MOODY'S INVESTORS SERVICE

SECTOR IN-DEPTH

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Sovereigns - Asia Pacific

Spillovers from slowing trade weigh on growth; shifts in production chains positive for a few sovereigns over time

Asian export growth has slowed substantially in recent months as the global economy has cooled, including demand from China (A1 stable). As trade volumes decline, in part driven by ongoing and broad-based tensions between the US (Aaa stable) and China, we explore which countries in the region are most vulnerable to durably slower growth in Chinese demand, and which could stand to gain from longer-term shifts in investment and trade connections.

» **Countries with higher trade exposure to China face largest deceleration in economic growth.** The slowdown in Asian exports has been broad-based, reflecting weakening global output and, in particular China, given its role as a source of final demand and in the region's supply chain. Apart from Hong Kong (Aa2 stable) and Mongolia (B3 stable), Singapore (Aaa stable), Vietnam (Ba3 stable) and Taiwan (Aa3 stable) are among the most exposed to a sustained slowdown in China. These trade-driven economies are key nodes in the manufacture of intermediate products, especially for electronics, which are particularly exposed to tensions between the US and China. Given the uncertain outlook for growth and trade policy, as well as generally tighter financing conditions, slower investment growth will amplify the trade slowdown.

» **Diversity of export destinations and scope for fiscal accommodation provides some mitigation against near-term softening.** Countries in the region are also susceptible to second-round effects of slower Chinese imports given lower demand from other trading partners who face pressures from their respective exposures to China. Those more reliant on trade outside of Asia Pacific, which is likely to grow at a steadier, albeit slower, pace, such as Bangladesh (Ba3 stable), will be less vulnerable. At the same time, higher public spending can mitigate flagging external demand, especially in Singapore, Korea (Aa2 stable) and Taiwan, whose strong fiscal positions provide scope for potentially greater support.

» **Gains from trade and investment diversion will depend on industrial structure, scalability and labor costs**, potentially benefiting Thailand (Baa1 stable), Vietnam, Taiwan and Malaysia (A3 stable) (see Exhibit 1), although the reconfiguration of supply chains will only occur over a number of years. Countries with already large manufacturing bases are likely to have existing domestic supplier networks, as well as deep pools of labor, that support further investment. Nevertheless, country-specific hurdles, such as protectionist policies and political risk, will limit the gains from potential shifts in production chains in some cases.

Exhibit 1
Thailand, Vietnam, Taiwan and Malaysia stand to benefit the most from trade and investment diversion away from China

Country	Export Similarity Index (score)	Labor Cost ($ nominal wage, % of China)	Manufacturing GDP ($ billion)	Logistics Performance Index (score)	Ease of Doing Business (score)	Exports to China (% of GDP)
Thailand	0.35	46	123	3.4	78.5	12.5
Vietnam	0.43	26	34	3.3	68.4	14.6
Taiwan	0.35	179	182	3.6	80.9	22.5
Malaysia	0.32	84	70	3.2	80.6	13.5
Hong Kong	0.39	220	3	3.9	84.2	54.1
Korea	0.37	340	422	3.6	84.1	24.8
India	0.28	20	390	3.2	67.2	4.2
Japan	0.33	325	1,042	4.0	75.7	19.0
Indonesia	0.22	22	205	3.2	68.0	13.7
Singapore	0.28	413	58	4.0	85.2	13.9
Philippines	0.22	26	61	2.9	57.7	11.7
New Zealand	0.11	371	20	3.9	86.6	22.3
Sri Lanka	0.16	26	16	2.6	61.2	3.7
Australia	0.10	430	76	3.8	80.1	29.6
Pakistan	0.11	18	37	2.4	55.3	6.9
Macao	0.20	198	0			21.9
Cambodia	0.14	26	4	2.6	54.8	6.2
Bangladesh	0.11	16	43	2.6	42.0	2.5
Mongolia	0.02	42	1	2.4	67.7	85.0
Fiji	0.10	63	0	2.4	61.2	3.6
Maldives	0.00		0		54.4	0.1
Papua New Guinea	0.02		0	2.2	60.1	15.5
Solomon Islands	0.01		0	2.6	59.2	65.9
Memo:						
China		6,190	3,559	3.6	73.6	

Notes: The Export similarity index measures the composition of export baskets between two countries by comparing the underlying shares of each product category in each country's total exports; a higher value denotes a high degree of substitution between that country and China. Labor cost is the mean nominal monthly wage in US dollars for each country as compared to that for China in 2017, or the latest available. Logistics performance and Ease of doing business refers to each country's latest scores in the World Bank's respective reports in those areas. Exports to China as a share of GDP shows 2017 data.
Sources: World Bank, ILO Global Wage Report 2018/19, Moody's Investors Service

