

# REGIONAL ECONOMIC OUTLOOK

ASIA AND PACIFIC



ASIA AND PACIFIC  
DEPARTMENT

## **Navigating Waves of New Variants: Pandemic Resurgence Slows the Recovery**

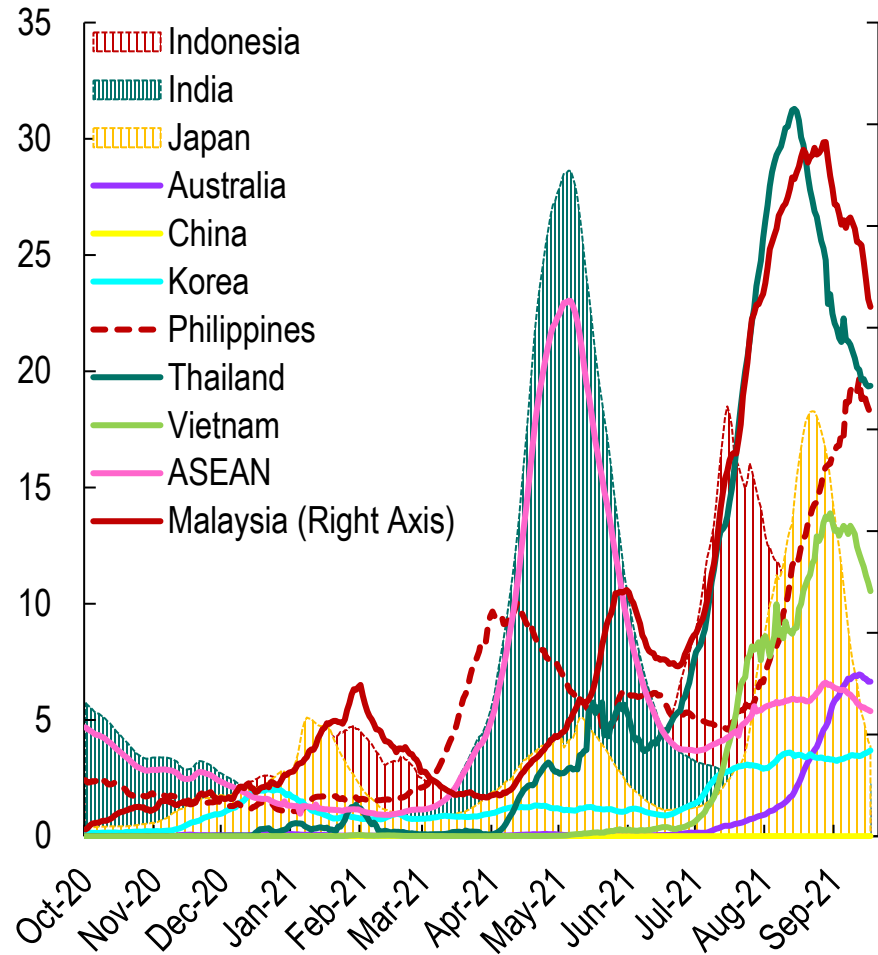
IMF REGIONAL OFFICE FOR ASIA AND THE  
PACIFIC

NOVEMBER 10, 2021

# Delta strikes back amidst a slow start to vaccination, and despite progress recently, divergences in vaccination remain...

## Confirmed New Cases

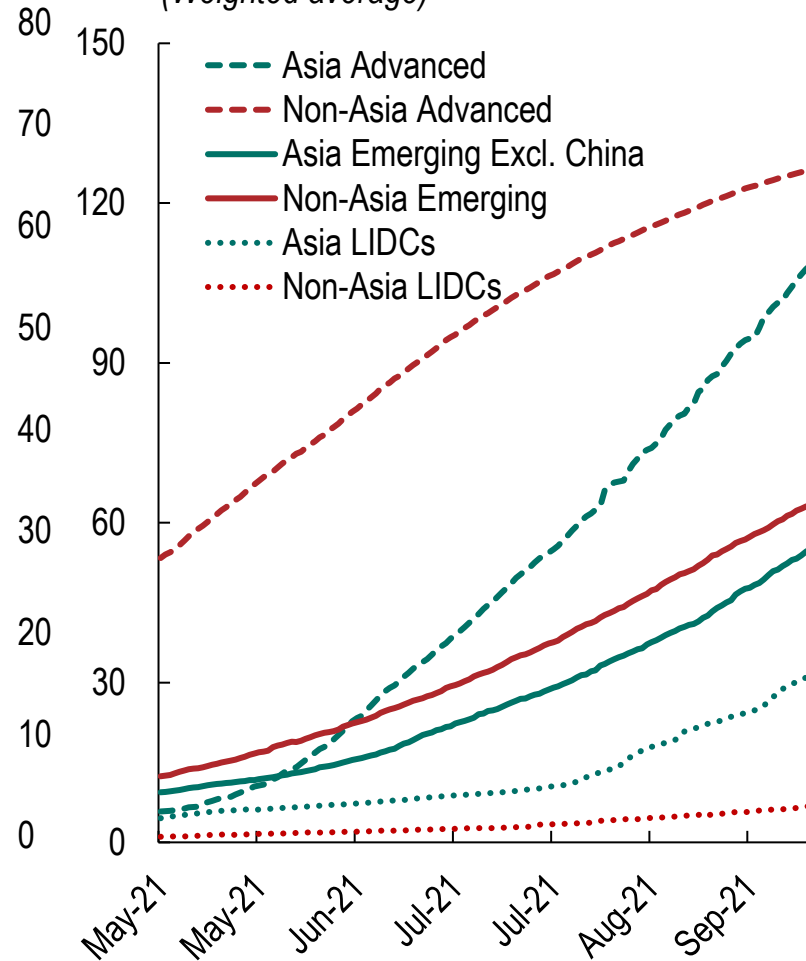
(Per 100 000 people. 7 day average)



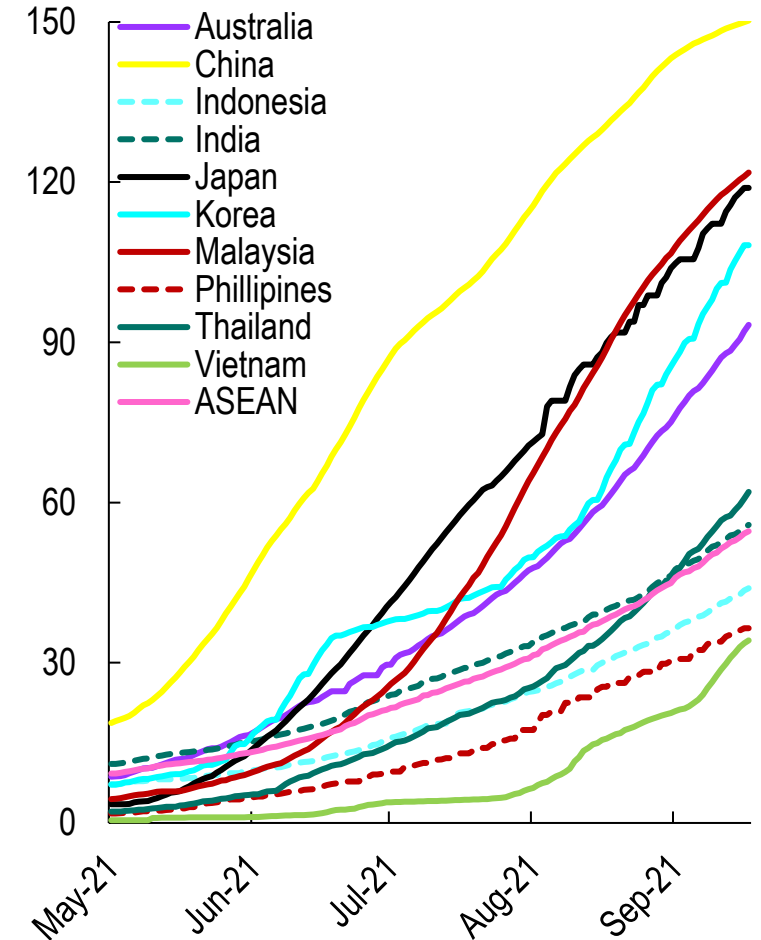
## COVID-19 vaccine doses administered per 100 people:

### By Region and Income

(Weighted average)



### Asian Countries



Sources: Johns Hopkins University, and IMF staff calculations.

Note: Data as of Sep 21st, 2021. ASEAN aggregate is calculated using weighted average by population.

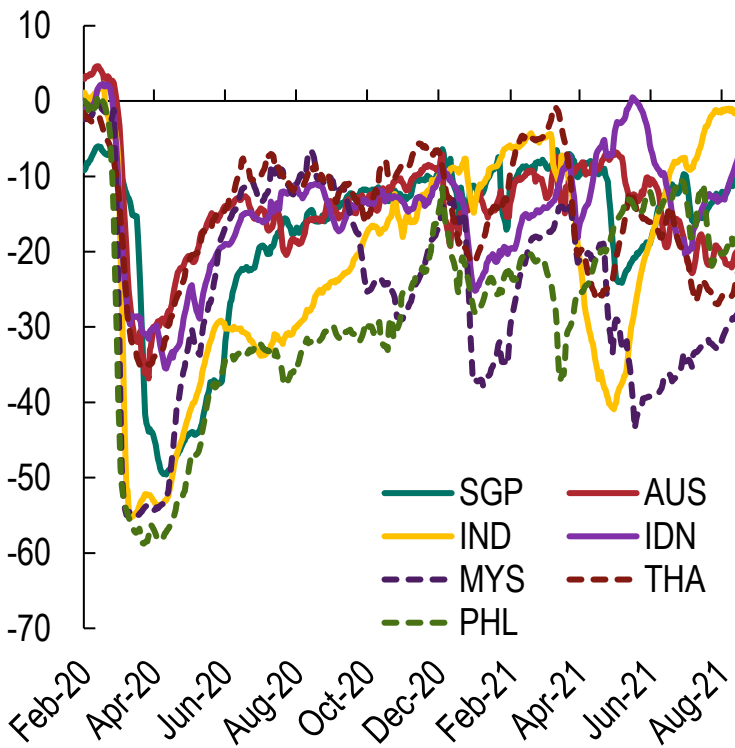
Sources: Our World in Data.

Note: Data as of Sep 21st, 2021. For vaccines that require multiple doses, each individual dose is counted. As the same person may receive more than one dose, the number of doses per 100 people can be higher than 100. ASEAN aggregate in RHS is calculated using weighted average by population.

# ...reinforcing a multispeed economic recovery.

## Mobility

(Percent from baseline – median value during Jan 3 – Feb 6, 2020, 7 day MA)

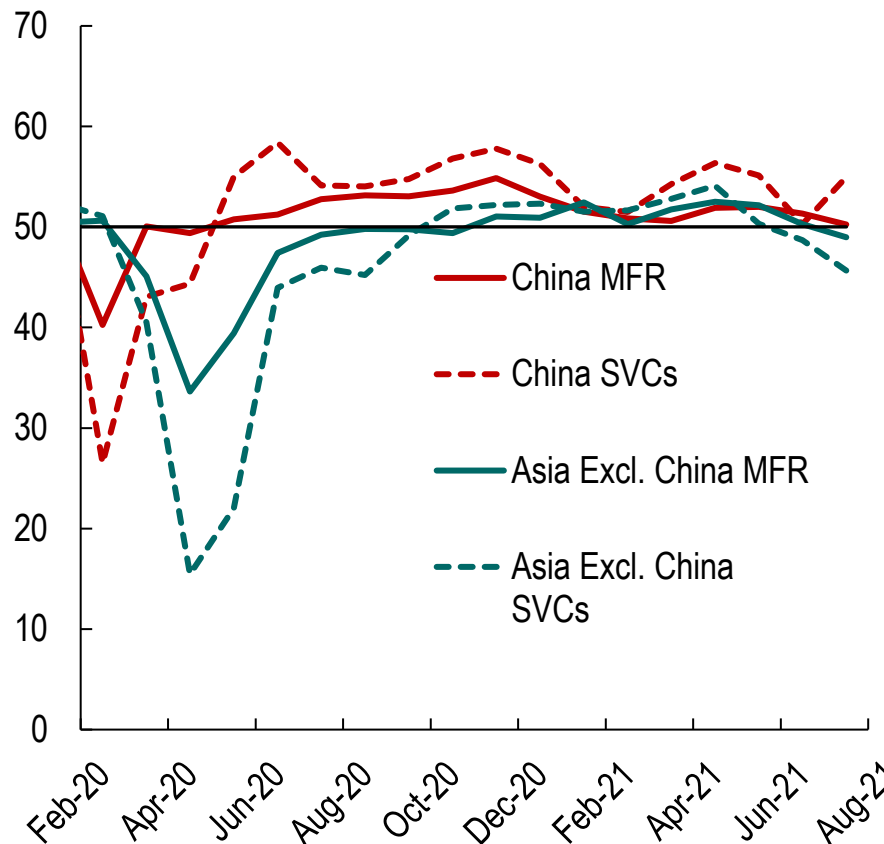


Source: Google COVID-19 Community Mobility Report and IMF staff calculations.

Note: The figure displays the 7 day moving-average of the overall mobility index. Overall mobility index is computed as the average of the percentage changes from pre-pandemic baseline day in retail, grocery and pharmacy, parks, transit, workplaces and inverse of residential.

## Manufacturing and Services PMI

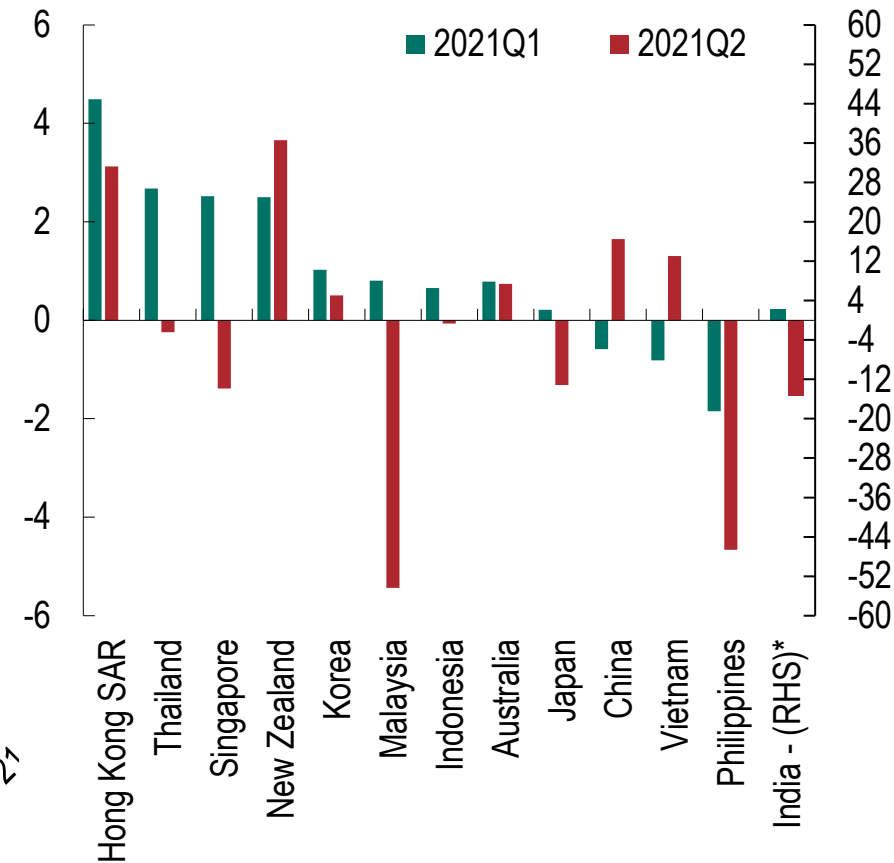
(Index, 50+ = expansion)



Source: Haver Analytics and IMF staff calculations.

## GDP Growth Surprises

(percentage points)



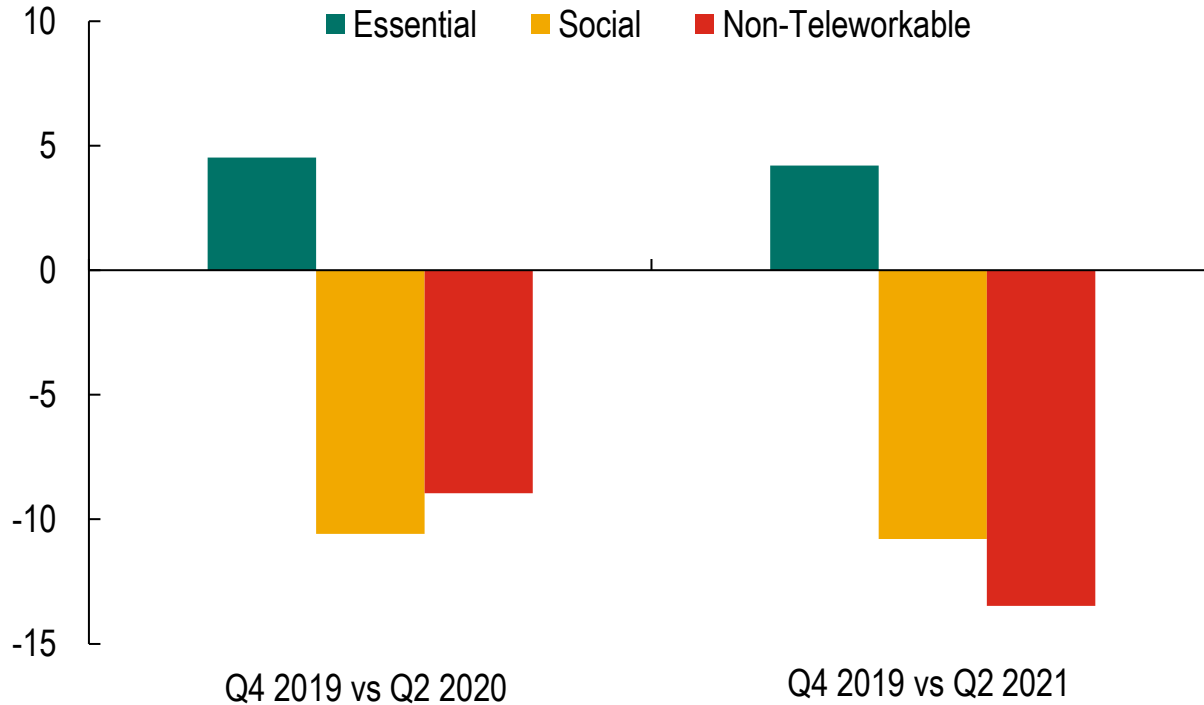
Source: World Economic Outlook and IMF staff calculations.

Note: \*India RHS axis. Defined as surprise in 2021Q1/2021Q2 as the difference between the observed value and the projection in April 2021 WEO forecasts. RHS = right hand side.

# Employment recovery has lagged, particularly in contact-intensive sectors and among youth.

## Asia: Change in Employment by Industry

(Percent)



Sources: Haver Analytics; and IMF staff calculations.

