymakers should ensure that the various overlapping trade agreements of which Malaysia is a member do not contribute to fragmentation, but rather have open and non-discriminatory membership criteria. Malaysia is well positioned to advocate the open trading relationships and global value chains that have supported its recent development, and likewise to support norms that minimize trade policy uncertainty. Domestically, Malaysia can support continued investment by maintaining an attractive policy environment, undertaking structural reforms and improving infrastructure (IMF, 2023b), and can increase resilience to global shocks resulting from geopolitical tensions by improving FX reserves and reducing debt to maximize the policy space available to respond (IMF, 2023a). The wider the range of markets to which Malaysia sells, and the more diversified the sources of inputs, the more resilient Malaysia's supply chains will be to external shocks (IMF, 2022c). Similarly, producing more complex products – as well as maintaining high quality institutions and regulations – is associated with lower vulnerability to reshoring of FDI (IMF, 2023b).

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Appendix VI. Transitioning from Blanket to Targeted Subsidies: Best Practice and Implications for Malaysia[1]

The time is right for subsidy reform in Malaysia, given its high fiscal, environmental, distributional, and opportunity costs, as well as its many benefits that are aligned with Malaysia's Twelfth National Plan's goals. This note presents the several key ingredients for this reform to be fruitful and long-lasting, based on previous cross-country successful and unsuccessful subsidy reform episodes, including past attempts at reforming subsidies in Malaysia.

A. Costs of Subsidies, Benefits and Challenges of Subsidy Reform

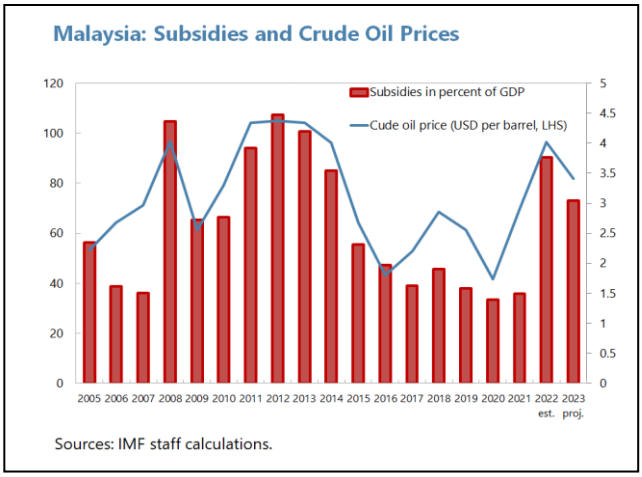
1. The benefits of subsidy reform are well recognized, as energy subsidies are costly, regressive, inefficient, and environmentally harmful. For Malaysia, subsidy reform would help achieve several of the goals set in its Twelfth Malaysia Plan. As they are an important driver of fiscal deficits and crowd-out productive investments given limited fiscal buffers, removing subsidies would push in the direction of fiscal sustainability and rebuilding buffers, while creating space for critical growth-enhancing public spending, including in the energy sector, as well as to targeted transfers to the most vulnerable segments of the economy. Subsidies are regressive and usually benefit richer households and using expenditure savings from subsidy reform to finance such transfers can help lowering inequality. Since subsidies encourage wasteful energy consumption and hence increase emissions and reduce incentives for investments in renewable energy, subsidy reform would help achieve Malaysia's climate ambition of becoming a carbon neutral economy by 2050.

2. Despite the G20 group repeated calls for a phase-out of inefficient fossil fuel subsidies in all countries, reform has proven to be a difficult and complex process, for well-identified reasons. Reform efforts have stalled particularly in commodity exporting countries, where fuel subsidies are considered a way of sharing the resource wealth with the people. First, there is lack of public information on the cost of subsidies, including in terms of foregone critical growth-enhancing investments, and on the scale of subsidies (how domestic prices compare to international prices). Second, there is usually concern about the adverse impact of subsidy reform on the poor, and public mistrust in how savings from subsidy reform will be used, particularly in countries that lack capacity to implement cash transfer programs and/or a well-functioning social safety net. Third, the inflationary effect of subsidy reform and potential volatility in domestic energy prices often hinder reform efforts, particularly if reforms are implemented during weak macroeconomic conditions (low growth and high inflation) or during periods of high international energy prices. Finally, specific interest groups benefitting from the status quo often oppose and block subsidy reform.

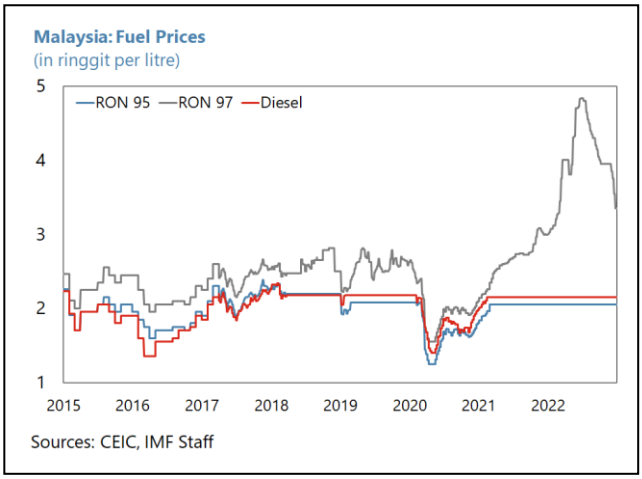
B. Subsidies in Malaysia

3. Subsidies have existed in Malaysia for decades, and energy subsidy bills have often constituted a large share of government spending, reaching over 20 percent of current

[1]Prepared by Ghada Fayad.



expenditures and 4 percent of GDP in periods of high commodity prices. Since 1983, an automatic pricing mechanism (APM) has been used in Malaysia, not as part of subsidy reform to pass on fluctuations in international prices to consumers as its name suggests, but to calculate the level of subsidies needed to cover the difference between the fixed retail prices of petroleum products and the market price. The three major subsidized fossil transport fuels in Malaysia are diesel, RON95 and RON97. There are also subsidies on LPG, cooking oil and some food items like sugar.



4. Malaysia attempted subsidy reform in the past with mixed success. As part of the 10th Malaysia Plan (2010–2015), a subsidy reform program was initiated by Prime Minister Razzak in July 2010, setting out a schedule of gradual subsidy reductions for fuel, sugar and other products, over a three-to-five-year period. However, the reforms stalled, and only the price of RON97 was floated in 2010, and it was not until Sept 2013 that the reform progressed, following a period of rising fiscal deficit and debt. The prices of diesel and RON95 petrol were first raised by about 10 percent each, and then fully eliminated by Dec 2014, capitalizing on the plunge in oil prices at the time. The 2014 Budget at the time announced that half of the savings from restructuring subsidies would be distributed in the form of direct cash assistance to low-income groups, with the other half being used to finance development projects. The removal of fuel subsidies pushed inflation above its historical average but without any signs of more generalized inflationary pressures, despite a positive output gap, helped by low oil prices. In 2018 however, subsidies for lower-grade petroleum were re-introduced along with a managed float fuel price mechanism with targeted subsidies for the low-income group effective 2019. In 2022, the MOF was repeatedly clear on its intention of shielding consumers from surging commodity prices following the war in Ukraine, and as a result spending on subsidies significantly increased to close the gap between fixed retail and international commodity prices.

C. Lessons Learned from Past Subsidy Reforms

5. Malaysia was one of about fifty countries that attempted some level of fossil fuel subsidy reform during 2015-2018, a period of relatively contained oil prices, with varying degrees of success. India, for instance, significantly reduced oil and gas subsidies during FY2014-2017, combined with government support to the renewable energy sector. LPG subsidies were

redirected straight to the consumers' bank accounts, putting in place the world's largest benefit transfer scheme. The reform was in tandem with communication campaigns to assess consumers' views. On the other hand, in 2015, Indonesia completed its reform of gasoline and diesel subsidies, with significant budgetary savings. However, fuel price changes were not implemented in a consistent and regular manner, with gaps between when prices are adjusted growing over time. Prices were last locked in 2019 in the leadup to recent presidential elections, along with continued investments in coal, instead of moving towards cleaner sources of energy. Beyond recent history, subsidy reform experiences date back to decades ago, with IMF (2013) assessing 28 major reform episodes across 19 countries mostly during 1980-2012.

6. There are several complementary and mutually reinforcing ingredients for designing a successful subsidy reform. Cross-country experience in reforming energy subsidies, drawing on both successful and unsuccessful cases, suggests that reform efforts are likely to be successful if they are:

(i) **part of a comprehensive reform plan with clear long-term objectives, on which stakeholders are consulted to ensure buy-in and prevent unnecessary backlash**. A clear and carefully planned medium-term reform strategy with clear objectives and timeline, preceded by extensive outreach campaigns were major factors behind the success of subsidies reforms (Iran, 2010; Philippines 1996 & 2001, Turkey 1998). Stakeholders should be invited to participate in the formulation of the subsidy reform strategy, and for instance Indonesia 2003 fuel subsidy reform was not successful due to inadequate consultation with stakeholders;

(ii) **based on an automatic pricing mechanism to depoliticize the setting of energy prices**: automatic pricing formulas can limit discretionary government interventions and limit reform reversal. Both the Philippines and Turkey successfully implemented such a mechanism during their subsidy reforms and were very transparent publicly on the details of the mechanism. Many other countries however abandoned such mechanism amidst unwillingness to pass on sharp international prices increases to consumers. Using price smoothing rules can help maintain these mechanisms even during periods of large price increases in international prices, as those would only gradually be transmitted to domestic prices under the smoothing mechanism. Finally, responsibility for implementing the automatic mechanism can be given to an independent body, to ensure continuity and avoid political influence across different governments.

(iii) **implemented gradually with appropriately phased price increases, which can also be sequenced across energy products, along with appropriate macroeconomic policies in place, while committing to eventual elimination of subsidies.** Successful reforms were usually implemented over a few years period, which allows households and firms time to adjust to energy price increases. Gradual increases also limit the impact of the reform on inflation, while also allowing policies, such as monetary policy to respond when necessary. It also provides time to build credibility by showing that subsidy savings are being put to good use and to establish supporting social safety nets. The pace of price increases should be carefully calibrated based on the gap between retail and international prices, the

available fiscal space, and the ability to put in place measures to mitigate the impact on vulnerable households. The adjustment paths of domestic prices could be differentiated by type of fuel based on their relative weights in the consumption of different income groups (those with higher shares in low-income consumers' baskets should have a slower adjustment path).

(iv) **accompanied by mitigating measures targeted at low-income households particularly where social safety nets (SSN) are weak and coupled with SSN reform.** These cash transfers give beneficiaries the flexibility to purchase the level and type of energy that best suits their needs. The modalities of such transfers have varied across countries, and their design is directly linked to the existing social safety nets:

1. ***In countries with existing SSN***, the most efficient of these programs can be expanded to provide relief to vulnerable households by increasing benefit levels and coverage. Where safety nets are comprehensive enough, such as in Mexico, LPG prices were gradually increased without any targeted social welfare mechanisms to mitigate impacts on the vulnerable, as its existing large-scale cash transfer program, which has a specific component intended to help households meet their energy needs, has already mitigated the impact of LPG reform.

2. ***In countries with not so well-functioning or absent SSN***, it is recommended to leverage on measures used in response to COVID-19 and to harness the power of digital tools to identify eligible household and deliver assistance. It is also highly recommended to complement subsidy reform with a reform strategy to strengthen the SSN system by addressing any inefficiencies and improving targeting capabilities, including through investing in information and delivery systems. In El Salvador, LPG subsidies were replaced with an income transfer that identified beneficiaries based on electricity consumption, initially via a barcode on electricity bills. This was later replaced with a new payment system that paid subsidies directly to LPG vendors when beneficiaries purchased LPG at the same time as providing ID and entering a personal identification number in a special, program-specific mobile phone. The phones were distributed to LPG vendors, who were also given special training in their use. The use of mobile phone technology allows information about all transactions to be collected in real time in a central database, improving the program's enforceability. In 2015, the government reported that the new program provided benefits to around 74 per cent of households. A similar system was adopted in Peru where the government in 2012 created the Fondo de Inclusión Social Energético (FISE), under which recipient households receive a monthly voucher providing financial support for the first LPG refill every month. The FISE eligibility criteria include average monthly electricity consumption, household income, house construction etc. The voucher is provided to recipients via a numeric code on their electricity bill. Relief to affected poor households could also be provided in the short term by reducing education, health, or public transportation fees to the extent that they help in reaching the targeted groups and can be effectively implemented.

3. In Malaysia's case, there are existing cash assistance programs that can be used. Most recently the Bantuan Keluarga Malaysia (BKM) was introduced in the 2022 Budget as an improved version of the previously known Bantuan Prihatin Rakyat (BPR). BKM is expected to reach more recipients and higher allocation compared to BPR.

(v) **take country circumstances into account, including the business and oil price, as well as political cycles**: subsidy reform is more successful when oil prices are falling, and when growth is relatively high, and inflation is low, as public resistance to reform is lower than economic conditions are favorable. These conditions are expected in 2023 with global commodity prices projected to moderate, and with Malaysia's growth, though weakening, projected at around pre-pandemic average, and with inflation remaining contained. Achieving broad consensus on the criticality of subsidy reform across political parties in Malaysia's new government following the 15th GE would be needed for the reform to be successful. The 2013 reform was followed by wide criticisms from opposition parties at the time who argued that the reform was a shortcut that would not help Malaysia's debt problem and that it would be detrimental to the poor.

(vi) **underpinned by a far-reaching and transparent communication strategy that is clear about the costs of subsidies and the benefits of reform, including winners and losers from reform and how expenditure savings from subsidy reform are going to be spent**. In the Philippines, a public communication campaign began at an early stage and included a nationwide road show to inform the public of the problems of subsidies. Transparency is also key and successful governments publicly disseminated information and data on the magnitude of the subsidies and how they are funded, their distribution across income groups and comparison to spending on priority areas, and how prices are formulated. Malaysia's 2013-14 subsidy reform raised awareness about subsidy costs, including publicizing information on posters at petrol stations and on monthly electric bills. India's "Give It Up!" campaign was a central-government-led program with strong backing from the Prime that tried to establish that wealthier individuals should voluntarily stop consuming subsidized LPG.

D. Conclusions

7. The commitment to subsidy reform in the 2023 Budget needs to be complemented by a clear, well-defined, and transparently communicated comprehensive reform plan. While multiple recent statements on the unsustainability of record spending on subsidies in 2022 provided an indication of the cost of subsidies, clearly explaining to the public and media the multifaceted costs of subsidies and why replacing those with a system of targeted cash transfers, along with strengthening SSNs, is more beneficial, particularly to poor households, remains to be done. The government thus far insisted on the gradual nature of subsidy reform, but more clarity is needed on the exact sequencing of energy price increases, to shape expectations and avoid public uproars, and on the exact depoliticized price-setting mechanism. Details about the mitigating cash transfers should ideally be quantified and be part of the Budget.

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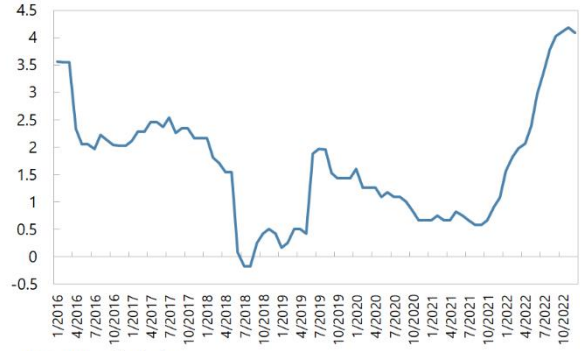
Appendix VII. Monetary Policy Transmission in Malaysia: Lessons from Historical Data[1]

Monetary policy transmission in EMs has been found to be weak historically due to under-developed financial markets and heavy central bank intervention in FX markets undermining the exchange rate channel. Monetary policy in Malaysia shifted to a market-based interest rate framework in 2004. Against this backdrop, this paper tests the effectiveness of the policy rate tool in preserving price stability, estimates the transmission lag and investigates nonlinearities in Malaysia based on historical data. In order to investigate the potential implications for the trade-off between growth and price stability, known as the sacrifice ratio, it also investigates the impact of monetary policy tightening on economic activity. Finally, the paper draws some implications for monetary policy and the broader policy-mix at the current juncture.

A. Background: Taking Stock of Recent Monetary Policy Tightening and Inflation Developments in EMs Including Malaysia

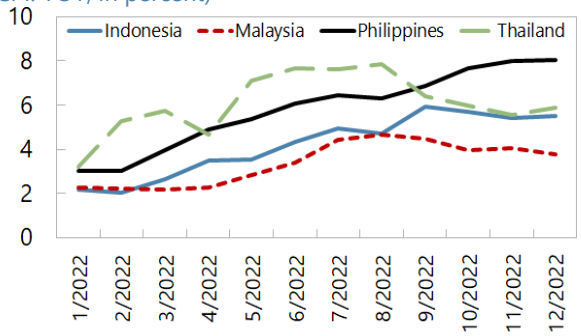
1. Headline inflation has risen while core CPI shows signs of persistence in Malaysia. Headline CPI Inflation rate reached 3.8 percent in December 2022 driven by food prices, averaging 3.4 percent over the year in Malaysia. However, core inflation, excluding administered and volatile food items, rose to 4.1 percent in December 2022, among highest recorded since 2016, signaling some degree of persistence.

Malaysia: Core Inflation
(In percent yoy)



CEIC, IMF staff calculation

Inflation Has Been Rising in ASEAN-5
(CPI: YOY, in percent)

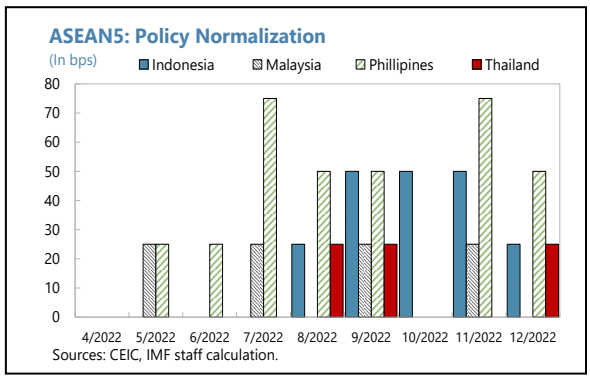


Sources: CEIC, IMF Staff Calculation.

2. The Bank Negara Malaysia (BNM) has started a gradual monetary policy normalization. The BNM has taken a gradual approach in normalizing its monetary policy by a cumulative 100 basis points (bps) over the last four meetings since May 2022, recalibrating the level of monetary accommodation given that the economy is now on a strong footing. In the latest Monetary Policy Statement of January 2023, the BNM decided to maintain the OPR at 2.75 percent to allow for an assessment of the impact of previous cumulative hikes. ASEAN4 peers have also

[1] Prepared by Kodjovi Eklou.

started to normalize monetary policy, some more aggressively so, with Philippines hiking cumulatively by 350bps since May 2022.