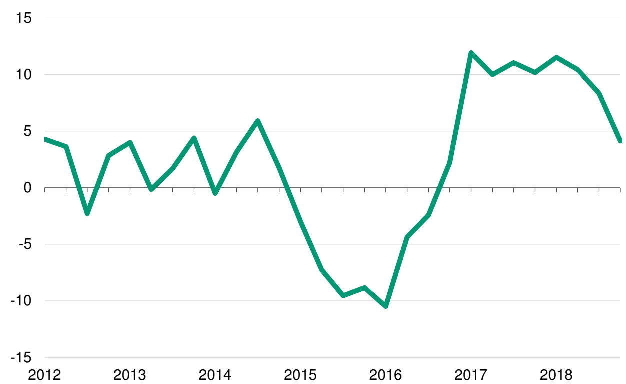
Countries with higher trade exposure to China face largest deceleration in growth

Asian exports entered 2019 on a weak footing. Growth in Asia Pacific goods exports[1] slowed to 4.3% year-on-year in the fourth quarter of 2018, down from a recent high of nearly 14% in the third quarter of 2017 (see Exhibit 2). The weakening in export shipments over the past year has been broad-based, reflecting the deteriorating outlook for global growth and, in particular, China. Lower import demand from the region's largest economy (see Exhibits 3 and 4) reflects both domestic and external factors, including slower domestic demand as credit availability has tightened and the trade dispute with the US. [2]

Exhibit 2

Asia Pacific goods exports have slowed considerably over the course of 2018

(Merchandise exports, % change year-on-year, dollar terms)

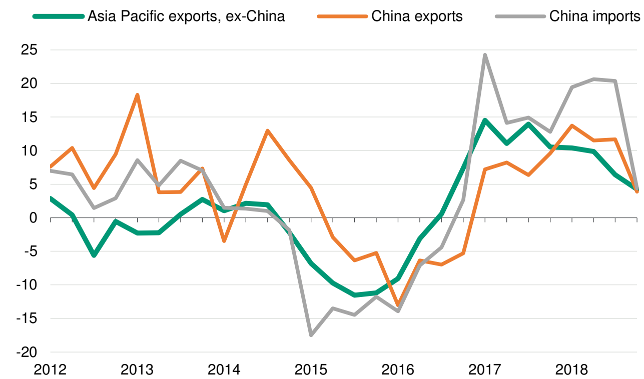


Note: Includes 18 out of 24 rated governments in the region, namely Australia, Bangladesh, China, Hong Kong, India, Indonesia, Japan, Korea, Malaysia, Mongolia, New Zealand, Pakistan, the Philippines, Singapore, Sri Lanka, Taiwan, Thailand and Vietnam.
Sources: National authorities, Haver Analytics, Moody's Investors Service

Exhibit 3

Region's synchronized exports performance reflects supply chain integration with China, as well as China as a source of final demand

(Merchandise trade, % change year-on-year, dollar terms)

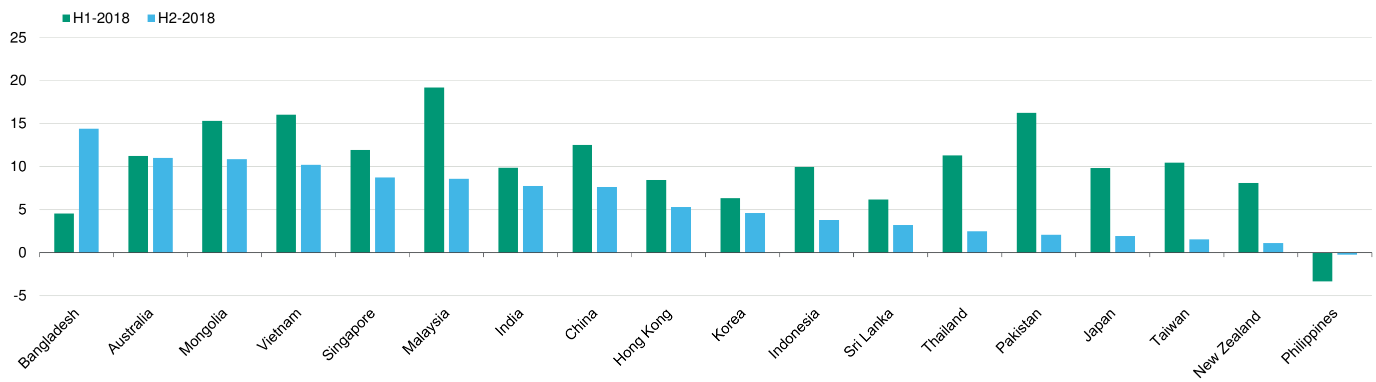


Sources: National authorities, Haver Analytics, Moody's Investors Service

Exhibit 4

Goods exports have decelerated for most Asia Pacific sovereigns over the past year