Note: Asia refers to Australia, Hong Kong SAR, Indonesia, Japan, Korea, Malaysia, New Zealand, Singapore, Taiwan Province of China, Thailand, The Philippines, and Vietnam. Data are seasonally adjusted, based on June 2020 data (or latest available). "Essential" industries refer to agriculture, utilities, transport, information and communication, and health and public administration; "Social" industries refer to wholesale and retail, hotels and restaurants, and arts and entertainment; and "Non-teleworkable" industries refer to mining, manufacturing, and construction.

## Asia: Change in Unemployment Rate by Age

(December 2019 to June 2021. Percentage points)



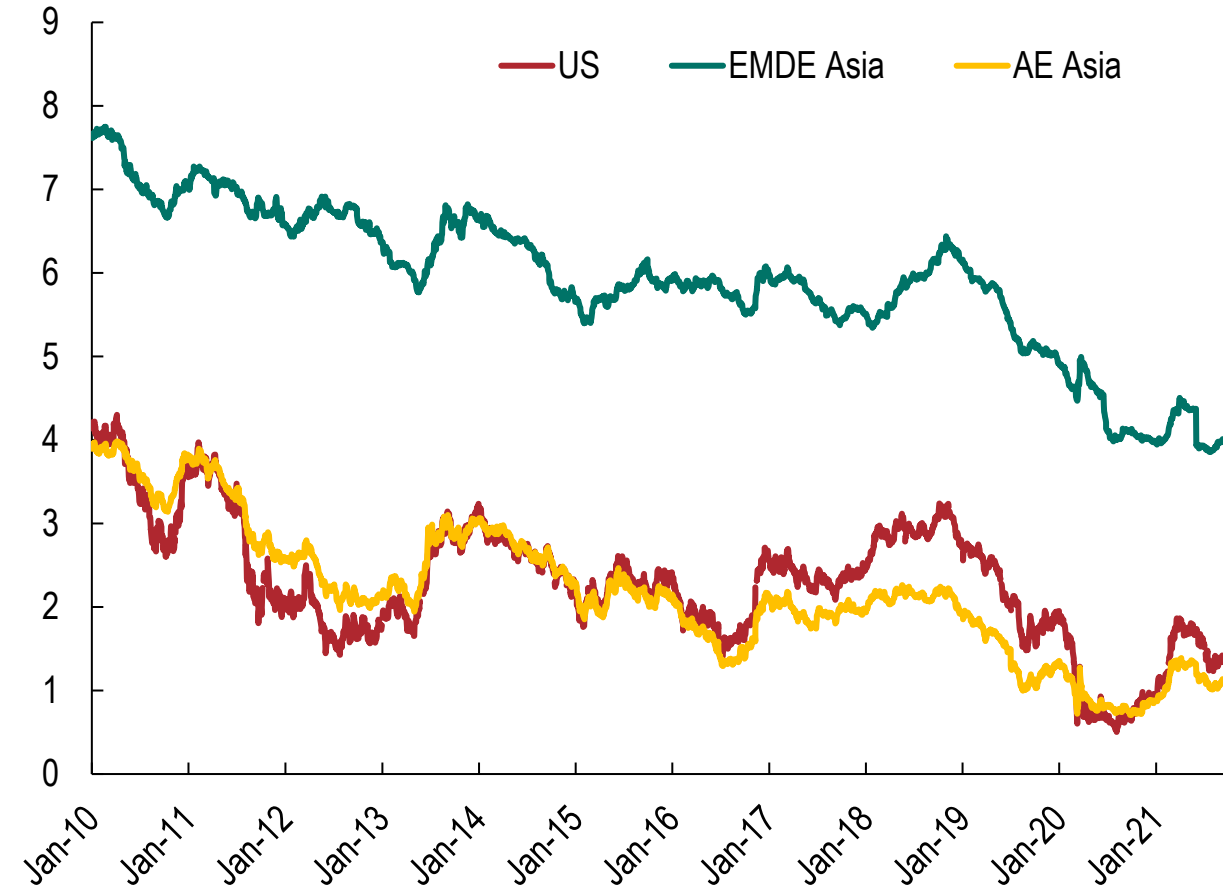
Sources: Haver Analytics; and IMF staff calculations.

Note: For unemployment by age, Asia refers to Australia, Japan, Korea, New Zealand, Taiwan Province of China, and Thailand. Data for Thailand is up to March 2021.

# Despite mostly accommodative financial conditions...

## US and Asia 10-Year Yields

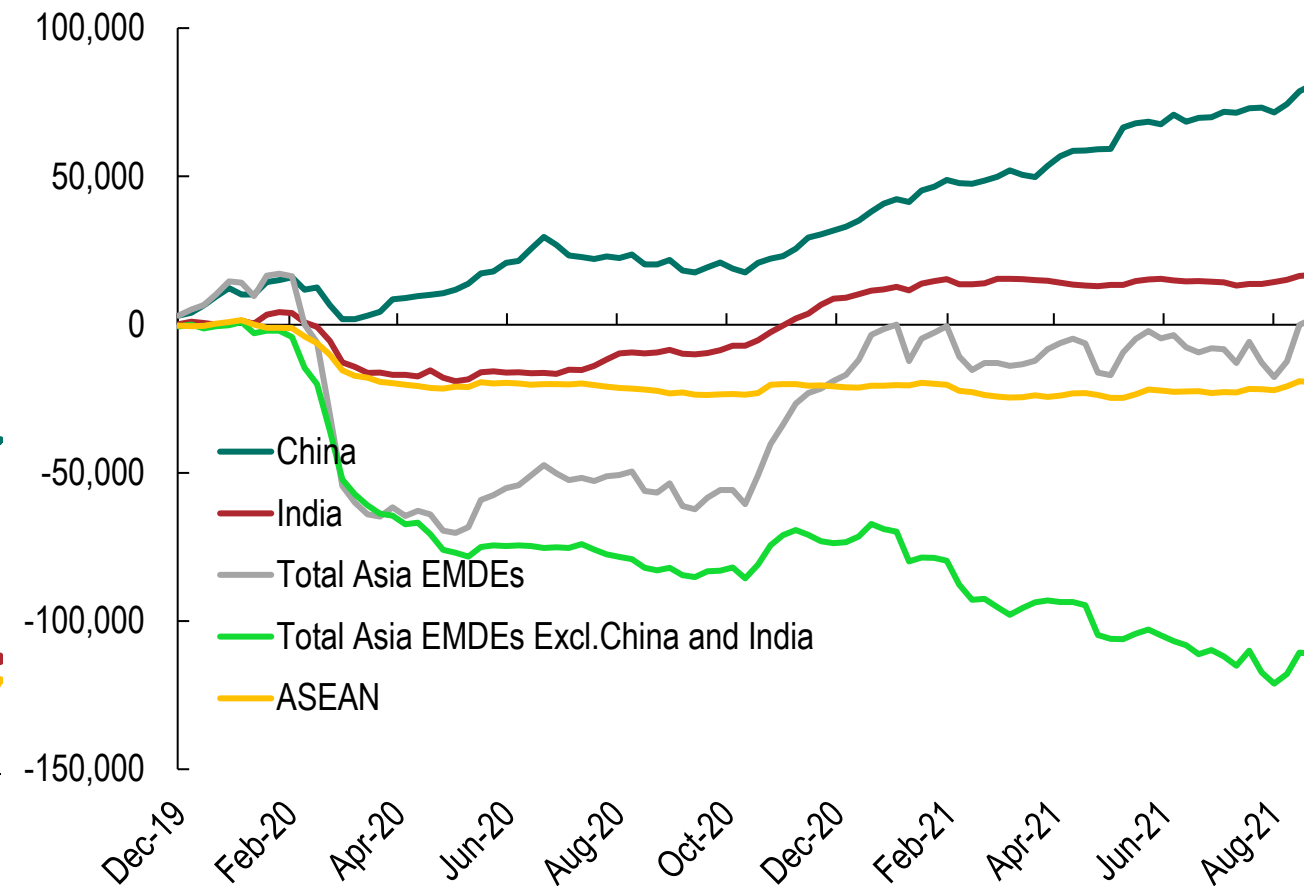
(Percent)



Source: Federal Reserve Bank of San Francisco, Bloomberg LP and IMF staff calculations.  
 Note: Simple average of 10 year yields. EMDE Asia includes: China, India, Indonesia, Malaysia, Philippines, Sri Lanka, Thailand and Vietnam. AE Asia includes: Australia, Hong Kong SAR, Japan, Korea, New Zealand, Singapore and Taiwan Province of China.

## Cumulative Portfolio Flows: Selected EM Asia-Economies

(Millions of USD)



Source: Institute of International Finance.

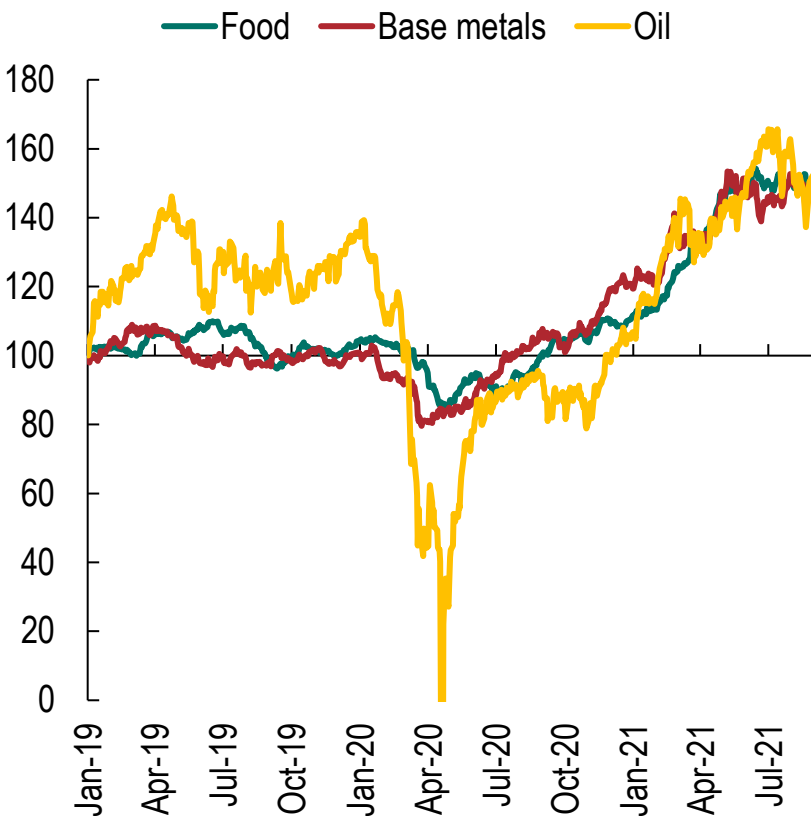
Note: Total Asia EMDEs includes equity flows for Indonesia, India, Korea, Thailand, Philippines, Vietnam, Taiwan Province of China, China, Sri Lanka and debt flows for Indonesia, India and Thailand. China includes equity flows and India equity and debt flows. ASEAN includes Indonesia, Thailand, Philippines and Vietnam. Portfolio flows for ASEAN includes equity flows for Vietnam and Philippines and total flows for Indonesia and Thailand.



# ...and inflation has been on the rise amidst increasing commodity prices and supply chain disruptions.

## Commodity Prices

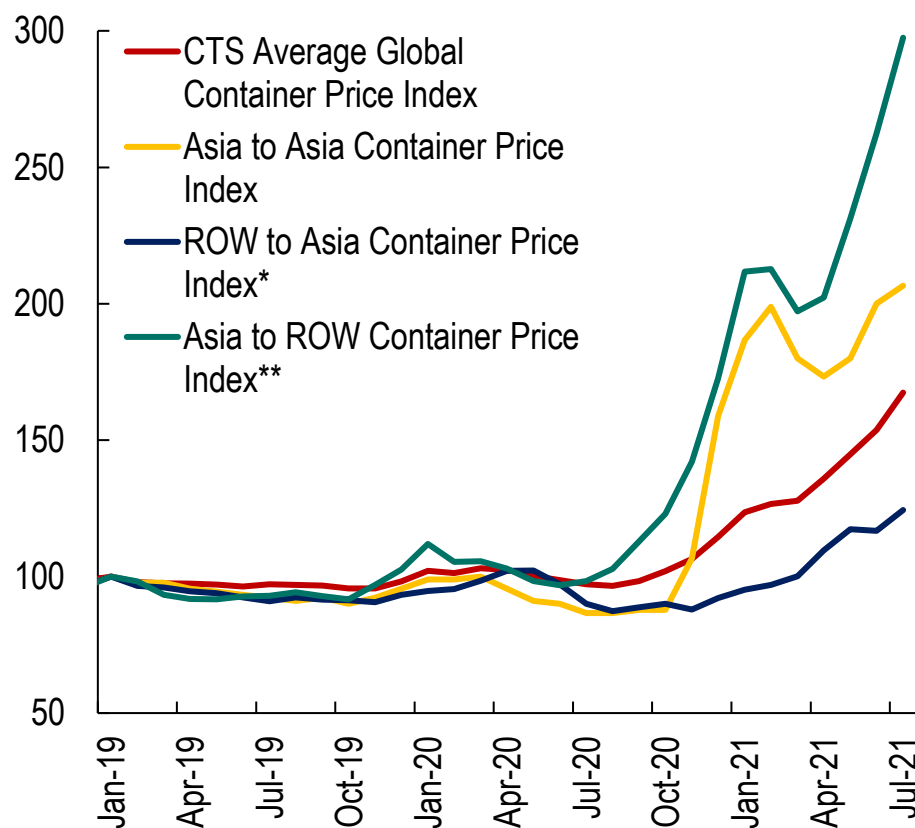
(Index January 2019 = 100)



Source: Bloomberg LPP and IMF staff calculations.  
 Note: Food index from Commodity Research Bureau BLS/US Spot Foodstuff, Base metal index as Bloomberg Base Metals Spot Price Commodity Index and Oil as US Crude Oil WTI Cushing OK Spot.

## Container Price Index

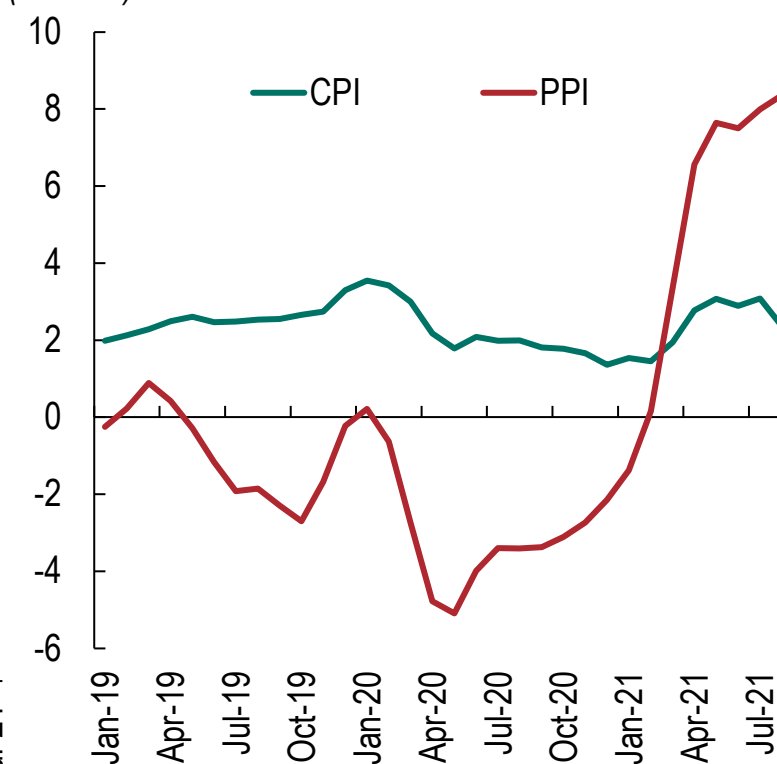
(Index January 2019 = 100)



Source: Bloomberg and IMF staff calculations.  
 Note: \*ROW to Asia Container Price Index is the simple average of South, Central and North America to Asia Container Price Indexes.  
 \*\*Asia to ROW Container Price Index is the simple average of Asia to Europe, North America, Australasia & Oceania and the Indian sub continent.

## Asia: Consumer Price Index and Producer Price Index Inflation

(Percent)



Source: Haver Analytics and IMF staff calculations.  
 Notes: Countries included in CPI are Bangladesh, Cambodia, China, Hong Kong SAR, India, Indonesia, Japan, Korea, Lao P.D.R., Macao SAR, Malaysia, Mongolia, Philippines, Singapore, Sri Lanka, Taiwan Province of China, Thailand and Vietnam. Countries included in PPI are China, India, Japan, Korea, Malaysia, Philippines, Singapore, Taiwan Province of China and Thailand.

# Asia Outlook: A Slower Recovery

# Growth Projections: Selected Asia



|  | World | Asia | Asia AE | EMDE Asia | Australia | New Zealand | China | Japan | Korea | India | ASEAN | PICs and Small States |
|--|-------|------|---------|-----------|-----------|-------------|-------|-------|-------|-------|-------|-----------------------|
|--|-------|------|---------|-----------|-----------|-------------|-------|-------|-------|-------|-------|-----------------------|

|                                 |      |      |      |      |      |      |      |      |      |      |      |      |
|---------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| <b>2020</b>                     | -3.1 | -1.3 | -2.7 | -0.7 | -2.4 | -2.1 | 2.3  | -4.6 | -0.9 | -7.3 | -3.3 | -8.5 |
| <b>2021</b>                     | 5.9  | 6.5  | 3.7  | 7.2  | 3.5  | 5.1  | 8.0  | 2.4  | 4.3  | 9.5  | 2.6  | 2.0  |
| <b>Revisions from April WEO</b> | -0.1 | -1.1 | -0.1 | -1.3 | -1.0 | 1.1  | -0.4 | -0.9 | 0.7  | -3.0 | -1.9 | -2.5 |
| <b>2022</b>                     | 4.9  | 5.7  | 3.4  | 6.3  | 4.1  | 3.3  | 5.6  | 3.2  | 3.3  | 8.5  | 5.5  | 5.5  |
| <b>Revisions from April WEO</b> | 0.5  | 0.3  | 0.6  | 0.3  | 1.3  | 0.1  | 0.0  | 0.7  | 0.5  | 1.6  | -0.3 | -0.8 |

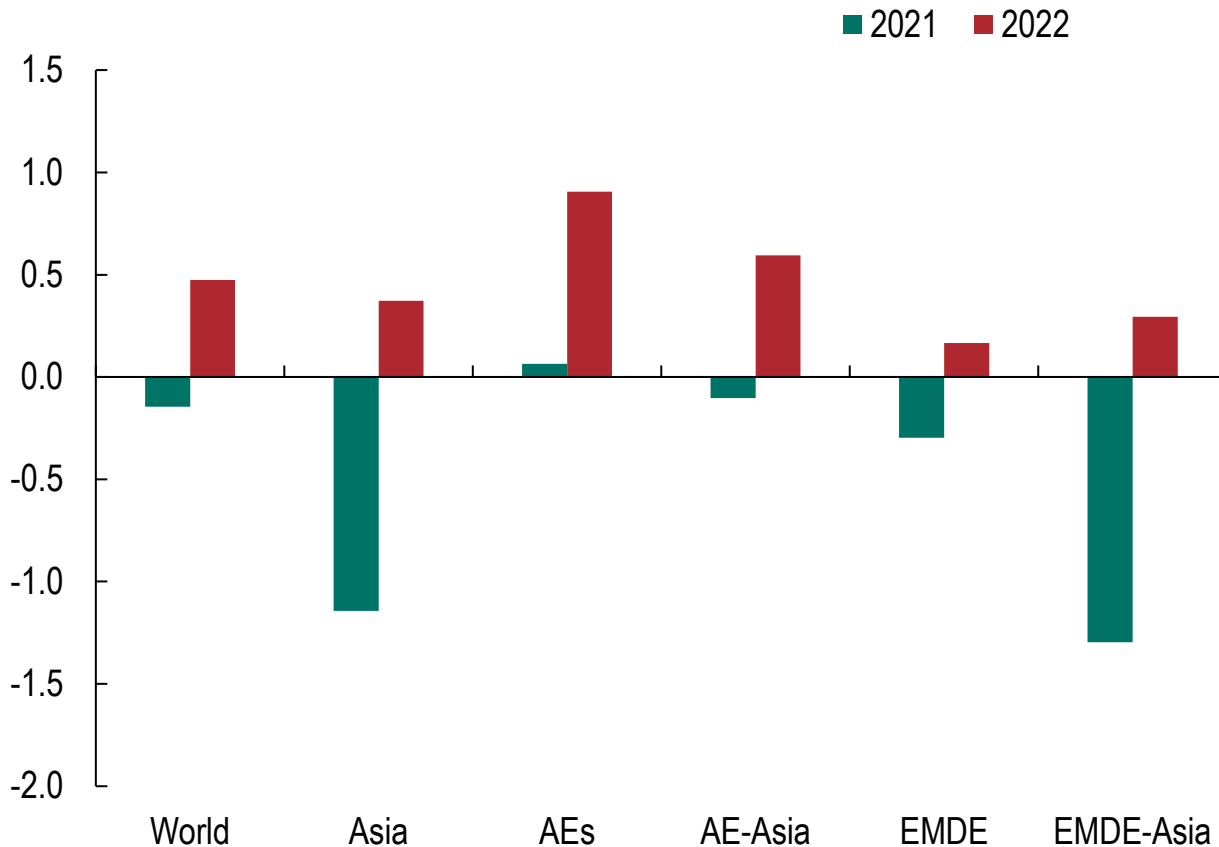
Source: IMF World Economic Outlook.



