AMRO
ASEAN +3 MACROECONOMIC RESEARCH OFFICE

ASEAN+3 REGIONAL ECONOMIC OUTLOOK (AREO) 2020

ASEAN+3 in the Global Value Networks

The factual information covers data for the period up to March 16, 2020, except when stated otherwise.

ISSN: 25297449

Printed in Singapore

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Foreword

AMRO's *ASEAN+3 Regional Economic Outlook* (AREO) annual flagship report is in its fourth edition. Launched in 2017, the 20th anniversary of the Asian Financial Crisis, the report attempts to provide a holistic view of trends and developments in the ASEAN+3 region. It draws on the insights of AMRO's various country teams with regard to the risks, vulnerabilities, and challenges facing the individual economies, and attempts to weave them into a coherent narrative of developments from a regional perspective. This is no easy task: given that the ASEAN+3 economies have diverse levels of development and income. The economies range from low-income developing economies to middle-income emerging markets, to high-income mature economies. They comprise some of the least-developed agrarian economies to some of the most technologically advanced economies. Yet, despite their diversity, the regional economies are becoming more integrated over time, bound together by trade, investment, and people. The adage, "geography is destiny," aptly encapsulates the region.

The AREO report has two parts: The first focuses on the short-term outlook, in particular, the risks and vulnerabilities facing the region, and the policy responses by the authorities. The second is thematic, focusing on the challenges facing the regional economies in their quest for growth and, for some, their aspirations to catch up to the advanced economies.

2019 has been a highly eventful year, marked by the escalating and de-escalating US-China trade tensions, geopolitical conflicts, domestic political unrest, market sell-offs, and extreme weather conditions and natural disasters. Just as we were closing the 2019 chapter on a brighter note, with the conclusion of the US-China Phase One trade deal, geopolitical tensions in the Middle East flared up, rocked by the assassination of a high-level official in the region. Overnight, oil prices shot up, jeopardizing a key assumption behind our growth projections. Thankfully, the situation was contained and tensions subsided. These developments have made the preparation of the report very challenging, particularly the first chapter on the short-term outlook.

However, just as things were quieting down, the novel coronavirus (COVID-19) outbreak in Wuhan, China, erupted and spread to several countries in the region. Again, our baseline forecast for recovery in the region was thrown into disarray. This time, no reprieve was forthcoming, and we have had to crank up our models to take into account the impact of the COVID-19 epidemic on the region. With the situation still evolving, and entire cities and countries shutting down, there is great uncertainty over how severe the pandemic will be and how long it will take to contain its spread. The global spread of the coronavirus led to panic sell-offs in financial markets and prompted the US Federal Reserve to cut interest rates by 50 basis points on March 3, and by another 100 basis points on March 15. Guided by experience with the severe acute respiratory syndrome epidemic in 2003 and the latest information on the key features of the COVID-19, we have made some brave assumptions on the duration and severity of the pandemic and revised our forecasts for the region. Our baseline is that the region will be hard hit in H1 2020, but then rebound strongly in the second half of the year.

Separately, our thematic chapter continues the storyline that we have been pursuing over the last three reports—the quest for growth and development by the regional economies and the challenges they face along the way. Our 2018 AREO report reviewed the "manufacturing for export" growth strategy followed by the regional economies for several decades, in light of technological changes, and affirmed its continuing relevance and efficacy; at the same time, it proposed the inclusion of services as a second engine of growth. *AREO 2019* built on the narrative by asking what capacity and connectivity are needed to leverage the new digital technology to enhance and sustain growth.

This year, we take a step back and review the prospects for sustaining growth in the region, in view of four major trends in the global economy: the increasing protectionist environment in the United States and Europe; the Fourth Industrial Revolution; the rise of Factory Asia and Shopper Asia; and the growing regional integration. We find that the new economy offers many opportunities for growth, based on harnessing the new digital technology to create new products and services to meet the discerning demands of the affluent middle class in Asia. The saga continues.

Hoe Ee Khor
Chief Economist

Acknowledgments

The *ASEAN+3 Regional Economic Outlook* (AREO) report provides AMRO staff's assessment of both the conjunctural and structural issues facing the ASEAN+3 region. It covers the short-term risks, vulnerabilities, and challenges facing member economies, as well as the policy options taken by or that are available to their authorities. It also presents staff's study on longer-term issues that are pertinent to sustained economic growth in the region. This AREO report reflects information as of March 16, 2020, and has been submitted to the Executive Committee of the ASEAN+3 members for discussion.

This report was prepared by the Regional and Financial Surveillance teams led by Li Lian Ong; it also draws on the surveillance work of the country teams. It was reviewed and cleared by Chief Economist, Hoe Ee Khor. The report has also benefited from the guidance of AMRO Director, Toshinori Doi, and other members of the Senior Management team.

The chapters were anchored by Li Lian Ong (Chapter 1) and Suan Yong Foo (Chapter 2). The primary authors were Edmond Chiang Yong Choo, Diana del Rosario, Marthe Hinojales, Vanne Khut, Anne Oeking, Prashant Pande, Wei Sun, Madeleine Vinuya, and Trung Thanh Vu, with contributions from Laura Grace Gabriella, Sumio Ishikawa, Simon Liu, and Thi Kim Cuc Nguyen; San Ling Lam (Consultant) advised on the preparation of Chapter 2.

The country notes in the annex were authored by Jinho Choi, Diana del Rosario, Tanyasorn Ekapirak, Suan Yong Foo, Paolo Hernando, Xianguo (Jerry) Huang, Zhiwen Jiao, Justin Lim, Ruperto Majuca, Muhammad Firdauz Muttaqin, Thi Kim Cuc Nguyen, Jade Vichyanond, Wanwisa (May) Vorranikulkij. The report also includes contributions from other members of the Surveillance Group, namely Malichanh Chiemsisoulath, Seung Hyun (Luke) Hong, Jae Young Lee, Huy Toan Nguyen, Chaipat Poonpatpibul, Yang-Hyeon Yang, and Matthew Yiu.

Edmond Choo managed the production of the publication, with support from Madeleine Vinuya, editorial assistance from Linda Long, and proof-reading by Faith Pang; Huong Lan (Pinky) Vu, Jiayi Zhang, and Karen Wilkinson (Consultant) coordinated communications and outreach efforts.

The authors would like to thank AMRO's Advisory Panel, chaired by Maria Socorro Bautista, for their helpful suggestions; the ASEAN+3 central bank participants at the inaugural AMRO AREO Brainstorming Session for their insightful observations on regional developments; and member authorities for their constructive comments.

Finally, the views expressed in this report are those of AMRO staff and do not, in any way, implicate ASEAN+3 members.

Abbreviations

4IR	Fourth Industrial Revolution
5G	Fifth generation
ADB	Asian Development Bank
AEs	advanced economies
AFC	Asian Financial Crisis
AI	artificial intelligence
AR	Argentina
ARA	assessing reserve adequacy
ARDL	autoregressive distributed lag model
ASEAN	Association of Southeast Asian Nations
ASEAN+2	ASEAN+3 excluding Mainland China
ASEAN+3	ASEAN plus China (including Hong Kong), Japan, and Korea
ASEAN-4	Indonesia, Malaysia, the Philippines, and Thailand
ASEAN-5	Indonesia, Malaysia, the Philippines, Thailand, and Singapore
ASEAN-6	ASEAN-5 plus Vietnam
AUM	assets under management
BBGAI	Bloomberg Barclays Global Aggregate Index
BCLM	Brunei Darussalam, Cambodia, Lao PDR, and Myanmar
BCLMV	Brunei Darussalam, Cambodia, Lao PDR, Myanmar, and Vietnam
BN	Brunei Darussalam[1]
BOK	Bank of Korea
BOI	Board of Investments
BOT	Bank of Thailand
BPO	business process outsourcing
bp	basis point
CAPEX	capital expenditure
CBOE	Chicago Board Options Exchange
CLMV	Cambodia, Lao PDR, Myanmar, and Vietnam
CN	People's Republic of China
CNY	Chinese renminbi
EMs	emerging markets
EMEs	emerging market economies
ETF	exchange-traded fund
EU	European Union
EUR	euro
EV	electric vehicle
FTA	free trade agreement
FDI	foreign direct investment
G3	US, euro area, Japan
G24	Intergovernmental Group of Twenty-Four
GBP	pound sterling/ pound
GDP	gross domestic product
GFC	global financial crisis
GMIM	generalized method of moments
GVAR	global vector autoregression
GVC	global value chain
GVN	global value network
HK	Hong Kong, China[2]
HS	harmonized system
H-O	Heckscher-Ohlin
ID	Indonesia
IEA	International Energy Agency
IFP	international fragmentation of production
IMF	International Monetary Fund
IN	India
IRS	interest rate swap
JGB	Japanese government bond

[1] For brevity, "Brunei Darussalam" is referred to as "Brunei" in the text.
[2] For brevity, "Hong Kong, China" is referred to as "Hong Kong" in the text.

JP	Japan
JPY	Japanese yen
KH	Cambodia
KLIBOR	Kuala Lumpur interbank offered rate
KR	Korea
LA, Lao PDR	Lao People's Democratic Republic[3]
LCY	local currency
LIBOR	London interbank offered rate
MAS	Monetary Authority of Singapore
Mb/d	million barrels per day
MM	Myanmar
MMK	Myanmar kyat
MNC	multinational corporation
MRA	mutual recognition arrangements
MX	Mexico
MY	Malaysia
MYR	Malaysian ringgit
NIM	net interest margin
NODX	non-oil domestic exports
NPL	non-performing loans
NY Fed	New York Federal Reserve
OECD	Organisation for Economic Co-operation and Development
OPEC	Organization of the Petroleum Exporting Countries
PBC	People's Bank of China
PCE	personal consumption expenditure
PH	the Philippines
PK	Pakistan
Plus-3	China (including Hong Kong), Japan, Korea
PMI	Purchasing Managers' Index
PPP	purchasing power parity
R&D	research and development
RCA	revealed comparative advantage
ROOs	rules of origin
RoW	rest of the world
RRR	reserve requirement ratio
S&P	Standard and Poor's
SG	Singapore
SGD	Singapore dollar
SMEs	small- and medium-sized enterprises
TH	Thailand
TR	Turkey
UK	United Kingdom
US	United States
US Fed	US Federal Reserve
USD	US dollar
VA	value-added
VAR	vector autoregression
VARX*	augmented vector autoregression
VIP	very important person
VIX	CBOE volatility index
VN	Vietnam
WEF	World Economic Forum
WITS	World Integrated Trade Solution
WTO	World Trade Organization
yoy	year-over-year
ZA	South Africa

[3] For brevity, "Lao People's Democratic Republic" is referred to as "Lao PDR" in the text.

Chapter 1.

Macroeconomic Prospects and Challenges

Highlights

- The start to 2020 has been eventful—the ASEAN+3 region's resilience will be tested, especially in the first half of the year. 2019 had already been an unsettling year, as a result of the US-China trade tensions and a general weakness in external demand. Nonetheless, the region grew by an estimated 4.8 percent—albeit down from 2018—supported by its strong macroeconomic fundamentals, sound financial systems, and broadly disciplined macroeconomic policymaking.

- Trade developments were the main factor behind the slowdown in 2019. Regional exports were hit by the tariff measures and negative sentiment surrounding the repeated escalation and de-escalation in the US-China trade conflict. The impact was cushioned somewhat by factors such as tariff exclusions, trade and investment diversion, and a strong tourism sector, buoyed by arrivals from China and ASEAN.

- ASEAN+3 growth is projected to slow sharply in 2020, to 4.2 percent. AMRO estimates that the coronavirus (COVID-19) outbreak in China will reduce its growth by 0.7 percentage point, with attendant spillovers to the rest of the region. Main risks to the outlook arise from the uncertainty related to the spread, duration and severity of what has now become a global pandemic, its impact on G3 growth, and the possibility of a resumption in US-China trade tensions.

- The heightened uncertainty resulting from the global spread of the coronavirus has introduced greater volatility in markets. In March, the US Federal Reserve implemented two surprise inter-Federal Open Market Committee meeting interest rate cuts, totaling 150 basis points, and launched a massive USD 700 billion quantitative liquidity program when US dollar funding stress led to a broad sell-off across asset classes and volatility in equity markets reached global financial crisis levels.

- The COVID-19 global pandemic is expected to impact the trajectory and composition of regional growth. Following a very weak first half of the year, AMRO expects economic activity to rebound strongly in the second half, led by manufacturing—supported by recovery in the global semiconductor and capex cycles—and positive sentiment surrounding the US-China Phase One trade agreement. In the short term, the services sector—tourism, in particular—is expected to be hard hit but should gradually recover once the pandemic subsides.

- Timely and skillful use of the various policy levers will be crucial for the region in 2020. Importantly, most ASEAN+3 economies still have some policy space and buffers to react to shocks that are materializing. With the spectre of the COVID-19 global pandemic casting a long, dark shadow over the world, regional policymakers will need to strategically use that policy room to boost growth while safeguarding financial stability.

I. Rising Risks

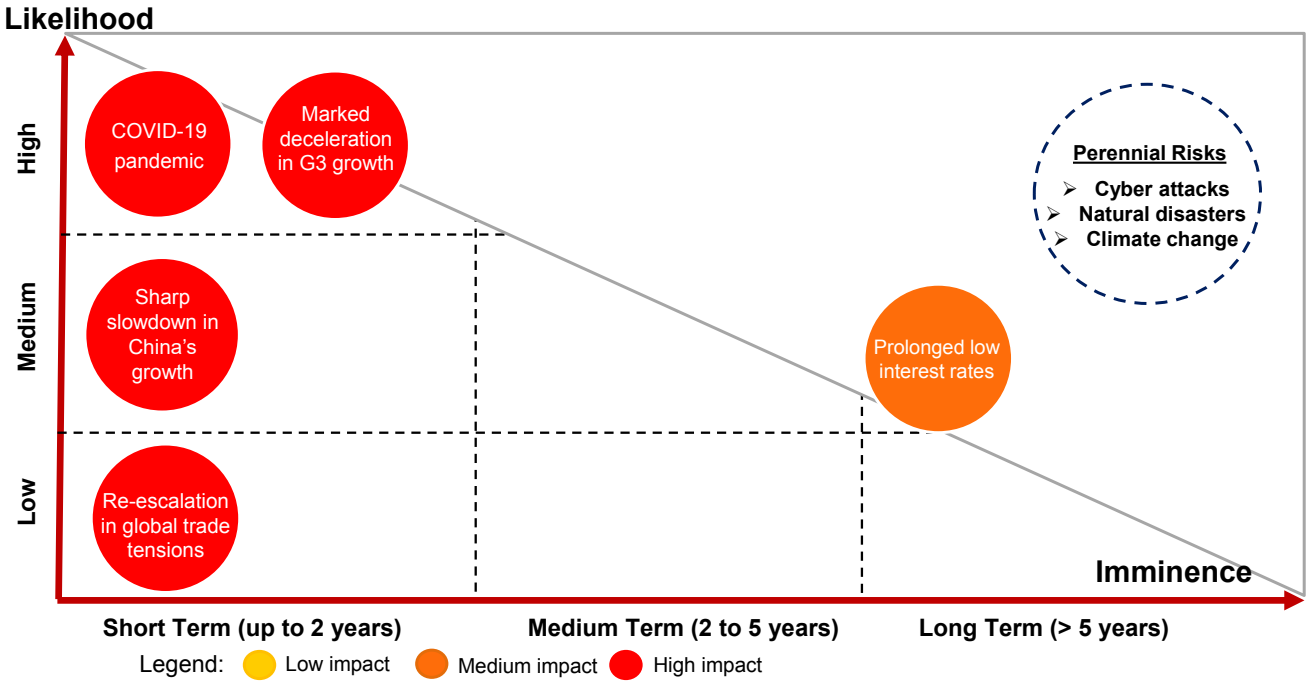
The novel coronavirus (COVID-19) global pandemic has turned 2020 into a highly challenging year, but the ASEAN+3 region's resilience will ensure that it weathers the storm and recovers strongly. Supported by its strong macroeconomic fundamentals, the region withstood several shocks in 2019, arising mainly from the US-China trade tensions, and grew by 4.8 percent. In the immediate wake of the good news in December that the United States had agreed to the Phase One trade deal with China, tensions in the Middle East flared up with the US assassination of a high-profile Iranian army general. The tensions—and ensuing hike in oil prices—subsided quickly but were followed by another shock when China reported the outbreak of a new strain of coronavirus, the COVID-19, in Wuhan, a major industrial city in central China, which spread quickly throughout the country. The Chinese authorities' drastic actions to lock down Wuhan and quarantine several cities helped to limit the transmission of the virus, but it has nonetheless spread worldwide and many countries are taking unprecedented actions to try and contain its spread.

The COVID-19 pandemic represents the wild card for global growth in 2020. It has become the thread that ties several of the key risks identified in AMRO's Global Risk Map (Figure 1.1), and its unravelling could trigger the realization of those risks, either individually or—more devastatingly—in combination. In the event that the pandemic is protracted and virulent, the highlighted risks will essentially become the baseline.

As it stands, China's growth will slow markedly, with inescapable implications for the rest of the region, even if activity were to rebound in the second half of the year. AMRO estimates that the outbreak could cost the Chinese economy 0.8 percentage point in growth in 2020 (AMRO, 2020a), down to 5.3 percent, even after taking into account support measures that the authorities have already introduced and others that they may implement (Box 1.1). Any further deterioration from this point that results in a significant weakening in banks' asset quality and rise in systemic risks could cause a greater slowdown that would be even more damaging to the region. The one reassuring factor may be China's strong track record (and policy space) in implementing the necessary policy mix to engineer a soft landing—as exemplified by the use of fiscal levers to offset the impact of US tariffs on its external sector this past year—and in addressing pockets of weaknesses in the financial system.

The likelihood of a marked deceleration in G3 growth has risen sharply, with the COVID-19 pandemic casting a

Figure 1.1. Global Risk Map



Source: AMRO staff estimates.
Note: G3 = US, euro area, Japan.

