

**EXECUTIVE
BOARD
MEETING**

SM/22/53

March 9, 2022

To: Members of the Executive Board

From: The Secretary

Subject: **Malaysia—Staff Report for the 2022 Article IV Consultation**

Board Action:	Executive Directors' consideration (Formal)
Tentative Board Date:	Friday, April 1, 2022
Publication:	Not yet decided*
Questions:	Mr. Leigh, APD (ext. 36518)
Document Transmittal in the Absence of an Objection and in accordance with Board policy:	After Board Consideration—ASEAN+3 Macroeconomic Research Office, Asian Development Bank, Asian Infrastructure Investment Bank, Food and Agriculture Organization, Islamic Development Bank, United Nations Development Programme, World Trade Organization

***At the time of circulation of this paper to the Board, the authorities have indicated that they need more time to consider whether they will consent to the Fund's publication of this paper. Publication will only proceed upon the receipt by the Fund of the member's explicit consent.**



MALAYSIA

STAFF REPORT FOR THE 2022 ARTICLE IV CONSULTATION

March 7, 2022

KEY ISSUES

Context. Malaysia's economy is showing signs of a gradual yet steady recovery thanks to the authorities' impressive vaccine rollout, swift and coordinated implementation of multi-pronged support measures. The recovery nevertheless remains uneven and the output gap sizeable, with significant downside risks. Going forward, the authorities should calibrate macroeconomic policies to the pace of the recovery, while preserving policy space given pandemic-related uncertainties, and simultaneously accelerate structural reforms.

Main Economic Policy Recommendations:

- Additional targeted fiscal support is warranted in the near term, given the remaining output gap. Fiscal policy support should continue to be nimble, with focus on buttressing the recovery, preventing further scarring, and protecting the most vulnerable.
- To rebuild buffers, fiscal consolidation should resume once the recovery is entrenched, and be primarily revenue-based. The authorities' commitment to medium-term consolidation backed by a medium-term revenue strategy and a fiscal responsibility act is welcome.
- The accommodative monetary policy stance is appropriate. Monetary policy should remain data dependent. In case of adverse shocks, the exchange rate should remain the main shock absorber; and there is space to ease monetary policy if needed.
- The financial sector is sound, although the household debt overhang should be addressed. The financial sector support measures have appropriately become more targeted and are progressively being unwound alongside the recovery. Continued strengthening of personal bankruptcy liquidation and bankruptcy repayment plans would support orderly deleveraging.
- Structural reform policies are needed to foster inclusive growth, address climate risks, and facilitate external rebalancing. Robust governance and anti-corruption reforms would strengthen the management of public finances and the delivery of public services.

Approved By
**Odd Per Brekk and
 Maria Gonzalez**

Mission dates: January 24–February 9, 2022. The mission met with the Governor and Deputy Governors of the Bank Negara Malaysia, the Under Secretary and Chief Economist 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, Nour Tawk (all APD), Natalia Novikova (Resident Representative) and Tian Yong Woon (Economist in Singapore Office); Rosemary Lim and Tengku Muhammad Azlan Ariff (Executive Directors Office) joined the meetings. Odd Per Brekk (APD) joined the concluding meetings. Kaustubh Chahande and Justin Flinner (both APD) assisted in the preparation of this report. Data used in this report for staff analyses are as of January 24, 2022, unless otherwise noted.

CONTENTS

CONTEXT: MALAYSIA NAVIGATING A MULTI-SPEED GLOBAL RECOVERY	4
RECENT DEVELOPMENTS: A STEADY BUT UNBALANCED RECOVERY	5
OUTLOOK: SOLID GROWTH WITH LINGERING PANDEMIC SCARS AND DOWNSIDE RISKS	7
POLICY DISCUSSIONS: CALIBRATING MACRO POLICIES TO THE PACE OF THE RECOVERY WHILE ACCELERATING REFORMS	9
A. Fiscal Policy: Sustaining Recovery, Minimizing Scarring, Rebuilding Buffers, and Enhancing External Rebalancing	9
B. Monetary and Exchange Rates Policies: Transitioning to Policy Normalization	12
C. Financial Sector Policies: Safeguarding Stability	14
D. Structural Policies: The Post-Pandemic Transition—Promoting Inclusive Growth and Job Creation	15
E. Integrating Surveillance Advice and Capacity Development Support	17
STAFF APPRAISAL	17
FIGURES	
1. Growth and Exports	19
2. Inflation and Domestic Resource Constraints	20
3. Monetary Developments	21
4. Capital Flows	22
5. Fiscal Policy Developments	23
6. Public Sector Fiscal Stance and Prospects	24
7. Banking Sector Developments	25

8. Financial Soundness Indicators	26
9. Household Debt	27
10. Residential Property Market	28

TABLES

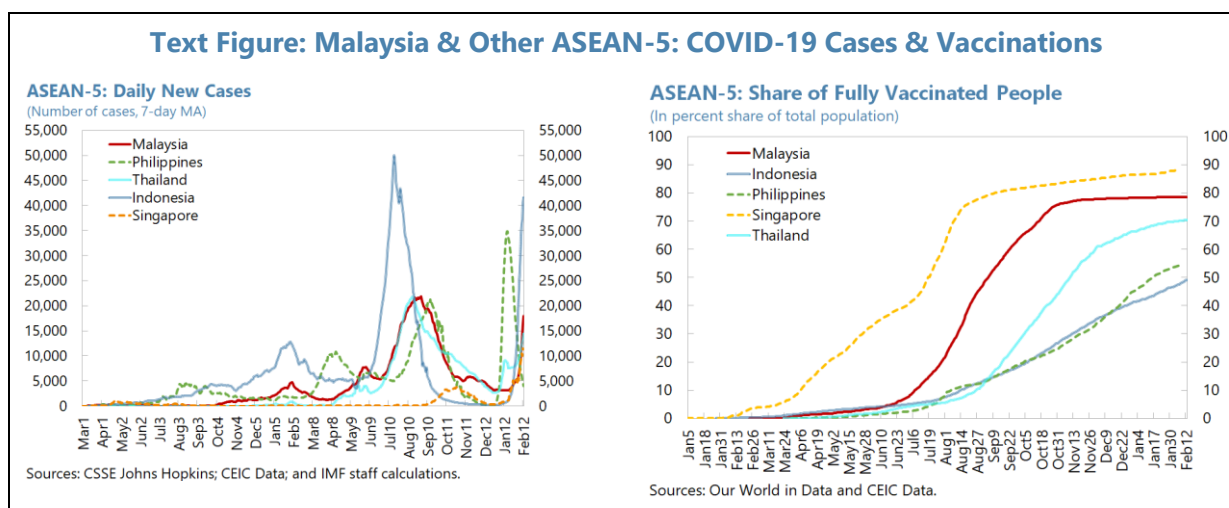
1. Selected Economic and Financial Indicators, 2017-27	29
2. Indicators of External Vulnerability, 2017-21	30
3. Balance of Payments, 2017-27	31
4. Medium-Term Macroeconomic Framework, 2017-27	32
5. Summary of Federal Government Operations and Stock Positions, 2017-27	33
6. Depository Corporations, 2017-21	34
7. Banks' Financial Soundness Indicators, 2017-2021Q3	35

APPENDICES

I. The Financial Sector Blueprint: 2022-2026	36
II. Public Debt Sustainability Analysis	37
III. External Sector Assessment	45
IV. Trade Liberalization and GVCs as Engines of Growth in Malaysia	47
V. Economic Scarring and Distributional Consequences of the Covid-19 Pandemic in Malaysia	55
VI. Risk Assessment Matrix	76
VII. Optimal Fiscal Policy in Malaysia	78
VIII. Fighting Climate Change in Malaysia	87
IX. Capital Flows Volatility and Spillovers in Malaysia	103
X. External Debt Sustainability Analysis	113
XI. Draft Press Release	118

CONTEXT: MALAYSIA NAVIGATING A MULTI-SPEED GLOBAL RECOVERY

- 1. Pre-pandemic, Malaysia's highly open and diversified economy delivered sustained growth, on the back of strong policy frameworks.** GDP growth averaged around 5 percent in 2015–2019, boosting per capita income, while inflation was kept low. Despite significantly narrowing in the wake of the Global Financial Crisis (GFC), persistent current account surpluses prevailed reflecting a surplus of private saving over investments. The long-standing tradition of fiscal prudence kept debt levels fairly contained. Malaysia is not an inflation targeter, as Bank Negara Malaysia (BNM) has a broad mandate with multiple objectives and an equally broad policy toolkit.¹ Continued development of domestic financial and foreign exchange markets and favorable debt profiles have helped to mitigate the impact of external shocks on the economy.
- 2. With the population now largely vaccinated, the authorities have progressed in their judicious reopening of the economy and strive to avoid a repeat of the strict lockdown policies that halted the recovery in 2021.** Caseloads in 2021 reached levels unseen in 2020. The reimposition of nationwide containment measures that accompanied the worsening pandemic stalled the nascent recovery in 2021, notwithstanding several additional fiscal stimulus packages. Now in the face of the Omicron variant, no further nationwide lockdowns are envisaged, supported by large vaccination rates and the ongoing vaccine booster program.²



- 3. The 12th Malaysia Plan (12MP) for 2021-25 aims for high-income status and a carbon-neutral economy.** The plan provides a five-year road map, aiming to boost labor productivity and transport infrastructure, accelerate innovation and enhance the digital and green economies, while narrowing development disparities across regions and strengthening fiscal governance. The 12MP strategy aims to increase investment in human capital and the contribution of MSMEs to the

¹ See Appendix VI of IMF Country Report 20/57 for a description of the BNM's monetary policy framework.

² About 44¾ percent of the population have received a booster shot by February 28, 2022.

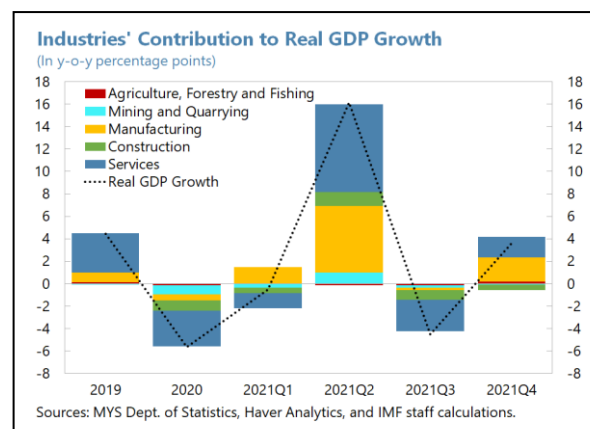
economy.³ It comes at an opportune time when Malaysia is yet to secure a solid and broad-based recovery; and at-risk fiscal space argues for nimble implementation to preserve policy space.

Text Table. The Twelfth Malaysia Plan (12MP) 2021-2025

Prosperous, Inclusive, and Sustainable Malaysia			
Theme 1	Theme 2		Theme 3
Resetting the Economy	Strengthening Security, Well-Being, and Inclusivity		Advancing Sustainability
Fourteen Game Changers			
<i>Broad Areas</i>		<i>Sector Focus</i>	
Imperative for reform & transformation	Transforming public service through whole-of-government approach	Catalyzing strategic & high impact industries	Transforming MSMEs
Transforming the approach in eradicating hardcore poverty	Multiplying growth of less developed states Sabah & Sarawak	Improving TVET ecosystem to nurture future talent	Revitalizing healthcare system
Aligning R&D towards commercialization	Enhancing national security & unity	Embracing the circular economy	Accelerating adoption of Integrated Water Resources Management
		Enhancing digital connectivity	Transforming logistics ecosystem

RECENT DEVELOPMENTS: A STEADY BUT UNBALANCED RECOVERY

4. The recovery has been strengthening but has remained uneven. The severe Delta outbreak in the middle of 2021 prompted strict nationwide containment measures, which limited real GDP growth to about 3 percent, while inflation was contained at 2½ percent (Table 1). The export-oriented manufacturing sector, which remained operative during shutdowns, underpinned this growth, while weaknesses in the agricultural sector reflected prolonged labor shortages due to lower flows of migrant workers. Contact-intensive sectors, including tourism, have been hard-hit.



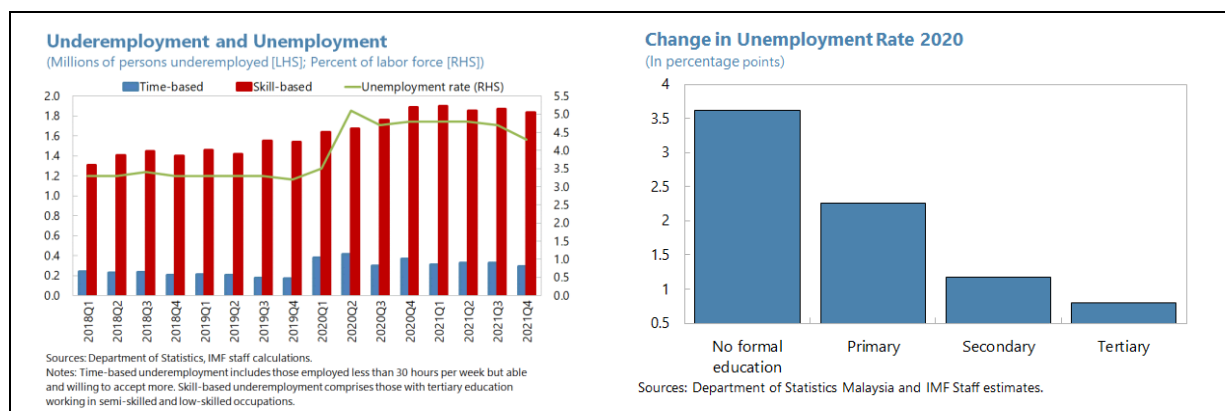
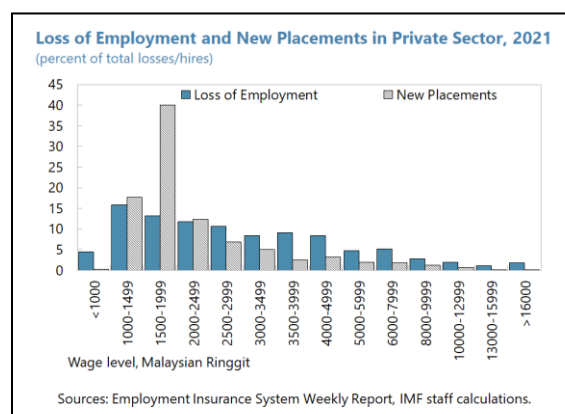
5. The economy was helped by the swift, significant, and multi-pronged pandemic policy response in 2021. Total COVID-related fiscal spending amounted to RM39 billion (2½ percent of GDP) in 2021, more than double the initially budgeted RM17 billion, and above the RM38 billion spent in 2020. As a result, the federal government deficit is estimated at about 6½ percent of GDP in 2021, higher than the 5½ percent deficit foreseen in the 2021 Budget. Federal government debt is estimated at 63 percent of GDP, remaining below the effective debt ceiling implied by the twice-

³ See Appendix I.

raised domestic debt ceiling from 55 to 65 percent of GDP.⁴ Staff's baseline projections reflect a gradual decline in the fiscal deficit over the medium term, broadly in line with the authorities' targets up until 2024, but deviates from authorities' path from 2025 as the 3.5 percent deficit target is not yet underpinned by identified measures. BNM maintained an accommodative monetary policy stance, with its overnight policy rate unchanged at a record low of 1¾ percent through early 2022. Additional lending facilities, including for SMEs, were established and a six-month loan moratorium was extended to individuals, micro enterprises and SMEs that were adversely affected by the pandemic in July 2021.

6. Reflecting the uneven recovery, labor market outcomes showed significant variation across sectors and skill levels.

The unemployment rate declined to about 4½ percent in 2021Q4 (2021: 4¾ percent) but is still high for women (5 percent) and youth (about 11¾ percent). Under-employment (skill-based and time-based) has increased while unemployment has disproportionately increased for those with less education. The pandemic has also displaced higher-skilled workers, as only 40 percent of them are re-employed and often in placements below their skill levels. Meanwhile, over 57 percent of new placements were in jobs earning lower wages.⁵



7. The banking system remained sound amidst uncertainty around asset quality and profitability (Table 7). At end-November 2021, the banking sector total capital ratio stood at 18 percent and the Liquidity Coverage Ratio at 145 percent (above the 100 percent minimum requirement). Non-performing loans (NPLs) remained low at 1½ percent of total loans, but the share of SME loans under repayment assistance reached about 36¾ percent, warranting close monitoring. Both BNM's top-down and individual bank stress tests as of 2021 affirmed the resilience of the

⁴ Appendix II provides detailed information on the debt ceiling.

⁵ Source: Malaysia's Employment Insurance System (November 2021).

banking system to withstand adverse economic and financial shocks, while highlighting that credit risk remains high especially in the business sector.⁶

8. The capital account was broadly stable in 2021 and foreign exchange interventions (FXI) two-sided in line with swings in capital flows.⁷ Net portfolio flows reached around \$7½ billion by December 2021, primarily driven by sustained net debt inflows (\$8¼ billion). Non-resident holdings of government securities increased by 6¾ percent compared to end-2020 as FTSE Russell kept Malaysia in its World Government Bond Index and removed the country from its fixed-income watch list. Gross FX reserves increased by US\$9¼ billion in 2021, helped by the US\$5 billion SDR allocation (about 1¼ percent of GDP). Reserves remain adequate at 126 percent of the ARA metric.

9. Malaysia's external position in 2021 is preliminarily assessed to have been moderately stronger than warranted by medium-term fundamentals and desirable policies (Appendix III). While the current account surplus is viewed as a sign of strength by investors, it represents a gap of 1.1 percent that reflects deviations from fundamentals and desirable policy levels, in part driven by relatively lower spending on social safety nets in Malaysia. Policies that aimed to strengthen social safety nets, encourage investment, and boost productivity, would help facilitate external rebalancing. External debt declined in 2021 compared to 2020 but remains above pre-pandemic levels with one-third of debt denominated in local currency, and about half of short-term external debt in the form of intragroup borrowings among banks and corporations, which have been generally stable during the pandemic (Appendix X).

10. Economic policies have been broadly in line with past Fund advice. Consistent with IMF recommendations, the authorities are anchoring fiscal policy on their medium-term consolidation objective. The current monetary policy stance is in accordance with staff advice to carefully calibrate monetary policy in response to economic conditions, and 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 as regards social safety nets, which call for capacity development (CD) support.

OUTLOOK: SOLID GROWTH WITH LINGERING PANDEMIC SCARS AND DOWNSIDE RISKS

11. Economic growth is projected to be solid in the medium term, although risks of long-term economic scarring are real. Growth in 2022 is projected at 5¾ percent driven by pent-up domestic demand, given the high vaccination rate and expected low movement restrictions, and

⁶ Banks have notably increased provisions by about 60 percent compared to pre-pandemic levels. Total provisions for potential credit losses stood at around 2 percent of total banking system loans in November 2021.

⁷ Staff relies on FXI proxy data from the database of Adler et al. (2021) and changes in reserves, which are imperfect proxies for the direction of FXI, in making this assessment.

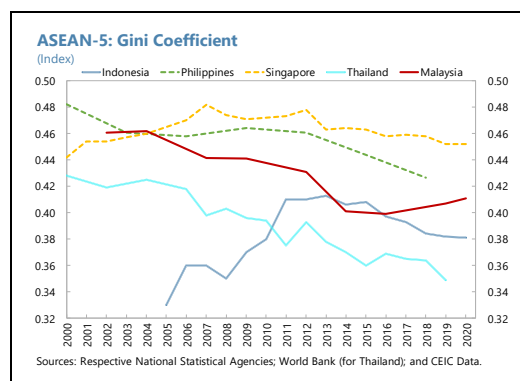
continued strong external demand. However, the pandemic could lead to permanent GDP losses (Appendix V) with a persistent negative impact on trade and Global Value Chain (GVC) patterns (Appendix IV). Given scarring effects, the output gap is expected to narrow to $-3\frac{1}{2}$ percent and $-2\frac{1}{4}$ percent in 2022 and 2023 respectively. Inflation is projected to stabilize at $2\frac{1}{2}$ percent despite transitory supply-chain challenges. The current account (CA) surplus is expected to decline gradually over the medium term, as consumption and capital-related imports recover, despite a gradual pick up in foreign tourism flows as the economy reopens (Table 3).

12. Downside risks dominate the outlook (GRAM—Appendix VI).

- Downside:** The main near-term downside risk threatening the recovery is a re-intensification of the pandemic with mutated vaccine-resistant variants, leading to a more protracted pandemic, reducing mobility as economic agents voluntarily socially distance, and potentially leading to renewed global travel restrictions. Fiscal risks from contingent liabilities could materialize and could necessitate additional measures to ensure medium-term fiscal sustainability. Long-standing political and related policy uncertainty could have implications for reform momentum, with potential implications for public investment as well as fiscal and debt vulnerabilities. Other risks include a sharper slowdown in China, Malaysia's largest trading partner, and a disorderly monetary policy normalization in AEs. The ongoing conflict in Ukraine poses additional risks through volatile and higher food and fuel prices and the attendant impact on growth of Malaysia's major trading partners most notably Europe.
- Upside:** Higher-than-expected pent-up demand domestically is the main upside risk to the outlook.

13. Distributional risks of the pandemic loom large.

The pandemic may exacerbate income inequality and represents considerable risks to SMEs, workers in contact-intensive sectors, low-skilled workers, and those in the informal sector. Pandemic-related loss of schooling in low-income and vulnerable households, estimated by the World Bank at 1.3 years, could also lead to a permanent loss in human capital. These impacts have the potential to linger over the medium to long term (Appendix V).



Authorities' Views

14. The authorities broadly agreed with staff's assessment of the outlook and risks. They view growth at $5\frac{1}{2}$ – $6\frac{1}{2}$ percent in 2022, with inflation normalizing towards its long-term average. Under the expectation of no further lockdowns, growth would be driven by improvement in overall income and employment conditions, some pent-up private consumption, continued strong external demand, as well as continuous progress in infrastructure spending. They expect a significant narrowing of the output gap in 2022 driven by an expected strong recovery in output as the economy fully reopens and activity normalizes.

15. The authorities expressed reservations regarding the external balance assessment. The authorities questioned the ability of the EBA's adjusters to fully capture Malaysia specific factors, including transitory effects of the COVID-19 pandemic. They are pursuing reforms to strengthen social safety nets and to encourage private investment and productivity growth, which should help external rebalancing. With regard to external debt sustainability, they noted that, while external debt is high, it remains manageable given mitigating factors: (i) the sustained current account surplus signals strength in Malaysia's repayment capacity and reduces external financing needs, (ii) banks and corporations' intragroup borrowings (around half of short-term debt) are generally stable and on concessional terms, and (iii) sizable net foreign currency-denominated external asset position held by domestic entities.

POLICY DISCUSSIONS: CALIBRATING MACRO POLICIES TO THE PACE OF THE RECOVERY WHILE ACCELERATING REFORMS

Macroeconomic policies should be calibrated to address the sizeable economic slack, high uncertainty, and medium-term scarring, while preserving policy space given pandemic-related risks and development spending needs. Structural reforms, including governance and anti-corruption reforms, should aim at boosting medium-term growth, reducing inequality and enhancing external rebalancing. Temporary additional fiscal support, combined with a further easing of the monetary policy stance, could be considered if downside risks materialize.

A. Fiscal Policy: Sustaining Recovery, Minimizing Scarring, Rebuilding Buffers, and Enhancing External Rebalancing

16. Additional, targeted fiscal support is warranted in 2022-2023. The 2022 Budget allocated RM23 billion (1.4 percent of GDP) out of the COVID Fund for COVID-related spending, with an increasing share spent on upskilling programs, social assistance support to vulnerable groups, and SME financing. Considering the still-sizeable projected economic slack, medium-term pandemic scarring effects, generally favorable debt dynamics, and staff's assessment that debt is sustainable (Appendix II), staff advice is to provide modest additional fiscal support by about 2 percentage points cumulatively in 2022 and 2023 above the 2022 budget plans, moving the fiscal impulse in 2022 from negative to moderately positive territory, and delaying the start of consolidation by one year to 2023.⁸ The additional stimulus would close the output gap faster than in the baseline, thus helping limit the pandemic's scarring effects. Targeted additional spending should center on protecting the vulnerable (notably low-income highly-indebted households), supporting viable SMEs in hard-hit sectors, and minimizing the impact of scarring on inequality, and increasing productive capacity—through public investments in green and climate-resilient projects, improved training and

⁸ Staff analysis is based on a stochastic model calibrated for Malaysia, which explores tradeoffs between macroeconomic stabilization and debt sustainability (Appendix VII).

education, strengthened health policies, and digital transformation. However, the higher public debt with pre-COVID-19 fiscal vulnerabilities, warrants a cautious approach towards continued fiscal support, as a protracted pandemic could entail future spending pressures. In that respect, federal government debt remains below the effective debt limit (of 67 percent of GDP) implied by the twice-raised 65 percent of GDP limit on domestic debt under both baseline and staff recommended fiscal paths. Furthermore, staff recommendation involves a larger consolidation (by about 3 percentage points) in the medium term compared to the passive baseline, that would put debt on a firm downward trend and help rebuild fiscal buffers necessary to respond to future shocks.

17. Over the medium term, fiscal consolidation should be growth-friendly and backed by robust governance and anti-corruption measures to support sound public financial management. Fiscal adjustment should start once the output gap is sufficiently closed and be primarily revenue-based to help rebuild the buffers and enable the adoption of measures that are important for external rebalancing. To maximize the return to public investment, the authorities should continue to implement past Fund advice on fiscal governance reforms contained in the 2018-2019 Article IV consultations reports, with a focus on reducing vulnerabilities to corruption. While the increases in the debt ceiling were appropriate in view of COVID-related as well as broader development spending needs under the 12MP, staff recommend embedding changes to the debt ceiling and clearly defined ex ante escape clauses within the Fiscal Responsibility Act (FRA). The escape clauses would specify what constitutes large shocks, allow temporary breaches of the debt ceiling if those materialize, while at the same time setting a clear framework to bring debt back under the limit and help preserve Malaysia's fiscal credibility. In that respect, the authorities' aim to bring debt below 60 percent of GDP in the medium to long term is appropriate. Staff welcome the planned reforms to the approach of government guarantees, a long-standing fiscal risk in Malaysia, under its medium-term debt management strategy.

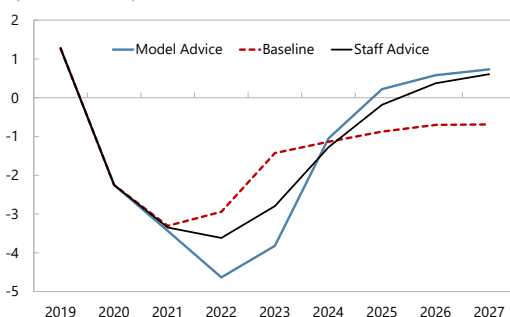
18. Embarking on the medium-term revenue strategy (MTRS) is an urgent priority. Malaysia's tax revenues have been on a declining trend and are low compared to peers, and the pandemic highlighted the need for revenue mobilization. The 2022 Budget appropriately called for bold and effective reforms to the tax system through the adoption of a MTRS, to ensure sufficient funding for expenditure needs under the 12MP. A welcome and long-awaited review of the tax incentive system is underway under the MTRS umbrella. However, meeting the 3½ percent of GDP targeted deficit will require measures beyond improving tax compliance. First, policy reforms that increase the efficiency and equity of the tax system without imposing a higher average tax burden should be front-loaded to support the recommended expansionary fiscal stance. Second, once the recovery is entrenched, tax policy options include reinstatement of the goods and services tax (GST).⁹ Also, carbon taxation should be considered in the context of a comprehensive climate mitigation strategy that could generate 1 to 3 percent of GDP in fiscal revenues by 2030 (Appendix VIII); staff welcome the authorities' ongoing studies on the feasibility of implementing a carbon tax. 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.

⁹ Staff estimates suggest that the 2018 GST removal created a revenue loss of 1¼ percent of GDP.

Text Figure. Baseline-, Model-, and Staff Recommended- Fiscal Paths and Key Indicators of Fiscal Space

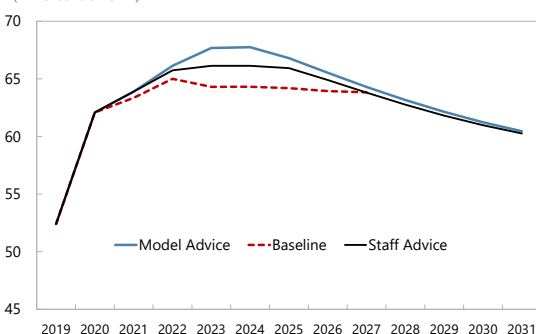
Structural Primary Balance

(in Percent of GDP)



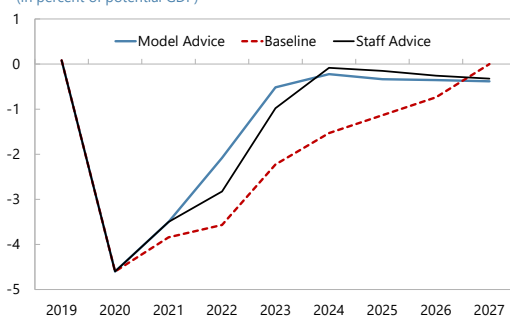
Federal Government Debt

(in Percent of GDP)



Output Gap

(in percent of potential GDP)



Fiscal Space Assessment: Relevant Indicators for Malaysia



Favorable debt dynamics: high share of debt:

Held domestically
Issued in local currency
At longer maturities

Negative interest rate growth differentials

Low public gross financing needs

Reasonable market access costs

Lack of demographic pressures

Track record of fiscal prudence



High contingent liabilities

Large external financing requirements

Increase in debt post-pandemic

Sources: IMF staff calculations; Appendix VII.

Text Table. Malaysia: Fiscal Path: Baseline vs. Staff Recommendation

	2021	2022	2023	2024	2025	2026	2027
Structural Primary Deficit to Potential GDP							
Baseline	-3.3	-2.9	-1.4	-1.1	-0.9	-0.7	-0.7
Staff recommended	-3.3	-3.6	-2.8	-1.3	-0.2	0.4	0.6
Fiscal Impulse							
Baseline	1.0	-0.4	-1.5	-0.3	-0.3	-0.2	0.0
Staff recommended	1.0	0.3	-0.8	-1.5	-1.1	-0.6	-0.2
Overall Deficit to GDP							
Baseline	-6.4	-6.1	-4.6	-4.4	-4.3	-4.2	-4.2
Staff recommended	-6.4	-7.0	-5.9	-4.4	-3.4	-3.0	-2.9
Federal Government Debt to GDP							
Baseline	63.4	65.0	64.3	64.3	64.2	63.9	63.8
Staff recommended	63.4	65.7	66.1	66.1	65.9	64.9	63.8
Output Gap							
Baseline	-3.8	-3.6	-2.2	-1.5	-1.1	-0.7	0.0
Staff recommended	-3.5	-2.8	-1.0	-0.1	-0.2	-0.3	-0.3

Sources: IMF staff calculations; Appendix VI.

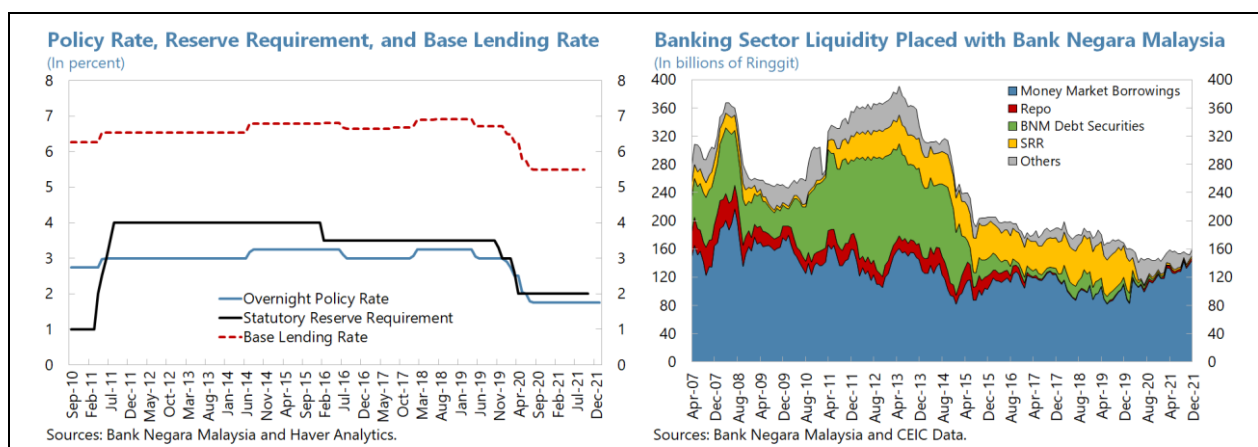
Authorities' Views

19. The authorities noted that their policy response thus far has averted a deeper downturn and that the time is right to resume fiscal consolidation which was interrupted by the pandemic. While they highlighted that the new debt ceiling provides the space for larger fiscal support to speed up the economic recovery, the improvement in the economy's cyclical position in 2022 in their view suggests the need to start a cautious fiscal adjustment path to ensure sustainability. Given the effect of the pandemic and the country's large development needs, the debt ceiling of 65 percent of GDP on domestic debt is envisaged to remain until 2025, with a goal of reducing debt below 60 percent by then.

20. The authorities highlighted the significant progress towards finalizing pending fiscal reforms. They will advance on the MTRS where they will consider new sources of revenues such as reintroduction of the GST, carbon tax, and capital gains tax once the recovery is entrenched. They are optimizing expenditures to enhance spending efficiency through public expenditure review, targeting subsidies, and through pension and civil service reforms. They reiterated their commitment to finalizing and introducing the FRA this year, which aims at further enhancing governance, accountability, and transparency in fiscal management.

B. Monetary and Exchange Rates Policies: Transitioning to Policy Normalization

21. The current accommodative monetary policy stance is appropriate. The real over-night policy rate (OPR) adjusted for one-year ahead inflation expectations implies that short term real interest rates remain close to zero. At the aggregate level, there are no signs of liquidity strains, and domestic financial conditions remain accommodative consistent with the financial condition index (Figure 3). The outlook for core inflation remains benign, and headline inflation is projected to remain broadly unchanged in 2022. The significant output gap and the slack in the labor market limit the risk of second round effects, and inflation expectations are well anchored. Monetary policy should remain data dependent—a tightening would be appropriate if there is strong evidence of de-anchoring of inflation expectations and, conversely, the BNM has room to further ease monetary policy, in combination with the supportive fiscal policy, if downside risks materialize.



22. Against the backdrop of monetary policy normalization in AEs, monetary policy should remain agile. Malaysia is well prepared to face a gradual increase in global interest rates under the baseline (Appendix IX). However, a sharp tightening of global financial conditions and risk-off investor behavior could lead to surges in capital outflows. Under disorderly market conditions (DMC), exchange rate flexibility combined with liquidity support, including in foreign currency, and monetary policy accommodation striking a balance between supporting growth and managing capital outflows, should be the first line of defense. However, in imminent crisis circumstances, temporary outflow capital flow management measures (CFMs) as part of a broader policy package could be considered in line with the Fund's institutional view (IV).

23. The exchange rate should continue to serve as a shock absorber, with foreign exchange intervention (FXI) limited to DMC. Further reserve accumulation is not called for, given the adequate reserve coverage and the undervaluation of the Ringgit. Malaysia's relatively liquid FX market, with no strong evidence of FX mismatches that pose systemic risk to the broader financial system, and a mature and multi-pronged monetary policy framework, limit the argument for FXI outside DMC. Accordingly, while employing FXI, the BNM should consider its interactions with other policies, against the backdrop of the moderately stronger external position. The BNM's steps to liberalize foreign exchange policy and to deepen the FX market are welcome.¹⁰ These include the implementation of electronic trading platforms for access and price discovery, the improvement of market trade transparency via daily publication of interbank FX and money market data, and the liberalization of CFMs.¹¹ In this context, existing CFMs should be gradually phased out with due regard to market conditions. 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. The progress made on the operationalization of the BNM's multi-tool monetary policy model, leveraging the joint work with the Fund on the integrated policy framework (IPF) modelling, is welcome.

Authorities' Views

24. The authorities agreed with staff's assessment, albeit with some reservations. They view the monetary policy stance as accommodative with inflation expectations well-anchored and policy settings well-calibrated to the phase of the recovery and price dynamics. Transition to policy normalization would be guided by a sustained narrowing, but not necessarily closing, of the output gap, sustained growth in private consumption, an improved labor market, and stronger investment

¹⁰ See IMF Country Report 20/57 for a discussion of the measures assessed as CFMs.

¹¹ Under the Fund's taxonomy, this would be considered as a CFM easing. As of April 15, 2021 the authorities have removed the export conversion rule (i) allowing residents to now manage the conversion of export proceeds according to their foreign currency cash flow needs while previously exports proceeds below RM200000 were exempted, (ii) allowing now resident exporters to settle domestic trade in foreign currency with other resident entities provided that they are in the global supply chain, (iii) providing resident exporters with the possibility for repatriation of export proceeds up to 24 months (iv) the possibility for resident exporters to net off export proceeds against permitted foreign currency obligations for some specific reasons. As of January 27, 2022 residents with domestic Ringgit borrowing are now allowed to invest up to RM1 million equivalent in aggregate per calendar year on individual basis or up RM50 million equivalent per calendar year in aggregate on a corporate group basis.

without overreliance on policy support. Regarding monetary policy normalization in AEs, they view the exchange rate as the first line of defense playing the role of a shock absorber, and reiterated their commitment to exchange rate flexibility. However, they also highlighted mitigating factors including the limited external exposure given low reliance on foreign funding, and the general preparedness of the markets based on previous experiences. The authorities disagreed on the recommendation to phase out the remaining FX market development measures that the Fund classifies as CFMs. They view these measures as necessary for financial stability and as prudential in nature, building the resilience of domestic markets consistent with the mandate of the BNM. The BNM continues to have reservations about the benefits of regular publication of FXI data given the trade-offs, including the likely impact on market speculation.

C. Financial Sector Policies: Safeguarding Stability

25. Addressing the household debt overhang is a priority. Total household debt fell below 90 percent of GDP in June 2021 as borrowers resumed payments after exiting from the loan moratoria. High household financial assets at around 194½ percent of GDP help mitigate the vulnerability from high household debt. Risks appear confined in a narrow segment of low-income borrowers with an exposure estimated to account for only about 1¼ percent of the banking system loans.¹² However, the pandemic has taken a toll on household incomes, with growth in household financial assets moderating to around 5½ percent in June 2021 from about 7¼ percent in December 2020 owing to withdrawal from retirement savings to smooth consumption. Staff welcome the development of strong preventive and ex-post measures (such as advice to debtors on smart deleveraging techniques and informal debt restructuring), personal debt enforcement tools and the work undertaken on their personal bankruptcy framework. To consolidate on this progress, further improvements are needed in the areas of ex-post measures including, personal bankruptcy liquidation and bankruptcy repayment plans to support orderly deleveraging (Garrido et al, 2020).¹³

26. Continued targeted support to the corporate sector would help limit scarring and shore up viable firms through the recovery. Non-financial corporates (NFCs) debt stood at 110 percent of GDP at the end of 2020. The share of firms-at-risk—the proportion of NFCs with an interest coverage ratio below 2—moderated to 28½ percent in the middle of 2021 but remains above pre-pandemic levels. Targeted policies should continue to support viable firms, with the main principles being to limit moral hazard, articulate clear eligibility requirements and exit strategies, and facilitate an efficient allocation of resources in the economy. Measures will need to be continuously geared toward and account for the characteristics of SMEs, which make up the majority of Malaysian firms and employment and have been disproportionately affected by the pandemic shock. Meanwhile, the BNM should continue to enforce robust monitoring, including timely information gathering to assess credit risk, particularly in SMEs, and full provisioning of expected losses.

¹² BNM Financial Stability Review—First Half 2021.

¹³ <https://www.elibrary.imf.org/view/journals/001/2020/172/001.2020.issue-172-en.xml>.

27. The unwinding of the pandemic-related support should continue as the recovery becomes entrenched. Regulatory and supervisory policies will play a critical role in preserving financial stability and credit discipline and ensuring that the flow of credit to the real economy is sustained during the unwinding period. Staff welcomed the authorities judicious unwinding of forbearance measures and their targeted approach to financial support measures to vulnerable and hard-hit sectors, which could include further refinement of the eligibility criteria, as needed.¹⁴ The BNM should fully enforce prudential and regulatory frameworks as relief measures are gradually lifted, allowing flexibility in timing by requiring banks to implement medium-term plans to restore capital or liquidity shortfalls. The BNM's Financial Sector Blueprint (2022-2026) strategy on fostering financial inclusion, economic transformation, and a sustainable economy, is welcome (Appendix I).

28. The authorities should continue to enhance the effectiveness of the AML/CFT framework. Staff welcome recent legislative initiatives and improvements made in compliance with requirements related to politically-exposed-persons (PEPs) by banks and urge further action on the full implementation of the beneficiary ownership (BO) guideline. The authorities should focus on high risks areas identified in the National Risk Assessment including BO and domestic PEPs and continue to monitor the implementation of requirements consistently with the Financial Action Task Force (FATF) standards.

Authorities' Views

29. The authorities broadly agreed with staff's assessment. They noted that while household debt remains high, the net financial assets position of households remains comfortable. The authorities noted that banks' asset quality in the household segment is sound and provisions remain adequate. They also affirmed that the financial sector has enough buffers to absorb sizable shocks and remains resilient although credit risks remain high. They noted that as financial sector support measures have become more targeted and are progressively unwound alongside the economic recovery, close attention will be provided to financial stability risks. They also noted sustainable finance as a key overarching theme of 12MP, the Financial Sector Blueprint and the Capital Market Masterplan. The BNM has also published a series of guides for financial institutions which will facilitate the planned mandatory disclosure of climate-related risks by financial institutions from 2024, and the inclusion of such risks in financial sector stress tests.

D. Structural Policies: The Post-Pandemic Transition—Promoting Inclusive Growth and Job Creation

30. Coordinated policies are needed to address structural challenges, limit economic scarring from the pandemic, boost productivity, and address inequality. Malaysia's 12MP priorities are well targeted towards these challenges. These include boosting the digital economy, reforming the labor markets, elevating the level of education, encouraging broad-based productivity drivers, accelerating governance and anti-corruption reforms, and adopting climate policies that

¹⁴ In this regard, the authorities have introduced the URUS program to support vulnerable individual borrowers hard-hit by the pandemic in the bottom 50 percent group.

increase Malaysia's adaptive capacity and ambitiously bolster its role in global mitigation efforts (Appendix VIII). 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 external rebalancing and an inclusive recovery, including temporarily expanding coverage of existing social safety net programs to include more vulnerable households and expanding program coverage in affected remote areas targeting children from low-income households who have experienced loss in schooling during the pandemic. The authorities should accelerate the implementation of the strategies outlined in the National Anti-Corruption Plan (NACP), including the legislative initiatives on freedom of information, increased procurement transparency, and strengthening independence and capacity of prosecution office and judiciary to handle corruption cases more effectively.

31. Reenergizing trade liberalization and reform would help boost growth and productivity in Malaysia. Trade, especially GVC trade, stalled leading up to the pandemic, in part due to still-high trade restrictions in the region, which have changed little since the 1990s. Trade liberalization through regional initiatives such as the Regional Comprehensive Economic Partnership (RCEP)¹⁵ and the ratification of the Comprehensive and Progressive Agreement for the Trans-pacific Partnership (CPTPP) as well as loosening of non-tariff barriers, easing of trade & technology tensions and the facilitation of digital trade, could support medium-term growth (Appendix IV).

32. The tourism sector needs a holistic and multi-pronged strategy for adapting to the post-pandemic period.¹⁶ The sector's value added averaged a high of 15 percent of GDP pre-pandemic and 11 percent in 2020. The pandemic is expected to leave scars in the tourism sector — a strategic and high impact sector in the vision of 12MP—following two years of travel restrictions and intermittent lockdowns. For the medium term, a shift towards a more sustainable and higher value-added tourism model could be explored. A move to lower-density tourism services with higher unit revenue might help reduce the potential health risks from mass travel and foster a greener recovery.

Authorities' Views

33. The authorities noted progress on 12MP priorities, including on carbon-neutrality, and governance reforms under the NACP. They have pledged to achieve net zero emissions by 2050 and are proceeding steadily with their ambitious mitigation and adaptation plans. There is strong institutional coordination on climate change and plans to integrate climate risk within macroeconomic and financial stability assessments. Studies are ongoing on carbon pricing including how to address its implications for low-income households, workers, and firms. The draft bill for the establishment of the Ombudsman office is expected to be tabled in Parliament this year. On procurement, they are introducing integrity and governance elements to the current legislative framework. Several Members of Administration and Parliament have already submitted asset declarations, but the laws governing such declarations have not been finalized yet. They agreed that

¹⁵ The RCEP was ratified in January 2022.

¹⁶ Staff analysis of the impacts from COVID-19 on tourism in the Asia-Pacific and Caribbean economies, with policies and reforms to mitigate the impact on output and jobs, can be found [here](#).

reductions in non-tariff restrictions could be beneficial, namely for trade in services. They highlighted that their National Tourism Policy for 2020-2030 aims to embrace smart tourism as part of the tourism recovery plan which encourages digital promotion and seamless/touchless travel journeys. They agreed on the need for reforms to expand the coverage of the social protection system, address its fragmentation, and raise benefits to adequate levels.

E. Integrating Surveillance Advice and Capacity Development Support

34. Fund capacity development (CD) work aims to be supportive of surveillance advice and the authorities' policy agenda. Progress being made on finalizing the FRA and developing the MTRS is welcome and the authorities could consider engaging the Fund for any remaining capacity development needs on both fronts, as needed. The pandemic has highlighted the need to strengthen the targeting of welfare programs, especially given its likely impact on inequality. Ongoing joint technical work with the BNM on macro-modelling has gained traction with the BNM and bodes well with the Fund's workstream in the operationalization of the integrated policy framework (IPF).

Text Table. The Nexus Between CD Priorities and Surveillance Advice

CD priorities	Surveillance Advice
Fiscal Responsibility Act (FRA)	FRA is key to putting debt on a firm downward trend, rebuild fiscal buffers necessary to respond to future shocks and ensure robust fiscal governance and transparency to enhance management of the public finances.
Medium-Term Revenue Strategy (MTRS)	A MTRS is needed as a central pillar of medium-term fiscal consolidation as Malaysia's tax revenues have been on a declining trend and are low compared to peers.
Social safety nets	Social safety nets should be strengthened to expand the coverage of the system, address its fragmentation, and raise benefits to adequate levels, a high priority that has been laid bare by the pandemic.
Integrated Policy Framework (IPF)	Strengthen macroeconomic modelling, operationalize IPF tools and explore interactions between FXI and other IPF tools.

STAFF APPRAISAL

35. The recovery is steady but remains uneven. After being hard hit in 2020, the Malaysian economy rebounded in 2021 with growth driven by the manufacturing sector on the back of strong external demand. Contact-intensive and the agriculture sectors however remained weak. Malaysia's 2021 external position was moderately stronger than warranted relative to fundamentals and desirable policies.

36. Downside risks cloud the near-term outlook. These include vaccine-resistant COVID-19 variants, amid the recent uptick in Omicron cases, monetary policy normalization in advanced economies and spillovers from the ongoing conflict in Ukraine. Distributional risks of the pandemic

threaten progress toward reducing inequality over the last decades. Macro policies need to be more accommodative if downside risks materialize.

37. Fiscal policy needs to be nimble and targeted to buttress the recovery in the near term, followed by well-specified fiscal consolidation centered on revenue mobilization over the medium term. Additional targeted support is warranted in 2022-23 with a focus on the vulnerable and hard-hit sectors to minimize scarring. Policy space should be preserved for future shocks, including a protracted pandemic. Fiscal consolidation should start once the recovery is entrenched, be primarily revenue-based and support spending priorities to facilitate external rebalancing. Staff welcome the authorities' commitment to fiscal sustainability.

38. The current accommodative monetary policy stance is appropriate. There is ample liquidity in the financial system, inflation expectations are well anchored, and there remains slack in the economy. Monetary policy should remain data dependent, guided by close monitoring of pandemic developments, inflation expectations and wage growth. Staff welcome the authorities' ongoing joint work with the Fund towards operationalizing the IPF tools, an example of effective CD-surveillance integration. The flexible ringgit exchange rate has served Malaysia well, and the authorities' continued commitment to exchange rate flexibility is welcome.

39. The authorities' commitment to safeguarding the stability of the financial sector as pandemic measures are being unwound is welcome. While aggregate household net financial asset position remains comfortable, pockets of vulnerabilities remain in the low-income borrowers' segment. Continued efforts to strengthen personal bankruptcy liquidation and bankruptcy repayment plans could support orderly deleveraging. Staff welcomes the authorities' continued targeting of financial sector support measures and their progressive unwinding in line with the recovery, while paying close attention to financial stability risks.

40. Determined implementation of 12MP will help minimize pandemic-related economic scarring and enhance economic resilience while promoting inclusive growth and job creation. The 12th Malaysia Plan focus on labor market reskilling and boosting productivity would help lift up potential growth. Strengthening social safety nets would support inclusive recovery and staff sees scope for additional CD support to improve the targeting of welfare programs especially given the likely impact of the pandemic on inequality. Liberalizing non-tariff barriers could provide a welcome fillip to growth, and a holistic and multi-pronged strategy is needed to adapt the national tourism model to the post-pandemic new normal. 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.

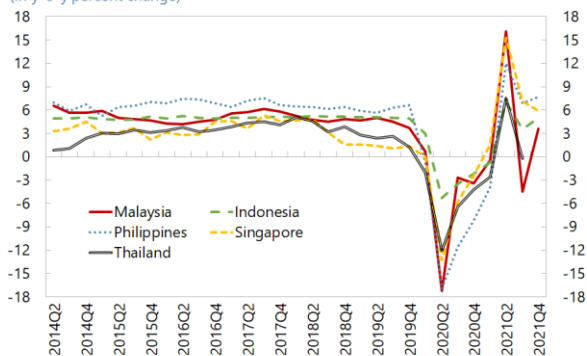
41. It is recommended that the next Article IV consultation with Malaysia be held on the standard 12-month cycle.

Figure 1. Malaysia: Growth and Exports

Growth has rebounded since its 2020 lows, but momentum stalled in 2021Q2 following a severe COVID-19 Delta wave.

Real GDP Growth

(In y-o-y percent change)

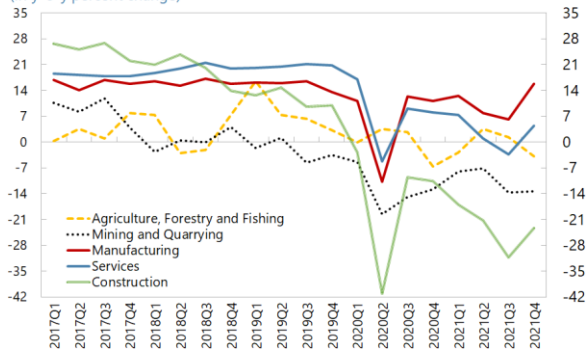


Sources: CEIC Data.

The export-oriented manufacturing sector underpinned growth, while lockdown measures affected other sectors.