# The largest growth downgrades amid low vaccination...

## Growth Revisions

(Percentage points)



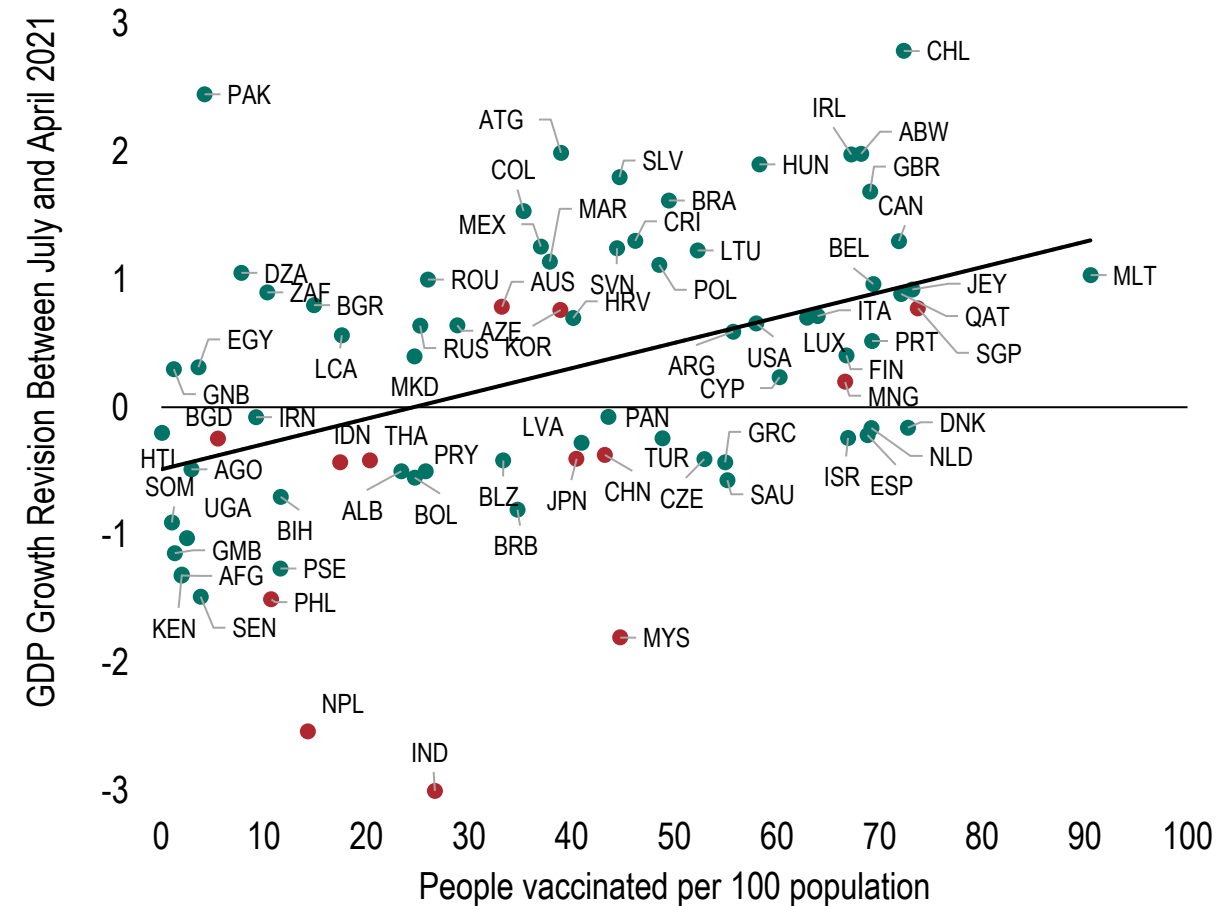
Source: World Economic Outlook and IMF staff calculations.

Note: Revisions show the difference between projections in October 2021 WEO and April 2021 WEO.

Positive numbers indicates upward revision.

## GDP Growth Revisions and Vaccination

(vertical axis in percentage points)



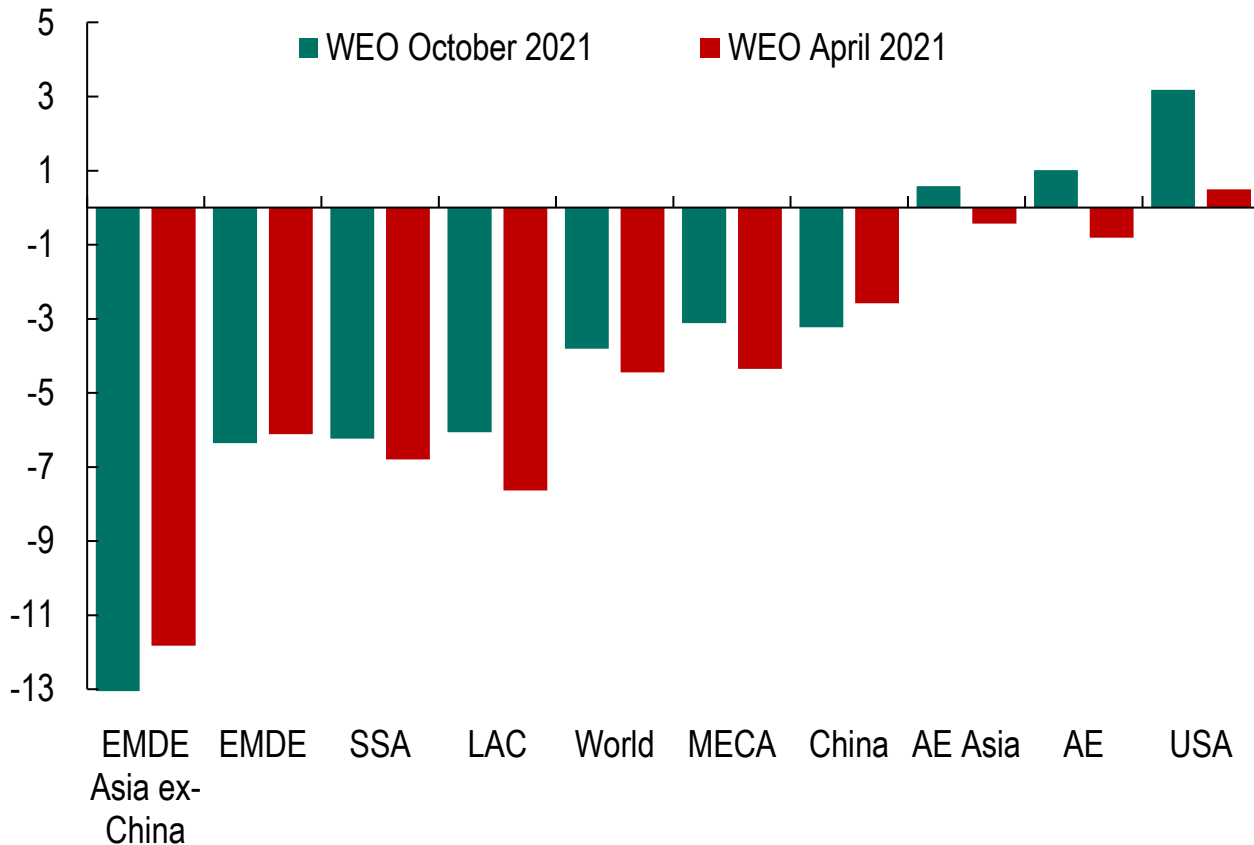
Source: Our World in Data, World Economic Outlook and IMF staff calculations.

# ...and medium-term scarring in EMDEs with limited policy space and dependent on tourism...

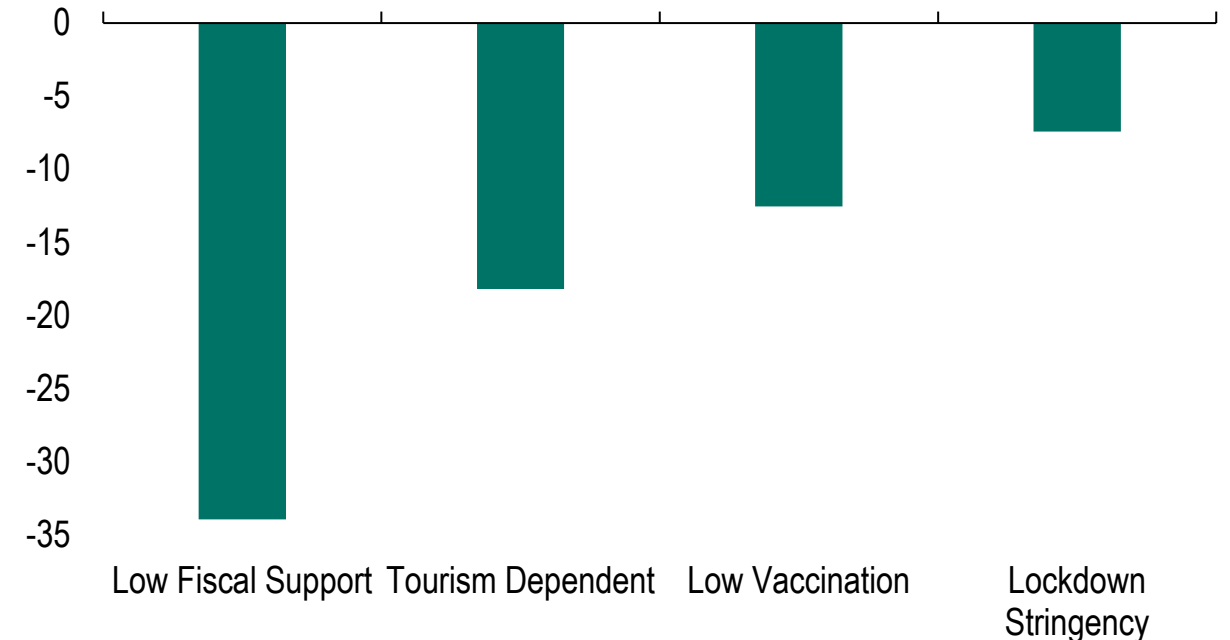
## Medium Term GDP Loss: Difference in Cumulative Growth Rates (2020-25)

(Current projection relative to pre-COVID-19 forecast, in percentage points. Weighted average)

### Regional comparison



### Factors affecting scarring



Source: World Economic Outlook and IMF staff calculations.  
 Note: Current projections are based on October 2021 WEO and April 2021 WEO database.  
 Pre-COVID-19 forecast is based on January 2020 WEO database.

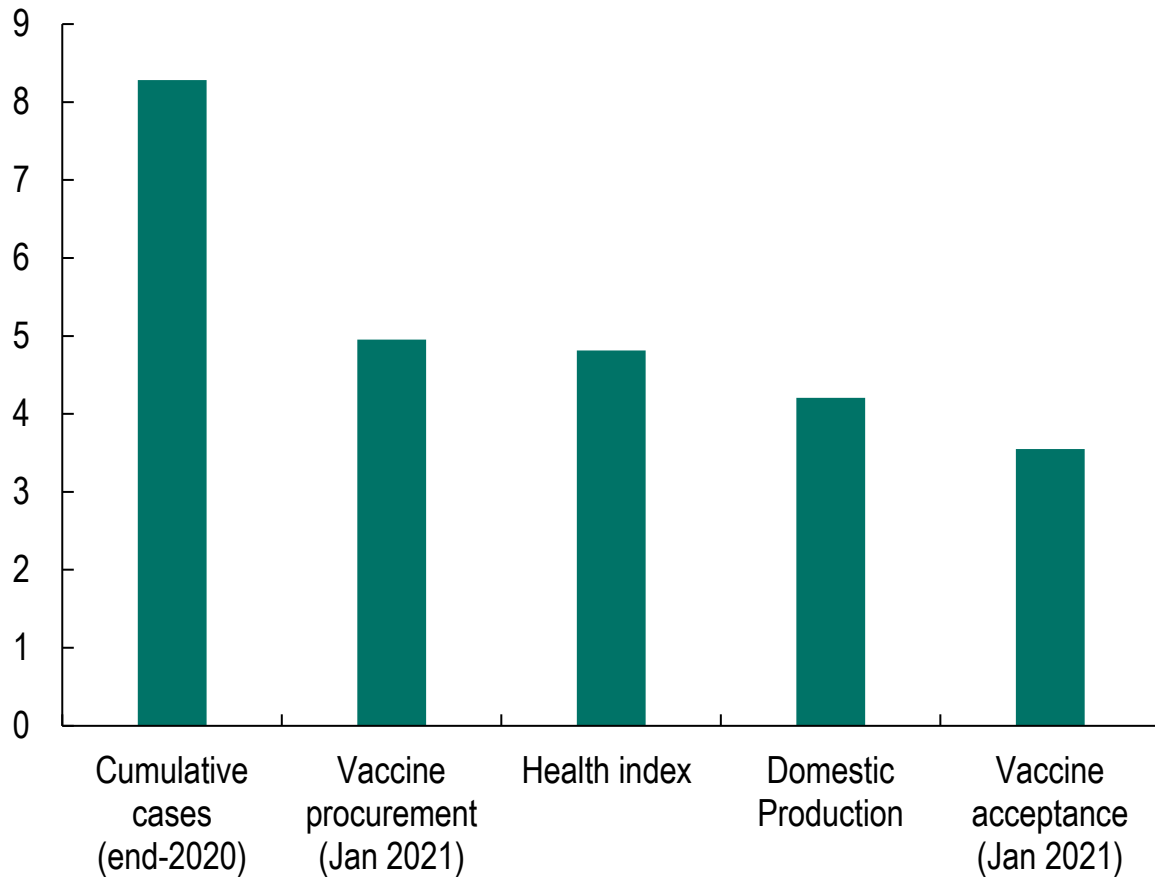
Source: World Economic Outlook.  
 Note: Tourism Dependent countries include Maldives, Vanuatu, Kiribati, Fiji, Thailand, Philippines and Cambodia. Bars denote medium-term output losses across different country characteristics. Countries are classified as high/low when they are above/below the median of Asia Region for a certain characteristic.

# Lessons from vaccine strategies

# Complacency and late procurement led to slow vaccine rollouts in Asia

## Factors affecting vaccine rollouts

(Vaccinations per 100 population, impact of 1 standard deviation change in factor)

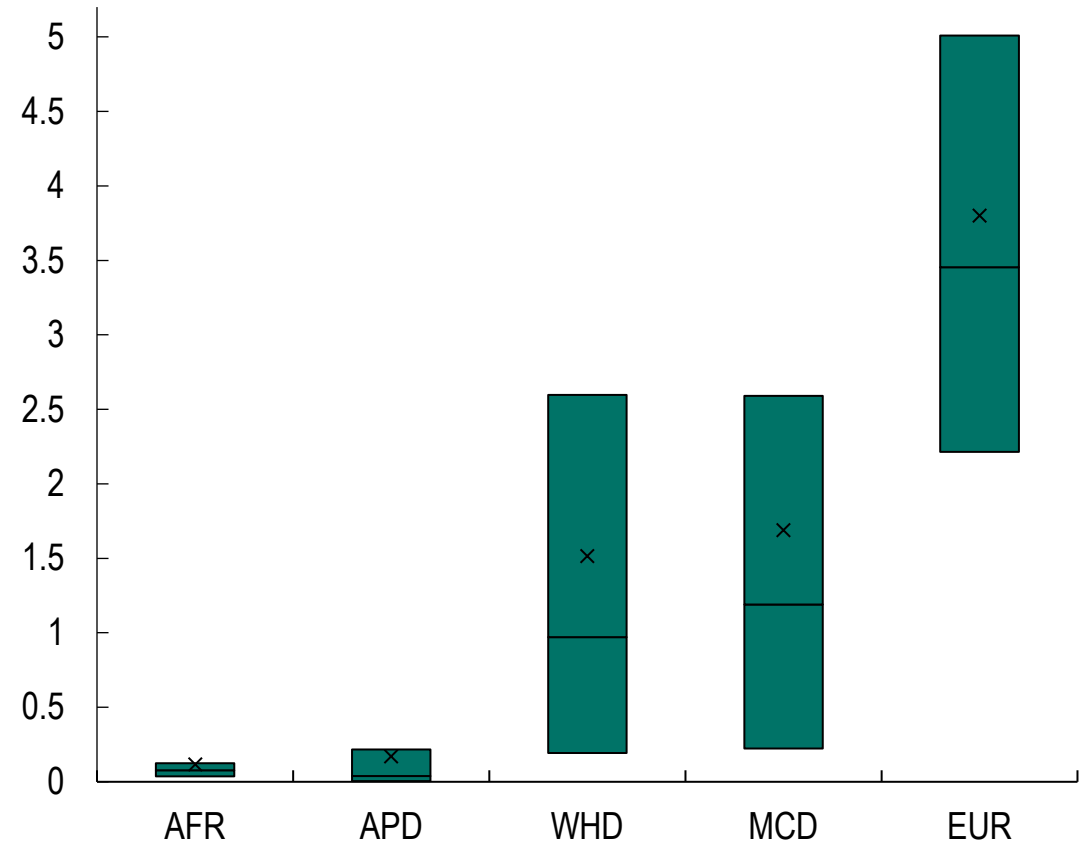


Source: Deb et al. (2021a).

