

Highlights

- 2023 was a tale of two halves for the global economy and ASEAN+3. The first half saw continued aggressive monetary policy tightening and short-lived financial market instability in the United States (US) and Europe, and elevated inflation. In the second half, monetary policy tightening paused, finaancial markets stabilized, and growth in the US and Europe proved resilient alongside moderating inflation.
- ASEAN+3 registered stronger growth of
 4.3 percent in 2023—an increase from 3.2 percent in 2022—driven by robust domestic demand amid weakness in exports. Inflation in the region moderated, although core inflation remained high given firm domestic demand. Financial conditions improved toward the end of the year, with credit growth remaining firm, equity markets recovering, bond yields moderating, and exchange rates stabilizing. Healthy international reserves levels contributed to the region's external resilience.
- ASEAN+3 is expected to grow at a faster pace of 4.5 percent in 2024, before moderating to 4.2 percent in 2025. Domestic demand is likely to remain resilient, underpinned by recovering investment and firm consumer spending. Export recovery, especially in semiconductors, and tourism should provide an additional lift to growth. In the medium term, the ASEAN+3 region is expected to continue to be an engine of growth in the global economy—growing faster than the world average and contributing around 45 percent of global growth in 2024–2030. Inflation is forecast to continue moderating but disinflation would be gradual and core inflation is likely to remain elevated as domestic demand remains robust.
- The near-term prospects for ASEAN+3 could be impacted by various risks. A sudden spike in global commodity prices due to an escalation in

geopolitical tensions or weather shocks is the most salient risk. Other key risks include a slowerthan-expected growth in China, adverse spillovers from US Presidential election campaign, and possible recession in major advanced economies outside the region. Over the longer term, escalating geopolitical confrontations, failure to prepare for an aging population, climate change, cyber-attacks, and pandemic outbreaks pose complex challenges to macrofinancial stability.

- Nonetheless, the current positive outlook for ASEAN+3 provides an opportunity for the region to rebuild policy space lost during the pandemic. In 2023, fiscal consolidation continued in most ASEAN+3 economies, though most have not fully regained pre-pandemic policy space, while almost all central banks in the region have kept their monetary policy relatively tight to contain inflationary pressures. Going forward, the priority for fiscal policy should be directed mainly at restoring buffers while providing targeted support for the economy. Meanwhile, it is essential for monetary policy to be focused on anchoring inflation expectations given the continued upside risks to inflation.
- Looking back to developments since the onset of COVID-19, despite a strong initial recovery, GDP growth for the region has remained below pre-pandemic trend. This reflects ongoing adjustments and scarring effects that have lowered underlying growth amid a challenging global environment. Notably, the recovery in investment has been particularly weak. Policies to support investment in productivity- and resilience-enhancing areas, especially for smaller firms, are crucial to steer growth back toward pre-pandemic trends. Closer regional collaboration could also strengthen growth potential eroded by the pandemic.

I. Economic Developments in 2023: A Resilient but Challenging Year

The global economy faced many challenges in 2023. The year began amid the most aggressive monetary tightening cycle in the United States (US) in over four decades (Figure 1.1). The collapse of several major US regional banks in March 2023 highlighted the potential hidden financial vulnerabilities that could be unraveled by sharply rising interest rates.¹ Concerns over similar financial stability risks in other economies increased investor uncertainties, leading to higher global financial market uncertainty. US Treasury 10-year yields rose to its highest levels since 2007—as market expectations realigned towards a higher-for-longer policy rate scenario and US Treasury bond issuances increased—leading to higher financial market and capital flows volatility. 2023 also saw the highest number of armed conflicts since World War II (United Nations 2023). Heightened geopolitical tensions kept global commodity prices high and increased the risk of supply chain disruptions. Adverse weather conditions further threatened crop production and exacerbated global food insecurity.

However, positive economic developments emerged throughout the year. Inflation in the United States trended steadily downward as monetary conditions tightened with the rise in the US Federal Reserve's (the Fed) policy rate, and commodity prices continued to decline. The Fed's rate hikes did not derail improving domestic demand, with consumer spending on goods resuming its expansion. The US economy was surprisingly robust and expectation of

Figure 1.1. United States: Federal Funds Rate and 10-year Treasury Note (Percent)



Source: National authorities via Haver Analytics.

the United States being on track to achieve a soft landing increased toward the end of the year—with inflation moderating to about 3 percent (Figure 1.2). The fallout from the US regional banks' failures was also quickly contained. Meanwhile, the euro area avoided a recession, in part reflecting a mild winter and easing inflation pressures. These improvements mostly materialized in the second half of 2023, enabling the global economy to end the year on a firmer footing than it began.

ASEAN+3 region demonstrated continued resilience. Overall, the region, led by China, registered a robust growth of 4.3 percent in 2023—an increase from 3.2 percent in 2022—underpinned mainly by resilient domestic demand. External demand weakened sharply in the first half of the year but rebounded in the second half of the year providing a significant boost to growth for many regional economies (Figure 1.3). The negative output gaps in most of the regional economies narrowed in 2023 (Figure 1.4). In particular, Brunei, China, Hong Kong, Indonesia, and Thailand are estimated to have smaller negative output gap in 2023, as the economies continued to recover from the pandemic. Japan's negative output gap is estimated to have turned positive by the second quarter following strong growth momentum and a departure from years of deflationary pressures. Meanwhile, the positive output gaps in the Philippines and Singapore narrowed while those in Korea, Malaysia, and Vietnam turned negative, mainly as weak external demand weighed on exports and growth.

Figure 1.2. United States: Real GDP Growth and Headline Inflation

(Percent, year-on-year)



Source: National authorities via Haver Analytics; AMRO staff calculations. Note: Headline inflation refers to the Consumer Price Index.

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/ The collapse of Silicon Valley Bank and Signature Bank marked the second and third largest US bank failures (by asset size) since 2008 (Dela Cruz and Gull 2023).

Figure 1.3. Selected ASEAN+3: Real GDP Growth





Source: National authorities via Haver Analytics; AMRO staff calculations. Note: Aggregate GDP is calculated using purchasing power parity (PPP) weighted average. Selected ASEAN refers to Brunei, Indonesia, Malaysia, the Philippines, Singapore, Thailand, and Vietnam. Cambodia, Lao PDR, and Myanmar are excluded due to data unavailability.

Figure 1.4. Selected ASEAN+3: Output Gap, 2022-2023 (Percent of potential output)



Source: National authorities via Haver Analytics; AMRO staff calculations. Note: BN = Brunei; CN = China; HK = Hong Kong; ID = Indonesia; JP = Japan; KR = Korea; MY = Malaysia; PH = the Philippines; SG = Singapore; TH = Thailand; and VN = Vietnam. Cambodia, Lao PDR, and Myanmar are excluded due to data unavailability. Output gap is calculated as (actual output-potential output)/potential output. Potential output is estimated using a 2-sided HP filter on guarterly GDP data from 1973 (or earliest available quarterly data to 2025). AMRO staff projections are used for GDP in 2024 and 2025.

Domestic Demand Anchored Growth

Domestic demand continued to be the main driver of the region's growth in 2023. Private consumption was the primary driver, contributing about 60 percent of regional growth during the year (Figure 1.5, Figure 1.6). Investment activities gained momentum towards the end of the year and contributed about a quarter of overall GDP growth in ASEAN+3. Net exports turned around to contribute positively to growth since the third quarter.

Steady recovery in the labor market and improving household incomes underpinned private consumption. Private consumption growth remained especially robust for the ASEAN-5 economies, Brunei, and Hong Kong.

Household spending was driven by higher income amid lower inflation. Labor market conditions broadly improved across the region—unemployment rates fell below pre-pandemic levels for most regional economies (Figure 1.7). Labor force participation rates remain highexceeding pre-pandemic levels—in most economies, except Hong Kong, and Vietnam (Figure 1.8). The tight labor market in most regional economies was also partially due to the slow return of foreign workers who went back to their home countries during the COVID-19 pandemic (Box 1.1). Given the strong demand for labor, growth in nominal wages was sustained or increased further in most economies (Figure 1.9).





Source: National authorities via Haver Analytics; AMRO staff calculations. Note: Statistical discrepancies are not shown. Excludes Cambodia, Lao PDR, Myanmar, and Vietnam due to data unavailability.

Figure 1.6. Selected ASEAN+3: Private Consumption Growth



Note: ASEAN-5 = Indonesia, Malaysia, the Philippines, Singapore, and Thailand.



(Index, Q4 2019 = 100, seasonally adjusted)



Source: National authorities via Haver Analytics. Note: CN = China; HK = Hong Kong; ID = Indonesia; JP = Japan; KR = Korea; MY = Malaysia; PH = the Philippines; SG = Singapore; TH = Thailand; and VN = Vietnam. ASEAN-6 = Indonesia, Malaysia, the Philippines, Singapore, Thailand, and Vietnam. Data are up to Q4 2023, except for Indonesia (Q3 2023).

Figure 1.8. Selected ASEAN+3: Labor Force Participation Rate (Percent of working-age population, seasonally adjusted)



Source: National authorities via Haver Analytics.

Note: HK = Hong Kong; JP = Japan; KR = Korea; ID = Indonesia; MY = Malaysia; PH = the Philippines; TH = Thailand; VN = Vietnam. Latest 2023 data are for Q4, except for Indonesia (Q3 2023)

Figure 1.9. Selected ASEAN+3: Nominal Wages, by Economy (Percent, year-on-year)



Source: National authorities via Haver Analytics.

Source: National authonities via naver Analytics. Note: HK = Hong Kong; ID = Indonesia; KR = Korea; MY = Malaysia; SG = Singapore; TH = Thailand; VN = Vietnam. Data for Malaysia refer only to manufacturing wages. Data are up to Q4 2023, except for Hong Kong and Indonesia (Q3 2023).

Domestic investment recovered gradually and has yet to reach pre-pandemic levels. Gross fixed capital formation grew at a modest pace in the first half of the year as financial conditions tightened following interest rate increases in most ASEAN+3 economies (Figure 1.10). Investment activities in Japan and Korea moderated throughout the year due mainly to lower capital expenditure in machinery and equipment in line with the downturn in the electronics and semiconductor cycle. In contrast, investment in ASEAN-5 and Brunei remained firm. In particular, investment activities in these economies picked up in the second half of the year partly as a result of the gradual realization of investment projects, including those approved in previous years (Figure 1.11).

Property market distress in China—the largest economy in the region—raised some concerns in the middle of 2023, but the economy stabilized toward the end of the

Figure 1.10. Selected ASEAN+3: Real Gross Fixed Capital Formation and Contribution to GDP Growth

(Percent, year-on-year; percentage points)



Source: National authorities via Haver Analytics; AMRO staff calculations. Note: ASEAN-5 = Indonesia, Malaysia, the Philippines, Singapore, and Thailand. Data are unavailable for Cambodia, Lao PDR, Myanmar, and Vietnam. Data for China refer to the contribution of gross fixed capital formation to year-on-year GDP growth.





Source: National authorities via Haver Analytics.

year. The property sector correction in China weighed on its economic growth, with investment in real estate contracting as several large property developers faced financial difficulties (Figure 1.12). Swift and wide-ranging policy measures—such as the injection of liquidity and maintaining access to credit for productive sectorsmitigated broader spillovers to the rest of the economy. Growth slowdown was also cushioned by continued robust investment in the manufacturing sector and on infrastructure, along with strong household spending (Figure 1.13). The steady increase in durable goods demand suggests gradual improvement in consumer sentiments, reflecting the underlying strength of private consumption in China. Overall, China achieved an above-target annual growth rate of 5.2 percent in 2023 thanks to relatively robust private consumption that offset the impact of falling real estate investment and weak external demand.

Figure 1.11. Selected ASEAN: Investment Approvals (Percent, year-on-year, four-quarter moving average)



Source: National authorities via Haver Analytics; AMRO staff calculations. Note: Data for Malaysia refer to capital investment in approved projects in the manufacturing sector. Data for Thailand refer to all sectors. Data for Vietnam refer to newly registered capital for foreign direct investment. Data refer to local currency values of approved projects, excluding Vietnam (in US dollars).

Figure 1.13. China: Real Consumer Spending (Percent, year-on-year)



Source: National authorities via Haver Analytics

Note: Real retail sales and online sales are estimated by deflating nominal sales with the consumer price index. Passenger car sales refer to units of passenger cars sold.

Box 1.1:

Migrant Worker Developments in Selected ASEAN+3 Economies

The COVID-19 pandemic has affected the flow of migrant workers including in the region. Migrant workers were badly affected as economies imposed stringent containment measures and mobility restrictions in 2020-21. Many lost their jobs as lockdown measures froze most economic activities, and work passes were suspended to contain the spread of the virus. Some were forced to return home, while others were unemployed and stranded in their host country. Key migrant worker destinations in ASEAN, notably Brunei, Malaysia, Singapore, and Thailand, experienced significant declines in the number of migrant workers in 2020-21, given that these economies have the largest share of migrant worker participation in the workforce (Figure 1.1.1). Unlike the ASEAN peers, the corresponding period saw the number of migrant workers increase in Japan, while remaining largely stable in Korea.

In several regional economies, despite the economic recovery, migrant worker flows have not fully returned to pre-pandemic levels. In Brunei, Thailand and Malaysia, total number of migrant workers remain at between 10 percent and 16 percent below the (2019) pre-pandemic levels. This shortfall has contributed to the tightening of labor market conditions in some segments of the economy, particularly industries that are heavily reliant on migrant workers, such as agriculture, construction, manufacturing, and services (mainly tourism-related). As recovery gains traction, businesses are facing difficulties meeting demand because of a shortage of manpower as the normalization of migrant worker flows has been slow to materialize. In Malaysia, migrant worker needs in the palm oil plantations and construction industries remain large, as the inflows of migrant workers in these two industries continue to fall short in 2022–2023, given the sizable outflows observed during the height of the pandemic. Similarly, in Thailand, the inflows of migrant workers into the service industry in 2022-2023 remain modest, as compared to the sizable outflows in 2020 (Figure 1.1.2). The notable exception is Singapore, where migrant worker inflows have surpassed prepandemic levels, as the economy saw an increase of

more than 250,000 migrant workers in 2022–2023,¹ mostly in the construction sector.

The current shortage of migrant workers has come at a critical juncture, particularly for regional economies that are on the path to strengthening recovery, as this would hinder growth by impeding businesses from fulfilling orders and expanding operations. This situation could lead to increased production costs, production delays and further straining industries that are dependent on migrant labor. However, it is unlikely that the issue can be resolved quickly, due to the following:

- First, it remains challenging to recruit migrant workers with relevant skillsets, especially after experienced workers returned home during the height of the pandemic and found jobs at home. Therefore, new migrants may need time to be trained before they are able to replace the ones who left during the pandemic.
- Second, the pandemic brought to fore lapses in migrant worker services—including access to healthcare and social support services in certain host countries that have yet to be rectified (ILO 2020). Prolonged negotiations with source countries (such as Bangladesh and Indonesia) over migrant workers' benefits and working conditions are hampering the swift resumption of migrant worker flows into these economies (Lee, Latiff, and Chu 2022).
- Third, heightened international scrutiny of human trafficking is leading to more bureaucratic process for approving migrant worker applications, especially for regional economies that rank high on the US State Department's annual Trafficking Persons Report (Foyez 2022).

As a result, labor market conditions in industries that are disproportionately dependent on migrant workers will continue to remain relatively tight, as it would take some time for migrant worker flows to fully recover.

This box was written by Anthony Tan.

 $^{^{}u}$ This figure excludes Migrant Domestic Workers—persons employed to work in or for a household.



Figure 1.1.1. Selected ASEAN+3: Number of Migrant Workers

Source: Japan Ministry of Health, Labor and Welfare; Statistics Korea; Thailand Ministry of Labor; Ministry of Home Affairs and Ministry of Human Resources Malaysia; Brunei Department of Economic Planning and Statistics; Singapore Ministry of Manpower; AMRO staff estimates. Note: Figures in parentheses refer to the share of migrant workers in the labor force in 2022. Except for Japan, migrant worker data are up to May 2023 (Korea and Thailand), June 2023 (Singapore), and November 2023 (Malaysia). The 2023 data point for Brunei refers to AMRO staff estimates. Data for Singapore excludes migrant domestic workers. Data for Thailand refers to migrant workers holding work permits only, which underestimates the true picture of migrant workers. According to the Thailand Ministry of Holtons 2000, microst the vorkers are used to hold the labor force in 2020. Thailand Migration Report (United Nations 2019), migrant workers account for over 10 percent of the labor force in 2019.



