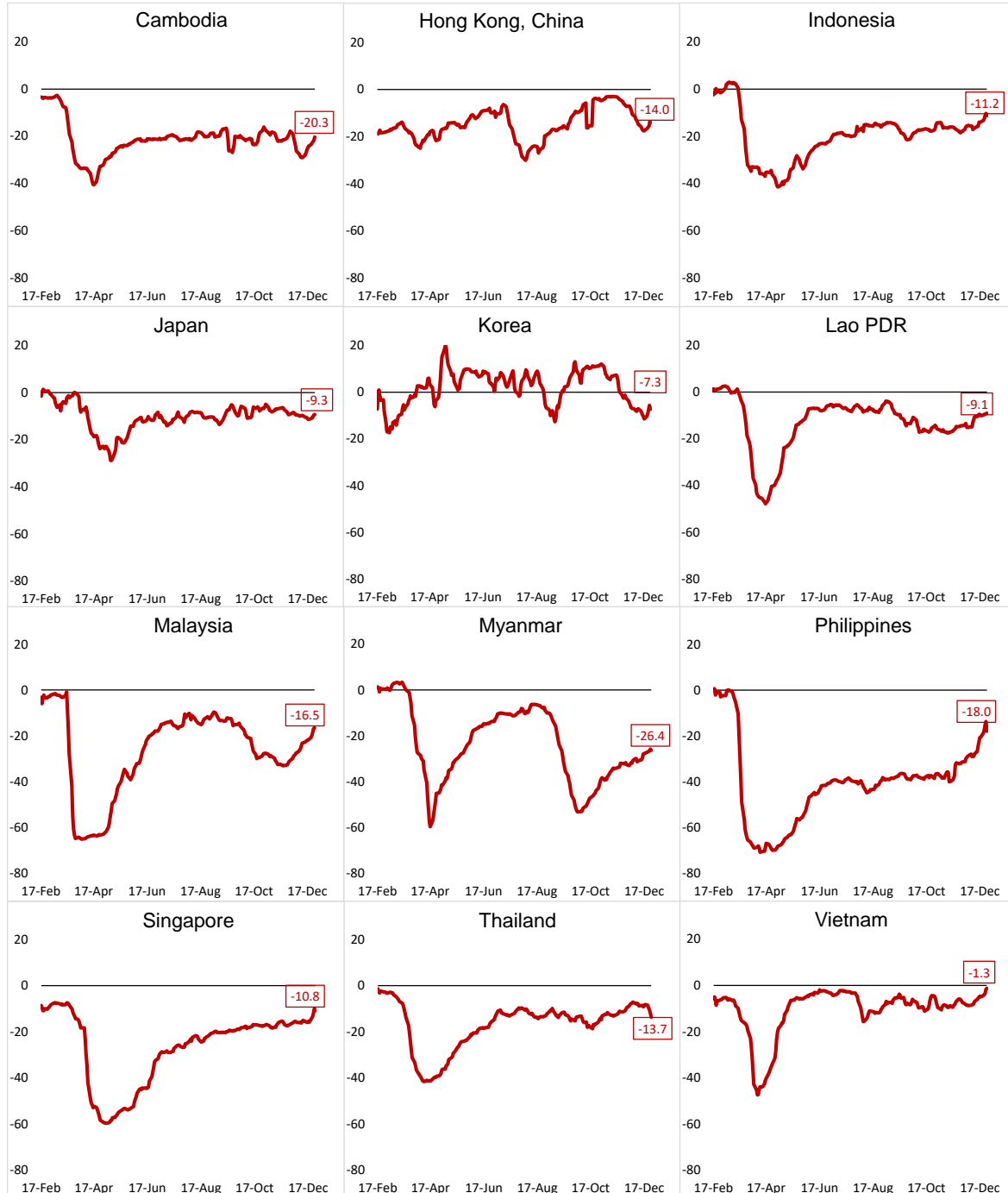


Wednesday, December 30, 2020

Data as of December 25, 2020, unless otherwise stated

**Figure 1. Selected ASEAN+3 Economies: Aggregate Non-Residentials Mobility**  
(Percentage change from baseline: January 3–February 6, 2020 = 0, 5-day moving average)

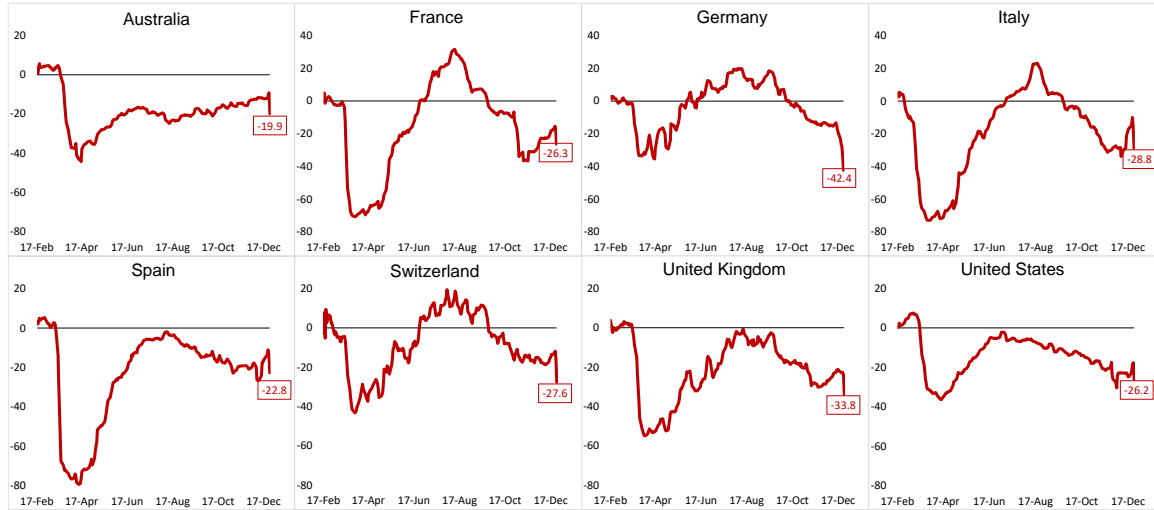


Sources: Haver Analytics, sourced from Google COVID-19 Community Mobility reports; and AMRO staff calculations.

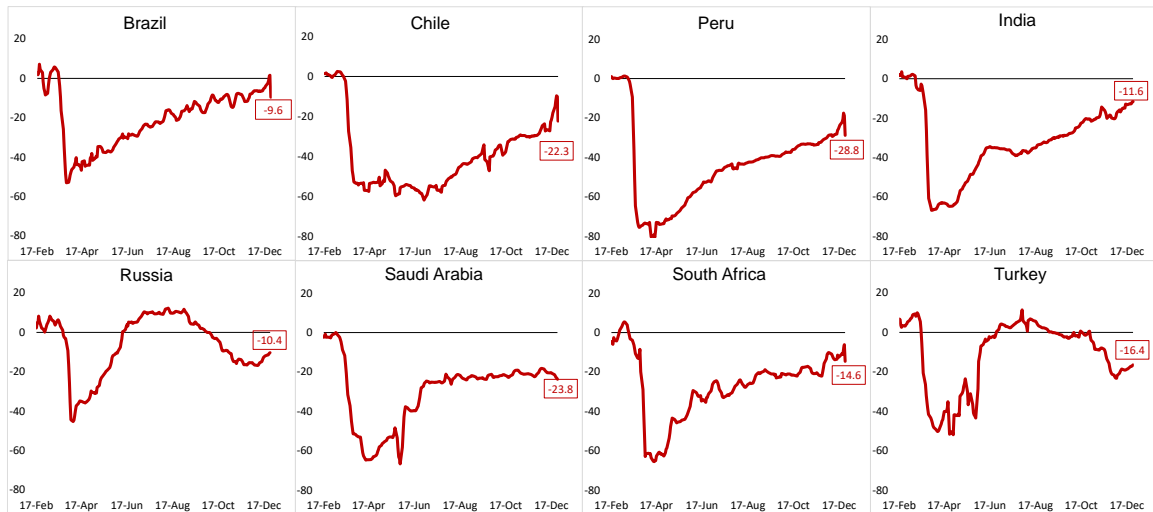
Note: Google Community Mobility data show how visits and lengths of stay at different places change compared to a baseline. The changes are calculated with the same kind of aggregated and anonymized data used to show popular times for places in Google Maps. Changes for each day are compared to a baseline value for that day of the week. The baseline is the median value, for the corresponding day of the week, during the 5-week period. Brunei and China data are not available. "Non-residentials" refer to the aggregated mobility data for places such as groceries and pharmacies, retail and recreation facilities, parks, transit stations and workplaces (see Appendix I). The percentage change in non-residential mobility is calculated based on a change in total visitors, compared to the baseline period.

**Figure 2. Selected Non-Regional Economies: Aggregate Non-Residentials Mobility**  
(Percentage change from baseline: January 3–February 6, 2020 = 0, 5-day moving average)

### Advanced Economies



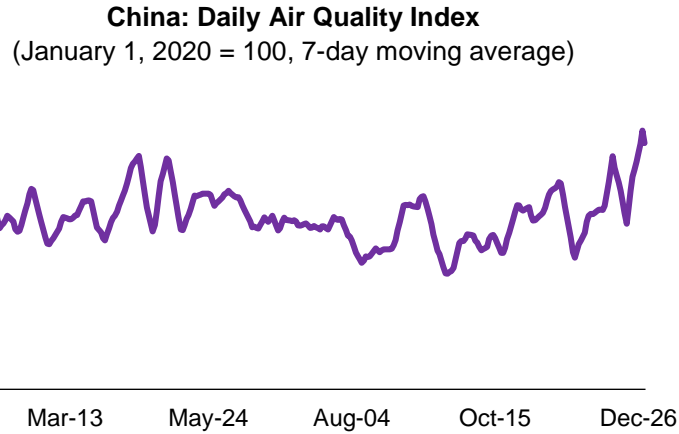
### Emerging Market Economies



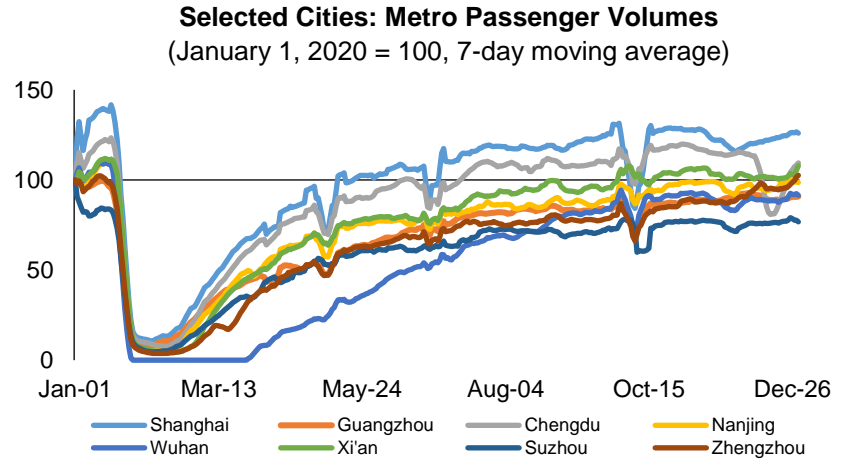
Sources: Haver Analytics, sourced from Google COVID-19 Community Mobility reports; and AMRO staff calculations.

