

are high. Policymakers need to redouble efforts to keep workers connected to the labor force and solvent firms in business while allowing nonviable firms to exit, and facilitating new businesses to emerge and generate new job opportunities, and thus mitigate scarring.

This *Regional Economic Outlook* draws on studies analyzing the impact of COVID-19. Chapter 3 examines the effect of containment and related policy measures on health outcomes and economic activity. Fast implementation of containment measures and appropriately timed exits—supported by strong testing and contact tracing policies—have been key in stabilizing COVID-19’s spread while mitigating its economic costs in many Asian economies. Fiscal support has also been critical to reduce economic costs, underpin recovery, and limit scarring. Chapter 4 warns that the crisis is having the largest impact on low-income workers, women, and youth, and so is increasing inequality. These distributional effects could be even larger in the medium term as robots displace low-skilled workers, and the resulting higher levels of inequality could undermine social cohesion. Policies should be targeted to mitigate the pandemic’s adverse distributional consequences and so underpin overall economic activity and virus containment.

2. A Multispeed Recovery in Asia

Global Context

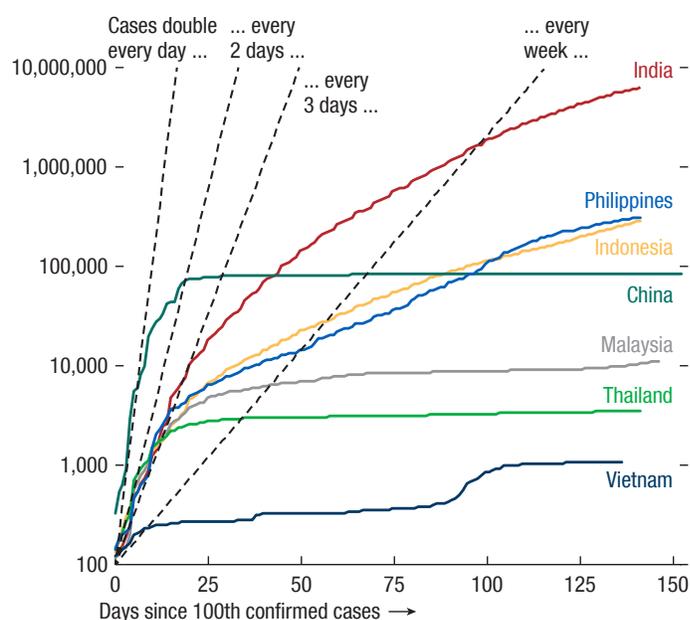
The COVID-19 pandemic plunged the world into a sharp recession in the first half of 2020. Service sector activity, which relies on person-to-person contact, took a big hit. Manufacturing also weakened substantially, and global trade plummeted. Global growth is projected at -4.4 percent in 2020, 0.6 percentage points above the June 2020 *World Economic Outlook Update* forecast. The upgrade reflects a better second quarter outturn in major countries that eased lockdowns earlier than expected. The

recovery is projected to be more gradual than previously forecast. In 2021 global growth is projected at 5.2 percent, 0.3 percentage point lower than projected in June 2020, reflecting the persistence of social distancing into 2021.

Green Shoots in Asia

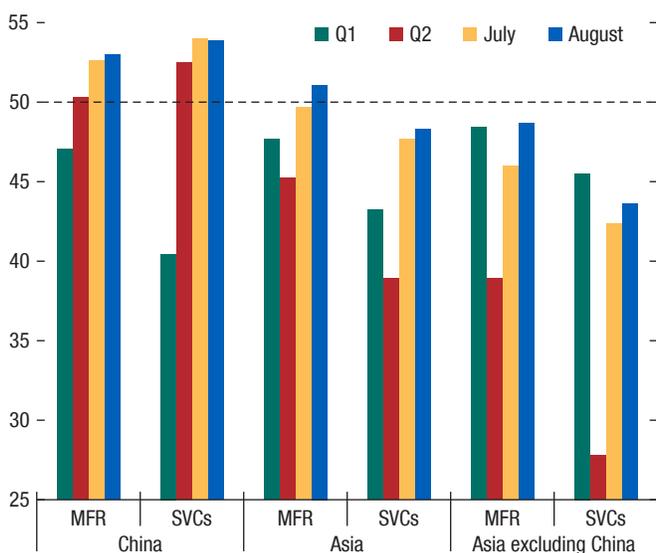
The pandemic is at various stages in the Asia and Pacific region. Many countries have successfully contained the first wave of the virus, although there have been second waves in some countries (Australia, Japan, Myanmar), as well as periodic, localized outbreaks in others (China, Korea, New Zealand, Vietnam). A small group is still striving to flatten the pandemic curve (India, Indonesia, Philippines; Figure 2.1), and yet others remain largely free of COVID-19 (most Pacific island countries). Countries across the region have exited from economy-wide containment measures at varying speeds (Box 2.1), but some major restrictions remain in place—external borders are closed in most countries, exacting significant economic costs.

