

# Voice of Asia

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Insights

Our Voice of Asia series brings to life the challenges and opportunities facing the region today and tomorrow. Voice of Asia is the result of significant collaboration across the Deloitte Asia Pacific and Global Network.

# Unlocking the lockdown: Asia Pacific's road to recovery

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# Three themes impacting Asia's economic recovery



# China's economy will recover strongly later this year, a welcome boost for the rest of Asia

How sharply the economy would have contracted in Q1 when almost the entire country was subject to lockdown? This has been on the minds of investors and most China watchers since late January. Q1 GDP growth came in at -6.8% yoy, which is quite respectable in light of halted activities in China and other major economies. With 70%-80% of businesses resuming work by the end of March, we expect GDP to be flat in Q2.

For the first half of this year, we cannot expect much from growth, for the reason that February's sizable uptick in unemployment to 6.2 percent weighs on household sentiment and thus private consumption, and although the People's Bank of China has lowered the cost and expanded the quantity of credit to the real economy, banks have not passed all of this on to areas of the economy that have been hit hardest—private sector small and medium-sized enterprises (SMEs).

However, the Chinese economy should recover strongly in the second half provided COVID-19 infection curves flatten in the US and western Europe by late Q2, as capacity utilization returns to normal and a bigger-than-expected stimulus lends a fillip to growth. The Politburo meeting on 27 March carried clear hints of a big stimulus in the works, calling for an increase in the fiscal deficit ceiling; government issuance of special treasury bonds; more issuance of local government special purpose bonds; and lower interest rates, to stabilize and jumpstart the economy. A plethora of related measures have since been announced, and housing and auto purchase restrictions have been eased.

With policymakers now averse to the type of large, "flood irrigation" stimulus deployed in 2008, we think fiscal stimulus to be announced shortly could be enough to drive GDP growth above 3 percent for 2020 as a whole. The composition of the stimulus package should also be more prudent, comprising new infrastructure investment in 5G, industrial Internet-of-Things, and data centers; measures to spur household consumption; and targeted credit easing, rather than a no-holds-barred, credit-fuelled investment drive.

Given the above, our base case is for a substantial acceleration in economic growth in the second half of this year. For China's neighbors, laboring under a decline in external demand as the major developed economies enter recessions induced by the COVID-19 crisis, a recovery in their biggest economic partner will present much-needed support to their economies. Again, our assumption is that major developed countries will lag China's recovery by around two quarters, barring a resurgent 2nd wave of COVID-19.

Table 1 sets out the main channels through which China's economy benefits the rest of Asia. Given we do not expect any near-term recovery in outbound tourism from China, the main positive will come from rising Chinese demand for imports from its neighbors. Hong Kong, Taiwan, South Korea and Singapore should gain from this. That said, Hong Kong's economy is likely to suffer a large contraction due to its heavy reliance on mainland tourists, and the HKD-peg as it worsens deflation.

Table 1

**Asian Economies' Exposure to China (2018 or the latest available year)**

	Share of exports to China(%)	Share of tourists from China(%)	China's share of inward FDI(%)	Share of outward FDI to China(%)
<b>Hong Kong</b>	55.2	78.3	31.9	49.2
<b>India</b>	9.0	2.6	-	-
<b>Indonesia</b>	19.5	13.5	15.0	-
<b>Malaysia</b>	13.9	11.4	13.0	5.6
<b>Philippines</b>	12.9	16.3	20.7	-
<b>Singapore</b>	24.3	18.4	5.8	23.2
<b>Korea</b>	31.0	31.2	12.4	16.4
<b>Taiwan</b>	27.9	24.4	38.1	37.9
<b>Thailand</b>	11.8	27.6	18.5	-
<b>Vietnam</b>	17.3	32.0	31.4	-

Source: CEIC, Centennial Asia Advisors



# Bold responses in other Asian economies will also help produce a strong second half

Asian governments have announced wide-ranging monetary and fiscal interventions to cushion the worst of the pandemic's effects and prevent a downward spiral in economic conditions.

Monetary authorities have responded forcefully via large rate cuts, using off-scheduled meetings where necessary, reflecting the urgency of the situation. Bank of Korea cut rates by 75bps and Bank of Thailand made a 50bps cut.

They have also gone beyond the traditional playbook of rate cuts and liquidity support to banks. Bank of Korea said it would buy an “unlimited” amount of bonds over the next three months, a move one BOK official admitted is akin to quantitative easing; Bank Indonesia announced it would buy bonds in the primary market; Bangko Sentral ng Pilipinas approved a PHP300 billion (USD5.9 billion) bond repurchase deal with the Treasury to provide it with additional funds. The Bank of Japan announced further monetary policy easing including purchase of JGBs, measures to support corporate financing, and increased purchases of CPs and corporate bonds.

On the fiscal side, governments have grasped that fiscal policy will have to do the heavy lifting in supporting growth, given the precipitous fall in global demand on which their economies rely.

- **India:** The government on 25 March declared a nationwide lockdown (the world's largest lockdown ever) for 21 days, effective immediately, followed by a 2-week extension until the end of April. The government unveiled a INR1.7 trillion (USD22.4 billion) stimulus package aimed at supporting vulnerable people and businesses in society, in addition to announcing various statutory and regulatory compliance relief

measures. This could result in a wider fiscal deficit for FY 2021 (April 2020-March 2021). The Reserve Bank of India (RBI) declared a sizeable reduction in the policy repo rate and announced several measures to inject liquidity into the system.

- **Indonesia:** The Jokowi administration unveiled two fiscal stimulus packages totalling IDR33.2 trillion (USD2 billion) within a month of each other. Finance Minister Sri Mulyani said the two packages would lead to a widening of the fiscal deficit to 2.5 percent of GDP from a projected 1.76 percent in budget estimates. More recently, she expressed a willingness to allow the deficit to widen beyond the statutory limit of 3 percent of GDP.

- **Australia:** Australia reacted swiftly to the crisis, closing its borders early on and implementing an extensive testing regime. Yet its economy is still taking a large hit, the direct result of the government shutting down activity in several sectors to slow the spread of COVID-19. Substantial support has been rolled out, boosting health system preparedness, strengthening the safety net, subsidizing wages and lowering business costs. Although the fiscal cost—10 percent of annual GDP—is high, the net benefits will be considerable, particularly as interest rates will be kept low for an extended period. The central bank has cut its policy rate to a record low of 0.25 percent and adopted quantitative easing by targeting 3-year government bond yields (also 0.25 percent). Finally, a range of novel measures from the central bank offered a line of credit to businesses (via banks), adding up to a further 6 percent of GDP by way of support.