Note: Google Community Mobility data show how visits and lengths of stay at different places change compared to a baseline. The changes are calculated with the same kind of aggregated and anonymized data used to show popular times for places in Google Maps. Changes for each day are compared to a baseline value for that day of the week. The baseline is the median value, for the corresponding day of the week, during the 5-week period. "Non-residentials" refer to the aggregated mobility data for places such as groceries and pharmacies, retail and recreation facilities, parks, transit stations and workplaces (Appendix I). The percentage change in non-residential mobility is calculated based on a change in total visitors, compared to the baseline period.

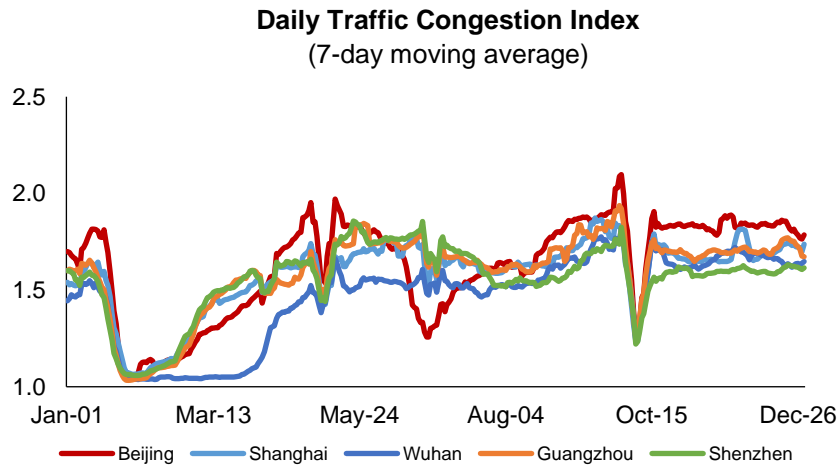
**Figure 3. China: Selected Daily Activity Indicators, 2020**  
(Data as of December 29, 2020)



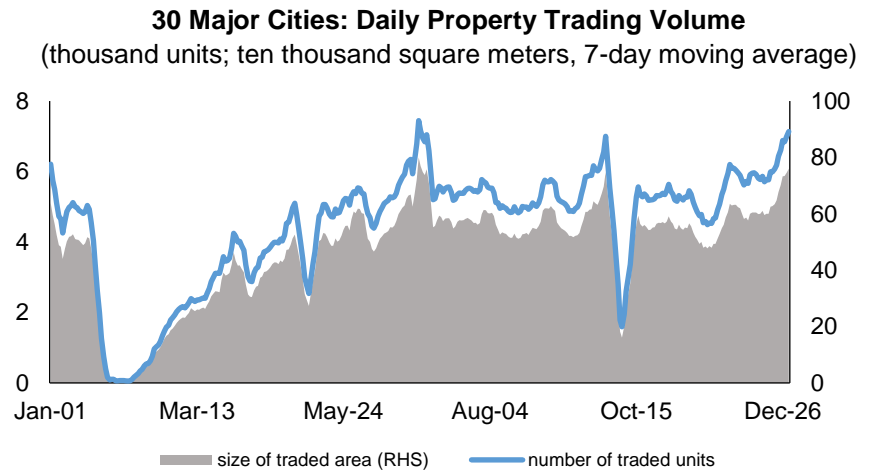
Sources: Haver Analytics; and AMRO staff calculations.  
Note: Air quality is taken as a proxy for the intensity of activity in different industries, as this is in part affected by factories' burning of coal. The closer the value to 0, the lower the air pollution.



Sources: Wind; and AMRO staff calculations.

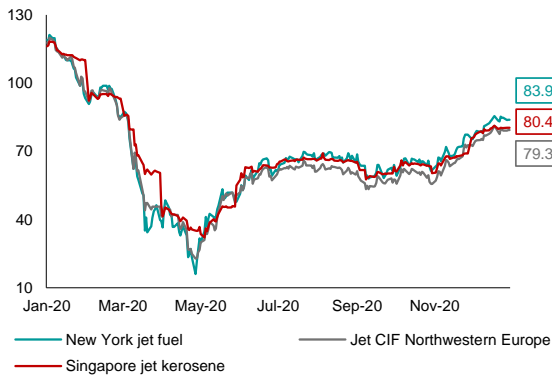


Sources: Wind; and AMRO staff calculations.  
Note: Congestion delay index = the travel time under traffic congestion/ travel time under free flow. The sharp decline in early October may be due to the long holiday in China.



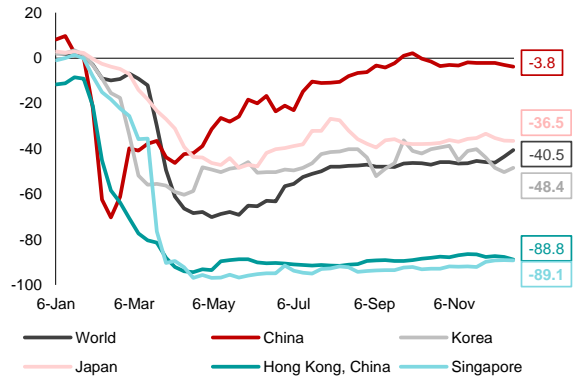
Sources: Wind; and AMRO staff calculations.

**Figure 4. Price of Jet Fuel**  
(January 1, 2019 = 100,  
as of December 29, 2020)



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

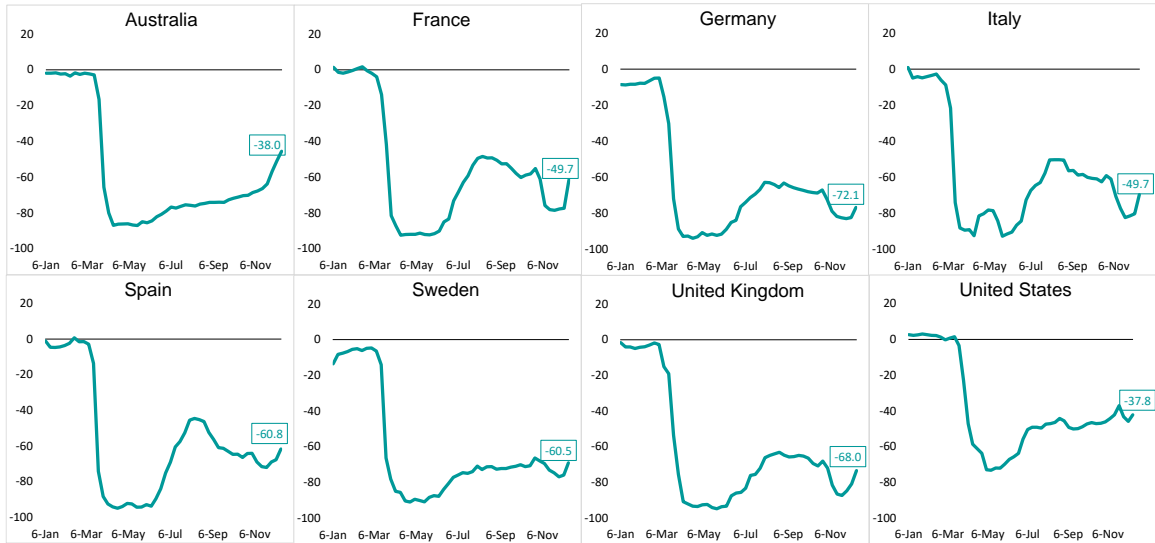
**Figure 5. World and Selected ASEAN+3 Economies: Weekly Scheduled Flights**  
(Percent year-over-year change,  
as of December 21, 2020)



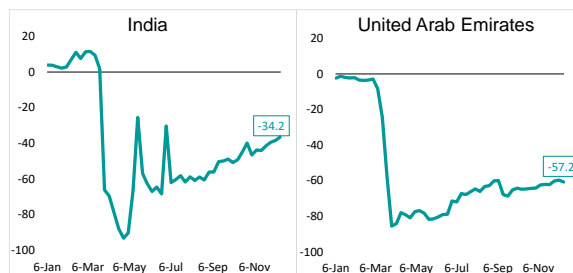
Sources: Official Aviation Guide; and AMRO staff calculations.  
Note: Latest available data as of December 30. Data include international and domestic flights.

**Figure 6. Selected Non-Regional Economies: Weekly Scheduled Flights**  
(Percent year-over-year change, as of December 21, 2020)

**Advanced Economies**



**Emerging Market Economies**



Sources: Official Aviation Guide; and AMRO staff calculations.

Note: Latest available data as of December 30. Data include international and domestic flights. The spike in India's number of scheduled flights in the week of May 18 was due to a sudden resumption of domestic flights.

