Chapter 1.

Macroeconomic Prospects and Challenges

Highlights

- ASEAN+3 economies demonstrated their resilience to the health and economic impact of the COVID-19 pandemic, with a V-shaped rebound in the latter part of 2020. AMRO staff's baseline forecast is for the regional economy to expand by 6.7 percent in 2021, following a slight contraction in 2020. The risks to a sustained recovery are now focused largely on those arising from the longer-lasting consequences of the pandemic—the inevitable "scarring" of segments of the economy, and their ultimate implications on financial stability and sovereign debt. Meanwhile, the future of US–China trade relations continues to simmer in the background.

- The pandemic has been defined by its uneven impact on industries and businesses, with attendant implications for the workforce and individual economies in general. Public health measures disrupted, in particular, close contact services and severely limited consumption. Even with the pickup in economic activity, some output losses are expected to persist. Unsurprisingly, investor sentiment was dampened by the uncertain outlook, but promising signs of improvement are emerging. With the electronics sector expected to continue its recovery, following the downturn in 2019, capital expenditure is likely to follow. Meanwhile, investment diversion from China to ASEAN represents an upside risk factor for the latter, post-pandemic.

- Rapid digitalization as a result of the pandemic has fundamentally transformed economies by permanently changing the way companies do business, individuals work, and consumers consume. Some segments of the economy will rebound quickly with the turnaround in manufacturing, from innovation in technology, or benefit from pent-up savings and robust domestic demand, while others will remain under pressure and must adapt, move on, or reinvent themselves to survive. Employment prospects will also depend on the recovery of the services sector, which accounts for a large share of all jobs, including in the more vulnerable informal and smaller business segments.

- Trade in the highly export-oriented ASEAN+3 region was adversely affected by the pandemic, just as it had started to recover from the US–China trade conflict, and the outlook is expected to remain complicated. While export contraction troughed in mid-2020, improvements have been uneven across the region and sectors—some have benefitted from pandemic-driven demand, while the more traditional export sectors and goods have continued to lag. Trade in services, a cushion to goods trade in 2019, has been devastated as the pandemic has shut down the travel and tourism industry and other close contact services, and the deployment of vaccines will play a key role in their revival.

- The financial sector has undergone an interesting bifurcation. Markets have posted positive returns—indeed, equity markets have soared— as unprecedented policy stimuli and, more recently, the development of highly efficacious vaccines, have motivated a sharp rally in asset prices. In contrast, concerns are rising as to what corporate and household—and hence bank—balance sheets could reveal about economic scarring when the stimulus policy measures are eventually removed. AMRO staff's top-down stress tests of individual bank balance sheets in ASEAN+3 economies suggest that the majority of banks are well-buffered against large shocks to asset quality.

- Policymaking in the year ahead should be aimed at repairing the damage from the pandemic and allowing them to properly recover to minimize scarring, while safeguarding against new crises. Pandemic policy responses have been unprecedented by any measure, in the form of monetary easing, liquidity injections, massive fiscal stimuli, and regulatory forbearance, to offset the liquidity squeeze and income losses. Consequently, policy space has narrowed, albeit still comfortable for some. Policymakers are, appropriately, thinking about the eventual transition from the myriad of crisis response policies but the decision as to when and how to exit smoothly without triggering any cliff effect to growth and financial stability is a challenging one, and should be effected in a holistic, coordinated manner. Realistically, rebuilding policy space will be feasible only in the medium-term.

"Wear a mask."

Anthony Fauci
Director, US National Institute of Allergy and Infectious Diseases
CNN interview, May 21, 202

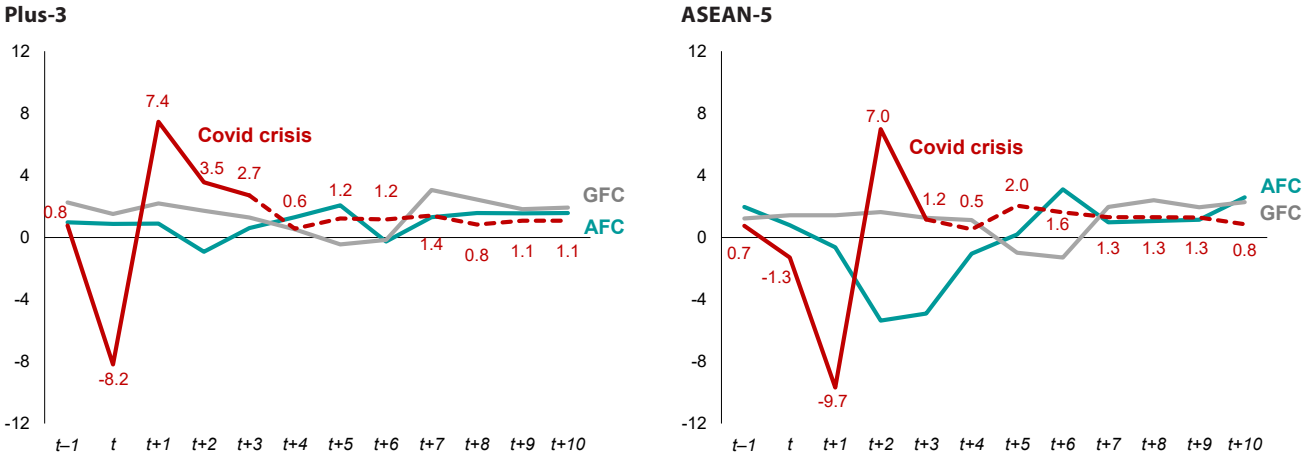
I. The Shape of Things to Come?

No one should underestimate the ability of ASEAN+3 economies to recover from the multifaceted economic crisis caused by the COVID-19 pandemic in 2020. The once-in-a-century event that was the COVID-19 pandemic turned the year into a torrid roller-coaster ride, starting with spread of the deadly COVID-19 virus across the region, and then to the rest of the world, and ending with the rollout of highly efficacious vaccines. In the intervening period, physical lockdowns and business shutdowns devastated entire economies in the first and second quarters of the year, in a crisis characterized by many as being far worse than all previous regional economic and financial crises, and matched or surpassed only by the Great Depression in terms of the depth of the collapse in economic activity and the increase in unemployment (Iacurci 2020, Wheelock 2020). However, in a show of resilience, regional economies rebounded strongly in the second quarter (China) and the third quarter of 2020 (rest of the region), heralding a much quicker and stronger-than-expected V-shaped turnaround in growth, compared to previous crises (Figure 1.1).

At the same time, the risks to recovery cannot be overlooked. AMRO's Global Risk Map (GRiM) has changed markedly from a year ago, yet remains the same. The COVID-19 pandemic was naturally at the core of the 2020 GRiM (AMRO 2020a, 2020b), with the manifestation of key risks surpassing AMRO staff's expectations at the time. Going forward, potential fallout from the "scarring" of the economy and the financial sector, caused by the COVID-19 crisis (hereafter "Covid crisis"), underpins the key risks to the regional outlook (Figure 1.2). The US–China trade and technology tensions, which have been temporarily overshadowed by the pandemic, represent other important risks. This conflict, which is expected to remain heightened under the new US Administration, has major implications for regional trade developments over both the short and medium term (Section II).

The world is still struggling to contain the pandemic, although the successful development of vaccines for the COVID-19 virus has given governments hope, by enabling mass vaccinations. Many, including major advanced economies (AEs), are experiencing subsequent "waves" of infections (Box 1.1), even as new variants of the virus emerged in late-2020 that appear to be more infectious (CDC 2020). Meanwhile, the speed of vaccine deployment has been below

Figure 1.1. Selected ASEAN+3: GDP Growth Profiles during Major Crises
(Percent quarter-over-quarter, seasonally adjusted)



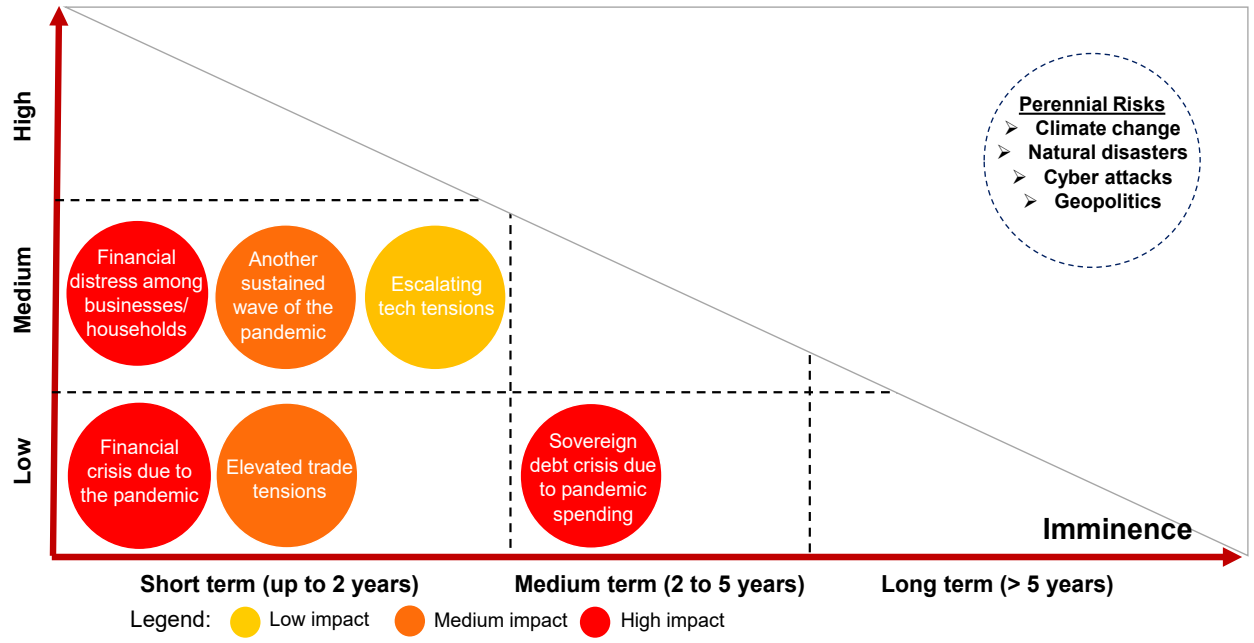
Sources: National authorities via Haver Analytics; and AMRO staff calculations.
Note: AFC = Asian financial crisis; GFC = global financial crisis; Plus-3 = China (including Hong Kong), Japan, and Korea. The first quarter of each crisis (t) comprises Q3 1997 (AFC); Q3 2007 (GFC); Q1 2020 (Covid crisis).

The authors of this chapter are Anne Oeking and Li Lian Ong (co-anchors), Jinho Choi, Edmond Chiang Yong Choo, Diana del Rosario, Marthe Hinojales, Luke Seung Hyun Hong, Catharine Tjing Yiing Kho, Justin Ming Han Lim, Byunghoon Nam, Prashant Pande, Toàn Long Quách, Wei Sun, and Trung Thanh Vu, with input from Laura Grace Gabriella and AMRO country desk economists. Marcus Kheng Tat Tan provided research support; Min Wei provided data management support.

expectations, reflecting mainly logistical and manpower problems; the availability of vaccines in terms of timing, cost, and supply is also an issue for many AEs, and emerging market and developing economies (EMDEs). Encouragingly, lessons learned about the virus, treatments, and containment measures have resulted in more targeted approaches being adopted (Figure 1.3), with a smaller impact on economic activity from the new waves of infections, compared to the early days of the pandemic.

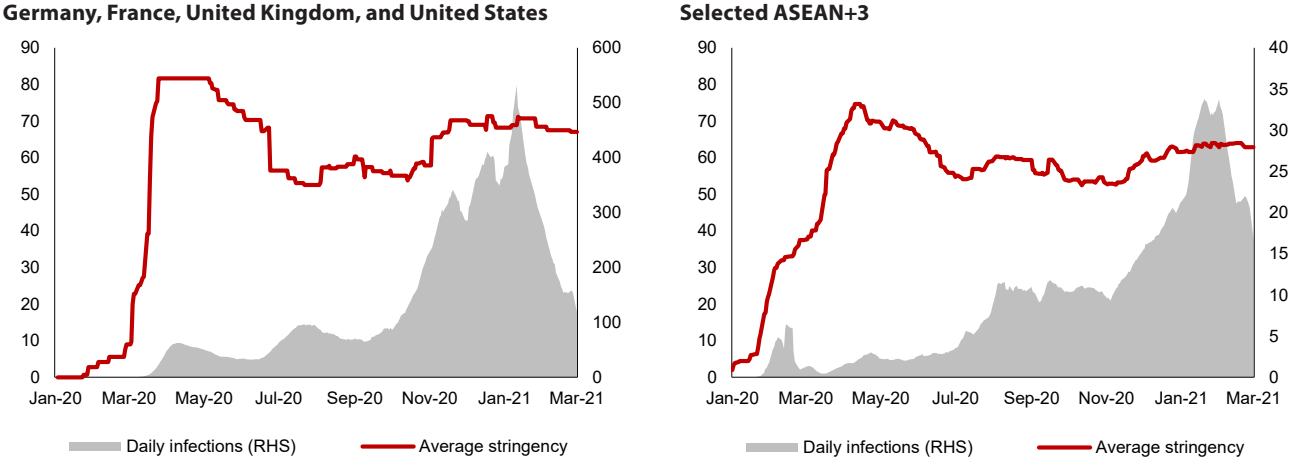
Rising financial distress among businesses and households could potentially lead to a financial crisis. Already, many businesses throughout the region have been permanently shuttered by the pandemic and jobs lost. If recovery is delayed, the destruction in corporate earnings amid tighter credit conditions, as banks become more reluctant to lend, could see even more businesses go into bankruptcy in the face of depressed demand and growing concerns about a protracted global recession. The resulting fallout in the form of mass unemployment would, in turn, affect the ability of individuals to service their personal loans. While AMRO staff assess the likelihood of a major financial crisis to be a tail risk at this juncture, its realization would depend on the extent of the damage wrought on the balance sheets of households and businesses—and, consequently, banks' asset quality and their ability to access funding (Section III)—especially when current regulatory forbearance measures are eventually removed.

Figure 1.2. Global Risk Map, February 2021



Source: AMRO staff estimates.

Figure 1.3. Selected Advanced Economies and ASEAN+3: Average Stringency Index and Daily COVID-19 Infections
(Index; thousands of cases, 7-day moving average)



Sources: Oxford COVID-19 Government Response Tracker; Johns Hopkins University, both via Haver Analytics; and AMRO staff calculations.
Note: The Stringency Index is a composite measure based on nine indicators recording the strictness of 'lockdown style' policies, including school and workplace closures, group sizes, and travel bans. A higher score indicates stricter measures. If policies vary at the subnational level, the index is shown as the response level of the strictest subregion. Selected ASEAN+3 includes China, Hong Kong, Indonesia, Japan, Korea, Malaysia, the Philippines, Singapore, Thailand, and Vietnam. Average stringency denotes the simple average of the stringency indices of these economies.

Beyond the immediate, mostly pandemic-related risks, are the perennial threats. Climate change and natural disasters can have huge economic impact and long-lasting, multigenerational consequences. Several ASEAN+3 economies face very high disaster risks, indeed, among the highest in the world (Day and others 2019). More frequent and severe natural disasters demonstrate the need for adapting and improving preparedness, which could entail huge financial and fiscal costs for governments (AMRO 2018, 2020a). Ever-more sophisticated cyberattacks—as evidenced by the recent large-scale hacking of US government agencies—can disrupt government and business operations and cause enormous security risks and reputational damage. Cybersecurity threats have become even more elevated with many organizations increasingly shifting to remote work arrangements, with potentially weaker cybersecurity systems, in the wake of the pandemic. Lastly, geopolitical risks, beyond the US–China trade and tech tensions, will continue to generate uncertainties, as evidenced by the post-election impasse in the United States, prolonged Brexit negotiations, or tensions in the South China Sea.

Unsurprisingly, the vast majority of ASEAN+3 economies are in the early phase of their respective business cycles. Growth rebounded in the third quarter of 2020, in seasonally-adjusted quarter-over-quarter terms, aided by comprehensive stimulus packages to offset the severe impact of lockdowns through most of the first half of 2020 and the subsequent return of economic activity (Table 1.1), but there is significant slack in labor markets. Brunei and Vietnam remain in mid-cycle from a year ago, thanks to their successful pandemic management; the former has benefited from a large foreign direct investment (FDI) project, while the latter continues to be supported by the rebound in domestic demand and its resilient export sector. Meanwhile, China's early and strong recovery from its lockdown has moved the economy into the mid-cycle phase. Myanmar's economy has been in a downturn since the third quarter of FY2019/20, and activity has remained sluggish amid a protracted virus outbreak; the declaration of a one-year state of emergency by the military in early February 2021 has caused further uncertainty to the economic outlook.

Regional economies are largely concentrated in the slowing phase of the credit cycle, as banks became highly risk averse as a result of the pandemic. Regulatory forbearance and government actions to underwrite credit risk encouraged banks to roll over existing loans and to support small and medium enterprises (SMEs), but demand from businesses and households have been curtailed by the severe impact of the pandemic on their balance sheets, notwithstanding low interest rates. Singapore and Lao PDR remain in the contractionary part of the cycle, similar to a year ago; in contrast, credit in Indonesia and Malaysia is recovering, supported by targeted measures to assist SMEs and stimulate demand, as well as the easing of monetary conditions and macroprudential policies. The Plus-3 economies are in the expansionary phase, with Japan benefiting from massive credit support from both government-affiliated and private financial institutions, while Korea is seeing rising demand for credit among pandemic-hit firms amid easing monetary conditions.

Property assets in the majority of economies have been resilient against the pandemic shock and are moderately valued, consistent with where they were a year ago. More generally, policy support in the form of interest rate cuts for borrowers and regulatory forbearance for banks have forestalled a massive sell-off in the real estate market. The notable changes are China, where high valuations have moderated over the past year, and Korea, where valuations have actually risen from moderate to high, on the back of surging residential property prices despite the pandemic and tightening of macroprudential policy measures. Looking ahead, property prices are likely to remain supported in most economies, underpinned by the search for yield amid a low interest rate environment.

The region's growth is projected to rebound strongly in 2021 and moderate in 2022. AMRO staff's baseline forecast is that regional growth will rise to 6.7 percent, following an estimated contraction of 0.2 percent in 2020, during which only China, Brunei, Lao PDR, Myanmar, and Vietnam posted positive growth (Table 1.2). Growth in 2021 is forecast to range from –2.6 percent in Myanmar to 8.7 percent in China; on a regional basis, aggregate Plus-3 growth is estimated to rise to 7.2 percent, while the ASEAN subregion is anticipated to expand by 4.9 percent. In 2022, ASEAN+3 growth is projected at 4.9 percent.

Outside of the low base effect, the turnaround in manufacturing and exports, alongside supportive economic policies, are expected to drive expansion. The eventual widespread distribution of vaccines will further normalize economic activity and improve labor market conditions. The gradual return of travel and tourism will benefit most economies, especially Cambodia, Japan, Singapore, and Thailand. Brunei's growth in 2021 will largely be insulated from external developments, with a massive FDI project scheduled to commence construction soon, while the Lao PDR economy should benefit from increased electricity generation, better weather conditions and ongoing construction of large-scale infrastructure projects.

However, pandemic- and trade-related risks to growth continue to cast a shadow over staff's baseline forecasts. Analyses of upside and adverse GRiM scenarios suggest that risks to AMRO's baseline growth are tilted to the downside in 2021 and balanced in 2022 (Box 1.2), ranging from 4.1–7.7 percent and 3.5–6.2 percent, respectively. Meanwhile, output gaps in the region are likely to be negative for some time to come, and indeed, the Covid

crisis is expected to shift output trajectories permanently lower for many ASEAN+3 economies, even though growth rates are expected to return to potential over the medium term (Box 1.3).

Even though permanent "scarring" is inevitable in some sectors, policymaking in 2021 should ensure that the economic wounds inflicted by the COVID-19 pandemic in 2020 are allowed to properly scab over and heal, while safeguarding against new crises. Although most regional economies started from a position of strength in their fiscal and external balances, with surpluses or relatively small deficits, the large stimulus packages have stretched the financing and debt servicing capacity of some, with public debt ratios rising sharply (Section IV). In the medium term, unfettered and prolonged fiscal support can elevate fiscal and financial vulnerabilities, the latter potentially manifesting in a sell-off of a country's sovereign debt, with attendant capital outflows. The challenge for policymakers going forward will be to walk the fine line between ensuring continuing support for economic recovery, while strategizing to transition and exit from extraordinary measures in a timely and safe manner and, eventually, to rebuild policy space.

Table 1.1. ASEAN+3: Business, Credit, and Property Valuation Cycles

Credit Cycle		Business Cycle: Early	Mid	Late	Downturn	Property Valuation Cycle
	Recovery	Indonesia				Low
		Malaysia				Moderate
						High
						-
	Expansionary					Low
		Japan	China			Moderate
		Korea				High
						-
	Slowing					Low
		Philippines Thailand	Brunei Vietnam		Myanmar	Moderate
		Hong Kong				High
		Cambodia				-
	Contractionary					Low
		Singapore				Moderate
						High
		Lao PDR				-

Source: AMRO staff estimates.

Table 1.2. ASEAN+3: AMRO Staff Growth Estimates and Projections, 2020–22
(Percent)

Member	2019	AREO 2020		AREO 2021		
		2020 p/	2021 p/	2020 e/	2021 p/	2022 p/
ASEAN+3	**4.6**	**4.2**	**5.0**	**–0.2**	**6.7**	**4.9**
Plus-3	**4.6**	**4.2**	**5.0**	**0.7**	**7.2**	**4.7**
China	6.0	5.3	6.1	2.3	8.7	5.5
Hong Kong	–1.2	0.5	1.8	–6.1	4.8	6.5
Japan	0.3	0.1	0.6	–4.8	2.7	1.8
Korea	2.0	2.0	2.6	–1.0	3.2	3.0
ASEAN	**4.7**	**4.4**	**5.0**	**–3.4**	**4.9**	**5.7**
Brunei	3.9	3.5	2.9	0.9	3.1	4.0
Cambodia	7.1	6.2	6.9	–3.0	4.7	6.1
Indonesia	5.0	4.9	5.2	–2.1	4.9	5.3
Lao PDR	5.5	6.1	6.5	0.5	4.6	4.8
Malaysia	4.3	4.0	4.6	–5.6	5.6	6.2
Myanmar	6.8	6.0	6.9	3.2	–2.6	4.5
Philippines	6.0	6.2	6.6	–9.5	6.9	7.8
Singapore	0.7	0.8	2.6	–5.4	6.0	4.7
Thailand	2.4	1.5	3.2	–6.1	2.3	4.8
Vietnam	7.0	6.6	6.8	2.9	7.0	6.8

Sources: National authorities via CEIC and Haver Analytics; and AMRO staff projections.
Note: e/ refers to AMRO staff estimates and p/ refers to AMRO staff projections. Myanmar's growth numbers are based on its fiscal year, from October 1 to September 30. AREO 2020 = *ASEAN+3 Regional Economic Outlook 2020*.

Box 1.1:

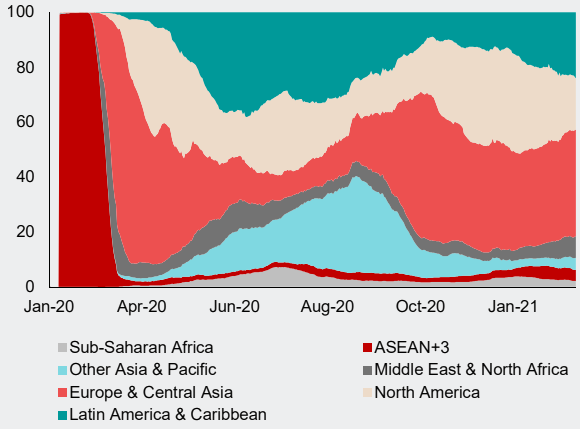
The COVID-19 Pandemic One Year Later

A year after the World Health Organization declared the COVID-19 outbreak a pandemic on March 11, 2020, the virus continues to spread rapidly across the world. More than 100 million cases have been confirmed worldwide, including more than 2.5 million confirmed deaths. The pandemic has impacted almost every corner of the globe, with waves of outbreaks moving from one region to the next and back, and new variants sprouting recently (Figure 1.1.1). Daily new cases across the world increased from their April 2020 peak of about 90,000 average cases to more than 750,000 average cases in December, and numbers remain elevated (Figure 1.1.2). Although some of the increases can be traced to better testing regimes, many economies have been experiencing severe new waves of infections.

The pandemic has lasted longer and with greater intensity than expected early on, with new waves recurring. Strict social distancing measures have been largely successful in containing the highly transmissible virus, but occasional flareups have occurred even in the most guarded places. In many parts of the world, initial optimism about short-lived restrictions had to be revisited and restrictions eventually lengthened or re-imposed. With strong resurgences and new, more infectious mutations of the virus, it has become clear that until vaccines are readily available and widely taken up, continuing vigilance will be critical. While several vaccines have been developed, tested, and approved, and vaccination programs have begun across the world (Figure 1.1.3) with varying degrees of progress (Figure 1.1.4), achieving herd immunity is expected to take some time.

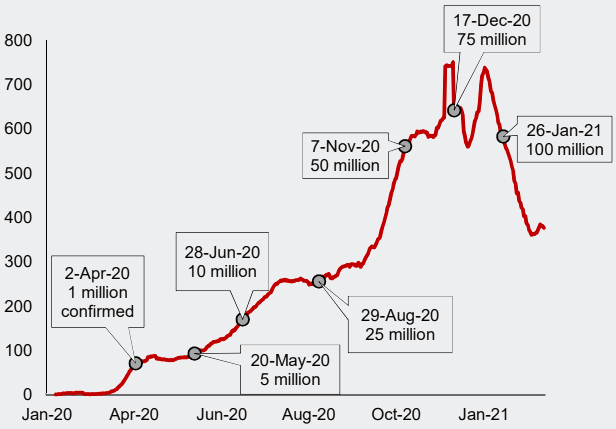
Although the ASEAN+3 region was infected first, the overall caseload has been significantly lower than in other parts of the world as a result of relatively successful containment measures. Several regional economies took decisive measures early on and have so far been shielded from major outbreaks, namely, Brunei, Cambodia, Lao PDR, and Vietnam (Figure 1.1.5). That said, the region has not been spared, and several economies have experienced more than one wave already. Other economies went for months without any significant outbreak before infections eventually erupted—cases in Myanmar did not pick up until the end of August 2020; and after a smaller wave in March, Thailand recorded its largest surge only since December 2020; while Malaysia has been battling a second wave since September 2020. Simultaneous outbreaks across several economies in the region have been observed at different points in time throughout 2020 (Figure 1.1.6), and cases have continued to rise, particularly so toward the end of 2020 (Oeking 2021).

Figure 1.1.1. World: Daily New Cases by Region
(Percentage share of total cases, 7-day average)



Sources: Johns Hopkins University via Haver Analytics; and AMRO staff calculations.

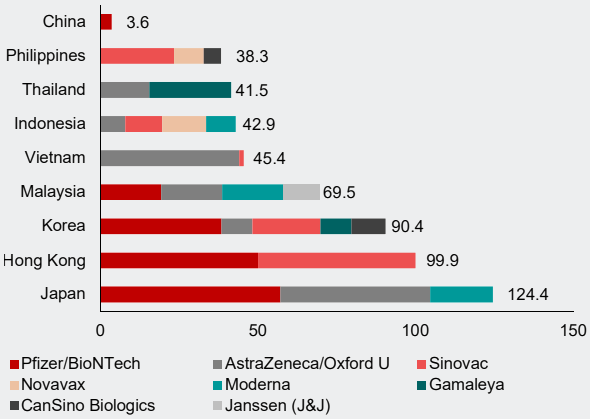
Figure 1.1.2. World: Daily New Cases
(Thousands of persons, 7-day average)



Sources: Johns Hopkins University via Haver Analytics; and AMRO staff calculations.

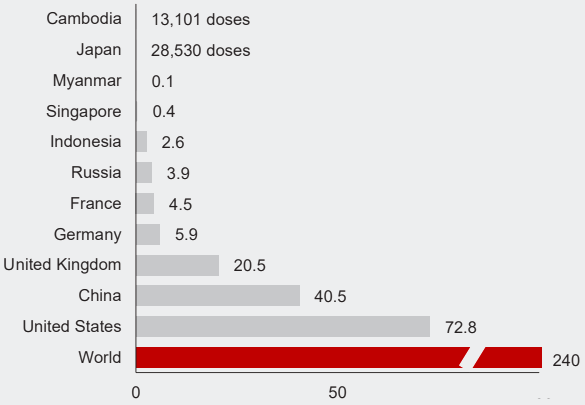
The experience of the past year has shown that stringent containment measures early on and adhering to the learning curve have proven to be effective. Domestically, lockdowns, gradual reopening thereafter, and continuing vigilance through masking up, maintaining physical distancing, avoiding crowds and superspreader events, extensive testing and contact tracing have been instrumental in controlling the spread of the virus, while border closures, testing, and quarantine rules for travelers have helped to isolate imported cases. On a positive note, the impact on mortality might have been more contained as the pandemic has progressed, notwithstanding the sharp rise in recent caseloads in some countries, given the buildup in knowledge about treatments, therapeutic drugs, and better-prepared healthcare systems. Similarly, physical restrictions have become more strategic and targeted, lessening the economic fallout from subsequent waves of infections.

Figure 1.1.3. ASEAN+3: Confirmed Vaccine Contracts
(Percent of population covered)



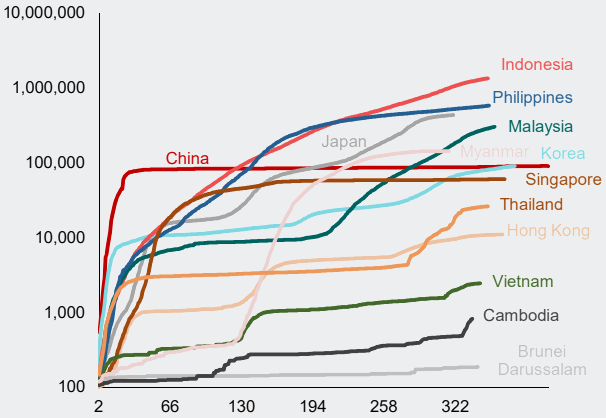
Sources: Duke Global Health Innovation Center, Launch and Scale Speedometer; Haver Analytics; and AMRO staff calculations.
Note: Latest available data as of February 15, 2021. The contracts comprise deals that have been signed, finalized, and publicly announced; the data exclude deals under negotiation as well as confirmed deals with unknown amounts, and procurement under COVAX. China data exclude purchases of own vaccine candidates for domestic use as purchase deals have not been publicly announced.

Figure 1.1.4. World: Vaccine Doses Administered by Country
(Millions of doses)



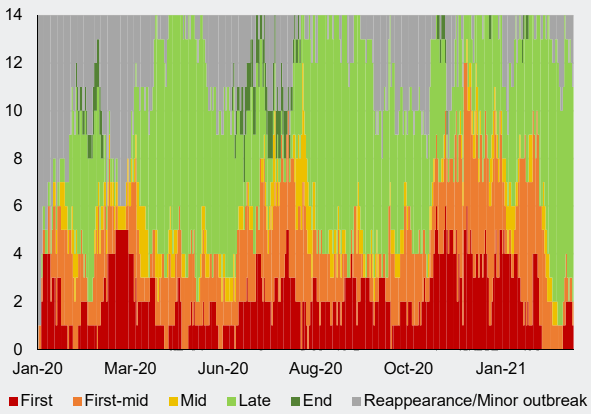
Source: Our World in Data via Haver Analytics.

Figure 1.1.5. ASEAN+3: Confirmed Cases
(Days after 100th confirmed case; cases in log scale)



Sources: Johns Hopkins University via Haver Analytics; and AMRO staff calculations.

Figure 1.1.6. ASEAN+3: Stages of the Covid Cycle and Waves of Infection
(Number of economies; 3-day moving average)



Sources: Johns Hopkins University via Haver Analytics; and AMRO staff calculations.
Note: Based on Hinojales, Oeking, and Ong (2020); see Oeking (2021) for more details.

The author of this box is Anne Oeking.

Box 1.2:

A Wary Recovery

Baseline projections by AMRO staff are that economic growth in the region will rebound in 2021 and sustained into 2022. The pace and strength of this recovery is, however, far from certain. While 2021 began with optimism surrounding the successful development, approval, and deployment of COVID-19 vaccines, the world has also been confronted by mutating and rapidly spreading new strains of the virus. On the domestic front, the eventual removal of unprecedented fiscal, monetary and financial stimulus measures is expected to pose additional headwinds to growth. The region's recovery will be highly contingent on the pace of vaccination programs, strength of external demand, and extent of economic scarring induced by the pandemic. Given the highly uncertain operating environment, AMRO staff have simulated both upside and downside scenarios, to assess the potential impact of the risk factors presented in the Global Risk Map for AMRO's baseline projections for 2021 and 2022 (Figure 1.2.1). [1/ 2/]

Economic reopening enabled by herd immunity (Table 1.2.1). Output losses from the pandemic are likely to be permanent across the ASEAN+3, although growth should eventually surpass pre-pandemic rates and return to potential. But the full return to broad-based economic activity will only be possible once the pandemic has been fully contained, likely when herd immunity has been achieved. Under all scenarios, it is assumed that full removal of travel restrictions and social distancing requirements will be undertaken only upon the achievement of herd immunity in individual economies, that is, when vaccination of a substantial part of the population has been achieved (WHO 2020). The pace of vaccination programs will, therefore, be a pivotal factor in the recovery of domestic demand and tourism.

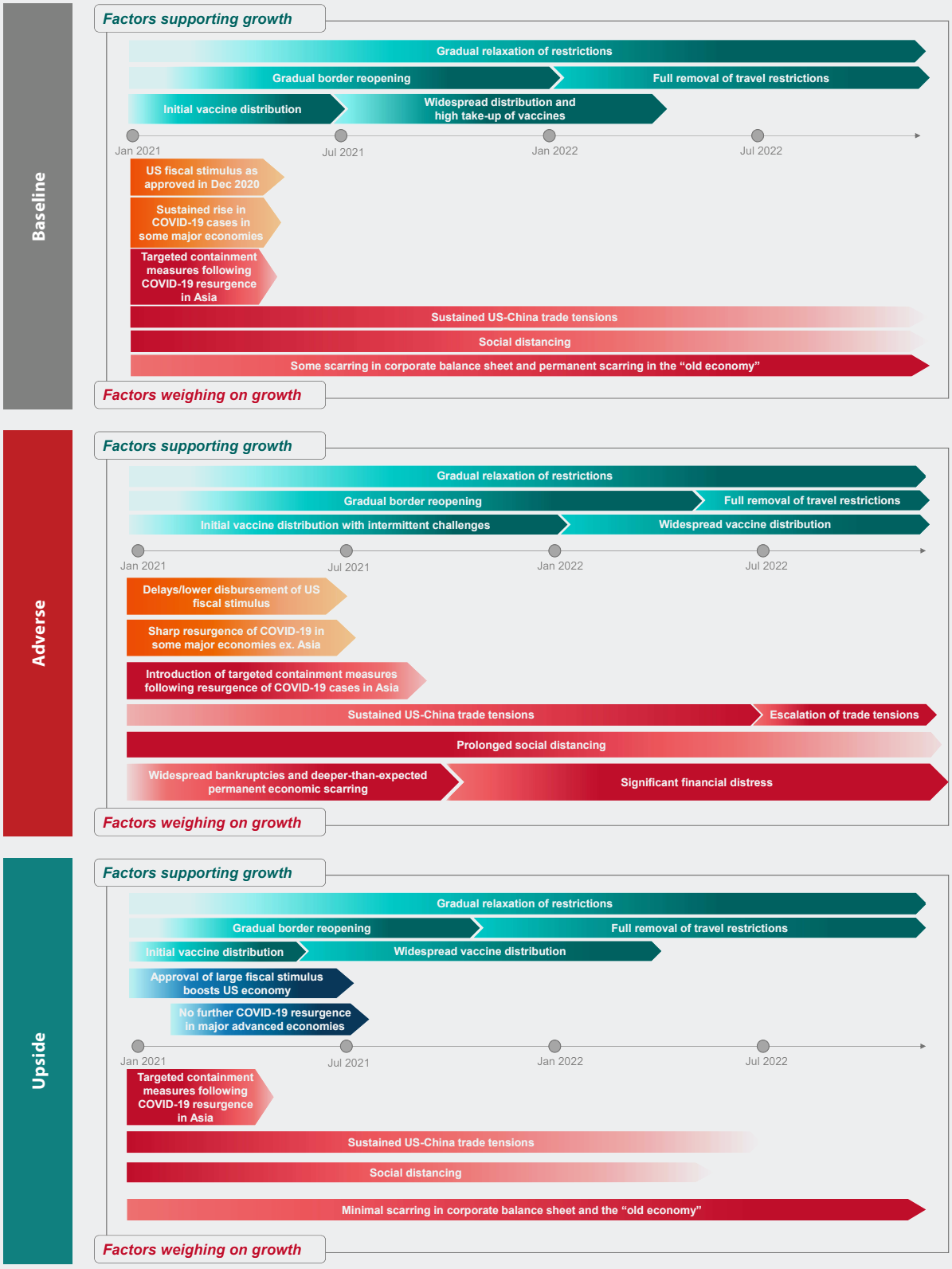
Recovery in external demand and global trade (Table 1.2.2). Global trade has been improving since its trough in Q2 2020, following the first global wave of the pandemic in early 2020. However, the fluidity of developments in the United States—the ASEAN+3 region's largest trading partner, accounting for about 15 percent of gross exports—represents a significant source of uncertainty for the region. The latest, and any forthcoming additional, US fiscal stimuli under the Biden Administration, and the extent to which they lift the US economy and its trading partners, will affect demand for regional exports. At the same time, any change to the state of existing US–China trade and tech tensions under the new administration is also expected to affect exports in the short term.

Balance sheet weakness and economic scarring (Table 1.2.3). The steep and protracted decline in income in 2020 has significantly weakened some corporate and household balance sheets in certain sectors. In particular, the travel industry and close contact services have been most adversely affected. With travel restrictions and other domestic containment measures in place, these sectors are facing increasing financial pressure, with possible liquidity and solvency issues, especially once policy support is removed. Labor market weaknesses, amid structural shifts in the economy, would further exacerbate these scarring effects, all with potential adverse implications for financial stability.

1/ Simulations are run using the Oxford Economics' Global Economic Model (GEM), which covers 80 economies in detail and six regional blocks, including emerging market economies (EMEs) and Asia-Pacific, interlinked through trade, prices, exchange rates, and interest rates. Essentially an error-correction model, the GEM estimates how quickly a dependent variable returns to its equilibrium state after a shock to its independent variables. Hence, the model approximates both the short- and long-term effects of variables. In the short term, the model exhibits "Keynesian" features: sticky factor prices and aggregate demand-determined output. In the long term, prices adjust fully and the equilibrium is determined by supply factors such as productivity, labor, and capital; rising growth, by boosting demand, will lead to higher prices. For this exercise, only the short-term estimates are produced and discussed. The extended model covers all ASEAN+3 economies; the underlying dataset is updated every month.

2/ Similar to the conduct of stress tests, scenario analysis estimates exposure to specific events, but not the probability of the event occurring. A comprehensive risk assessment combines scenario analysis with other quantitative and qualitative tools (Čihák and others 2019).

Figure 1.2.1. ASEAN+3: Summary of Key Assumptions for Growth Scenarios



Source: AMRO staff estimates

Table 1.2.1. ASEAN+3: Assumptions on Vaccinations

Scenarios	Assumptions
Baseline	• Vaccination programs go according to plan. • Major global and regional economies successfully vaccinate substantial proportion of their population by mid-2021. • Major global and regional economies fully reopen by end-2021.
Approach	• Vaccination programs are delayed due to logistical challenges, supply constraints and other unforeseen complications, including lower-than-expected efficacy against COVID-19 or new variants of the coronavirus. • Continued resurgences of COVID-19 outbreaks in 2021 prompt more rounds of (partial) lockdowns. • Inoculation of targeted populations is only achieved in early 2022. • Economies are only able to fully reopen by mid-2022.
Upside	• Vaccination programs receive high public take-up, and are rolled out smoothly and quickly. • Targeted populations are fully inoculated before the end of the second quarter of 2021. • Major global and regional economies fully reopen by the fourth quarter of 2021.

Source: AMRO staff estimates.
Note: Vaccination strategies and capabilities vary widely across ASEAN+3 economies, particularly in terms of access to vaccines and population size and spread. As such, the implementation of vaccination programs is not explicitly modelled but rather, assumed solely to approximate the timing of more extensive economic reopening, including the removal of travel restrictions and social distancing requirements.

Table 1.2.2. ASEAN+3: Assumptions on US Fiscal Policy and Trade Tensions

Scenarios	Assumptions
Baseline	• US fiscal stimulus amounting to USD 908 billion, approved by Congress on December 21, 2020, is just a "downpayment," with additional stimuli to come under a Biden administration that has secured control in both the House of Representatives and the Senate. • The US–China trade and tech tension status quo is maintained, with no escalation.
Approach	• Lower and delayed amounts of US fiscal assistance are disbursed due to administrative challenges. • Trade and tech tensions escalate, and the United States increases tariffs on Chinese goods by 10 percent toward end-2021, as posturing for US mid-term elections in 2022 begins. In response, China raises tariffs on US goods by the same percentage.
Upside	• Additional US fiscal stimulus amounting to multiples of the December 2020 package. • No further escalation in trade and tech tensions, with some signaling on future reduction in tariffs.