B. Empirical Analysis on Monetary Policy Transmission in Malaysia

Monetary Policy Transmission in EMs and Malaysia: Channels and Recent Literature

3. Monetary policy transmission works through various channels including the interest rate channel, the exchange rate channel, the bank lending (credit) channel and asset price channel.[2] First, an increase of nominal rates by translating into higher real rates and user cost of capital lead to deferred consumption and reduction in desired investment, thus exerting a downward pressure on prices through the interest rate channel. Second, the exchange rate channel is also important in the context of open emerging markets and operates as follows. An increase in domestic rates by leading to an appreciation puts downward pressure on prices of tradable goods in the consumption basket. The exchange rate appreciation will also reduce both aggregate demand and net exports. Third, through the credit channel, a tightening of monetary policy reduces deposits and liquidity from the banking system and induces a reduction in lending. Finally, higher interest rates increase the discount factor for future dividend income and could also reduce expected future cash flows and stock returns and thus would reduce equity prices. Given the positive correlation between asset prices including equity prices and consumption through a wealth effect, an interest rate hike would therefore reduce consumption and inflation.

4. Recent empirical literature highlights the importance of the exchange rate channel, the credit channel, and the asset price channel in emerging and developing economies (EMDEs) including in Malaysia. Monetary policy transmission in EMDEs has been found weak historically due to under-developed financial markets, heavy central bank intervention undermining the exchange rate channel in FX markets (see Mishra et al, 2012), but also data and methodological issues (see Berg et al., 2013). However, Brandão-Marques et al. (2021) show that once the exchange rate channel is explicitly accounted for, interest rate hikes reduce both inflation and output in EMDEs. Recent empirical investigations in Malaysia show the importance of the credit channel (Rashid et al, 2020)[3], the asset price channel in particular equity prices as captured by the stock

[2] The BNM highlighted these four channels as the most dominant for its monetary policy in a BIS survey (BIS, 2008).

[3] They use data on credit supply by banks to show that that the credit channel is important in Malaysia, but Islamic banks respond less to monetary policy compared to commercial banks. Further, they also find that small-sized banks

(continued)

market index (Khaw and Sivabalan, 2016) while Poon (2018) finds that CFMs reduced the transmission of monetary policy.[4]

Testing the Channels of Monetary Policy Transmission in Malaysia

5. We identify monetary policy shocks following Romer and Romer (2004) and Holm et al. (2021). The first step in investigating the transmission of monetary policy is to identify monetary policy shocks. Monetary policy decisions are usually endogenous because these decisions are made in response to current or future economic conditions. In order to identify a causal effect of monetary policy, we need to isolate the component of the change in the OPR that is not driven by the Central Bank's expectation about key variables such as inflation and growth. In this paper we follow the approach used in Romer and Romer (2004) and Holm et al (2021) to identify these monetary policy shocks that are plausibly purged from expectations about economic conditions.

6. We exploit the BNM monetary policy statement level data since the introduction of the market-based interest rate framework in 2004.[5] Our specification is similar to Holm et al. (2021) using data on policy meeting frequency as follows:

$$\Delta i_m = \beta_0 + \beta_1 i_{m-1} + \sum_{k=0}^{1} \delta_k^{\pi} \pi_{m,t+k} + \sum_{k=0}^{1} \delta_k^{y} y_{m,t+k} + \beta_2 E_{m-1} + \eta_m^{MP} \qquad (1)$$

Where Δi_m is the change in the policy rate (OPR) at meeting *m*, i_{m-1} is the level of the OPR in the previous meeting. Meeting *m* takes place in year *t,* and control variables include inflation forecasts for the current year ($\pi_{m,t}$) and the next year ($\pi_{m,t+1}$), growth forecasts for the current and next year respectively $y_{m,t}$ and $y_{m,t+1}$ but also the MYR/USD bilateral exchange rate from previous meeting month (E_{m-1}).[6] Data on inflation and growth forecasts were taken from the consensus forecast for the corresponding month of each meeting and the bilateral exchange rate from CEIC. Finally, η_m^{MP} is a measure of monetary policy shock associated with meeting *m* obtained as a residual from equation (1).

7. We estimate equation (1) by OLS and found similar results to Romer and Romer (2004) and Holm et al (2021). Our estimates cover the meetings from May 2004 to July 2022. Table 1 shows the results of our estimates with coefficients having expected coefficients and similar to those found for the US and Norway in Romer and Romer (2004) and, in Holm et al (2021) respectively. Further, similarly, the model explains about 30 percent of the variation in the change in OPR. We find that, when the BNM expects a strong growth in the current year, monetary policy rate is likely to be increased while it is likely to hike the OPR when next year inflation is expected to be high. Figure

respond more to the increased interest rate as compared to large-sized banks. This finding holds for both Islamic and conventional banks. Finally, less-liquid banks respond more to the tightening of monetary policy as compared to more-liquid counterparts.

[4] These studies however do not investigate explicitly the monetary policy transmission under the OPR regime as it is the case in this paper.

[5] The first monetary policy statement was released in May 2004.

[6] We also use the lagged growth in the NEER (data from Haver) in an alternative specification and found very similar results.

1 shows the estimated monetary policy shocks (η_m^{MP}) from specification (1) in Table 1.[7] Following Romer and Romer (2004) and Holm et al (2021), we obtain the monthly estimates of monetary policy shocks over January 2004 to July 2022, setting them to zero in months without a monetary policy meeting.

Table 1. Malaysia: Determinants of the Changes in the OPR

	(1)	(2)
i_{m-1}	-0.110***	-0.112***
	(0.030)	(0.029)
$y_{m,t}$	0.024***	0.022***
	(0.008)	(0.008)
$y_{m,t+1}$	0.029	0.024
	(0.025)	(0.024)
$\pi_{m,t}$	-0.024	-0.020
	(0.019)	(0.017)
$\pi_{m,t+1}$	0.113**	0.105***
	(0.050)	(0.039)
E_{m-1}	0.011	
	(0.032)	
$NEER_{m-1}$		0.002
		(0.002)
β_0	-0.207	-0.122
	(0.283)	(0.148)
N	115	115
R-squared	0.271	0.274

Robust standard errors in parentheses.
* p<0.10, ** p<0.05, *** p<0.01

8. We test the impact of monetary policy shocks on inflation and economic activity using the Local Projection approach. Based on the previously identified monetary policy shocks**,** we use the following specification similar to Holm et al. (2021) in a local projection framework (Jordá, 2005), robust to misspecification. We estimate the following equation:

$$Y_{t+h} - Y_{t-1} = \alpha_0^h + \theta^h \eta_t^{MP} + \lambda^h \eta_t^{MP} \times \Delta \ln(NEER)_t + \mu^h \eta_t^{MP} \times STM_t + \rho^h \eta_t^{MP} \times \Delta BLR_t + \sum_{j=0}^{J} \phi_j^h X_{t-j} + \xi_t^h \quad (2)$$

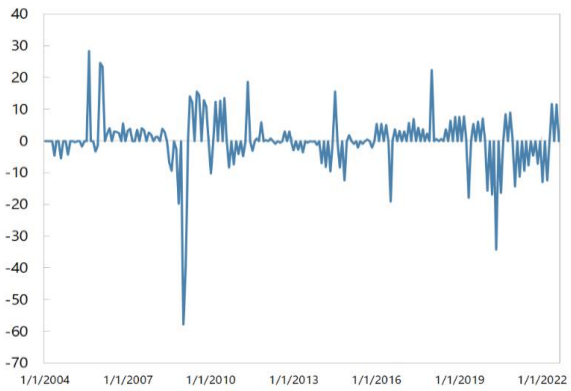
Where Y_t is the outcome variable (either the logarithm of the CPI index or the logarithm of the industrial production index, as a proxy for output, or the unemployment rate), at time t (monthly data), $\Delta \ln(NEER)_t$, is the change in the logarithm of the nominal effective exchange rate (NEER), STM_t is the year-on-year growth rate of the stock market index, ΔBLR_t is the change in commercial

[7] The monetary policy shocks from specification (1) and (2) in Table 1 are very similar (correlation coefficient of 0.996).

banks' base lending rate and X is a set of control variables including the contemporaneous conditioning factors ($\Delta\ln(NEER)_t, STM_t$ and ΔBLR_t), two months of lagged values of the dependent variable (logarithm of the CPI index and logarithm of the industrial production index), 2 months of lagged values of the monetary policy shock (η_t^{MP}), two months of lagged values of commodity price index, two months of lagged values of a proxy for foreign exchange intervention (FXI) and of an index of US monetary policy uncertainty.[8] Finally, h=0,1..,24 is the horizon of cumulative response of the dependent variable and ξ_t^h is the error term.

Figure 1. Malaysia: Monthly Series of Monetary Policy Shocks

(In basis points)



Sources: Bank Negara Malaysia, CEIC and IMF Staff Calculations

9. Our specification augments the approach in Holm et al. (2021) and Brandão-Marques et al (2021) to explicitly test the main competing channels of monetary policy transmission in Malaysia. Brandão-Marques et al (2021) show that explicitly modelling the exchange rate channel of monetary policy allows to capture the effect of monetary policy in emerging markets in a similar fashion to advanced economies. However, as previously discussed, the BNM highlighted four main channels of monetary policy transmission including interest rate, the exchange rate, the bank lending (credit) and asset price. We extend the specification in Brandão-Marques et al (2021) by explicitly modelling two additional channels (asset prices and credit). In equation (2), θ^h, captures the cumulative impact of monetary policy shock on inflation, output, or unemployment rate at horizon *h*, when the three channels of monetary policy transmission are shut down. Further, one can obtain the total impact of monetary policy accounting for i) the exchange rate channel at one standard deviation in the change in the NEER (σ) – about 1.2 percent appreciation – as $\theta^h + \sigma\lambda^h$ at horizon *h*, ii) the asset price channel at the 25th percentile of stock market index price growth (*p25)* – *about* **-**2.9 percent – as $\theta^h + p25 \times \mu^h$ and, iii) the credit channel at a one standard deviation(φ) – about 7 basis points increase – in the base lending rate as $\theta^h + \varphi\rho^h$.

10. We present cumulative impulse response functions (IRF) as deviation in percent of initial value. Throughout the paper, we measure the outcome variable in deviation relative to its initial level in the month of preceding the shock and thus impacts shown should be interpreted as percent of initial month's value. More specially, outcome variables are the log change times 100. The policy shocks are measured as 1 percentage point or 100 basis points (bps) change in month 0. The

[8] The lag selection was based on the Akaike and Bayesian information criteria. Further, the specification on industrial output uses 3 months of lagged values of the monetary policy shock and accounts for a structural break in the series around 2009:M2. Following Holm et al. (2021), we used the smoothed industrial production index. Data on industrial production index, CPI index, were taken from International Financial Statistics, stock market index (FTSE Bursa MYSA composite) and base lending rate of commercial banks from CEIC, FXI proxy data is taken from Adler et al. (2021) and US monetary policy uncertainty index from Husted et al (2020). Note that BNM counts FX market operations as part of monetary policy instruments with the aim to mainly smooth ringgit movements (see BIS survey).

only exception is in the case of unemployment rate, where the results are presented as a deviation in percentage points compared to the initial's month value.

11. Our estimates show that the exchange rate channel features a strong and persistent transmission of monetary policy shocks to inflation (Figure 2). The impulse response functions (IRF) in Figure 2 show that, the effect of a 100bps increase in monetary policy shock shutting off all channels, is negative and statistically significant only about 14-15 months and this effect persists up to 21 months and can reach about 2.5 percent reduction in inflation. Focusing on the asset price channel and testing for a potential amplifying effect of asset price movement yields a very similar IRF as in the main effect. This suggests that the asset price channel is relatively muted. However, the IRF focusing on the exchange rate channel shows larger impact on inflation in the short and long term. We find that in about 7 months, the same monetary policy shock could reduce inflation by 5 percent cumulatively. These effects could persist and be larger in the long term (13 months – with a cumulative peak impact at about 8 percent). These results imply that for an initial inflation rate of 3 percent, a 100bps tightening could lead to an inflation rate of about 2.75 percent in 13 months. The credit channel on the other hand shows a cumulative reduction in inflation by 3 percent in 18 months for the same magnitude of monetary policy shock. Overall, our finding is similar to Brandão-Marques et al (2021) showing that the exchange rate channel is important for monetary policy transmission in EMs.[9]

12. We find that monetary policy tightening could have output cost especially in the long-term, but the implied sacrifice ratio is low (Figure 3). Our results show that a 100 bps in monetary policy shock could reduce industrial production cumulatively by between 2 percent (main impact) to about 3 percent in 24 months (when accounting explicitly for the credit channel or exchange rate channel). These estimates, imply based on a back-of-the envelope calculation a reduction in real GDP by between 3.6 percent and 5.4 percent over 24 months respectively.[10] These estimates imply a sacrifice ratio close to one for 24 months.[11] Our results are close to Khaw and Sivabal (2016) who also found a low sacrifice ratio in Malaysia. We also investigated the impact of monetary policy on unemployment rate (Figure A1 in Annex). We find an increase in unemployment by about 2 percentage points in 24 months. Our finding on the small sacrifice ratio is also consistent with the relatively rapid pace of monetary policy transmission (through the exchange rate channel) but also given that the BNM is an independent central bank, and that Malaysia is an open economy.[12]

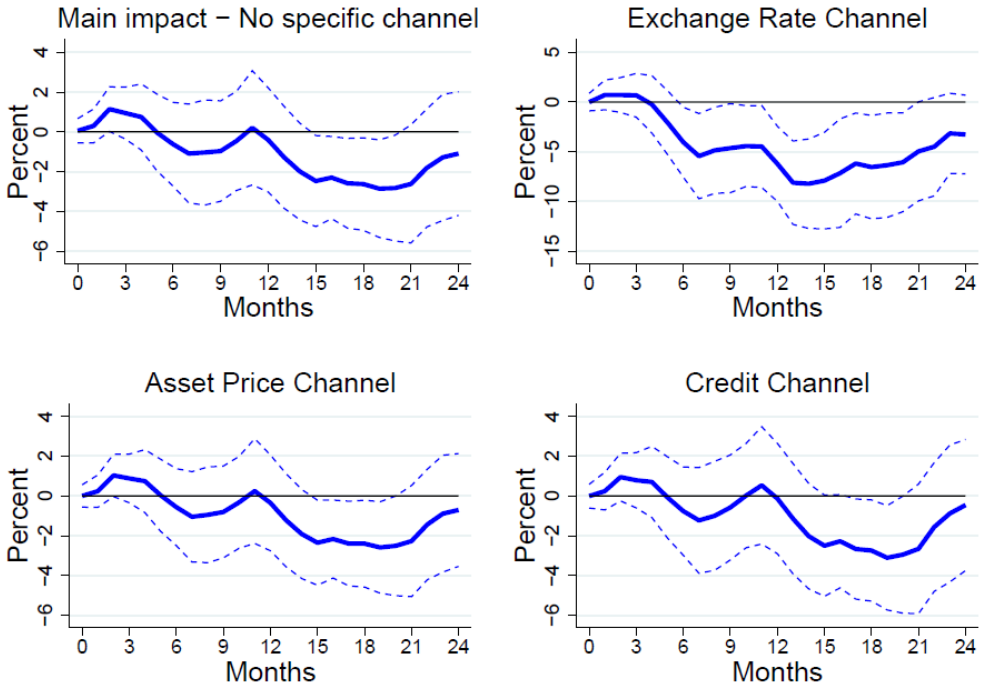
[9] The exchange rate plays an important role in emerging market economies given its the large influence on demand in small open economies and as a key variable for private sector expectations about inflation (see BIS, 2008). We use credit growth as an alternative measure to the base lending rate and found similar results for credit channel.

[10] Using quarterly data, we regress the logarithm of real GDP on the logarithm of industrial index production and found that industrial production account for about 80 percent of the variation in real GDP over the period. Further, we found that a 1 percent increase in industrial production implies a 1.8 percent increase in real GDP.

[11] We calculate the sacrifice ratio as the ratio of the reduction in output over the reduction inflation. In a shorter period (13 months), the sacrifice ratio is below one. The sacrifice ratio is even lower considering the impact of monetary policy on unemployment rate.

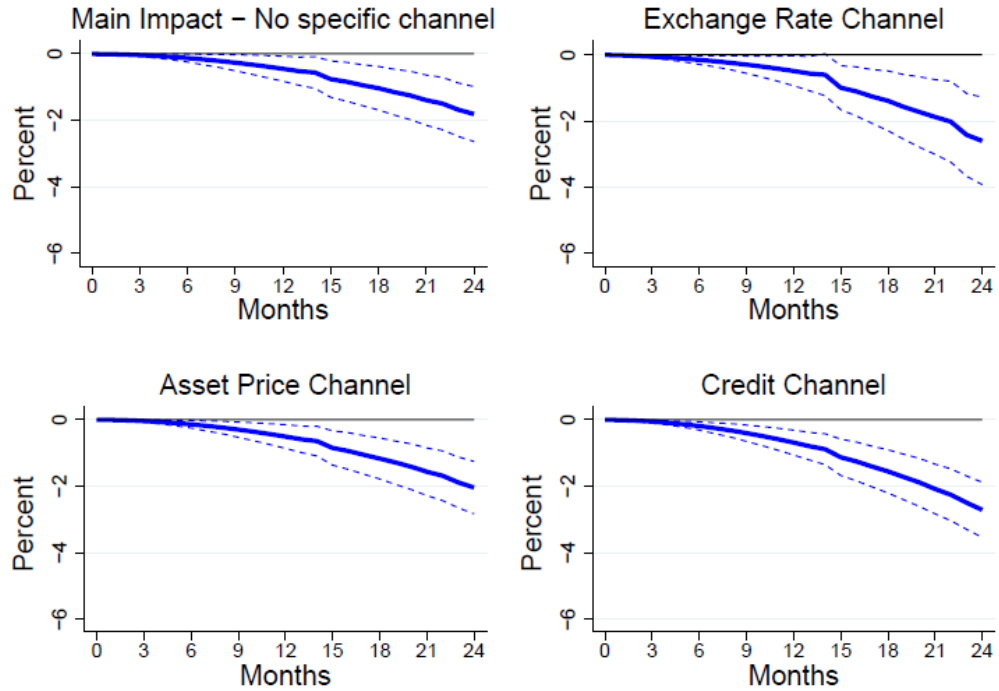
[12] See for instance Mazumder (2014) and, Magkonis and Zekente (2020) showing that high speed of disinflation, greater central bank independence and greater openness reduce the sacrifice ratio.