Figure 1.1.2. Selected ASEAN+3: Number of Migrant Workers, by Key Sectors (Annual change, thousand persons)

Source: Japan Ministry of Health, Labor and Welfare; Statistics Korea; Thailand Ministry of Labor; Ministry of Home Affairs and Ministry of Human Resources Malaysia; Brunei Department of Economic Planning and Statistics; Singapore Ministry of Manpower. Note: Data for Singapore excludes migrant domestic workers, while data for Thailand refers to migrant workers holding work permits.

Weaker Exports Performance

Exports for ASEAN+3 was weak in 2023. Gross exports for all regional economies, except Cambodia, contracted in 2023 (Figure 1.14). The slow growth in goods exports mainly reflected still-weak global electronics demand, and lower commodity prices. Global semiconductor sales declined by 20 percent year-on-year in May, the largest contraction in over a decade (SIA 2023). With electronics accounting for a large share of the ASEAN+3 exports base, the downcycle weighed significantly on the region's export performance (Figure 1.15). At the same time, the moderation in global commodity prices lowered export value for commodity exporters in the region.

Signs of a turnaround emerged in the second half of the year. Goods exports have contracted at a slower pace since August, while goods volume has continued to expand after turning positive in April, lending optimism to the prospect of weak exports having bottomed out (Figure 1.16). Resilient GDP growth in the United States and continued demand for durable goods also benefited the region's exports. Notably, the milder contraction in non-tech exports provided some counterbalance against the weakness in technology-related exports (Figure 1.17).

In contrast, services exports remained resilient, partially offsetting the drag on goods exports. Strong growth in travel services more than offset the continued contraction in transport and manufacturing services (Figure 1.18). The weak growth in the latter segments was in line with the sluggish goods exports. The recovery in the travel services since the full removal of COVID-19 restrictions continued apace. Tourist arrivals across the region have on average exceeded 70 percent of pre-pandemic levels (Figure 1.19). Overall, intraregional tourism was particularly strong, except for China where recovery of outbound tourism has been more gradual (Figure 1.20). The share of tourists from ASEAN has exceeded the pre-pandemic share for all regional economies as of September 2023, while the share of tourists originating from China reached only about 25 percent of pre-pandemic levels. Growth in other services exports also remained robust, reflecting continued firm demand for modern services—services that can be provided without physical presence, enabled by technology—in the post-pandemic environment.



Figure 1.14. ASEAN+3: Goods Export Growth

(Percent, year-on-year, three-month moving average)

Source: National authorities via Haver Analytics; AMRO staff calculations

Note: Calculated based on merchandise exports in US dollars for all economies. Colors indicate the size and direction of change: the deeper the shade of red, the larger the negative change, with the darkest shade indicating a decrease of more than 30 percent year-on-year; the deeper the shade of green, the larger the positive change, with the darkest shade indicating an increase of more than 30 percent year-on-year.

Figure 1.15. World: Global Semiconductor and Capital Expenditure Cycles

(Percent, year-on-year, six-month moving average)



Source: World Semiconductor Trade Statistics, Inc.; AMRO staff calculations. Note: Underlying data represent actual global billings up to December 2023 and estimated monthly billings next year using WSTS forecasts. Capital expenditure data are for the Germany (as proxy for euro area), Japan, and the United States.

Figure 1.16. Selected ASEAN+3: Goods and Services Export Growth





Figure 1.17. Selected ASEAN+3: Export Growth, by Product Type



Source: National authorities via Haver Analytics; AMRO staff calculations. Note: Goods exports value data are not available for Brunei, Lao PDR, and Myanmar. Goods exports volume data are not available for Brunei, Cambodia, Lao PDR, and Myanmar. Services exports data are not available for Brunei and Myanmar.



Note: Data refers to export values in US dollars. "Tech" covers goods that fall under HS codes 8541–42 and 8486 (all semiconductor-related). Data excludes Cambodia, Myanmar, and Lao PDR.

Figure 1.18. Selected ASEAN+3: Growth in Exports of Services, by Category (*Percent, year-on-year*)



Source: National authorities via Haver Analytics; AMRO staff calculations.

Note: Transport services comprise sea transport, air transport, other modes of transport, and postal and courier services. Exports of travel services cover goods and services (excluding transport services) that are acquired from an economy by nonresidents during visits to that economy. Data for Brunei, Cambodia, Myanmar, and Vietnam are not available.

Figure 1.19. Selected ASEAN+3: Tourist Arrivals (Index, 2019 monthly average = 100)



Source: National authorities via Haver Analytics; AMRO staff calculations

Note: CMV = Cambodia, Myanmar, and Vietnam; KH = Cambodia; ID = Indonesia; MY = Malaysia; MM = Myanmar; PH = the Philippines; SG = Singapore; TH = Thailand; VN = Vietnam; HK = Hong Kong; JP = Japan; KR = Korea. Brunei, China, and Lao PDR are excluded due to data unavailability. Data are as of January 2024, except for Malaysia, Cambodia, and Myanmar (December 2023).





Source: National authorities via Haver Analytics; AMRO staff calculations.

Note: 2023 data are from January to December 2023, except for Japan (January to November)

Gradual Disinflation

Headline inflation continued to moderate from its peaks in 2022—where inflation surged due mainly to the confluence of global supply chain disruption, spike in commodity prices following the Russia-Ukraine conflict which escalated into a crisis, and post-pandemic demand recovery. Headline inflation across the Plus-3 and ASEAN economies grew at a slower pace in 2023, while core inflation trends diverged between the two subregions, with core inflation continuing to increase in the Plus-3 but moderating for ASEAN economies (Figure 1.21). The moderation in headline inflation was due mainly to declines in global commodity prices (Figure 1.22). In terms of levels, however, commodity prices continued to be higher than prior to the pandemic in 2019, except for natural gas which declined to below the prices in 2019.

Volatility in energy and food prices continued to exert pressure on regional inflation. In September, crude oil prices hit the highest level since the start of 2023 following the extension of oil production cuts by Saudi Arabia and Russia. The increased prices led to an uptick in transportation costs across the region (Figure 1.23). Food prices remained high as the dry weather due to El Niño reduced agricultural yield. The price of rice—a staple for most ASEAN+3 economies surged in August 2023, reaching its highest level since 2008, following India's export ban on non-basmati white rice. Food inflation in the ASEAN+3 region consequently outpaced inflation in other major categories by the second half of the year (Box 1.2).

Core inflation remained elevated in most regional economies. Core inflation in the Plus-3 subregion is on an increasing trend while core inflation in the ASEAN economies has begun to moderate. The dynamics of core inflation differ significantly across the region, reflecting the economies' diverse economic structure, import reliance, exchange rate passthrough and inflation management

2024

Rice

Fertilizer

approach, among others. Supply-factors such as global commodity prices and exchange rate passthrough have played a more prominent role in core inflation in recent periods. Strong demand pressures arising from robust

domestic demand conditions further complicate the identification and isolation of inflation drivers, and by extension, the appropriate policy response (Box 1.3).





Source: National authorities via Haver Analytics; AMRO staff calculations.

Note: Average headline and core inflation refer to the respective trim means, which exclude outliers. Core inflation excludes food and energy

Figure 1.22. World: Commodity Prices



Source: Bank Negara Malaysia; Financial Times; US Energy Information Administration; Wall Street Journal; World Bank, via Haver Analytics. Note: Wheat price refers to Kansas City wheat, natural gas refers to Henry Hub Natural Gas, and rice refers to Thailand white rice

Natural gas



Brent crude oil





Crude palm oil

Wheat

Source: National authorities via Haver Analytics; AMRO staff calculations.

Note: Aggregate consumer price inflation is calculated as a simple average of individual economies' data series. Data for ASEAN are up to Q4 2023, except for Myanmar (Q2 2022).

Box 1.2:

Sticky Food Prices Spice Up ASEAN+3 Inflation Outlook

Elevated food prices remain a key concern in the ASEAN+3. While regional food inflation declined notably in 2023, it continued to outpace headline inflation in most of the region's economies.

The stickiness of retail food prices following commodity price shocks is a common historical phenomenon, as reviewed in Ferrucci, Jimenez-Rodriguez, and Onorante (2012). In an empirical study, del Rosario and Wynn (2023) show that global food price shocks exhibit a delayed and persistent impact on headline inflation in the ASEAN+3typically materializing 1–5 months after the shock and the spillovers extending over 14-22 months (Figure 1.2.1). By comparison, the effects of global oil price shocks to domestic headline inflation manifest and dissipate more quickly—either contemporaneously or 1 month after the shock, with a duration of 2-14 months, which is roughly half the span of the spillover duration of global food prices on ASEAN+3 inflation.

The global food price index of the United Nations Food and Agriculture Organization (FAO) fell by 14 percent in 2023, suggesting a potential easing in food price pressures on ASEAN+3 headline inflation in 2024. That said, global food prices have remained above historical norms, hovering just below the levels observed during the food price shocks in 2008 and 2011 (Figure 1.2.2). This situation raises concerns about food affordability for low-income economies, including Lao PDR, and Myanmar in the ASEAN+3, and could dampen discretionary spending among cash-strapped households across the region. Currency depreciations exacerbate the cost pressures for most ASEAN+3 economies that are net importers of food commodities (Tan, Choo, and Chong 2022). At the same time, various factors could reverse the recent declines in global food prices. First, an escalation of the conflict in the Middle East could trigger a spike in oil prices, raising the cost of food production and transportation. While oil prices have been relatively stable to date, attacks on cargo vessels in the Red Sea since mid-November 2023 pushed up ocean freight rates by 40–80 percent by the first week of January 2024 (Figure 1.2.3).¹

Second, extreme weather events arising from the interaction of El Niño and global warming could reduce agricultural yields and push up food prices, which in turn could be exacerbated by export restrictions imposed by major commodity producers.² For example, rice prices rose by 21 percent in 2023 following India's ban on exports of non-basmati rice in July 2023, and tighter global rice supply due to El Niño-related dry weather conditions (Figure 1.2.2). Sugar prices also surged by 27 percent in 2023 owing to similar concerns over the impact of El Niño and the likelihood of export restrictions (World Bank 2023a). The US Climate Prediction Center expects ongoing El Niño conditions to persist through April, leading to 2024 potentially surpassing 2023 as the hottest year on record (Hirji and others 2024).

In addition, a worsening of geopolitical tensions in major food producing economies could unsettle global food markets once again. Russia's withdrawal from the Black Sea Grain Initiative in July 2023 caused an uptick in the FAO food price index, although this was subsequently abated by ample harvests in major food-producing nations and declines in input costs, particularly, from energy, shipping, and fertilizers (Vos and others 2023).

This box was written by Diana del Rosario.

^{1/} The Red Sea connects to the Suez Canal, which handles 12 percent of global trade and as much as 30 percent of global container traffic (Cooban and North 2024; Partington 2024).

²⁷ Recent studies show that human-induced global warming has led to more frequent and extreme El Niño and La Niña events since the 1960s. Wilcox and others (2023) find a shift in the factors influencing the formation of El Niño—or more generally, the El Niño-Southern Oscillation (ENSO)—since the 1970s, attributing it to human-induced global warming rather than changes in solar output as observed in the prior 3,500 years. Cai and others (2023) show that the increased frequency and severity of El Niño and La Niña events—the warm and cold phases of ENSO—post-1960 is associated with human-induced global warming.



Figure 1.2.1. ASEAN+3: Transmission Period of Global Commodity Price Shocks to Headline Inflation (Months after shock)

Source: Bank for International Settlements, FAO, and national authorities, all via Haver statistics; AMRO staff calculations. Note: CN=China; HK = Hong Kong, China; JP = Japan; KR = Korea; ID = Indonesia; MY = Malaysia; PH = the Philippines; SG = Singapore; TH = Thailand; BN = Brunei; KH = Cambodia; LA = Lao PDR; VN = Vietnam. See del Rosario and Wynn (2023) for information about the modelling specifications.

Figure 1.2.2. World: Aggregate and Selected Food Price Indices

(Index, 2014–2016 = 100)



Figure 1.2.3. World: Ocean Freight Rates (Index, 2019 = 100)



Note: The FAO Food Price Index is the average of the price indexes of meat, dairy, cereals, vegetable oils, and sugar, weighted by the respective average export share of each of the said commodity groups in 2014–2016.

Source: Bloomberg Finance L.P.; AMRO staff calculations. Note: Container freight rate is represented by the Drewry World Container Index, a composite of spot container freight rates for major East-West trade' routes; dry bulk carrier rate by the Baltic Dry Index, a composite of prices paid for shipping dry bulk materials across more than 20 routes.

Source: FAO via Haver Analytics.

Box 1.3:

Drivers of Core Inflation in ASEAN+3

Headline and core inflation in the ASEAN+3 region have experienced multi-year highs since 2021. Inflation escalated due to pandemic-induced shifts in demand, global supply chain disruptions, labor shortages, and commodity price spikes due in part to the Russia-Ukraine conflict which escalated into a crisis. Headline and core inflation moderated in 2023, but remained elevated, surpassing long-term averages in most economies.

Nevertheless, headline inflation in ASEAN+3 rose at a slower pace and reached a lower peak compared to major economies outside the region, likely reflecting the lower pass-through of global commodity prices due in part to administrative price controls and subsidies (Figure 1.3.1). Similar to the United States, the euro area and other OECD economies, core inflation in ASEAN+3 has also moderated at a slower pace than headline inflation. In China, Japan¹, and the Philippines, the slower pace of disinflation in core inflation relative to headline inflation is more pronounced, with core inflation outpacing headline inflation for 7 to 9 months out of the first 10 months in 2023. At the same time, core inflation in ASEAN+3 now fluctuates in a range three times wider than before the pandemic. For some economies, the increase in core inflation range has even exceeded that of headline inflation.

To identify the drivers of core inflation, demand and supply factors are decomposed using the framework in Shapiro (2022).² Domestic demand was the main driver of core inflation for the region both before and after the pandemic for most economies.³ From 2010 to 2019, demand factors underpinned the core inflation dynamics in China, Hong Kong, Korea, and Singapore (Figure 1.3.2). In Japan, Malaysia, and the Philippines, core inflation was driven by both demand and supply factors, with demand factors being slightly more prevalent. On the other hand, supply factors dominated the core inflation dynamics in Thailand, mainly reflecting the fluctuation in international commodity prices.

In 2021 to 2022, the role of supply factors in driving core inflation in the ASEAN+3 region increased in line with the prevalence of supply shocks. Supply factors became the main driver of core inflation in China, Malaysia, and the Philippines, and a more significant driver in other regional economies. This shift was mainly due to a broad-based increase in input prices after supply shocks. Concurrently, domestic supply constraints and currency depreciation against the US dollar in the latter half of 2022 put more upward pressures on core inflation, on top of the recovery in demand with the reopening of economies.

Overall, in 2023, while supply pressures subsided as global commodity prices declined and stabilized, demand-side factors regained prominence as robust post-pandemic recovery supported inflation. Nevertheless, supply factors continued to contribute more than before the pandemic while core inflation remained sticky at high levels despite tighter monetary policy in most regional economies. Across ASEAN+3 economies, supply factors continued to dominate in Thailand and China. Conversely, demand became the primary driver for other regional economies, fueled by stronger economic growth, higher exports (Indonesia, Korea), robust domestic consumption recovery (Hong Kong, Japan, Malaysia, the Philippines, Singapore), and a rebound in tourism (Hong Kong, Indonesia, Japan) following the complete reopening of economies.

All in all, supply factors have become more important drivers of inflation in ASEAN+3, raising concerns about the limitations of conventional demand-focused interventions. Looking ahead, supply factors are expected to become more frequent and persistent due to global shifts, such as global value chain reconfiguration, diminishing demographic returns, and the transition toward a greener economy. Supply-side policy responses could thus see an increased role in inflation management.

This box was written by Megan Wen Xi Chong, Catharine Tjing Yiing Kho and Heung Chun (Andrew) Tsang.

^{1/} Core inflation for Japan refers to "core-core" inflation, which excludes fresh food and energy.

^{2/} See Kho, Chong and Tsang (2024) for details on the decomposition method.

^{3/} Given data limitations, inflation drivers for Indonesia before 2021 could not be assessed.

Despite the increasing complexity in distinguishing between supply and demand-driven shocks, monetary policy remains crucial for maintaining price stability by adjusting aggregate demand and anchoring inflation expectations. However, targeted supply-side policy responses, such as relaxing import restrictions or introducing temporary price subsidies, may be more effective in specific circumstances. Overall, a nuanced and coordinated approach to identify and manage the shifting demand and supply drivers across ASEAN+3 is essential for calibrated policy responses to achieve price stability.