- **New Zealand:** We see New Zealand's GDP contract by 5% to 10% over 2020 because it is a small and open economy with dependence on commodities, tourism and demand of overseas education. However, New Zealand enjoys a stronger fiscal position than most developed countries with ratio of net core Crown debt to GDP below 20%. This position of strength allows the government to borrow significantly to support economic resilience. The New Zealand Government's response has been prompt and hard hitting as they are committed to eradicating the virus. Total fiscal support packages announced to date amount to around 6% of GDP. The RBNZ has cut rates and rolled out QE of NZD33 billion (USD 20 billion).
  - **Korea:** The Korean government has leaned on fiscal levers heavily, announcing a bevy of support packages including a KRW11.7 trillion (USD9.6 billion) supplementary budget of assistance for households and industries and healthcare-related spending, KRW50 billion of support for SMEs in soft loans and loan guarantees, and close to another KRW50 billion to stabilize equity, bond and short-term funding markets. There is talk of another supplementary budget in the works.
  - **Singapore:** The government announced three stimulus packages, increasing fiscal stimulus as the crisis deepened. This has brought the overall budget deficit for 2020 to an unprecedented SGD44.3 billion (USD31 billion), which translates to about 9 percent of GDP. A large part of the package offers enhanced wage subsidies and risk-sharing of loans to affected sectors. This is meant to save jobs and keep the flow of credit to businesses intact, tuned such that the most affected sectors, e.g. aviation and tourism, will receive the most help.
  - **Thailand:** The government announced a THB400 billion (USD12.2 billion) fiscal package equivalent to about 2.4% of GDP, comprising THB180 billion in soft loans, debt moratoriums, and reductions in government taxes and fees, plus THB45 billion in cash handouts for the recently unemployed. It has also announced an emergency decree that would unlock an option to borrow funds—potentially paving the way for a bigger fiscal stimulus.
  - **Malaysia:** Prime Minister Muhyiddin Yassin unveiled a MYR250 billion (USD57.6 billion) stimulus package (16 percent of GDP) encompassing the previous government's MYR20 billion relief package. However, only MYR90 billion of this represents novel measures, including MYR50 billion in working capital loan guarantees for businesses, MYR10 billion in cost deferments for Employees Provident Fund-related relief, MYR4.5 billion in additional central bank credit facilities, co-funding of rebates with other government-linked companies, and MYR25bn in direct government spending.
  - **The Philippines:** The Philippine Congress is preparing a supplementary budget worth upwards of PHP200 billion (USD3.95 billion) to help the economy ride out its current slowdown. This will be funded from non-budgetary sources, so will not divert funding designated for infrastructure spending or social transfers to the poor. Finance Secretary Carlos Dominguez III said in an interview the administration could allow the budget deficit to balloon to about 3.6 percent of GDP, versus a target of 3.2 percent, and that the government will “do as much as it takes” to “protect front-liners”.
  - **Japan:** Prime Minister Abe unveiled a JPY108 trillion (USD 1 trillion) emergency fiscal package, which was endorsed by the Cabinet on 7 April for a budgeting process in the Diet. The package includes cash payments to households and SMEs, interest free, unsecured loans to certain business sectors, as well as measures to prevent the spread of infections and enhance medical treatment.
- In light of these measures, we outline below our expectations for economic performance across Asia. A very weak first half of the year is likely to be followed by a strong second half, laying the foundations for a vigorous revival of economic dynamism in 2021.

TABLE 2

**Forecasts for Asian economies**

<b>2020</b>	<b>Growth (%)</b>	<b>Inflation (%)</b>	<b>Current Account (% of GDP)</b>	<b>Currency (vs. USD)</b>	<b>Policy Rate (%)</b>
<b>China</b>	3.5	5.0	0.0	7.20	-
<b>Australia</b>	-3.9	0.4	-2.7	0.61	0.25
<b>Japan</b>	-2.1	0.4	3.7	109.00	-0.10
<b>India</b>	2.0	4.6	-0.1	74.40	3.90
<b>South Korea</b>	0.8	1.0	3.6	1,160.00	0.50
<b>Taiwan</b>	0.8	0.6	11.5	31.00	1.00
<b>Singapore</b>	-0.4	0.5	16.0	1.38	-
<b>Thailand</b>	-3.5	0.1	5.5	32.5	0.50
<b>New Zealand</b>	-5.6	1.3	-4.1	0.62	0.25
<b>Vietnam</b>	5.5	2.0	1.7	23,100.00	4.80
<b>Indonesia</b>	3.0	2.6	-2.0	15,500.00	3.50
<b>The Philippines</b>	3.2	2.4	-0.5	52.00	2.75
<b>Malaysia</b>	0.8	-0.5	2.5	4.30	2.00

Source: Centennial Asia Advisors, Deloitte

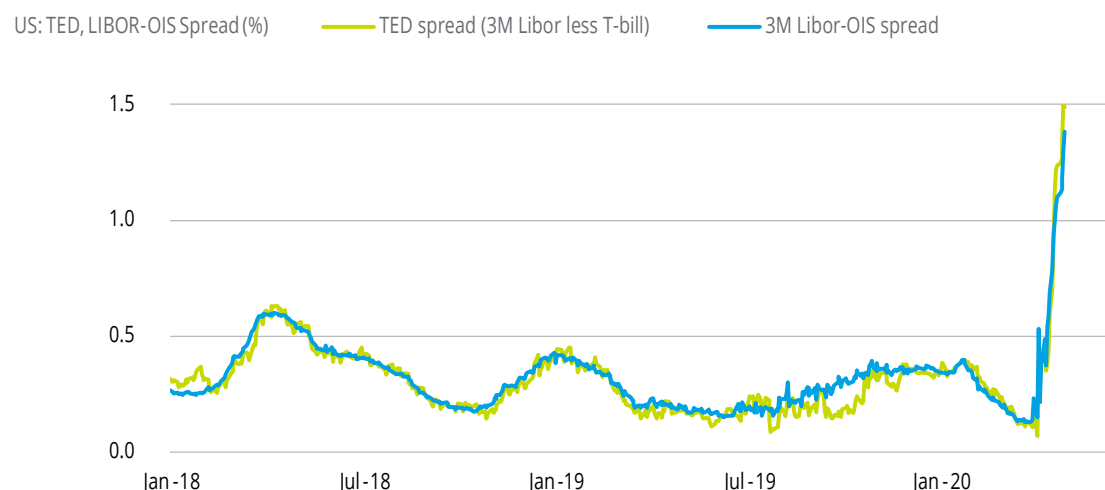
# The big downside risk: could financial stresses be crystallized even if broad aggregate demand eventually recovers, and if so, who is most at risk?

The COVID-19 shock led to a severe “sudden stop” in capital flows to emerging markets (EMs). According to the Institute of International Finance, outflows in 1Q20 alone reached USD83.3 billion<sup>1</sup>—much larger than during the peak of the Global Financial Crisis—and were particularly accentuated for emerging Asian economies.

Despite central banks’ Herculean attempts to provide unprecedented liquidity support to markets, the sharp rise in the US LIBOR-OIS spread, a key gauge of banking sector risk, shows financial stress remains elevated. Further bouts of financial turbulence are likely, which will unleash adverse impacts on Asian economies.

CHART 1

## Stress levels still high, EM outflows to persist ...

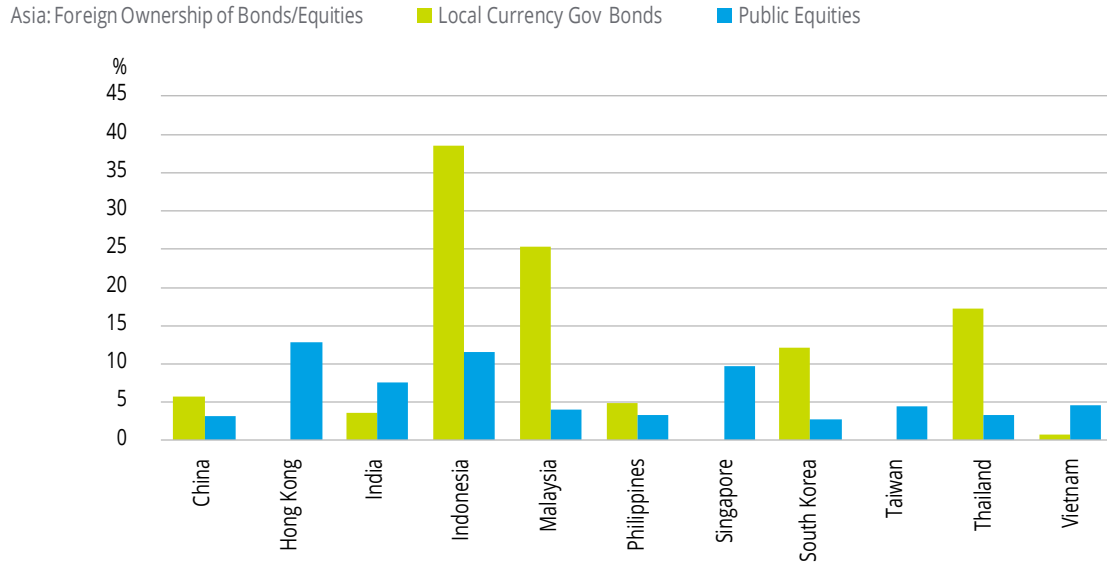


Source: CEIC, Bloomberg, OECD Equity Market Review Asia 2019, Asian Development Bank, Centennial Asia Advisors  
 Note: Data on foreign ownership of local currency government bonds unavailable for HK, SG and TW.

1. Robin Brooks, Elina Ribakova, Sergi Lanau, Jonathan Fortun, Benjamin Hilgenstock, Capital Flows Report Sudden Stop in Emerging Markets, Institute of International Finance, Page 3.