Source: AMRO staff estimates.

Table 1.2.3. ASEAN+3: Assumptions on Household and Corporate Balance Sheets

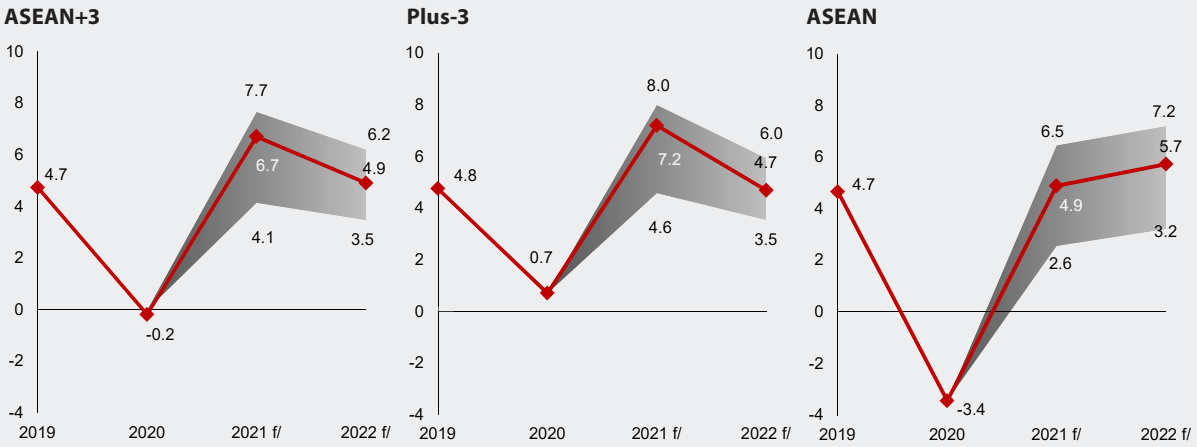
Scenarios	Assumptions
Baseline	• Weak corporate balance sheets, particularly in sectors most affected by the pandemic. The impact is contained, with minor spillovers into other sectors of the economy.
Approach	• Corporate balance sheets are significantly weakened by the pandemic, leading to widespread corporate defaults. • Households face lower income, further straining their own balance sheets. • Significant financial distress by end-2021, with weakness in the financial sector and subdued investor and consumer sentiments weighing further on the economy.
Upside	• Scarring in corporate balance sheets is limited and manageable.

Source: AMRO staff estimates.

Overall, risks to baseline growth are tilted to the downside in 2021, and finely balanced in 2022. Under the baseline, the ASEAN+3 region is expected to expand by 6.7 percent in 2021 and 4.9 percent in 2022. In the event of the materialization of all risks under the adverse scenario, regional growth could be as weak as 4.1 percent in 2021 and 3.5 percent in 2022. Conversely, growth could be lifted to 7.7 and 6.2 percent in 2021 and 2022, respectively, under the upside scenario (Figure 1.2.2). The potential for higher growth is projected to be mainly driven by stronger-than-expected travel and tourism, and other service activities across the region. Growth in ASEAN economies will also benefit from stronger-than-expected country-specific factors, such as new investment policies that would gain greater traction with an earlier containment of the pandemic and subsequent economic reopening.

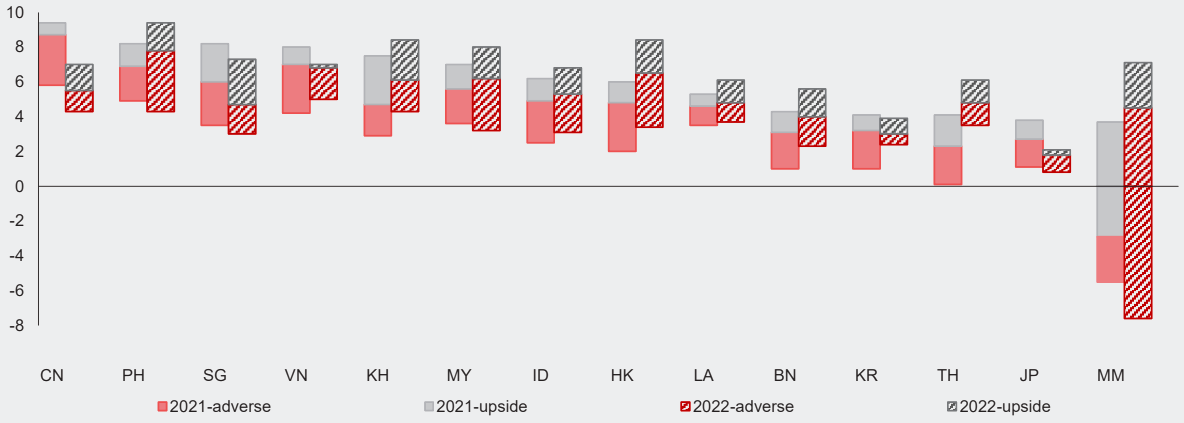
Given the diverse economic structures and levels of development across the ASEAN+3 region, the impact under the various scenarios are expected to affect each economy differently. The upside and downside growth estimates for each economy are therefore, among other things, reflective of factors such as their degree of economic openness, success in containing the pandemic, financial sector development, and structural policies. The wide band of uncertainty surrounding the baseline forecasts underscores the many lingering and evolving risks in the near-term operating environment (Figure 1.2.3).[3/] The projections are estimates for the impact of selected key risks, which are likely to affect growth prospects in the next two years (Figure 1.2.4). However, the risk factors are by no means exhaustive. Growth performance for each economy remains subject to the materialization of other unidentified or idiosyncratic upside and downside risks, as well as respective policy measures.

Figure 1.2.2. ASEAN+3: GDP Growth Forecasts under AMRO Staff Scenarios
(Percent year-over-year)



Sources: National authorities via Haver Analytics; and AMRO staff estimates.
Note: f/ denotes forecast.

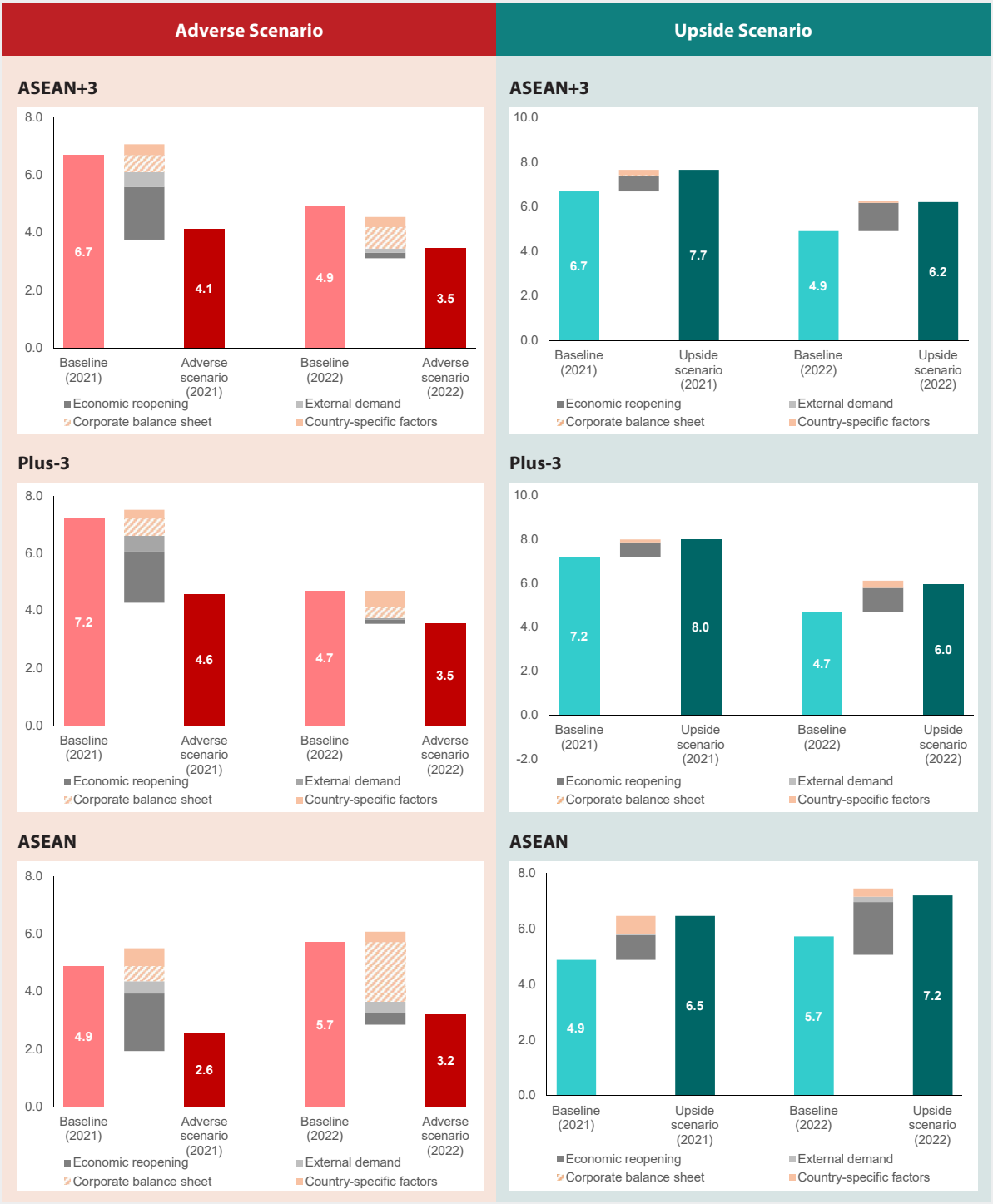
Figure 1.2.3. ASEAN+3: Projected GDP Growth Ranges, 2021 and 2022
(Percent year-over-year)



Sources: Oxford Economics; and AMRO staff estimates.
Note: BN = Brunei Darussalam; CN = China; HK = Hong Kong; ID = Indonesia; JP = Japan; KH = Cambodia; KR = Korea; LA = Lao PDR; MY = Malaysia; MM = Myanmar; PH = Philippines; SG = Singapore; TH = Thailand; and VN = Vietnam.

3/ The growth ranges should not be construed as AMRO's official forecasts. Each economy's near-term outlook and policy responses are discussed in greater detail in the Annex.

Figure 1.2.4. ASEAN+3: Contributions to GDP Growth by Key Risk Factors under AMRO Staff Scenarios
(Percent year-over-year; percentage point contribution)



Sources: Oxford Economics; and AMRO staff estimates.
Note: The model-generated impact of the selected key risk factors is augmented with judgment by AMRO staff to incorporate country-specific factors into the growth range of each economy. As such, the sum of the factors may not add up to the differences between the baseline and scenario projections because of offsetting risk factors.
Plus 3 = China (including Hong Kong), Japan, Korea.

The author of this box is Catharine Tjing Yiing Kho.

Box 1.3:

Economic Loss in the Wake of the Pandemic

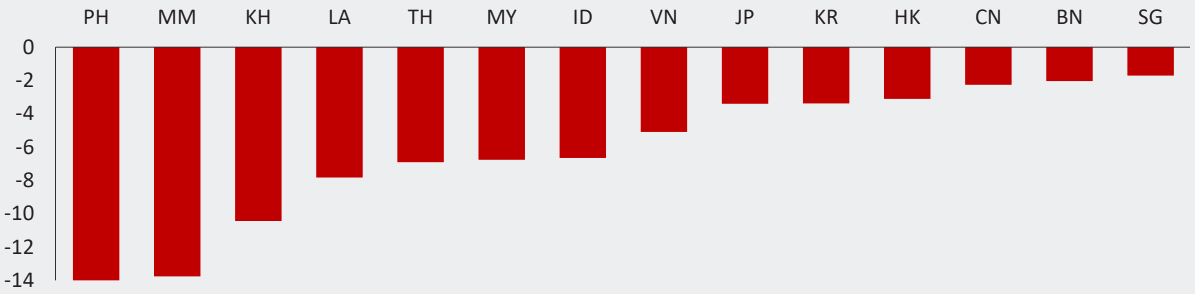
The majority of ASEAN+3 economies are expected to surpass their pre-pandemic growth rates over the next two years, as they recover from one of the most severe and complex shocks in decades. But the loss from COVID-19 lockdowns and social distancing measures will linger across the region. Swift and progressive policy responses have been aiding the recovery, but output is forecast to remain lower than corresponding levels had they grown at the same rate as before the pandemic. Output gaps are estimated to range from 2 percent for Brunei, China, and Singapore, to as large as 10–14 percent for Cambodia, Myanmar and the Philippines (Figure 1.3.1). Cambodia and the Philippines rely more heavily on travel and tourism, which are likely to remain constrained by the pandemic, while Myanmar faces dimmer prospects with the declaration of the state of emergency. Across all regional economies, output gaps are forecast to remain negative through 2022 (Figure 1.3.2).

Past economic and financial crises have been shown to result in persistent output losses. Empirical evidence suggests that postcrises economic recoveries only lead to a reversion to long-term growth rates, which have been insufficient to offset output losses during crises and return to precrisis trend output (Cerra and Saxena 2008). Indeed, in most cases, crises shift output trajectories permanently lower. The Asian financial crisis (AFC) knocked the ASEAN-5 and Plus-3 economies away from their then GDP trajectories, and the global financial crisis (GFC) a decade later widened that gap (Ong and Choo 2020). The only exception is the Philippines, which was able to revert to its pre-AFC trend output 14 years after the shock, having been less affected by the GFC and with domestic demand picking up significantly in subsequent years.

The COVID-19 health and economic crisis, although different in nature from past crises, is expected to likewise lead to a long-term shift in the output paths of many ASEAN+3 economies. The pandemic has highlighted the vulnerabilities of global supply chains, notably, the supply of essential products, and has exposed the pitfalls of weak governance and public health infrastructures, while it has also accelerated digitalization. At the same time, the severe and unprecedented disruptions to economic activity and trade are forcing a rethink of the present growth model with its emphasis on efficiency and cost minimization, to one that places greater emphasis on resilience and sustainability.

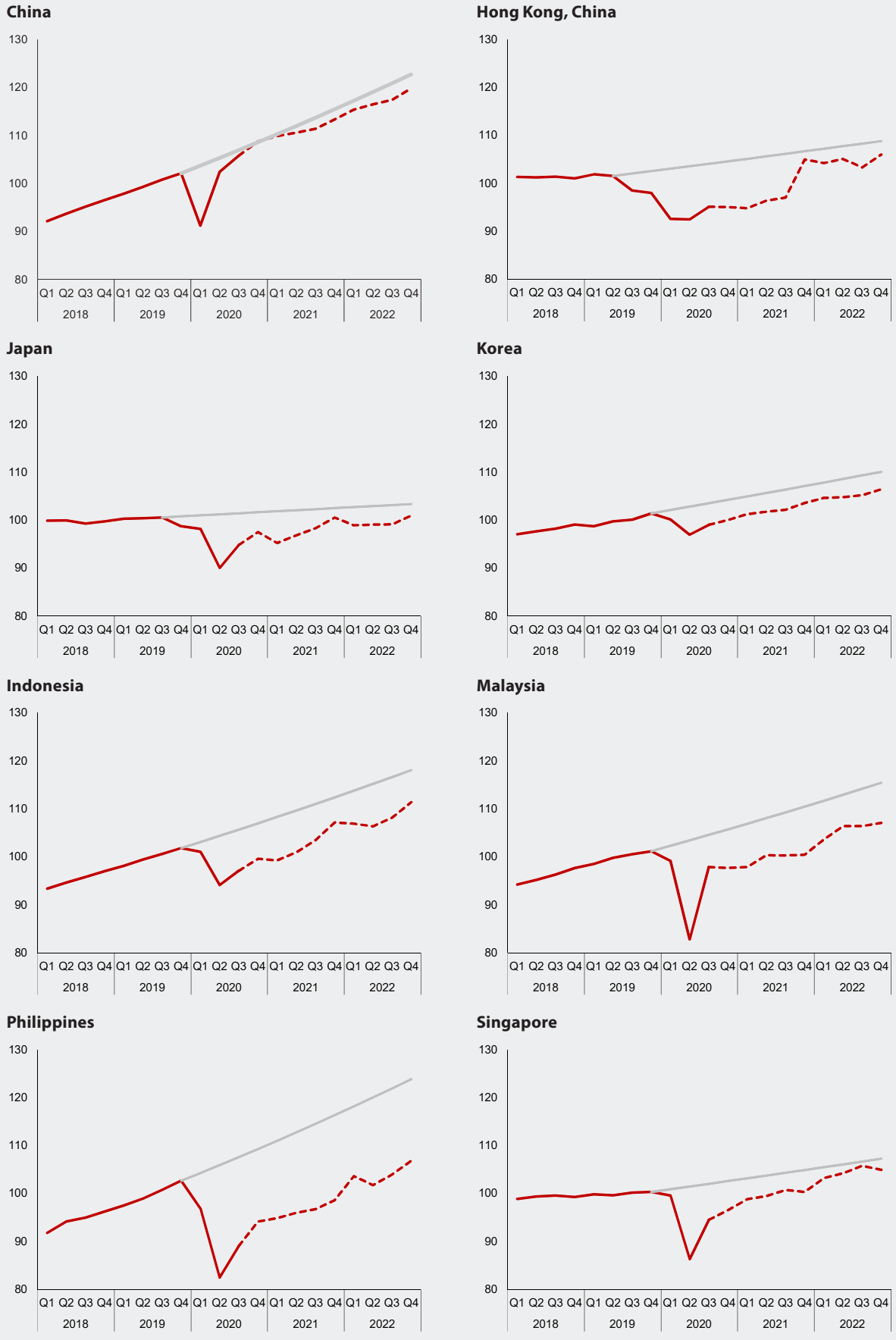
Against this backdrop, economies that are well-positioned in the current wave of digitalization, or are able to adapt quickly owing to earlier investments in technology, and that pursue governance reforms to improve public service delivery, may be able to emerge stronger from the pandemic crisis. At the same time, economies' ability to seize emerging opportunities and adjust to a new normal will form an essential part of the recovery (see Chapter 2). To this end, ASEAN+3 economies have been stepping up efforts to further facilitate digitalization, diversify export markets and import sources, enhance inclusivity, support the transition to a green economy, and attract foreign investments by improving the business environment, to name a few.

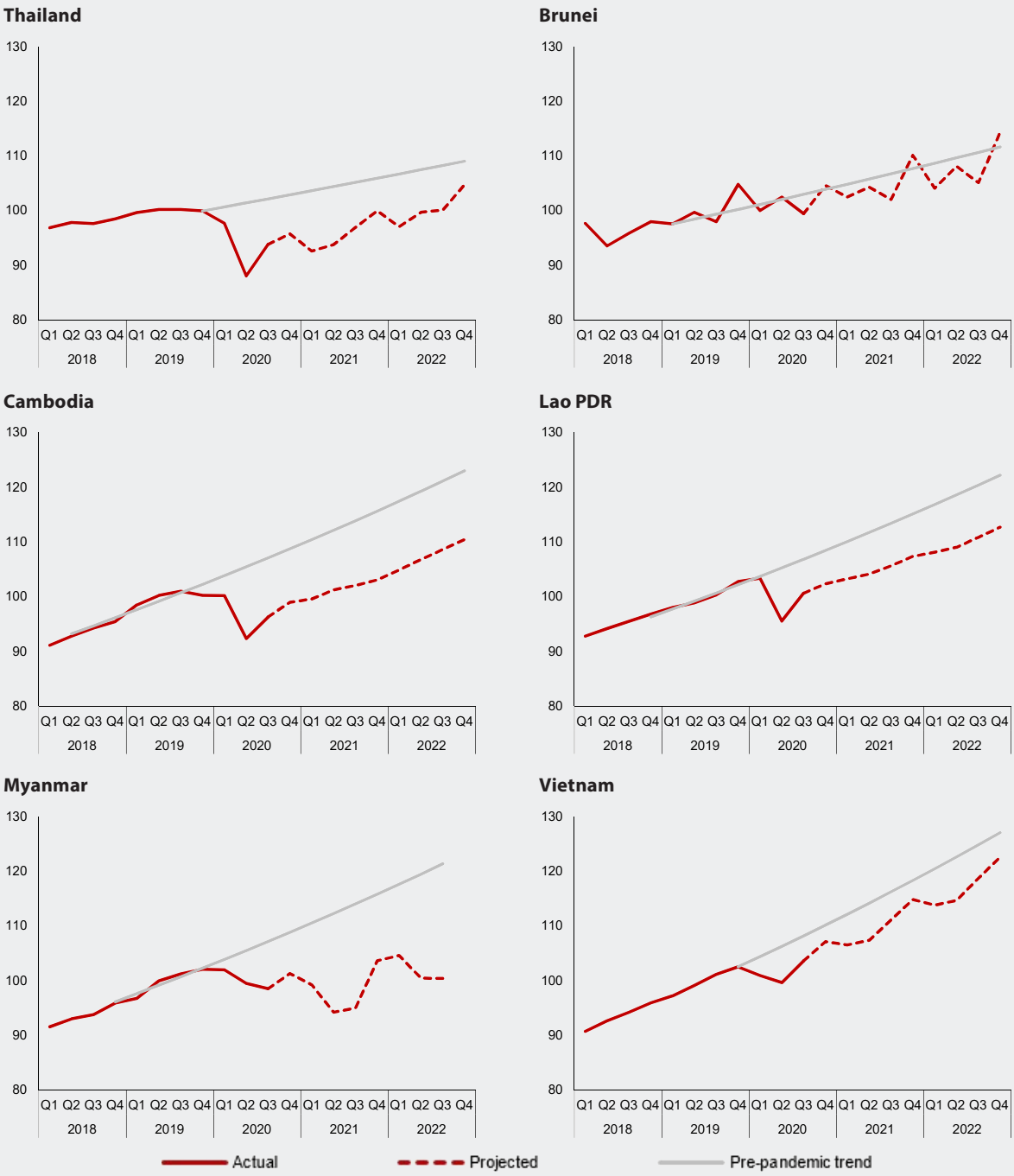
Figure 1.3.1. ASEAN+3: Projected Deviations of Real GDP Levels from Trend by 2022
(Percent)



Sources: National authorities via Haver Analytics; and AMRO staff estimates.
Note: Estimates are based on exhibits in Figure 1.3.2. BN = Brunei Darussalam; CN = China; HK = Hong Kong; ID = Indonesia; JP = Japan; KH = Cambodia; KR = Korea; LA = Lao PDR; MY = Malaysia; MM = Myanmar; PH = Philippines; SG = Singapore; TH = Thailand; and VN = Vietnam.

Figure 1.3.2. ASEAN+3: Actual and Projected Real GDP Levels against Pre-Pandemic Trends
(Index, 2019=100)





Sources: National authorities via Haver Analytics; and AMRO staff calculations and estimates.
Note: The pre-pandemic trend is based on average 2017–19 GDP growth rates after taking the logarithmic transformation of real GDP. The 2021–22 growth path for each economy is based on AMRO's quarterly projections.

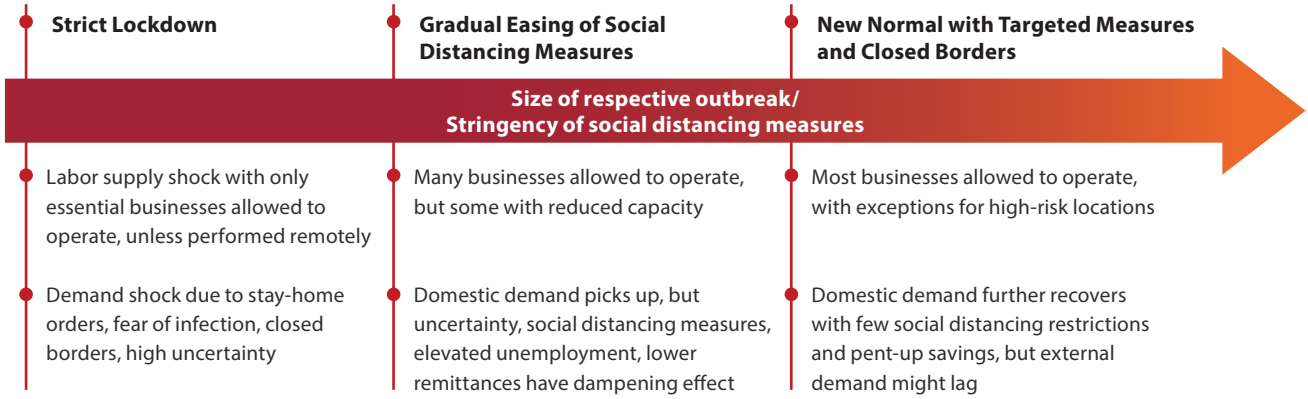
The author of this box is Diana del Rosario, with contributions from AMRO desk economists.

II. Uneven Impact, Uncertain Recovery

The COVID-19 pandemic disrupted the global economy throughout 2020, and has had a more far-reaching and lasting impact than many had expected during the initial stages. Economic performance in ASEAN+3 member economies during the pandemic has been determined by several factors. First and foremost, the size of the infection outbreaks and how governments have addressed them have been crucial in affecting the supply and demand of goods and services across regional economies (Figure 1.4). Relatedly, business and consumer confidence has been influenced by perceived risks of further infection waves.

The growth drivers for each economy have been key. Reliance on domestic versus external demand, via exposure to and reliance on international trade, tourism and remittances, has implied different impacts and recovery speeds. The composition and relative importance of economic sectors also play a central role. Some sectors have benefited from pandemic-induced demand or have been able to switch to digital operations, while those that require travel or face-to-face interaction—and account for a large share of employment in many regional economies—have been devastated. Finally, policy stimuli targeted at supporting businesses and consumers have been critical in keeping economies afloat.

Figure 1.4. Schematic: Stringency of Social Distancing Measures



Source: AMRO staff estimates.

A Gradual Rebound in the Real Economy

Domestic demand and production across the region were severely hit when authorities first rolled out containment measures to keep infections under control. The early outbreak and lockdowns in China caused total retail sales to plunge in the first quarter of 2020, and the rest of the region followed suit as most economies suffered their worst deterioration in the second quarter of 2020, at the height of the first global wave of the pandemic (Figure 1.5). The economic downturn was observed earlier in Hong Kong as a result of the global economic slowdown, escalating US–China trade tensions, as well as domestic social incidents. While retail sales have been improving since their troughs, they have yet to return to pre-pandemic levels, in line with consumer confidence (Figure 1.6).

In contrast, the online sales component has thrived as movement restrictions saw many consumers purchase their goods and services online. For example, the overall online traffic of major e-commerce platforms in Singapore saw a 23 percent increase in the first six months in 2020, while the percentage of Japanese households ordering goods and services over the internet was 8.7 percent higher in November 2020 compared to a year earlier. Besides essential goods, more time spent at home has led to increased purchases of furniture, electronics, and entertainment via the internet, which were also reflected in trade patterns. But, despite the sharp increase and favourable growth prospects in e-commerce, the share of sales has remained dwarfed by retail sales from physical stores (Figure 1.7).

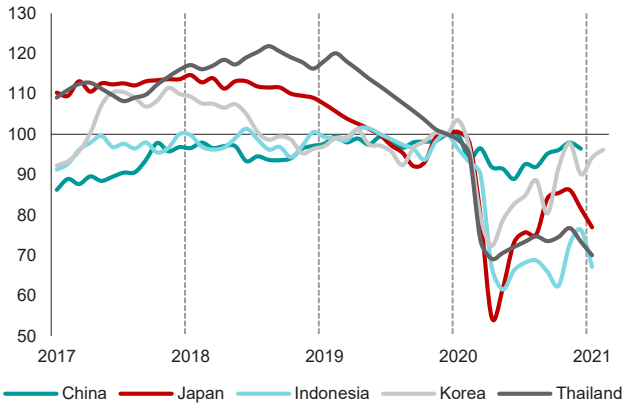
The overall slowdown in private consumption and investment has indeed been the main driver of falling expenditure across most regional economies. Economies such as Hong Kong, Japan, Malaysia, the Philippines, Thailand, and Singapore have been particularly hard hit (Figure 1.8). Its weakness has become less pronounced in the latter part of 2020 as economic activity resumed (Figure 1.9). Sluggish demand has been affected by not only income losses and low confidence (Box 1.4), but also the unique circumstances of the pandemic which have strongly impacted the ability to consume. Indeed, consumption fell while savings increased in several regional economies. In Japan, the household savings rate rose sharply in the second quarter of 2020, even as disposable household income increased on the back of government fiscal support, and has not yet returned to pre-pandemic levels (Figure 1.10).

Figure 1.5. Selected ASEAN+3: Retail Sales
(Percent year-over-year; 3-month moving average)

Economy	2017 Jan – Dec	2018 Jan – Dec	2019 Jan – Dec	2020 Jan – Dec	2021 Jan – Feb	Latest change from previous year
China						3.2
Hong Kong						–9.0
Indonesia						–16.6
Japan						–0.7
Korea						–0.5
Malaysia						–1.9
Philippines						–11.5
Singapore						–4.6
Thailand						–3.8
Vietnam						6.1

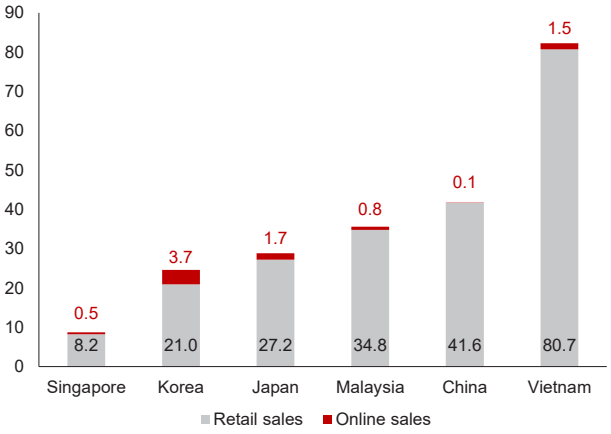
Sources: National authorities, via Haver Analytics; and AMRO staff calculations.
Note: The data are calculated based on local currency values. Quarterly data for Malaysia are linearly interpolated.

Figure 1.6. Selected ASEAN+3: Consumer Confidence
(Index, December 2019 = 100)



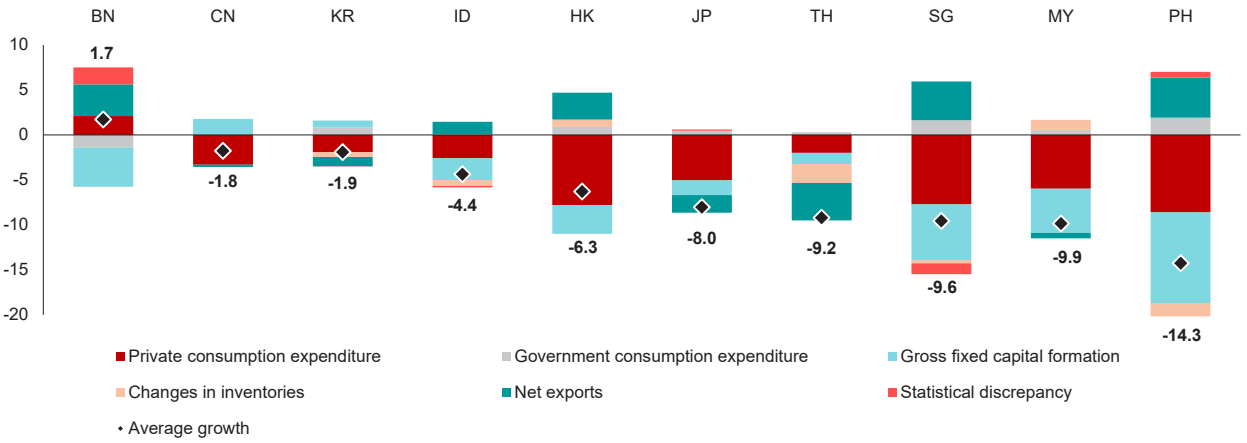
Sources: National authorities via Haver Analytics; and AMRO staff calculations.

Figure 1.7. Selected ASEAN+3: Retail and Online Sales, 2019
(Percent of GDP)



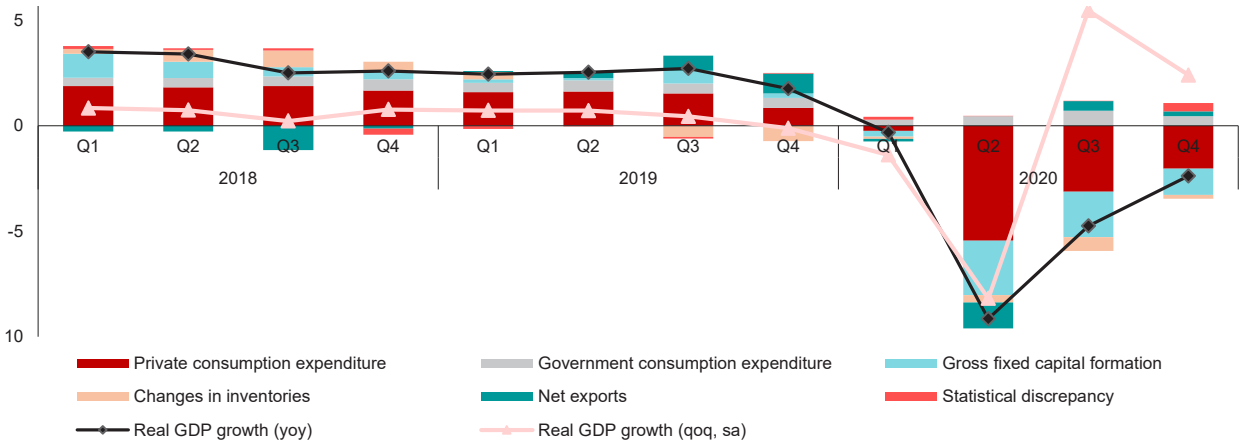
Sources: National authorities via Haver Analytics; and AMRO staff calculations.
Note: Retail sales here exclude online sales.

Figure 1.8. Selected ASEAN+3: Real GDP Growth by Expenditure, Q2 –Q3 2020 Average
(Percentage points, year-over-year)



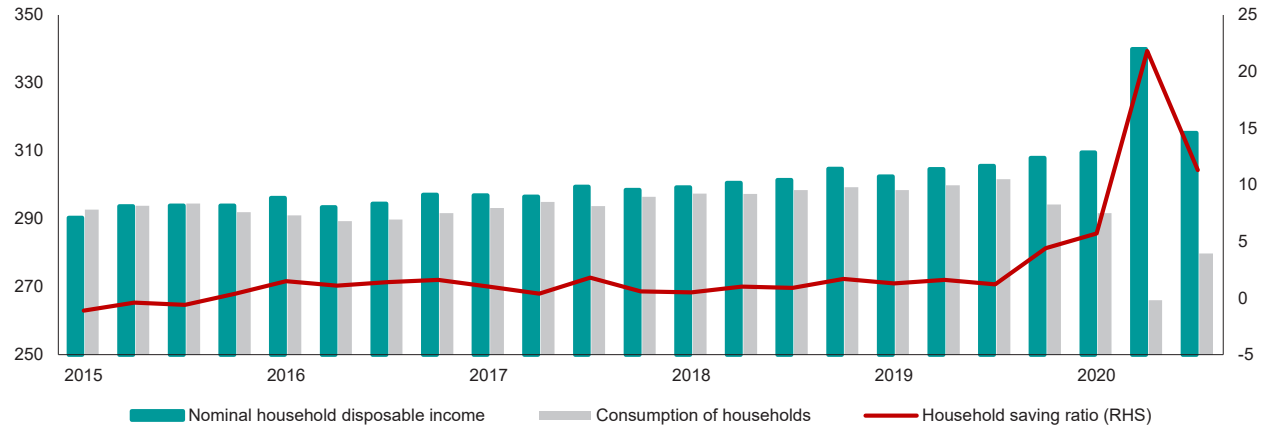
Sources: National authorities via Haver Analytics; Wind; and AMRO staff calculations.
Note: BN = Brunei Darussalam; CN = China; HK = Hong Kong; ID = Indonesia; JP = Japan; KR = Korea; MY = Malaysia; PH = Philippines; SG = Singapore; and TH = Thailand. The data refer to Q1 and Q2 for China. Private consumption for China here refers to both private and government consumption, given that there is no breakdown released by National Bureau of Statistics of China.

Figure 1.9. Selected ASEAN+3: Aggregate Real GDP Growth by Expenditure
(Percentage points, year-over-year; quarter-over-quarter, seasonally adjusted)



Sources: National authorities via Haver Analytics; and AMRO staff calculations.
Note: Includes Brunei, Hong Kong, Indonesia, Japan, Korea, Malaysia, the Philippines, Singapore and Thailand; data are unavailable for Cambodia, China, Lao PDR, Myanmar and Vietnam. Q4 2020 data exclude Brunei.

Figure 1.10. Japan: Household Income, Consumption, and Savings Ratio
(Trillions of Japanese yen; percent of household disposable income)

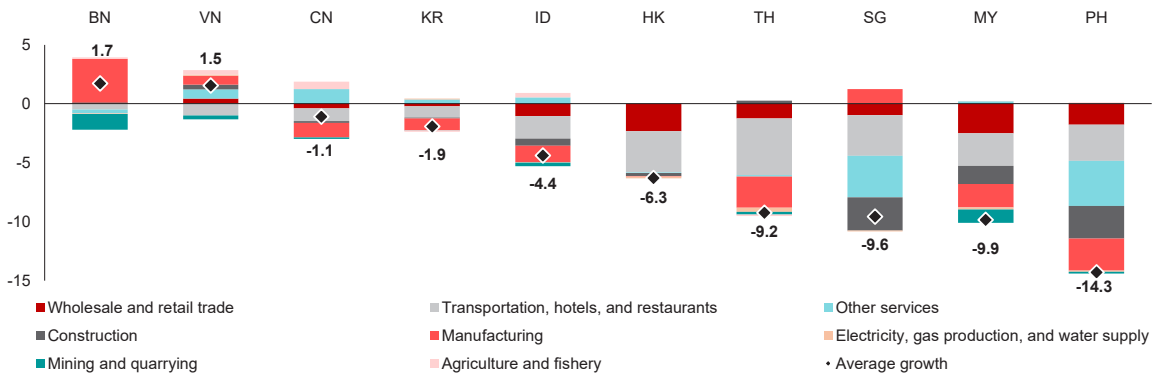


Source: Cabinet Office of Japan via Haver Analytics.

The economic fallout from restrictions on movement and social distancing is clearly reflected in individual industries. The services industry faced deeper recessionary pressures compared to other sectors, including in the wholesale and retail trade sector, which declined for all economies except Brunei and Vietnam, both of which had taken measures to quickly bring the virus outbreak under control (Figure 1.11). Digitizable services, agriculture, and construction have generally been less affected although Malaysia, the Philippines, and Singapore encountered a plunge in construction activity due to the quarantine of migrant workers to curb infection. Natural disasters, such as droughts and floods in Cambodia and Lao PDR, and typhoons in the Philippines, also impacted the agricultural sector, as well as electricity production in Lao PDR. All industries were severely impacted in the second and third quarter of 2020 (Figure 1.12).

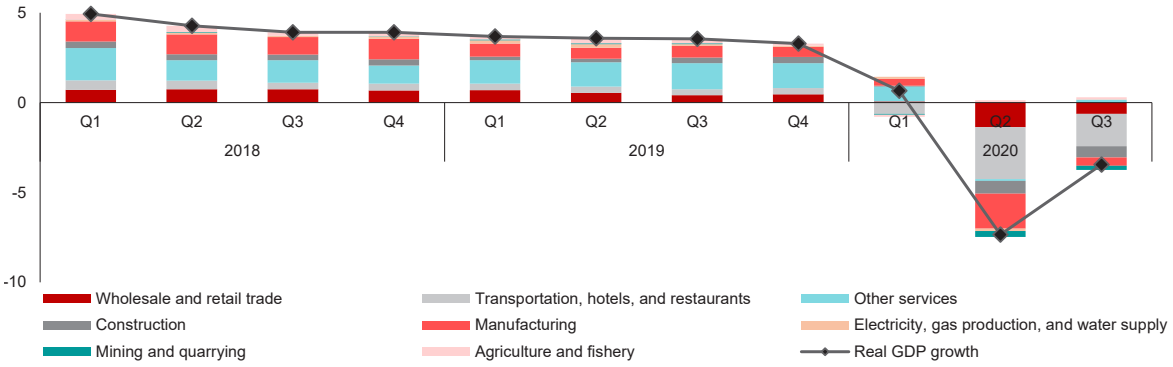
Manufacturing activity was disrupted by both labor supply and demand shocks, although the former was mostly resolved following the first round of strict lockdowns. Supply chain disruptions and weakened domestic and external demand affected most manufacturing subsectors, as well as oil and gas. However, regional manufacturing activity has started to rebound more strongly compared to close contact services (Figure 1.12). Correspondingly, the Purchasing Managers' Index (PMI) suggests that manufacturing activity bottomed out in China in February 2020, in the rest of the region between March and May (Figure 1.13). All of these factors have impacted capital expenditure (Figure 1.8), with the ASEAN subregion particularly hard hit, registering its deepest fall in the second quarter of 2020 since the GFC (Figure 1.14). Domestic investment in China decreased by 1.5 percent year-over-year in the first quarter of 2020, but has subsequently rebounded.