Figure 2. Malaysia: Cumulative Impulse Response Function of a 100bps Monetary Policy Shock on Inflation



Note: 90 percent confidence interval in dashed lines. Newey-West standard errors (robust to autocorrelation) are used.

Figure 3. Malaysia: Cumulative Impulse Response Function of a 100bps Monetary Policy Shock on Industrial Production



Note: 90 percent confidence interval in dashed lines. Newey-West standard errors (robust to autocorrelation) are used.

Testing Nonlinearities in Monetary Policy Transmission in Malaysia: The Role of Domestic and External Factors

13. We investigate the role of external factors (commodity prices and global monetary policy) as well as domestic factors (high inflation and the level of the OPR) in the transmission of monetary policy. Focusing on the main channels of monetary policy transmission in Malaysia as identified in the previous section, we consider the following equation:

$$Y_{t+h} - Y_{t-1} = \alpha_0^h + \theta^h \eta_t^{MP} + \lambda^h \eta_t^{MP} \times \Delta \ln(NEER)_t + \rho^h \eta_t^{MP} \times \Delta BLR_t + \tau^h \eta_t^{MP} \times Z_t + \sum_{j=0}^{J} \phi_j^h X_{t-j} + \xi_t^h \quad (3)$$

Where Z_t is a set of domestic factors (high inflation rate and the level the OPR) as well as external factors (global commodity prices and global monetary policy), with X now including two months lag values of these domestic and external factors in addition to other controls consistently, while other variables retain the same definition. We use the global commodity price index (as well as global food, energy and input price indexes as a proxy for global supply side inflationary pressure) from the IMF. Drawing from the BIS policy rate statistics, we measure global monetary policy as the average of change in policy rates weighted by each country's currency share in global foreign exchange reserves.[13] We also investigate whether the monetary policy transmission is affected by the level of policy rate and high inflation rates.

14. Our results show that global commodity prices-driven inflationary pressures do not impair monetary policy transmission in Malaysia (Figure A2 and A3 in Annex). We test the impact of a 100 bps monetary policy shocks conditional on a one standard deviation in global commodity price inflation and found that there is no significant change to the baseline transmission whether focusing on the credit or the exchange rate channel. We found similar results for global industrial input price, global energy price and global food price inflation. Our finding suggests that external supply side pressures on inflation as captured through international commodity price dynamics, would not impair the ability of monetary policy to achieve price stability in Malaysia.[14]

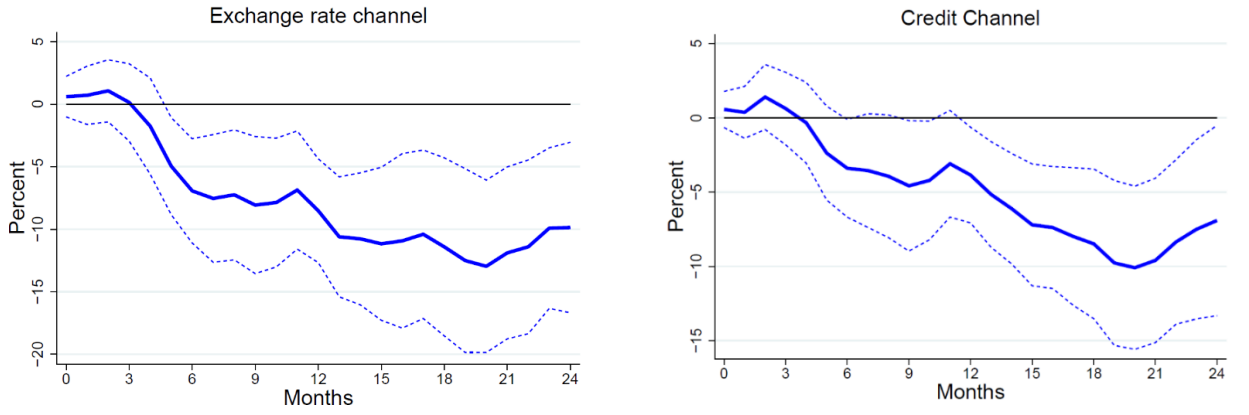
15. We find that global monetary policy tightening amplifies monetary policy transmission in Malaysia (Figure 4). Our estimates of the impact of monetary policy shock in Malaysia conditioning on a 1 standard deviation – about 13bps – hike globally shows that inflation could be cumulatively reduced by between 8 percent in 7 months (exchange rate channel) and about 10 percent (credit channel) in 18 months. Our findings suggest that a synchronized tightening could have a persistent reduction effect on inflation up to 24 months, with all major channels of

[13] Our approach is similar to the Council on Foreign Relations' methodology for their global monetary policy tracker. Our indicator includes Australia, Canada, China, Euro area, Japan, Switzerland, United Kingdom, and United States. The currencies of these countries represent about 97 percent of global foreign exchange reserves with the USD representing about 61 percent (data as of 2022Q1).

[14] We have also found (results not shown here) that while in general, monetary policy do not affect supply side inflation as captured by the producer price index (PPI), considering the exchange rate channel, monetary policy can reduce PPI inflation in Malaysia.

monetary policy transmission amplified. We further investigate the channels through which global monetary policy tightening could complement domestic effort to mitigate inflationary pressures in Malaysia. To do so, we include global growth and global inflation among controls at different horizons.[15] We find that, once we control for global inflation dynamics, the complementary role of global monetary policy is weakened (See Figure A4 in Annex). This suggests that global monetary policy tightening would complement domestic efforts only to the extent that it reduces global inflation.

Figure 4. Malaysia: Synchronized Tightening and Monetary Policy Transmission to Inflation in Malaysia

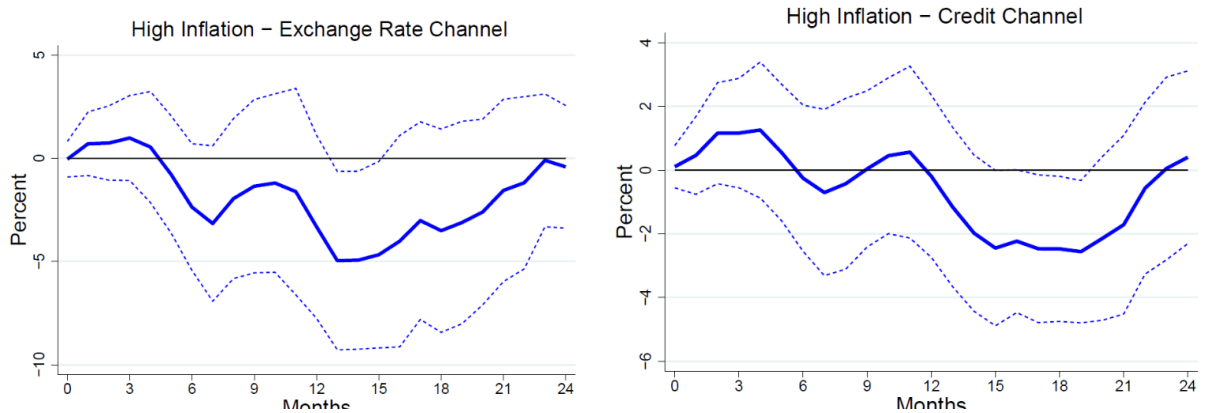


Note: 90 percent confidence interval in dashed lines. Newey-West standard errors (robust to autocorrelation) are used.

16. Our results show that while the level of the OPR does not seem to matter, in the context of high inflation rate, monetary policy transmission is weakened. We test the impact of a 100bps hike in the monetary policy shock conditioning on the median level of the policy rate (of 3 percent) and found that there is no impact on the transmission compared to our baseline finding (see Figure A5 in Annex). This suggests that the transmission of monetary policy in Malaysia is independent of the level of the policy rate. Further, we examine the role of high inflationary environment by estimating the impact of a 100bps hike in the monetary policy shock conditioning on the level of inflation rate. The estimates using the 75th percentile of inflation rate (3.2 percent) as a proxy for high inflation is shown in Figure 5. The IRF shows that monetary policy transmission is weakened in high inflation environment. More specifically, we find that the monetary policy transmission through the exchange rate is now delayed as we find a statistically significant impact only around 13 months. In terms of magnitude, our results imply that the effectiveness of monetary policy transmission could be reduced between about 20 percent (credit channel) and 30 percent (exchange rate channel) based on peak impacts. One implication is that in a period of high inflation, monetary policy tightening may need to be more aggressive to achieve the same result under normal conditions but there could be also a delay in the transmission.

[15] We applied Spline extrapolation to quarterly data to obtain monthly figures.

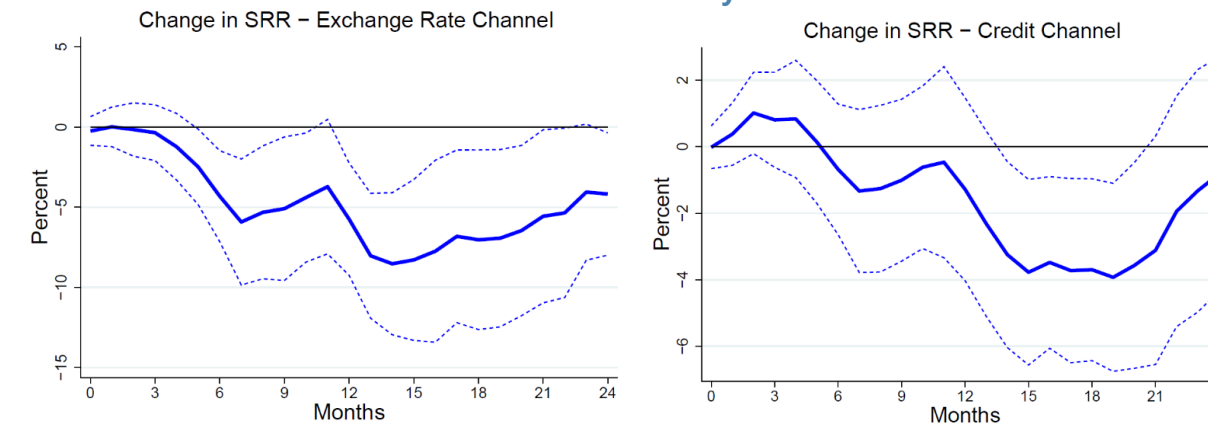
Figure 5. Malaysia: High Inflation Environment and Monetary Policy Transmission to Inflation Malaysia



Testing the Role of Other Policy Levers: Foreign Exchange Interventions (FXI) and the Statutory Reserve Requirement (SRR)

17. Finally, we explore the role of other policy levers in shaping monetary policy transmission in Malaysia. We employ a specification similar to equation (3) to investigate the role of FXI (one month lag) and SRR. As discussed earlier, the BNM acknowledges FXI as being part of primary instruments of monetary policy albeit with the sole aim to smooth ringgit movements. Given the importance of the exchange rate channel we test how FXI interacts with monetary policy transmission in Malaysia. Further, while the BNM emphasizes that the SRR should not be seen as a signal on the monetary policy stance it however stated that SRR can be used to support the transmission of monetary policy rates to retail rates (see link). In addition, recent evidence (Rashid et al, 2020) shows the importance of the liquidity condition of banks in shaping the transmission of monetary policy in Malaysia.

Figure 6. Malaysia: Statutory Reserve Requirement and Monetary Policy Transmission to Inflation in Malaysia

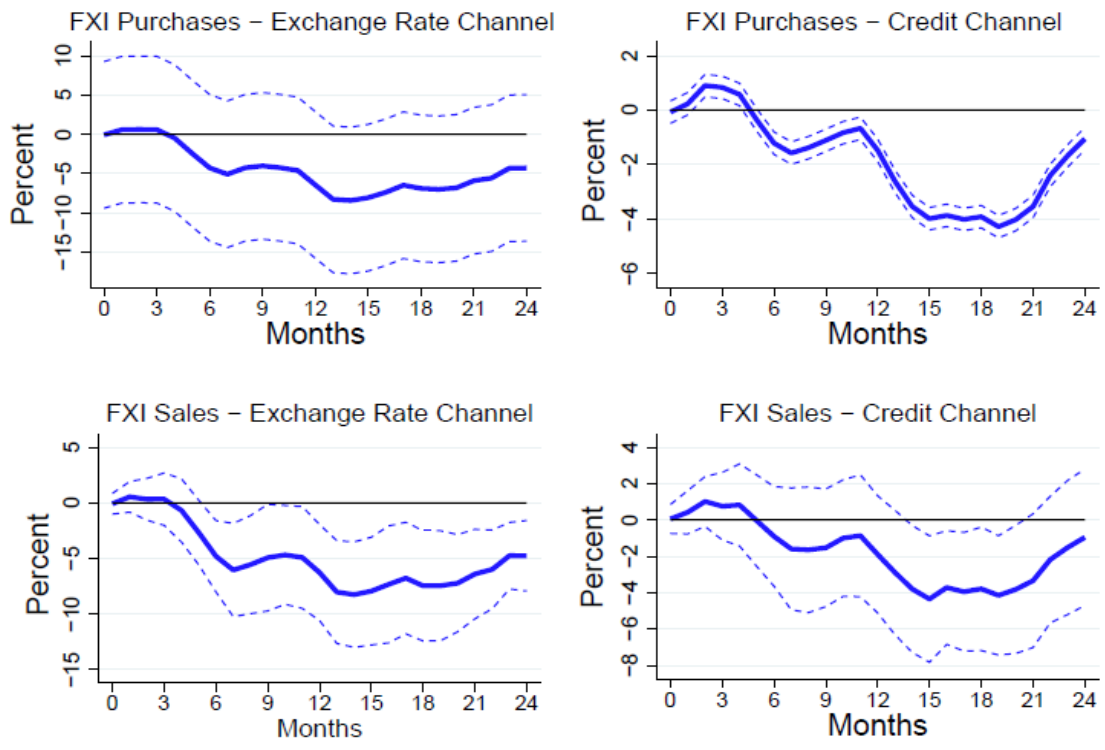


Note: 90 percent confidence interval in dashed lines. Newey-West standard errors (robust to autocorrelation) are used.

18. We find that changes in the SRR rate could amplify the transmission of monetary policy through the credit channel in Malaysia. Our IRF with the impact of a 100bps hike in monetary policy shock estimated for 1 standard deviation in the change of the SRR – about 19bps – shows that while the change in the SRR does not have material impact on the transmission through the exchange rate channel it amplifies the credit channel, in particular in the medium term. We find a cumulative reduction in inflation by 4 percent in 18 months compared to about 3 percent in the baseline estimates (see Figure 6).

19. Our results show that FXI affect monetary policy transmission with purchases weakening the exchange rate channel while strengthening the credit channel, but sales preserve the exchange rate channel. FXI purchases amplify the credit channel, leading to a persistent reduction in inflation with a cumulative impact (for a 1percentage point of GDP increase) reaching about 4 percent reduction in inflation in 14 months (see Figure 7). This result is consistent with Hofmann et al (2019) who find that FXI can affect domestic credit as purchases could dampen credit to firms (in particular those vulnerable to currency movements). At same time, by leaning against exchange rate appreciations, FXI purchases tend to weaken the exchange rate channel of monetary policy (see Mishra et al, 2012). Finally, we find that sales preserve the exchange rate channel, by leaning against depreciations, with a broadly neutral impact on the credit channel.

Figure 7. Malaysia: Foreign Exchange Intervention (FXI) and Monetary Policy Transmission in Malaysia



Note: 90 percent confidence interval in dashed lines. Newey-West standard errors (robust to autocorrelation) are used.

C. Conclusions

20. We find that the exchange rate and credit channels are important for monetary policy transmission in Malaysia with a potentially low sacrifice ratio. While we find that monetary policy tightening reduces both output and inflation, the relative cost of output loss to price stability could be low.

21. Investigating nonlinearities, we find that regarding price stability:

- *Domestic factors can shape monetary policy transmission.* While we do not find any impact for the level of the OPR, our results show that in a high inflation context, monetary policy transmission is weakened and delayed suggesting that a more aggressive policy rate adjustment would need to be considered to have an impact similar under normal conditions.

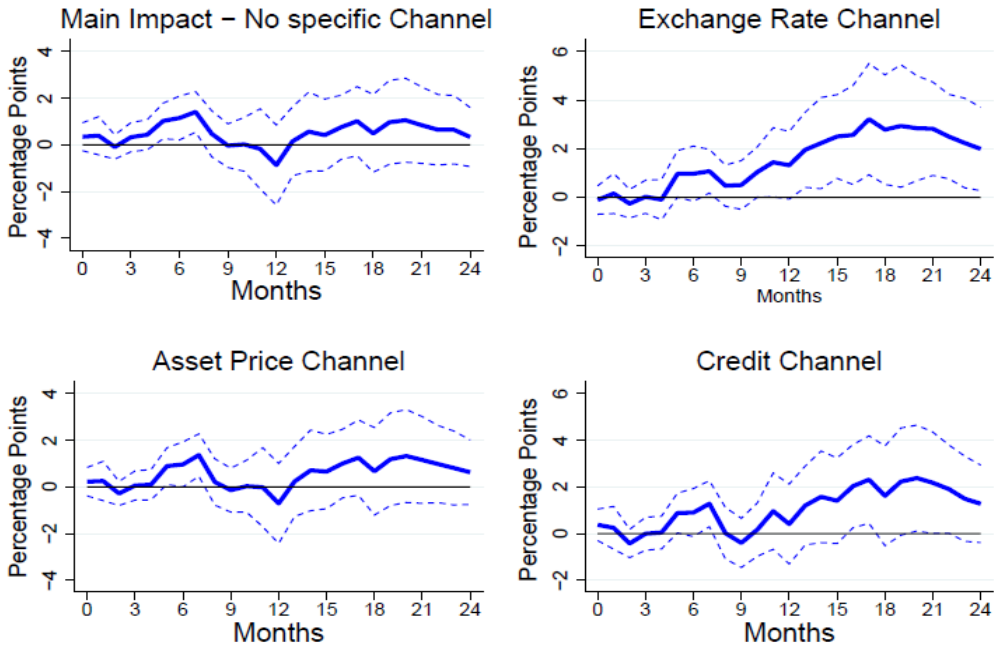
- *External factors could also affect monetary policy transmission.* Our empirical analysis shows that global commodity prices (including energy, industrial input, and food prices) do not impact the transmission of monetary policy in Malaysia. However, global tightening amplifies monetary policy transmission with a larger reduction in inflation compared to only a domestic policy tightening, driven by global disinflation.