CHART 2

### ... and Asia will not be spared



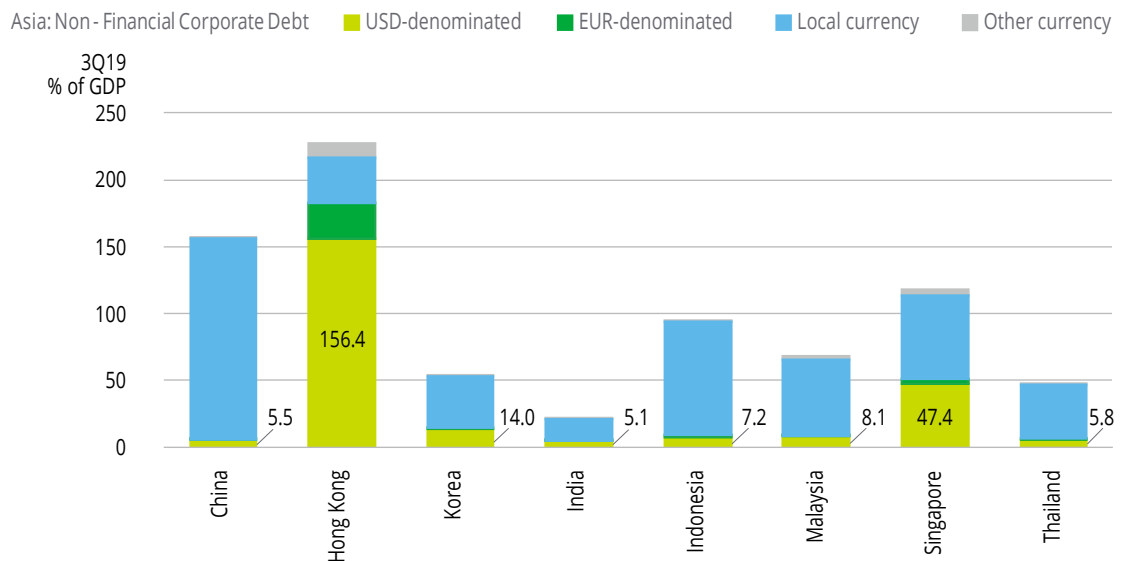
Source: CEIC, Bloomberg, OECD Equity Market Review Asia 2019, Asian Development Bank, Centennial Asia Advisors  
 Note: Data on foreign ownership of local currency government bonds unavailable for HK, SG and TW.

The region’s currencies, equities and bonds have already received a drubbing, but further declines are likely in the present “risk-off” climate—befitting their status as riskier parts of the investible universe. Yield differentials vis-à-vis developed

markets (DMs) have narrowed as the G3 central banks have applied maximum monetary stimulus, but this will bring little reprieve for Asian assets, which are more sensitive to growth wobbles.

CHART 3

### Foreign borrowing, mostly in USD, has risen

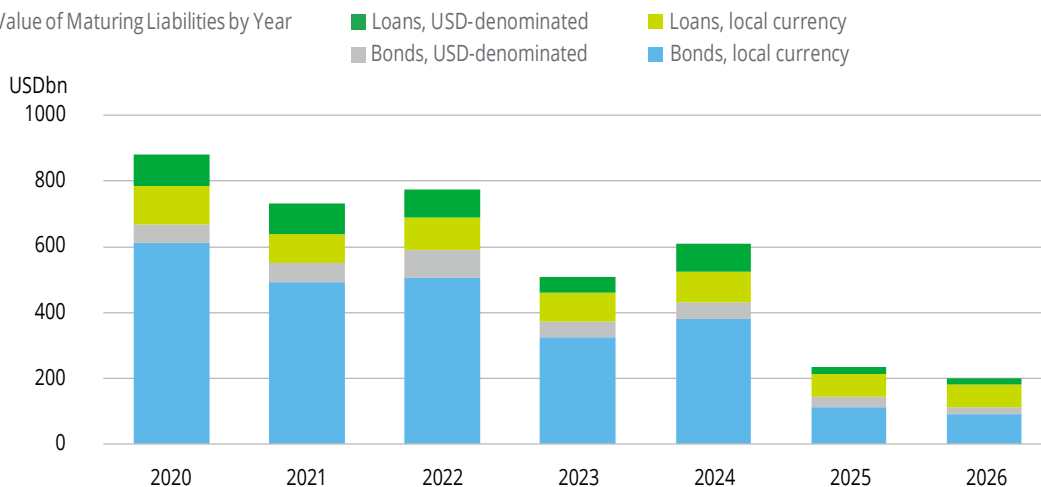


Source: CEIC, BIS, International Debt Statistics, Institute of International Finance, Centennial Asia Advisors  
 Note: Numbers in Chart 6 refer to USD-denominated debt as a % of GDP

CHART 4

### Refinancing risks are elevated

Asia: Value of Maturing Liabilities by Year



Source: CEIC, BIS, International Debt Statistics, Institute of International Finance, Centennial Asia Advisors  
 Note: Numbers in Chart 6 refer to USD-denominated debt as a % of GDP

**Second**, a global safe-haven rush into USD cash has pushed the currency to vertiginous heights, making it more difficult for emerging Asian economies to service their stock dollar-denominated debt (Chart 3). Most emerging Asian economies are exposed: China (5.5 percent of GDP), Korea (14.0 percent of GDP), India (5.1 percent of GDP), Indonesia (7.2 percent of GDP), Malaysia (8.1 percent of GDP) and Thailand (5.8 percent of GDP).

**Third**, the maturity profile of Asian non-financing corporate debt shows a large chunk of bonds are due for repayment in 12 months or before (Chart 4). This is especially salient because refinancing will be more difficult than in previous years given current adverse market conditions, which are likely to persist through most of 2020.

To assess Asian economies’ resilience to financial stresses, we looked at several debt and reserve-related measures of external vulnerability, and summarize these in Table 3.

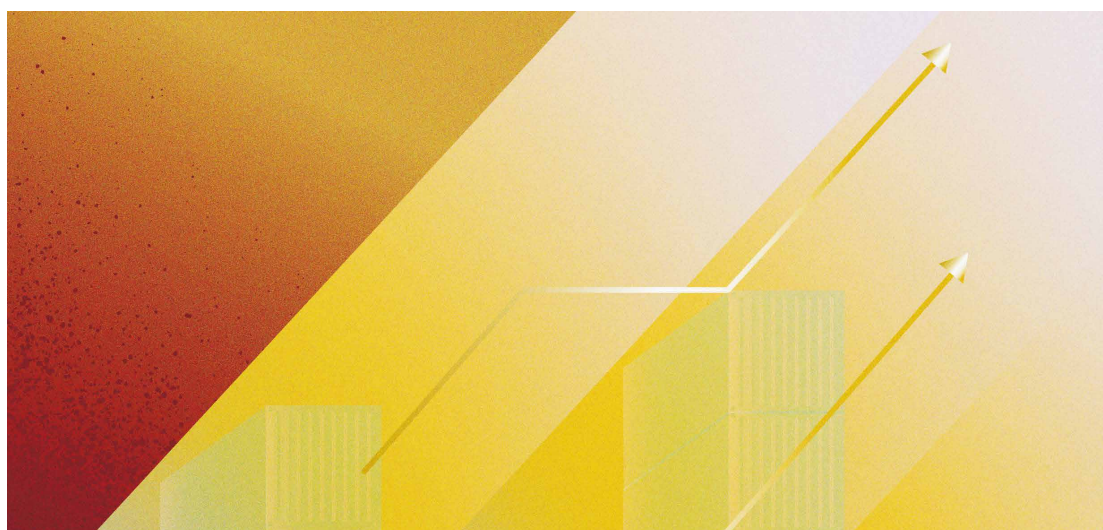


TABLE 3

### Asian economies' external vulnerability scorecard

	Basic Balance (CA + Net FDI) % of GDP	Debt Service Ratio (% of Exports + Primary Income)	Import Cover (Number of Months)	Ratio of Short- Term External Debt to FX Reserves	Combined Z-score (Higher = more resilient)
<b>Taiwan</b>	10.2	0.34	20.5	0.38	<b>102.1</b>
<b>Thailand</b>	2.0	0.08	12.8	0.23	<b>102.0</b>
<b>Hong Kong</b>	9.2	0.17	9.6	0.24	<b>101.4</b>
<b>China</b>	1.5	0.27	18.0	0.37	<b>101.3</b>
<b>Singapore</b>	35.1	0.26	9.3	0.72	<b>101.1</b>
<b>Philippines</b>	-0.1	0.16	9.8	0.18	<b>100.9</b>
<b>South Korea</b>	5.7	0.18	9.8	0.33	<b>100.7</b>
<b>India</b>	-1.9	0.40	11.7	0.23	<b>99.4</b>
<b>Vietnam</b>	3.9	0.24	3.5	0.28	<b>98.9</b>
<b>Malaysia</b>	2.5	0.29	6.1	0.89	<b>96.2</b>
<b>Indonesia</b>	-4.4	0.73	9.3	0.36	<b>96.0</b>