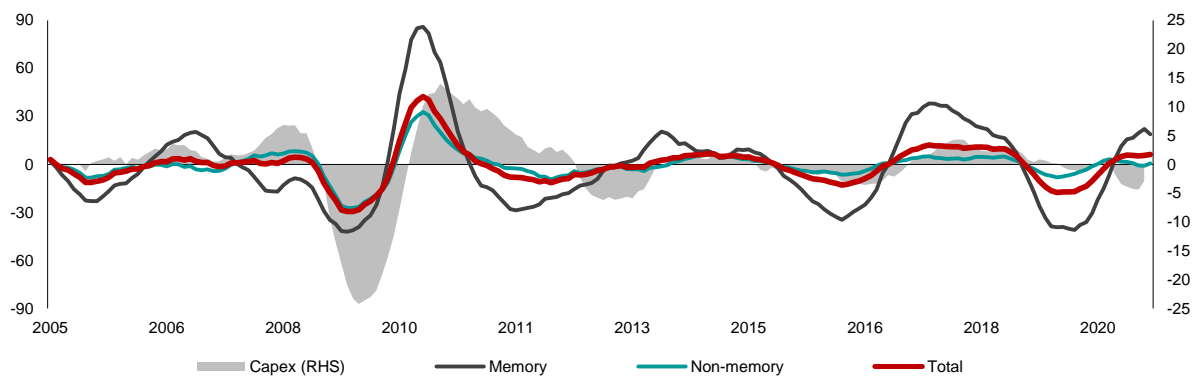
**Figure 7. Selected Economies: COVID-19 Government Response Stringency**  
(Daily index, as of December 29, 2020)



Sources: Thomas Hale, Sam Webster, Anna Petherick, Toby Phillips, and Beatriz Kira (2020). Oxford COVID-19 Government Response Tracker, Blavatnik School of Government. Via Our World in Data.

Note: The index records the number and "strictness" of government policies for containing COVID-19, using nine closure indicators (including school, work, and border travel). The redder the color, the more stringent the set of policies vis-a-vis the rest of the world, and can be taken to mean that the COVID-19 infections are still not under control.

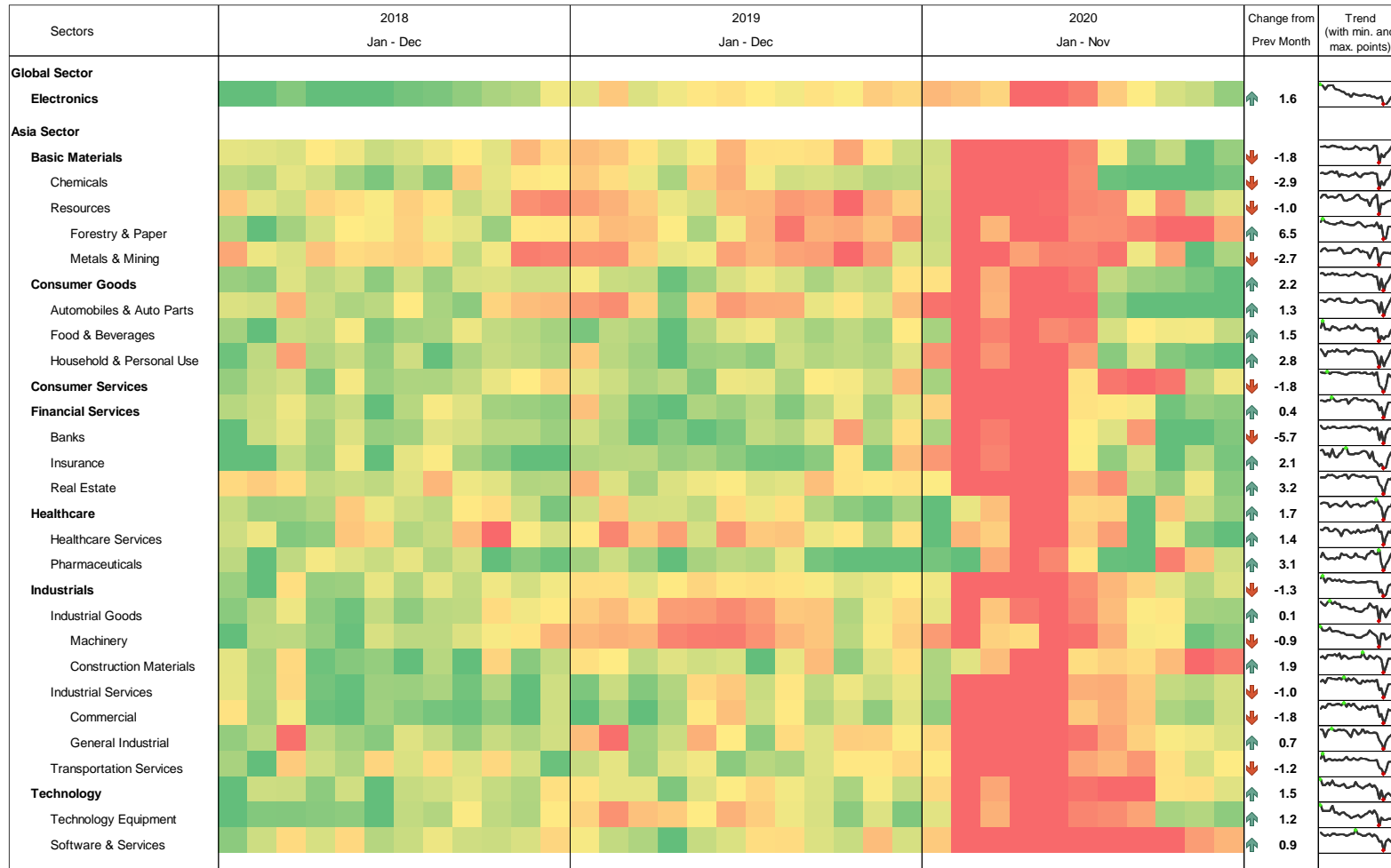
**Figure 8. Monthly Global Semiconductor and Capex Cycles**  
(Percent year-over-year, 6-month moving average)



Sources: Haver Analytics; World Semiconductor Trade Statistics Inc.; and AMRO staff estimates.

Note: All cycles are estimated by applying the Hodrick-Prescott filter separately, with a smoothing factor lambda of 14,400. Semiconductor data represent global sales; capex data are for the euro area, Japan, and the United States. Semiconductor data up to October 2020, while the capex data is up to September 2020.

**Figure 9. Monthly Purchasing Manager Index (PMI): Global Electronics and Asia Sectors**



Source: IHS Markit.

Note: The PMI headings 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 increasing in business activity over previous month, and a reading below 50 denotes otherwise.

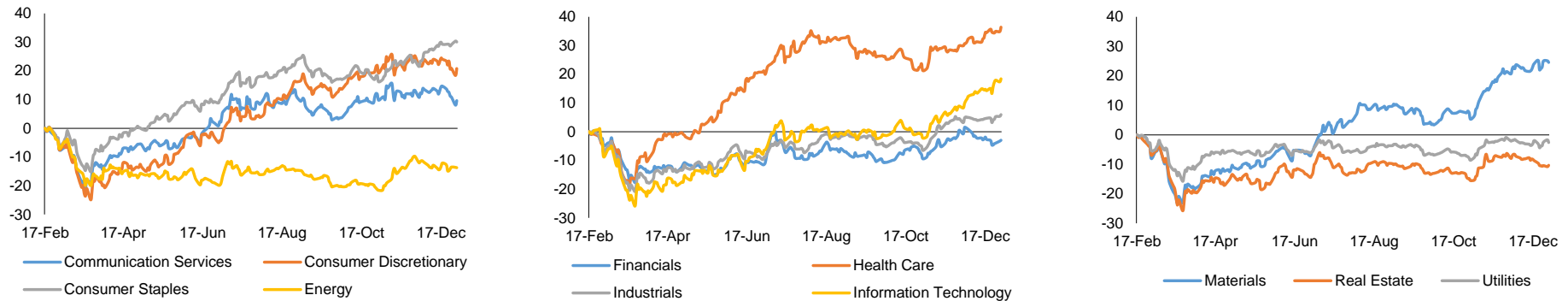
**Figure 10. ASEAN+3: Market Recovery Indicators,**  
(Percentage change since February 17, 2020; Data as of December 29, 2020)

Sector	CN	HK	JP	KR	ID	MY	PH	SG	TH	VN
Communication Services	-14.1	10.9	12.4	42.2	9.4	-3.5	17.2	-27.7	-11.4	7.9
Consumer Discretionary	45.3	22.0	10.1	23.5	-5.0	-13.7	0.8	-19.0	18.9	10.7
Consumer Staples	75.5	4.1	0.7	6.9	-4.8	-1.3	7.2	-3.1	-4.9	27.1
Energy	-11.4	-22.1	-31.5	12.0	21.1	-0.8			-4.4	7.2
Financials	-1.9	-2.5	-14.5	3.9	-1.7	5.6	-16.0	-6.2	-9.4	27.0
Health Care	38.2	48.3	20.4	96.5	35.3	75.9			5.4	15.6
Industrials	15.7	-13.1	0.3	18.8	3.0	-9.0	2.4	-12.5	-9.5	25.2
Information Technology	5.6	96.5	7.0	25.8	13.2			17.3	252.5	28.7
Materials	24.4		9.8	50.5	24.9	25.4			24.3	93.3
Real Estate	-1.8	-17.7	-20.1	57.8	-16.9		-5.3	-4.0	-16.1	12.4
Utilities	8.5	-21.1	-13.4	4.4	8.5	-8.3	3.5		-3.8	5.0
<b>Equity Index</b>	<b>13.3</b>	<b>-5.0</b>	<b>17.2</b>	<b>25.8</b>	<b>2.9</b>	<b>6.4</b>	<b>-2.6</b>	<b>-11.4</b>	<b>-4.3</b>	<b>17.6</b>
<b>FX (vs USD)</b>	<b>6.4</b>	<b>0.2</b>	<b>5.7</b>	<b>7.6</b>	<b>-3.5</b>	<b>2.3</b>	<b>5.0</b>	<b>4.4</b>	<b>3.6</b>	<b>0.5</b>
<b>10yr yield (bp)</b>	<b>29.8</b>	<b>-78.8</b>	<b>6.5</b>	<b>5.5</b>	<b>-69.0</b>	<b>-20.8</b>	<b>-140.0</b>	<b>-81.5</b>	<b>-0.5</b>	<b>-51.3</b>

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

Note: Changes are in percent, except for the 10-year yield. The stocks included in the benchmark indices are classified into sectors as per MSCI GICS classification.