- *Other policy levers could complement monetary policy in addressing inflationary pressures.* In line with the importance of banking sector liquidity in the transmission of monetary policy in Malaysia, we find that tightening the Statutory Reserve Requirement (SRR) could amplify the impact of monetary policy tightening particularly through the credit channel in Malaysia. Further, FXI purchase could strengthen the credit channel (although weakening the exchange rate channel) while FXI sales preserve the exchange rate channel.

22. Overall, there is scope for monetary policy to address inflationary pressures in conjunction with fiscal policy while carefully taking into account the output cost in Malaysia. Given the estimated low sacrifice ratio and muted monetary policy transmission in periods of high inflation, more tightening of the monetary policy stance should be considered. The BNM could also take advantage of complementary policy levers such as the SRR to contain inflation, in case of concerns on financial stability risks from rate hikes. More specifically, appropriate tightening of the SRR could support monetary policy in dealing with inflationary pressures through the credit channel. Although FXI sales can support the exchange rate channel, the recent decrease in reserves (see Appendix VIII) calls for a prudent approach consisting in rebuilding reserve buffers to face potential severe downside risks. Fiscal policy should support monetary policy effort through consolidation while also playing an important role in addressing potential output challenges through carefully targeted support to the most vulnerable, usually with a high marginal propension to consume.

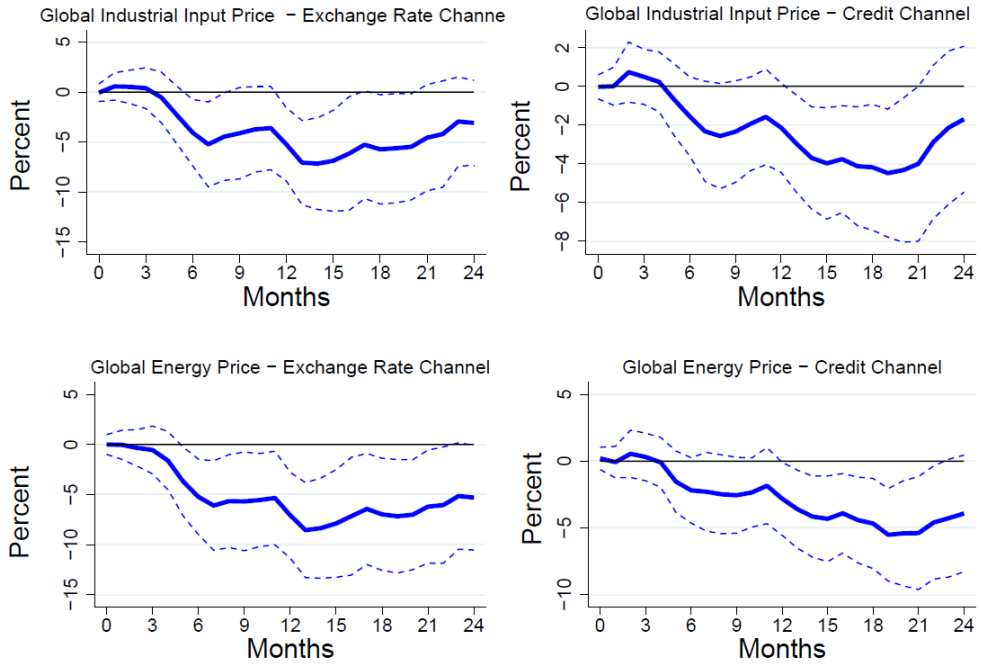
Annex I. Additional Results

Figure A1. Malaysia: Cumulative Impulse Response Function of a 100bps Monetary Policy Shock on the Unemployment Rate



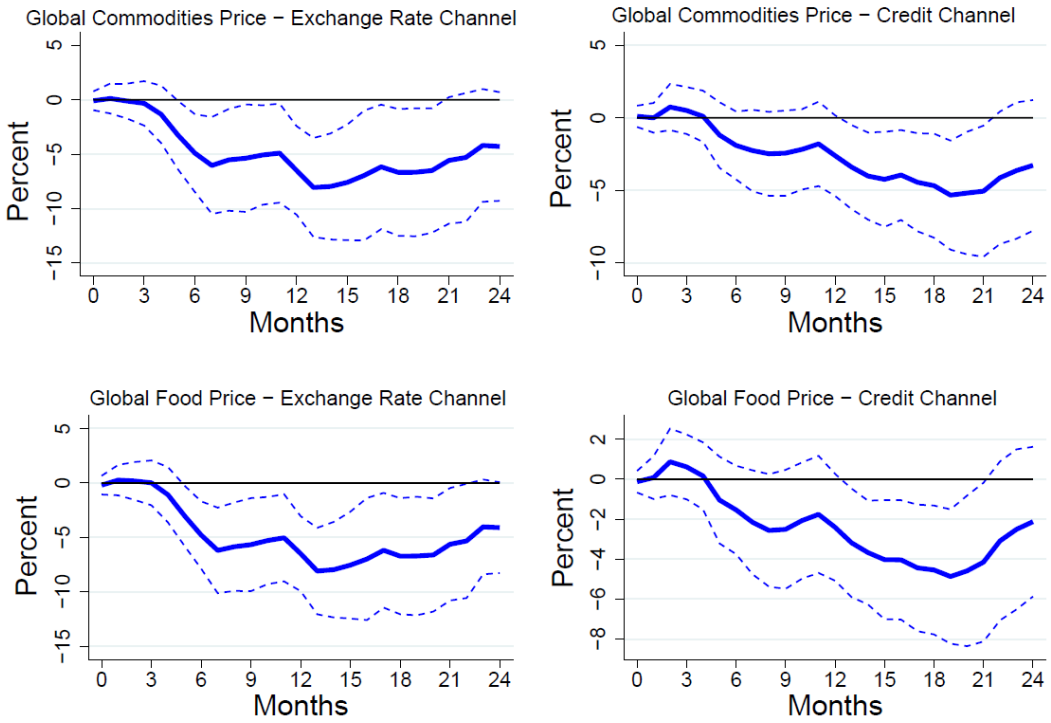
Note: 90 percent confidence interval in dashed lines. Newey-West standard errors (robust to autocorrelation) are used.

Figure A2. Malaysia: Global Input and Energy Price - Monetary Policy Transmission to Inflation



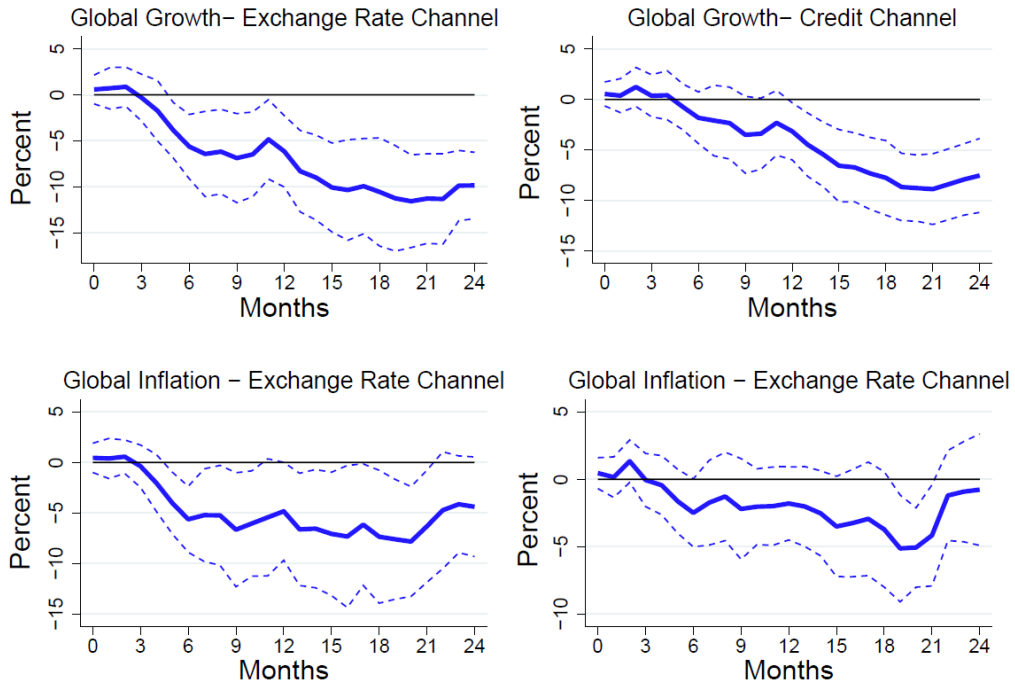
Note: 90 percent confidence interval in dashed lines. Newey-West standard errors (robust to autocorrelation) are used.

Figure A3. Malaysia: Global Commodity Prices - Monetary Policy Transmission to Inflation



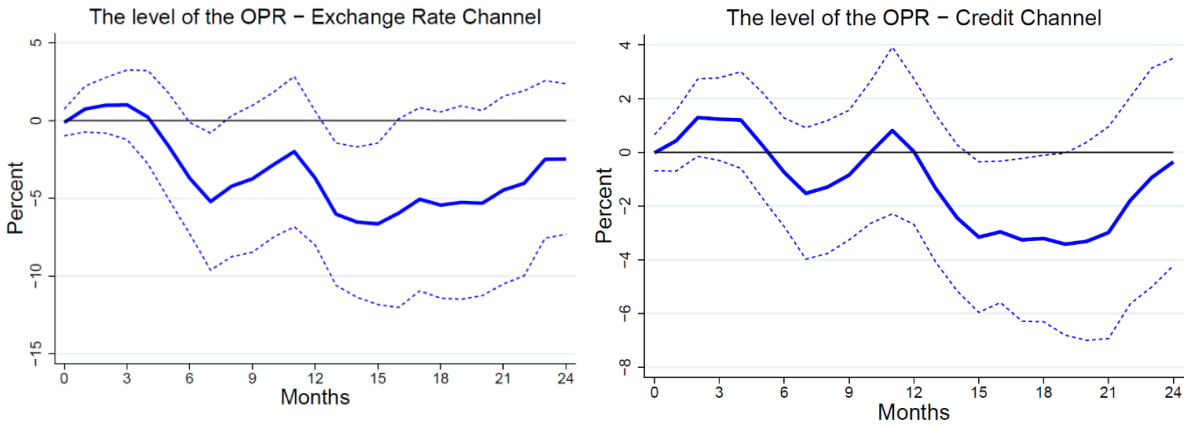
Note: 90 percent confidence interval in dashed lines. Newey-West standard errors (robust to autocorrelation) are used.

Figure A4. Malaysia: Channels of Global Monetary Policy Transmission to Inflation in Malaysia



Note: 90 percent confidence interval in dashed lines. Newey-West standard errors (robust to autocorrelation) are used.

Figure A5. Malaysia: The Level of the OPR and Monetary Policy Transmission to Inflation in Malaysia



Note: 90 percent confidence interval in dashed lines. Newey-West standard errors (robust to autocorrelation) are used.

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Appendix VIII. Simulating Downside Risks Scenarios Using the Integrated Policy Framework[1]

Malaysia experienced a strong post-pandemic recovery in 2022; however, it now faces headwinds from a slowdown in its major trading partners, tightening global financial conditions, and elevated inflationary pressures. This annex illustrates some of the key downside scenarios and analyzes the implications of employing various policy tools using the Integrated Policy Framework (IPF).

1. Malaysia's economy experienced a strong post-pandemic recovery in 2022. Following a contraction in 2020 and a mild rebound in 2021, Malaysia's economy experienced strong growth in 2022. The Malaysian economy grew at 8.7 percent in 2022, with the output gap turning positive this year. Growth has been driven by robust domestic demand and supported by a revival of tourism following the removal of COVID-19-related travel restrictions in 2022Q3. The recovery in demand, however, has increased domestic inflationary pressures, with core CPI projected to rise from 0.7 percent last year to 3 percent this year. In addition, following the War in Ukraine and a tightening of monetary policy in advanced economies, Malaysia faced strong external pressures that led to the ringgit depreciating against the dollar and Malaysia's FX reserves declining, partly reflecting foreign exchange interventions (FXI) by the Bank Negara Malaysia (BNM) to support the ringgit. Nonetheless, in recent months, these pressures have reversed and, over the medium-term, staff assess Malaysia's external position to be stronger than what is warranted by fundamentals. Malaysia's FX reserves are adequate, with a coverage (measured as a percent of the IMF's ARA metric) of 110 percent at end-2022, compared to 121 percent at end-2021.

2. While growth was strong in 2022, Malaysia's economy faces major headwinds amidst a highly uncertain global outlook. A slowdown in growth is expected in Malaysia's major trading partners, because of the tight monetary and fiscal stance in several advanced economies to rein in inflation. A renewed slowdown in China, which is one of Malaysia's largest trading partners, could also have negative spillover effects on Malaysia's growth and external outlook. While global financial conditions are already tight, a protracted war in Ukraine could amplify inflationary pressures and prompt advanced economies, particularly the United States, to further tighten their monetary policy. This could intensify the external pressures on emerging market economies, with a flight of capital to safety. These downside risks, if realized, have the potential of lowering Malaysia's growth, increasing inflation, and depreciating its currency.

3. Shocks under a downside scenario could be amplified by market frictions in Malaysia. Transmission of external financial shocks can be amplified if FX markets are shallow. Notwithstanding the steps taken by BNM to deepen the FX market,[2] staff estimates suggest that historically Malaysia has predominantly exhibited shallowness in its FX market. A rough proxy for the

[1] Prepared by Shujaat Khan (APD) and Hou Wang (MCM).

[2] BNM has taken several steps over the years to deepen FX markets and improve market efficiency to withstand potential shocks. As a result, FX turnover has increased over the years, averaging US$15.5b per day in 2023 YTD, compared to a daily FX turnover of US$13.7b in 2022 and US$11.3b in 2021.

depth of the FX market is the level and variability of the Uncovered Interest Party (UIP) premium on local currency debt. In shallow FX markets, in case of large capital flows or changing external risk sentiments, the UIP premium can demonstrate large variations. Similarly, large bid-ask spreads can also be reflective of inefficient market frictions. In addition, countries with high dollarization or dominant currency pricing can exhibit FX market shallowness in stress episodes. For instance, under these conditions, if external shocks put depreciation pressures on the local currency, exporters might not be inclined to sell FX, while the demand for FX from importers rises, which would further amplify the shock. In case of Malaysia, the UIP premium and MYR/USD bid-ask spread have been mostly positive and increased significantly during stress episodes. Moreover, there is also significant dominant currency pricing, with about 80 percent of trade invoicing done in US dollar. This suggests that Malaysia has shallow FX markets, which could exacerbate external shocks, despite mitigating factors such as well-anchored inflation expectations and low exchange rate pass-through. Additionally, a recent IMF study (Eklou, 2023, forthcoming) finds that in EMs with low financial development, high dollar invoicing and, firms facing credit constraints in the form of low liquidity buffers, dollar exchange rate volatility can severely impact firms' productivity growth.

4. Key downside scenarios are simulated to illustrate the effectiveness of various policy measures:

- **Scenario-1:** Under this stylized adverse scenario, there is a severe and protracted slowdown in China. Growth in the foreign economy, represented by the US in the model, declines by about 2 percent relative to the steady state, as a sharp decline in imports from a major trading partner causes shortages in industry supplies and consumer goods. This also causes a decline in external demand and a slowdown in Malaysia. Additionally, a shift in market sentiments raises the risk premia and triggers a risk-off shock, which causes the ringgit to depreciate.

- **Scenario-2:** This scenario assumes that further escalation of the war in Ukraine and continued supply disruptions lead to persistent price pressures, including through elevated commodity prices and higher wage demand. This causes a de-anchoring of inflation expectations in the US, where the core inflation is expected to increase by about 1 percentage point compared to the baseline. Inflationary pressures also pass-through to Malaysia and aggressive monetary policy tightening in the US is followed by an outflow of capital from EMs, as the risk-off sentiment rises.

5. A policy mix that does not rely excessively on a single policy tool, and thus explores optimal combination of tools, can be effective at mitigating the fallout of the adverse scenarios. As China is one of Malaysia's largest trading partners, under scenario-1, a slowdown in China results in a decline in Malaysia's external demand (Figure 1). Due to the risk-off shock (changing investor risk sentiment that causes UIP risk premium to rise), the ringgit depreciates, despite a reduction in China's policy rate, and the weaker ringgit passes through to higher domestic inflation in Malaysia. While global oil prices fall due to a decline in global demand, the oil price that domestic consumers face in local currency rises initially following the shock because of the large ringgit depreciation. Based on the quantitative IPF model (Adrian et al., 2021), a policy response that

relies solely on the interest rate requires a reduction in the policy rate to spur domestic demand. The interest rate response, however, is muted because of the higher inflation. In contrast, a policy mix that relies on both the interest rate and FXI improves the macroeconomic outcomes. FXI limits the depreciation resulting from a risk-off shock, which reduces the inflationary impact of the shock.[3] Consequently, monetary policy gains additional space to lower the policy rates further and reduce the impact on output. Nonetheless, in this scenario, since depreciation is relatively short-lived, the gains from the use of FXI may be limited and the cost of FXI may exceed its benefits. A policy mix that also includes a fiscal response in the form of direct transfers is able to contain the short-term negative impact of the shock on domestic demand; however, the additional fiscal costs lead to high government debt and higher long-term rates in the medium-to-long run.

6. The desirability of FXI may be diminished in the absence of risk-off shocks. In an alternative version of scenario-1 that does not include a risk-off shock (Figure 2), there are no sharp increases in the UIP premium. In the absence of the risk-off shocks, the fundamental shocks are such that the exchange rate appreciates, because the foreign country cuts interest rates much more aggressively than Malaysia. Consequently, the negative demand shock leads to a decline in both inflation and output, which an expansionary monetary policy on its own can address. Put differently, in the absence of a risk-off shock, there is no significant policy trade-off that FXI can address, so its desirability may be diminished. In this illustrative scenario, FXI that limits exchange rate appreciation leads to a relative improvement in the trade balance; however, that comes at a cost of reducing private domestic demand, as the policy rate is relatively tighter compared to the case in which only the policy rate is deployed as a policy instrument.

7. This alternative scenario can also be used to demonstrate the implications of the removal of generalized fuel subsidies. The alternative scenario without risk-off shocks observes a 10 percent decline in oil prices. Assuming that the steady state already incorporates a certain level of fuel subsidy, a reduction in oil subsidies by about 10 percent maintains domestic oil prices broadly at their steady state level. This, however, leads to a smaller decline in inflation, which, nonetheless, is still below its baseline level. Combined with targeted transfers, the policy mix may also limit the output loss, compared to a policy mix with just interest rate and FXI. Moreover, the fiscal cost of targeted transfers, as reflected in the increase in government debt, can also be mitigated by the reduction in spending on subsidies. In contrast, the trade-offs may be more severe if subsidies were removed when prices are high, as the removal would add to the inflationary pressures.