Figure 2.1. Cumulative Confirmed Cases, Emerging Asia
(Log scale)



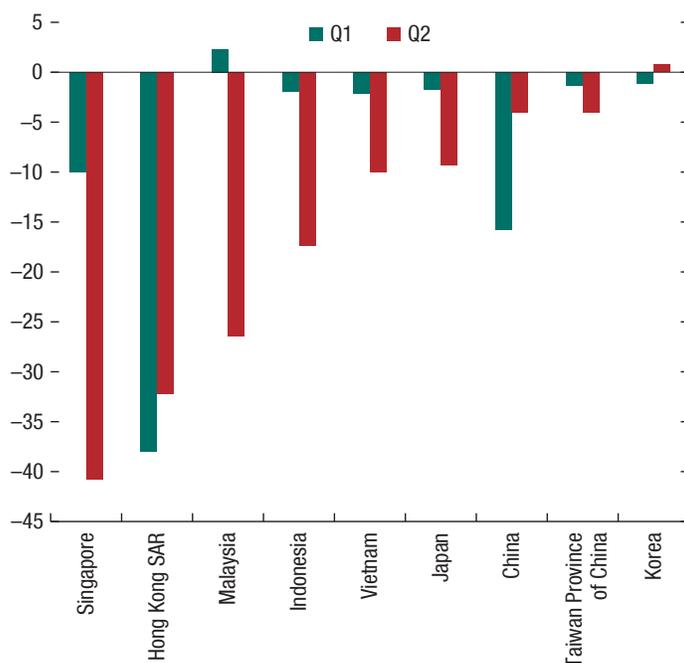
Sources: Johns Hopkins University; and IMF staff calculations.
Note: As of September 30, 2020.

Figure 2.2. Manufacturing and Services PMI
(Seasonally adjusted, 50+ = expansion)



Sources: Haver Analytics; and IMF staff calculations.
Note: MFR = manufacturing; SVC = service.

Figure 2.3. Retail Sales
(Percent change, year-over-year)



Sources: CEIC; Haver Analytics; and IMF staff calculations.

Economic activity is beginning to revive, starting with China. After hitting a trough in February 2020, China’s growth received a boost from infrastructure, real estate investment, and a surge in exports, mainly of medical and protective equipment, as well as work-from-home-related electronics. This is being followed by a gradual recovery in private nonhousing investment and consumption.

The economic contraction in the rest of Asia appears to have bottomed out in the second quarter of 2020 (Figures 2.2 and 2.3). The drop in activity in the second quarter was particularly sharp in India and the Philippines, given the continued rise in virus cases and extended lockdowns. In India, activity plunged by 24 percent year-on-year in the second quarter, with large contractions across all sectors except for agricultural production, where record crops and fewer virus cases have supported the rural economy. A fall in remittances compounded the hit on activity in the Philippines and the Pacific island countries. High-frequency indicators point to a trough in activity for much of Asia in April, with economies recovering thereafter, though

at multiple speeds. The surge in risk aversion and capital outflows from the region seen in the immediate aftermath of the outbreak has reversed in recent months. Advanced economies with lower infection rates have seen a bigger pickup in activity through to August than did emerging market and developing economies (excluding China). Inflation across Asia has remained largely contained because of a drop in demand, lower oil prices, and stable food prices, but inflation has been high in India due to supply-side disruptions related to lockdowns.

Countries recovering faster from the pandemic are those that introduced effective containment measures early and timed their exit from containment well. Comprehensive testing and contact tracing infrastructure were key in the early stages and exit phase of the pandemic, including in countries that did not implement mandatory restrictions (Korea). Fiscal support also facilitated the resumption of activity (Chapter 3). That said, support targeted to vulnerable segments of society

has been deficient, highlighting underdeveloped health and social institutions, weak financial inclusion, and high levels of informality.

Outlook and Risks: Can Asia Lead the Way Forward?