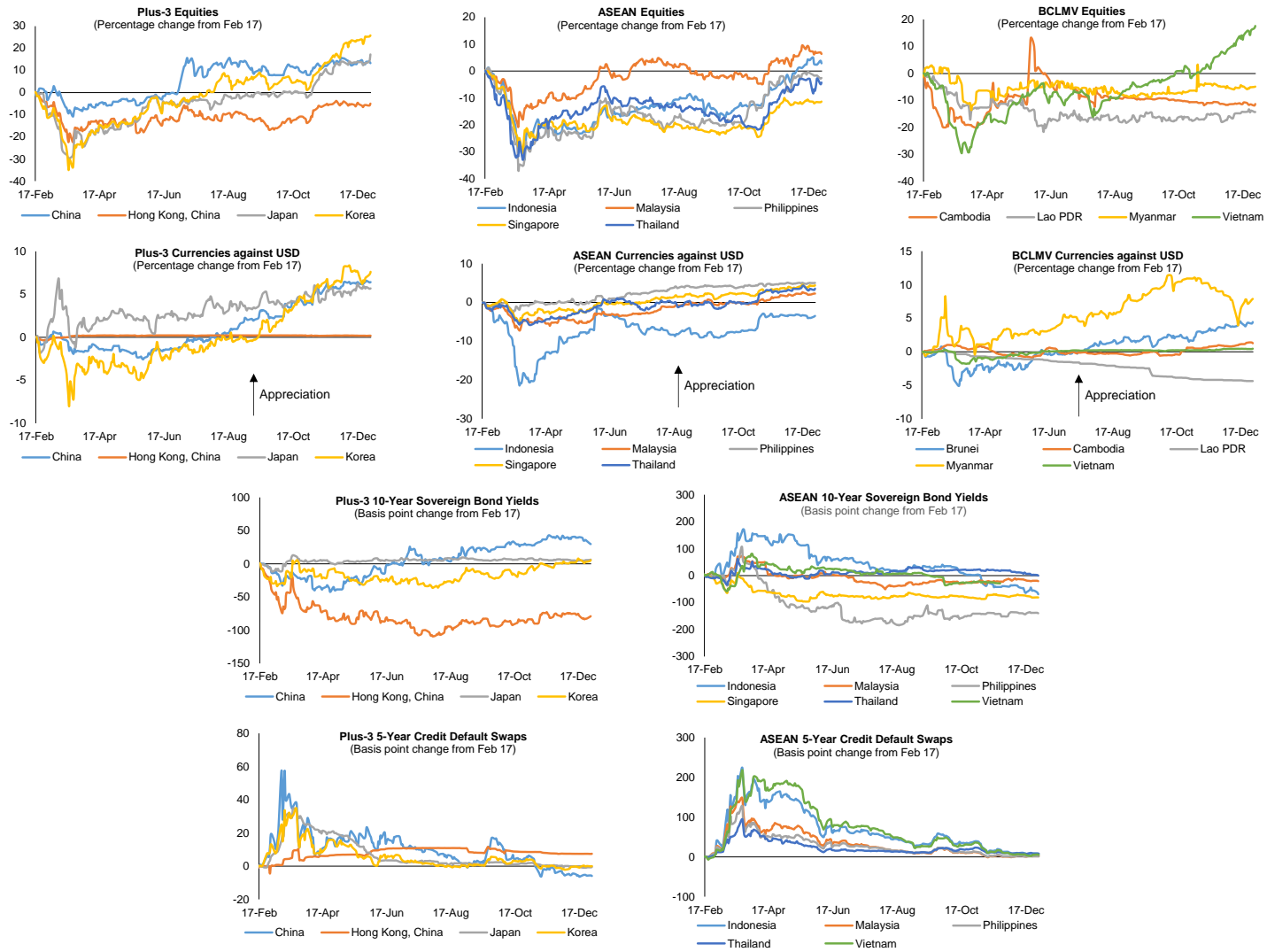
**Figure 11. ASEAN+3: Sectoral Equity Indices**  
(Percentage change from baseline: February 17, 2020 = 0; Data as of December 29, 2020)



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

Note: The regional equity indices are weighted using stock market capitalization, in US dollar values, as of February 17, 2020. The stocks included in the benchmark indices are classified into sectors as per MSCI GICS classification.

**Figure 12. ASEAN+3: Market Recovery Indicators, by Economy**  
(Data as of December 29, 2020)

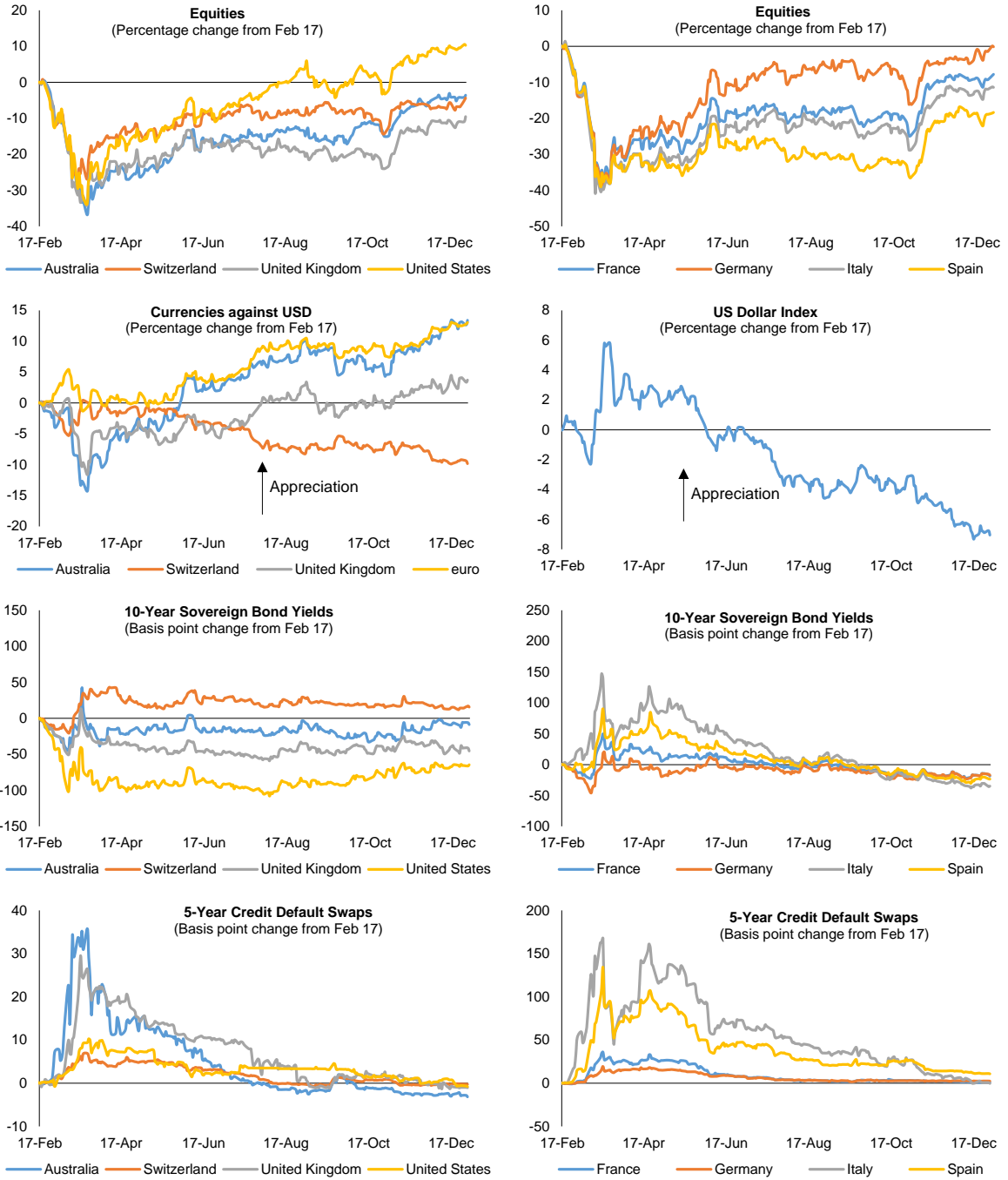


Sources: Bloomberg Finance, L.P; and AMRO staff calculations.