(Merchandise exports, % change year-on-year, dollar terms)



Sources: National authorities, Haver Analytics, Moody's Investors Service

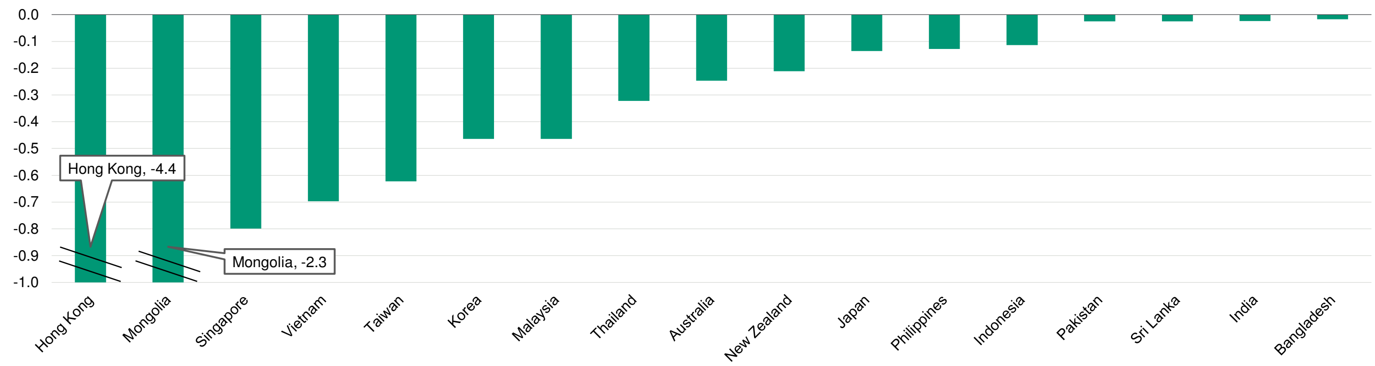
In addition, commodity price falls have contributed to the more pronounced deceleration in Indonesia (Baa2 stable) and New Zealand (Aaa stable), both of which recorded mild year-on-year contractions in goods exports in the fourth quarter. By contrast, the demonstrated resilience of Bangladesh's exports reflects in part their limited exposure to China and the rest of Asia.

We expect the outlook for the region's exports, and consequently economic growth, to continue to weaken, given our projection of a slowing in Chinese real GDP growth to 6.0% in 2019 and 2020 from 6.6% in 2018 and 6.9% in 2017. The transmission of a slowing Chinese economy to other parts of Asia Pacific through trade is significant, given China's role as a source of final demand and its position in the regional supply chain.

Assuming that demand from China weakens equally for all goods types, we estimate the direct impact on trading partners' exports of a slowing in China's import growth to 5% in 2019, half the 9.9% increase in 2018. Hong Kong and Mongolia are most exposed given the high concentration of their exports that are absorbed by China. Singapore, Vietnam, Taiwan, Korea and Malaysia (see Exhibit 5) are also vulnerable. These trade-driven economies are key nodes in the manufacture of intermediate products, especially for electronics, a sector particularly exposed to the US-China trade and technology disputes.

Exhibit 5

Hong Kong, Mongolia, Singapore and Vietnam are most exposed to a fall in Chinese demand
(Foregone goods exports as a share of GDP)