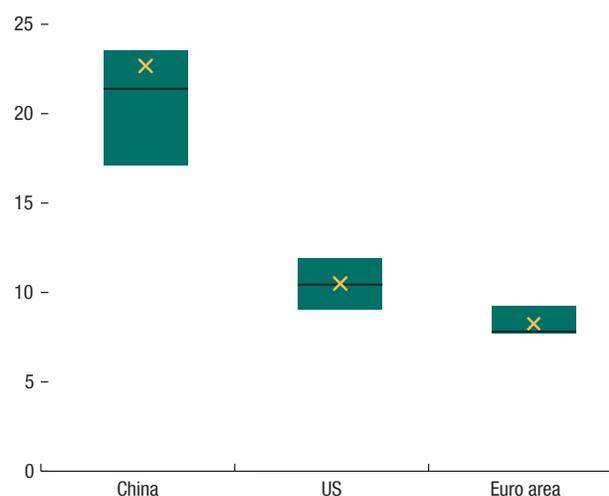
While Asia is beginning to emerge from its worst-ever recession, regional growth has been further downgraded to -2.2 percent in 2020, 0.6 percentage point lower than in June (Table 2.1). This reflects a sharper contraction, notably in India, the Philippines, and Malaysia. Bucking this trend, China's outlook has been revised up to 1.9 percent for 2020 because of a faster-than-expected rebound in the second quarter, and growth is expected to pick up to 8.2 percent in 2021 on the assumption of a smooth handover from public sector support to private sector demand. Asian advanced economies are expected to shrink by less than previously projected, reflecting a faster pickup in activity following earlier exit from lockdowns.

Recovery is likely to be sluggish. The Asia and Pacific region is projected to grow by 6.9 percent in 2021. While this is 0.3 percentage point higher than projected in June, it nevertheless implies a further drop in the level of output in 2021 than envisaged earlier. Activity is seen as beginning to normalize next year in badly hit emerging market economies. The stronger recovery in China, the United States and the euro area will also support growth in Asia (Figure 2.4). Domestic private sector demand is expected to recover slowly, however, due to a longer period of social distancing and containment measures.

Output is expected to remain below pre-pandemic trend through the medium term.

- *Returning to full capacity will be a long slog.* Fear of infection and social distancing measures are dimming consumer confidence and will keep economic activity below capacity until a vaccine is developed. International borders are likely to remain closed for a considerable period. Scarring

Figure 2.4. Trade Exposure of REO 14
(Percent of total trade)



Sources: IMF Direction of Trade Database; and staff calculations.

Note: The chart shows the share of trade exposure (import plus export) to China, the United States, and the euro area as percent of the total trade of respective countries. The horizontal line inside each box represents the median; the upper and lower edges of each box show the top and bottom quantiles. X is the mean. REO 14 includes: Australia, China, Hong Kong SAR, India, Indonesia, Japan, Korea, Malaysia, New Zealand, the Philippines, Singapore, Taiwan Province of China, Thailand, and Vietnam.

effects are likely thus to be larger in countries that are highly dependent on tourism and other services that require in-person contact, affecting small states in South Asia, the Pacific islands, and some advanced economies and emerging market and developing economies.

- *Labor markets show increasing signs of scarring.* Labor market indicators are deteriorating much more than during the global financial crisis. Aggregate hours worked have declined as both employment rates and hours worked per employee have collapsed. Unemployment has surged, and labor force participation has plunged, particularly for women and younger workers.
- *Prospects for a global trade-led recovery are decidedly uncertain.* Although China's recovery can boost regional trade, weak global growth, closed borders, and festering tensions around trade, technology, and security have worsened the prospects for a trade-led recovery in the region. Some

Table 2.1. Asia: Real GDP
(Year-over-year change; percent)