Figure 1.11. Selected ASEAN+3: Real GDP Growth by Industry, Q2–Q3 2020 Average
(Percentage points, year-over-year)



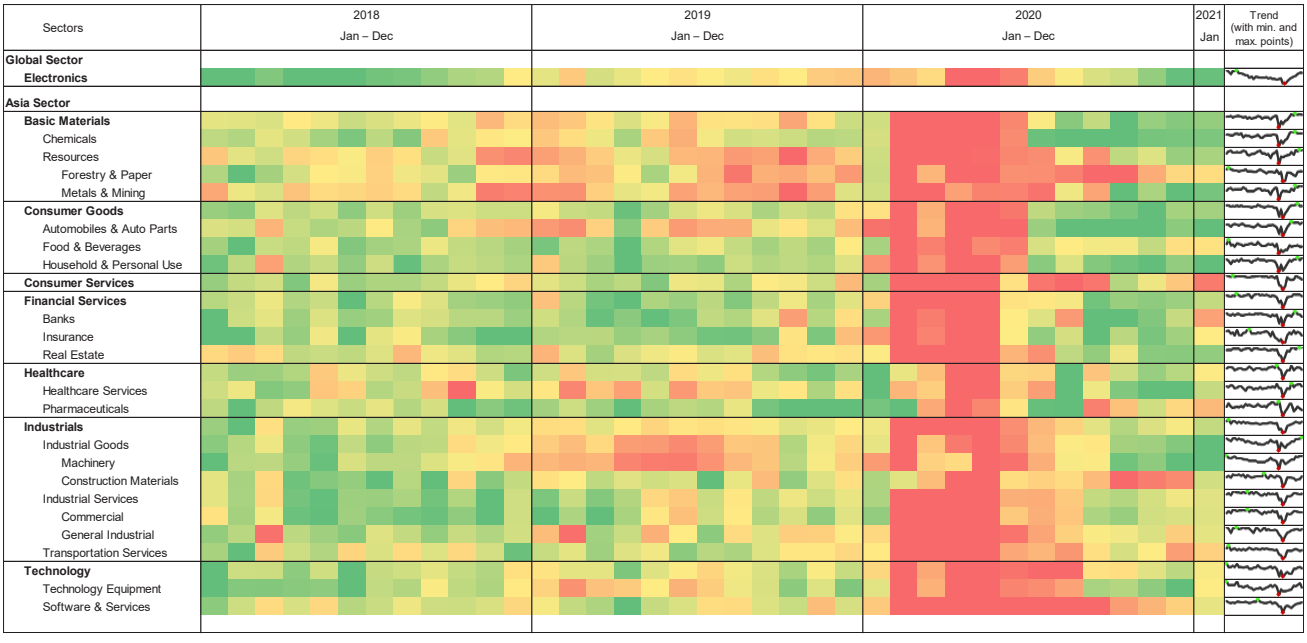
Sources: National authorities via Haver Analytics; Wind; and AMRO staff calculations.
Note: BN = Brunei Darussalam; CN = China; HK = Hong Kong; ID = Indonesia; KR = Korea; MY = Malaysia; PH = Philippines; SG = Singapore; TH = Thailand; and VN = Vietnam. The data refer to Q1 and Q2 nominal GDP for China.

Figure 1.12. Selected ASEAN+3: Aggregate Real GDP Growth by Industry
(Percentage points, year-over-year)



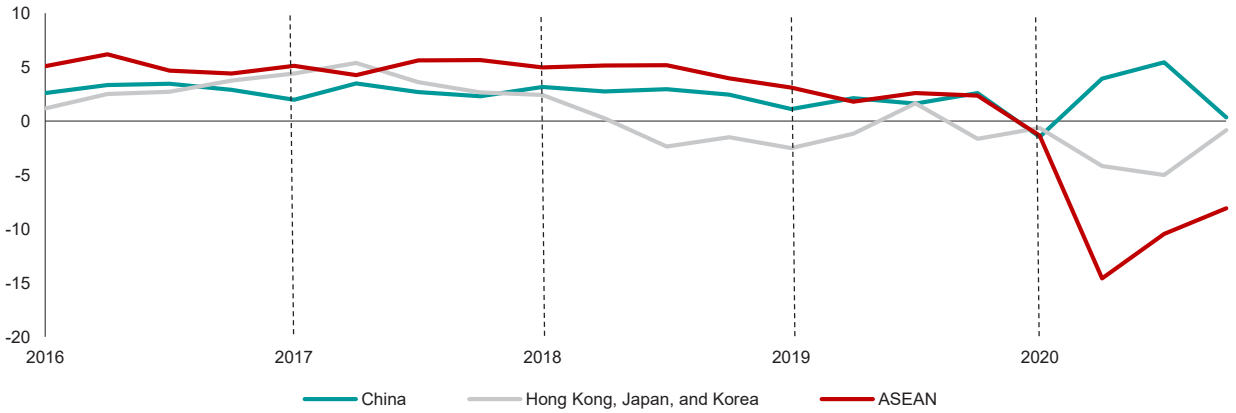
Sources: National authorities via Haver Analytics; and AMRO staff calculations.
Note: Selected ASEAN+3 include Brunei, Hong Kong, Indonesia, Japan, Korea, Malaysia, the Philippines, Singapore and Thailand; data are unavailable for China, Cambodia, Lao PDR, Myanmar and Vietnam.

Figure 1.13. Selected World and Asia: Sectoral Purchasing Managers' Index



Sources: IHS Markit; and Haver Analytics.
Note: The Purchasing Managers' Index (PMI) readings are coded by colors: The deeper the red, the further below (< 45) from the diffusion level of 50; greener denotes the further above (> 55) from 50. A PMI reading above 50 denotes an increase in activity over previous month, and a reading below 50 denotes otherwise. IHS Markit Asia Sector PMI data are derived from surveys of over 6,700 companies operating in 13 economies, including China; Hong Kong; Indonesia; India; Japan; Korea; Malaysia, Myanmar; the Philippines; Singapore; Taiwan Province of China; Thailand; and Vietnam.

Figure 1.14. Selected ASEAN+3: Real Gross Fixed Capital Formation
(Percent year-over-year)



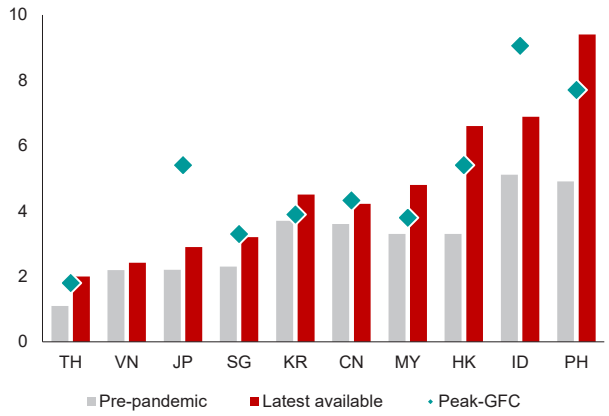
Source: National authorities via Haver Analytics; and AMRO staff calculations.
Note: ASEAN excludes Cambodia, Lao PDR, Myanmar and Vietnam

Weakened Labor Markets

Unemployment rates in many economies across the region have spiked, albeit to different degrees. The sharp reduction in economic activity has caused many businesses to close down, furlough, or shed their workers. Meanwhile, the large number of self-employed in the informal sector has been stranded without business and income. In several economies—notably, Hong Kong, Korea, Malaysia, the Philippines and, more generally, Thailand—unemployment rates rose more sharply during the pandemic than during the GFC (Figure 1.15). More worrying is that in addition to high unemployment, labor force participation rates across the region also fell and employment rates dropped (Figure 1.16; Box 1.4). While labor market conditions have continued to worsen over the course of 2020 in Hong Kong, conditions in the Philippines and Malaysia have improved somewhat from the second quarter of 2020, and by end-2020 in Singapore, in line with the easing in social distancing measures.

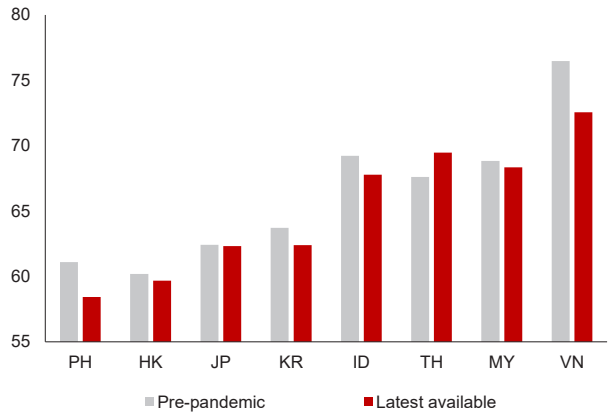
The employment impact has been fairly uneven across economies, sectors, and parts of the population. Employment in services has dropped sharply, reflecting the strong impact of the pandemic on face-to-face interactions. In contrast, the impact on sectors such as healthcare or digitizable services has been negligible or even positive. Younger workers have been most heavily affected, and informal labor—which plays a significant role in most ASEAN economies, including Cambodia, Indonesia, Lao PDR, Myanmar, and the Philippines—has also been more affected, especially as a large share of informal employment relates to services. Consequently, labor markets where a bigger share of employment is in manufacturing, have fared better than those more dependent on services.

Figure 1.15. Selected ASEAN+3: Unemployment Rates
(Percent of labor force, seasonally-adjusted)



Source: National authorities via Haver Analytics.
Notes: Pre-pandemic refers to Q4 2019 except for Indonesia (Q1 2020). Latest available data refer to Q4 2020 , except for Indonesia (Q3 2020). Peak-GFC at different times between Q3 2007 and Q3 2009. Peak-GFC data for Vietnam is not available. Labor market data for the Philippines and Singapore are based on the first and last month of each quarter, respectively. CN = China; HK = Hong Kong; ID = Indonesia; JP = Japan; KR = Korea; MY = Malaysia; PH = Philippines; SG = Singapore; TH = Thailand; and VN = Vietnam.

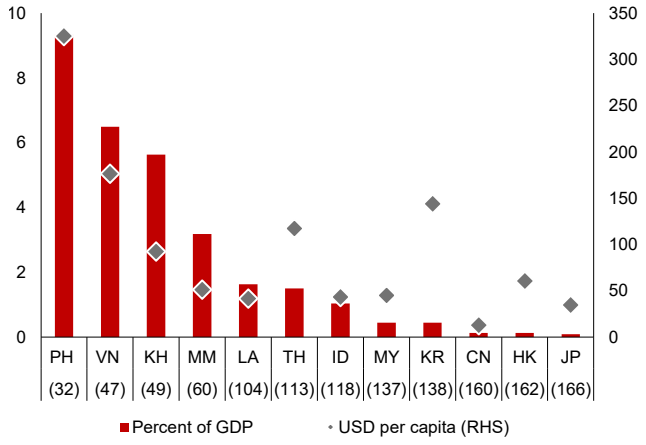
Figure 1.16. Selected ASEAN+3: Labor Force Participation Rates
(Percent of working-age population, seasonally-adjusted)



Source: National authorities via Haver Analytics.
Notes: Pre-pandemic refers to 2019 Q4 except for Indonesia (Q1 2020). Latest available data refer to Q4 2020 except for Indonesia (Q3 2020) and Vietnam (Q2 2020). Labor market data for the Philippines are based on the first month of each quarter. HK = Hong Kong; ID = Indonesia; JP = Japan; KR = Korea; MY = Malaysia; PH = Philippines; TH = Thailand; and VN = Vietnam.

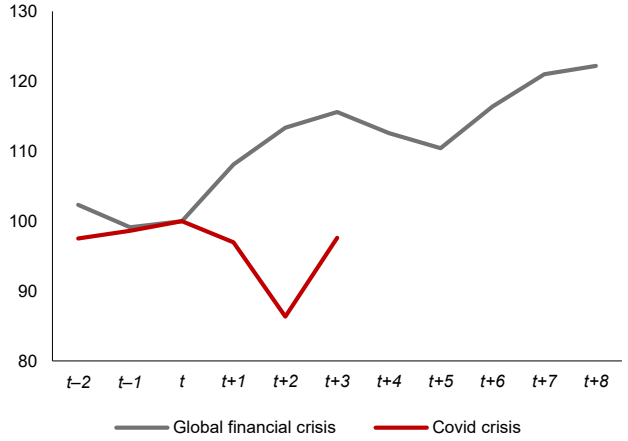
Remittances have been adversely affected by the COVID-19 pandemic. Migrant workers play a particularly important economic role for several ASEAN economies, especially Cambodia, the Philippines, and Vietnam (Figure 1.17), and remittances have proven to be a very stable form of income, including during past crises (Choo and Oeking 2020). This situation is true for both cross-border migrant workers and cross-border remittances, as well as domestic migrant workers—oftentimes from rural to urban areas—and domestic remittances. But the nature of the current crisis has been exceptional and has impacted virtually every country in the world simultaneously. Migrant workers have been infected by the virus and hit by layoffs and forced repatriations, as well as confronted by fewer deployment opportunities, in part because of limited cross-border movement. Consequently, less money has been sent home in many economies (Figure 1.18).

Figure 1.17. ASEAN+3: Remittance Receipts, 2019
(Percent of GDP; US dollar per capita)



Sources: United Nations; World Bank; and AMRO staff calculations.
Note: Numbers in parentheses refer to 2019 global rankings for respective economies in terms of percent of remittances to GDP. Remittance data for Brunei Darussalam and Singapore are not available. CN = China; HK = Hong Kong; ID = Indonesia; JP = Japan; KH = Cambodia; KR = Korea; LA = Lao PDR; MY = Malaysia; MM = Myanmar; PH = Philippines; TH = Thailand; and VN = Vietnam.

Figure 1.18. Selected ASEAN: Aggregate Remittance Inflows
(Quarterly, Index, t = 100)



Sources: International Monetary Fund; and AMRO staff calculations.
Note: Selected ASEAN includes Indonesia, the Philippines and Thailand. The first quarter of each crisis (t) comprises Q3 2007 (GFC) and Q1 2020 (Covid crisis).

Encouragingly, remittances have started to gradually recover in some economies after the initial drop. The turnaround—especially for the Philippines—has been in line with the global economic rebound and increased demand for certain professions, notably, nurses and other essential workers. However, remittances are likely to remain below pre-pandemic levels, as labor markets around the world will take time to recover and closed borders continue to deter migration, likely until vaccines are widely deployed. The strength of recovery in important migrant-host economies will be crucial to migrant workers' job prospects, deployment or re-migration, and thus speed of recovery in remittances. At the same time, the global economic landscape has changed and the scarring experienced by many economies may be permanent. Consequently, re-migration may not be fully possible for some occupations, as transformed economies will likely require different skillsets, and lost deployment opportunities will not be immediately offset.

The economic fallout from the pandemic will have lasting effects with permanent scars, and a full recovery is unlikely as long as the virus has not been fully stamped out. Even with a pickup in economic growth, some output losses are expected to persist (Box 1.3). In addition, rapid digitalization has fundamentally transformed economies by permanently changing the way many companies do business and individuals work, as well as consumer behavior, and accelerating the transition to new types of jobs. Several forces will be important for the recovery in the real economy:

- Business closures and fewer entry of new firms, especially in more traditional sectors, or nonviable firms being kept alive by government support, could result in lower productivity and a continued lack of investment. A corporate sector with impaired balance sheets and more leverage will take time to recover, with possibly continued sluggish spending in some areas and slow labor market recovery.

- At the same time, startups—particularly in the digital economy—could benefit from pandemic-induced demand, supported by low interest rates and availability of funding from investors and the government. In Singapore, for example, formation of new business entities—notably in sectors transformed by social distancing measures such as retail trade, wholesale trade, and food and beverage services—rebounded strongly following a sharp drop during the lockdown period (Figure 1.19). If innovative new firms were able to grow and thrive amid the economic transformation, they could eventually boost employment, and lift efficiency and productivity.

- The recovery of the heavily affected services industry is highly dependent on bringing the spread of the COVID-19 virus under control and achieving herd immunity. The sector contributes a large share of jobs across many regional economies, including in the more vulnerable segments of informal and micro, small, and medium enterprise (MSME) employment. Many small businesses have closed, and given the delayed resumption of many services and the accompanying rebound in employment, the massive loss in jobs will take time to be absorbed, and economic inequality is likely to widen as a result.

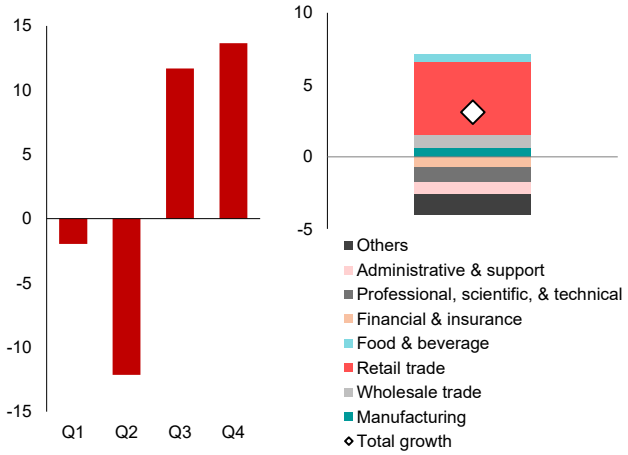
- Further, some jobs and related skillsets, such as in retail and tourism, have been displaced or permanently transformed by the accelerated move to more digitalization of the workplace and businesses (see Chapter 2). The size of this shift depends on the ability to train and upskill workers, the adaptability of the business community to changes, and access to capital for innovative businesses.

- Large segments of populations were not impacted by income losses, but rather by the disruption to their consumption, especially of travel and hospitality services. Pent-up demand from this segment could rebound sharply as soon as domestic virus outbreaks are under control and restrictions are lifted, and especially once herd immunity is achieved in the population. With closed borders, some outbound consumption might even shift to the domestic market, for example in the form of domestic tourism.

- Consumer behavior has seen a fundamental shift as the pandemic removed some inertia and forced quicker adoption of online services. These services, which include e-commerce, online media, food delivery, remote learning and working, digital financial services, and telemedicine (Google, Temasek, and Bain & Company 2020), have enormous growth potential. Survey results suggest that 94 percent of new digital consumers in the ASEAN-6 economies would continue to use at least one online service going forward (Figure 1.20) (Google, Temasek and Bain & Company, 2020). Translating this transformation into broad-based economic benefit—via new business formation, human capital improvements, employment growth, and a strong rebound in services—will be one of the major challenges facing policymakers post-pandemic.

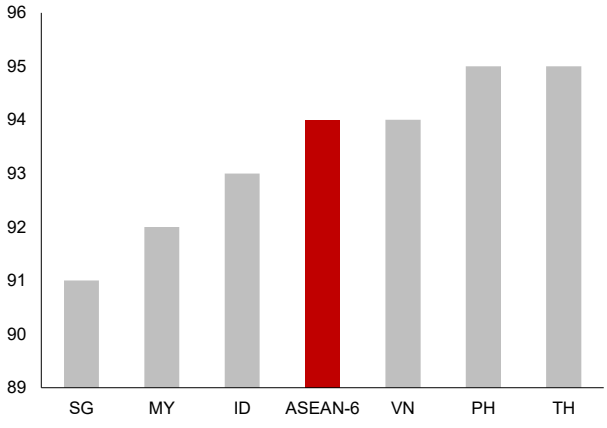
The divergent impact of the Covid crisis across the ASEAN+3 region and within its economies is likely to continue. Some segments will rebound quickly with the turnaround in manufacturing, innovation in digitalization, as well as pent-up savings, and robust domestic demand; while others will remain under pressure and must adapt, move on, or reinvent themselves to survive. Whether businesses in hard-hit sectors will remain viable as the economy recovers; or if employment will bounce back with lifted restrictions, and transformed economies are able to train and upskill workers; or whether scars have already become permanent: these factors will determine the trajectory and shape of the new economy.

Figure 1.19. Singapore: Formation of Business Entities, 2020
(Percent year-over-year; contribution to total annual growth rate)



Sources: Accounting and Corporate Regulatory Authority; and AMRO staff calculations.
Note: Business entities include businesses (partnerships & sole proprietorships); local and foreign companies; limited liability partnerships; limited partnerships; and public accounting firms.

Figure 1.20. ASEAN-6: New Online Consumers' Willingness to Continue Using at Least One Internet Service Post-COVID-19
(Percent of total new digital consumers)



Source: Google, Temasek and Bain & Company (2020).
Note: ID = Indonesia; MY = Malaysia; PH = Philippines; SG = Singapore; TH = Thailand; and VN = Vietnam.

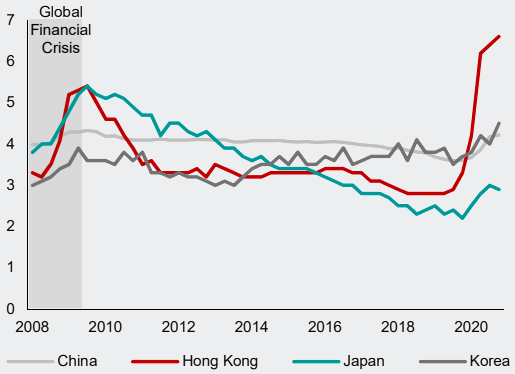
Box 1.4:

Uneven Hit to Labor Markets

The COVID-19 pandemic has adversely affected labor markets across the region. The situation has been characterized by sharp spikes in unemployment rates, falling labor force participation rates, and a drop in employment in many economies (Figures 1.4.1–1.4.2). As economic activity across the region has gradually rebounded, labor market conditions have started to improve in several regional economies from their nadir in the second quarter of 2020. It remains to be seen how many job losses will be permanent, or whether some will return once restrictions are lifted. To date, the impact has been uneven across sectors and segments of the population.

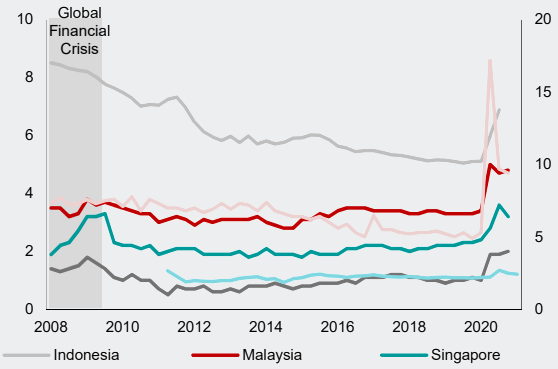
Figure 1.4.1. Selected ASEAN+3: Historical Unemployment Rates
(Percent of labor force, seasonally-adjusted)

Plus-3



Source: National authorities via Haver Analytics.

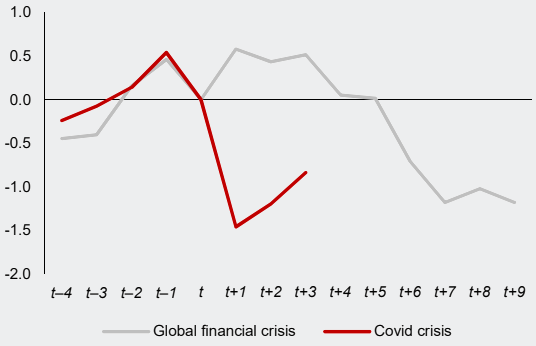
ASEAN-6



Source: National authorities via Haver Analytics.
Notes: Indonesia's data are interpolated as it only releases labor market data semiannually for every Q1 and Q3 of the year. Labor market data for the Philippines and Singapore are based on the first and last month of each quarter, respectively.

Figure 1.4.2. Selected ASEAN+3: Aggregate Employment Levels during Crises
(Index, t = 0, seasonally adjusted)

Selected Plus-3



Sources: National authorities via Haver Analytics; and AMRO staff calculations.
Notes: Selected Plus-3 refers to Hong Kong, Japan and Korea. The first quarter of each crisis (t) comprises Q3 1997 (Asian financial crisis) and Q1 2020 (Covid crisis).

Selected ASEAN

Sources: National authorities via Haver Analytics; and AMRO staff calculations.
Notes: Selected ASEAN refers to Malaysia, the Philipiines, Singapore and Thailand. Labor market data for the Philippines and Singapore are based on the first and last month of each quarter, respectively. The first quarter of each crisis (t) comprises Q3 1997 (Asian financial crisis) and Q1 2020 (Covid crisis).

The impact has varied markedly across sectors. Most economies recorded a loss of employment in the manufacturing and construction sectors, particularly during the height of respective outbreaks. But the retrenchment was most notable in the services sector, especially in accommodation and food services and wholesale and retail trade (Table 1.4.1), as these sectors are naturally the most impacted by virus containment measures and social distancing requirements. On the flip side, the employment effect on some sectors was small or even positive, including in agriculture, digital and digitizable services such as information and communication or financial activities, as well as pandemic-driven demand in the healthcare and social work sector. Generally, labor markets in economies with a bigger share of employment in manufacturing have fared better than those in services (Figure 1.4.3).

Micro, small, and medium-sized enterprises (MSMEs) have been more heavily affected by the pandemic, as they have weaker balance sheets and are more vulnerable to liquidity shocks. A relatively large share of employment across regional economies—above 80 percent in some—takes place within MSMEs, predominantly in the services sector (Figure 1.4.4). While the financial stability impact from the weakened balance sheets of smaller enterprises might be non-systemic, their labor market implications could be substantial. In many economies, the outcome will only be fully visible once government support has ended.

The importance of MSMEs could be even greater than official data suggest, given the large presence of informal employment, often in the form of micro enterprises. Informal employment accounts for a significant share of employment across several regional economies, most notably in Cambodia, Indonesia, Lao PDR, and Myanmar, with a large share in the hard-hit services sector (Figure 1.4.5). Although minimal information is available on just how much informal employment has been affected by the pandemic, workers in the informal sector have likely been more vulnerable (ILO 2020), and labor markets in a number of ASEAN economies could thus have been more adversely affected than formal labor market data suggest.

The pandemic's effect on the labor market in different segments of the population have been similarly unequal:

- Data from Hong Kong, Japan, Korea, and Thailand indicate that the largest employment losses have occurred among younger workers, while employment of certain groups of elderly workers grew in 2020 in some economies (Figure 1.4.6). Part of the increase in elderly employment could be a structural feature of rapidly aging societies, amplified by uncertainty about the pandemic's economic impact and thus lower retirement rates, as well as a move from informal to formal employment.

- The impact on employment by gender differs across economies, with male employment being harder hit in some economies such as Hong Kong, and female employment taking a sharper hit early on in Japan and eventually in Korea—possibly because female workers tend to be hired as temporary employees, and in part attributable to increasing childcare needs at home following school closures.

Table 1.4.1. Selected ASEAN+3: Growth in Employment by Industry, Q3 2020
(Percentage point contribution to total, year-over-year)

	Hong Kong	Indonesia	Japan	Korea	Malaysia	Philippines	Singapore	Thailand
Total	**-4.4**	**0.4**	**-0.8**	**-1.3**	**-0.4**	**-2.3**	**-4.4**	**1.5**
Agriculture, forestry, and fishing		2.36	-0.43	-0.02	-0.10	2.96		0.61
Mining and quarrying	0.00	-0.07	0.00	-0.01	-0.01	0.10		0.02
Manufacturing	-0.11	-1.46	-0.64	-0.28	-0.07	-0.85	-0.73	-0.98
Utilities (incl. electricity, gas, and water related services)	0.00	-0.06	0.05	0.11	0.00	0.02		-0.05
Construction	-0.11	-0.52	0.03	0.23	-0.23	0.04	-0.91	0.53
Wholesale and retail trade	-2.61	0.46	0.03	-0.85	0.15	0.90	-0.71	1.10
Transport and storage	-0.19	-0.05	-0.03	0.09	-0.03	-0.86	-0.19	0.16
Information and communication	-0.01	0.01	0.31	-0.06	0.05	-0.32	0.06	-0.03
Accommodation and food service activities	-1.37	-0.02	-0.79	-0.92	-0.25	-1.87	-0.88	-0.18
Financial and insurance activities	0.06	-0.19	0.31	-0.08	0.01	-0.01	0.11	0.07
Real estate	0.05	-0.01	0.25	-0.30	0.00	-0.12	-0.21	0.13
Professional, tech, administrative, and support services	0.02	-0.12	-0.18	0.12	0.03	-0.68	-0.14	-0.08
Human health and social work activities	-0.17	0.02	0.30	0.55	0.00	0.14	0.14	0.19
Other services		0.04	-0.03	0.09	-0.01	-1.71	-0.93	-0.01

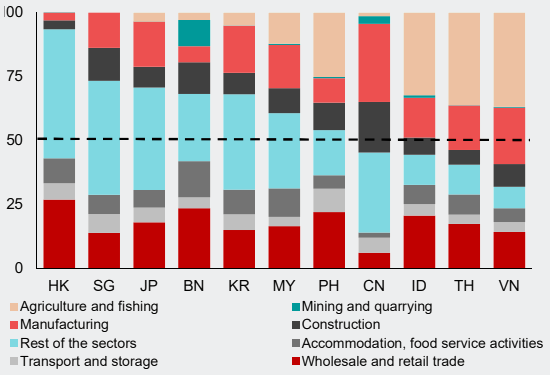
Sources: National authorities via Haver Analytics; and AMRO staff calculations.
Note: Labor market data for the Philippines and Singapore are based on the first and last month of each quarter, respectively. Total employment excludes public administration, defense, compulsory social security and education sectors. Classification of jobs is according to the ISIC rev. 4 standard. Blank spaces mean no classification from national sources.

- In Malaysia, some of the steepest losses were observed among low-skilled employment; in contrast, high-skilled (formal) employment has been most heavily affected in the Philippines.

All in all, the pandemic has impacted certain vulnerable segments of the working population more severely than others, exacerbating inequality.

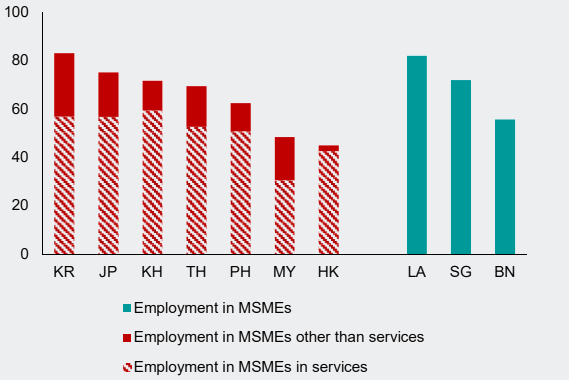
Employment loss, a fall in income, and lower wage growth have adversely affected household balance sheets, and their ability to service debt, with implications for financial stability. Similarly, these factors can pose a threat to recovery by suppressing consumer sentiment and weighing on private consumption. Prolonged labor market weakness—particularly once government support is rolled back—can risk further socioeconomic consequences, including by increasing social pressures due to worsening inequality and evoking social unrest, rising poverty, and dwindling human capital—all possibly intensifying the need for further fiscal intervention down the line.

Figure 1.4.3. Selected ASEAN+3: Share of Employment by Sector, as of Q4 2019
(Percent)



Sources: National authorities via Haver Analytics; and AMRO staff calculations.
Note: Data for China refer to 2018 and for Indonesia refers to Q1-2020. Malaysia's Professional services category includes real estate services. Labor market data for the Philippines and Singapore are based on the first and last month of each quarter, respectively. Employment for public administration, defense, compulsory social security and education sectors are omitted to ensure consistency across countries. BN = Brunei Darussalam; CN = China; HK = Hong Kong; ID = Indonesia; JP = Japan; KR = Korea; MY = Malaysia; PH = Philippines; SG = Singapore; TH = Thailand; and VN = Vietnam.

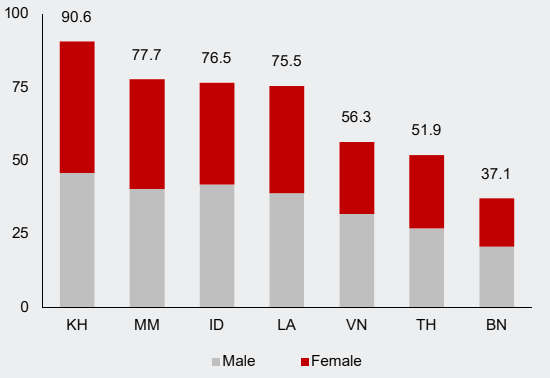
Figure 1.4.4. Selected ASEAN+3: Share of Employment by Micro, Small, and Medium Enterprises, 2019 or Latest
(Percent)



Sources: National authorities via Haver Analytics; World Bank; and AMRO staff calculations.
Note: The categorization of enterprise size is defined by the respective national authorities and the definition differs across economies. The shares for Cambodia and Japan are AMRO estimates. Employment in MSMEs for Hong Kong refers to the share in private sector employment. For Thailand, employment in services comprises services and commerce. Data refer to 2018 for Korea and Thailand; 2014 for Cambodia; and June 2020 for Hong Kong and Japan. BN = Brunei Darussalam; HK = Hong Kong; JP = Japan; KH = Cambodia; KR = Korea; LA = Lao PDR; MY = Malaysia; PH = Philippines; SG = Singapore; and TH = Thailand.

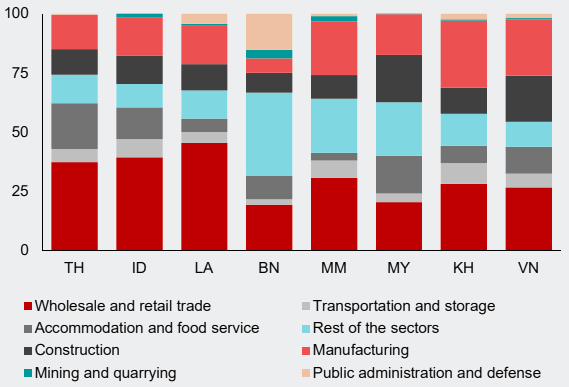
Figure 1.4.5. Selected ASEAN+3: Share of Informal Employment
(Percent share of non-agricultural employment)

By Gender



Sources: ASEANstat; and International Labour Organization.
Note: Data as of 2012 for Cambodia; 2016 for Vietnam; 2017 for Brunei, Lao PDR and Myanmar; and 2018 for Indonesia and Thailand. BN = Brunei Darussalam; ID = Indonesia; KH = Cambodia; LA = Lao PDR; MM = Myanmar; TH = Thailand; and VN = Vietnam.

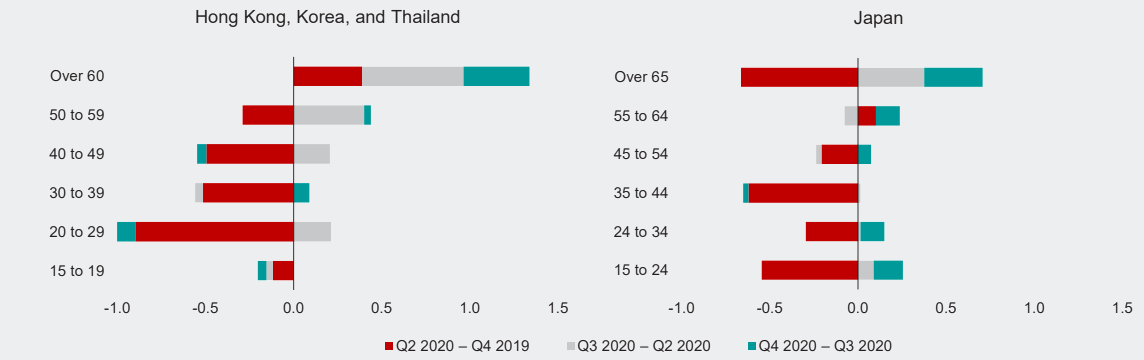
By Sector



Source: ASEANstat.
Note: Data as of 2012 for Cambodia; 2016 for Vietnam; 2017 for Brunei, Lao PDR, Malaysia and Myanmar; and 2018 for Indonesia and Thailand. In the case of Malaysia, informal employment includes only workers up to 64 years of age. BN = Brunei Darussalam; ID = Indonesia; KH = Cambodia; LA = Lao PDR; MY = Malaysia; MM = Myanmar; TH = Thailand; and VN = Vietnam.

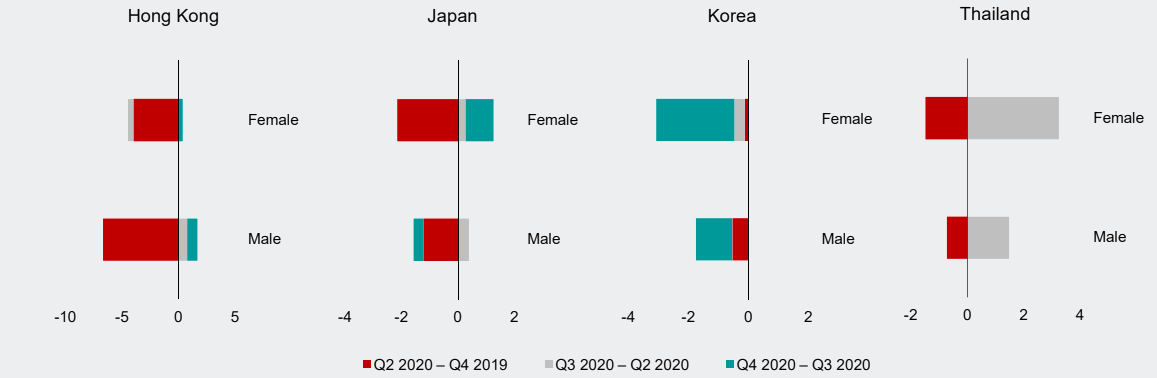
Figure 1.4.6. Selected ASEAN+3: Growth in Employment
(Percent period-over-preriod)

By Age



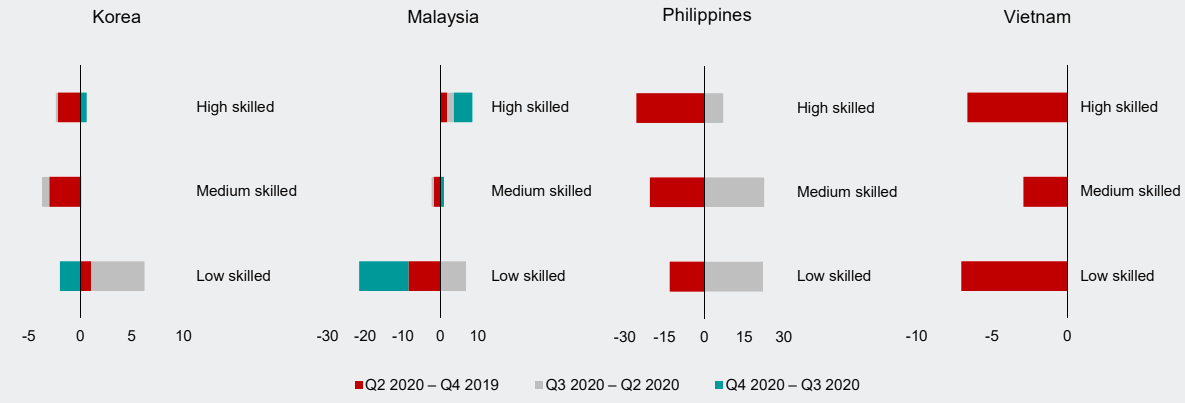
Sources: National authorities via Haver Analytics; and AMRO staff calculations.
Note: Fourth quarter 2020 data are unavailable for Thailand. The chart on the left includes changes for Hong Kong and Korea between the third and fourth quarter of 2020.

By Gender



Sources: National authorities via Haver Analytics; and AMRO staff calculations.
Note: Fourth quarter 2020 data are unavailable for Thailand.

By Skill Level



Sources: National authorities via Haver Analytics; and AMRO staff calculations.
Note: Skill levels are determined by types of occupation reported under the International Classification of Occupations (ISCO)-08 classification. High-skilled occupations include managers, professionals and technicians and associate professionals. Medium skilled occupations include clerical support workers, service and sales workers, skilled agricultural, forestry and fishery workers, craft and related trades workers, plant and machine operators, and assemblers. Low-skilled workers refer to elementary workers. Fourth quarter 2020 data are unavailable for the Philippines and Vietnam.

The authors of this box are Edmond Chiang Yong Choo and Anne Oeking.

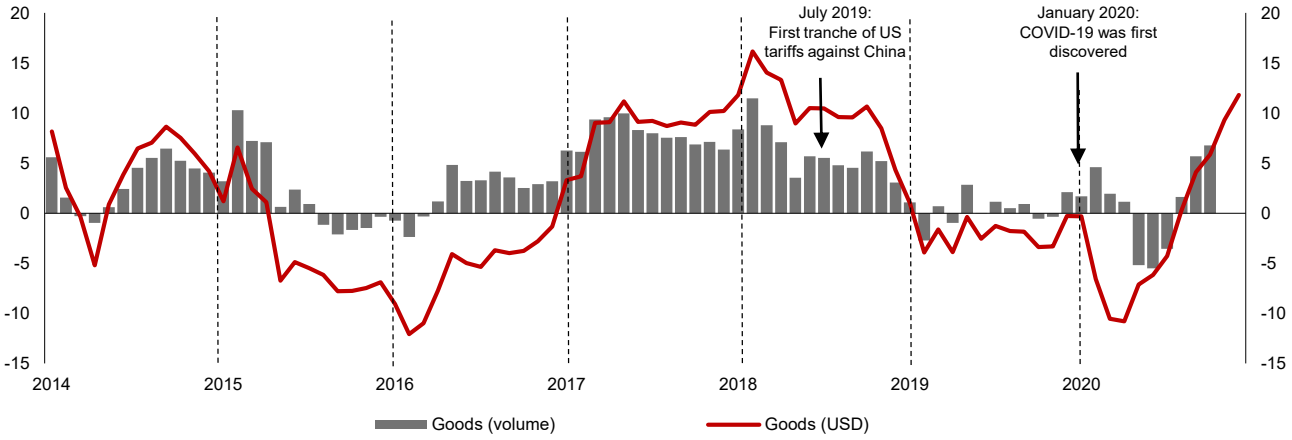
A Transformed Trade Landscape

The trade environment for the ASEAN+3 economies turned out to be even more challenging in 2020 than in 2019. The US–China trade conflict became secondary to the pandemic's much more severe impact on international trade. The fragile recovery in the region's exports that began in the last quarter of 2019—as easing tension between China and the United States buoyed market confidence—had collapsed by late January 2020. As a consequence, ASEAN+3 goods exports declined steeply in the first half of 2020, even when compared to the previous year, before starting to recover in the second half of 2020 (Figure 1.21).