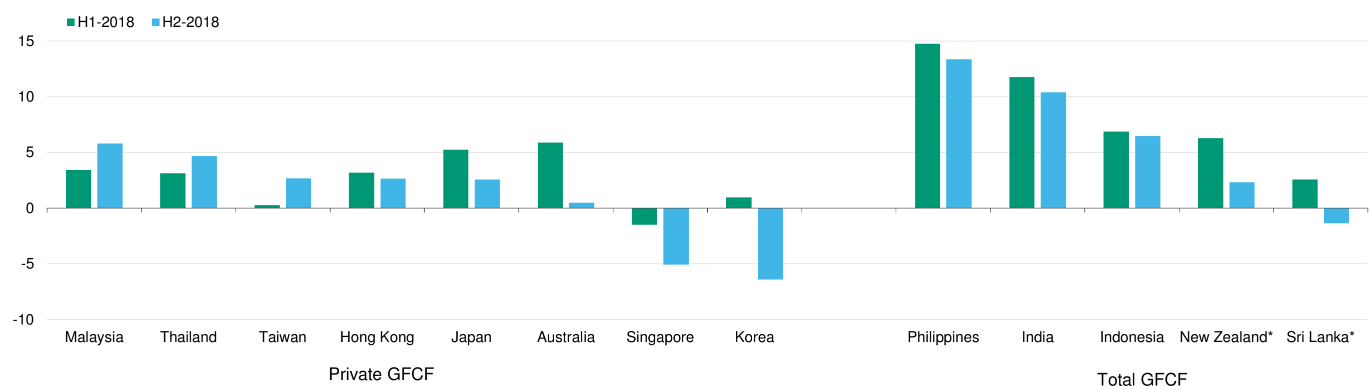
Note: For each country, we calculate the difference in goods exports when comparing two scenarios: 10% growth in Chinese goods imports vs. 5% growth in Chinese goods imports; calculated in nominal dollar value terms and subsequently expressed as a function of each country's nominal GDP.
Sources: International Trade Center, Moody's Investors Service

In addition to lower demand for its own domestically-produced goods, Singapore would also be exposed to a generalized downturn in China's demand for commodities and goods sourced elsewhere in the region, such as those provided by Australia (Aaa stable) or Indonesia, given the city-state's role as a shipping, logistics and commodities trading hub. By contrast, relatively closed economies such as India are less susceptible.

Given the uncertain outlook for growth and trade policy, as well as generally tighter financing conditions, slower investment growth will amplify the trade slowdown, as shown over the second half in 2018 (see Exhibit 6).

Exhibit 6

Investment growth for much of APAC weakened in second half of 2018, driven by private sector
(Real gross fixed capital formation, % change year-on-year)



Note: Total gross fixed capital formation shown where private gross fixed capital formation not available. Private nonresidential investment shown for Japan. Q3-2018 shown for Sri Lanka and New Zealand as H2-2018 not yet available.
Sources: National authorities, Haver Analytics, Moody's Investors Service

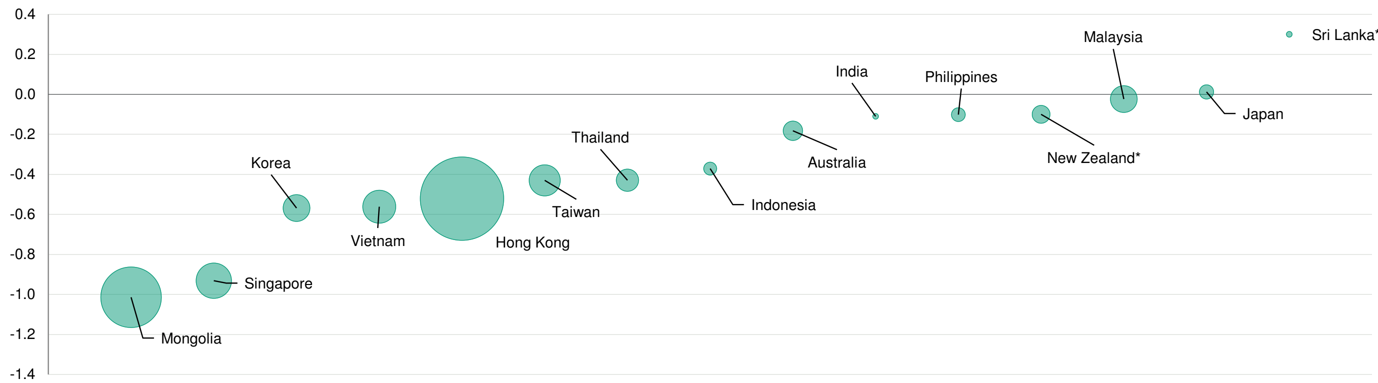
In Korea, large declines in facilities investment – machinery and transport equipment – led the fall in private gross fixed capital formation, reflecting the weakness in export-oriented industries, such as electronics and semiconductor manufacturing, that we expect to persist well into 2019. Similar considerations are also likely to drive softer private investment in Singapore and Taiwan, both of which already recorded year-on-year contractions in the fourth quarter. While a recovery from several years of subdued private investment in Thailand gained traction through 2018, it is unlikely to gain further strength at least through the first half of 2019 on account of uncertainty posed by upcoming elections.