Real GDP by Industry

(In y-o-y percent change)

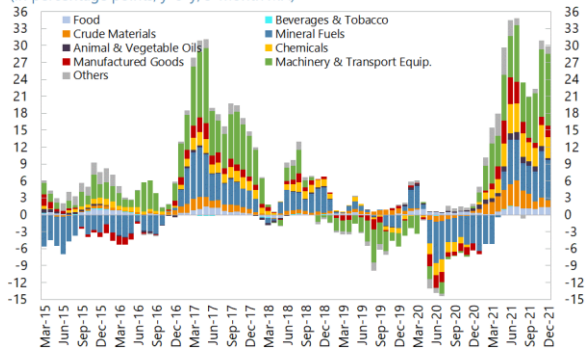


Sources: MYS Dept. of Statistics, Haver Analytics, and IMF staff calculations.

Import volumes rebounded as investment sentiment recovered, led by machinery, manufactured goods, and chemicals.

Contribution to Merchandise Import Growth

(In percentage points, y-o-y, 3-month MA)

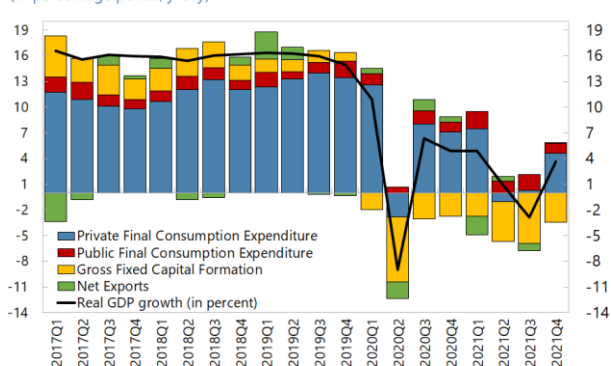


Sources: MYS Dept. of Statistics, Haver Analytics, and IMF staff calculations.

Private domestic demand recovered as well, while strong net exports continued given strong pandemic-related external demand.

Contributions to Real GDP Growth

(In percentage points, y-o-y)

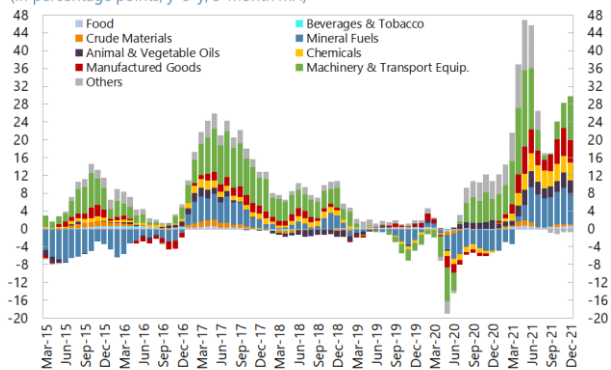


Sources: MYS Dept. of Statistics, Haver Analytics, and IMF staff calculations.

Exports remained strong, supported by external demand for pharmaceutical and electric equipment, but declined somewhat in Q3 following lockdown measures.

Contribution to Merchandise Export Growth

(In percentage points, y-o-y, 3-month MA)

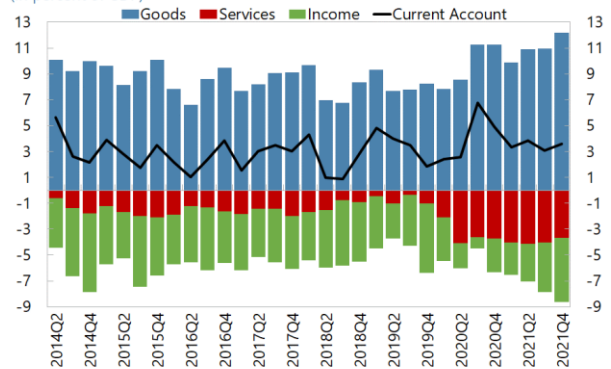


Sources: MYS Dept. of Statistics, Haver Analytics, and IMF staff calculations.

The current account surplus narrowed relative to 2020 despite strong exports, as imports gradually recovered.

Current Account Balance

(In percent of GDP)



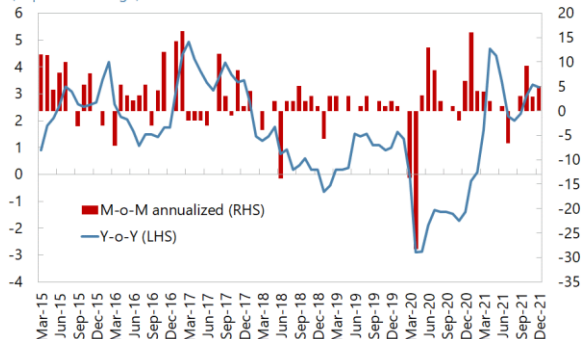
Sources: MYS Dept. of Statistics, CEIC Data, and IMF staff calculations.

Figure 2. Malaysia: Inflation and Domestic Resource Constraints

Inflation remained contained in 2021 despite strong base effects in Q2...

Consumer Price Index

(In percent change)

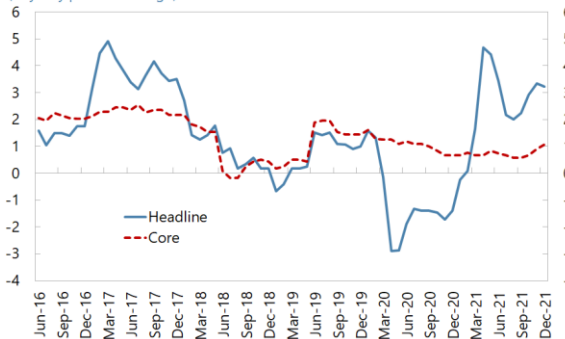


Sources: CEIC Data, MYS Dept. of Statistics, and IMF staff calculation.

...while core inflation remained benign given slack in the economy and labor markets.

Inflation Developments

(In y-o-y percent change)

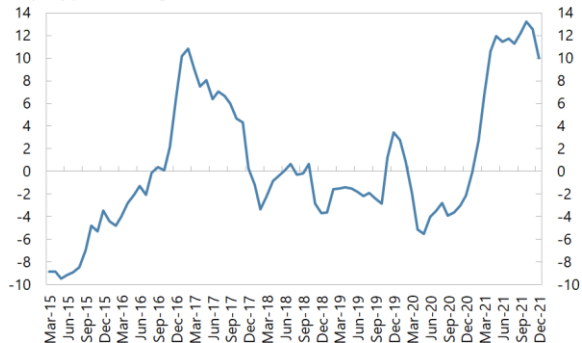


Sources: CEIC Data, MYS Dept. of Statistics, and IMF staff calculations.

Producer prices increased reflecting a rebound in global demand, higher commodity prices and supply disruptions...

Producer Price Index

(In y-o-y percent change)

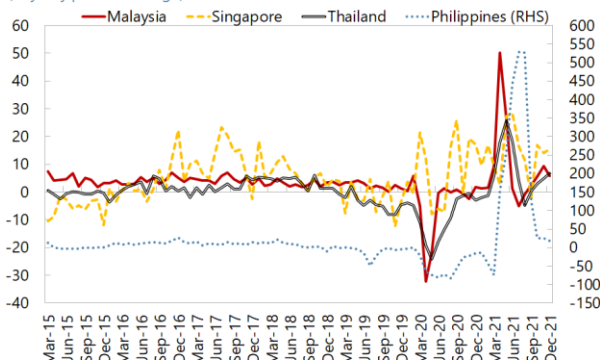


Sources: CEIC Data, and MYS Dept. of Statistics.

...and industrial production resumed its recovery following a decline during the COVID wave in Q3.

Industrial Production in Selected ASEAN Countries

(In y-o-y percent change)

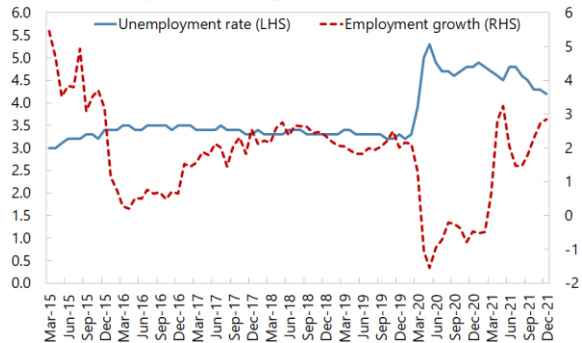


Sources: CEIC Data.

Unemployment remained high as pandemic-prompted lockdowns stalled growth in most sectors...

Labor Market Developments

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

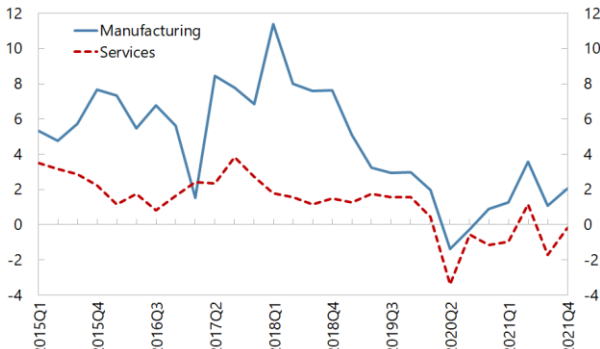


Sources: CEIC Data.

...while growth in manufacturing and services wages remains modest.

Growth in Average Monthly Salary & Wages

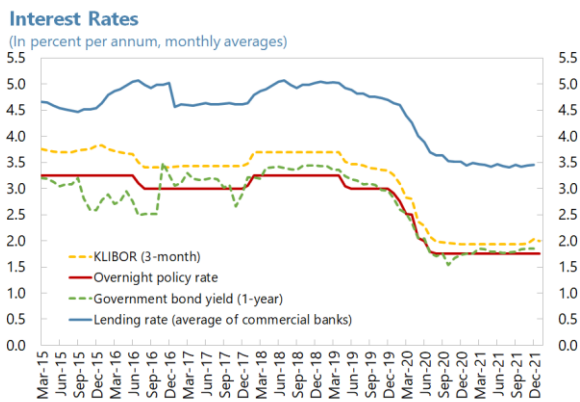
(In y-o-y percent change)



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

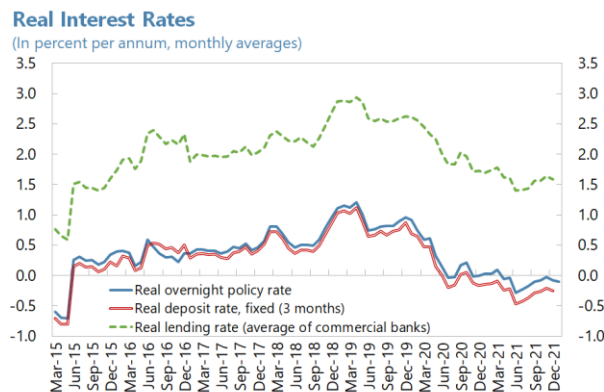
Figure 3. Malaysia: Monetary Developments

The BNM maintained the policy rate at historical low while lending rates also remain low...



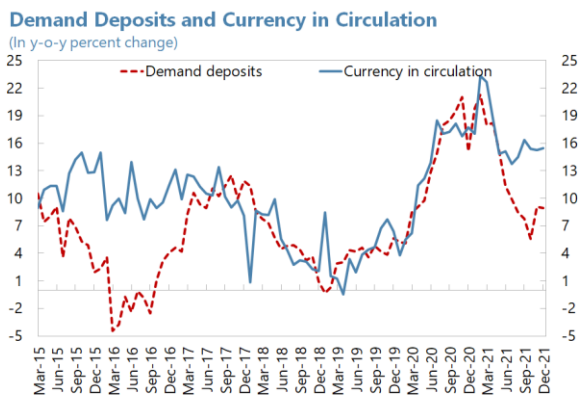
Sources: Bank Negara Malaysia and Haver Analytics.

...with the real policy rate and the real deposit entered negative territory but are close to zero.



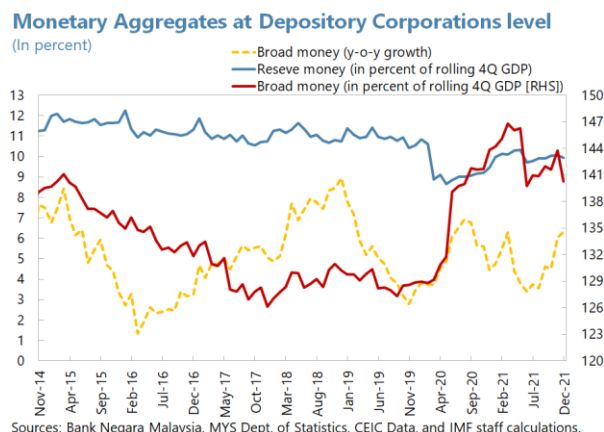
Note: Real rates are obtain by adjusting for inflation expectations of 1-year ahead. Sources: Bank Negara Malaysia, Haver Analytics, Consensus Economics, and IMF staff calculations.

Demand deposits and currency in circulation have picked up after declining...



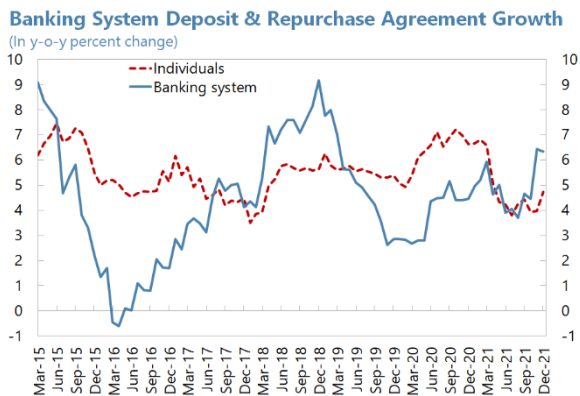
Sources: Bank Negara Malaysia, CEIC Data, and IMF staff calculations.

... partly driving a pick-up in broad money growth.



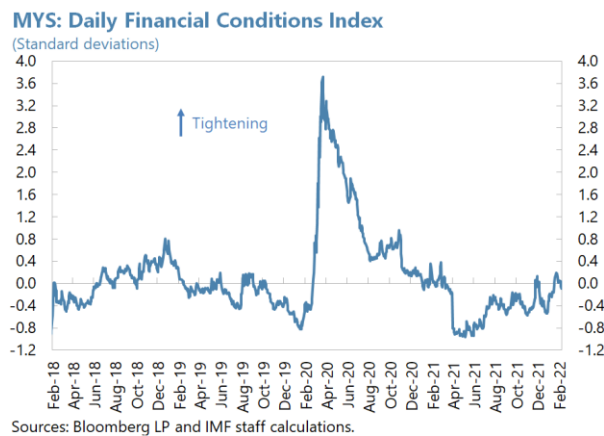
Sources: Bank Negara Malaysia, MYS Dept. of Statistics, CEIC Data, and IMF staff calculations.

Banking system deposits have picked up...



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

... while financial conditions have eased since the significant tightening in early 2020.



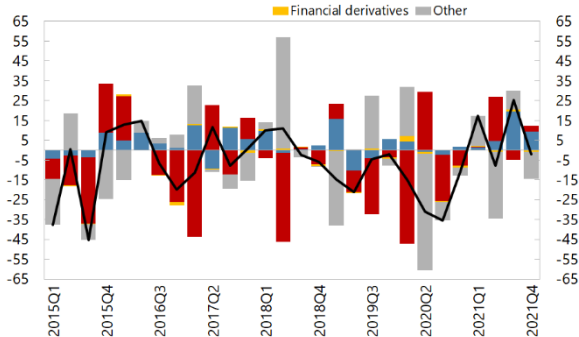
Sources: Bloomberg LP and IMF staff calculations.

Figure 4. Malaysia: Capital Flows

Capital flows returned in 2021...

Financial Account Balance, Net

(In percent of GDP, positive = inflow)

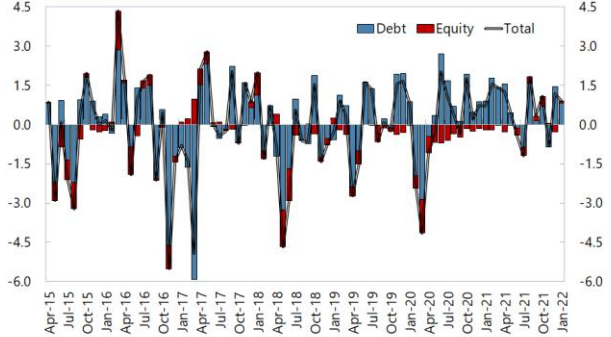


Sources: MYS Dept. of Statistics, CEIC Data, and IMF staff calculations.

...as portfolio debt inflows persisted ...

Malaysia: Nonresident Portfolio Capital Flows

(In billions of USD)

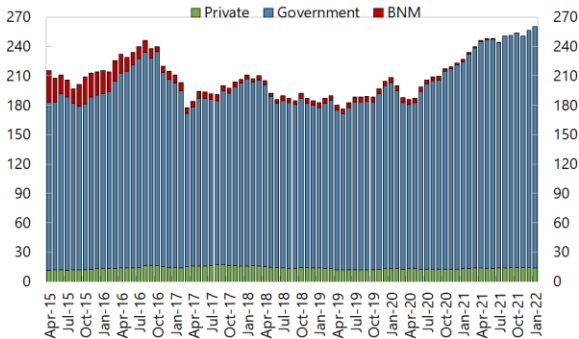


Note: Based on staff estimates from debt and equity markets data.
Sources: Bank Negara Malaysia, Bursa Malaysia, CEIC Data, and IMF staff calculations.

...resulting in an increase in foreign holdings of ringgit-denominated government securities.

Foreign Holdings of Local-Currency Debt Securities

(In billions of Ringgit)

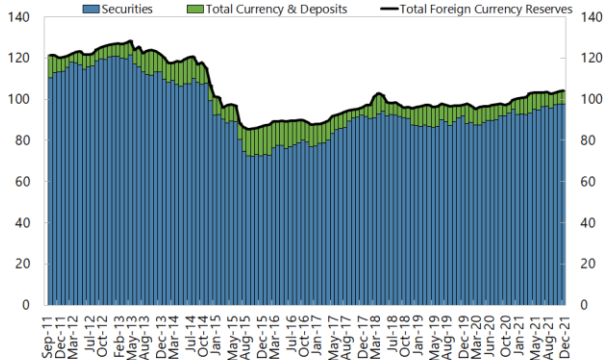


Sources: Bank Negara Malaysia, CEIC Data, and IMF staff calculations.

BNM's gross reserved steadily increased in 2021.

Official Foreign Currency Reserves

(In billions of USD)

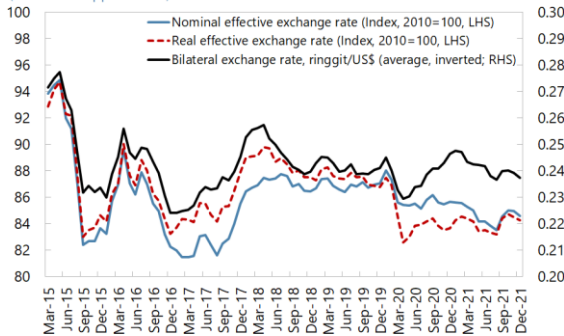


Sources: Bank Negara Malaysia, CEIC Data, and IMF staff calculations.

Real-effective exchange rate appreciated in 2021H2, but remains below pre-pandemic levels as the ringgit weakened vis-à-vis US dollar.

Exchange Rates

(Increase = appreciation)

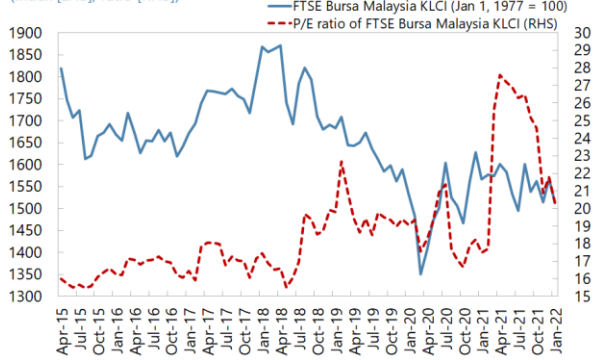


Source: IMF, International Financial Statistics

The stock market remained volatile and closed in modest losses in 2021.

Stock Market Performance

(Index [LHS]; ratio [RHS])

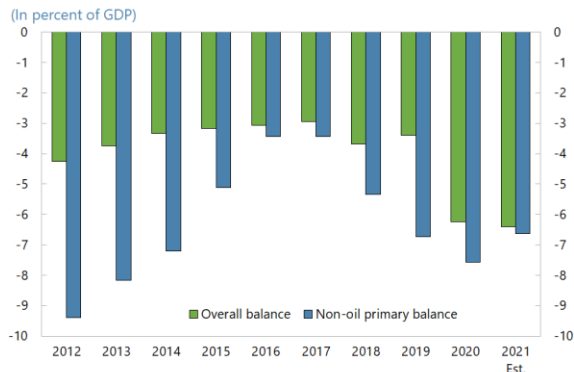


Sources: Bursa Malaysia and CEIC Data.

Figure 5. Malaysia: Fiscal Policy Developments

The pandemic led to a large fiscal deficit in 2020 and 2021 ...

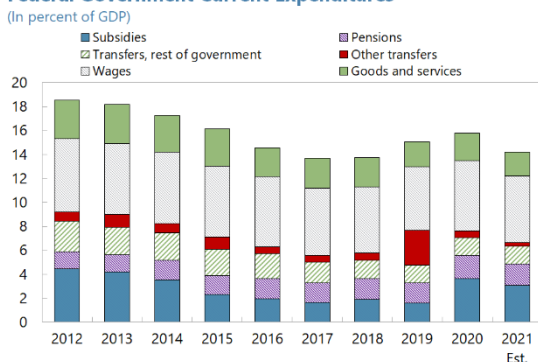
Federal Government: Overall and Non-Oil Balance



Sources: Malaysian Authorities and IMF staff calculations.

Current expenditures increased, particularly on subsidies...

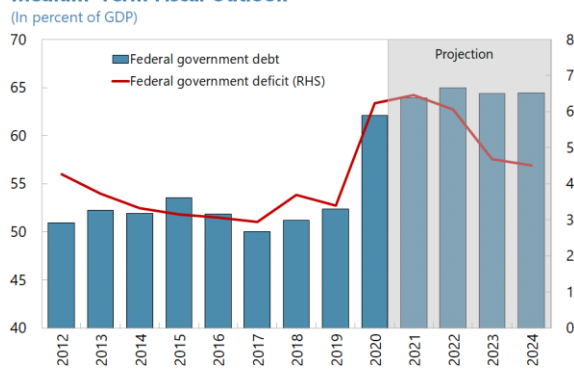
Federal Government Current Expenditures



Sources: Malaysian Authorities and IMF staff calculations.

Federal government deficit and debt levels have continued rising in 2021 following the step increase in 2020.

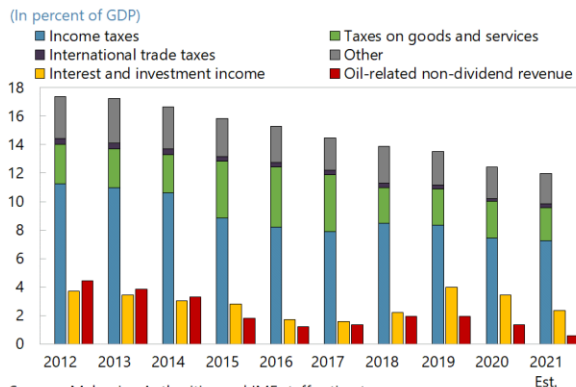
Medium-Term Fiscal Outlook



Sources: Malaysian Authorities and IMF staff estimates.

... while revenues continued their pre-pandemic weakening trend.

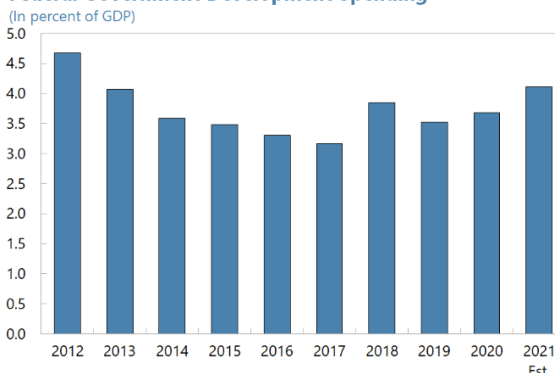
Federal Government Revenue



Sources: Malaysian Authorities and IMF staff estimates.

...and development expenditure has been on rising trend since 2019.

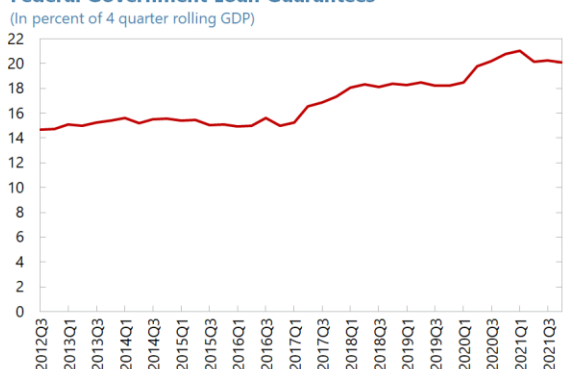
Federal Government Development Spending



Sources: Malaysian Authorities and IMF staff estimates.

Guarantees remain close to 20 percent of GDP after a sharp increase during the pandemic.

Federal Government Loan Guarantees



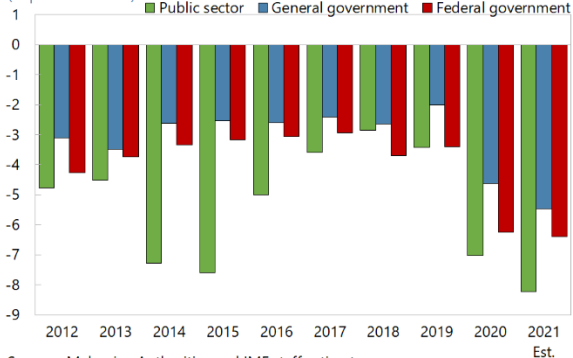
Sources: Bank Negara Malaysia, CEIC Data, and IMF staff calculations.

Figure 6. Malaysia: Public Sector Fiscal Stance and Prospects

Prior to the pandemic, the Non-Financial Public Sector (NFPS) deficit had been improving since 2015.

Fiscal Balance

(In percent of GDP)

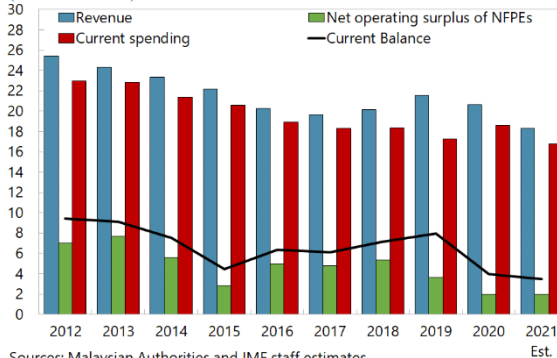


Sources: Malaysian Authorities and IMF staff estimates.

Public companies' surpluses have been sustained.

Current Balance of the Public Sector

(In Percent of GDP)

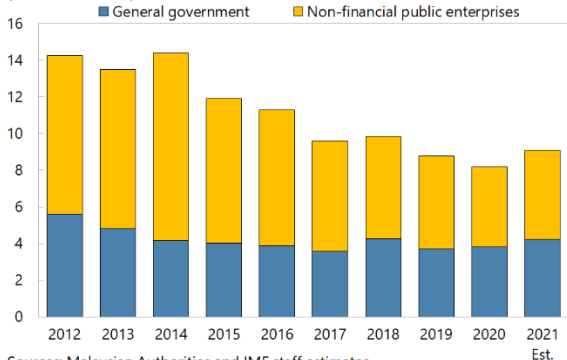


Sources: Malaysian Authorities and IMF staff estimates.

General government development spending has recently picked up...

Development Spending

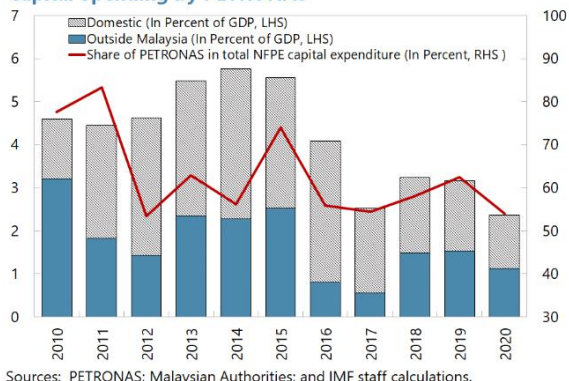
(In Percent of GDP)



Sources: Malaysian Authorities and IMF staff estimates.

...with Petronas' share lower than before.

Capital Spending by PETRONAS



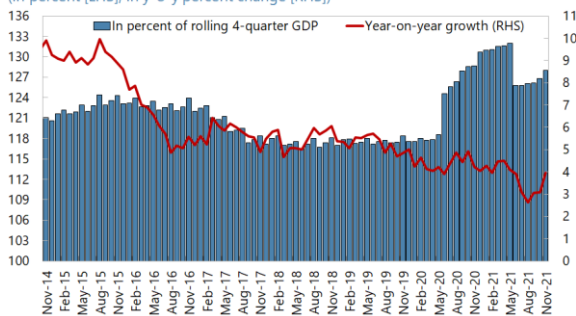
Sources: PETRONAS; Malaysian Authorities; and IMF staff calculations.

Figure 7. Malaysia: Banking Sector Developments

Credit growth remains stable but credit has declined as a share of GDP as GDP partially recovered.

Bank Credit to Private Sector

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



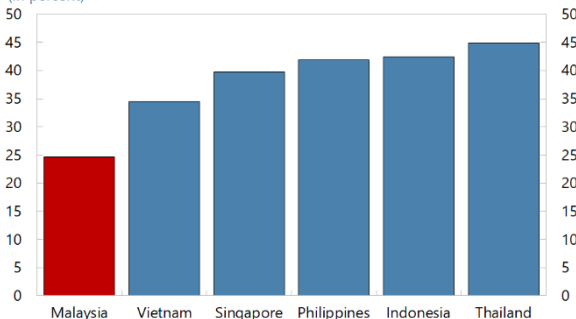
Note: The growth rates have been adjusted by staff to account for the re-classification of a non-bank to bank in April 2018.

Source: IMF, *Integrated Monetary Database*; MYS Dept. of Statistics; CEIC Data; & IMF staff

Corporate leverage compares favorably to peers.

Corporate Debt-to-Equity Ratio, 2020

(In percent)



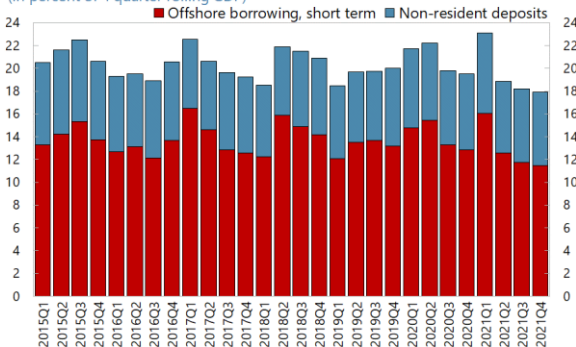
Note: Values presented are median values for nonfinancial sector.

Sources: IMF, *Corporate Vulnerability Indicators*.

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

Bank Short Term Debt

(In percent of 4 quarter rolling GDP)

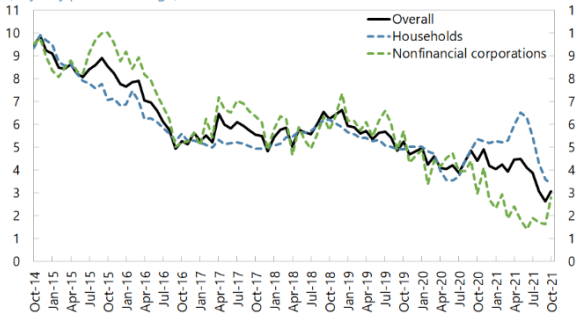


Sources: Bank Negara Malaysia, CEIC Data, and IMF staff calculations.

Credit to the private sector remains subdued but credit to households has increased.

Bank Credit to Private Sector

(In y-o-y percent change)



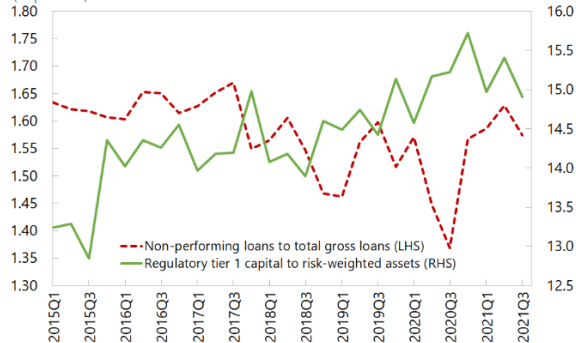
Note: The growth rates have been adjusted by staff to account for the re-classification of a non-bank to bank in April 2018.

Sources: IMF, *Integrated Monetary Database*, and IMF staff calculations.

The banking system remains well capitalized while non-performing loans remain low.

Bank NPLs and Capital Buffers

(In percent)

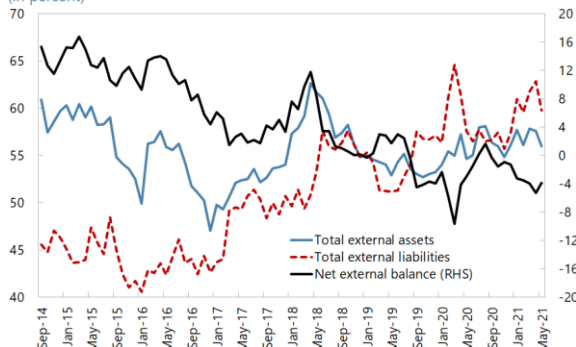


Sources: IMF, *Financial Soundness Indicators*.

Banks' net external asset position remains weak.

Banking System: External Assets and Liabilities

(In percent)

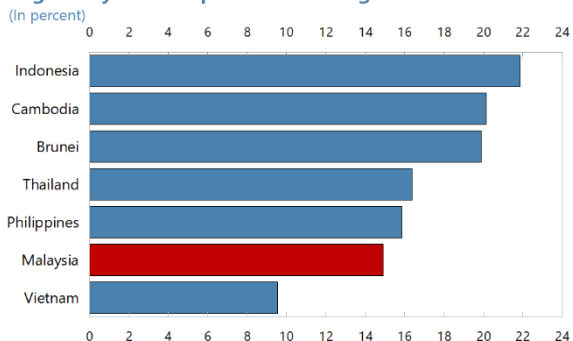


Sources: Bank Negara Malaysia, CEIC Data, and IMF staff calculations.

Figure 8. Financial Soundness Indicators

Malaysian Banks remain with relatively strong capital buffers...

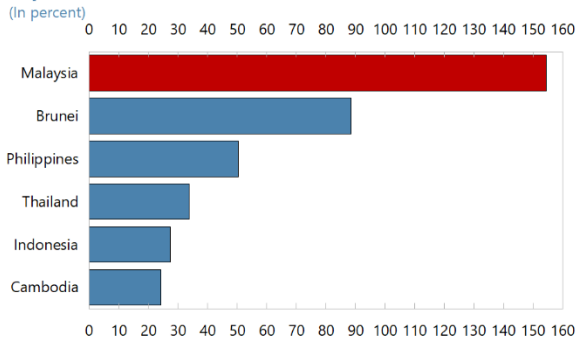
Regulatory Tier 1 Capital to Risk-Weighted Assets



Note: Philippines & Vietnam as of 2021Q2; and rest as of 2021Q3.
Source: IMF, *Financial Soundness Indicators*.

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

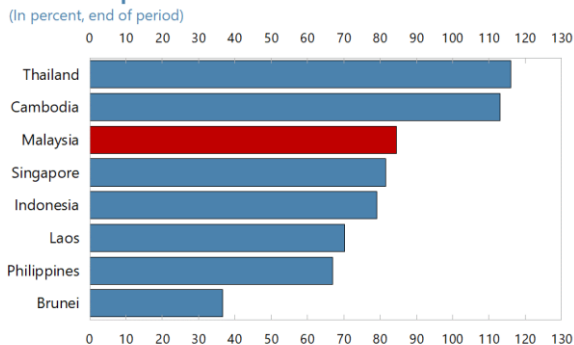
Liquid Assets to Short-Term Liabilities



Note: Philippines as of 2021Q2; rest as of 2021Q3.
Source: IMF, *Financial Soundness Indicators*.

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

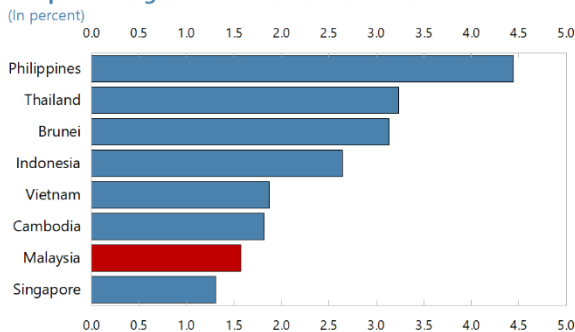
Loans to Deposits Ratio for Commercial Banks



Note: Laos as of 2020Q4; Cambodia as of 2019Q4; rest as of 2021Q3.
Source: CEIC Data, *ASEAN Economic Monitor*.

...and asset quality remains high.

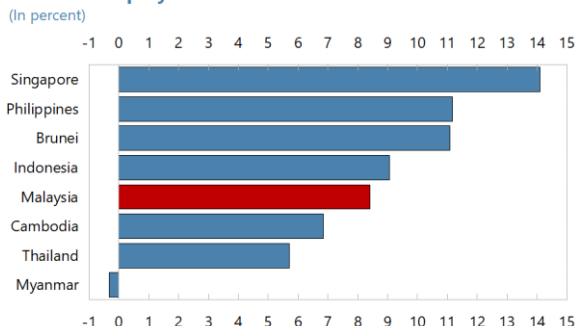
Nonperforming Loans to Total Gross Loans



Note: Brunei & Malaysia as of 2021Q3; Philippines & Vietnam as of 2021Q2; Cambodia, Indonesia, & Thailand as of 2020Q4; and Singapore as of 2019Q4.
Source: IMF, *Financial Soundness Indicators*.

Banks remain profitable ...

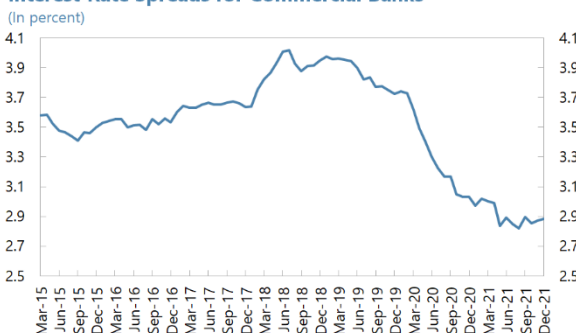
Return on Equity



Note: Philippines as of 2021Q2; Singapore as of 2019Q4; and Myanmar as of 2018Q4; rest as of 2021Q3.
Source: IMF, *Financial Soundness Indicators*.

...but profitability will be under pressure, partially reflecting lower interest rate spreads.

Interest Rate Spreads for Commercial Banks



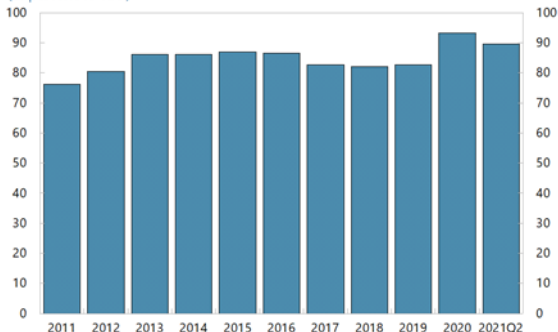
Note: The interest rate spread is defined as difference between the average lending rate and the average savings deposits rate.
Sources: Bank Negara Malaysia, CEIC Data, and IMF staff calculations.

Figure 9. Malaysia: Household Debt

Household debt as share of GDP moderates...

Household Debt

(In percent of GDP)

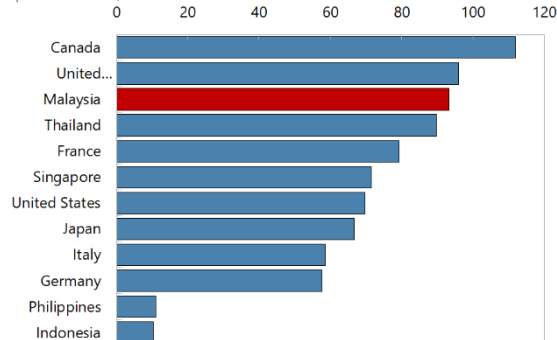


Sources: CEIC Data and Bank Negara Malaysia.

...but remains high compared to ASEAN peers...

Household Debt Across G7 & ASEAN-5 countries, 2020

(In percent of GDP)

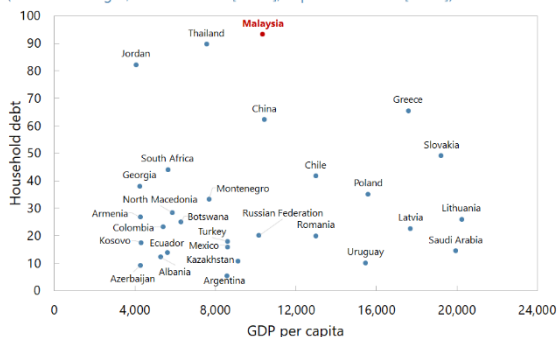


Sources: CEIC Data, Global Economic Monitor.

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

Household Debt and GDP per Capita

(2011-20 averages; in current USD [X axis]; in percent of GDP [Y axis])

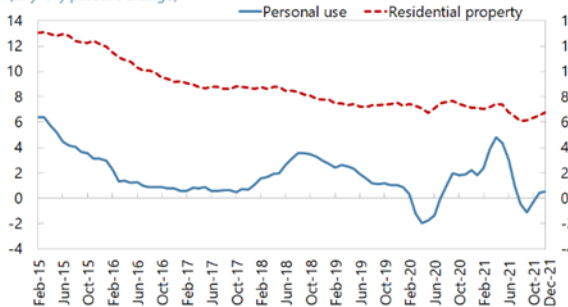


Sources: CEIC Data, Global Economic Monitor.

Housing loans remained broadly stable.

Household Loan Growth

(In y-o-y percent change)

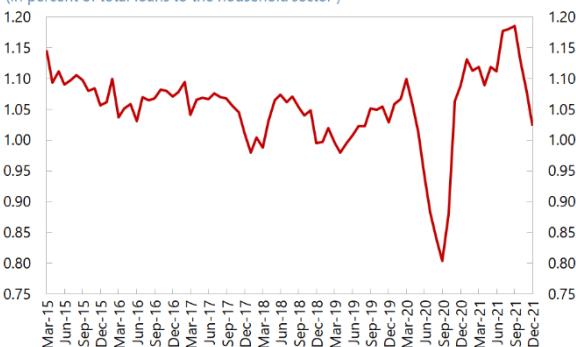


Note: This chart is for household loan in the banking system only. Presented growth rates have been adjusted by staff to account for the re-classification of a non-bank to bank in April 2018. Sources: CEIC Data, Bank Negara Malaysia (BNM), and IMF staff calculations.

Household non-performing loans after a decline on the back of loan moratoria have picked up but remain low...

Household Sector NPLs

(In percent of total loans to the household sector)

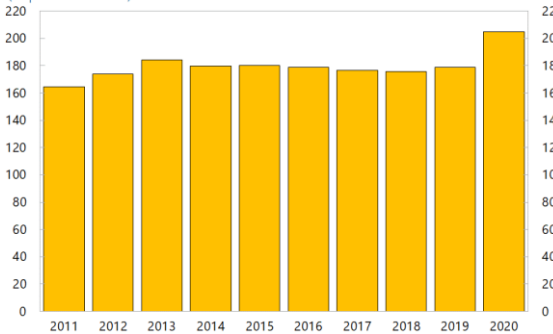


Sources: Bank Negara Malaysia, Haver Analytics, and IMF staff calculations.

...and household financial assets increased in 2020 as share of GDP.

Household Financial Assets

(In percent of GDP)



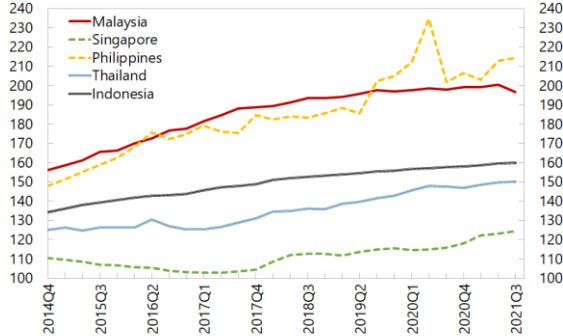
Sources: Bank Negara Malaysia, MYS Dept. of Statistics, Haver Analytics, & IMF staff calculation.

Figure 10. Malaysia: Residential Property Market

House prices have declined in Q3 2021.

House Price Index

(Index, 2010 = 100)

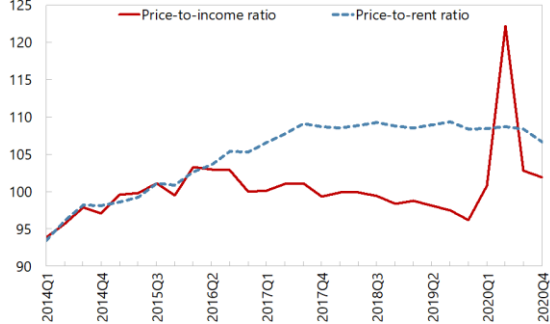


Sources: Bank for International Settlements and CEIC Data.

The price-to-income ratio have begun to stabilize after a surge on the back of the collapse in income in 2020Q2.

House Prices Relative to Rents and Income

(Index, 2015 = 100)

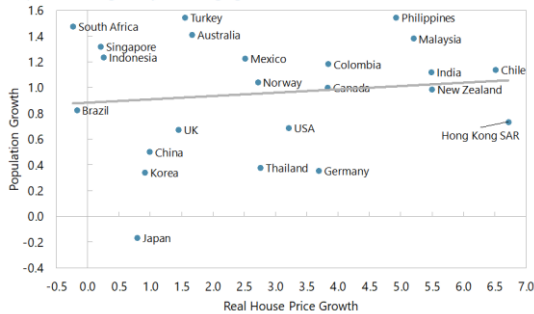


Sources: IMF, Research Dept. - "Real State Markets Module".

Although population growth is strong, this alone cannot explain the rise in house prices relative to other countries.

Real House Prices and Population Growth

(In percent change, 10-year average growth rates: 2011-2020)

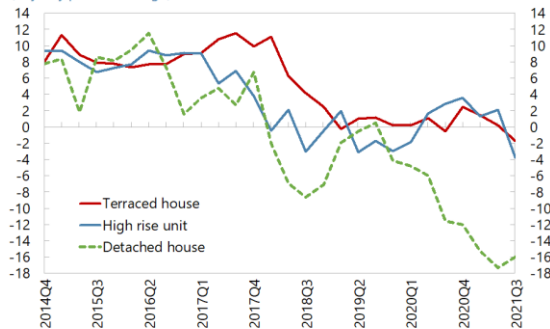


Sources: Bureau of International Settlements; IMF, International Financial Statistics; IMF staff calculations.

... prices falling in all segments of Kuala Lumpur.

House Prices in Kuala Lumpur

(In y-o-y percent change)



Sources: MYS Ministry of Finance and IMF staff calculations.

Residential supply has been increasing...

Residential Property Supply

(In thousand units)

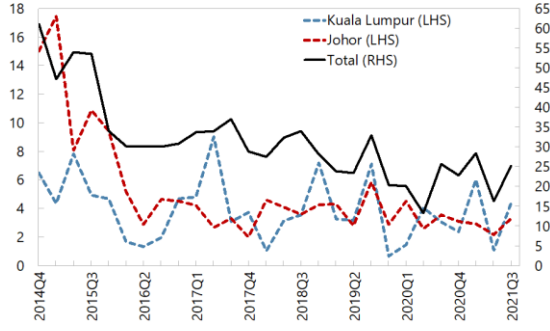


Sources: MYS Ministry of Finance and IMF staff calculations.

... as construction starts are on a recovery path.

Residential Property: Construction Started

(In thousand units)



Sources: MYS Ministry of Finance and IMF staff calculations.