	Actuals and Latest Projections					Difference from April 2020 World Economic Outlook		Difference from Pre-Pandemic Oct. 2019 World Economic Outlook	
	2017	2018	2019	2020	2021	2020	2021	2020	2021
Asia	5.8	5.3	4.6	-2.2	6.9	-2.2	-0.7	-7.3	1.7
Advanced Economies (AEs)	2.8	1.7	1.2	-4.2	2.9	0.3	-0.8	-5.4	1.4
Australia	2.4	2.8	1.8	-4.2	3.0	2.5	-3.2	-6.4	0.4
New Zealand	3.8	3.2	2.2	-6.1	4.4	1.1	-1.6	-8.8	1.7
Japan	2.2	0.3	0.7	-5.3	2.3	-0.1	-0.7	-5.7	1.9
Hong Kong SAR	3.8	2.8	-1.2	-7.5	3.7	-2.6	-0.2	-8.9	1.2
Korea	3.2	2.9	2.0	-1.9	2.9	-0.7	-0.5	-4.1	0.1
Taiwan Province of China	3.3	2.7	2.7	0.0	3.2	4.1	-0.3	-1.9	1.1
Singapore	4.3	3.4	0.7	-6.0	5.0	-2.5	2.0	-7.0	3.4
Macao SAR	9.9	5.4	-4.7	-52.3	23.9	-22.7	-8.2	-51.2	23.9
Emerging Markets and Developing Economies (EMDEs)¹	6.7	6.3	5.5	-1.7	8.0	-2.7	-0.5	-7.7	1.8
Bangladesh ²	7.3	7.9	8.2	3.8	4.4	0.0	-3.4	-3.8	-2.9
Brunei Darussalam	1.3	0.1	3.9	0.1	3.2	-1.2	-0.3	-4.6	-0.3
Cambodia	7.0	7.5	7.0	-2.8	6.8	-1.2	0.7	-9.5	0.0
China	6.9	6.7	6.1	1.9	8.2	0.7	-1.0	-4.0	2.3
India ³	7.0	6.1	4.2	-10.3	8.8	-12.2	1.4	-17.3	1.4
Indonesia	5.1	5.2	5.0	-1.5	6.1	-2.0	-2.1	-6.6	0.9
Lao P.D.R.	6.8	6.3	5.2	0.2	4.8	-0.5	-0.8	-6.3	-2.0
Malaysia	5.8	4.8	4.3	-6.0	7.8	-4.3	-1.2	-10.4	2.9
Myanmar	5.8	6.4	6.5	2.0	5.7	0.2	-1.9	-4.3	-0.4
Mongolia	5.3	7.2	5.1	-2.0	6.0	-1.0	-2.0	-7.4	0.9
Nepal	8.2	6.7	7.1	0.0	2.5	-2.5	-2.5	-6.3	-3.3
Philippines	6.9	6.3	6.0	-8.3	7.4	-8.9	-0.2	-14.4	1.0
Sri Lanka	3.6	3.3	2.3	-4.6	5.3	-4.0	1.1	-8.1	1.0
Thailand	4.1	4.2	2.4	-7.1	4.0	-0.5	-2.1	-10.2	0.5
Vietnam	6.9	7.1	7.0	1.6	6.7	-1.1	-0.3	-4.9	0.2
Pacific Island Countries and Other Small States	4.1	1.7	3.6	-7.5	4.2	-5.2	-0.6	-11.3	0.7
Bhutan	6.3	3.8	3.8	0.6	-0.5	-2.1	-3.3	-6.6	-6.4
Fiji	5.4	3.5	-1.3	-21.0	11.5	-15.2	4.5	-24.0	8.3
Kiribati	0.9	2.3	2.3	-1.1	3.0	-1.1	0.7	-3.4	0.9
Maldives	6.8	6.9	5.7	-18.6	12.7	-10.5	-0.5	-24.6	7.2
Marshall Islands	4.1	3.6	5.3	-4.5	-0.9	-4.3	-4.1	-6.8	-2.9
Micronesia	2.7	0.2	1.2	-3.8	1.2	-3.4	-0.2	-4.6	0.4
Nauru	-5.5	5.7	1.0	0.7	1.3	2.4	-0.1	0.0	0.0
Palau	-2.0	5.8	-1.8	-11.4	-7.4	0.5	-21.8	-13.2	-9.6
Papua New Guinea	3.5	-0.8	4.9	-3.3	1.2	-2.3	-1.7	-5.8	-1.3
Samoa	1.0	-2.2	3.5	-5.0	-1.5	-1.3	-2.0	-9.4	-3.7
Solomon Islands	5.3	3.9	1.2	-5.0	4.5	-2.9	0.7	-7.9	1.8
Timor-Leste	-3.8	-0.8	3.1	-6.8	4.0	-3.8	0.2	-11.8	-0.8
Tonga ⁴	3.3	0.3	0.7	-2.5	-3.5	-1.3	-4.7	-6.2	-6.4
Tuvalu	4.6	3.7	6.0	-0.5	3.0	0.4	-0.6	-4.9	-1.3
Vanuatu	4.4	2.9	3.3	-8.3	4.3	-5.0	-0.6	-11.4	1.5
ASEAN⁵	5.4	5.2	4.7	-3.4	6.1	-2.7	-1.3	-8.1	1.1
ASEAN-5⁶	5.2	4.9	4.2	-4.4	6.0	-3.1	-1.5	-8.8	1.3
EMDEs excluding China and India	5.6	5.6	5.2	-2.5	5.9	-2.3	-1.8	-7.7	0.6

Sources: IMF, World Economic Outlook database; and IMF staff estimates and projections.