The authors of this chapter are Li Lian Ong (lead), Edmond Choo, Diana del Rosario, Marthe Hinojales, Anne Oeking, Prashant Pande, Wei Sun, Madeleine Vinuya, and Trung Thanh Vu, with contributions from Sumio Ishikawa, Laura Grace Gabriella, Simon Liu, and Thi Kim Cuc Nguyen.

long, dark shadow over the global outlook. Encouragingly, recent US data show that the economy is starting from a position of strength—growing at a moderate pace while inflation remains subdued. However, the US Federal Reserve (hereafter "US Fed") was sufficiently concerned about the risks posed by the coronavirus to the economy that it pre-emptively cut interest rates by 50 basis points on March 3, in between Federal Open Market Committee (FOMC) meetings, and then by another 100 basis points on March 15, along with the introduction of a massive quantitative liquidity program.

The outlook is even more fraught elsewhere in the G3. EU growth was widely expected to slow to its lowest rate since the global financial crisis (GFC), even before the coronavirus spread quickly through the region. Economic activity in Germany—one of Europe's main engines of growth—slumped to a six-year low in 2019, while post-Brexit trade negotiations with the United Kingdom are only just beginning, with the risk of extended and widespread disruptions to commerce. Meanwhile, Japan has already been directly affected by the pandemic and indirectly by regional spillovers to economic activity. Consequently, both the European Central Bank (ECB) and the Bank of Japan (BOJ) have announced stimulus measures, via expansions in their asset-buying programs.

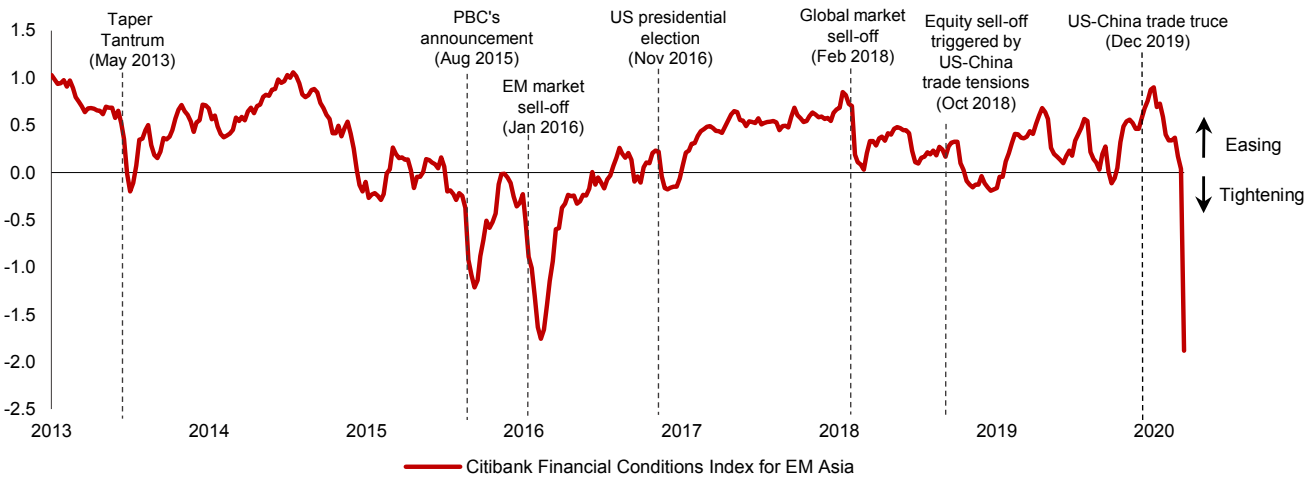
Into this mix, global trade developments—with the United States in the eye of the storm—has taken on even greater importance. Indeed, the COVID-19 pandemic has overshadowed the turnaround in global business sentiment following the US-China Phase One trade agreement, which was signed on January 15, 2020. For China, any re-escalation in trade tensions, possibly as a result of setbacks or slippages in implementation, could place similar pressure on its external sector and those of its regional neighbors, as that seen in 2018 and 2019. Combined with the disruption to its services and manufacturing sectors from the coronavirus outbreak, the impact could push the economy—and the rest of the region—further into tail risk territory. Separately, trade negotiations are also ongoing between Japan and the United States (e.g., over US tariffs on Japanese automobiles), while the EU is now in US crosshairs.

Meanwhile, oil prices have fallen sharply, triggered by the COVID-19 pandemic and exacerbated by the supply dispute between Saudi Arabia and Russia—an unexpected turnaround from heightened concerns at the start of the year. If (pent up) demand picks up strongly when the pandemic recedes, or if there is an unexpected intensification in hostilities in the Middle East, oil prices could spike. However, given the very weak demand environment and excess supply situation, any rise in oil prices is unlikely to be sustained (Box 1.2).

In the current highly stressed environment, low interest rates are an important stimulant. The easier financial conditions in global markets had provided much-needed support for growth in 2019. However, the huge drawdown in equity markets and sharp widening in sovereign and credit default swap spreads have contributed to a recent tightening in financial conditions in emerging markets (Figure 1.2). Importantly, the large rate cuts by the US Fed provide room for EMs to ease monetary policy to mitigate against the effects of the anticipated downturn in the global economy.

Over the medium to longer term, a prolonged period of low rates could introduce its own risks. Already evident in some countries, low interest rates squeeze net interest rate margins and reduce the profitability of financial institutions, and cause asset-liability mismatches on balance sheets. As a result, financial institutions are forced

Figure 1.2. Emerging Markets: Financial Conditions Index



Sources: Citibank; and AMRO staff estimates.
Note: Variables included are short-term money market rates, government bond yields (short and long tenor); 2- to 10-year yield spread; credit and credit default swap spreads; difference between 3-month Treasury bill and the 3-month LIBOR based in US dollars, 2-year and 10-year yield differentials with US yields; country specific MSCI index; equity volume; country specific MSCI financials index; exchange rate and exchange rate volume; plus some purely external variables: JPMorgan Emerging Market Bond Index-Plus spread and oil prices. EM = emerging market.

to take on greater risks in an effort to earn higher returns. Concurrently, the overall stock of debt among some ASEAN+3 economies is high and rising, and low interest rates could encourage further borrowing—through bank or shadow bank loans and/or security issuances—which could render the debt unsustainable when conditions change and interest rates rise.

Lurking behind these more immediate and higher-profile risks are the perennial, and increasingly recognized, threats to financial stability posed by climate change and natural disasters. More frequent and severe weather and natural disasters in recent years have shown that no economy in the region is immune from their impact and long-lasting consequences. The Great East Japan Earthquake cost Japan 3.4 percent of GDP, but economic loss and damage has amounted to more than 10 percent of GDP in the case of Lao PDR (from a severe storm in 1993), Myanmar (from a cyclone in 2008), and Thailand (from the floods in 2011) (AMRO, 2018a). The severity and increasingly multi-generational nature of the economic impact demonstrates the importance of investing in climate-proof infrastructure and adaptation measures, as well as in setting aside buffers for reconstruction and inclusive social safety nets.

The risk of climate change and natural disasters could also spill into the financial system, potentially magnifying its impact on the real economy. With more frequent, intense, and widespread disasters, banks could face rising credit defaults as collateral values are eroded, eating into their capital. Likewise, the balance sheets of insurers and reinsurers would become increasingly exposed, eventually resulting in a sharp rise in insurance costs, and further increasing the vulnerability of the real economy (Box 1.3).

In the face of these challenges, it is encouraging that the majority of ASEAN+3 economies seem well-positioned to deal with the main risks on the horizon. There appears to be little sign of overheating, which augurs well for those that have adopted more stimulative measures to support their economies in the wake of the COVID-19 pandemic (Figure 1.3):

- *Many economies have moved forward in the business cycle compared to a year ago*. Some, such as Lao PDR, Malaysia, and the Philippines appear to have traversed the late-cycle stage of their respective business cycles quite quickly and are showing signs of moving into the early phase. Brunei and Myanmar have meanwhile progressed to mid-cycle. The impact of the US-China trade tensions and the pandemic have pushed China, Hong Kong, Japan, Korea, and Singapore into a downturn, although in Hong Kong's case, domestic unrest was probably a bigger factor.

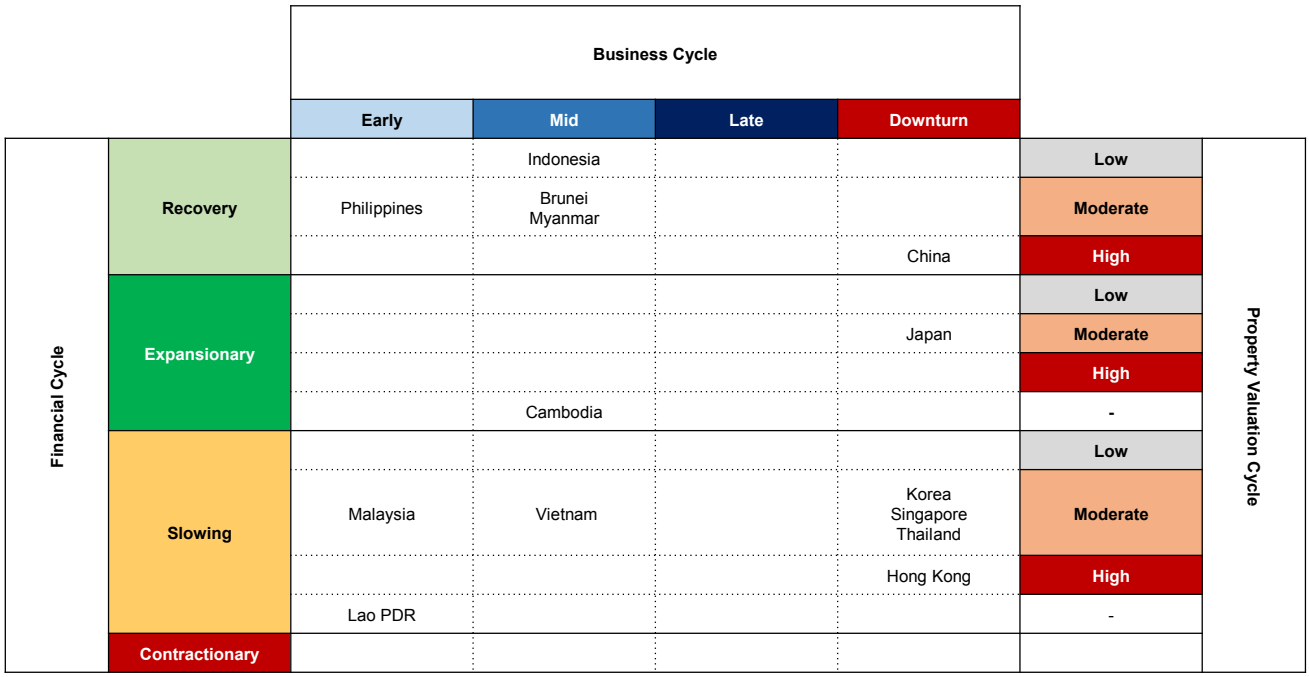
- *Most countries have maintained their positions in the financial cycle over the past year*. They remain in either the slowing or recovery phase, pointing to a low risk of incipient credit bubbles throughout the region. Malaysia and Thailand have moved into the slowing phase, while the Philippines has shifted from the slowing to the recovery phase. Only Japan, which has picked up from the slowing phase, and Cambodia, which has graduated from the recovery phase, are in the expansionary phase of their respective financial cycles, although the situation may change swiftly.

- *Property valuations have remained largely unchanged and moderate*. The exception is Korea, where macroprudential measures appear to have been broadly effective in addressing the previously high prices. Only China's and Hong Kong's property prices remain "rich," notwithstanding their economic downturn.

Growth in the ASEAN+3 region as a whole is projected to slow significantly in 2020. AMRO forecasts that economic activity in the region will be reduced by 0.7 percentage point and expand at a much lower 4.2 percent, on the back of sharply weaker growth in China and the G3 economies (Table 1.1 and Appendix 1). Hong Kong's economy, which is most closely tied to developments in China, is expected to post negative growth again in 2020, following the recession in 2019. Japan's growth surpassed expectations in 2019, expanding at 0.7 percent, but is set to slow significantly, to 0.1 percent, partly as a result of weaker domestic demand. Korea, which is struggling with a severe COVID-19 outbreak, is estimated to register much weaker growth again this year, at 2.0 percent. The ASEAN region as a whole is anticipated to soften further in 2020, with significant downward revisions to the growth estimates for some economies.

AMRO projects that economic activity in the region will be supported by a strong rebound in manufacturing and trade activity in H2 2020, following a sharp slowdown in the first half of the year. Korea's recovery is anticipated to be led by improvements in domestic activity and a turnaround in the global semiconductor cycle; the ASEAN-5 economies and Vietnam should similarly benefit. Additionally, growth in the Philippines is expected to pick up to 6.2 percent as the government ramps up fiscal spending following budget delays in 2019, while Lao PDR should rebound from lower growth in 2019 as a result of flash floods and drought.

Figure 1.3. ASEAN+3: Business, Financial, and Property Valuation Cycles



Source: AMRO staff estimates.
Note: In Korea's case, the analysis on property valuations focuses on Seoul and its surrounding areas, which has recorded high year-over-year growth in prices.

Table 1.1. ASEAN+3: AMRO Growth Estimates and Projections, 2019–21
(Percent)

Member	2018	January 2020		April 2020		
		2019 e/	2020 p/	2019 e/	2020 p/	2021 p/
ASEAN+3	**5.2**	**4.9**	**4.9**	**4.8**	**4.2**	**5.0**
Plus-3	5.2	4.9	4.9	4.9	4.2	5.0
China	6.6	6.1	6.1	6.1	5.3	6.1
Japan	0.3	1.1	0.5	0.7	0.1	0.6
Korea	2.7	1.9	2.4	2.0	2.0	2.6
ASEAN	5.2	4.7	4.9	4.6	4.4	5.0
ASEAN-5	4.9	4.4	4.6	4.2	4.1	4.8
ASEAN-5 & BN	4.9	4.4	4.6	4.2	4.1	4.8
ASEAN-4 & VN	5.2	4.9	5.0	4.8	4.5	5.1
CLMV	7.0	6.9	6.9	6.9	6.4	6.8
HK & SG	3.1	-0.2	1.2	-0.2	0.2	2.2

Sources: National authorities; and AMRO staff projections.
Note: e/ refers to AMRO staff estimates, and p/ refers to AMRO staff projections. Plus-3 = China (including Hong Kong), Japan, and Korea. ASEAN-5 = Indonesia, Malaysia, the Philippines, Singapore, and Thailand; ASEAN-4 = Indonesia, Malaysia, the Philippines, and Thailand; CLMV = Cambodia, Lao PDR, Myanmar, and Vietnam; BN = Brunei; HK = Hong Kong; SG = Singapore; VN = Vietnam.

Addendum to The ASEAN+3 Regional Economic Outlook (AREO) 2020

Table. AMRO's Revised Growth Projections for the ASEAN+3 Economies

Economy	2018	2019 e/	AREO 2020[4]		April 2020	
			2020 p/	2021 p/	2020 p/	2021 p/
ASEAN+3	**5.2**	**4.8**	**4.2**	**5.0**	**2.0**	**5.5**
Plus–3	5.2	4.9	4.2	5.0	2.2	5.6
China	6.6	6.1	5.3	6.1	3.5	6.5
Hong Kong, China	2.9	–1.2	–0.5	1.8	–4.0	3.0
Japan	0.3	0.7	0.1	0.6	–1.8	2.5
Korea	2.7	2.0	2.0	2.6	–1.4	3.2
ASEAN	**5.2**	**4.6**	**4.4**	**5.0**	**1.1**	**5.2**
Brunei Darussalam	0.1	3.9	3.5	2.9	3.0	2.9
Cambodia	7.5	7.1	6.2	6.9	2.7	6.8
Indonesia	5.2	5.0	4.9	5.2	2.3	5.3
Lao PDR	6.3	6.0	6.1	6.5	3.8	6.2
Malaysia	4.7	4.3	4.0	4.6	0.1	4.6
Myanmar	6.8	6.8	6.0	6.9	4.5	6.9
The Philippines	6.2	5.9	6.2	6.6	4.5	6.7
Singapore	3.4	0.7	0.8	2.6	–1.0	2.0
Thailand	4.1	2.4	1.5	3.2	–6.0	4.0
Vietnam	7.1	7.0	6.6	6.8	4.5	7.0

Note: e/ refers to AMRO staff estimates, and p/ refers to AMRO staff projections. Plus-3 = China (including Hong Kong), Japan, and Korea.

[4] The country forecasts in *AREO 2020* were prepared based on information available as of March 16, 2020 when much of members' macroeconomic data for February were still not available and the impact of the COVID-19 epidemic was largely unknown. Since then, the spread and severity of the global pandemic have become clearer and more data and information have become available, including policy measures announced by the member authorities, allowing a deeper analysis of the impact on the economies. The COVID-19 pandemic has significantly increased the uncertainty and downside risks around the global and regional outlook. AMRO staff will continue to update their analyses and projections, taking into account new data releases and policy responses.

Box 1.1:

Impact of the COVID-19 Pandemic on the ASEAN+3 Economies

The recent outbreak of a novel coronavirus, COVID-19, in Wuhan, China, and its subsequent spread outside the country has heightened the risk to both China's growth and those of the region and the rest of the world. The eventual economic impact of the disease will depend on its duration, virulence, and contagiousness. In China, the pandemic is putting great pressure on the health system, and resulting in lost wages and lower productivity from sick days and work stoppages. The fear of infection and attempts to curtail contagion has led to disruptions in transportation, the manufacturing supply chain, provision of services, and closure of schools and businesses. Reportedly, the spread of the disease has largely been brought under control in China. However, the authorities are now confronted with the challenge of balancing containment against the need to resume production and other economic activity.