Table 1. Malaysia: Selected Economic and Financial Indicators, 2017-27

	2017	2018	2019	2020	Est. 2021	Proj.					
						2022	2023	2024	2025	2026	2027
Nominal GDP (2021): US\$372.8 billion						Population (2020): 32.6 million					
GDP per capita (2021, current prices): US\$10,350						Poverty rate (2019, national poverty line): 0.2 percent					
Unemployment rate (2021, end-of-period): 4.2 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).											
Real GDP (percent change)	5.8	4.8	4.4	-5.6	3.1	5.7	5.7	5.0	4.5	4.5	4.0
Total domestic demand	6.6	4.7	4.0	-5.1	3.8	8.1	5.6	5.6	5.0	4.8	4.2
Consumption	6.7	7.1	6.6	-2.9	2.7	10.3	4.1	5.2	4.8	4.6	3.7
Private consumption	6.9	8.0	7.7	-4.3	1.9	13.9	5.7	5.3	5.4	5.3	4.2
Public consumption	5.7	3.4	1.8	3.9	6.6	-5.3	-4.5	4.7	1.0	0.7	0.6
Private investment	9.0	4.3	1.6	-11.9	2.6	10.0	8.2	7.5	6.5	6.0	5.8
Public gross fixed capital formation	0.3	-5.0	-10.7	-21.3	-11.4	6.1	6.1	5.0	4.8	4.2	4.2
Net exports (contribution to growth, percentage points)	-0.3	0.4	0.7	-0.9	-0.4	-1.9	0.3	-0.4	-0.3	-0.2	0.0
Saving and investment (in percent of GDP)											
Gross domestic investment	25.5	23.9	21.0	19.7	22.3	16.9	19.3	20.1	21.0	21.8	22.7
Gross national saving	28.3	26.1	24.5	24.0	25.7	20.3	22.6	23.3	24.1	24.8	25.7
Fiscal sector (in percent of GDP) 1/											
Federal government overall balance	-2.9	-3.7	-3.4	-6.2	-6.4	-6.1	-4.6	-4.4	-4.3	-4.2	-4.2
Revenue	16.1	16.1	17.5	15.9	14.3	14.1	13.6	13.6	13.5	13.5	13.5
Expenditure and net lending	19.0	19.8	18.4	22.1	20.7	20.2	18.3	18.0	17.8	17.7	17.7
Tax refunds (Arrears) 2/			2.4								
Federal government non-oil primary balance	-3.4	-5.3	-6.7	-7.6	-6.6	-5.9	-4.0	-3.6	-3.3	-3.0	-2.9
Consolidated public sector overall balance 3/	-3.6	-2.9	-3.4	-7.0	-8.2	-8.6	-7.1	-6.8	-6.4	-6.2	-6.2
General government debt 3/	54.4	55.6	57.1	67.8	69.0	70.6	69.9	69.9	69.8	69.6	69.5
Of which: federal government debt	50.0	51.2	52.4	62.1	63.4	65.0	64.3	64.3	64.2	63.9	63.8
Inflation and unemployment (annual average, in percent)											
CPI inflation	3.7	1.0	0.7	-1.1	2.5	2.5	2.0	2.0	2.0	2.0	2.0
CPI inflation (excluding food and energy)	1.6	0.4	1.1	1.0	0.7	0.8	1.0	1.1	1.1	1.1	1.1
Unemployment rate	3.4	3.3	3.3	4.5	4.7	4.5	4.3	4.2	4.2	4.2	4.2
Macroeconomic variables (end of period)											
Broad money (percentage change) 4/	4.8	7.7	2.7	4.9	5.6	7.5	8.9	7.4	7.3	7.4	7.1
Credit to private sector (percentage change) 4/	5.4	8.3	4.9	4.0	3.8	6.9	8.9	7.4	7.3	7.4	7.1
Credit-to-GDP ratio (in percent) 5/ 6/	126.6	130.0	130.4	144.9	138.0	137.2	137.2	137.2	137.2	137.2	137.2
Overnight policy rate (in percent)	3.00	3.25	3.00	1.75	-20.12	...	...	...	...	...	...
Three-month interbank rate (in percent)	3.5	3.6	3.3	1.9	2.0	...	...	...	...	...	...
Nonfinancial corporate sector debt (in percent of GDP) 7/	101.5	102.6	99.2	109.0	...	...	...	...	...	...	...
Nonfinancial corporate sector debt issuance (in percent of GDP)	3.3	2.0	1.8	2.3	2.6	...	...	...	...	...	...
Household debt (in percent of GDP) 7/	82.6	82.0	82.7	93.2	...	...	...	...	...	...	...
Household financial assets (in percent of GDP) 7/	176.4	175.7	179.0	205.0	...	...	...	...	...	...	...
House prices (percentage change)	6.1	2.5	1.8	1.2	...	...	...	...	...	...	...
Exchange rates (period average)											
Malaysian ringgit/U.S. dollar	4.30	4.03	4.14	4.19	4.14	...	...	...	...	...	...
Real effective exchange rate (percentage change)	-1.6	4.1	-1.3	-3.6	-0.3	...	...	...	...	...	...
Balance of payments (in billions of U.S. dollars) 5/											
Current account balance	8.9	8.0	12.8	14.3	12.9	13.8	14.9	15.4	16.3	16.9	18.4
(In percent of GDP)	2.8	2.2	3.5	4.2	3.5	3.4	3.3	3.2	3.1	3.0	3.0
Goods balance	27.2	28.4	30.1	33.0	41.1	49.4	52.0	53.3	55.1	59.0	69.1
Services balance	-5.3	-4.3	-2.6	-11.3	-14.7	-16.7	-18.4	-20.3	-22.8	-26.1	-33.8
Income balance	-13.0	-16.1	-14.7	-7.4	-13.4	-18.9	-18.7	-17.5	-16.0	-16.0	-16.8
Capital and financial account balance	-1.1	2.8	-9.1	-18.2	7.0	-4.1	-11.2	-13.9	-15.8	-15.6	-17.0
Of which: Direct investment	3.8	2.5	1.6	0.7	7.9	6.9	7.2	7.3	7.4	7.6	8.0
Errors and omissions	-4.0	-8.9	-1.7	-0.6	-15.8	0.0	0.0	0.0	0.0	0.0	0.0
Overall balance	3.8	1.9	2.0	-4.6	4.0	9.7	3.6	1.5	0.5	1.3	1.5
Gross official reserves (US\$ billions) 5/ 8/	102.4	101.4	103.6	107.6	116.9	126.6	130.2	131.7	132.2	133.5	135.0
(In months of following year's imports of goods and nonfactor services)	5.5	5.8	6.7	5.6	5.4	5.7	5.7	5.6	6.2	6.7	7.3
(In percent of short-term debt by original maturity)	117.8	103.4	108.8	117.7	123.8	117.6	120.9	112.4	107.0	101.9	94.4
(In percent of short-term debt by remaining maturity)	93.7	84.6	87.2	92.0	95.4	92.4	94.0	86.8	83.6	79.7	94.4
Total external debt (in billions of U.S. dollars) 5/ 8/	218.8	223.5	231.5	238.5	256.4	276.6	285.0	306.0	322.5	341.5	363.5
(In percent of GDP)	68.5	62.3	63.4	70.7	68.9	68.1	63.4	63.1	61.5	60.4	59.8
Of which: short-term (in percent of total, original maturity)	39.7	43.9	41.1	38.4	36.8	38.9	37.8	38.3	38.3	38.4	39.4
short-term (in percent of total, remaining maturity)	50.0	53.6	51.3	49.1	47.8	49.5	48.6	49.6	49.0	49.1	39.4
Debt service ratio 5/											
(In percent of exports of goods and services) 9/	14.0	10.6	10.9	13.6	10.8	10.3	10.5	11.3	12.0	12.4	12.6
(In percent of exports of goods and nonfactor services)	14.8	11.2	11.6	14.5	11.7	11.1	11.3	12.2	13.1	13.5	13.7
Memorandum items:											
Nominal GDP (in billions of ringgit)	1,372	1,448	1,513	1,417	1,544	1,660	1,807	1,941	2,083	2,238	2,398

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 (NFPs). 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, 2017–21

	2017	2018	2019	2020	2021 1/
Financial indicators					
General government debt (in percent of GDP) 2/	54.4	55.6	57.1	67.8	69.0
Broad money (end of period, year-on-year percent change) 3/	4.8	7.7	2.7	4.9	5.6
Private sector credit (end of period, year-on-year percent change) 3/	5.4	8.3	4.9	4.0	3.8
3-month interest rate (percent, 12-month average) 4/	3.4	3.7	3.5	2.6	2.3
External indicators 5/					
Goods exports, f.o.b. (percent change, 12-month basis, in U.S. dollars terms) 6/	12.3	10.4	-4.1	-6.2	27.4
Goods imports, f.o.b. (percent change, 12-month basis, in U.S. dollars terms) 6/	12.7	11.5	-5.7	-9.0	28.1
Current account balance (12-month basis, in billions of U.S. dollars) 6/	8.9	8.0	12.8	14.3	12.9
Current account balance (12-month basis, in percent of GDP)	2.8	2.2	3.5	4.2	3.5
Capital and financial account balance (12-month basis, in billions of U.S. dollars) 6/	-1.1	2.8	-9.1	-18.2	7.0
Gross official reserves (in billions of U.S. dollars)					
In months of following year's imports of goods and nonfactor services 6/	5.5	5.8	6.7	5.6	5.4
As percent of broad money 3/ 6/	24.7	23.1	22.8	22.2	23.7
As percent of monetary base 3/ 6/	281.2	269.3	271.9	271.0	297.8
Total short-term external debt by: 6/ 7/					
Original maturity (in billions of U.S. dollars)	86.9	98.1	95.2	91.5	94.4
Remaining maturity (in billions of U.S. dollars)	109.3	119.9	118.9	117.0	122.5
Original maturity to reserves (in percent)	84.9	96.7	91.9	85.0	80.8
Original maturity to total external debt (in percent)	39.7	43.9	41.1	38.4	36.8
Remaining maturity to reserves (in percent)	106.7	118.2	114.7	108.7	104.8
Remaining maturity to total external debt (in percent)	50.0	53.6	51.3	49.1	47.8
Total external debt (in billions of U.S. dollars) 6/ 7/	218.8	223.5	231.5	238.5	256.4
Of which: public sector (medium- and long-term (MLT))	77.9	71.8	76.0	85.6	93.4
Total external debt to exports of goods and services (in percent) 6/ 8/	92.7	85.6	91.1	108.4	91.9
External amortization of MLT debt to exports of goods and services (in percent) 6/ 8/	12.4	8.6	8.6	10.8	9.2
Financial market indicators					
Kuala Lumpur Composite Index (KLCI), end of period	1,797	1,691	1,589	1,505	1,467
10-year government securities yield (percent per annum, average)	4.0	4.1	3.6	2.8	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, 2017–27 1/

	2017	2018	2019	2020	Est.		Proj.				
					2021	2022	2023	2024	2025	2026	2027
(In billions of U.S. dollars)											
Current account balance	8.9	8.0	12.8	14.3	12.9	13.8	14.9	15.4	16.3	16.9	18.4
Goods balance	27.2	28.4	30.1	33.0	41.1	49.4	52.0	53.3	55.1	59.0	69.1
Exports, f.o.b.	186.4	205.8	197.3	185.2	235.9	266.9	275.3	279.7	284.2	290.7	308.2
Imports, f.o.b.	159.2	177.4	167.2	152.1	194.9	217.5	223.4	226.4	229.1	231.6	239.1
Services balance	-5.3	-4.3	-2.6	-11.3	-14.7	-16.7	-18.4	-20.3	-22.8	-26.1	-33.8
Receipts	37.1	40.3	41.1	22.0	20.9	23.2	26.0	29.4	33.3	38.0	40.1
Payments	42.4	44.6	43.7	33.3	35.6	40.0	44.4	49.7	56.1	64.1	74.0
Primary income	-9.0	-11.2	-9.5	-6.8	-11.1	-12.0	-11.7	-10.8	-9.8	-8.8	-8.5
Secondary income	-4.0	-4.9	-5.2	-0.6	-2.3	-6.8	-7.1	-6.7	-6.2	-7.2	-8.4
Capital and financial account balance	-1.1	2.8	-9.1	-18.2	7.0	-4.1	-11.2	-13.9	-15.8	-15.6	-17.0
Capital account	0.0	0.0	0.1	-0.1	-0.2	0.0	0.0	0.0	0.0	0.0	0.0
Financial account	-1.1	2.8	-9.2	-18.1	7.2	-4.1	-11.2	-13.9	-15.8	-15.6	-17.0
Direct investment	3.8	2.5	1.6	-0.8	4.7	6.9	7.2	7.3	7.4	7.6	8.0
Portfolio investment	-3.6	-12.2	-7.0	-11.7	4.6	2.4	3.4	2.5	-0.5	0.8	-2.5
Other investment	-1.3	12.54	-3.8	-5.6	-2.1	-13.5	-21.8	-23.7	-22.7	-24.0	-22.5
Errors and omissions	-4.0	-8.9	-1.7	-0.6	-15.8	0.0	0.0	0.0	0.0	0.0	0.0
Overall balance	3.8	1.9	2.0	-4.6	4.0	9.7	3.6	1.5	0.5	1.3	1.5
Gross official reserves	102.4	101.4	103.6	107.6	116.9	126.6	130.2	131.7	132.2	133.5	135.0
In months of following year's imports of goods and nonfactor services	5.5	5.8	6.7	5.6	5.4	5.7	5.7	5.6	6.2	6.7	7.3
In percent of short-term debt 2/ 3/	93.7	84.6	87.2	92.0	95.4	92.4	94.0	86.8	83.6	79.7	94.4
(In percent of GDP)											
Current account balance	2.8	2.2	3.5	4.2	3.5	3.4	3.3	3.2	3.1	3.0	3.0
(Excluding crude oil and liquefied natural gas)	-0.9	-1.5	0.8	2.3	0.9	0.1	1.2	1.3	1.3	1.3	1.4
Goods balance	8.5	7.9	8.2	9.8	11.0	12.1	11.5	11.0	10.5	10.4	11.4
Exports, f.o.b.	58.4	57.3	54.0	54.9	63.3	65.6	61.1	57.5	54.1	51.3	50.7
Imports, f.o.b.	49.9	49.4	45.8	45.1	52.3	53.5	49.6	46.6	43.6	40.9	39.3
Services balance	-1.7	-1.2	-0.7	-3.3	-4.0	-4.1	-4.1	-4.2	-4.4	-4.6	-5.6
Primary income	-2.8	-3.1	-2.6	-2.0	-3.0	-3.0	-2.6	-2.2	-1.9	-1.6	-1.4
Secondary income	-1.3	-1.4	-1.4	-0.2	-0.6	-1.7	-1.6	-1.4	-1.2	-1.3	-1.4
Capital and financial account balance	-0.3	0.8	-2.5	-5.4	1.9	-1.0	-2.5	-2.9	-3.0	-2.8	-2.8
Direct investment	1.2	0.7	0.4	-0.3	1.3	1.7	1.6	1.5	1.4	1.3	1.3
(Annual percentage change)											
<i>Memorandum items:</i>											
<i>Goods trade</i>											
Exports, f.o.b., value growth (in U.S. dollars) 1/	12.3	10.4	-4.1	-6.2	27.4	13.1	3.2	1.6	1.6	2.3	6.0
Export volume growth 4/	11.1	5.5	-1.6	1.4	14.4	1.3	4.2	3.7	3.9	3.8	3.7
Imports, f.o.b., value growth (in U.S. dollars) 1/	12.7	11.5	-5.7	-9.0	28.1	11.6	2.7	1.4	1.2	1.1	3.2
Import volume growth 4/	12.9	3.1	-3.2	-2.8	18.6	6.0	5.4	4.9	4.1	4.1	3.8
Terms of trade	1.1	-0.4	1.1	-3.8	6.3	0.8	-0.5	0.1	0.1	0.1	0.0
<i>Net international investment position 1/</i>											
(In billions of U.S. dollars)	-7.5	-17.6	-9.5	16.8	21.8	...	...	...	...	...	...
(In percent of GDP)	-2.4	-4.9	-2.6	5.0	5.8	...	...	...	...	...	...

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, 2017–27 1/

	2017	2018	2019	2020	Est.		Proj.				
					2021	2022	2023	2024	2025	2026	2027
Real sector (percent change)											
Real GDP growth	5.8	4.8	4.4	-5.6	3.1	5.7	5.7	5.0	4.5	4.5	4.0
Total domestic demand	6.6	4.7	4.0	-5.1	3.8	8.1	5.6	5.6	5.0	4.8	4.2
<i>Of which:</i> Private consumption	6.9	8.0	7.7	-4.3	1.9	13.9	5.7	5.3	5.4	5.3	4.2
Public consumption	5.7	3.4	1.8	3.9	6.6	-5.3	-4.5	4.7	1.0	0.7	0.6
Private investment	9.0	4.3	1.6	-11.9	2.6	10.0	8.2	7.5	6.5	6.0	5.8
Public gross fixed capital formation	0.3	-5.0	-10.7	-21.3	-11.4	6.1	6.1	5.0	4.8	4.2	4.2
Output gap (in percent) 2/	0.8	0.6	0.1	-4.6	-3.8	-3.6	-2.2	-1.5	-1.1	-0.7	0.0
Consumer prices (period average)	3.7	1.0	0.7	-1.1	2.5	2.5	2.0	2.0	2.0	2.0	2.0
Consumer prices, excluding food and energy (period average) 2/	1.6	0.4	1.1	1.0	0.7	0.8	1.0	1.1	1.1	1.1	1.1
GDP deflator	3.8	0.6	0.1	-0.8	5.7	1.7	3.0	2.3	2.7	2.8	3.0
Saving and investment (in percent of GDP)											
Gross domestic investment	25.5	23.9	21.0	19.7	22.3	16.9	19.3	20.1	21.0	21.8	22.7
Private, including stocks	17.6	16.7	14.8	14.5	17.9	12.4	14.8	15.6	16.4	17.2	18.1
<i>Of which:</i> gross fixed capital formation	17.1	17.0	16.7	15.7	15.0	17.3	17.6	18.0	18.5	18.8	19.2
Public	8.0	7.2	6.2	5.2	4.3	4.5	4.5	4.5	4.6	4.6	4.6
Gross national saving	28.3	26.1	24.5	24.0	25.7	20.3	22.6	23.3	24.1	24.8	25.7
Private 3/	22.1	18.9	16.5	19.9	22.2	17.0	19.2	19.8	20.6	21.3	22.2
Public 3/	6.2	7.2	8.0	4.0	3.6	3.4	3.5	3.5	3.5	3.5	3.5
Fiscal sector (in percent of GDP)											
Federal government											
Revenue	16.1	16.1	17.5	15.9	14.3	14.1	13.6	13.6	13.5	13.5	13.5
Tax	12.9	12.0	11.9	10.9	10.5	10.3	10.0	10.0	9.9	9.9	9.9
Nontax	3.1	4.1	5.5	5.0	3.8	3.8	3.6	3.6	3.6	3.6	3.6
Expenditure and net lending	19.0	19.8	18.4	22.1	20.7	20.2	18.3	18.0	17.8	17.7	17.7
Current	15.8	15.9	14.9	18.4	16.6	15.5	13.6	13.5	13.5	13.5	13.4
Development	3.2	3.9	3.5	3.7	4.1	4.7	4.7	4.5	4.3	4.3	4.3
Overall balance	-2.9	-3.7	-3.4	-6.2	-6.4	-6.1	-4.6	-4.4	-4.3	-4.2	-4.2
Cyclically-adjusted balance (in percent of potential GDP) 2/	-3.0	-4.8	-3.0	-4.8	-6.0	-5.8	-4.4	-4.3	-4.1	-4.1	-4.1
Nonoil and gas primary balance	-3.4	-5.3	-6.7	-7.6	-6.6	-5.9	-4.0	-3.6	-3.3	-3.0	-2.9
Federal government debt	50.0	51.2	52.4	62.1	63.4	65.0	64.3	64.3	64.2	63.9	63.8
Balance of payments (in billions of U.S. dollars) 2/											
Goods balance	27.2	28.4	30.1	33.0	41.1	49.4	52.0	53.3	55.1	59.0	69.1
Services balance	-5.3	-4.3	-2.6	-11.3	-14.7	-16.7	-18.4	-20.3	-22.8	-26.1	-33.8
Income balance	-13.0	-16.1	-14.7	-7.4	-13.4	-18.9	-18.7	-17.5	-16.0	-16.0	-16.8
Current account balance	8.9	8.0	12.8	14.3	12.9	13.8	14.9	15.4	16.3	16.9	18.4
(In percent of GDP)	2.8	2.2	3.5	4.2	3.5	3.4	3.3	3.2	3.1	3.0	3.0
Capital and financial account balance	-1.1	2.8	-9.1	-18.2	7.0	-4.1	-11.2	-13.9	-15.8	-15.6	-17.0
<i>Of which:</i> Direct investment	3.8	2.5	1.6	0.7	7.9	6.9	7.2	7.3	7.4	7.6	8.0
Errors and omissions	-4.0	-8.9	-1.7	-0.6	-15.8	0.0	0.0	0.0	0.0	0.0	0.0
Overall balance	3.8	1.9	2.0	-4.6	4.0	9.7	3.6	1.5	0.5	1.3	1.5
International trade in goods (annual percent change) 2/											
Goods exports, f.o.b. (in U.S. dollars terms)	12.3	10.4	-4.1	-6.2	27.4	13.1	3.2	1.6	1.6	2.3	6.0
Goods imports, f.o.b. (in U.S. dollars terms)	12.7	11.5	-5.7	-9.0	28.1	11.6	2.7	1.4	1.2	1.1	3.2
Terms of trade	1.1	-0.4	1.1	0.6	6.0	5.8	1.7	1.5	0.0	1.4	3.0
Gross official reserves (in billions of U.S. dollars) 3/											
(In months of following year's imports of goods and nonfactor services)	5.5	5.8	6.7	5.6	5.4	5.7	5.7	5.6	6.2	6.7	7.3
(In percent of short-term debt by original maturity) 2/	117.8	103.4	108.8	117.7	123.8	117.6	120.9	112.4	107.0	101.9	94.4
(In percent of short-term debt by remaining maturity) 2/	93.7	84.6	87.2	92.0	95.4	92.4	94.0	86.8	83.6	79.7	94.4
Total external debt (in billions of U.S. dollars) 2/ 3/											
(In percent of GDP)	218.8	223.5	231.5	238.5	256.4	276.6	285.0	306.0	322.5	341.5	363.5
Short-term external debt (percent of total, original maturity)	68.5	62.3	63.4	70.7	68.8	68.0	63.3	63.0	61.4	60.3	59.7
Short-term external debt (percent of total, remaining maturity)	39.7	43.9	41.1	38.4	36.8	38.9	37.8	38.3	38.3	38.4	39.4
Debt-service ratio 2/ 3/	50.0	53.6	51.3	49.1	47.8	49.5	48.6	49.6	49.0	49.1	39.4
(In percent of exports of goods and nonfactor services)	14.8	11.2	11.6	14.5	11.7	11.1	11.3	12.2	13.1	13.5	13.7
Net international investment position (in billions of U.S. dollars) 2/											
	-7.5	-17.6	-9.5	16.8	21.8	...	...	...	...	...	...
Memorandum items:											
Nominal GDP (in billions of ringgit)	1,372	1,448	1,513	1,417	1,544	1,660	1,807	1,941	2,083	2,238	2,398

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, 2017–27

	2017	2018	2019	2020	Proj.						
					2021	2022	2023	2024	2025	2026	2027
I. Statement of Government Operations 1/											
	(In billions of ringgit)										
Revenue	220.4	232.9	264.4	225.1	221.0	234.0	246.6	263.8	282.0	302.8	323.8
Taxes	177.7	174.1	180.6	154.4	161.8	171.4	180.7	193.2	206.4	221.7	237.1
Direct taxes	116.0	130.0	134.7	112.5	120.0	127.3	134.8	144.3	154.4	163.6	178.5
Indirect taxes	61.6	44.0	45.8	41.9	41.8	44.0	45.9	48.9	52.1	58.1	58.6
Non-tax revenue	42.7	58.8	83.8	70.7	59.2	62.6	65.9	70.6	75.6	81.1	86.7
Investment income	21.6	31.9	60.1	48.7	36.0	39.5	41.9	45.0	48.3	51.9	55.6
Other revenue	21.1	26.9	23.8	22.0	23.2	23.2	24.0	25.6	27.3	29.2	31.2
Expenditure and net lending	260.7	286.3	278.9	313.8	320.2	334.7	329.9	349.8	370.7	395.9	423.7
Current expenditure, including COVID fund	217.2	230.5	225.6	261.3	256.9	257.1	245.5	262.0	280.3	300.7	321.7
Expense		230.5	225.6	226.1	219.2	236.1	245.5	262.0	280.3	300.7	321.7
Compensation of employees	77.0	80.0	80.5	83.0	84.5	86.5	92.0	97.8	104.0	110.6	117.6
Use of goods and services	34.7	35.3	31.5	29.3	23.3	30.4	26.6	28.3	30.1	32.0	34.0
Interest	27.9	30.5	32.9	34.5	39.0	46.3	53.1	60.1	67.3	75.1	82.5
Subsidies and social assistance	22.4	27.5	23.9	19.8	16.7	17.4	14.7	12.9	11.9	11.3	11.2
Grants and transfers	31.3	30.9	66.0	28.9	27.6	27.2	29.3	31.2	33.2	35.7	38.2
Social benefits and other expense	23.8	26.3	-9.4	30.6	28.1	28.4	29.8	31.7	33.8	35.9	38.2
COVID fund 2/				35.2	37.7	21.0					
Wage subsidies				13.0	9.7	3.0					
Social transfers				16.2	16.8	8.0					
Other spending				6.0	11.2	10.0					
Net acquisition of nonfinancial assets (incl. COVID spending) 3/	43.5	55.8	53.3	52.5	63.3	77.5	84.4	87.8	90.4	95.2	102.0
Gross operating balance	3.2	2.4	38.8	-1.0	1.8	-2.1	1.1	1.8	1.8	2.1	2.1
Net lending/borrowing	-40.3	-53.4	-14.5	-88.7	-99.2	-100.7	-83.4	-86.0	-88.7	-93.1	-99.9
Tax refunds (Arrears) 4/			-37.0								
Overall fiscal balance (authorities' definition) 1/	-40.3	-53.4	-51.5	-88.4	-98.8	-100.7	-83.4	-86.0	-88.7	-93.1	-99.9
	(In percent of GDP)										
Revenue	16.1	16.1	17.5	15.9	14.3	14.1	13.6	13.6	13.5	13.5	13.5
Taxes	12.9	12.0	11.9	10.9	10.5	10.3	10.0	10.0	9.9	9.9	9.9
Direct taxes	8.5	9.0	8.9	7.9	7.8	7.7	7.5	7.4	7.4	7.3	7.4
Indirect taxes	4.5	3.0	3.0	3.0	2.7	2.7	2.5	2.5	2.5	2.6	2.4
Non-tax revenue	3.1	4.1	5.5	5.0	3.8	3.8	3.6	3.6	3.6	3.6	3.6
Investment income	1.6	2.2	4.0	3.4	2.3	2.4	2.3	2.3	2.3	2.3	2.3
Other revenue	1.5	1.9	1.6	1.6	1.5	1.4	1.3	1.3	1.3	1.3	1.3
Expenditure and net lending	19.0	19.8	18.4	22.2	20.7	20.2	18.3	18.0	17.8	17.7	17.7
Current expenditure, including COVID fund	38.4	15.9	14.9	18.4	16.6	15.5	13.6	13.5	13.5	13.4	13.4
Expense	15.8	15.9	14.9	16.0	14.2	14.2	13.6	13.5	13.5	13.4	13.4
Compensation of employees	5.6	5.5	5.3	5.9	5.5	5.2	5.1	5.0	5.0	4.9	4.9
Use of goods and services	2.5	2.4	2.1	2.1	1.5	1.8	1.5	1.5	1.4	1.4	1.4
Interest	2.0	2.1	2.2	2.4	2.5	2.8	2.9	3.1	3.2	3.4	3.4
Subsidies and social assistance	1.6	1.9	1.6	1.4	1.1	1.0	0.8	0.7	0.6	0.5	0.5
Grants and transfers	2.3	2.1	4.4	2.0	1.8	1.6	1.6	1.6	1.6	1.6	1.6
Social benefits and other expense	1.7	1.8	-0.6	2.2	1.8	1.7	1.7	1.6	1.6	1.6	1.6
COVID fund 2/				2.5	2.4	1.3					
Wage subsidies				0.9	0.6	0.2					
Social transfers				1.1	1.1	0.5					
Other spending				0.4	0.7	0.6					
Net acquisition of nonfinancial assets (incl. COVID spending) 3/	3.2	3.9	3.5	3.7	4.1	4.7	4.7	4.5	4.3	4.3	4.3
Gross operating balance	0.2	0.2	2.6	-0.1	0.1	-0.1	0.1	0.1	0.1	0.1	0.1
Net lending/borrowing	-2.9	-3.7	-1.0	-6.3	-6.4	-6.1	-4.6	-4.4	-4.3	-4.2	-4.2
Tax refunds (Arrears) 4/			-2.4								
Overall fiscal balance (authorities' definition) 1/	-2.9	-3.7	-3.4	-6.2	-6.4	-6.1	-4.6	-4.4	-4.3	-4.2	-4.2
II. Stock Positions											
	(In billions of ringgit)										
Federal government debt	686.8	741.1	793.0	879.6	978.3	1,079.0	1,162.4	1,248.4	1,337.0	1,430.2	1,530.0
(In percent of GDP)	50.0	51.2	52.4	62.1	63.4	65.0	64.3	64.3	64.2	63.9	63.8
<i>Memorandum items:</i>											
Structural balance (in billions of ringgit) 5/	-41.6	-69.5	-44.7	-68.0	-92.1	-96.9	-79.5	-82.5	-85.7	-91.0	-99.6
Structural balance (percent of potential GDP) 5/	-3.1	-4.8	-3.0	-4.6	-5.7	-5.6	-4.3	-4.2	-4.1	-4.0	-4.2
Structural primary balance (percent of potential GDP) 5/	-1.0	-2.7	-0.8	-2.3	-3.3	-2.9	-1.4	-1.1	-0.9	-0.7	-0.7
Primary balance (percent of GDP)	-0.9	-1.6	-1.2	-3.8	-3.9	-3.3	-1.7	-1.3	-1.0	-0.8	-0.7
Nonoil and gas primary balance (percent of GDP) 5/	-3.4	-5.3	-6.7	-7.6	-6.6	-5.9	-4.0	-3.6	-3.3	-3.0	-2.9
Oil and gas revenues (percent of GDP)	2.5	3.8	5.5	3.8	2.8	2.6	2.3	2.3	2.3	2.2	2.2
General government debt (percent of GDP) 6/	54.4	55.7	57.2	67.9	69.0	70.6	69.9	69.9	69.8	69.5	69.4
General government balance (percent of GDP) 6/	-2.4	-2.6	-2.0	-4.6	-5.5	-5.0	-3.5	-3.3	-3.1	-3.0	-3.0
Public sector balance (percent of GDP)	-3.6	-2.9	-3.4	-7.0	-8.2	-8.6	-7.1	-6.8	-6.4	-6.2	-6.2
Nominal GDP (in billions of ringgit)	1,372	1,448	1,513	1,417	1,544	1,660	1,807	1,941	2,083	2,238	2,398

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, 2017–21 1/

	2017	2018	2019	2020	2021
(In billions of ringgit; end of period)					
Net foreign assets	333.1	306.1	287.3	312.1	356.0
Foreign assets	583.4	584.0	582.8	601.0	661.3
Foreign liabilities	250.3	277.9	295.5	289.0	305.4
Net domestic assets	1,359.6	1,518.4	1,585.7	1,651.4	1,715.8
Net domestic credit	1,857.1	2,026.7	2,118.8	2,249.1	2,349.8
Net credit to nonfinancial public sector	161.7	195.0	197.5	250.5	278.3
Net credit to central government	144.4	170.9	173.4	226.8	254.4
Net credit to state & local government	1.9	1.9	1.9	1.4	1.7
Net credit to nonfinancial corporations	15.4	22.1	22.2	22.2	22.3
Credit to private sector 2/	1,607.6	1,741.2	1,825.8	1,898.0	1,970.3
Net credit to other financial corporations	87.8	90.6	95.4	100.6	101.1
Capital accounts	423.2	439.4	473.2	515.6	540.4
Other items (net)	-74.3	-68.9	-64.1	-85.4	-92.1
Broad money 3/	1,681.5	1,810.8	1,859.3	1,949.7	2,058.1
Narrow money	449.9	454.1	479.9	556.1	626.0
Currency in circulation	92.4	94.3	100.2	117.7	136.5
Transferable deposits	357.5	359.8	379.8	438.4	489.5
Other deposits	1,199.4	1,314.0	1,343.2	1,361.0	1,403.8
Securities other than shares	32.2	42.7	36.1	32.6	28.3
(Contributions to 12-month growth in broad money, in percentage points)					
Net foreign assets	-1.8	-1.6	-1.0	1.3	2.3
Net domestic assets	6.6	9.4	3.7	3.5	3.3
<i>Memorandum items:</i>					
Broad money (12-month percent change)	4.8	7.7	2.7	4.9	5.6
Currency in circulation (12-month percent change)	8.1	2.1	6.2	17.5	16.0
Credit to private sector (12-month percent change)	5.4	8.3	4.9	4.0	3.8
Money multiplier (broad money/narrow money)	3.7	4.0	3.9	3.5	3.3
Sources: Data provided by the Malaysian authorities; and IMF, <i>Integrated Monetary Database</i> and staff calculations.					
1/ Based on data provided by the authorities, but follows compilation methodology used in IMF's <i>Integrated Monetary Database</i> .					
2/ Actual data as provided by the Malaysian monetary authorities in the <i>Integrated Monetary Database</i> .					
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, 2017–2021Q3

	2017	2018	2019	2020	2021Q3
	(In percent; end of period)				
Capital adequacy					
Regulatory capital to risk-weighted assets	17.8	18.1	18.6	18.9	18.2
Regulatory Tier 1 capital to risk-weighted assets	15.0	14.6	15.1	15.7	14.9
Asset quality					
Nonperforming loans net of provisions to capital 1/	6.2	4.8	5.0	5.1	5.2
Nonperforming loans to total gross loans	1.5	1.5	1.5	1.6	1.6
Earnings and profitability					
Return on assets	1.4	1.4	1.5	1.1	1.2
Return on equity	13.1	12.6	12.9	9.2	10.8
Interest margin to gross income	61.1	61.0	57.8	58.1	60.5
Non-interest expenses to gross income	43.2	42.0	42.3	42.5	44.6
Liquidity					
Liquid assets to total assets (liquid asset ratio)	22.0	21.9	21.6	22.0	23.3
Liquid assets to short-term liabilities	138.3	143.2	149.1	148.2	154.4
Loan-deposit ratio 2/	88.9	87.7	88.6	87.6	86.4
Liquidity Coverage Ratio	130.5	139.6	146.5	151.7	155.1
Sensitivity to market risk					
Net open position in foreign exchange to capital	6.1	5.5	4.2	5.2	4.9
Sectoral distribution of total loans to nonbanking sector					
Residents	97.0	97.0	97.5	97.4	97.2
Other financial corporations	3.3	3.2	3.5	3.4	3.5
General government	1.9	2.0	1.8	1.8	1.7
Nonfinancial corporations	35.9	35.5	35.4	34.4	34.5
Other domestic sectors	56.0	56.3	56.9	57.9	57.5
Nonresidents	3.0	3.0	2.5	2.6	2.8

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.

2/ Deposits exclude those accepted from banking institutions and Bank Negara Malaysia. Loans exclude loans sold to Cagamas Berhad and loans extended to banking institutions. Beginning July 2015, loans exclude financing funded by Islamic Investment Accounts.

Appendix I. The Financial Sector Blueprint: 2022-2026¹

The recently launched Bank Negara Malaysia's Financial Sector Blueprint (2022-2026) strategy focuses on fostering financial inclusion, economic transformation, and a sustainable economy.

1. **Financial policies were supportive of the economy during the COVID-19 pandemic.** The Fund for small and medium enterprises (SMEs) was enhanced by RM4.5 billion, bringing the total available funds as of mid-September 2021 to RM11.2 billion. Additional facilities were provided following the 2022 budget announcement. Furthermore, under the enhanced Targeted Relief and Recovery Facility, SMEs can now utilize up to 30 percent of the approved financing to repay existing business financing.² In addition, a six-month loan moratorium available to all individuals (B40, M40 and T20), microenterprises, and affected SMEs was established effective July 7, 2021.
2. **The financial sector features prominently in the 12MP.** The 12MP recognizes the role of the financial sector in channeling resources to the productive sectors of the economy in order to foster a sustained growth in Malaysia. The financial sector blueprint documents the strategic orientation for the sector over the next five years.
3. **The Blueprint identifies five strategic thrusts to foster financial inclusion, economic transformation, and a sustainable economy³:**
 - *Fund Malaysia's economic transformation* – through continued support to the recovery of the economy, regulatory actions to promote the aspiration of becoming a high-income country and enhancing the intermediation role of domestic financial markets.
 - *Elevate the financial well-being of households and businesses* – through the improvement of financial inclusion by providing access including through mobile banking, strengthening financial resilience for both household and the corporate sectors, and enhancing financial ethics.
 - *Advance digitalization of the financial sector* – through the digital infrastructure dedicated to improving digital financial services, cybersecurity risk management, and regulatory practices.
 - *Position the financial system to facilitate an orderly transition to a greener economy* – through the integration of climate risks both in BNM's internal processes and, in its supervisory and prudential regulatory roles, and the support of an orderly transition to a low-carbon economy.
 - *Advance value-based finance through Islamic finance leadership* – through positioning Malaysia as an international gateway for Islamic finance, enhancing policy enablers of value-based finance and promoting the social finance aspect of Islamic finance.

¹ Prepared by Kodjovi Eklou.

² Refinancing of existing business financing under BNM's Fund for SMEs is not allowed.

³ The financial sector blueprint can be found [here](#).

Appendix II. Public Debt Sustainability Analysis¹

Malaysia started the pandemic with at-risk fiscal space. The two successive temporary increases in its debt ceiling by a total of 10 percentage points as well as ample liquidity in the domestic markets allowed stepped-up support for the economy amid the 2021 Delta-variant outbreak. However, fiscal space remains at risk and there is a need to start rebuilding space once the recovery is entrenched. Under current policies, Malaysia's federal government debt remains sustainable and is projected to stabilize at around 64 percent of GDP in the medium term. Existing pre-COVID vulnerabilities, such as sizable external financing requirements and large contingent liabilities, exacerbate sustainability risks. A credible medium-term consolidation plan is required to put the debt on a clear downward trend path and ensure fiscal sustainability.

1. **Baseline macro-fiscal assumptions.** The macroeconomic and policy assumptions follow the team's baseline projections. In 2021, the economy is recovering from the COVID-19-induced slowdown and expand at 3.1/9 percent in real/nominal terms. The recovery will firm up in 2022 with real growth projected at 5.7 percent. The fiscal deficit, which increased to 6.2 percent of GDP in 2020 is expected to widen to 6.4 percent in 2021 as the authorities appropriately continued supporting the economy amid the worst Delta-variant outbreak in the second half 2021. Under current policies, the deficit is expected to decrease to 6.1 percent in 2022 and average at 5 percent of GDP over 2022-24, as per the authorities' target, but will remain at 4.3 percent in 2025, significantly above the authorities' 12th Malaysia Plan (12MP) target of 3 to 3.5 percent of GDP.
2. **Financing needs.** Under the baseline scenario, Malaysia's gross financing needs (defined as the sum of the fiscal deficit and maturing debt) are projected to stand at 11.4 percent of GDP in 2021 and to decline to 10.8 in 2022, and to decline towards the pre-2020 average by 2026.
3. **Debt profile vulnerabilities.** Debt in the DSA is based on the federal government budget, 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 standing on the debt profile vulnerabilities assessed in the MAC-DSA is as follows, with the first two assessed as high risk (Heat Map)
 - While majority of the debt is issued at long maturities, the share of T-Bill issuance has recently increased and the annual change in short-term public debt this year slightly exceeded (at 1.2 percent) the upper threshold of early warning benchmark of 1 percent.
 - The share of debt held externally is moderately high at 26 percent of total debt, above the lower threshold of early warning benchmarks. However, about 90 percent of external debt is in local currency, and the deep and liquid domestic debt market and the existence of large domestic

¹ Prepared by Ghada Fayad.

institutional investors who tend to make opportunistic investments is a mitigating factor of this risk.

- The share of debt denominated in foreign currency is very low at 3 percent of total debt.
- Market perception remains favorable with bond spreads below the lower MAC-DSA threshold of 200 bps.
- The external financing requirement is high at 31 percent of GDP in 2020, and is above the upper threshold of early warning benchmarks, though it has been on a decreasing trend and there are several mitigating factors to this vulnerability as discussed in Appendix X.

4. **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, initially to allow for increased borrowing to finance COVID-related spending, but in 2021 the increase was also linked to the planned scaling-up of public investment as per the 12th Malaysia Plan. It is worth noting that the previous increases in Malaysia's debt ceiling from 40 percent in 2003 to 45 percent in 2008, and to 55 percent in 2009 were indeed all permanent.
- Second, the debt limit for the Malaysia Treasury Bills (MTBs) and offshore borrowing stands at RM10 billion and RM35 billion, respectively, and has not been amended.
- The debt ceiling for federal government debt, which takes into account all the limits above and changes over time, stands at 67.9 percent of GDP in 2021 and 67.7 percent of GDP 2022, and baseline debt is projected to remain below those limits in both years. With the authorities confirming that the 65 percent of GDP ceiling will remain effective until 2025, baseline debt remains below the effective limit until then.

5. **Realism of Baseline Assumptions.**

- Past assumptions on real growth and primary balance are neither too optimistic nor pessimistic. The highest median forecast error for the GDP deflator is -1.8 percent, suggesting that the staff forecasts have been relatively optimistic. The forecast bias has improved in the past few years.
- Under the baseline scenario, the projected 3-year adjustment in the cyclically adjusted primary balance (CAPB) is relatively small, with a percentile rank of 27 percent compared to the historical experience for high-debt market access countries. The CAPB level is in a percent rank of 77 percent.

6. **Stress Tests and Risks.** Under the baseline scenario, the federal government debt will remain within the authorities' new debt anchor until 2025 and under the DSA's debt burden benchmark of 70 percent in the medium term.

- *Macro-fiscal stress tests.* Debt is expected to remain below the 70 percent benchmark in the medium-term under the real interest rate shock and the primary balance shocks. The debt profile improves under a real depreciation shock given the low share of foreign-denominated debt instruments. The real growth shock and combined shocks however would cause debt to increase over 70 percent of GDP in the medium term. Gross financing needs remain below the DSA's 15 percent benchmark under all shock scenarios.
- *Contingent liability shock.* This shock assumes that the government is obliged to absorb all committed guarantees, totaling 13 percent of GDP, over 5 years. This shock also assumes negative feedback effect on interest rate. The debt-to-GDP ratio would rise to 77.2 percent of GDP in the medium term, breaching the DSA and debit limit benchmarks.

7. **Illustrative fiscal consolidation scenarios.** The 2022 Budget confirmed the authorities' 3.5 percent of GDP deficit target for 2025 as per the 12MP. Reaching that target would require fiscal consolidation measures of about 1.3 pp relative to the baseline, optimally starting once the recovery is entrenched. The adjustment would optimally be more heavily based on revenue measures. The consolidation is necessary to rebuild buffers and maintain the ability to respond to future shocks and to finance the ambitious and necessary development expenditure agenda under the 12MP. It is also needed to maintain market confidence and address Malaysia's structural fiscal issues including (i) persistent revenue weakness, (ii) increasing burden of debt servicing costs, (iii) and the uncertainty as well as crowding-out costs of continuing to finance deficits through heavy reliance on the domestic market. Finally, fiscal policy has a key role to play in climate change mitigation, which is an urgent priority for the authorities, and carbon pricing initiatives have proven their ability to achieve climate mitigation goals with the added benefit of significant revenue generation. Relatedly, staff analysis also shows there is scope for climate mitigation and adaptation to be skillfully integrated, for instance by hypothecating some share of revenues from a potential carbon tax for adaptation-related public investment spending which would boost economic growth and thereby provide additional fiscal space.

Figure 1. Malaysia: Public Sector Debt Sustainability Analysis – Baseline Scenario

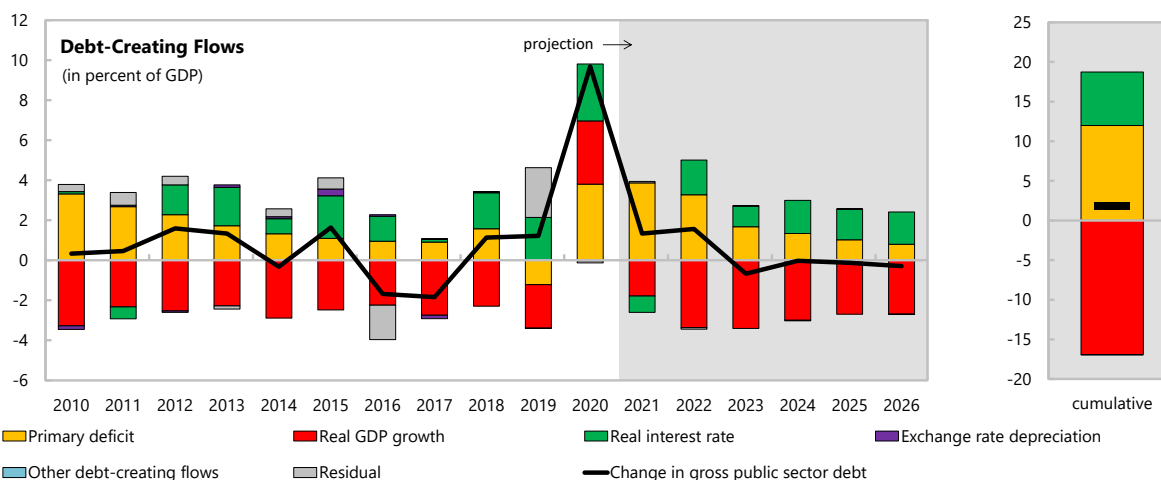
(Percent of GDP unless otherwise indicated)

Debt, Economic and Market Indicators^{1/}

	Actual			Projections						As of September 15, 2021		
	2010-2018 ^{2/}	2019	2020	2021	2022	2023	2024	2025	2026			
Nominal gross public debt	51.1	52.4	62.1	63.4	65.0	64.3	64.3	64.2	63.9	Sovereign Spreads		
										EMBIG (bp) ^{3/}	194	
Public gross financing needs	8.8	4.1	9.6	11.3	10.9	8.3	8.8	8.2	8.1	5Y CDS (bp)		
										5Y CDS (bp)	43	
Real GDP growth (in percent)	5.5	4.4	-5.6	3.1	5.7	5.7	5.0	4.5	4.5	Ratings	Foreign	Local
Inflation (GDP deflator, in percent)	2.1	0.1	-0.8	5.7	1.7	3.0	2.3	2.7	2.8	Moody's	A3	A3
Nominal GDP growth (in percent)	7.7	4.5	-6.4	9.0	7.5	8.9	7.4	7.3	7.4	S&P's	A-	A
Effective interest rate (in percent) ^{4/}	4.3	4.4	4.3	4.4	4.7	4.9	5.2	5.4	5.6	Fitch	BBB+	BBB+

Contribution to Changes in Public Debt

	Actual			Projections						cumulative	debt-stabilizing primary balance ^{9/}
	2010-2018	2019	2020	2021	2022	2023	2024	2025	2026		
Change in gross public sector debt	0.3	1.2	9.7	1.3	1.6	-0.7	0.0	-0.1	-0.3	1.8	
Identified debt-creating flows	0.2	-1.3	9.8	1.3	1.6	-0.7	0.0	-0.1	-0.3	1.8	
Primary deficit	1.8	-1.2	3.8	3.9	3.3	1.7	1.3	1.0	0.8	12.0	-1.1
Primary (noninterest) revenue and grants	18.7	17.5	15.9	14.3	14.1	13.6	13.6	13.5	13.5	82.7	
Primary (noninterest) expenditure	20.5	16.3	19.7	18.2	17.4	15.3	14.9	14.6	14.3	94.7	
Automatic debt dynamics ^{5/}	-1.5	0.0	6.0	-2.6	-1.6	-2.4	-1.3	-1.2	-1.1	-10.2	
Interest rate/growth differential ^{6/}	-1.6	0.0	6.0	-2.6	-1.6	-2.4	-1.3	-1.2	-1.1	-10.2	
Of which: real interest rate	1.0	2.1	2.8	-0.8	1.7	1.0	1.7	1.5	1.6	6.7	
Of which: real GDP growth	-2.6	-2.2	3.2	-1.8	-3.4	-3.4	-3.0	-2.7	-2.7	-16.9	
Exchange rate depreciation ^{7/}	0.0	0.0	0.0	...	...	...	...	...	...	...
Other identified debt-creating flows	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Contingent liabilities	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Residual, including asset changes ^{8/}	0.1	2.5	-0.1	0.1	-0.1	0.0	0.0	0.0	0.0	0.0	



Source: IMF staff.

1/ Public sector is defined as central government.

2/ Based on available data.

3/ Long-term bond spread over U.S. bonds.

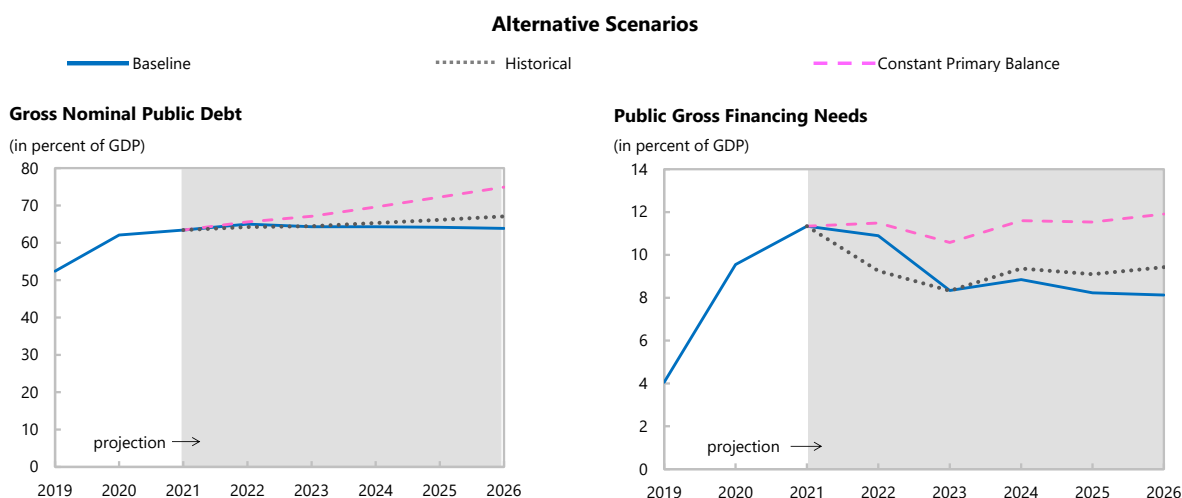
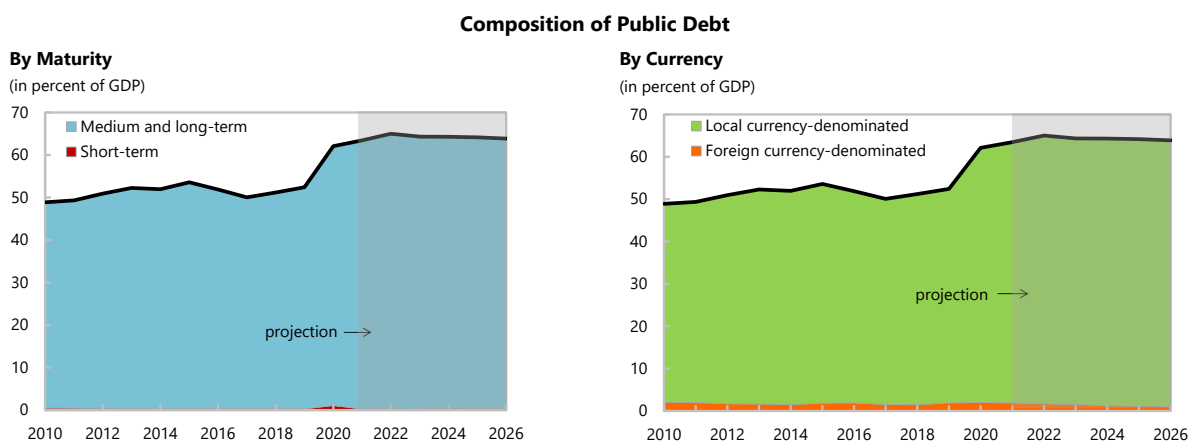
4/ Defined as interest payments divided by debt stock (excluding guarantees) at the end of previous year.

5/ Derived as $[(r - \pi(1+g) - g + ae(1+r))/(1+g+\pi+g\pi)]$ times previous period debt ratio, with r = interest rate; π = growth rate of GDP deflator; g = real GDP growth rate; a = share of foreign-currency denominated debt; and e = nominal exchange rate depreciation (measured by increase in local currency value of U.S. dollar).6/ The real interest rate contribution is derived from the numerator in footnote 5 as $r - \pi(1+g)$ and the real growth contribution as $-g$.7/ The exchange rate contribution is derived from the numerator in footnote 5 as $ae(1+r)$.

8/ Includes asset changes and interest revenues (if any). For projections, includes exchange rate changes during the projection period.