8. In the presence of market frictions, FXI can limit the fallout from an adverse stagflationary shock in the US. In scenario-2, persistent supply shocks lead to higher inflation in the US and domestically. Combined with a deteriorating foreign investor risk-off sentiment, the ringgit witnesses a large and persistent depreciation. The inflationary shock in the US in scenario-2 leads to a strong reaction from the Fed to contain inflation, which results in a decline in its output. A policy that relies exclusively on the interest rate would require raising rates significantly for an

[3] While the quantitative IPF model treats FX purchases and sales symmetrically, staff's empirical analysis finds an asymmetry, with the direction of FXI impacting monetary policy transmission differently (Annex VII).

extended period to contain inflation, which slows down growth. While net exports benefit from the depreciation, domestic demand stays persistently low, which also causes imports to remain weak. In contrast, a policy mix that also involves the use of FXI restricts the ringgit depreciation and limits its pass-through to domestic inflation. Consequently, the policy rate hike necessary to stabilize inflation is reduced, which leads to a smaller loss of output. A policy mix that also involves expansionary fiscal policy, while bolstering output, leads to an increase in government debt. While the current specification of the model assumes a relatively flat Phillips curve, alternative assumptions of a steeper Phillips curve lead to higher inflationary pressures from expansionary fiscal policy, which add to the trade-offs faced from using fiscal policy under this scenario.

9. An integrated approach to designing a policy mix can improve its effectiveness by reducing the trade-offs faced under the isolated use of various policy tools. Under a frictions-based approach, IPF tools such as FXI may be used as complementary tools to traditional policy instruments such as the policy interest rate. When FX markets are shallow, a risk-off shock can cause large and persistent depreciation. Under these circumstances, FXI can be used to limit the depreciation, which, by reducing its inflationary impact, allows the monetary policy to focus on stabilizing output. Additionally, while not captured in the quantitative IPF model, there may be certain non-linearities that could become active when the shock is large. For example, even though moderate FX mismatches may not contribute to sharp deleveraging after small depreciations, they may do so if the shock is large enough. While fiscal policy should not be used in isolation, it can be used as a complementary tool. Policymakers, however, should be aware of the trade-offs when deploying various policy tools.

10. FXI should be undertaken only in the presence of well-identified frictions and if the shocks are large. Under the IPF, an indiscriminate use of FXI is not condoned. FXI should only be used when there are well-identified frictions (for example, shallow FX markets, unhedged FX risks and balance sheet mismatches, and high exchange rate pass-through that risks de-anchoring inflation expectations) and if the shocks are large enough that they pose risks to the macroeconomic and financial stability. Additionally, FXI should not be a substitute for warranted macroeconomic adjustments. If FXI is being used to address sharp changes in risk premia, the aim should be to target the premia, instead of a specific exchange rate. Moreover, rather than using FXI in isolation, it should be integrated within the overall policy response to the frictions. Finally, in outflow episodes, for the effectiveness and credibility of FX sales, it is necessary for the country to have sufficient reserves.

Figure 1. Malaysia: Adverse Scenario 1, Risk-Off Shock From Protracted Slowdown in China

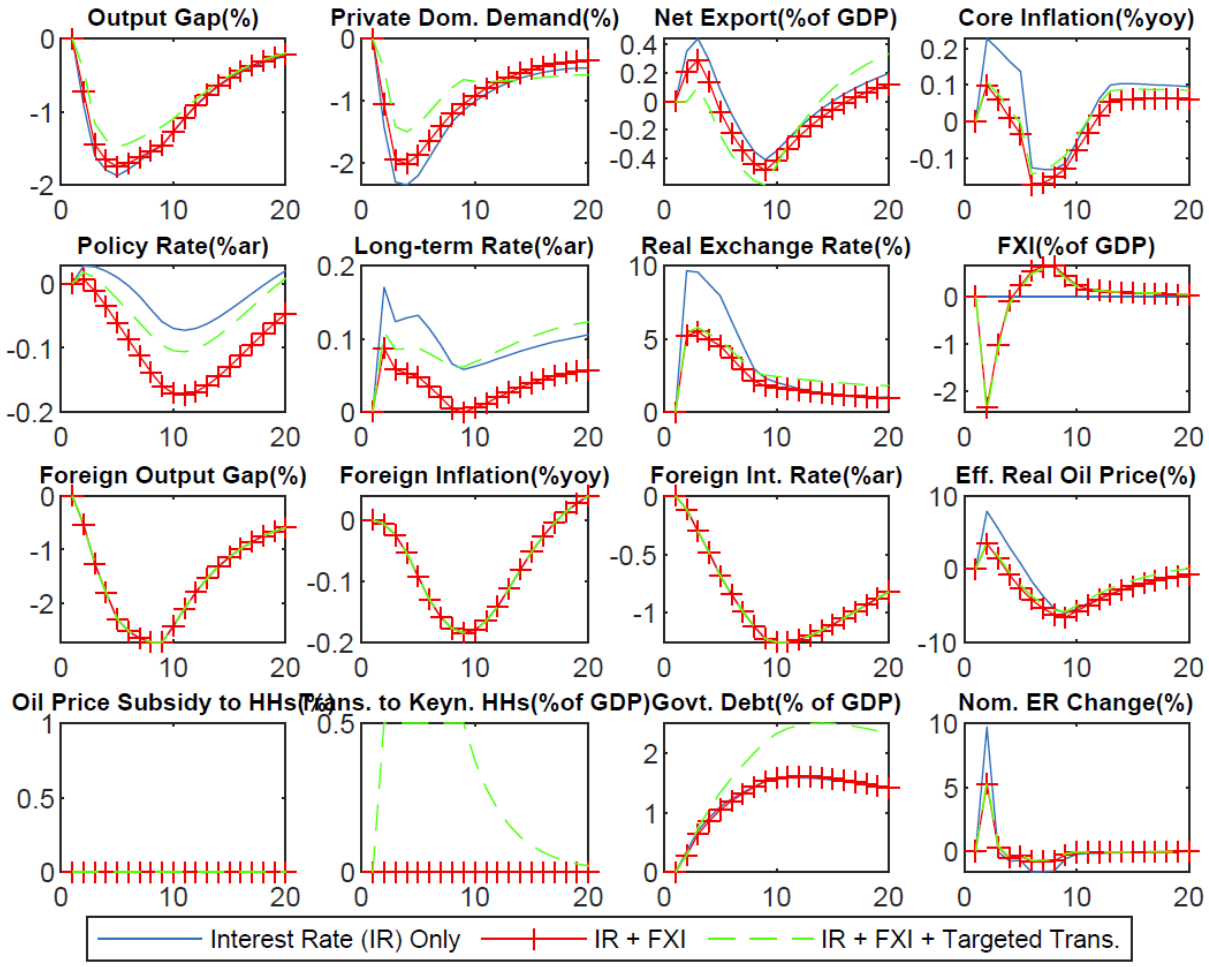


Figure 2. Malaysia: Alternative Scenario 1, No Risk-Off Shock and Subsidy Removal

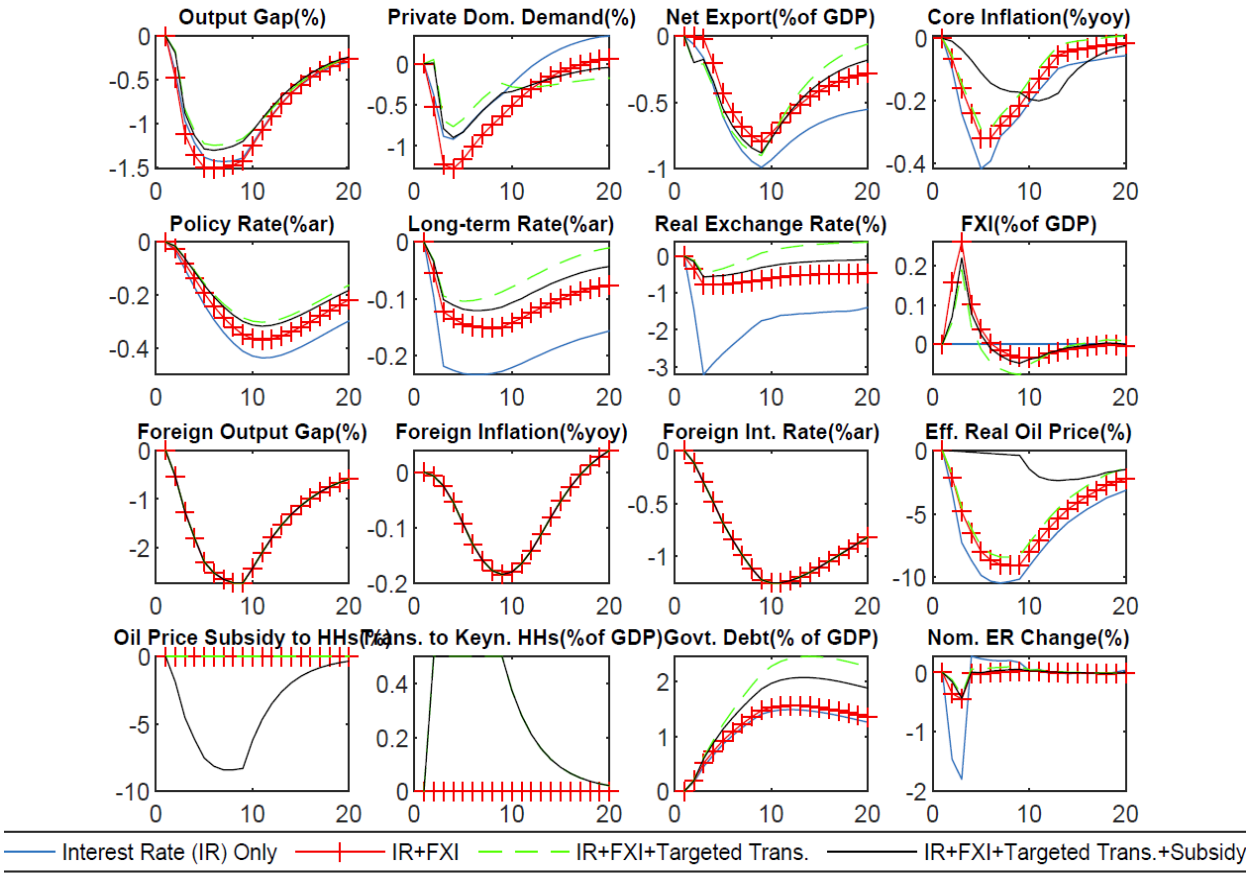
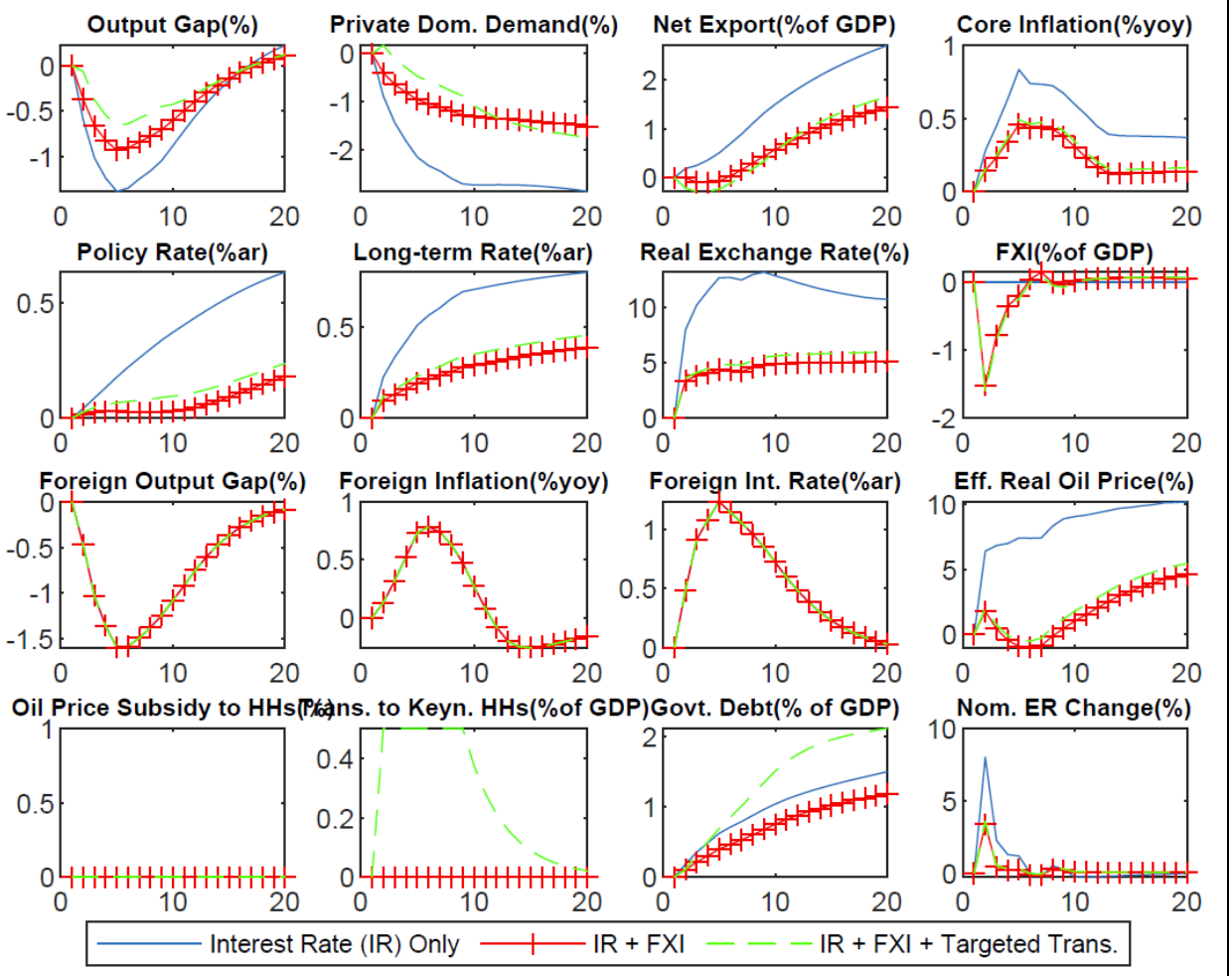


Figure 3. Malaysia: Adverse Scenario 2, Stagflation in the US



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Appendix IX. External Debt Sustainability Analysis

Malaysia's external debt declined in 2022 due to strong GDP growth, even as offshore short-term borrowings increased. External debt remains manageable, with one-third of debt denominated in local currency, and about 40 percent of short-term external debt in the form of intragroup borrowings among banks and corporations, which are generally stable.

1. Malaysia's external debt, as a share of GDP, declined in 2022 compared to 2021, but remains higher than its pre-pandemic level in 2019. Malaysia's external debt-to-GDP ratio declined to 64 percent of GDP at end-2022, significantly lower than 70 percent of GDP at end-2021. This decline in external debt compared to 2021 is largely due to strong GDP growth in 2022. Total external debt in absolute terms increased in 2022, as offshore short-term borrowings, namely private sector external debt, rose. Public sector borrowing declined compared to 2021 and there was also a decline in non-resident holdings of local-currency debt securities.

2. The currency profile of external debt is stable. As of end-2022, one-third of external debt (33.1 percent of total external debt) was denominated in ringgit, largely in the form of nonresident holdings of domestic debt securities (65.1 percent of ringgit-denominated external debt) and in ringgit deposits in domestic banking institutions. As such, these liabilities are not subject to valuation changes arising from exchange rate fluctuations. The remaining two-thirds of external debt (66.9 percent of GDP) is denominated in foreign currency (FC). The non-financial corporate sector accounted for over half of FC-denominated external debt, which is largely subject to prudential and hedging requirements. About 34 percent of FC-denominated external debt is accounted by interbank borrowings and FC deposits in the domestic banking system—with the former increasing in 2022 because of higher borrowing by domestic banking groups to increase their liquidity buffers and to finance domestic lending—which are subject to prudential standards. Another 32 percent of FC-denominated external debt comprises bonds and notes issued offshore and loans, which are subject to hedging requirements.

3. From a maturity perspective, the share of short-term external debt by original maturity increased in 2022. Short-term debt by original maturity accounted for 42.1 percent of total external debt as of end-2022. Over 40 percent of the short-term external debt are in the form of intragroup borrowings among parent banks and multi-national corporates which are generally stable. Meanwhile, about another 17 percent are accounted by trade credits, which are largely backed by export earnings and are self-liquidating.

4. Over the medium term, external debt-to-GDP ratio is projected to return to a steady downward path. Total external debt is projected to fall to about 56 percent by 2028. This baseline path is slightly higher than the previously projected path as it reflects the higher external financing rates following the war in Ukraine and also captures the valuation effect from a depreciation of the ringgit against the US dollar. The downward path reflects the net effect of sustained current account (CA) surpluses (excluding interest payments), a recovery in economic growth supported by domestic demand, and capital inflows over the medium-term. The share of short-term debt, by original maturity, is projected to stabilize at about 41 percent of total external debt by 2028. Gross external

financing needs, which are estimated to be about 28 percent of GDP in 2022, are expected to decline to around 25 percent by 2028 (Table 2).

5. Sizable external debt would keep Malaysia's external vulnerabilities elevated, albeit manageable. Standard stress tests under the external DSA indicate that external debt is most vulnerable to an exchange rate depreciation. A 30 percent real exchange rate depreciation in 2023 could push external debt to about 75 percent of GDP by 2028. Moreover, the materialization of a persistent historical shock could lead to an external debt level around 75 percent of GDP in the outer years. Other scenarios—such as a deceleration in real GDP growth and a rise in the interest rate, would lead to moderate increases in external debt. The impact of these shocks would be mitigated by: (i) the high share of ringgit-denominated external debt and (ii) largely stable intercompany loans and interbank borrowings.

6. While risks to Malaysia's external debt sustainability arising from the above vulnerabilities have increased, they can be managed via a variety of mitigation measures. As of end-2022, gross official reserves stood at US$114.7 billion, or about 85 percent of short-term external debt. The coverage of gross official reserves while adequate under the IMF reserve adequacy metric (ARA) (110 percent of the metric at end-2022), dropped significantly over the year. Exchange rate flexibility, a moderate CA surplus, and the relatively large share of ringgit-denominated external debt will continue to serve as important buffers against potential external shocks. Moreover, banks' exposure in the form of interbank borrowings, NR deposits and debt issuances are subject to prudential requirements on liquidity and funding risk management, while corporations are subject to an approval framework to ascertain that external borrowings are utilized for productive purposes and that they are supported by foreign currency earnings.