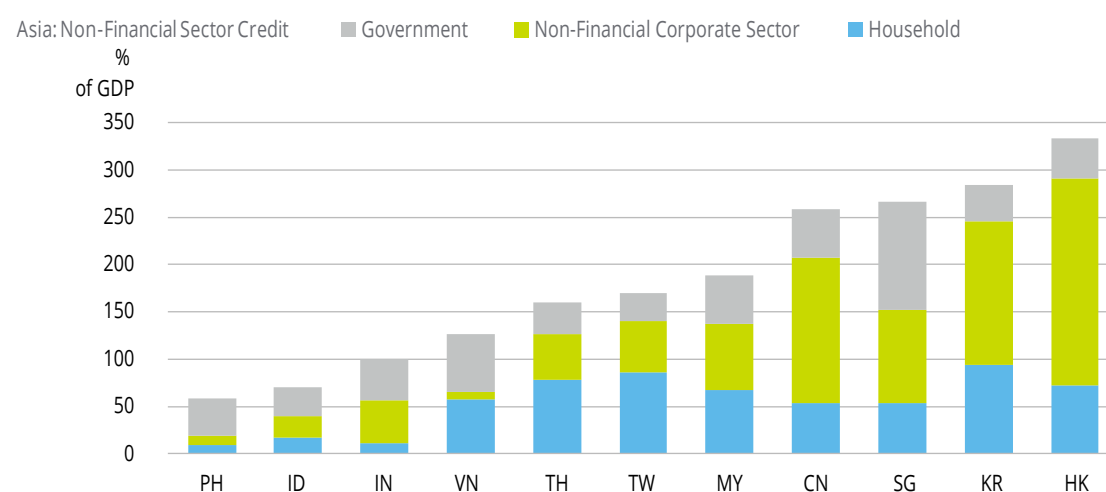
Source: CEIC, Centennial Asia Advisors

**Fourth**, domestic stability could also be threatened as a toxic mix of sharply slowing growth, tightening financial conditions and existing high leverage in some jurisdictions amplifies the economic damage to come, putting

banking sector stability to the test. According to the International Monetary Fund, 40 percent of total corporate debt, or USD19 trillion<sup>2</sup>, would not be serviceable even in a recession half as severe as the one during the GFC in 2009.

CHART 5

### Debt levels to determine financial vulnerability



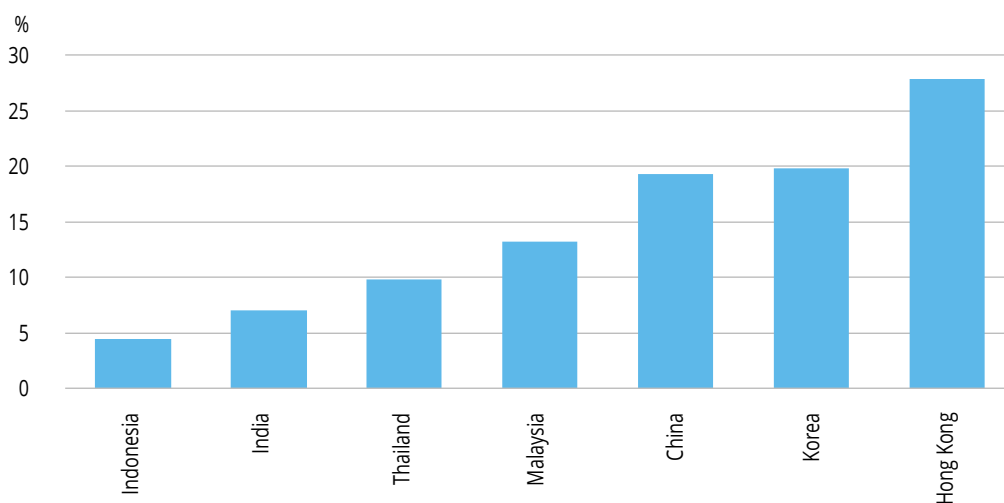
Source: Bank of International Settlements, Centennial Asia Advisors

- Larry Elliott, "Global economy faces \$19tn corporate debt timebomb, warns IMF", The Guardian 16 Oct. 2019: <https://www.theguardian.com/business/2019/oct/16/global-economy-faces-19tn-corporate-debt-timebomb-warns-imf>

CHART 6

### Debt servicing ability is key

Asia: Debt Service Ratios (Private Non-Financial Sector)



Source: Bank of International Settlements, Centennial Asia Advisors

Non-financial corporate debt levels look large in Hong Kong (219 percent of GDP), Korea (151.1 percent), China (153.6 percent) and Singapore (97.9 percent).

Household debt levels are elevated and form a large share of total private non-financial sector credit in Vietnam, Thailand, and Malaysia, suggesting increased risk of a debt crisis in the household sector.

A recession in property prices is also possible, which will further weaken the financial position of households as a large chunk of their debt is typically in mortgage loans. This is exacerbated by the increased propensity for home ownership in Asia.

The absolute level of leverage is not the only factor at play; equally as important is the ability to

service that debt, although we highlight the risk that income streams could evaporate quickly in a severe economic contraction.

Looking at debt servicing ratios and absolute leverage levels in tandem alters the picture, as high debt levels in Hong Kong and Korea are balanced by very high debt-service ratios. This leaves Malaysia and Thailand as the economies most at risk.

A potential challenge to the banking system could arise if a toxic mix of sharply slowing growth, tightening financial conditions, and existing high leverage in some jurisdictions amplifies the economic damage. Vietnam is a notable example, with its banks running on thin capital buffers and non-performing loans underreported. The sharp slowdown in growth will put their fundamentals to the test.