The severe acute respiratory syndrome (SARS) outbreak could provide a benchmark for estimating the potential impact of COVID-19. SARS was first reported in Q4 2002, with most cases registered in Q1 and Q2 2003—and like the COVID-19, occurred over the busy Lunar New Year travel period. The latter has become more widespread than SARS, which infected about 8,000 people, mainly in China and Hong Kong. However, while there was less SARS contagion elsewhere in the region and globally, the COVID-19 has become a global pandemic. That said, SARS was more deadly, with an average fatality rate of nearly 10 percent compared to 3.4 percent so far for the COVID-19, according to World Health Organization estimates. AMRO assumes a similar duration for the main episode of infections for both diseases, of about 4 months. Similar to SARS, the pandemic's impact on China is projected to be short-lived but significant. A sharp slowdown in growth is anticipated for Q1 2020, in both the manufacturing and services sectors, as the restrictions on population movements and holiday extensions have been disruptive for both production and demand.

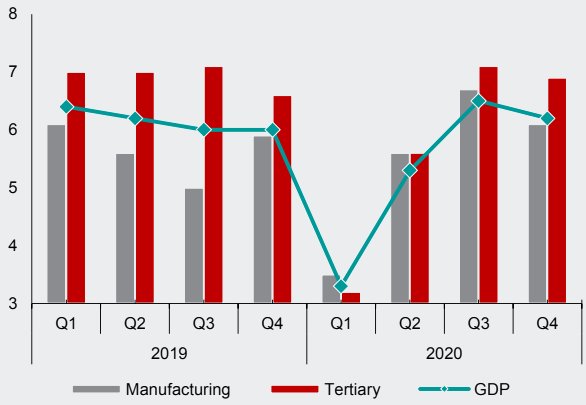
AMRO projects that the COVID-19 outbreak could reduce China's 2020 GDP by 0.8 percentage point, which would be significantly larger than during the SARS pandemic. It is estimated that a –0.3 percentage point reduction in growth would be attributable to the manufacturing sector and a –0.5 percentage point reduction to the services sector. In the manufacturing sector, the global supply chain centered in the affected regions is expected to experience significant disruption. However, companies are likely to find ways to make up for most (if not all) of the lost production subsequently, to meet demand, given that the manufacturing sector is relatively less constrained by production capacity. Hence, the manufacturing sector is likely to rebound strongly (Figure 1.1.1). In the service sector, firms would have limited capacity to make up for the lost business days. Demand for several types of services, such as tourism, is unlikely to rebound quickly, and the provision of services cannot be increased significantly in a short period. Hence, its recovery to pre-pandemic levels would be more gradual. In addition to the impact on growth, the pandemic could affect employment, prices, and financial stability in China.

The virus outbreak in the ASEAN+3 region's largest economy and the world's second largest has resulted in significant spillovers to the region and the rest of the world. For the region as a whole, the effects are being felt because of increased regional integration and connectivity. The main spillover channels are through a sharp drop in travel and tourism; a decline in China's imports through the supply chain as manufacturing production is disrupted and domestic demand is affected; and the spread of the disease to regional economies. In addition, the pervading uncertainty and fear have demolished business and consumer confidence, and increased risk aversion in financial and commodities markets to unprecedented levels. Should the Chinese economy slow down much more significantly than anticipated during 2020, the effects on regional economies could be very severe.

Several regional economies have seen a rising number of cases and have implemented strong measures to contain the spread, with adverse impact on their economic activity. In addition,

those with large tourism sectors and a high share of Chinese visitors are being particularly hard hit by the pandemic. During the SARS outbreak in 2003, tourism dropped sharply. The number of visitors from China to Japan, Korea, Malaysia, the Philippines, Singapore, and Indonesia plunged—by between 50–90 percent year-over-year—in the months of May and June 2003, but rebounded in 2004 (Figure 1.1.2). The effects are undoubtedly significantly worse this time, given that the number of Chinese visitors to the region has increased manifold since then—from less than 20 percent of all visitors in 2002 to more than 40 percent in 2018—and given that the corresponding importance of tourism's contribution to regional economies' GDP has increased. Among the ASEAN+3 economies, Cambodia and Thailand are expected to be most affected, Vietnam and Hong Kong to a lesser extent (although the latter has already suffered from a sizable reduction in visitor arrivals owing to the ongoing social unrest). Additional negative effects are already being observed, with a near-standstill in tourists and business travellers from other regions, as infections spread quickly within the ASEAN+3 region and throughout the world, and countries place restrictions on foreign visitors and returning residents.

Figure 1.1.1. China: AMRO's Quarterly Growth Projections
(Percent)



Sources: Wind Economic Database; and AMRO staff calculations.

Figure 1.1.2. Selected ASEAN+3 Economies: Visitor Growth during SARS
(Percent year-over-year; number of visitors)

Sources: Haver Analytics; national authorities; and AMRO staff calculations.
Note: Refers to visitor numbers in Japan, Korea, Malaysia, the Philippines, Singapore, and Indonesia. SARS = severe acute respiratory syndrome.

This box was prepared by Anne Oeking and Simon Liu, based on AMRO (2020a).

Box 1.2:

The Demand–Supply Dynamics of Oil Prices

Oil prices are a key driver of financial markets in the ASEAN+3 region. Although they have settled at a structurally lower range since 2015 (average Brent price of USD 58 per barrel since 2015 compared to USD 110 per barrel between 2011–14), any sustained volatility and upward trend in prices could affect regional economies through channels such as their balance of payments, inflation, and fiscal balance. Not surprisingly, the rise in geopolitical risks from the US-Iran standoff at the turn of the year caused a (temporary) ripple of alarm through the region. However, all indicators suggest that the demand-supply dynamics are tilted in favor of the latter:

- The supply of oil is expected to rise in 2020. By way of background:
  - At its December 2019 meeting, Organization of the Petroleum Exporting Countries (OPEC) members decided to further reduce its production by 0.37mb/d (million barrels per day) and beyond this metric, Saudi Arabia agreed to a further reduction of 0.4mb/d in supply. However, the failure of OPEC+ discussions in March 2020 means that the production cuts are off the table, which could lead to a rise in supply by 2.1mb/d.[1]
  - Estimates by the International Energy Agency (IEA) and OPEC suggest that non-OPEC supply will increase by 1.8–2.0mb/d, compared to 1.9mb/d in 2019. Though the incremental supply from the United States has declined as a result of falling rig counts, it remains the biggest contributor to incremental non-OPEC supply (Figure 1.2.2). The IEA also expects a sizable increase in supply from Brazil, Canada, and Norway in 2020.

  With all these factors taken together, supply could potentially rise by 4mb/d, consistent with the trend over the past few years when OPEC cuts have been offset (sometimes more so) by non-OPEC supply (Figure 1.2.3), which should keep downward pressure on oil prices. Indeed, the recent fall in oil prices will reduce the incentive for many oil producers to maintain the level of production but given the disagreements within OPEC+ and the subsequent announcements of increasing production by Saudi Arabia and Russia will keep the risks of a supply glut alive.

- Subdued demand should also play a role in dampening oil prices going forward. Prior to the COVID-19 outbreak, estimates by OPEC (2020a) and IEA (2020a) had projected global demand to

Figure 1.2.1. Oil Production: Compliance with OPEC Cuts, December 2019
(Millions of barrels per day)

Country	Dec 2019	Agreed cuts*	Cuts implemented
Saudi Arabia	9.7	-0.32	-0.95
Iraq	4.6	-0.14	-0.06
UAE	3.1	-0.10	-0.10
Kuwait	2.7	-0.09	-0.10
Iran	2.1		
Nigeria	1.7	-0.06	-0.17
Angola	1.4	-0.05	-0.12
Libya	1.1		
Algeria	1.0	-0.03	-0.04
Others	2.1	-0.04	0.06
Total	**29.4**	**-0.81**	**-1.48**

Sources: International Energy Agency; and AMRO staff calculations.
Note: Agreed cuts by OPEC members against the baseline supply in October 2018, except for Kuwait (September 2018). mb/d = million barrels per day; OPEC = Organization of the Petroleum Exporting Countries; UAE = United Arab Emirates.

Figure 1.2.2. Oil Production: Projections for Non-OPEC Countries, as of January 2020
(Millions of barrels per day)

Country	2020	Change vs. 2019	Percentage of non-OPEC supply
US	18.3	1.11	27.3
Russia	11.5	-0.06	17.2
Canada	5.7	0.14	8.5
China	3.9	-0.01	5.8
Brazil	3.2	0.31	4.8
Norway	2.1	0.39	3.2
Mexico	2.0	0.05	3.0
Qatar	2.0	0.01	2.9
UK	1.2	0.08	1.8
Oman	1.0	0.00	1.5
Others	16.2	0.11	24.2
Total	**67.0**	**2.13**	

Sources: International Energy Agency; and AMRO staff calculations.
Note: mb/d = million barrels per day; OPEC = Organization of the Petroleum Exporting Countries; UK = United Kingdom; US = United States.

[1] OPEC+ is the alliance of crude oil producers, between the 11 OPEC members led by Saudi Arabia and the 10 non-OPEC members led by Russia.

rise by approximately 1.2mb/d in 2020 (Figure 1.2.4), as compared to about 1mb/d in 2019, which is still lower than the forecast increase in supply. However, the demand forecasts were subsequently updated to factor in the impact of the COVID-19 epidemic (Figure 1.2.5), and the revised estimates that demand would fall, by up to 0.1mb/d in 2020 (OPEC 2020b, IEA 2020b), have significantly tilted risks to the downside. The IEA lowered its Q1 2020 oil demand estimate by 1.8mb/d for China and 2.5mb/d globally (IEA, 2020b) to reflect the estimated impact of the epidemic on oil demand.

Figure 1.2.3. Oil Supply: Annual Changes
(Millions of barrels per day)

Region/ Country	2015	2016	2017	2018	2019
World	0.83	1.02	0.25	3.47	0.00
US	-0.68	-0.28	1.19	2.19	0.81
Russia	0.17	0.33	-0.26	0.58	-0.30
Saudi Arabia	0.75	0.23	-0.53	0.70	-0.82
OPEC (ex Saudi Arabia)	1.89	-0.04	-0.23	-0.53	-2.18
Others	-1.30	0.77	0.08	0.53	2.49

Sources: International Energy Agency; and AMRO staff calculations.
Note: mb/d = million barrels per day; OPEC = Organization of the Petroleum Exporting Countries; US = United States.

Figure 1.2.4. Oil Demand: Projections by Country, as of January 2020
(Millions of barrels per day)

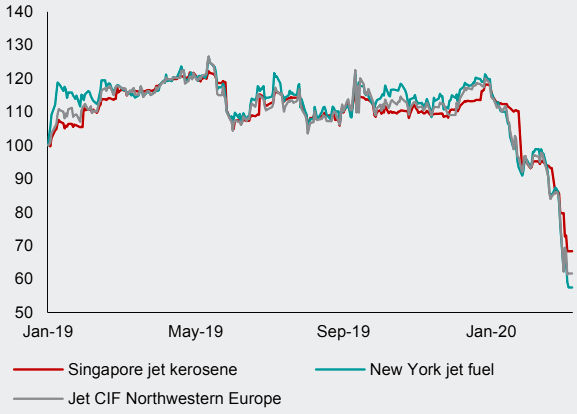
Country	2020	Change (vs. 2019)	Percentage of world demand
US	20.68	0.17	20.38
China	14.05	0.44	13.85
EU-5	8.15	-0.01	8.03
India	5.19	0.17	5.12
Japan	3.65	-0.04	3.60
Russia	3.64	0.04	3.59
Brazil	3.13	0.03	3.09
Saudi Arabia	3.12	-0.05	3.08
Korea	2.62	0.03	2.58
Canada	2.51	0.00	2.47
Iran	1.91	-0.04	1.88
Mexico	1.92	0.01	1.89
Rest of world	30.88	0.44	30.44
Total	**101.45**	**1.19**	

Sources: International Energy Agency; and AMRO staff calculations.
Note: The forecasts do not incorporate the impact of the COVID-19 pandemic on oil demand. Mb/d = million barrels per day; US = United States. EU-5 countries are Germany, France, Italy, Spain, and the United Kingdom.

The forward market was pricing lower oil prices in 2020 until the elevation of risks surrounding the coronavirus pandemic. The backwardation in oil markets (as of January 17, 2020) meant that the market was expecting a lower price in the forward space as compared to the spot (Figure 1.2.6), suggesting a tilt toward excess supply. The rally in oil prices in Q4 2019 was largely driven by positive developments surrounding the US-China trade negotiations—the New York Federal Reserve (hereafter "NY Fed") estimates that about 67 percent of the oil price rally in Q4 2019 was attributable to demand side factors (Figure 1.2.7).[2]

Supply factors came into play in December 2019 when OPEC agreed on cuts, and geopolitical tensions related to the US-Iran standoff emerged at the end of the month. The subsequent easing in geopolitical tensions and rising oil inventories led to weaker prices in early January 2020, while the COVID-19 epicdemic pushed them down further as markets recalibrated their expectations of potential demand. As of March 16, 2020, the forward market is pricing in a small rise in oil prices but the expected average over the next 12 months of USD 37 per barrel would be much lower than the USD 61 per barrel seen before mid-January. The NY Fed model confirms that the recent fall in oil prices is indeed a demand shock.

Figure 1.2.5. Price of Jet Fuel
(January 1, 2019 = 100)



Sources: Intercontinental Exchange (ICE); and AMRO staff calculations.

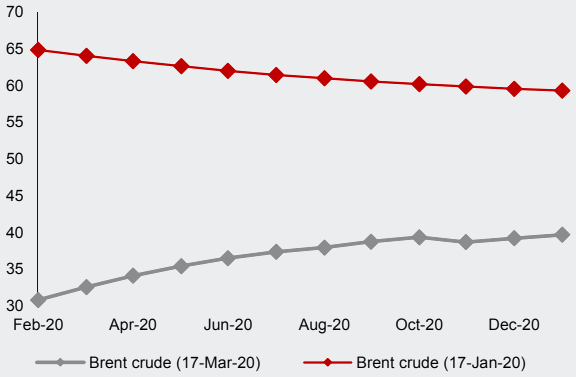
Market positioning shows that speculative players had reduced their long positions significantly by end-February, from their 2020 high toward the end of January, following the correction in oil prices. As it was, oil prices were markedly lower as of end-January 2020 compared to their May 2019 peak despite the

[2] See https://www.newyorkfed.org/research/policy/oil_price_dynamics_report.

higher long positions (Figure 1.2.8). The drop in prices after news of the COVID-19 epidemic broke was followed by the unwinding of long positions, which confirmed the weaker sentiment toward oil prices.

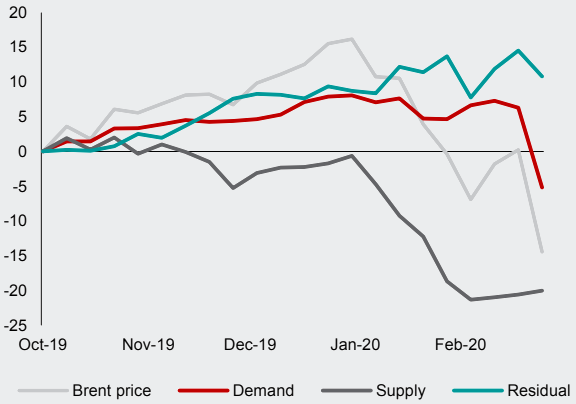
The overall trajectory points to oil prices moving lower in 2020 from 2019. The average forward implied price for Brent crude in 2020 is about USD 37 per barrel, as of March 17, 2020. Any upside risk would arise either from improved demand or the manifestation of supply risks, such as a significant and sustained escalation in tensions in the Middle East. The supply outlook suggests that spare production capacity—with both OPEC and non-OPEC members—would likely dampen any material move higher. The recent failure by OPEC+ to agree on production cuts and, indeed, their readiness to increase production will put a ceiling on prices. Concurrently, demand-side risks such as a sharp slowdown in global growth on the back of the COVID-19 pandemic represent a sizable downside for oil prices. Moreover, the impact of any geopolitical event on oil prices should be temporary. An examination of oil price action after recent US-Iran incidents shows that each rise was short-lived—the markets remained generally calm during these events, as reflected in the lack of any sustained rise in option implied volatility (Figure 1.2.9). Hence, the prevailing environment should ensure continuing softness in oil prices and help mitigate the impact of the pandemic on the external sector of the net oil importing ASEAN+3 countries (Figure 1.2.10).

Figure 1.2.6. Oil Prices: Forward Pricing
(US dollars per barrel)



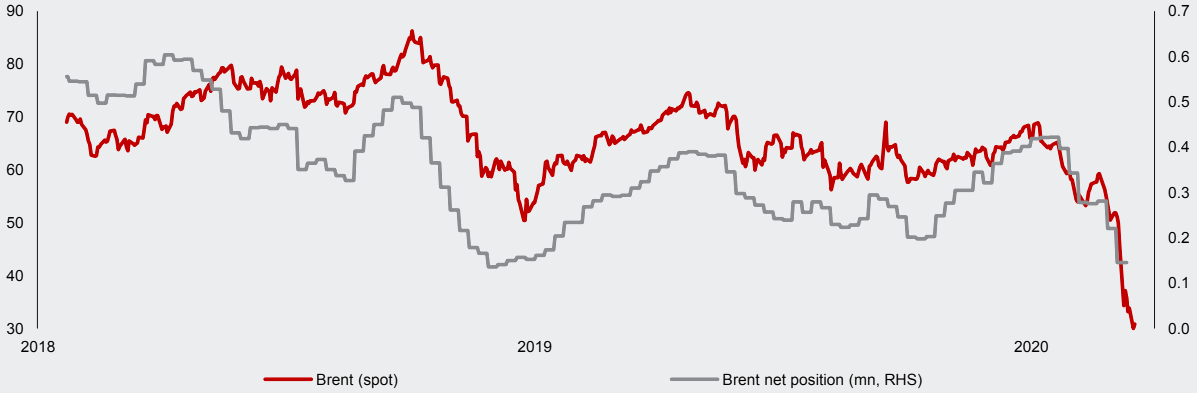
Sources: Bloomberg Finance, L.P.; and AMRO staff calculations.