The region's exports were on a roller-coaster before eventually recovering on the back of normalizing economic activity. Exports to the United States, which helped buoy the region's export growth in 2019, contracted in 2020 as the US economy fell into a recession (Figure 1.22). Conversely, exports to China held strong in the first quarter, but as the virus spread quickly through the region and to the rest of the world, demand for ASEAN+3 exports collapsed (Figure 1.23).

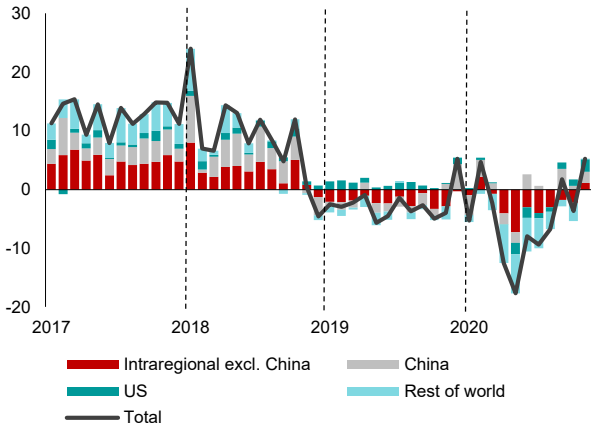
Regional export growth had recovered by the third quarter of 2020, as the pandemic came under better control and countries began to ease their containment measures. Exports from several regional economies eventually exceeded pre-COVID-19 levels, as the recovery broadened further in the fourth quarter of 2020 (Box 1.5). In some regional economies, most notably Cambodia, China, and Vietnam, the rebound was strong enough to register positive export growth for the full year (Figure 1.24). Meanwhile, gains by the ASEAN economies from the earlier observed trade diversion trends, sparked by the US–China trade tensions (AMRO, 2020a), continued in 2020, with most economies increasing their share of exports of US-tariffed goods (Figure 1.25).

Figure 1.21. ASEAN+3: Aggregate Goods Exports by Value and Volume
(Percent year-over-year, 3-month moving average)



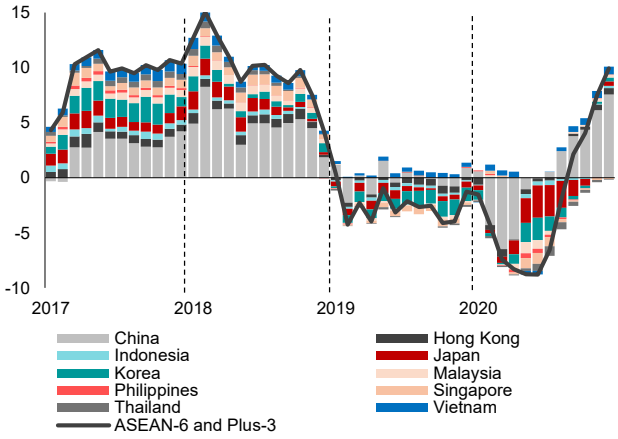
Sources: National authorities via Haver Analytics; and AMRO staff calculations.

Figure 1.22. ASEAN+2: Contributions to Goods Export Growth by Importer
(Percentage points, year-over-year)



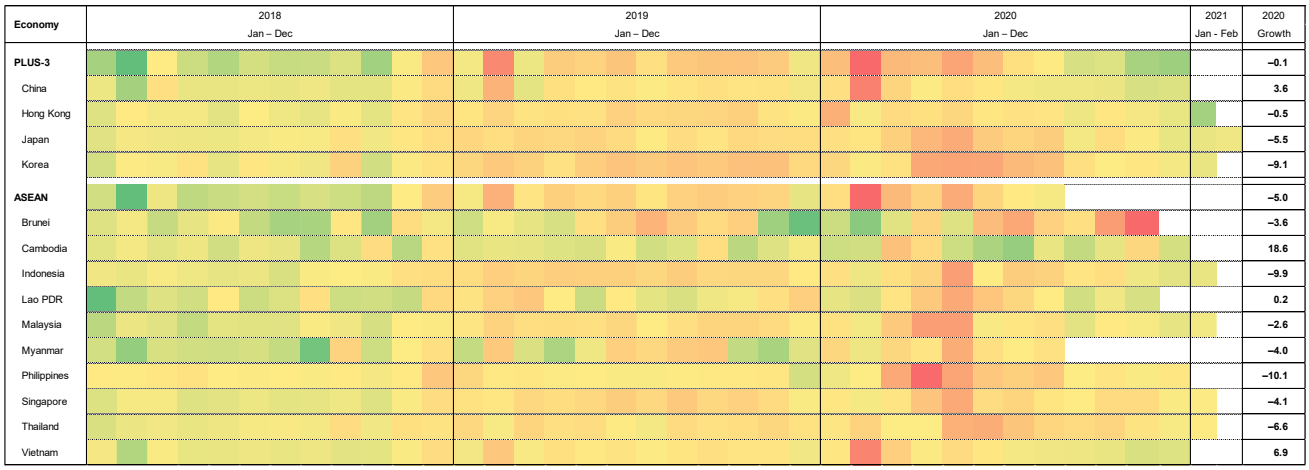
Sources: IHS Markit; and AMRO staff calculations.

Figure 1.23. Selected ASEAN+3: Contributions to Goods Export Growth by Exporter
(Percentage points, year-over-year)



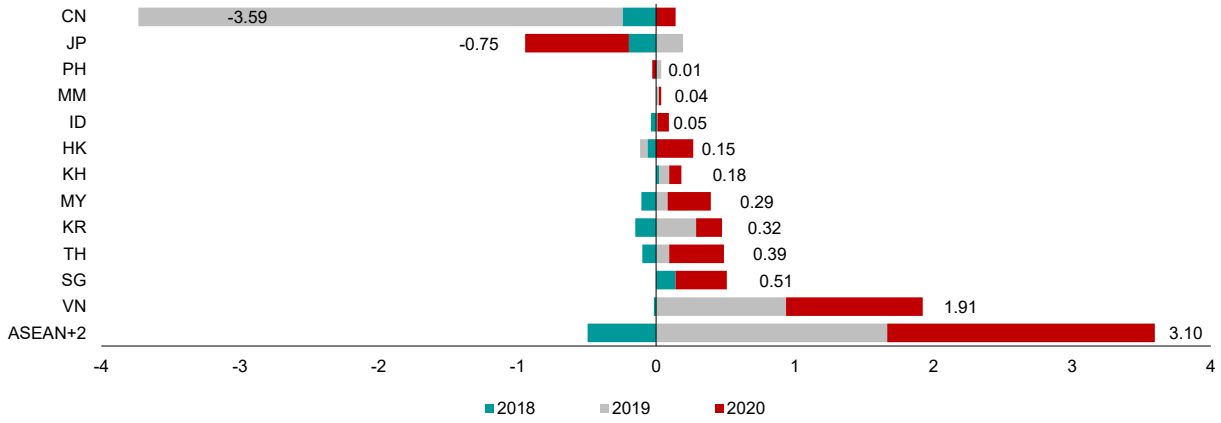
Sources: National authorities via Haver Analytics; and AMRO staff calculations.

Figure 1.24. ASEAN+3: Goods Exports
(US dollars, percent year-over-year)



Sources: National authorities via CEIC and Haver Analytics; Ministry of Economy and Finance, Cambodia; and AMRO staff calculations.
Note: Data are based on exports in US dollars. The colors represent the distance the growth in total merchandise exports is away from mid-point. The deepening intensity of the red of the data points in the figure denotes increasingly more negative data are; the greener the data points, the more positive they are.

Figure 1.25. United States: Change in Share of Imports, 2018–20
(Percentage points)



Sources: IHS Markit; and AMRO staff calculations.
Note: Brunei and Lao PDR excluded for brevity. Gains are less than 0.005 for both. CN = China; HK = Hong Kong; ID = Indonesia; JP = Japan; KH = Cambodia; KR = Korea; LA = Lao PDR; MY = Malaysia; MM = Myanmar; PH = Philippines; SG = Singapore; TH= Thailand and VN = Vietnam. ASEAN+2 excludes China.

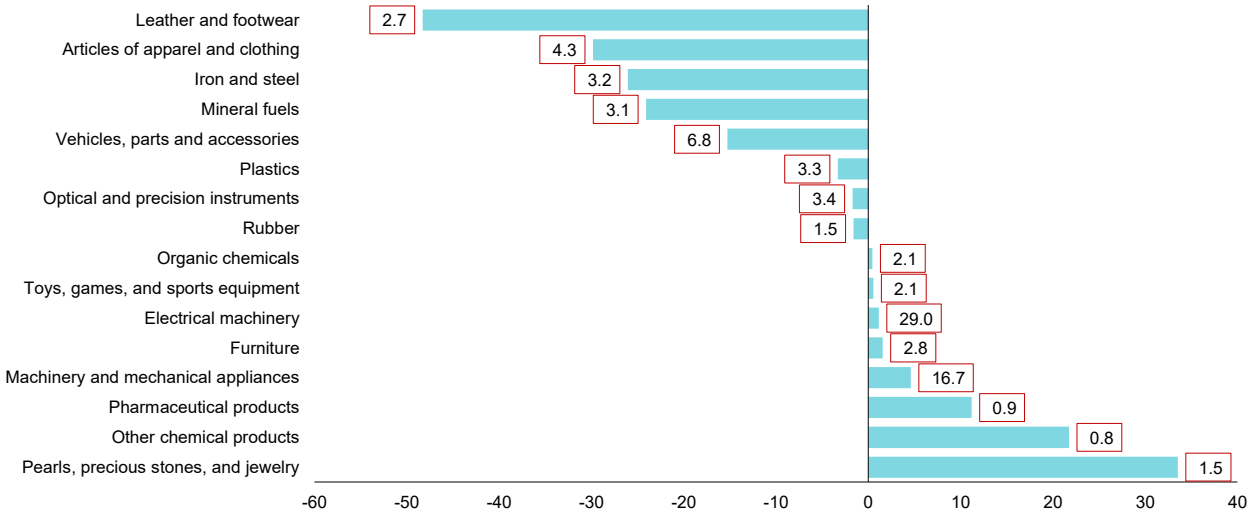
The improvement in exports, though broad-based, remains fragile and uneven across the region. Trade remains relatively more tepid for some of the ASEAN economies (Figure 1.24), while others have benefitted from pandemic-driven demand in the second half of 2020, such as Vietnam for its wood products and furniture, and China and Malaysia for medical goods and protective equipment (Box 1.6), the latter particularly for its rubber glove exports. Demand for electronics, a lifeblood of the region, has gained traction since September 2020, helping high-tech exporters such as Japan and Korea offset some of the decline in their total exports for the whole year.

More generally, some of the region's exports have held up well during the pandemic. However, because these faster-growing sectors have mainly been related to nontraditional exports, and they have thus been only minor contributors to overall regional trade activity. Demand for these products appears to be driven largely by the pandemic's impact on economic activity—such as certain textiles for surgical use and protective apparel; jewelry, especially gold, possibly as a store of value (Pande and Majuca 2020); as well as cleaning soaps and other surface-active agents.

Most ASEAN+3 traditional exports, on the other hand, declined in 2020, consistent with poor global and regional demand. They include goods such as vehicles, semiconductors, garments, mineral fuels, plastics, and iron and steel (Figure 1.26). Fortunately, electrical and electronics goods exports—constituting almost half of pre-pandemic regional exports—contracted relatively less than some other goods, thus supporting exports to some degree.

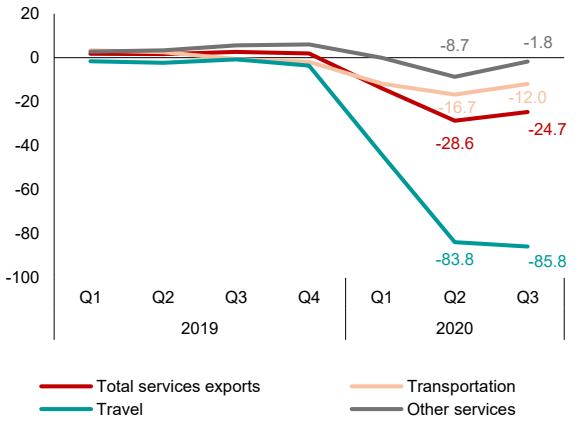
Additionally, service exports, particularly tourism—which helped support the region's external sector during the US–China trade conflict—have been severely affected by COVID-19 containment measures and weakened global demand. ASEAN+3 service exports declined sharply in the

Figure 1.26. ASEAN+3: Growth in Aggregate Major Exports by Product, January–November 2020
(Percent year-over-year)



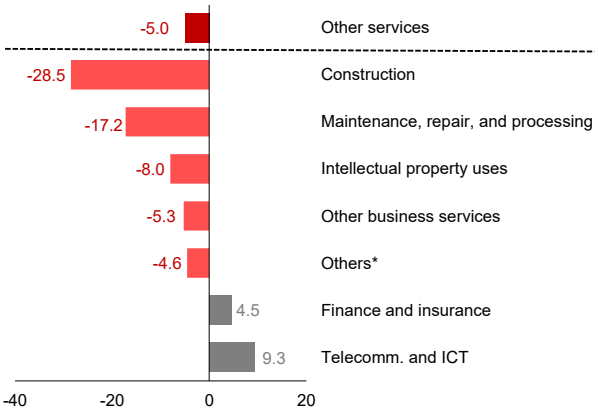
Sources: IHS Markit; and AMRO staff calculations.
Note: Figures in boxes represent the sector's share to the region's total exports in 2019.

Figure 1.27. Selected ASEAN+3: Aggregate Services Exports by Type
(Percent year-over-year)



Sources: Haver Analytics; and AMRO staff calculations.
Note: Brunei, Lao PDR, Myanmar, and Vietnam, for which quarterly data are unavailable, are excluded.

Figure 1.28. Selected ASEAN+3: Breakdown of Aggregate "Other Services" Exports, 2020 Year-to-Date
(Percent year-over-year)

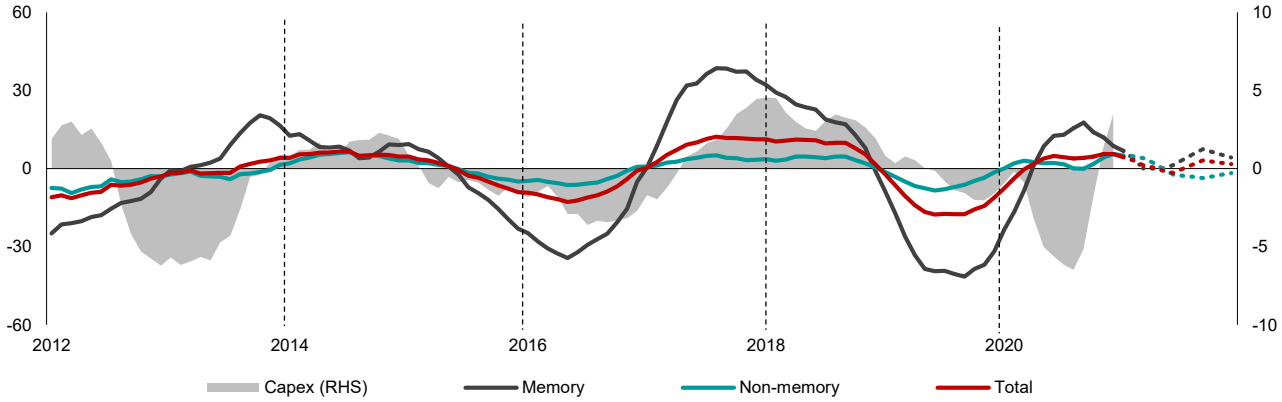


Sources: Haver Analytics; and AMRO staff calculations.
Note: "Other services" refer to service exports excluding transportation and travel services; "Others" include government services not included elsewhere, personal, recreational and cultural services. Brunei, Lao PDR, Myanmar, and Vietnam, for which quarterly data are unavailable, are excluded. ICT = Information and communication technology.

first three quarters of 2020 (Figure 1.27), as border closures led to a halt in international travel and tourism, while the collapse in international trade weighed on transportation services (Box 1.8). In contrast, business and professional services have been largely sustained (Figure 1.28), with the proliferation of digital technology adoption and remote working arrangements, following a transitional period at the onset of the pandemic.Overall, the nascent recovery in ASEAN+3 trade appears fragile. Trade in services is unlikely to fully recover until the COVID-19 virus has been contained across the globe. Meanwhile, the trajectory for goods trade remains uncertain as reflected in more timely shipping indicators (Box 1.5). Encouragingly, the worst appears to be over for the all-important electronics sector. Demand for semiconductors grew by 6.5 percent in 2020, after falling by as much as 12 percent in 2019 (Semiconductor Industry Association, 2020). AMRO's Semiconductor Cycles suggest that global demand for semiconductors actually strengthened in 2020 (Figure 1.29). Looking ahead, demand from Europe and the United States is expected to support the industry, with an expected average growth of 13 percent in 2021, followed by the Asia-Pacific region, with forecast aggregate growth of 10.8 percent.

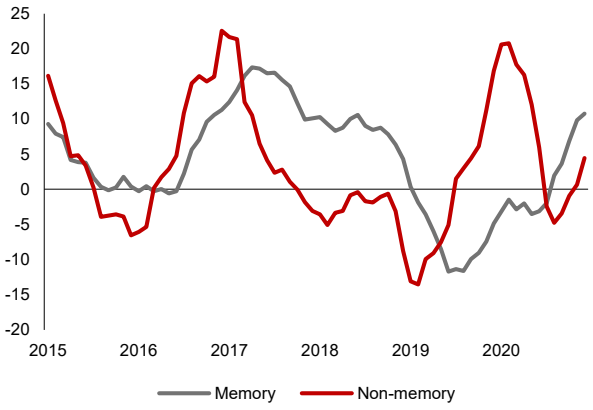
The boost to demand for technology products from the effects of the pandemic is expected to continue going forward. The overall semiconductor cycle has been largely driven by demand for products in the larger memory segment, particularly for integrated circuits, in line with the proliferation of advanced gadgets, as the pandemic changed consumer and corporate activities. Still, non-memory-based elements—such as cameras, bio-medicals, or optoelectronics, including for the internet—appear to be catching up with their memory counterparts (Figure 1.30), with relatively

Figure 1.29. Global Semiconductor and Capital Expenditure (Capex) Cycles
(Percent year-over-year, 6-month moving average)



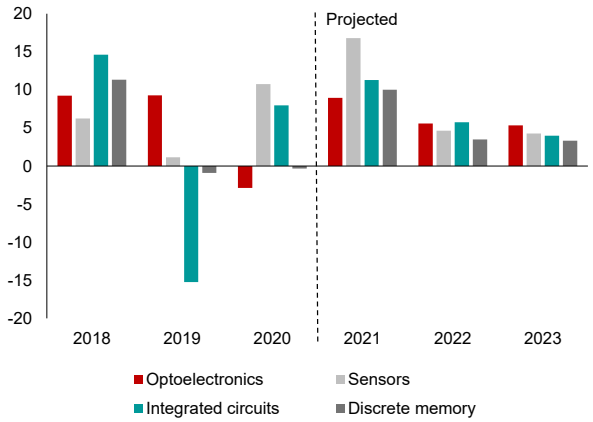
Sources: WSTS Inc.; and AMRO staff calculations.
Note: Dotted lines indicate cycle values derived from 2020–21 forecasts from WSTS, Inc.

Figure 1.30. Semiconductor: Growth in Overall Global Sales by Category
(Percent year-over-year)



Sources: WSTS Inc.; and AMRO staff calculations.

Figure 1.31. Semiconductor: Projected Growth in Global Sales by Component
(Percent year-over-year)



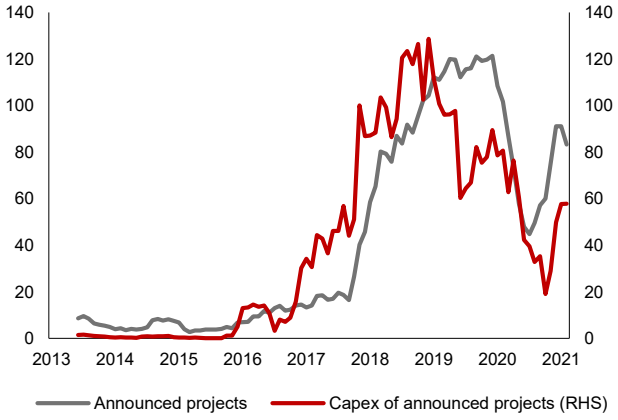
Sources: WSTS INC.; and AMRO staff calculations.
Note: Figures starting from 2021 are forecasts from WSTS, Inc..

stable demand expected over the next two years (Figure 1.31). Promisingly, market projections point to a robust turnaround in semiconductor demand (WSTS 2020). This development can already be seen in the strong appetite for semiconductors from laptop and 5G smartphone manufacturers (Fitch and Koh 2021; Nagumo 2021), and even from automakers, for automotive electronics (Riley and Ziady 2021). The surge in demand for semiconductors could provide a much-needed boost to global capex, which has been largely weak since 2018.Meanwhile, investor sentiment, although somewhat improved, remains tepid. The pandemic has exacerbated the uncertainty in the external environment initially brought about by the US–China trade tensions, as evidenced by announcements of new FDI projects in the region, which have been further reduced (Figures 1.32–1.33). Co-locations and relocations, a major driver of project announcements in 2019 as result of the trade tensions, have likewise nearly disappeared (Figure 1.34). For example, even Vietnam, one of the identified benefactors of the FDI diversion in 2019 (AMRO 2020a), saw the number of inward projects drop from nearly 170 to fewer than 40 announcements.

Although actual FDI volumes held up strongly in some countries in 2020, the number of inward intentions for future projects saw a broad-based decline across the ASEAN+3. Still, the region's project announcements have been buttressed by more projects flowing to the ASEAN subregion in 2020, which amounted to almost half of its total estimated capital expenditure (Figure 1.33). Although recent indicators remain weak, this outturn is consistent with anecdotal evidence pointing to the ASEAN subregion as a prime recipient of investments that have been diverted away from China, and that ASEAN—along with the Plus-3—will continue to be an important node in global value chain activity in the post-pandemic world (see Chapter 2). Thus, in the short-term, investment diversion, like that of trade, continues to be an upside risk factor for many of the regional economies. However, uncertainty about pandemic developments will likely drive the trade and investment environment in 2021, even as China continues to make good progress toward implementing its Phase One trade deal with the United States (Box 1.7).

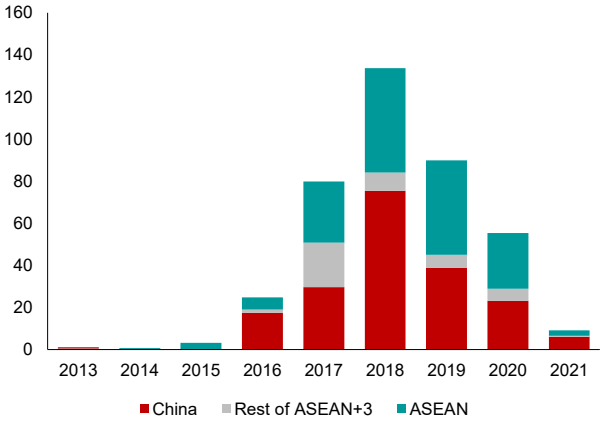
The pandemic has fundamentally changed the future of trade in goods and services. It has accelerated the

Figure 1.32. ASEAN+3: Aggregate Inward FDI Announcements
(Number of projects; Billions of US dollars)



Sources: Orbis Crossborder; and AMRO staff calculations.
Note: Inward project announcements cover four types: new projects, expansion projects, relocated projects, and co-located projects. Co-located projects refer to those that are moved to a location where the investor already has existing business.

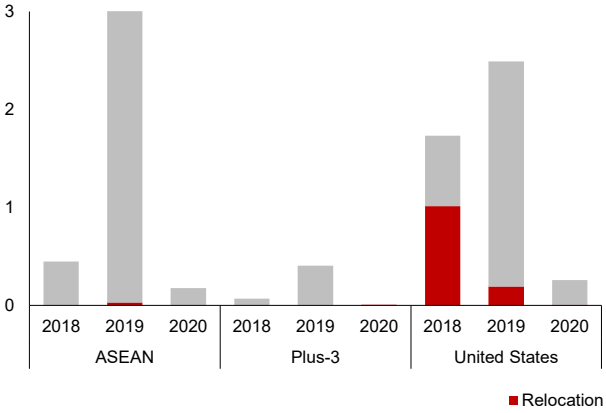
Figure 1.33. ASEAN+3: Inward FDI Announcements by Destination
(Billions of US dollars)



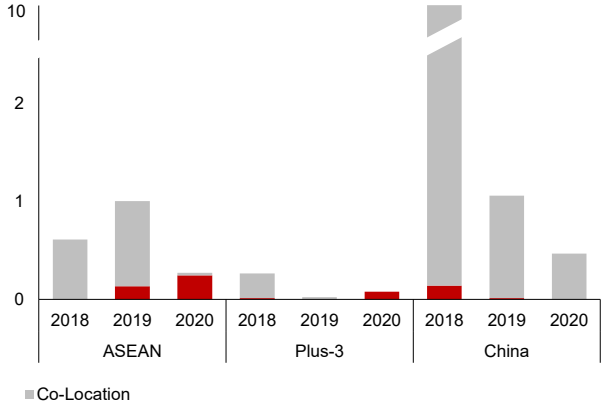
Sources: IHS Markit; and AMRO staff calculations.

Figure 1.34. ASEAN+3 and United States: FDI Co-Location and Relocation by Direction
(Billions of US dollars)

From China



From the United States



Sources: Orbis Crpssborder; and AMRO staff calculations.

digitalization of households and businesses, as well as the emergence of new and different technologies. It has also raised the possibility of reconfigured global value chains post-pandemic, as technology significantly transforms the factors that help develop the deep supply chains in the ASEAN+3 region, for both goods and services (see Chapter 2).As technology changes, so will the manner of global production and trade. Cost considerations will become less important—implying a need to strengthen other comparative advantages, such as skilled labor supply, regulations, and logistic capabilities. Despite some evidence of firm movements, such as those away from China, the ASEAN+3 region remains a highly attractive location, including for future FDI flows—supported by a fast-growing middle class and dynamic growth prospects. However, to remain significant nodes in global value chain activity, the region will need to keep up with the digital economy's requisite hard and soft infrastructure, along with coordinated regional strategies that strongly incorporate resilience against various possible shocks.

Box 1.5:

Is the Shipping "Crystal Ball" Picking Up a Trade Revival?

ASEAN+3 trade gained from shifts in demand as a consequence of the pandemic. Electrical and electronic product exports benefited from increased reliance on technology as remote work-from-home (WFH) arrangements and e-commerce became the new normal (Figure 1.5.1). WFH and changes in consumer behavior also led to greater demand for other non-information technology products, such as furniture and bicycles, with an increasing share of exports from the region (Figure 1.5.2). The health crisis likewise saw a surge in demand for medical products and personal protective equipment (PPE), such as ventilators, face masks, and rubber gloves. Increased imports of some of these goods originated mainly from the United States and Europe. More recently, some ASEAN economies received an additional boost to its commodity exports—including base metals—owing to China's investment-led economic recovery from the pandemic.

A greater proportion of ASEAN+3 exports that enjoyed relatively strong demand in 2020 was transported by air and land. In the wake of supply chain disruptions and movement restrictions, some businesses switched from ocean freight to air and land freight, where possible:

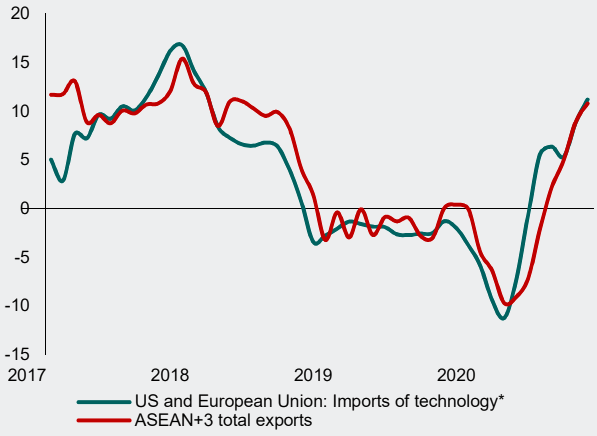
- Urgent consignments, like PPEs and other medical items, as well as goods that are crucial to just-in-time supply chains, such as electronics components, were generally transported by air. As a result, air cargo revenue grew by 31 percent in the second and third quarter of 2020, after falling by 28 percent year-over-year in the first quarter of 2020 (IATA 2020a, 2020b).

- Meanwhile, rail freight volume from Chinese cities to destinations along the Eurasia trade route accelerated when ocean freight was hit by capacity constraints from COVID-19 restrictions (King 2020). Indeed, rail freight transportation between China and Europe—which is less costly than air freight and faster than transporting by sea—became an attractive alternative (DSV Global Transport and Logistics 2020). But, as China-Europe rail services reached full capacity, overland trucking—which can be faster than trains—became more appealing (van Marle 2020).

- Hong Kong recorded a sustained expansion in land-based shipments, which were predominantly re-exports bound for China, while Korea and Malaysia saw an increase in air and land freight from the end of the second quarter of 2020 (Figure 1.5.3), leading to an increase in the export shares of land-based cargo for Hong Kong, and air and/or land transport for Korea and Malaysia.

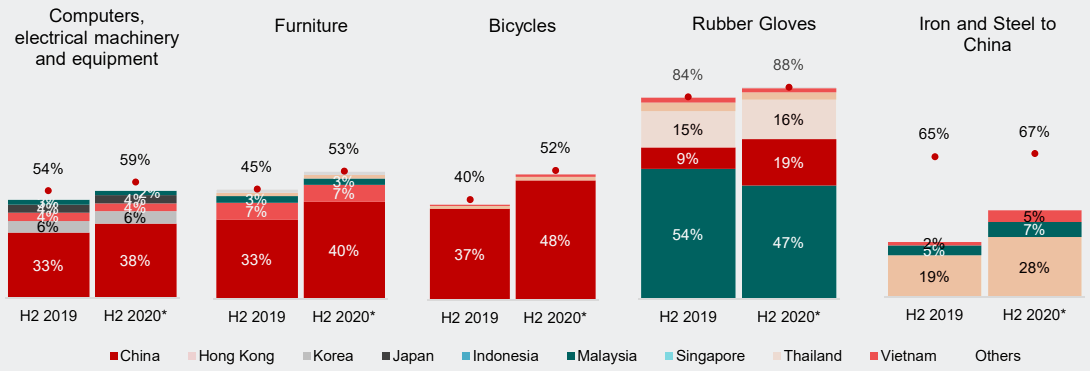
But even as air and land freight increased in importance during the pandemic, maritime transport continued to dominate global trade. Ocean freight accounts for at least 50 percent of exports among regional economies, except Hong Kong—where more than half of gross exports (including re-exports) are sent over land to mainland China—and Lao PDR, a landlocked economy where land-based trade is more dominant (Figure 1.5.4). Aside from being the least costly alternative, ships can move a broader range of goods than aircrafts, while rail transportation is not widely available throughout the region. For example, exports of furniture and bicycles are usually shipped via general cargo vessels or container ships, while base metals, such as iron and steel, are typically transported via general cargo or bulk carriers. An even greater variety of goods can be exported via container ships, mostly traversing the Transpacific route, while grains and other dry bulk commodities are carried in bulk carriers and petroleum, liquefied natural gas, and chemicals in tankers. Shipping data can thus be used to gauge signs of a broadening in trade activity.

Figure 1.5.1. Selected ASEAN+3: Exports and US+EU Technology-Related Imports
(Percent year-over-year, 3-month moving average)



Sources: National authorities via IHS Markit and Haver Analytics; and AMRO staff calculations.
Note: Imports of technology are represented by automated data processing machines (HS code: 8471) and electrical machinery and equipment (HS code: 85) for the ASEAN-6 and Plus-3.

Figure 1.5.2. Selected ASEAN+3: Global Market Share for Specific Goods
(Percent of total exports of the specified good)



Source: National authorities via IHS Markit.
Note: The proportions of iron and steel exports to China are relative to total exports of iron and steel to China. "Others" refer to other ASEAN+3 economies where data are available from IHS Markit. Hong Kong, Singapore, and Malaysia data are for domestic exports.
* Refers to data until November 2020 for Malaysia, the Philippines, and Vietnam.

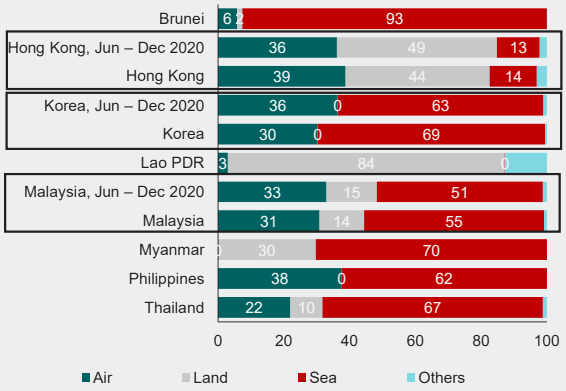
Figure 1.5.3. Selected ASEAN+3: Merchandise Export Values by Mode of Transport
(US dollar, percent year-over-year; 3-month moving average)

Sources: National authorities via Haver Analytics and IHS Markit; and AMRO staff calculations.
Note: Trade by land has been excluded for Korea, given that the long-term trend is very erratic.

Shipping-based indicators of ASEAN+3 trade point to continuing disruption by the pandemic, notwithstanding the turnaround in exports which troughed in the first half of 2020.[1/] Shipping capacity has come under pressure as reduced workforces, port congestions, and vessel route diversions (during the earlier part of the pandemic) coincided with rising demand in the West when restrictions following the first wave of COVID-19 infections were eased. That pickup in demand was met by only a few ASEAN+3 economies, led by China, as others continued to deal with elevated COVID-19 infection rates. In turn, the mix of tight shipping capacity and uneven trade flows has given rise to a shortage of shipping containers in some parts of Asia, especially in China (Ren 2020). It has prompted container vessels elsewhere to leave port without being fully loaded and head to hubs where demand is high (Mongelluzzo 2020). Such trends in ship movements are captured in the significant outperformance of outbound ship traffic (ship count) relative to cargo volume (cargo tonnage)—or the sharp drop in cargo volume per ship—in the second half of 2020 for Indonesia, the Philippines, Singapore, Thailand, and to a certain extent, Japan. The shipping imbalance has, in fact, led to a spike in ocean freight rates—for example, rates for containers leaving Shanghai have risen threefold since the end of 2019 (Figure 1.5.5).

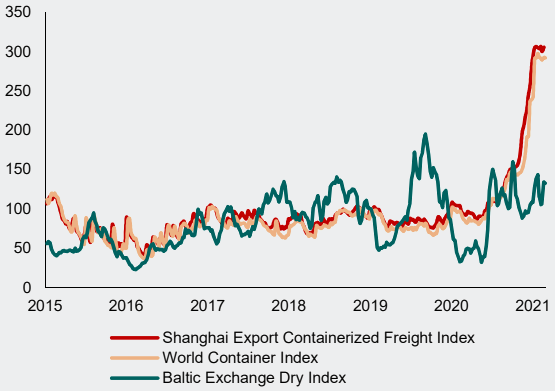
Shipping activity in the region points to overall weakness in global demand and regional supply, the latter likely affected by logistical and supply chain constraints. The shipping indicators for outbound cargo volumes for most regional economies show a loss in momentum heading toward the end of 2020 through early 2021, after the earlier turnaround (Figure 1.5.6). Vietnam's outbound cargo is the exception, with seaborne trade posting a strong rebound in early 2021. The general decline in shipping momentum is also corroborated in seaborne import volumes, which suggest a slowing trend across many economies, despite indications of a more recent pickup in Myanmar and Vietnam (Figure 1.5.7). Overall, the shipping indicators point to a fragile recovery in global demand and supply, hinting that the recent revival in exports—led by air and land freight—may have limited steam. Hence, any sustained recovery in ASEAN+3 trade would likely be contingent on an easing in logistical constraints and improvements in global demand.

Figure 1.5.4. Selected ASEAN+3: Share of Merchandise Exports by Mode of Transport, 2019
(Percent of total value)



Sources: National authorities (for Hong Kong and Malaysia data) via Haver Analytics and IHS Markit (Korea); UN Comtrade; and AMRO staff calculations.
Notes: Only ASEAN+3 economies with available data are reported. The bulk of "Others" for Hong Kong refers to rivers; and pipelines and cables for Lao PDR.

Figure 1.5.5. World: Ocean Freight Rates
(Percent, February 25, 2019 = 100)



Source: Bloomberg Finance L.P.

1/ See del Rosario and Quách (2020) for the detailed discussion and methodology behind the shipping indicators.

Figure 1.5.6. Selected ASEAN+3: Gross Merchandise Exports against Outbound Ship Count and Cargo Tonnage Shipping Indicators
(Index, 2019 monthly average = 100)

Sources: MarineTraffic; national authorities via Haver Analytics; and AMRO staff estimates.
Note: Vietnam's ship count includes only containerships. Vietnam's ship count and cargo tonnage use a two-month leading prediction of the metrics. Ship count and cargo tonnage indicators are based on information up to February 28, 2021.

Figure 1.5.7. Selected ASEAN+3: Gross Merchandise Imports against Inbound Ship Count and Cargo Tonnage Shipping Indicators
(Index, 2019 monthly average = 100)

Sources: MarineTraffic; national authorities via Haver Analytics; and AMRO staff estimates.
Note: Vietnam's ship count includes only containerships. Vietnam's ship count and cargo tonnage use a two-month leading prediction of the metrics. Ship count and cargo tonnage indicators are based on information up to February 28, 2021.

The authors of this box are Diana del Rosario and Toàn Long Quách.

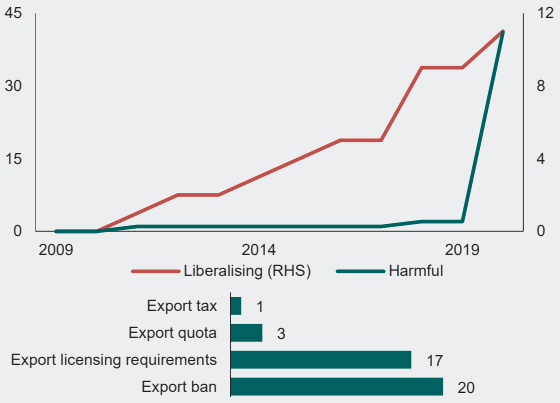
Box 1.6:

Trade in Medical Goods during a Pandemic

The COVID-19 pandemic brought the trade in medical goods and protective equipment to the forefront of trade policy in 2020. The sudden demand for these critical products, which quickly outstripped domestic supply, gave rise to protectionism around these strategic goods.[1/] To ensure availability for their domestic population, many economies in the world restricted their trade, mainly through the use of export bans and licensing requirements (Figure 1.6.1). While these goods constitute only a very small portion of total ASEAN+3 exports—less than 1 percent—some economies in the region have nonetheless benefited from the strong global demand for them.

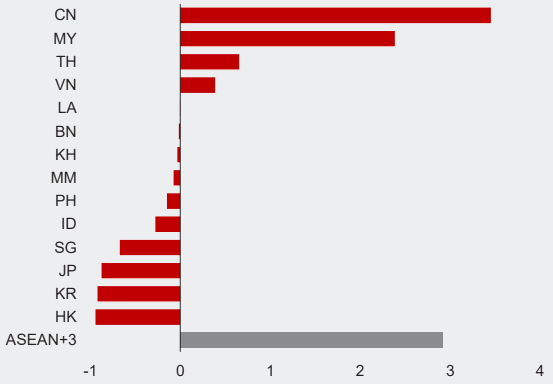
The ASEAN+3 region as a whole was a net exporter of protective and medical equipment (PPEs) in 2020. They were largely driven by China and Malaysia, which more than offset the net imports by other regional economies (Figure 1.6.2). The success of China's containment measures in controlling the spread of the virus early on, and its ability to quickly scale up production meant that it was able to manufacture sufficient equipment for domestic needs and for export. Similarly, in Malaysia, the production of rubber gloves was ramped up to meet increased global demand. Overall, the region's exports of PPEs picked up in the second quarter of 2020, after slowing down in late 2019 (Figure 1.6.3).