Figure 1.3.1. US, euro area, OECD, and ASEAN+3: Headline and Core Inflation (Percent, year-on-year)



Source: National authorities via Haver Analytics; AMRO staff calculations.

Note: ASEAN+3 includes China, Hong Kong, Japan, Korea, Indonesia, Malaysia, the Philippines, Singapore, and Thailand. OECD here refers to OECD economies excluding the United States and economies in the euro area and ASEAN+3 to avoid double counting. Türkiye is also excluded to avoid skewing the regional data due to the idiosyncratic sharp depreciation of the lira.





Source: National authorities via Haver Analytics; AMRO staff calculations. Note: CN = China; HK = Hong Kong; ID = Indonesia; JP = Japan; KR = Korea; MY = Malaysia; PH = the Philippines; SG = Singapore; TH = Thailand.

Financial Conditions Eased

Overall financial conditions in ASEAN+3 eased, in line with global financial conditions. The US federal funds rate has remained unchanged since July 2023, while the European Central Bank began to increase rates at a slower pace from June 2023 before pausing in September (Figure 1.24). The more gradual monetary policy tightening helped ease global financial conditions. Improving capital markets performance towards the end of the year, in addition to slower tightening of monetary policy in regional economies led to more favorable financial conditions in ASEAN+3 (Figure 1.25). In China and Vietnam, monetary conditions were even more accommodative after the economies reduced interest rates and provided additional liquidity support—in the form of lower reserve requirements and the provision of long-term capital to boost growth.

Credit growth continued but at a more moderate pace. Bank lending to the nonfinancial private sector continued to grow for most regional economies but at a slower pace, except for Japan, Indonesia, and the Philippines (Figure 1.26). Credit growth for Japan continued to expand firmly, while credit growth recovered strongly in 2022 and was sustained in 2023 for Indonesia and the Philippines, in line with strong economic growth in these economies. Despite interest rate increase across the region, nonperforming





Source: National authorities via Haver Analytics

Note: Data are up to February 2024. Policy rates refer to one-year loan prime rate (China, CN); BI Rate (Indonesia, ID); the target rate for the 10-year government bond yield (Japan, JP); base rate (Hong Kong, HK; Korea, KR); overnight policy rate (Malaysia, MY); overnight reverse repo rate (the Philippines, PH); one-day repurchase rate (Thailand, TH); refinancing rate (Vietnam, VN); federal funds rate (upper range) (United States, US); and deposit facility rate (euro area, EU).

loan ratios fell for most regional economies, except Hong Kong, Cambodia, and Vietnam (Figure 1.27). The high interest rates may increase default risks in some sectors, but ASEAN+3 banks have strengthened their resilience by building capital buffers well above regulatory minima (Figure 1.28, AMRO 2023b).

Capital markets performance was adversely impacted by the banking turmoil in the US in the first half of 2023 but recovered by the end of the year. Regional equity markets price indexes weakened temporarily after the collapse of Silicon Valley Bank in March in the United States heightened concerns over hidden financial vulnerabilities, particularly in emerging market economies (Figure 1.29). China's equity returns remain weak throughout the year reflecting continued investor uncertainty over a turnaround in its property sector. At the same time, high interest rates pushed up long-term bond yields in the second and third quarter of 2023 (Figure 1.30). In the fourth quarter of the year, improved economic performance and the stabilization of interest rates regionally and globally pushed bond yields back down to January 2023 levels, while the equity market performances broadly improved for most regional economies except for China and Hong Kong.



Figure 1.25. Selected ASEAN+3: AMRO's Financial Conditions Index (Normalized Scores)

Source: Bloomberg Finance L.P.; National authorities via Haver Analytics; AMRO staff estimates. Note: The financial condition index reflects the overall enabling conditions for future economic activity, which could potentially provide complementary information about future economic activity (BNM 2017). AMRO's financial conditions index is based on indicators covering the banking system, foreign exchange market, bond and equity markets. Data covers China, Hong Kong, Indonesia, Korea, Malaysia, the Philippines, Singapore, and Thailand only.

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Figure 1.26. Selected ASEAN+3: Growth in Credit to Private Nonfinancial Sector

(Percent, year-on-year, four-quarter moving average)



Note: The private nonfinancial sector includes nonfinancial firms and households. Data refer to: claims on nonfinancial institutions and other resident sectors by depository corporations other than the central bank (China); loans and advances by authorized institutions to nonfinancial sectors (Hong Kong); loans to corporations and households by depository corporations other than the central bank (Korea); claims on nonfinancial corporations and households by depository corporations other than the central bank (Korea); claims on the private sector by commercial and rural banks (Indonesia); loans by the banking system (Malaysia); claims on private sector by depository corporations other than the central bank (Korea); claims on the private sector by commercial and rural banks (Indonesia); loans by the banking system (Malaysia); claims on private sector by depository corporations other than the central bank (Korea); claims on the private sector by commercial and rural banks (Indonesia); loans by the banking system (Malaysia); claims on private sector by depository corporations other than the central bank (Korea); claims on the private sector by commercial and rural banks (Indonesia); loans by the banking system (Malaysia); claims on private sector by depository corporations other than the central bank (Korea); claims on the private sector by depository corporations other than the central bank (Korea); claims on private sector by depository corporations other than the central bank (Theiland). Credit growth is calculated based on local currency terms.





Source: National authorities via Haver Analytics; IMF.

Note: ASEAN-5 = Indonesia, Malaysia, the Philippines, Singapore, and Thailand; BCLV = Brunei, Cambodia, Lao PDR, and Vietnam; Plus-3 = China, Hong Kong, Japan, and Korea. Data are up to Q4 2023, except for Cambodia, Hong Kong, Indonesia, Korea, Lao PDR, Malaysia, and Vietnam (Q3 2023), Brunei (Q2 2023), Japan and the Philippines (Q1 2023). Data for Myanmar are unavailable.



Figure 1.28. Selected ASEAN+3: Capital Adequacy Ratio (*Percent of Risk-Weighted Assets*)

Source: National authorities via CEIC. Note: Data are up to Q4 2023, except for Lao PDR, the Philippines, Singapore, and Korea (Q3 2023).

Figure 1.29. Selected ASEAN+3: Equity Market Indices (Index, 2 January 2022 = 100)



Source: National authorities via Haver Analytics; AMRO staff calculations. Note: ASEAN-5 = Indonesia, Malaysia, the Philippines, Singapore, and Thailand; CLMV = Cambodia, Lao PDR, Myanmar, and Vietnam; SVB = Silicon Valley Bank. Data for Brunei are unavailable.

Sustained External Strength

ASEAN+3 continued to receive foreign direct investment (FDI), albeit at a slower pace—but developments were uneven. Realized FDI inflows fell by 43.7 percent to USD 195 billion in the first half of 2023 compared to the same period of 2022 (Figure 1.31). China continued to register FDI inflows, albeit at a slower rate, while FDI inflows into most other regional economies were sustained despite the challenging external environment—underscoring continued investor confidence in the region's overall growth prospects (Figure 1.32). Ongoing US-China tensions also contributed to this divergence—affecting inflows into China, and partly diverting investments into the rest of ASEAN+3 as firms circumnavigate the US investment and trade restrictions (Zhao and Ho 2023).

Non-resident portfolio flows for ASEAN+3 experienced continued shifts throughout the year. Portfolio investment registered a smaller outflow of USD 79 billion in the first three quarters of 2023 compared to USD 116 billion in the same period in 2022 (Figure 1.33). Equity markets received inflows in the first guarter of the year due to optimism surrounding China's economic reopening (Figure 1.34, Figure 1.35). Subsequently, concerns about China's growth prospects and expectations of higher-for-longer US interest rates led to capital outflows from the region. Debt inflows to the rest of the region have broadly recovered—Korea and the ASEAN-4 economies recorded net debt inflows of USD 14.5 billion in the first three quarters of the year, compared to USD 13.9 billion in the same period in 2022. On the other hand, debt outflows from China continued

Figure 1.30. Selected ASEAN+3: 10-year Government Bond Yields (Basis point change from 2 January 2022)



Source: National authorities via Haver Analytics; AMRO staff calculations. Note: ASEAN-6 (average) is the simple mean of changes for Indonesia, Malaysia, the Philippines, Singapore, Thailand, and Vietnam. Data are up to 29 February 2024.

into 2023 as the interest rate differential with major global and regional economies widened.

Most regional currencies depreciated in the middle of 2023 but rebounded and stabilized by the end of the year. Multiple interest rate increases in the United States and the euro area, and idiosyncratic risks in some ASEAN+3 economies put downward pressure on regional currencies in the first three quarters of the year. Most regional currencies depreciated against the US dollar in 2023, but recovered in the last quarter of the year following improving growth prospects and suspension of interest rate increases in the United States and the euro area (Figure 1.36). The exceptions were the Laotian kip and Myanmar kyat which continued to depreciate, reflecting country-specific challenges. Trade-weighted nominal and real exchange rates for ASEAN+3 saw smaller depreciations (Figure 1.37).

International reserves for the regional economies remain high and adequate to finance short-term needs. After declining in 2022, net central bank reserves rose to 24.3 percent of GDP in 2023 due mainly to a higher current account balance (Figure 1.38). International reserves in the Plus-3 increased towards the end of the year, while ASEAN-5 economies broadly accumulated reserves throughout 2023 and surpassed its 2021 levels (Figure 1.39). International reserves for regional economies generally remain adequate, except for Lao PDR (Figure 1.40).² Lao PDR's international reserves have increased slightly since the start of the year, but can only provide 2.7 months of import cover—which is below the recommended 3 months.

²⁴ In the case of Lao PDR, imports of goods related to direct investment projects are not included in their internal calculation mechanism. Lao PDR authorities assess the level of international reserves remains sufficient, covering 4.6 months of imports as of December 2023.

Figure 1.31. Selected ASEAN+3: Foreign Direct Investment (*Billions of US dollars*)



Source: Balance of Payments and International Investment Position Statistics database, IMF; AMRO staff calculations.

Note: YTD = year-to-date. Data refer to the direct investment liabilities item in the balance of payments. Data are up to Q3 2023, except for Vietnam (Q1 2023). Brunei, Lao PDR, and Myanmar are excluded due to unavailability of data.

Figure 1.33. Selected ASEAN+3: Nonresident Portfolio Investment, Q1–Q3 2023

(Billions of US dollars)



Source: Balance of Payments and International Investment Position Statistics database, IMF; national authorities via Haver Analytics; AMRO staff calculations. Note: ASEAN-4 = Indonesia, Malaysia, the Philippines, and Thailand; Plus-3 = China, Hong Kong, Japan, and Korea.



(Millions of US dollars)



Source: International Financial Statistics database, IMF; AMRO staff calculations. Note: ASEAN-5 = Indonesia, Malaysia, the Philippines, Singapore, and Thailand; Plus-3 ex China = Hong Kong, Japan, and Korea; YTD = year-to-date, which includes data from Q1 to Q3. Data refer to the direct investment liabilities item in the balance of payments.

Figure 1.34. Selected ASEAN+3: Nonresident Portfolio Investment, Monthly





Source: Institute of International Finance via Haver Analytics; AMRO staff calculations. Note: Selected ASEAN+3 includes China, Indonesia, Malaysia, the Philippines, Korea, and Thailand.



Figure 1.35. Selected ASEAN+3: Nonresident Portfolio Flows, by Country (Billions of US dollars)

Source: Institute of International Finance via Haver Analytics; AMRO staff calculations. Note: ASEAN-4 = Indonesia, Malaysia, the Philippines, and Thailand.



Figure 1.36. ASEAN+3: Exchange Rates against the US Dollar (Index, 2 January 2022 = 100)



Source: National authorities via Haver Analytics: AMRO staff calculations Note: ASEAN-5 = Indonesia, Malaysia, the Philippines, Singapore, and Thailand; CMV = Cambodia, Myanmar, and Vietnam; CN = China; LA = Lao PDR; Plus-3 ex China = Hong Kong, Japan, and Korea. Exchange rate data are up to 29 February 2024.





Source: National authorities; IMF via Haver Analytics; AMRO staff calculations. Note: Data exclude scheduled contractual commitments in foreign currencies. Data are up to December 2023 except for Brunei (November 2023), Vietnam (October 2023), Cambodia and Lao PDR (September 2023), and Myanmar (March 2021). Singapore's foreign exchange reserves have been adjusted for transfers to its sovereign wealth fund. Due to data unavailability, GDP for Brunei, Cambodia, and Lao PDR refer to AMRO's estimates



(Percent, year-on-year)



Source: Haver Analytics; Bank for International Settlements via Haver Analytics; AMRO staff calculation Note: Selected ASEAN+3 includes China, Hong Kong, Indonesia, Japan, Korea, Malaysia,

the Philippines, Singapore, and Thailand. Exchange rate averages are weighted by GDP.

Figure 1.39. Selected ASEAN+3: Net International Reserves, by Subregion

(Index, 2021 average = 100)



Source: National authorities; IMF via Haver Analytics; AMRO staff calculations. Note: ASEAN-5 = Indonesia, Malaysia, the Philippines, Singapore, and Thailand; BCLV = Brunei, Cambodia, Lao PDR, and Vietnam; Plus-3 = China, Hong Kong, Japan, and Korea. Data exclude scheduled contractual commitments in foreign currencies. Data are up to December 2023 except for Brunei (November 2023), Vietnam (October 2023), Cambodia and Lao PDR (September 2023), and Myanmar (March 2021). Singapore's foreign exchange reserves have been adjusted for transfers to its sovereign wealth fund. Myanmar is omitted due to data unavailability.



Source: IMF; national authorities; World Bank; AMRO staff calculations. Note: CN = China; HK = Hong Kong; ID = Indonesia; JP = Japan; KH = Cambodia; KR = Korea; MM = Myanmar; MY = Malaysia; PH = the Philippines; SG = Singapore; TH = Thailand; VN = Vietnam. Data are as of December 2023 for reserves, except for Brunei (November 2023), Vietnam (October 2023), Cambodia (September 2023), and Myanmar (March 2021). For short-term external debt, data are as of Q3 2023, except for Myanmar, and Vietnam (2022). Data for goods and services imports are as of Q4 2023, except for Cambodia, Hong Kong, the Philippines, Thailand, Vietnam (Q3 2023), and Myanmar (Q3 2020). The size of the bubble denotes the relative amount of each economy's net international reserves in US dollars. Excludes Lao PDR due to data unavailability for recent short-term external debt.

Figure 1.40. ASEAN+3: Reserves Adequacy

Outlook for ASEAN+3: Sustained Growth amid Н. **Continued Disinflation**

AMRO staff expect the region to grow at a slightly faster pace of 4.5 percent in 2024 before moderating to 4.2 percent in 2025. The improvement in regional growth from 4.3 percent in 2023 to 4.5 percent this year is mainly driven by a stronger growth in ASEAN economies, which more than offset the steady growth in the Plus-3 region (Table 1.1). Regional growth is subsequently forecast to be more moderate in 2025 as economic expansion in the Plus-3 subregion normalizes to potential growth while growth in ASEAN remains steady.

- Plus-3. Growth in 2024 will be led by China and Korea. In China, GDP growth is expected to pick up slightly in 2024, supported by gradual recovery in the property sector and improving external demand. The rebound in the global chips cycle will boost Korea's exports and drive its recovery in 2024. Growth in Hong Kong is forecast to remain robust as external demand improves. Meanwhile, GDP growth in Japan is expected to moderate as post-pandemic growth momentum wanes. Growth in all Plus-3 economies would moderate toward potential growth in 2025.
- ASEAN. GDP growth for most ASEAN economies, with the exception of Myanmar, is forecast to improve in 2024. The rebound in merchandise exports as well as firm domestic demand will continue to drive the region's growth. The return of tourism to pre-pandemic levels will also benefit most economies. Growth is forecast to be maintained in 2025 as global economic prospects improve and economies converge toward potential growth.

Headline inflation is projected to trend downward. Inflation in ASEAN+3 is set to moderate from 6.3 percent in 2023 to 3.7 percent in 2025. Excluding Lao PDR and Myanmar, where persistent currency depreciation has pushed up prices, inflation for the rest of the region is forecast to be lower at 2.5 percent in 2024 and 2.3 percent in 2025. Lower inflation for most regional economies is mainly occurring in tandem with the continued stabilization of global commodity prices. However, inflation for some regional economies is likely to remain above long-term average as strong domestic demand places upward pressure on prices.