Table 1. Malaysia: Profile of External Debt

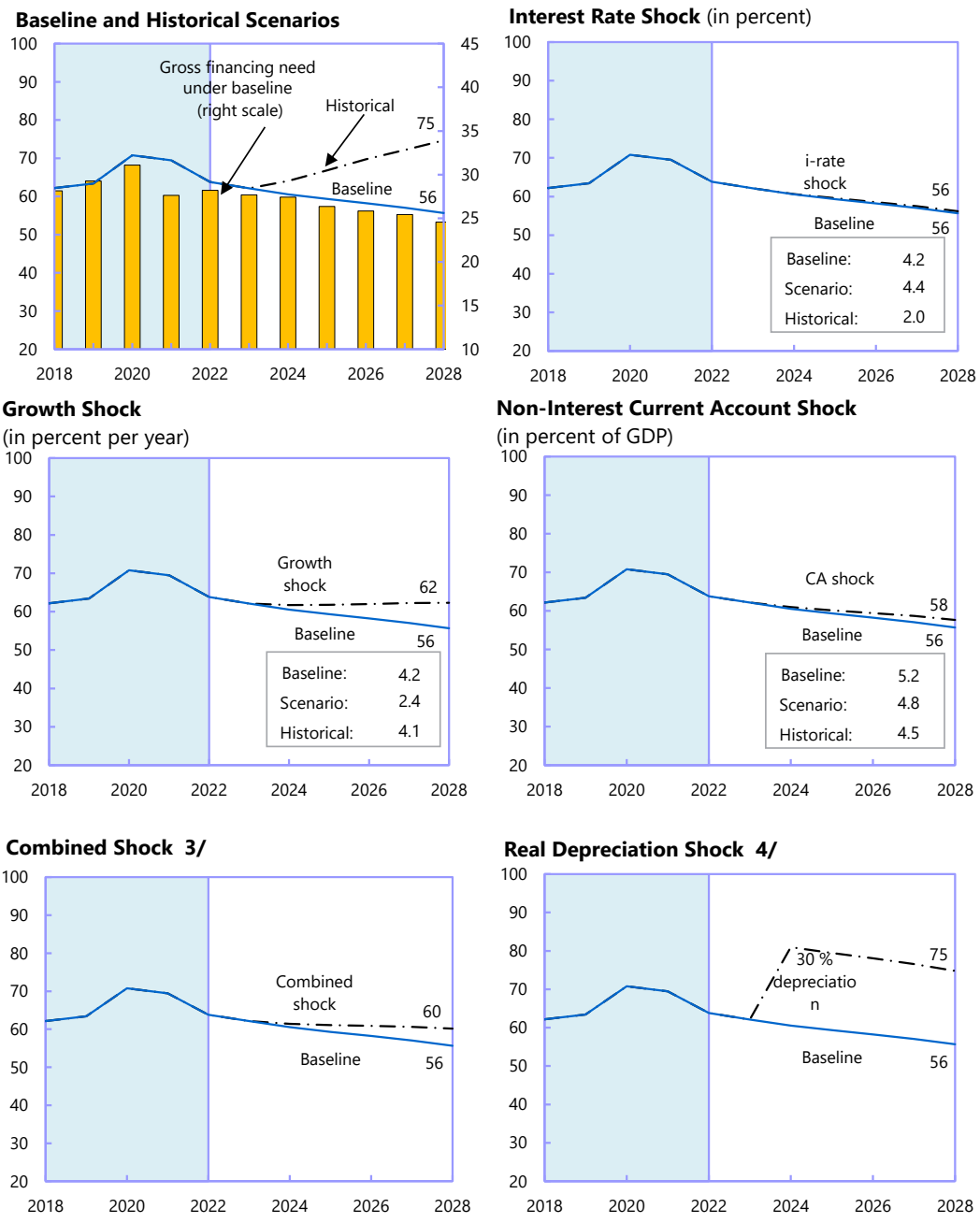
(In percent of GDP unless otherwise mentioned; original maturity)

	2017	2018	2019	2020	2021	2022
Total external debt	64.5	63.8	62.6	67.6	70.0	64.0
Medium- and long-term	*38.9*	*35.8*	*36.9*	*41.7*	*43.8*	*37.0*
Offshore borrowing	23.4	22.9	23.0	25.5	25.3	21.4
Public sector	9.7	9.5	8.5	10.1	10.5	8.2
Federal government	1.2	1.2	1.6	1.7	1.6	1.4
Public enterprises	8.4	8.4	6.9	8.4	8.9	6.8
Private sector	13.7	13.4	14.5	15.4	14.8	13.2
Banks	3.4	3.3	3.7	3.9	3.5	3.0
Nonbanks	10.4	10.1	10.8	11.5	11.2	10.2
Nonresident holdings of ringgit-denominated debt instruments	14.3	11.7	12.8	14.9	15.9	13.3
Government securities	13.3	10.9	12.0	14.1	15.0	12.6
Other securities	1.0	0.7	0.7	0.8	0.9	0.7
Other	1.2	1.2	1.1	1.3	2.5	2.4
Short-term	*25.6*	*28.0*	*25.8*	*25.9*	*26.3*	*26.9*
Offshore borrowing	13.7	16.2	14.2	14.0	13.0	13.6
Public sector	0.0	0.0	0.0	0.0	0.0	0.0
Private sector	13.7	16.2	14.2	14.0	13.0	13.6
Banks	12.5	14.1	13.2	12.8	11.4	12.2
Nonbanks	1.1	2.0	1.0	1.2	1.5	1.4
Nonresident holdings of ringgit-denominated debt instruments	0.8	0.8	0.5	0.7	0.6	0.5
Government securities	0.2	0.3	0.1	0.4	0.5	0.4
Other securities	0.6	0.5	0.4	0.2	0.1	0.1
Nonresident deposits	6.7	6.8	6.8	6.7	6.5	6.2
Other	4.4	4.3	4.2	4.6	6.2	6.7
	(In percent of total external debt unless otherwise mentioned)					
By original maturity:						
Short-term	39.7	43.9	41.1	38.3	37.5	42.1
Medium- and long-term	60.3	56.1	58.9	61.7	62.5	57.9
By currency:						
Local currency denominated	34.7	30.3	32.8	33.9	34.5	33.1
Foreign currency denominated	65.3	69.7	67.2	66.1	65.5	66.9
By instrument:						
Nonresident holdings of ringgit-denominated debt instruments	23.4	19.5	21.2	23.0	23.6	21.6
Interbank borrowing	19.5	22.1	21.1	19.0	16.3	19.1
as share of GDP	12.5	14.1	13.2	12.8	11.4	12.2
Bonds and notes	17.1	16.6	16.5	18.0	18.2	15.4
Intercompany loans	14.8	14.8	13.4	13.4	13.3	13.5
as share of GDP	9.6	9.4	8.4	9.0	9.3	8.6
Nonresident deposits	10.4	10.6	10.9	9.9	9.2	9.8
Loans	6.1	7.9	8.3	8.0	6.8	6.6
Others	8.7	8.5	8.4	8.7	12.5	14.1
Gross official foreign exchange reserves (US$ billion)	102.4	101.4	103.6	107.6	116.9	114.7

Sources: Bank Negara Malaysia; and IMF staff calculations.

Figure 1. Malaysia: External Debt Sustainability: Bound Tests 1/ 2/

(In percent of GDP)



Sources: International Monetary Fund, Country desk data, and staff estimates.
1/ Shaded areas represent actual data. Individual shocks are permanent one-half standard deviation shocks. Figures in the boxes represent average projections for the respective variables in the baseline and scenario being presented. Ten-year historical average for the variable is also shown.
2/ For historical scenarios, the historical averages are calculated over the ten-year period, and the information is used to project debt dynamics five years ahead.
3/ Permanent 1/4 standard deviation shocks applied to real interest rate, growth rate, and current account balance.
4/ One-time real depreciation of 30 percent occurs in 2021.

Table 2. Malaysia: External Debt Sustainability Framework, 2018–2028

(In percent of GDP, unless otherwise indicated)

	Actual							Est.	Proj.					
	2018	2019	2020	2021	2022			2023	2024	2025	2026	2027	2028	Debt-stabilizing non-interest current account 6/
Baseline: External debt	62.2	63.4	70.8	69.5	63.8			**62.1**	**60.5**	**59.3**	**58.2**	**57.1**	**55.7**	**-2.5**
Change in external debt	-6.1	1.2	7.4	-1.3	-5.7			-1.7	-1.6	-1.2	-1.1	-1.2	-1.4	
Identified external debt-creating flows (4+8+9)	-8.2	-5.0	0.5	-12.1	-10.4			-6.3	-6.4	-6.2	-6.3	-6.1	-6.0	
Current account deficit, excluding interest payments	-3.7	-5.1	-6.0	-5.0	-3.7			-4.7	-5.6	-5.4	-5.2	-5.0	-4.9	
Deficit in balance of goods and services	-6.7	-7.5	-6.4	-7.1	-6.9			-6.8	-6.3	-6.2	-6.2	-6.3	-6.2	
Exports	68.6	65.3	61.6	68.8	73.8			69.1	70.7	69.1	67.6	66.7	65.3	
Imports	61.8	57.8	55.2	61.7	66.9			62.3	64.4	63.0	61.4	60.5	59.1	
Net non-debt creating capital inflows (negative)	0.1	0.1	-0.2	-1.8	-0.9			-0.9	-1.0	-1.0	-0.9	-0.9	-0.9	
Automatic debt dynamics 1/	-4.6	0.0	6.7	-5.3	-5.9			-0.7	0.2	0.1	-0.2	-0.1	-0.2	
Contribution from nominal interest rate	1.5	1.6	1.9	1.2	1.0			1.9	2.9	2.6	2.3	2.0	1.9	
Contribution from real GDP growth	-2.9	-2.7	3.8	-2.0	-5.5			-2.6	-2.6	-2.4	-2.4	-2.1	-2.1	
Contribution from price and exchange rate changes 2/	-3.1	1.1	1.1	-4.5	-1.4			...	...	...	...	...	...	
Residual, incl. change in gross foreign assets (2-3) 3/	2.1	6.3	6.9	10.8	4.8			4.6	4.8	5.0	5.2	4.9	4.6	
External debt-to-exports ratio (in percent)	90.7	97.1	114.9	100.9	86.4			89.9	85.6	85.8	86.1	85.5	85.3	
Gross external financing need (in billions of US dollars) 4/	101.0	106.9	104.9	103.0	114.6			123.2	131.5	136.6	143.8	150.8	155.5	
in percent of GDP	28.1	29.3	31.1	27.6	28.2	10-Year	10-Year	27.7	27.4	26.3	25.8	25.4	24.6	
Scenario with key variables at their historical averages 5/								**62.1**	**64.1**	**66.8**	**69.7**	**72.2**	**74.6**	**-0.5**
Key Macroeconomic Assumptions Underlying Baseline						Historical Average	Standard Deviation							
Nominal GDP (US dollars)	358.8	365.2	337.3	373.0	406.3			445.1	479.9	518.4	557.1	593.0	632.9	
Real GDP growth (in percent)	4.8	4.4	-5.5	3.1	8.7	4.1	3.7	4.5	4.5	4.4	4.4	3.9	3.9	
GDP deflator in US dollars (change in percent)	7.2	-2.5	-2.2	7.2	0.2	-1.4	6.6	4.9	3.1	3.5	2.9	2.5	2.7	
Nominal external interest rate (in percent)	2.4	2.6	2.7	1.9	1.6	2.0	0.4	3.3	4.9	4.6	4.1	3.6	3.6	
Growth of exports (US dollar terms, in percent)	10.1	-3.1	-12.8	23.6	16.8	2.6	12.7	2.5	10.3	5.6	5.1	5.1	4.4	
Growth of imports (US dollar terms, in percent)	10.1	-5.0	-11.7	23.6	18.1	3.0	12.5	2.0	11.5	5.6	4.8	4.9	4.2	
Current account balance, excluding interest payments	3.7	5.1	6.0	5.0	3.7	4.5	0.8	4.7	5.6	5.4	5.2	5.0	4.9	
Net non-debt creating capital inflows	-0.1	-0.1	0.2	1.8	0.9	0.1	1.4	0.9	1.0	1.0	0.9	0.9	0.9	

Sources: Data provided by the authorities; and IMF staff estimates.

1/ Derived as $[r - g - \rho(1+g) + \varepsilon\alpha(1+r)]/(1+g+\rho+g\rho)$ times previous period debt stock, with r = nominal effective interest rate on external debt; ρ = change in domestic GDP deflator in US dollar terms, g = real GDP growth rate, ε = nominal appreciation (increase in dollar value of domestic currency), and α = share of domestic-currency denominated debt in total external debt.

2/ Derived as $[r - g - \rho(1+g) + \varepsilon\alpha(1+r)]/(1+g+\rho+g\rho)$ times previous period debt stock, with r = nominal effective interest rate on external debt; ρ = change in domestic GDP deflator in US dollar terms, g = real GDP growth rate, ε = nominal appreciation (increase in dollar value of domestic currency), and α = share of domestic-currency denominated debt in total external debt.

3/ For projection, line includes the impact of price and exchange rate changes.

4/ Defined as current account deficit, plus amortization on medium- and long-term debt, plus short-term debt at end of previous period.

5/ The key variables include real GDP growth; nominal interest rate; dollar deflator growth; and both non-interest current account and non-debt inflows in percent of GDP.

6/ Long-run, constant balance that stabilizes the debt ratio assuming that key variables (real GDP growth, nominal interest rate, dollar deflator growth, and non-debt inflows in percent of GDP) remain at their levels of the last projection year.

Appendix X. Malaysia's Financial System: Getting Ready for Climate Change [1]

Achieving Malaysia's 2050 net zero target will require billions of dollars of investments and significant private funding. While Malaysia has yet to determine its exact path towards net zero, its transition will undoubtedly have significant economic implications, given importance of carbon-intensive sectors. Malaysia's transition also creates challenges for the financial sector, with higher carbon prices, tighter regulations likely affecting the sector's portfolios on one hand, while the sector juggles its pivotal role in financing Malaysia's transition on the other.

A. Moving Towards a Greener Economy

1. Malaysia pledged to achieve net zero greenhouse gas emissions by 2050. In July 2021, Malaysia also upgraded its NDC target to reduce intensity of greenhouse gas (GHG) emissions by 45 percent by 2030 relative to 2005 unconditionally**.** Energy path outlined in 12th Malaysia Plan (12MP) also assumes phasing out coal power generation.

2. Most of Malaysia's (GHG) emissions stem from fuel use for power generation, transportation, and land conversion activities, while the country's substantial carbon sinks offer partial emissions offsets (Figure 1). Malaysia accounts for approximately 0.7 percent of the world's annual carbon dioxide (CO2) emissions and 0.35 percent of cumulative historical CO2 emissions globally (IMF 2022a). Compared to its ASEAN-5 peers, Malaysia's net GHG emissions are relatively low, on both aggregate and per real US dollar GDP terms, having come in at 115,644 CO2-equivalent (CO2e) gigagrams and 285 CO2e grams per US dollar GDP in 2019. Most of Malaysia emissions come from carbon dioxide.

3. Achieving Malaysia's climate target will require billions of dollars of investments and significant private funding. Cumulative investment required to achieve net zero target by 2050 would require about RM 350-450 billion[2] (c. $90 billion), according to Malaysia's JC3 (WWF-BCG estimates). However, given limited forward-looking fiscal buffers, the mobilization of private sector capital is deemed critical for Malaysia to achieve its climate goals. An eventual material pivot of Malaysia's firms towards carbon-neutrality or net zero would give rise to significant funding needs to be met by the financial sector.

B. Climate Transition: Implications for Malaysian Corporates

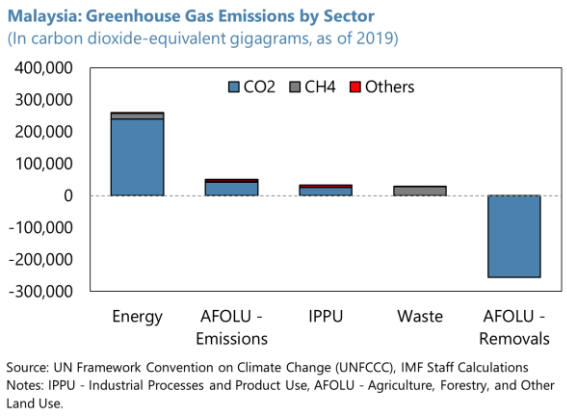
4. Shifts in customer and investor preferences as well as government expectations are forcing companies to integrate climate commitments into their business strategy. Almost all top 50 listed Malaysian companies are considering improvements to their performance along ESG

[1]Prepared by Natalia Novikova and Tian Yong Woon.

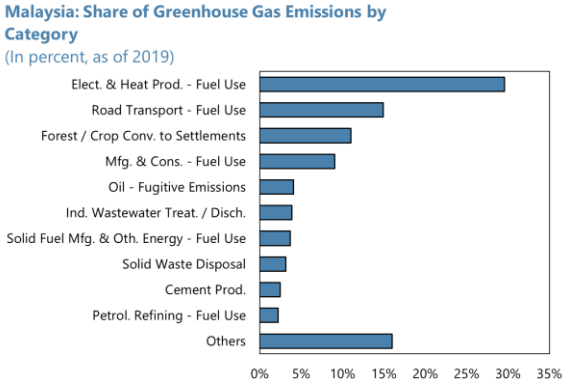
[2] This includes capital expenditures across various abatement levels in energy, upgrading transportation infrastructure among others. Adaptation and resilience expenditure not included.

(environmental, social and governance) criteria (PwC, 2022). For context, Malaysia counts 26 companies in the MSCI All Country World Index (ACWI) ESG Leaders Index, where about 70 percent of index constituents have emissions reduction policies. In contrast, only about 18 percent of Malaysian companies in the PwC survey have made net zero commitments and 47 percent of surveyed firms were still finalizing their promises as of late-2021, and with an even lower proportion doing so among SMEs.