Figure 1.2.7. Oil Prices: Estimates of Demand-Supply Impact
(Log changes)



Sources: NY Fed; and AMRO staff calculations.

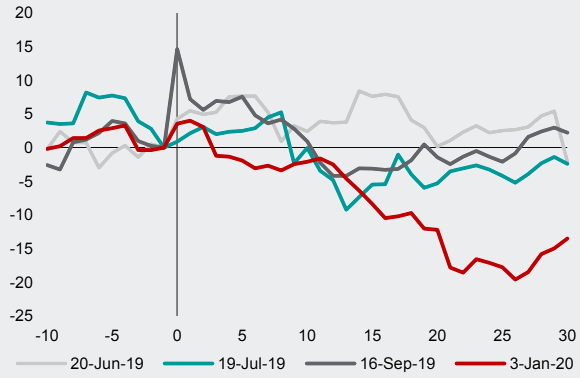
Figure 1.2.8. Oil Markets: Positioning and Spot Prices, as of March 17, 2020
(US dollars per barrel; open interest in millions of contracts)



Sources: Commodity Futures Trading Commission; Haver Analytics; and AMRO staff calculations.

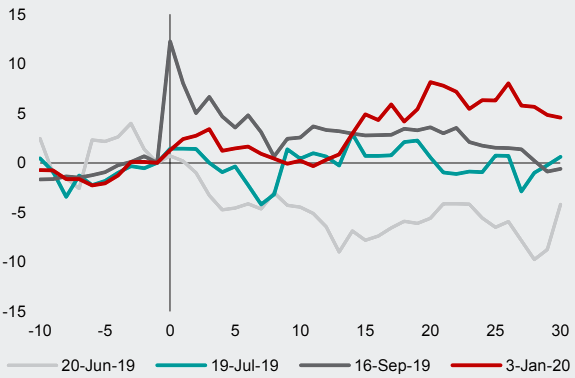
Figure 1.2.9. Brent Crude: Impact of Middle East Tensions Relative to Day of Event
(Percent)

Spot Prices



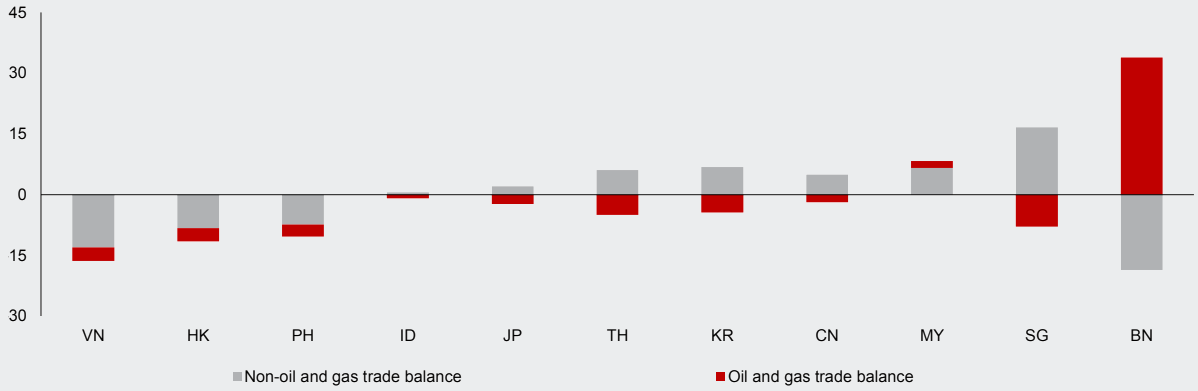
Sources: Haver Analytics; and AMRO staff calculations.
Note: t = 0 is the day of the event and Brent crude prices are indexed to the end of day levels at t = –1. The geopolitical events considered are (1) the US drone strike on Baghdad (January 3, 2020); (2) the attack on Saudi oil facilities (Saturday, September 14, 2019; market reaction on Monday, September 16, 2019); (3) the seizure of British-flagged tanker by Iran (July 19, 2019); and (4) the shooting down of a US drone (June 20, 2019). Iran retaliated on January 8, 2020, but the spike in oil prices lasted less than a day because of the quick de-escalation in the situation by Iran and the United States. t = number of days from event day.

Implied Volatility of 3-Month Options



Sources: Bloomberg Finance L.P.; and AMRO staff calculations.
Note: t = 0 is the day of the event and the 3-month Brent crude option implied volatility is indexed to the end of day levels at t = –1. The geopolitical events considered are (1) the US drone strike on Baghdad (January 3, 2020); (2) the attack on Saudi oil facilities (Saturday, September 14, 2019; market reaction on Monday, September 16, 2019); (3) the seizure of British-flagged tanker by Iran (July 19, 2019); and (4) the shooting down of a US drone (June 20, 2019). Iran retaliated on January 8, 2020, but the spike in oil prices lasted less than a day because of the quick de-escalation in the situation by Iran and the United States. t = number of days from event day.

Figure 1.2.10. ASEAN+3: Non-oil, and Oil and Gas Trade Balances
(Percent of GDP)



Sources: IHS Markit Global Trade Atlas; International Monetary Fund; and AMRO staff calculations.
Note: Data cover January to December 2019; oil and gas trade balance refers to exports minus imports of products under HS product codes 2709 to 2711.
BN = Brunei; CN = People's Republic of China; HK = Hong Kong; JP = Japan; ID = Indonesia; KR = Korea; MY = Malaysia; PH = the Philippines; SG = Singapore; TH = Thailand; VN = Vietnam.

This box was prepared by Prashant Pande.

Box 1.3:

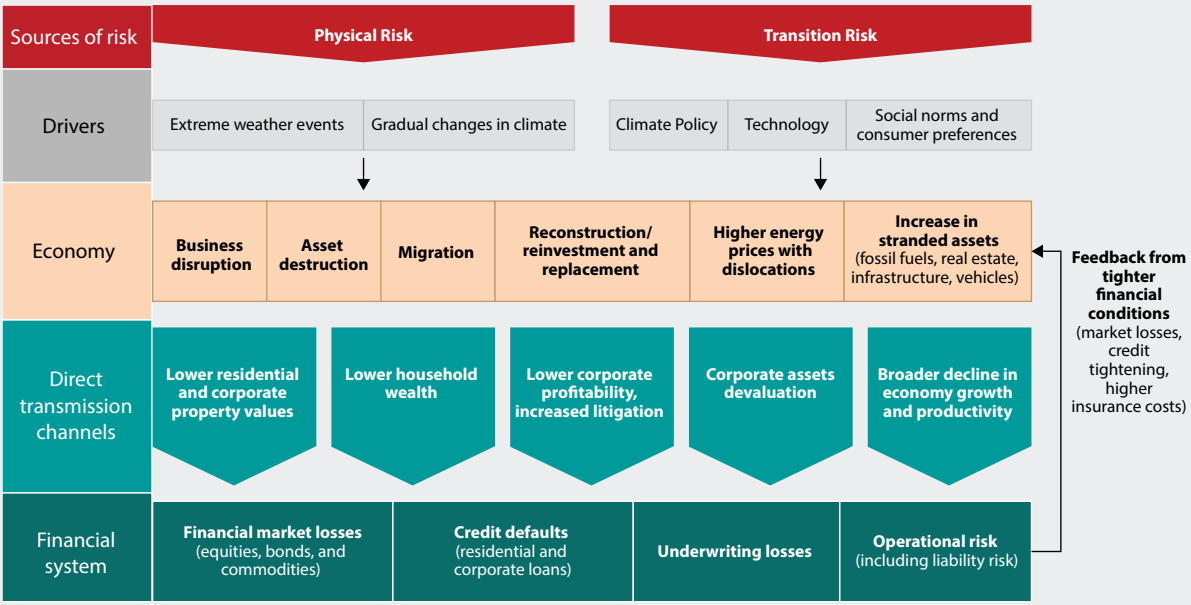
Climate Change Poses a Growing Risk to Regional Financial Stability

The growth outlook for the ASEAN+3 region will increasingly depend on how the region manages the rising threat of climate change. Warming global temperatures have coincided with increased frequency of destructive typhoons and erratic weather patterns in the region, disrupting agricultural production, as well as other key industries. The Thailand floods in 2011, followed by Typhoon Haiyan in the Philippines and Vietnam in 2013, triggered a rethink of how to make regional supply chains more "climate-change" proof. A country's external position could also be weakened in the aftermath of a disaster, especially if rebuilding efforts trigger a sudden spike in imports, which then puts downward pressure on its currency. AMRO (2018a) had previously assessed the impact of natural disasters and climate change on the economic activity and fiscal positions of several ASEAN+3 countries.

However, while the impact of climate change on the real sector may be obvious, its effect on financial stability is less so. How well prepared the region's financial sectors, notably, its banks and insurance companies, are against climate change risks could be an important determinant of its financial stability and consequently, growth trajectory. The growing research on natural hazard risks generally identifies two channels through which disruptive events could affect a country's economic and financial stability: the manifestation of physical and transition risks (Figure 1.3.1).[1]

Physical risks appear to be more apparent and relevant for the majority in the ASEAN+3 region, while transition risks are a more pressing concern for the advanced economies. AMRO (2018a) discusses the significant economic impact and fiscal drain of post-disaster recovery and

Figure 1.3.1. Climate Risks: Potential Channels of Impact on Financial Stability



Sources: International Monetary Fund; Network for Greening the Financial System; and AMRO staff.

[1] FSB (2015) defines physical risks "as direct physical influences on economic value chains," for example, apparent physical impact, such as water stress and increased building cooling; reduced harvests; damaged roads, buildings, and infrastructure; or cancelled flights or changes in land use. Transition risks, on the other hand, refer to those that arise as a result of the push to transition to a low-carbon economy, consequently leading to, for example, a revaluation of investments, or higher transaction costs in order to minimize regulatory and legal risks.

reconstruction. Gradual changes in climate—such as those resulting in ocean acidification and loss of biodiversity—could disrupt livelihoods, with lasting consequences for future generations. However, the physical risks to the financial sector are equally significant, through first- and second-order effects, with the potential for greater losses via multiplier effects. To illustrate, extreme weather events can directly affect the solvency of insurers. They would have to pay out significant damages to clients, which would indirectly result in financial markets losses to bond and stock values as they sell down their assets to meet their obligations. Concurrently, uninsured losses or unpaid insurance losses would impact the balance sheets of those affected, through unexpected depreciation in value, higher default risk of loans (which would affect the asset quality of creditor banks), and, in extreme cases, downgrades to their creditworthiness. Indeed, climate change could potentially stifle the growth of the insurance sector within the ASEAN+3 region and, consequently, the sector's ability to provide protection to the region's people and assets. Within this region, only Japan is relatively well-insured (Figure 1.3.2), notwithstanding the increasing losses to the region from disasters over the past 30 years (Figure 1.3.3).

The credit risks posed by climate change to the balance sheets of systemic financial institutions are also very real. A 2019 analysis of corporate disclosures by 45 financial institutions—some of the world's largest—suggests that the potential negative impact of climate change on their financial position is approaching USD 700 billion (Carbon Disclosure Project, 2019). The survey suggests that most of these losses arise from credit risks, with an estimated USD 468 billion worth of potential losses attributable to clients being exposed to physical risks. This situation is particularly true for most ASEAN countries, which are largely uninsured against the physical consequences of climate change. On the other hand, the survey shows that the estimated impact of climate change on financial institutions' direct operations is much smaller relatively (USD 225 billion), and even more so for the impact on their supply chains (USD 0.3 billion). The voluntary nature of corporate disclosures on the consequences of climate change to their operations also suggests that these losses are likely significantly underestimated.

ASEAN+3 financial sectors should also prepare against transition risks, as regional economies continue to move up the development ladder. For instance, the Financial Stability Board's Task Force on Climate-Related Financial Disclosures, which calls for voluntary financial risk disclosures for use by companies to inform their stakeholders, notes that addressing the impact of climate change "may entail extensive policy, legal, technology, and market changes to address mitigation and adaptation requirements" (FSB, 2015). In the case of ASEAN+3 banks, transition risks could also include future rebalancing of their lending operations away from environmentally unfriendly projects toward clean and green investments (Figure 1.3.4). For example, ASEAN+3 financial institutions, as a group, represent the largest funding pool of coal projects globally, dwarfing those of the United States and Europe combined.

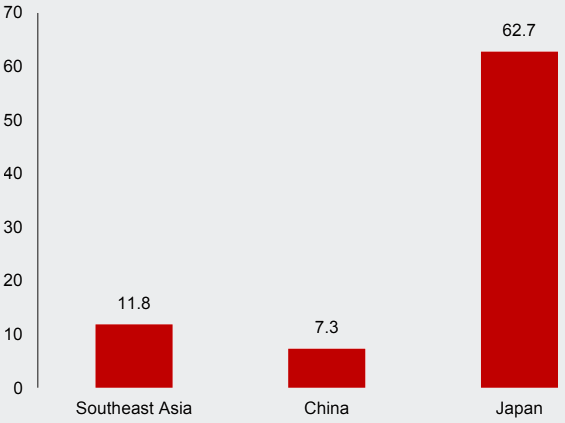
Increasing stakeholder activism and the rally against rising carbon emissions have resulted in greater scrutiny of the business activities of some of the larger, more visible ASEAN+3 financial institutions, but transitions need to be carefully managed. Since last year, some Japanese financial institutions have enforced higher environmental standards on financing coal projects. For example, one of Japan's major banks has stopped financing new coal-fired power plant projects. This year, China's largest state-owned investment holding company dropped thermal power plant projects, while Singapore's largest banks have announced their exit from the coal funding space by 2021. While encouraging, any disorderly and uncoordinated pullback from existing projects could put billions of US dollars of assets across the region at risk of being stranded—yet again highlighting the financial stability risks from climate change.

Any significant financial instability could also affect the fiscal purse. As previous experience from financial crises has shown, the fiscal costs—comprising direct outlays linked to government intervention policies in the financial system and a broader measure defined by the increase in public debt—would not be immaterial. The empirical evidence suggests that, since the early 1980s, financial crises among the ASEAN+3 countries incurred direct fiscal costs averaging 20 percent GDP or the equivalent of 31 percent of financial sector assets, while increasing public debt by an average of 19 percent of GDP (Laeven and Valencia, 2018).

The increasing evidence of climate change means that ASEAN+3 financial sectors will have to deal with physical and transition risks in the decades

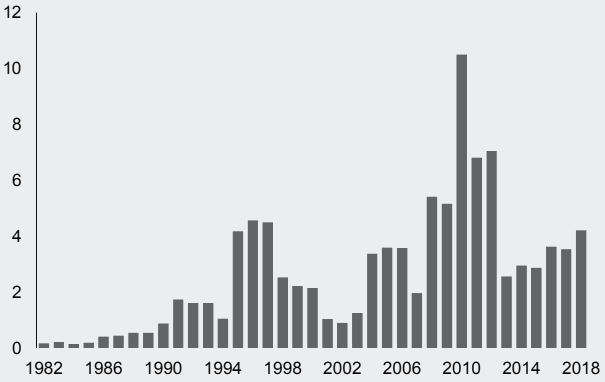
to come. Domestically, mandatory disclosure of carbon footprints among firms would enable a more appropriate pricing of project risks and reallocation of capital toward more sustainable activities and investments. There is also significant room for financial market players, alongside regulators, to develop appropriate frameworks for estimating potential financial losses in extreme disaster scenarios, thus enabling the implementation of appropriate strategies by those players when such events occur (SPG, 2016). The cross-border nature of climate risks means that a standard framework may be possible—and even be beneficial—at the regional level. A similar approach to regional coordination would also benefit the ASEAN+3 economies in managing transition risks, especially as the region becomes more closely linked as a result of increased intra-regional investments.

Figure 1.3.2. Asia: Insured Natural Hazard Losses, 1986–2018
(Percent of total losses)



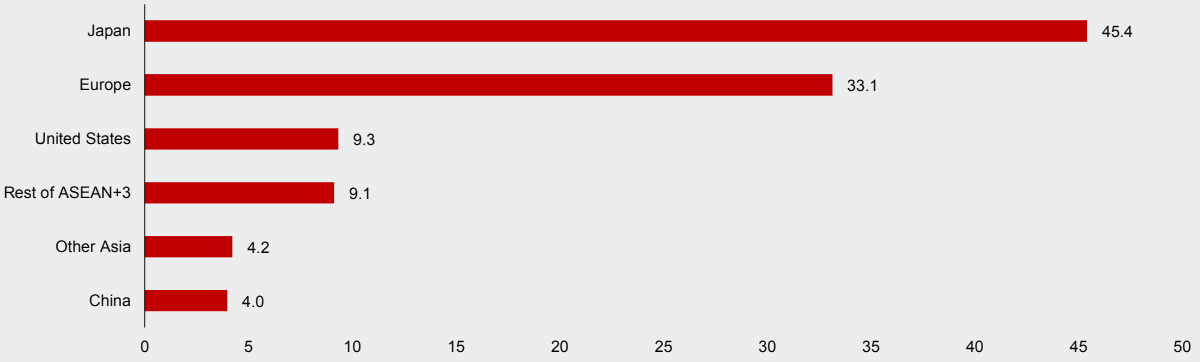
Sources: Munich Re; and NatCatSERVICE.

Figure 1.3.3. Asia: Total Natural Hazard Losses
(Billions of US dollars, 3-year moving average)



Sources: Munich Re; and NatCatSERVICE.

Figure 1.3.4. Asia and Selected Advanced Economies: Top Lenders to Coal Projects Globally, 2017–Q3 2019
(Billions of US dollars)



Source: Urgewald, Global Coal Exit List.

This box was prepared by Marthe Hinojales and Diana del Rosario.