Table 1.1. ASEAN+3: AMRO Staff Growth and Inflation Estimates and Forecasts,	2024-25
(Percent, year-on-year)	

	GDP Growth			Inflation			
Economies	2023e	2024f	2025f	2023e	2024f	2025f	
ASEAN+3	4.3	4.5	4.2	6.3	4.3	3.7	
ex. Lao PDR and Myanmar	-	-	-	2.8	2.5	2.3	
Plus-3	4.4	4.4	4.1	2.3	2.1	2.0	
China	5.2	5.3	4.9	0.2	1.0	1.6	
Hong Kong	3.2	3.5	3.0	2.1	2.5	2.3	
Japan	1.9	1.1	1.0	3.3	2.5	2.1	
Korea	1.4	2.3	2.1	3.6	2.5	2.0	
ASEAN	4.2	4.8	4.9	8.0	5.2	4.4	
ex. Lao PDR and Myanmar	-	-	-	3.0	2.7	2.4	
Brunei	1.4	2.7	2.9	0.4	1.4	1.0	
Cambodia	5.3	6.2	6.4	2.1	3.1	2.8	
Indonesia	5.0	5.2	5.2	3.7	2.8	2.5	
Lao PDR	4.3	4.7	4.9	31.2	14.3	9.3	
Malaysia	3.7	5.0	4.7	2.5	2.5	3.0	
Myanmar	3.4	3.2	3.2	24.4	16.1	15.8	
Philippines	5.6	6.3	6.5	6.0	3.6	2.9	
Singapore	1.1	2.6	1.9	4.8	3.0	2.5	
Thailand	1.9	2.9	3.1	1.2	1.2	1.9	
Vietnam	5.1	6.0	6.5	3.3	3.6	2.7	

Source: National authorities via CEIC and Haver Analytics; AMRO staff estimates and forecasts. Note: e = estimates; f = forecast. Myanmar's growth and inflation numbers are based on its fiscal year, which runs from 1 April to 31 March. Regional aggregates for growth are estimated using the weighted average of 2022 GDP on purchasing power parity basis; inflation estimate and forecasts refer to the yearly average; regional aggregates for inflation are computed using simple averaging.

Over the medium term, the ASEAN+3 region is expected to remain a major driver of the global economy. The region is forecast to expand by an average of 4.4 percent in 2024–2030, outpacing global growth (Figure 1.41). The growth slowdown, as compared to an average growth of 5.3 percent in 2011–2019 is mainly a result of a moderation in potential growth as the middle income and developing economies of the region move towards the production possibility frontier and converge to the potential growth rates of advanced economies. In the short-to-medium term, however, the region will need to contend with a more challenging external environment, although this is partly offset by continued strength of domestic demand and support from intraregional demand. Nonetheless, ASEAN+3 will remain a major





Source: National authorities via Haver Analytics; Oxford Economics; IMF *World Economic Outlook* January Update 2024; AMRO staff calculations. Note: f = forecast. Real GDP is forecast in local currency and converted to purchasing power parity (PPP). driver of global growth, contributing about 45 percent of global growth, slightly above the pre-pandemic average of 44.5 percent (Figure 1.42). This growth trajectory will predominantly be driven by the Plus-3 economies, contributing three-quarters of this growth. Within the ASEAN region, the ASEAN-6 (Indonesia, Malaysia, the Philippines, Singapore, Thailand, and Vietnam) economies will continue to anchor growth at 4.9 percent, contributing an average of 10 percent to global growth in 2024–2030. Growth of the BCLM (Brunei, Cambodia, Lao PDR, Myanmar) economies is also expected to pick up gradually, expanding by more than 5 percent per year. These economies are thus poised to account for a larger share of the regional and world economy by the end of the next decade.



Figure 1.42. World: Contribution to Real GDP Growth on PPP Basis (Percent share)

Source: National authorities via Haver Analytics; Oxford Economics; *IMF World Economic Outlook* January Update 2024; AMRO staff calculations Note: ASEAN-6 = Indonesia, Malaysia, the Philippines, Singapore, Thailand, and Vietnam; BCLM = Brunei, Cambodia, Lao PDR, and Myanmar; Plus-3 = China, Japan, and Korea; ROW = rest of the world. f = forecast. Real GDP is forecast in local currency and converted to purchasing power parity (PPP).

Key Factors Shaping the Near-Term Outlook

Overall growth for ASEAN+3 is set to be driven by a gradual recovery in external demand and resilient domestic demand. The operating environment underpinning the outlook for the region in 2024 and 2025 is expected to be more benign, as the various shocks that have affected the global economy over the past few years begin to subside. Notably, the semiconductor cycle, which saw an exceptionally deep downturn in the last couple of years, is expected to turn around—benefitting the region's major semiconductor exporters. In addition, the continued demand for exports from major economies, especially the United States, and the full recovery of tourism activity from pandemic lows, is expected to further support overall external demand. Meanwhile, domestic demand in ASEAN+3 economies are forecast to remain robust, driven by a resumption of growth in private investment amid resilient private consumption.

The recovery in the global electronics cycle will lift the region's exports. Following last year's growth contraction of 9.4 percent—a four-year low—global semiconductor sales are expected to rebound to 13.1 percent in 2024, with demand improving broadly across key regions. The forthcoming recovery is partly driven by the "replacement cycle"-or the time it takes to replace an old unit, particularly those bought during the COVID-19 pandemic. It is also boosted by increasing demand for highly advanced chips, such as for automotive intelligence, high-performance computing, and Artificial Intelligence (AMRO 2023c; IDC 2023). Economies that can swiftly expand their existing production capacities toward high-performance chips should benefit from this rising demand, relative to others in the region that are more concentrated in more mature chips.

However, the current global semiconductor cycle upturn could be rather narrow and gradual. Current underlying demand dynamics show that demand is narrowly focused on certain advanced segments. Further, the next "peak"-especially for the non-memory sector, which comprises about 80 percent of the industry—could also be lower than those in previous cycles (Figure 1.43). Chips demand from China—which accounts for a third of global demand—is only expected to recover briskly by the second half of this year, and electronics manufacturers worldwide would also need to continue contending with rising input prices, as recent PMI surveys suggest. Nevertheless, global semiconductor demand is expected to accelerate until about the first half of 2025, after which some moderation would be expected as base effects fully dissipate. As semiconductor demand normalizes further, global chip sales are anticipated to grow at a healthy average of 9.5 percent per year in 2025–2026 (Figure 1.44, WSTS Inc. 2023). The anticipated subsequent increase in global capital spending, due to a recovery in demand for technology, could also provide a second-order boost to overall ASEAN+3 exports.³

Figure 1.43. World: Global Semiconductor Cycles

The resumption of goods consumption in the United States would benefit regional exports. Between the latter half of 2021 to the middle of 2023, growth in services consumption in the United States outpaced goods consumption. This trend emerged as services spending surged while the spike in revenge spending on goods dissipated after lockdowns and social distancing measures were lifted. The weaker growth in the demand for goods led to lower imports from the region despite the better-than-expected performance of the US economy through 2023. However, recent developments suggest a moderation in this trend. The growth in the consumption of goods in the United States regained strength in the second half of 2023, surpassing the growth of services consumption for the first time since 2021. The demand rotation from goods to services in the past two years is likely to be transitory, with a normalization toward pre-pandemic trend (Figure 1.45, AMRO 2024a). Recovery in goods consumption in the United States, supported by continued disinflation, is expected to benefit demand for regional exports.



Source: AMRO staff estimates using data from WSTS Inc

Note: The underlying data for the dashed lines are WSTS (annual) projections, extrapolated by AMRO staff to derive the monthly cycle estimates.



Figure 1.44. World: Annual Global Semiconductor Demand

Note: Dashed lines are projections. The value projections by WSTS were used by AMRO staff to extrapolate the 2024–2026 growth for semiconductor volumes

3/ As discussed in AMRO (2020), and updated in AMRO (2023a), recovery in demand for technology has historically led new capital expenditure (capex), based on empirical data. The correlation between the semiconductor cycle and the capex cycle—when computed between January 2005 and July 2023—is about 0.60, and slightly higher for the non-memory sector at 0.65.

⁽Percent, year-on-year)

Source: WSTS Inc.; AMRO staff estimates

Tourist arrivals to the region are poised to see a full recovery in 2024–2025. The resumption of flights and normalization of travel patterns toward pre-pandemic trends are expected to proceed further (Figure 1.46). Tourist arrivals from China to the region are likely to increase as authorities in the region lifted or ease visa requirements for visitors from China and vice versa. High tourist arrivals from other ASEAN+3 economies and major economies outside the region which drove the tourism recovery in 2023 would remain a significant driver of tourism in 2024-2025. The full resumption of cross-border physical activities, including trade exhibitions and concerts, would boost demand for the Meetings, Incentives, Conferences and Exhibitions (MICE) industry. For example, most MICE venues in Malaysia have been fully booked for 2024; and all ASEAN-5 economies will be hosting multiple major concerts by various international artists throughout the year (Ganesan 2023; Neo 2023).

Domestic demand will continue to underpin growth, with the gradual recovery in private investment and robust private consumption. Private investment is projected to pick up as financial conditions ease, and the resumption of investment projects that were previously delayed due to the pandemic is expected to accelerate this year. The recovery in external

Figure 1.45. United States: Real Private Consumption Expenditure (Percent, year-on-year)



Source: US Bureau of Economic Analysis; AMRO staff estimates.

Figure 1.47. Selected ASEAN+3: Output Gap, 2024–2025 (Percent, 2024 and 2025)

demand is also expected to spur investment in export-related sectors. In China, gradual property sector recovery amid ongoing policy support would also boost real estate investment, generating spillovers for the rest of the region (Box 1.4). Meanwhile, private consumption is expected to remain strong amid favorable labor market conditions and moderating inflation.

Lower global commodity prices but rising domestic demand pressures would complicate inflation dynamics. Global commodity prices are expected to remain on a moderating trend as the supply shocks in recent years subside. However, heightened geopolitical tensions affecting key commodity-producing economies would keep commodity prices elevated. The end of the US interest rate hiking cycle should limit further currency depreciations against the US dollar and reduce imported inflation for ASEAN+3 economies. Notwithstanding these downward pressures, disinflation is likely to progress at a slow pace due to offsetting domestic factors. Core inflation in some economies will likely remain high due to strong demand pressures—the output gap has turned positive in several economies in 2024 and is projected to widen further in 2025 (Figure 1.47). Administrative adjustments to domestic prices—such as subsidy cuts in Thailand and Malaysia, and the increase in Goods and Services Tax in Singapore—could put additional upward pressure on prices.

Figure 1.46. Selected ASEAN+3: International Flight Arrivals (Index, December 2019 = 100)



Source: National authorities via Haver Analytics; AMRO staff calculations. Note: HK = Hong Kong; ID = Indonesia; IP = Japan; RR = Korea; PH = the Philippines; SG = Singapore; TH = Thailand. Brunei, Cambodia, China, Lao PDR, Malaysia, Myanmar, and Vietnam are excluded due to data unavailability. Data for Japan include both arrivals and departures. Data for Indonesia refer to departures only.



Source: National authorities via Haver Analytics; AMRO staff calculations.

Note: BN = Brunei; CN = China; HK = Hong Kong; ID = Indonesia; JP = Japan; KR = Korea; MY = Malaysia; PH = the Philippines; SG = Singapore; TH = Thailand; VN = Vietnam. Output gap is calculated as (actual output-potential output)/potential output. Potential output is estimated using a 2-sided HP filter on quarterly GDP data from 2010 to 2025. AMRO staff projections are used for GDP in 2024 and 2025.

Box 1.4:

Will Risks China Faced in 2023 Carry Over to 2024?

China's 2023 economic recovery was bumpy, marked by a delayed consumption pick-up, real estate sector challenges, subdued external trade, and cautious sentiment. The effects of the pandemic lingered for several months after the economy reopened. The much-anticipated 'revenge' consumption rebound did not fully materialize as households remained cautious, and investment was hampered by subdued business sentiment and strains in the real estate sector (Figure 1.4.1). Some sectors also faced significant supply chain challenges, including related to adverse geopolitical events and tensions between China and the United States.

Despite the challenging conditions, China's economy grew by 5.2 percent, reflecting its resilience in various aspects. Policy measures implemented by Chinese authorities played a crucial role in keeping the economic recovery broadly on track. Labor market conditions improved gradually, with the urban surveyed unemployment falling significantly to 5.2 percent in 2023, and per capita disposal income rising by more than 6 percent. These positive developments supported household spending, which remained resilient throughout the year. Enterprises in strategic emerging industries continued to thrive in many provinces and cities.

China's growth momentum is expected to pick up moderately in 2024. China's macro fundamentals remain sound, paving the way for a more stable economic recovery in 2024 following the challenges of 2023. Consumption should remain the primary driver of growth, supported by further improvements in labor market conditions. Investment is anticipated to gain greater traction in the later part of 2024, driven by the expansion of traditional infrastructure, the construction of modern and advanced infrastructure, and substantial investments in high-tech manufacturing and services. Real estate investments are expected to recover gradually as overall conditions in the sector improve and confidence starts to return. The real estate sector has seen nascent signs of stabilization with prices for Tier-2 and Tier-3 cities bottoming out (Figure 1.4.2). The property sector's drag on growth has halved from -3.7 percent in

2022 to -1.8 percent in 2023, and is on track to diminish further in 2024. Exports are forecast to pick up, benefitting from the global electronics cycle turnaround and providing a further lift to growth.

However, China's outlook is subject to some risks and uncertainties. The real estate recovery requires careful management to alleviate strains related to overstretched property developers and to restore confidence. Financial strains faced by some local governments may also persist. Concurrently, high leverage remains a vulnerability in certain sectors of the economy. Orderly deleveraging is therefore necessary to enable enterprises—particularly small and medium-sized ones—to become more financially resilient, invest more, and enhance their competitiveness. Globally, forces driving geoeconomic fragmentation could remain formidable. In this regard, China's efforts to strengthen cooperation with partner economies to shape conditions for trade, investments, and technological gains should yield good results. At the same time, perennial challenges, such as those related to population aging, socioeconomic disparities, and climate change, could weigh on the economy's growth potential.

China has ample policy space and capacity to navigate through these challenges. Fiscal soundness remains intact amid continued efforts at fiscal consolidation (Figure 1.4.3). China's external position remains robust, characterized by a healthy current account surplus and substantial foreign currency reserves (Figure 1.4.4). Domestically, China hosts well-organized and efficient supply production networks and supply chainsenabling it to mitigate the effects of intermittent global supply chain disruptions and continue supporting regional production and trade. On the financial front, the banking system continues to be wellcapitalized (Figure 1.4.5). China therefore continues to have moderate room to ease monetary and credit policies further. In addition to the recent approach of measuredly reducing the reserve ratio requirements and loan prime rates for banks, the authorities continue to have many macroprudential levers at their disposal to support the domestic economy, particularly the real estate sector's recovery (AMRO 2024b).

Figure 1.4.1. China: GDP Growth

(Percent, year-on-year; percentage points)



Source: China authorities via WIND.









Figure 1.4.5. China: Banking System Capital Adequacy Ratio (Percent)

Figure 1.4.2. China: Property Price Index, by City Tiers (Percent, year-on-year)



Source: CEIC data.

Note: Data refer to property price indexes of newly constructed, residential properties.

Figure 1.4.4. China: Balance of Payments (Trillions of US dollars; percent of GDP)



Source: China authorities; CEIC.

Source: China authorities; CEIC.

III. Risks to the Outlook: Uncertainties Remain

The overall balance of risk to the region's outlook is tilted to the downside, with a spike in global commodity prices especially food—a key macroeconomic risk. In the financial markets, the spillover risk from tighter US monetary policy has subsided since the middle of 2023. However, the risk of increased volatility in asset prices and capital flows has become more salient especially given the ongoing campaign in the US presidential election in 2024, potentially heightening market uncertainties and/or amplifying systemic risks. At the same time, the risk of a sharper-thanexpected moderation in the growth of major economies has receded but cannot be ruled out, compounding uncertainty in the growth outlook of the region.

The key risks facing the region are summarized in AMRO's Regional Risk Map (Figure 1.48).



Figure 1.48. Regional Risk Map, April 2024

Source: AMRO staff.

Note: The Regional Risk Map captures those risks and challenges that could derail the region's macro-stability. These are in relation to (1) growth and inflation outlook, (2) financial stability concerns, and (3) other key long-term challenges. The risks and challenges are divided into two categories; (1) short-term risks (these are conjunctural risks, up to 2 years, where the risks represent scenarios that could materially alter the baseline path), and (2) long-term risks (these are more persistent or secular trends and/or challenges, including perennial risks).