While more granular data for the private sector is not available, the (milder) deceleration in gross fixed capital formation in Indonesia and the Philippines (Baa2 stable), two of the more domestically driven economies among the large emerging markets in the region, likely follows on from local policy rate increases. Over the past year, they have also been subject to higher market interest rates against the backdrop of their widening current account deficits and exchange rate volatility. We project some of these pressures to ease somewhat on account of lower oil prices and slower expectations of tightening by the US Federal Reserve, among other factors, although a sharp tightening in financing conditions may occur in particular markets, especially where policy credibility is relatively weak. Moreover, for Indonesia and the Philippines, public infrastructure investment will contain further weakening in total gross fixed capital formation.

Overall, we expect the largest deceleration in real GDP growth in 2019 in Mongolia, Singapore, Korea, Vietnam and Hong Kong (see Exhibit 7). These economies are among the most trade-oriented, and most reliant on Chinese demand.

Exhibit 7

Countries most exposed to a fall in Chinese demand facing largest declines in economic growth
(Y-axis shows change in real GDP growth, 2019F vs. 2018; size of bubbles shows exports to China as a share of GDP)



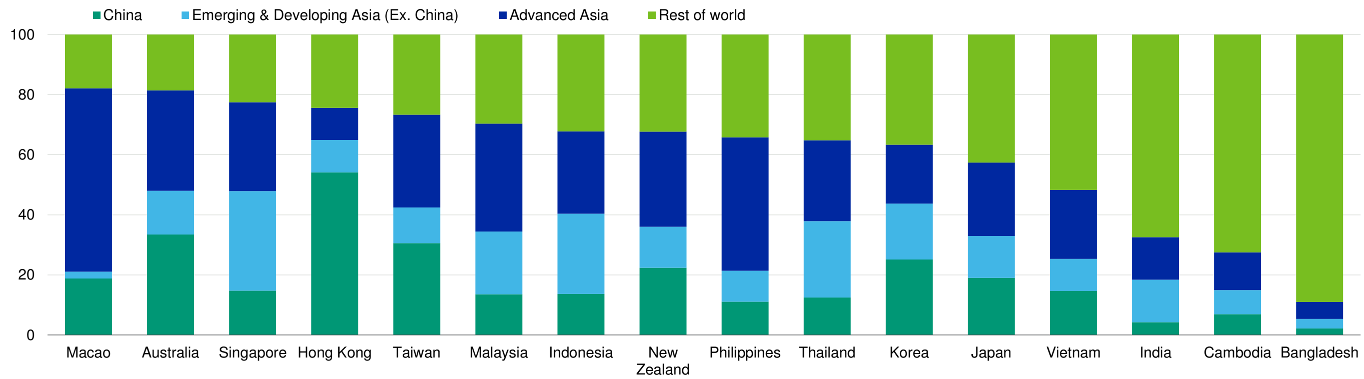
Note: 2018 through three quarters shown for Sri Lanka and New Zealand.
Sources: National authorities, Haver Analytics, Moody's Investors Service

Diversity of export destinations and scope for fiscal accommodation provides some mitigation against near-term softening

The exposure of Asia Pacific countries to China reflects increased trade integration across the region over the past two decades[3], facilitated in part by the implementation of free trade agreements (FTAs). These include both bilateral and multilateral pacts, such as that entered into by China with the 10 members of the Association of Southeast Asian Nations (ASEAN).[4] As such, countries in the region are also susceptible to lower demand from other trading partners who face pressures from their own respective exposures to a slowing in China.

By contrast, countries that are more reliant on trading partners outside of Asia Pacific, such as Bangladesh, are less vulnerable to the direct spillover effects from an escalation of the US-China trade conflict or a slowdown in China that reverberates through the regional supply chain (see Exhibit 8). Nevertheless, the degree to which a greater reliance on trade with countries outside of Asia Pacific can mitigate the synchronized regional downturn will also depend on demand conditions in those export destinations. To that end, we highlighted in our most recent Global Macro Outlook 2019-20 (February 2019 Update) report, that the risks to global growth are broad-based and tilted to the downside with growth momentum in the euro area stalling in the second half of 2018, while we see the US--although it has defied the slowing trend so far--as likely to moderate over the next two years because of a cooling fiscal impulse and capital spending. Asian exporters reliant on European markets will experience less of a deceleration in demand but will also see continued relatively muted growth in demand in general.