**Figure 13. Non-regional Economies: Market Recovery Indicators, by Economy**  
(Data as of December 29, 2020)

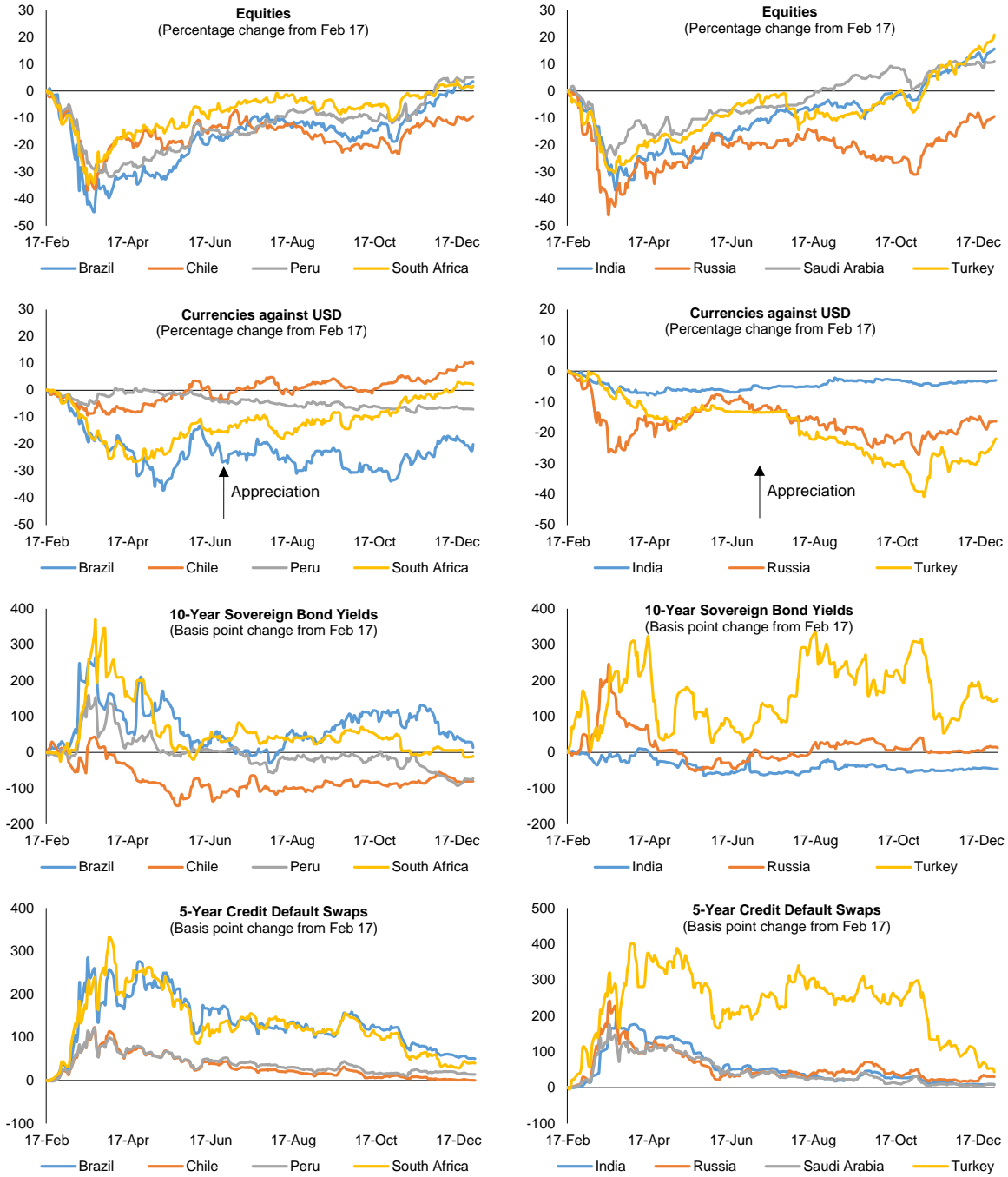
**Advanced Economies**



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

**Figure 13. Non-regional Economies: Market Recovery Indicators, by Economy**  
(Continued; Data as of December 29, 2020)

**Emerging Market Economies**

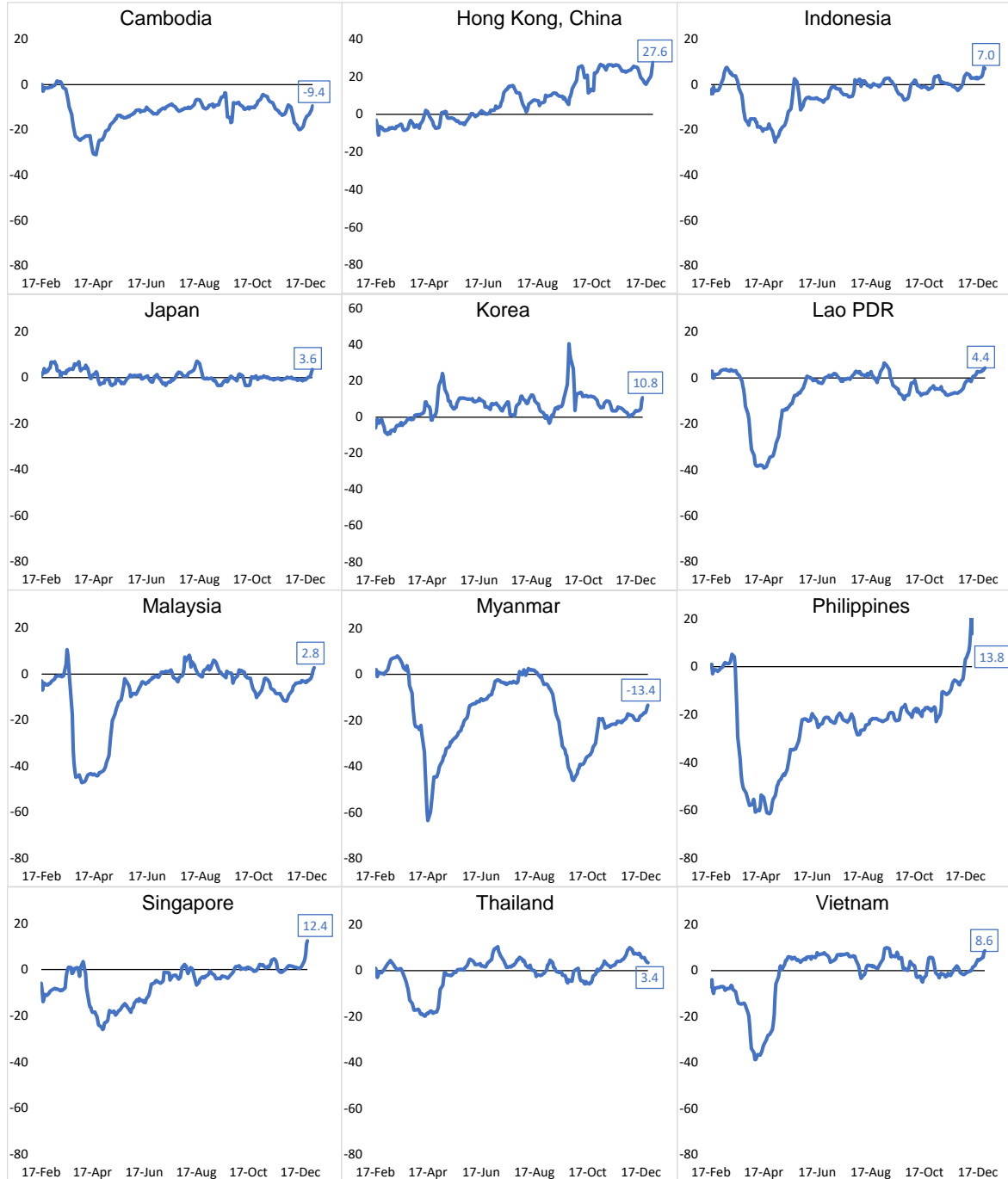


Sources: Bloomberg Finance, L.P.; and AMRO staff calculations.

**Appendix I. Non-Residentials Mobility: Individual Places**

**Appendix Figure 1. Selected ASEAN+3 Economies: Visits to Groceries and Pharmacies**

(Percentage change from baseline: January 3–February 6, 2020 = 0, 5-day moving average)



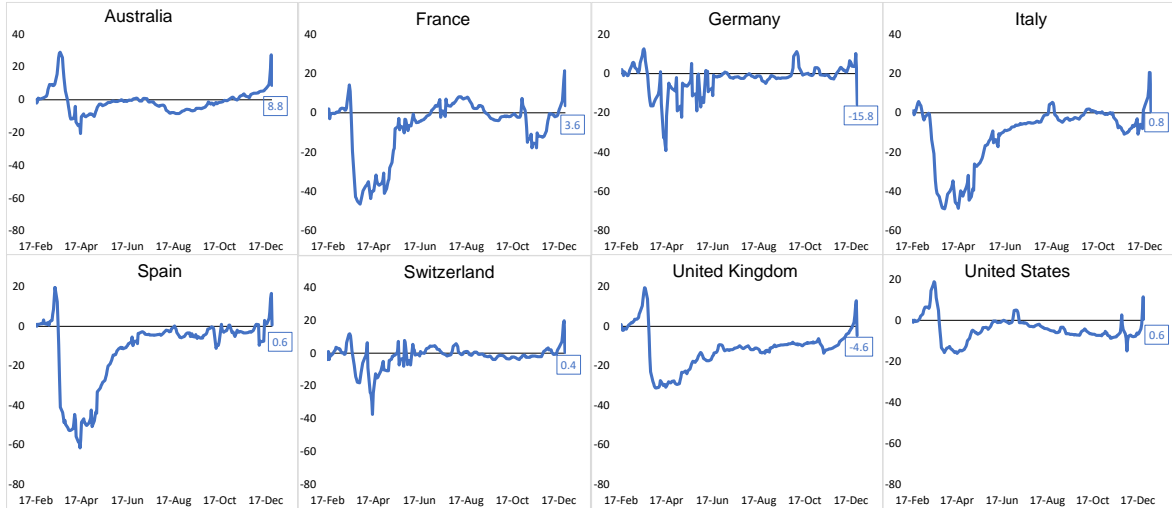
Sources: Haver Analytics, sourced from Google COVID-19 Community Mobility reports; and AMRO staff calculations.

Note: "Groceries and Pharmacies" include grocery markets, food warehouses, farmers' markets, specialty food shops, drug stores, and pharmacies.

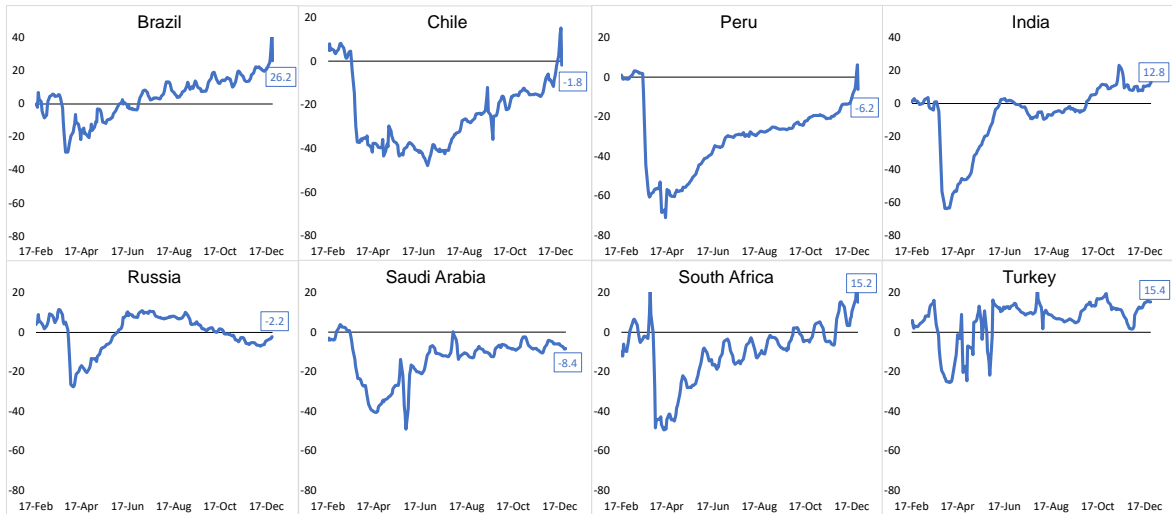
## Appendix Figure 2. Selected Non-Regional Economies: Visits to Groceries and Pharmacies