- Spike in global commodity prices. The risk of significant spikes in global commodity prices, fueled by a combination of weather-related and geopolitical factors in 2024, remains salient. 2024 may mark another record for high global temperatures, primarily attributed to the El Niño weather pattern, which typically peaks in winter and contributes to an increase in the global mean temperature. A worse-thanexpected El Niño could significantly alter rainfall patterns and temperatures, potentially impacting the global supply of key food commodities such as grains, vegetable oils, and sugar in the upcoming months. Such changes could raise global food prices, exacerbated by additional protectionist measures on exports, especially of staple foods. Global energy and transportation costs are also at risk of surging, particularly if conflicts in the Middle East and the ongoing Russia-Ukraine conflict intensify or should crucial sea routes be disrupted. As most economies in the region are net importers of commodities, these developments would contribute to a resurgence in inflation pressures.
- Slower economic growth in China. Economic growth in China remains resilient and is benefiting from the government's supportive policies, but pockets of vulnerability persist. The real estate sector, in particular, which is a significant contributor to GDP and household wealth, continues to display signs of weakness. Protracted weakness in the property sector could pose risks to the financial system. Additionally, local government fiscal strains could limit the capacity for further policy interventions to support the economy. A notable slowdown in China's economic growth, hypothetically, falling to 4.3 percent in 2024—a full percentage point below the baseline forecastcould significantly impact the broader ASEAN+3 region. This decline could result in a 1.7 percentage point reduction in aggregate growth for these economies, due to decreases in trade, investment, and tourism.

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- Adverse spillovers from US presidential election. As the US presidential election progresses through 2024, heated populist debates during the campaign period could lead to heightening of protectionist sentiments and greater uncertainty in future policy directions of the United States. In particular, a spike in risk aversion following potential changes in major policy directions and/or geopolitical shifts could trigger swift and unpredictable market reactions, leading to sharp fluctuations in asset prices and volatile capital flows, affecting regional emerging economies that are often more susceptible to external shocks.
- Sharp growth slowdown in the US and Europe. The likelihood of recession in both the United States and Europe has receded compared to last year. However, if inflation remains elevated and interest rates stay higher for longer, these economies could experience a sharper growth moderation and new financial vulnerabilities, especially in the commercial property sector and the credit market. If growth in the United States and Europe were to be lower by one percentage point in 2024, ASEAN+3 growth could be reduced by a thirdposting a similar growth as in 2022, when some regional economies have not fully reopened (Figure 1.49).

Over the longer-term risk horizon, ASEAN+3 faces a complex interplay of deeper structural and perennial challenges that could have consequential impact

on macroeconomic and financial stability of the region. Chief among these is the risk of escalating geoeconomic confrontations and continued heightening of global geopolitical tensions. These tensions are reshaping trade links and investment flows, and presenting significant policy challenges and uncertainties. This could potentially disrupt existing economic relationships and force countries to deal with a complicated mix of alliances and economic policies, which could result in a more fragmented and unstable economic environment. This challenge is explored more fully in Chapter 2: Navigating Tomorrow.

Alongside this concern, other long-term risks persist. The region's efforts with climate change mitigation and adaptation remain critical, given its vulnerability to environmental disasters and extreme weather events. Natural disasters exacerbate these challenges, directly impacting economies and livelihoods. Cybersecurity threats and the unintended consequences of advanced technologies also pose significant risks, affecting everything from financial stability to privacy. Lastly, the region's response to infectious disease outbreaks, as seen during the COVID-19 pandemic, underscores the importance of enhancing healthcare systems and preparedness. The risk of another pandemic cannot be downplayed—the likelihood of a recurrence of another pandemic like COVID-19 in the next 25 years is predicted to be about 50 percent (UNDP 2023).





Source: Oxford Economics Global Economics Model; AMRO staff estimations. Note: ASEAN-6 = Indonesia, Malaysia, the Philippines, Singapore, Thailand, and Vietnam; Plus-3 = China, Hong Kong, Japan, and Korea. Estimates refer to the impact on Plus-3 and ASEAN-6 economies, which account for 99 percent of ASEAN+3's GDP in 2022 (purchasing power parity basis). Remaining economies are omitted due to data unavailability

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IV. Policy Considerations: To Prepare for Tomorrow

Looking ahead, growth in ASEAN+3 is expected to remain resilient, with gradually moderating inflation. The region grew at a faster pace in 2023, as robust domestic demand offset weak external demand. Growth momentum is projected to be sustained in 2024, with strengthening exports expected to provide more impetus for growth. Inflation in the region moderated in 2023 and that is expected to continue in 2024. However, upside risks to inflation remain salient due to geopolitical tensions, adverse weather conditions, and strengthening domestic demand pressure.

The positive growth prospects for ASEAN+3 offer a timely opportunity to rebuild policy space. Most regional authorities continued to consolidate fiscal positions in FY2023. Despite ongoing efforts, some regional economies have only partially recovered the policy space lost in the pandemic (Figure 1.50). Fiscal deficits are expected to narrow for most regional economies in FY2024, with the fiscal stance in most economies assessed as contractionary or neutral, with the exception of Brunei and Lao PDR (Table 1.2). In the short term, fiscal policy should continue to strike the right balance between restoring fiscal buffers and supporting growth. Delays in fiscal consolidation could heighten market concerns about public debt sustainability, given the higher debt-to-GDP ratios in most regional economies (Box 1.5).

Monetary policy remains tight in most regional economies amid moderating but elevated inflation. As of December 2023, central banks in the region, except for China and Vietnam, kept policy interest rates equal or higher than their pre-pandemic levels. The overall pace of monetary tightening slowed toward the end of 2023 on signs that headline inflation has peaked. For China and Vietnam, monetary policy was progressively eased throughout the year to support growth (Figure 1.51). Going forward, the uneven pace of disinflation amid upside risks to inflation would warrant careful monetary policy adjustments (Box 1.6). In economies where core inflation remains high, central banks should keep policy rates sufficiently restrictive to ensure that inflation expectations remain well-anchored. On the other hand, monetary policy stance can be more accommodative in economies that face rapid disinflation amid lackluster growth momentum. Concurrently, the change of monetary policy framework in Japan to mitigate the rising disconnect between the easy monetary policy stance and still elevated inflation could have important but manageable impact on the rest of the region (Box 1.7).

Targeted credit policies continue to support vulnerable sectors. Although pandemic-related extraordinary credit policies have generally been withdrawn, many regional authorities are still maintaining some form of targeted credit support for sectors badly impacted by the pandemic. These measures include credit guarantees for small and medium-sized enterprises (SMEs) in hospitality services and other sectors. In some regional economies, financial institutions are also given the flexibility to tailor targeted credit solutions (including loan restructuring) to help businesses adjust to the new normal.





Source: AMRO staff, based on Poonpatpibul and others (2020).

Note: BN = Brunei; CN = China; HK = Hong Kong; ID = Indonesia; JP = Japan; KH = Cambodia; KR = Korea; LA = Lao PDR; MY = Malaysia; MM = Myanmar; PH = the Philippines; SG = Singapore; TH = Thailand; VN = Vietnam. This framework does not take into account the ability and capacity of monetary authorities to undertake unconventional monetary policy.

Figure 1.51. Selected ASEAN+3: Cumulative Changes in Policy Interest Rates (Basis points)



Source: National authorities via Haver Analytics.

Note: Data are up to December 2023. Policy rates refer to seven-day reporate (China); seven-day reverse reporate (Indonesia); base rate (Korea); overnight policy rate (Malaysia); overnight reverse reporate (the Philippines); one-day repurchase rate (Thailand); refinancing rate (Vietnam).



Table 1.2. ASEAN+3 Policy Matrix: AMRO Staff Assessment of Current Policy Stance and Recommendations

Note: Asterisk (*) denotes fiscal year from 1 April to 31 March. Fiscal policy stance is assessed by the fiscal impulse based on structural primary balance. The fiscal policy stance in 2023 is based on 2023 estimates, while the fiscal stance in 2024 is based on the 2024 budget. For Brunei and Hong Kong which have a currency board arrangement, the current monetary stance refers to current monetary condition. Data are up to 26 March 2024.

Box 1.5:

Fiscal Policy: Recent Developments and Outlook

Most regional authorities shifted to consolidate their fiscal positions in 2023, although at different paces, leading to some variations in fiscal outcomes. In Indonesia, Lao PDR, Malaysia, the Philippines, and Thailand, the fiscal balances continued to improve as the deficit narrowed in FY2023. Similarly, the improvement in fiscal balances resumed in China and Hong Kong, benefiting from the economic reopening. In Korea, the withdrawal of temporary income support measures contributed to better fiscal outcomes. Despite these positive developments, fiscal deficits across most regional economies are still bigger than pre-pandemic levels. In contrast, falling oil and gas revenue in Brunei and the expansion of capital spending in Cambodia and Myanmar resulted in a worsening of their fiscal deficits in FY2023 (Figure 1.5.1).

Regional authorities are seeking to further improve their fiscal positions in FY2024. Based on announced budgets for FY2024, fiscal deficits are expected to narrow in most regional economies (Figure 1.5.2). Stronger economic activities will contribute to robust revenue growth, supported by digitalizing tax administration and payments. Expenditure is also planned to increase, albeit to a lesser extent, in order to address post-pandemic spending priorities. As a result, the fiscal stance in FY2024 is assessed as contractionary or neutral, except in Brunei and Lao PDR (Table 1.5.1).

ASEAN+3 member authorities should strike a careful balance between restoring fiscal buffers and carrying out active fiscal policy in the near term. Deteriorated fiscal position due to unprecedented fiscal stimulus and sizable revenue shortfalls during the pandemic underscore the urgent need to rebuild policy space. Delays in fiscal consolidation amid higher financing costs could heighten concerns about debt sustainability, as government debt-to-GDP ratios and debt service burden have increased sharply in some regional economies, subjecting them to market scrutiny (Figure 1.5.3). While fiscal policy should transition from its extended crisis mode to its fundamental role in promoting growth and fostering inclusiveness, continuing uncertainties in the near term calls for a flexible and agile fiscal policy response.

Strengthening fiscal consolidation over the medium term would be crucial to safeguard fiscal sustainability. Establishing clear fiscal consolidation targets and schedules, coupled with a strong commitment, would be crucial in guiding medium-term fiscal consolidation plans. In formulating policy measures for fiscal consolidation, the authorities should not only focus on reducing the primary deficit through revenueenhancing measures and expenditure restructuring or reform, but also implement initiatives to enhance growth potential to achieve more favorable debt dynamics. For economies with a high share of foreign currency debt, policies to maintain exchange rate stability, such as tight monetary and fiscal policies, are particularly important. In addition, addressing longterm structural challenges calls for more pre-emptive roles of fiscal policy, including in preparing for the aged and post-aged populations in ASEAN+3 in the next 10 to 20 years, and tackling critical climate change adaptation and mitigation needs of the region.

This box was written by Byunghoon Nam and Seung Hyun (Luke) Hong.



Source: National authorities via CEIC and Haver Analytics; AMRO staff estimates Note: BN = Brunei; CN = China; HK = Hong Kong; ID = Indonesia; JP = Japan; KH = Cambodia; KR = Korea; LA = Lao PDR; MY = Malaysia; MM = Myanmar; PH = the Philippines; SG = Singapore; TH = Thailand; VN = Vietnam. (1) Fiscal balance for Korea represents the fiscal balance including social security funds; (2) Fiscal balance for Singapore is based on the overall budget surplus/deficit, excluding capitalization and depreciation of nationally significant infrastructure from the overall fiscal position.

Figure 1.5.2. ASEAN+3: Contribution to the Change in Fiscal Balance, FY2024

(Percent of GDP)



Source: National authorities via CEIC and Haver Analytics; AMRO staff estimates Note: BN = Brunei; CN = China; FY = fiscal year; HK = Hong Kong; ID = Indonesia; JP = Japan; KH = Cambodia; KR = Korea; LA = Lao PDR; MY = Malaysia; MM = Myanmar; PH = the Philippines; SG = Singapore; TH = Thailand; VN = Vietnam. The FY2024 budget is not available for Myanmar.

Table 1.5.1. ASEAN+3: Fiscal Stance, FY2023-2024

		FY2024			
		Expansionary	Neutral	Contractionary	
	Expansionary	BN	SG, VN	KH, JP, MM	
FY2023	Neutral		CN		
	Contractionary	LA	ID, KR, MY	НК, РН, ТН	

Source: AMRO staff assessment.

Note: FY = fiscal year. AMRO assesses the fiscal stance by fiscal impulse, measured by the changes in structural primary balance. The fiscal stance of Brunei is assessed by the change in primary expenditure as its revenue is heavily dependent on oil and gas prices. The FY2024 budget is not available for Myanmar. Data are up to 26 March 2024.



Figure 1.5.3. ASEAN+3: Gross Government Debt, FY2019–2023 (Percent of GDP)

Source: National authorities via CEIC and Haver Analytics; AMRO staff estimates

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Box 1.6:

Estimating the Neutral Rate of Interest for Selected ASEAN+3 Economies

The neutral rate of interest, or R-star, is the short-term real interest rate that prevails when the economy is at full employment and stable inflation. It is the equilibrium interest rate at which monetary policy is neither contractionary nor expansionary. Knowing the level of R-star helps policymakers assess the potential impact of their monetary policy decisions. While it is an important reference in the conduct of monetary policy, R-star is not directly observable. It can only be inferred from macroeconomic empirical models.

Long-term trends in the short-term real interest rate can provide insights to the levels of R-star, especially when monetary policy decisions align with a variant of the Taylor Rule. In such cases, policy instruments are adjusted in response to inflation pressures and excessive demand, and the policy actions are effectively transmitted through to economic activity and prices (Fujiwara and others 2016). The interest rate is a key monetary policy instrument for several ASEAN+3 economies—China, Japan, Korea, Indonesia, Malaysia, the Philippines, and Thailand (AMRO 2023a).¹ For these economies, except for Malaysia and Thailand, short-term real interest rates trended downward in the two decades preceding the COVID-19 pandemic (Figure 1.6.1). These trends are consistent with the decreasing pattern in our R-star estimates, as well as with studies that find similar declines in R-stars across both advanced and emerging market economies (IMF 2023; Obstfeld 2023). The concurrent downshift in R-stars has been attributed to common macroeconomic and financial forces such as demographic transitions, productivity slowdowns, and the scarcity of safe assets.

Real interest rates of ASEAN+3 economies experienced heightened volatility during the COVID-19 pandemic. They fell to exceptionally low levels in 2021–2022 in the wake of large policy rate cuts to counter the impact of the pandemic. Rising inflation subsequently prompted policy rate hikes—in Korea since August 2021, and in Malaysia, the Philippines, and Thailand since May or August 2022. As a result, real rates have picked up in these economies in more recent periods.

Where does monetary policy in ASEAN+3 economies stand at the current juncture? Latest R-star estimates are derived from the widely used Laubach-Williams model that has been augmented to account for the large and persistent COVID-19 shock (Holston, Laubach, and Williams 2023; henceforth, HLW).² While the HLW model is a closed economy model that is more applicable to advanced economies, the estimates—when combined with expert judgment—can serve as a useful benchmark in assessing the monetary policy stance for some of the ASEAN+3 economies.

The R-star estimates are highly imprecise and sensitive to model specification, as noted by the model proponents themselves (Holston, Laubach, and Williams 2017). To compensate, a range of R-star estimates is obtained for each of the seven ASEAN+3 economies; the estimates are then averaged over the first three quarters of 2023.³ The current stance of monetary policy is summarized as follows:

This box was written by Diana del Rosario, Yin Fai Ho, and Michael Wynn, with inputs from Jinho Choi, Suan Yong Foo, Xu (Kimi) Jiang, Jungsung Kim, Justin Lim, Allen Ng, Thi Kim Cuc Nguyen, and Heung Chun (Andrew) Tsang.

¹⁷ The other ASEAN+3 economies, which do not use the domestic interest rate as a key monetary policy instrument, are omitted.

²⁷ The HLW model is a semi-structural model that identifies R-star from a set of relationships consistent with the New Keynesian framework (see Holston, Laubach, and Williams 2023; Choi and Kim forthcoming).

³⁷ The range of estimates for each economy is derived from adjusting model parameters (particularly, the constraints for the slopes of the investmentsaving (IS) and Phillips curves and the coefficient of the COVID-19 variable) and seasonally adjusted inflation metrics (headline or core inflation, and year-on-year or quarter-on-quarter transformations). Derived estimates are subject to model convergence and screened based on economist judgment. It is important to note that the results are indicative only and not exhaustive of the findings from all possible model iterations. Nonetheless, AMRO's overall assessments of monetary conditions and monetary policy stance take a more comprehensive approach which goes beyond the estimates provided by this exercise.