II. Diversions from Trade Tensions

Trade developments, the main focus in 2019, will again be important for growth in 2020. Regional exports had undoubtedly been hurt since mid-2018 by the repeated escalation in the US-China trade conflict after the United States imposed tariffs on four tranches of Chinese goods, totaling USD 362 billion (Figure 1.4):

- The US Administration implemented tariffs of 25 percent on USD 50 billion worth of China's exports in July and August 2018. In retaliation, China imposed 25 percent in tariffs on an equivalent amount of imports from the United States.

- This action was followed by the imposition of 10 percent tariffs by the United States on USD 200 billion worth of Chinese imports, in September 2018; China then slapped 5–10 percent tariffs on USD 60 billion of US imports. In May–June 2019, the United States raised the tariff rates on those tranches to 25 percent, and China by another 5–25 percent.

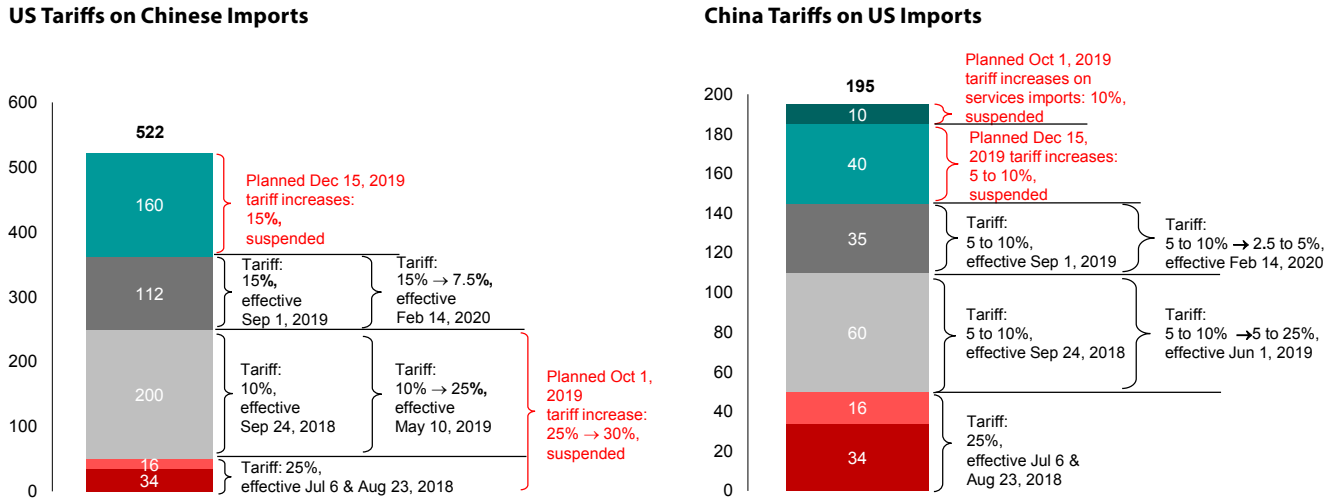
- Finally, the United States put tariffs of 15 percent on USD 112 billion of imports from China, and China retaliated with 5–10 percent tariffs on USD 35 billion of imports from the United States, effective September 1, 2019.

- Following the Phase One trade agreement, signed on January 15, 2020: (1) both sides halved their respective tariff rates on the September 2019 tranches, in February 2020; and (2) tariffs on both the October and December 2019 tranches were also suspended.

The value of goods exports from the region continued to fall throughout 2019. However, the corresponding volumes generally held up, pointing to the lowering of export prices (Figure 1.5). On an individual economy basis, goods exports also declined during the year, compared to 2018, with the exception of Cambodia, Lao PDR, Vietnam, and the Philippines (Figure 1.6). In H1 2020, exports are expected to be significantly affected by the COVID-19 pandemic, which has disrupted production in China and spilled over to exports around the region through the supply chain network.

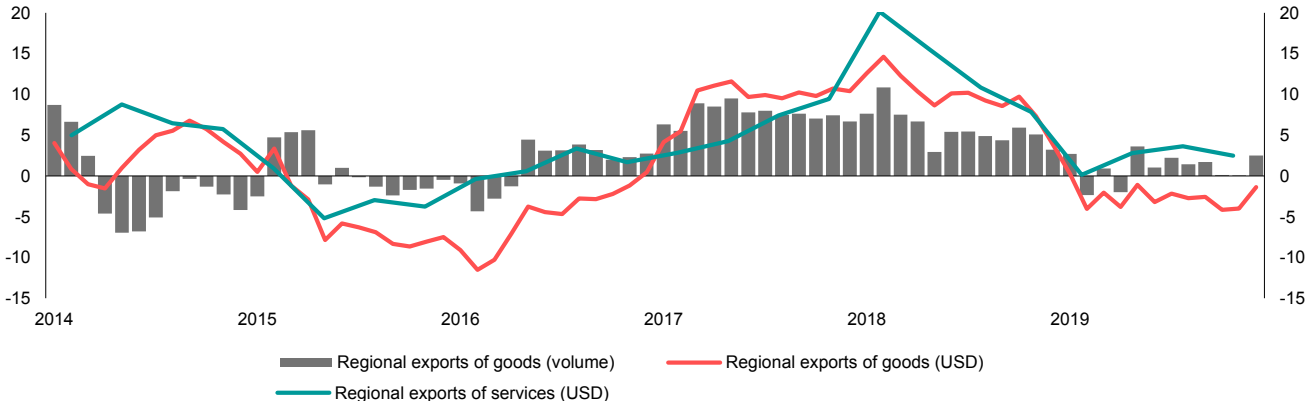
In 2019, total exports were supported in part by external demand for services—chief among them, the tourism industry—which remained positive, albeit sharply slower than in 2018. In this regard, the region's tourism exports represented a bright spot in 2019, driven mostly by intra-regional visitor arrivals, especially from China and ASEAN (Figure 1.7). Overall, tourism's contribution to GDP has increased in nearly all countries in the region since 2000. The World Travel and Tourism Council estimates that the direct benefits of tourism to the ASEAN+3 region are highest for Cambodia and Thailand, contributing more than 10 percent to GDP (Figure 1.8). The total gains are much higher—more than 30 percent for Cambodia and more than 20 percent for Thailand and the Philippines.

Figure 1.4. United States and China: Trade Tariffs and Corresponding Tranches
(Billions of US dollars)



Sources: China Ministry of Commerce; Office of the United States Trade Representative; and AMRO staff compilation.

Figure 1.5. ASEAN+3: Goods and Services Exports
(Percent year-over-year, 3-month moving average)



Sources: National authorities; and AMRO staff calculations.

Figure 1.6. ASEAN+3: Total Goods Exports by Economy
(Percent year-over-year)

Economy	2018												2019												2020	
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb
PLUS-3	13.9	22.8	1.7	8.9	12.2	7.6	9.4	9.1	6.5	14.3	2.5	-4.2	3.3	-14.6	4.3	-3.2	-2.3	-4.6	0.0	-3.9	-4.5	-4.7	-3.5	3.8		
China	10.6	43.5	-3.0	11.9	11.9	10.7	11.6	9.5	13.9	14.3	3.9	-4.6	9.3	-20.7	14.0	-2.7	1.1	-1.5	3.4	-1.0	-3.2	-0.8	-1.3	7.9		
Hong Kong	17.2	0.9	7.0	7.1	15.0	2.7	9.4	12.7	4.2	14.1	-1.1	-5.8	-0.7	-7.2	-1.3	-2.6	-2.4	-8.8	-5.3	-6.2	-7.3	-9.2	-1.4	3.5	-22.1	
Japan	16.3	6.5	8.7	10.2	10.6	7.6	4.7	5.4	-2.5	8.4	-0.4	-3.2	-6.8	-3.4	-6.9	-5.8	-8.0	-4.9	1.4	-4.1	-1.2	-5.4	-4.1	-3.7	-2.8	
Korea	22.3	3.1	5.5	-2.0	12.8	-0.4	6.1	8.7	-8.1	22.5	3.6	-1.7	-6.2	-11.3	-8.4	-2.1	-9.8	-13.8	-11.1	-14.0	-11.9	-15.0	-14.5	-5.3	-6.3	4.5
ASEAN	22.1	9.4	10.7	14.1	12.4	10.7	13.7	10.5	5.4	12.7	2.6	-1.9	-0.5	-2.6	-3.5	-1.4	-2.2	-3.6	0.9	-3.8	-2.4	-3.4				
Brunei	16.6	7.1	28.2	12.8	3.4	29.1	42.5	41.3	0.0	44.9	-3.9	7.5	23.8	5.4	13.3	20.3	-2.8	-10.0	-20.1	-11.0	-4.5	-9.5	45.8	71.2		
Cambodia	15.3	6.7	15.4	10.1	23.1	10.0	13.3	35.4	33.8	-4.2	34.8	-2.2	15.9	11.3	13.1	17.6	20.0	4.3	22.5	17.5	-14.7	33.1	16.8			
Indonesia	8.8	12.0	5.4	9.2	13.0	11.0	19.6	4.5	2.6	4.3	-3.1	-3.9	-4.4	-11.2	-9.0	-9.5	-8.5	-8.9	-5.1	-10.0	-5.7	-6.1	-6.1	1.1	-3.7	
Lao PDR	72.8	29.4	17.0	22.1	1.9	26.0	17.5	-2.0	24.3	23.2	29.1	-4.5	-1.5	-8.7	-12.0	3.5	27.1	3.9	17.0	22.1	12.7	7.2	-1.5			
Malaysia	33.5	11.3	16.4	29.2	14.1	15.8	16.3	4.6	8.9	20.7	2.1	3.5	-1.5	-9.4	-5.2	-4.9	-3.5	-7.2	-0.1	-3.0	-7.7	-7.4	-4.8	3.2	-0.6	
Myanmar	22.4	50.7	19.5	23.0	24.0	20.8	28.6	65.5	-7.6	25.3	2.7	-3.7	27.8	-12.9	19.8	38.6	9.0	-9.9	-6.5	-11.6	-13.1	29.9				
Philippines	1.1	1.3	0.4	-1.9	1.7	3.7	2.3	4.0	1.1	6.7	1.0	-12.2	-6.7	-0.1	-1.8	1.0	1.0	3.3	3.5	0.8	-1.2	0.3	-0.4	21.6	9.7	
Singapore	18.0	6.0	5.8	16.9	14.6	10.8	14.0	12.8	9.6	16.4	4.6	-4.2	-1.7	-0.2	-5.8	-3.7	-5.8	-10.3	-5.9	-11.5	-5.7	-8.8	-5.1	4.7	-5.0	
Thailand	19.5	11.2	8.5	11.7	9.9	6.0	5.0	7.0	-4.2	8.2	-2.6	-1.4	-5.7	5.7	-7.2	-3.0	-4.0	1.3	7.3	-4.8	-1.7	-3.3	-6.5	-2.1	-0.5	
Vietnam	40.6	9.0	23.0	5.3	11.6	11.6	16.9	18.3	9.3	10.8	8.7	0.3	9.4	-3.3	7.0	10.3	9.4	7.4	11.1	10.4	10.7	7.6	4.7	14.0	-17.4	50.0

Sources: National authorities; and AMRO staff calculations.
Note: Data are based on exports in US dollars. The colors represent the distance the growth in total merchandise exports is away from mid-point. The deeper the red color of the data, the more negative the data are; the greener, the more positive.

Figure 1.7. ASEAN+3: Visitor Arrivals by Region, 2019
(Year-to-date percentage change, 2019 and 2018)

Economy	Hong Kong	Indonesia	Japan	Korea	Malaysia	Philippines	Singapore	Thailand	Vietnam
Total visitor arrivals	**-14.2**	**2.9**	**2.8**	**14.6**	**3.7**	**15.6**	**3.3**	**4.2**	**16.2**
of which contribution by region (percentage points)									
ASEAN	-0.6	5.3	1.4	0.6	1.8	0.0	0.6	1.1	1.9
China, incl Hong Kong	-11.2	-0.7	4.0	8.1	0.7	6.5	1.2	1.3	5.4
Japan	-0.3	-0.1		2.2	0.1	0.7	0.3	0.4	0.8
Korea	-0.6	0.2	-5.3		0.2	5.3	0.1	0.2	5.2
Other Asia	-0.1	-4.4	0.7	2.1	0.8	6.6	0.0	1.7	0.0
Europe	-0.4	0.5	0.9	0.7	0.1	0.9	0.4	-0.1	0.5
Americas	-0.4	0.5	0.8	0.7	0.1	0.7	0.5	0.1	0.4
Oceania	-0.1	0.3	0.3	0.1	0.1	0.0	0.3	-0.1	0.0
Others	-0.3	1.3	0.1	0.1	-0.1	5.1	0.0	-0.4	2.0

Sources: Haver Analytics; and AMRO staff calculations.
Note: For some destination countries, visitor aggregates by region capture only those from main source countries. For example, the Americas' visitors to Vietnam include US and Canada only.
ASEAN = Association of Southeast Asian Nations; Oceania = Australasia, Melanesia, Micronesia, and Polynesia.

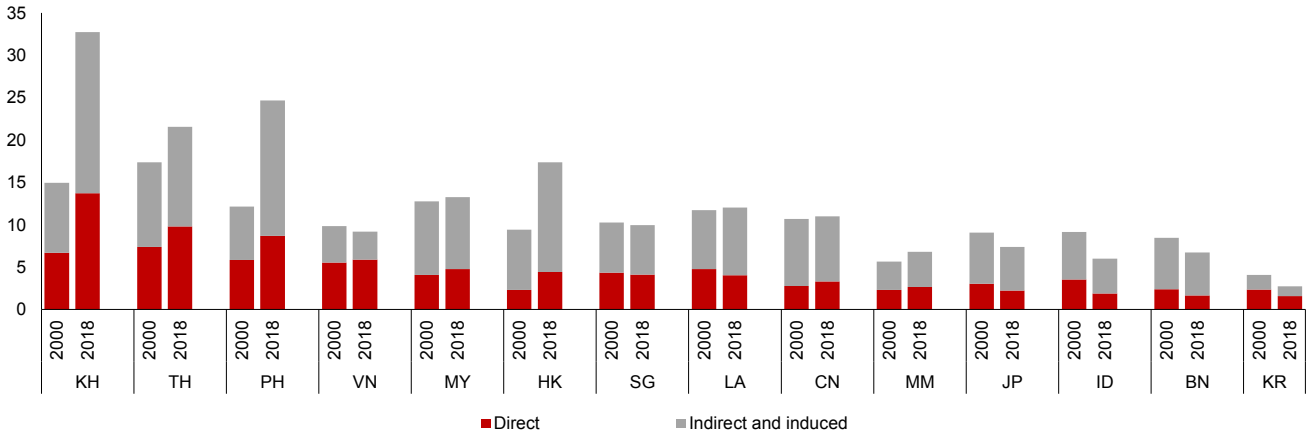
For the ASEAN+3 region as a whole, the sharp decline in China's goods exports to the United States last year was cushioned by several mitigating factors. They include:

- *Trade exclusions*. The portion of China's non-tariffed goods exports to the United States grew by an average 25.3 percent month-over-month between January and December 2019.[5] These exclusions, albeit a small share of the total tariffed package, provided some relief. For example, the headline value of the batch of products in Tranche 1 had fallen by only 12.1 percent in December 2019, compared to a decline of 80.1 percent year-over-year for the corresponding tariffed products (Figure 1.9). The cumulative value of exclusions was more pronounced for the earlier Tranche 1 (9 out of 15 batches of exclusions were granted) compared to the latter two tranches; the base effects for the former suggest that this boost should become less pronounced over time.

- *Trade diversion*. Trade diversion also helped to sustain the region's exports, along with the resulting FDI diversion. In particular, the "ASEAN+2" economies (ASEAN+3 excluding Mainland China) appear to have benefited most from the diversion of US imports from China to other countries. While total regional exports remained generally weak, data on the increase in individual countries' shares of total US imports between June 2018 and December 2019 suggest that most of the decline in the import of goods by the United States from China were offset by the former's imports from the ASEAN+2 countries (Box 1.4). These US imports from the rest of the region amounted to USD 58.6 billion, equivalent to more than half of the export value lost by China (Figure 1.10). The remaining portion of diverted trade went to the rest of the world.

Thus, the ASEAN+2 countries were able to increase their exports to the United States, despite sluggish headline trade volumes. Consequently, US demand for ASEAN+2 exports remained positive, in contrast to its demand from China, other regional peers, and the rest of the world (Figure 1.11). Indeed, the United States was the only positive contributor to ASEAN+2 export growth in 2019—its contributions actually increased following the tariff hikes in 2018 and 2019.

Figure 1.8. ASEAN+3: Travel and Tourism Contributions to GDP, 2000 and 2018
(Percent)



Sources: World Travel and Tourism Council; World Bank; and AMRO staff calculations.
Note: "Direct" includes only direct transactions by tourists for tourism services and products such as accommodation, recreation, transportation, and other related sectors; "indirect" measures the supply chain impact (relating to outside goods/services such as marketing, cleaning, maintenance, energy provision); "induced" measures the impact of money spent in the local economy by employees working in jobs supported by tourism both directly and indirectly. Total contribution includes the direct impact as well as indirect and induced impact. BN = Brunei; CN = People's Republic of China; HK = Hong Kong; JP = Japan; ID = Indonesia; KR = Korea; KH = Cambodia; LA = Lao People's Democratic Republic; MM = Myanmar; MY = Malaysia; PH = the Philippines; SG = Singapore; TH = Thailand; VN = Vietnam.

That said, the gains from trade diversion were not equally distributed within the group. A subregional breakdown shows that Korea and Vietnam benefited the most (Figure 1.12). The subregional variation could be explained, in part, by the composition of US imports on a sectoral basis, which is largely focused on metals, textiles, and primary commodities (Figure 1.12).