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

Figure 2. Malaysia: Public Debt Sustainability Analysis – Composition of Public Debt and Alternative Scenarios

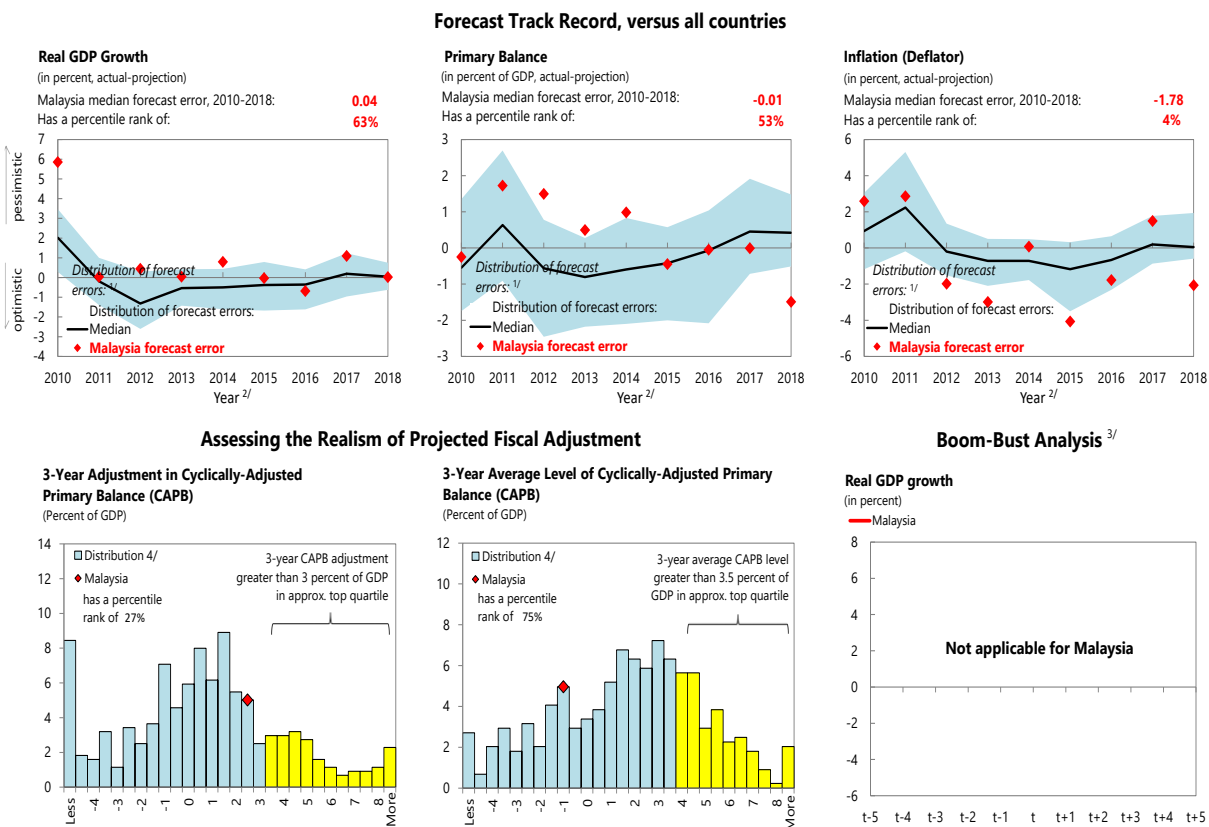


Underlying Assumptions (in percent)

Scenario	2021	2022	2023	2024	2025	2026
Baseline Scenario						
Real GDP growth	3.1	5.7	5.7	5.0	4.5	4.5
Inflation	5.7	1.7	3.0	2.3	2.7	2.8
Primary Balance	-3.9	-3.3	-1.7	-1.3	-1.0	-0.8
Effective interest rate	4.4	4.7	4.9	5.2	5.4	5.6
Constant Primary Balance Scenario						
Real GDP growth	3.1	5.7	5.7	5.0	4.5	4.5
Inflation	5.7	1.7	3.0	2.3	2.7	2.8
Primary Balance	-3.9	-3.9	-3.9	-3.9	-3.9	-3.9
Effective interest rate	4.4	4.7	4.9	5.2	5.5	5.7
Historical Scenario						
Real GDP growth	3.1	4.0	4.0	4.0	4.0	4.0
Inflation	5.7	1.7	3.0	2.3	2.7	2.8
Primary Balance	-3.9	-1.5	-1.5	-1.5	-1.5	-1.5
Effective interest rate	4.4	4.7	5.0	5.4	5.7	6.0

Source: IMF staff.

Figure 3. Malaysia: Public Debt Sustainability Analysis – Realism of Baseline Assumptions



Source : IMF Staff.

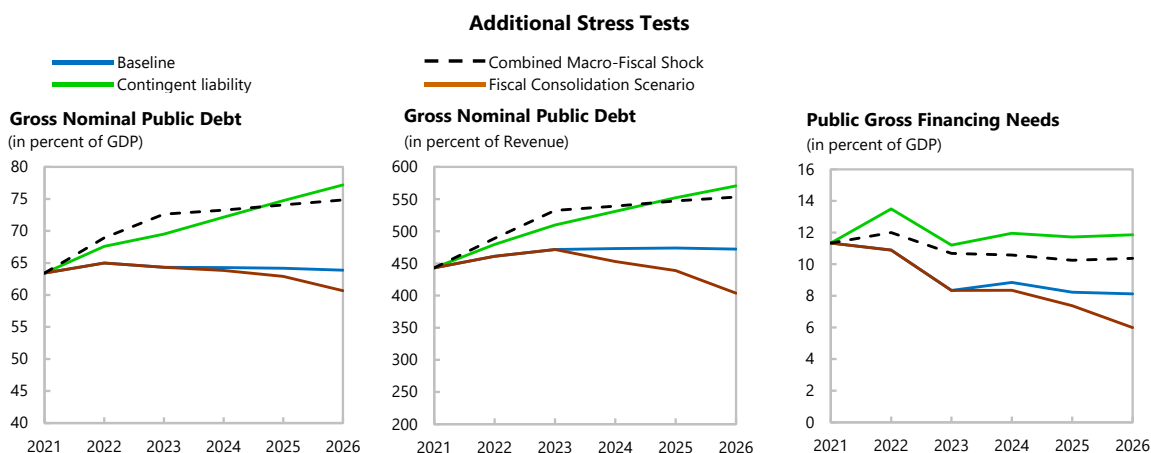
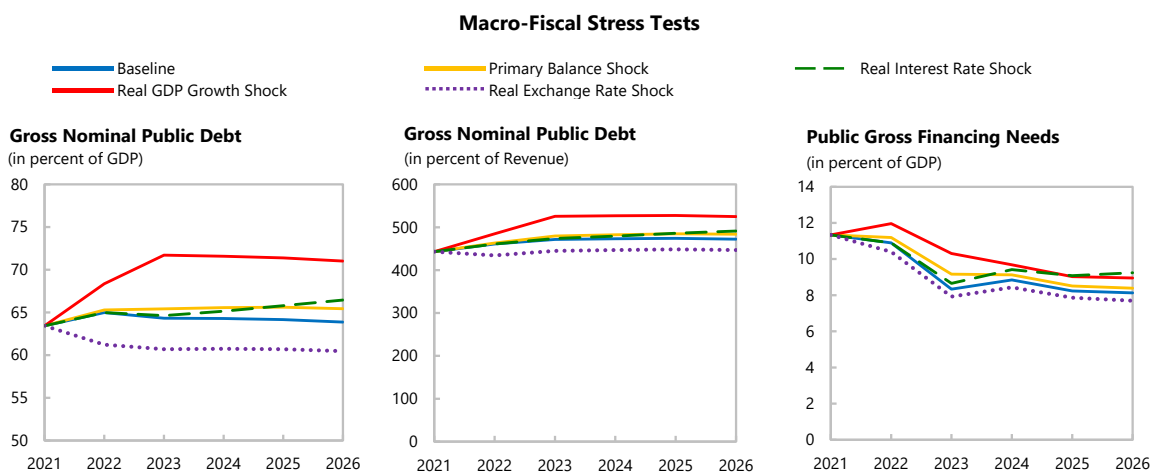
1/ Plotted distribution includes all countries, percentile rank refers to all countries.

2/ Projections made in the spring WEO vintage of the preceding year.

3/ Not applicable for Malaysia, as it meets neither the positive output gap criterion nor the private credit growth criterion.

4/ Data cover annual observations from 1990 to 2011 for advanced and emerging economies with debt greater than 60 percent of GDP. Percent of sample on vertical axis.

Figure 4. Malaysia: Public Debt Sustainability Analysis – Stress Tests



Underlying Assumptions (in percent)

	2021	2022	2023	2024	2025	2026
Primary Balance Shock						
Real GDP growth	3.1	5.7	5.7	5.0	4.5	4.5
Inflation	5.7	1.7	3.0	2.3	2.7	2.8
Primary balance	-3.9	-3.6	-2.5	-1.5	-1.2	-0.9
Effective interest rate	4.4	4.7	4.9	5.2	5.4	5.7
Real Interest Rate Shock						
Real GDP growth	3.1	5.7	5.7	5.0	4.5	4.5
Inflation	5.7	1.7	3.0	2.3	2.7	2.8
Primary balance	-3.9	-3.3	-1.7	-1.3	-1.0	-0.8
Effective interest rate	4.4	4.7	5.5	6.1	6.7	7.2
Combined Shock						
Real GDP growth	3.1	2.3	2.3	5.0	4.5	4.5
Inflation	5.7	0.8	2.2	2.3	2.7	2.8
Primary balance	-3.9	-4.0	-3.0	-1.5	-1.2	-0.9
Effective interest rate	4.4	4.8	5.5	6.2	6.8	7.3
Real GDP Growth Shock						
Real GDP growth	3.1	2.3	2.3	5.0	4.5	4.5
Inflation	5.7	0.8	2.2	2.3	2.7	2.8
Primary balance	-3.9	-4.0	-3.0	-1.3	-1.0	-0.8
Effective interest rate	4.4	4.7	5.0	5.3	5.5	5.7
Real Exchange Rate Shock						
Real GDP growth	3.1	5.7	5.7	5.0	4.5	4.5
Inflation	5.7	9.3	3.0	2.3	2.7	2.8
Primary balance	-3.9	-3.3	-1.7	-1.3	-1.0	-0.8
Effective interest rate	4.4	4.8	4.9	5.2	5.4	5.6

Source: IMF staff.

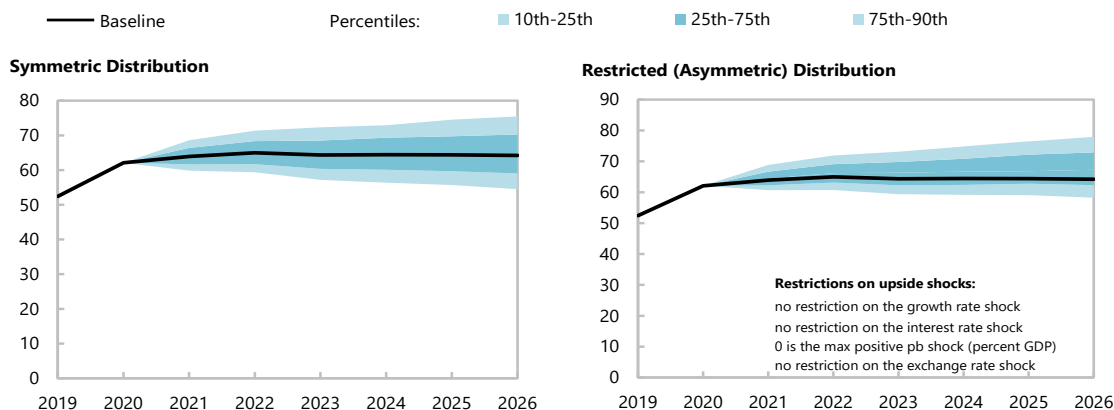
Figure 5. Malaysia: Public Debt Sustainability Analysis Risk Assessment

Heat Map

Debt level ^{1/}	Real GDP Growth Shock	Primary Balance Shock	Real Interest Rate Shock	Exchange Rate Shock	Contingent Liability shock
Gross financing needs ^{2/}	Real GDP Growth Shock	Primary Balance Shock	Real Interest Rate Shock	Exchange Rate Shock	Contingent Liability Shock
Debt profile ^{3/}	Market Perception	External Financing Requirements	Change in the Share of Short-Term Debt	Public Debt Held by Non-Residents	Foreign Currency Debt

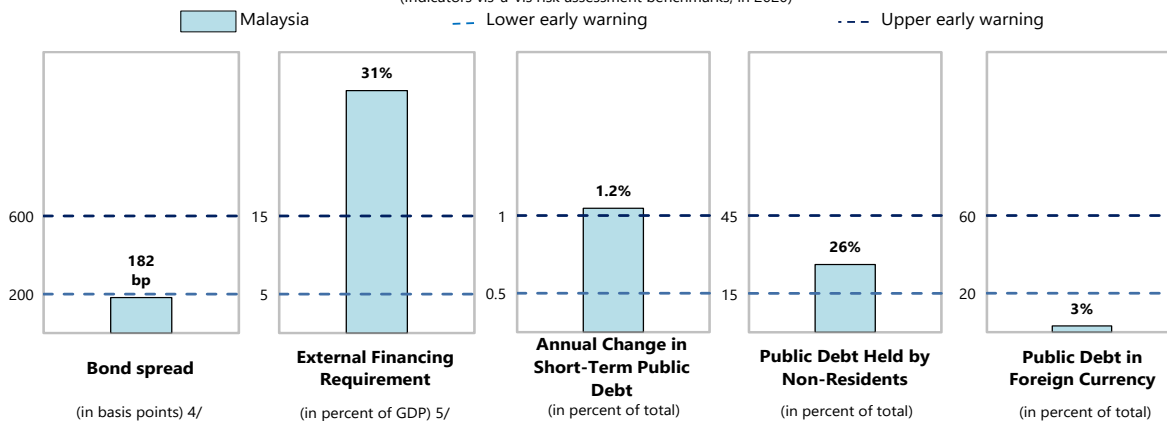
Evolution of Predictive Densities of Gross Nominal Public Debt

(in percent of GDP)



Debt Profile Vulnerabilities

(Indicators vis-à-vis risk assessment benchmarks, in 2020)



Source: IMF staff.

1/ The cell is highlighted in green if debt burden benchmark of 70% is not exceeded under the specific shock or baseline, yellow if exceeded under specific shock but not baseline, red if benchmark is exceeded under baseline, white if stress test is not relevant.

2/ The cell is highlighted in green if gross financing needs benchmark of 15% is not exceeded under the specific shock or baseline, yellow if exceeded under specific shock but not baseline, red if benchmark is exceeded under baseline, white if stress test is not relevant.

3/ The cell is highlighted in green if country value is less than the lower risk-assessment benchmark, red if country value exceeds the upper risk-assessment benchmark, yellow if country value is between the lower and upper risk-assessment benchmarks. If data are unavailable or indicator is not relevant, cell is white.

Lower and upper risk-assessment benchmarks are:

200 and 600 basis points for bond spreads; 5 and 15 percent of GDP for external financing requirement; 0.5 and 1 percent for change in the share of short-term debt; 15 and 45 percent for the public debt held by non-residents; and 20 and 60 percent for the share of foreign-currency denominated debt.

4/ Long-term bond spread over U.S. bonds, an average over the last 3 months, 17-Jun-21 through 15-Sep-21.

5/ External financing requirement is defined as the sum of current account deficit, amortization of medium and long-term total external debt, and short-term total external debt at the end of previous period.

Appendix III. External Sector Assessment¹

<p>Overall Assessment: <i>On a preliminary basis and adjusting for transitory factors, Malaysia's external position in 2021 is assessed as moderately stronger than the level implied by medium-term fundamentals and desirable policies.</i> During the COVID-19 pandemic, Malaysia's CA surplus increased given strong external demand for pandemic related exports, including personal protective equipment (PPE) and electronic and electrical (E&E) equipment. A decline in the surplus is projected over the medium-term as domestic private demand gradually recovers and as Malaysia moves from the pandemic to the endemic phase of COVID-19².</p> <p>Potential Policy Responses: With Malaysia almost fully vaccinated, near-term policies should continue to support the nascent recovery through a targeted fiscal expansion combined with an accommodative monetary policy stance. Over the medium term, fiscal policy should target a gradual and growth-friendly consolidation, while policies that strengthen social safety nets and encourage private investment and productivity growth should be prioritized to support external rebalancing and help to bring the current account balance closer to its norm.</p>							
Foreign Asset and Liability Position and Trajectory	<p>Background. Malaysia's NIIP has averaged around 1 percent since 2010 and was 5.9 percent of GDP in 2021 (compared with 4.8 percent of GDP at the end of 2020), reflecting higher gross and reserve assets, and an increase in net portfolio investment. Direct investment and portfolio investment abroad contribute most to assets, whereas direct investment and portfolio liabilities contribute most to liabilities. Total external debt, measured in US dollars, was about 68 percent of GDP in 2021 (compared with 71 percent at the end of 2020), has remained manageable, with one third of it is in foreign currency, and 37 percent in short-term debt by original maturity (half of which held by intragroup borrowings among banks and corporations which have been generally stable during the pandemic).</p> <p>Assessment. Malaysia's NIIP is projected to rise over the medium term, reflecting projected CA surpluses. Malaysia's balance sheet strength, exchange rate flexibility, and increased domestic investor participation should continue to help withstand shocks (as they have in the context of the COVID-19 crisis).</p>						
	2021 (percent GDP)	NIIP: 5.9	Gross Assets: 137.1	Res. Assets: 31.5	Gross Liab.: 131.2	Debt Liab.: 29.7	
Current Account	<p>Background. Between 2010 and 2019 Malaysia's CA surplus contracted by 7 percentage points, underpinned by lower national savings and robust domestic demand. In 2021 the CA account surplus narrowed slightly to 3.5 percent of GDP (compared to 4.2 percent of GDP in 2020) as a recovery in overall imports has partly offset exports. The CA surplus continues to be affected by pandemic-related transitory factors including (1) the decline in travel income given continued international travel restrictions; (2) the sustained strong external demand for pandemic-related exports, including rubber glove products and electronic and electrical equipment; and (3) the decline in outward remittances from the crisis and lockdown measures in 2021.</p> <p>Assessment. The EBA CA model estimates a cyclically adjusted CA of 1.7 percent of GDP and a CA norm at -0.1 percent of GDP for 2021. After factoring in the transitory effect on the CA of the net exports of pandemic-related medical goods, including rubber glove products (1.3 percent of GDP), the global household consumption composition shift (0.9 percent of GDP), lower net remittances (0.2 percent of GDP), the decline in receipts from travel services receipts including tourism (-1.5 percent), and transport (-0.12) the estimate of the IMF staff CA gap is about 1.1 percent of GDP (± 1 percent of GDP). Relative policy gaps largely explain the CA gap: low public health care expenditure compared to the rest of the world contributes 0.9 percentage point to the CA gap, while the looser fiscal policies adopted in 2021 in the rest of the world relative to Malaysia also contribute 0.9 percentage points to the excess surplus.</p>						
	2021 (percent GDP)	CA: 3.5	Cycl. Adj. CA: 1.7	EBA Norm: -0.1	EBA Gap: 1.8	COVID-19 Adj.: -0.7	Other Adj.	Staff Gap: 1.1
Real Exchange Rate	<p>Background. In 2021 the REER depreciated by 0.5 percent relative to the 2020 average and is about 6 percent lower than in 2015. The mild depreciation in 2021 compared to 2020 (-3 percent) reflect a stabilization in capital outflows and the effect of the weakened economic outlook and new COVID-19 waves on the NEER.</p> <p>Assessment. The IMF staff CA gap implies a REER undervaluation of -2.4 percent in 2021, applying an estimated elasticity of 0.46. The EBA REER index and level models estimate Malaysia's REER to be undervalued by -30 percent and -41 percent, respectively. At the same time, considering the lack of underlying macroeconomic stresses, such as inflation or wage pressures, and the broad stability of FX reserves, the IMF staff assesses the REER to be undervalued in the range of -0.4 to -4.4 percent, with a midpoint of -2.4 percent, consistent with the IMF staff CA gap.</p>						

¹ Prepared by Nour Tawk.

² The assessment is preliminary given the lack of full-year data for 2021. A complete analysis will be provided in the 2022 External Sector Report.

Capital and Financial Accounts: Flows and Policy Measures	<p>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. In 2020 Malaysia saw capital outflows during the March 2020 global risk-off episode, but capital flows stabilized afterward. Capital flows have remained broadly stable in 2021 despite the resurgence of COVID-19 waves and the renewal of lockdowns. Net portfolio flows reached US\$5.9 billion by September 2021, primarily driven by sustained net debt inflows (US\$6.8 billion). Since late 2016 the Financial Markets Committee has implemented measures to develop the onshore FX market and increase hedging opportunities.³</p> <p>Assessment. Continued exchange rate flexibility and macroeconomic policy adjustments, such as those prescribed by the IPF, are necessary to manage capital flow volatility. CFMs should be gradually phased out, with due regard for market conditions.</p>
FX Intervention and Reserves Level	<p>Background. Reserve levels have steadily increased for Malaysia during the COVID-19 pandemic, after capital outflows to the region stabilized following the risk-off episode in March 2020. Reserve levels stood at US\$116.8 billion as of December 2021 (compared to US\$107.6 billion at the end of December 2020).</p> <p>Assessment. Under the IMF's composite ARA metric, reserves remain broadly adequate therefore further accumulation is uncalled for. Gross official reserves were about 126 percent of the ARA metric at the end of December 2021. FX interventions should continue to be limited to preventing disorderly market conditions (DMC), while the exchange rate should continue to adjust as a first line of defense and to serve as a shock absorber in case of DMCs.</p>

³ On December 2, 2016, the Financial Markets Committee announced a package of measures aimed at facilitating onshore FX risk management and enhancing the depth and liquidity of onshore financial markets. Two of these measures were classified as CFMs under the IMF's institutional view on capital flows. In addition, the authorities' strengthened enforcement of regulations on resident banks' noninvolvement in offshore ringgit transactions was considered enhanced enforcement of an existing CFM measure. Over the course of 2017–19, additional measures were announced to help deepen the onshore financial market and facilitate currency risk management

Appendix IV. Trade Liberalization and GVCs as Engines of Growth in Malaysia¹

The pandemic has resulted in unprecedented output losses in Malaysia, and as everywhere, it is expected to engender significant medium-term scarring. An urgent and renewed structural reform drive is therefore needed to boost productivity and output potential. Trade has been a powerful driver of growth and poverty alleviation in Malaysia, but trade restrictions – especially non-tariff barriers – have remained high and have changed little since the 1990s. The analysis in this appendix indicates that while the pandemic would adversely impact trade and GVC patterns in the medium term, a reduction in non-tariff barriers could boost growth, productivity, and investment, mitigating some of the pandemic-related losses.

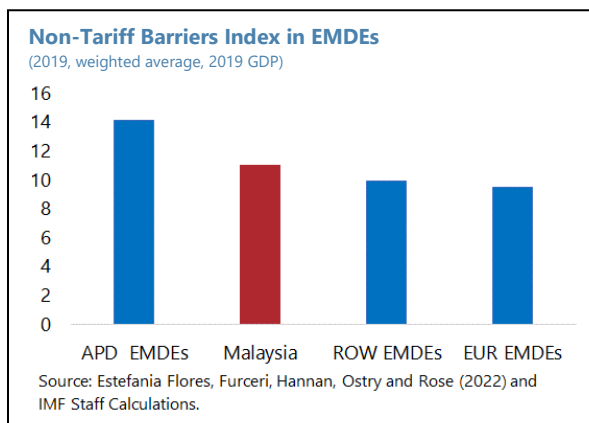
A. The Pre-Pandemic Landscape

1. **Trade has been a powerful driver of growth for Malaysia historically, as in the Asia-Pacific region.** The benefits of international trade are many and well documented in the literature, but among others, trade can help boost investment and productivity by allowing for faster spread of technology, including through linkages formed when participating in global value chains (see, for example, Krugman, 1979; Grossman and Helpman, 1991; Young, 1991; and Frankel and Romer, 1999 among others).
2. **In Malaysia, trade witnessed decades of robust growth.** De facto trade openness (defined as a share of goods and services trade in GDP) in Malaysia reached over 200 percent of GDP in the years leading to the Global Financial Crisis (GFC), but then began to decline afterwards, in line with ASEAN peers (figure 1, panel 1). A similar trend is visible with respect to Global Value Chain (GVC) integration, despite Malaysia having a seminal role in integration and global manufacturing. Backward linkages (foreign value-added goods and refer to the use of imported value-added goods as inputs in the production of exports) are the second highest (following Singapore) in ASEAN countries, and have stalled in the past decade, despite an increasing trend prior to the GFC (figure 1, panel 2).
3. **A slowdown in trade liberalization is among the many reasons for the slowdown in trade momentum prior to the pandemic in Malaysia and other countries.** The slowdown in global economic activity following the GVC, and subsequently investment, largely accounts for the slowdown in trade growth (World Economic Outlook 2016, Chapter 2). But another explanation can be tied to the stagnation in trade liberalization and the slower pace of trade reforms (Asia and Pacific Regional Economic Outlook 2021, Chapter 4). Indeed, the fast decline in tariffs from more than 50 percent in the 1970s to less than 6 percent in the 2000s contributed to the fast export growth in the region (figure 1, panel 3). By 2014, tariffs in Malaysia were already lower than average tariffs in Asia (1.2 percent). This indicates that little scope for further tariff reductions. However, this is not the case for non-tariff barriers.

¹ Prepared by Nour Tawk. This appendix leverages the work on trade liberalization contained in the October 2021 Asia and Pacific Regional Economic Outlook.

4. **Non-tariff barriers remain high in Malaysia and the ASEAN region more generally but are more difficult to quantify given data constraints.** To remedy this, we use the novel and comprehensive trade restrictions index (the NTB index, henceforth referred to as the NTBI), compiled by Estefania Flores and others (2022), which covers up to 157 countries going back as far as 1949. The NTBI is constructed based on detailed information on trade restrictions using data from the IMF's Annual Report on Exchange Arrangements and Exchange Restrictions (AREAER) and is an empirical measure of how restrictive official government policy is against international flows of goods and services. Namely, the index is constructed on the following AREAR measures: i) exchange measures; ii) arrangements for payments and receipts; iii) imports and import payments; iv) exports and exports proceeds; and v) payments and proceeds from invisible transfers and current transfers. Therefore, the index combines information on relevant non-tariff barriers, including payment restrictions, licensing requirements, documentation requirements, and so on. The index varies from 0 to 20, with lower levels indicating fewer trade restrictions.

5. **Non-tariff barrier reforms have stalled in Malaysia and across ASEAN countries.** The NTBI has declined from 15 in 1949 to 11 in 2019 in line with ASEAN peers (with the exception of Singapore), and rankly slightly below Asia's median (figure 1, panel 4). However, while Malaysia has lower NTBs on average compared to EMDEs in Asia, it has higher NTBs compared to other EMDEs (text chart) suggesting scope for further liberalization. Indeed, compared to a standard European EMDE (where NTBs are lowest), NTBs with regards to imports and exports remain, which could make trade more costly. Those would include restrictions on imports and import payments such as documentation requirements for release of foreign exchange for imports (such as pre-shipment inspections, documents requirements), import licenses (open general licenses and licenses with quotas requirements). Other non-tariff barriers also remain on exports and exports proceeds: those include repatriation requirements, surrender requirements, documentation requirements (such as pre-shipment inspections), and export licenses. On the other hand, and comparable to advanced economies and European EMDEs, Malaysia has removed all restrictions to payments for invisible transactions and current transfers.



B. The Effect of the COVID-19 Pandemic on Trade Patterns, and Risks of Scarring

6. **The impact of the COVID-19 pandemic on trade in Malaysia differs from past recessions episodes.** During the GFC, Malaysia's exports of goods declined by 17 percent following the global shock. However, services held up, as exports of services dropped by less than 5 percent on average in 2009 and had recovered by the following year (Figure 2, panel 1). As for COVID-19, while initially the Movement Containment Order (MCO) caused net exports to crash in 2020Q2, what followed was an increase in exports in the following quarters so that exports of goods only declined

by 5 percent in 2020, causing a net increase in the trade balance by 11 percent in 2020. However, this net increase in the goods balance was offset by the collapse in the services balance: exports of services declined by 46 percent in 2020, while imports of services were reduced by 23 percent. Losses in services were mainly driven by the collapse in international travel, which nearly quadrupled the services balance deficit.

7. **The pandemic has had a heterogeneous impact on trade across sectors.** As a manufacturer of pharmaceutical goods, protective and personal equipment (PPE), and electronic and electrical (E&E) equipment, Malaysia was well positioned to benefit from the external demand for pandemic-related goods (Figure 2, panel 2). Indeed, exports of both pharmaceuticals and PPE increased by almost 8 percent year-on-year in 2020, with a pronounced increase in exports of PPE rubber gloves. E&E exports followed by a 7 percent increase, as the work-from-home new norm propelled household demand for electronic goods. This more than offset the temporary decline in exports of autos and machinery, as well as of agriculture and mining exports which had been generally robust in the years prior to the pandemic.

8. **Anecdotal evidence on trade and GVCs suggest disruption in supply chains following stringent lockdown episodes.** In 2021Q2, a severe COVID-19 wave caused prompted authorities to keep essential sectors operative at 60 percent capacity, while all non-essential sectors shut down. However, as outbreaks occurred, manufacturing factories were shut down to control the spread of the virus. This resulted in disruptions in the supply of semi-conductors which led to shutdowns of many global manufacturers, including US (Ford Motors), Japanese (Toyota and Nissan), and German (Infineon) manufacturers. News on supply disruptions persisted well after the lockdowns have been lifted and as firms transition back to full capacity operations: data on port congestion suggests that cargo rollovers² in Malaysia's Port Klang³ had increased by over 58 percent in 2021⁴, among the highest in the region⁵, leading to higher container median time in port compared to historical norms (figure 2, panel 3).

9. **High frequency proxies on GVCs corroborate anecdotal evidence on supply chain disruptions.** We use monthly data on the share of intermediate imports to total imports as a proxy for GVC participation and find that fluctuations in intermediate imports correspond to periods of lockdowns in Malaysia. Monthly data on semi-conductor exports shows a similar trend, with troughs and peaks corresponding to periods of lockdowns and of restrictions eased respectively (figure 2, panel 4).

² A container rollover is when a container fails to get loaded onto its scheduled vessel and has to be accommodated on a subsequent ship.

³ Port Klang is considered among the biggest 50 container ports in the world (<https://www.worldshipping.org/top-50-ports>)

⁴ <https://www.theedgemarkets.com/article/port-klang-has-highest-container-rollover-percentage-5845-2021-percentE2percent80percent94-data>.

⁵ Recent news point to an easing in global supply chains disruptions.

10. **We assess the pandemic's medium-term impact on GVCs and trade patterns by looking at past recessions and pandemic episodes.** Local projection methods using data on measures of GVC participation at the country-year level for ASEAN countries are regressed on indicators for past recessions and pandemics. The results indicate that recessions and pandemics have a large and persistent impact on GVCs: in the medium term, backward linkages, forward linkages, and total GVC linkages decline by -2.3, -0.2, and -2.1 percentage points respectively (figure 2, panel 5). The results also show the importance of country linkages, highlighting that when recessions occur in partner countries, they also lead to a decline GVCs. The results suggest that, in the medium term, a 6 percentage points decline in country partner growth would lead to a -0.9 percentage points decline in total GVCs, and by -0.5 and -0.4 percentage points for backward and forward linkages respectively (figure 2, panel 6). This implies scarring effects from the pandemic on trade and GVC patterns, requiring structural reforms to remedy potential losses in the medium term.

C. Potential Growth Gains from Further Trade Liberalization

11. **Empirical analysis on the effects of a reduction in NTBs suggest positive outcomes on economic variables.** Based on a sample of 34 countries in Asia, regressions are estimated at the country-year level on the effects of a change in the NTBI on economic growth, productivity, investment, and trade in goods and services, while controlling for country and time fixed effects. The results suggest that NTBI reforms are historically associated with boosting economic activity: a one standard deviation decrease in the NTBI leads to a 0.5 percentage point increase in GDP. In addition, this reduction in non-tariff barriers boosts productivity by 0.7 percentage points, and investment by 1.8 percentage points (figure 3, panel 1).

12. **Trade also benefits from a reduction in NTBs, helping mitigate some of the pandemic's scarring effects.** While the results of the effects of NTBIs on trade in goods are not statistically significant in the Asia sample (but are significant in a global sample), they indicate that NTBI reforms can lead to significant increases in trade in services in the medium term. This is of particular relevance for countries like Malaysia, where services trade has been adversely impacted by the COVID-19 pandemic (figure 3, panel 1), most notably tourism flows which continue to remain depressed.

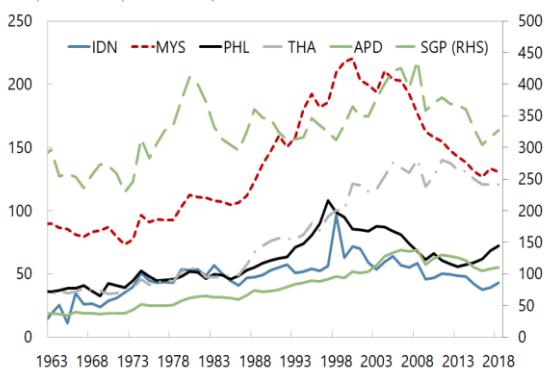
13. **Gains from NTBI reforms can vary significantly, depending on country characteristics.** Emerging market and developing economies seemingly receive larger benefits from reducing NTBs, as this could reflect potential gains from technology transfers. Gains are smaller for advanced economies, who are generally further on the technology frontier. The empirical results also show that effects of NTB reductions on GDP are especially more pronounced in countries that are more integrated in value chains. This suggests that Malaysia could be well positioned to achieve large gains from NTB reductions, given that it is GVC-intensive, and that NTBs remain somewhat high. Finally, gains from NTB reforms appear larger in countries which rank higher on the structural reform index (signaling more liberalized domestic and labor markets for instance). This suggests that other structural reforms could also enhance the effects of reducing NTBs, therefore amplifying the effects of trade liberalization (figure 3, panel 2).

14. **Trade reforms can reverse some of the output losses from the COVID-19 pandemic in Malaysia.** Our analytical results indicate that the pandemic could engender medium-term losses in Malaysia, as in expected in the rest of the world as well. However, a push for trade liberalization, namely in the form of a reduction in non-tariff barriers, could counter some of these scarring effects, boosting growth, productivity, and investment. Malaysia is well positioned to receive some of these benefits, especially given its importance in global value chains. The effect of trade liberalization on growth is further enhanced when coupled with other structural reforms, highlighting the importance of a comprehensive reform agenda.

Figure 1. Trade in Malaysia Before COVID-19

Before the pandemic, trade openness in Malaysia had been on a declining trend...

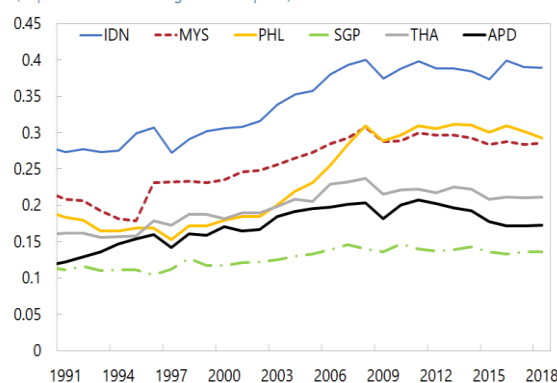
Trade Openness: ASEAN Countries
(exports and imports to GDP percent)



Sources: World Economic Outlook, IMF staff calculations

...alongside GVC participation for Malaysia and the region...

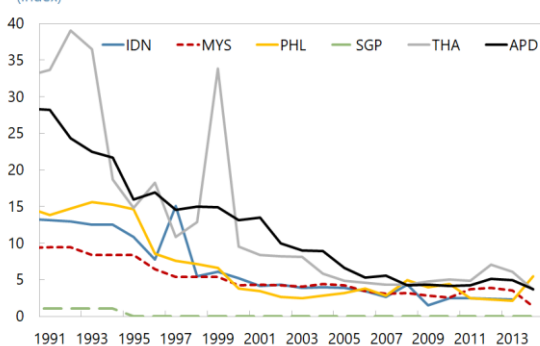
Backward Linkages to Exports: ASEAN Countries
(imported value-added goods to exports)



Sources: UNCTAD-Eora Global Value Chain Database; and IMF staff calculations

...despite having achieved low tariff levels ...

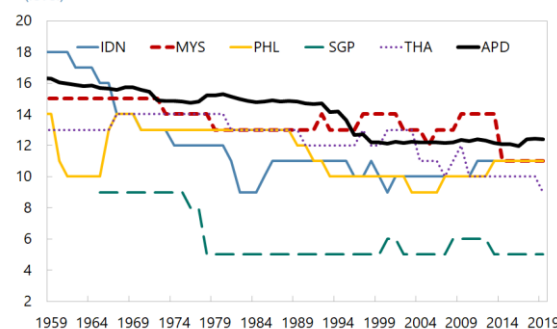
Tariff Barriers
(Index)



Sources: Furceri and others 2019; and IMF staff calculations

...but non-tariff barriers remain high...

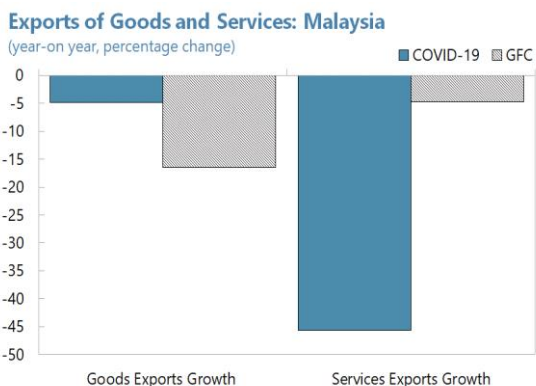
Non-Tariff Barriers Index
(level)



Source: Estefania Flores et al. (2022)

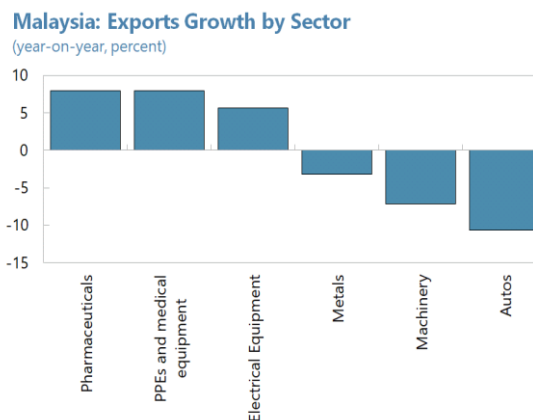
Figure 2. Impact of the COVID-19 Pandemic and Past Recessions

Trade in goods remained resilient during COVID-19 compared to the GFC, while services exports suffer...



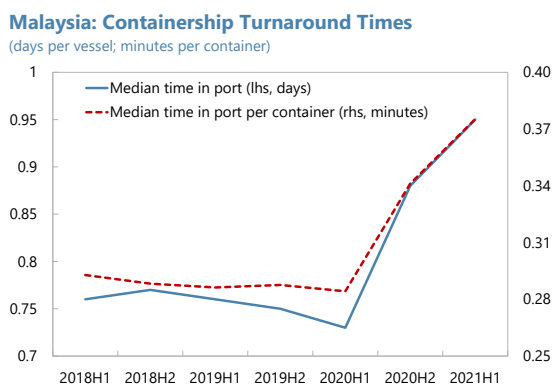
Sources: World Economic Outlook, IMF staff Calculations.
Note: Change in exports growth for GFC corresponds to 2009 compared to 2008, and to 2020 compared to 2019 for COVID-19.

External demand for pharmaceuticals, PPE and electrical equipment supported Malaysian exports...



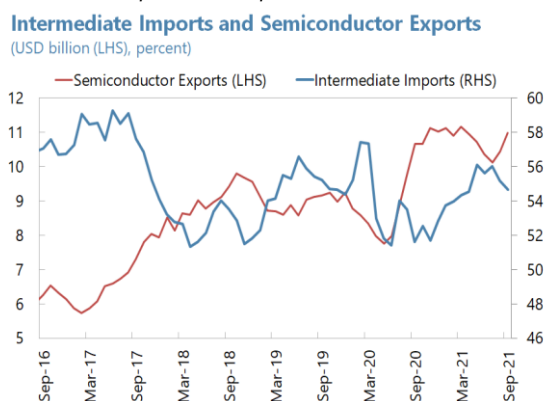
Sources: COMTRADE, IMF staff calculations.

Anecdotal evidence suggests supply chain disruptions...



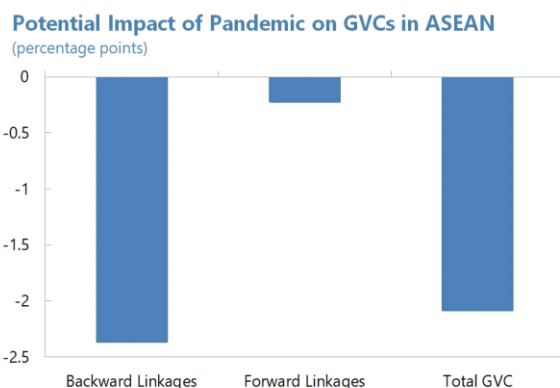
Sources: UNCTAD, MarineTraffic.

...which are corroborated by high-frequency data on intermediate imports and exports...



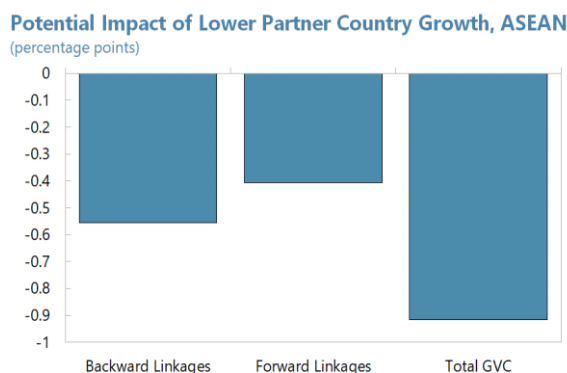
Sources: CEIC, IMF staff calculations.
Note: intermediate imports are reported as a share of total imports.

Recessions have a large and persistent impact on GVCs...



Sources: IMF staff calculations
Note: Figure corresponds to the impulse response function to a recession and pandemic dummy at the five-year horizon. All variables measured as a percent of total exports. Standard errors are clustered at the country level.

...as do recessions and slowdowns in partner countries.

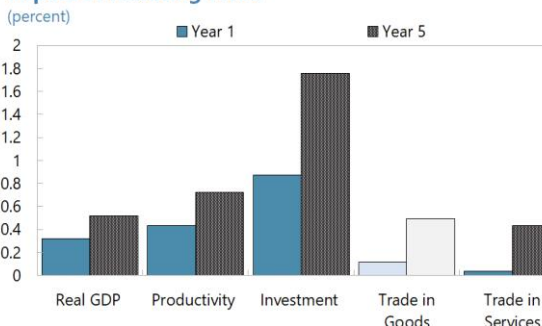


Sources: IMF staff calculations.
Note: Figure corresponds to the impulse response function to a 6-percentage-points decline in partner country growth (equivalent to the decline in global growth in 2020) at the five-year horizon. All variables measured as a percent of total exports. Standard errors are clustered at the country level.

Figure 3. Impact of Reduction in NTBs

A reduction in NTBs could engender positive economic outcomes...

Impact of Reducing NTBs

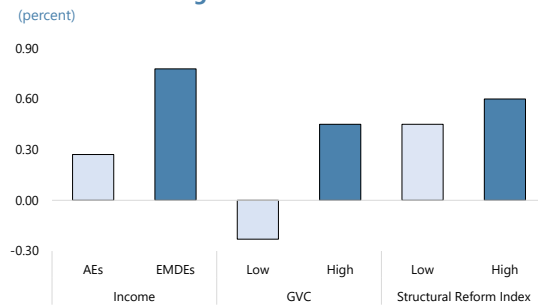


Sources: IMF staff calculations.

Note: Figure corresponds to the impulse response function to a two-standard-deviation decrease in N index at the first (short term) and fifth (medium term) horizons. Light shaded bars indicate that results significant at 90 percent confidence interval. Standard errors are calculated using Driscoll-Kraay. NTB = nontariff barrier.

...while gains are higher depending on country characteristics.

Effect of Reducing NTBs on GDP



Source: IMF staff calculations, Estefania, Furceri, Hannan, Ostry and Rose (2022), World Bank, UNCTAD Eora and IMF Staff calculations.

Note: Figure corresponds to the IRF to a one standard deviation increase in NTB at the fifth (medium term) horizon. Structural Reform Index is an average between labor, financial and product market reforms index. Heterogenous effects for Income and Tariffs are calculated using the interaction of the Income/Tariffs dummy above and below median with the NTB index. For GVC and Structural Reforms Index, smooth transition function are used. Light shaded bars indicate that results are not significant at 90% CI. Standard errors are calculated using Driscoll-Kraay.

References

- Estefania Flores, Julia, Davide Furceri, Swarnali Hannan, Jonathan D. Ostry, and Andrew K Rose. 2022. "A Contribution to the Measurement of Aggregate Trade Restrictions." IMF Working Paper WP/22/1.
- Frankel, Jeffrey, and David Romer. 1999. "Does Trade Cause Growth?" *American Economic Review* 89 (3): 379–99.
- Grossman, Gene, and Elhanan Helpman. 1991. "Innovation and Growth in the Global Economy". Cambridge, Massachusetts: MIT Press.
- International Monetary Fund. 2016. "Subdued Demand: Symptoms and Remedies", WEO World Economic Outlook Chapter 2
- International Monetary Fund. 2021. "Reigniting Asia's Growth Engine through Trade Liberalization", APD Regional Economic Outlook Chapter 4.
- Krugman, Paul. 1979. "A Model of Innovation, Technology Transfer, and the World Distribution of Income." *Journal of Political Economy* 87 (2): 253–66.
- Young, Alwyn. 1991. "Learning by Doing and the Dynamic Effects of International Trade." *Quarterly Journal of Economics* 106 (2): 369–405.

Appendix V. Economic Scarring and Distributional Consequences of the COVID-19 Pandemic in Malaysia¹

The COVID-19 pandemic risks substantial medium-term scarring, through reduced investment, lower productivity and erosion in human capital. Such mechanisms also risk increasing inequality, as the pandemic impact falls disproportionately on low-skilled workers and vulnerable groups. This appendix attempts to quantify the impact on potential output and inequality in Malaysia, and then explores the structural features of the economy that may amplify these effects and the corresponding policies which could mitigate them.

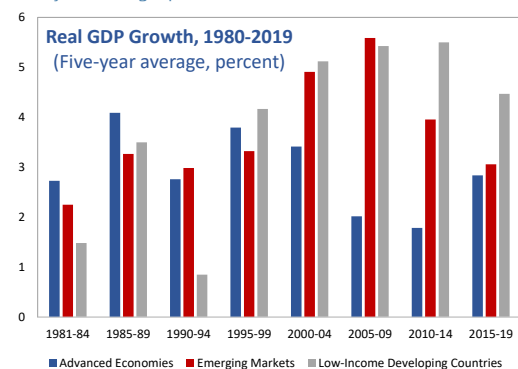
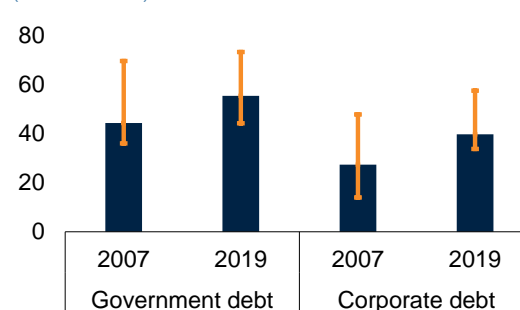
A. Background: Pre-COVID Context and Recent Trends

Output Growth

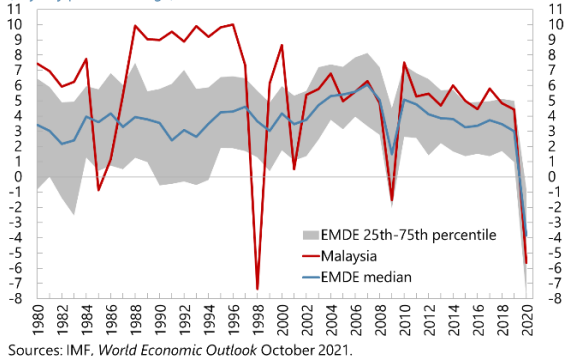
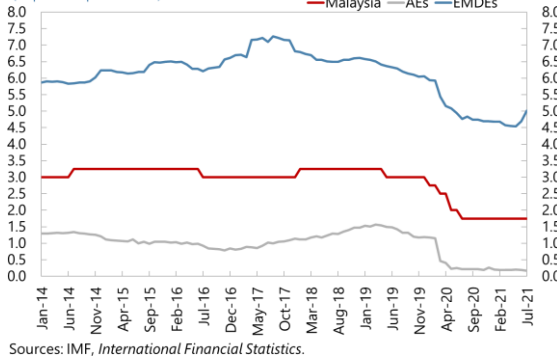
1. **While many emerging and developing economies (EMDEs) faced the pandemic with slowing growth and high debt, Malaysia entered 2020 after a decade of strong growth (Figure 1).** Annual real GDP growth averaged around five percent over the last decade, significantly above the EMDE median, and substantial room remained for monetary stimulus using conventional tools. The downturn in Malaysia in 2020, however, was particularly severe, with output contracting more than in many comparable economies, as was also the case during the Global Financial Crisis when GDP fell by proportionately more than at any time since the Asian Financial Crisis. Alongside a range of COVID-19 control measures, Malaysian authorities responded with substantial interest rate cuts and four fiscal support packages. While these relieved pressure on some of the most affected sectors, they have increased the federal government's deficit- and debt-to-GDP ratios to record highs, narrowing the available fiscal space.

2. **The recessions caused by COVID-19 in many EMs, including Malaysia, are likely to have substantial and persistent impacts on potential output.** As with previous recessions, the downturn raises serious risks of hysteresis effects through prolonged unemployment, bankruptcy and resource misallocation (Bernstein et al. 2019, Furceri et al. 2021c). Yet it has added specific extra pressures, such as reduced human capital accumulation due to school closures, especially in regions and communities with limited access to digital infrastructure. Addressing these issues while also providing a credible strategy for fiscal consolidation will be a key challenge in the medium term. The Twelfth Malaysia Plan presents a constructive five-year roadmap, aiming to evade the middle-income trap and propel the economy to high-income status, invest in human capital, enhance the digital and green economies, boost transport infrastructure and increase the contribution of SMEs to the economy.

¹Prepared by Alexander Copestake and Kodjovi Eklou.

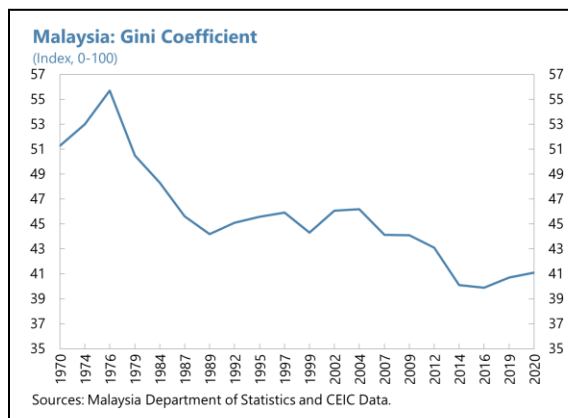
Figure 1. Emerging Economies—Initial Conditions and the Impact of COVID-19 Crisis**Real GDP Growth, 1980-2019**
(Five-year average, percent)**Emerging Market and Developing Economies: Government and Corporate Debt, 2007 and 2019**
(Percent of GDP)

Source: World Bank, June 2020 Global Economic Prospects, Chapter 3, Box1.
Note: Bars show unweighted averages. Whiskers show interquartile range. Based on data for up to 150 Emerging Markets and Developing Economies.