- China and Japan exhibit an accommodative monetary policy stance, i.e., the 1-quarter and 1-year ahead R-star estimates surpass the economies' respective measures of the real interest rate (Figure 1.6.2). Choi and Kim (2023) reached the same conclusion for Japan, advocating for the Bank of Japan to gradually normalize its ultra-easy monetary policy.
- The monetary policy stance of the *Philippines* and Thailand are characterized as borderline neutral to restrictive. For these two economies, the 1-guarter ahead real rates are higher than the R-star range, suggesting tight monetary conditions. However, the 1-year ahead real rates are close to the upper bound of the R-star estimate as inflation rates for the Philippines and

Figure 1.6.1. Selected ASEAN+3: Estimated R-star and Short-term Real Interest Rate, 2000–2023 (Percent)



Source: International Monetary Fund and national authorities via Haver Analytics; AMRO staff estimates. Note: CN = China; ID = Indonesia; JP = Japan; KR = Korea; MY = Malaysia;

PH = the Philippines; TH = Thailand. R-stars are median estimates by AMRO staff based on the HLW model. Real interest rate is the nominal policy rate adjusted for the average of headline inflation in the current quarter and the next.

Thailand are expected to approach the midpoint of their respective target bands.

- Indonesia and Korea have contractionary monetary policy stances—the real interest rates are significantly higher than the estimated range of R-star. The increase in real interest rates reflect moderating inflation and multiple policy rate increases.
- For *Malaysia*, the assessment is less conclusive and dependent on the real interest rate metric. With the real interest rate metrics hovering around both ends of the range of Malaysia's R-star estimates, Bank Negara Malaysia may have some flexibility to either maintain the policy rate in 2024 or raise it should inflation surprise to the upside.

Figure 1.6.2. Selected ASEAN+3: Estimated R-star and Short-term Real Interest Rates, Q1–Q3 2023 (Percent)



-R-star, median • Real rate, 1-quarter ahead • Real rate, 1-year ahead

Source: International Monetary Fund and national authorities via Haver

Analytics; Bloomberg, AMRO staff estimates. Note: CN = China; ID = Indonesia; JP = Japan; KR = Korea; MY = Malaysia; PH = the Philippines; TH = Thailand.Estimated R-stars are based on the average of the first three quarters of 2023. Real rate metrics are based on the latest policy rate adjusted for Bloomberg's median forecast for 1-year ahead and AMRO's headline inflation forecasts for 1-quarter ahead.

Box 1.7:

Japan's Yield Curve Control Policy: A Rethink and Its Significance

The Bank of Japan (BOJ) adopted the Yield Curve Control (YCC) policy in September 2016, with the aim to anchor long-term interest rates at zero percent. The BOJ introduced the Negative Interest Rate Policy (NIRP) in January 2016 initially to put downward pressure on short-term interest rates and raising inflation expectations. However, not only did short-term interest rates fall into negative territory, but the yield curve flattened, and long-term interest rates also dropped below zero percent. When concerns emerged that the compression in interest rate margins would undermine the profitability of financial institutions, the BOJ implemented the YCC¹ framework to make monetary easing more sustainable. Operationally, this entailed switching from quantity to interest rate targeting. The YCC was aimed at shaping the yield curve by keeping the short-term policy interest rate at –0.1 percent and targeting the long-term interest rate—the yield on the 10-year Japanese Government Bond (JGB) at about 0 percent by buying JGBs along the entire yield curve.

How the adjustments and exit of Japan's YCC affect the domestic economy

The BOJ typically maintained close control over the term structure of interest rates with the YCC policy. In July 2018, the former Governor Kuroda mentioned in the press conference that 10-year JGB yields were expected to move around ±0.1 percent with the possibility of fluctuations up or down at twice that level (i.e. around ± 0.2 percent). The allowance band was subsequently decided to be 0.25 percent in March 2021. Strict control of the YCC has come at the expense of a sharp decline in bond market liquidity, consequently diminishing the role of the bond market in setting the price of government bonds and determining the yield curve. For instance, since the Fed began its interest rate tightening cycle in early 2022, 10-year JGB yields have persistently been under upward pressures, occasionally hitting the upper bound (Figure 1.7.1). The heightened volatility in overseas financial and capital markets triggered by the collapse of Silicon Valley Bank in March 2023 subsequently caused significant disruptions in the functioning of the JGB market. Bid-ask spreads widened and correlations between the spot and

futures prices of JGBs weakened, impeding the smooth formation of the entire yield curve.

In recent times, the BOJ has increased the flexibility of its YCC policy to mitigate the side effects of prolonged monetary easing on financial markets amid upward yield pressures. In December 2022, the BOJ unexpectedly doubled the band width to 0.5 percent above or below the target of 0 percent in response to rising yields and continued deterioration in bond market functioning.² This move aimed to enhance bond market functioning, addressing issues arising from the deterioration in liquidity and the disruption of the price discovery function (Figure 1.7.2). In July 2023, the BOJ decided to conduct YCC with greater flexibility, effectively raising the upper bound from 0.5 percent to 1.0 percent. In October 2023, the BOJ further increased the flexibility of the YCC by regarding the 1.0 percent upper bound as a "reference". Many financial market players viewed the recent policy tweaks to the YCC framework as indicative steps towards a formal exit from the YCC policy framework.

This box was written by Jinho Choi and Wee Chian Koh.

¹⁷ YCC is not a widely used monetary policy tool. Besides the BOJ, only the Fed (during and after World War II) and the Reserve Bank of Australia (during the COVID-19 pandemic) have employed YCC.

²⁷ After decades of bond purchases, the BOJ had crowded the market, with its JGB holdings making up more than half of outstanding JGBs. There were emerging signs of bond market illiquidity such as reduced trading volumes and price distortions. The BOJ's bond market survey showed that the diffusion index for the degree of bond market functioning from the surveyed institutions' viewpoint declined to minus 64 percentage points in Q1 2023 from minus 21 percentage points in Q1 2022.

On 19 March 2024, the BOJ decided to terminate its NIRP and YCC on the basis of the virtuous cycle between wages and prices. Japan's CPI inflation has moderated from its peak in 2023 but continues to be relatively high (Figure 1.7.3). In particular, the "corecore" CPI (less fresh food and energy) has surged to around 4 percent (year-on-year) since April 2023, as the passthrough effects of high commodity prices and a weak yen strengthened with some time lag. The BOJ has judged that achieving its inflation target in a stable and sustainable manner has come in sight, thus lifting its negative interests rate policy and resetting the short-term policy rate to 0–0.1 percent. It emphasized that high nominal wage growth is likely to be sustained due to improving corporate profits and tight labor market conditions, as reflected





Source: Bank of Japan; Japan Ministry of Finance. Note: JGBs = Japanese Government Bonds; NIRP = Negative Interest Rate Policy; QQE = Quantitative and Qualitative Easing; YCC = Yield Curve Control.

Figure 1.7.3. Japan: Core CPI and Nominal Wage Inflation

(Percent, year-on-year)



Source: Ministry of Internal Affairs and Communication, Ministry of Health, Labour and Welfare via Haver Analytics; AMRO staff calculations. Note: CPI = consumer price inflation. in this year's annual spring labor-management wage negotiation results. For the time being, the BOJ maintains its accommodative policy stance despite its first rate hike in nearly two decades.

The BOJ's exit from the YCC and NIRP may lead to a rise in interest rates, which would help improve the profitability of financial institutions. The timing for the next rate hike is contingent upon sustained growth of nominal wages and its subsequent impact on overall price levels, particularly in services, which have historically been low. With the termination of the YCC and NIRP, long-term interest rates are expected to rise which would have a positive impact on financial institutions' profitability as the increase in net interest incomes is expected to offset

Figure 1.7.2. Japan: JGB Yield Curve, Before and after the BOJ's Monetary Policy Meeting on 19–20 December 2022 (Percent per year)



Source: Ministry of Finance Japan; AMRO staff calculation. Note: JGBs = Japanese Government Bonds. Yields for long-term maturities were linearly interpolated using the 10-year, 15-year, 20-year, 25-year, and 30-year yields.

Figure 1.7.4. Japan: Outstanding JGBs and Interest Payments

(Trillions of yen; percent per year)



Source: Ministry of Finance Japan; AMRO staff calculations. Note: JGBs = Japanese Government Bonds. The effective interest rates were

calculated as the proportion of annual interest payments relative to the outstanding JGBs from the previous year.

the unrealized losses in bond investments. Bond market functions will also improve significantly with enhanced liquidity and price discovery, especially for JGBs, as domestic financial institutions have large demands for long-term JGBs with higher coupons.

In contrast, higher long-term interest rates would increase debt servicing costs of Japan's high government debt. Japan's government debt rose to 261 percent of GDP in fiscal 2022 from 239 percent in fiscal 2019, due mainly to large pandemic-related fiscal stimulus. However, the government's interest payments have remained low, due to the very low interest rates in JGBs during the YCC period (Figure 1.7.4). The recent YCC adjustments have resulted in an uptick in long-term JGB yields. With the termination of the YCC and NIRP, higher interest rates would gradually increase the financing costs for new JGB issuances, and so raise the effective interest rate.

What the end of Japan's YCC could mean for global markets

Markets are concerned about the risks posed by a strong repatriation of Japan's foreign portfolio assets. Japanese investors hold very large quantities of global assets, reflecting decades of foreign bonds purchases in response to low yields domestically. Total holdings of foreign bonds by Japanese residents—even after excluding the economy's USD 1.1 trillion official reserve holdings—amounted to about USD 3 trillion at its peak in 2021. Japanese investors are by far the biggest foreign owners of US Treasuries and hold a large share of French, Australian, and UK debt securities as well (Figure 1.7.5). An end to Japan's YCC policy and the expected rise in long-term JGB yields could incentivize Japanese institutions to shift investments back to Japan, which would drive up global bond yields and tighten global financial conditions.

However, a rise in long-term JGB yields may not necessarily pose trouble for global markets. Japanese investors sold large amounts of foreign bonds in 2022 as the high US dollar hedging costs more than offset the returns from interest rate yield differentials between long-term foreign bonds and JGBs. The sales were largely driven by hedging activities of institutional investors such as banks and life insurers (Figure 1.7.6). Yet, the reduction in Japanese foreign bond demand has had limited impact on global markets. Japanese investors subsequently resumed buying foreign bonds in 2023. With hedging costs expected to fall in 2024 as central banks cut interest rates, long-term JGB yields would have to rise significantly to offset the fall in hedging costs for a large-scale repatriation of Japanese foreign portfolio investments to occur. Under the scenario of a phased YCC exit, 10-year JGB yields are estimated to remain below 1 percent (AMRO 2024c).

A rapid unwinding of Japan's large foreign bond portfolio could still arise if there are unexpected shocks, but the risk is small. For instance, if JGB yields surge while hedging costs stay high, Japanese investors could face large capital losses on their JGB holdings as well as their hedged foreign bond holdings. Such a scenario could force these investors to sell the bonds at significant losses. To some extent, this risk is mitigated by the large passively managed investments of Japanese pension funds and life insurers under their benchmark asset allocations, which are not expected to change significantly due to shortterm market shifts. Vulnerabilities could also lurk in nonbank financial institutions as shown in the liability-driven investment crisis in the United Kingdom's gilt market in 2022. This risk is currently low as a large share of Japanese bond holdings is "held-to-maturity" and recorded at amortized cost.

The yen would probably strengthen if the BOJ declares a turn to a tightening bias. A rise in JGB yields, amid an end to the Fed's tightening cycle, is expected to lead to an appreciation of the yen. This would weigh on the competitiveness of Japan's exports, although the impact may be limited since about 60 percent of exports are invoiced in foreign currency. Nonetheless, imported goods will become cheaper with a stronger yen, which would boost the exports of Japan's main trading partners, particularly China and the United States. Another important implication is the headwind to corporate profitability as the yen-value of overseas earnings of foreign subsidiaries will fall. This could slow the rally in Japanese stock markets, which have outperformed even the S&P 500 in 2023.



Figure 1.7.5. Japan: Holdings of Foreign Bonds in 2022 (Billions of US dollars; percent)



Japan's share of foreign bond market (right axis)

Source: Haver Analytics; National authorities; AMRO staff calculations.

Figure 1.7.6. Japan: Residents' Net Purchase of Foreign Bonds (Billions of US dollars)



Source: BOJ; AMRO staff calculations. Note: Data shows 12-month trailing sums.

Opportune time to phase out YCC?

The BOJ's YCC exit taken place in a well-timed and smooth manner and is expected to alleviate the adverse effects on Japan's financial system. The confluence of heightened inflation, yen depreciation pressures, and side effects from prolonged ultra-easy monetary policy provided conducive conditions for the BOJ to reassess its YCC program. Although higher long-term interest rates will raise financing costs and lower yen-denominated overseas earning of Japanese companies if the yen strengthens, the YCC exit is justified from the longer-term perspective. The BOJ's exit from the YCC will allow long-term JGB yields to move with market dynamics, and so improve how the JGB markets function and bolster the profitability of financial institutions. In the event that JGB yields rise sharply, some selling pressure in the global bond markets would be likely, but the potential disruptions are expected to be limited.

V. Special Feature: The Long Recovery from COVID-19

The COVID-19 pandemic caused the sharpest contraction in GDP growth for ASEAN+3 in the past three decades. The region narrowly avoided recession and registered flat growth in 2020 (Figure 1.52). COVID-19 occurred at a time when regional GDP growth had already slowed to 5 percent a year, from an average of about 9 percent leading up to both the Asian financial crisis and the global financial crisis (Figure 1.53). While the initial recovery from the COVID-19 pandemic was stronger than after previous crises, growth for ASEAN+3 has since plateaued at 4.5 percent—lower than the pre-crisis growth rate and among the lowest regional growth rates in the past 30 years. The sustained lower growth raises concerns about the possibility of a prolonged period of reduced growth due in part to economic scarring caused by the pandemic.

Figure 1.52. ASEAN+3: Real GDP Growth (Percent, year-on-year)



Source: National authorities via Haver Analytics; AMRO staff calculations. Note: As most crises occur over one or two calendar years, the year with the lowest annual GDP growth among the affected years is used as reference year for the crises above. The reference year for the Asian financial crisis is therefore 1998; 2009 for the global financial crisis and 2020 for COVID-19.

Figure 1.54. Selected ASEAN+3: Real GDP Trend (Index, 2019 = 100)



Source: National authorities via Haver Analytics; AMRO staff calculations. Note: The pre-pandemic trend is estimated using a one-sided HP filter on quarterly data from Q1 2010 to Q4 2019 and extended to Q4 2023 using linear regression. The postpandemic trend is estimated using a two-sided HP filter on quarterly data from Q1 2010 to Q4 2025, including AMRO-forecast GDP data. Aggregate trend is weighted using 2022 GDP. Cambodia, Lao PDR and Myanmar are excluded due to data unavailability. Despite the strong recovery in real GDP growth, ASEAN+3 is expanding at a slower rate than its pre-pandemic growth trend. Underlying growth of GDP, derived by removing the cyclical components, indicates that the region is growing at 3.5 percent a year, slower than the 4.2 percent growth recorded prior to the pandemic (Figure 1.54). Except Brunei and Japan, trend growth in most regional economies is lower by about one percentage point (Figure 1.55). This slower trend growth partly reflects ongoing post-pandemic adjustments, such as continuing efforts to rebuild businesses' balance sheets and the reconfiguration of labor dynamics. The series of shocks after 2020 and in the global economy and the sharp tightening of global monetary policy further dampened growth for the region. The pandemic's longer-term effect on productivity, due in part to learning losses, could further lower trend growth (AMRO 2022).





Source: National authorities via Haver Analytics; AMRO staff calculations and estimates. Note: The pre-crisis (post-crisis) period refers to the simple average of GDP growth in the five years before (after) 1998 for the Asian financial crisis; 2009 for the global financial crisis and 2020 for COVID-19. 2024 and 2025 GDP growth refers to AMRO's forecast.





Source: National authorities via Haver Analytics; AMRO staff calculations. Note: BN = Brunei; CN = China; HK = Hong Kong; ID = Indonesia; JP = Japan; KR = Korea; MY = Malaysia; PH = the Philippines; SG = Singapore; TH = Thailand; VN = Vietnam. GDP trend growth refers to the average year-on-year growth of HP-filter detrended GDP. Cambodia, Lao PDR and Myanmar are excluded due to data unavailability.