¹EMDEs excluding Pacific island countries and other small states.

²Bangladesh's data are reported on a fiscal year basis. Its fiscal year starts from July 1 and ends on June 30.

³India's data are reported on a fiscal year basis. Its fiscal year starts from April 1 and ends on March 31.

⁴Tonga's data are reported on a fiscal year basis. Its fiscal year starts from July 1 and ends June 30.

⁵ASEAN comprises Brunei Darussalam, Cambodia, Indonesia, Lao P.D.R., Malaysia, Myanmar, the Philippines, Singapore, Thailand, and Vietnam.

⁶ASEAN-5 comprises Indonesia, Malaysia, the Philippines, Singapore, and Thailand.

countries have started diversifying their economies and moving up the value chain. However, a fundamental reorientation of growth models toward domestic demand will take time and considerable policy effort. For small economies (such as the Pacific island countries), their size, remoteness, and high vulnerability to natural disasters make it exceptionally difficult to reorient away from tourism, commodities, and remittances.

The extent of scarring will depend on economies' reliance on contact-intensive activities; market rigidities; digital penetration, technological capacity, and availability of remote working; and policy space to support resource reallocation. Weak household, corporate, and financial balance sheets may add to scarring.

Uncertainties, Unknowns, and Risks

Although early success in developing an effective vaccine could lead to a quicker and stronger recovery, the downside risks are considerable.

- A second wave of the pandemic cannot be ruled out.
- Escalating US-China tensions spanning trade, financial flows, technology, and geopolitics could pose major economic risks, given Asia's major role, among other things, in global value chains.
- The pandemic's disproportionate impact on the poorest and most vulnerable will exacerbate already high and rising income and wealth inequality in Asia and could engender social tensions.
- A return to tighter financial conditions could exacerbate pre-pandemic vulnerabilities (such as highly leveraged public and private sector balance sheets), tip struggling corporations and small and medium enterprises into bankruptcy, worsen credit risk and financial stability, and aggravate debt overhangs.

Policies: From Green Shoots to a Smart, Green, Inclusive Recovery

A full arsenal of policy support is needed. Asia and Pacific countries have already provided significant fiscal policy support to cushion the pandemic's impact. Likewise, central banks have cut policy rates, injected liquidity, and introduced unconventional measures: such support should continue because of the extent of evident economic slack across the region. However, the pandemic's prolonged duration is creating structural challenges for policy. It is becoming increasingly difficult to distinguish between temporary liquidity shortages and solvency problems and between temporary and permanent job losses. For all countries—and especially for emerging market and developing economies that are running out of policy space—policymakers will need to find ways to continue to support the economy while preparing for the post-pandemic world and longer-term challenges, such as ageing and climate change, without exacerbating existing vulnerabilities, including financial stability concerns (2020 *Global Financial Stability Report*).

The crisis provides an opportunity to deliver on promises for inclusive and green growth. Some reforms—in health care, social safety nets, labor market, and the corporate sector—can be beneficial during the pandemic while facilitating a speedier return to pre-pandemic output and sustaining social cohesion.

- *Strong health care and containment measures remain vital.* Countries that have yet to bring the outbreak under control should redouble efforts to flatten the pandemic curve. Micro-containment measures are necessary in all countries, along with timely testing and effective contact tracing. Greater efforts on the curative side are also warranted, such as increased hospital capacity to diagnose and treat. Credible plans to secure adequate vaccine supplies are essential, including through multilateral vaccine sharing efforts. Ramping up relatively underdeveloped health care systems is critical for many emerging

market and developing economies, including the Pacific island countries, to meet their Sustainable Development Goals.