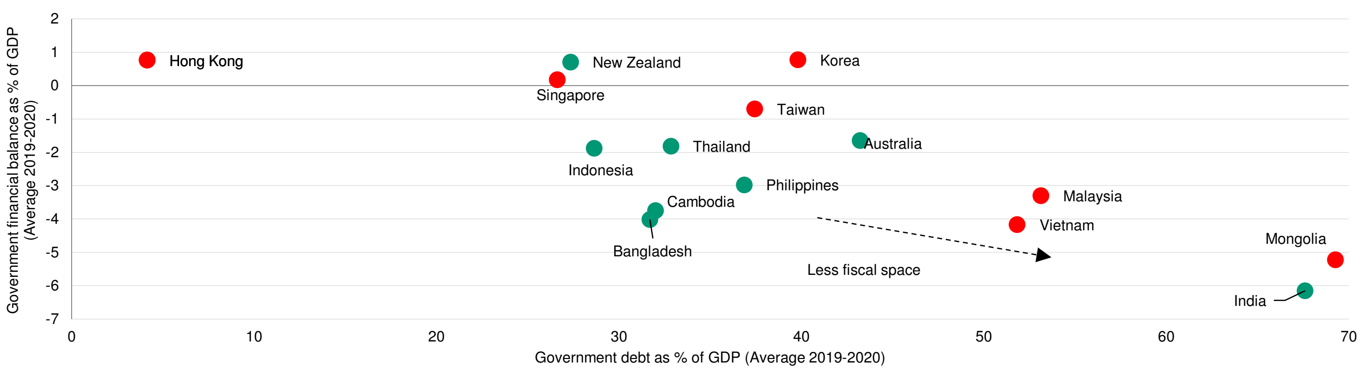
Exhibit 8
India, Cambodia and Bangladesh less exposed to an Asian slowdown
(% of goods exports)



Sources: IMF Direction of Trade Statistics, Taiwan DGBAS, Haver Analytics, Moody's Investors Service

Government spending can provide some mitigation against flagging external demand, depending on their fiscal positions. Although their economies are among the most susceptible to slower Chinese demand, Singapore, Hong Kong, Korea and Taiwan have fiscal space to support growth if needed, as we expect they will run narrow fiscal deficits or balanced budgets at the general government level over the next two years and maintain moderate government debt levels (see Exhibit 9). By contrast, the ability of governments in Malaysia, India (Baa2 stable) and Vietnam to push through fiscal stimulus is constrained by their comparatively weaker fiscal strength, as reflected in their wider budgetary shortfalls and higher debt.

Exhibit 9
Less space for fiscal expansionary policies in Vietnam, Malaysia and India, to help compensate for slower external demand
(Average 2019-20, as % of GDP)



Note: Japan not shown due to its high debt to GDP levels at more than 200%. Red-colored nodes refer to countries identified as more directly exposed to a slowdown in China through the trade channel.
Sources: National authorities, Moody's Investors Service

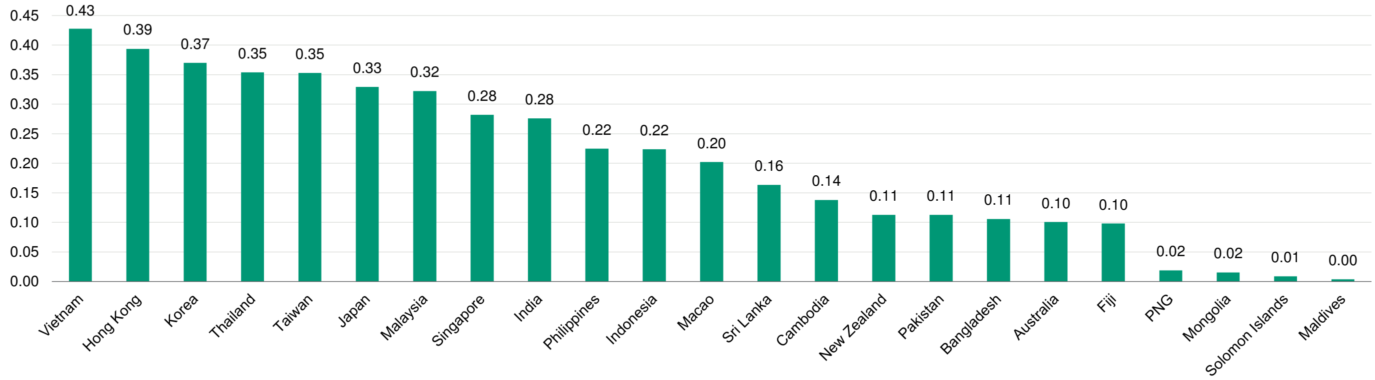
Gains from long-run trade and investment diversion will depend on industrial structure, scalability and labor costs

Beyond the near-term cyclical impact, there is an increasing likelihood of a reconfiguration of regional supply chains over the next few years as businesses may ultimately relocate production away from China to minimize the tariff burden and/or avoid concentration risk. In addition, trade frictions may serve to accelerate a trend of manufacturing and investment being diverted away from China that was previously set in train by other factors, such as the rapid rise in Chinese wages. We explore the major factors that are likely to determine which economies attract such trade and investment flows.