Within the region, the trade in intermediate goods points to intra-regional supply chain re-routing. Intermediate goods currently account for about 60 percent of ASEAN+2 overall trade, followed by capital goods (18 percent), then by consumption (13 percent). Consequently, changes in the level of ASEAN+2 exports are typically driven by the trend in intermediate goods exports, in particular, to China. Not

[5] The US Trade Representative (USTR) put in place an exclusion process that allows US-based companies to apply for tariff exemptions. The USTR has reportedly accepted an average 22.5 percent of all applications. Tariff exclusions since December 2018 amount to about 6.0 percent of the total value of goods that have been hit with tariffs up to September 2019. Of the 15 exclusion batches granted, nine involve the first tranche, while the second and third tranches were granted three exclusion batches each. In total, exclusions granted to Tranche 1 now comprise 24.1 percent of its original value of USD 34 billion; exclusions for Tranche 2 are estimated to be equivalent to about 11.9 percent of its original value of USD 16 billion; while exclusions for Tranche 3 are equivalent to 5.9 percent of its original value.

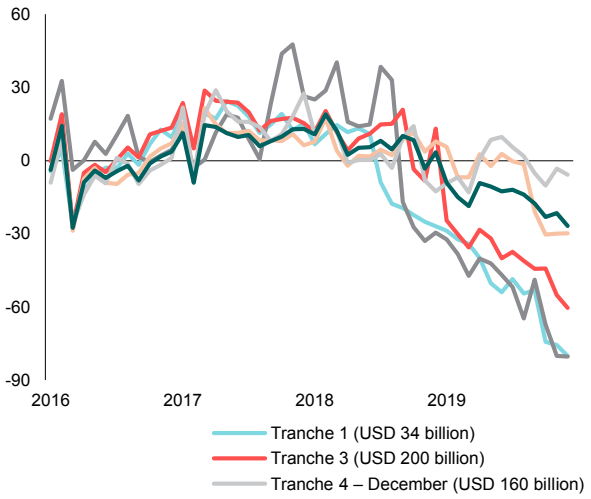
surprisingly, their intermediate goods exports to China have collapsed since July 2018 (Figure 1.13). However, the fall in ASEAN+2 intra-regional exports has been less pronounced, suggesting that some production activities may have been rerouted. Indeed, the data show that China's loss in terms of export share of intermediate goods to the United States was absorbed elsewhere in the region (Figure 1.14 and Box 1.4).

The redistribution of trade and investment across the region that resulted from the trade tensions could have lasting ramifications well beyond the life of the conflict. The evidence is supported by the data on FDI diversion, notably through co-locations. Anecdotal evidence suggests that co-locations by foreign multinationals operating in the region, to other destinations within the region with already-established firm presence, may be attributable to either: (1) the attractiveness of cost savings from economies of scale and a desire to move closer to suppliers and markets; or (2) the ongoing trade tensions. There are two strategies that these multinationals may employ to reconfigure supply chain operations around the frictions caused by the trade conflict and circumvent US tariffs: (1) deliver goods produced in China to purchasers at locations outside the United States; and (2) move some parts of the production from China to other economies within Asia.

The impact of Chinese tariffs on US goods has also been evident in sourcing practices. According to a survey of US firms based in China, the tariffs have resulted in higher manufacturing costs for those that have been sourcing components from the United States (Amcham, 2019). The consequent higher sales prices charged by those firms have resulted in lower demand for their products. The result is that US firms are increasingly sourcing from within China and avoiding importation from the United States, in order to insulate themselves from the tariffs.

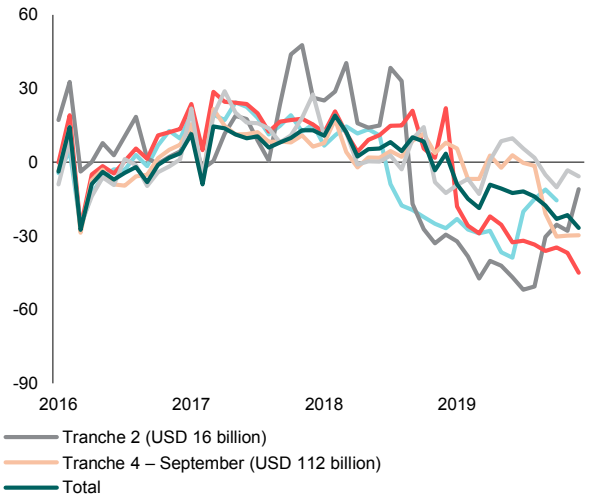
Figure 1.9. China: Goods Exports to the United States by Tariff Tranche
(Percent year-over-year)

Tariffed Goods Only



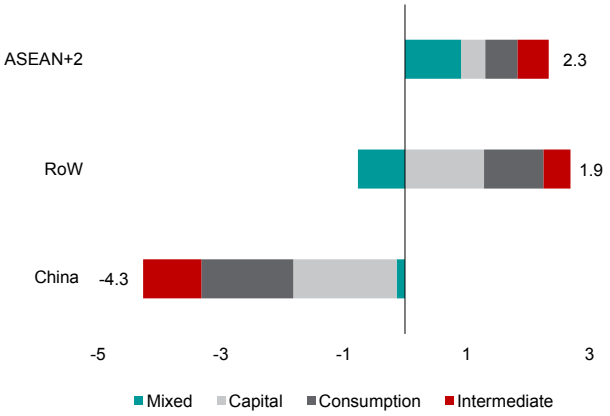
Sources: United States International Trade Commission Dataweb; and AMRO staff calculations.

Combination of Tariffed and Non-Tariffed Goods



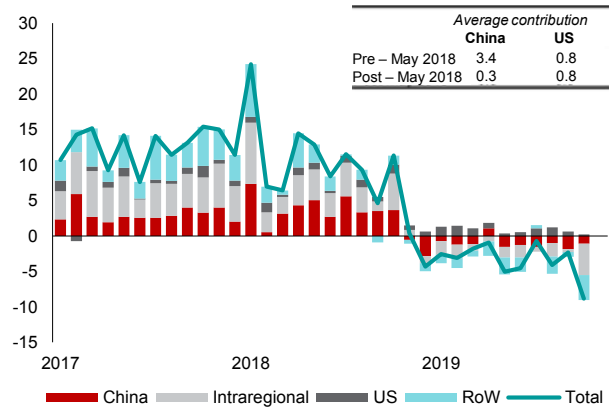
Sources: United States International Trade Commission Dataweb; and AMRO staff calculations.

Figure 1.10. United States: Change in Share of Imports by Source and Tariffed Product Category
(Percentage points)



Sources: United States International Trade Commission Dataweb; and AMRO staff estimates.
Note: The data cover the June 2018 to December 2019 period.
RoW = rest of the world. Shares are calculated by summing the percentage point changes across the product categories.

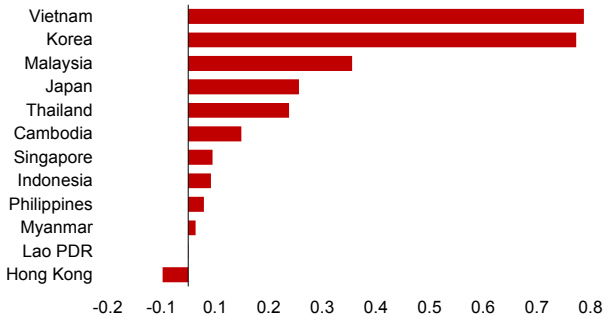
Figure 1.11. ASEAN+2: Contributors to Export Growth
(Percentage points)



Sources: IHS Markit Global Trade Atlas; and AMRO staff estimates.
Note: RoW = rest of the world.

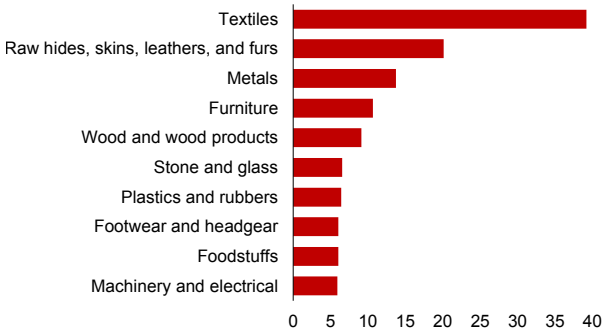
Figure 1.12. United States: Change in Share of Imports
(Percentage points)

By Source



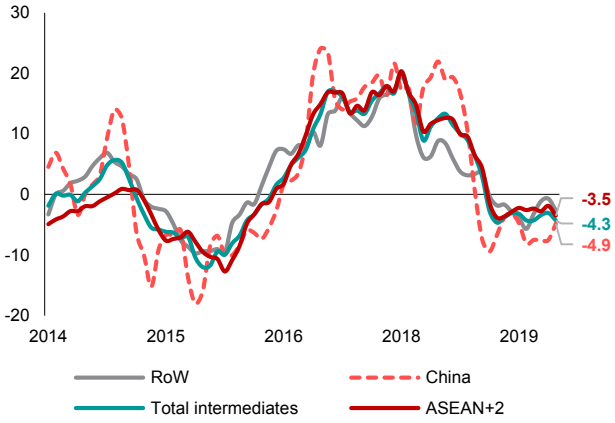
Sources: United States International Trade Commission Dataweb; and AMRO staff estimates.
Note: The data cover the June 2018 to December 2019 period. Brunei is not included as estimates are too small to be visible in the chart.

By Sector



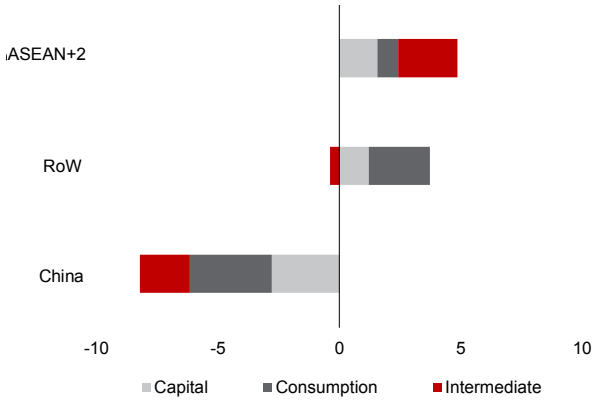
Sources: United States International Trade Commission Dataweb; and AMRO staff estimates.
Note: The data cover the June 2018 to December 2019 period.

Figure 1.13. ASEAN+2: Exports of Intermediate Goods
(Percent year-over-year, 3-month moving average)



Sources: IHS Markit Global Trade Atlas; and AMRO staff estimates.
Note: RoW = rest of the world.

Figure 1.14. United States: Change in Share of Electric Machinery Imports by Category
(Percentage points)

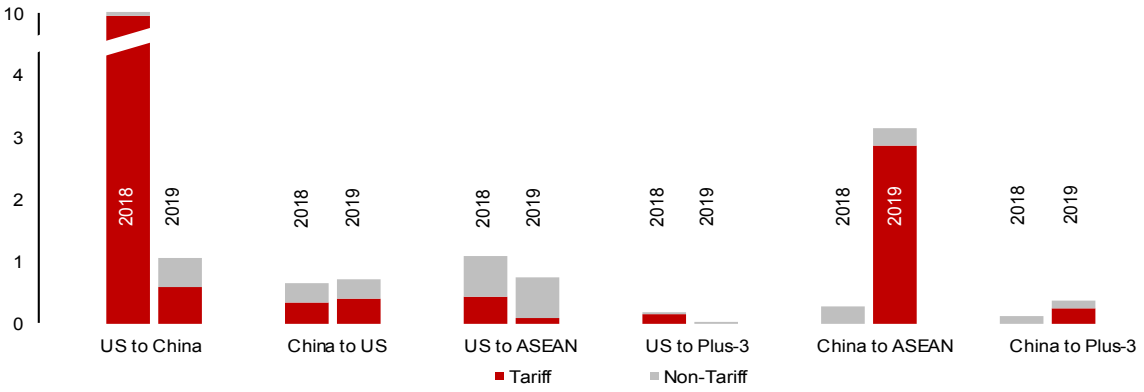


Sources: United States International Trade Commission Dataweb; and AMRO staff estimates.
Note: The data cover the June 2018 to December 2019 period. RoW = rest of the world. Shares are calculated by summing the percentage point changes across the product categories.

The ASEAN region has been the top destination for "diverted" FDI. According to AmCham (2019), 40 percent of the respondent firms located in China planned to relocate their manufacturing facilities from China to ASEAN and Mexico. The data show that announced and approved FDI co-locations from China to ASEAN spiked in 2019, while co-locations from the United States to China were very high in 2018 (Figure 1.15). Malaysia appears to be the main beneficiary of co-locations from China to ASEAN, attracting an estimated USD 2.5 billion in 2019, followed by Vietnam (USD 390 million) and Thailand (USD 216 million). Wood, furniture, and paper manufacturing represented the lion's share of planned co-locations from China to ASEAN (67 percent), followed by industrial, electric, and electronic machinery (11 percent) and metals and metal products (7 percent) (Figure 1.16).

Following a torrid year, the progress in trade negotiations between China and the United States should provide some support for the region's exports going forward. Alongside the ongoing tariff exclusion process, and other possible reductions, the Phase One trade agreement bodes well not only for China's exports, but also for the rest of the region, both in terms of the supply chain and business sentiment. But, as noted in Section I, actual implementation of this agreement remains to be seen.

Figure 1.15. United States and ASEAN+3: FDI Co-locations by Direction
(Approved and announced, billions of US dollars)

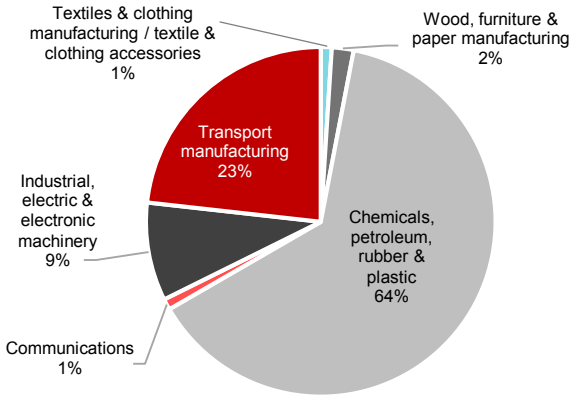


Sources: Orbis Crossborder Investment; and AMRO staff calculations.
Note: China investing in itself (China to Plus-3) occurs when a foreign investor invests jointly in a project with a Chinese counterpart, so half the amount is apportioned to China such that it has a contribution to the co-location project; however, it is classified in the Orbis database as a cross-border transaction. ASEAN = Association of Southeast Asian Nations; FDI = foreign direct investment; Plus-3 = China (including Hong Kong), Japan, and Korea; US = United States.

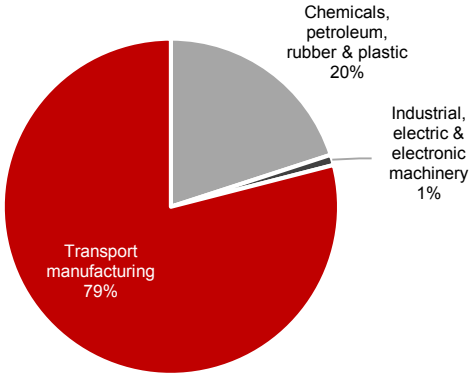
Figure 1.16. United States, China, and ASEAN: FDI Co-locations by Tariffed Sectors
(Approved and announced)

2018

China to ASEAN

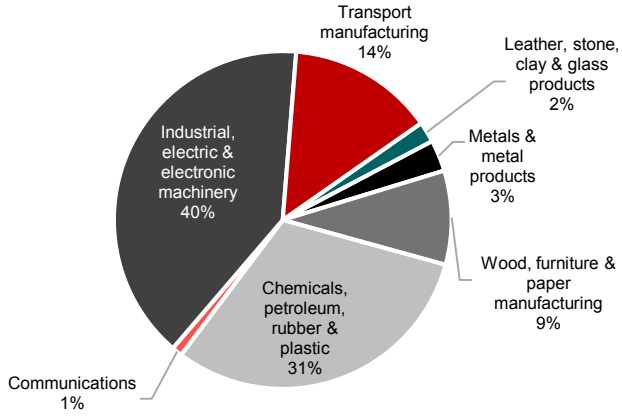


United States to China

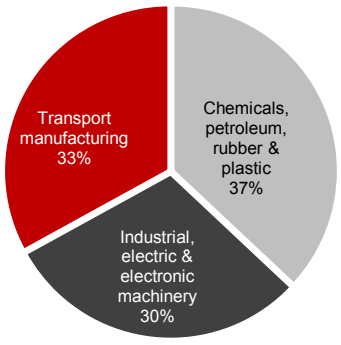


2019

China to ASEAN



United States to China



Sources: Orbis Crossborder Investment; and AMRO staff calculations.
Note: Orbis-defined sectors are matched against sectors in the United States International Trade Commission DataWeb affected by the Tranches 1 to 4 tariffs, and approximate the size of FDI diversion that could be associated with the trade tensions. ASEAN = Association of Southeast Asian Nations; FDI = foreign direct investment.

Box 1.4:

Resilience of the ASEAN+2 to the US–China Trade Tensions

The US-China trade conflict has highlighted the capacity of the ASEAN+2 (that is, ASEAN+3 excluding Mainland China) as an alternative source market for US imports. US consumers had traditionally sourced about three-quarters of the products that were subjected to higher tariffs from the rest of the world and China, while the ASEAN+2 contributed to the remaining demand.[1] In 2017, the rest of the world accounted for almost 60 percent of US imports of the tariffed products, while China and ASEAN+2 provided about 18 percent each. The ASEAN+2's share of US imports of the tariffed goods had largely been stable leading up to the first tariff hike against China, after which it trended upwards (Figure 1.4.1).

China's subsequent loss of US market share has been a gain for the rest of the region, which absorbed part of the demand. China's share of US imports suffered a large decline in 2019, relative to the ASEAN+2 and its own historical trends (Figure 1.4.2). While the ASEAN+2 share of US imports remains relatively small in comparison to China and the rest of the world, it has risen faster than the other two since the trade conflict began. The increase is largely attributable to exports from the BCLMV (Brunei, Cambodia, Lao PDR, Myanmar, and Vietnam) group of economies (Figure 1.4.3). The fact that a large portion of the tariffed goods comprises intermediate goods may have been a positive contributing factor, with emerging production hubs, such as Cambodia and Vietnam, able to take advantage of their substitutability as a source market.