(Percentage change from baseline: January 3–February 6, 2020 = 0, 5-day moving average)

### Advanced Economies



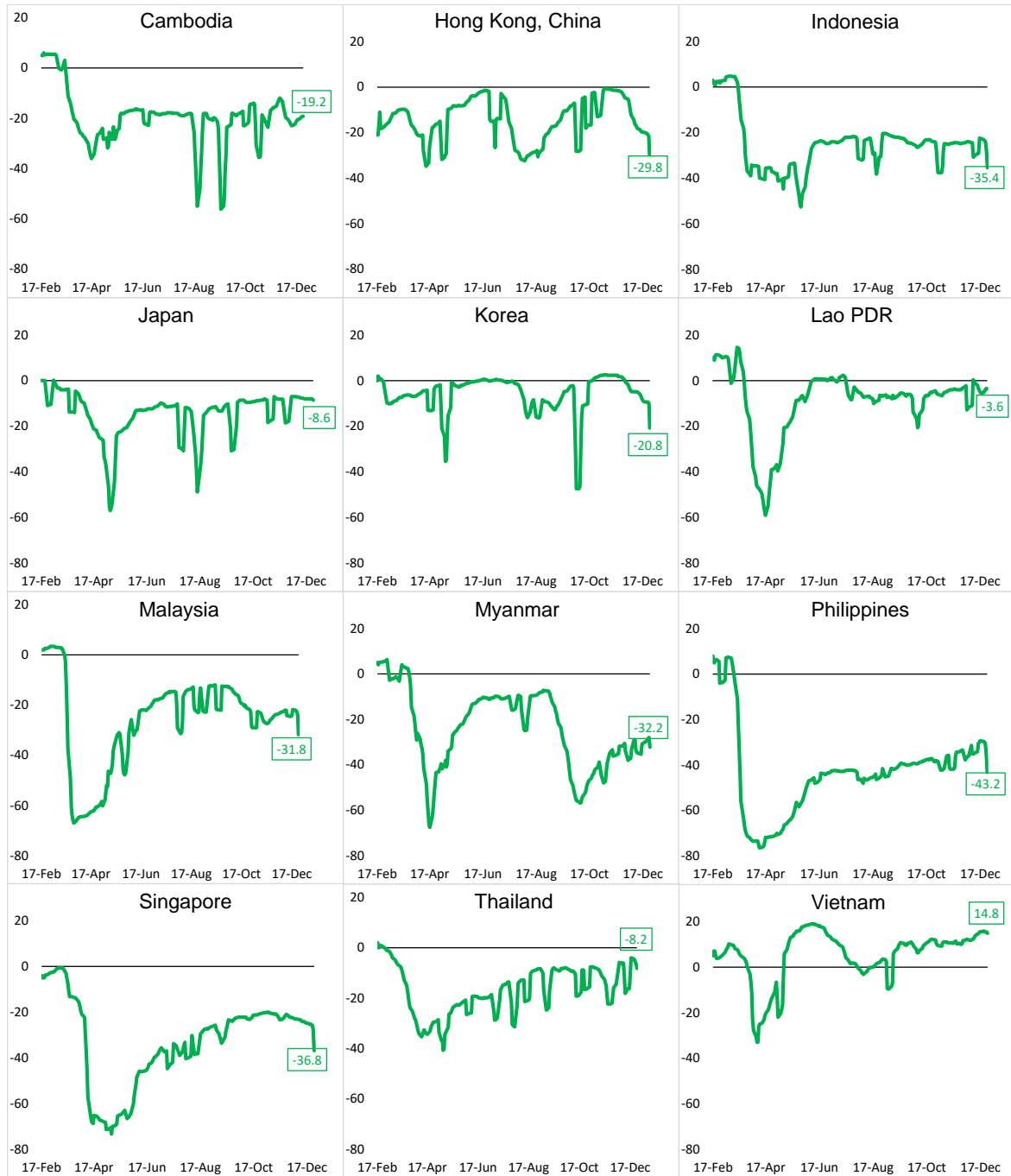
### Emerging Market Economies



Sources: Haver Analytics, sourced from Google COVID-19 Community Mobility reports; and AMRO staff calculations.

Note: "Groceries and Pharmacies" include grocery markets, food warehouses, farmers' markets, specialty food shops, drug stores, and pharmacies.

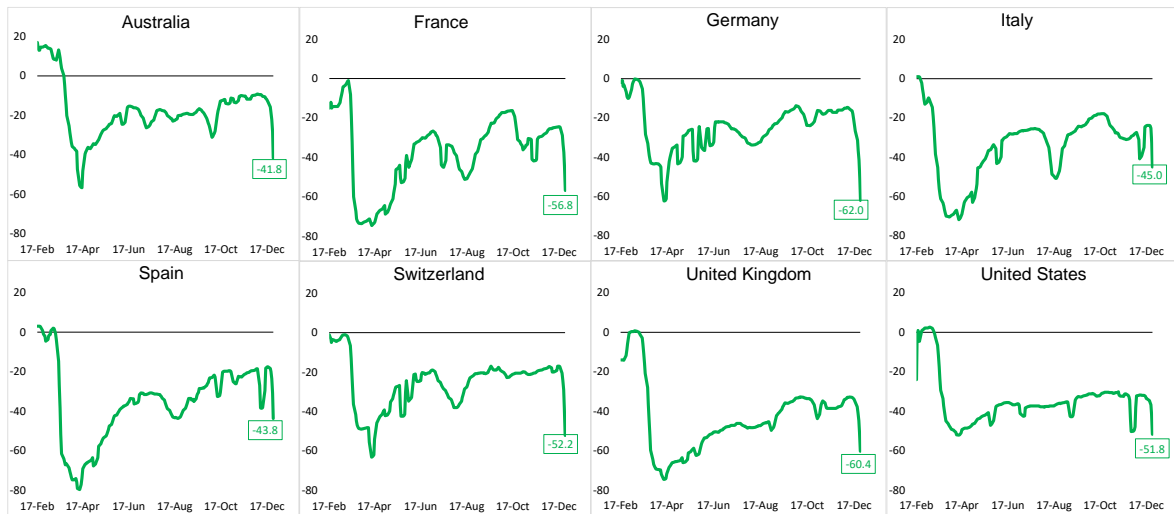
**Appendix Figure 3. Selected ASEAN+3 Economies: Visits to Workplaces**  
 (Percentage change from baseline: January 3–February 6, 2020 = 0, 5-day moving average)



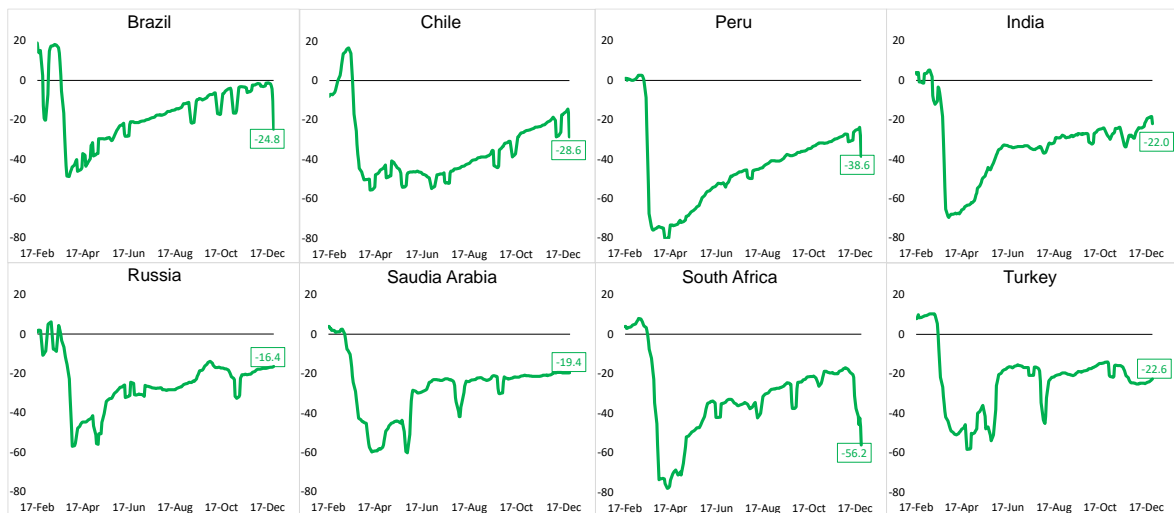
Sources: Haver Analytics, sourced from Google COVID-19 Community Mobility reports; and AMRO staff calculations.

**Appendix Figure 4. Selected Non-Regional Economies: Visits to Workplaces**  
 (Percentage change from baseline: January 3–February 6, 2020 = 0, 5-day moving average)