Note: The figure reports the impact of one standard deviation change in different factors on the share of population that is vaccinated with at least one dose.

## Cumulative COVID-19 cases by end-2020

(Per 100 population, simple average)



Source: Johns Hopkins University.

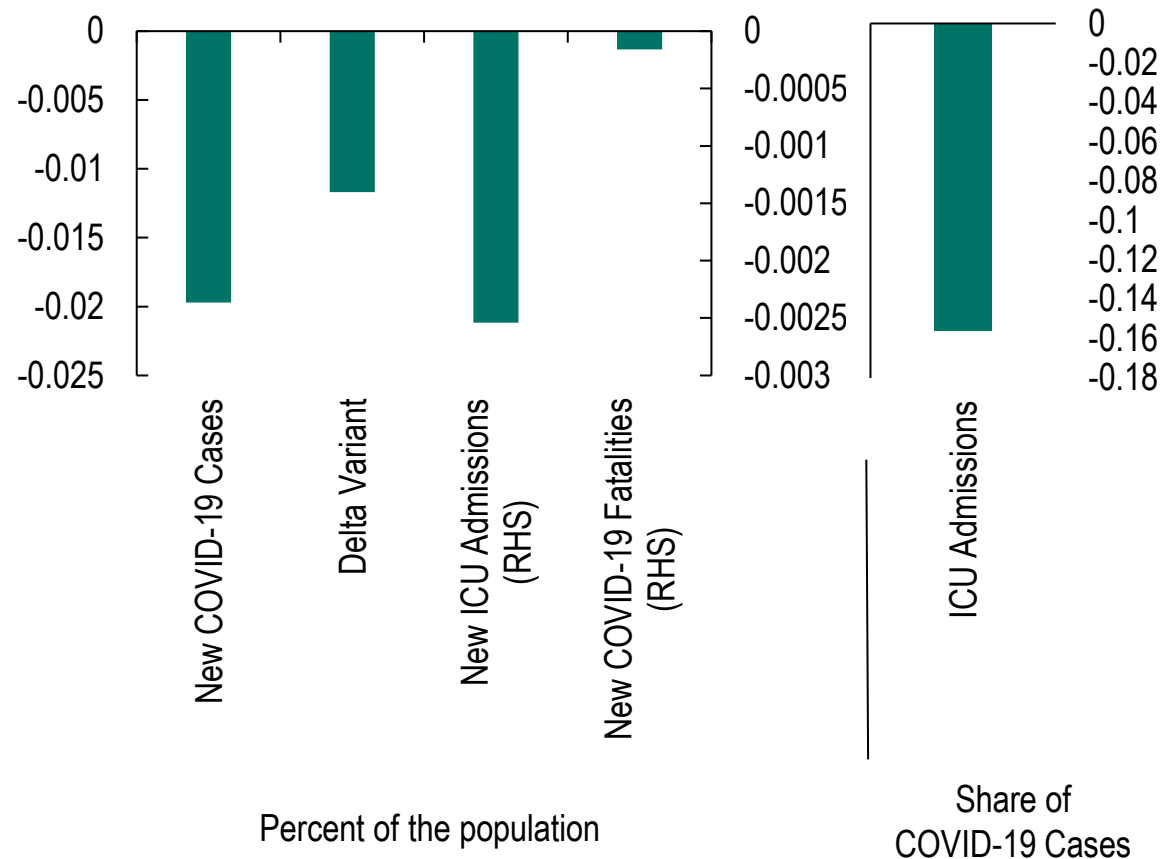
Note: The chart shows the cumulative number of COVID-19 cases per region at the end of 2020. The horizontal line inside each box represents the median; the upper and lower edges of each box show the top and bottom quartiles, respectively; and the top and bottom markers denote the maximum and the minimum, respectively. x represents the mean.



# Vaccines improve health outcomes and allow health systems to cope with the transition from pandemic to endemic...

## Effect of COVID-19 vaccines on health outcomes

(Percent of the population)

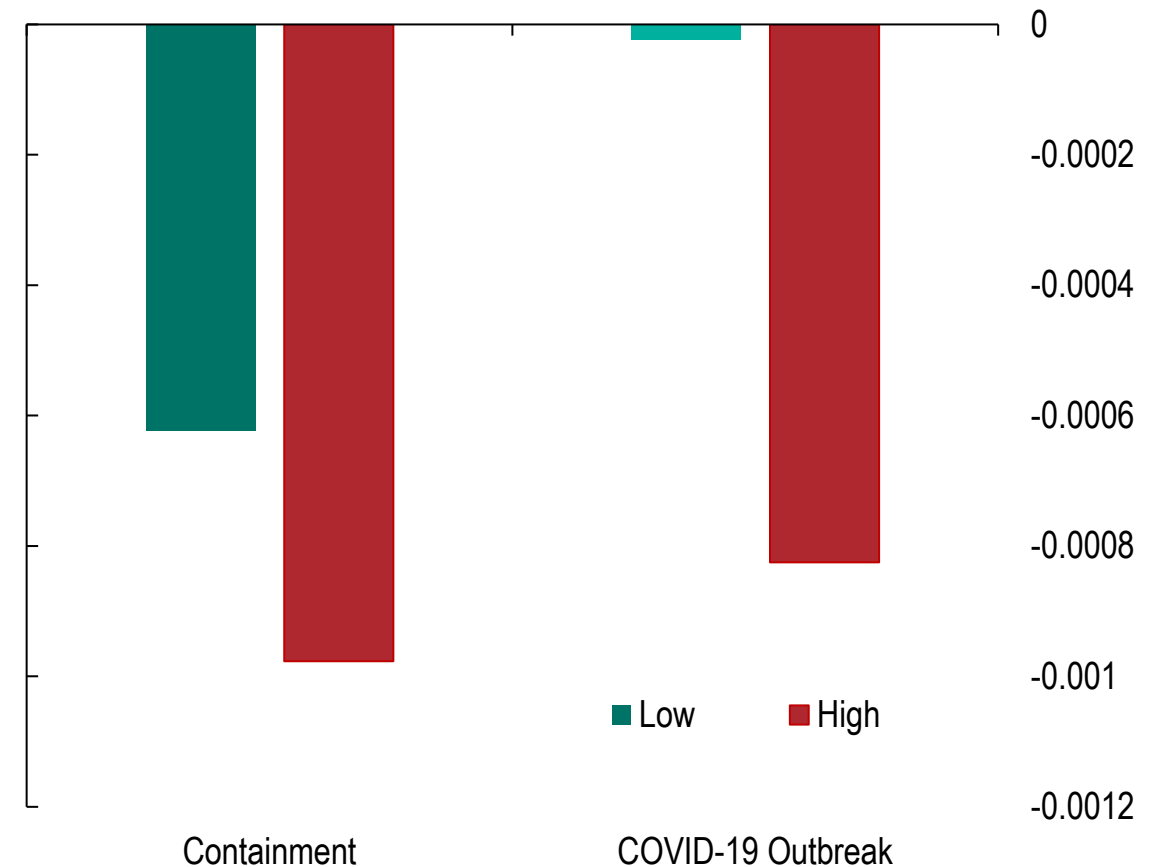


Source: Deb et al. (2021a).

Note: The chart shows the daily effect of a 20 ppt increase in the administration of a first COVID-19 dose per capita on health outcomes per capita 21 days following their administration.

## Role of country's initial conditions on health effects

(Cases as percent of the population)



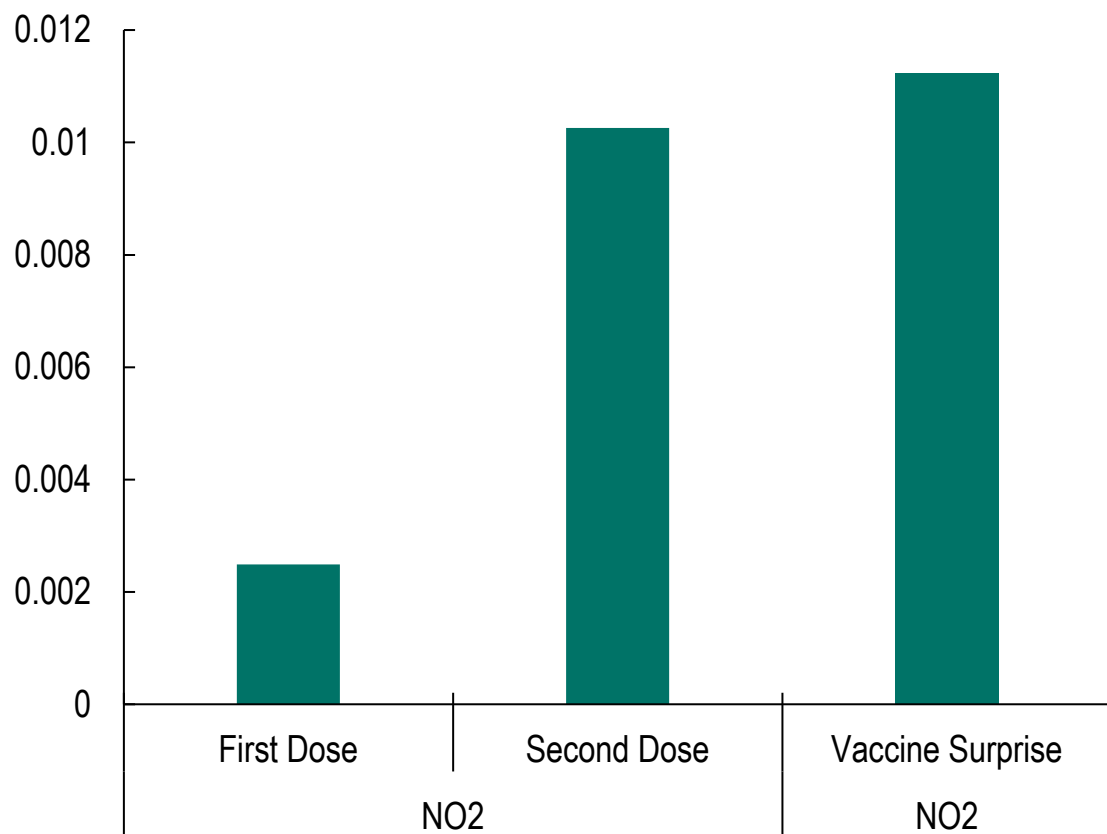
Source: Deb et al. (2021a).

Note: The red (green) bars show the impact of vaccines after 21 days on new COVID-19 cases when containment measures or the severity of the outbreak are low (high).

# ...resulting in significant and persistent effects on activity

## Effect of COVID-19 vaccines on economic indicators

(Emissions as percent of population)

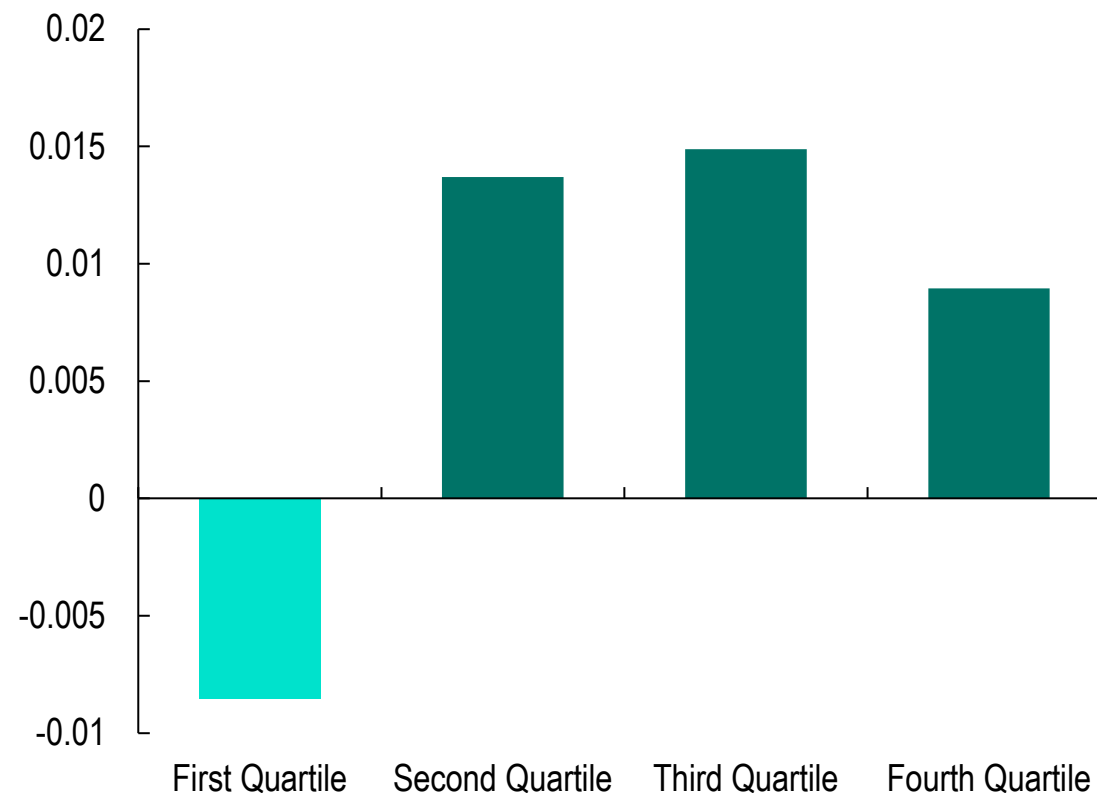


Source: Deb et al. (2021b).

Note: The bar shows the impact after 1 day of vaccine first and second dose per capita and vaccine surprise per capita on NO<sub>2</sub> emissions. Vaccine surprises are defined as the difference between the expected vaccine administrations and the actual full doses administered.

## Economic effects of vaccination depending on the share of population vaccinated

(Emissions as percent of population)



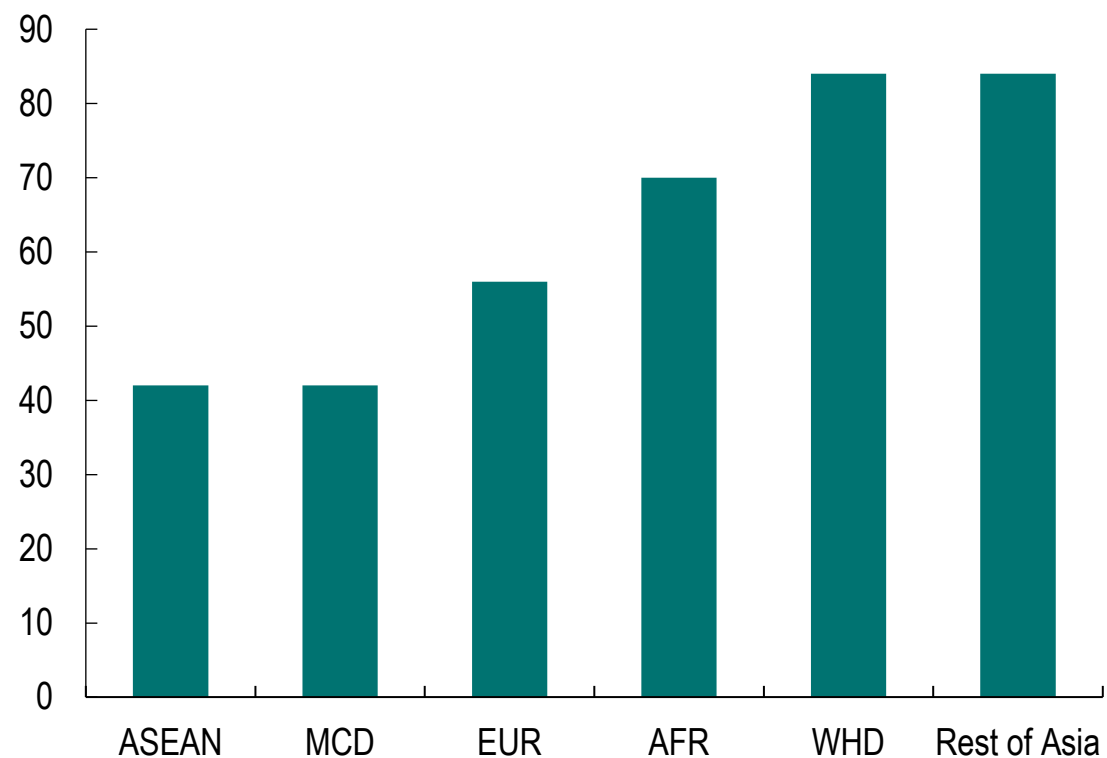
Source: Deb et al. (2021b).

Note: The bar charts denote the impact after 1 day of vaccine surprises per capita at different quartiles on NO<sub>2</sub> emissions. The lighter shade indicates the effect is not statistically significant at the 90 percent level. Vaccine surprises are defined as the difference between the expected vaccine administrations and the actual full doses administered.

# Large cross-country spillovers: No country is safe until all countries are safe!

## Days elapsed until Delta variant reached 50 percent of COVID-19 cases

(Number of days)

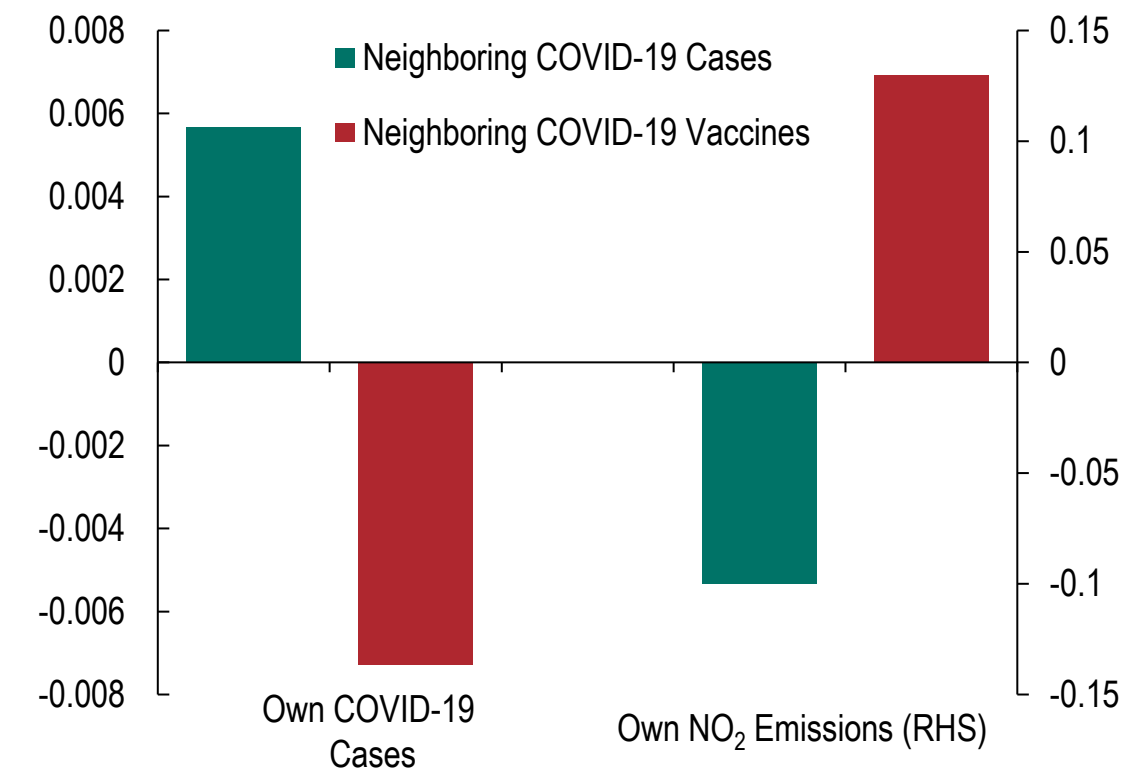


Source: GISAID, CoVariants.org.