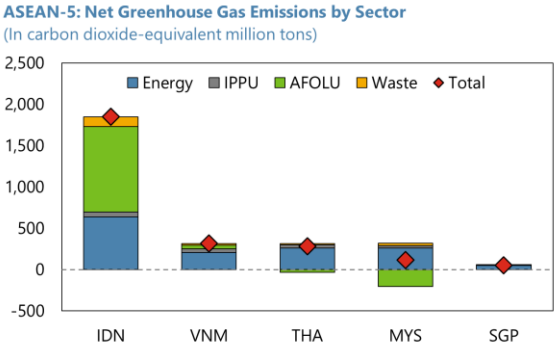
Figure 1. Malaysia: Greenhouse Gas Emissions



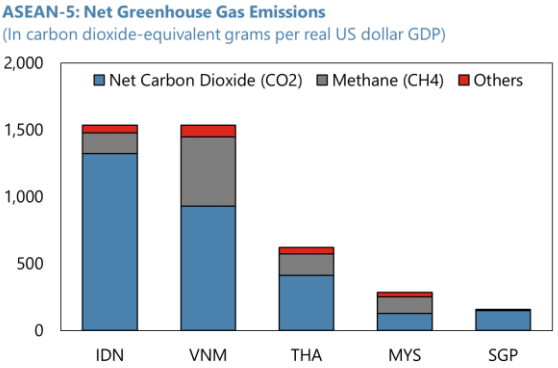
Source: UN Framework Convention on Climate Change (UNFCCC), IMF Staff Calculations
Notes: IPPU - Industrial Processes and Product Use, AFOLU - Agriculture, Forestry, and Other Land Use.



Source: UN Framework Convention on Climate Change (UNFCCC), IMF Staff Calculations.



Source: UN Framework Convention on Climate Change (UNFCCC), IMF Staff Calculations
Note: Data as of 2019, except for Singapore (2018) and Vietnam (2016). IPPU - Industrial Processes and Product Use, AFOLU - Agriculture, Forestry, and Other Land Use.



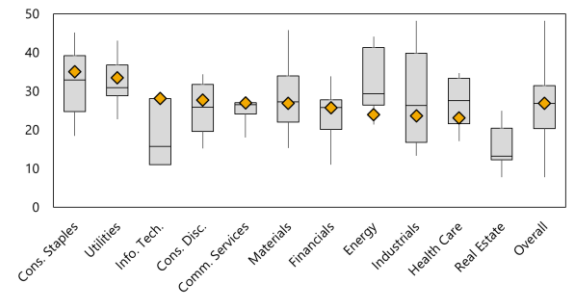
Source: UN Framework Convention on Climate Change (UNFCCC), IMF Staff Calculations
Note: Data as of 2019, except for Singapore (2018) and Vietnam (2016).

5. Malaysian firms have moderate levels of unmanaged ESG risks relative to ASEAN peers, based on Sustainalytics ESG Risk Scores[3]. Across sectors in ASEAN-5, the greatest ESG-related risks are denoted in consumer staples, utilities, and energy, while information technology and real estate are assessed to have the lowest risks. Malaysia firms share the same median ESG risk score as their ASEAN-5 peers, with their highest sectoral median ESG risk scores denoted in consumer staples, utilities, and IT. Aside, ESG score coverage of the region's companies is generally low, as only 17

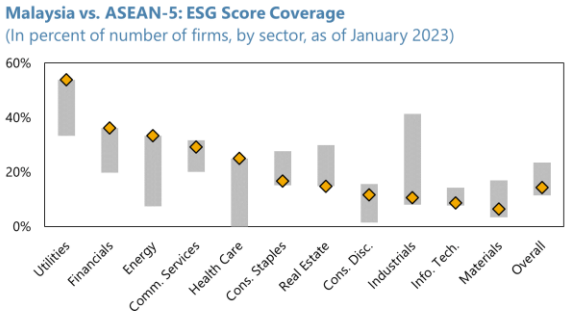
[3] Sustainalytics ESG risk scores measure the magnitude of a company's unmanaged ESG risks, which includes: 1) unmanageable risk and 2) risks that could potentially be managed by a company but are not deemed sufficiently managed. Lower scores represent less unmanaged risk and vice versa, where zero is the lowest score and for 95 percent of companies, the maximum score is below 50. The risk scores are directly comparable across companies and industries. Link to methodological document.

percent of listed firms in ASEAN-5 countries are assigned an ESG score on average. Utilities firms receive the greatest regional ESG score coverage (42 percent), while coverage for IT, consumer discretionary, and materials sectors is relatively low (about 10 percent).

Figure 2. Malaysia: ESG Performance of ASEAN-5 Firms



Sources: Bloomberg, IMF Staff Calculations. Note: Gray box and whisker plots denote distribution of ASEAN-5 scores. Yellow diamond-shaped plots denote medians of Malaysian firms. Higher scores denote higher ESG-related risks.



Sources: Bloomberg, IMF Staff Calculations. Notes: Gray box plots denote the distribution of ASEAN-5 score coverage percentages. Yellow diamond-shaped plots denote score coverage percentages of Malaysian firms. ESG score coverage pertains to the percentage of stock-listed firms within each sector that have at least one of the following scores: S&P Global ESG Rank, Sustainalytics ESG Risk Score, MSCI ESG Rating.

6. Carbon taxation is a promising climate tool to incentivize green transition. Staff analysis shows carbon taxes can help address both emissions reductions and needed fiscal revenues (IMF 2022). Carbon taxes of $25 to $75 per ton of CO2 emissions can potentially raise fiscal revenues of 1 to 3 percent of GDP by 2030, although taxes of larger than $75 per ton of CO2 emissions would be needed for Malaysia to achieve net zero greenhouse gas emissions by 2050. Carbon taxation could also potentially raise significant fiscal revenues, which could be recycled to address the distributional effect of resulting higher energy prices on households and firms, and to support adaptation efforts. Thus, low-income households, workers, and firms more vulnerable to higher energy prices implied by a carbon tax could be identified and compensated adequately, including through higher social transfers (IMF, 2022). In 2022, Malaysia announced plans to introduce a carbon tax and is also considering an Emissions Trading Scheme to achieve its climate ambitions. The latter can achieve emissions reductions too, albeit at a lower rate compared to carbon taxation. Meanwhile, BNM estimated that the phase-in of the European Carbon Border Adjustment Mechanism, which implies waves of carbon taxation starting from 2026 and requires reporting emissions from 2023, could affect around 60 percent of Malaysia's exports to the EU by 2026 or about 5 percent of total exports (BNM 2023a).

7. Higher carbon prices may require significant adjustments by Malaysian companies, irrespective of the tools used. High-emitting sectors, including energy industries, transportation, and manufacturing, among others, are likely to be the most affected by higher carbon prices (Box).[4] These sectors constituted about 37 percent of Malaysia's GDP in 2021.

[4] While this exercise assumes a one-off increase of a carbon price, in practice rate increases tend to be gradual.

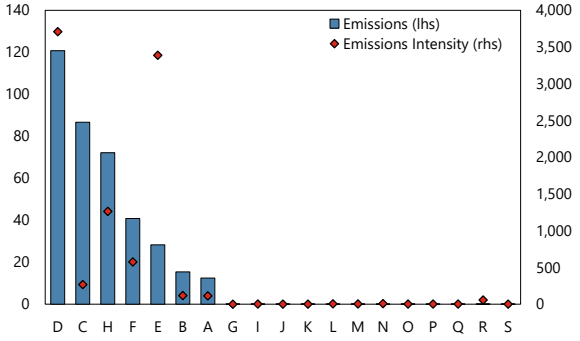
Box 1. Potential Impact of Higher Domestic Carbon Prices on Malaysian Corporates

Firm-level financial data was used to assess the potential impact of a one-off carbon tax on the debt-servicing capacity of Malaysian firms. The exercise assumed a hypothetical level of carbon tax rates of $25, $50, and $75 per ton CO2-equivalent (CO2e).[1] The study covered about 1,400 Malaysian companies, which represent about 75 percent of Malaysian firms included in the ORBIS database, based on total assets. Sample coverage varies across sectors, from 26 percent in real estate to over 90 percent for most high emissions sectors.

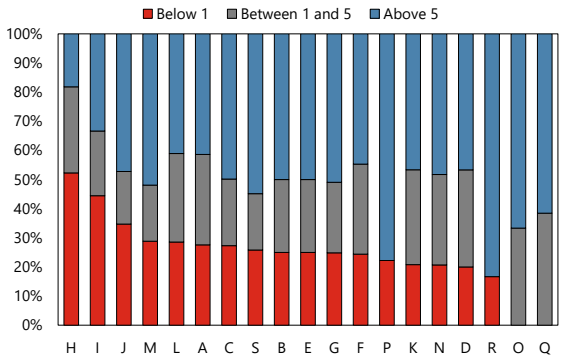
About 75 percent of Malaysia's pre-pandemic emissions stemmed from the energy generation, manufacturing, and transportation sectors. Further, the energy generation and waste management sectors exhibited the highest emissions intensity, measured as sector's emissions intensity relates to its greenhouse gas emissions per gross value added. In the waste management sector high intensity reading partially due to its relatively low sector-level output. Activity-level emissions data for Malaysia was obtained from Malaysia's Fourth Biennial Update Report (BUR 4) to the UNFCCC.

First, firm-level greenhouse gas emissions were estimated by scaling firm output levels by the average per-output emissions of firms' corresponding sectors. Next, firm-level carbon taxes were computed by scaling the estimated greenhouse gas emissions by the applied carbon tax rate. Firms were assumed to fully absorb imposed carbon taxes, so no pass-through of carbon tax burdens was applied. Then, firms' earnings before interest and taxes (EBIT) and current assets were reduced by the computed carbon taxes. Lastly, and for each sector, we calculated the share of firms whose interest coverage ratios (ICRs) and current ratios (CRs) deteriorated from above 1 in the baseline scenario to below 1 in the post-carbon tax scenario. In the baseline scenario, most sectors had less than 30 percent of firms with ratios of below 1, except for the transportation (52 percent ICR below 1, 48 percent CR below 1) and accommodation and food services (44 percent ICR below 1) sectors, among others.

Malaysia: Emissions and Emissions Intensity
(lhs: emissions, in CO2e mn tons, rhs: emissions intensity, in CO2e tons per mn ringgit of value added)



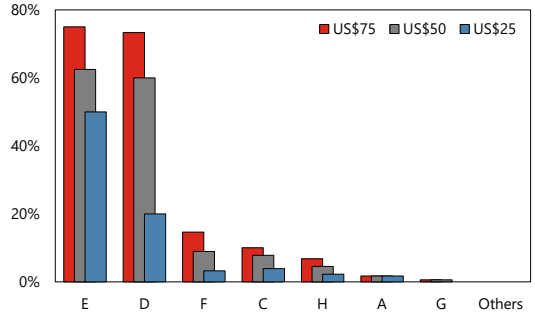
Malaysia: Pre-Carbon Tax ICR Distribution
(In percentage of firms in sector sample)



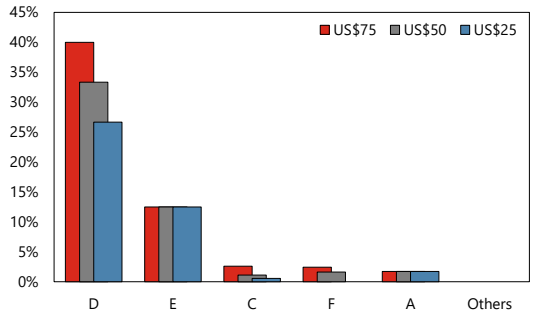
Energy generation (E) and waste management (D) firms were found likely to be the hardest hit by the imposition of a one-off carbon tax. It was found that about half of energy generation and one fifth of waste management firms would have suffered ICR declines to below 1 due to a $25 per ton CO2e carbon tax. Also, about 27 percent of energy generation firms and 13 percent of waste management firms would have seen CR declines to below 1. Higher carbon tax rates of $50 and $75 per ton CO2e were found to have resulted in greatly increased proportions of energy generation and waste management firms suffering ICR and CR declines to below 1. Firms in other sectors were found likely to have experienced only mild to moderate ICR and CR impacts for the applied levels of carbon tax, largely due to the relatively lower emissions intensity associated with their sectors.

Box 1. Potential Impact of Higher Domestic Carbon Prices on Malaysian Corporates (concluded)

Malaysia: Share of Firms Whose ICR Drop Below 1 Post-Carbon Tax
(By level of carbon tax per ton, in percentage of number of firms in eligible sample)



Malaysia: Share of Firms Whose CR Drop Below 1 Post-Carbon Tax
(By level of carbon tax per ton, in percentage of number of firms in eligible sample)



Sources: ORBIS, Malaysia BUR 4, Bloomberg, IMF Staff Calculations. Note: A - Agriculture, forestry and fishing; B - Mining and quarrying; C - Manufacturing; D - Electricity, gas, steam and air conditioning supply; E - Water supply; sewerage, waste management and remediation activities; F - Construction; G - Wholesale and retail trade; repair of motor vehicles and motorcycles; H - Transportation and storage; I - Accommodation and food service activities; J - Information and communication; K - Financial and insurance activities; L - Real estate activities; M - Professional, scientific and technical activities; N - Administrative and support service activities; O - Public administration and defense; compulsory social security; P - Education; Q - Human health and social work activities; R - Arts, entertainment and recreation; S - Other service activities

1/ A similar approach is used in the climate transition risk analysis applied in the IMF Financial Sector Assessment Program (IMF 2020, IMF 2022b), where transition risks are defined as those resulting from policy, technology, legal, and market changes that occur during the move to a low-carbon economy. The impact of these developments is approximated by a carbon tax path.

C. Financial Sector Role in Climate Transition

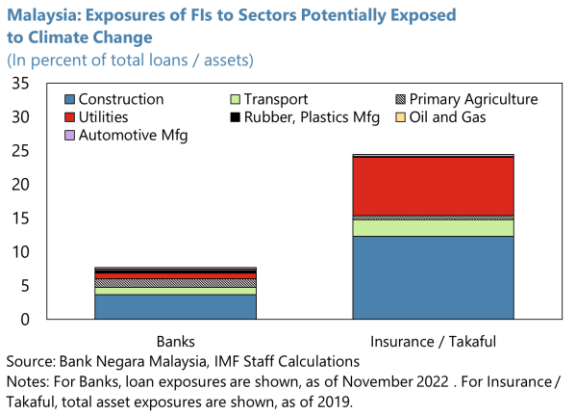
8. Banks and broader financial system will need to play a critical role in orderly transition to a greener economy. Two important strategic frameworks take this vision into account: (i) BNM's Financial Sector Blueprint (2022-2026); and (ii) the Capital Markets Masterplan 3 launched by Securities Commission Malaysia in 2021. Both strategies envisage steps to enhance monitoring and assessment of climate risks and reporting and disclosure practices, as well as to promote sustainable financing, including for a transition to a low-carbon economy.

9. Malaysia financial institutions have sizable assets that could be exposed to environmental risks (Figure 3). About 8 percent of banking sector loans and 24 percent of insurance sector total assets are in sectors with high carbon intensity or potentially exposed to climate change. For example, an explorative study by the BNM and the WB focusing on biodiversity found that about 8 percent of Malaysia's banking system loans are extended to potentially exposed sectors as of November 2022 (WB, BNM, 2022). In addition, over one half of commercial loans portfolio in the sample was exposed to sectors that depend to a high extent on ecosystem services. This high dependency exposes Malaysian banks to physical risk from ecosystem deterioration, particularly related to deterioration in surface water (29 percent), climate regulation such as carbon storage (26 percent), and flood and storm protection (16 percent). Of the commercial loans portfolio, 87 percent is also exposed to sectors that strongly impact ecosystem services (thus potentially facing a higher level of transition risk from changes in regulations and policies), particularly related to greenhouse gas (GHG) emissions (61 percent), water use (55 percent), and terrestrial ecosystem use

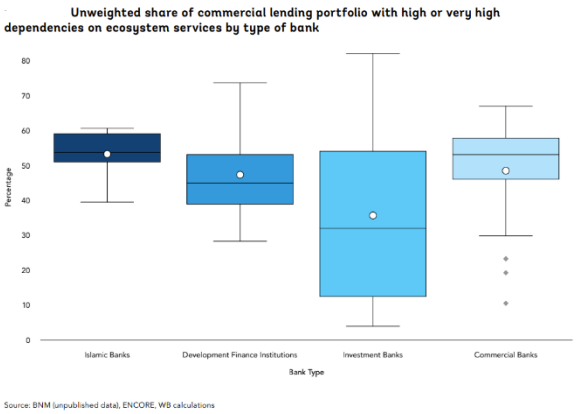
(43 percent) among others. There are wide differences between individual banks and bank types in their exposure to physical risk and transition risk with the differences linked to the target sector of lending that those banks predominantly serve.

10. The BNM is preparing for an industry-wide climate risk stress testing exercise in 2024. The exercise will assess the resilience of Malaysian financial institutions to physical and transition risks arising from various climate scenario. The BNM plans to use scenarios developed by the NGFS as a basis and will assume a variety of potential pathways for the evolution of the relevant fiscal and regulatory policies, and physical climate environments up to 2050.

Figure 3. Malaysia: Malaysian FIs and Nature-Related Risks



Source: Bank Negara Malaysia, IMF Staff Calculations
Notes: For Banks, loan exposures are shown, as of November 2022 . For Insurance / Takaful, total asset exposures are shown, as of 2019.



Source: BNM (unpublished data), ENCORE, WB calculations

11. The exercise will build on BNM's earlier initiatives aiming to strengthen climate-related reporting and management of risk by the financial industry. Climate Change and Principle-based Taxonomy (CCPT) and Value-based Intermediation Financing and Investment Impact Assessment Framework Sectoral Guides clarify issuance of standards and frameworks to improve climate risk management practices by FIs and aim to promote the consistent classification of exposures to climate-related financial risks. In 2022, FIs started submitting semi-annual reports on the application of the CCPT[5].

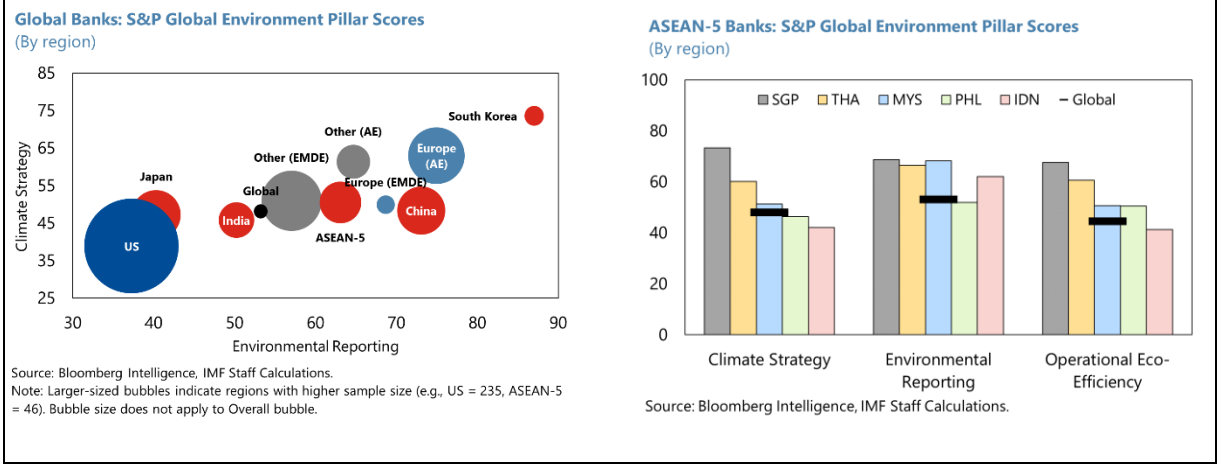
12. Meanwhile, Malaysia banks, along with ASEAN-5 peers, still trail many advanced economies in terms of climate strategy and environmental reporting, based on S&P Global climate strategy scores[6]. Malaysia banks mildly beat regional and global averages on the climate strategy and operational eco-efficiency fronts and outperform their peers on environmental

[5] In 2H 2022, the FIs were able to classify 95 percent of total new loans/financing and 73 percent of new financial investments. As of December 2022, over 70 percent of outstanding loans and exposures via financial instruments were categorized under the CCPT (BNM 2023b). The largest share of exposures was classified in the climate transition categories, particularly in electricity, gas, steam and air conditioning supply sector, where over 90 percent of outstanding loans were categorized, and in manufacturing.