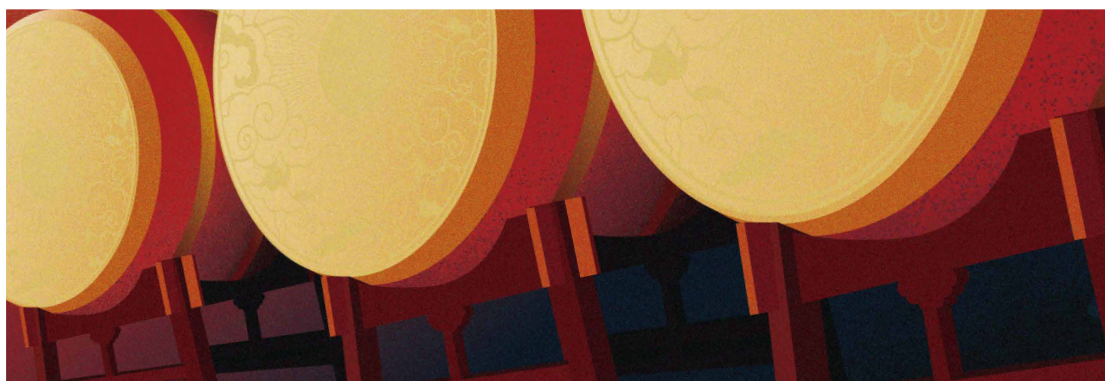
# Conclusion

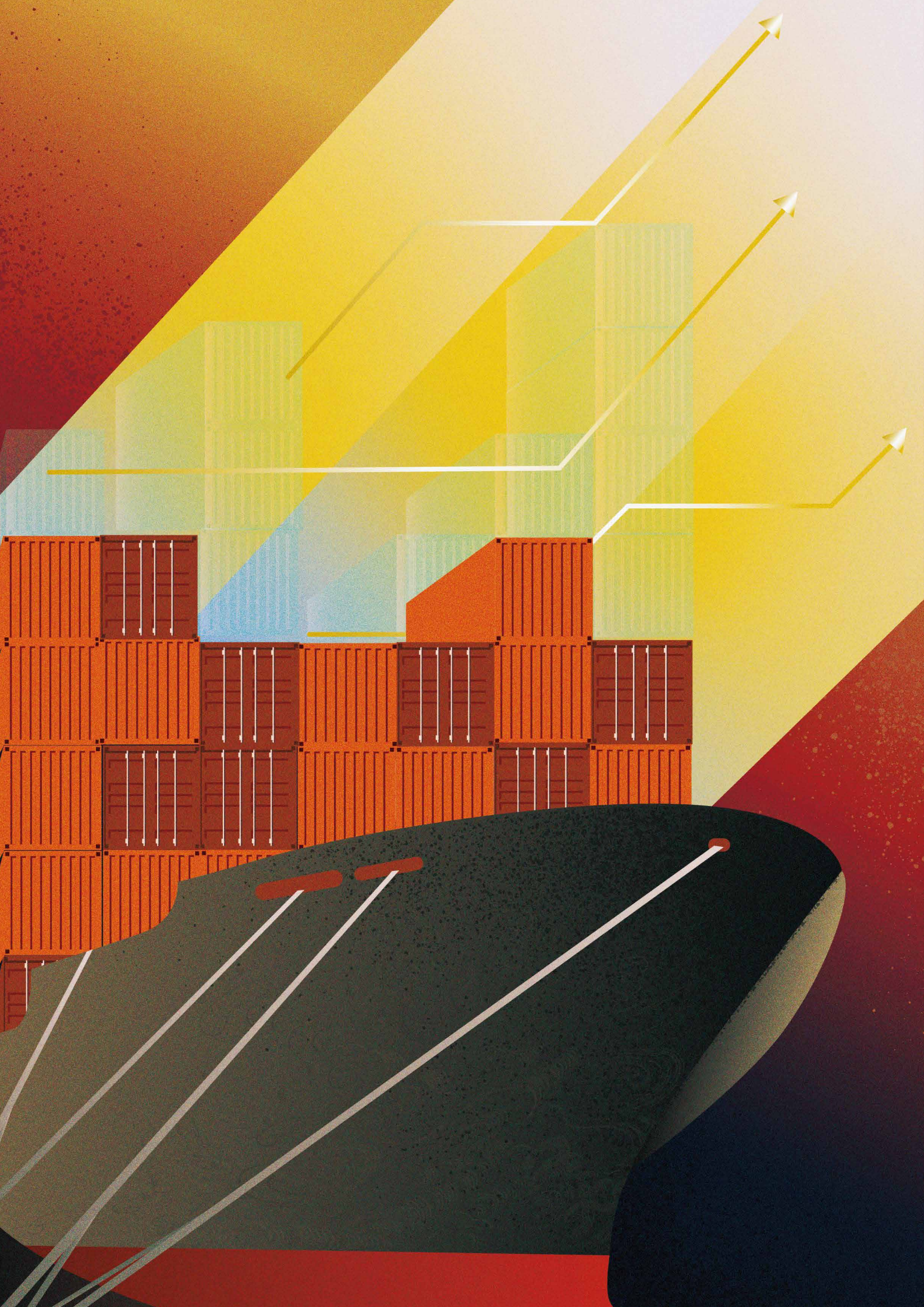
Given our assumptions that the worst of the COVID-19 crisis will be over in the key economic powerhouses of North America and western Europe by the early part of the third quarter of 2020, and the further boost from aggressive, broad-based counter-cyclical measures, Asia-Pacific economies, led by China, are poised to begin an economic recovery sometime in the third quarter. We expect oil prices to remain well below last year's average, which will help reinforce the recovery given Asian economies, except Malaysia, are major beneficiaries of the oil price slump. The resulting low inflation risk also gives the region's central banks room to guide interest rates even lower. North Asia, which has been affected more than ASEAN economies by supply chain disruptions, could bounce back more strongly.

Certainly, downside risks still remain. In addition to the potential for financial sector instability described above, a renewed trade war is possible since it is unlikely that China can deliver on its promises to buy more US goods (an additional USD200 billion in 2020 and 2021). Even in the absence of a trade war, trade tensions between China and the US could well be a long-term theme that is further complicated by domestic politics in both countries and the geopolitical overlay.

Trade tensions have brought supply chain strategy of global companies to the fore. In essence, global supply chains rest on the principle of maximizing profits and minimizing inventories, but the trade-off between profits and certainty has become more acute. From Asia's perspective, economic integration in North Asia has reinforced global supply chains in sectors such as technology and autos, with China Mainland the linchpin, connecting Japan, Korea and Taiwan. Would halted economic activity caused by COVID-19 result in permanent damage to global supply chains? In the following piece, we take a deep dive into examining this hypothesis.

In one recent development, according to Bloomberg, Japan has earmarked USD2.2bn to help Japanese companies repatriate production from China. To quote Premier Li Keqiang on 13 March, exports cannot be stabilized without genuine reforms. So far, most developed countries, led by the US, have unveiled a wide range of stimulus to stabilize employment and business. Against this backdrop, the commitment of Asian policymakers, Beijing in particular, will be tested. To start, much lower tariffs and improved market access would be needed for China to pre-emptively ease trade tensions. However, a strong recovery coupled with much lower tariffs could prompt a current account deficit, which China has not experienced for many years.





# The reshuffling of global supply chains

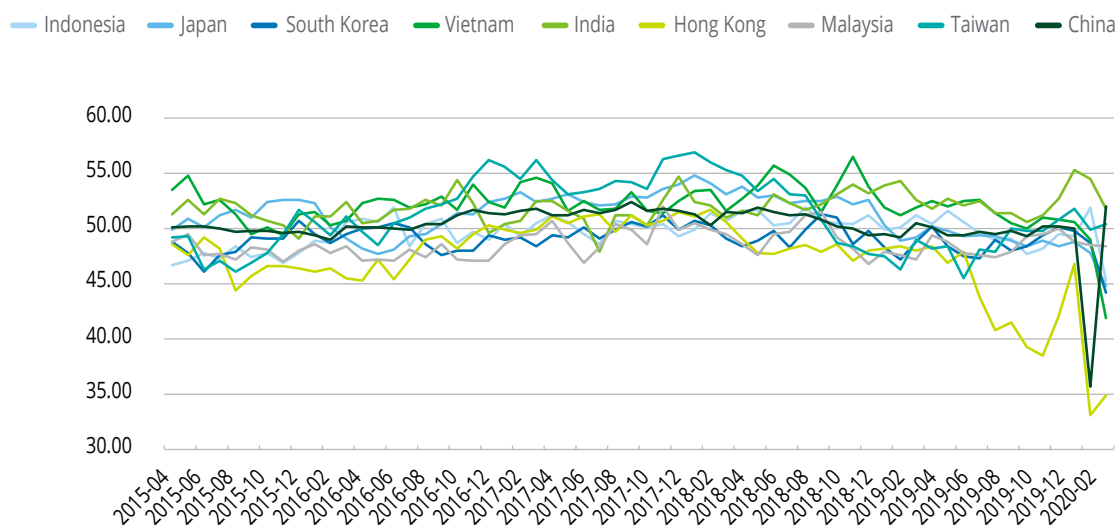
# Supply chain shock to continue

Companies across the world today rely on Asia Pacific manufacturing more than ever. China accounts for 30 percent of global manufacturing and more than 50,000 companies worldwide have tier one suppliers in China. However, the latest purchasing manager's indexes (PMI) show weak sentiment among big companies across APAC. South Korea, which is highly dependent on exporting intermediate goods, saw PMI fall from 48.7 in February to 44.2 in March, its lowest level for 11 years. Also in March, the services sector in Japan experienced its fastest-ever manufacturing activity contraction and Association of Southeast Asian Nations (ASEAN) PMI dropped to an all-time low.

China, India and Taiwan are rare bright spots. China's manufacturing is back in action, with most factories operational again. As of March 25, the resumption rate of large and medium-sized Chinese enterprises was close to 97 percent, an increase of 17.7 percentage points from 25 February. Manufacturing has bounced back strongly since most lockdown measures were lifted. Meanwhile, Taiwan has held up well despite implementing extensive containment measures, and India's manufacturing activity managed to stay in expansion territory.