Figure 1.6.1. Global Export Restrictions: New Interventions in the Medical and Surgical Sector
(Cumulative since 2009)



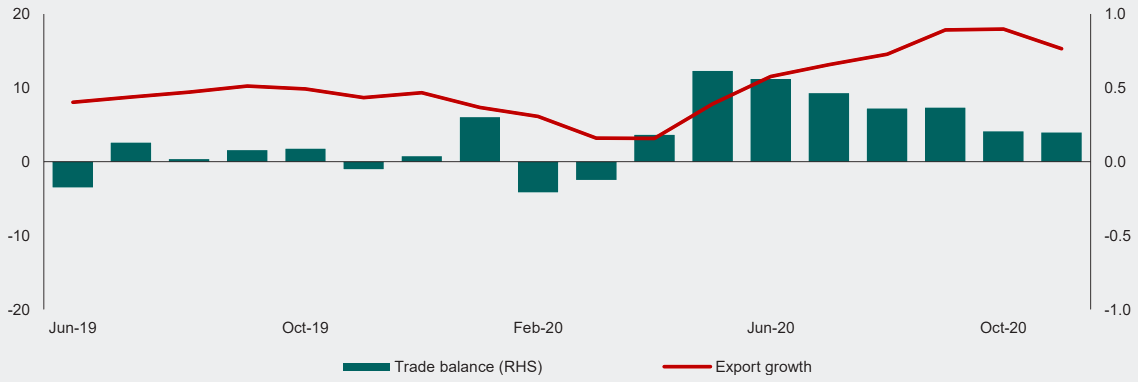
Sources: Global Trade Alert; and AMRO staff calculations.

Figure 1.6.2. ASEAN+3: Trade Balance of Protective and Medical Equipment, 2020 Year-to-Date
(Billions of US dollars)



Sources: IHS Markit; and AMRO staff calculations.
Note: BN = Brunei Darussalam; CN = China; HK = Hong Kong; ID = Indonesia; JP = Japan; KH = Cambodia; KR = Korea; LA = Lao PDR; MY = Malaysia; MM = Myanmar; PH = Philippines; SG = Singapore; TH = Thailand; and VN = Vietnam.

Figure 1.6.3. ASEAN+3: Trade in Protective and Medical Equipment
(Percent year-over-year; billions of US dollars)



Sources: IHS Markit; and AMRO staff calculations.

The author of this box is Marthe Hinojales.

1/ The goods refer to a group of 51 six-digit HS codes, including 300590, 300670, 401511 (surgical and medical gloves); 841920 (sterilizers); 900490 (protective spectacles); 940220 (furniture and bedding) and 940290 (medical and surgical furniture), among others.

Box 1.7:

Taking Stock of the US–China Phase One Deal

The signing of the Phase One deal between the United States and China on January 15, 2020 marked the easing of trade tensions between the two economies that began in 2018. As part of the deal, China agreed to increase its purchases from the United States by at least USD 200 billion over two years to 2021, covering manufactured goods, energy, agriculture, and services (Table 1.7.1). The United States, on the other hand, halved its tariffs on USD 120 billion worth of goods from China and cancelled a planned round of tariffs on an additional USD 180 billion of Chinese goods.

Both sides held a review of the progress on implementing the agreement on August 25, 2020, and appeared optimistic, despite the COVID-19 pandemic. The pandemic had also affected the US tariff exclusion process for particular Chinese-made products—beginning March 2020, the United States had excluded medical goods imports such as ventilators, oxygen masks, gloves, and some personal protective equipment from additional tariffs.[1/] A statement from the Ministry of Commerce of China indicating that "the two sides agreed to create conditions and atmosphere to push forward" the implementation of the deal,[2/] underscored how COVID-19 had made the timeline for implementing the agreement more challenging.

A stocktake of China's commitments under Phase One supports the positive outcome of the review. While China's imports as of June 2020 suggested a shortfall of more than 75 percent, it had been trimmed to less than 40 percent by December (Table 1.7.2). The sluggish progress in the early part of 2020 is consistent with the adverse impact of the pandemic on China's growth in the first half of 2020, as well as the continued rise in infections in the United States. As economic activity in China has continued to normalize since June, imports from the United States have also gained traction—China imported nearly 49 percent more in the second half of 2020 than in the first half. This surge helped to reduce its earlier projected shortfall for 2020, especially in energy and manufactured goods.

Table 1.7.1. US–China Phase One Deal: Targeted Product Categories

Manufactured Goods	Agriculture	Energy	Services
• Industrial machinery • Electrical equipment and machinery • Pharmaceutical products • Aircraft • Vehicles • Optical and medical instruments • Iron and steel • Other manufactured goods	• Oilseeds • Meat • Cereals • Cotton • Other agricultural commodities • Seafood	• Liquefied natural gas • Crude oil • Refined products • Coal	• Charges for use of intellectual property • Business travel and tourism • Financial services and insurance • Other services • Cloud and related services

Source: US Trade Representative Office.
Note: "Other manufactured goods" include solar-grade polysilicon and other organic and inorganic chemicals, hardwood lumber, integrated circuits (manufactured in the United States), and chemical products; "aircraft" refer to both orders and deliveries. "Other agricultural commodities" includes all products, including alfalfa, citrus, dairy, dietary supplemented, distilled spirits, dried distiller grains, essential oils, ethanol, fruits and vegetables, ginseng, pet food, processed foods, tree nuts, and wine. "Seafood" includes lobster. "Coal" includes metallurgical coal. "Services" represent the cross-border supply of services, with the exception of financial, insurance, and cloud services, which include both cross-border supply and supply through commercial presence.

1/ This exclusion for medical goods is notable, as the US Trade Representative Office (USTR) has a very high rejection rate for exclusion requests. As of July 2020, about 84 percent of all exclusion requests filed until January 2020 had been denied by the USTR.

2/ Ministry of Commerce, China (2020).

Table 1.7.2. China: Stocktake of Progress under the Phase One Deal, as of December 2020

	2020 Target (2017 Baseline + Additional Imports)	Actual US Imports, 2020				Non-US Imports	
		December		June		December	
	Billions of US dollars	Billions of US dollars	Percent to target	Billions of US dollars	Percent to target	Billions of US dollars	Percent of US imports to non-US imports
Manufactured Goods	110.5	66.7	60.3	30.3	27.4	927.1	7.2
Agriculture	36.5	23.5	64.5	8.7	23.8	146.4	16.1
Energy	25.5	9.8	38.4	1.3	5.0	218.3	4.5
Total (Non-Services)	172.5	100.0	58.0	40.2	23.3	1,291.8	7.7

Sources: IHS Markit; and AMRO staff calculations.

The author of this box is Marthe Hinojales.

Box 1.8:

Travel and Transportation when Borders are Closed

Although largely dwarfed by goods exports, service exports are becoming increasingly more important for several of the ASEAN+3 economies. They are particularly significant for the two international financial centers in the region, Singapore and Hong Kong, followed by Cambodia and Thailand, where tourism was a mainstay pre-COVID-19 pandemic (Figure 1.8.1). For the entire region, the travel, transportation, and other business services segments dominate, albeit to different degrees across economies (Figure 1.8.2). For example, while travel services account for 80 percent of total service exports in Cambodia and Lao PDR, other business services make up almost half of service exports in the Philippines. The pandemic dealt a severe blow to many service exports, especially in tourism and hospitality, as a result of border closures and the collapse in air travel.

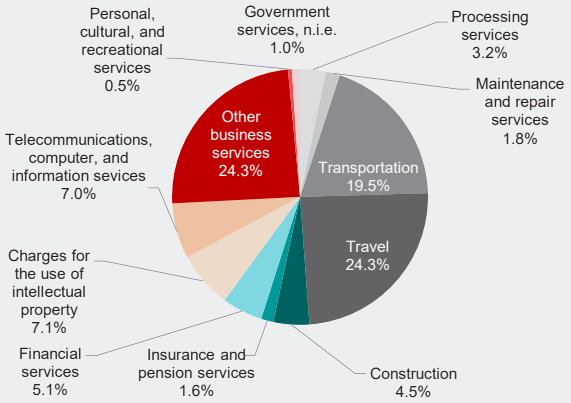
Travel receipts have been most affected among the various sectors. Tourist arrivals started to fall in February 2020 and had come to an abrupt halt by March/April with the closure of borders to protect populations against the spread of the virus (Figure 1.8.3). Travel receipts declined by more than 50 percent across the region in the first three quarters of 2020, which significantly impacted regional economies, where the direct and indirect impact of domestic and international travel and tourism ranged from less than 5 percent of GDP in Korea and Myanmar to more than 25 percent in Cambodia and the Philippines in 2019 (Figure 1.8.4), and contributed significantly to employment (Choo and others 2020).

Although borders have been cautiously reopened for selected groups of travelers—mostly for returning citizens and business travelers—they have remained largely closed to leisure and social visits. The recovery in cross-border travel and tourism remains highly uncertain in the near term, as the pre-condition for border reopening will be the successful containment of COVID-19 both domestically and abroad. The tenacious and constantly evolving nature of the pandemic has, however, necessitated a constant review of border policies, including quarantine requirements, testing, contact tracing, and soon, vaccinations. Economies with high reliance on foreign tourism have thus been hit hard, and a full rebound is unlikely until the pandemic is well under control around the world through mass vaccinations.

Figure 1.8.1. ASEAN+3: Composition of Exports, 2015–19 Average
(Percent of GDP)

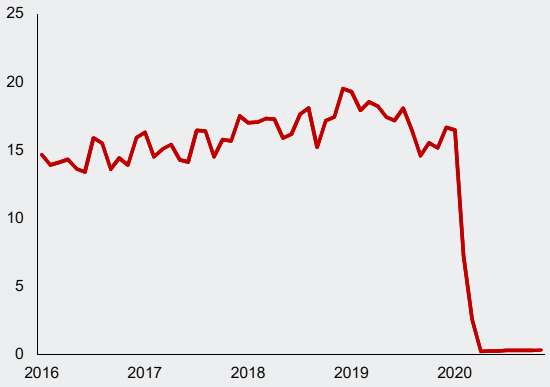
Sources: National authorities via Haver Analytics; and AMRO staff calculations.
Note: BN = Brunei Darussalam; CN = China; HK = Hong Kong; ID = Indonesia; JP = Japan; KH = Cambodia; KR = Korea; LA = Lao PDR; MY = Malaysia; MM = Myanmar; PH = Philippines; SG = Singapore; TH = Thailand; and VN = Vietnam.

Figure 1.8.2. ASEAN+3: Share of Aggregate Services Exports by Industry, 2015–19
(Percent)



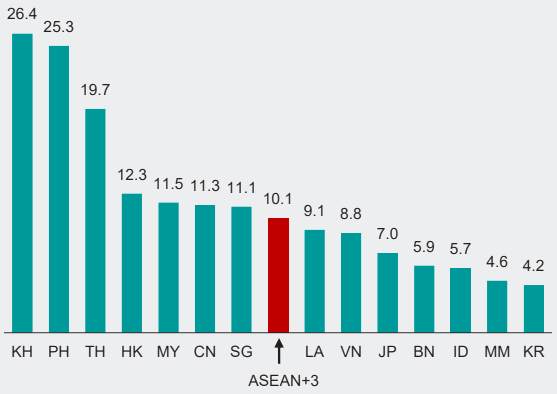
Sources: National authorities via Haver Analytics; and AMRO staff calculations.
Note: Vietnam is not included in the total as it does not report a sectoral breakdown of its services trade. n.i.e. = not included elsewhere.

Figure 1.8.3. Selected ASEAN+3: Aggregate Tourist Arrivals
(Millions of persons)



Sources: Haver Analytics; and AMRO staff calculations.
Note: Data include Cambodia, Hong Kong, Indonesia, Japan, Korea, Singapore, Thailand and Vietnam.

Figure 1.8.4. ASEAN+3: Total Contribution of Travel and Tourism to GDP, 2019
(Percentage share of GDP)



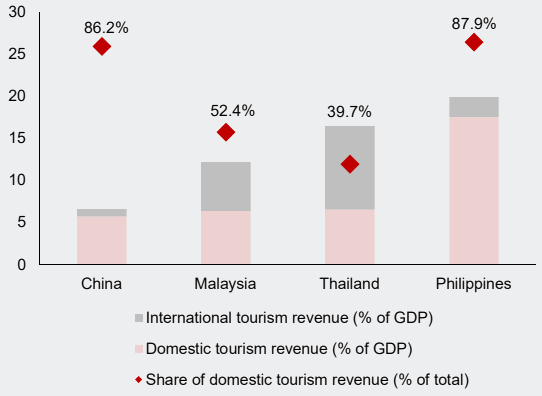
Sources: World Travel and Tourism Council; and AMRO staff calculations.
Note: Shares for ASEAN+3 refer to the median. BN = Brunei Darussalam; CN = China; HK = Hong Kong; ID = Indonesia; JP = Japan; KH = Cambodia; KR = Korea; LA = Lao PDR; MY = Malaysia; MM = Myanmar; PH = Philippines; SG = Singapore; TH = Thailand; and VN = Vietnam.

As domestic restrictions have gradually been lifted in economies with relatively contained COVID-19 cases, domestic tourism has been able to resume. In 2018, domestic tourists accounted for more than 80 percent of all visitors in Vietnam, more than 90 percent in the Philippines and Japan, and more than 95 percent in Korea and China (Choo and others 2020). In several economies, revenue from domestic tourism has thus accounted for the larger share of the industry (Figure 1.8.5). While domestic tourism does not generate foreign exchange earnings and domestic tourists might pursue different experiences than international visitors, it has the potential to support the hard-hit sector in economies where the epidemic situation is well under control. For instance, even with closed borders, the resumption of domestic travel in China saw the number of weekly scheduled flights returning to its pre-pandemic levels by October 2020 (Figure 1.8.6). For small economies such as Singapore, the number of flights remained about 85 percent lower than a year earlier even with the resumption of domestic tourism, illustrating the pressure the aviation sector continues to face.

Overall, the net travel balance for most ASEAN+3 economies moderated during 2020 as the decline in tourism receipts far outstripped the lower travel expenditure abroad by residents. Several economies in the region— Brunei, China, Korea, Lao PDR, the Philippines, and Singapore—were net importers of travel services pre-pandemic, that is, their residents spent more money traveling abroad than foreign visitors spent domestically (Figure 1.8.7). With limited cross-border movements, a resumption of domestic tourism would benefit the tourism sector in these places to varying degrees. Of course, these are aggregate effects—some segments of the travel industry would likely benefit more than others. That said, any flare-up in infection rates would likely drag down overall travel spending. Net travel exporters, on the other hand—most notably Cambodia, Japan, and Thailand, as well as Malaysia and Myanmar to lesser degrees—are likely the ones suffering the most from the collapse in international travel.

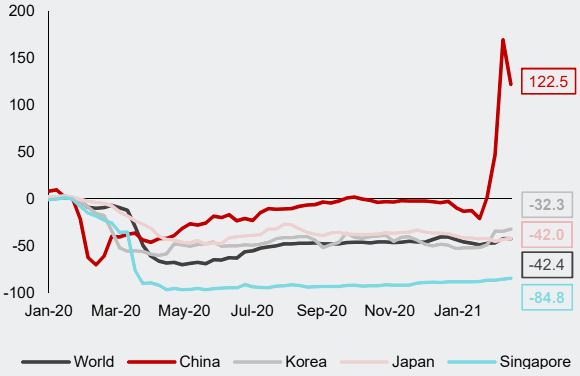
Amid weak global demand and limited cross-border movement, a full recovery in services trade, especially travel and transportation, seems unlikely. Policymakers in the ASEAN+3 region have sought to boost domestic tourism in an effort to mitigate the loss of revenue from international tourists. They have introduced various measures including travel subsidies, tax reliefs and promotional campaigns as incentive. The need to comply with social distancing measures and border closures while supporting income and employment within the sector have also prompted the creation of innovative service offerings. These include repurposing airports for luxury camping, rebranding tourist attractions to appeal to locals, and repricing hotel rooms and amenities to provide alternative venues for those who are working remotely, and entice locals to take vacations in hotels. The transportation sector has also suffered. The loss in revenue from passenger transport and the fall in freight transport due to weaker global demand for goods have led to a sharp decline in receipts for transportation services, although all economies in the region—with the exception of Hong Kong—are net transportation services importers (Figure 1.8.8).

Figure 1.8.5. Selected ASEAN+3: Domestic versus International Tourism Revenue
(Percent of GDP; percent of total)



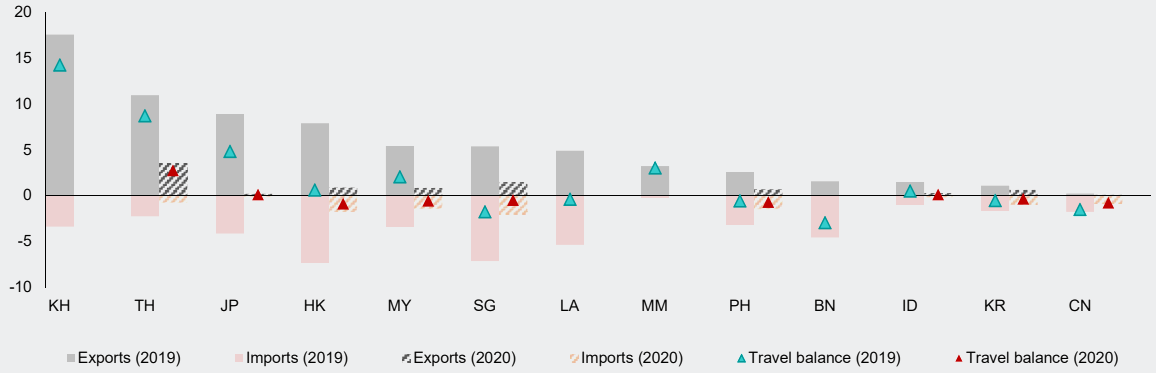
Sources: National authorities via CEIC and Haver Analytics; and AMRO staff calculations.
Note: Data for mainland China are as of 2019; Malaysia, the Philippines and Thailand are as of 2018.

Figure 1.8.6. World and Selected ASEAN+3: Flight Departures
(Percent year-over-year)



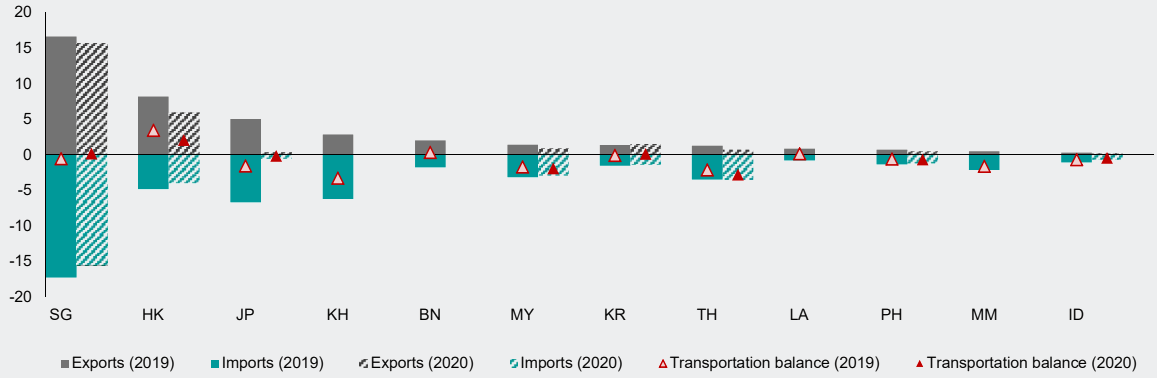
Source: Official Aviation Guide.
Note: Data are in weekly frequency.

Figure 1.8.7. ASEAN+3: Export and Import of Travel Services
(Percent of GDP)



Sources: National authorities via Haver Analytics; and AMRO staff calculations.
Note: Data are unavailable for Vietnam and quarterly data for Brunei, Cambodia, Lao PDR and Myanmar. Data for Hong Kong, Philippines and Thailand cover the first to third quarter of 2020. BN = Brunei Darussalam; CN = China; HK = Hong Kong; ID = Indonesia; JP = Japan; KH = Cambodia; KR = Korea; LA = Lao PDR; MY = Malaysia; MM = Myanmar; PH = Philippines; SG = Singapore; and TH = Thailand.

Figure 1.8.8. ASEAN+3: Export and Import of Transportation Services
(Percent of GDP)



Sources: National authorities via Haver Analytics; and AMRO staff calculations.
Note: Data for Vietnam and quarterly data for Brunei, Cambodia, Lao PDR, and Myanmar are unavailable. Data for Hong Kong, the Philippines and Thailand cover the first to third quarter of 2020. BN = Brunei Darussalam; CN = China; HK = Hong Kong; ID = Indonesia; JP = Japan; KH = Cambodia; KR = Korea; LA = Lao PDR; MY = Malaysia; MM = Myanmar; PH = Philippines; SG = Singapore; and TH = Thailand.

The authors of this box are Catharine Tjing Yiing Kho and Anne Oeking.

III. A Dichotomy in the Financial Sector?

The progress of the pandemic has led to divergent perceptions of the financial sector. Both AE and regional emerging market (EM) equities have soared, following the huge drawdown in March–April 2020—and their volatility have returned to almost pre-pandemic levels—ostensibly because investors feel optimistic about the outlook for corporate profitability, amid extraordinary policy support and positive vaccine developments (Figures 1.35–1.36).

Concurrently, total returns on EM sovereign and credit bonds have been positive in 2020, with regional EMs faring well relative to their peers in terms of the market's relative risk assessments (Figures 1.37–1.38). In contrast, concerns have risen about what corporate and household—and hence bank—balance sheets could reveal about economic scarring when policy support is eventually removed.

A Quick Turnaround in Markets

Global financial markets have come a long way since the panic-driven crash in March 2020, when the COVID-19 outbreak was officially declared a global pandemic. Since then, unprecedented policy responses in the form of monetary easing, liquidity injections, massive fiscal stimuli, and regulatory forbearance, to offset the liquidity squeeze and income losses from the necessary physical containment measures, have helped turn around asset prices. The success in slowing the spread of the virus in some parts of the world, the gradual easing of restrictions and reopening of economies, and, more recently, success in the development of efficacious vaccines have been positive for markets. The outcome of the US Presidential election also appeared to buoy investor sentiment.

Accommodative monetary policies, especially in AEs, have played a major role in supporting markets in 2020, beyond their initial backstopping objective. With economic recovery still fragile and nascent, ultra-easy monetary policies in the AEs are expected to remain in place for a prolonged period, which will boost markets (Figure 1.39). The success in vaccine development has been a further boon for markets, boosting equity prices, especially in sectors that have been underperforming since the pandemic broke out.

The outcome of the US elections further improved the backdrop for risk assets. The exit of the Trump administration has raised hopes of improvements in US–China relations and consequently, for global trade. In addition to the White House, the swing in the balance of power in Congress toward the Democrats, who now control both the House of Representatives and the Senate, has increased optimism for larger fiscal stimulus packages and more rational, credible policymaking. Concerns that a Democratic government would result in stronger regulatory oversight of banks and nonfinancial firms are less likely to manifest in the near term as the incoming Biden administration focuses instead on dealing with the pandemic and healing the economy.

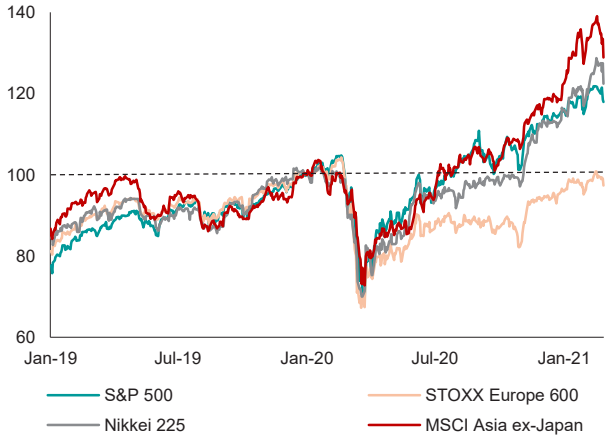
While supported by the recovery in AE markets, regional financial markets have been affected by idiosyncratic factors, reflecting the diversity of their economies. Financial stress has declined significantly since the peak in March 2020 (Figure 1.40). Generally, macro-financial policy responses, and the pickup in economic activity following the easing in containment measures, drove the turnaround in markets. The timing, size, and type of support resulted in various degrees of success in controlling the pandemic, and the macro backdrop underpinned market performance (Table 1.3):

- A clear divergence emerged between Plus-3 and ASEAN equity markets, as the recovery in the former was much quicker. The turnaround was also uneven at the sectoral level (Box 1.9). Looking ahead, a more positive global backdrop provides opportunity for regional laggards to catch up.

- US dollar movements dominated regional currency markets, but country-specific factors also played a part. Appreciation pressure on the Korean won, Philippine peso, and Thai baht (which had started toward the end of 2019) reflected strengthening current account balances (Figure 1.41), while the Chinese renminbi benefited from the country's rapid resumption of economic activity once infections were controlled. US dollar weakness will likely be the dominant theme in FX markets—the Biden Administration is not expected to undertake any verbal intervention—while any perceived reduction in trade and tech tensions will further support regional currencies; appreciation pressures may ease as current account surpluses start to narrow (Table 1.4).

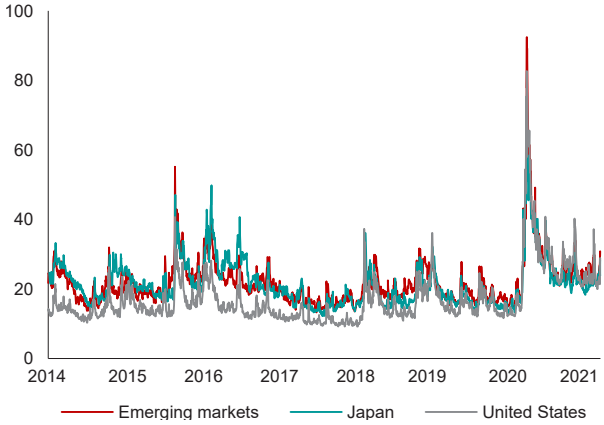
- Bond markets have been largely supported by monetary policy easing and massive liquidity injections, both global and domestic. As markets stabilized, the gradual improvement in risk sentiment saw a return of flows to the region. However, the recent spike in US long-term rates, combined with market expectations of continuing large fiscal deficits, have led to a recent steepening in yield curves in some emerging economies, which will likely continue through 2021.

Figure 1.35. Selected Advanced Economies and Asia: Equity Market Indices
(Index, January 1, 2020 = 100)



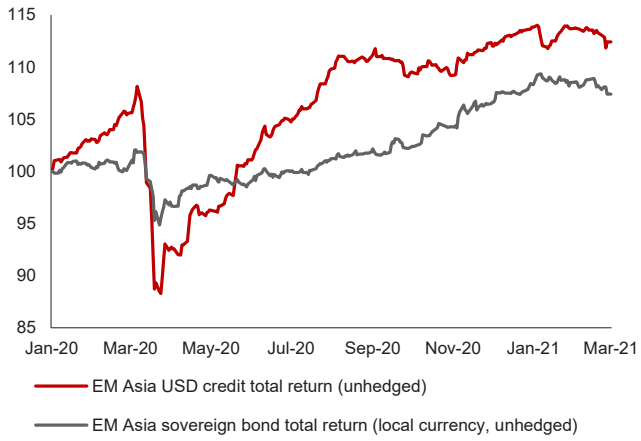
Sources: Bloomberg Finance L.P.; Haver Analytics; and AMRO staff calculations.

Figure 1.36. Selected Advanced and Emerging Markets: Equity Volatility Indices
(Percent)



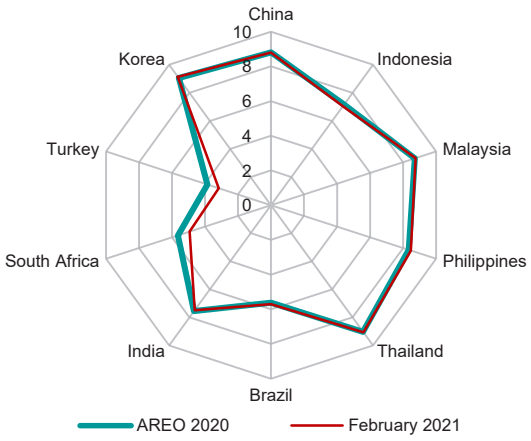
Source: Haver Analytics.

Figure 1.37. Asia: Total Returns on Sovereign and Corporate Bonds
(Index, December 31, 2019 = 100)



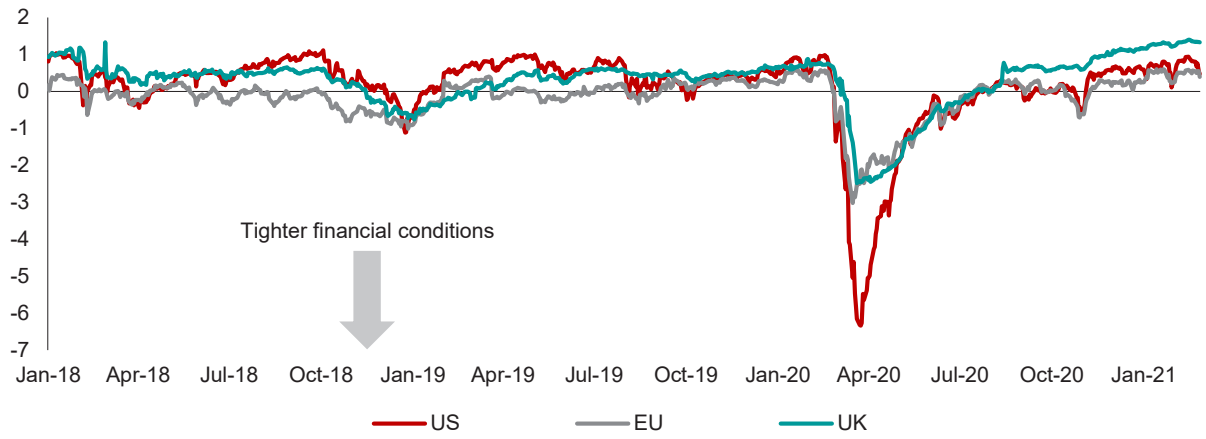
Source: Bloomberg Finance L.P.

Figure 1.38. Selected Emerging Market Economies and Korea: Sovereign Access to Capital Markets
(Rank)



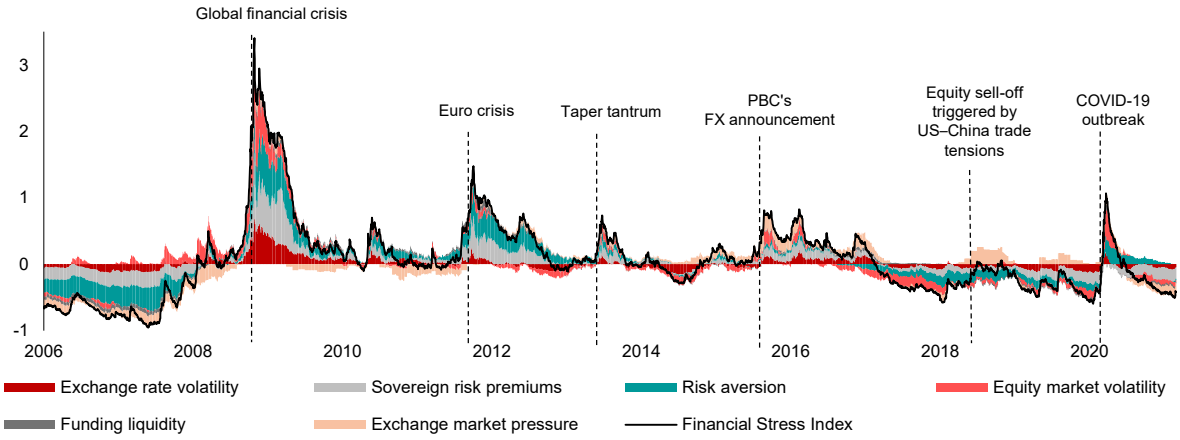
Sources: Haver Analytics; and AMRO staff estimates via ARTEMIS.

Figure 1.39. EU, United Kingdom, and United States: Financial Conditions Index



Source: Bloomberg Finance L.P.
Note: EU = European Union; UK = United Kingdom; and US = United States.

Figure 1.40. Selected ASEAN+3: Financial Stress Index



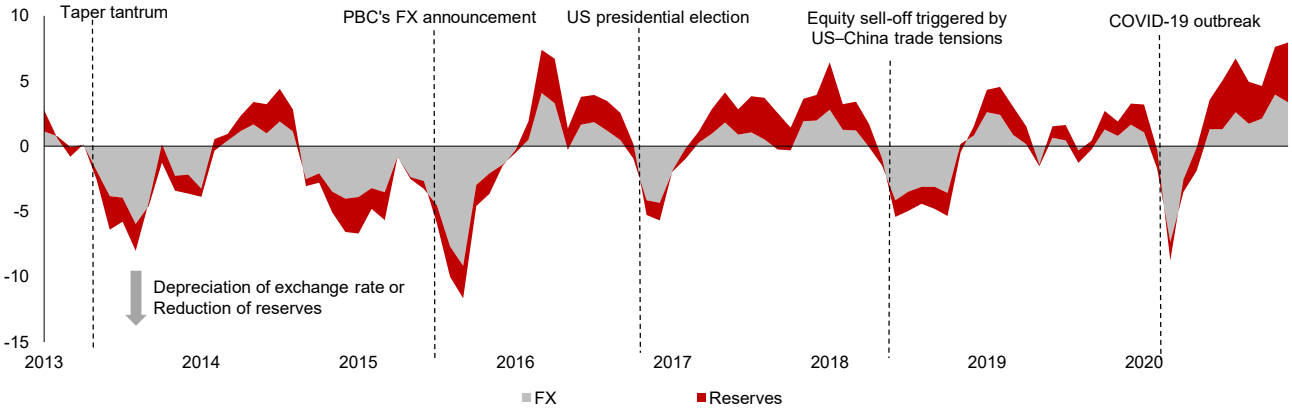
Sources: Bloomberg Finance L.P.; national authorities via Haver Analytics; and AMRO staff estimates.
Note: The Financial Stress Index (FSI) is estimated from the methodology proposed in Poonpatpibul and others (2018). PBC = People's Bank of China.

Table 1.3. ASEAN+3 and Selected Advanced Economies: Performance of Equity, Exchange Rate, and Government Bond Markets, as of February 28, 2021

Economy	Benchmark equity index (log returns)					Currency (against USD, log returns)					10-year yield (basis points)					10-year vs 5-year yield spread (basis points)				
	Level	2021 (YTD)	2020	2019	2018	Level	2021 (YTD)	2020	2019	2018	Level	2021 (YTD)	2020	2019	2018	Level	2021 (YTD)	2020	2019	2018
US	3,829	1.9%	15.1%	25.4%	-6.4%	96.8	0.2%	-7.5%	0.3%	4.1%	1.52	60.7	-100.4	-76.7	27.9	70.0	14.8	32.6	5.3	-2.6
EU	3,685	3.7%	-5.3%	22.1%	-15.6%	1.223	-0.4%	9.1%	-2.0%	-4.5%	-0.23	3.7	-38.4	-42.7	-18.5	31.3	1.4.4	-11.9	-26.6	-7.5
UK	6,652	2.9%	-15.5%	11.4%	-13.8%	1.417	3.5%	3.7%	3.3%	-5.8%	0.82	62.6	-62.5	-45.8	8.6	70.1	33.5	8.0	-24.5	-23.0
CN	3,585	3.2%	13.0%	20.1%	-28.2%	6.449	1.4%	6.2%	-1.2%	-5.5%	3.28	13.8	0.1	-16.4	-57.9	22.0	2.0	-6.3	-1.5	23.6
HK	30,074	9.9%	-3.5%	9.7%	-14.6%	7.754	0.0%	0.4%	0.6%	-0.2%	1.30	60.0	-102.0	-37.0	19.0	65.0	26.0	36.0	-8.0	-7.0
JP	30,168	9.5%	14.9%	18.7%	-12.9%	106.1	-2.9%	5.2%	1.4%	2.2%	0.15	13.2	3.2	-1.4	-4.5	20.3	7.3	2.3	-3.8	-0.4
KR	3,100	7.6%	26.8%	7.4%	-19.0%	1,109	-2.0%	6.0%	-3.5%	-4.4%	1.89	17.1	5.0	-28.4	-51.1	51.1	12.4	18.5	-13.8	-5.6
ID	6,290	5.1%	-5.2%	1.7%	-2.6%	14,083	-0.2%	-1.3%	3.7%	-5.9%	6.56	67.3	-117.7	-96.2	70.6	90.5	22.5	5.3	-50.9	-23.7
MY	1,582	-2.8%	2.4%	6.2%	-6.1%	4.041	-0.5%	1.8%	1.0%	-2.0%	3.01	36.1	-65.0	-77.4	16.5	75.0	20.2	40.4	-17.0	-6.0
PH	6,756	-6.5%	-9.0%	4.6%	-13.7%	48.6	-1.2%	5.3%	3.7%	-5.2%	3.55	58.2	-137.5	-266.8	208.5	70.9	26.0	23.0	16.7	-48.6
SG	2,974	4.5%	-12.5%	4.9%	-10.3%	1.317	0.3%	1.8%	1.2%	-2.0%	1.29	44.7	-89.8	-29.9	3.6	62.5	24.2	19.9	4.7	-19.3
TH	1,497	3.2%	-8.6%	1.0%	-11.5%	30.1	-0.6%	-0.6%	8.4%	0.6%	1.79	46.8	-15.7	-100.5	15.9	77.1	3.4	50.5	-11.3	-13.0
KH	640	-1.3%	-16.2%	46.0%	33.4%	4,078	-1.2%	0.9%	-1.0%	0.2%										
LA	587	-2.0%	-19.6%	-3.9%	-17.7%	9,349	-0.6%	-4.5%	-3.9%	-2.9%										
MM	1,867	2.5%	15.6%	18.3%	22.4%	1,422	-6.9%	10.6%	3.8%	-11.9%										
VN	1,165	5.4%	13.9%	7.4%	-9.8%	23,022	0.3%	0.3%	0.2%	-2.2%	2.338	24.1	-83.7	-170.9	-7.9	123.6	-8.4	-7.1	82.1	-27.4

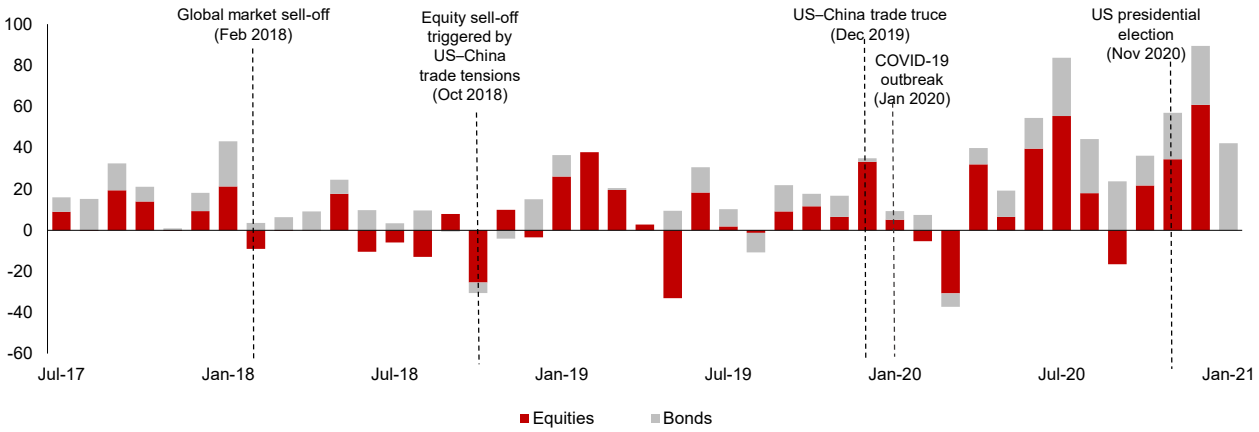
Sources: Haver Analytics; and AMRO staff calculations.
Note: YTD = year-to-date. CN = China; EU = euro area; HK = Hong Kong; JP = Japan; ID = Indonesia; KR = Korea; KH = Cambodia; LA = Lao People's Democratic Republic; MY = Malaysia; PH = the Philippines; SG = Singapore; TH = Thailand; VN = Vietnam; UK = United Kingdom; US = United States.

Figure 1.41. ASEAN-4 and Korea: Exchange Market Pressure Index



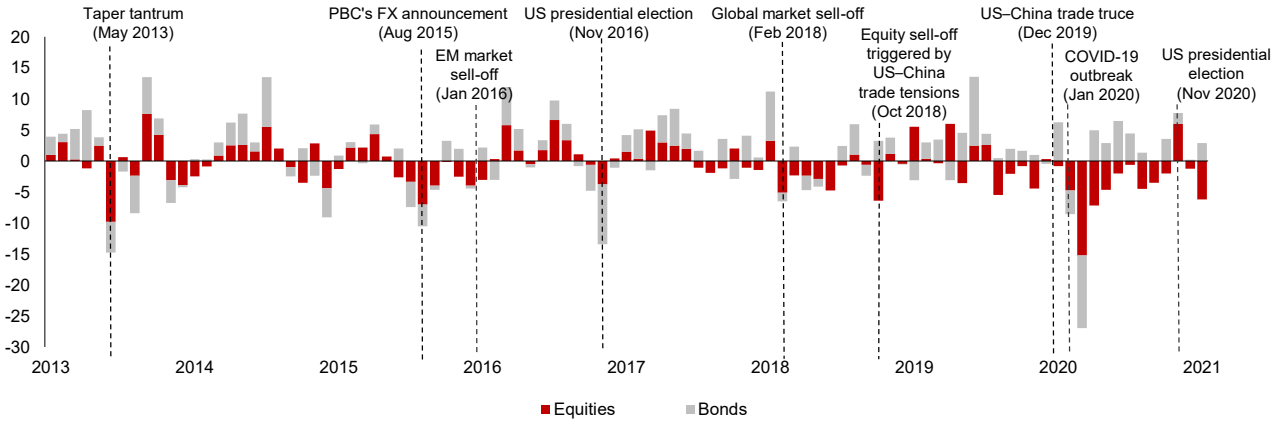
Sources: National authorities via Haver Analytics; and AMRO staff calculations.
Note: The Exchange Market Pressure Index is the sum of percentage changes of both currency and foreign reserves of a particular month over the preceding six months. ASEAN-4 refers to Indonesia, Malaysia, the Philippines, and Thailand. FX = exchange rate; PBC = People's Bank of China.