**Advanced Economies**

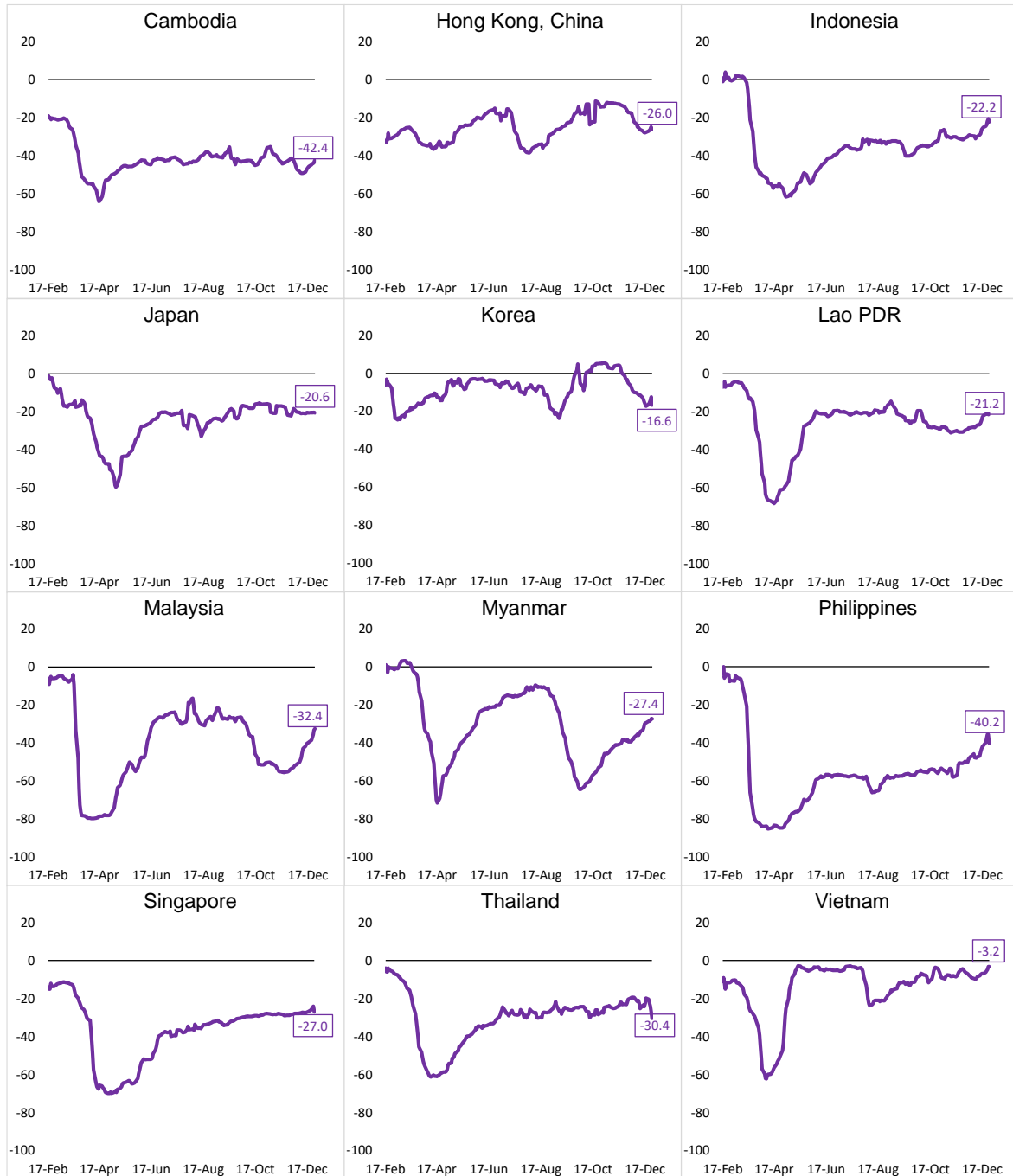


**Emerging Market Economies**



Sources: Haver Analytics, sourced from Google COVID-19 Community Mobility reports; and AMRO staff calculations.

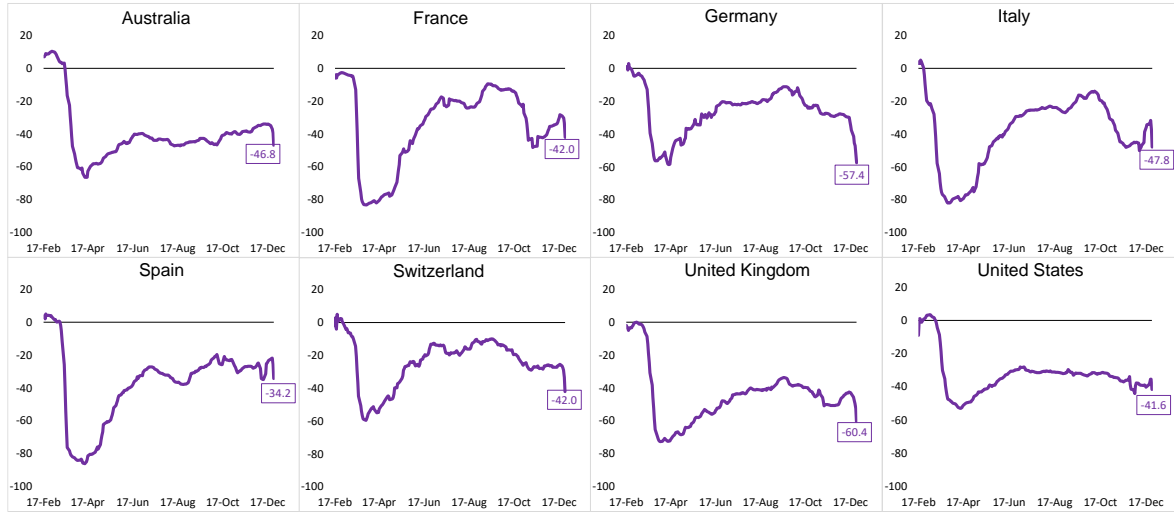
**Appendix Figure 5. Selected ASEAN+3 Economies: Visits to Transit Stations**  
 (Percentage change from baseline: January 3–February 6, 2020 = 0, 5-day moving average)



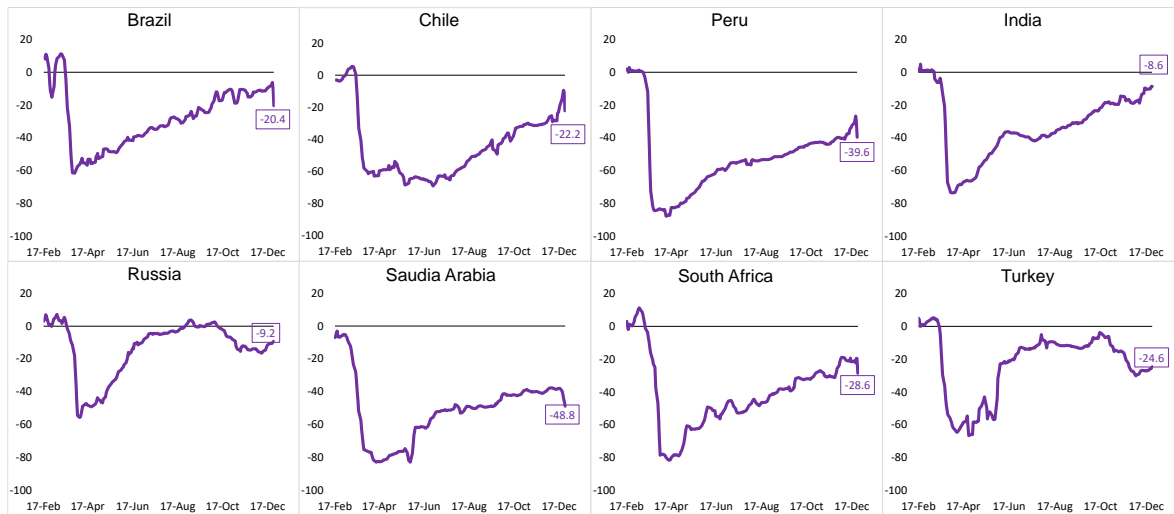
Sources: Haver Analytics, sourced from Google COVID-19 Community Mobility reports; and AMRO staff calculations.  
 Note: "Transit Stations" include public transport hubs such as subway, bus, and train stations.

**Appendix Figure 6. Selected Non-Regional Economies: Visits to Transit Stations**  
 (Percentage change from baseline: January 3–February 6, 2020 = 0, 5-day moving average)

**Advanced Economies**



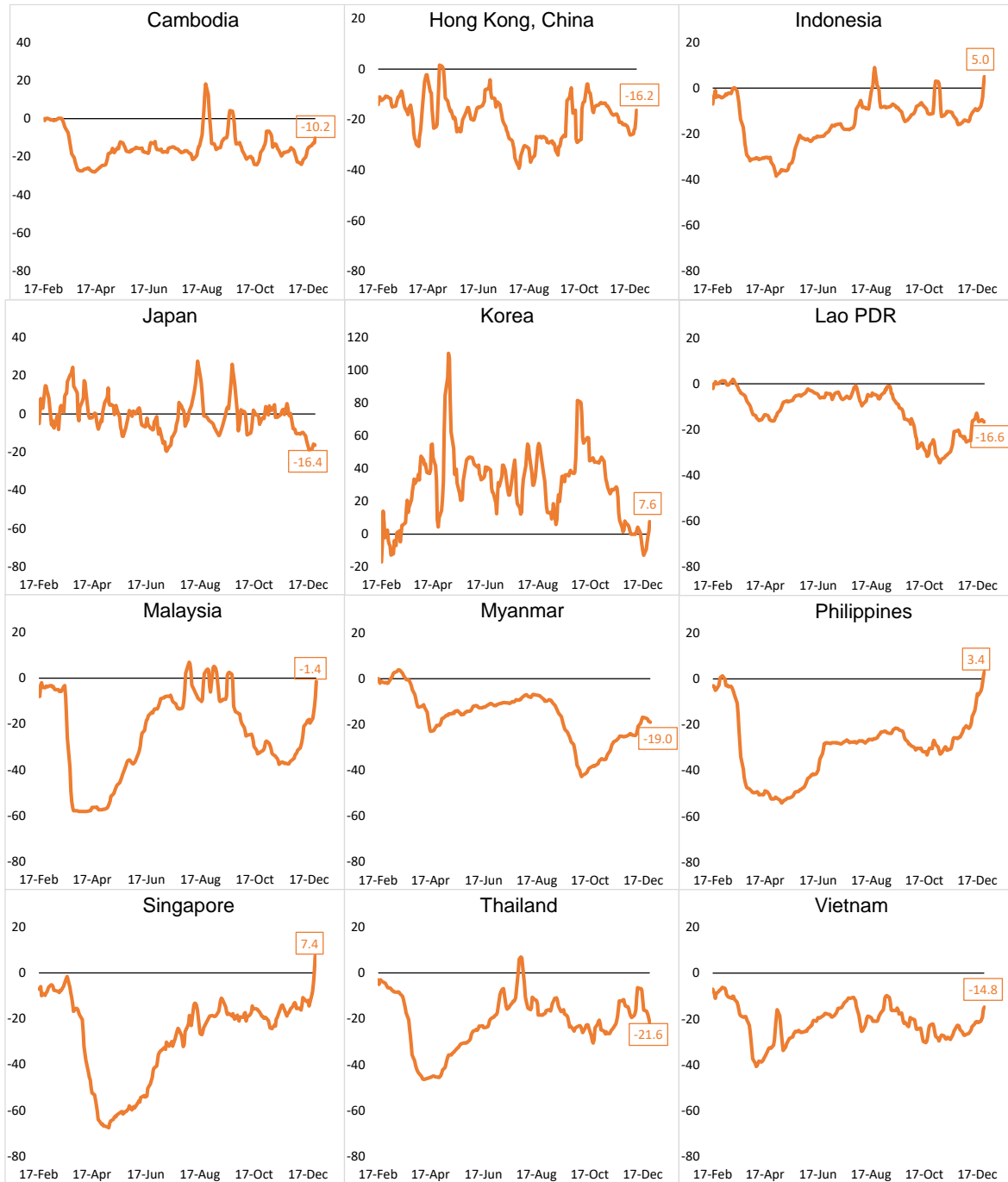
**Emerging Market Economies**



Sources: Haver Analytics, sourced from Google COVID-19 Community Mobility reports; and AMRO staff calculations.  
 Note: "Transit Stations" include public transport hubs such as subway, bus, and train stations.