Countries that already produce similar products to China will have a significant advantage in this regard. We construct an Export Similarity Index[5] using SITC six-digit-level product data to measure the similarity of exports between China and individual economies in the Asia Pacific region (see Exhibit 10). Unsurprisingly, countries that already participate in the regional manufacturing supply chain have the greatest export similarity to China, notably Vietnam, Korea, Thailand, Taiwan, Japan (A1 stable) and Malaysia. While among the most susceptible to the direct impact of slower trade flows as described above, these countries are at the same time best positioned to benefit from positive spillovers.

Exhibit 10

Vietnam, Korea, Thailand and Taiwan exhibit the greatest export similarity to China
(Export similarity index vs. China)



Note: The Export similarity index measures the composition of export baskets between two countries by comparing the underlying shares of each product category in each country's total exports; a higher value denotes a high degree of substitution between that country and China.
Sources: International Trade Center, Moody's Investors Service

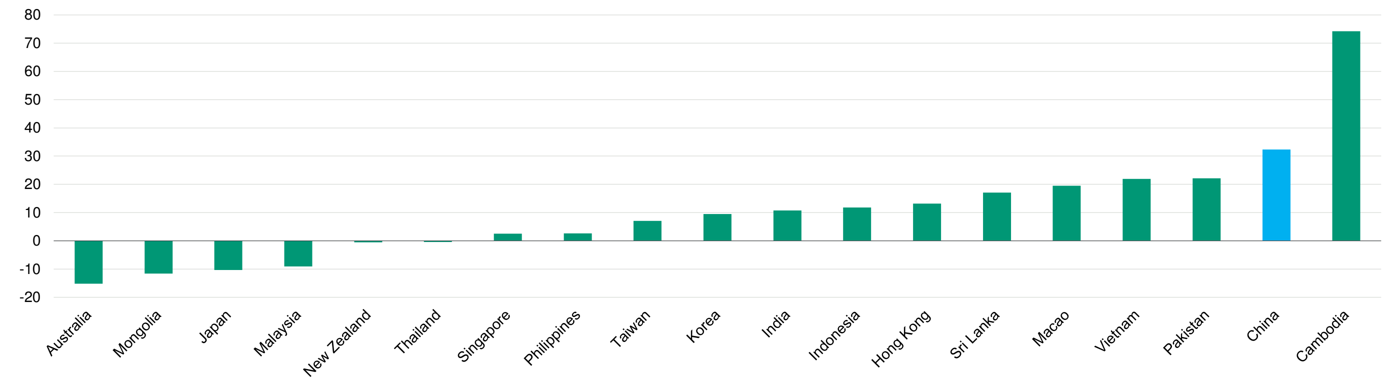
By contrast, commodity exporters, such as Australia and Mongolia, and small, narrowly diversified economies are least similar to China.

Rather than representing an inherently similar industrial structure that suggests a degree of substitutability, Hong Kong's high export similarity results from its role as an international trading and logistics hub adjacent to China: Hong Kong's re-exports of goods manufactured on the mainland account for a large share of its total exports. As such, we do not expect Hong Kong to be in a position to absorb manufacturing production from a reconfiguration of supply chains, notwithstanding its other strengths.

Rising wage costs in China, partly reflecting a labor force that is beginning to decline, could be an important factor in the relocation of production, especially for labor-intensive and lower value-added manufacturing goods. According to the International Labour Organization (ILO) Global Wage Report 2018/19, Chinese labor costs have increased faster than nearly all other Asia Pacific economies since 2013 (see Exhibit 11). As a result, even with mean nominal wages in US dollars increased of over 20% for Vietnam over the same period, the corresponding measure for China is four times larger (see Exhibit 1). As wage growth was stagnant in Thailand between 2013 and 2016, nominal wage levels have fallen to less than half of China.

Exhibit 11

Rise in Chinese labor costs has been faster than nearly all other Asia Pacific countries
(% change in nominal monthly wages in dollars, 2013-17 or latest)



Sources: ILO Global Wage Report 2018/19, Moody's Investors Service

Chinese firms have achieved sufficient scale to compete with traditional sources of FDI in providing capital to other countries in the region, and have themselves started to diversify their production bases to take advantage of more competitive wages and growing labor quality outside of China. In line with these trends, China lost three percentage points of its global share of textile manufacturing between 2013 and 2016, while shares for Bangladesh and Vietnam increased by 1.3 and 1.7 percentage points, respectively.