- Maintaining appropriate fiscal support is critical to ensure that the recovery does not unravel, but with an eye toward sustainability and longer-term objectives.* The priorities include spending on health care, targeted social protection, and assistance for viable small and medium enterprises. Better targeting to the most vulnerable, including in the informal sector, would help to boost fiscal multipliers—examples are Cambodia’s introduction of digital cash transfers; India’s efforts to expand cash benefits using digital payment platforms and socioeconomic databases; Indonesia and Vietnam’s introduction of new cash transfer programs targeted to the vulnerable; and Nepal’s temporary in-kind food transfers. Investments in green energy and technological infrastructure should be prioritized to create jobs and improve teleworking opportunities. A credible medium-term fiscal strategy, including steps to improve revenue mobilization and spending efficiency, is needed given high debt levels and limited tax bases (2020 *Fiscal Monitor*). Low-income countries, including the Pacific island countries, will require donor assistance in the form of concessional financing and grants for the foreseeable future.
- Monetary policy should remain supportive while output gaps are large and inflation pressures low.* Instruments include policy rate cuts and unconventional monetary support (Indonesia, Japan, Korea, Thailand), as well as steps to improve policy transmission, for example strengthening the interest rate–based policy framework in China. In some cases where inflation remains low, debt monetization could be appropriate, provided it is well communicated, limited in size, time-bound, and implemented within a clear operational framework that preserves central bank independence and does not impede monetary policy. The exchange rate should continue to act as a shock absorber. If such flexibility were to amplify economic contraction and heighten financial instability to crisis or near-crisis proportions, temporary and well-designed capital flow measures could be considered as part of a policy package to safeguard macro-financial stability, along with international financial support.
- Financial sector policies should pay close attention to elevated risks, while providing temporary and targeted liquidity support as needed.* As the recovery takes hold, there will be a case for dialing back some of the measures adopted at the height of the pandemic, given elevated credit risk and debt overhang (for example, in China) or high household debt (Australia). To prevent a buildup of systemic exposures, policymakers will need to attend to emerging risks and will need to tighten micro and macroprudential measures as the recovery takes hold. Countries where the pandemic has aggravated preexisting vulnerabilities need to ensure that the financial sector is well capitalized and provisioned, and nonperforming loans are resolved promptly.
- Structural reforms should focus on reducing scarring and boosting growth potential.* They should prioritize measures to protect the poor, reduce informality, and reduce worker disengagement and skill erosion. Safety nets need to be made more inclusive of informal workers and facilitate training and redeployment (Dabla-Norris and Rhee 2020). Corporations should be incentivized to restructure if needed, and new equity-like instruments could be considered to help viable small and medium enterprises overcome debt overhang and retool (Bauer and others, forthcoming). Insolvency frameworks should be streamlined to facilitate corporate debt restructuring and resource reallocation. Reforms are needed to ease administrative burdens and regulatory barriers for new investment (including foreign investment), exports (especially of food and medical supplies), and start-ups. Leveling the playing

field between state-owned and private enterprises is essential to support business formation and job creation (China, India, Indonesia, Vietnam). Improving agricultural productivity is critical for many developing economies and Pacific island countries. Food security remains a key risk that could adversely

affect the urban and rural poor. Contingency planning and international cooperation will be essential to mitigate it, including through multilateral safety nets such as the ASEAN+3 (10 ASEAN countries plus China, Japan, and Korea) Emergency Rice Reserve.

Box 2.1. Exiting Lockdowns: Asia's Reopening Experience and Some Early Lessons

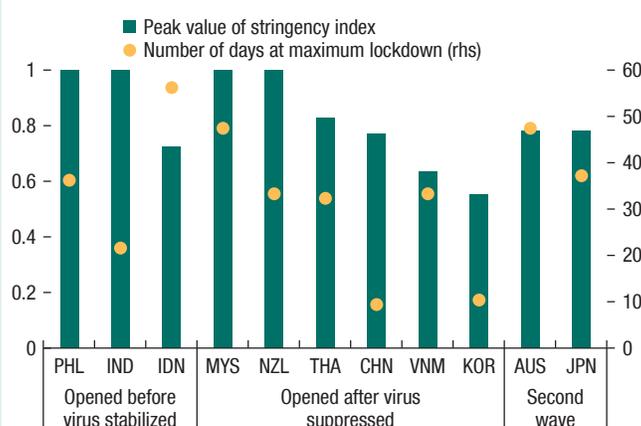
The IMF developed a new containment index (grounded in IMF staff surveys and other publicly available information) for six economic sectors (international travel, schools, retail, industry, services, and public gatherings) for 11 Asian countries and 22 European economies (see Franks and others, forthcoming, and IMF 2020 for details). Compared with other available indices (for example, Hale and others 2020), the new index has two advantages: It distinguishes between key economic sectors (services, industry, retail), thus providing a granular view of containment measures, and it captures announcements about future changes to containment measures.