Figure 1.42. China: Net Foreign Portfolio Investment in Equity Securities and Change in Foreign Holdings of Bonds
(Billions of US dollars)



Sources: Bloomberg Finance L.P.; Haver Analytics; and AMRO staff estimates.

Figure 1.43. ASEAN-4, Korea, and Vietnam: Net Aggregate Foreign Portfolio Investment Flows
(Billions of US dollars)



Sources: National authorities via Haver Analytics; and AMRO staff calculations and estimations.
Note: ASEAN-4 = Indonesia, Malaysia, the Philippines, and Thailand; EM = emerging market; FX = exchange rate; PBC = People's Bank of China; US = United States.

Pressure on capital outflows largely eased after the first quarter of 2020. While inflows into regional debt markets resumed as early as May 2020, equity markets (excluding China) had to wait until November before foreign investors returned (Figures 1.42–1.43). The resumption of inflows into China's capital markets is attributable to its successful containment of the virus, followed by the quick recovery in economic activity, as well as the economy's increased weightings in benchmark investment indices. For the other regional EM economies, equity flows were mostly negative, while debt flows were mostly into Korean government bonds, regarded as a "safe haven" play in the region. The case for sustained inflows into regional markets going forward is strong in a low volatility environment with attractive local asset valuations, and strong growth prospects (Figures 1.44–1.46).

Separately, the recovery in oil prices has gathered momentum since November 2020. The upward trajectory was fueled by positive vaccine news, the outcome of the US Presidential elections, agreement by OPEC+ to slow the planned increase in crude oil production and more recently, reflation expectations. These factors will provide support for oil prices but further upside will likely face both demand and supply headwinds although another massive slump is unlikely (Box 1.10).

The pandemic remains a key risk for markets, although the widening deployment of vaccines will see a gradual moderation of that risk over time. If the United States and major European countries are able to muddle through the deadly wave of infections through the first quarter of 2021, market sentiment is likely to strengthen. However, confidence is likely to be tempered by developments on the fiscal front. Fiscal stimulus was instrumental in supporting households and businesses during the lockdowns and through their gradual easing. And fiscal support will continue to be needed for some time to come, to ensure a soft landing for many economies and sustain market confidence. For instance, the political impasse in providing fiscal relief in both the United States and EU had an adverse effect on markets in the late third quarter and the fourth quarter of 2020. However, some governments in the region may have to balance the continuation of fiscal support to ensure a soft landing for their economies and risk the buildup of excessive debt, against withdrawing

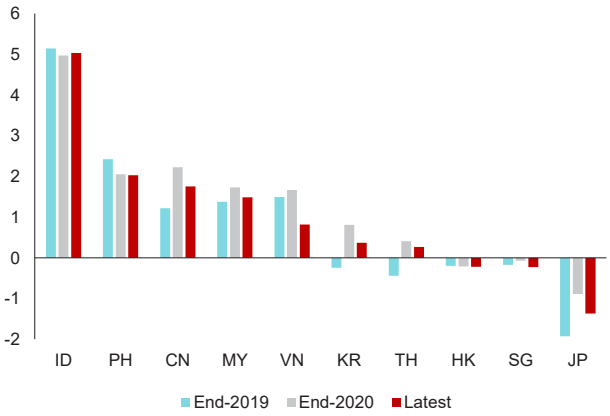
that support too soon before the recovery has gained sufficient traction, leading to potential cliff effects and a relapse in the recovery, either of which could spook financial markets.

Table 1.4. Selected ASEAN+3: Current Account Balance Projections, 2021
(Percent of GDP)

		Current Account		
Economy	Trend	2019	2020	2021
China		**1.0**	2.1	1.5
Indonesia		**-2.7**	**-0.5**	-1.9
Japan		**3.7**	**3.3**	3.7
Korea		**3.6**	4.5	3.8
Malaysia		**3.4**	**4.4**	3.1
Philippines		**-0.9**	3.4	0.9
Singapore		**14.3**	**17.6**	19.3
Thailand		**7.0**	3.3	1.3
Vietnam		**4.8**	4.5	4.5

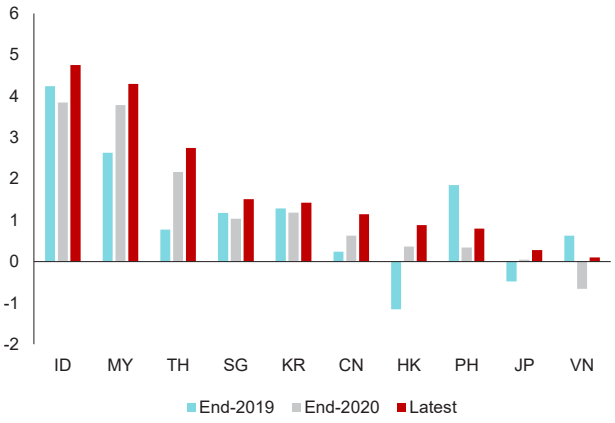
Sources: National authorities via Haver Analytics; and AMRO staff estimates and projections.
Note: Figures in bold refer to actuals while the rest are AMRO's estimates and projections.

Figure 1.44. Selected ASEAN+3: Bond Yield Spreads over US Treasury Yields
(Percent spread between 10-year sovereign yield and 10-year US Treasury yield)



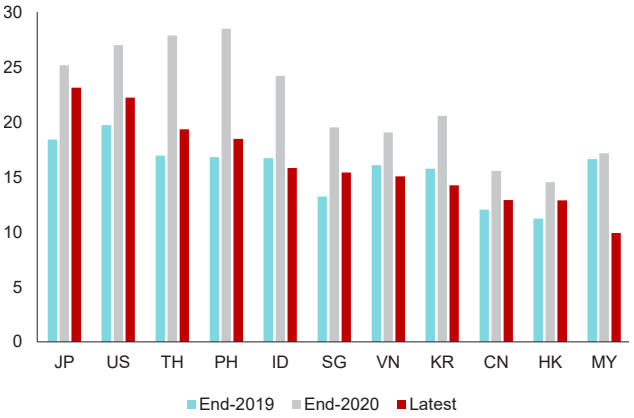
Sources: Haver Analytics; and AMRO staff calculations
Note: Higher spreads over US yields indicate attractive valuations. The current spreads of most regional bonds are either higher or similar to those seen before the pandemic. CN = China; HK = Hong Kong; ID = Indonesia; JP = Japan; KR = Korea; MY = Malaysia; PH = Philippines; SG = Singapore; TH = Thailand; and VN = Vietnam.

Figure 1.45. Selected ASEAN+3: Real Interest Rates
(Percent spread of 10-year sovereign yield over 12-month average inflation)



Sources: Haver Analytics; and AMRO staff calculations.
Note: Higher real yields indicate attractive valuations. The current real yields of most regional bonds are either higher or similar to those seen before the pandemic. CN = China; HK = Hong Kong; ID = Indonesia; JP = Japan; KR = Korea; MY = Malaysia; PH = Philippines; SG = Singapore; TH = Thailand; and VN = Vietnam.

Figure 1.46. Selected ASEAN+3: Equity Valuations of Benchmark Indices
(12-month forward price-to-earnings ratio, percent)



Sources: Bloomberg Finance L.P.; and AMRO staff calculations.
Note: Lower price-to-earnings ratios indicate better valuations. Most of the regional equity indices have more attractive valuations than that of US S&P500. CN = China; HK = Hong Kong; ID = Indonesia; JP = Japan; KR = Korea; MY = Malaysia; PH = Philippines; SG = Singapore; TH = Thailand; US = United States; and VN = Vietnam.

Box 1.9:

Asymmetrical Equity Price Recovery across Economic Sectors

The pandemic-driven sell-off in regional equity markets and the subsequent recovery was uneven across economies. In particular, significant divergences are observed among sectors (Table 1.9.1) and at different periods of time (Table 1.9.2). A closer examination reveals the following factors as key reasons for the differences:

- ***Success of pandemic lockdowns.*** China was not only the first country to impose a lockdown but also the first to successfully contain the spread of the virus. Consequently, China's equity markets experienced a more moderate decline during the first wave of the pandemic (January–March 2020) and a quicker recovery, compared to others. During other subsequent infection outbreaks, only partial lockdowns were imposed, and hence the economy was barely affected, and the restrictions had little effect on regional equities.

- ***Key economic drivers.*** Country-specific key economic drivers contributed partly to the divergence observed within equity markets. Equity markets of goods-export-driven economies, such as China, Korea, and Vietnam, recovered more rapidly, notably during the period (April–June 2020) of partial easing of lockdowns and extraordinary global monetary and fiscal easing. On the other hand, the equities of tourism and services-driven economies, such as Cambodia, the Philippines, Singapore, and Thailand were hurt by travel bans.

- ***Sectoral diversification.*** The clear winners during the pandemic were healthcare and information technology (IT), while energy and financial services were the worst hit major sectors. A significant rise in demand for healthcare goods and services underpinned the strength in China's and Malaysia's equity markets, while demand for IT services due to the strong pickup in working remotely buoyed the technology-heavy China and Korea benchmark indices. In contrast, the Thai benchmark index, which is more heavily weighted toward energy and financial services, and the Hong Kong and Singapore benchmark indices, where financials and properties are important constituents, were adversely impacted. Energy sector stocks in the region were affected by the sharp decline in oil prices and the poor demand outlook. The low interest rate environment as well as the potential rise in NPLs due to the pandemic weighed on equities in the financial services sector.

- ***Other factors.*** Idiosyncratic factors also played a role in the performance of some markets, notably, political tensions (Myanmar, Thailand), fortuitous presence of specialized firms that benefited from the pandemic (for example, glove manufacturers in Malaysia).

Within each index, divergences in sectoral performance may narrow going forward, as vaccines become increasingly more available and containment measures are further eased. That said, the case for convergence among regional equity markets is weaker, given that economies are likely to follow different recovery paths.

Table 1.9.1. ASEAN+3: Equity Performance by Sector and Country, January 1, 2020–February 26, 2021
(Percent, natural log)

Sector (MSCI sub-indices)	CN	HK	JP	KR	ID	MY	PH	SG	TH	VN
Communication services	47.1	-2.5	35.5	64.2	-12.3	-6.6	15.8	-38.4	-21.7	51.8
Consumer discretionary	43.4	0.7	12.4	34.2	-22.8	-20.8	-18.8	-17.8	-18.0	22.8
Consumer staples	42.3	-11.7	-4.2	6.9	-21.4	-8.3	-17.9	24.8	-12.8	10.7
Energy	-26.4		-16.6	28.5	-6.3	-9.4			-12.4	10.4
Financial services	-3.4	25.0	-5.4	-13.3	-3.7	-3.1	-26.7	0.1	-14.9	38.0
Health care	51.7		8.3	38.7	-9.7	52.5			-22.9	15.5
Industrials	15.1	3.6	9.3	1.0		-21.4	-11.6	-26.6	-21.3	22.9
Information technology	50.6	-0.2	20.4	42.3				17.0	103.0	42.2
Materials	37.2		13.9	56.5	-9.7	26.4			0.1	111.4
Real estate	-16.4	-5.4	-11.6				-16.9	-16.5	-18.1	19.0
Utilities	5.4	-17.0	-15.1	-19.9	-41.0	-22.2	-23.1		-10.9	-1.0
MSCI country index	**29.8**	**8.6**	**9.9**	**33.4**	**-10.0**	**-5.2**	**-15.6**	**-9.7**	**-12.7**	**19.5**

Sources: Bloomberg Finance L.P.; and AMRO staff calculations.
Note: The sectoral (log) returns are calculated as the changes to the sectoral sub-indices published by MSCI for each equity market except Vietnam, for which a change in the market capitalization of equities belonging to a particular sector based on MSCI classifications is used. The equity index used is the MSCI country index. The outlined cells represent the two sectors within each benchmark index that had the highest market capitalization as of December 31, 2020. CN = China; HK = Hong Kong; ID = Indonesia; JP = Japan; KR = Korea; MY = Malaysia; PH = Philippines; SG = Singapore; TH = Thailand; and VN = Vietnam.

Table 1.9.2. ASEAN+3: Equity Market Returns during Different Phases of the Pandemic
(Percent, natural log)

	The Collapse	Stimulus-Driven Recovery	Stagnation	Vaccine-Driven Rally	Change since January 01, 2020
Start date	31-Dec-19	23-Mar-20	9-Jun-20	30-Oct-20	31-Dec-19
End date	23-Mar-20	9-Jun-20	30-Oct-20	26-Feb-21	26-Feb-21
China	-20.4	20.4	18.2	11.5	29.8
Hong Kong	-30.0	20.0	-3.2	21.8	8.6
Japan	-28.6	23.6	-3.1	18.0	9.9
Korea	-36.2	35.9	2.9	30.7	33.4
Indonesia	-52.9	27.9	-0.1	15.1	-10.0
Malaysia	-24.3	22.8	-7.6	3.8	-5.2
Philippines	-50.1	32.9	-4.5	6.1	-15.6
Singapore	-38.4	23.5	-15.2	20.4	-9.7
Thailand	-43.6	30.9	-23.3	23.2	-12.7
Cambodia	-21.8	17.6	-11.4	-1.9	-17.4
Lao PDR	-17.9	-8.0	2.3	1.1	-22.4
Myanmar	-0.4	-2.0	-1.4	-4.0	-7.8
Vietnam	-36.6	30.0	2.9	23.3	19.5

Sources: Bloomberg Finance L.P.; and AMRO staff calculations.
Note: The equity indices used are the benchmark MSCI equity indices for respective countries. Broadly, there have been four phases in equity markets since the beginning of 2020, namely: (1) Collapse—the phase in which markets crashed during the early weeks of the pandemic (December 31, 2019 to March 23, 2020); (2) Stimulus driven recovery—the recovery phase, which was engineered by extraordinary monetary and fiscal stimuli around the world as lockdowns remained in place (March 23, 2020 to June 9, 2020); (3) Stagnation—the phase when economies gradually came out of their lockdowns but the outlook was clouded by new waves infection, and generally fewer stimulus measures (June 9, 2020 to October 30, 2020); (4) Vaccine-driven rally—the phase when positive news around vaccine development drove market recovery, fueled by the Biden victory in the US Presidential election (October 30, 2020 to latest). The greener the heatmap, the stronger the performance; the redder the heatmap, the weaker the performance.

The author of this box is Prashant Pande.

Box 1.10:

Oil Prices Supported by the OPEC+

The pandemic had a devastating effect on oil prices but since then have recovered to pre-pandemic levels. The impact from the severe contraction in demand, excess supply, and shortage of storage space, led to a historic collapse in oil prices in April 2020 (Pande 2020a) (Figure 1.10.1), which was only partially reversed when containment measures were gradually eased and deep production cuts were agreed by the Organization of the Petroleum Exporting Countries and 10 other oil-producing nations (OPEC+) (Pande, 2020b). In December, with prices on the rise from vaccine optimism, OPEC+ members agreed to increase production by another 0.5 million barrels per day (mb/d), following the initially agreed rise of 1.9 mb/d. More recently, oil prices driven by reflation expectations moved to levels seen before the pandemic-induced weakness. Going forward, oil prices will likely face resistance from the following factors:

- Demand recovery has proved elusive as highlighted by the successive downgrades in forecasts, both by the Energy International Agency (EIA) and OPEC (Figure 1.10.2).

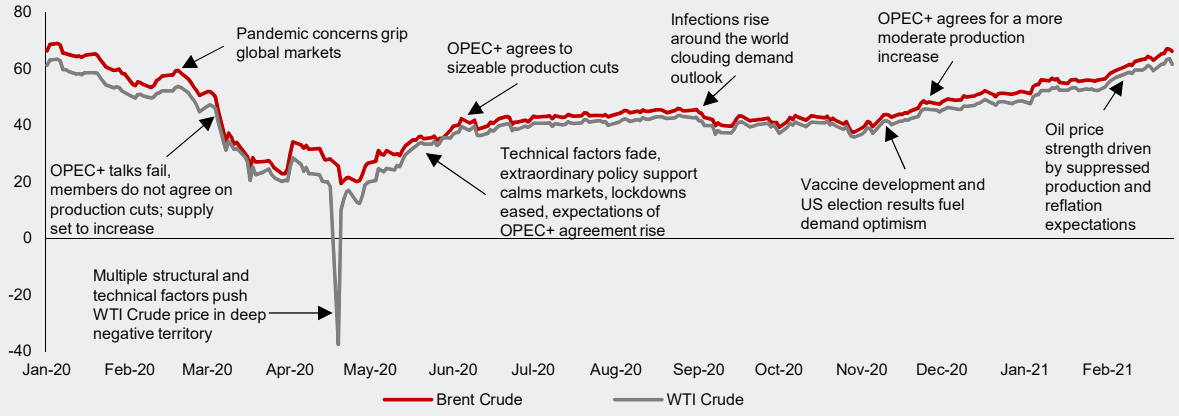
- The inventory built up (excess supply as compared to demand) in 2020 has been significant and, based on forecasts by the EIA and OPEC, may take another year to run down.

- Any rise in oil prices also incentivizes producers to increase supply. Anecdotally, Russia and Kazakhstan pressed for an increase in production during the OPEC+ meeting in January 2021. Although Saudi Arabia announced a unilateral production cut to more than offset the proposed increase in production, its ability to support prices alone could be limited if other producers also push for increases.

- The potential permanent economic scarring as a result of the pandemic has dented the long-term expectations for oil prices. Even though spot prices have recovered to pre-pandemic levels, the very long end of the Brent Crude forward prices is still much lower than that seen before the pandemic struck (Figure 1.10.3).

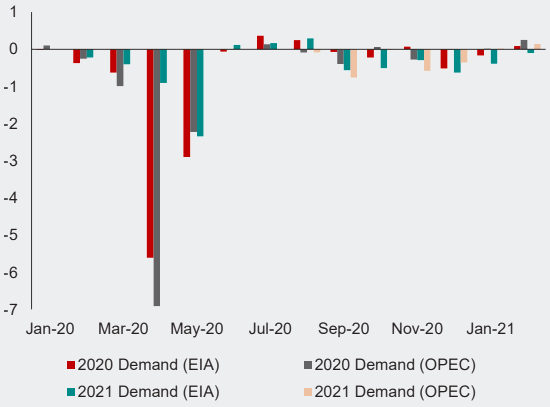
That said, another collapse in oil prices is unlikely. Compared to April 2020, governments have become much more reluctant to impose large-scale lockdowns because of their huge economic impact, which should forestall another demand shock. Meanwhile, OPEC+ has also demonstrated much better coordination in controlling oil production to support prices. Overall, the backdrop of low and stable oil prices is likely to persist in the coming months, which will benefit regional oil importers and remove one of the key sources of volatility for financial markets.

Figure 1.10.1 Crude Oil Prices and Key Events
(US dollars a barrel)



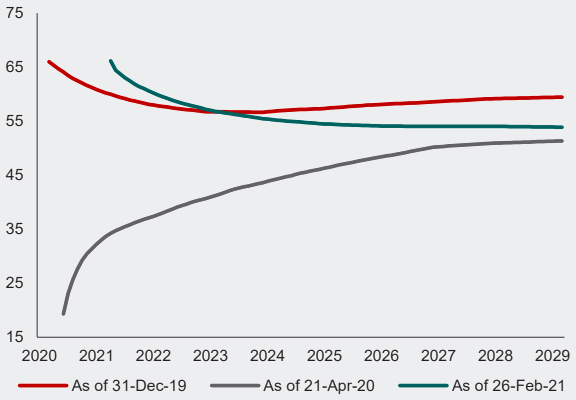
Sources: Bloomberg Finance L.P.; and AMRO staff estimates.

Figure 1.10.2: Oil Prices: EIA and OPEC Demand Forecasts for 2020 and 2021
(Million barrels a day)



Sources: US Energy Information Administration; OPEC; and AMRO staff calculations.

Figure 1.10.3: Oil Prices: Long-Term Forward Pricing of Brent Crude
(US dollars a barrel)



Sources: Bloomberg Finance L.P.; and AMRO staff calculations.

The author of this box is Prashant Pande.

Debt at Risk

The COVID-19 pandemic has caused widespread financial difficulties for businesses and households, and pressured bank balance sheets. During national lockdowns, firms were shuttered and employees were furloughed or retrenched. With falling or no income, many firms and households were at risk of being unable to fulfil their loan payments and other debt obligations. Governments provided cash transfers and other forms of financial support, while central banks eased monetary policy and pumped liquidity into the system to mitigate the income shortfall. Regulators have afforded regulatory forbearance to banks to facilitate the rolling over and restructuring of loans. The aim is to help support the economy; avoid mass defaults; and mitigate the shock to banks' asset quality, which may have otherwise forced widespread bank recapitalization at a time when market prices have collapsed. In the coming months, the strategies that individual authorities adopt vis-à-vis monetary and financial sector policies will be crucial for financial stability in the region. Support measures during 2020 have largely obscured the actual financial viability of firms and households. The landscape will become clearer when those measures are allowed to lapse or gradually removed, and the extent of any "scarring" is revealed.

Large losses by banks as a result of the pandemic could cause a domino effect through an increasingly interconnected international financial system. Systemic risks manifest when spillovers occur as a result of interlinkages through borrowing-lending relationships, capital market transactions, common ownership structures and market sentiment. Second-round effects in the form of contagion caused by investor herd behavior could then push other financial institutions into distress. Within the ASEAN+3 region, financial deepening and integration have intensified over the past two decades (Figure 1.47), raising the risks of systemic crises.

Stress tests by AMRO staff of a financial fallout from the ripple effects triggered by the pandemic suggest that most ASEAN+3 economies would be relatively resilient. Unsurprisingly, total losses as a percentage of GDP would be largest for the two international financial centers, Hong Kong and Singapore (Box 1.11). However, a shock to regional EM banking systems of the size of the AFC, would result in total losses ranging from 1.2–7.9 percent of GDP. In the extreme, widespread institutional failures similar to that of Lehman Brothers during the GFC could see losses amounting up to almost 100 percent of GDP.

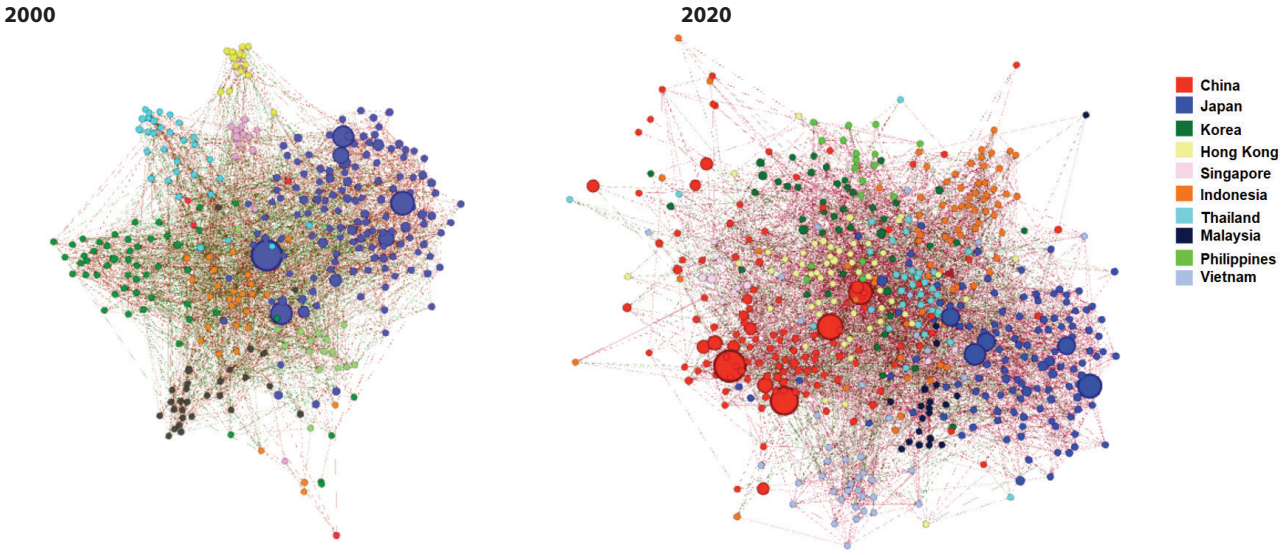
But, how vulnerable would regional financial systems be to an AFC-sized shock? Improved corporate governance and macroprudential oversight has strengthened debt service capacity (Figure 1.48), amid rising private sector debt (Figure 1.49). Separately, many regional economies have increased bank capitalization since the AFC, both in terms of higher quality and total capital (Figure 1.50). Consequently, top-down stress tests of individual bank balance sheets in ASEAN+3 economies suggest that the majority of banking systems are generally well-buffered against large shocks (Box 1.12):

- Among the Plus-3 economies, aggregate debt service ratios (defined as interest payments plus debt amortizations to income) have been rising for China, Hong Kong, and Korea, toward or beyond AFC levels. However, bank solvency stress tests suggest that average nonperforming (NPL) ratios in most of these well-capitalized banking systems would have to reach about, or even significantly exceed, those recorded during the AFC, before regulatory capital adequacy ratio (CAR) hurdles are breached. China's, Japan's, and Hong Kong's system NPL ratios would have to rise by an aggregate 11, 10, and 18 percentage points, respectively, for capitalization to fall to the corresponding regulatory minima.

- The aggregate debt service ratios of the private sector in some major ASEAN countries are well below AFC levels, following the sharp deleveraging in the wake of that crisis. Concurrently, ASEAN banking systems have significantly strengthened their buffers, with overall CARs ranging from 15 percent for the Philippines to between 20–24 percent for Brunei, Cambodia and Indonesia, almost all of which comprise high quality, Tier 1 capital. Solvency stress tests of bank credit suggest that NPL ratios of sample banks would have to rise by an aggregate 5.4 percentage points for Vietnam to 28 percentage points for Indonesia, to run capital down to regulatory minimum levels.

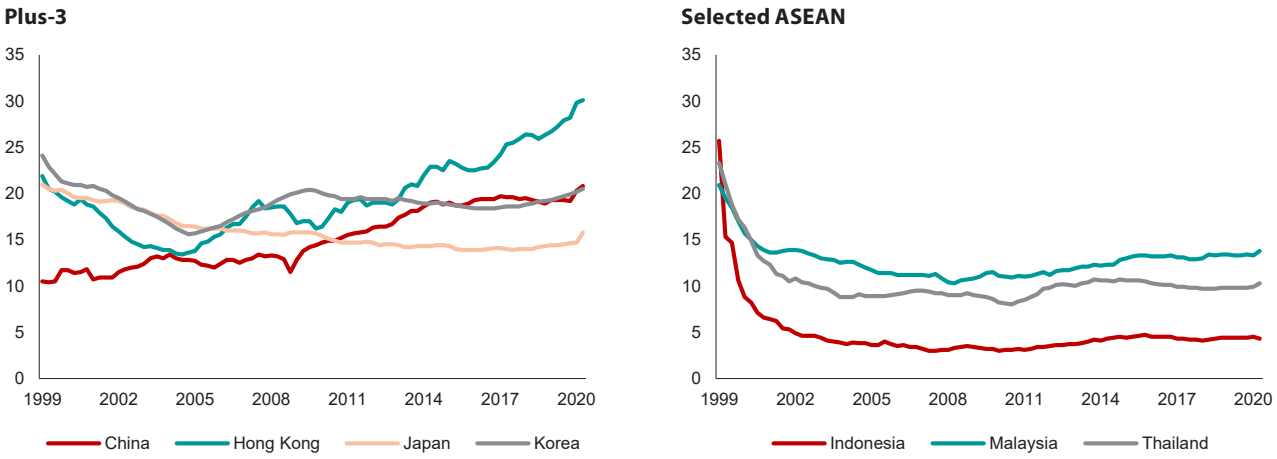
- The wide, asymmetric distribution of breakeven NPL ratios—the ratio at which a bank's CAR is at the regulatory minimum—in each ASEAN+3 economy suggests that the soundness of banks varies significantly (Figure 1.51). For example, the breakeven NPL ratios for the majority of big and medium banks in Indonesia are in the top 50th percentile while those of the small banks are more clustered in the bottom half, with a handful of positive outliers. The bulk of small Chinese and Japanese banks' breakeven NPL ratios are clustered between the 25th and 75th percentile, while those of big Korean, Malaysian, Thai, and Vietnamese banks are at the 50th percentile or below.

Figure 1.47. Selected ASEAN+3: Regional Financial Deepening and Integration



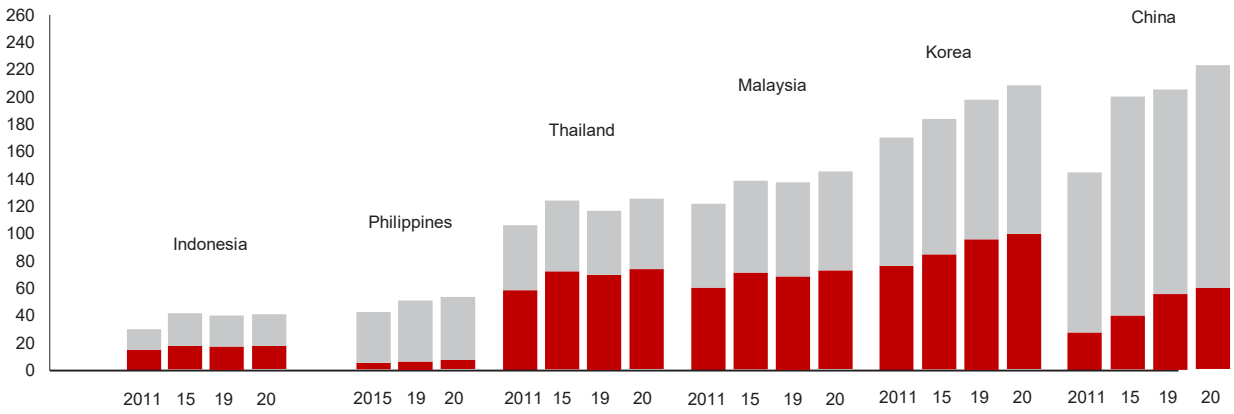
Sources: Credit Research Initiative of the National University of Singapore; and AMRO staff calculations.
Note: Each node represents a listed financial institution (FI) in the ASEAN+3 region. The size of the node represents the magnitude of the FI's liabilities. The color of the node denotes its economy of domicile. Two nodes are connected with an edge if there is a non-zero correlation between the default risks of the two institutions. The thickness of the edge represents the strength of the default correlation.

Figure 1.48. Selected ASEAN+3: Private Sector Debt Service Ratios
(Percent)



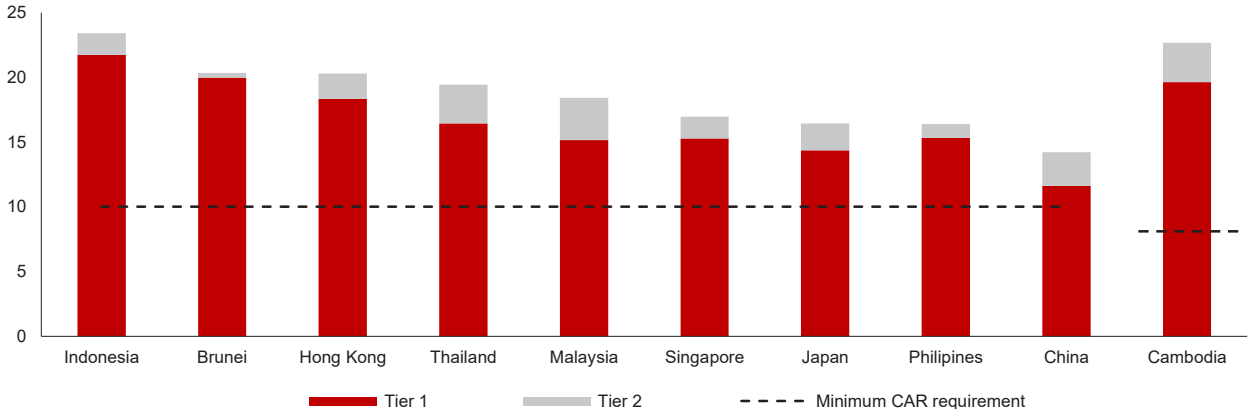
Sources: Bank for International Settlements via Haver Analytics; and AMRO staff calculations
Note: The debt service ratio is defined as the ratio of interest payments and amortizations to income.

Figure 1.49. Selected ASEAN+3: Household and Nonfinancial Corporate Debt
(Percent of GDP)



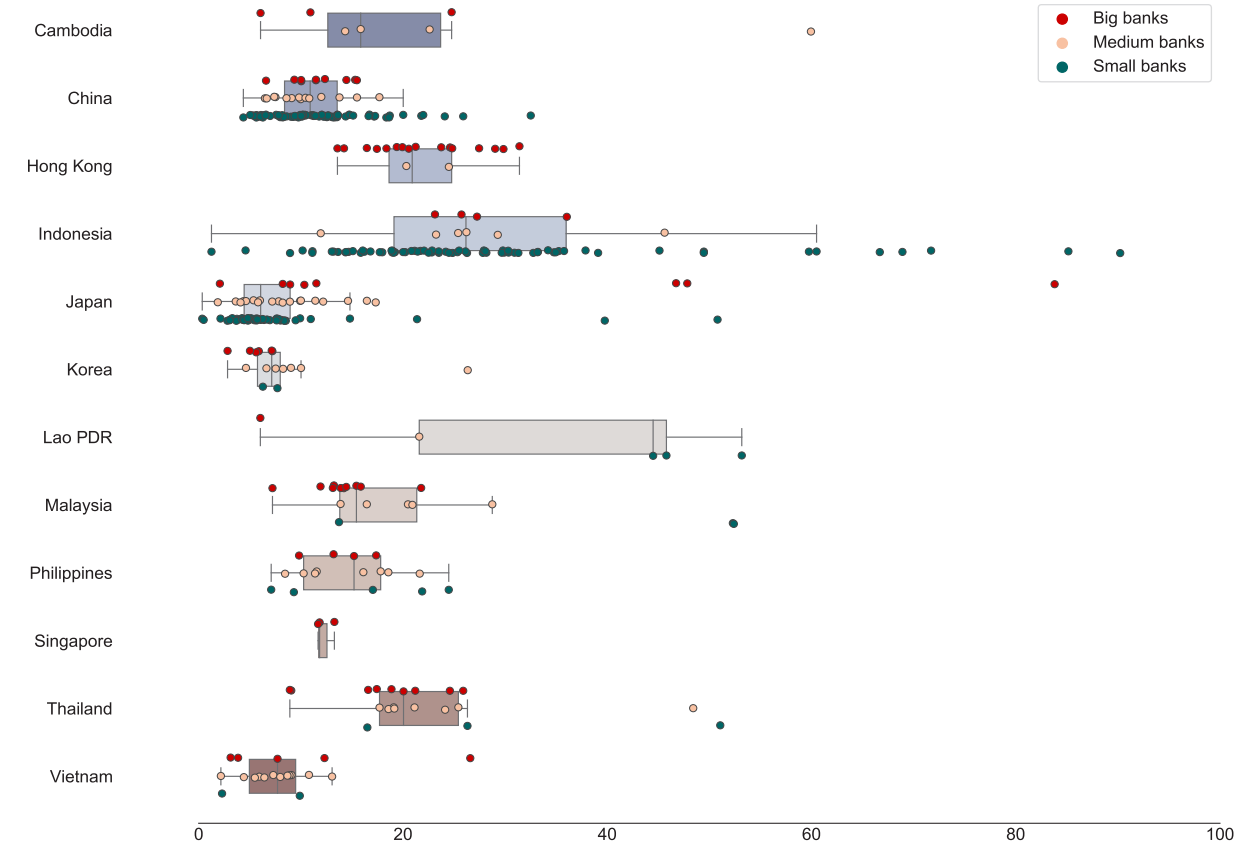
Sources: Bank for International Settlements and national authorities, both via Haver Analytics; and AMRO staff calculations.
Note: 2020 data refer to Q2 2020.

Figure 1.50. Selected ASEAN+3: Bank Capitalization Ratios
(Percent of risk-weighted assets, 2020 latest)



Sources: International Monetary Fund via Haver Analytics; and AMRO staff calculations.

Figure 1.51. ASEAN+3: Distribution of Breakeven Nonperforming Loan Ratios
(Percent)



Sources: BankFocus; and AMRO staff estimates.
Note: The boxplot (also known as box and whisker plot) shows the distribution of numerical data and skewness through a five-number summary: the minimum score, first (lower) quartile, median, third (upper) quartile, and maximum score. The interquartile (IQR) range is the difference between the first quartile and third quartile, and shows how the data are spread about the median. The IQR is multiplied by 1.5 and added to the first and third quartiles, to estimate the minimum and maximum scores, beyond which a number may be considered an outlier. Each dot along the boxplot in the figure represents one bank in the sample. The colors of dots represent bank size. Big banks comprise those whose total assets are equal to or greater than 5 percent of GDP; medium banks comprise those whose total assets are in between 1–5 percent of GDP; small banks comprise those whose total assets are equal to or lower than 1 percent of GDP. Bank holding companies are used where available; separate stress tests of their sub-banks (where data are also available but not included in the above to avoid double counting) indicate that their breakeven NPLs typically fall within the outlier range for each banking system. Capital adequacy is defined as 10.5 percent for Basel III banks (6.5 percent for Japanese banks that do not have an overseas business base), and 8 percent for Basel II banks.

Box 1.11:

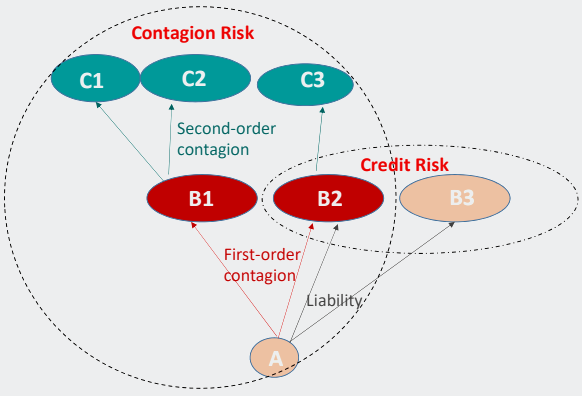
Covid, Credit, and Contagion Risks to ASEAN+3 Financial Systems

The experience from previous crises show that the resulting fiscal costs could be substantial. Since the early 1980s, financial crises among the ASEAN+3 countries incurred direct fiscal costs averaging 20 percent GDP or the equivalent of 31 percent of financial sector assets, while increasing public debt by an average of 19 percent of GDP (Laeven and Valencia 2018). The pandemic has already imposed an onerous fiscal burden on governments in the region, with more spending likely to be required. Some may not have the fiscal space to bear the fallout from any systemic financial crisis, which may include bailing out banks and providing additional support to economic activity affected by the adverse impact on financial intermediation.

For the financial system, the costs would be not only the expected (direct) losses of individual creditor banks, but also the "collateral damage" through contagion. The incremental probability of default (PD) for an individual bank (node A in Figure 1.11.1) captures the credit shock. The expected credit losses are estimated based on the liabilities that the bank owes to its direct creditors (nodes B2 and B3) and an assumed loss given default. The pairwise default correlations, using PDs of 2,000 financial institutions, are estimated to capture the propagation of shocks through an interconnected financial system (nodes B1, B2, and the C nodes) and the losses to those creditors.

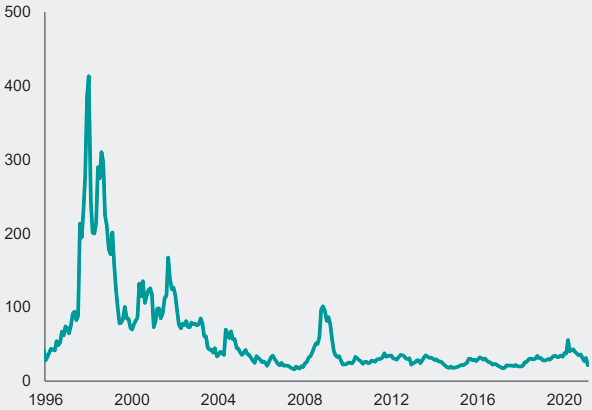
Banks in the Asia-Pacific region have been resilient thus far. The PDs of the region's EM banks only rose by only about 20 basis points at the height of the market turmoil in March/April 2020 (Figure 1.11.2), which was far lower than those recorded during the Asian and global financial crises. Abundant liquidity support and debt moratoria have kept borrowers afloat, while regulatory forbearance has allowed banks to postpone recognizing NPLs and realizing losses. However, the concern is that the Covid crisis could turn into a fully-fledged financial crisis in a downside risk scenario, if the distribution of vaccines is delayed, the pandemic continues to intensify, economic recovery falters, and policy space continues to shrink.