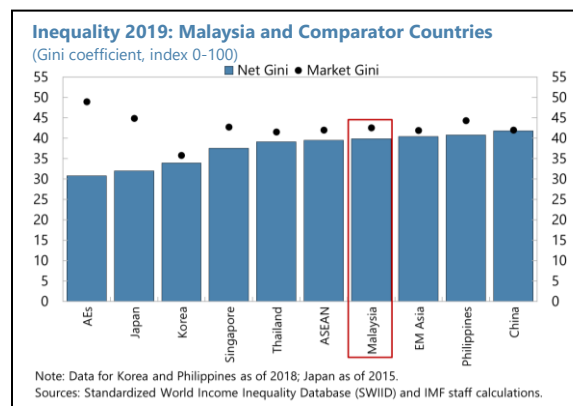
Real GDP Growth: Malaysia and EMDEs
(In y-o-y percent change)**Monetary Policy-Related Interest Rate**
(In percent per annum)

Inequality

3. **COVID-19 threatens the progress Malaysia has made in reducing inequality over the last four decades.** Inequality has been declining since the end of the 1970s, on the back of the economic transformation spurred by the commodity price boom and affirmative action for disadvantaged groups under the New Economic Policy. This economic transformation has enhanced social mobility and improved living standards for a sizeable portion of the population (Hill, 2020). The reduction in inequality accelerated over 1976-1979, before stalling during the 1990s and 2000s – following the Asian financial crisis. While inequality has continued to decline post-GFC, albeit at a slower pace, since 2019 it has started to increase again, and this continued into 2020. The crisis induced by the COVID-19 pandemic threatens to accelerate this trend and reverse the progress of the last four decades.



4. **Inequality remains elevated compared to some peer countries, even after accounting for redistribution.** Although pre-pandemic (2019) market inequality, as captured by the Gini index before taxes and transfers, was close to the average of other Asians EMs, net inequality was among the largest compared to peers. This suggests that redistributive policies played only a small role compared to peer countries, and especially so when compared to AEs, whether by design or due to a lack of efficacy. Market inequality, however, remains lower in Malaysia than in AEs.



B. Estimates of Economic Scarring and Distributional Implications of the Pandemic

This section investigates the impacts of past recessions and pandemics on medium-term output and inequality. Past recessions in emerging markets are used to quantify likely scarring effects, then the recent literature on pandemics and inequality is surveyed to assess the likely distributional implications of the COVID-19 pandemic.

The Evidence on Pandemics, Recessions, and Economic Scarring²

5. **Recessions can have persistent negative effects on potential output, particularly due to declining labor productivity and reduced investment.** This section uses the local projection method (Jordá, 2005) to provide a reduced form estimate of the response of potential growth to recessions over various horizons, by comparing the average post-recession path of potential growth with its predicted counterfactual. The estimation equation is:

$$y_{t+h,j} - y_{t-1,j} = \beta_{(h)} E_{t,j} + \sum_{s=1}^p \gamma_{l(h),s} E_{t-s,j} + \sum_{s=1}^{h-1} \gamma_{f(h),s} E_{t+h-s,j} + \sum_{s=1}^p \delta_{(h),s} \Delta y_{t-s,j} + a_{(h),j} + \tau_{(h),t} + u_{(h)t,j}$$

where $(y_{t+h,j} - y_{t-1,j})$ represents cumulative growth in log points of potential GDP, at different horizons ($h = 0, \dots, 7$), $a_{(h),j}$ and $\tau_{(h),t}$ are country and time fixed effects respectively, and $u_{(h)t,j}$ is the error term. The coefficient β captures the dynamic multiplier effect (impulse response) of the cumulative growth in log points of potential GDP with respect to the recession event dummy variable E . The number of lags for each variable is denoted by p . The specification controls for past changes of dependent variable Δy , lagged event dates, and future values of the event dummy between times t and $t + h - 1$ to correct for possible forward bias. These controls alleviate possible endogeneity or reverse causality and contemporaneous interactions between dependent and independent variables.

² This section draws from Appendix III in the Thailand 2021 Article IV by Ara Stepanyan.

6. **This analysis uses data from 39 emerging markets over the period 1980-2019.**³

Recessions are defined as years with negative GDP growth (Huidrom and others, 2016), while a financial crisis is defined as in Laeven and Valencia (2018). Data for structural indicators are mostly from the Economic Freedom of the World, WDI, and OECD. Fiscal indicators are mostly from FAD's Global Debt and Fiscal Monitor datasets. The multivariate filtering approach developed by Blagrove and others (2015) is used to estimate potential output. In some specifications, additional country-time interaction terms are included to investigate the role of different propagation channels, initial conditions, structural factors, and policy responses.

7. **Past recessions led to substantial medium-term scarring in EMs that were magnified in the context of pandemics.**

Our estimate show that in the sample, potential output was more than 4 percent lower after recession compared to no recession scenarios (Figure 2). Further, when recessions coincide with pandemics, as identified from the Emergency Disasters Database, these losses are even larger, with a central estimate of 15 percent, though with a wide confidence interval. While such effects seem large, they are in line with results elsewhere, including from advanced economies (Bannister and others, 2020). Our results also show that scarring occurs mainly through the labor productivity and investment channels. More specifically, after 5 years, labor productivity was more than 5 percent lower while investment was more than 2 percent lower compared to a no recession scenario.

8. **Countries' initial conditions, structural characteristics and policy response shape the magnitude of scarring effect of recessions (Figure 3).** Interacting the recession indicator with debt variables reveals that countries with large debt (public, corporate, and household debt) experience a disproportionately large scarring effect from recessions reflecting the role of low buffers when facing a recession. Further, the policy response also matters and can dampen the scarring effect. For instance, a one percent of GDP increase in public investment is associated with around 5 percentage points higher potential output after five years, affirming the substantial role for counter-cyclical fiscal policy. Finally, structural reform can also reduce the scarring effect from recessions, with a more flexible labor market and business regulation, and a better insolvency framework and a smaller shadow economy, all contributing to the mitigation of scarring effects.

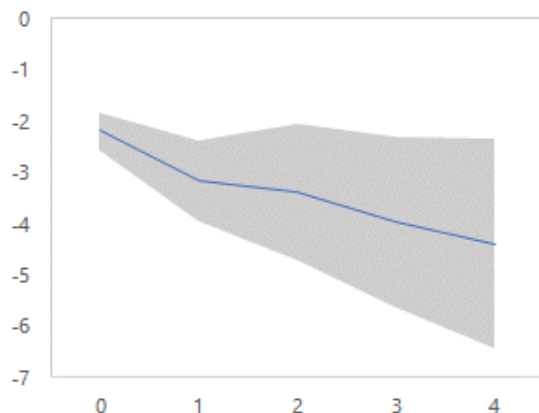
The Evidence on Pandemics and Inequality

9. **Pandemics can increase inequality by disproportionately affecting the poorest and most vulnerable members of the population.** Furceri et al. (2021a), investigate the impact of five epidemics that appeared in recent decades, namely SARS 2003, H1N1 2009, MERS 2012, Ebola 2014, and Zika 2016. They find that these events increased inequality, through output contractions and job losses for low-educated workers which redistribute income toward the less vulnerable and richer

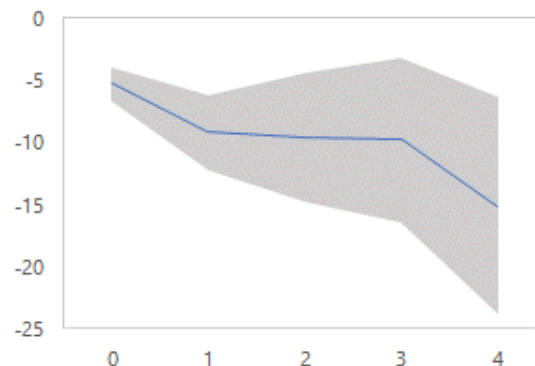
³ Specifically, we use data from Algeria, Angola, Argentina, Azerbaijan, Belarus, Brazil, Chile, China, Colombia, Croatia, Dominican Republic, Ecuador, Egypt, Hungary, India, Indonesia, Iran, Kazakhstan, Kuwait, Libya, Malaysia, Mexico, Morocco, Oman, Pakistan, Peru, Philippines, Poland, Qatar, Romania, Russia, Saudi Arabia, South Africa, Sri Lanka, Thailand, Turkey, Ukraine, United Arab Emirates, Uruguay, and Venezuela.

Figure 2. Impact of Recessions on Output, Productivity and Investment in Emerging Economies

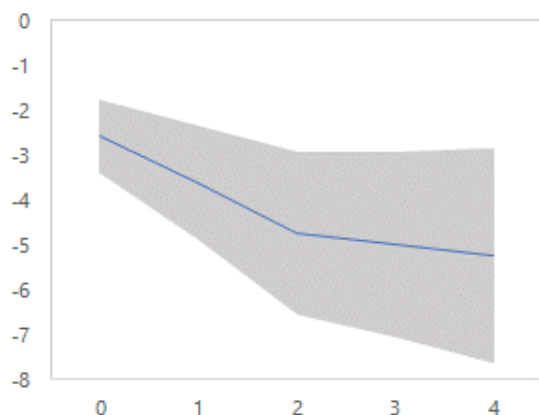
Cumulative Response of Potential Output to Recessions (EMs)



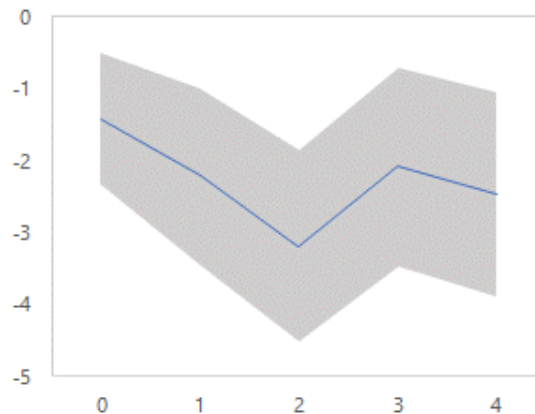
Cumulative Response of Potential Output to Recessions with Pandemics (EMs)



Cumulative Response of Labor Productivity to Recessions (EMs)



Cumulative Response of Investment Rate to Recessions (EMs)

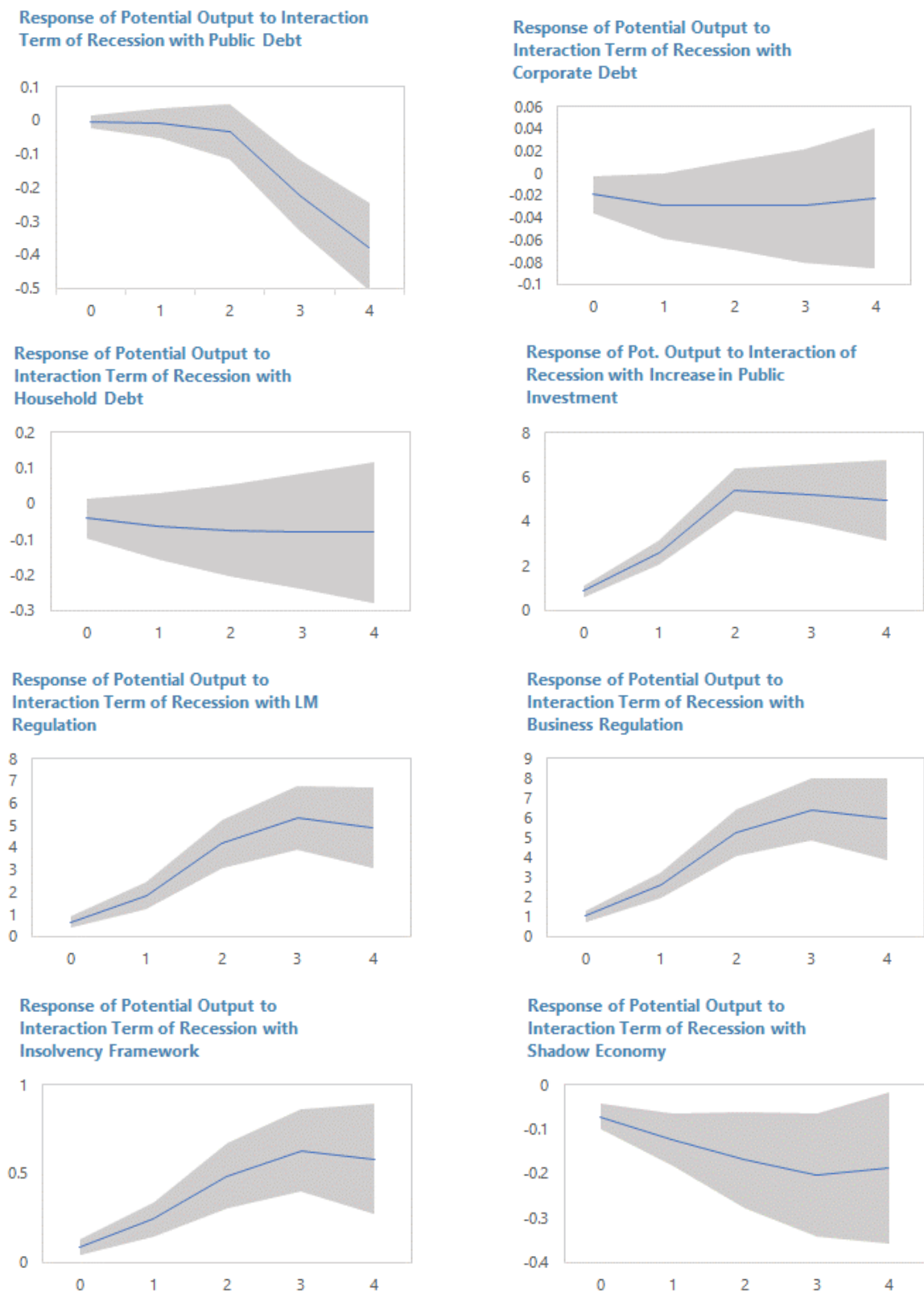


Sources: Emergency Disasters Database, WDI, WEO, and IMF staff estimates.

parts of the population.⁴ Emmerling et al. (2021) find similar results based on the five 21st century pandemic episodes, and project a persistent increase in income inequality, as measured by the Gini index, up to 2025. On the current pandemic, Schmitt-Grohé et al. (2020) find that, in the early stages of the spread of the SARS-CoV-2 virus in the United States, the relative impact of the virus was far larger on poor communities than on affluent ones. In developing countries, using high frequency phone surveys, Kugler et al. (2021) show that female, younger, less educated and urban workers were initially more affected, as they were more exposed to work stoppage due to the COVID-19

⁴ Similarly, Galletta and Giommoni (2020) provide evidence for the effect of the 1918 influenza in Italy, showing that municipalities most exposed to the disease have experienced a persistent increase in inequality as a consequence of the reduction in the share of income generated by the poorer side of the population, while top earners do not seem to be affected.

Figure 3. The Role of Initial Conditions and Structural Factors in Post-Recession Scarring



Sources: Emergency Disasters Database, WDI, WEO, and IMF staff estimates.

lockdowns. These findings suggest that COVID-19 could lead to a rise in inequality. Indeed, the evidence suggests that channels through which the pandemic can amplify existing inequalities (as identified in Dosi et al., 2020), including inequities in risk of contagion, access to hospitalization, ability to work remotely, and risk of longer-term job loss, have been operative.

10. **Initial conditions and policy support shape the impact of pandemics on inequality.** Furceri et al. (2021b) show that the rise in inequality in the aftermath of major pandemics over the last two decades has been higher in episodes with a lack of fiscal support. The increase in inequality is particularly large in cases with lower fiscal deficits, lower public health expenditures, and lower redistribution, in contrast to cases with no turn to austerity. These findings suggest that fiscal support, in terms of public health spending, redistribution, and social protection spending, could mitigate the distributional consequences of the current COVID-19 pandemic.⁵ In addition to providing evidence for the mitigating role of fiscal support, Aguirre and Hannan (2021) find that countries with strong initial conditions, defined as low informality, high family benefit and high health expenditure per capita, experience lower pandemic-induced inequality.

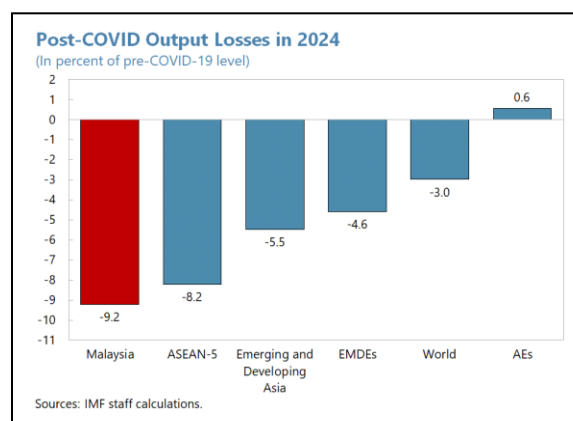
C. Implications for Malaysia

The Scarring Implications of the Pandemic for Malaysia

11. **Medium-term output losses from the pandemic are projected to be substantial.**

While 2024 global output is projected to be three percent below the pre-COVID forecast, this impact is particularly large in emerging markets and in Asia. The relatively large projected impact for Malaysia – that is consistent with the previously estimated impact in EMs – is driven by the initial COVID shock plus further downgrades due to the delta and omicron variants, both directly and through external demand. Recent rapid progress in

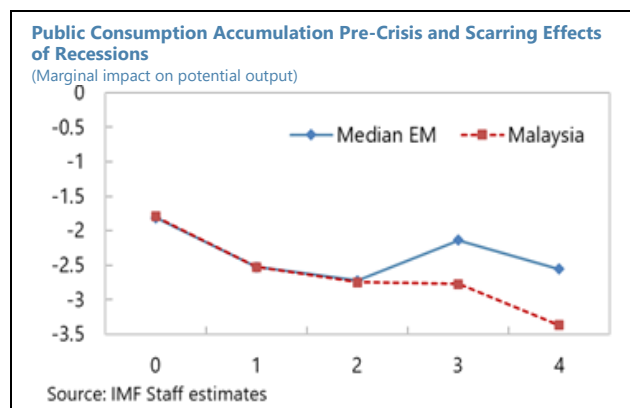
the national vaccination campaign may thus ameliorate this projection, but there remain substantial downside risks, including from potential vaccine-resistant new variants.



12. **Malaysia's high level of debt pre-COVID may amplify the scarring effects of the crisis.** Using our point estimates from section B where interaction effects are included, we plot in Figure 4 the Malaysia-specific impact and compare it to the median EM in the sample. Our results show that scarring effects from past recessions in Malaysia were larger than in the median EM in the sample, owing to the relatively large debt accumulation pre-crisis. Relatively large public and private debt (both household and corporate debt accumulations have historically amplified the scarring effect of

⁵ See also, for instance, Almeida et al. (2021) showing a similar result for EU households.

recessions in Malaysia compared to the median EM in the sample (left-hand panels Figure 4).⁶ Further, the impact of pre-crisis public debt accumulation on potential output in Malaysia was mostly driven by a larger public consumption accumulation than peers.⁷ Recent evidence (Garrido et al., 2020) shows that household debt tends to induce larger drag on future GDP growth than corporate debt, because of the high propensity to consume among debtors – which leads to vulnerabilities from household debt to build up faster if expenditure outpaces disposable income (Garber et al, 2019, Mian and Sufi, 2018). Given that Malaysia entered the pandemic with relatively higher debt compared to emerging market peers (right-hand panels of Figure 4) historical evidence suggests that scarring concerns remain relevant. However, there are also mitigating factors for Malaysia such as a relatively flexible business and labor market regulations. Beyond that, the overall evidence here also reinforces the need for a credible and growth-friendly medium-term fiscal consolidation strategy that would put debt on a downward trend and rebuild fiscal buffers (Appendix VII). Proactive policies to skillfully address the household debt overhang will also be essential.



13. **The pandemic and related lockdown measures have substantial direct and spillover effects across sectors through supply chains.** Sectors which are not directly affected by pandemic-related restrictions, for instance because they can be performed remotely, are impacted through spillovers from their suppliers or their customers. Consider the input-output network in Figure 5, which shades industries according to the share of employment that is teleworkable, essential or social, from Shibata (2020). Specifically, aggregate exposure – capturing the importance of non-teleworkable, non-essential and social sectors – is summarised by:⁸

$$Exposure_j = (1 - Teleworkable_j) \times (1 - Essential_j) \times Social_j$$

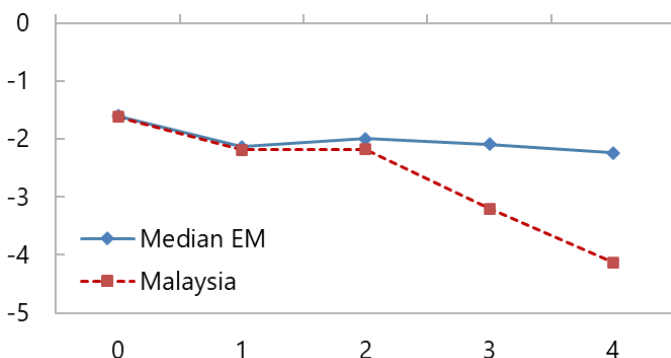
⁶ However, the combined impact of private debt (household and corporate) pre-crisis poses a larger drag on growth and thus higher scarring effect compared to public debt alone. Moreover, as suggested by our finding on the role of public investment in dampening scarring effects, public debt accumulation driven by public investment may play a mitigating role.

⁷ The output multiplier of public consumption is known to be much lower than that of public investment. Our results are also consistent with this empirical regularity.

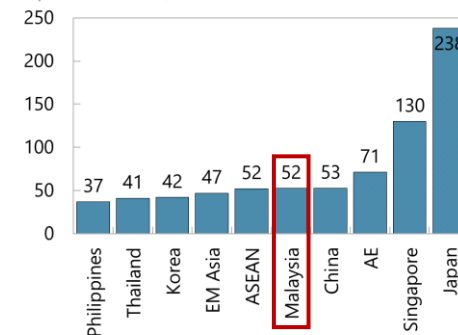
⁸ Essential jobs sectors refer to those that were not subject to government mandated shutdowns while social jobs sectors are those where individuals interact to consume goods.

Figure 4. Debt and Scarring in Malaysia

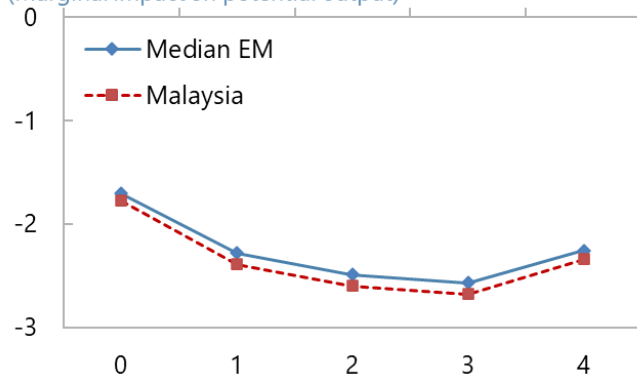
Public Debt Accumulation and Scarring Effects of Recessions
(Marginal impact on potential output)



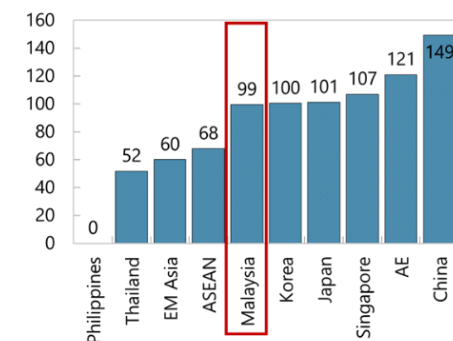
Public debt before the pandemic
(In percent of GDP)



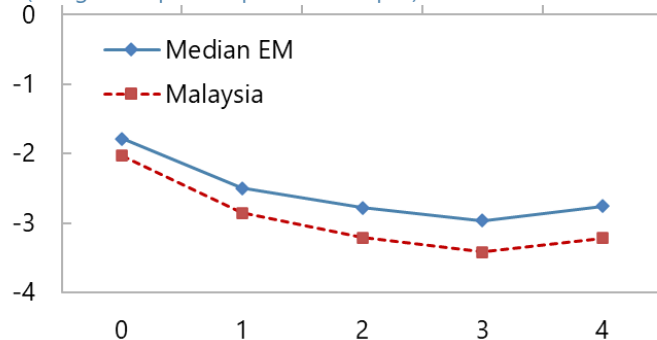
Corporate Debt Accumulation and Scarring Effects of Recessions
(Marginal impact on potential output)



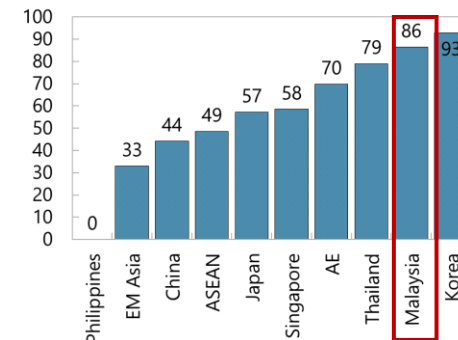
Corporate debt before the pandemic
(In percent of GDP)



Household Debt Accumulation and Scarring Effects of Recessions
(Marginal impact on potential output)



Household debt before the pandemic
(In percent of GDP)



Sources: FAD Global Debt database, BIS, CEIC and IMF staff estimates.

Note: The left hand of the panel shows the cumulative impact of past recessions on potential output growth in log points accounting for debt accumulation using coefficient estimates from section B. Pre covid-19 figures (right-hand panels) are from the latest available year, specifically 2019 for public debt and 2016 for corporate and household debt.

The picture highlights that while direct exposure is concentrated in contact-intensive services, such as hotels and restaurants, many other industries that provide them with inputs (e.g., food, beverages, and tobacco) are vulnerable to negative spillover effects.⁹

14. **Accounting for these spillovers, every sector of the economy is affected by the pandemic, albeit with different magnitudes (Figure 6).** To measure spillovers through supply networks, we first define the input purchases of industry j operating in country d from industry i operating in country c as n_{cidj} according to the OECD's inter-country input-output tables (OECD 2018). A Malaysian industry's 'upstream domestic' exposure (i.e., via its Malaysian customer industries) to pandemic-related restrictions can then be summarized by:

$$UpstreamDomestic_i = \sum_j \left(\frac{n_{MiMj}}{\sum_k (n_{MiMk} + n_{MiFk})} \cdot Exposure_j \right)$$

where M denotes Malaysian industries and F denotes the aggregation of foreign industries. Upstream domestic exposure is thus the average exposure of domestic customer industries, weighted using their share of purchases in total usage across all industries for both domestic and export production. Upstream foreign exposure then follows analogously, for foreign customer industries (note the change in the subscript of the numerator):

$$UpstreamForeign_i = \sum_j \left(\frac{n_{MiFj}}{\sum_k (n_{MiMk} + n_{MiFk})} \cdot Exposure_j \right)$$

Downstream domestic and foreign exposure (i.e., via suppliers, either in Malaysia or abroad) can then be measured equivalently, using the average exposure faced by an industry's suppliers.¹⁰ While services industries are most affected directly (blue bars, bottom section), many manufacturing industries which are their suppliers are also exposed to knock-on effects (green bars, middle section). Almost all sectors are exposed to some degree of downstream effects (red bars), as almost all are customers of an exposed sector – e.g., the computer and electronics sector purchasing from wholesale trade. In general, exposure is greatest through domestic relationships, except for a few sectors with high export shares where foreign exposure is more important – e.g., electrical equipment, computers, and business services.

⁹ While the focus here is on exposure to pandemic-related restrictions, note that positive demand shocks will also spread through the network in a similar fashion. For instance, the major increase in exports of consumer electronics and rubber gloves implies increased demand for those industries which supply inputs to the 'computers and electronics' and 'rubber and plastics' sectors.

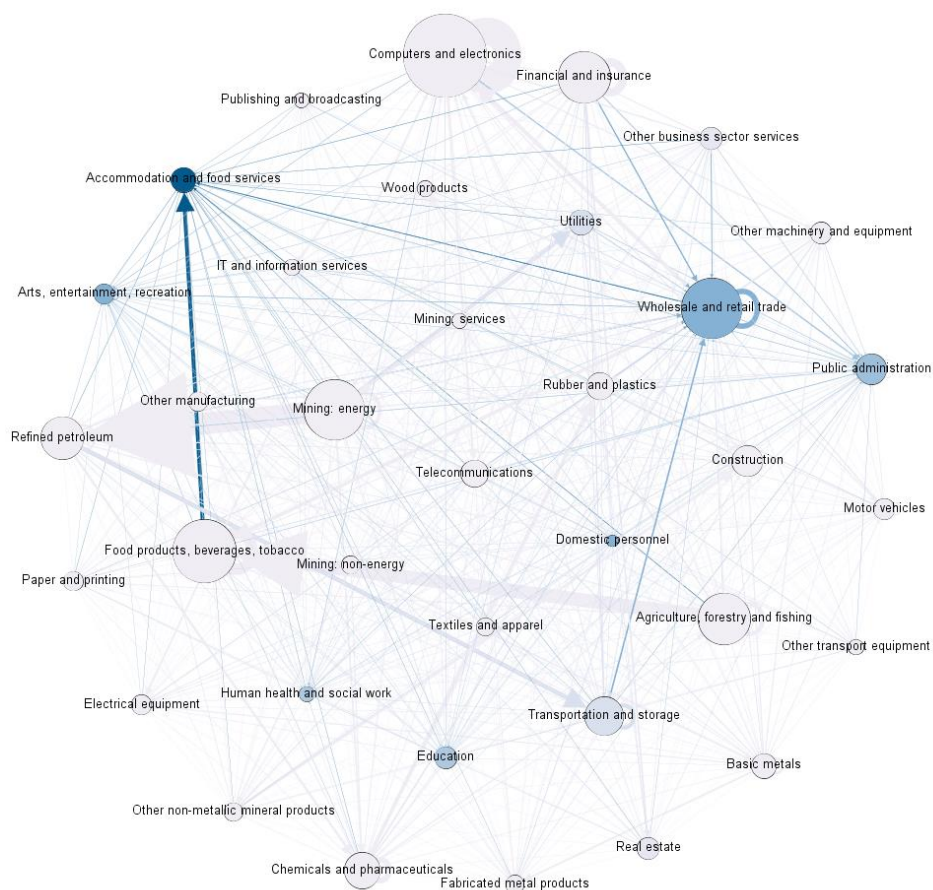
¹⁰ Specifically, industry-wise downstream exposure is the average exposure of supplier industries, weighted by their share in total supply of inputs to a given industry:

$$DownstreamDomestic_i = \sum_j \left(\frac{n_{MjMi}}{\sum_k (n_{MkMi} + n_{FkMi})} \cdot Exposure_j \right)$$

$$DownstreamForeign_i = \sum_j \left(\frac{n_{FjMi}}{\sum_k (n_{MkMi} + n_{FkMi})} \cdot Exposure_j \right)$$

(These two measures are simply the inverse of the upstream measures – essentially reversing the input-output coefficients i and j to examine spillovers in the opposite direction, from supplier to customer rather than from customer to supplier.)

Figure 5. Input-Output Structure and Exposure to Pandemic Shocks



Sources: Shibata (2020), OECD (2018), and IMF staff calculations.

Note: The size of the sectors is measured by total output, including both domestic production and exports. The darker the color, the higher is the exposure score (see text). The arrows flow from input sectors to output sector and are thicker with the size of the flow. The darker the arrows the higher is the exposure of the destination industry.

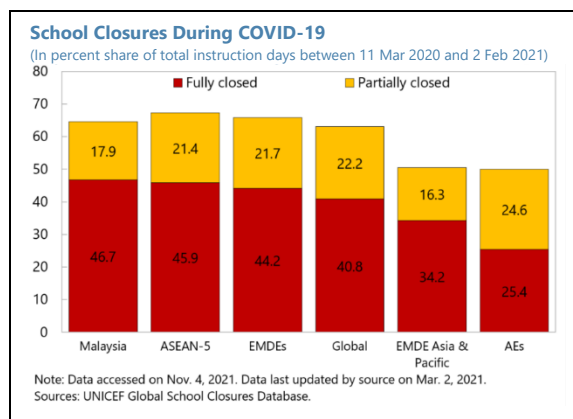
15. **The COVID-19 pandemic has disproportionately affected SMEs in the service sector.** The impact has been felt disproportionately by firms in the contact-intensive service sector, which in turn comprise mainly of small and medium enterprises (SMEs).¹¹ According to SME Corporation Malaysia, in 2020, SMEs represented a significant share of overall business establishments (1.52 million, or 97.2 percent of the total), and accounted for 7.25 million jobs (about 48 percent of total employment), 38.2 percent of GDP and 13.5 percent of exports and represent 85.5 percent of the service sector.¹²

¹¹ The definition of SMEs since 2013 is based on two criteria. For the Manufacturing sector, they are defined as firms with sales turnover not exceeding RM50 million or number of full-time employees not exceeding 200, while for the services and other sectors, they are defined as firms with sales turnover not exceeding RM20 million or number of full-time employees not exceeding 75.

¹² In 2019, SMEs employed 7.3 million workers (48.4 percent of total employment), 38.9 percent of GDP, 17.9 percent of Exports.

16. In the longer-run, foregone education is a major concern.

During the first ten months of the pandemic, schools were closed for 46 percent of instruction days (i.e., non-holidays), and operated with limited capacity for a further 18 percent of instruction days (see chart). This was in line with neighboring countries, but substantially above the global and AE averages. As noted in the previous section, reduced labor productivity is a significant channel through which scarring effects on output can occur. Such interruptions to students' learning, and the resulting negative effects on long-term human capital in the absence of broad based educational 'catch up' programs, could thus have important implications for long-run output. The students least able to access remote learning substitutes, such as online or TV/radio broadcast education, are also more likely to live in rural areas or come from the poorest 40 percent of households (UNICEF, 2020). This implies an important complementary role for targeted educational interventions to counter the potential negative consequences for social mobility and thus existing inequalities.



The Distributional Implications of the Pandemic in Malaysia

17. The pandemic reduced household income, especially in the lower part of the income distribution and for employees and the self-employed.¹³ The main sources of household incomes, paid employment and self-employment, declined by 16.1 percent and 9.7 percent respectively. Household average gross income therefore decreased by 10.3 percent, driven by the income loss of employees and the self-employed, mainly through job loss, reduction in hours worked and skill-related under-employment. Regarding household distribution by decile, while a majority experienced a decline in income, households in the Bottom 40 percent (B40) and in Middle 40 percent (M40) have experienced the largest decline, leading to income shares of 15.9 percent and 36.9 percent respectively.¹⁴ The Top 20 (T20) percent's income share rose by 0.4 ppt (compared to 2019) to 47.2 percent; this group was affected to a relatively smaller extent, with 12.8 percent moving to M40.

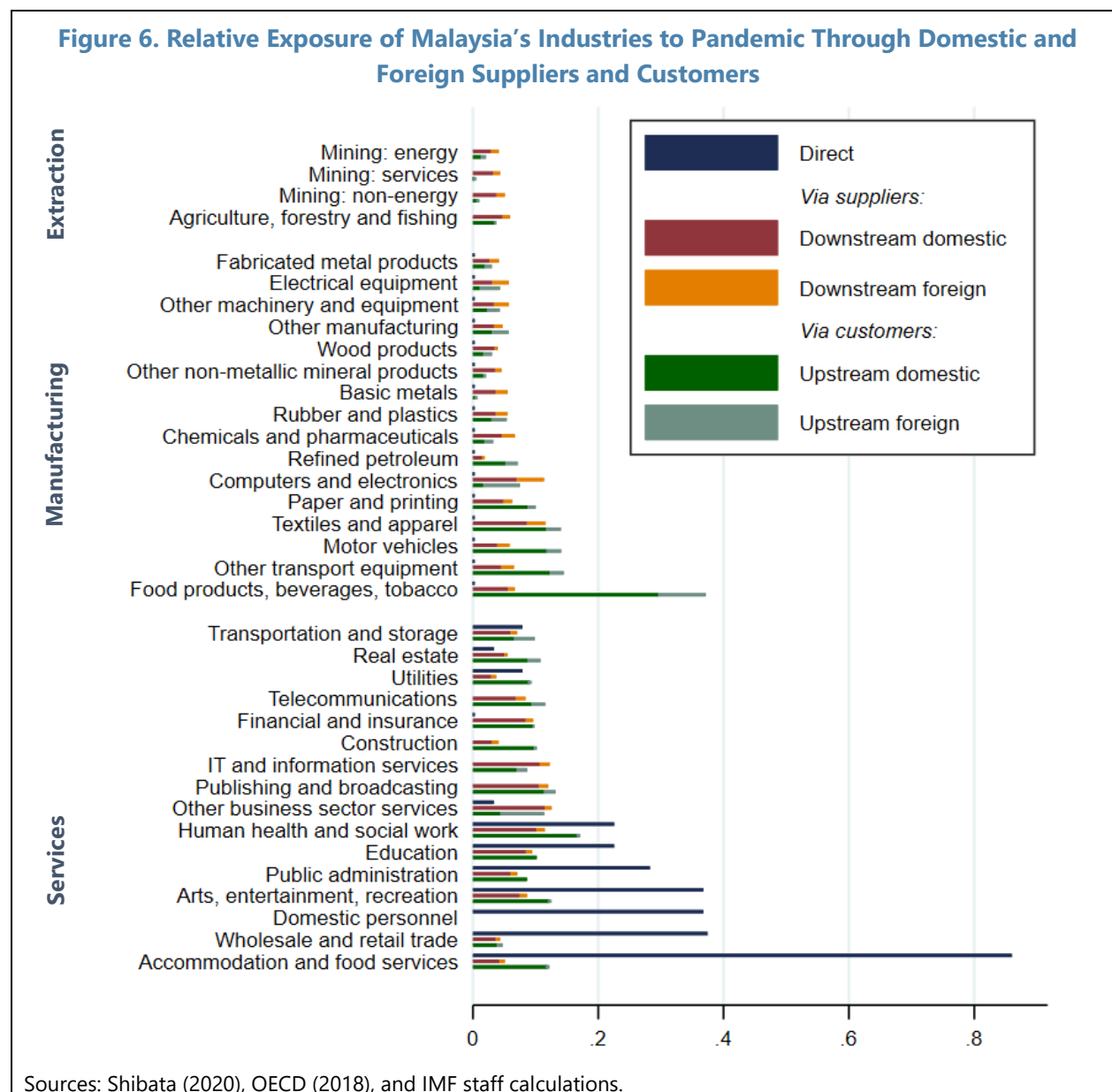
18. The pandemic has disproportionately affected the income and employment of individuals in the agriculture and services sectors.¹⁵ The Department Of Statistics of Malaysia (DOSM) has released a survey on the effect of COVID-19 on the economy, showing a share of respondents that have lost their jobs and experienced a severe income loss (more than 50 percent) in

¹³ Source: Household Income Estimates and Incidence of Poverty Report, Malaysia, 2020.

¹⁴ In 2020, there was an additional of 12.5 per cent of households moving to lowest part of the income distribution with less than RM2,500 (B1) while 20 per cent of households from the M40 group have moved to B40. In addition, the B40 and M40 income shares have declined by 0.1ppt and 0.3 ppt respectively relative to 2019.

¹⁵ This impact was heterogenous across the services sub-sector as discussed below.

the service sector of respectively 54.2 percent and 53.6 percent.¹⁶ The corresponding numbers are 21.9 percent and 50 percent respectively in the agriculture sector.



19. **Severe income losses were driven mainly by income loss in the service sector and the agriculture sector.** Sub-sectors such as arts, entertainment and recreation, food services, fishing and transportation were among the most affected. Individuals in the manufacturing sector and in administrative and support services were among the most protected against job losses.

¹⁶ This survey was undertaken online from 23rd-31st March 2020 and covered 168,182 respondents of at least 15 years old. The DOSM disclaimed that this survey could not be generalized to all Malaysians but could be used to support analysis of the COVID-19 situation at the time of the survey.

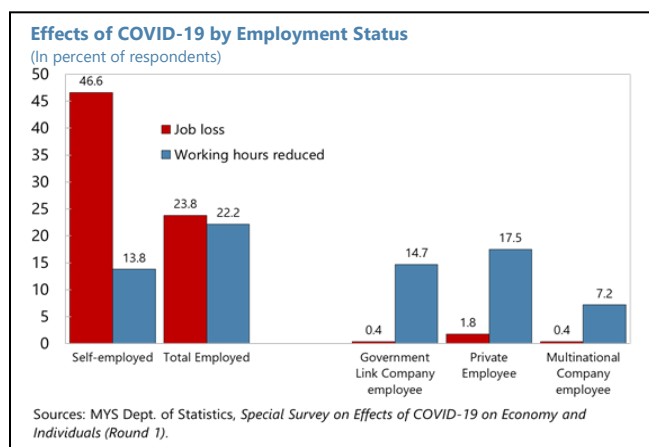
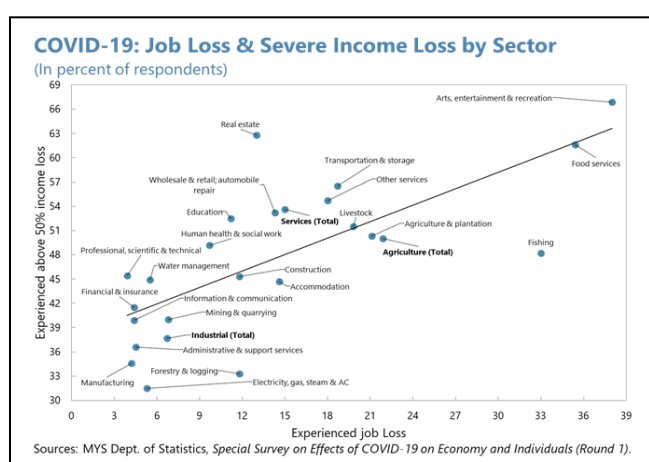
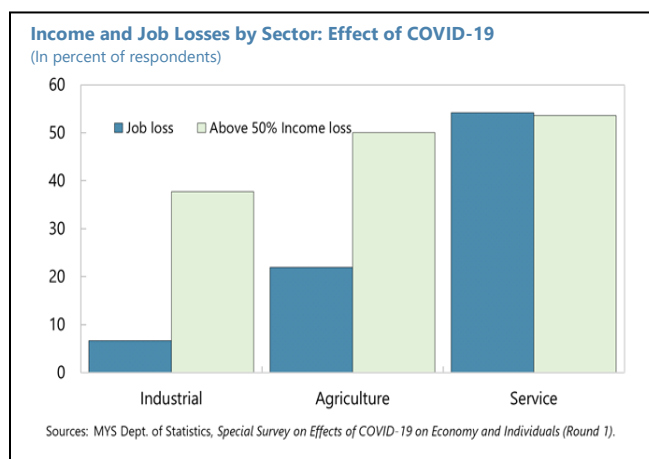
20. **The self-employed had a particularly high risk of losing their jobs.**

The survey shows that about 47 percent of self-employed reported losing their jobs in early 2020, about twice the average proportion for all types of employment status. Meanwhile private sector employees were more likely to have a reduction in the number of hours worked, and public sector and multinational employees faced the least risk of losing their jobs.

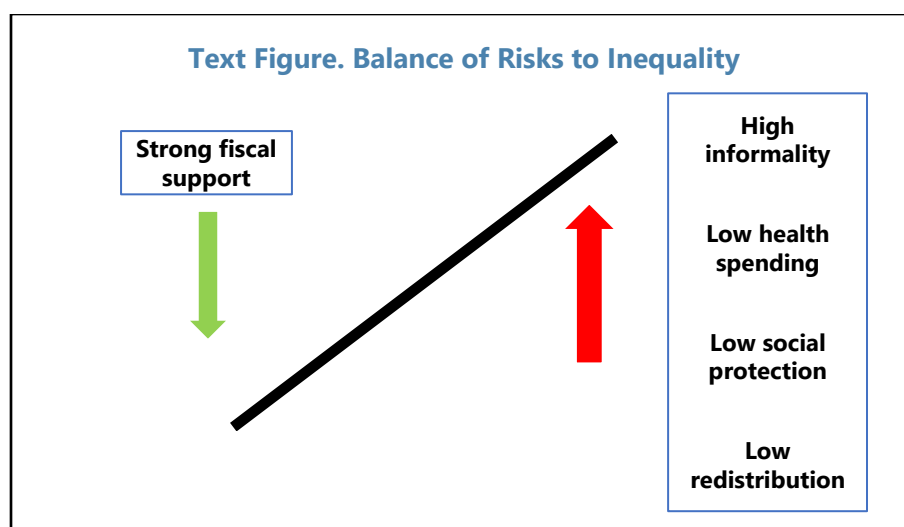
21. **Overall, the sectors with the lowest ability to work from home (least tele-workable) were the most at risk of registering job losses, reduced numbers of hours worked and severe income losses.**

Respondents that reported being unable to work from home were also most likely to report severe income loss, the most at risk of reducing the number of hours worked and the most at risk of losing their jobs (Figure 7). They were mainly from sectors such as food services, livestock, fishing, livestock and transportation and storage. Rahman et al (2020) estimate that about 64.5 percent of jobs in Malaysia cannot be performed from home (after adjusting for internet access) and that 50.9 percent of jobs require high levels of physical proximity. A significant proportion of the population is therefore doubly vulnerable: vulnerable both ex-ante through relatively low income and education, and directly through greater physical exposure to COVID-19. Indeed, the ability to work from home is positively correlated with non-routine cognitive analytical skills (Rahman et al.,2020).

22. **Given the structural pre-pandemic characteristics of Malaysia, risks to inequality are tilted to the upside.** In addition to the recent increase in inequality pre-pandemic, Malaysia's structural characteristics point to an upside risk for inequality post-pandemic. As previously discussed, recent evidence (Furceri et al., 2021b and, Aguirre and Hannan, 2021) show that strong



fiscal support and strong initial conditions (defined as low informality, high social protection spending, high health expenditure and high redistribution) contribute to mitigating pandemic-induced inequality. Health spending and social protection spending were below the average of Asian EMs for the most recent pre-pandemic data (Figure 8). Absolute redistribution, measured as the difference between the market Gini and the net Gini, was also below both the ASEAN and EM averages in 2019, after excluding Indonesia (which had a negative absolute redistribution score). Furthermore, shadow economy was among the highest in the region pre-pandemic. The only mitigating factor is therefore the large fiscal support, estimated to reach 9.6 percent of GDP by end- 2021 (see Appendix VII). As evidenced by the continued increase in the Gini index in 2020, the number of structural factors that would contribute to further increases in inequality is higher than the only mitigating factor (fiscal support). While it is difficult to anticipate with accuracy whether the large fiscal support may outweigh the impact of structural factors, again given the recent trend, a prudent approach would suggest considering the case for a rise in inequality.



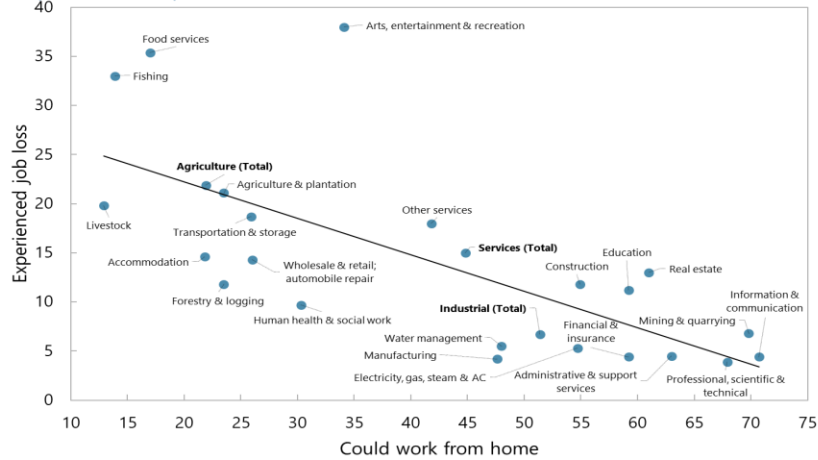
D. Conclusions

23. **In the medium term, the COVID-19 pandemic is expected to have significant scarring effects on Malaysia's potential output, and to increase inequality.** Historically, recessions reduce potential output across the next five years, while pandemics add further harms to the 'typical' recession. Interlinkages between sectors imply that the concentrated negative impact in some sectors will have broader repercussions across the economy. In addition, as evidenced by the recent increase in inequality in 2020, the pandemic is expected to raise income inequality as vulnerable households that are self-employed or employed in the agriculture and services sectors will suffer disproportionately large income and job losses. Further, the structural characteristics of Malaysia (relatively low social protection spending, including health spending, limited redistribution, and a large informal sector) could also amplify the impact of the pandemic on income inequality.

Figure 7. The Pandemic and Related Movement Control Orders Have Disproportionately Affected Sectors with Low Ability to Work from Home in Malaysia

Ability to Work from Home and Job Loss by Sector

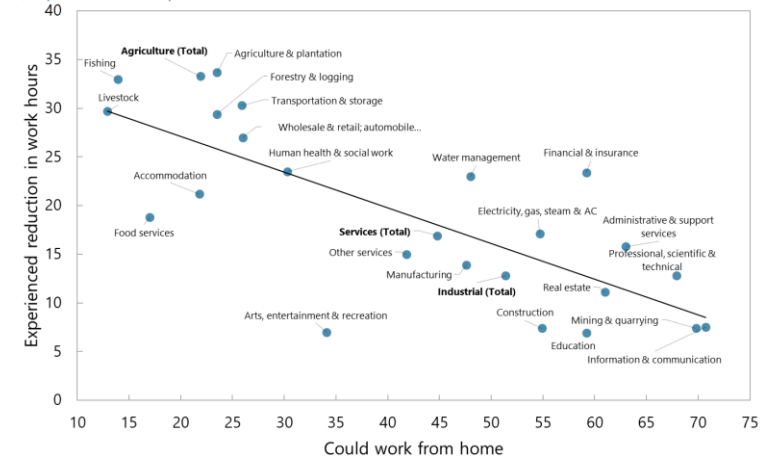
(In percent of respondents)



Sources: MYS Dept. of Statistics, *Special Survey on Effects of COVID-19 on Economy and Individuals (Round 1)*.

Ability to work from home & fall in work hours by sector

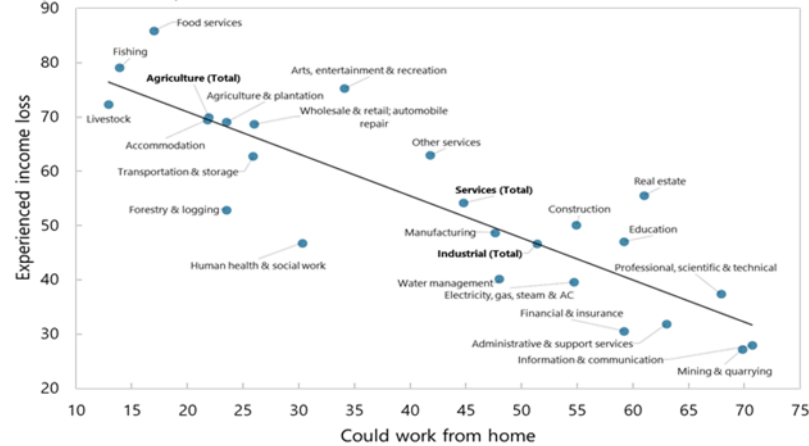
(In percent of respondents)



Sources: MYS Dept. of Statistics, *Special Survey on Effects of COVID-19 on Economy and Individuals (Round 1)*.