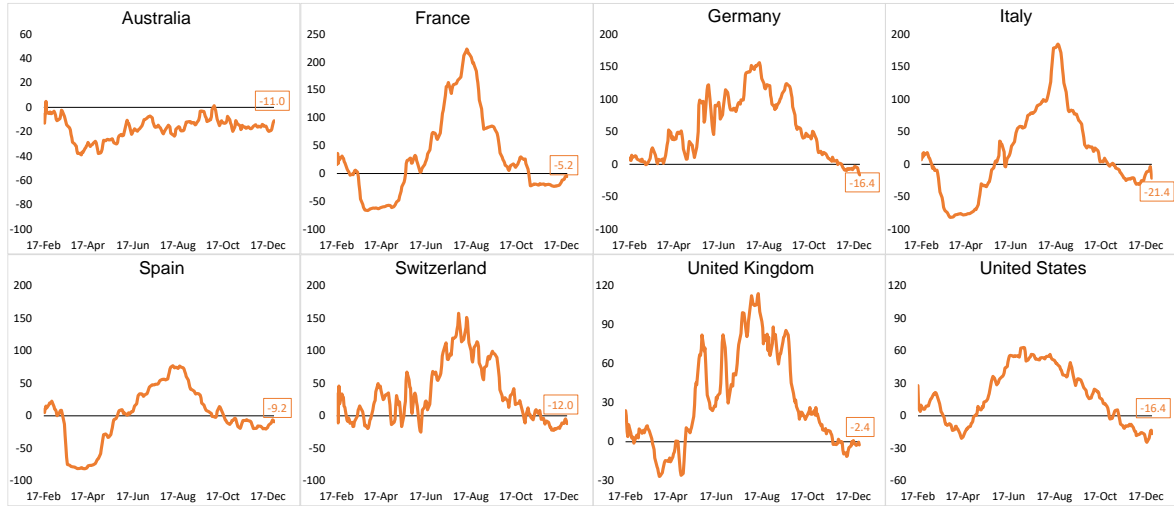
**Appendix Figure 7. Selected ASEAN+3 Economies: Visits to Parks**  
 (Percentage change from baseline: January 3–February 6, 2020 = 0, 5-day moving average)



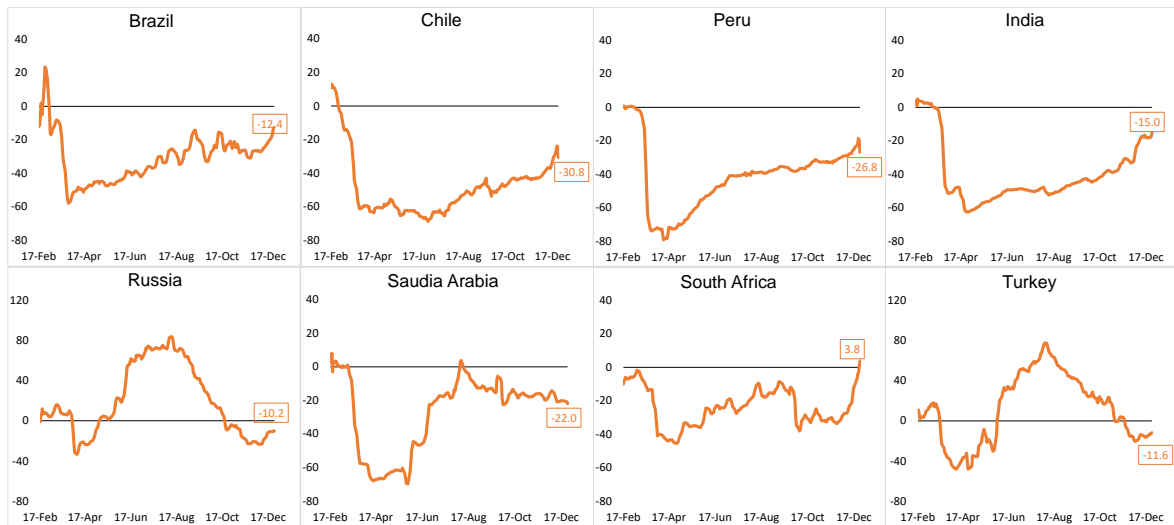
Sources: Haver Analytics, sourced from Google COVID-19 Community Mobility reports; and AMRO staff calculations.  
 Note: "Parks" include local parks, national parks, public beaches, marinas, dog parks, plazas, and public gardens.

**Appendix Figure 8. Selected Non-Regional Economies: Visits to Parks**  
 (Percentage change from baseline: January 3–February 6, 2020 = 0, 5-day moving average)

**Advanced Economies**



**Emerging Market Economies**



Sources: Haver Analytics, sourced from Google COVID-19 Community Mobility reports; and AMRO staff calculations.  
 Note: "Parks" include local parks, national parks, public beaches, marinas, dog parks, plazas, and public gardens.

### Appendix Figure 9. Selected ASEAN+3 Economies: Visits to Retail and Recreation Facilities

(Percentage change from baseline: January 3–February 6, 2020 = 0, 5-day moving average)



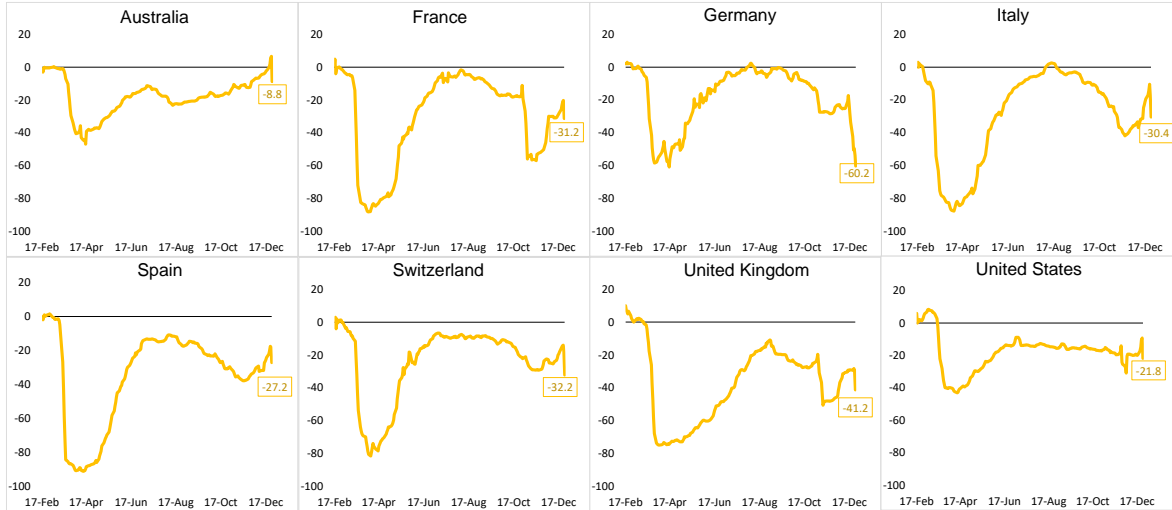
Sources: Haver Analytics, sourced from Google COVID-19 Community Mobility reports; and AMRO staff calculations.

Note: "Retail and Recreation Facilities" include restaurants, cafes, shopping centers, theme parks, museums, libraries, and movie theaters.

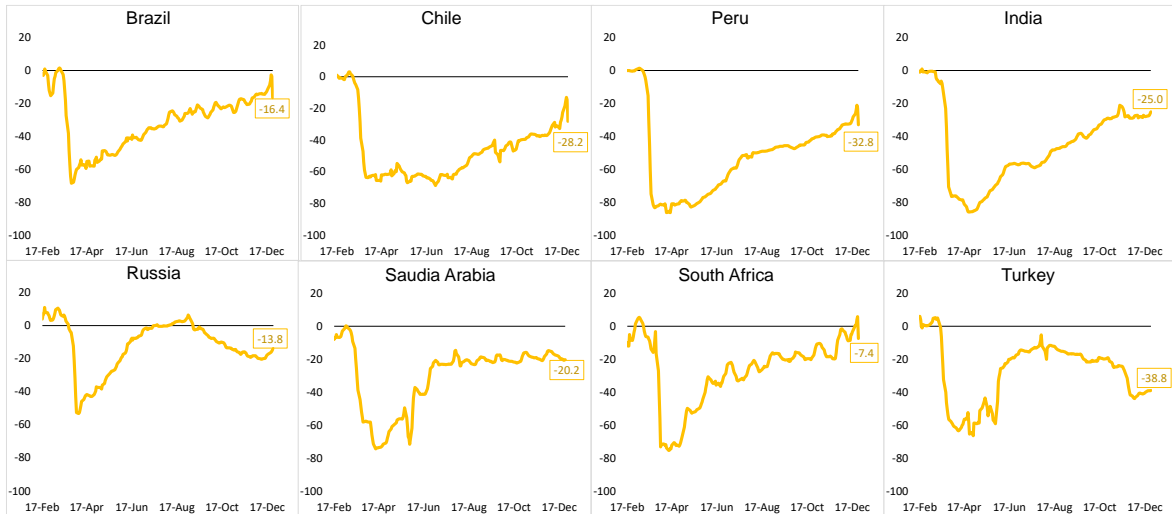
**Appendix Figure 10. Selected Non-Regional Economies:  
Visits to Retail and Recreation Facilities**

(Percentage change from baseline: January 3–February 6, 2020 = 0, 5-day moving average)

**Advanced Economies**



**Emerging Market Economies**



Sources: Haver Analytics, sourced from Google COVID-19 Community Mobility reports; and AMRO staff calculations.

Note: "Retail and Recreation Facilities" include restaurants, cafes, shopping centers, theme parks, museums, libraries, and movie theaters.