Other considerations include scalability, the quality of infrastructure and the regulatory environment. Countries with already large manufacturing bases are likely to have existing domestic supplier networks, as well as deep pools of labor, that support further investment. In addition, infrastructure that facilitates connectivity to suppliers and customers in an efficient, reliable and cost-effective manner can mitigate the costs associated with the realignment of supply chains.

As proxied by the World Bank's Doing Business rankings, a regulatory environment conducive to the efficient conduct of private sector activity can facilitate the creation of new businesses domestically and enhance foreign investment prospects. In this vein, the persistence of foreign ownership restrictions and other protectionist measures constrain countries' openness to FDI.

Combining these factors, we see Thailand, Vietnam, Taiwan and Malaysia as having the greatest potential to benefit from trade and investment diversion (see Exhibit 1). However, other idiosyncratic considerations may either enhance or detract from these countries' relative strengths in the areas described above.

Beyond the intraregional trade integration mentioned above, some countries have obtained preferential or tariff-free access to large overseas markets[6] that position them favorably as a potential source of goods. For example, Australia, Korea and Singapore have FTAs with the US, while Japan has an FTA with the European Union (EU, Aaa stable). Singapore[7] and Vietnam have concluded negotiations on similar arrangements with the EU, but they have yet to enter into force. Some developing countries have also obtained preferential access to the US or the EU for certain goods under schemes such as Generalized System of Preferences (GSP) or Everything but Arms (EBA),[8] although the associated goods are likely to be lower-value-added manufacturing or products tied to their respective commodity endowments.

Negative factors include political risk – domestically driven for Thailand and stemming from long-lasting cross-border tensions with China in the case of Taiwan, as prominent examples – which introduces a degree of uncertainty that has likely forestalled even larger FDI inflows.

Moody's related publications

Outlook

- » Sovereigns – Asia Pacific: 2019 outlook stable as domestic strengths counter rising external, policy uncertainties, January 2019
- » Cross-Sector - Global: 2019 Outlook - Global credit conditions to weaken amid slowing growth and rising risks, November 2018
- » Global Macro Outlook: 2019-20: Global growth to decelerate amid tightening global liquidity and elevated trade tensions, November 2018
- » Sovereigns – Global: 2019 outlook still stable, but slowing growth signals increasingly diverging prospects, November 2018

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Sector In-Depth

- » Global Trade Monitor – January 2019: Trade uncertainty is beginning to affect investment decisions, January 2019

Rating Methodology

- » Sovereign Bond Ratings, November 2018

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Endnotes

1 In dollar-denominated terms for 18 out of 24 rated governments, namely Australia, Bangladesh, China, Hong Kong, India, Indonesia, Japan, Korea, Malaysia, Mongolia, New Zealand, Pakistan, the Philippines, Singapore, Sri Lanka, Taiwan, Thailand and Vietnam.

2 We expect the current de-escalation in tensions to be temporary, although further escalation in tariffs is now less likely in the short term. We foresee a prolonged US-China trade and geopolitical dispute, with continued disagreements over intellectual property, investment, state subsidies and World Trade Organization reform. For a full description of our baseline scenarios for global trade, please see **Global Trade Monitor - January 2019: Trade uncertainty is beginning to affect investment decisions**, January 2019

3 See **"Evolving trade patterns - Asia: Exports still drive growth, as intra-regional links increasingly defines how Asia trades"**, May 2018.

4 ASEAN member nations are Brunei, Cambodia, Indonesia, Laos, Malaysia, Myanmar, Philippines, Singapore, Thailand and Vietnam.

5 We use an approach first described in Finger and Kreinin, **"A Measure of 'Export Similarity' and Its Possible Uses,"** The Economic Journal, December 1979.

6 All 24 rated countries in the Asia Pacific are already members of the World Trade Organization.

7 The EU-Singapore FTA was ratified by the European Parliament in February 2019.

8 Beneficiaries under the US GSP scheme include Cambodia, Fiji, India, Indonesia, Mongolia, Pakistan, Papua New Guinea, the Philippines, Solomon Islands, Sri Lanka and Thailand. The EU's GSP and GSP+ schemes include India, Indonesia, Pakistan, Philippines, Sri Lanka and Vietnam. The EU's EBA arrangement includes Bangladesh, Cambodia, and the Solomon Islands.

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