Ability to Work from Home & Income Loss by Sector

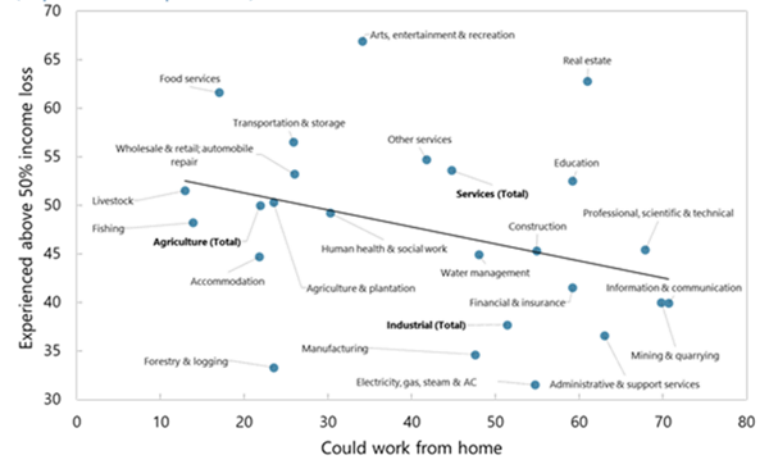
(In percent of respondents)



Sources: MYS Dept. of Statistics, *Special Survey on Effects of COVID-19 on Economy and Individuals (Round 1)*.

Ability to Work from Home & Severe Income Loss by Sector

(In percent of respondents)

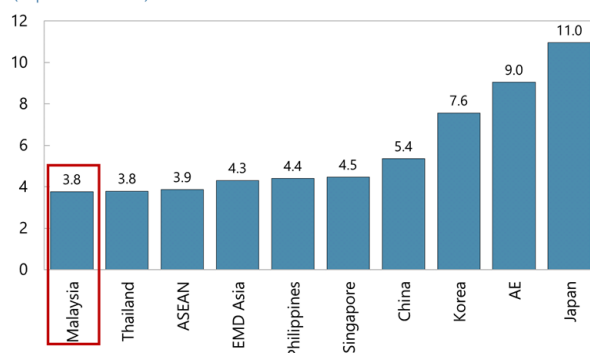


Sources: MYS Dept. of Statistics, *Special Survey on Effects of COVID-19 on Economy and Individuals (Round 1)*.

Figure 8. Proxies for Pre-pandemic Structural Characteristics

Health Spending (most recent data)

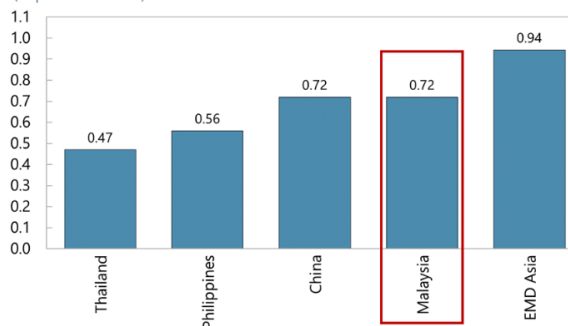
(In percent of GDP)



Sources: World Bank World Development Indicators (2018).

Social Protection Spending

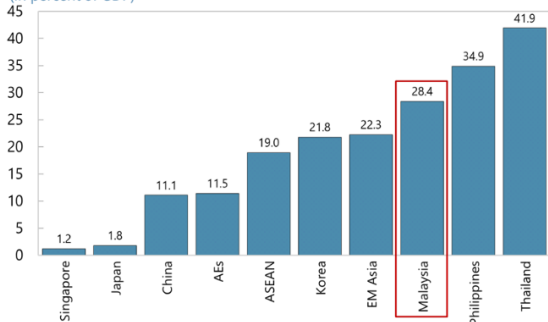
(In percent of GDP)



Sources: World Bank ASPIRE data. Thailand (2010-2011), China (2014), Philippines (2013 - 2014), Malaysia (2013). Data for Solomon Islands is not included in EMD Asia.

Size of Shadow Economy: Malaysia & comparator countries

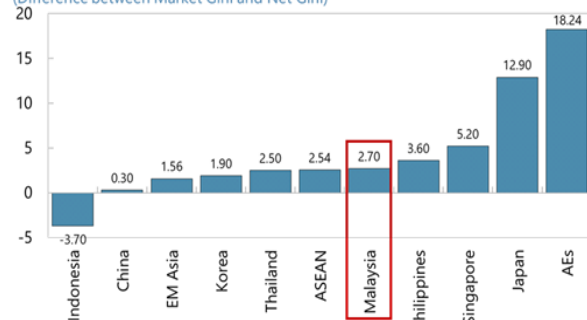
(In percent of GDP)



Note: Simple average were used for country groups.
Sources: Medina, Leandro, and Friedrich Schneider, 2020. "Shedding Light on the Shadow Economy: A Global Database and the Interaction with the Official One." *World Economies* 21: 25-82.

Redistribution: Malaysia and comparator countries

(Difference between Market Gini and Net Gini)



Note: Data for Korea and Philippines as of 2018; Japan as of 2015.
Sources: Standardized World Income Inequality Database (SWIID) and IMF staff calculations.

24. However, well-designed and targeted policies could mitigate the impact of the pandemic on both output and inequality.

- *In the near term*, given the uneven exposure to the pandemic, in addition to the announced fiscal stimulus, authorities could target fiscal support to sectors (including well designed scaling up of public investment with higher fiscal multipliers) with limited capacity to work from home and pursue active labor market policies. The latter could facilitate reallocation of labor, limiting the possible increase in skills mismatch, and boost aggregate demand by targeting those who have suffered severe income loss in the service and agriculture sectors.
- *Social assistance to the most vulnerable*. Social protection to the poorest members of the society and by extension the more liquidity-constrained households, self-employed and SMEs disproportionately hit by the pandemic would lessen the distributional impacts of the pandemic in Malaysia. A more targeted approach focused on supporting the poorest members of the society would also allow a better allocation of the limited resources and achieve even greater progress in reducing poverty and inequality. Important safeguards include explicit sunset clauses, rigorous means-testing, monitoring and reporting, and excluding debtors that are unviable.

- *Structural reforms.* In addition, policymakers should focus on strengthening their insolvency frameworks to address debt overhang through measures that avoid formal bankruptcy or facilitate recovery after bankruptcy. Structural reforms, centered on reducing the regulatory burden in the labor and product markets, should be one of the key priorities for medium term policies. It will also help reduce the size of the informal sector. While the introduction of the unemployment insurance in Malaysia in 2018 was a major step forward, a significant share of workers is not covered by the scheme, and that share is likely to increase over time given the increased incidence of temporary and gig jobs and self-employment. This will also help reduce the size of informal sector. Finally, judiciously calibrated R&D incentives could help boost the country's innovative capacity in the medium term.
- As part of Malaysia's short-term economic recovery plan, *Penjana*, authorities introduced incentives for the upskilling and reskilling of workers. This initiative should be enhanced by focusing on non-routine cognitive analytical skills, non-routine interpersonal skills, and digital skills that will help build resilience in the face of rapid technological change and improve the ability to work from home.

25. **Strategies to support corporate sector health through the recovery are essential.** Key principles should guide the eligibility criteria for which firms to assist and the assignment of policies. These include:

- *Limiting potential moral hazard*, to ensure firms receiving funds do not misuse them or engage in risky behavior, via setting terms of compliance and a clear exit strategy.
- *Articulating clear eligibility requirements*, which would limit adverse selection and scope for discretion, while preserving fiscal space.
- *Facilitating an efficient reallocation of resources in the economy*, to raise aggregate productivity as well as enabling firms to adapt to the post-COVID-19 operating environment.

26. **Targeted support is preferred to broad support.** Although broad-based (and liquidity) support is quicker and less administratively burdensome to disburse (and speed was a priority when the shock first hit), as the economy moves to the recovery phase, the focus should continue with a better targeting of firms to minimize fiscal costs, preserve fiscal space (Diez et al. 2021, OECD 2020a, 2020b), and limit governance challenges.

27. **The type of support should be linked to the nature of the problem firms are facing.** The general principles follow those in the literature (see Gourinchas and others 2020, IMF 2020a, and OECD 2020a), namely:

- Firms that were not viable prior to the COVID-19 shock should be encouraged to exit through liquidation.
- Solvent firms that are facing liquidity difficulties due to the pandemic should be provided liquidity assistance, such as through soft loans, expenditure deferrals, or debt moratoria.

- Firms that have become insolvent due to the pandemic, but are expected to recover post-pandemic, can be assisted through loans or equity injections.
- For those firms that cannot be supported through liquidity or solvency support, there needs to be efficient restructuring (to restore viability) or liquidation (where firms should exit) to encourage a reallocation of resources across the economy. To facilitate quick and low-cost restructurings, informal out of court resolution frameworks could be simplified and incentivized.

28. **The high prevalence of SMEs and informality in Malaysia requires additional considerations in designing the overall strategy.** The predominant share of SMEs in the affected sectors, and the high degree of informality in business practices, can make ascertaining the true financial position of such firms difficult, as well as open room for the misdirection and misuse of funds. Other considerations include the need to preserve employment for low-skilled labor, the geographic concentration of such firms (e.g., in tourism-dependent areas), and the systemic importance of some larger firms, and the social costs of loss of employment. This is compounded by the prevailing high uncertainty due to the pandemic.

- The eligibility criteria could consider firms that generate high social value through externalities based on their interlinkages with the local economy, particularly employment (for instance SMEs in the services sector).
- For firms where information on financial health is limited, the size of support could be gradually extended over the support period, based on the requirement to keep and meet objective markers.

References

- Almeida, V., Barrios, S., Christl, M., De Poli, S., Tumino, A., and van der Wielen, W. (2021). "The impact of COVID-19 on households' income in the EU". *The Journal of Economic Inequality*, 1-19.
- Aguirre, J. P. C., and Hannan, S. A. (2021). "Recoveries After Pandemics: The Role of Policies and Structural Features". *IMF Working Papers, WP/21/181*
- Bannister, G., Finger, H., Kido, Y., Kothari, S., and E., Loukoianova (2020). "Addressing the Pandemic's Medium-Term Fallout in Australia and New Zealand." *IMF Working Papers, WP/20/272*
- Bernstein, S., Colonnelli, E., Giroud, X., and Iverson, B. (2019). "Bankruptcy spillovers". *Journal of Financial Economics*, 133(3), 608-633.
- Blgrave, P., R. Garcia-Saltos, D. Laxton, and F. Zhang, 2015, "A Simple Multivariate Filter for Estimating Potential Output," IMF Working Paper WP/15/79.
- Bonacini, L., Gallo, G., and Scicchitano, S. (2021). "Working from home and income inequality: risks of a 'new normal' with COVID-19". *Journal of population economics*, 34(1), 303-360.
- Díez, F., R. Duval, J. Fan, J. Garrido, S. Kalemli-Özcan, C. Maggi, S. Martinez-Peria and N. Pierri, (2021), "Insolvency Prospects Among Small-and-Medium-Sized Enterprises in Advanced Economies", IMF Staff Discussion Note.
- Dosi, G., Fanti, L., and Virgillito, M. E. (2020). "Unequal societies in usual times, unjust societies in pandemic ones". *Journal of Industrial and Business Economics*, 47(3), 371-389.
- Emmerling, J., Furceri, D., Monteiro, F. L., Pizzuto, P., and Tavoni, M. (2021). "Will the Economic Impact of COVID-19 Persist? Prognosis from 21st Century Pandemics". *IMF Working Papers, 2021(119)*.
- Furceri, D., Loungani, P., Ostry, J. D., and Pizzuto, P. (2021a). "Will COVID-19 Have Long-Lasting Effects on Inequality? Evidence from Past Pandemics". IMF Working Paper WP/21/127
- Furceri, D., Loungani, P., Ostry, J. D., and Pizzuto, P. (2021b). "The rise in inequality after pandemics: can fiscal support play a mitigating role?". *Industrial and Corporate Change*, 30(2), 445-457.
- Furceri, D., Celik, S. K., Jalles, J. T., and Koloskova, K. (2021c). "Recessions and total factor productivity: Evidence from sectoral data". *Economic modelling*, 94, 130-138.
- Galletta, S., and Giommoni, T. (2020). "The effect of the 1918 influenza pandemic on income inequality: Evidence from Italy". Available at SSRN 3634793.
- Garber, G., Mian, A., Ponticelli, J., and Sufi, A. (2019). Household debt and recession in Brazil. In *Handbook of US Consumer Economics* (pp. 97-119). Academic Press.
- Garrido, J. M., Nadeem, S., Riad, N., DeLong, C. M., Rendak, N. and, Rosha, A. (2020). Tackling private over-indebtedness in Asia: Economic and legal aspects. *IMF Working Papers, 2020(172)*.
- Hill, H, Malaysian Economic Development, (2010), "Looking Backwards and Forward", Working Papers in Trade and Development 2010/13, Australian National University.

- Huidrom, R., M. A. Kose, and F. Ohnsorge. 2016. "Challenges of Fiscal Policy in Emerging Market and Developing Economies." CAMA Working Paper 34/2016, Crawford School of Public Policy, Sydney, Australia.
- IMF, 2020a, "Regulatory and Supervisory Measures in Response to the COVID-19 Pandemic," COVID-19 Notes.
- International Monetary Fund. 2021. "World Economic Outlook: Managing Divergent Recoveries."
- Jordá, O. 2005. "Estimation and Inference of Impulse Responses by Local Projections." *American Economic Review* 95 (1): 161-182.
- Kugler, M. D., Viollaz, M., Vasconcellos Archer Duque, D., Gaddis, I., Newhouse, D. L., Palacios-Lopez, A., and Weber, M. (2021). "How Did the COVID-19 Crisis Affect Different Types of Workers in the Developing World?" (No. 9703). The World Bank.
- Laeven, L., And F. Valencia. 2018. "Systemic Banking Crises Revisited." IMF Working Paper 18/206, International Monetary Fund, Washington, DC.
- Medina, L., and Schneider, F. (2020). "Shedding light on the shadow economy". *World Economics*, 21(2), 25-82.
- Mian, A., and Sufi, A. (2018). Finance and business cycles: the credit-driven household demand channel. *Journal of Economic Perspectives*, 32(3), 31-58.
- OECD (2018). "Inter-Country Input-Output Tables, 2018 Edition". Organization for Economic Cooperation and Development. <http://oe.cd/icio>
- OECD, 2020a, "COVID-19 Government Financing Support Programmes for Businesses"
- OECD, 2020b, "Corporate Sector Vulnerabilities during the COVID-19 Outbreak: Assessment and Policy Responses," [OECD Policy Responses to Coronavirus \(COVID-19\)](#)
- Rahman, A. A., Jasmin, A. F., and Schmillen, A. (2020). "The Vulnerability of Jobs to COVID-19: The Case of Malaysia". ISEAS Yusof Ishak Institute. <http://hdl.handle.net/11540/12748>.
- Schmitt-Grohé, S., Teoh, K., and Uribe, M. (2020). "COVID-19: testing inequality in New York City (No. w27019). National Bureau of Economic Research.
- Shibata, I. (2020). "The Distributional Impact of Recessions: The Global Financial Crisis and the Pandemic Recession." *IMF Working Papers*. WP/20/96
- UNICEF (2020). "COVID-19: Are children able to continue learning during school closures? A global analysis of the potential reach of remote learning policies using data from 100 countries." New York: United Nations Children's Fund.

Appendix VI. Risk Assessment Matrix¹

Risks	Likelihood and Transmission	Expected Impact of Risk	Recommended Policy Responses
Outbreaks of lethal and highly contagious COVID-19 variants lead to subpar/volatile growth, with increased divergence across countries.	High Rapidly increasing hospitalizations and deaths, due to low vaccination rates or caused by vaccine-resistant variants, force lockdowns and increased uncertainty about the course of the pandemic. Policies to cushion the economic impact are prematurely withdrawn or constrained by lack of space.	High High household debt is a vulnerability and a protracted impact of COVID-19 can be expected to constrain domestic consumption and lead to a deterioration of bank asset quality. Protracted measures to contain the pandemic can exacerbate scarring in the real economy. Higher financing costs for the sovereign; a relatively high public debt; and realization of contingent liabilities in the absence of a credible medium-term consolidation plan, 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.	With fiscal buffers decreasing following the initial pandemic policy response and the impact of COVID-19, the ability of macroeconomic policies to provide a cushion against a protracted slump is narrowing. On the fiscal side, provide targeted fiscal support to directly impacted households and firms, while developing a credible medium-term plan for fiscal consolidation. Continued emphasis on critical infrastructure projects and structural reforms to enhance productivity. Allow FX flexibility to continue acting as a shock absorber. On the macro-financial side, continue to ensure sufficient liquidity, including more accommodative monetary policy, combined with close monitoring of asset quality, especially with a view to assessing viable from non-viable firms. The BNM has room to further cut its policy rate if downside risks materialize.
	High COVID Persistent disruptions in the production and shipment of components caused by lockdowns and logistical bottlenecks continue until 2023.	High With a highly open economy and as a key player in global supply chains of semi-conductors, a prolonged covid-19 pandemic threatens to negatively impact economic activity through its impact on the Manufacturing/Electronics sector and trade.	
Extended global supply chains disruptions.	High COVID Persistent disruptions in the production and shipment of components caused by lockdowns and logistical bottlenecks continue until 2023.	High With a highly open economy and as a key player in global supply chains of semi-conductors, a prolonged covid-19 pandemic threatens to negatively impact economic activity through its impact on the Manufacturing/Electronics sector and trade.	With Malaysia almost fully vaccinated, a 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.
Abrupt growth slowdown in China	Medium A combination of a sharper-than-expected slowdown in the property sector, more frequent Covid-19 outbreaks, and inadequate policy responses result in a sharp slowdown of 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. Monetary easing provided it is consistent with the inflation output trade-off can also be considered. Targeted fiscal policy support can also play some role in minimizing scarring impact, although the fiscal space is at-risk. Structural policies could be implemented to minimize scarring and rebalance growth towards domestic demand.
De-anchoring of inflation expectations in the U.S. and/or advanced European economies	Medium/Low A fast recovery in demand amid a lagging supply-side response leads to a rapid de-anchoring of inflation expectations, which prompts central banks to tighten policies abruptly. The resulting sharp tightening of global financial conditions and spiking risk premia lead to currency depreciations, asset market selloffs, bankruptcies, sovereign defaults, and knock-on effects	Medium/High Impact on Malaysia would be through the narrowing difference in the interest rate, the resulting outflows and depreciation of the Ringgit and, through the upward pressure on the bond yields. High public debt is a vulnerability. Limited external financing is a mitigating factor.	The exchange rate should be allowed to act as a shock absorber, intervening only to smooth excessive volatility. Monetary policy should be calibrated to balance the trade-off between supporting growth and managing capital outflows. There is scope to provide liquidity support in foreign currency to maintain financial stability. With a fiscal space at-risk, 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).

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
External			
Rising and volatile food and energy prices.	High Commodity prices are volatile and trend up amid pent-up demand and supply disruptions, conflicts, or a bumpy transition to renewable energy sources. This leads to bouts of price and real sector volatility	Low This would happen in the context of increased volatility in oil prices due to the ongoing conflict in Ukraine which could potentially weigh on global growth. Further, as Malaysia's role as net energy exporter has been diminishing over time, this could also represent a negative shock to the economy.	Rebuild fiscal buffers as this is a transitory shock 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.
Natural disasters related to climate change	Medium Higher frequency of natural disasters causes severe economic damage.	Medium Severe flood events could destroy infrastructure and capital and necessitate relief and recovery spending, negatively impacting output and reducing 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.
Risks	Likelihood and Transmission	Expected Impact of Risk	Recommended Policy Responses
Domestic			
Fiscal risks from public debt and contingent liabilities (Short- to medium-term).	Medium A prolonged COVID-19 pandemic could trigger realization of risks that would have adverse consequences for fiscal policy, raising the sovereign's financing cost and requiring even stronger fiscal adjustment in the medium-term 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.
Global information infrastructure failure	Medium A disruption in global information systems (from an unintended error, natural disaster, or knock-on effects of widespread energy shortages) and/or cyber-attacks on critical infrastructure and institutions trigger financial instability or widespread disruptions in socio-economic activities and remote work arrangements.	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.

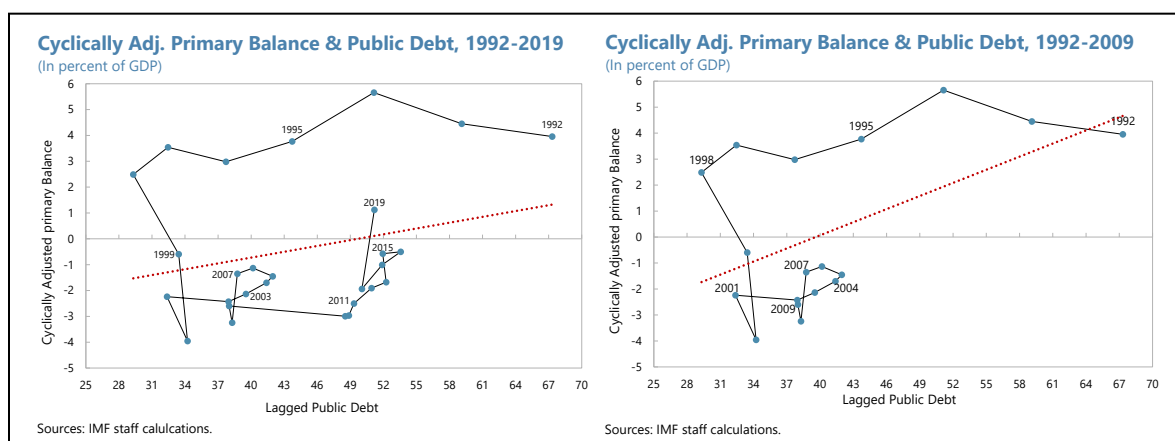
Appendix VII. Optimal Fiscal Policy in Malaysia¹

Malaysia is currently at an important turning point with high vaccination rates supporting the recovery momentum, but the recovery is still uneven, output remains well below potential, and scarring risks are large. The challenge is one of identifying and embarking on the best path for fiscal policy. So far in the pandemic, Malaysia's fiscal policy response appropriately prioritized supporting people and the recovery at the expense of narrowing its at-risk fiscal space and thus its ability to respond to future shocks. In short term, the analysis based on a stochastic structural model calibrated for Malaysia, suggests a need to continue supporting the recovery through a well-designed and targeted fiscal expansion. Beyond the near term, and like other countries with fiscal vulnerabilities, Malaysia needs to embark on a credible and growth-friendly fiscal consolidation path that would put debt on a downward trend and rebuild fiscal buffers.

A. Fiscal Policy Pre-Pandemic

1. **Malaysia started the pandemic with existing vulnerabilities but with mitigating factors as well.** Fiscal space at the start of the pandemic was assessed to be at risk as pre-existing vulnerabilities such as high contingent liabilities (20 percent of GDP, out of which 13 percent of GDP are committed) raised fiscal risks. Debt profile remains favorable with the majority of debt issued domestically, at long maturities, and in local currency. While the cost of debt is not high, debt service has constituted an increasing share of revenues, reaching 15 percent in 2020 and projected to use further in 2021 and 2022, in part due to Malaysia's narrow revenue base.

2. **In the past, fiscal policy appropriately reacted to the increases in debt by consolidating.** Looking at the reaction of the cyclically adjusted primary balance (CAPB) to lagged public debt during 1992–2019 can give insights into past consolidation efforts to put debt on downward path. A positive reaction means that fiscal policy is sustainable because debt increases are followed by fiscal consolidation. In Malaysia, we find a weak positive relationship suggesting that higher public debt is associated with higher CAPB primary balances. The relationship is stronger in the pre-global financial crisis (GFC) period.



¹ Prepared by Ghada Fayad. Special thanks go to Anh Nguyen and Jean-Marc Fournier for their helpful insights and technical assistance on the Fournier (2019) optimal fiscal stance model.

B. Pandemic Fiscal Policy Response

3. Despite at-risk fiscal space, the authorities responded boldly to the pandemic. To

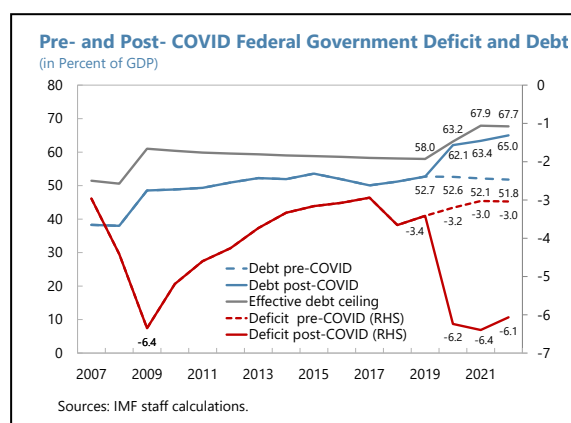
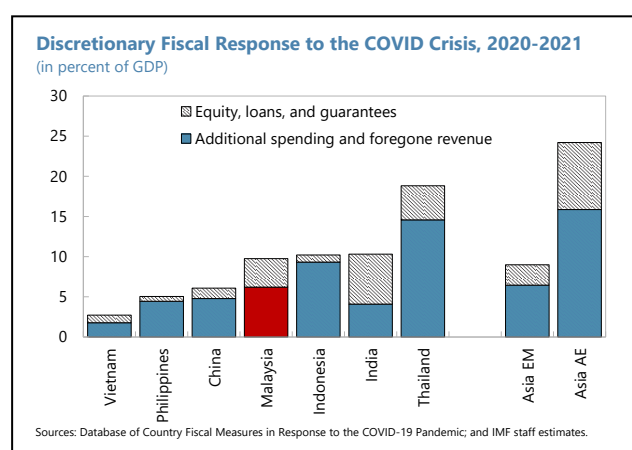
finance economic stimulus packages aimed at addressing the COVID crisis, a COVID-19 Fund was established in September 2020 with a limit of RM45 billion,

which was increased in December 2020 to 65 billion and more recently to 110 billion to account for COVID-related spending commitments in the 2022 Budget. In terms of allocation of spending across years, RM38 billion spent in 2020 under five stimulus packages, RM39 billion is envisaged to be spent in 2021 with an original RM17 billion allocated in the 2021 Budget and four additional spending packages, and RM23 billion is allocated for 2022. This sums up to a total of RM100 billion to be spent

from the fund over 2020-2022, leaving a RM10 billion buffer for contingencies or additional needed spending in 2022. In terms of allocation of spending categories, most spending has been on cash transfer programs and wage subsidies which accounted for more than half of total spending. In 2022, an increasing share of the allocation will be spent on upskilling programs, social assistance support to vulnerable groups, and SME financing. Below-the-line financing included 3.5 percent of GDP in loan guarantees in 2020 of up to 80 per cent of loan amounts for the purpose of financing working capital requirements for businesses affected by the pandemic. With several tax relief/exemption measures extended, including in the 2022 Budget, foregone revenues are estimated to have reached about 0.8 percent of GDP over 2020 and 2021.

4. **The strong fiscal response widened deficit and debt levels, and the debt ceiling was twice raised by a total 10 percentage points.** The increase in deficit and debt by about 3 and 10 percentage points of GDP is similar in magnitude to what happened at the time of the

	RM billion				% of GDP			
	2020	2021	2022	Total	2020	2021	2022	Total
COVID-SPENDING	38	39	23	100	2.7	2.5	1.4	6.6
Current	35	38	21		2.5	2.5	1.3	
Wage subsidies	13	10	3		0.9	0.6	0.2	
Social transfers	16	17	8		1.1	1.1	0.5	
Upskilling programs	0.3	0.4	1.0		0.0	0.0	0.1	
SME grants	3	3	0		0.2	0.2	0.0	
Other	3	7	9		0.2	0.5	0.5	
Capital	3	1	2		0.2	0.1	0.1	



GFC and is also comparable to the increase in debt levels in emerging markets and middle-income countries seen post COVID. The increase is also significant when compared to the pre-COVID fiscal policy path. Both the GFC and the current crisis saw increases in the debt ceiling by a total 10 percentage points, keeping actual debt below the effective limit in the baseline.

C. Malaysia's Envisaged Fiscal Path: 2022 Budget

5. **With recovery, resilience and reforms as overarching themes, the 2022 Budget remains focused on supporting the nascent recovery and minimizing pandemic long-term scarring while at the same time lifting-off a cautious adjustment path.** It foresees a narrowing of the overall deficit to 6.1 percent of GDP in 2022, down from 6.4 percent in 2021, suggesting a mildly contractionary fiscal stance in 2022. Underlying this decline are conservative revenue projections and the new, yet lower, COVID-19 allocation for 2022 compared to that of the previous two years. The bulk of the 2022 spending allocation is on cash assistance to vulnerable groups and wage subsidies to hard-hit sectors, which will also benefit from tax relief measures. The allocation is appropriate to address rising inequality post pandemic. While the COVID-19 fund ceiling and lifespan have been extended to RM110 billion until end 2022, total projected spending since 2020 is expected to reach RM100 billion, providing RM10 billion buffer for contingencies. In line with the 12th Malaysia Plan (12MP), development expenditure in the 2022 Budget is projected to rise significantly in 2022 and average 4.5 percent of GDP over the medium term, mostly directed into environmentally friendly projects with high multiplier effect.

6. **The 2022 Budget introduced targeted, mostly one-off, tax measures to raise revenues.** These measures are to be complemented by more permanent measures that would address Malaysia's long-standing revenue weakness under the medium-term revenue strategy (MTRS) umbrella. The windfalls from such measures, estimated at 0.5 percent of GDP, were conservatively excluded from revenue projections, and are planned to be used to reduce the deficit if they materialize. They include a one-time special tax for high-income companies,² and a Special Voluntary Disclosure Program (SVDP) for indirect taxes. Other measures were targeted to improving tax compliance including a tax compliance certificate as a pre-condition on tenderers to participate in government procurement, and implementation of the Tax Identification Number. A welcome and long-awaited review of the tax incentive system is underway under the MTRS.

7. **Beyond 2022, the Budget confirmed the government's commitment to medium-term consolidation to rebuild fiscal buffers, but through an initially gradual path and without clarity on underlying measures.** The overall fiscal deficit is projected to average at 5 percent of GDP for the 2022 – 2024, compared to a target 4.5 percent during 2021-2023 as per 2021 Budget, and to decline further to 3.5 percent by 2025 as per the 12MP targets. While the initial gradual deficit reduction is mostly driven by the projected recovery and the expiration of COVID-19 Fund, achieving the 3.5 deficit target by 2025 will have to be supported by additional measures. Even though it was noted that the government aims to gradually reduce debt levels and affordability with

² The windfall tax will be introduced for companies that generate extraordinary profits in 2022, with earnings above RM100 million taxed at 33 percent instead of the blanket 24 percent rate.

realistic but firm debt reduction targets to ensure fiscal sustainability, no quantification of such targets was provided.³

D. Optimal Fiscal Stance

8. **Fiscal policy stance is assessed with a stochastic structural model whereby a forward-looking government maximizes utility under a debt constraint.**⁴ The model aims to strike a balance between the objectives of economic stabilization and debt sustainability. The government decides the fiscal stance, defined as a change in the structural primary balance. The model features (i) feedback effects between fiscal policy and output whereby the primary balance has an effect on output (through cycle-dependent fiscal multiplier), and the output has in turn an effect on the primary balance through automatic stabilizers, (ii) hysteresis effects where recessions reducing potential output, reflecting human and physical capital losses of economic downturns, and (iii) fiscal policy being constrained by adverse effects of higher debt where the interest rate is a rising function of debt and, at high debt levels, the government faces a stochastic risk of losing market access. In addition, fiscal policy is subject to an implementation lag, the government decides its fiscal stance one year ahead in the model. The government does not know the position in the cycle in real time and can only forecast it. Moreover, changing fiscal policy entails a cost, reflecting implementation costs of spending reforms or tax uncertainty costs. The model also incorporates supply constraints, suggesting a limit to the ability of fiscal policy to close the gap.

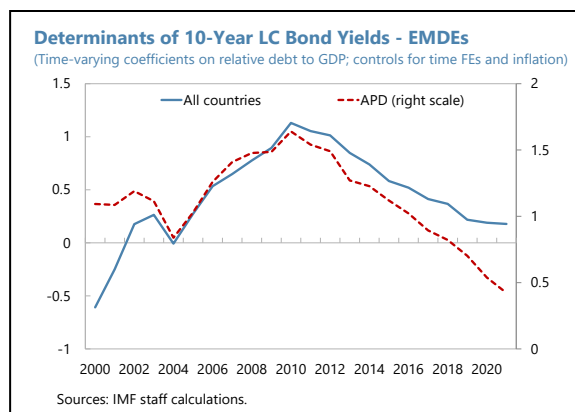
9. **Key model results suggest that while governments should countercyclically smooth the cycle, highly indebted government should react less to adverse shocks.** The model is analogous to Deaton (1991) buffer stock model of the consumer, applied to the government. A low debt level is like a buffer, as the government has the possibility to increase debt in case of a shock without paying excessive interest rates or facing market-access risk. The government should thus generate surpluses to restore buffers when public debt is high. Highly indebted governments should react less to shocks. When the debt buffer (the difference between current debt level and levels at which debt is too much at risk) is small, the probability of market stress is high and the marginal value of an extra unit of buffer is large. This provides an incentive to preserve buffers to guard against future shocks. As a result, when debt is high, the optimal policy response to offset a negative shock is smaller than when debt is low.

10. **As many other emerging market economies, Malaysia fiscal policy faces a trade-off between achieving a strong, broad-based and durable recovery and ensuring debt is on sustainable path.** We calibrate the model to Malaysia, using Malaysia specific historical data and assumptions on some model parameters, to infer the optimal fiscal policy response at this juncture. Key assumptions include:

³ Staff's baseline projections reflect a gradual decline in the fiscal deficit over the medium term, broadly in line with the authorities' targets up until 2024, but deviates from authorities' path from 2025 as the 3.5 deficit target is not underpinned by measures.

⁴ See Fournier (2019) and Fournier and Lieberknecht (2020) for model details.

- Elasticity of interest rate to debt level.* This parameter represents the impact of debt increases on government bond yields. Chapter 2 of the 2021 October Fiscal Monitor finds that interest rate sensitivity to debt has been on a declining trend, suggesting increased debt-carrying capacity. For emerging markets and developing economies (EMDEs) in particular, a fundamentals-based asset valuation model, with time-varying coefficients for both absolute and relative debt indicators, is estimated to show that both local currency (LC) and foreign currency government bond yields have become less responsive to debt indicators as well as country fundamentals. The same model is estimated by adding a dummy for the APD region, and shows that the sensitivity of LC debt in the region has gone down from about 1.5 after the GFC to 0.5 in 2021.⁵ We conservatively assume the elasticity at 1.5, noting that model results are not very sensitive to changes in this parameter.⁶ Overall, as argued in the FM, results on higher debt tolerance should be interpreted with caution as the drop in the correlation since the global financial crisis coincides with a period of ample global liquidity and could reverse should liquidity reduce, particularly in light of upcoming tightening of monetary policy in AEs.
- Debt limit:* which is the debt level at which there is risk of loss of market access. For Malaysia, we use the effective debt limit which in the long run stands at 67 percent of GDP.
- The fiscal multiplier.* The fiscal multiplier calibration reflects the country's economic structure such as trade openness, exchange rate flexibility, and labor market rigidity, as well as the country's business cycle and monetary policy stance. Using Batini et al. (2014) bucket approach would put Malaysia in the low multiplier bucket (multiplier 0 to 0.3). Dime et al. (2021) estimate higher multipliers for the Asian countries, ranging from 0.73 to 0.88. In light of this, and with the planned scaling up of public investment with high multiplier effect, we put Malaysia's multiplier in the "medium-multiplier" group at 0.6.
- Growth-adjusted interest rate.* Long-run potential growth is assumed at 2 percent, real effective interest rates and population growth rates at their long-run value (as per DSA assumptions) of 3.5 and 1 percent respectively. It should be noted that Malaysia's interest-rate growth differential has been negative historically (except during crisis years) which contributed favorably to debt dynamics.



⁵ Thanks go to Andresa Lagerborg for running the FM regression model for the APD region.

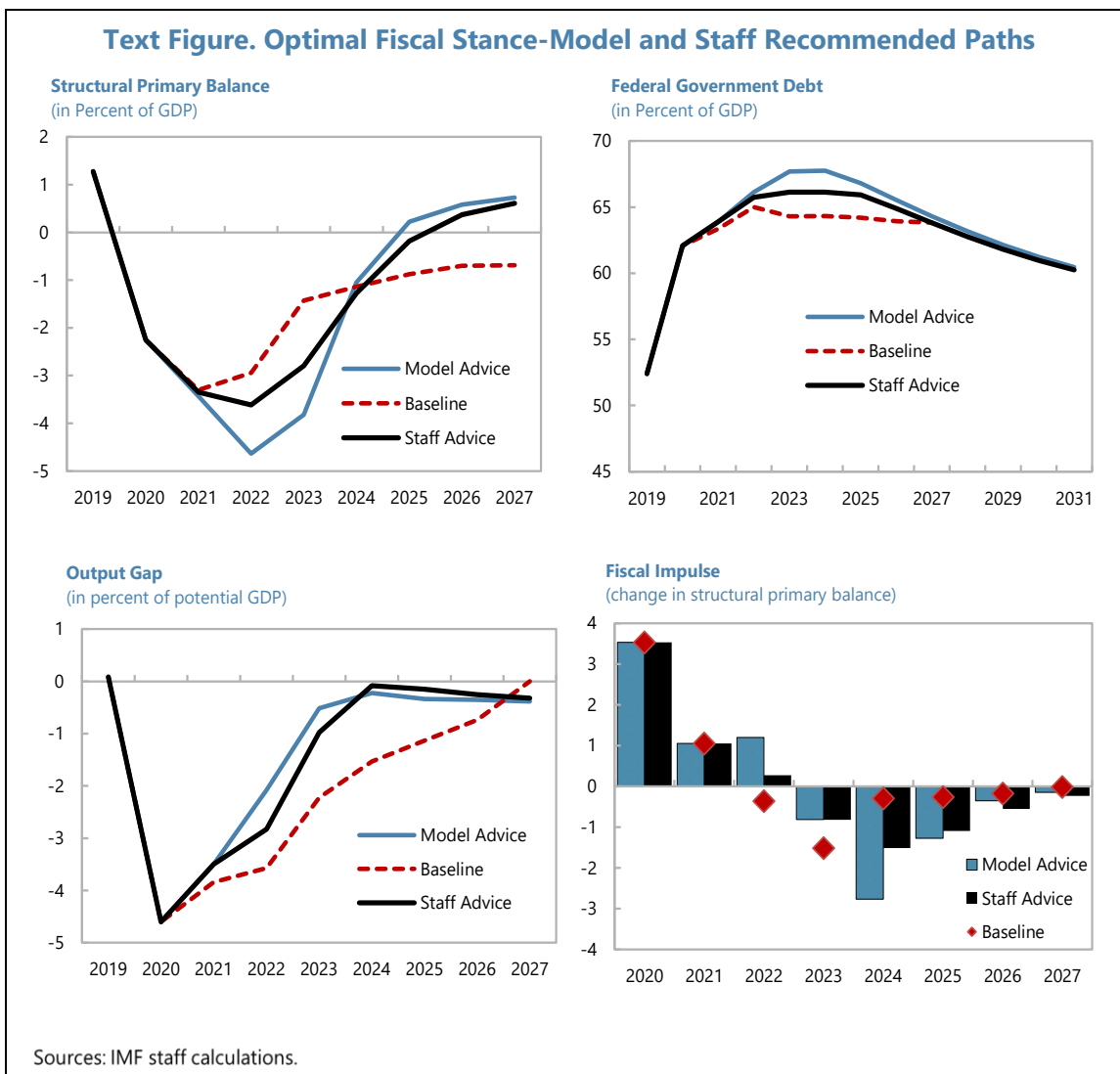
⁶ The reason for the low sensitivity is that a higher elasticity of interest rates to the debt level has two effects that, in this specific exercise, broadly offset each other: (i) it raises the marginal cost of a given increase in debt (leading the government to target a lower debt level); but (ii) it lessens the surplus needed to reduce debt (dampening the debt aversion effect induced by (i)) because the interest rate burden drops faster when debt declines.

- *Automatic stabilizer* is set at 0.2, the historical semi elasticity of the primary balance to the output gap for Malaysia. Data are based on the macroframework projections of the current policy scenario.
- *Other model parameters* such as the welfare function parameters (discount factor, risk aversion, labor elasticity etc.) are standard in the literature. The model also features an adjustment cost reflecting the difficulty of implementing effectively a large fiscal stimulus, and of reversing such a stimulus. The adjustment cost parameter is set at 3. This is a moderate adjustment cost as the model can recommend quite a sizeable adjustment if the previous primary balance level was far from appropriate. One can hardly infer this parameter from historical data as one cannot exclude that the observed degree of fiscal inertia reflects suboptimal political constraints. The two hysteresis parameters, namely the size of hysteresis and the output gap threshold below which hysteresis affects potential output, are calibrated 10 percent and -1 percent.

11. **The model provides support for additional stimulus in the short run followed by fiscal consolidation over the medium term.** The larger deficits in the near term suggested by the model indicate a stronger focus on narrowing the still very negative output gap in 2022 and 2023 and minimizing hysteresis and the corresponding economic scarring until the pandemic is contained. Relative to the baseline, the model recommends more stimulus by about 4 pp of GDP. After 2023, the model advice recommends a gradual fiscal adjustment. In contrast to the stable path of public debt in the current policy scenario, the model discerns a need to anchor public debt on a downward path over the medium term and rebuild fiscal buffers to create room for policy support in case further shocks arise. The model's recommendation for medium-term fiscal adjustment is driven by a need to stabilize debt and rebuild fiscal buffers, and in that respect the consolidation is about 2.9 pp steeper than the passive baseline, and would put debt on a firm downward trend.

12. **Staff recommended path is for a smaller stimulus and consolidation relative to the model's optimal path.** Under such path, the fiscal stance would be looser than baseline by about 2 p.p. cumulatively in 2022 and 2023, and tighter in the medium term relative to baseline about 3 p.p. While not undermining the model optimal recommendation, this alternative smoother path is more cognizant of Malaysia's at-risk fiscal space amid a protracted pandemic that might necessitate more spending down the road, and of the practical and feasibility challenges of embarking on a large stimulus at this stage of the pandemic, as well as of the later unwinding such stimulus.

13. **These results are generally robust to sensitivity checks.** To check the sensitivity of the advice to assumptions, we re-run the model by changing key model parameters and find that the argument for more near-term fiscal support broadly holds under most of the alternative parameters. First model results are not particularly sensitive to parameters governing market access risk such as changes in sensitivity of interest rate to debt as noted above, nor to the debt limit. This is because the optimal policy reacts preemptively to contain the interest rate burden, before being too constrained by the debt limit. Second, the model recommendation for the primary structural balance for 2022 in an alternative scenario without scarring is very similar to the baseline (just 0.35 pp difference), illustrating that the main motivation for additional stimulus is to avoid hysteresis. Third, if the fiscal multiplier is higher (respectively, lower), the same economic output can be achieved with less (respectively, more) fiscal stimulus.





E. Link to Fiscal Space Assessment

14. **While Malaysia’s fiscal space has been assessed to be at risk, staff is of the view that it affords Malaysia enough room to embark on the recommended marginal near-term expansion.** Despite the step increase in public deficit and debt since the pandemic, and the pre-existing fiscal risks of large external financing needs⁷ and contingent liabilities, positive dynamics for Malaysia’s fiscal space are manifested in its low gross financing needs, favorable debt profile including extended debt maturities and a greater share of domestic and local currency borrowing, historically favorable negative interest rate-growth differentials, as well as lack of demographic pressures. Malaysia also started the pandemic with a fiscal space at-risk assessment, however the twice-increased debt ceiling since 2020 and ample liquidity in the domestic market allowed Malaysia to mount a strong fiscal response thus far without endangering market access nor debt sustainability, and staff is of the view that it could continue to do so in the near future. The cautious

⁷ Please refer to the external DSA appendix XI for a discussion on the mitigating factors for this vulnerability.

recommended fiscal stimulus is however cognizant of the protracted nature of the pandemic and to safeguard space for potential future spending needs.

Text Table. Fiscal Space Assessment: Relevant Indicators for Malaysia	
	
Favorable debt dynamics: high share of debt: Held domestically Issued in local currency At longer maturities	High contingent liabilities
Negative interest rate growth differentials Low public gross financing needs Reasonable market access costs Lack of demographic pressures Track record of fiscal prudence	Large external financing requirements Increase in debt post-pandemic

15. **In the current conjuncture of the aftermath of a severe negative shock and lingering negative output gap, fiscal inaction or abrupt consolidation could actually reduce fiscal space by dampening growth.** Alternatively, the recommended temporary stimulus could create fiscal space and improve medium-term debt prospects, if used wisely as advised by staff including on targeted transfers, to fund investment in productive infrastructure, support structural reforms, and help repair private balance sheets. As growth returns to potential, fiscal stimulus loses its effectiveness while the cost of fiscal consolidation diminishes, and it becomes optimal to embark on a fiscal adjustment path that would rebuild space while putting debt on a firm downward trend.

F. Conclusions

16. **Malaysia's fiscal prudence over the last decades has afforded it space for a strong response to the pandemic so far but more needs to be done to both minimize scarring effects and rebuild buffers.** A stochastic structural model calibrated for Malaysia suggests that the optimal fiscal stance is one that involves higher spending in the near term relative to the 2022 Budget baseline, but that would also involve more consolidation effort over the long term to put debt on a firm downward trend and rebuild fiscal buffers.

References

- Batini, N., L. Eyraud, L. Forni, and A. Weber, 2014, "Fiscal Multipliers: Size, Determinants, and Use in Macroeconomic Projections," IMF Technical Notes and Manuals 14/04.
- Deaton, Angus S. 1991. "Saving and Liquidity Constraints," *Econometrica* 59 (5): 1221-48.
- Dime, R., E. Ginting, and J. Zhuang, 2021, "Estimating Fiscal Multipliers in Selected Asian Economies," ADB Economics Working Paper Series, No. 638.
- Fournier, J.M., 2019a, "A Buffer-Stock Model for the Government: Balancing Stability and Sustainability," IMF Working paper, No. 19/159.
- , 2019b, "The Appropriate Fiscal Stance in France: A Model Assessment", IMF Selected Issues, No. 19/246.
- Economic Planning Unit, Prime Minister's Department, Malaysia (2022), Twelfth Malaysia Plan 2021-2025 - A prosperous, Inclusive, Sustainable Malaysia. Retrieved from [Twelfth Malaysia Plan, 2021-2025 \(epu.gov.my\)](https://epu.gov.my/Twelfth_Malaysia_Plan_2021-2025).
- Fournier, J.M. and P. Lieberknecht, 2020, "A Model-Based Fiscal Taylor Rule and a Toolkit to Assess the Fiscal Stance," IMF Working paper, WP/20/33.
- International Monetary Fund, 2021, October 2021 Fiscal Monitor, Chapter 2 Ministry of Finance, Malaysia (2022). 2022 Fiscal Outlook and Federal Government Revenue Estimates. Retrieved from <https://budget.mof.gov.my/2022/index-en.html>

Appendix VIII. Fighting Climate Change in Malaysia¹

While Malaysia is less vulnerable than many of its neighbors, there remain significant climate risks, particularly flooding, cyclones and chronic heat stress. These threaten both coastal tourism and urban areas, and are likely to affect the poorest groups in society disproportionately. Malaysia emits approximately 0.7 percent of global CO₂, primarily from the energy sector. This appendix aims to first establish stylized facts about Malaysia's vulnerability and contribution to climate change, and to take stock of the authorities' climate goals and commitments. It then considers policy responses across mitigation and adaptation, as well as the role of the financial sector, taking into account both current plans and best practice internationally.

A. Context

1. **While Malaysia is less vulnerable than many of its neighbors, there remain significant climate risks, particularly flooding, cyclones and chronic heat stress (Figure 1).** The Economic and Social Commission for Asia and the Pacific estimates current annual losses in the Asia-Pacific region from both hydrometeorological and geophysical natural hazards to be around US\$780 billion, rising to US\$1.4 trillion in the worst-case scenario (ESCAP, 2021). Malaysia is relatively less exposed, with at least 115 other countries globally suffering more from extreme weather events between 2000 and 2019.² Dasgupta et al. (2009) assess that one meter of sea-level rise could increase the 1 in 100-year storm surge impact zone in Malaysia by around 24 percent, and increase the population affected by around 34 percent. Under the Intergovernmental Panel on Climate Change (IPCC)'s Representative Concentration Pathway (RCP) 8.5 high emission scenario, average daily maximum temperatures surpass 33°C by the end of the century (WBG Climate Change Knowledge Portal, 2021), risking a range of severe heat-related illnesses and injuries. Such temperature rises could also place up to 43 million people in Malaysia at risk of malaria, up from a 1961-2000 baseline of 17.6 million (WHO, 2015). Many of these climate risks also interact, for instance cyclones causing floods which spread communicable diseases, creating the risk of multiple overlapping crises.

2. **These risks threaten both coastal tourism and urban areas, and are likely to affect the poorest groups in society disproportionately.** Prior to the pandemic, The World Travel and Tourism Council estimated that the travel and tourism sector in Malaysia constituted 11.7 percent of GDP and accounted for 15.1 percent of total employment in 2019 (WTTC, 2021). Increased inundation risks threaten valuable tourist infrastructure in coastal regions, while global temperature changes could affect the relative desirability of different areas. Rising temperatures are compounded by Urban Heat Island (UHI): dark surfaces, air pollution and lack of vegetation and local heat sources have been observed to push the temperature in Kuala Lumpur 4-6°C above rural surroundings

¹ Prepared by Alexander Copestake and Ghada Fayad.

² Ranking from the Germanwatch Global Climate Risk Index, which examines 180 countries (Eckstein et al., 2021).

(Elsayed, 2012). Poorer communities are least able to invest in flood defenses or air conditioning, and are more likely to work in manual labor occupations which are most vulnerable to heat stress.

3. **Malaysia emits approximately 0.7 percent of annual global CO₂, primarily for electricity, heating and transportation (Figure 1).** Malaysia accounts for 0.35 percent of cumulative historical CO₂ emissions globally, in line with ASEAN neighbors Thailand (0.43 percent) and the Philippines (0.2 percent), with electricity, heat, transport and manufacturing the largest emitters (Ritchie and Roser, 2020). The ambitious Twelfth Malaysia Plan aims for transformation to a high-income carbon-neutral economy. Advancing sustainability is one of three core themes, focusing on advancing green growth while enhancing energy sustainability and transforming the water sector. The government initially committed to an unconditional 35 percent reduction in greenhouse gas intensity by 2030, relative to 2005, before strengthening this to 45 percent in July 2021. While this is relatively stringent among ASEAN nations (see Table 1), this is not ambitious in absolute terms, as discussed in the next section. Despite rapid investment in renewable electricity capacity over the last ten years, including relative to some neighbors, the total absolute stock remains small. However, the PM pledged in September 2021, ahead of COP26, to achieve net zero emissions as early as 2050 and to cease construction of new coal-fired power plants.

B. Mitigation

4. **Malaysia faces difficult policy decisions on how to promote emissions reduction, particularly in the energy sector.** The 11th Malaysia Plan made significant progress on mitigation, including through expanding renewable energy capacity, reducing waste and increasing government green procurement. A key component of the 12th Malaysia Plan (12MP) is the development of an NDC roadmap, while the Ministry of Environment and Water's Long-Term Low Emission Development Strategy, due by the end of 2022, will outline plans for achieving net zero. The Ministry of Finance and Bursa Malaysia are currently investigating a range of carbon pricing options, including a carbon tax and emissions trading scheme (ETS), in collaboration with other government agencies and the World Bank. Energy-related CO₂ emissions accounted for most of Malaysia's greenhouse gas (GHG) emissions in 2018. Within the energy-related emissions, power generation accounted for 48 percent of Malaysia's emissions, transportation 25 percent, industry (manufacturing and construction) 25 percent, and residential 1 percent. Combustion of coal, natural gas, and gasoline accounted for 39, 29, and 16 percent of energy-related CO₂ emissions respectively. Promoting a rapid transition to cleaner energy sources is a key challenge that the NDC roadmap must address.