Note: The chart computes the number of days elapsed since Delta variant cases reached 50 percent of all COVID-19 cases in regions, since the date that Delta variant reached 50 percent of cases in India (April 19 2021). Rest of Asia includes Japan, Korea, China, Hong Kong SAR, Australia, New Zealand, Nepal, Bangladesh and Sri Lanka.

## Effect of neighboring COVID-19 cases and vaccines on a country's health and economic outcomes

(Percent of population; NO<sub>2</sub> as percent of population (RHS))



Source: Deb et al., 2021a,b.

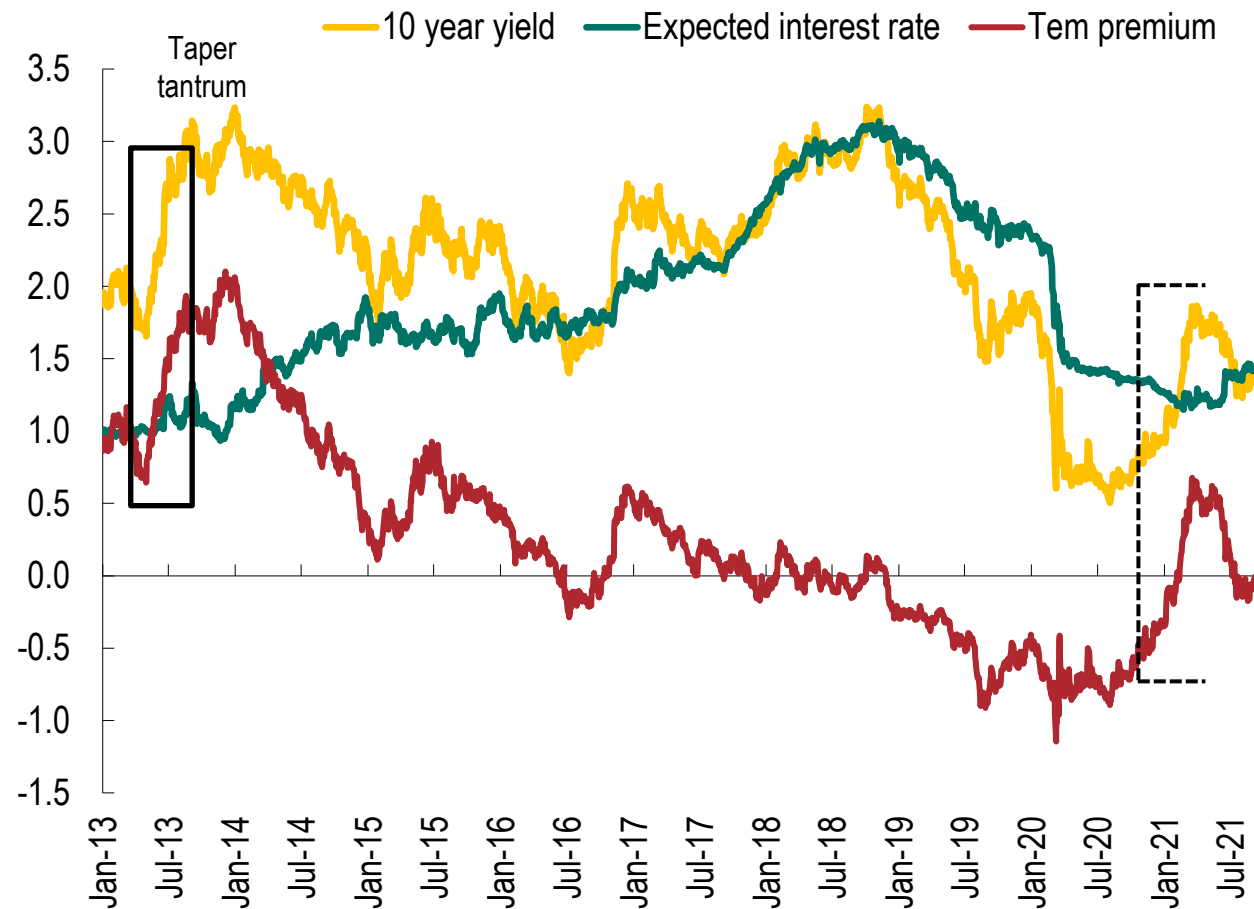
Note: The green bars denote the impact of neighboring COVID-19 cases per capita on country's own COVID-19 cases per capita, and on a country's NO<sub>2</sub> emissions per capita, after 7 and 30 days, respectively. The red bar denotes the effect of neighboring COVID-19 vaccines on a country's own COVID-19 cases per capita and on a country's own NO<sub>2</sub> emissions per capita, after 7 and 30 days, respectively.

# Risks



# A faster than anticipated US monetary policy tightening will have sizeable spillovers...

## Decomposition of 10-Year US Bond Yield: Expected Interest Rate and Term Premium (Percent)

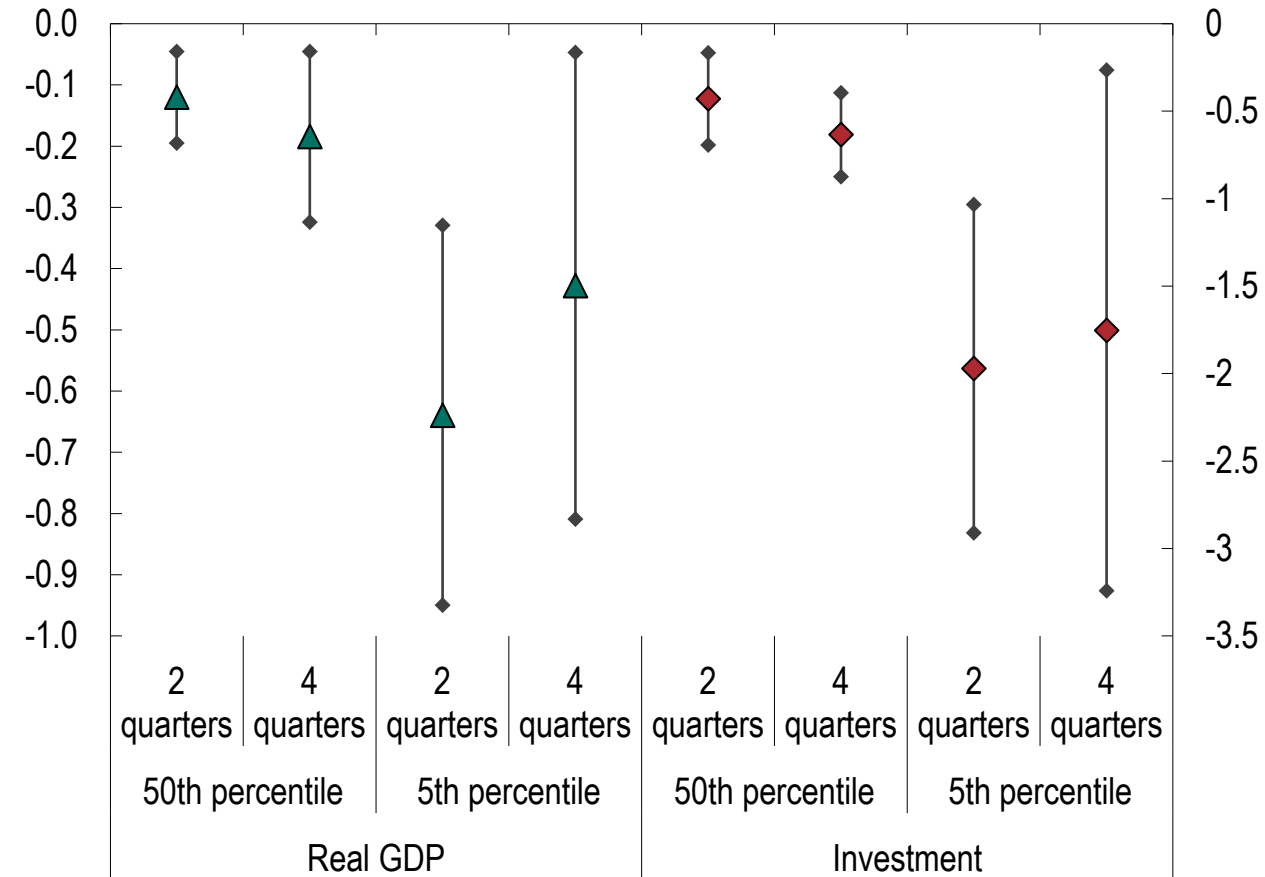


Sources: Federal Reserve Bank of New York.

Note: Expected interest rate captures the expected average level of short-term Treasury yields over the next 10 years.

## Response of Real GDP and Investment

(Impulse responses at 2 and 4 quarters, LHS - percent change in real GDP and RHS - percent change in real investment)



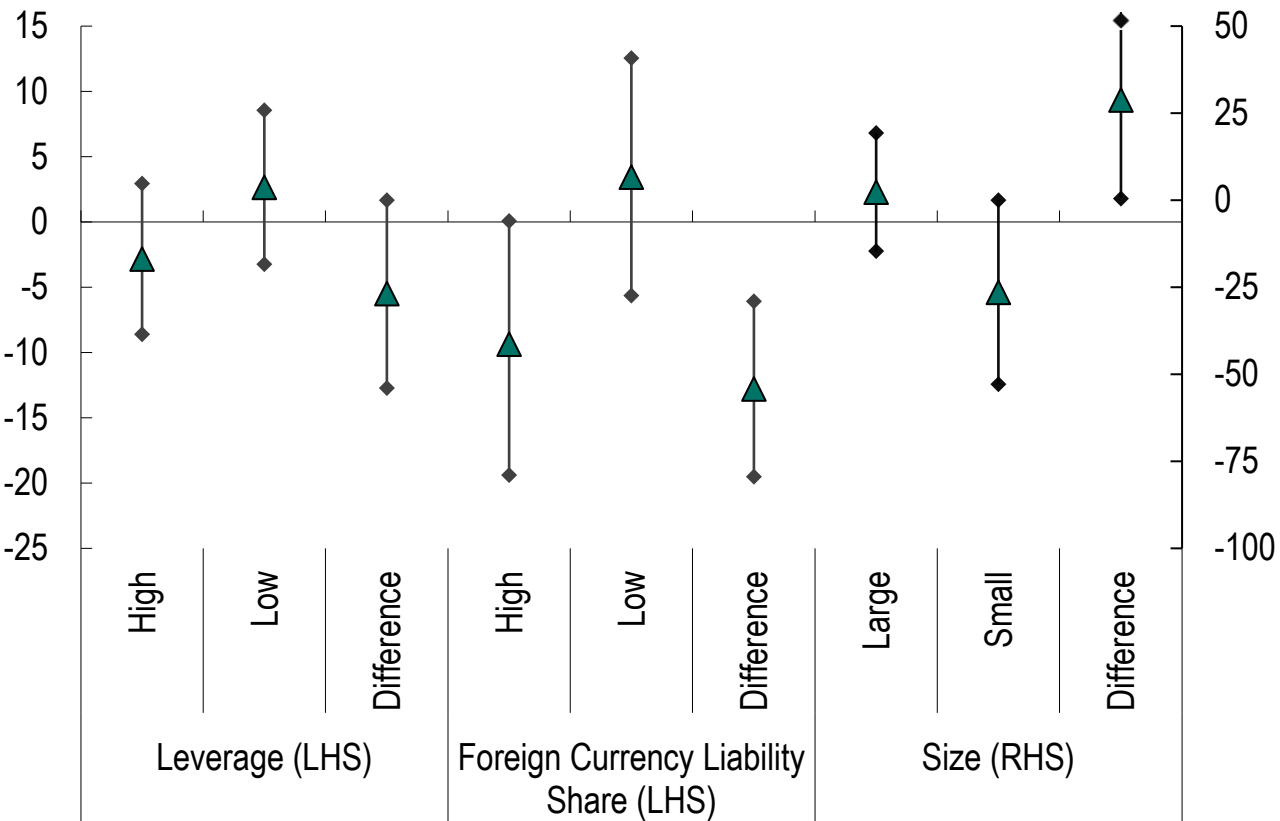
Sources: International Financial Statistics, World Economic Outlook, Haver Analytics and IMF staff calculations.

Note: Estimations are based on panel quantile regressions and show the impact of a 100 basis points exogenous US monetary policy shock. Standard errors are bootstrapped using blocks of four quarters. Error bars denote the +/- two standard deviations.

# ...amplified in countries with higher leverage and FX debt...

## Heterogenous Investment Response Across Firms

(Cumulative impulse responses at 8 quarters, percent change in firm investment ratio)



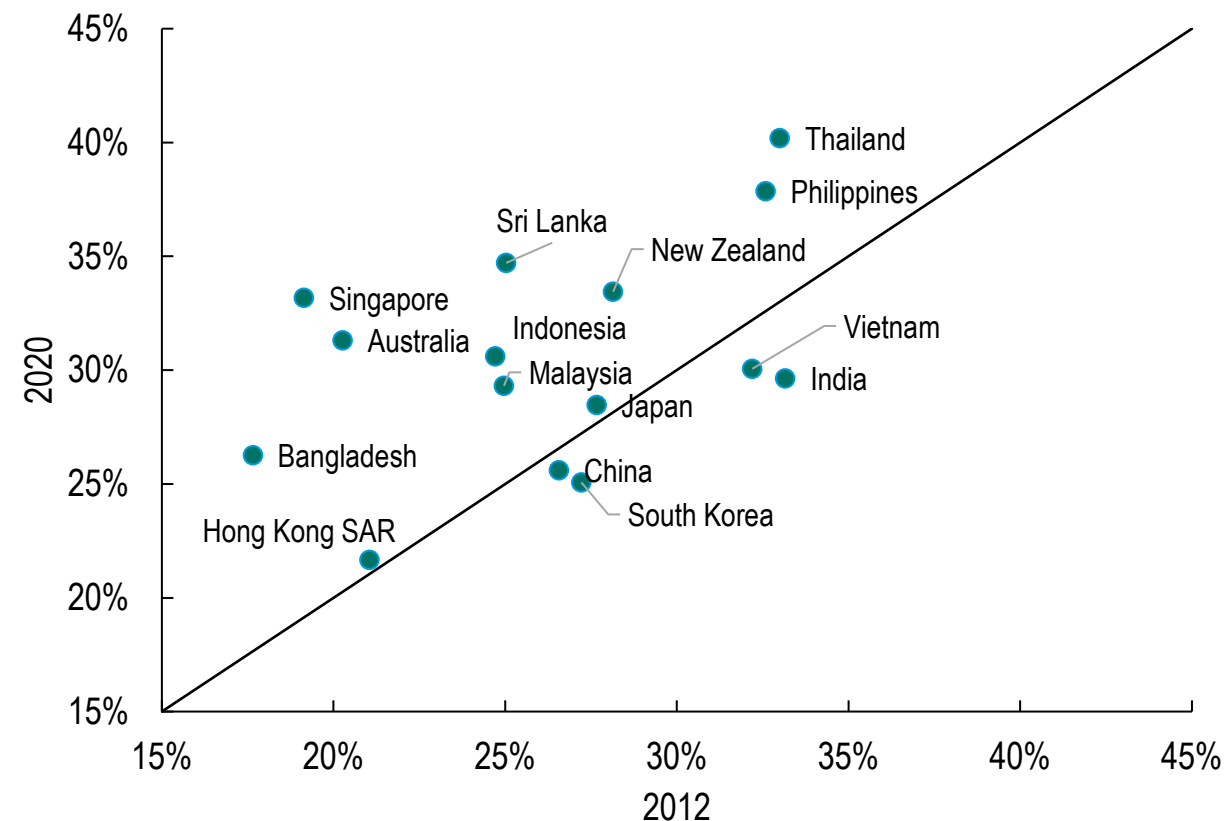
Sources: S&P Capital IQ and IMF staff calculations.

Note: Estimates show the response of firm investment ratio (capital expenditure to fixed capital) to a 100-basis points exogenous shock to US interest rate. Estimations are based on a semi-parametric approach with firm and country-industry-time fixed effects. Standard errors are clustered at firm level. Error bars denote the confidence intervals for 90% significance.

LHS = left-hand scale; RHS = right-hand scale.

## Non-financial corporations: Debt to Asset Ratio

(Percent, weighted average)



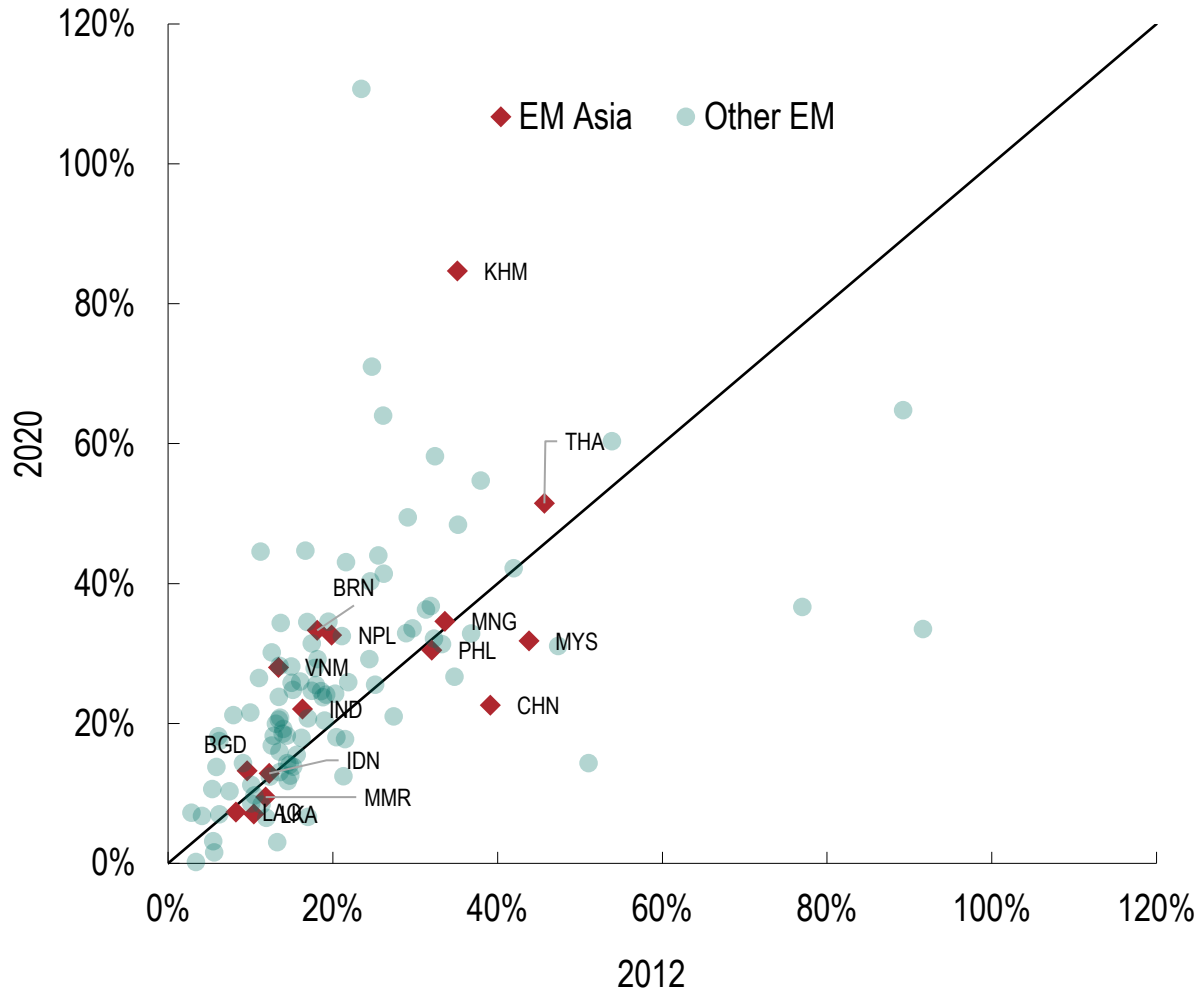
Source: S&P Capital IQ and IMF staff calculations.