Asian authorities generally responded early to the epidemic compared with other regions (Chapter 3). On average, Asian countries tightened domestic restrictions five days after a significant outbreak (defined as 100 cumulative cases), though Indonesia was slower to act, waiting for 25 days. Sequencing of closures was also similar across countries, with international travel restrictions imposed first, followed by school closures.

However, the stringency and duration of lockdowns differed markedly across countries (Figure 2.1.1). Several countries imposed near-complete lockdowns for more than a month (Malaysia, New Zealand, Philippines), but others closed only nonessential services and allowed industrial sectors to continue operating (Australia, Thailand, Vietnam). Korea, however, did not implement mandatory shutdowns, instead issuing strong recommendations regarding business closures, relying on voluntary social distancing and a comprehensive testing and tracing infrastructure to contain the virus.

The effectiveness of lockdowns in reducing infection rates also varied across countries. Challenges (caused by government capacity constraints) in implementing and enforcing lockdowns, especially in more densely populated emerging markets with greater levels of informality and poverty (Deb and others 2020a; 2020b), may have made lockdowns less effective (India, Indonesia, Philippines). Limited health care capacity, including in testing and tracing, may have also affected the effectiveness of lockdowns. Several countries ramped up testing and tracing capabilities, but some countries lagged behind (Indonesia, Philippines).

Figure 2.1.1. Lockdown Stringency and Duration
(Index; days, rhs)

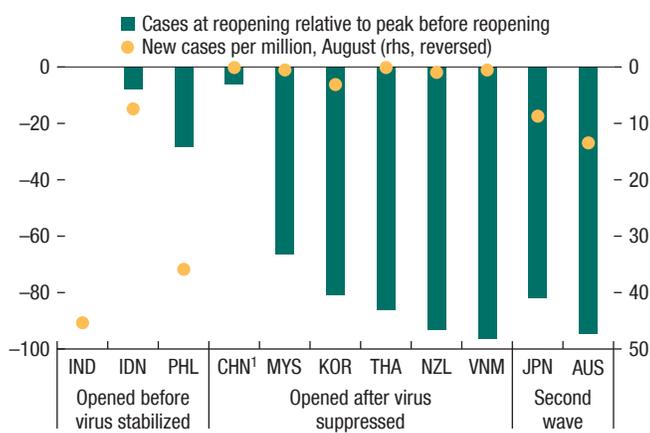


Source: IMF staff estimates.

Note: rhs = right-hand scale. Stringency index averages across sub-indices for 6 sectors (retail, services, industry, school, international travel, public gatherings). Each sub-index normalized to lie between 0 and 1, with 1 implying the sector is fully closed, and 0 implying fully open. Country abbreviations are International Organization for Standardization country codes.

Box 2.1 (continued)

Figure 2.1.2. Reopening Timing and Latest Infection Rates
(Percent change; infections per million, rhs)



Source: IMF staff estimates.
 Note: rhs = right-hand scale. Reopening date is defined as the first time the stringency index declines from its peak.
¹Excludes Hubei. In China, the reopening date based on the index is February 9, 2020, when some low risk provinces were reopened. Because the reopening strategy differed significantly across provinces and was based on province-level trends, China is not classified as having “opened before virus stabilized,” even though the number of cases nationally had not declined significantly from its peak. Country abbreviations are International Organization for Standardization country codes.

Asian countries generally reopened their economies after suppressing the virus. Most eased restrictions when new cases were more than 80 percent below peak levels (Figure 2.1.2). In this group, only Australia and Japan saw a substantial second wave of infections. Others witnessed small outbreaks, though these have largely been contained (China, Korea, New Zealand, Vietnam).

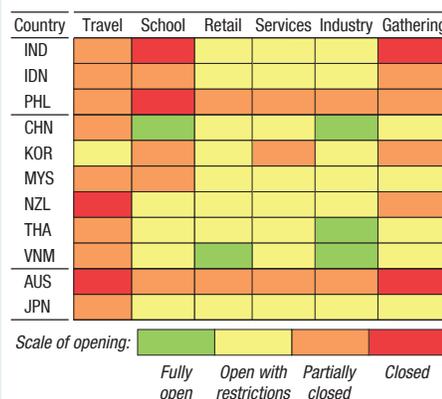
Some countries, however, reopened before infection rates fell significantly and experienced an increase in cases after opening. India started easing restrictions while virus cases were still rising, and Indonesia and the Philippines had seen a stabilization in cases but had not suppressed the virus. The decision to reopen early in the epidemic cycle in these countries was potentially motivated by the perceived high economic cost of the lockdown (especially for informal workers with limited access to social safety nets) compared with smaller health gains,

given favorable demographics (a younger population that is at lower risk) and higher population density. These early openers have continued to experience a high number of new infections (Figure 2.1.2), reflecting a pickup in mobility after reopening, less scope for voluntary social distancing, and other factors like mass movement of migrant workers in India.