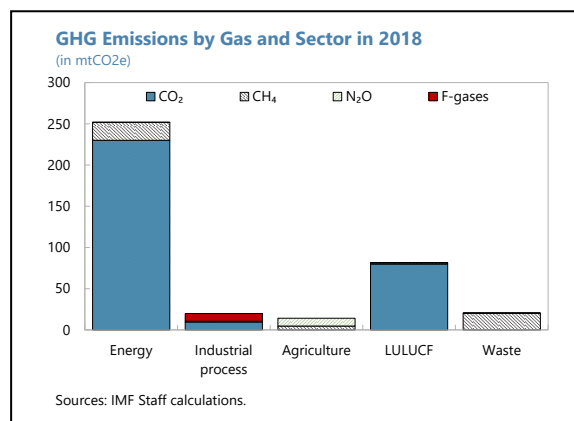
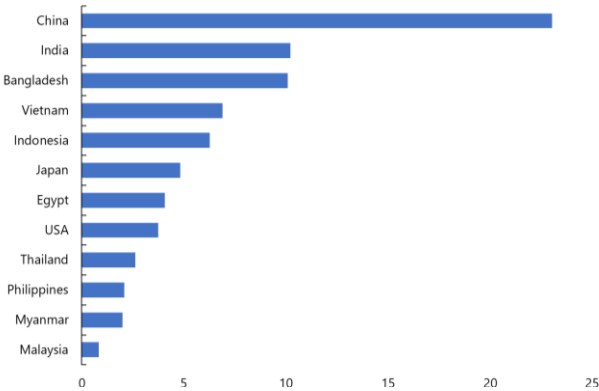
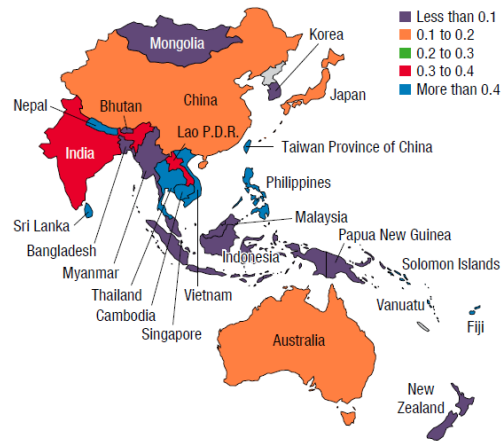


Figure 1. Exposure and Contribution to Climate Change

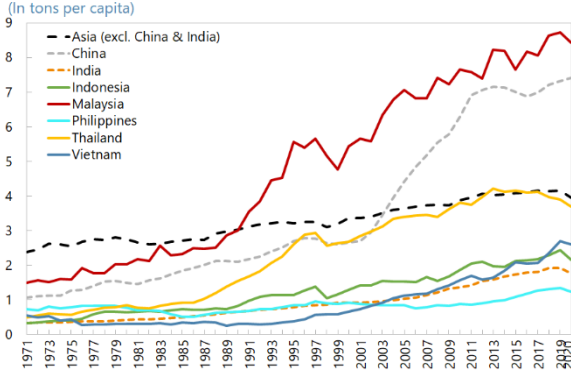
Low-Elevation Coastal Zone Population, 2000
(Percentage of global LECZ population)



Damage from Climate-related Events, 2010-19
(In percent of GDP)

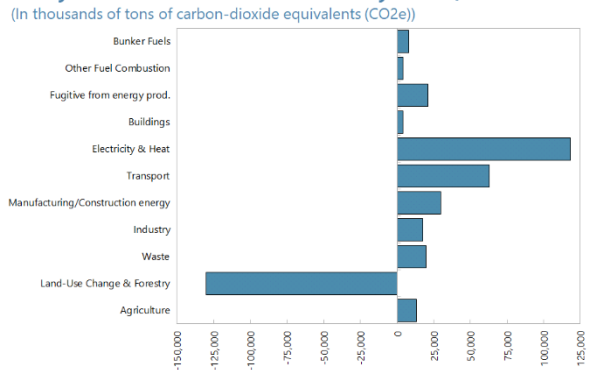


CO2 Emissions Per Capita
(In tons per capita)



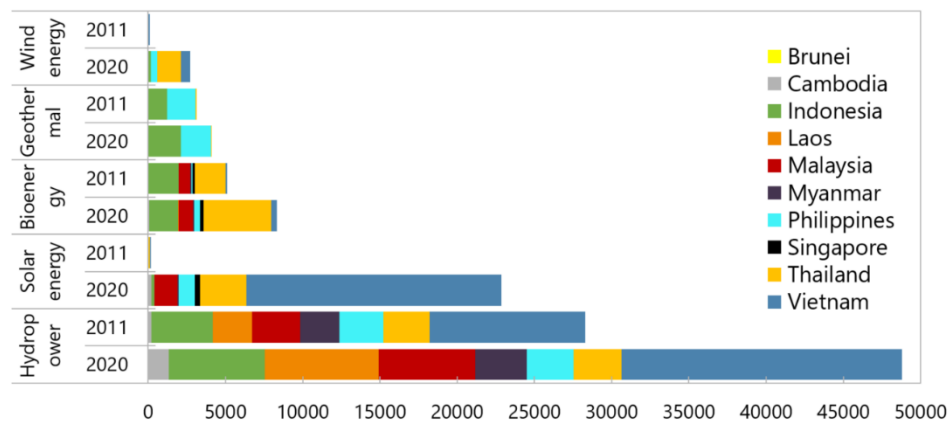
Sources: Global Carbon Project; and Our World in Data.

Malaysia: Greenhouse Gas Emissions by Sector, 2016
(In thousands of tons of carbon-dioxide equivalents (CO2e))



Sources: Climate Watch; and Our World in Data.

ASEAN: Renewable Energy Installed Capacity by Technology
(In megawatts)



Sources: Dabla-Norris et al. 2021, Neumann et al. 2015, EM-DAT 2020, Our World in Data, ClimateWatch, IRENA 2021.

Table 1. Submission Status of Intended Nationally Determined Contributions (INDCs) Across ASEAN

Country	Commitment	Reference case	Target year
Brunei	20 percent	BAU* (2015)	2035
Cambodia	27 percent	2010**	2030
Indonesia	29 percent reduction, additional 12 percent	BAU	2030
Lao PDR	Sector measures to reduce emissions		
Myanmar	Sector based measures to increase renewables and energy-based efficiency	BAU	2030
Malaysia	45 percent reduction in emissions intensity	BAU (2005)	2030
Philippines	75 percent reduction	BAU	2030
Singapore	36 percent reduction in emissions intensity	BAU (2005)	2030
Thailand	20 percent, additional 5 percent	BAU (2005)	2030
Vietnam	8 percent and additional 17 percent conditional on access to international cooperation and mechanisms	BAU (2010)	2030

* Business as usual (BAU) implies a reduction in emissions relative to the hypothetical emissions projected forward from a base year in the absence of major climate change policies. Not all countries provide a derivation for the BAU pathway; the base year is given in parentheses where available.

**Country that is not using a BAU scenario as reference for emission reductions.

Source: United Nations Framework Convention on Climate Change (UNFCCC) INDC submissions.

5. **Fiscal policy can play a key role in climate mitigation, including by implementing carbon pricing policies that raise the price of carbon and incentivize firms and households to reduce their emissions.** This paper focuses on two key market-based potential carbon pricing fiscal tools for Malaysia: carbon tax and ETS, which have both been put forward in the 12MP as policy options to reduce emissions. The October 2019 IMF Fiscal Monitor argues that, of the various mitigation strategies, carbon taxes on the supply of fossil fuels in proportion to their carbon content are “the most powerful and efficient, because they allow firms and households to find the lowest-cost ways of reducing energy use and shifting toward cleaner alternatives.” Under an ETS instead, firms are required to hold an allowance for each ton of their emissions, the government sets a cap on total allowances or emissions, and market trading of allowances establishes the emissions price. The total quantity of allowances is fixed, and market trading of allowances establishes a market price for emissions. Auctioning the allowances provides a source of government revenue. Overall, a carbon tax’s revenue generation capacity, its price predictability under a clear pricing path, and its low administrative burden (a carbon tax can build on existing tax systems) separate it from an ETS that usually offers no price predictability, generate less revenues and require new infrastructure and new capacity to monitor trading markets.³ In the case of Malaysia with revenue weakness and development spending needs under the 12MP, a climate tool that could both address emissions

³ In the absence of exemptions, with the addition of a price floor, and if the government auctions initial allowances, an ETS can achieve the same beneficial outcomes as an equivalent carbon tax. In practice however that has not been the case as the coverage of ETS has usually been limited to power generators and large industrial firms.

reductions and generate needed fiscal revenues appears superior. Carbon taxation could also be complemented by additional sector-specific measures, such as energy efficiency regulations or feebates. A comprehensive mitigation strategy may also include direct public provision of some green infrastructure not provided by the private sector.

6. **Despite being very effective, carbon taxes have seldom been the instrument of choice in the Asia-Pacific where countries have instead adopted or are considering adopting ETSs to mitigate climate change.** China, Korea and New Zealand have opted to implement an ETS, while several other countries, including Malaysia, are considering doing so. Only Japan and Singapore have implemented a carbon tax in the region, and Indonesia is scheduled to do so in 2022 (Table 2). While ETSs appear to be more widely used in the region, the prospective imposition of border carbon adjustments (BCAs), which are import fees imposed by carbon-taxing countries on goods manufactured in non-carbon taxing countries, by the European Union and potentially other major advanced economies makes the case for countries in the region to adopt their own carbon tax. For Malaysia, the 2022 Budget raised concerns about the effect of BCAs on Malaysian exports given strong trade links with the US and EU, and highlighted the need for policies that would enable the smooth transition of industries to low carbon activities.

Table 2. Carbon Tax and Emissions Trading Systems in Asia and the Pacific

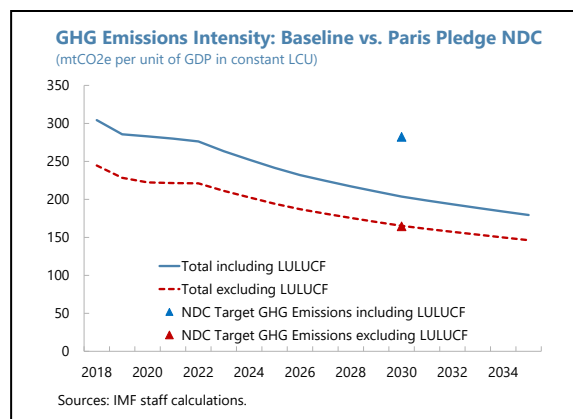
Country	Initiative	Type	Status	Coverage	Year of implementation
China	China national ETS	ETS	Implemented	National	2021
	Beijing pilot ETS	ETS	Implemented	Subnational	2013
	Chongqing pilot ETS	ETS	Implemented	Subnational	2014
	Fujian pilot ETS	ETS	Implemented	Subnational	2016
	Guangdong pilot ETS	ETS	Implemented	Subnational	2013
	Hubei pilot ETS	ETS	Implemented	Subnational	2014
	Shanghai pilot ETS	ETS	Implemented	Subnational	2013
	Shenyang ETS	ETS	Under consideration	Subnational	TBC
	Shenzhen pilot ETS	ETS	Implemented	Subnational	2013
	Tianjin pilot ETS	ETS	Implemented	Subnational	2013
Indonesia	Indonesia carbon tax	Carbon tax	Scheduled	National	2022
	Indonesia ETS	ETS	Under consideration	National	TBC
Japan	Japan carbon pricing mechanism	ETS	Under consideration	National	TBC
	Japan carbon tax	Carbon tax	Implemented	National	2012
	Saitama ETS	ETS	Implemented	Subnational	2011
	Tokyo CaT	ETS	Implemented	Subnational	2010
Korea	Korea ETS	ETS	Implemented	National	2015
Malaysia	Malaysia ETS	ETS	Under consideration	National	TBC
New Zealand	New Zealand ETS	ETS	Implemented	National	2008
Singapore	Singapore carbon tax	Carbon tax	Implemented	National	2019
Thailand	Thailand ETS	ETS	Under consideration	National	TBC
Vietnam	Vietnam ETS	ETS	Under consideration	National	TBC

Sources: World Bank Carbon Pricing Dashboard, April 2021; IMF (2021b).

7. **The analysis in this section relies on the IMF/World Bank Carbon Pricing Assessment Tool (CPAT) which allows a detailed quantitative analysis of carbon pricing mechanisms.**⁴ CPAT provides data on use of fossil fuels by major sectors and produces country-specific projections of fuel use and CO₂ emissions in a business-as-usual (BAU) baseline. It allows rapid estimation of

⁴ Please see IMF (2019b) for more details on the CPAT.

the likely impact on emissions, fiscal revenues, local air pollution, mortality, and economic welfare of carbon pricing, and can thus help policy makers design, compare and implement such carbon pricing reforms to achieve their climate mitigation NDCs. The impacts of carbon pricing on fuel use and emissions depend on: (i) their proportionate impact on future fuel prices in different sectors; (ii) a simplified model of fuel switching and electricity dispatch within the power generation sector; and (iii) various own-price elasticities for electricity use and fuel use in other sectors.

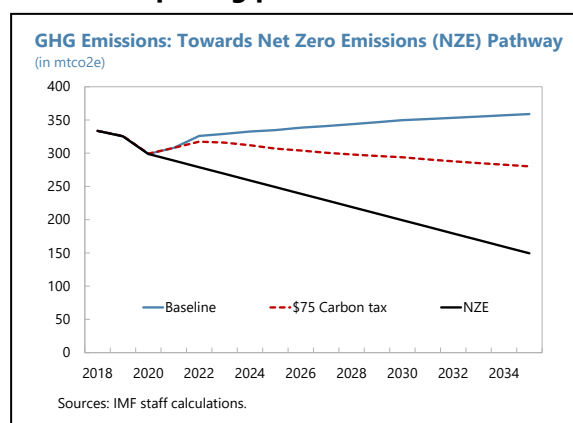


8. Malaysia is projected to overachieve on its updated commitment of 45 percent unconditional reduction in emission intensity under the Paris Agreement in the BAU baseline.

The expected overachievement includes emissions from land use and the land-use change and forestry (LULUCF). Based on emission intensity in Malaysia in 2005 (the base year), the unconditional target is calculated and compared to projected emission intensity in 2030. For Malaysia, emission intensity in 2030 is projected to be 39 percent lower than the target. This issue is not Malaysia-specific, in the Asia-Pacific region, IMF (2021a) identified several other countries in the same situation such as India, Hong Kong, Nepal and Myanmar. This result speaks more about the ambitiousness of the target rather than the need for emission reductions, which remains important including to achieve net zero emissions by 2050. Next, we assess how different carbon tax rates and how the ETS allows significant reduction in baseline emission intensity, while securing additional benefits.

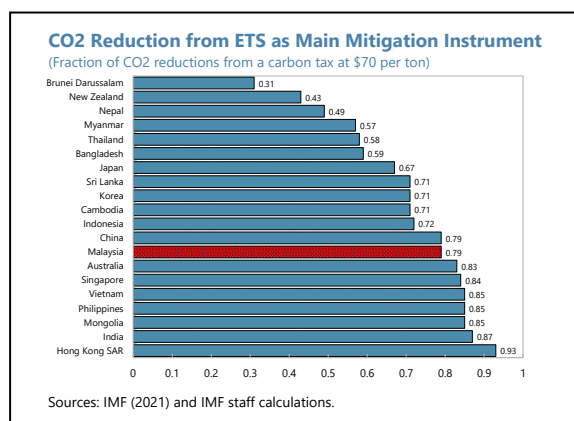
9. Illustrative simulation exercises with different carbon pricing policies show a carbon tax can achieve reduction in emissions relative to the BAU baseline.

A carbon tax of US\$25, US\$50, and US\$75 per ton of CO₂ emissions can reduce emissions in Malaysia 8, 12 and 15 percent below IMF-projected BAU levels in 2030. However, a carbon tax larger than US\$75 would be needed to achieve carbon neutrality by 2050, a goal that has been reiterated in the 12MP. Overall, carbon pricing would optimally envision a rising and predictable price per ton of emissions, and would also be comprehensive enough in coverage, avoiding exemptions from the start.



10. ETS can also achieve emissions reductions but at a lower rate compared to carbon

taxation. We compare the ETS to a carbon tax using the same CO₂ prices per tons in 2030 to see how different they are in terms of the mitigations responses they promote. As argued in IMF (2019b), ETSs are typically around 40-70 percent as effective as broad carbon pricing, not because of the instrument itself but rather its assumed coverage of power generators and large industries only based on applications of ETS. In the Asia-Pacific region, the effectiveness of ETS for a US\$70 per ton CO₂ price is close to 70 percent on average (IMF 2021a), and for Malaysia specifically 79 percent. This means that the ETS can achieve 79 percent of the CO₂ reduction attained from a carbon tax at US\$70 per ton.⁵



11. Carbon taxation could potentially raise significant fiscal revenues, which could be recycled to address the distributional effect of resulting higher energy prices, and to support adaptation efforts.

US\$25, US\$50, and US\$75 carbon prices could potentially raise fiscal revenues of 1, 2, and 3 percent of GDP respectively in 2030. But carbon taxation raises energy prices significantly, with potentially regressive consequences since energy products often account for a higher share of the consumption basket of low-income households.

A US\$75 carbon price raises coal and natural gas prices by 111 and 75 percent respectively above the BAU baseline levels in 2030. Diesel and oil prices also rise significantly by 65 and 54 percent respectively. It is therefore imperative that these

Energy Price Changes for \$75/tCO ₂ in 2030 (weighted by consumption)				
Fuel	Unit	Baseline	Carbon tax	% change
Coal	US\$ per gigajoule (GJ)	6.78	14.35	111%
Natural gas	US\$ per gigajoule (GJ)	7.83	13.66	75%
Diesel	US\$ per liter	0.62	1.02	65%
Oil	US\$ per barrel	69.57	107.22	54%
Electricity	US\$ per kwh	0.10	0.15	39%
Kerosene	US\$ per liter	0.70	0.91	31%
LPG	US\$ per liter	0.53	0.68	28%
Gasoline	US\$ per liter	0.70	0.89	27%

additional revenues are wisely and efficiently used. There is a strong case to use such revenues for transfers that would compensate firms and low-income households affected by higher energy prices.⁶ In the case of Malaysia, using a fraction of those revenues to fund public investments in the context of the envisaged scaling up of development expenditure under the 12MP would be an obvious choice. These investments could also include adaptation measures, as discussed below, to reduce the financing gap for worthwhile long-term measures that increase resilience to climate risks. While a holistic approach is required, considering all potential development needs and the marginal

⁵ Other potential mitigation measures such as coal tax and electricity emissions tax are less effective in reducing emissions in Malaysia, with fraction of CO₂ reduction from a \$70 carbon tax at 70 and 58 percent respectively.

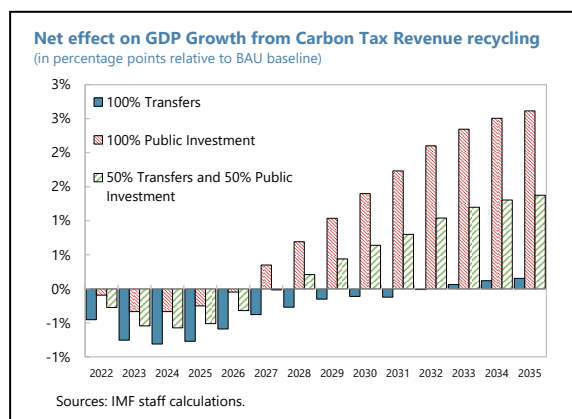
⁶ Given Malaysia's large informal sector, targeted cash transfers are preferable to reductions in labor taxes, and even these would require careful design to ensure all relevant groups are reached, given the imperfect coverage of existing social safety nets. Ensuring that such compensating transfers reach those most affected by higher prices may also be important for ensuring public support for any nascent carbon taxation scheme.

return to each possible use of carbon tax revenues, compensatory transfers and adaptation investments would likely score highly.

12. Simulations suggest that recycling fiscal revenues on transfers and on public investment has the potential to raise GDP growth in Malaysia in the medium term.

The negative effect from carbon taxation on growth will be more than compensated if revenues from carbon taxation are recycled between transfers and public investment. Furthermore, investment into green activities could have a particularly large positive impact on GDP, as the associated fiscal multiplier tends to be significantly higher (Batini et al., 2021). Net gains

are highest if 100 percent of revenues are recycled towards public investment, and lowest if all are spent on transfers. Recycling half of revenues on investment and the other half on transfers has the potential to raise GDP growth by about 1 percentage point higher than the baseline growth in the medium and long run. Given the initial costs, the imposition of a carbon tax must be carefully timed to ensure that it does not undermine the post-pandemic recovery.

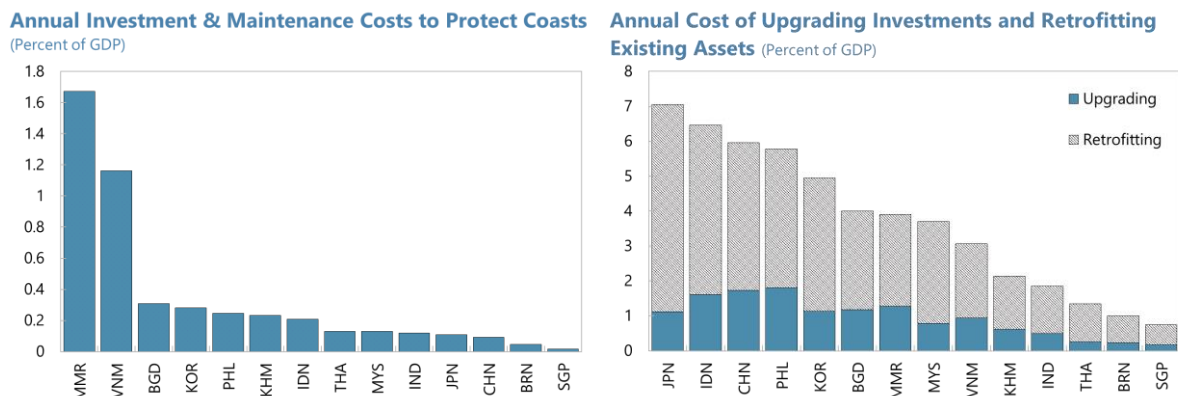


C. Adaptation

13. Effective adaptation to climate change has preventative, alleviative and financial elements (IMF 2019). Harm can be prevented through public information (e.g., early warning systems and risk assessments), new technologies and infrastructure, and policies to discourage inefficient risk-taking. Should potentially harmful events occur, damage can be alleviated through well-prepared contingency plans which provide timely support and reconstruction, and through social safety nets which minimize harm to the most vulnerable firms and households. Adaptation investment can be very costly (Figure 2) but is critical in limiting post-disaster debt increases by improving resilience ex-ante (Marto et al., 2018). The financial sector has a vital role in funding such preventative investment, providing post-disaster liquidity, and managing other physical, transition and liability risks of climate change (Carney 2015).

14. Malaysia has made significant progress in preparing to adapt to climate change.

Recent events have highlighted the urgency of such adaptation: major floods occurred in 2010, 2012, 2014 and 2021, while a particularly strong El Niño in 2016 led to water shortages, heatwaves and wildfires. Minimum, mean and maximum air temperatures have increased, along with rainfall intensity. The 2018 Third National Communication to the UNFCCC assesses the vulnerability of six sectors – water and coastal resources, food security and agriculture, forestry and biodiversity, infrastructure, energy and public health – to four major risks, namely flooding, dry spells, higher sea levels, and higher sea temperatures. It also identifies key gaps and outlines plans for improvement (Table 2). The 11th Malaysia Plan made significant progress, with new flood mitigation projects protecting 1.6 million people. The 12th Malaysia Plan goes further, outlining a range of measures to

Figure 2. Estimated Costs of Climate Change Adaptation

Source: Dabla-Norris et al. 2021, Nicholls et al. 2019, Rozenberg et al. 2019, Hallegate et al. 2019, IMF Capital Stock 2019 Dataset, IMF WEO and staff calculations.

Note: All estimates are at the country level. Upgrading cost estimates are constructed using projected investment spending, the likely exposure of investment projects, and upgrading unit costs. Retrofitting costs are constructed using capital stock estimates, estimates of the average exposure of physical assets, and retrofitting unit costs. Coastal protection estimates were obtained with the methodology of Rozenberg et al., 2019, and the level of protection corresponds to the protection that minimizes the sum of protection costs and residual flood damage to assets.

promote green and resilient cities, to assess and publicize hydro-climatic hazards for planning purposes, and to improve early warning systems and disaster response and recovery measures. The next step is to develop an integrated national approach. As such, the creation of a Policy on Disaster Risk Management is among the eight priority KPIs attached to one of the Plan's three core themes, 'Advancing Sustainability'. The Ministry of Environment and Water is developing a comprehensive National Adaptation Action Plan to identify the most important potential investments in increasing resilience and has applied to the UN Green Climate Fund for financial support with this process.

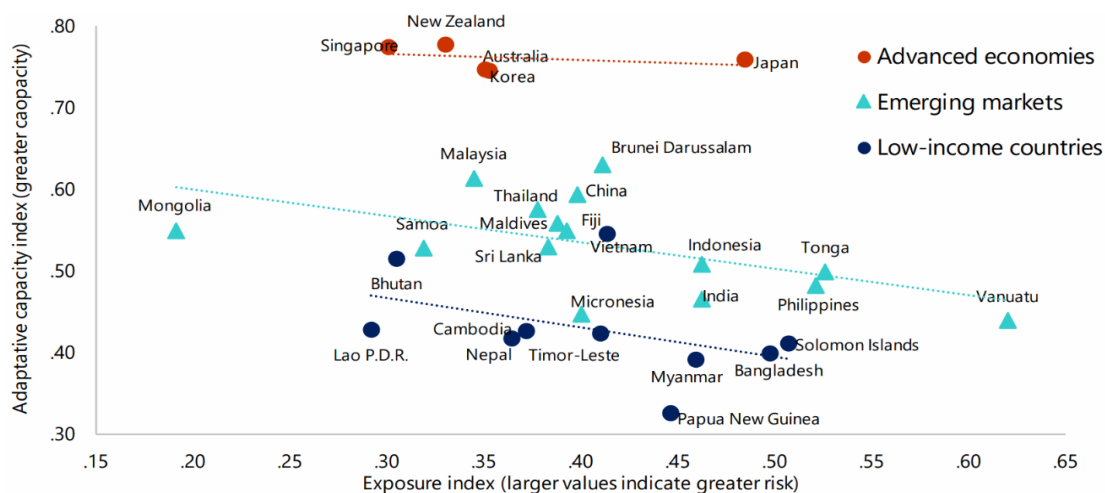
15. **Nonetheless, there remains substantial further work to be done.** Malaysia scores relatively highly on 'adaptive capacity' (Figure 3), defined as 'the ability of a system to adjust to climate change (including climate variability and extremes) to moderate potential damages, to take advantage of opportunities or to cope with the consequences' (IPCC Fourth Assessment Report, 2007). Yet projected adaptation costs remain high, necessitating careful management over the medium term. Substantial further work remains to assess the cost-effectiveness of potential measures, including measures to address risks emerging from studies such as those in Table 2. Revenues from mitigation measures, such as a carbon tax as outlined above, could be recycled to targeted investments in adaptation that also create jobs and support growth. To date, progress towards a full National Adaptation Plan has been slower than in some neighbors (Figure 4), underscoring the need for fiscal reform and coordinated efforts across government and private sector partners to ensure adequate financing for adaptation-related investments.

Table 2. Extract from the Third National Communication to the UNFCCC: Adaptation Gaps and Improvement Plans

Area	Gaps	Improvement Plan
Flood	Lack of projected flood maps covering all the flood prone basins.	Establish comprehensive flood maps covering all flood prone basins in Malaysia.
Dry Spell	Analysis of projected dry spells for vulnerability assessments need to be based on seasonal rather than annual scale, and with high spatial resolution.	Develop seasonal projected dry spell maps that are suitable for vulnerability assessments at the sub-basin and local scales.
	Insufficient priority and detailed analysis of impacts of dry spell on dams and reservoirs	Conduct studies on the impact of climate change on dams for electricity generation and water supply.
Sea Level Rise	Insufficient coastal hydrodynamic simulation that incorporates sea level rise impacts for vulnerable coastal regions in Malaysia.	Develop high resolution coastal inundation maps based on coastal hydrodynamic simulation that incorporates sea level rise for 20-year time intervals up to 2100, and carry out detailed coastal erosion and sedimentation studies to plan comprehensive adaptation measures.
Integrated hazards	The combined impacts of sea level rise, storm surges, abnormally high tides and high rainfall which could lead to severe flooding are not well understood.	Develop models that integrate sea level rise, storm surges, abnormally high tides and high rainfall for early warning and assessment of future scenarios.
	Inadequate information of assets in vulnerable areas for each sector.	Develop a comprehensive database for each sector
Capacity Building and Awareness	Insufficient capacity to conduct impact assessments in all key sectors	Develop the required capacity in each key sector for Vulnerability & Adaptation analysis.
	Lack of awareness and understanding of the full chain of implications of climate change impacts by key stakeholders in all relevant sectors.	i. Conduct detailed studies on the full chain impacts of climate change for all sectors; ii. Conduct awareness and capacity building programs to targeted stakeholders.

Source: Malaysia Third National Communication to the UNFCCC, Chapter 4.

Figure 3. Adaptive Capacity and Physical Exposure



Sources: Dabla-Norris et al., 2021, based on 2015–18 data from the EU commission, the United Nations University Institute for Environment and Human Security, the University of Notre Dame, and the IMF World Economic Outlook database.

D. Finance

16. **While the financial sector is itself exposed to risks from climate change, it also has an important role in supporting the sustainability transition.** In 2019 approximately 12 percent of all assets held by financial players in Malaysia were in sectors exposed to climate change (BNM, 2021). Green debt issuance, alongside other environmental, social and governance (ESG) products, has expanded rapidly in Malaysia in recent years (Figure 5). Malaysia is a leader in Islamic green finance, including issuing the world's first sovereign dollar sustainability sukuk, in a US\$800million offering in April 2021, providing new sources of financing for eligible environmental projects.

17. **Significant initiatives are underway to prepare the Malaysian financial sector for risks arising from climate change.** The transition to a greener financial system is a substantial element of Bank Negara Malaysia's 2022-2026 Financial Sector Blueprint.⁷ BNM is working across five broad areas: (i) integrating climate risk within macroeconomic and financial stability assessments; (ii) strengthening regulatory and supervisory expectations for managing climate risks; (iii) creating an enabling environment for green financing and investment; (iv) greening its own operations; and (v) engagement and capacity building across government and the financial sector. BNM plans to include climate risks in financial sector stress tests by 2024, to which end in late 2021 it released an Exposure Draft setting out proposed principles for climate risk management by financial institutions, and will publish a discussion paper on potential stress test methodology in 2022 Q1 to solicit industry feedback. To support its supervisory role, BNM has issued a taxonomy for classifying economic activities as 'climate supporting', 'transitioning' or 'watchlist', for use in future risk assessments and to facilitate standardized design of green financial products.⁸ This is - complemented by new guidance on assessing climate risk for Islamic financial institutions, including through a series of sectoral guides which enumerate specific upcoming environmental, social and governance risks.⁹ In 2022 BNM plans to publish a guide for financial institutions to facilitate voluntary disclosure of climate-related risks in line with the G20's Task Force on Climate-Related Financial Disclosures (TCFD), with a view to these being mandatory by 2024.¹⁰ Internally, BNM has introduced Environmental, Social and Governance (ESG) and Socially Responsible Investing (SRI) criteria into its investment processes, and taken a range of measures to reduce the carbon footprint of its own operations, such as more durable banknotes with a longer lifespan and improved energy efficiency in Bank buildings.

⁷ <https://www.bnm.gov.my/publications/fsb3>. This parallels the Ministry of Energy, Green Technology and Water's Green Technology Master Plan and the Security Commission's Sustainable and Responsible Investment Roadmap.

⁸ <https://www.bnm.gov.my/-/climate-change-principle-based-taxonomy>

⁹ <https://www.bnm.gov.my/-/value-based-intermediation-financing-and-investment-impact-assessment-framework-guidance-document>. Specific guides have so far been published for the palm oil, renewable energy, and energy efficiency sectors, while guides on the oil and gas, construction and infrastructure, and manufacturing sectors are being finalized.

¹⁰ In partnership with the UN Capital Development Fund and the Malaysia Digital Economy Corporation, BNM also sponsors accelerator programs for start-ups with novel contributions to achieving the SDGs. <https://www.bnm.gov.my/-/launch-of-the-digital-finance-innovation-hub-and-inclusive-fintech-accelerator>

18. **A range of forums have been established to support financial sector collaboration, both domestically and internationally.** The Joint Committee on Climate Change (JC3), established in 2019, brings together the BNM, the Securities Commission, Bursa Malaysia, and 19 industry players. More broadly, the Malaysia Climate Action Council, chaired by the Prime Minister, coordinates national climate change action by relevant agencies and state governments. Internationally, the ASEAN Taxonomy Board, set up in 2021, includes representatives from all 10 ASEAN member states, while BNM liaises with more than 80 countries through the Network of Central Banks and Supervisors for Greening the Financial System (NGFS), which it joined in 2018.

19. **Looking ahead, a challenge across these areas is to transition smoothly from institution-building and agreement of principles to introducing binding regulation and taking concrete actions.** In doing so, the speed of implementation must be carefully judged to ensure effective execution with sufficient buy-in from industry counterparts. Meanwhile, financial authorities should continue to engage with global ‘frontrunners’, including through the NGFS, to examine innovative policy measures from other countries and to assess the potential to apply them in Malaysia. While relatively advanced compared to emerging market peers, financial sector measures could build on approaches being developed by, for instance, the ECB and Bank of Japan, such as using disclosure of climate-risk exposure as the basis for favorable treatment for collateral and asset purchases, or developing minimum standards for climate risk assessment methodologies.

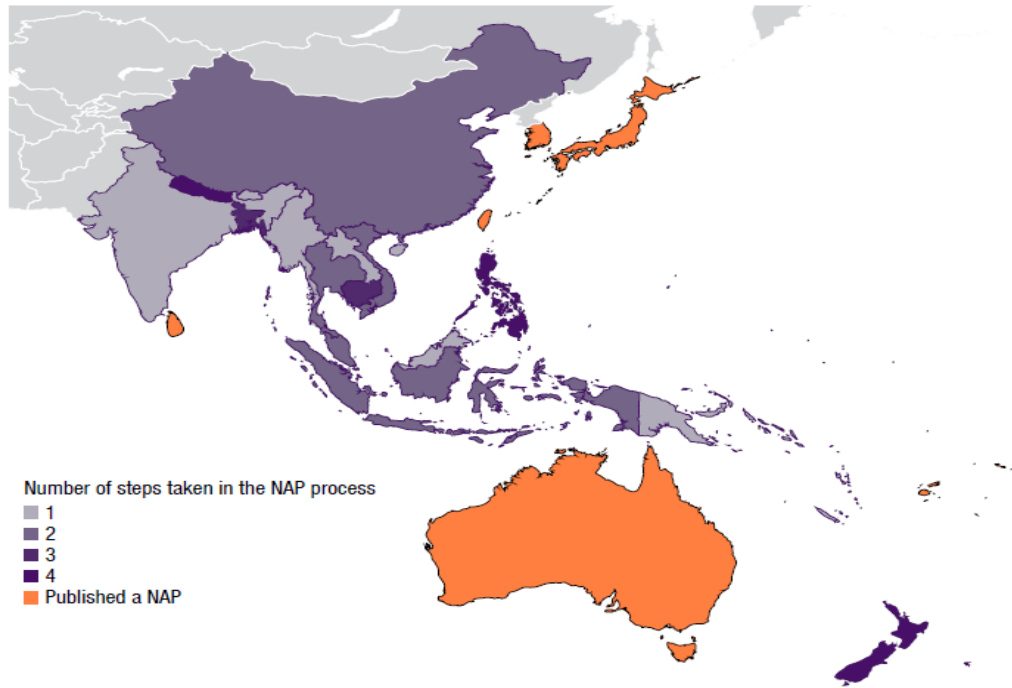
E. Conclusion

20. **While recent policy proposals are welcome, particularly the focus on sustainability in the 12MP, an acceleration of mitigation and adaptation measures will be required.** Though less vulnerable than many neighbors, Malaysia remains exposed to significant potential harms from climate change. The target of net zero GHG emissions by 2050 will require substantial structural reform and green investment, as noted in the 12MP. Carbon taxation is a promising option for incentivizing the energy transition, alongside a range of sector-specific reinforcing measures. Carefully calibrating these actions and any compensatory transfers will be critical to ensure that they are not regressive, particularly in the context of Malaysia’s large informal sector. Substantial expenditures on adaptation will also be required, with an urgency underlined by recent floods and heatwaves. Financial authorities have taken early steps to assess exposure to physical, liability and transition risks, and the successful recent issuance of the government’s first sustainability sukuk is welcome, but substantial work remains. Finally, there is scope for mitigation and adaptation to be integrated, for instance by hypothecating some share of revenues from a potential carbon tax for adaptation-related spending.

In the short term, COVID-related recovery spending should be aligned with environmental goals. Support to firms and industries should not be provided through weakening environmental regulations. Indeed, firm-specific support can be made contingent on compliance with environmental standards and disclosure of exposure to climate-related risks. Stimulus spending should include support for green investment. There are many opportunities for green investments with large fiscal multipliers, as highlighted by Hepburn et al. (2020; see Figure 6) and Batini et al.

(2021), and nature-related jobs such as ecosystem restoration can provide new sources of employment. By highlighting sustainability as a key theme, alongside resetting the economy, the Twelfth Malaysia Plan is promising in this regard.

Figure 4. Progress Toward NAPs in Asia and the Pacific



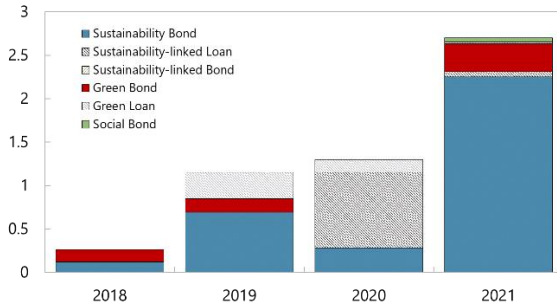
Sources: Dabla-Norris et al. 2021, using Summary on Progress on NAPs (<https://unfccc.int/topics/adaptation-and-resilience/workstreams/national-adaptation-plans>) and UNFCCC (2019).

Note: The figure is created from the UNFCCC table of progress on national adaptation plans (NAPs) as follows. The technical guidelines by the United Nations consists of four elements: (1) laying the groundwork and addressing gaps; (2) strategic orientation and preparation; (3) implementation strategies; and (4) reporting, monitoring, and review. The number of steps taken in the NAP process represents the number of the elements a country has completed (if at least one measure in each element is taken, the country is deemed to complete that element). Four countries (Malaysia, Marshall Islands, Micronesia, and Palau) were not in the UNFCC database, but considered to have taken one step because documents were found that showed progress had been made in creating an adaptation plan. For advanced economies, independent research verified the status of their respective NAPs.

Figure 5. Issuance of Sustainable Debt in Malaysia

Debt issuance by type

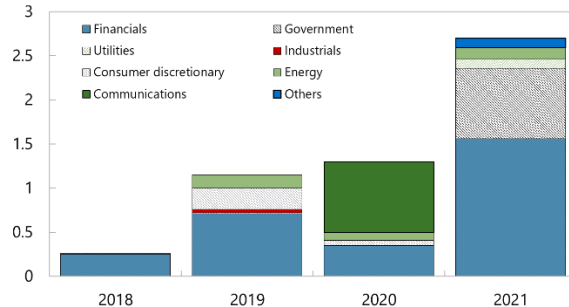
(US\$ billions)



Source: Bloomberg NEF, IMF staff calculations.

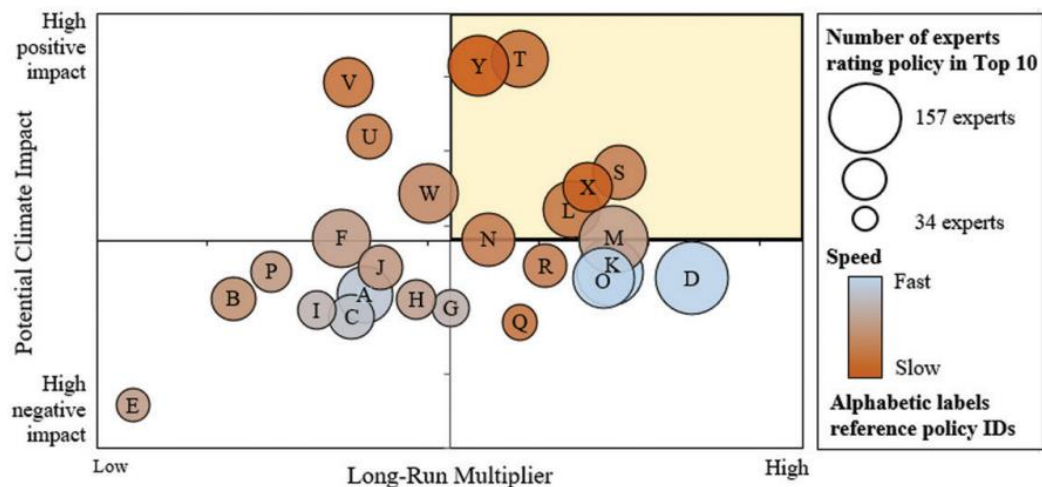
Debt issuance by industry

(US\$ billions)



Source: Bloomberg NEF, IMF staff calculations.

Figure 6. Potential Climate Impact and Fiscal Multiplier of COVID-19 Stimulus Policies



A	Temporary waiver of interest payments	N	Worker retraining
B	Assisted bankruptcy (super Chapter 11)	O	Targeted direct cash transfers or temporary wage increases
C	Liquidity support for large corporations	P	Rural support policies
D	Liquidity support for households, start-ups and SME's	Q	Traditional transport infrastructure investment
E	Airline bailouts	R	Project-based local infrastructure grants
F	Not for profits, education, research, health inst. bailouts	S	Connectivity infrastructure investment
G	Reduction in VAT and other goods and services taxes	T	Clean energy infrastructure investment
H	Income tax cuts	U	Buildings upgrades (energy efficiency)
I	Business tax deferrals	V	Green spaces and natural infrastructure investment
J	Business tax relief for strategic and structural adj.	W	Disaster preparedness, capacity building
K	Direct provision of basic needs	X	General R&D spending
L	Education investment	Y	Clean R&D spending
M	Healthcare investment		

Source: Hepburn et al. 2020.

Notes: Graph plots the estimated long-run fiscal multiplier and potential climate impact of 25 archetypical fiscal stimulus measures, based on surveys of officials in G20 finance ministries and central banks.

References

- Batini, N., Di Serio, M., Fragetta, M., Melina, G., Waldron, A. (2021). "Building Back Better: How Big Are Green Spending Multipliers?" IMF Working Paper 21/87. Washington, DC: International Monetary Fund.
- BNM (2021). "Preparing Our Financial Sector for Risks from Climate Change". *Bank Negara Malaysia*. Retrieved from <https://www.bnm.gov.my/climatechange>
- Carney, M., (2015). "Breaking the Tragedy of the Horizon – Climate Change and Financial Stability". *Bank of England*. Speech at Lloyd's of London, 29 September 2015.
- Dabla-Norris, E., Daniel, J., Nozaki, M., Alonso, C., Balasundharam, V., Bellon, M., Chen, C., Corvino, D., Kilpatrick, J., 2021. "Fiscal Policies to Address Climate Change in Asia and the Pacific". IMF Departmental Paper 21/07. Washington, DC: International Monetary Fund.
- Dasgupta, S., Laplante, B., Murray, S. and Wheeler, D. (2009). "Sea-level rise and storm surges: A comparative analysis of impacts in developing countries." The World Bank. URL: <http://documents1.worldbank.org/curated/en/657521468157195342/pdf/WPS4901.pdf>
- Eckstein, D., Künzel, V., and Schäfer, L. (2021). "Global Climate Risk Index 2021", Germanwatch, Berlin. URL: <https://germanwatch.org/en/19777>
- Economic Planning Unit, Prime Minister's Department, Malaysia (2022), Twelfth Malaysia Plan 2021-2025 - A prosperous, Inclusive, Sustainable Malaysia. Retrieved from [Twelfth Malaysia Plan, 2021-2025 \(epu.gov.my\)](https://epu.gov.my).
- Elsayed, I. (2012). "Mitigation of the Urban Heat Island of the City of Kuala Lumpur, Malaysia". International Digital Organization for Scientific Information (IDOSI), *Middle East Journal of Scientific Research*. 11. 1602–1613. 10.5829/idosi.mejsr.2012.11.11.1590. URL: https://eko-yol.com/ru/wp-content/uploads/sites/4/2019/03/Kuala-Lumpur-Mitigation_of_the_Urban_Heat_Island_Inte.pdf
- EM-DAT. 2020. "The International Disaster Database". Center for Research on the Epidemiology of Disasters. <https://www.emdat.be>
- ESCAP (2021). "Asia-Pacific Disaster Report 2021". United Nations Economic and Social Commission for Asian and the Pacific.
- Hallegatte, Stephane, Jun Rentschler, and Julie Rozenberg. 2019. "Lifelines: The Resilient Infrastructure Opportunity". Washington, DC: World Bank.
- Hepburn, C., O'Callaghan, B., Stern, N., Stiglitz, J. and Zenghelis, D. "Will COVID-19 fiscal recovery packages accelerate or retard progress on climate change?", *Oxford Review of Economic Policy*, 36(S1), 2020.
- International Monetary Fund (2019a). "Building Resilience in Developing Countries Vulnerable to Large Natural Disasters." IMF Policy Paper, International Monetary Fund, Washington, DC

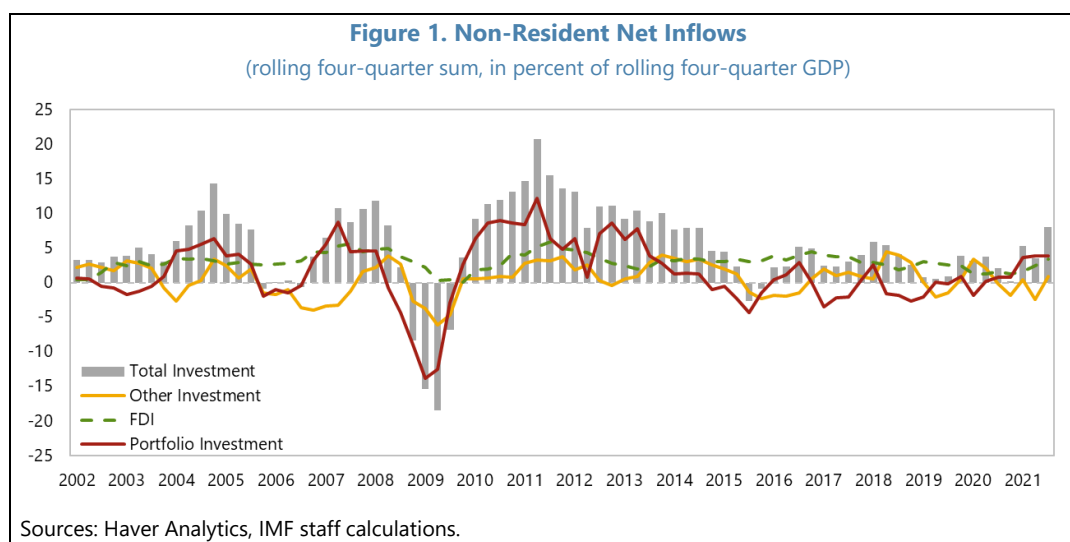
- International Monetary Fund (2019b). "Fiscal Policies for Paris Climate Strategies—from Principle to Practice." IMF Policy Paper 19/010, International Monetary Fund, Washington, DC.
- International Monetary Fund (2019c). "How to Mitigate Climate Change?" Fiscal Monitor. Washington, DC, October.
- International Monetary Fund (2021a). "Fiscal Policies to Address Climate Change in Asia and the Pacific." IMF Policy Paper 21/07, International Monetary Fund, Washington, DC.
- International Monetary Fund (2021b). "IMF ESG Monitor: July 2021". International Monetary Fund, Washington, DC.
- IPCC Fourth Assessment Report (2007). "Impacts, Adaptation, and Vulnerability". Contribution of Working Group II to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change. Cambridge: Cambridge University Press.
- IRENA. (2021). Renewable Capacity Statistics 2021. Retrieved from International Renewable Energy Association: <https://www.irena.org/publications/2021/March/RenewableCapacity-Statistics-2021>
- Marto, R., C. Papageorgiou, and V. Klyuev. 2018. "Building Resilience to Natural Disasters: An Application to Small Developing States," *Journal of Development Economics*. 135: 574-586.
- Neumann, Barbara, Athanasios T. Vafeidis, Juliane Zimmermann, and Robert J. Nicholls. 2015. "Future Coastal Population Growth and Exposure to Sea-Level Rise and Coastal Flooding- A Global Assessment". PLoS ONE 10 (6): e0131375
- Nicholls, R., Hinkel, J., Lincke, D. and van der Pol, T., 2019. "Global Investment Costs for Coastal Defense through the 21st Century". World Bank Policy Research Working Paper 8745, World Bank, Washington, DC
- Ritchie, H., and Roser, M. (2020) - "CO₂ and Greenhouse Gas Emissions". Published online at OurWorldInData.org. URL: <https://ourworldindata.org/co2-and-other-greenhouse-gas-emissions>
- Rozenberg, J., and Fay, M., 2019. "Beyond the Gap: How Countries Can Afford the Infrastructure They Need while Protecting the Planet". Washington, DC: World Bank.
- WBG Climate Change Knowledge Portal (CCKP) (2021). Malaysia. Agriculture Interactive Climate Indicator Dashboard. URL: <https://climatedata.worldbank.org/CRMePortal/web/agriculture/crops-and-land-management?country=MYS&period=2080-2099>
- World Health Organization (2015). "Climate and Health Country Profile – 2015, Malaysia". URL: <http://www.who.int/globalchange/resources/PHE-country-profile-Malaysia.pdf?ua=1>
- WTTC (2021). "Malaysia: 2021 Annual Research: Key Highlights". World Travel and Tourism Council. URL: <https://wttc.org/Research/Economic-Impact>

Appendix IX. Capital Flows Volatility and Spillovers in Malaysia¹

Potential inward spillovers to Malaysian financial markets from changes in global risk appetite and investor preferences could be significant. Monetary policy normalization in advanced economies may affect Malaysia via higher borrowing costs and more volatile capital flows and FX markets. This appendix discusses recent trends in the structure and volatility of capital flows to Malaysia. It also explores factors that could amplify and mitigate shock transmissions, including reforms introduced by the BNM aimed at improving Malaysia's resilience to external shocks.