Figure 1.11.1. Affected Parties of Bank A's Credit and Contagion Risks



Source: Sun (2020).

Figure 1.11.2. Asia Pacific: One-Year Probability of Default of Emerging Market Banking Sector
(Basis points)



Source: Credit Research Initiative of the National University of Singapore.

Stress tests are conducted on the most recent financial data of global systemically important banks (G-SIBs) and domestic systemically important banks (D-SIBs) in the region.[1/] The shocks applied resemble those of the past two crises, to gauge the economic costs in such adverse scenarios. The first scenario assumes an AFC-sized credit shock (that is, a 400-basis point increase in PDs) on the selected banks; the second assumes a Lehman-type bank failure (that is, a 9,000 basis point increase in PDs):

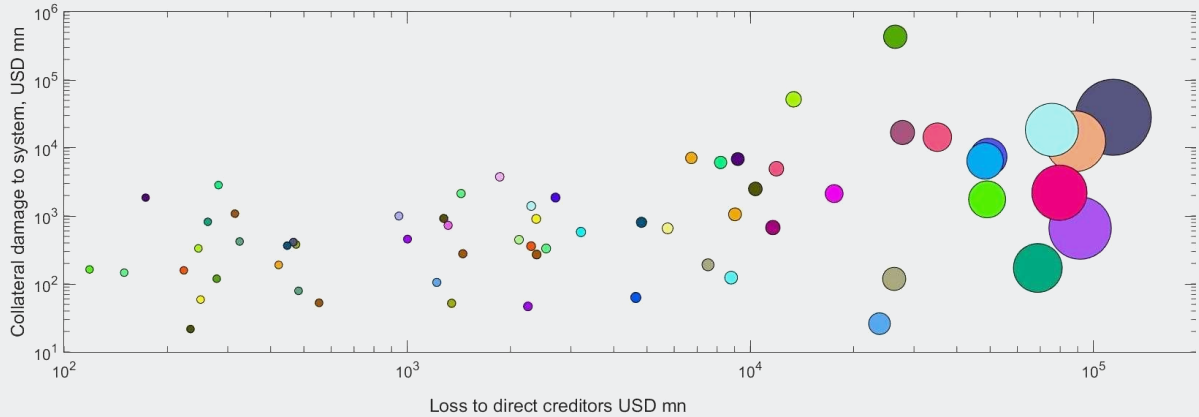
- In general, larger banks tend to have bigger impact on the financial system in both direct loss to creditors and collateral damage. However, some smaller lenders could also pose significant collateral damage through contagion comparable to that caused by the bigger players. Hence, these banks are not only too big to fail in their national contexts, but also may be too interconnected to fail in the regional context. In the event that these banks' provisions and capital are insufficient to absorb any resulting losses, and they are unable to raise the requisite capital from the market, government bailouts may be necessary, which would impact the fiscal purse already under pressure from mitigating the economic shocks from the pandemic

- If an AFC-sized shock hits every ASEAN+3 G-SIB and D-SIB in a banking system, the total expected losses would be very significant in GDP terms. The direct losses to creditors of the G-SIBs and D-SIBs tend to be greater than the collateral damage, given their large liabilities (Figure 1.11.3). However, the collateral damage from institutions in Singapore and the Philippines would be larger. The overall impact would be largest for the two financial centers, Hong Kong and Singapore (Table 1.11.1).

- When the stress tests are repeated with the extreme tail risk scenario of a Lehman-sized shock—that is, an almost certain likelihood of failure—incremental expected credit losses would be massive. The amounts could exceed USD 10 trillion, plus another USD 1 trillion from the contagion fallout for the largest institutions (Figure 1.11.4). A large proportion of the contagion/collateral losses caused by major ASEAN banks would be borne by their domestic counterparts because of close interlinkages; separately, G-SIBs and D-SIBs in China would have the largest impact on the Plus-3 financial systems (Table 1.11.2), while the underlying data suggest that their most significant interactions would be with Japanese banks. Accordingly, any collective default would make the total losses even more sizable.

Hence, banking supervisors need to look beyond the individual balance sheets of financial institutions. They should pay close attention to the externalities from the materialization of contagion risks. Moreover, among the many financial systems that are affected by the contagion risks, the domestic financial system is likely to suffer the most. Crucially, this analysis only covers up to second-order contagion, so any estimated collateral damage amount would be larger.

Figure 1.11.3. ASEAN+3: Incremental Direct Losses to Creditors and "Collateral Damage" Caused by G-SIBs and D-SIBs from a 400 Basis Point Increase in Probabilities of Default
(Millions of US dollars)



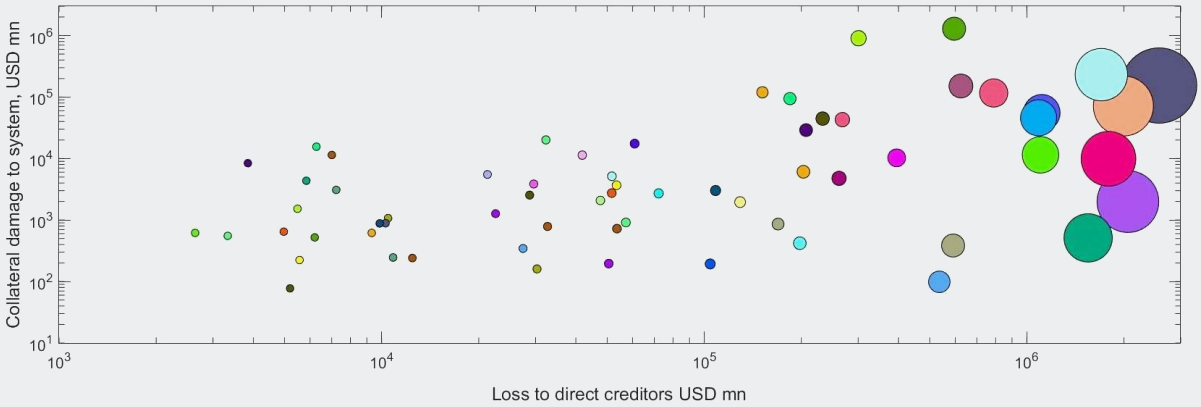
Sources: Credit Research Initiative of the National University of Singapore; and AMRO staff estimates.
Note: 10^1=10, 10^2=100, 10^3=1,000, 10^4=10,000, and 10^5=100,000. Each node represents a G-SIB/D-SIB in the region. The size of the node reflects the relative size of the bank's liabilities. Node colors are randomly assigned. Data are as of January 2021.

Table 1.11.1. ASEAN+3: Incremental Direct Losses to Creditors and "Collateral Damage" Caused by the G-SIBs/D-SIBs of a Particular Economy from a Collective 400 Basis Point Increase in Probabilities of Default
(Millions of US dollars)

Loss Component	Financial System									
	China	Japan	Korea	Hong Kong	Indonesia	Malaysia	Philippines	Singapore	Thailand	Vietnam
Collateral damage due to contagion from source entities										
(1) To own financial system	91,462	124,928	5,314	2,992	1,005	797	7,644	78,900	3,551	1,111
(2) To Plus-3 financial system (excluding own)	16,330	1,047	265	388	1,019	112	2,706	17	1,741	235
(3) To ASEAN financial system (excluding own)	364	68	27	5	8	8	37	1	132	38
(4) To rest of world financial system	9,168	148	108	119	883	305	294	18	1,124	1,473
Expected credit loss from source entities to direct creditors (5)	513,254	201,288	39,869	102,546	9,776	10,224	5,366	25,275	11,789	4,878
Total loss to domestic GDP in 2020: ((1)+(2)+(3)+(4)+(5))/GDP	4	7	3	30	1	3	4	31	4	3
Number of G-SIBs and D-SIBs	9	6	4	5	14	3	9	3	5	5

Sources: Credit Research Initiative of the National University of Singapore; and AMRO staff estimates. Data are as of January 2021.

Figure 1.11.4. ASEAN+3: Incremental Direct Losses to Creditors and "Collateral Damage" Caused by G-SIBs and D-SIBs from a 9,000 Basis Point Increase in Probabilities of Default
(Millions of US dollars)



Sources: Credit Research Initiative of the National University of Singapore; and AMRO staff estimates.
Note: 10^1=10, 10^2=100, 10^3=1,000, 10^4=10,000, 10^5=100,000, and 10^6=1,000,000. Each node represents a G-SIB/D-SIB in the region. The size of the node reflects the relative size of the bank's liabilities. Node colors are randomly assigned. Data are as of January 2021.

Table 1.11.2. ASEAN+3: Incremental Direct Loss to Creditors and "Collateral Damage" Caused by the G-SIBs/D-SIBs of a Particular Economy from a Collective 9,000 Basis Point Increase in Probabilities of Default
(Millions of US dollars)

Loss Component	Financial System									
	China	Japan	Korea	Hong Kong	Indonesia	Malaysia	Philippines	Singapore	Thailand	Vietnam
Collateral damage due to contagion from source entities										
(1) To own financial system	1,265,153	1,448,124	50,147	37,859	8,891	5,781	93,643	649,935	82,515	15,190
(2) To Plus-3 financial system (excluding own)	104,729	7,363	961	1,264	4,247	330	11,432	50	4,751	683
(3) To ASEAN financial system (excluding own)	5,366	442	309	16	29	28	101	3	413	120
(4) To rest of world financial system	64,831	986	579	403	4,334	1,390	850	52	3,468	8,784
Expected credit loss from source entities to direct creditors (5)	11,548,218	4,528,981	897,041	2,307,293	219,966	230,038	120,728	568,690	265,249	109,752
Total loss to domestic GDP in 2020: ((1)+(2)+(3)+(4)+(5))/GDP	88	119	59	672	22	71	63	358	71	50
Number of G-SIBs and D-SIBs	9	6	4	5	14	3	9	3	5	5

Sources: Credit Research Initiative of the National University of Singapore; and AMRO staff estimates. Data are as of January 2021.

The author of this box is Wei Sun, based on Sun (2020).

1/ The G-SIBs are those identified by the Financial Stability Board (FSB 2020). The D-SIB list in this analysis, which may differ from the official ones, is constructed based on public disclosure, media reports, and AMRO staff estimations. Where D-SIBs are not public information, the domestic banks are ranked by asset size as a rough-and-ready proxy, although other key characteristics, such as interconnectedness, complexity, cross-jurisdiction activity, and substitutability, also define systemic importance (IMF/BIS/FSB 2009; Basel Committee on Banking Supervision 2018).

Box 1.12:

Well-Buffered ASEAN+3 Banking Systems

Going into the COVID-19 pandemic, ASEAN+3 banking systems were well capitalized—the outcome of many years of effort to strengthen the financial system in the wake of the Asian financial crisis (AFC)—but may have been jeopardized by the pandemic. The aggregate capital adequacy ratios (CARs) of the region's banking systems that have adopted Basel III standards were well above the minimum total capital plus capital conservation buffer, of 10.5 percent in the period before the pandemic. (Figure 1.12.1), while those that have not yet transitioned were at or above the Basel II minimum of 8 percent (BCBS 2004, 2011, 2018). Additionally, system-wide nonperforming loan (NPL) ratios were relatively low, pre-pandemic, at about 3 percent or lower (Figure 1.12.2). The pandemic poses a risk to bank solvency, following the sharp rise in credit risks and corresponding deterioration in asset quality, which may be camouflaged by regulatory forbearance and official credit support measures.

The size of credit shocks that would require recapitalization in ASEAN+3 banking systems can be estimated to determine the pandemic's potential threat to financial stability in the region. The region's recovery profile to date suggests that the impact of the Covid crisis would likely be somewhere between that of the global financial crisis (GFC) and AFC (Ong and Choo 2020): The recovery in growth from the AFC was deep and U-shaped in many economies—where significant recapitalization of some banking systems was necessary—while the majority experienced shallow, V-shaped recoveries during the GFC, and are also expected to post, albeit deeper, V-shaped recoveries during this crisis. Correspondingly, bank NPL ratios arising from the pandemic could reasonably be expected to rise to somewhere between the relatively low levels recorded during the GFC and the very high ones incurred by some economies during the AFC, once the pandemic is contained and the dust settles.

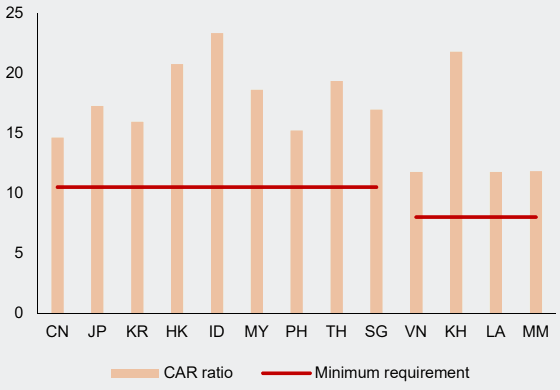
Reverse solvency stress tests are undertaken for a sample of ASEAN+3 banks. The stress test, which is an adapted version of Čihák (2007), is applied to individual banks in each financial system for which data are available (Table 1.12.1). In the exercise, individual bank NPLs are shocked—increases in NPLs require banks to make additional provisions, which reduces capital as well as risk weighted assets (from write-offs), thus reducing banks' CARs—until their CARs fall to the relevant regulatory minima, to derive the "breakeven" NPL ratios. All else being equal, the results may be interpreted as follows:

- ***The bigger the shock to NPL required to reduce existing CAR to the regulatory minima, the healthier the current buffer.*** The buffer comprises both capital and provisions against problem and NPLs. If the latter are sufficiently provisioned for, then any deterioration would require additional provisions that would reduce profits or eat into existing capital. The stress test results suggest that NPL ratios would have to rise by an average of at least 10 percentage points or more among banks in the majority of ASEAN+3 economies, to reduce capitalization to the regulatory minima (Tables 1.12.2); in the case of Indonesia, the aggregate NPL ratio would have to increase by about 28 percentage points. In several banking systems (for example Indonesia, Lao PDR, Malaysia, Thailand) the small banks appear to have even stronger buffers than the bigger, more systemic ones, in aggregate.

- ***The higher the breakeven NPL ratio relative to AFC peak, the lower the likelihood of a systemic banking crisis.*** The average NPL ratios reached during the AFC were quite unprecedented, ranging between 20–50 percent in several economies. Given the quicker recovery trajectory from this Covid-19 crisis, the likelihood of such a recurrence is low. Hence, the average breakeven NPL ratios for the majority of banking systems are at, about, or greater than, those registered during the AFC, which suggest that a widespread banking crisis remains a tail risk for now, absent further large, unexpected shocks.

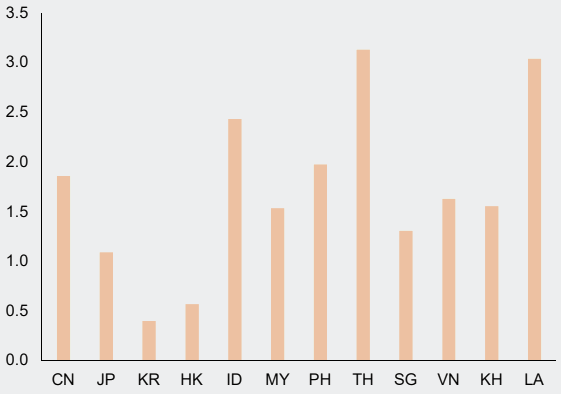
Figure 1.12.1. ASEAN+3: Banking System Soundness Indicators, as of End-2019
(Percent)

Capital Adequacy Ratios



Sources: Bank of Korea, BCBS, and International Monetary Fund, all via Haver Analytics.
Note: CN = China; HK = Hong Kong; ID = Indonesia; JP = Japan; KH = Cambodia; KR = Korea; LA = Lao PDR; MY = Malaysia; MM = Myanmar; PH = Philippines; SG = Singapore; TH = Thailand; and VN = Vietnam.

Nonperforming Loan Ratios



Sources: International Monetary Fund and Korea Federation of Banks, both via Haver Analytics.
Note: CN = China; HK = Hong Kong; ID = Indonesia; JP = Japan; KH = Cambodia; KR = Korea; LA = Lao PDR; MY = Malaysia; PH = Philippines; SG = Singapore; TH = Thailand; and VN = Vietnam.

Table 1.12.1. ASEAN+3: Bank Sample for Reverse Solvency Stress Test

Member	Number of Sample Banks				Bank Assets (Percentage of banking system assets)				Bank Assets (Percentage of GDP)			
	All Banks	Big Banks	Medium Banks	Small Banks	All Banks	Big Banks	Medium Banks	Small Banks	All Banks	Big Banks	Medium Banks	Small Banks
Cambodia	7	3	4	n.a.	30	24	9	n.a.	56	45	16	n.a.
China	106	10	14	82	68	51	9	7	199	149	27	22
Hong Kong	18	16	2	n.a.	79	78	1	n.a.	673	667	5	n.a.
Indonesia	93	4	8	81	96	51	17	29	54	28	9	16
Japan	77	8	19	50	76	61	10	5	272	217	37	17
Korea	15	6	7	2	51	44	6	0	140	122	17	1
Lao PDR	5	1	1	3	36	32	2	3	32	28	1	2
Malaysia	19	10	5	4	100	90	8	1	198	179	17	2
Philippines	17	4	8	5	75	47	26	2	74	46	26	2
Singapore	3	3	n.a.	n.a.	46	46	n.a.	n.a.	291	291	n.a.	n.a.
Thailand	21	10	8	3	84	68	16	1	158	127	29	2
Vietnam	19	5	11	3	36	22	13	1	75	46	27	2

Sources: Asian Development Bank; BankFocus; national authorities via Haver Analytics; and AMRO staff calculations.
Note: "All banks" comprise those available in BankFocus; "big banks" comprise those whose total assets are equal to or greater than 5 percent of GDP; "medium banks" comprise those whose total assets are in between 1–5 percent of GDP; "small banks" comprise those whose total assets are equal to or lower than 1 percent of GDP.

Table 1.12.2. ASEAN+3: Breakeven Nonperforming Loan Ratios
(Percent)

Member	Pre-Pandemic NPL Ratio				Change in NPL Ratio to Reach CAR Minima				Breakeven NPL Ratio from Reverse Stress Test				Crisis Peak NPL Ratio	
	All Banks	Big Banks	Medium Banks	Small Banks	All Banks	Big Banks	Medium Banks	Small Banks	All Banks	Big Banks	Medium Banks	Small Banks	AFC	GFC
Cambodia	1.0	1.1	0.7	n.a.	18.5	16.4	26.4	n.a.	19.5	17.5	27.1	n.a.	16.2	4.8
China	1.5	1.5	1.5	1.9	11.0	11.7	8.0	9.1	12.5	13.1	9.5	11.1	29.8	1.0
Hong Kong	0.5	0.5	0.4	n.a.	18.2	18.2	22.6	n.a.	18.8	18.7	23.0	n.a.	7.3	1.6
Indonesia	2.8	1.9	2.8	4.5	28.1	25.9	38.8	24.6	30.9	27.8	41.6	29.1	48.6	2.5
Japan	1.1	0.8	1.4	2.3	10.4	12.7	6.4	4.2	11.5	13.6	7.8	6.5	6.6	2.9
Korea	0.7	0.6	0.7	0.6	5.5	5.0	8.9	6.0	6.1	5.6	9.7	6.6	8.3	0.6
Lao PDR	3.2	2.9	2.9	7.0	6.6	3.1	18.7	39.4	9.9	6.0	21.6	46.3	n.a.	n.a.
Malaysia	1.5	1.4	1.8	1.2	13.3	12.5	18.5	39.1	14.8	13.9	20.3	40.3	18.6	3.6
Philippines	1.9	1.7	2.3	3.1	11.6	11.6	11.6	12.5	13.5	13.2	13.9	15.6	14.6	3.5
Singapore	1.5	1.5	n.a.	n.a.	10.7	10.7	n.a.	n.a.	12.2	12.2	n.a.	n.a.	5.9	2.0
Thailand	3.8	4.0	2.4	2.9	15.9	15.1	21.5	24.1	19.7	19.0	23.9	27.0	42.9	5.2
Vietnam	1.5	1.5	1.6	1.8	5.4	5.3	5.5	5.6	6.9	6.8	7.0	7.4	n.a.	1.9

Sources: BankFocus; and AMRO staff estimates.
Note: Data are from individual banks' financial statements for 2019. "All banks" comprise those available in BankFocus; "big banks" comprise those whose total assets are equal to or greater than 5 percent of GDP; "medium banks" comprise those whose total assets are in between 1–5 percent of GDP; "small banks" comprise those whose total assets are equal to or lower than 1 percent of GDP. Where banks do not report classified loans, their NPL ratios are used to calculate their NPL levels. Minimum capital adequacy is defined as 10.5 percent for banking systems that have adopted Basel III (ASEAN-5, China, Hong Kong, Korea, and Japan, with 6.5 percent for Japanese banks that do not have an overseas business base), and 8 percent for those that have adopted or are transitioning to Basel II (Cambodia, Lao PDR, and Vietnam). Given the unavailability of NPL ratios for Singapore during the AFC, the highest ratio in the immediate post-AFC period (second quarter of 2004) is used as proxy, capturing, in part, the lagging nature of this indicator. In some economies, the odd small or medium-sized bank has reported CAR that appears to be below the regulatory minima; this very small number of banks are excluded from AMRO staff's estimations of aggregate breakeven NPL ratios.

The author of this box is Trung Thanh Vu, with contributions from Laura Grace Gabriella and Min Wei.

IV. Pandemic Policies and Prescriptions

Macro-financial policymaking took center stage in 2020 for all economies in the region, and will continue to do so for the foreseeable future. Caught by surprise at how quickly and widely the COVID-19 virus spread throughout the region and the rest of the world, regional policymakers were forced to walk the fine line between protecting lives and supporting the economy, while ensuring that they had sufficient policy space to do so, to maintain market confidence. Although the region has been relatively successful in containing the spread of infections and supporting the economies, the struggle against the virus has been relentless as the easing of the containment measures has often been followed by renewed outbreaks. The development of efficacious vaccines at by late-2020 therefore represents a light at the end of the tunnel, but has also introduced new complications—policymakers must now strategize on how to exit smoothly from the plethora of pandemic policies that have been enacted, without triggering a relapse in the economic recovery or systemic financial distress.

Policy Space

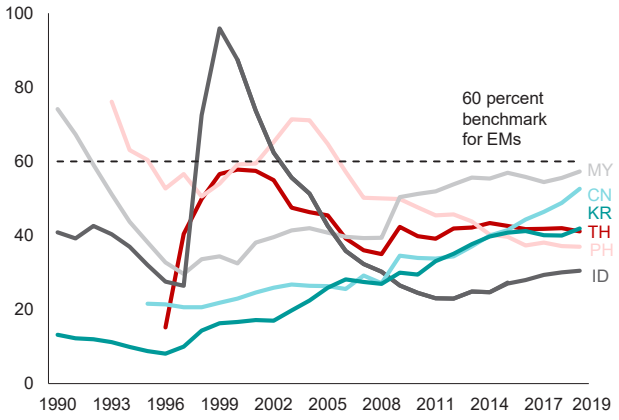
The ASEAN+3 economies went into the COVID-19 pandemic with the advantage of having built up significant policy cushions and financial reserves, benefiting from judicious policymaking over many years. Thanks to the adoption of prudent macroeconomic policies and reforms to regulatory and governance frameworks since the AFC, most authorities had policy space to support their respective economies. Many of the region's banking systems had also built strong capital and liquidity buffers—the result of lessons learned from the AFC and GFC, respectively—putting them in a strong position to absorb the impact to their loan books and volatility in funding markets.

Strengthened fiscal management in the wake of the AFC and continued fiscal prudence had helped preserve and enhance fiscal space. Consequently, government debt was at low to moderate levels (Figure 1.52), and the primary balance was in surplus or modest deficit (Figure 1.53). A comprehensive assessment of policy space suggests that, when the pandemic struck, several AEs and EMEs in the ASEAN+3 region had ample fiscal room to support households and businesses, while the rest—with the exception of Japan—had moderate fiscal headroom (Poonpatpibul and others 2020). Excluding Lao PDR, the other BCLMV (Brunei, Cambodia, Lao PDR, Myanmar, Vietnam) economies had moderate or ample fiscal policy space (Table 1.5).

Separately, monetary policy in the region had been normalized, in line with the economic recovery post-GFC, but was accommodative leading into the pandemic. The stance at the time reflected weakening economic activity as a result of the US–China trade conflict. Substantial FX reserve buffers had also been built up in most EMs to defend against volatile capital flows (Figures 1.54–1.55), while the macroprudential toolkit was developed and deployed to mitigate against risks of financial distress from rising household and corporate debt. Consequently, most AEs and EMEs in the region, except those with fixed exchange rate regimes, had moderate policy space to work with (Poonpatpibul and others 2020), while the BCLMV countries had either moderate or limited monetary policy space (Table 1.5).

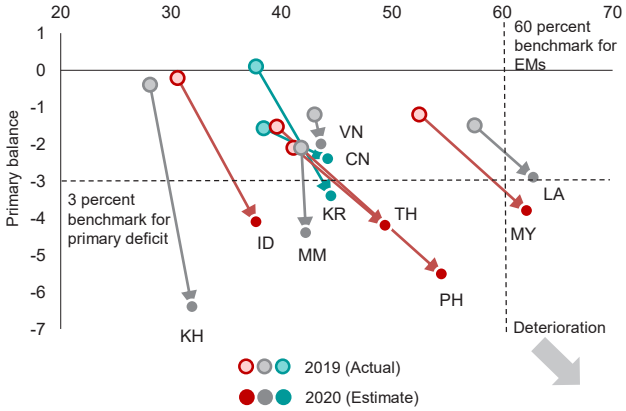
The size and scale of macro-financial policies that were deployed in 2020 to combat the pandemic have been extraordinary by any measure. ASEAN+3 economies swiftly injected substantial stimuli to save lives, and protect livelihoods and businesses, when the COVID-19 pandemic struck (Table 1.6). On the fiscal front, governments have rolled out a wide range of relief measures for households, including cash transfers, debt relief, and tax deferrals (Figure 1.56). Meanwhile, job retention programs, provision of low-cost loans, as well as moratoria on debt repayments have been implemented, to support the corporate sector. Central banks eased monetary policy and recalibrated macroprudential policies to absorb adverse shocks to financial and credit markets and support economic activity, while financial regulators afforded forbearance for banks to allow them time to address the shock to the balance sheets of their customers.

Figure 1.52. Selected ASEAN+3: General Government Debt
(Percent of GDP)



Sources: National authorities via Haver Analytics; and AMRO staff calculations.
Note: Data up to 2019. CN = China; ID = Indonesia; KR = Korea; MY = Malaysia; PH = the Philippines; and TH = Thailand.

Figure 1.53. Selected ASEAN+3: Public Debt and Primary Balance
(Percent of GDP)



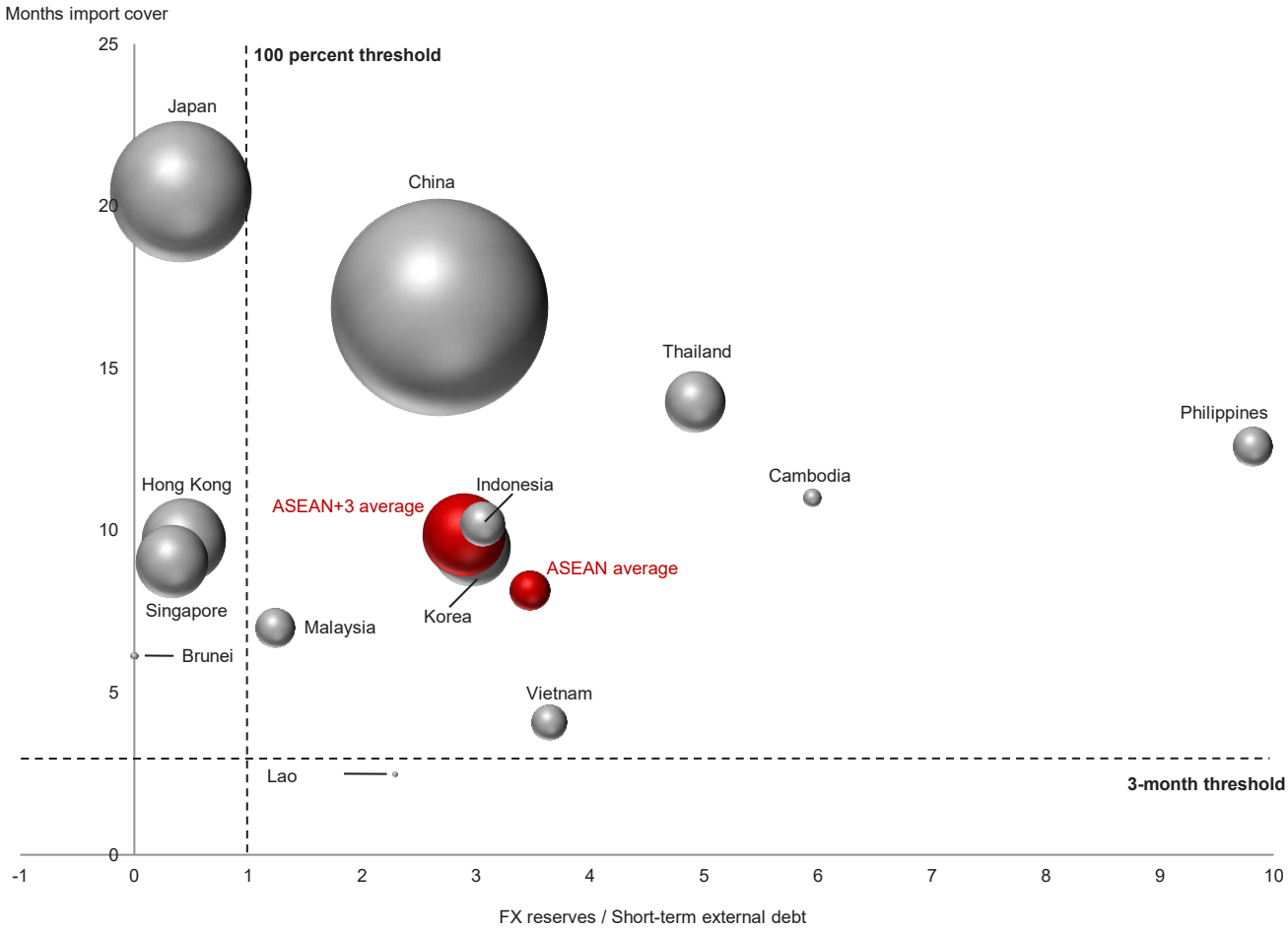
Sources: National authorities via Haver Analytics; and AMRO staff estimates.
Note: CN = China; ID = Indonesia; KH = Cambodia; KR = Korea; LA = Lao People's Democratic Republic; MM = Myanmar; MY = Malaysia; TH = Thailand; and VN = Vietnam.

Table 1.5. ASEAN+3: Assessment of Policy Space
(Pre- and post-COVID-19, end-2019 versus end-2020)

Policy space		Fiscal		
		Ample	Moderate	Limited
Monetary	Ample		Philippines Vietnam	
	Moderate	Korea Singapore Thailand	China Indonesia Malaysia Myanmar Philippines Thailand Vietnam	
	Limited	Brunei Darussalam Cambodia Hong Kong	Brunei Darussalam	Japan Lao PDR

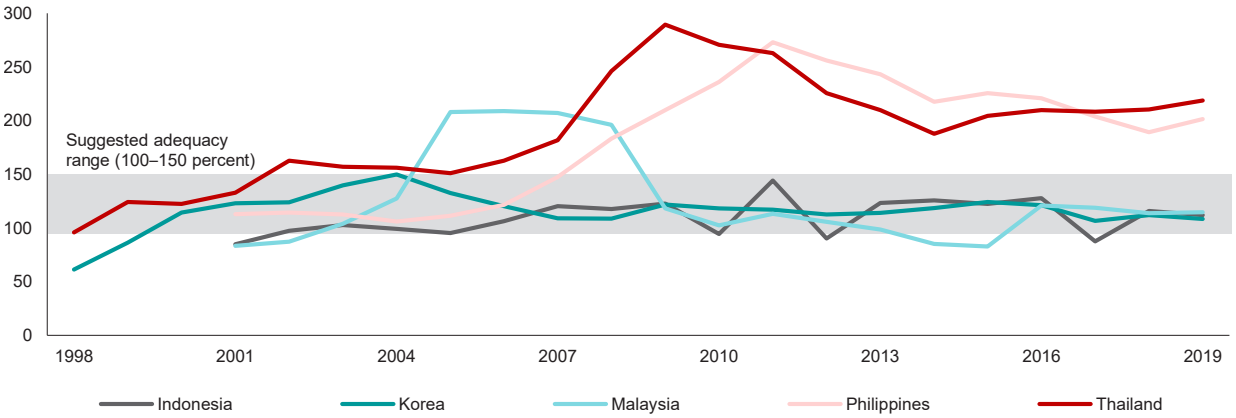
Source: AMRO staff estimates, based on Poonpatpibul and others (2020).
Note: The economies in red font represent their policy space positions during the pre-COVID period, which are assessed to have shifted to their respective new positions in black font. Poonpatpibul and others (2020) assess fiscal policy space using three pillars: (1) debt sustainability indicators; (2) risks to financing capacity and debt profile; and (3) country-specific factors, relying on AMRO country desk economist judgement, all conditional on available information; the magnitude of fiscal space is defined operationally in three levels: Fiscal space is (1) "ample" when fiscal sustainability and financing capacity suggest no significant short-term constraint in undertaking discretionary fiscal policy measures to mitigate short-term economic downturns; (2) "moderate" when there are some concerns about fiscal sustainability and financing capacity, but meaningful short-term discretionary fiscal policy measures are possible within certain limits to mitigate short-term economic downturns; and (3) "limited" when there is no further (or at most only marginal) room to undertake discretionary fiscal policy measures to mitigate short-term economic downturns. Poonpatpibul and others (2020) also propose that an economy's monetary policy space can be assessed using four pillars: (1) the degree of monetary policy autonomy; (2) distance of the prevailing monetary policy rate from the zero lower bound and the deviation of inflation from the benchmark; (3) external vulnerability; and (4) financial imbalance and the ability to address them by using macro-prudential tools. The magnitude of monetary space is defined operationally in three levels: Monetary space is (1) "ample" when the extent to which monetary policy can be eased is large, and the ability to undertake monetary policy easing in the short and medium term is unlikely to be constrained by the institutional monetary policy and exchange rate setup, and external and financial stability considerations; (2) "moderate" when there is certain room for further monetary policy easing in the short and medium term but the ability to do so in the future could be constrained by either external or financial stability considerations; and (3) "limited" when there is very little or no policy space to ease policy, either because of: (1) adverse implications of monetary easing on external and financial stability considerations; (2) close to zero or even lower policy rate; or (3) the inherent institutional setup and exchange rate stability, which do not allow for any monetary policy space. This framework does not necessarily take into account the ability and capacity of monetary authorities to undertake unconventional monetary policy.

Figure 1.54. ASEAN+3: Reserve Coverage



Sources: International Monetary Fund and national authorities, both via Haver Analytics; and AMRO staff calculations.
Note: Based on latest available data. Import coverage includes imports of goods and services. Size of bubble denotes the relative amount of international reserves in US dollars. Total short-term debt data for Myanmar are not available hence excluded from the figure. FX = foreign exchange; Lao PDR = Lao People's Democratic Republic.

Figure 1.55. ASEAN-4 and Korea: Reserve Adequacy
(Percent)



Sources: International Monetary Fund and national authorities, both via Haver Analytics.
Note: The IMF Assessing Reserve Adequacy EM metric comprises four indicators which could be potential risks to the balance of payments: (1) export income, (2) broad money (3) short-term debt, and (4) other liabilities to reflect other portfolio investment outflows. Each component is risk-weighted based on the percentile of observed capital outflows from EMs during exchange market pressure periods.

Table 1.6. ASEAN+3: Overview of Key Pandemic Policies, February 1, 2020–February 28, 2021

Assessment as of February 28, 2021		Plus-3				ASEAN									
Fiscal Measures		CN	HK	JP	KR	BN	ID	KH	LA	MM	MY	PH	SG	TH	VN
Economy-wide	Extension of announced stimulus packages, and other special fiscal measures			●			●	●			●	●	●	●	
Individuals/ Households	Direct cash transfers		●	●	●		●	●		●	●	●	●	●	●
	Suspension of rental fees, loan, and interest payments	●	●	●	●	●	●		●	●	●	●	●	●	●
	Debt restructuring						●		●		●			●	●
	Government subsidies/ guarantees on minimum wages and extra allowances for employees		●	●	●	●	●	●	●		●	●	●		●
	Tax deferrals, waivers, and rebates on selected purchases	●		●	●	●	●		●	●	●	●	●	●	
	Waived fees for digital services (e.g., for banking needs, selected telecommunication charges)			●	●	●					●	●		●	●
	Cash subsidies for vulnerable groups			●			●	●			●			●	
	Price freeze on basic necessities								●		●	●		●	
	Subsidized salaries for new graduates joining the workforce		●											●	
	Fee cuts or payment deferrals for services (e.g., transportation; utilities)	●	●	●		●	●		●		●	●		●	●
Businesses	Income tax reductions for key sectors/ Delays in taxation and compulsory payments	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	Waived utility fees			●			●			●	●				
	Moratoria on debt payments	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	Lifting of import restrictions on local enterprises	●	●			●	●		●	●		●			
	Government guarantees on debt/ loans	●	●	●	●		●	●			●	●			
	Reduction or deferral of customs payments for some importers	●				●	●		●	●				●	
	Higher tax benefits for listed companies											●		●	
	Subsidies for maintaining operations and/or employment		●	●	●			●			●		●	●	
	Waived transaction fees for selected securities											●			●
Monetary Measures															
Economy-wide	Extension of announced monetary measures, including but not limited to those listed below			●			●	●			●		●	●	
Businesses	Credit subsidies and credit extension to SMEs	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	Temporary financing lines to manage cash flow	●	●	●	●	●	●			●	●	●	●	●	●
	Provision of low-cost loans and soft loans		●	●	●		●	●	●	●	●		●	●	●
	Allowing more corporate bond issuances to support cash flow, including supply chain financing	●			●								●		
	Purchases of bonds issued by hard-hit companies			●	●									●	
Financial Institutions	Intervention to ease liquidity and expand banks' lending capacity, including aggressive lowering of reserve requirement ratios	●			●		●	●	●	●	●	●		●	
	Introduction of special deposit facilities for lenders that undergo mergers or business integration														
	Temporary measures to provide USD and local currency liquidity		●	●	●		●						●		
	Full access to low-cost funding for microfinancial institutions									●					
Asset Markets	Central bank's direct purchase of government bonds in the primary market						●				●				
	Active purchases of government bonds and papers to stabilize asset markets			●	●		●					●		●	
	Suspension of short-selling in the stock exchange				●		●				●			●	
Regulatory Forbearance															
Economy-wide	Extension of announced monetary measures, including but not limited to those listed below						●	●					●		
Capital Adequacy/ Liquidity	Lower required capital or countercyclical capital buffers		●				●	●			●		●		
	Lower select liquidity coverage ratios (e.g., foreign exchange) and loan-deposit ratios being imposed		●		●		●					●			
	Lower collateral ratios for select settlement activities/ expanding eligibla collateral			●	●					●					
	Higher range of securities eligible for open market operation transactions			●	●		●								
	Relaxed penalties imposed on institutions with reserve deficiencies											●			
Lending and Borrowing	Flexible treatment of nonperforming loans, thus allowing no additional provisioning on bank balance sheets		●	●			●	●	●		●	●	●	●	●
	Extension of timeline for banks to restructure loans						●	●		●				●	
	Removal of loan downpayment requirements for selected bank acquisitions														
	Eased loan restructuring and/or Know-Your-Customer rules						●		●	●		●		●	●
	Permission to draw down on capital and liquidity buffers to support lending activities		●	●			●				●	●	●		
Other Activities	Delayed new, tighter rules on asset management activities	●													
	Allowing banks to offload bad loans to asset management companies														
	Deferral of new accounting rules for property companies														
	Relaxed rules on buyback of shares						●								
	Higher trading limits and on FX forward positions				●									●	
	More flexible timelines for bank's reporting and other administrative requirements			●	●						●	●			

Sources: National authorities; and AMRO staff estimates, based on AMRO (2021).

The large fiscal stimulus measures have generally reduced the policy buffers against any future sustained waves of the pandemic or any other high-impact risks. Several economies saw a big jump in fiscal deficits in 2019, with more deficit spending expected in 2021, leading to a significant increase in government debt and possibly an increase in risks to fiscal sustainability (Figures 1.57–1.58). Although fiscal space for most economies is assessed to remain broadly within their pre-pandemic proximate ranges, a pronounced reduction has resulted for some economies (Table 1.5):

- Fiscal policy space has shifted from ample to moderate for Brunei, whose widened fiscal deficit is mainly attributable to low oil prices, and for Thailand, where public debt is quickly rising toward its self-imposed ceiling at 60 percent of GDP.