CHART 7

## Manufacturing PMI in Asia Pacific

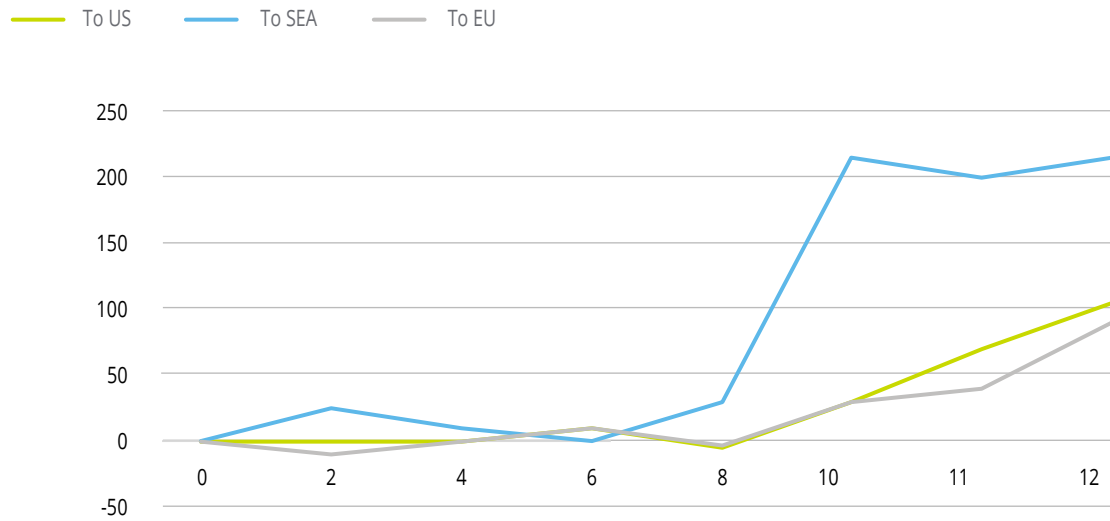


Source: Wind

There are also logistics challenges. For many multinationals, lead times have doubled, compounded by a shortage of air and ocean freight options. According to the TAC index, airfreight rates skyrocketed by as much as 200 percent on routes out of China to ASEAN destinations as factories tried to source key components. Airfreight prices to Europe and the United States

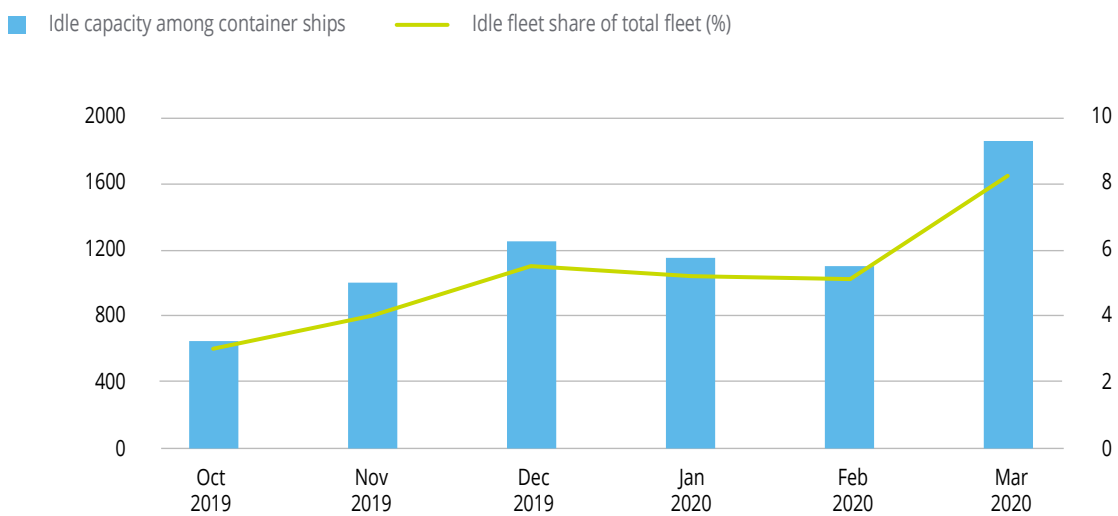
have also increased by more than 100 percent. This will continue as long as Chinese airlines are limited to flying only one route to only one country. Meanwhile, many sailings from China to the US and Europe are being canceled on short notice. Idle container ship and unused fleet share capacity have risen.

CHART 8

**2019-2020 % change in cost of air freight from China ...**

Source: TAC, SCMP

CHART 9

**... idle container ship capacity and fleet share**

Source: TAC, SCMP

As the pandemic spreads beyond China, its shock to global supply chains will likely be wider than that of the US-China trade war, and more prolonged than usual for a natural disaster. According to the United Nations Conference on Trade and Development, the most impacted economies will be the EU (machinery, automotive and chemicals),

US (machinery, automotive and precision instruments), Japan (machinery and automotive), South Korea (machinery and communications equipment), Taiwan (communications equipment and office machinery) and Vietnam (communications equipment).

# Brace for a demand-side pummeling

Job losses and welfare claims worldwide are now in the tens of millions. The International Labor Organization has forecasted that as many as 25 million lay-offs will occur if the pandemic is not controlled. In Asia, Japanese unemployment was still stable at 2.4 percent in February, but the job openings to applicants ratio dropped to its lowest level in three years. Almost 23 million people in Thailand registered for the government’s cash handout. A demand crisis is compounding the supply shock for companies worldwide.

## Rise in global unemployment

Due to a sudden drop in overseas demand, Asia Pacific economy is struggling to win orders from abroad. In China, factories have reportedly had 10%-20% of their orders cancelled (in some cases for goods that have already been manufactured). Manufacturers in India have seen a record decline in export orders, with international sales declining faster than at any time since September 2013.

## Most industries are suffering

Major industries including automotive, pharmaceuticals, medical equipment and supplies, electronics, consumer goods have been significantly affected. Chinese manufacturers are being heavily impacted due to the central role they play in the supply chains of companies across the world.

## Pharmaceuticals and medical supplies

China and India have established themselves as major players in the global pharmaceuticals supply chain, with about 80 percent of active

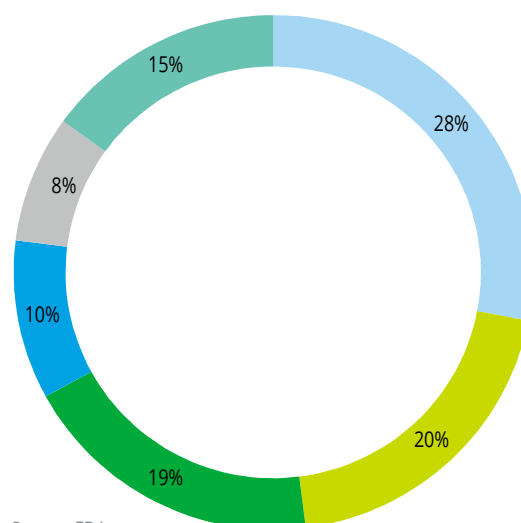
pharmaceutical ingredients in the US reliant on Chinese or Indian components. Many intermediate goods used to make antibiotics are also manufactured in China. Since the surge in COVID-19, the pharmaceuticals industry has forecasted that reduced Chinese production will cause drug shortages. Medical establishments could try to source from elsewhere, but it not easy for other suppliers to achieve sufficient scale and quality.

In medical devices and supplies, there is increasing dependence on China for protective gear, masks and ventilators for patients, as well as masks for medical professionals and the public, and a need for increased production of COVID-19 test kits. As China manufacturing restarts, the situation will ease somewhat.