The ASEAN+2, in aggregate, recorded positive export growth to the United States in 2019, suggesting that regional economies continued to be resilient to the trade headwinds. Total imports by the United States from this group increased by 4.2 percent year-over-year, on average, between January and December 2019. In fact, US imports of the tariffed goods from the ASEAN+2 continued to tread in positive territory, even though its total imports fell (Figure 1.4.4). Given that the recently signed Phase One trade agreement does not yet fully eliminate the tariffs against China's goods, ASEAN+2 economies are likely to continue reaping some of the benefits of trade diversion, particularly those with high export similarities to China's products. There is an opportunity for these economies to take advantage of their current price attractiveness vis-à-vis Chinese products and maintaining it by improving aspects of their external competitiveness, such as enhancing the ease of doing business, reducing non-tariff barriers, and embracing innovation.

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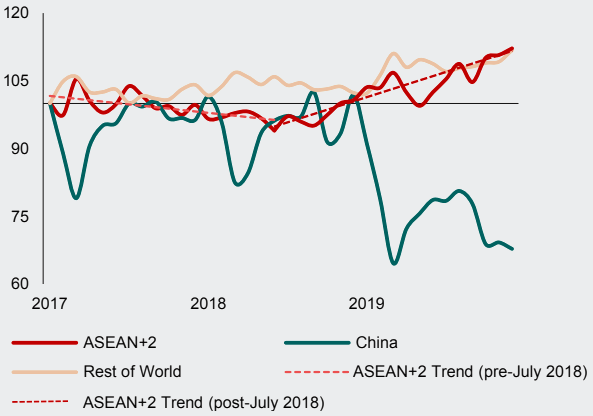
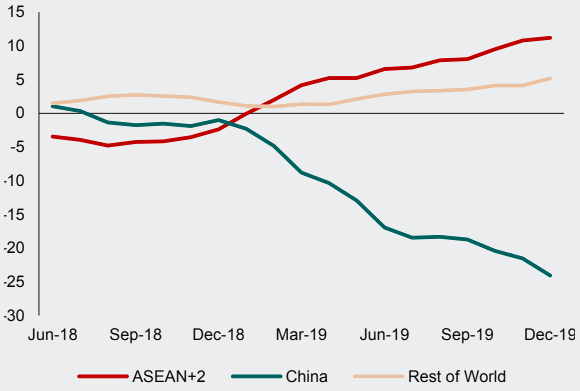
[1] Refers to the products covered under the first four tranches (e.g.1-4A), with a total value of USD 362 billion.

Figure 1.4.1. United States: Change in Import Shares by Source
(Index, January 2017 = 100)



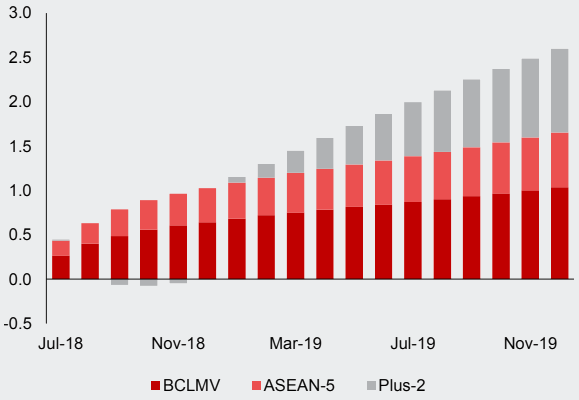
Sources: United States International Trade Commission Dataweb; AMRO staff calculations.
Note: Data are only for Tranches 1–4A. ASEAN+2 = ASEAN+3 excluding China.

Figure 1.4.2. United States: Growth in Import Shares by Source
(Percent year-over-year, 6-month moving average)



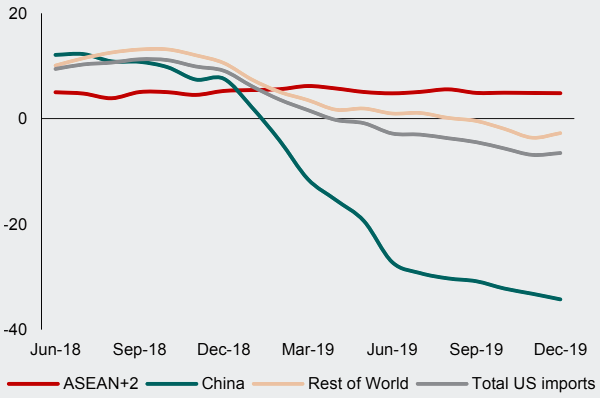
Sources: United States International Trade Commission Dataweb; AMRO staff calculations.
Note: Data are only for Tranches 1–4A. Shares are calculated by summing the percentage point changes across the product categories. ASEAN+2 = ASEAN+3 excluding China.

Figure 1.4.3. United States: Change in Import Shares by Regional Grouping
(Index, January 2017 = 100)



Sources: United States International Trade Commission Dataweb; AMRO staff calculations.
Note: Data are only for Tranches 1–4A. BCLMV = Brunei, Cambodia, Lao PDR, Myanmar, and Vietnam; ASEAN-5 = Indonesia, Malaysia, the Philippines, Thailand, and Singapore; Plus-2 = Hong Kong, Japan and Korea.

Figure 1.4.4. United States: Growth in Imports of Tariffed Goods by Source
(Percent year-over-year, 6-month moving average)



Sources: United States International Trade Commission Dataweb; AMRO staff calculations.
Note: Data are only for Tranches 1–4A.

This box was prepared by Marthe Hinojales.

III. Fear in Financial Markets?

The spread of COVID-19 has upended global financial markets and more than reversed the gains from the easing in the US-China trade tensions in late 2019. Major equity markets have all been severely impacted by the pandemic, and have continued to plummet despite the extraordinary easing measures taken by their central banks (Figure 1.17), in conjunction with announcements of fiscal support. The ASEAN-5 equity markets have followed suit and have already lost significantly more than last year's returns, up to March 16, 2020. China has given back almost all of the 22 percent rise in 2019, but policy support from the authorities has helped to contain the fall from 2019 year-end levels. Similarly, Hong Kong has lost all of last year's 9 percent gain and is down nearly 17 percent year-to-date.

The ASEAN+3 currencies have also weakened. In particular, the Thai baht has depreciated by almost 8 percent, while the Indonesian rupiah, Korean won, Singapore dollar, and Malaysian ringgit have all depreciated by more than 5 percent. Concurrently, investors have sought refuge in long-term government bonds, with 10-year yields compressing in the majority of markets.

Capital flows in the ASEAN+3 region have been quite volatile over the past year. Equity market investors worried about the impact of continuing US-China trade tensions on growth and corporate profitability; at the same time, announcements by several major global equity and bond investment index providers of their intentions to include or increase the weight of China's onshore stocks and bonds raised concerns about the implications of a massive reallocation of investment funds across the region. However, easier global financial conditions and the very low interest rate environment provided support for continued inflows into fixed income markets in 2019, although they have since seen some reversals following the COVID-19 outbreak (Figure 1.18).

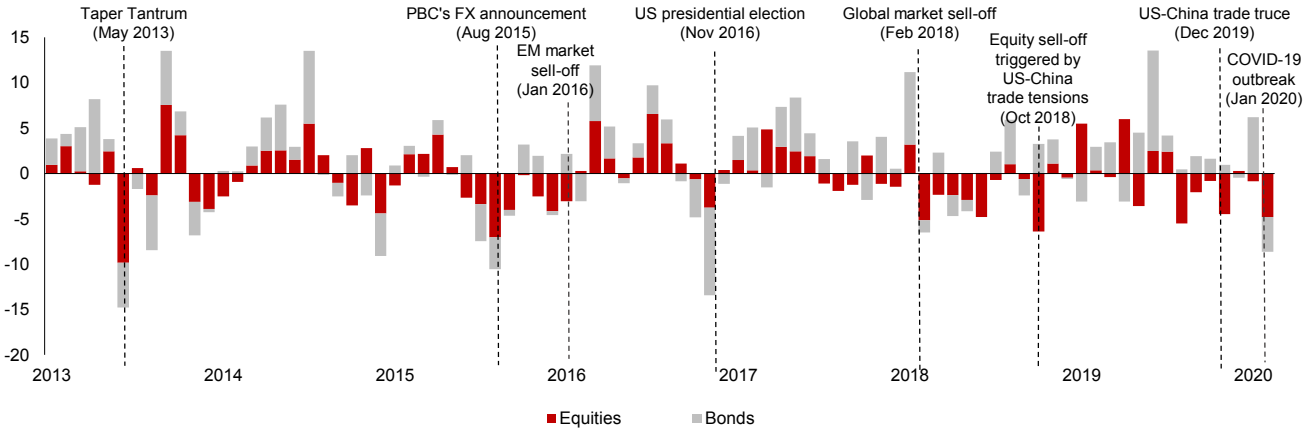
Overall market risk within the ASEAN+3 region was lower in 2019 compared to the previous year, but has jumped up in recent weeks. Last year, financial stress had largely manifested in the form of pressure on exchange rates (Figure 1.19), predominantly the Chinese renminbi and Korean won, while exchange rate developments among the ASEAN-4 were characterized by some currency appreciation and accumulation of reserves (Figure 1.20). The current stress stemming from the COVID-19 pandemic has pushed AMRO's Financial Stress Index above the long-run average, as a result of increased exchange rate volatility, sovereign risk premia, and risk aversion across the region.

Figure 1.17. ASEAN+3 and Selected Advanced Economies: Performance of Equity, Exchange Rate, and Government Bond Markets, as of March 17, 2020

Economy	Benchmark equity index					Currency (against USD)					10-year yield (basis points)				
	Level	2020 (Ytd)	2019	2018	2017	Level	2020 (Ytd)	2019	2018	2017	Level	2020 (Ytd)	2019	2018	2017
US	2,386	-26.1%	28.9%	-6.2%	19.4%	97.6	1.5%	0.3%	4.2%	-9.7%	0.72	-119.9	-76.7	27.9	-3.9
EU	2,450	-34.6%	24.8%	-14.3%	6.5%	1.117	-0.5%	-2.0%	-4.4%	13.6%	-0.46	-27.6	-42.7	-18.5	21.9
UK	5,151	-31.7%	12.1%	-12.5%	7.6%	1.230	-6.7%	3.4%	-5.6%	9.7%	0.43	-38.5	-45.8	8.7	-4.7
CN	2,789	-8.6%	22.3%	-24.6%	6.6%	7.009	-0.7%	-1.2%	-5.7%	6.3%	2.69	-45.0	-16.4	-57.9	84.9
HK	23,064	-18.2%	9.1%	-13.6%	36.0%	7.769	0.2%	0.6%	-0.2%	-0.8%	0.91	-85.6	-24.3	17.3	-14.0
JP	17,002	-28.1%	18.2%	-12.1%	19.1%	105.9	2.4%	1.4%	2.2%	3.7%	0.02	2.8	-1.4	-4.5	0.2
KR	1,715	-22.0%	7.7%	-17.3%	21.8%	1,229	-6.4%	-3.6%	-4.6%	11.3%	1.52	-15.4	-28.4	-51.1	37.5
ID	4,691	-25.5%	1.7%	-12.5%	20.0%	14,933	-7.7%	3.6%	-6.1%	-0.7%	7.40	33.4	-96.2	170.6	-165.4
MY	1,281	-19.4%	-6.0%	-5.9%	9.4%	4.309	-5.3%	1.0%	-2.0%	9.6%	3.12	-17.7	-77.4	16.5	-31.2
PH	5,335	-31.7%	4.7%	-12.8%	25.1%	51.5	-1.7%	3.7%	-5.3%	-0.4%	4.33	-1.6	-266.8	208.5	29.0
SG	2,496	-22.6%	5.0%	-9.8%	18.1%	1.422	-5.7%	1.2%	-2.0%	7.5%	1.36	-37.8	-29.9	3.6	-47.0
TH	1,046	-33.8%	1.0%	-10.8%	13.7%	32.1	-8.0%	8.1%	0.6%	9.0%	1.15	-32.9	-100.5	15.9	-32.5
KH	629	-17.5%	58.4%	39.6%	-3.3%	4,123	-1.4%	-1.0%	0.2%	0.0%					
LA	644	-11.6%	-13.0%	-16.2%	-1.6%	8,903	-0.2%	-4.0%	-3.0%	1.3%					
VN	748	-22.2%	7.7%	-9.3%	48.0%	23,228	-0.2%	0.2%	-2.2%	0.3%	2.453	-96.3	-170.9	-7.9	-117.1

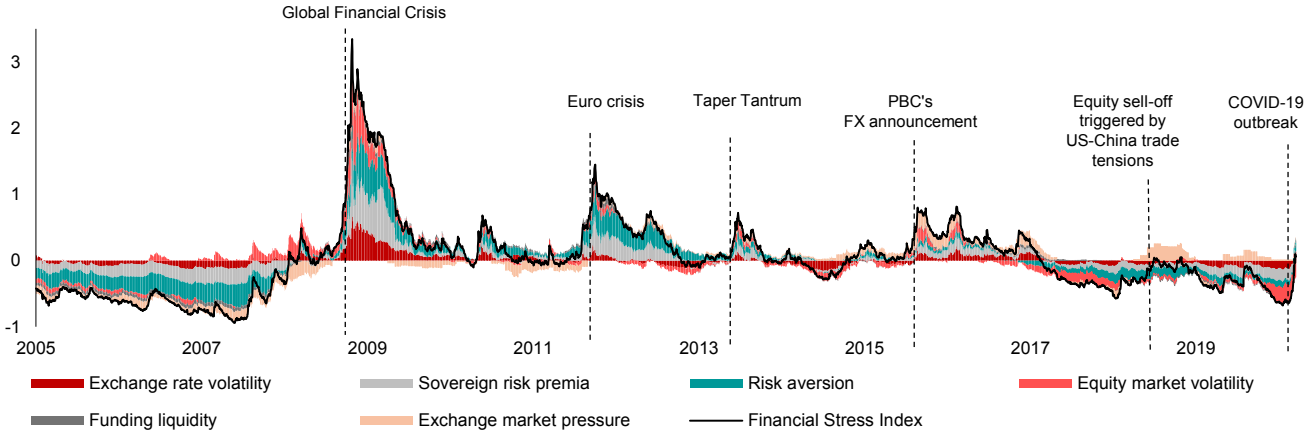
Sources: Haver Analytics; and AMRO staff calculations.
Note: CN = People's Republic of China; EU = euro area; HK = Hong Kong; JP = Japan; ID = Indonesia; KR = Korea; KH = Cambodia; LA = Lao People's Democratic Republic; MY = Malaysia; PH = the Philippines; SG = Singapore; TH = Thailand; VN = Vietnam; UK = United Kingdom; US = United States; Ytd = year-to-date.

Figure 1.18. ASEAN-4, Korea and Vietnam: Net Foreign Portfolio Investment Flows
(Billions of US dollars)



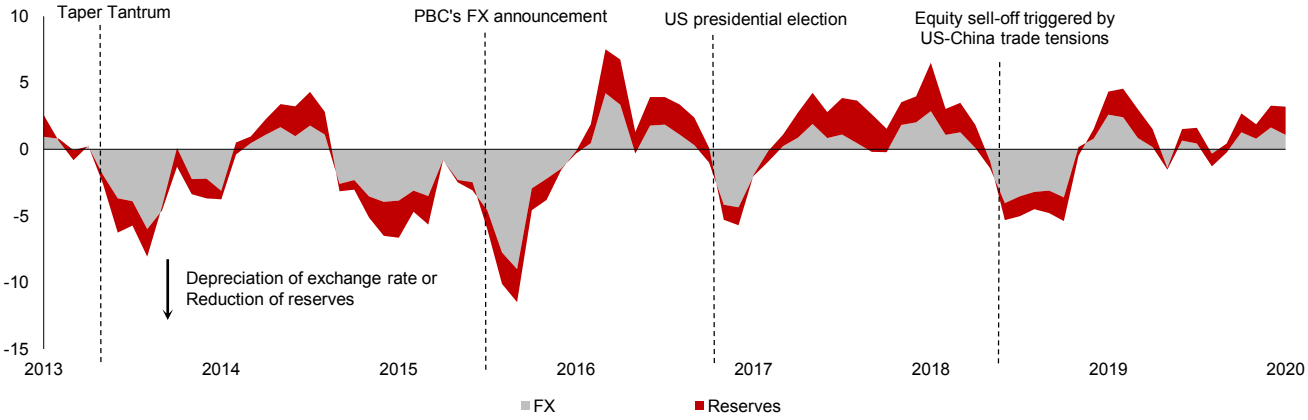
Sources: National authorities; and AMRO staff calculations.
Note: ASEAN-4 = Indonesia, Malaysia, the Philippines, and Thailand; EM = emerging market; FX = exchange rate; PBC = People's Bank of China; US = United States.

Figure 1.19. ASEAN+3: Financial Stress Index



Sources: Bloomberg Finance L.P.; national authorities; and AMRO staff estimates.
Note: The Financial Stress Index (FSI) is estimated from the methodology proposed in Poonpatpibul and others (2018). EM = emerging market; FX = exchange rate; PBC = People's Bank of China.

Figure 1.20. ASEAN-4 and Korea: Exchange Market Pressure Index



Sources: National authorities; and AMRO staff calculations.
Note: The Exchange Market Pressure Index is the sum of percentage changes of both currency and foreign reserves of a particular month over the preceding six months. ASEAN-4 refers to Indonesia, Malaysia, the Philippines, and Thailand. EM = emerging market; FX = exchange rate; PBC = People's Bank of China.