Note: Based on asset-weighted averages for each country. The sample excludes firms operating in the financial, insurance and utilities sectors.

# external buffers have increased, but policy space has declined...

## Reserves

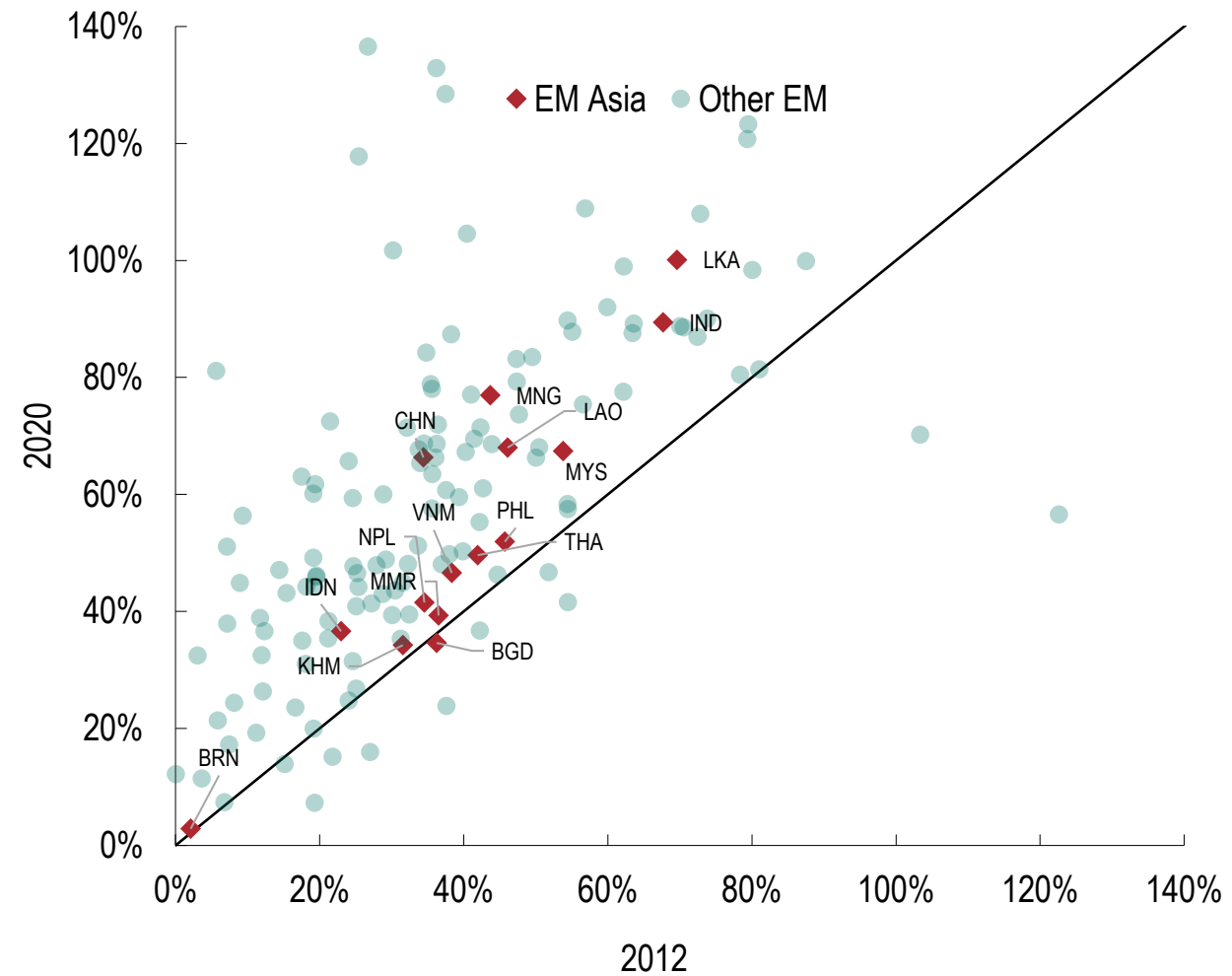
(Percent of GDP)



Source: International Financial Statistics and IMF staff calculations.

## Government Debt

(Percent of GDP)

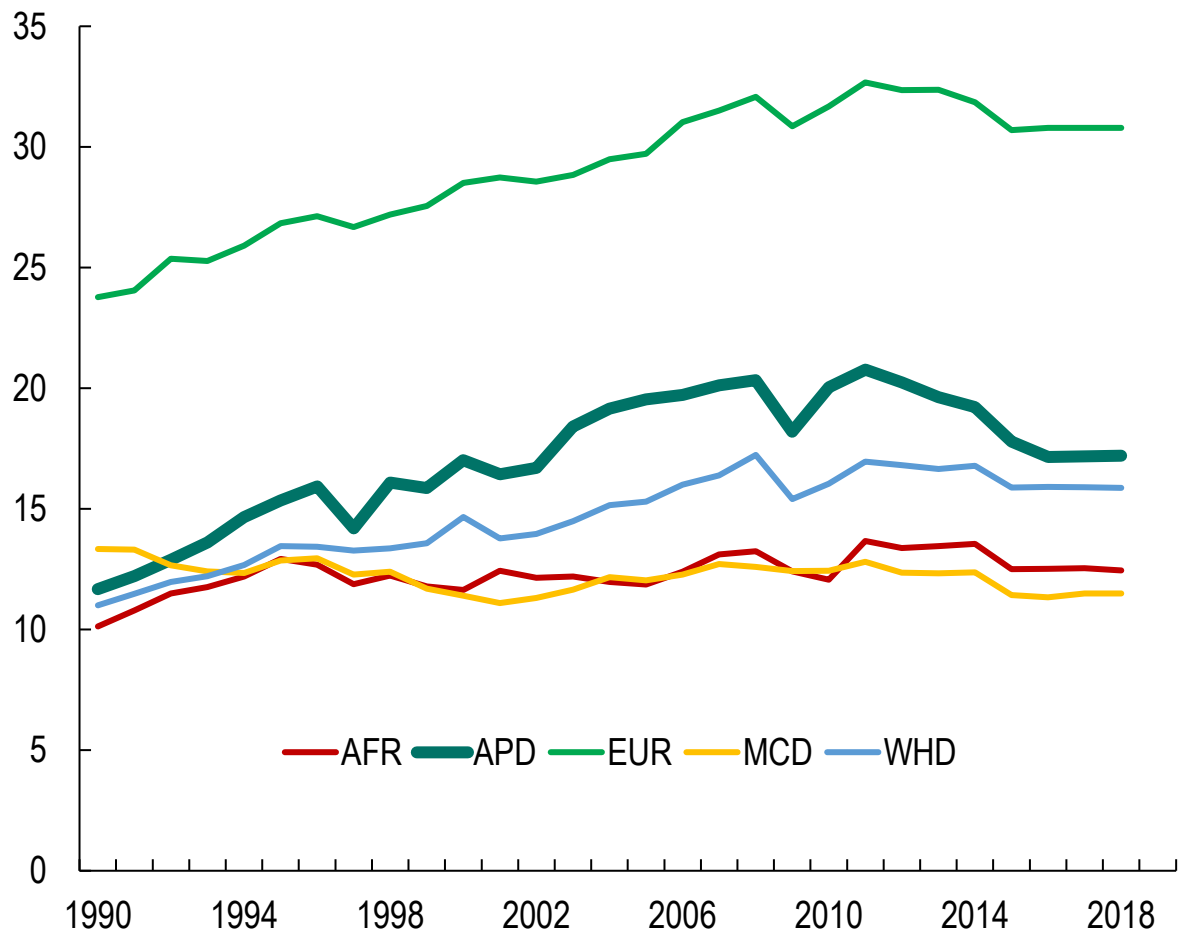


Source: World Economic Outlook and IMF staff calculations.

# Weakening GVC participation and realignments pose an additional risk...

## Backward Linkages

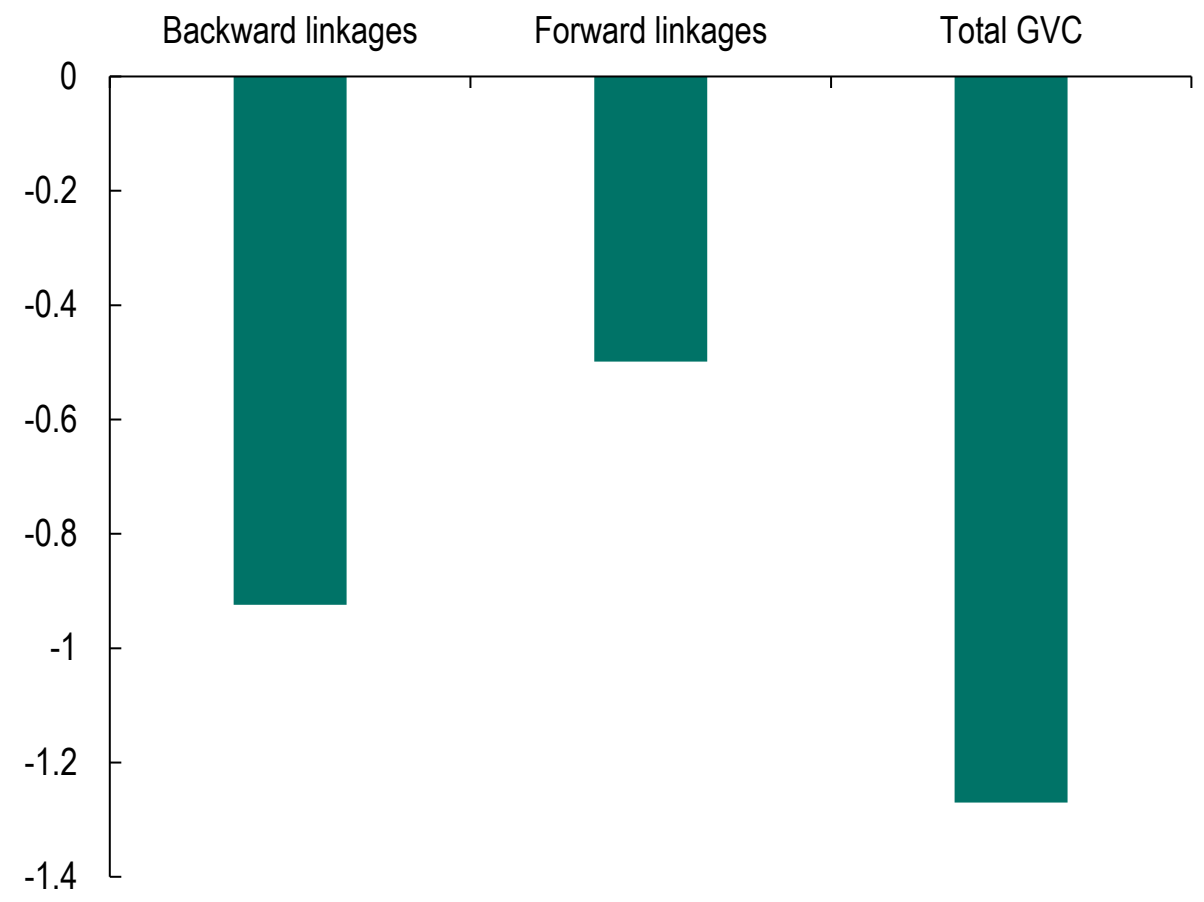
(Percent of total exports)



Source: UNCTAD EORA GVC Database and IMF staff calculations.  
 Note: Regional averages are calculated using 2019 GDP weights.

## Potential Impact of Pandemic on Global Value Chains

(Percent of total exports)



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

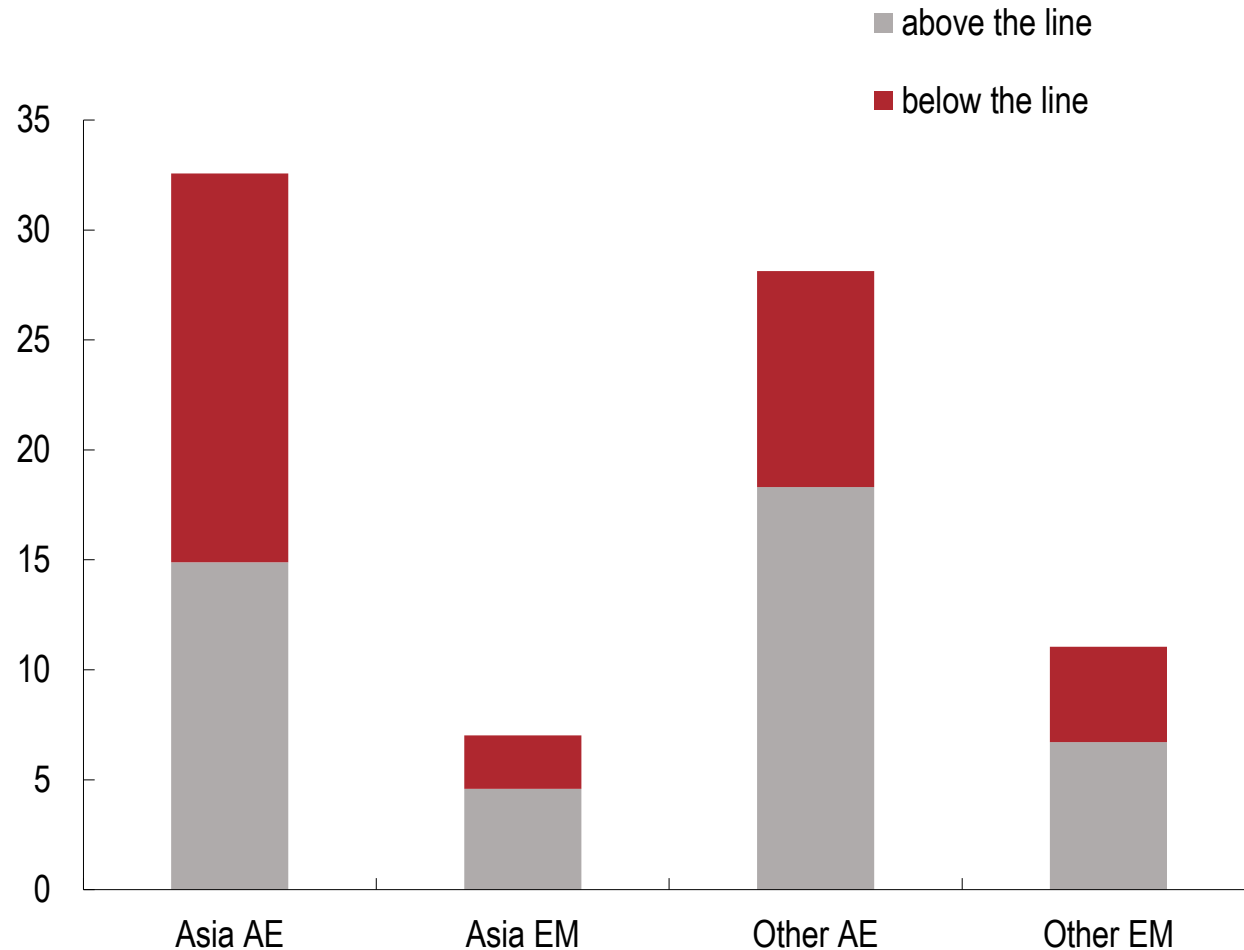


# Policy Recommendations

# Maintain the fiscal support for longer where possible, and create fiscal space for priority spending...

## Fiscal Stimulus Measures since March 2020

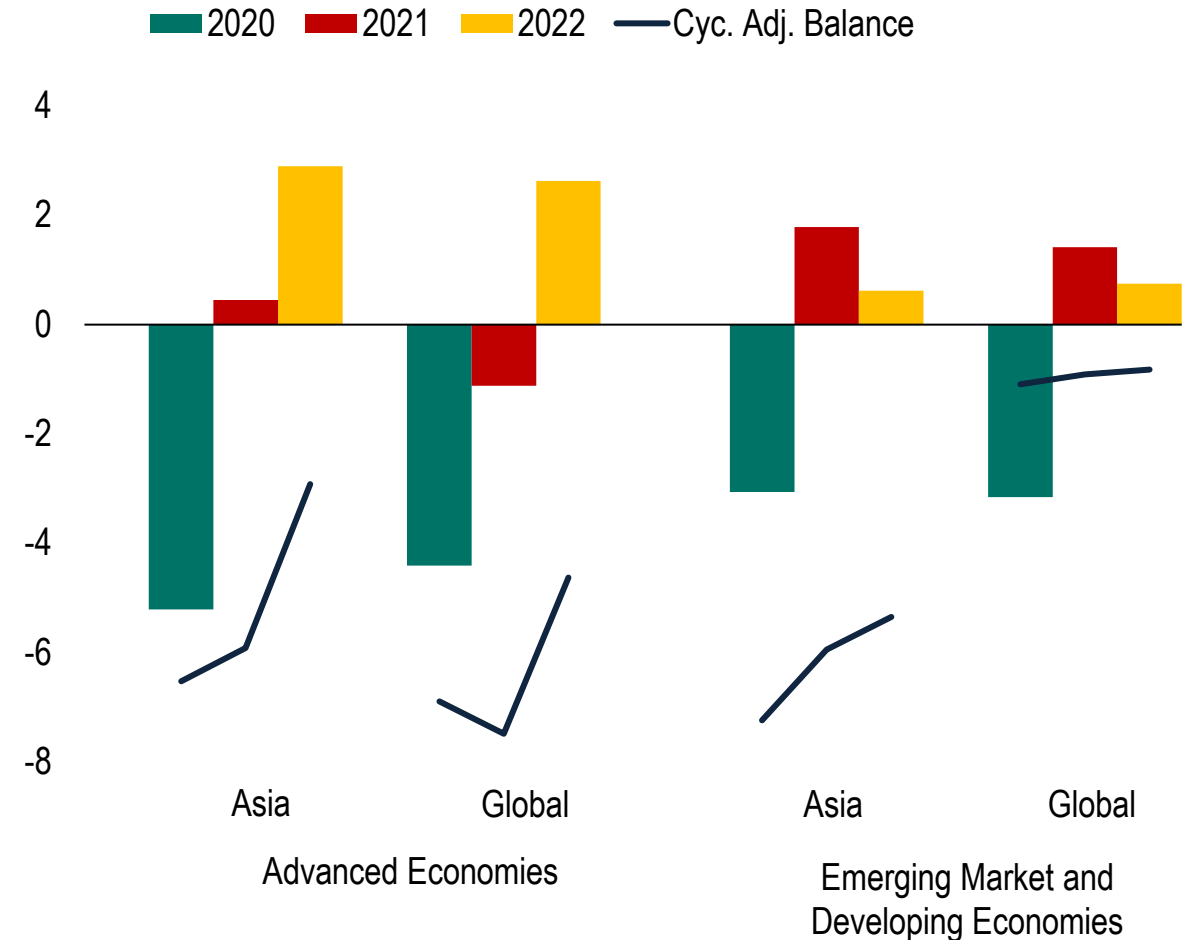
(Weighted average; percent of GDP)



Source: Fiscal Monitor Oct 2021 and IMF staff calculations.