Investment: Picking Up from a Deep Trough

Investment in most ASEAN+3 economies has yet to return to the pre-pandemic trend, in contrast to private consumption. While growth in both private consumption and investment remain below pre-pandemic trend for regional economies besides China and Thailand, the private consumption slowdown is less severe than that of investment (Figure 1.56). The decline in investment from its pre-pandemic trend is deeper than the trend declines in GDP and consumption (Figure 1.57). Stringent containment measures at the onset of the pandemic in 2020, including workplace closures and mobility restrictions, weighed on both investment and consumption activities (Figure 1.58). However, swift and substantial income and liquidity support to households helped mitigate the decline in household spending. Investment, on the other hand, came to a standstill. Mobility restrictions halted structures investment, while the synchronized global slowdown weighed on exports and dampened capital expenditure for machinery and equipment.

The pandemic impacted high-contact sectors, such as construction, disproportionately. Emphasis on physical distancing affected economic activities in high-contact sectors such as construction, retail trade, transportation and accommodation. The construction industry, vital for economic growth, was at a near-standstill due to mobility restrictions, remote working arrangements, disruptions in supply chains, delays in material deliveries, and prolonged project timelines. All these factors increased the cost of doing business and hampered new investments, while uncertainty about the pandemic recovery also eroded investor confidence. The slowdown in construction and social activities had cascading effects on related sectors, driving down demand for materials, labor, and services, and consequently generating spillover effects and simultaneous shocks (Das and others 2021).

Smaller firms were also more severely impacted by the pandemic. During the pandemic, smaller firms experienced a greater drop in sales revenue than large firms in the same sector and location (Adian and others 2020). These firms also have fewer financial buffers from external financing or accumulated profits, limiting their ability to withstand prolonged shutdowns or demand shocks. Up to 70 percent of micro, small, and medium enterprises (MSMEs) in Indonesia, Lao PDR, the Philippines, and Thailand had to suspend their operations, and up to two-thirds encountered a shortage of working capital during the pandemic (ADB 2020). The multiple shocks post-pandemic—lower global growth, high commodity prices, heightened financial market volatility-further weakened the cash flow and balance sheet for MSMEs. With MSMEs forming over 90 percent of businesses and employing more than half of the workforce in the region (Ong, Wei and Wong 2024), the lingering challenges of post-pandemic recovery not only weighed on overall investments but could also impact private consumption and broader export competitiveness.

Investment activity recovered more slowly than after the global financial crisis. While the negative impact on investment and the subsequent recovery was not as severe as the Asian financial crisis, investment recovery has been weak, particularly in ASEAN, relative to the aftermath of the global financial crisis. During crises, large fiscal stimulus packages were often directed toward infrastructure investment, providing a quick boost to investment and GDP growth (Green 2010). This approach could not be implemented during the COVID-19 pandemic as physical distancing incapacitated infrastructure construction which is labor-intensive. In addition, containment measures were kept in place almost throughout 2020 and 2021, delaying a return to investment activity. The financial distress among firms further limited investment capacity (Li and others 2020). The decline in investment growth was consequently much deeper and the recovery path was more challenging after COVID-19. Investment activity in ASEAN-5 took 11 quarters to return to pre-crisis levels, compared to only 2 quarters during the global financial crisis (Figure 1.59). Meanwhile, investment growth recovered at a similar pace as it did during the global financial crisis for Japan and Korea, although investment remained sluggish for China and Hong Kong due to the drag from the real estate sector (Figure 1.60).

Figure 1.56. Selected ASEAN+3: Deviation of Investment and **Private Consumption from Pre-pandemic Trend Level** (Percent of pre-pandemic trend, 2023)



Source: National authorities via Haver Analytics; AMRO staff calculations. Note: CN = China; HK = Hong Kong; ID = Indonesia; JP = Japan; KR = Korea; MY = Malaysia; PH = the Philippines; SG = Singapore; TH = Thailand. Deviation is calculated as percentagedifference between post-pandemic trend and pre-pandemic trend for 2023 average quarterly data (2023 yearly data for China). The pre-pandemic trend is estimated using a one-sided HP filter on quarterly data from Q1 2010 to Q4 2019 and extended to Q4 2023 using linear regression. The post-pandemic trend is estimated using one-sided HP filter on quarterly data from Q1 2010 to Q4 2023. Brunei, Cambodia, Lao PDR, and Myanmar are excluded due to data unavailability.

Figure 1.58. ASEAN+3: COVID-19 Containment Measures (Number of economies)



Source: Our World in Data; AMRO staff calculations.

120

110

100

90

80

0



Figure 1.59. Selected ASEAN+3: Level of Investment after Crises (Index, 1997 = 100; 2008 = 100; 2019 = 100)

Stay-at-home requirement





Source: National authorities via Haver Analytics; AMRO staff calculations. Note: CN = China; HK = Hong Kong; ID = Indonesia; JP = Japan; KR = Korea; MY = Malaysia; PH = the Philippines; SG = Singapore; TH = Thailand. Deviation is calculated as percentagedifference between post-pandemic trend and pre-pandemic trend for 2023 average quarterly data (2023 yearly data for Investment and Private Consumption of China). The pre-pandemic trend is estimated using a one-sided HP filter on quarterly data from Q1 2010 to Q4 2019 and extended to Q4 2023 using linear regression. The post-pandemic rend is estimated using one-sided HP filter on quarterly data from Q1 2010 to Q4 2023. Brunei, Cambodia, Lao PDR, Myanmar, and Vietnam are excluded due to data unavailability.





Required closing for all, except essential workplaces

Plus-3 ex China

Source: National authorities via Haver Analytics; AMRO staff calculations. Note: As most crises occur over the span of one or two calendar years, the year with the lowest annual GDP growth among the affected years is used as reference year for the crises above ASEAN-5 refers to Indonesia, Malaysia, Singapore, the Philippines, and Thailand. Brunei, Cambodia, China, Lao PDR and Vietnam are excluded due to data unavailability.

Figure 1.60. Selected ASEAN+3: Level of Investment after Crises, by Economy

Thailand

(Index, 1997 =100; 2008 = 100; 2019 = 100)

ASEAN-5







Singapore









Hong Kong 130 120 110 100 90 80 70 60 $0 \ 1 \ 2 \ 3 \ 4 \ 5 \ 6 \ 7 \ 8 \ 9 \ 10 \ 11 \ 12$ Quarters after crisis



Korea



Source: National authorities via Haver Analytics; AMRO staff calculations. Note: As most crises occur over the span of one or two calendar years, the year with the lowest annual GDP growth among the affected years is used as reference year for the crises above. Annual data is used for China, with index average 1996–1997 = 100, average 2007–2008 = 100 and average 2018–2019 = 100. Brunei, Cambodia, Lao PDR, and Vietnam are excluded due to data unavailability.

Asian Financial Crisis

Private Consumption: Fast Recovery Aided by Policy Support

Private consumption contracted marginally in 2020, the first time in the past 30 years. Private consumption fell from an average of 8 percent annual growth to -0.4 percent in 2020, double the 4-percentage point decline during the Asian financial crisis and global financial crisis (Figure 1.61). Most regional economies underwent prolonged sometimes multiple—rounds of stringent mobility restrictions throughout 2020 and 2021. International borders only began to be reopened in the second guarter of 2022 (AMRO 2023a). The loss of household income due to disrupted employment and weakened consumer sentiment amid heightened anxiety weighed on private consumption in 2020 and 2021. Mobility restrictions and bans on social gatherings also eliminated services consumption.

However, household spending rebounded faster than in past crises due in part to policy support. ASEAN+3 governments swiftly disbursed sizable financial assistance to households as part of their fiscal stimulus. The reduction in interest rates and the introduction of moratoriums and other concessions on debt repayment helped to support household disposable income during the pandemic. The shift to working from home preserved employment income for some households, while a concurrent rise of the platform-based economy (e.g., private hire transportation, food delivery services, and e-commerce) provided alternative income for others. Platform-based economy and digital payments also enabled continued goods and services consumption during and after the pandemic. Collectively, these measures helped to smoothen income fluctuations during the pandemic and allowed for a more seamless recovery once the economies reopened.

The rebound in private consumption across the region, however, masks underlying disparities. Private consumption has rebounded firmly in ASEAN-5 after mobility restrictions were removed (Figure 1.62). The recovery was more muted in the Plus-3 subregion, mainly reflecting lower real income growth and subdued consumer sentiments in China, Hong Kong, and Japan. Although the financial assistance programs supported the rebound in private consumption, they did not fully offset the negative impacts on the low-income households. In 2021, while the incomes of the top 60 percent in the global income distribution began to recover, those in the lowest 40 percent income bracket continued to experience disproportionate challenges. The largest income improvements were observed within the highest 20 percent income group (Narayan and others 2022).





Source: National authorities via Haver Analytics; AMRO staff calculations.

Note: Selected ASEAN+3 refers to Hong Kong, Japan, Korea, Malaysia, the Philippines, Singapore, and Thailand. All other economies were excluded due to data unavailability. The reference year for the Asian financial crisis is 1998; 2009 for the global financial crisis, and 2020 for COVID-19.





Source: National authorities via Haver Analytics; AMRO staff calculations

Note: As most crises occur over the span of one or two calendar years, the year with the lowest annual GDP growth among the affected years is used as reference year for the Asian financial crisis, global financial crisis and COVID-19. Stay-at-home requirements were implemented broadly across the region from the onset of the pandemic in Q1 2020 to Q4 2021, spanning eight quarters. Annual data is used for China, with index average 1996–1997 = 100, average 2007–2008 = 100 and average 2018–2019 = 100. Remaining economies are omitted due to data unavailability.

Labor Market: A Relatively Speedy-but Incomplete-Recovery

Labor markets have recovered quicker than in past crises. Unemployment rates peaked at 3.5 percent in 2020 due to lockdowns and workplace closures, lower than the 3.8 percent seen a year after the Asian financial crisis (Figure 1.63). Policy support measures, such as job retention schemes and wage subsidies, helped to mitigate employment losses during the pandemic. As a result, unemployment rates across most ASEAN+3 economies have broadly recovered to pre-pandemic levels since economies reopened. Notably, labor market tightness has emerged in most economies. In Japan, Korea, and Singapore, unemployment rates fell while the ratio of job vacancies to unemployed persons increased concurrently, indicating high demand for workers (Figure 1.64). Furthermore, a significant decrease in the number of migrant workers in Singapore and Malaysia in 2020 and 2021 exacerbated existing labor market tightness (Box 1.1).

However, COVID-19 had a more severe impact on labor force participation compared to past crises. The labor force participation rate (LFPR) declined across the region in 2020 (Figure 1.65). For most economies, the effects appear to be short-lived—LFPRs for most economies in 2022 exceeded 2019 levels. However, the recovery is uneven. In Hong Kong and China, LFPRs remain below pre-pandemic levels (Figure 1.66). The decline is especially severe in Hong Kong, where LFPR has fallen by about 2 percentage points since 2019. This is mainly attributable to an increase in the proportion of elderly persons as Hong Kong's population ages (AMRO 2024d). Meanwhile, LFPR has increased for other regional economies.

Figure 1.63. ASEAN+3: Unemployment Rate (Percent)



Source: World Bank via Haver Analytics; AMRO staff calculations. Note: Data refers to the average unemployment rate across the ASEAN+3 economies. The reference year for the Asian financial crisis (AFC) is 1998; 2009 for the global financial crisis (GFC), and 2020 for COVID-19.



(Percent)



Source: National authorities via Haver Analytics.

Note: AFC = Asian financial crisis; GFC = global financial crisis; HK = Hong Kong; JP = Japan; KR = Korea; SG = Singapore; TH = Thailand.

The relatively fast labor market recovery is largely the result of extensive policy support measures implemented by regional economies. These measures include wage support for employers and employees in high-contact sectors, such as tourism, to reduce the necessity for layoffs. For example, Singapore's Job Support Scheme provided SGD 26.9 billion in wage support for firms to retain their employees, preventing an estimated 0.9 percentage point increase in the resident unemployment rate in 2020 (AMRO 2021). Economies across the region also implemented various fiscal measures to stimulate job creation. For instance, in April 2020, Hong Kong announced plans to create 30,000 jobs in 2020–2021, while Thailand introduced 46

Figure 1.64. Selected ASEAN+3: Job Vacancy to Unemployment Ratio

(Index, 2019 = 100)



Source: Department of Statistics Malaysia; National authorities via Haver Analytics; AMRO staff calculations.





Source: National authorities via Haver Analytics. Note: CN = China; HK = Hong Kong; JP = Japan; KR = Korea; ID = Indonesia; MY = Malaysia; PH = the Philippines; SG = Singapore; TH = Thailand.

a program in September 2020 to facilitate the hiring of 260,000 new graduates. These measures helped mitigate potential scarring effects of the pandemic on the region's labor force. At the same time, reducing job losses helped bolster household incomes, which supported the recovery in private consumption when economies reopened. However, while aggregate employment has broadly recovered, labor market scarring could still exist through lower job quality and underemployment, especially with the rapid growth of the gig economy during the pandemic. In the Philippines, for example, the share of occupations with low and irregular pay have risen to above pre-pandemic levels (World Bank 2023b).

Policy Priorities: Rebuilding for a Better Tomorrow

Four years after the pandemic began, the still highly shock-prone operating landscape calls for a careful balancing of rebuilding policy space and providing policy support. After an unprecedented scale of fiscal spending, ongoing fiscal consolidation should prioritize structural reforms, to offset the temporary contractionary impact of fiscal adjustments and structurally enhance long-term growth potential (Andriansyah and Hong 2022). Monetary policy normalization—while necessary—should strive to maintain investor confidence while anchoring inflation expectations. A stable macroeconomic environment will support the investment recovery momentum, crucial for steering growth back to its pre-pandemic trend without triggering adverse shocks.

Boosting investment in productive sectors would be crucial in raising GDP growth back to pre-pandemic trend growth. The impact of the pandemic on firms has been uneven, with smaller firms and businesses in the construction and services harder hit. Having in place policies that support the smaller firms to recover, restructure, or move to a more promising sector would be useful, especially for these firms to modernize such as by improving energy efficiency and adopting greater digitalization. Separately, policies directed at new sources of growth for the broader economy, and investment in productivity- and resilience-enhancing areas such as for climate change adaptation and the adoption of new technologies would also be key. This reinforces the pandemic's impact on remote working and innovation trends, which have accelerated digitalization and automation (Njoroge and Pazarbasioglu 2020). Das and others (2021) highlighted the significance of considering amplification and transmission effects in policy design, especially those with sectoral emphasis. Positive spillovers are likely in scenarios such as the transition to a low-carbon economy or in allocating sector-specific public investments. A parallel commitment should also be made toward stimulating job creation and reskilling labor forces, laying the foundation for long-term sustainable growth.

Regional collaboration could strengthen the growth potential that was eroded by the pandemic. The disruption to cross-border trade and talent flows during the pandemic has increased resource misallocation, with regional economies unable to optimize operational costs and supply chain structures during the pandemic. The post-pandemic period therefore presents an opportunity for economies to tap their comparative strengths and leverage complementarities to raise collective growth potential. With rapid technological advancements, the pooling of resources and expertise would allow economies to accelerate the development and adoption of new technologies—from digitization, and automation to renewable energy. The collective approach would not only enhance each economy's technological capabilities but also foster a more inclusive and sustainable economic growth model.