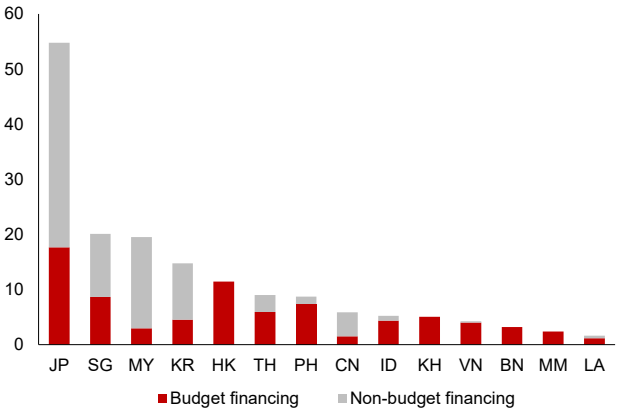
- While still moderate, Indonesia's fiscal policy space has narrowed in the wake of its sizable fiscal packages for 2020–21. The government has temporarily suspended the 3 percent of GDP budget deficit cap for 2020–22 to provide greater flexibility in its pandemic response. However, fiscal policy space may be constrained by the country's relatively narrow domestic investor base, and although foreign investors have returned as risk aversion receded, the flows from the latter tend to be more volatile.

On a positive note, private savings in the region have increased sharply, reflecting the collapse in domestic demand and amid heightened uncertainty in the outlook. As a result, the fiscal deficits have been financed largely from domestic savings rather than capital inflows. This unexpected development could help ease concerns about current account balances while creating some additional room for fiscal authorities (Figure 1.59).

Monetary policy space across the region has also narrowed following the raft of easing measures that were introduced to support the economy and financial systems. Some central banks have cut interest rates significantly since the start of the pandemic (Figure 1.60), resulting in reduced monetary policy space. That said, the monetary space in most of the other regional economies remains moderate (Table 1.5), within their proximate pre-COVID 19 range, while the cumulative rate cuts by the Philippines and Vietnam between December 2019 and 2020, of 200 and 150 basis points, respectively, have reduced their monetary policy space from ample previously, to moderate.

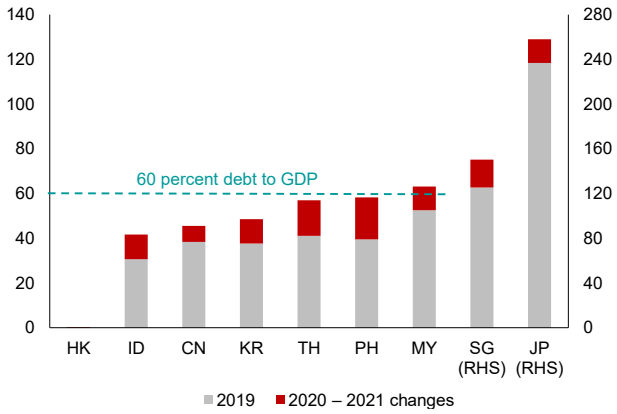
Central banks also provided support in several other ways. The adoption of unorthodox policies across the region helped inject liquidity into the financial system, preserve some monetary policy space, and protect financial stability (Box 1.13). Those measures comprised: (1) unconventional monetary policy measures such as central bank purchase of government bonds held by banks and nonbank financial institutions, which have averted a liquidity crunch in asset markets; and the introduction of special loans programs, notably to support SMEs; (2) regulatory forbearance and the targeted easing of macroprudential measures, which provided liquidity to the banking system and temporarily eased the pressure on bank balance sheets from rising credit risks; (3) efforts to secure US dollar liquidity via bilateral and multilateral swap lines or borrowings from international financial institutions, to try to offset the squeeze arising from disruptions to earnings from trade, and risk aversion toward risk assets (Pande and del Rosario 2020).

Figure 1.56. ASEAN+3: Economic Stimuli, February 1, 2020–February 28, 2021
(Percent of GDP)



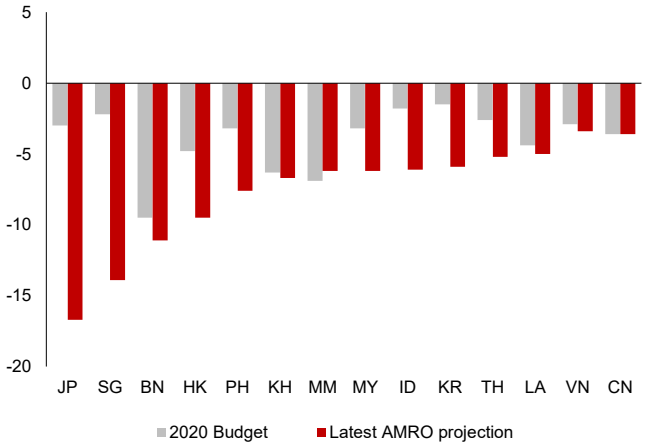
Sources: National authorities via Haver Analytics; and AMRO staff estimates.
Note: Based on governments' announced stimulus packages across regional economies. The non-budget financing component corresponds to the fraction of government's announced economic relief/stimulus packages financed by non-budget resources, for example, funding from public funds, public financial institutions or entities, or fiscal reserves. BN = Brunei Darussalam; CN = China; HK = Hong Kong; ID = Indonesia; JP = Japan; KH = Cambodia; KR = Korea; LA = Lao PDR; MY = Malaysia; MM = Myanmar; PH = Philippines; SG = Singapore; TH = Thailand; and VN = Vietnam.

Figure 1.57. Selected ASEAN+3: Government Debt Projections, 2020–21
(Percent of GDP)



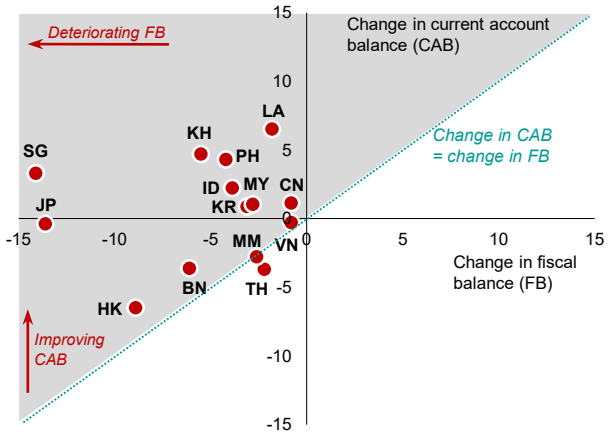
Sources: National authorities via Haver Analytics; and AMRO staff projections.
Note: The 2020–21 projections are based on the information available up to February 28, 2021. CN = China; HK = Hong Kong; ID = Indonesia; JP = Japan; KR = Korea; MY = Malaysia; PH = Philippines; SG = Singapore; Economic Stimuli, and TH = Thailand.

Figure 1.58. ASEAN+3: Budgeted versus Estimated Fiscal Balance, 2020
(Percent of GDP)



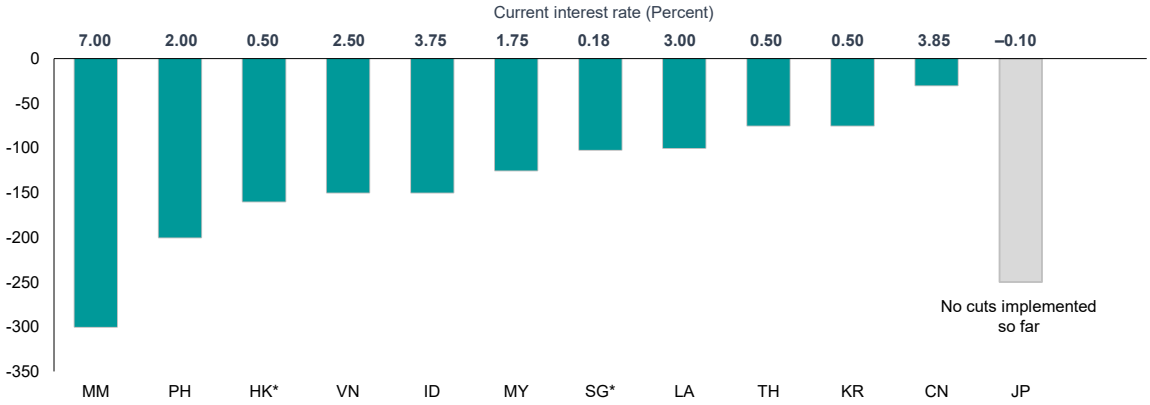
Sources: National authorities via Haver Analytics; and AMRO staff projections.
Note: BN = Brunei Darussalam; CN = China; HK = Hong Kong; ID = Indonesia; JP = Japan; KH = Cambodia; KR = Korea; LA = Lao PDR; MY = Malaysia; MM = Myanmar; PH = Philippines; SG = Singapore; TH = Thailand; and VN = Vietnam.

Figure 1.59. ASEAN+3: Changes in Estimated Fiscal and Current Account Balances, 2020
(Percent of GDP, relative to 2019)



Sources: International Monetary Fund via Haver Analytics; and AMRO staff projections and calculations.
Note: Fiscal balances are based on general government net lending/borrowing. The shaded area depicts economies where changes in current account balances have been supported by higher private sector savings. The fiscal balances of all economies, except China, have deteriorated, while the current account balances have improved, with the exception of Brunei, Hong Kong, and Thailand. For Brunei, Hong Kong, and Thailand, fiscal balances have weakened at a faster pace than current account balances. BN = Brunei Darussalam; CN = China; HK = Hong Kong; ID = Indonesia; JP = Japan; KH = Cambodia; KR = Korea; LA = Lao PDR; MY = Malaysia; MM = Myanmar; PH = Philippines; SG = Singapore; TH = Thailand; and VN = Vietnam.

Figure 1.60. ASEAN+3: Cuts in Key Interest Rates, January 1, 2020–February 28, 2021
(Basis point change)



Sources: National authorities via Haver Analytics; and AMRO staff calculations.
Note: Those with an asterisk uses the monthly average of market-based rates, instead of end-of-period rates. The definition of key interest rate varies across economies, and could mean the policy rate, the refinancing rate, the discount rate, the overnight repo rate, among others. Brunei and Cambodia are excluded from the sample given the current design of their respective monetary policies. CN = China; HK = Hong Kong; ID = Indonesia; JP = Japan; KR = Korea; LA = Lao PDR; MY = Malaysia; MM = Myanmar; PH = Philippines; SG = Singapore; TH = Thailand; and VN = Vietnam.

Policy Positions

Authorities in the region should err on the side of being accommodative in the coming year, where policy space allows. Given the downside risks to the outlook and the uncertainties surrounding the pandemic—including new virus strains, the efficacy and availability of vaccines, and the logistical challenges of the vaccination process—the default stance among policymakers should be to remain as accommodative as possible in the longer rather than shorter term (Figure 1.61). As it stands, the collapse in economic activity in the second quarter of 2020 has resulted in a large output gap for all regional economies and, despite the strong projected rebound in growth in 2021, the output gap is unlikely to be closed in the medium term (see Box 1.3).

Fiscal policy has been indispensable in supporting the pandemic-battered economies in the region in 2020. Going forward, fiscal policy stance among regional economies and AMRO staff's corresponding recommendations may be characterized as follows:

- ***Expansionary and could be more so.*** Fiscal spending in the Philippines to fight the pandemic and support the economy has been relatively modest, at 23.5 percent of GDP in 2020, compared with some regional peers, whose expenditure reached as high as 53.9 percent of GDP. Stronger fiscal support should be used to shore up the economy if the recovery were to falter or weaken.

- *Expansionary and should be maintained.* Cambodia rolled out a broad fiscal stimulus package in 2020. Continuing fiscal support is warranted in 2021 to bolster economic recovery and protect the vulnerable. A gradual shift away from short-term support measures toward investment in human and physical capital will help strengthen the medium-term resilience of the economy. Similarly, Myanmar's expansionary fiscal stance in FY2020/21 is aimed at increasing both capital expenditure and social spending, for which the authorities could tap more low-cost external funding. Thailand's substantial fiscal stimulus should be front-loaded toward the sectors most affected by the pandemic, notably, tourism, SMEs, and the informal sectors, while at the same time, facilitating structural reforms and increasing the pace of infrastructure investment.

- ***Expansionary but should be less so.*** Brunei's fiscal policy stance has been expansionary, driven by efforts to deal with the pandemic and to offset decline in oil and gas revenues; policy should be less expansionary going forward with the improvement in oil prices. China's fiscal policy impulse for 2020 amounted to about 5 percent of GDP and spending, while expansionary in 2021, should become less so, given the expected strong rebound in growth. Both Japan's stance and policy bias are expansionary, to deal with the challenges posed by the pandemic, but given its limited fiscal space, renewed efforts should be made to reduce the size of the deficit as the pandemic recedes, while pursuing expenditure reforms in the medium to long term.

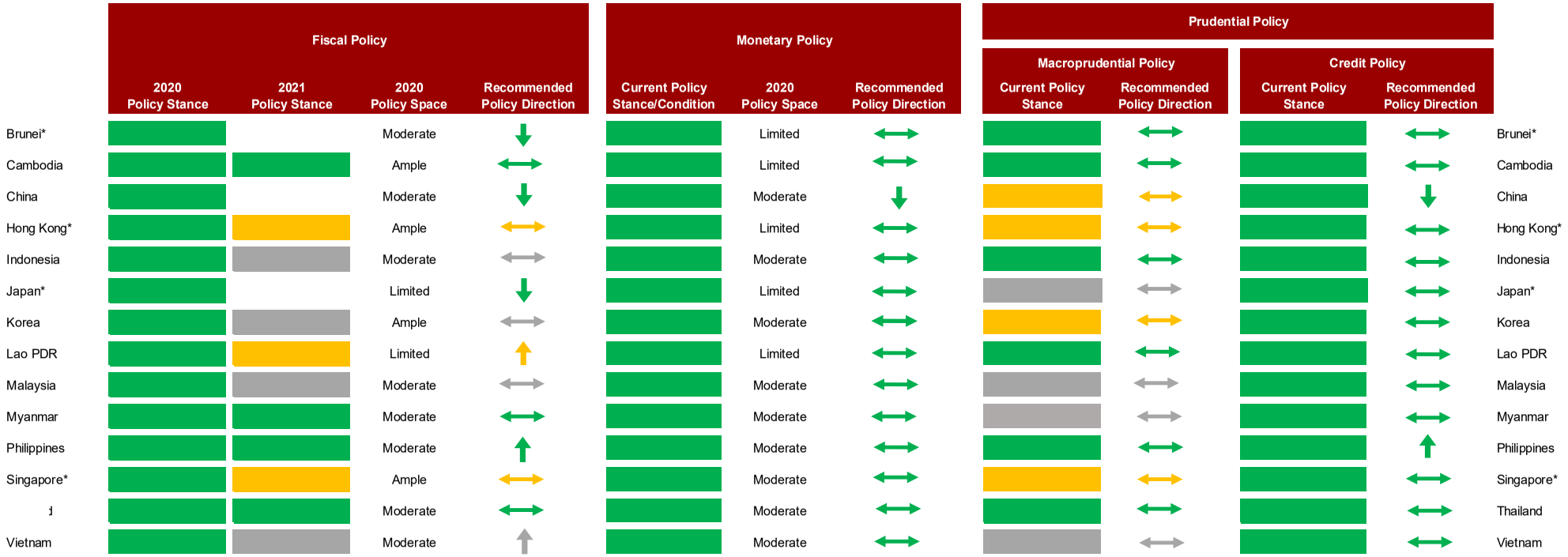
- ***Moving to neutral in 2021.*** Indonesia's expansionary fiscal stance is expected to be neutral in 2021, which should be maintained. The authorities are aptly focusing on continued healthcare spending and social assistance, and more targeted support toward a sustainable recovery. Similarly, Korea's fiscal impulse will flatten in 2021, with the government maintaining fiscal expenditure at 28.4 percent of GDP to sustain economic momentum and revitalize the economy, which is appropriate in the short term. The size of fiscal deficit is expected to be at 5.8 percent in 2021, roughly the same as the 2020 level. Malaysia promptly and prudently deployed expansionary fiscal measures as the health and economic crises rapidly unfolded, and should maintain supportive measures in 2021 to sustain the recovery. However, the rising debt burden underscores the importance of putting its tax revenue plan into action to restore fiscal buffers, as the statutory (domestic) debt limit reverts to the pre-pandemic level by 2023. In Vietnam, the authorities adopted an expansionary stance in 2020, with some stimuli injected to support households and businesses. As the stance is projected to become neutral in 2021, additional fiscal support would be beneficial in strengthening the resilience of the economic recovery, given sufficient fiscal space.

- ***Moving to contractionary in 2021.*** Singapore has significantly scaled down broad-based fiscal support in light of its improving growth prospects. It has appropriately adopted a targeted approach, notably toward the hard-hit sectors, and is continuing to focus on boosting job creation, as well as preparing businesses and households for the post-pandemic new normal. Similarly, Hong Kong's policy support in 2020, amounting to about 11 percent of GDP, was expansionary and broad in coverage. For 2021, the Hong Kong authorities are focusing on stabilizing the economy through targeted countercyclical measures, and concurrently taking steps to boost the economy's longer-term competitiveness and resilience. There remains substantial scope to increase policy support measures if necessary. Lao PDR's expansionary stance is projected to become contractionary in 2021, and while appropriate given the country's limited policy space, mounting public debt and external debt service, more achievable goals should be calibrated to support economic recovery. Revenue improvement measures should focus on broadening the tax base, modernizing tax collection, and reforming tax expenditure, while spending should prioritize the programs and projects that drive growth, create jobs, and strengthen healthcare and social safety nets. External debt service should be the top priority in 2021 to manage liquidity and solvency risks.

Monetary policy actions by regional central banks have been instrumental in preventing a credit crunch and providing liquidity support at various points of 2020. In addition to more conventional interest rate cuts across the board, with the exception of Japan (Figure 1.61), monetary authorities also enacted a myriad of measures to backstop the real economy and financial system (Table 1.6). The key tools employed include: cuts to reserve requirements (Cambodia, Indonesia, Lao PDR, Malaysia, Myanmar, the Philippines); injections of liquidity into markets through repo operations (China, Indonesia, Korea, Malaysia, the Philippines) and purchase of commercial paper and/or bonds in the primary or secondary market (Indonesia, Japan, Korea, Malaysia, the Philippines, Thailand); and the establishment of special lending programs for corporates, MSMEs (China, Indonesia, Japan, Korea, Malaysia, the Philippines Singapore, Thailand). With sufficient policy space and inflation posing little concern (Figure 1.62), monetary policy should remain accommodative for the foreseeable future, to support recovery in the growth momentum.

Prudential policies have been implemented to ensure that there is sufficient liquidity in the financial system to support continued lending to the economy while

Figure 1.61. ASEAN+3: AMRO Staff Assessment of Current Policy Stance and Recommendations



Source: AMRO staff estimates.
Note: "*" denotes fiscal year of April 1 to March 31. For Brunei, Cambodia, and Hong Kong, current monetary stance refers to the state of monetary conditions; "Credit Policy" refers to policies relating to credit extended to the real and property sectors, as well as to regulatory forbearance for banks.

guarding against any asset bubbles. The various measures introduced during the Covid crisis may be separated into two categories—conventional macroprudential policies and regulatory forbearance, which are typically used sparingly and are temporary in nature:

- Over the course of 2020, Cambodia, Indonesia, Lao PDR, and the Philippines moved to a more accommodative macroprudential stance, by cutting reserve requirements, adjusting countercyclical capital buffers, and/or liquidity coverage and collateral ratios, while Thailand relaxed rules on credit card and personal loan repayments; separately, Malaysia, Myanmar, and Vietnam moved from a tighter to a more neutral policy stance. In contrast, China, Hong Kong, Korea, and Singapore maintained their tight policies to dampen upward pressure on property prices.

- Authorities also afforded regulatory forbearance to banks to provide them with some flexibility to manage credit risks arising from the impairment of business and household balance sheets, and to encourage them to continue extending credit to the real economy. Key measures include postponing the implementation of new capitalization rules (Cambodia, China); adjusting capital requirements (Indonesia, the Philippines, Singapore); relaxing rules on liquidity (Indonesia, Korea, Malaysia, Myanmar, the Philippines, Singapore); and easing loan classification criteria (China, Indonesia, Lao PDR, Thailand).

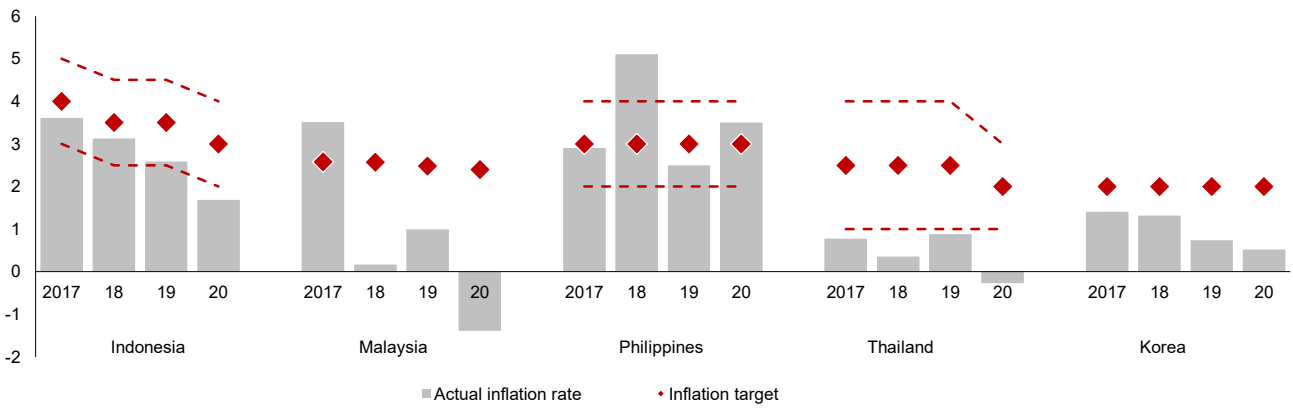
Policy Transition and Exit

Policymakers are, appropriately, thinking about the eventual transition from the multitude of crisis response policies that have been implemented to support their respective economies. The decision as to when and how to exit smoothly from stimulus policies without triggering any cliff effect is a challenging one, which will require policymakers to follow some broad guiding principles (Box 1.14). Safeguarding public health remains the top priority amid risks of another COVID-19 outbreak. Although the speedy development of efficacious vaccines is encouraging, many economies will remain highly susceptible to another wave of infections—requiring renewed containment measures in some cases—until the bulk of the population has been vaccinated. However, extensive and indefinite policy stimuli to support economic recovery is not sustainable either, given the narrowing policy space and rising debt burden (Table 1.5 and Figure 1.57). The "Catch 22" for policymakers is that any premature withdrawal of existing stimulus measures could gravely threaten the nascent economic recovery that began in the third quarter of 2020.

Broadly, well-managed exits from the raft of existing stimulus policies will be critical in avoiding any sudden shock to growth and financial stability. During the nascent recovery stage, the risk of withdrawing support from the economy too early is greater than providing stimuli for a bit longer than perhaps necessary. Hence, exit plans need to be implemented gradually and cautiously:

- Any withdrawal of financial support to households and businesses must be considered against the risks of household and business bankruptcies and high unemployment; exits from regulatory forbearance must be designed to avoid moral hazard, while avoiding any sudden shock to banks' balance sheets; and the unwinding of liquidity injections into the financial system must be balanced against any excessive tightening in credit conditions. Against these considerations, governments also need to eschew artificially supporting firms that are not economically viable, although it would be challenging not to do so in a highly uncertain climate.

Figure 1.62. ASEAN-4 and Korea: Actual Inflation versus Inflation Target
(Percent year-over-year, end-of-period)



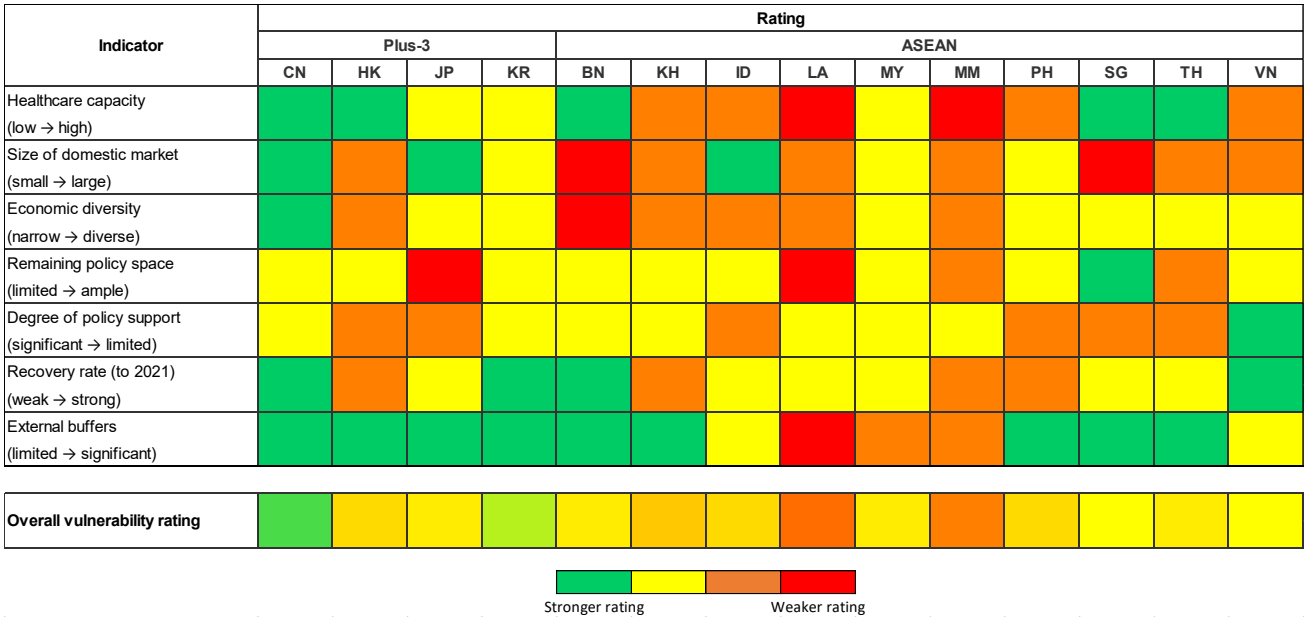
Sources: National authorities; and AMRO staff estimates.
Note: Malaysia is not officially an inflation-targeting economy; the long-term average is used in this instance. Dots represent mid-points of pre-defined inflation target bands, while dotted lines represent the upper and lower bounds of the bands. Korea does not have an inflation target band.

- It is crucial to engineer a "soft-landing" for the financial sector as the pandemic recedes. Regulatory forbearance is a powerful tool for "buying time" during a crisis, but such benevolent measures must be temporary to minimize moral hazard and protect the soundness of, and maintain confidence in, the financial system. For the relevant ASEAN+3 banking systems, exit policies and official guidance are required in two areas: (1) when and how banks should terminate their loan moratoria program, recognizing that some banks may need recapitalization; and (2) how authorities should phase out regulatory forbearance while allowing banks time to repair their balance sheets and normalize lending to the economy, post-pandemic.

Additionally, the timing and strategy of exit from stimulus policies should realistically vary across the region and depend largely on economy-specific factors. Some economies will be more vulnerable to exit because of their overall circumstances, such as: (1) the capacity of the healthcare system to cope with any mass recurrence of infections; (2) the capacity of the domestic market to support growth; (3) the diversity of the economy in providing growth opportunities; (4) the availability of policy space to support smooth transition; and (4) the degree of policy support that must be unwound vis-à-vis the strength of economic recovery. Based on this framework, AMRO staff's assessment is that the majority of economies in the ASEAN+3 region should remain cautious in exiting from their stimulus policies (Figure 1.63).

Last but not least, transitions and exits should be effected in a holistic, coordinated manner. They should involve the government, central bank, and financial regulators. These agencies should then engage with financial institutions and businesses to evaluate the effectiveness of policy support to date, identify and target support at particular sectors, and determine what type and how much more may be needed in those sectors. Rebuilding the post-pandemic economy should emphasize the structural aspects, namely, structural reforms, and building the necessary hard and soft infrastructure to facilitate the transition to the new digital economy (AMRO 2020a). Those that are not viable should be phased out, and workers reskilled from sunset industries to emerging ones. During this period, social safety nets should be strengthened to support the transition.

Figure 1.63. ASEAN+3: Vulnerability to Pandemic Policy Exit Risks, as of February 2021
(Rating)



Source: AMRO staff estimates.
Note: Ratings are assigned as follows: (1) red – weaker; (2) orange – less weak; (3) yellow – less strong; (4) green - stronger. The overall vulnerability rating is a simple average of the individual ratings. Indicators are defined as follows:
"Healthcare capacity" refers to the availability of hospital beds and the quality of healthcare, the latter of which draws on AMRO staff judgment;
"Economic diversity" refers to the relative size of key economic sectors (for example, agriculture, manufacturing, services), overlaid by AMRO staff judgment about the diversity of industries within each sector.
"Size of domestic market" refers to the economy's import-adjusted GDP.
"Remaining policy space" is based on the methodology presented in Poonpatpibul and others (2020) and shown in Table 1.5.
"Degree of policy support" is based on the extent of actual policy support provided since the start of the pandemic assessed by AMRO staff.
"Recovery rate" is proxied by AMRO staff's projections of the output gap as of end-2021.
"Reserve coverage" is based on the ERPD Matrix Scorecard percentile.
BN = Brunei Darussalam; CN = China; HK = Hong Kong; ID = Indonesia; JP = Japan; KH = Cambodia; KR = Korea; LA = Lao PDR; MY = Malaysia; MM = Myanmar; PH = Philippines; SG = Singapore; TH = Thailand; and VN = Vietnam.

Box 1.13:

Central Banks Lend a Helping Hand

Economies around the world have been faced with the challenge of funding the extraordinary fiscal support needed for the pandemic. Although most ASEAN+3 economies have built up significant fiscal space by pursuing relatively conservative fiscal policies and rules, the large pandemic relief packages still made the financing of the deficits challenging for some. Following the initial shock to the markets in March 2020, global liquidity conditions eased and provided relief to regional bond markets, but the unprecedented size of the fiscal stimuli and consequent widening of fiscal deficits posed challenges for bond auctions. However, close coordination between monetary and fiscal authorities ensured sufficient funding to support the economy.

Central banks enacted several policy measures, which helped to ease the pressure on bond markets. These measures included:

- ***Policy rate cuts.*** Anticipation of further rate cuts made bond valuations attractive for investors.

- ***Liquidity easing.*** Liquidity from reductions in reserve requirements, liquidity operations, and asset purchases in secondary markets, found their way to government bonds, amid a low credit-growth environment.

- ***Direct financing to the government.*** Bank Indonesia (BI) and Bangko Sentral ng Pilipinas (BSP) provided temporary, direct financing to the government (through primary market purchases/ private placements of government debt, residual buyer in the primary market, and short-term repurchase agreements/short term loans respectively), helping to regulate the supply of bonds to the market.[1/]

On the demand side, an examination of the key buyers of government debt in 2020 reveals the important roles played by banks and central banks (Table 1.13.1):

- In line with the burden sharing agreement between BI and the Indonesian government, a large portion of the latter's net issuance is held by the former. BI's government bond holdings increased as a result of direct placements (IDR 397.6 trillion), as well as from purchases in the primary (IDR 75.9 trillion) and secondary (IDR 128.3 trillion) markets. The banking system also absorbed a sizeable amount of issuances, about a fifth of which was made possible by the liquidity freed up by cuts in reserve requirements.

- Similarly, banks were the largest buyers of Malaysian government debt (51 percent of net supply of government debt in 2020), indirectly attributable to the adjustments to reserve requirements. Bank Negara Malaysia (BNM) also increased its holdings of government bonds to ensure sufficient liquidity for continuous financial intermediation, address market dislocation, and manage excessive volatility during the heightened stress period. The remaining statutory reserves are limited but BNM still has ample space through other tools, such as reverse repos and outright purchases of government bonds, to ensure sufficient liquidity in the market.

- There also appears to be a significant increase in central bank claims on the central government in the Philippines.

- Liquidity support through reduced reserve requirements was not needed in the current account surplus economies, Korea and Thailand. Indeed, the liquidity parked with these central banks rose in 2020. While the Bank of Korea and Bank of Thailand also increased their holdings of government debt, they did so to a much lesser extent than other regional peers.

1/ BI has purchased government bonds through market-based mechanisms, in accordance with the joint decree with the Ministry of Finance of Indonesia dated April 16, 2020, with the effective date extended until December 31, 2021. Under the one-off burden sharing agreement July 7, 2020, BI also financed the "public goods" package via private placements and absorbed the entire interest cost, and shared part of the interest costs of the micro, small, and medium enterprise and corporate packages.

Looking ahead, there is no obvious challenge to bond issuances in 2021, but authorities should be wary of risks that could potentially affect demand. In a low volatility, easy (global and domestic) liquidity environment, bond auctions should largely sail through. However, some of the following factors could adversely affect market appetite for bonds, notably: (1) a strong pick up in credit growth, as compared to deposit growth, which can limit the capacity of banks to absorb increased supply of bonds; (2) faster normalization of monetary policy in advanced economies, which can make emerging market bonds less attractive and cause a rise in the yields of domestic bonds; (3) turbulence in financial markets, which could lead to outflows from domestic bond markets; or (4) the likelihood that a large part of conventional monetary and liquidity support has already been implemented, which may limit the ability of some central banks to further cut rates or reserve requirements.

Countries that have implemented unconventional policies in 2020—under extraordinary circumstances—do not intend to use them as a long-term policy tools, and hence they did not negatively impact markets. BI has indicated that the government's direct placements of bonds with it was a one-off arrangement, while the BSP maintains that it will provide temporary, direct financing to the government only through short-term facilities. If necessary, central banks in the region could consider greater use of unconventional policies, given that inflation rates are low and well-anchored, and their external positions are relatively strong. In such circumstances, the communication and forward guidance around these measures should be transparent and effective to ensure that markets do not overreact. Sometimes, the assurance of a backstop itself may be sufficient to ensure market stability.

Table 1.13.1: ASEAN-4 and Korea: Absorption of Net Domestic Issuance of Government Debt, 2020
(Percent unless stated otherwise)

	Net Issuance (Trillions of LCY, 2020)	Net Issuance Absorbed By (Percent of net issuance, 2020)				Reserves Released (As percent of 2020 net supply)	Fiscal Deficit (Budgeted, Trillions of LCY, 2021)	Reserves Remaining (As percent of budgeted 2021 net supply)
		Banks (Domestic)	Central Bank	Non-Banks (Domestic)	Foreign Investors			
Indonesia	1118.0	34	54	20	-8	6	1006.4	25
Korea*	123.4	18	6	57	19	-8	113.2	65
Malaysia	0.089	51	16	8	25	47	0.085	3
Philippines**	1.567	23	74	n.a.	n.a.	13	1.750	79
Thailand***	0.908	43	14	47	-3	-65	0.792	553

Sources: National authorities; and AMRO staff calculations.
Note: Data for Indonesia, Malaysia, the Philippines, and Thailand are as of December 31, 2020 and Korea as of November 30, 2020, The data include IDR-denominated tradable government debt for Indonesia, treasury bonds for Korea, government bonds and bills for Malaysia, gross domestic central government debt for the Philippines and government bonds and bills for Thailand.
Reserves referred in the table are the bank deposits with central bank as part of regulatory reserve requirements. Reserves released is the reduction in these deposits (negative number implies a rise in deposits) which contributes to the liquidity conditions in the banking system LCY = local currency unit.
* The fiscal deficit (budgeted, 2021) for Korea indicates only the net bond issuance planned for 2021.
** The bond outstanding and holdings data for Philippine government bonds are not available. Net issuance for Philippines is calculated from the change in government's domestic debt. The net issuance absorbed by banks and the central bank are calculated from the change in claims on government. Central bank claims on government are adjusted to exclude the short-term loan of PH540.
*** The data for Thailand are in accordance with the fiscal year. Net issuance (2020) lists the net issuance from October 2019 to September 2020; Fiscal deficit (budgeted, 2021) is based on the Public Debt Management Office's projections of gross bond and bill issuance net of redemptions between October 2020 to September 2021.

The author of this box is Prashant Pande.

1/ BI has purchased government bonds through market-based mechanisms, in accordance with the joint decree with the Ministry of Finance of Indonesia dated April 16, 2020, with the effective date extended until December 31, 2021. Under the one-off burden sharing agreement July 7, 2020, BI also financed the "public goods" package via private placements and absorbed the entire interest cost, and shared part of the interest costs of the micro, small, and medium enterprise and corporate packages.

Box 1.14:

Post-Pandemic Policy Considerations

While continuing to provide the necessary pandemic policy support, the key objectives of each government need to shift gradually from crisis survival to strategic initiatives for robust recovery and sustainable growth. Given that resources are not unlimited, policy support should pivot from a "whatever it takes" to a "what can serve best" approach, taking into careful account the effectiveness and priorities of policy alternatives (Table 1.14.1). Policy tools should be carefully designed to incentivize the private sector to retake the lead in driving the economy to ensure self-sustainable economic recovery. In addition, various policy initiatives to address evolving priorities over time horizon need to be comprehensively assessed to avoid conflict and maximize complementarity (Figure 1.14.1). In the meantime, risk management, including COVID-19 prevention and control, should remain the top priority throughout.

Policy transition in the short-term should focus on economic recovery and gradually align with the medium- to long-term structural reform priorities, including building a more resilient economy. Managing policy space is important but rebuilding policy space will be feasible only in the medium term, as the need for policy support will continue until the economy adequately regains its growth momentum.

For a sustainable recovery, a cautious and targeted restarting of the economy is necessary after careful assessment of both health risks and economic impact. Containment measures should be relaxed in phases based on analyses of implied health risks, including the stages of virus transmission and the capacity of the public health system (Figure 1.14.2). Also, reopening all businesses at once in all regions is not desirable. Authorities should prioritize the groups of sectors and regions for reopening by taking into account virus transmission risks and the economic importance of each sector (Figure 1.14.3). In addition, policy support should be recalibrated to become more targeted. Broad financial assistance and tax incentives should be refocused to incentivize job creation and resource reallocation, supporting self-sustainable economic recovery.

The COVID-19 pandemic demonstrated the importance of resilient economic systems, which should be one of the ultimate goals of structural reforms in a post-pandemic world. Four aspects are particularly crucial (Figure 1.14.4):

- Traditional cost-efficient business practices have proven to be highly vulnerable to shocks, and supply chains need to be reconfigured to ensure more durable and effective business operations.

- The adoption of technology is essential in maintaining the provision of critical services in both the public and private sectors. The pandemic forced a shift from physical to contactless interactions through digital technology; the government could facilitate the continuing transition by providing appropriate incentives and requisite infrastructure.

- The pandemic also underscored the importance of developing strong healthcare capacity and enhancing the social security system to preserve life and livelihood.

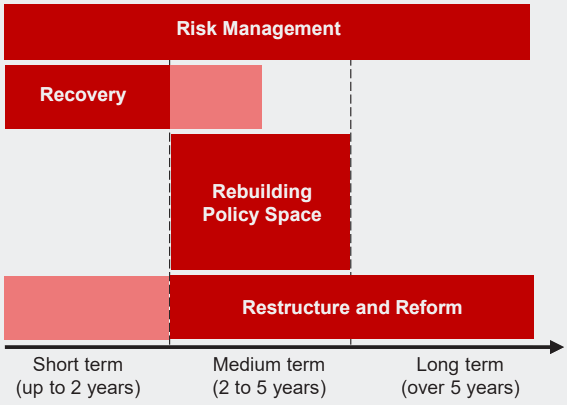
- Lastly, rebuilding policy space over the medium term is also critical in strengthening policy buffers and enhancing economic resilience. Going forward, a credible medium-term plan to replenish fiscal buffers and a clearly communicated schedule to unwind extraordinary monetary measures will be necessary to regain market confidence in the region's outlook.

Table 1.14.1. Pandemic Policies: Transition

	Pandemic Response	Post-Pandemic
Policy Objectives	• Survival	• Robust recovery • Sustainable growth
Approach	• Whatever it takes • Passive responses • Universal support	• What can serve best • Proactive strategies • Targeted support
Growth Drivers	• Led by stimulus packages	• Led by private sector with policy support
Time Horizon	• Short term	• Short, medium, and long term

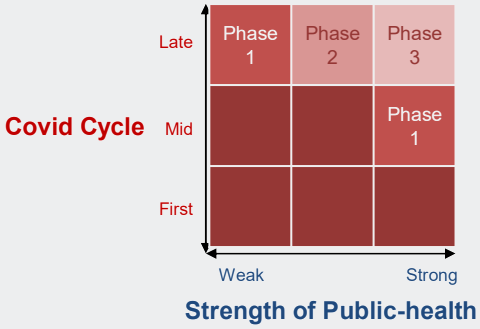
Source: AMRO staff illustration.

Figure 1.14.1. Pandemic Policies: Priorities over Time



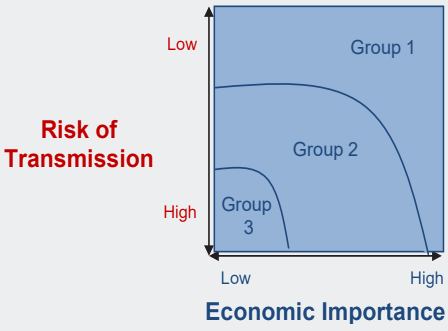
Source: AMRO staff illustration.

Figure 1.14.2. Pandemic Policies: Phased Approach



Source: AMRO staff illustration.

Figure 1.14.3. Pandemic Policies: Prioritized Reopening



Sources: McKinsey and Company; and AMRO staff illustration.

Figure 1.14.4. The Post-Pandemic Economic System: A "New Normal"

Source: Ekapirak and others (2020).

The authors of this box are Luke Seung Hyun Hong and Byunghoon Nam, based on Ekapirak and others (2020).