## Fiscal Stance, 2020-22

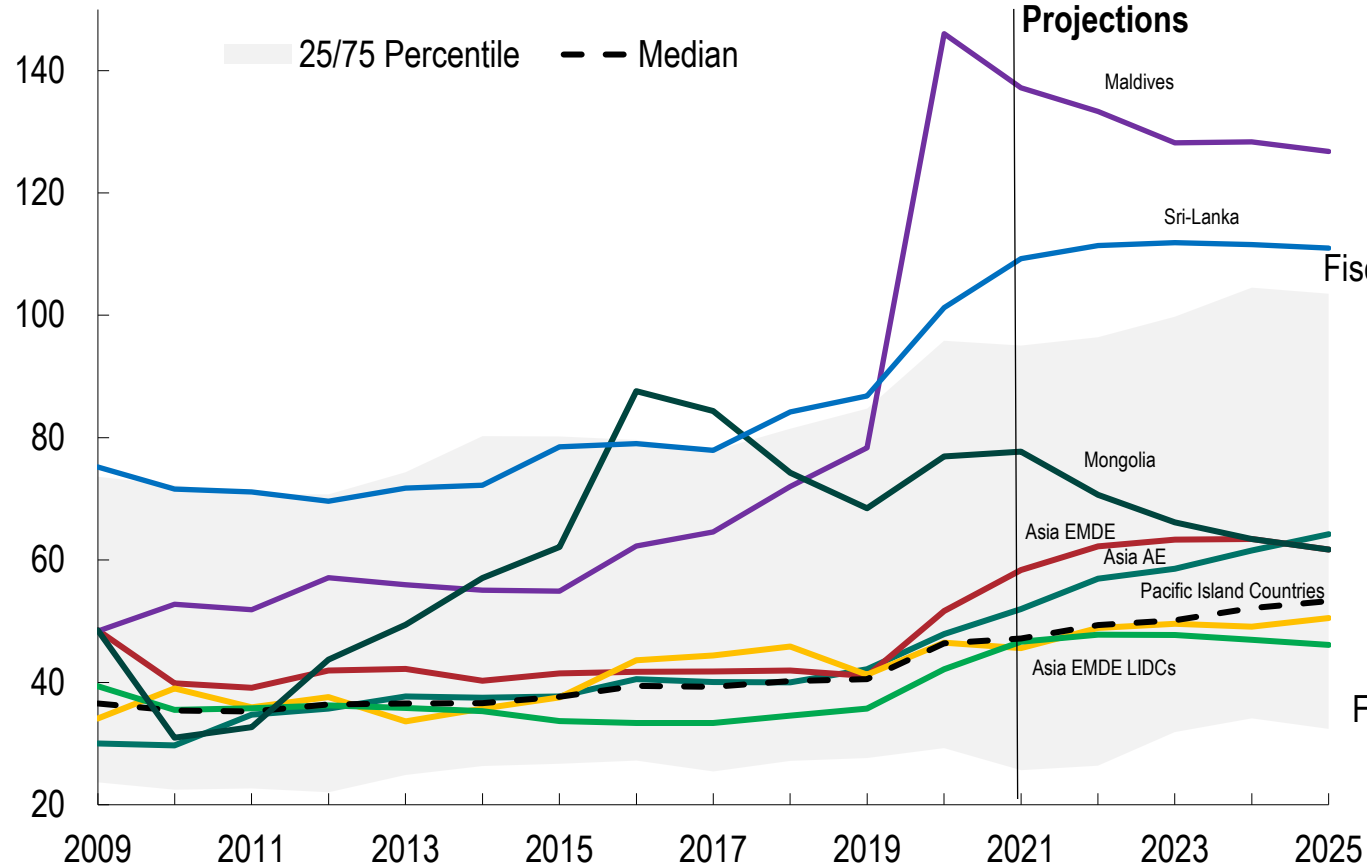
(Change in structural primary fiscal balance, percent of potential GDP;  
Cyclically adjusted balance, percent of potential GDP (black line))



Sources: World Economic Outlook and IMF staff calculations.

# ...but don't lose sight of the medium-term.

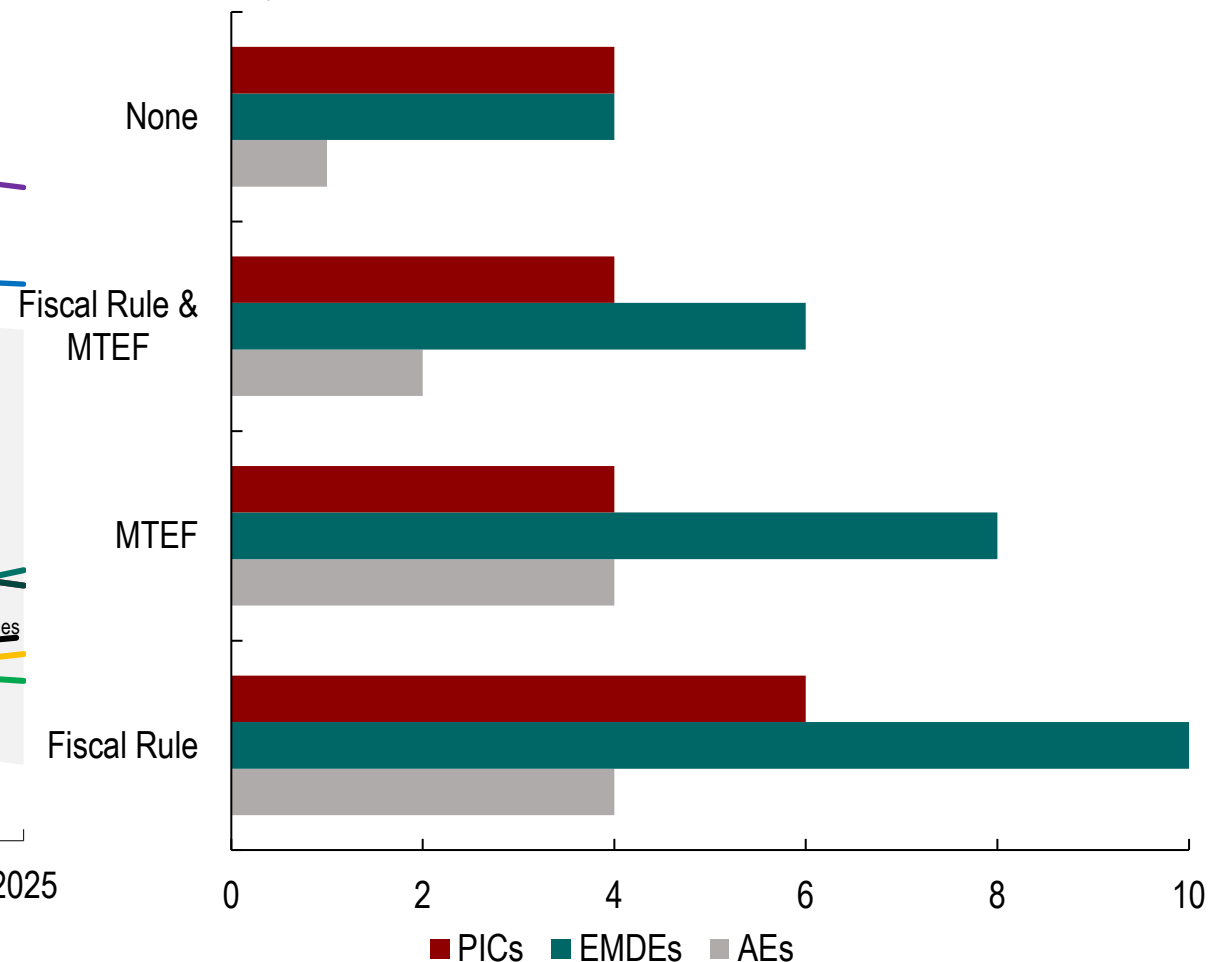
**Public Debt**  
(Percent of GDP)



Source: World Economic Outlook and IMF staff calculations.

**Medium-term fiscal frameworks in Asia and the Pacific**

(Number of countries)

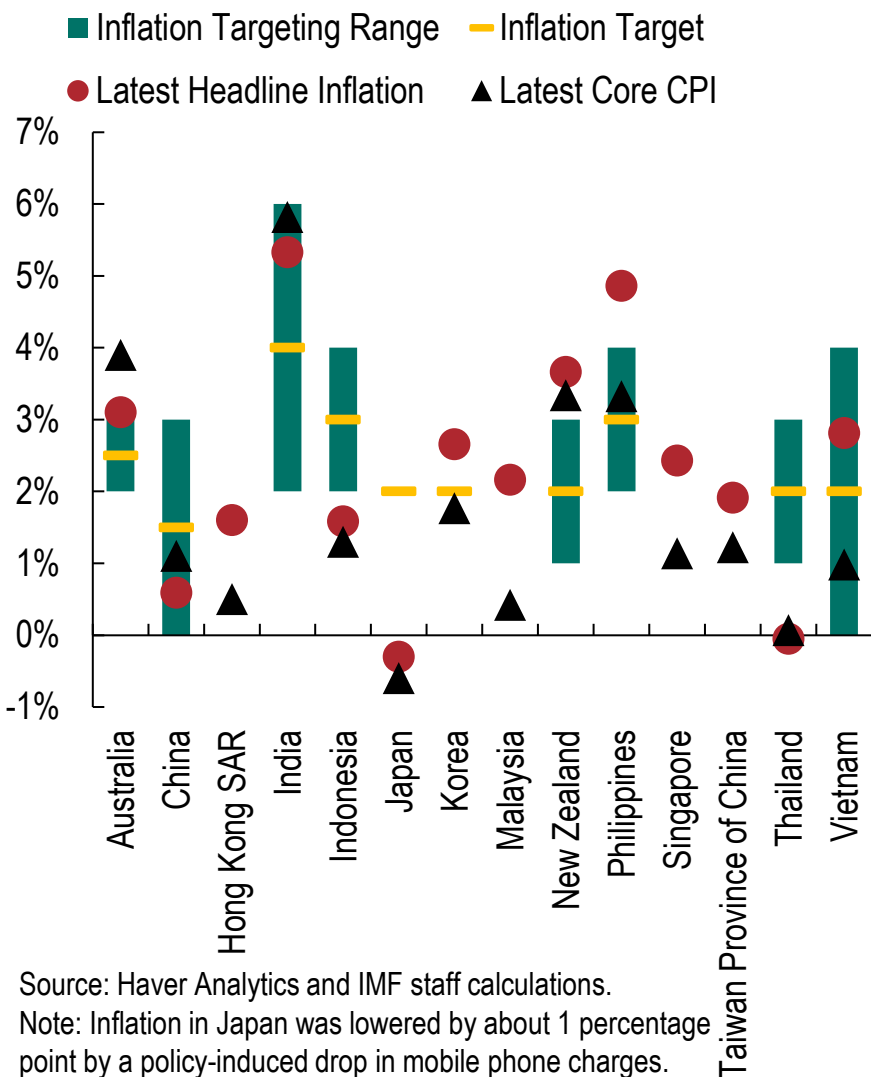


Source: IMF staff calculations.

Notes: MTEF corresponds to Medium Term Expenditure Framework. AEs includes a total of 7 countries, EMDEs includes 16 countries and PICs includes 10 countries.

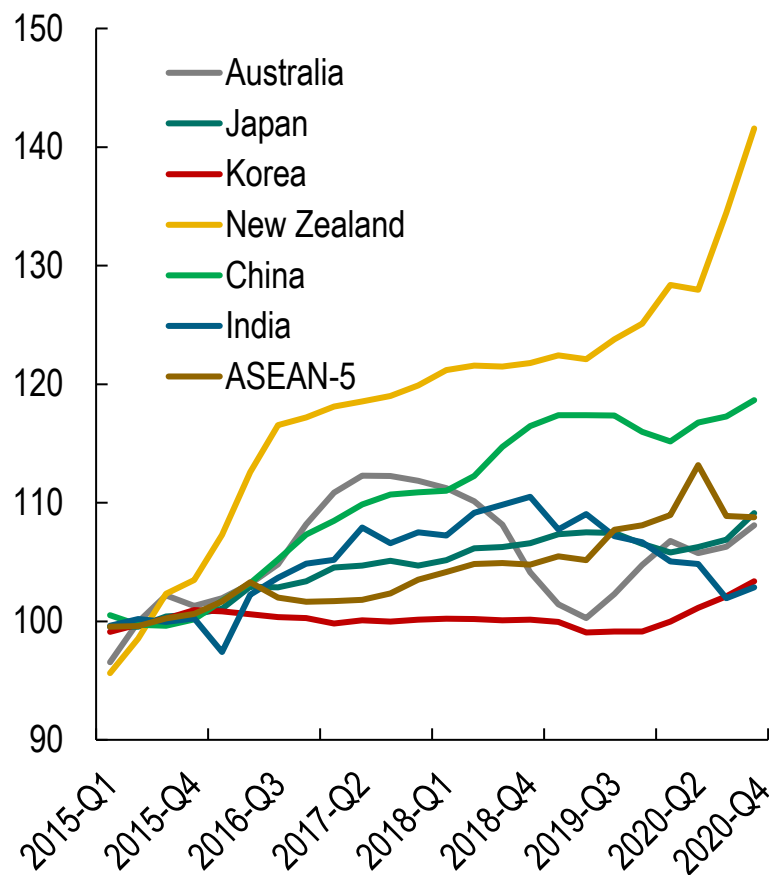
# Within target inflation provides space for continued monetary accommodation, with a close eye on financial risks and supportive corporate restructuring.

## Headline and Core CPI Inflation

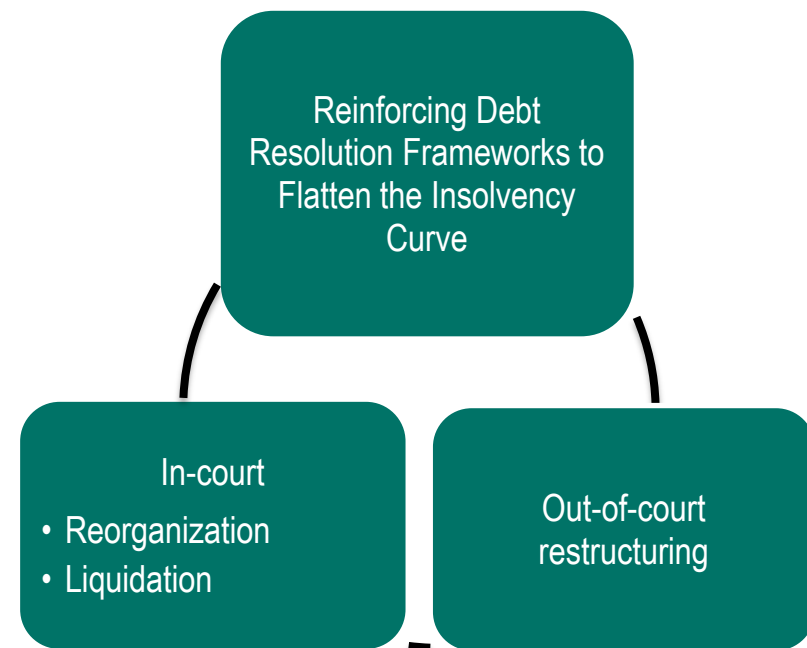


## Asia Selected Economies: Real House Price Index

(Index, 2015 = 100)



## Focus on Facilitating Balance Sheet Repair and Restructuring

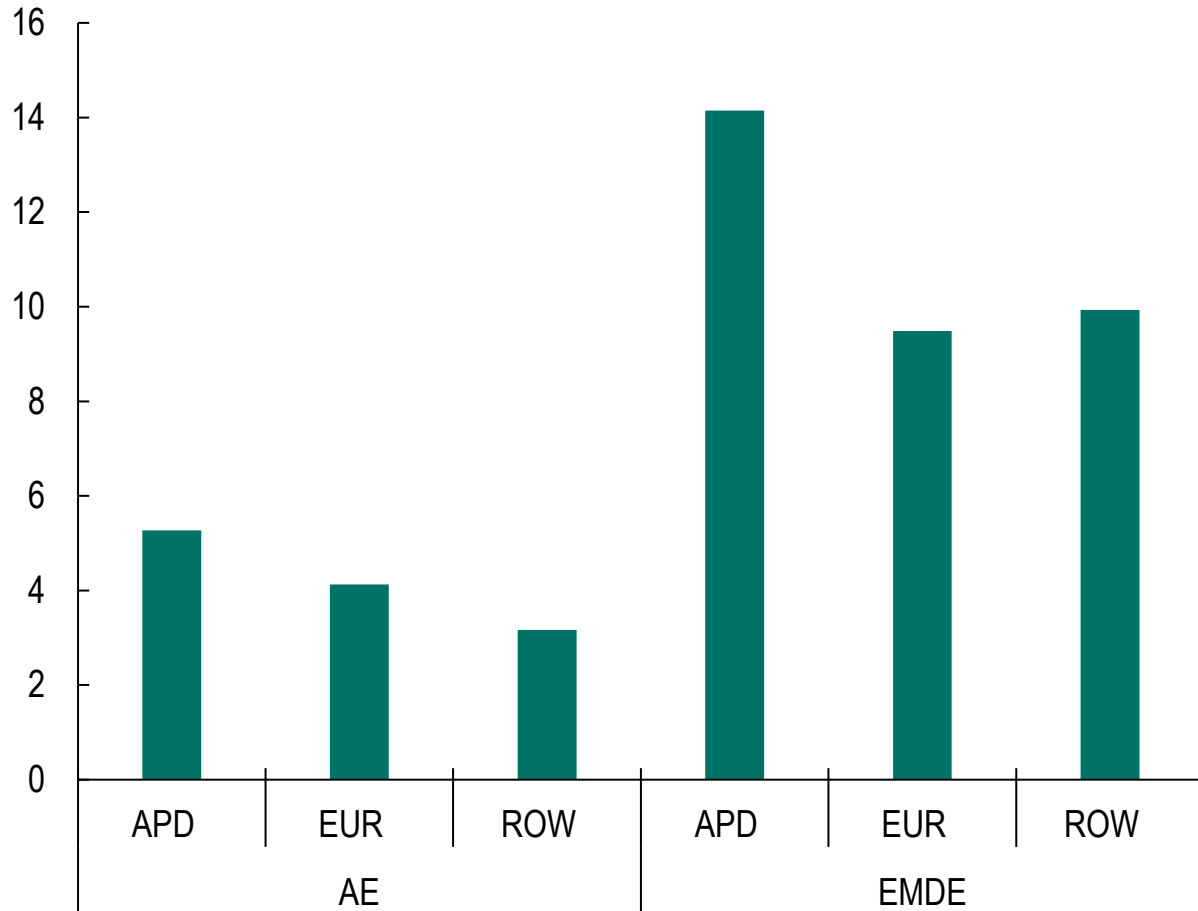


Sources: Bauer, Craig, Garrido, Kang, Kashiwase, Kim, Liu, and Rafiq (2021).