The speed of reopening has been slower in the early openers, reflecting persistently high infection rates. India, Indonesia, and the Philippines relaxed their harshest containment measures, but many sectors remain partially closed (that is, some states or subsectors have not reopened). However, countries that started easing restrictions after virus cases subsided have continued easing restrictions over time, and many sectors now either are completely open or operating with enhanced health protocols (Figure 2.1.3). Some of these countries adopted a sequential approach, reopening lower-risk regions or sectors first, and have also reimposed localized lockdowns if needed to control new virus clusters (China, Vietnam).

Economic activity has also recovered more slowly in the early openers. Purchasing managers’ indexes remain

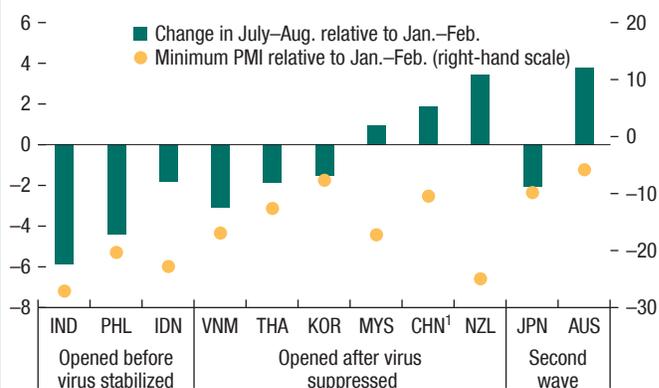
Figure 2.1.3. Status of Containment Measures



Source: IMF staff estimates.
 Note: As of September 8, 2020. Country abbreviations are International Organization for Standardization country codes.

Box 2.1 (continued)

Figure 2.1.4. Change in Manufacturing PMI
(Change in diffusion index)



Source: Haver Analytics.

¹For China, Jan. PMI is used instead of average over Jan. and Feb. because the impact of the epidemic was already visible in Feb. Country abbreviations are International Organization for Standardization country codes.

significantly below pre-COVID-19 levels in India and the Philippines (Figure 2.1.4), potentially reflecting relatively low de facto mobility as high infection rates led to a fear of becoming infected and limited or insufficiently implemented fiscal stimulus (Philippines). By contrast, indexes recovered or surpassed pre-COVID-19 levels in most countries that reopened after they had suppressed the virus.

Health measures such as testing and contact tracing have played an important role in mitigating the spread of the virus after exiting lockdowns. An increase in mobility and social interactions after lockdowns were lifted has led to new infection clusters in several countries that had suppressed

the virus. In Australia and Japan, these have led to second waves, and Australia reimposed strict containment measures in affected regions. However, an effective testing, tracing, and quarantining system has helped some countries detect and contain infection clusters before they led to widespread community transmission (China, Korea, New Zealand, Vietnam). Vietnam has used a comprehensive tracing system to quarantine all close contacts of positive cases. China and Korea have used technology and big data to significantly improve the efficiency of contact tracing and conduct risk assessment at a granular level. Localized lockdowns have also been imposed in hot spots to prevent further spread of the virus.

Lessons from Asia's Experience

Asia's experience highlights three key lessons:

- *Containment measures should be activated early*, when infection rates are still low, to effectively flatten the virus curve and reduce the depth and duration of the economic downturn (Chapter 3).
- *Exiting lockdowns after the virus has been suppressed leads to better health and economic outcomes.* As China's experience shows, a sequenced approach that prioritizes essential sectors and reopens regions based on forward-looking risk assessments can reduce the economic costs of lockdowns while minimizing health risks.
- *A comprehensive testing and tracing system can minimize the risk of second waves.* Adequate testing is needed to ensure early detection of new infection clusters, and an effective tracing and isolation system (including quarantining of close contacts and localized lockdowns) can reduce community transmission, preventing clusters from becoming more widespread. Although some system of testing and tracing is likely to be important in controlling second waves, the exact details of the system will vary across countries, depending on societal preferences and legal protections relating to privacy.