A. Capital Flows Volatility in Malaysia

1. **Foreign capital became an important source of funding for Malaysia (Figure 1).** Over the last two decades, foreign direct investment (FDI) in Malaysia stood just above 3 percent of GDP per annum, the highest among regional peers. Non-resident portfolio investments (PI) added about 1.6 percent of GDP on average, with over a third of that inflow going into public debt. Other investment account balance, which was mainly driven by non-resident deposits in domestic banks and interbank funding, stood at about 0.6 percent of GDP per annum on average in 2002-2021.

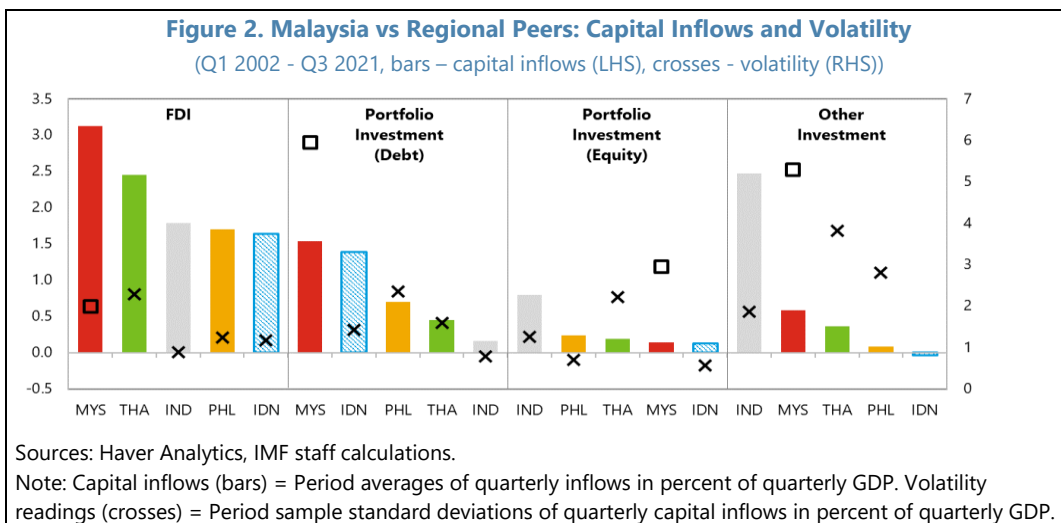


2. **Like other Asian emerging economies, Malaysia faced high volatility of capital inflows.** Compared to regional peers, Malaysia has high volatilities of portfolio flows and other investment (Figure 2). The latter was driven by non-resident deposits and interbank lending, with banks' external liabilities reflecting Malaysia's integration into the regional financial system.² After the GFC, in addition to advantageous growth prospects and a gradual liberalization of its capital account, ample

¹ Prepared by Kodjovi Eklou, Natalia Novikova and Tian Yong Woon.

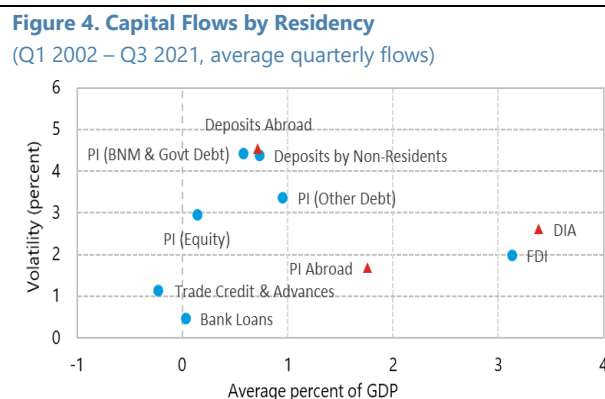
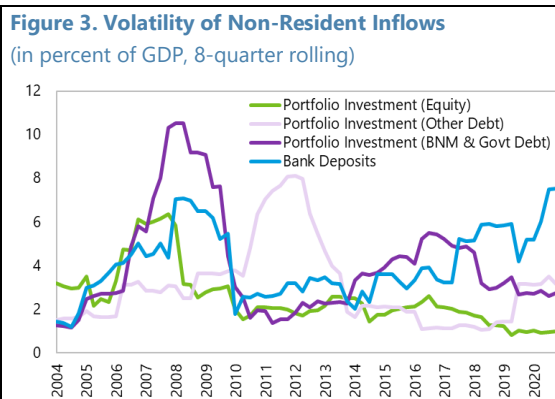
² Malaysia's bank external liabilities are higher than those observed among regional peers. This reflects significant presence of foreign banks, including those operating in the Labuan International Financial Centre (LIBFC), and sizable regional operations by domestic banks (BNM 2018). External funding acquired by foreign banks normally reflects intragroup placements from parent banks for back-to-back transactions. For domestic banking groups, changes in external liabilities are related to centralized liquidity management, including pooling of excess liquidity from overseas branches.

global liquidity became an important capital flows driver for Malaysia too (BIS 2020). Enhanced financial integration made the country more exposed to the global risk-on/risk-off waves and, as discussed in the following sections, has important implications for the government bond market.



3. **More recently, the magnitude and length of Malaysia’s total capital flow cycle have moderated.** The two most volatile components of Malaysia’s capital account — PI debt inflows and non-resident deposits — often offset each other outside of crisis episodes. At the same time, the volatility of deposit flows continues to increase steeply (Figure 3). Capital outflows by residents have also increased, partly due to Malaysia’s efforts to liberalize its capital accounts and allow investment abroad.

4. **Meanwhile, capital outflows by residents also increased, partly due to efforts to liberalize capital accounts and allow investment abroad.** Domestic investment abroad (DIA) averaged 3.4 percent of GDP, followed by residents’ portfolio investments (PI) abroad, which averaged about 1.8 percent of GDP (Figure 4). The latter has proven to be relatively stable. Between end-2018 and Q3 2021, cumulative portfolio investment by residents stood at US\$33 billion, reflecting investments by domestic institutional investors in equities primarily, and debt securities, exceeding corresponding foreign inflows.



Sources: Haver Analytics, IMF staff calculations.
Notes: On Figure 3, volatility readings are rolling 8-quarter sample standard deviations of net capital inflow components in percent of GDP. On Figure 4, blue circles -non-resident net inflows, red triangles -resident net outflows. Banks = Deposit Corporations.

B. Spillovers from Policy Normalization in Advanced Economies

5. **After a decade of loose monetary policy and quantitative easing, advanced economies (AE) have initiated policy normalization.** This can affect EM capital flows and financial conditions via several channels.

- *Higher level of rates globally due to tapering of asset purchases and interest rate hikes by AEs' central banks.* Tighter global liquidity may translate to higher borrowing costs for EM issuers. Historically, this impact is especially significant when policy tightening was unexpected or not driven by better economic conditions (IMF 2021b). US monetary policy tightening driven by strong economic performance however, may be associated with capital inflows to EMs and lower risk premiums on EM dollar-denominated bonds, while leading to higher yields on EM domestic debt. The reason could be that both a positive trade channel effect (higher external demand for EMs) and a positive risk channel effect (greater global risk appetite) lead to expectations of higher monetary policy rates.
- *Appreciation of the US dollar.* Dollar appreciation would have implications for EM balance sheets³ with a high share of foreign currency debt or a high reliance on external financing. Financial channels have become especially important during stress episodes and generally operate in the opposite direction to the competitiveness channel, as outflows are associated with revaluations of foreign currency-denominated assets and liabilities. In economies with net short foreign currency positions, the negative wealth effect tends to lead to credit contractions. Exchange rate depreciation may be contractionary if sovereign yields rise when the local currency depreciates even if there is no foreign currency debt. In addition, to the financial channel, exchange rate movements can also affect EMs through the trade and inflation channels.⁴
- *Capital flow and exchange rate volatility.* Higher uncertainty may amplify the impact of financial shocks (e.g., foreign interest rate shock or capital flow shock) via banks' balance sheet effects due to frictions associated with foreign currency denominated liabilities.⁵ Finally, through the "risk channel," surprise monetary policy changes in advanced economies, including those due to miscommunication, can affect perceptions of risk and by extension, financial conditions in emerging markets. US monetary policy can change the objective riskiness of EM assets (for example, by increasing perceived default probabilities) or affect investors' risk aversion.

6. **Negative spillovers are likely to be more pronounced for countries perceived to be riskier or exhibiting vulnerabilities.** Countries with a higher perceived sovereign risk, for example (speculative sovereign debt credit rating, higher proportion of debt held externally or with higher

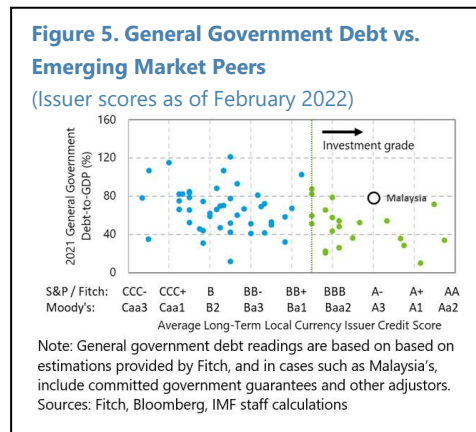
³ Evidence shows that 100-basis-point tightening of US monetary policy leads to an immediate 1 percentage point depreciation of EM currencies vis-à-vis the US dollar and portfolio outflows from EM of 7 basis points of annual GDP (IMF 2021a).

⁴ Most central banks in emerging Asia surveyed by the BIS highlight that the financial channel has strengthened over recent years and during periods of volatility as compared to trade competitiveness and pass-through to inflation channels (BIS 2020).

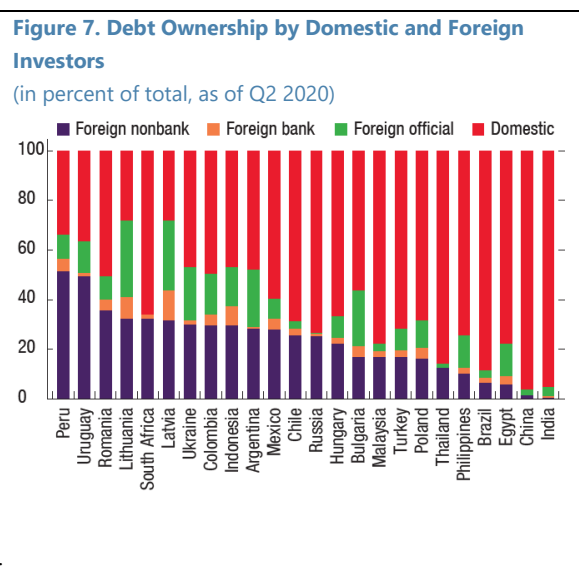
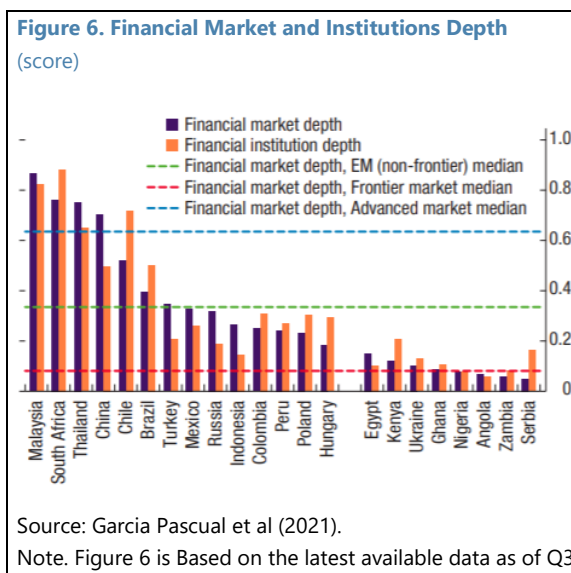
⁵ See Appendix VII of the 2020 Malaysia Staff Report.

currency volatility) are disproportionately affected. Spillovers are also estimated to be stronger in (i) the presence of financial frictions, ⁶ (ii) the context of weak domestic economic conditions and limited policy space, (iii) the context of weak macroeconomic fundamentals and policy institutions.

7. Malaysia’s general government debt is projected to remain below 70 percent of GDP over the medium term. If contingent liabilities are included, Malaysia’s general government debt⁷ lies above some of its similarly rated peers (Figure 5). Fund public debt sustainability analysis, however, finds federal government debt, which covers more than 90 percent of general government debt, to be sustainable including under macro-fiscal stress tests (Appendix II).



8. Well-developed financial markets and a large and diversified domestic investor base could help to mitigate the impact of tighter global financial conditions on capital flows and domestic interest rates. Malaysia’s scores for financial market and financial institution depth are on par with the median level in advanced economies (Figure 6). Over 60 percent of sovereign debt is held by a diverse domestic investor base (Figure 7), including about one third help by social security institutions. During earlier periods of heightened capital outflows, active buying by domestic institutional investors has allowed Malaysia to mitigate excessive adjustments in bond yields (IMF 2018, BIS 2020).

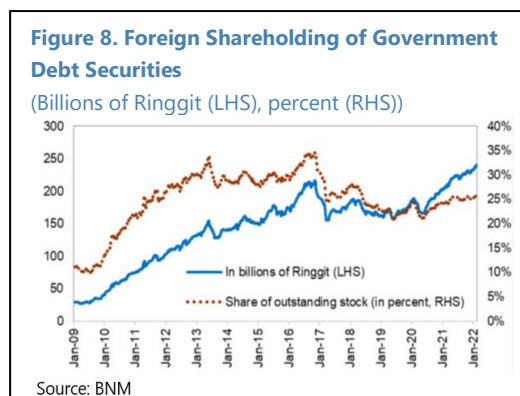


⁶ Firm-level evidence also shows that financial frictions and balance sheets effects matter as more leveraged firms and firms with a higher FX liability share, experience lower investment and revenues following US monetary policy tightening (IMF 2021b, Box 2.1).

⁷ Adjustments applied to general government debt level vary depending on the rating agency.

9. Inclusion of Malaysia into global bond market indices and stable credit rating allowed access to a broader pool of external public financing.⁸

- The share of foreign holdings of conventional government debt increased from 8.2 percent in mid-2005 to about 22 percent during the GFC and rebounded post-crisis to a 35 percent high in mid-2016. It declined to about 23 percent before the COVID pandemic and reached about 25 percent at end-2021 (Figure 8). Foreign holdings are concentrated in conventional MGS, with only about 11 percent of MGII being held by foreign investors at end-2021.



- Benchmark-driven investors can both stabilize and amplify volatility of foreign capital flows due to high correlations of global factors and drivers common across EMs. According to the BNM, the growing role of asset management companies and benchmark-tracking funds led to greater co-movement in asset prices across the region (BIS 2020). Arslanalp et al (2020) estimated the share of benchmark-driven investors in Malaysia's local currency government debt stood on average at 50 percent of total foreign holdings of public debt (Figure 9). However, such holdings were seen to be more stable over a few periods of capital outflows, including the Taper Tantrum in 2013 and US Presidential Elections in late 2016-early 2017.

Figure 9. Local currency government debt holdings by benchmark-driven investors
(in billions of US dollars, green - benchmark-driven flows)

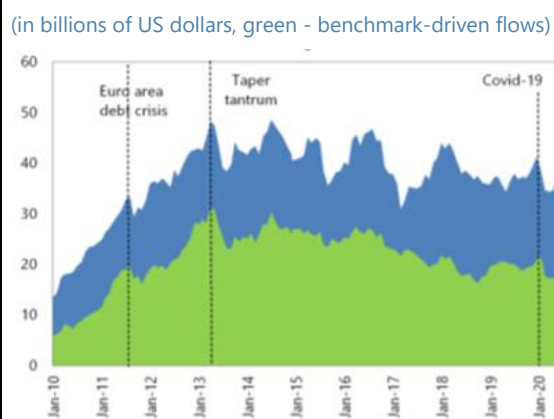
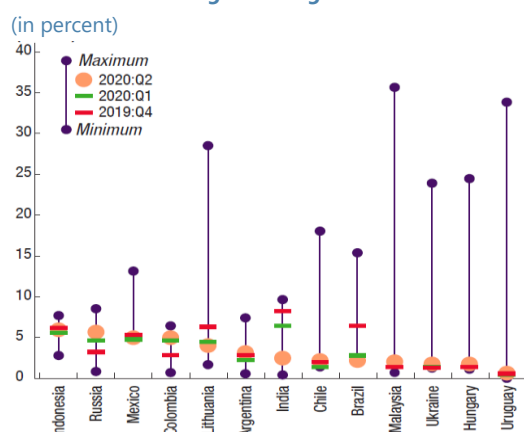


Figure 10. MSBFs: Aggregate Country Holdings as a Share of Total Foreign Holdings of Government Debt
(in percent)



Sources: IMF 2020; Garcia Pascual et al (2021) based on Arslanalp and Tsuda (2014 paper, 2020 data set update); Bloomberg Finance L.P.; and authors' calculations.

Note: on Figure 9, minimum, maximum, 2018:Q2, and 2020:Q2 reflect multi-sector bond funds (MSBF) holdings (excluding equities and state-owned enterprise holdings) as a share of the total foreign holdings of government debt in the respective country across the period 2009:Q4–2020:Q2.

⁸ Malaysia Government Securities (MGS), conventional bonds, were added to FTSE Russell in 2004 and Barclay's Global Aggregate Index in late 2005. Since then, MGS were also included in JPMorgan Emerging Market Bond Index, and Markit iBoxx Index, among others. Malaysia Government Investment Issues (MGII), Islamic finance instruments, are included in the Dow Jones Citigroup Sukuk Index, the Barclay's Global Aggregate, the Asia-Pacific Aggregate Indexes, and the JPMorgan Government Bond Index (Emerging Markets). (WB 2020)

- The share of highly opportunistic investors has declined significantly. In Malaysia, the share of unconstrained multi sector bond funds (MSBFs), — which are highly concentrated—both in their positions and their decision-making and tend to exhibit opportunistic behavior more so than other investment funds, — declined from above 30 percent in mid-2011 to less than 3 percent in 2020 (Figure 10).

10. **Sizable external financing needs of about one third of GDP represent a potential amplifying factor for Malaysia.** About 65 percent of external debt, which has increased compared to pre-pandemic levels, is denominated in foreign currency (Appendix X). External financing dependency is sizable including 24 percent of GDP related to bank liabilities and 16 percent of GDP related to government debt. While the composition of external debt has shifted more toward medium and long tenors, about 37 percent of external debt remains short-term at origin.

Figure 11. Maturity Breakdown of Debt Held by Non-Residents

(in percent of rolling four-quarter GDP)

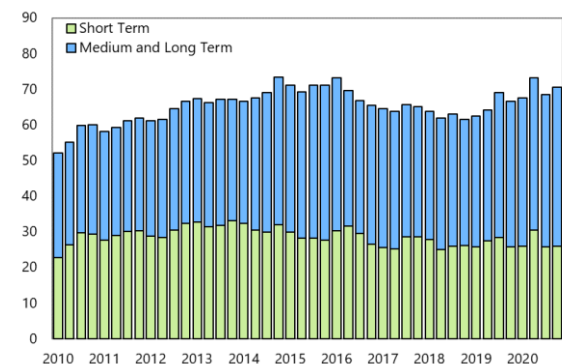


Figure 12. FX Reserves Coverage of Short-term External Debt

(in percent of short-term debt)

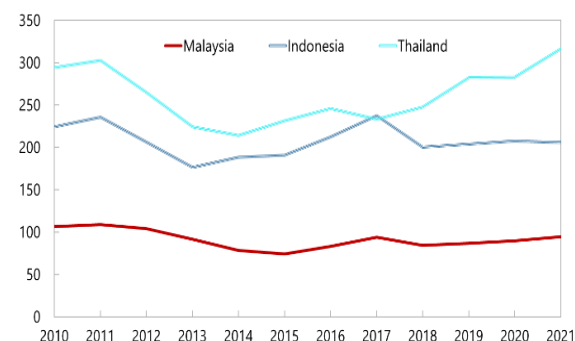


Figure 13. Foreign Currency Debt Held by Non-Residents

(in percent)

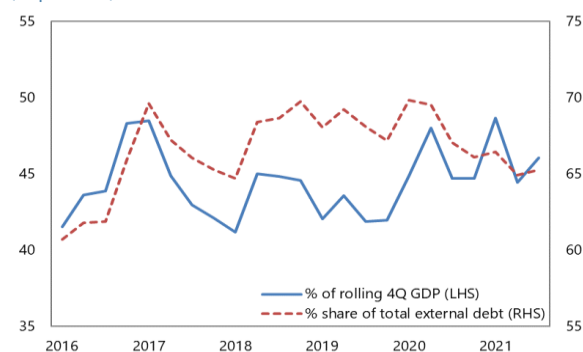
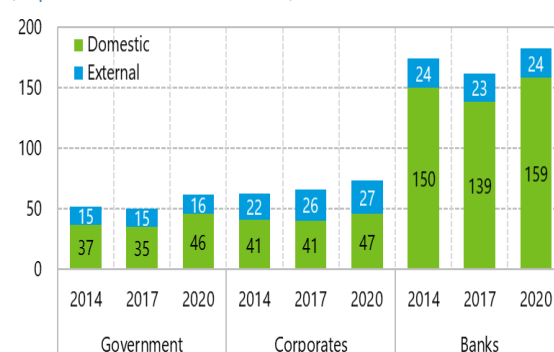


Figure 14. Sources of Funding by Sector

(in percent of GDP, as of 2020)



Sources: Haver Analytics, IMF, World Economic Outlook October 2021, IMF staff calculations.

Note: In Figure, 2021 estimates are preliminary, In Figure 14, Government debt relates to federal Ringgit-denominated debt, where external (domestic) sources also include (exclude) non-resident holdings. Corporate external debt relates to private offshore non-bank debt. Domestic debt relates to total credit to non-financial sector, less corporate external debt. Bank external debt relates to offshore private banking sector debt. Domestic debt relates to total commercial bank liabilities, less bank external debt.

11. **However, risks of capital outflows and exchange rate depreciation related to external vulnerabilities are mitigated by several factors.** First, Malaysia's robust macroeconomic fundamentals, including a well-diversified economy, sustained current account surpluses and projected recovery, as well as sound a domestic financial system and strong policy frameworks make it an attractive investment target among peers. Second, sufficient coverage of short-term external liabilities by foreign exchange reserves, a flexible exchange rate regime and availability and wide-spread use of FX hedging should help the economy to get ready for externally induced volatility.⁹

Figure 15. Ringgit Implied Volatility vs. Regional Currencies
(In percent, 1-month onshore currency option implied volatility)



Sources: Bloomberg LLP, and IMF staff estimates. Note: Regional onshore currencies vis-à-vis US dollar. These include Chinese renminbi, Indian rupee, Indonesian rupiah, Philippines peso, South Korean won, Sri Lankan rupee (from April 2015), Taiwan dollar, and Thai baht.

12. **Excessive exchange rate volatility during the periods of disorderly market corrections can be a source of financial stability risk.**¹⁰ Over the years, the BNM has developed and refined FX and capital flow management frameworks aimed at reducing the impact of speculative flows and deepening the FX market (BNM 2019, Grigorian 2019). BNM's FX interventions are driven by an assessment that excessive and volatile FX movements create risks with the exchange rate generally viewed as the first line of defense and as a shock absorber.

13. **The BNM has adopted a comprehensive approach in dealing with exchange rate and capital flow-related risks, depending on the nature of the shock.** For instance, during 2014–15, when the economy saw large non-resident capital flows and there was a terms-of-trade shock, the authorities allowed the exchange rate to adjust flexibly as a shock absorber. In contrast, during the capital flow reversal of late 2016, the authorities reinforced existing rules by requiring attestation for banks' non-facilitation of ringgit NDF.¹¹ In Q1 2020, during a period of significant non-resident portfolio outflows and sharp increases in exchange rate volatility caused by the COVID-19 outbreak, the ringgit exchange rate depreciated by about 5 percent vis-à-vis the US dollar. The BNM employed a targeted FX intervention (FXI) to mitigate excessive exchange rate volatility and provide sufficient FX liquidity, while allowing for continued ringgit flexibility. In addition, the BNM increased its outright purchases of government securities as part of its open market operations to support orderly domestic market adjustment amid portfolio outflows and signs of market stress (BNM 2021).

⁹ The BNM framework requires corporate borrowings to be used for productive purposes and supported by foreign currency earnings. Further, under the dynamic hedging program, registered non-resident investors can actively manage FX risk via forward onshore without documentation. Recent hedging instruments developed by the BNM, including initiatives to deepen the Interest Rate Swap market may help make capital flows more resilient to external shocks.

¹⁰ According to the BIS survey of Asian central banks, volatility of the bilateral exchange rate against the US dollar perceived to be central to financial stability (BIS 2020).

¹¹ The Fund assessed this measure as a Capital Flow Management (CFM) under the Institutional View (IV) as it limits capital outflows by not allowing onshore banks to engage in or facilitate offshore activities (IMF 2020, Appendix X).

C. Capital Flows-at-Risk

14. **The capital flows-at-risk framework could be useful in modeling the distribution of net non-resident portfolio debt inflows to Malaysia.** The analysis builds on the growth-at-risk (GaR) methodology by Prasad et al (2019) and adopts approach modifications for gross capital inflows by Goel and Miyajima (2021) and Gelos et al (2019). A quantile regression framework is applied to model average four-quarter-ahead net non-resident portfolio debt inflows, in percent of GDP (termed APDI for short) as a function of financial conditions, domestic macro conditions, domestic financial openness, and global commodity price fluctuations. The quantile regressions are specified as follows:

$$\bar{y}_{t+1:t+4}^q = a^q + \beta_1^q FCI_t + \beta_2^q Domestic\ Macro_t + \beta_3^q Financial\ Openness_t + \beta_4^q Commodity\ Return_t + \epsilon_t^q$$

where, for quantile q , $\bar{y}_{t+1:t+4}^q$ is the APDI reading at time t , a^q is the intercept term, β_i^q is the coefficient corresponding to the i -th factor (for example, β_2^q corresponds to *Domestic Macro*), and ϵ_t^q is the residual term at time t .

15. **A Financial Conditions Index (FCI) was constructed via principal component analysis using a group of global and domestic variables.**^{12,13} Global variables pertain to the VIX Index, which proxies global investor risk appetite, and the 10-year US government bond yield, while domestic variables pertain to Malaysia's 10-year to 1-year term spread, 1-year interbank spread, 10-year sovereign spread, 5-year senior sovereign CDS US dollar spread, and the Malaysia ringgit's returns against the US dollar.

16. **Additionally, the quantile regressions incorporated three control variables.** Domestic macro conditions represented by Malaysia's real year-on-year GDP growth, domestic financial openness proxied by the Chinn-Ito Index¹⁴ for Malaysia, and global commodity price fluctuations represented by returns of the Bloomberg Commodity Index.

17. **Higher FCI levels relate to tighter financial conditions (Figure 16).** Underlying variable movements that lead to higher FCI levels include increased readings for: the VIX Index, the 10-year US government bond yield, Malaysia's 10-year to 1-year term spread, Malaysia's 1-year interbank spread, Malaysia's 10-year sovereign spread, and Malaysia's 5-year senior sovereign CDS US dollar spread. Additionally, a stronger ringgit against the US dollar leads to higher FCI levels.

18. **The model was used to simulate the distributional APDI response to changes in financial conditions (Figure 17).** The simulation base period was set at Q3 2021. A two-standard

¹² Earlier studies showed that foreign flows into Malaysia's debt market respond to both domestic and foreign factors. Grigorian (2019) found that significant global push factors include VIX and US treasury bill yields, while domestic debt, inflation and exchange rate volatility are significant pull factors. Arslanalp et al (2020) showed that benchmark-driven flows are much more sensitive than aggregated portfolio to risk shocks, measured by VIX or BBB spread, and interest rate shocks, e.g., long-term US dollar or medium-term euro rates.

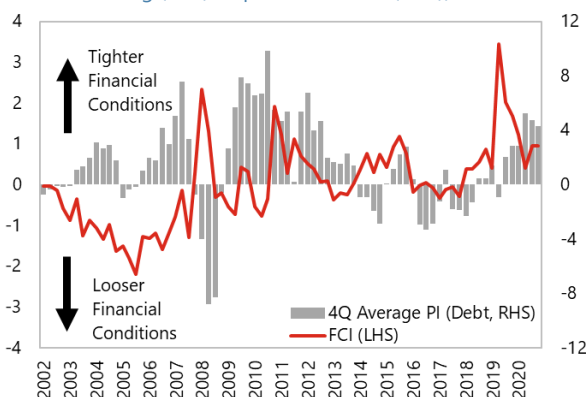
¹³ Multiple model specifications were tested during the study, including but not limited to model specifications separating the FCI into its global and domestic components, with issues such as severe multicollinearity, among others, encountered during the process.

¹⁴ Annual data on the Chinn-Ito Index were obtained from the index publisher's [website](#)

deviation FCI tightening shock, which would have elevated the base period FCI reading to just below Q1 2020 pandemic highs, was found to have three effects. First, the shock induces a leftward shift to the simulated APDI distribution relative to the baseline scenario distribution, suggesting a broad deterioration in overall APDI outcomes given a harsh tightening of financial conditions. Second, the probability of Malaysia recording APDI outflows increases to about 60 percent, compared to about 50 percent seen under baseline conditions. Third, Malaysia's 5 percent APDI-at-risk would worsen to an outflow of at least 5.2 percent of GDP, compared to 3.8 percent of GDP under baseline conditions.

Figure 16. FCI and 4Q Average PI (Debt)

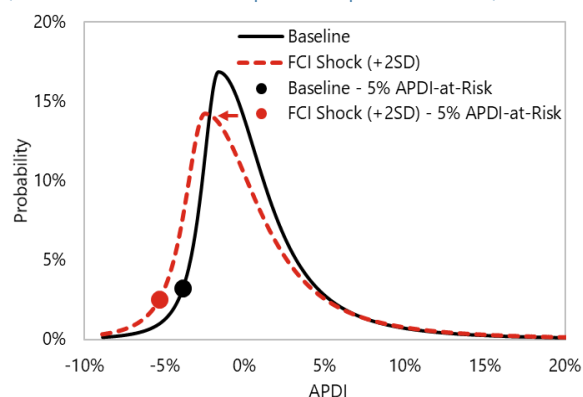
(in factor reading (LHS), in percent of GDP (RHS))



Sources: Haver Analytics, Bloomberg LLP, IMF staff calculations

Figure 17. Simulated APDI Distributions

(Q3-2021 simulation base period, in percent of GDP)



Sources: Haver Analytics, Bloomberg LLP, IMF staff calculations

D. Conclusion

19. **Malaysia is well prepared to face an increase in global interest rates implied by the baseline scenario of an orderly and well-telegraphed policy normalization in AEs.** However, carefully calibrating policy responses will be important. The exchange rate should remain the first line of defense, especially, in the context of monetary policy tightening in AEs driven by better economic conditions with positive spillovers through the trade channel. The policy response to unexpected monetary policy tightening in AEs driven by inflation considerations would depend on whether the exchange rate remains a shock absorber. Under disorderly market conditions, given the role of the exchange rate remains a shock absorber, the policy response could combine exchange rate flexibility with liquidity support, including in foreign currency, and monetary policy easing, striking a balance between supporting growth and managing capital outflows. Conversely, when the exchange rate becomes a shock amplifier amidst financial frictions and excessive exchange rate volatility, FXI would be appropriate. Further, in the context of (imminent) crisis, temporary outflow CFMs as part of a broader policy package could be considered, in line with the Fund's Institutional View (IV). BNM's steps to liberalize foreign exchange policy and to deepen the FX market are welcome. Consistent with previous Fund advice, existing CFMs should be gradually phased out with due regard to market conditions.

References

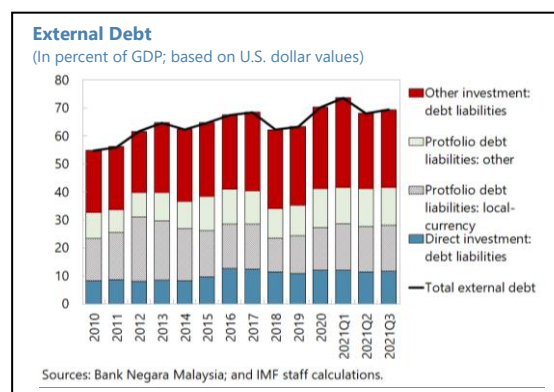
- Arslanalp, S., Drakopoulos, D., Goel, R., Koepke, R., and Helbling, T. F. (2020). *Benchmark-Driven Investments in Emerging Market Bond Markets: Taking Stock*. IMF Working Papers, 2020(192).
- Bank for International Settlements (2020). *Capital flows, exchange rates and policy frameworks in emerging Asia*. Report by a Working Group established by the Asian Consultative Council of the BIS. November 2020.
- Bank for International Settlements (2021). *Changing patterns of capital flows*. Committee on the Global Financial System Papers, No 66.
- Bank Negara Malaysia (2019). *Capital Account Safeguard Measures in the ASEAN Context*. Report by members of ASEAN Working Committee on Capital Account Liberalization, February 2019.
- Bank Negara Malaysia (2021). *Economic and Monetary Review 2020*.
- Garcia Pascual, A., Singh, R., Surti, J. (2021) *Investment Funds and Financial Stability: Policy Considerations*. IMF Departmental Paper, 2021 (018).
- Gelos, G., Gornicka, L., Koepke, R., Sahay, R., and Sgherri, S. (2019). *Capital flows at risk: Taming the ebbs and flows*. Journal of International Economics, 103555.
- Goel, R., Miyajima K. (2021). *Analyzing Capital Flow Drivers Using the 'At-Risk' Framework: South Africa's Case*. IMF Working Papers, 2021 (253).
- Grigorian, D. (2019). *Nonresident Capital Flows and Volatility: Evidence from Malaysia's Local Currency Bond Market*. IMF Working Papers, 2019 (23).
- Finder, H., Lopez Murphy, P. (2019). *Facing the Tides: Managing Capital Flows in Asia*. IMF Departmental Paper, 2019 (17).
- International Monetary Fund (2019). *Malaysia: 2019 Article IV Consultation*, March 2019. IMF Country Report 19/71.
- International Monetary Fund (2021a). *World Economic Outlook*, April 2021.
- International Monetary Fund (2021b). *Regional Economic Outlook for Asia and Pacific*, October 2021.
- Lu, Y., Yakovlev, D. (2018). *Instruments, Investor Base, and Recent Developments in the Malaysian Government Bond Market*. IMF Working Papers, 2018 (95)
- Schmittmann, J., Chua H.T. (2020). *Offshore Currency Markets: Non-Deliverable Forwards (NDFs) in Asia*, IMF Working Paper 2020 (179)
- World Bank (2020). *Malaysia's Domestic Bond Market: A Success Story*.

Appendix X. External Debt Sustainability Analysis¹

Malaysia's external debt declined in 2021, driven by a reduction in offshore borrowings. External debt remains manageable, with one-third of debt denominated in local currency, and about half of short-term external debt in the form of intragroup borrowings among banks and corporations, which have been generally stable during the pandemic.

1. Malaysia's external debt has declined in 2021 compared to 2020 but remains higher than pre-pandemic levels.

Malaysia's external debt-to-GDP ratio stands at 67.6 percent of GDP as of 2021Q3, down from 70.7 percent of GDP in end-2020. This decline in external debt compared to 2020 has been driven by a reduction in offshore borrowings, namely private sector external debt. Public sector borrowing has increased by about 0.2 percent of GDP compared to 2020, while non-resident holdings of local-currency debt securities have remained stable.



2. The currency profile of external debt is stable.

As of 2021Q3, over one-third of external debt (35 percent of total external debt) is denominated in ringgit, largely in the form of nonresident holdings of domestic debt securities (67.8 percent of ringgit-denominated external debt) and in ringgit deposits (16.6 percent) 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 (about 46 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.² Another 30.5 percent of FC-denominated external debt is accounted for by interbank borrowings and FC deposits in the domestic banking system. (Text Table)

3. From a maturity perspective, the share of short-term external debt by original maturity remained stable over the past years.

Short-term debt by original maturity accounted for 37.8 percent of total external debt as of 2021Q3. About 43 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 and remained stable during the pandemic. Meanwhile, another 14.7 percent are accounted by trade credits, 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, falling to about 55 percent by 2027.

This baseline path reflects the net effect of sustained current account (CA) surpluses (excluding interest payments), a recovery in economic growth supported by domestic demand, capital inflows, and low external financing rates. The share

¹ Prepared by Nour Tawk

² The central bank uses an approval framework to ascertain that corporate external borrowings are utilized for productive purposes and that they are supported by foreign currency earnings.

of short-term debt, by original maturity, is projected to stabilize at about 35 percent of total external debt by the end of the medium term. Gross external financing needs, which are estimated to have reached 28 percent of GDP in 2021, are expected to moderate to about 22 percent of GDP by 2027 (Table 1).

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 2021 could push external debt over 75 percent of GDP by 2025. Moreover, the materialization of a persistent historical shock (which now encompasses the COVID-19 shock) could lead to an external debt level around 73 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 (about 35 percent of total external debt) and (ii) largely stable intercompany loans (15 percent of external debt) and interbank borrowings (25 percent of external debt, about four-fifth of which are in the term of intragroup borrowings from related offices abroad).

6. **Risks to Malaysia's external debt sustainability arising from the above vulnerabilities would be managed via a variety of mitigation measures.** As of December 2021, gross official reserves stood at US\$116.8 billion, or about 120 percent of short-term external debt by original maturity. Gross official reserves are adequate under the IMF reserve adequacy metric (ARA) (about 126 percent of the metric). Exchange rate flexibility, a moderate CA surplus, and the relatively large share of ringgit-denominated external debt will continue to serve as important shock absorber against potential external shocks. Furthermore, continued development of local and foreign currency markets has also helped to shield the economy from 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

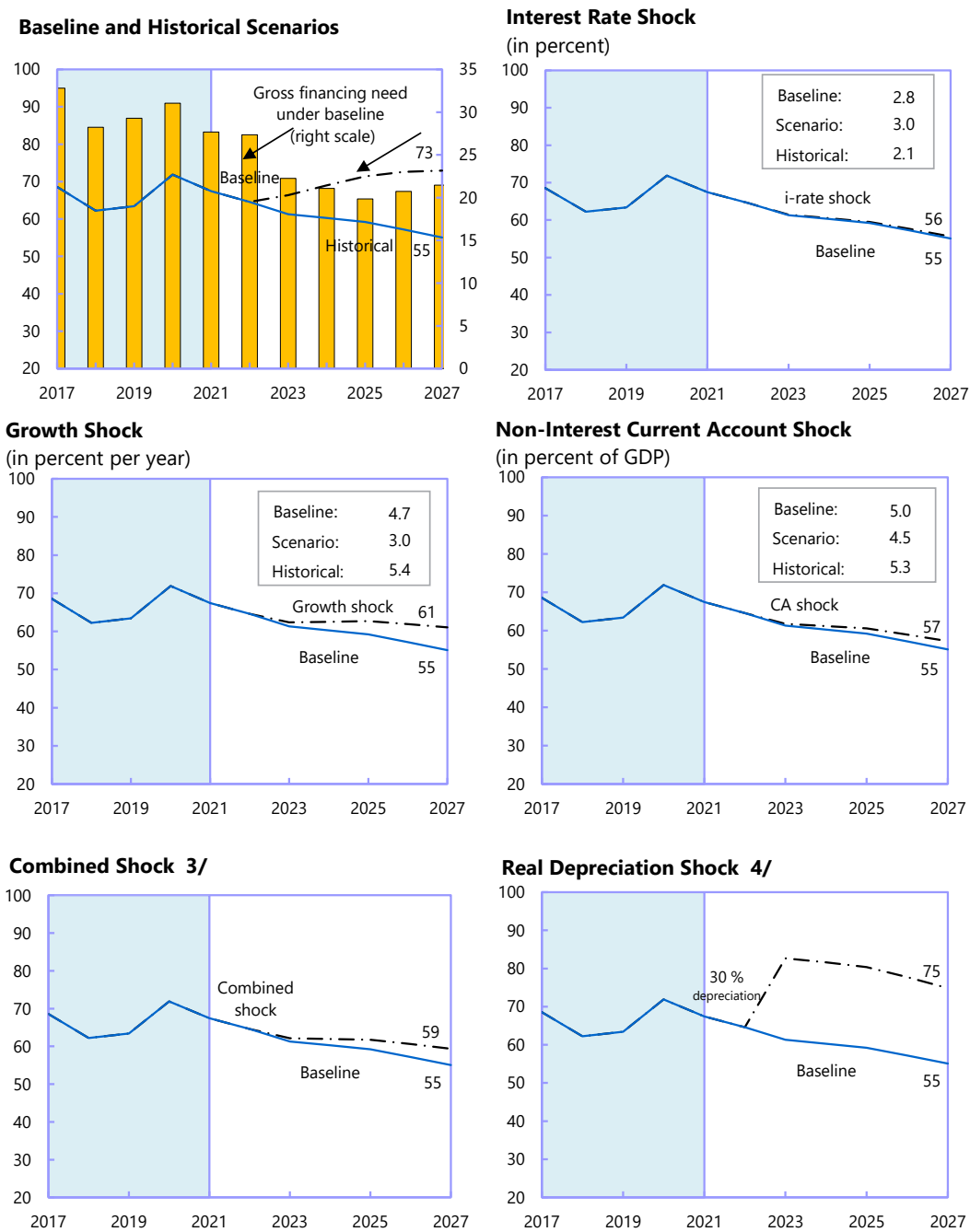
(In percent of GDP unless otherwise mentioned; original maturity)

	2017	2018	2019	2020	2021Q1	2021Q2	2021Q3
Total external debt (staff estimate) 1/	68.5	62.2	63.4	70.1	73.7	68.1	67.6
<i>Medium- and long-term</i>	41.3	34.9	37.3	43.6	43.1	42.4	43.8
Offshore borrowing	24.9	22.4	23.3	26.6	25.8	25.5	25.6
Public sector	10.3	9.3	8.6	10.6	10.2	11.0	10.8
Federal government	1.3	1.1	1.6	1.7	1.7	1.9	1.7
Public enterprises	9.0	8.2	7.0	8.9	8.6	9.1	9.1
Private sector	14.6	13.1	14.7	16.0	15.6	14.5	14.8
Banks	3.6	3.2	3.7	4.1	4.0	3.7	3.7
Nonbanks	11.0	9.8	10.9	11.9	11.5	10.9	11.2
Nonresident holdings of ringgit-denominated debt instruments	15.2	11.4	12.9	15.6	15.9	15.5	15.6
Government securities	14.2	10.7	12.2	14.8	15.1	14.7	14.7
Other securities	1.0	0.7	0.7	0.8	0.8	0.8	0.9
Other	1.3	1.1	1.1	1.4	1.3	1.3	2.6
<i>Short-term</i>	27.2	27.3	26.1	26.5	30.7	25.7	23.8
Offshore borrowing	14.5	15.8	14.4	14.7	17.4	13.8	13.3
Public sector	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Private sector	14.5	15.8	14.4	14.7	17.4	13.8	13.3
Banks	13.3	13.8	13.4	13.4	16.2	12.5	11.6
Nonbanks	1.2	2.0	1.1	1.2	1.2	1.3	1.8
Nonresident holdings of ringgit-denominated debt instruments	0.9	0.7	0.6	0.7	0.8	0.8	0.8
Government securities	0.3	0.3	0.1	0.4	0.7	0.7	0.7
Other securities	0.6	0.5	0.5	0.2	0.2	0.1	0.1
Nonresident deposits	7.1	6.6	6.9	7.0	7.1	6.2	6.3
Other	4.7	4.2	4.2	4.2	5.3	4.9	3.3
<i>Memorandum items:</i>							
	(In percent of total external debt unless otherwise mentioned)						
By original maturity:							
Short-term	39.7	43.9	41.1	38.7	41.6	37.8	38.0
Medium- and long-term	60.3	56.1	58.9	61.3	58.4	62.2	62.0
By currency:							
Local currency denominated	34.4	30.3	31.9	34.2	33.6	35.1	35.7
Foreign currency denominated	65.6	69.9	67.9	66.6	66.4	64.9	67.1
By instrument:							
Nonresident holdings of ringgit-denominated debt instruments	23.4	19.5	21.2	23.2	22.7	24.0	24.2
Interbank borrowing	19.2	22.1	31.2	28.6	32.8	28.1	25.3
as share of GDP	13.2	13.7	19.8	20.1	24.2	19.1	17.1
Bonds and notes	17.4	16.8	24.5	27.1	25.2	29.5	28.9
Intercompany loans	11.3	11.3	14.1	15.1	13.8	14.3	15.1
as share of GDP	7.7	7.0	8.9	10.6	10.2	9.7	10.2
Nonresident deposits	10.4	10.6	7.4	5.8	5.8	5.0	5.2
Loans	5.8	7.8	11.9	11.7	10.7	10.9	10.6
Gross official foreign exchange reserves (US\$ billion)	102.4	101.4	103.6	107.6	110.8	111.1	115.2

Sources: Bank Negara Malaysia; and IMF staff calculations.

1/ Based on staff's estimate of external debt and nominal GDP in U.S. dollar. Authorities' data are in ringgit terms. Differences with the authorities' debt-to-GDP ratio may occur on account of the exchange rate assumptions.

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, 2017–2027

(In percent of GDP, unless otherwise indicated)

	Actual					Est. 2022	Proj.					Debt-stabilizing non-interest current account 6/ -3.2	
	2017	2018	2019	2020	2021		2023	2024	2025	2026	2027		
Baseline: External debt	68.6	62.2	63.4	71.9	67.4	64.6	61.3	60.3	59.2	57.2	55.1		
Change in external debt	0.9	-6.3	1.2	8.5	-4.5	-2.8	-3.3	-1.0	-1.1	-2.0	-2.1		
Identified external debt-creating flows (4+8+9)	-9.4	-8.3	-5.1	0.6	-11.8	-9.0	-8.7	-8.0	-7.4	-7.2	-6.7		
Current account deficit, excluding interest payments	-4.0	-3.7	-5.1	-6.1	-4.9	-4.6	-4.8	-5.0	-5.1	-5.0	-5.0		
Deficit in balance of goods and services	-6.9	-6.7	-7.5	-6.4	-6.9	-6.8	-6.4	-5.8	-5.2	-4.9	-4.8		
Exports	70.0	68.6	65.3	61.4	67.2	66.4	61.2	57.2	53.6	50.6	48.9		
Imports	63.1	61.8	57.7	55.0	60.4	59.5	54.8	51.4	48.4	45.6	44.1		
Net non-debt creating capital inflows (negative)	-2.0	0.1	0.1	-0.2	-1.2	-1.8	-1.7	-1.6	-1.5	-1.4	-1.3		
Automatic debt dynamics 1/	-3.4	-4.7	0.0	6.9	-5.7	-2.5	-2.2	-1.4	-0.8	-0.8	-0.4		
Contribution from nominal interest rate	1.2	1.5	1.6	1.9	1.2	1.0	1.1	1.5	1.7	1.7	1.7		
Contribution from real GDP growth	-3.7	-3.0	-2.7	3.9	-2.3	-3.5	-3.3	-2.8	-2.5	-2.5	-2.1		
Contribution from price and exchange rate changes 2/	-0.9	-3.2	1.0	1.1	-4.6	...	...	...	...	...	...
Residual, incl. change in gross foreign assets (2-3) 3/	10.3	2.0	6.2	7.9	7.4	6.2	5.4	6.9	6.4	5.2	4.6		
External debt-to-exports ratio (in percent)	97.9	90.8	97.2	117.0	100.3	97.3	100.2	105.3	110.4	113.1	112.7		
Gross external financing need (in billions of US dollars) 4/	104.7	101.3	107.0	104.6	105.2	113.2	101.5	103.9	105.5	118.8	131.5		
in percent of GDP	32.8	28.2	29.3	31.1	27.7	10-Year	10-Year	27.4	22.2	21.1	19.9	20.7	21.5
Scenario with key variables at their historical averages 5/						64.6	66.4	69.0	71.4	72.6	72.9	-1.7	
Key Macroeconomic Assumptions Underlying Baseline						Historical Average	Standard Deviation						
Nominal GDP (US dollars)	319.1	358.8	365.3	337.0	380.1			413.7	456.4	492.7	531.5	572.8	612.3
Real GDP growth (in percent)	5.8	4.8	4.4	-5.6	3.5	5.4	3.4	5.7	5.7	5.0	4.5	4.5	4.0
GDP deflator in US dollars (change in percent)	0.1	7.2	-2.5	-2.2	8.0	-0.8	6.7	3.0	4.4	2.8	3.2	3.1	2.8
Nominal external interest rate (in percent)	1.8	2.4	2.7	2.7	1.9	2.1	0.4	1.6	1.9	2.6	3.0	3.1	3.3
Growth of exports (US dollar terms, in percent)	11.1	10.1	-3.1	-13.1	23.4	2.4	11.7	7.4	1.7	1.0	1.1	1.6	3.3
Growth of imports (US dollar terms, in percent)	11.2	10.1	-5.0	-12.1	23.8	3.8	11.4	7.4	1.5	1.4	1.5	1.6	3.4
Current account balance, excluding interest payments	4.0	3.7	5.1	6.1	4.9	5.3	0.9	4.6	4.8	5.0	5.1	5.0	5.0
Net non-debt creating capital inflows	2.0	-0.1	-0.1	0.2	1.2	-0.1	1.3	1.8	1.7	1.6	1.5	1.4	1.3

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

1/ Derived as $[r - g - \rho(1+g) + \alpha(1+r)] / (1+g+\rho+\rho g)$ 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, α = nominal appreciation (increase in dollar value of domestic currency), and α = share of domestic-currency denominated debt in total external debt.2/ Derived as $[r - g - \rho(1+g) + \alpha(1+r)] / (1+g+\rho+\rho g)$ 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, α = 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 XI. Draft Press Release

IMF Executive Board Concludes 2022 Article IV Consultation with Malaysia

FOR IMMEDIATE RELEASE

Washington, DC – [Month dd, YYYY]: The Executive Board of the International Monetary Fund (IMF) concluded the Article IV consultation¹ with Malaysia.

The recovery is strengthening but remains uneven. The severe Delta outbreak in the middle of 2021 prompted strict nationwide measures, which limited real GDP growth to about 3 percent, while inflation was contained at about 2½ percent (Table 1). The export-oriented manufacturing sector, which remained operative during shutdowns, underpinned growth, while the agricultural sector struggled with prolonged labor shortages due to a lower flow of migrant workers. Contact-intensive sectors, including tourism, were hard-hit.

A swift, substantial, and multi-pronged pandemic policy response supported the economy. Total COVID-related budget spending amounted to RM39 billion (about 2½ percent of GDP) in 2021, more than double the initially budgeted RM17 billion, and above the RM38 billion spent in 2020. As a result, the federal government deficit reached about 6½ percent of GDP in 2021, higher than the about 5½ deficit foreseen in the 2021 Budget. Federal government debt is estimated at 63 percent of GDP, below the domestic debt ceiling of 65 percent of GDP. BNM maintained an accommodative monetary policy stance, with its overnight policy rate unchanged at a record low of 1¾ percent through early 2022.

Growth is projected to be solid in the medium term, although risks of long-term economic scarring are real. Growth in 2022 is projected at about 5¾ percent driven by pent-up domestic demand against the backdrop of high vaccination rates and limited movement restrictions, as well as continued strong external demand. However, the pandemic could lead to permanent GDP losses and a drag on potential output. Inflation is projected to stabilize at about 2½ percent despite transitory supply-chain challenges. The current account surplus is expected to narrow gradually over the medium term, as consumption and capital-related imports recover, despite a gradual pick up in foreign tourism flows as the economy reopens.

Executive Board Assessment²

< >

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

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