CHART 10

### Global API supply by region

China Italy India USA  
Europe Other



Source: FDA

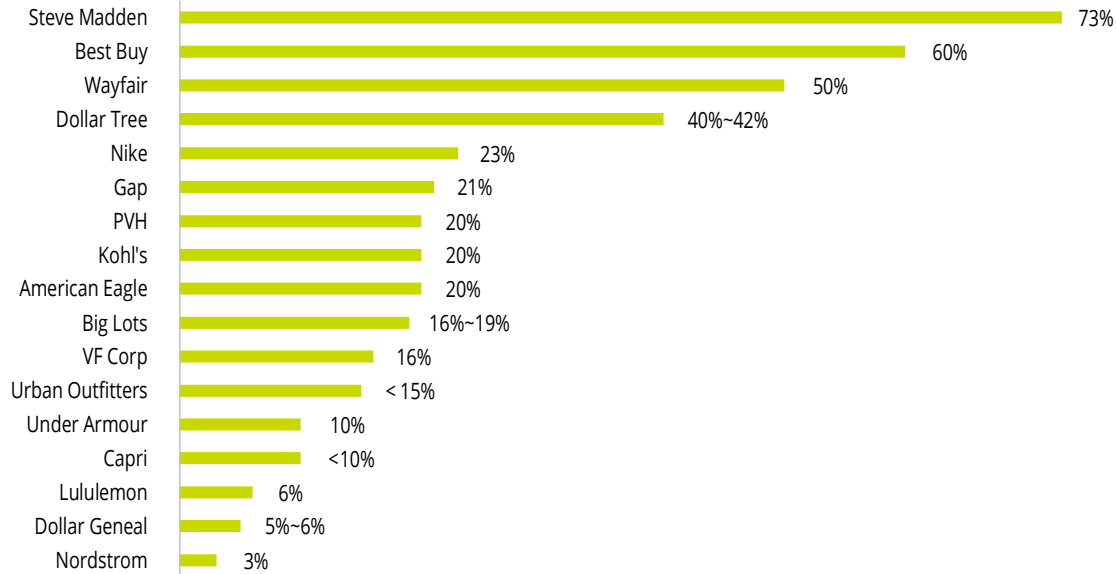
## Consumer and retail

Retailers face the reality that supply chain issues could move beyond just sourcing and production in China, disrupting the back-to-school and

holiday seasons. The shoe industry in the US, for example, is seen as one of the most reliant sectors, with 70 percent of shoes sold in the US coming from China. However, US footwear imports from China just had their worst January for more than a decade, tumbling by 15.7 percent.

CHART 11

### Sourcing from China (selected retailers)



Source: Coresight

## Automotive

China's auto industry was shut down for the whole of February, with almost half of the world's carmakers either suspending production or issuing warnings of potential closure due to a shortage of parts that usually originate from China.

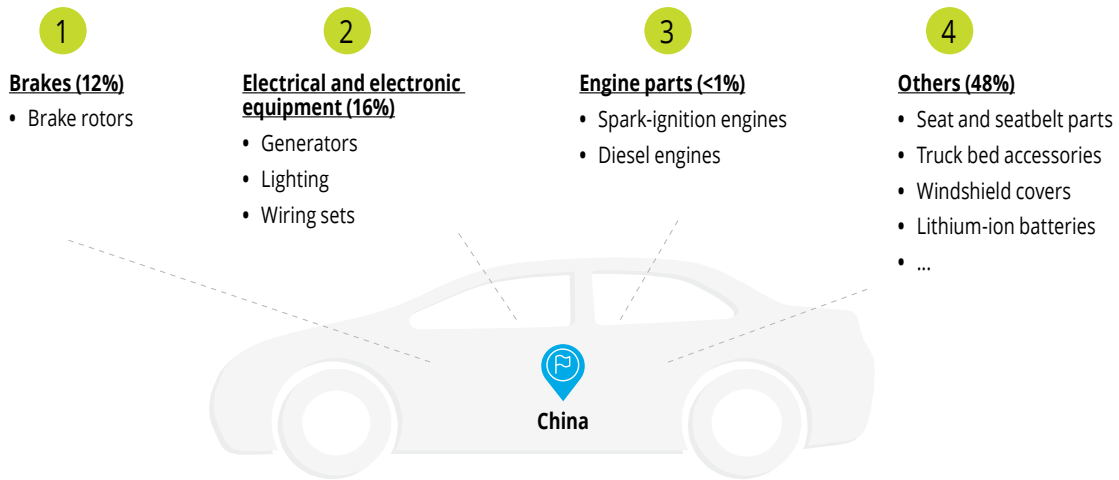
In Northeast Asia, Japan and South Korea's car industries are deeply interwoven with China. For instance, Hyundai's domestic production came to a complete halt due to a shortage of wire harnesses—essentials part needed to finish the vehicle assembly—that the company sources only from China. It turns out that South Korea has increased its dependence on Chinese-made parts and components in the last few years, with 80 percent of the country's wiring harness imports coming from China.

With the coronavirus intensifying in the west and China returning to work, Chinese car manufacturing faces a second supply chain shock.

Auto parts is one of a few economic sectors that bear the brunt of a global pandemic. It is a multibillion-dollar export industry that is vulnerable to declines in overseas demand. The majority of China's auto parts exports are low-skilled, labor intensive goods, such as bumpers, brake pads, clutches and wire-harnesses. They are not typically tier-1 parts (subsystems supply directly to OEM) but many of the inputs into these systems come from China. For instance, the US imported USD15 billion worth of auto parts from China in 2018, representing 13 percent of total US imports from the country (see the chart below). A prolonged global pandemic could exact a heavy toll on China's car parts manufacturers, especially those with higher exposure to overseas markets.

FIGURE 1

### China's share of US auto parts imports in 2018 (by value)



Source: US international Trade Commission

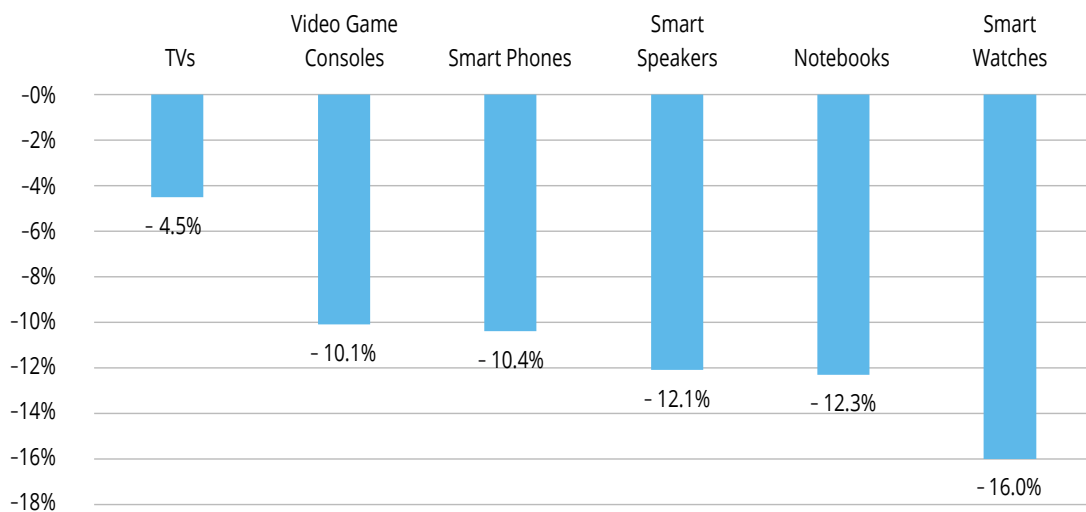
## Technology

The pandemic is expected to reduce global shipments of smartphones by 10 percent in 2020. Apple warned that it would not hit Q2 2020 revenue expectations due to supply constraints

and reduced retail demand. Disruption is not limited to China, but is spilling over into other Asian economies. In South Korea, Samsung had to temporarily stop operations at a production plant. Japan is also being hit and its sourcing of semiconductor materials could be challenged.

CHART 12

### Forecast for tech industry shipments



Source: Trendforce



The semiconductor manufacturing powerhouses in Asia Pacific (South Korea, Japan, China and Taiwan) are returning to normal, so there is hope that a disastrous impact on the global technology supply chain can be avoided. However, the supply

chain issues that emerged during the first quarter could still extend into the second quarter, and slackening demand for end products could further delay the recovery.