Appendix: Selected Key Macroeconomic and Financial Indicators

	2022	2023e	2024f	2025f
Brunei Darussalam				
Real GDP growth (percent, year-on-year)	-1.6	1.4	2.7	2.9
Headline inflation (period average, percent, year-on-year)	3.7	0.4	1.4	1.0
Current account balance (percent of GDP)	19.6	16.0	17.4	16.2
Government fiscal balance (percent of GDP)	1.3	-9.8	-8.7	-8.8
Cambodia				
Real GDP growth (percent, year-on-year)	5.2	5.3	6.2	6.4
Headline inflation (period average, percent, year-on-year)	5.3	2.1	3.1	2.8
Current account balance (percent of GDP)	-25.7	1.0	-3.1	-3.6
Government fiscal balance (percent of GDP)	-3.3	-6.9	-3.2	-3.1
China				
Real GDP growth (percent, year-on-year)	3.0	5.2	5.3	4.9
Headline inflation (period average, percent, year-on-year)	2.0	0.2	1.0	1.6
Current account balance (percent of GDP)	2.2	1.5	1.6	1.4
Government fiscal balance (percent of GDP)	-4.7	-4.4	-4.8	-5.0
Hong Kong, China				
Real GDP growth (percent, year-on-year)	-3.7	3.2	3.5	3.0
Headline inflation (period average, percent, year-on-year)	1.9	2.1	2.5	2.3
Current account balance (percent of GDP)	10.0	7.5	5.5	6.0
Government fiscal balance (percent of GDP)	-6.7	-3.6	-1.0	0.5
Indonesia				
Real GDP growth (percent, year-on-year)	5.3	5.0	5.2	5.2
Headline inflation (period average, percent, year-on-year)	4.2	3.7	2.8	2.5
Current account balance (percent of GDP)	1.0	-0.1	-0.3	-0.5
Government fiscal balance (percent of GDP)	-2.4	-1.7	-2.0	-2.0
Japan				
Real GDP growth (percent, year-on-year)	1.0	1.9	1.1	1.0
Headline inflation (period average, percent, year-on-year)	2.5	3.3	2.5	2.1
Current account balance (percent of GDP)	1.9	3.5	3.4	3.6
Government fiscal balance (percent of GDP)	-3.6	-5.2	-2.5	-1.9
Korea				
Real GDP growth (percent, year-on-year)	2.6	1.4	2.3	2.1
Headline inflation (period average, percent, year-on-year)	5.1	3.6	2.5	2.0
Current account balance (percent of GDP)	1.5	2.1	2.4	2.3
Government fiscal balance (percent of GDP)	-5.4	-3.8	-3.8	-3.0

Appendix: Selected Key Macroeconomic and Financial Indicators

	2022	2023e	2024f	2025f
Lao PDR				
Real GDP growth (percent, year-on-year)	4.4	4.3	4.7	4.9
Headline inflation (period average, percent, year-on-year)	23.0	31.2	14.3	9.3
Current account balance (percent of GDP)	-0.1	3.0	2.4	2.4
Government fiscal balance (percent of GDP)	-0.2	0.1	-0.6	-0.2
Malaysia				
Real GDP growth (percent, year-on-year)	8.7	3.7	5.0	4.7
Headline inflation (period average, percent, year-on-year)	3.3	2.5	2.5	3.0
Current account balance (percent of GDP)	3.1	1.2	2.5	3.1
Government fiscal balance (percent of GDP)	-5.6	-5.0	-4.3	-4.0
Myanmar				
Real GDP growth (percent, year-on-year)	2.4	3.4	3.2	3.2
Headline inflation (period average, percent, year-on-year)	13.2	24.4	16.1	15.8
Current account balance (percent of GDP)	-2.0	-3.4	-3.2	-3.1
Government fiscal balance (percent of GDP)	-2.1	-2.8	-4.8	-4.6
Philippines				
Real GDP growth (percent, year-on-year)	7.6	5.6	6.3	6.5
Headline inflation (period average, percent, year-on-year)	5.8	6.0	3.6	2.9
Current account balance (percent of GDP)	-4.5	-2.6	-2.2	-1.8
Government fiscal balance (percent of GDP)	-7.3	-6.2	-5.1	-3.8
Singapore				
Real GDP growth (percent, year-on-year)	3.8	1.1	2.6	1.9
Headline inflation (period average, percent, year-on-year)	6.1	4.8	3.0	2.5
Current account balance (percent of GDP)	18.0	19.8	19.2	19.9
Government fiscal balance (percent of GDP)	0.3	-0.5	0.1	0.6
Thailand				
Real GDP growth (percent, year-on-year)	2.5	1.9	2.9	3.1
Headline inflation (period average, percent, year-on-year)	6.1	1.2	1.2	1.9
Current account balance (percent of GDP)	-3.2	1.3	1.7	1.5
Government fiscal balance (percent of GDP)	-3.6	-3.3	-3.3	-3.1
Vietnam				
Real GDP growth (percent, year-on-year)	8.0	5.1	6.0	6.5
Headline inflation (period average, percent, year-on-year)	3.2	3.3	3.6	2.7
Current account balance (percent of GDP)	-1.1	-4.3	0.6	3.9
Government fiscal balance (percent of GDP)	-0.2	-4.1	-3.2	-3.0

Source: National authorities via CEIC and Haver Analytics; AMRO staff estimates. Note: Numbers in red are AMRO staff estimates and forecasts. Data refer to calendar year; except for government fiscal balances, and Myanmar, which refer to fiscal year. Data for 2023 refer to AMRO staff estimates, for data releases that are not yet available. Government fiscal balance refers to balance of the central and local governments for Cambodia; general government for Japan; and central government for all other economies. e = estimates; f = forecasts.

References

- Adian, Ikmal and others. 2020. "Small and Medium Enterprises in the Pandemic: Impact, Responses and the Role of Development Finance." Policy Research Working Paper, World Bank, Washington, DC. September.
- Andriansyah and Seung Hyun (Luke) Hong. 2022. "Rebuilding Fiscal Buffers in the Post-Pandemic Era: Fiscal Normalization, Consolidation, and Structural Reform." AMRO Policy Perspectives Paper. ASEAN+3 Macroeconomic Research Office, Singapore, May 23. https://amro-asia.org/rebuilding-fiscal-buffers-in-thepost-pandemic-era-fiscal-normalization-consolidationand-structural-reform
- ASEAN+3 Macroeconomic Research Office (AMRO). 2020. "Macroeconomic Prospects and Challenges." Chapter 1. ASEAN+3 Regional Economic Outlook. Singapore, April 7. https://amro-asia.org/asean3-regional-economicoutlook-areo-2020/
- ASEAN+3 Macroeconomic Research Office (AMRO). 2021. "Singapore – 2021." AMRO Annual Consultation Report. Singapore, November 8. https://amro-asia.org/amros-2021-annual-consultation-report-on-singapore/
- ASEAN+3 Macroeconomic Research Office (AMRO). 2022. "ASEAN+3 Growth Strategy in the Pandemic's Wake." Chapter 2. ASEAN+3 Regional Economic Outlook. Singapore, April 12. https://amro-asia.org/asean3regional-economic-outlook-areo-2022/
- ASEAN+3 Macroeconomic Research Office (AMRO). 2023a. "Macroeconomic Prospects and Challenges." Chapter 1. ASEAN+3 Regional Economic Outlook. Singapore, April 6. https://amro-asia.org/asean3-regional-economicoutlook-areo-2023/
- ASEAN+3 Macroeconomic Research Office (AMRO). 2023b. "Navigating High Debt in Low Visibility – Assessing Resilience of Financial Intermediaries." Chapter 4. ASEAN+3 Financial Stability Report. Singapore, December 5. https://amro-asia.org/asean3-financialstability-report-2023
- ASEAN+3 Macroeconomic Research Office (AMRO). 2023c. "Quarterly Update of the ASEAN+3 Regional Economic Outlook (AREO)." Singapore, October 4. https://amroasia.org/quarterly-update-of-the-asean3-regionaleconomic-outlook-areo-october-2023/
- ASEAN+3 Macroeconomic Research Office (AMRO). 2024a. "Quarterly Update of the ASEAN+3 Regional Economic Outlook (AREO)." Singapore, January 18. https://amroasia.org/quarterly-update-of-the-asean3-regionaleconomic-outlook-areo-january-2024/

- ASEAN+3 Macroeconomic Research Office (AMRO). 2024b. "China – 2023." AMRO Annual Consultation Report. Singapore, February 5. https://amro-asia.org/amros-2023-annual-consultation-report-on-china/
- ASEAN+3 Macroeconomic Research Office (AMRO). 2024c. "Japan – 2023." AMRO Annual Consultation Report. Singapore, forthcoming.
- ASEAN+3 Macroeconomic Research Office (AMRO). 2024d. "Labor Market Dynamics in the Changing Demographic Landscape of Hong Kong." Box A. AMRO Annual Consultation Report: Hong Kong – 2023. Singapore, forthcoming.
- Asian Development Bank. 2020. "COVID-19 Impact on Micro, Small, and Medium-Sized Enterprises in Developing Asia." Volume II. *Asia Small and Medium-Sized Enterprise Monitor 2020.* November.
- Blanchard, Olivier, Eugenio Cerutti, and Lawrence Summers. 2015. "Inflation and Activity—Two Explorations and their Monetary Policy Implications." IMF Working Paper 2015/230, International Monetary Fund, Washington, DC.
- Cai, Wenju, and others. 2023. "Anthropogenic Impacts on Twentieth-Century ENSO Variability Changes." *Nature Reviews Earth & Environment* 4: 407–418, June.
- Choi, Jinho, and Jungsung Kim. "Estimating Neutral Rate of Interest Rate in Japan." Annex 4. AMRO Annual Consultation Report: Japan – 2023. Singapore, forthcoming.
- Cooban, Anna and Robert North. 2024. "Houthi Attacks Close Vital Red Sea Route for Maersk's Container Ships. CNN, January 5.
- Das, Sonali and others. 2021. "Sectoral Shocks and Spillovers: An Application to COVID-19." IMF Working Paper 2021/204, International Monetary Fund, Washington, DC.
- del Rosario, Diana and Michael Wynn. 2023. "Food for Thought: Fertile Ground for ASEAN+3 Inflation." AMRO Analytical Note, ASEAN+3 Macroeconomic Research Office, Singapore, July 21. https://amro-asia.org/food-forthought-fertile-ground-for-asean3-inflation/.
- Dela Cruz, Rica, and Zuhaib Gull. 2023. "Asset total in 2023 bank failures catching up to 2008." S&P Global Market Intelligence. March 13.

- Ferruci, Gianluigi, Rebeca Jiménez-Rodríguez, and Luca Onorante. 2012. "Food Price Pass-Through in the Euro Area: Non-Linearities and the Role of the Common Agricultural Policy." International Journal of Central Banking 8(1): 179–217.
- Foyez, Ahammad. 2022. "Malaysia to recruit 500,000 Bangladeshi workers over 5 years." Benar News, June 2.
- Fujiwara, Shigeaki, and others. 2016. "Supplementary Paper Series for the "Comprehensive Assessment" (2): Developments in the Natural Rate of Interest in Japan." Bank of Japan Review Series 16-E-12, Bank of Japan, Tokyo, Japan, October 18.
- Ganesan, Vasantha. 2023. "Local MICE Sector Leads Tourism Recovery." The Edge Malaysia, Kuala Lumpur. September 3.
- Green, David Jay. 2010. "Southeast Asia's Policy Response to the Global Economic Crisis." *ASEAN Economic Bulletin* 27(1): 5-26.
- Hirji, Zahra, and others. 2024. "Scientists Are Already Bracing for Record-Breaking Heat in 2024." Bloomberg, January 8.
- Holston, Kathryn, Thomas Laubach, and John C. Williams. 2023. "Measuring the Natural Rate of Interest after COVID-19." FRB of New York Staff Report No. 1063, Federal Reserve Bank of New York, New York, June 16.
- Holston, Kathryn, Thomas Laubach, and John C. Williams. 2017. "Measuring the Natural Rate of Interest: International Trends and Determinants." *Journal of International Economics* 108, Supplement 1, S59-S75, May.
- International Data Corporation (IDC). 2023. "The Semiconductor Market Will Recover in 2024 With an Annual Growth Rate of 20%, Says IDC." Press release, Singapore, December 21. https://www.idc.com/getdoc. jsp?containerId=prAP51603223
- International Labour Organization (ILO). 2021. "Locked down and in limbo: The global impact of COVID-19 on migrant worker rights and recruitment." Geneva, November 22.
- International Monetary Fund (IMF). 2023. "The Natural Rate of Interest: Drivers and Implications for Policy." Chapter 2. *World Economic Outlook: A Rocky Recovery.* Washington, DC, April 11.
- Jorda Oscar, Sanjay R. Singh and Alan M. Taylor, 2020. "Longer-Run Economic Consequences of Pandemics." *The Review of Economics and Statistics* 104(1): 166—175.

- Kho, Catharine, Megan Chong and Andrew Tsang. 2024. "Changing Dynamics of Core Inflation in ASEAN+3." AMRO Analytical Note, ASEAN+3 Macroeconomic Research Office, Singapore, February 28. https://amroasia.org/changing-dynamics-of-core-inflation-in-asean3.
- Lee, Liz, Rozanna Latiff and Mei Mei Chu. 2022. "Focus: Malaysia firms turn down orders as migrant labour shortage hits." Reuters, June 13.
- Li, Jie and others. 2020. "COVID-19 Pandemic and Household Liquidity Constraints: Evidence from Micro Data." Emerging Markets Finance and Trade 56 (15): 3626–34.
- Narayan, Ambar and others. 2022. "Publication: COVID-19 and Economic Inequality: Short-Term Impacts with Long-Term Consequences." Policy Research Working Paper, World Bank, Washington, DC, January.
- Neo, Hui Yun Rebecca. 2023. "The Rise of the Live Music Industry in Southeast Asia." ASEANFocus Issue 2/2023, ISEAS–Yusof Ishak Institute, Singapore. September.
- Njoroge, Patrick and Ceyla Pazarbasioglu. 2020. "Bridging the Digital Divide to Scale Up the COVID-19 Recovery." IMF Blog, November 20. https://www.imf.org/en/Blogs/ Articles/2020/11/05/blog-bridging-digital-divide-to-scaleup-covid19-recovery
- Obstfeld, Maurice. 2023. "Natural and Neutral Real Interest Rates: Past and Future." NBER Working Paper 31949, National Bureau of Economic Research, Cambridge, Massachusetts, December.
- Ong, Li Lian, Min Wei and Siang Leng Wong. 2024. "ASEAN+3 Corporate and MSME Debt-at-Risk in a High Interest Rate Environment: From Pandemic to Pandemonium?" AMRO Policy Position Paper, ASEAN+3 Macroeconomic Research Office, Singapore, February. https://amro-asia. org/asean3-corporate-and-msme-debt-at-risk-in-ahigh-interest-rate-environment-from-pandemic-topandemonium/
- Partington, Richard. 2024. "What is the Red Sea Crisis, and What Does It Mean for Global Trade?" The Guardian, January 3.
- Semiconductor Industry Association (SIA). 2023. "Global Semiconductor Sales Increase 1.7% Month-to-Month in May." Press release, July 6. https://www.semiconductors. org/global-semiconductor-sales-increase-1-7-month-tomonth-in-may/
- Shapiro, Adam H. 2022. "A Simple Framework to Monitor Inflation," Federal Reserve Bank of San Francisco Working Paper 2020-29, San Francisco, CA.

- Tan, Anthony, Edmond Chiang Yong Edmond Choo, and Megan Chong Wen Xi. 2022. "Feeding Inflation in ASEAN+3: The Rising Price of Food?" AMRO Analytical Note, ASEAN+3 Macroeconomic Research Office, Singapore, September 14. https://www.amro-asia.org/feedinginflation-in-asean3-the-rising-price-of-food/.
- United Nations. 2023. "With Highest Number of Violent Conflicts Since Second World War, United Nations Must Rethink Efforts to Achieve, Sustain Peace, Speakers Tell Security Council." 9250th Security Council Meeting. January 26. https://press.un.org/en/2023/sc15184.doc.htm
- United Nations Development Programme (UNDP). 2023. "Making Our Future: New Directions for Human Development in Asia and the Pacific." In 2024 Regional Human Development Report. New York, November 6.
- U.S. Climate Prediction Center. 2023. "El Niño-Southern Oscillation (ENSO) Diagnostic Discussion." Maryland, December 14.
- Vos, Rob, and others. 2023. "Despite Improved Global Market Conditions, High Food Price Inflation Persists." International Food Policy Research Institute Blog, Washington, DC, December 4. https://www.ifpri.org/ blog/despite-improved-global-market-conditions-highfood-price-inflation-persists.
- Wilcox, Paul. S., and others. 2023. "Solar Forcing of ENSO on Century Timescales." Geophysical Research Letters 50(20), October.
- World Bank. 2023a. *Commodity Markets Outlook*. Washington, DC, October.
- World Bank. 2023b. "Securing a Clean Energy Future." Philippines Economic Update. Washington, DC, June.
- World Semiconductor Trade Statistics (WSTS). 2023. "WSTS Semiconductor Market Forecast Fall 2023". Press release, November 28. https://www.wsts.org/esraCMS/ extension/media/f/WST/6254/WSTS_nr-2023_11.pdf
- Zhao, Hongyan and Yin Fai Ho. 2023. "Has the Shifting Trade Landscape Changed the China–ASEAN Nexus?" AMRO Analytical Note, ASEAN+3 Macroeconomic Research Office, Singapore, September 11. https://amro-asia.org/ has-the-shifting-trade-landscape-changed-the-chinaasean-nexus/