# Reductions of high NTBs in EMDE Asia can help offset scarring and boost medium-term prospects.

## Non-tariff Barriers Index by Income and Region

(2019)

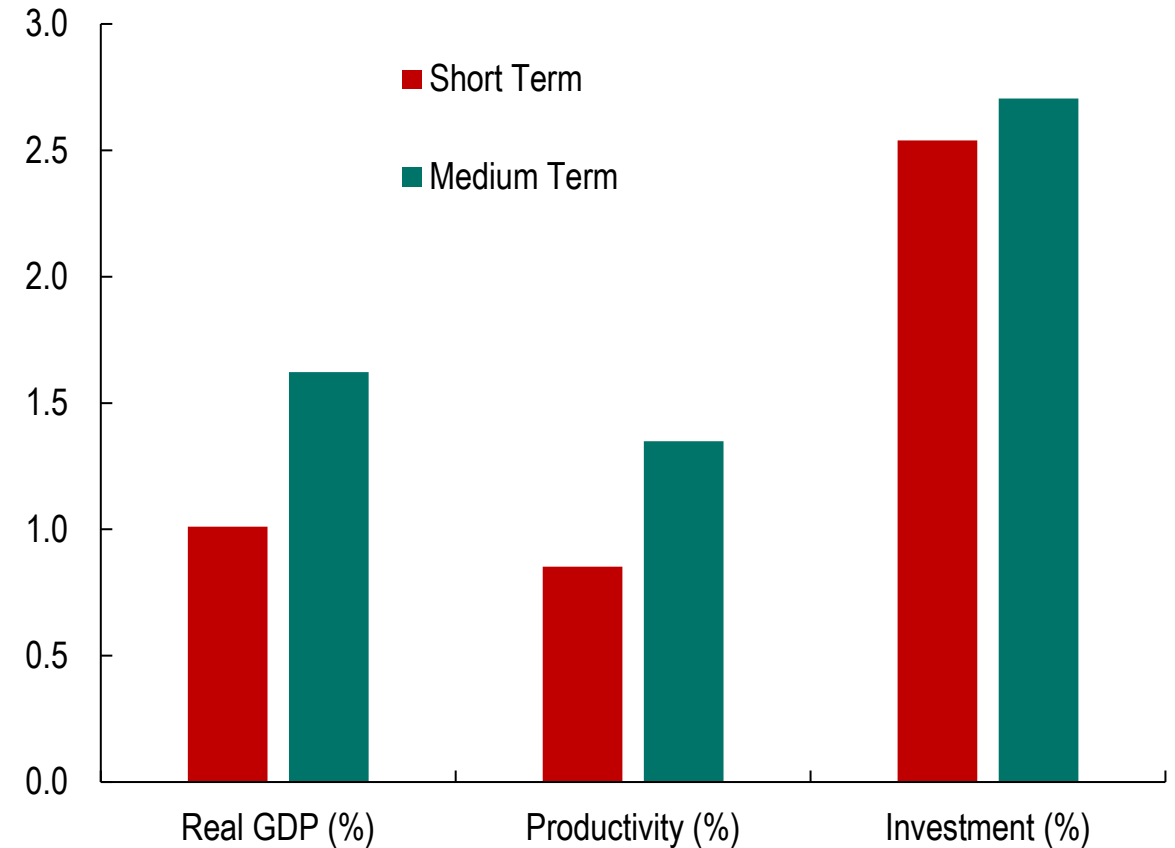


Source: Estefania Flores, Furceri, Hannan, Ostry and Rose (2020) and IMF staff calculations.

Note: NTBs Index ranges from 0 to 20, higher score means higher restrictions. PICs are excluded from APD-EMDE aggregate.

## Effect of Reducing NTBs

(Percent)



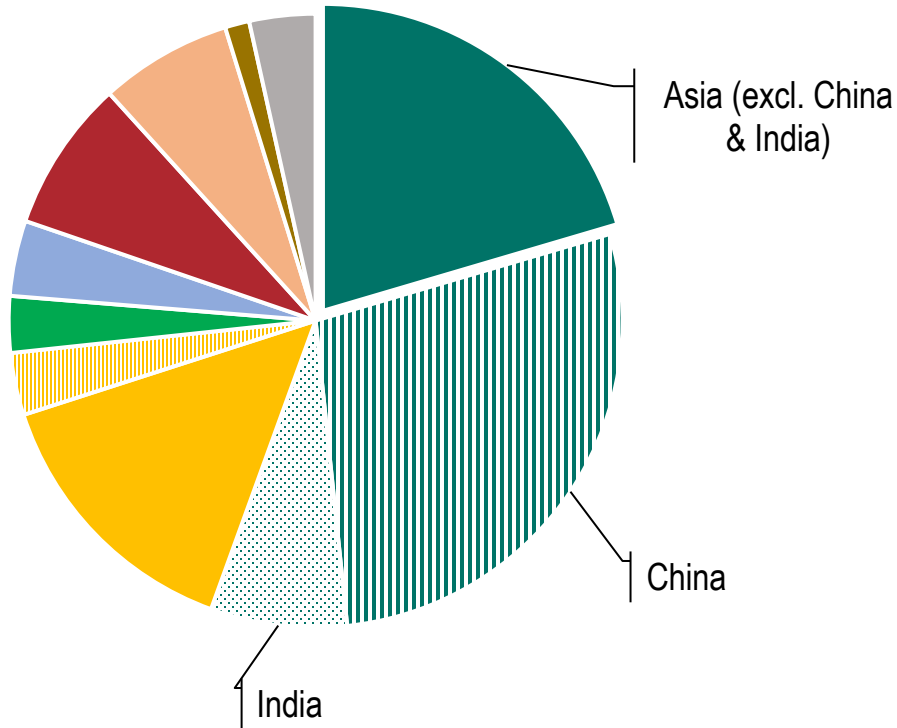
Source: Estefania, Furceri, Hannan, Ostry and Rose (2021).

Note: Figure above corresponds to the impulse response to a two standard deviation decrease in NTB Index after the first (short term) and fifth (medium term) year. Standard errors are calculated using Driscoll-Kraay. All results are significant at the 90 percent confidence level.



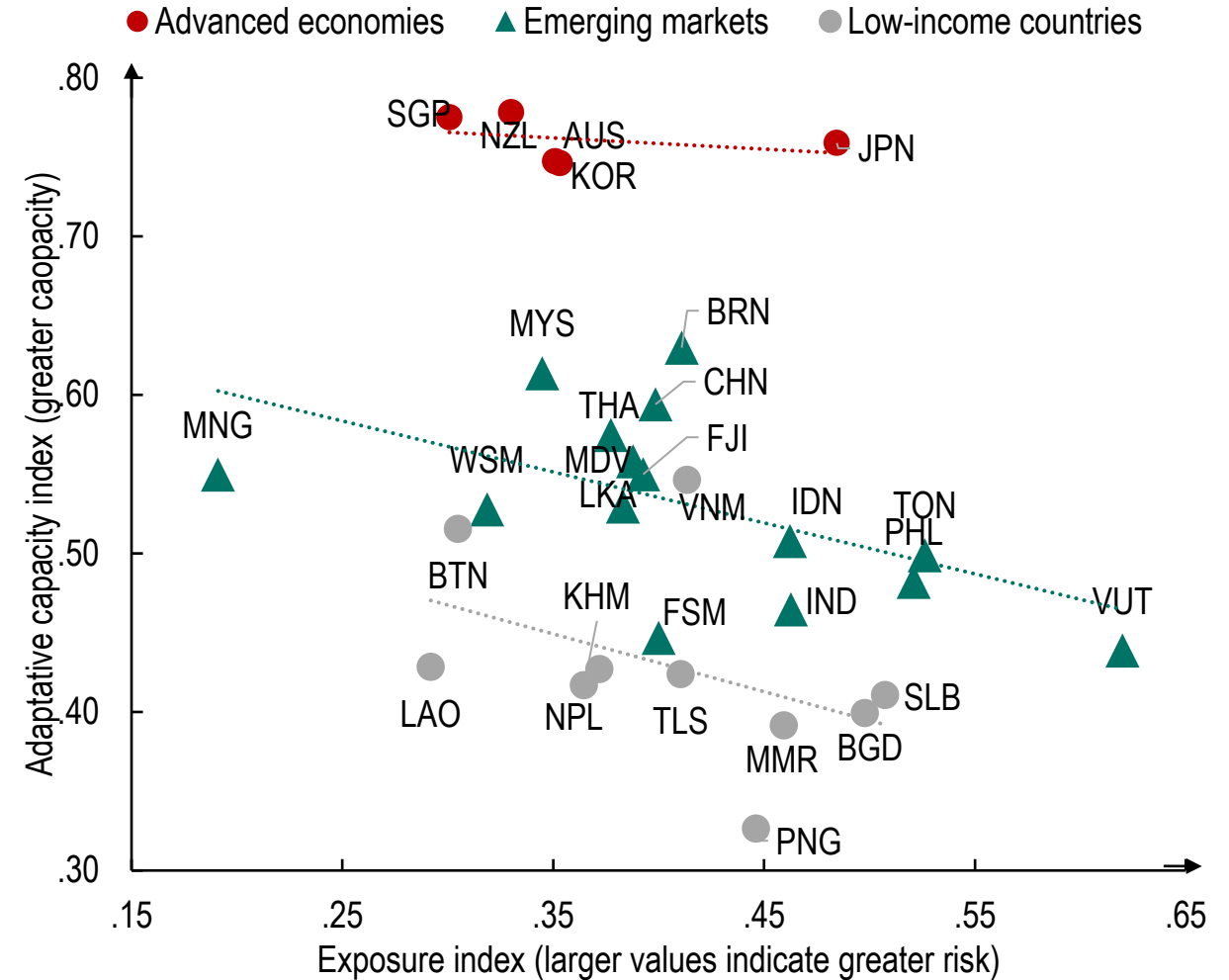
# Asia has an important role to play in curbing emissions...

## Annual CO2 emissions by region in 2019



Source: Our World in Data.

## Asia: Adaptive capacity and physical exposure



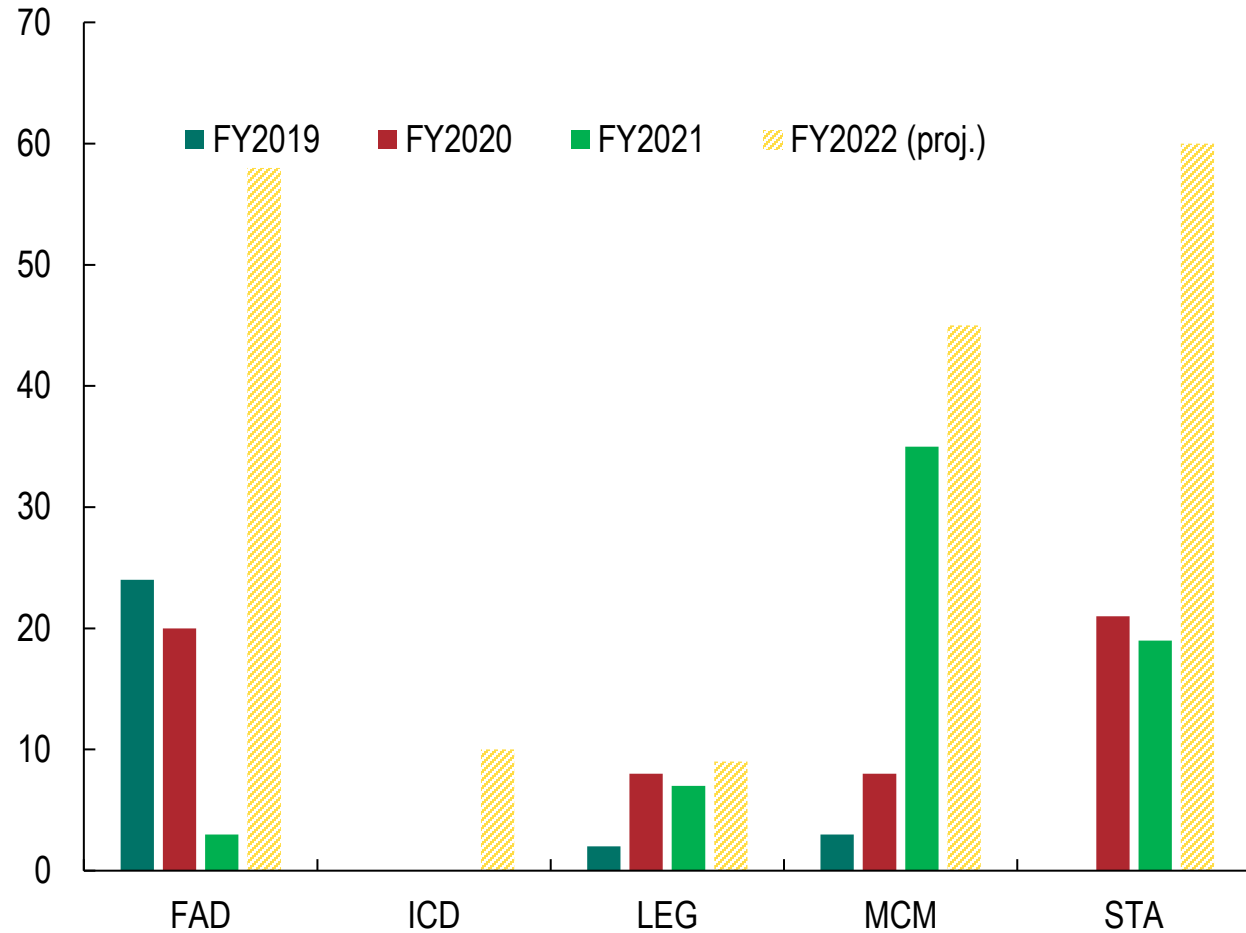
Source: IMF staff calculations based on 2015-18 data from the EU commission, the United Nations University Institute for Environment and Human Security, the University of Notre Dame, and the WEO.

# APD Capacity Development

# APD CD: pandemic response and best practices

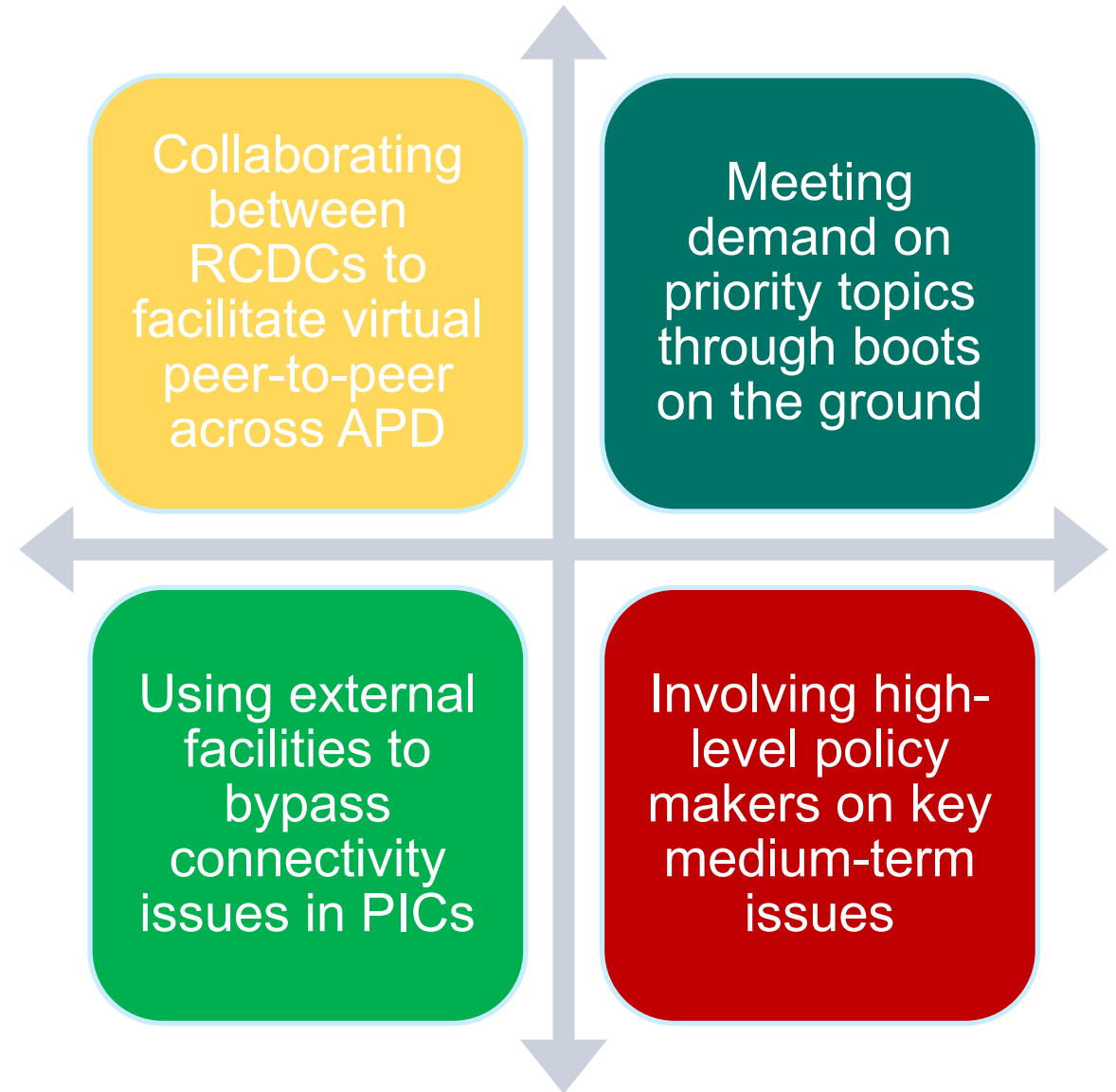
## CD Delivery Projects in APD

(Number by department)



Source: CDMAP and IMF staff calculations.

Note: FY2022 based on projections.





**Thank you**