# 7 key trends reshaping the future supply chains

Multinationals have long enjoyed a relatively reliable supply chain in Asia Pacific. But only a small fraction of companies have carefully assessed their supply-chain risks. The current crisis was caused by a combination of lean production and global, multistage supply networks. Interconnectedness and layered interdependency increase risks. In the long term we expect to see the following trends:

• **Diversification to Southeast Asian countries:** In a recent Deloitte survey of middle to top management at Japanese, South Korean, and Taiwanese MNCs, one-third of respondents had already relocated some or all of their manufacturing or assembly outside China due to trade tensions. For example, 55 percent of Japanese MNCs have moved or plan to move some or all of their operations out of China, with the figure reaching 78 percent and 75 percent among South Korean and Taiwanese MNCs respectively. The COVID-19 outbreak will likely

accelerate the longer-term shift of low-value-added (cloth, bags and hats) manufacturing from China to Southeast Asia as the Chinese government looks to move into high value tech production such as 5G and semiconductors.

• **Vietnam, Indonesia and Thailand the beneficiaries:** Data from the US Census Bureau show a 35.6 percent surge in goods imports from Vietnam last year, compared with a 16.2 percent contraction in goods imported from China. Many shoe makers have also diversified their supply chains beyond China due to higher tariffs. Companies including Nike, Under Armor and Puma have steadily been shifting resources to locations such as Vietnam. Apple's contract manufacturers have expanded into other countries. Last year, Google shifted its Pixel smartphone production to Vietnam from China as it built a supply chain in Southeast Asia.

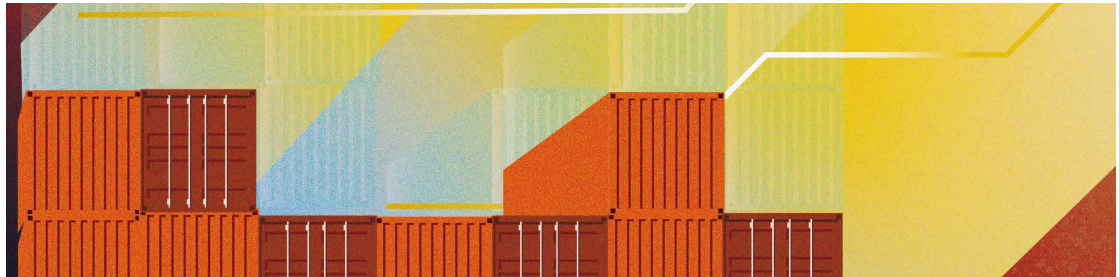
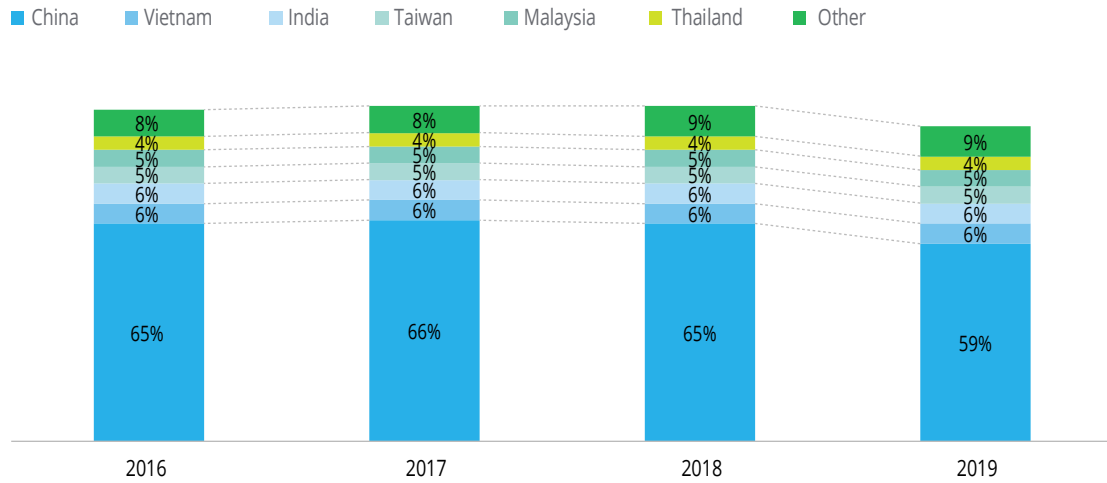


CHART 13

### US manufacturing imports from Asian countries



Source: Kearney

- It is difficult to replace China:** Not all manufacturing can be outsourced to Southeast Asia. The sheer scale of China cannot be replicated since it has more migrant workers, clustering of key suppliers and a generally higher level of skill. For example, China’s established supply chain network and capabilities allow MNCs to source anything from the vicinity of Guangdong in virtually all technology categories. Furthermore, a large proportion of manufacturing serves the domestic market.

Businesses should promptly consider actions that will improve their supply chain network resilience. In the short term, finding alternate supply sources, accounting for supply chain visibility and building safety reserves are some of the most immediate actions to be taken. In the long term, sourcing is a complex issue that will take time to perfect. To succeed, it is likely to need a combination of the following features:

- Start mapping and digital supply chains:** Supply chain mapping results in better visibility throughout a supply chain, indicating which suppliers, sites, parts, and products are at risk when potential disruption arises. This allows businesses to develop mitigation strategies to ease constrained inventory and identify

alternative capacity, so most companies will find the benefits outweigh the cost. Businesses with limited resources can start with a focus on key parts that drive the most revenue and work down through as many tiers as possible to gain visibility. Companies should also look for ways to digitize their supply chains. For example, an apparel manufacturer can create 3D samples of clothing online, instead of having to go back and forth overseas between a buyer and a manufacturer to see samples in person.

- Build backup capacity and flexibility:** Business should also invest in back up capacity by "hiding" one or more supporting supply networks within their core supply chains. This backup network will be able to take over immediately if a core network is shut down. For example, Toyota redistributed its standard components manufacturing after the 2011 earthquake so multiple nodes of its supply network had the same production capability. Flexible manufacturing, meanwhile, improves supply chain resilience. General Motors has factories in Argentina, Poland, Thailand and Brazil that follow the same design, template and manufacturing processes, so if one region experiences issues, factories elsewhere can provide immediate support.

- **Keep a global perspective while diversifying:** Businesses should also consider that over-reliance on one region could jeopardize their ability to continue business-as-usual. Add to this the risk of ever-more-frequent unforeseen disasters around the world, and it becomes apparent that companies need to reconfigure their global value chains to mitigate and manage risks in advance. Businesses should first assess their supply chain risks, and look to diversify their supply chains by building up parallel networks—more fragmented but tightly managed value chains to diversify risks. This requires longer term, scenario-based analysis of risks and opportunities, rather than simply shifting to a lower-wage country.
- **“Re-shoring” an option for some:** Businesses can also consider strategies such

as bringing supply chains closer to demand with on-shoring or near-shoring. For example, South Korean and Taiwanese manufacturers have plans to “re-shore” some of their high value manufacturing. The trend of companies moving back to their home bases is most prevalent among Taiwanese MNCs, driven by the “Invest Taiwan” initiative, which aims to attract companies back home with low-cost loans to cover the cost of relocation. Governments in Japan and the US also have similar incentives to lure multinationals back to home soil.

There is no guarantee that COVID-19 or another similar outbreak will not emerge at some point. Businesses that take the lessons learned and invest more to improve resilience in their supply chains will be better prepared when the next crisis arrives.

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The following economists contributed to creating the rich tapestry of insights that feature in *Voice of Asia*, Edition 7 April 2020:

**Anis Chakravarty**

Partner,  
Bengaluru  
anchakravarty@deloitte.com

**Chris Richardson**

Partner,  
Canberra  
chrichardson@deloitte.com.au

**Linda Meade**

Partner,  
Wellington  
lmeade@deloitte.co.nz

**Manu Bhaskaran**

CEO, Centennial Asia Advisors Pte Ltd;  
Alliance Partner,  
manu@centennialasia.com

**Roger Yun Tai Chung**

Deloitte Research Director,  
Shanghai  
rochung@deloitte.com.cn

**Rumki Majumdar**

Associate Director,  
Bengaluru  
rumajumdar@deloitte.com

**Shiro Katsufuji**

Director,  
Tokyo  
shiro.katsufuji@tohmatu.co.jp

**Sitao Xu**

China Chief Economist and Partner,  
Voice of Asia Leader,  
Beijing  
sxu@deloitte.com.cn

**Yanzi Wu**

Deloitte Research Manager,  
Shanghai  
zwu@deloitte.com.cn







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