[6] S&P Global Environmental pillar scores are measured on a scale between 0 and 100. Points are awarded at the question-level based on assessment of underlying data points and according to pre-defined scoring frameworks that assess availability, quality, relevance, and performance on Environmental topics. Question-level scores are then aggregated to criteria-level scores, which are then aggregated to pillar-level scores. Link to methodological document.

reporting. Further, ASEAN-5 banks score slightly better than the global average but trail peers in South Korea, Europe AEs, and Other AEs. In terms of S&P Global environment reporting scores, ASEAN-5 banks score much better than the global average, but trail peers in South Korea, Europe, China, and Other AEs. According to Asia Research and Engagement survey (ARE 2022), while Maybank and CIMB reflect climate risks in the risk register, high-carbon sector exposure disclosure is limited. There are some climate strategies in development, including net zero targets, but without short- and medium-term plans. All banks have board committees overseeing climate change, but no evidence of requiring climate expertise in board nominations. None disclose financed emissions or conduct climate scenario analyses.

Figure 4. ASEAN-5: Banks ESG Scores



13. Bank strategies are shifting from divestment to engagement. Bank loans remain the dominant source of funding in Malaysia, while banks themselves represent significant share of the economy. According to JC3 survey (Malaysia Joint Committee on Climate Change 2022), 30 percent of banks are implementing policies to reduce coal financing. Most targets envisage ceasing coal-fired power plants and coal financing in the coming years, and many started to phase out new coal-related activities in 2021. In the meantime, major Malaysian banks announced sustainable finance plans. These include quantitative, timebound, forward-looking targets and list of identify specific industries or segments to pursue. For example, Maybank plans to cumulative invest of $12bn (slightly below 10 percent of its gross loan book) in sustainable project financing and securities in 2021-2025. CIMB plan to invest $7bn (compared to the current gross loan book of about $100 bn) in 2021-2024.

14. At the same time, Malaysia's sustainable finance volumes have surged from $0.8 billion in 2017 to $4 billion in 2022 (Figure 5). The bulk of issuances stemmed from sustainability bonds by the financial sector over the period. Malaysia is a pioneer and key player in the sustainability Sukuk market.[7] Malaysia issued the world's first green Sukuk in 2017, and the world's first sovereign

[7] In 2014, Malaysia introduced Sustainable and Responsible Investment (SRI) Sukuk Framework, aiming to facilitate financing needs for projects that meet the UN Sustainable Development Goals. The Framework was expanded in 2019 with the launch of a five-year SRI Roadmap, aiming to widen the range of SRI instruments and to strengthen its SRI issuer and investor base. In 2022, Malaysia released the SRI-linked Sukuk Framework to facilitate companies' transition towards net-zero.

US dollar sustainability Sukuk in 2021. Malaysia's sustainable Sukuk issuance volumes have grown 307 percent since 2017, to $3.1 billion in 2022.

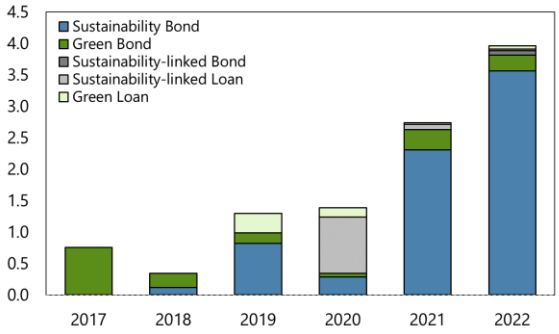
15. Over the years Malaysia used tax incentives and grant schemes to support market development. For example, to incentivize issuances, Malaysia introduced in 2016 income tax deductions on SRI Sukuk issuance costs, initially available until Year of Assessment (YA) 2020 but eventually extended to YA 2023. Similarly, tax deductions are also provided on SRI-linked Sukuk issuance costs from YA 2023 to YA 2027. Also, Malaysia unveiled in 2018 a tax-exempt Green SRI Sukuk Grant Scheme to assist issuers in defraying external review costs. The scheme was expanded in 2021 to cover bonds issued under the SRI-linked Sukuk Framework and the ASEAN Sustainability-linked Bond Standards and to include tax exemptions for grant recipients until YA 2025. The scheme was further expanded in 2022 to allow external review cost defrayments for issuances covered under the SRI-linked Sukuk framework.

16. In 2022, the SC also released the Principles-Based SRI Taxonomy for the Malaysian Capital Market. This taxonomy aims to enable capital market participants to identify economic activities that are aligned with environment, social and sustainability objectives, that would facilitate more informed and efficient decision-making for fundraising and investment for sustainability.

17. However, Malaysia's sustainable finance market is not without its challenges. Despite strong market growth, most of Malaysia's FIs in JC3 survey cite 1) poor data quality or availability, 2) inadequate financial incentives, and 3) low market awareness as the greatest hurdles to a sustainable finance market. Further, about two-thirds of FIs think that there are insufficient sustainable finance products on offer, with most FIs planning to widen their range of sustainable products and solutions in the future.

Figure 5. Malaysia: Malaysia's Sustainable Finance Market

Malaysia: Sustainable Financing Volumes
(In billions of US dollars, by theme and type)



Sources: BloombergNEF, IMF Staff Calculations

Malaysia: Sustainable Financing Sector - Type Matrix
(In billions of US dollars, cumulative)

	Finance	Govt.	Indust.	Utilities	Comms.	Others	Total
Sustainability Bond	3.3	1.8	1.2	0.6	-	0.2	7.1
Green Bond	1.0	-	-	0.5	0.0	0.3	1.8
Sustainability-linked Loan	0.1	-	-	-	0.8	0.1	1.0
Green Loan	-	-	0.0	0.1	-	0.4	0.5
Sustainability-linked Bond	0.1	-	-	-	-	-	0.1
Total	4.5	1.8	1.2	1.1	0.8	1.0	10.5
of which Sukuk	1.5	1.8	1.2	1.1	0.0	0.5	6.1

Sources: BloombergNEF, IMF Staff Calculations

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INTERNATIONAL MONETARY FUND

MALAYSIA

STAFF REPORT FOR THE 2023 ARTICLE IV CONSULTATION—INFORMATIONAL ANNEX

April 19, 2023

Prepared By | Asia and Pacific Department

CONTENTS

FUND RELATIONS

(As of March 31, 2023)

Membership Status: Joined March 7, 1958; Article VIII

General Resources Account

	SDR Millions	Percent of Quota
Quota	3,633.80	100.00
Fund holdings of currency (exchange rate)	2,559.13	70.43
Reserve tranche position	1,074.70	29.58
Lending to the Fund New Arrangement to Borrow	1.91	

SDR Department

	SDR Millions	Percent of Allocation
Net cumulative allocation	4,828.98	100.00
Holdings	4,314.12	89.34

Exchange Arrangement:

The de jure and de facto exchange rate arrangements are floating.

Malaysia maintains bilateral payments arrangements with 7 countries. The authorities have indicated that these arrangements do not have restrictive features.

The current foreign exchange policy (FEP) rules include prudential measures to promote monetary and financial stability while safeguarding the balance of payments position and value of the ringgit. The 2019 and 2020 Article IV Consultation Reports (IMF Country Reports No. 19/71 and No 20/57) list exchange rate measures that have been taken between December 2016 and December 2019.

In April 2021, the BNM announced further liberalization of the FEP policy aimed to improve business efficiency and provide flexibility for corporates in particular export-oriented industries to better manage their foreign exchange risk exposure.

The Malaysian authorities view remaining FEP rules as prudential in nature and necessary to ensure the availability of adequate information on the settlement of payments and receipts as part of the monitoring mechanism on capital flows. These controls do not contravene Malaysia's obligations under Article VIII. Malaysia has accepted the obligations of Article VIII, Sections 2, 3, and 4, and maintains a system free of restrictions on the making of payments and transfers for current

international transactions except for restrictions in place for security reasons notified to the Fund pursuant to Decision No. 144-(52/51).

Malaysia, in accordance with the UN Security Council resolutions implements the freezing without delay of funds and other financial resources, including funds derived or generated from property owned or controlled directly or indirectly by the designated individuals and entities. These measures are maintained for the reasons of national and international security and have been notified to the Fund pursuant to the IMF Executive Board Decision No. 144 (52/51). Malaysia also restricts any dealings or transactions with Israeli/Israel-related entities/individuals as well as in Israeli Shekel; however, since these restrictions affect the underlying transactions themselves, they are not subject to Fund jurisdiction under Article VIII, Section 2(b).

Article IV Consultation:

Malaysia is on the standard 12-month consultation cycle. Staff discussions for the 2023 Article IV consultation took place during March 8–20, 2023.

Financial Sector Assessment Program (FSAP) Participation:

Malaysia conducted its first FSAP in 2012 (IMF Country Report Nos. 13/52, 13/53, and 13/56–13/60).

Technical Assistance:

Fiscal Affairs Department (FAD): A mission on fiscal responsibility law took place in February 2020. A seminar on treasury management took place in February 2020. A workshop on tax revenue strategy and Medium-Term Revenue Strategy was held in January 2020. A mission on revenue mobilization strategy was conducted in January 2020. A joint workshop on tax policy with MOF was held in July 2016. A mission on expenditure review was conducted in December 2016. A Public Investment Management Assessment (PIMA) mission took place in May 2017. A seminar on treasury modernization was held in July 2017.

Legal Department (LEG): Missions were fielded in May and September 2011 to help draft a Centralized Asset Management Corporations Bill, in the context of a three-year project to assist Malaysia in implementing an asset forfeiture regime.

Monetary and Capital Markets Department (MCM): A mission on macrofinancial risk analysis and vulnerability analysis for corporate and financial institutions was conducted in October 2009. A workshop on monitoring financial risks was held in in May 2010. Technical assistance missions on stress testing capital markets were conducted in 2013. Technical assistance discussions on further options to deepen FX markets and on analyzing the role of the exchange rate in Malaysia's economy were concluded in March 2021. Technical Assistance on Monetary Policy Modelling in the context of the operationalization of Integrated Policy Framework (IPF tools) has been ongoing since December 2021.

Statistics Department (STA): Technical assistance and training missions on Government Financial Statistics (GFS) were conducted in March 2017 and March 2018, respectively, and follow-up GFS technical assistance missions were conducted in March and December 2019. Follow-up GFS technical assistance took place during February 28–June 30, 2022.

Anti-Money Laundering/Combating the Financing of Terrorism (AML/CFT):

In November 2014, Malaysia's AML/CFT regime was subject of an on-site assessment by the Asia Pacific Group on Money Laundering (APG) under the new methodology of the Financial Action Task Force (FATF), the global standard setter for AML/CFT. The Mutual Evaluation Report was published in September 2015. It concluded that overall Malaysia has a broadly robust legal AML/CFT framework with generally well-developed and implemented policies, but with a moderate level of effectiveness. The country developed an action plan to address the key deficiencies identified in the report. In February 2016, the FATF granted full membership to Malaysia based on its commitments to continue improving its AML/CFT regime. The FATF will continue to monitor the country's progress through its enhanced follow-up process. In the Third Enhanced Follow-up Report (October 2018), Malaysia made progress in addressing the technical compliance deficiencies, but remained under the FATF's enhanced follow-up process and will report back on progress made to strengthen its implementation of AML/CFT measures.

Resident Representative/Advisor: None.

STATISTICAL ISSUES

(As of March 2023)

I. Assessment of Data Adequacy for Surveillance
General: Data provision is adequate for surveillance.
National Accounts: The Department of Statistics Malaysia (DOSM) publishes annual and quarterly estimates of GDP, by the production, expenditure, and (annual only) income approaches, at current and constant 2015 prices, based on the *2008 SNA*. The DOSM also disseminates annual estimates for gross disposable income, saving, and net lending for the economy, as well as supply and use tables. DOSM should plan on updating the base year of Malaysian national accounts to a more recent period as recommended by the *2008 SNA*. **Price Statistics**: The monthly CPI and the PPI are available on a timely and comprehensive basis. A quarterly Services PPI and monthly building cost index are also published. The CPI weights are based on the Household Expenditure Survey for the reference year 2016. The Department of Statistics Malaysia should plan to update the CPI weights as household expenditure patterns will have changed in the intervening years since 2016. . The PPI weights are obtained from the Census of Economy 2016 for the reference year 2015 and other alternative sources of data for the value of production. The PPI weights should be updated based on a new Economic Census to reflect the changing structure of production.
Government Finance Statistics: STA is providing technical assistance to support the transition to accrual accounting and reporting and expansion of sectoral coverage. The Malaysian authorities submit annual GFS data on a cash basis to the IMF Statistics Department for budgetary central government. GFS data is currently in the last stages of transitioning to accrual-based accounting for the federal (central) government. Adoption of accrual reporting is necessary to capture a consolidated view of both assets and liabilities. There is a need to improve the timeliness, detail, and collection of data on nonfinancial public enterprises (NFPEs), statutory bodies, and state and local governments. Dissemination of more detailed data on non-listed NFPEs' assets and liabilities and domestic and foreign financing by type of debt instrument and holder would be desirable; efforts in this direction will require continued close collaboration among agencies, including the Ministry of Finance, the Department of Statistics Malaysia (DOSM), and Bank Negara Malaysia (BNM). There is also a need to disseminate more information on public private partnerships.
Monetary Statistics: The monetary and financial statistics (MFS) are broadly aligned to the Fund's data needs. BNM compiles monetary statistics using the standardized report forms (SRFs) 1SR for central bank and 2SR for other depository corporations for publication in the *International Financial Statistics*. There is a need to improve the institutional coverage of the financial corporations, sectorization of the domestic economy, and classification and valuation of financial instruments to ensure full adherence to the IMF's *Monetary and Financial Statistics Manual and Compilation Guide*. In addition, due to the growing importance of insurance corporations, pension funds, and other financial intermediaries in Malaysia, coverage of MFS should be expanded to include these institutions.

Financial Soundness Indicators: The BNM reports the 15 core financial soundness indicators (FSIs) and eight additional FSIs for deposit takers, and two additional FSIs on real estate markets on a quarterly basis for posting on the IMF's FSI website. FSIs on other financial corporations, nonfinancial corporations and households are not available. **Financial Access Survey:** BNM reports data on several key series and indicators of the Financial Access Survey (FAS), including mobile and internet banking, mobile money, gender-disaggregated data, and the two indicators (commercial bank branches per 100,000 adults and ATMs per 100,000 adults) adopted by the UN to monitor Target 8.10 of the Sustainable Development Goals (SDGs).	
External Sector Statistics: Department of Statistics Malaysia compiles and publishes quarterly balance of payments and international investment position (IIP) estimates in accordance with the sixth edition of the *Balance of Payments and International Investment Position Manual*. The authorities improved balance of payments and IIP estimates reporting detailed items and narrowing negative net errors and omissions. To further improve the estimates, data for other financial corporations need to be separately identified in the financial account and IIP. Malaysia participates in the IMF's Coordinated Direct Investment Survey and Coordinated Portfolio Investment Survey. Malaysia also compiles the Reserves Data Template.	
II. Data Standards and Quality	
Malaysia subscribed to the Special Data Dissemination Standard (SDDS) on August 21, 1996, with metadata published on the Data Standards Bulletin Board (DSBB). Malaysia met SDDS specifications on September 1, 2000. Malaysia is currently using a timeliness flexibility option for general government operations. The latest Annual Observation Report for Malaysia is available on the DSBB.	No Data ROSC is available.

Malaysia: Table of Common Indicators Required for Surveillance
(As of March 27, 2023)

	Date of Latest Observation	Date Received	Frequency of Data[6]	Frequency of Reporting[6]	Frequency of Publication[6]
Exchange rates	03/27/2023	03/27/2023	D	D	D
International reserve assets and reserve liabilities of the monetary authorities[1]	09/2022	10/31/2022	M	M	M
Reserve/base money	02/2023	03/24/2023	M	M	M
Broad money	02/2023	03/24/2023	M	M	M
Central bank balance sheet	09/2022	01/14/2022	M	M	M
Consolidated balance sheet of the banking system	09/2022	01/31/2022	M	M	M
Interest rates[2]	02/2023	03/24/2022	M	M	M
Consumer price index	02/2023	03/24/2023	M	M	M
Revenue, expenditure, balance and composition of financing[3]—general government[4]	2022	02/10/2023	A	A	A
Revenue, expenditure, balance and composition of financing[3]—federal government	2022: Q4	02/10/2023	Q	Q	Q
Stocks of central government and central government guaranteed debt[5]	2022: Q4	02/10/2023	Q	Q	Q
External current account balance	2022: Q4	02/11/2023	Q	Q	Q
Exports and imports of goods	12/2022	01/21/2023	M	M	M
Exports and imports of services	2022: Q4	01/21/2023	Q	Q	Q
GDP/GNP	2022: Q4	02/11/2023	Q	Q	Q
Gross external debt	2022: Q4	02/11/2023	Q	Q	Q
International Investment Position	2022: Q4	02/11/2023	Q	Q	Q

[1]Includes reserve assets pledged or otherwise encumbered as well as net derivative positions.
[2] Both market-based and officially determined, including discount rates, money market rates, rates on treasury bills, notes, and bonds.
[3] Foreign, domestic bank, and domestic nonbank financing is only available on an annual basis.
[4] The general government consists of the central government (budgetary funds, extra budgetary funds, and social security funds) state and local governments.
[5] Including currency and maturity composition.
[6] Daily (D), Weekly (W), Monthly (M), Quarterly (Q), Annually (A).