Several key themes have been at play in financial markets. In early 2019, both the FOMC and the ECB turned dovish, followed by rate cuts; trade tensions continued throughout most of 2019, with some respite toward the end of the year and in January 2020; and at the turn of the New Year, geopolitical tensions erupted in the Middle East, and the COVID-19 outbreak in Wuhan, China, was announced. The outcome was that:

- *Equity markets were supported by improvements to the trade situation and easier financial conditions toward the latter part of 2019.* Prices in China, Korea, and Japan rebounded from the very weak finish in 2018 (Figure 1.21). Equity markets that are closely linked to China (e.g., Korea) outperformed the other Asian EMs, such as Malaysia, which ended the year lower. However, markets have since fallen sharply as the pandemic sowed panic globally.

- *Despite the strong rebound in nominal terms, regional equity markets have generally not performed well since mid-2018.* After adjusting for risk (that is, adjusted for own volatility and long-term government bond yields), returns have predominantly been negative, as represented by their respective Sharpe ratios through most of 2019 (Figure 1.22). Daily equity returns improved to about zero or slightly positive only toward the latter part of 2019, but have since returned to negative territory and are falling rapidly.

- *Regional currencies strengthened in 2019.* The Chinese renminbi remained under some pressure, albeit much less than the previous year, while the Korean won was buffeted in part by increased trade tensions with Japan. Thailand—aided by sustained strong current account surpluses—was the best performer, and "high yielders" (e.g., Indonesia and the Philippines) were helped by the strong rally in bond markets. More generally, the Chinese renminbi has become more influential vis-à-vis the performance of regional currencies (Figure 1.23), underpinned by strengthening trade ties. In particular, the Korean won, Indonesian rupiah, and Philippine peso have shown greater correlation with the renminbi over time.

- *Regional bond markets saw a decline in yields across the board, in line with global interest rates.* They were further buoyed by the easing monetary policy stance of several regional central banks, and benefited from investors' search for yield.

In March 2020, US dollar funding stress led to a broad sell-off across asset classes. Equities, exchange rates, and bonds in EM Asia were adversely affected, and even gold and the Japanese yen depreciated. The US Fed subsequently announced a bond buyback program on March 15 to alleviate the liquidity shock. In this environment, tools available to regional central banks include their foreign exchange reserves, bilateral and multilateral swap arrangements, reducing required reserve and liquidity coverage ratios on foreign currency deposits, and encouraging the repatriation of funds from overseas. Indeed, some of these measures have already been announced by some regional authorities, but further action may be warranted if US dollar liquidity remains under sustained pressure.

Meanwhile, announcements of weighting adjustments by major global investment index providers initially caused some apprehension over their implications for EMs. From February 2019, the MSCI, FTSE Russell, S&P Dow Jones, and Bloomberg Barclays Indices indicated their intention to increase the weighting of China's onshore stocks and bonds in their respective benchmark indices over the course of 2019–20. These developments have made China's risk assets inescapably more important to global investors. Meanwhile, MSCI also increased Thailand's shares in its indices by qualifying several categories of Thailand's non-voting depository receipts.

However, AMRO's analysis suggests that the overall impact of the re-weightings *per se* on markets may be close to neutral. The phasing in of index changes over many months should allow investors to gradually reallocate, which should facilitate the smoothing of market prices. Moreover, the continuing increase in new assets under management across constituent markets should help offset any volatility in capital flows across borders from those reallocations (Box 1.5).

Once the flight to safety stage passes, the region's EM bonds are expected to attract investors again. With AE interest rates at very low (or even negative) levels and falling (Figures 1.24 and 1.25), investors are likely to continue searching for returns among higher-yielding EMs. The rate cuts by the US Fed appear to have fully met market expectations, and while no further easing is expected in the foreseeable future, neither is a reversal (Box 1.6). Given their relatively solid fundamentals, ASEAN EMs (and Korea) should remain beneficiaries from the market's ability to discern quality (Figure 1.26), although bond yields—as a spread against US as well as domestic policy rates—had been on a compressing trend until very recently (Figure 1.27). Meanwhile, the protracted low interest rate environment in countries such as Japan, while supportive of growth, carries important financial stability implications, through the narrowing of interest margins and potential weakening in the balance sheets of financial institutions (Box 1.7).

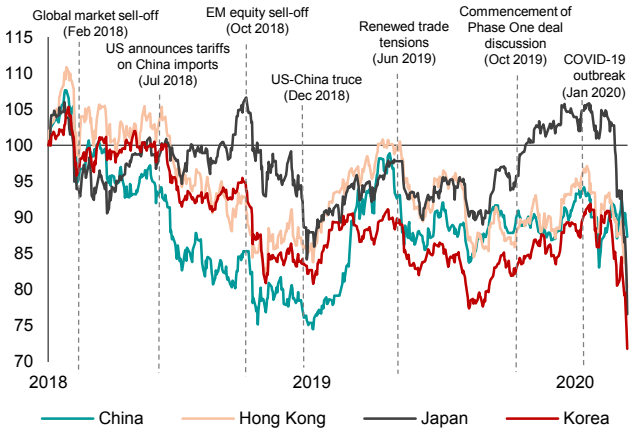
The increased risks in the global environment have introduced significantly greater volatility in markets. Uncertainties surrounding global economic activity and policymaking reached a historic high in 2019 (Figure 1.28), and are likely to rise further in 2020. The lack of clarity and tensions surrounding the trade

negotiations between China and the United States, buffeted by acrimonious Brexit negotiations among UK political parties and with the EU—became key drivers of confidence, spilling over into financial markets. While the US-China Phase One trade agreement and the finality of Brexit are positive in this regard, uncertainty has spiked significantly with the COVID-19 pandemic, and raised risk aversion to GFC levels (Figure 1.29). Consequently, the private sector will likely hold back spending and investment this year, and further weaken overall economic activity.

AMRO has developed a global vector autoregression model to estimate the impact of greater unpredictability in the outlook on asset prices and capital flows. The results estimate a 0.3–1.6 percent decline in equity prices 0–1 month after a one standard error shock in uncertainty (Box 1.8). In the event of heightened global economic uncertainty, the Japanese yen appreciates and most other currencies weaken against the US dollar. It likewise triggers a flattening in yield curves, on expectations of more accommodative monetary policy (given that the shock would likely dampen economic growth) as well as some rebalancing toward less-risky assets. Foreign investors also tend to shift away from EM assets, which could lead to an immediate outflow of nonresident capital from Asian equity and debt markets.

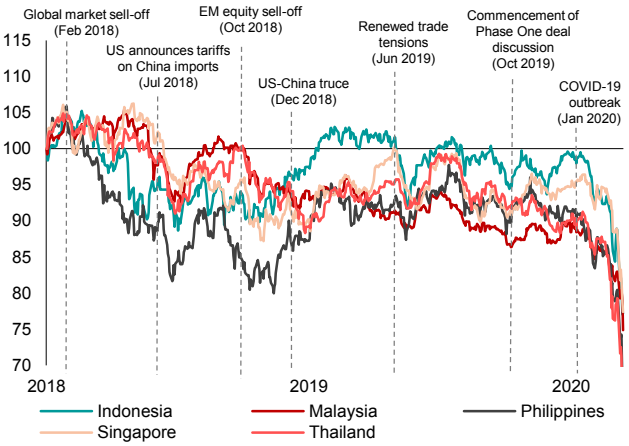
Figure 1.21. ASEAN+3: Equity Markets
(Index, January 1, 2018 = 100)

China, Japan, and Korea



Sources: Haver Analytics; and AMRO staff calculations.

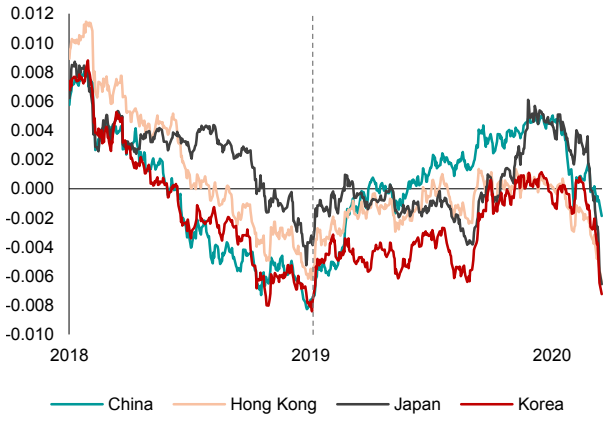
ASEAN-5



Sources: Haver Analytics; and AMRO staff calculations.

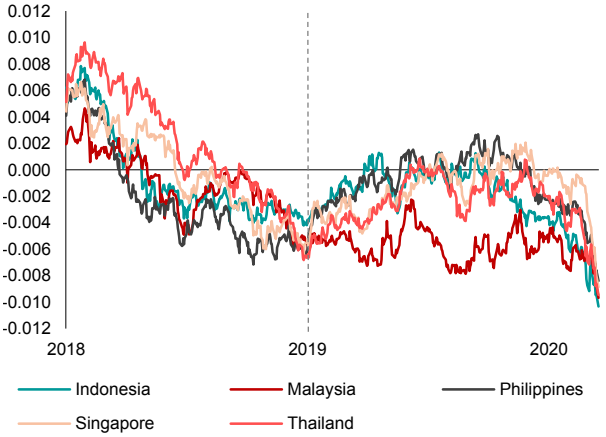
Figure 1.22. ASEAN+3: Sharpe Ratios

China, Japan, and Korea



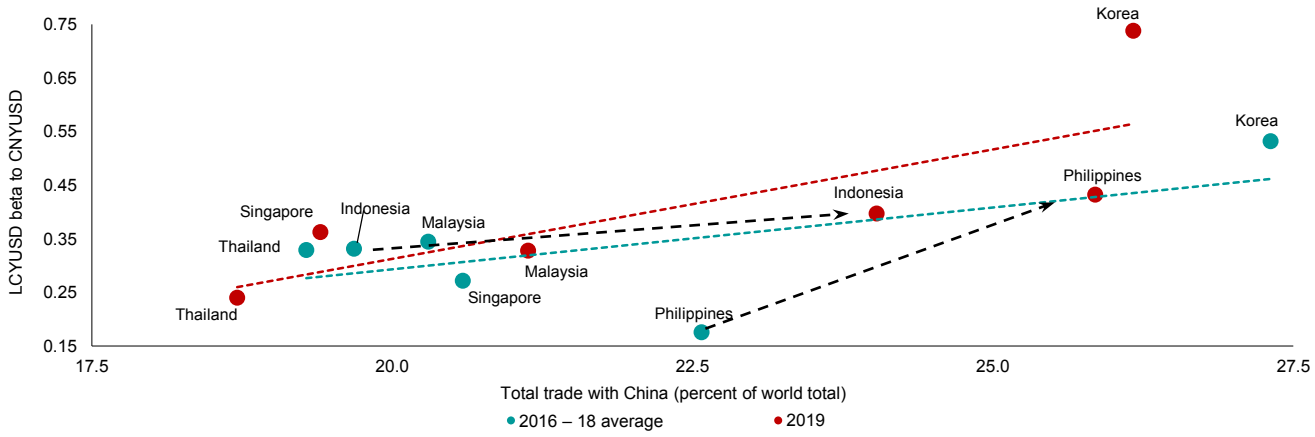
Sources: Haver Analytics; and AMRO staff calculations.
Note: Standard deviations are calculated from 240-day rolling returns.

ASEAN-5



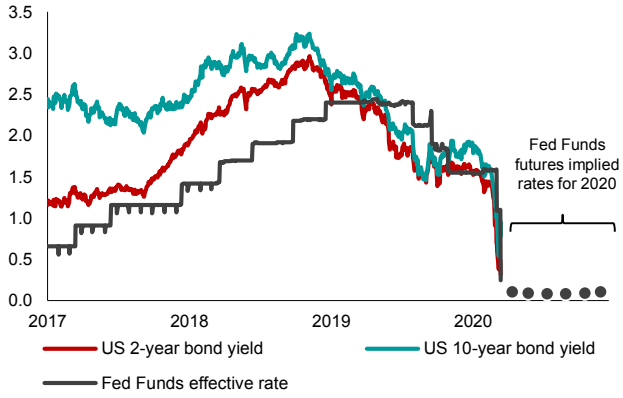
Sources: Haver Analytics; and AMRO staff calculations.
Note: Standard deviations are calculated from 240-day rolling returns.

Figure 1.23. ASEAN-5 and Korea: Sensitivity of Local Currency to CNY/USD versus Trade with China



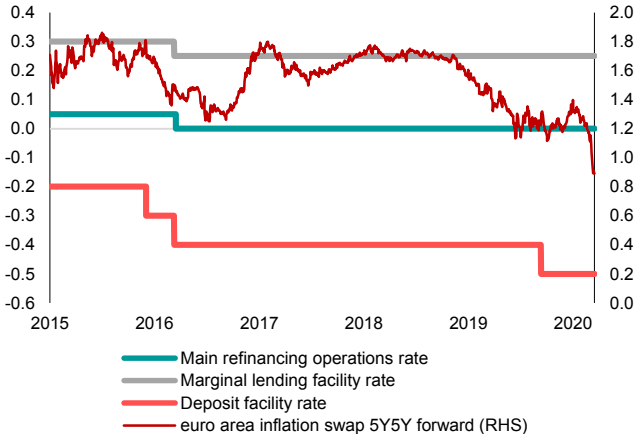
Sources: Haver Analytics; and AMRO staff estimates.
Note: The red line represents the regression line for the countries in 2019; the green line represents the regression line for the countries' 2016–18 average. Total trade refers to the sum of merchandise exports and imports. Only liquid ASEAN+3 (excluding Japan) currencies that are either in a managed or freely floating arrangement are included. USD = US dollar; CNY = Chinese renminbi; LCY = local currency.

Figure 1.24. United States: Fed Funds and Fed Funds Futures Rates, and Government Bond Yields
(Percent)



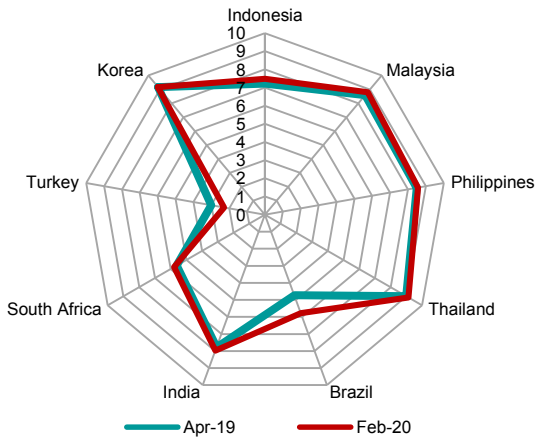
Source: Haver Analytics.
Note: Data for Fed fund futures implied rates as of March 17, 2020.

Figure 1.25. Euro area: 5Y5Y Inflation Swap and ECB Policy Rates
(Percent)



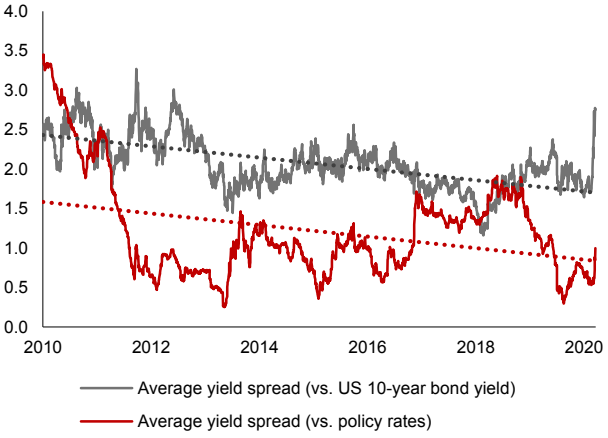
Source: Haver Analytics.
Note: 5Y5Y, or 5-year 5-year, refers to the expected inflation rate over the five-year period that begins five years from quotation. Data are as of March 17, 2020. ECB = European Central Bank.

Figure 1.26. Selected Emerging Markets and Korea: Sovereign Access to Capital Markets
(Rank)



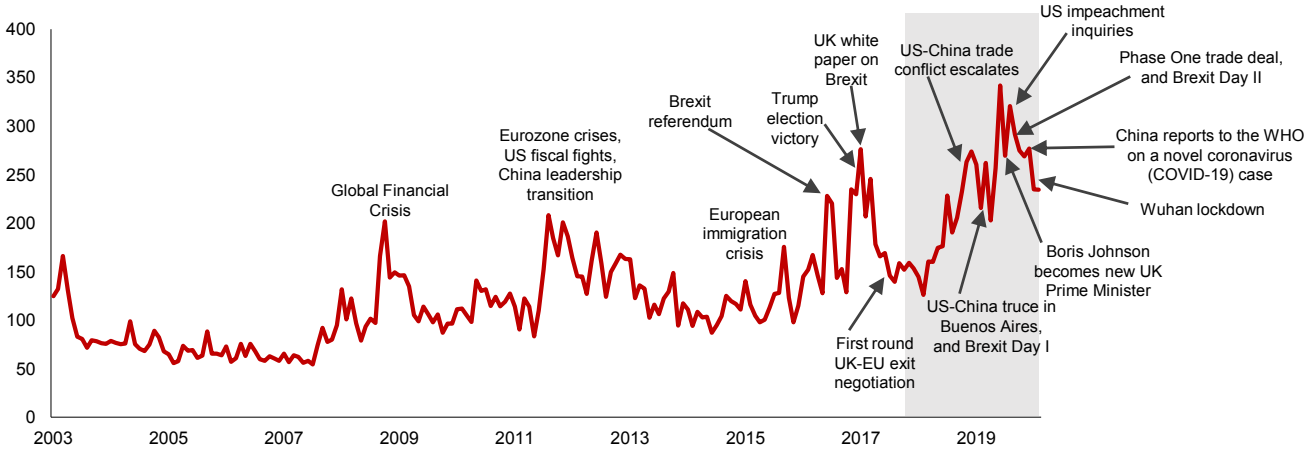
Sources: Haver Analytics; and AMRO staff estimates via ARTEMIS.
Note: The further away from zero, the relatively cheaper the market access relative to the emerging markets universe.

Figure 1.27. ASEAN-4 and Korea: Average Yield Spreads
(Percent)



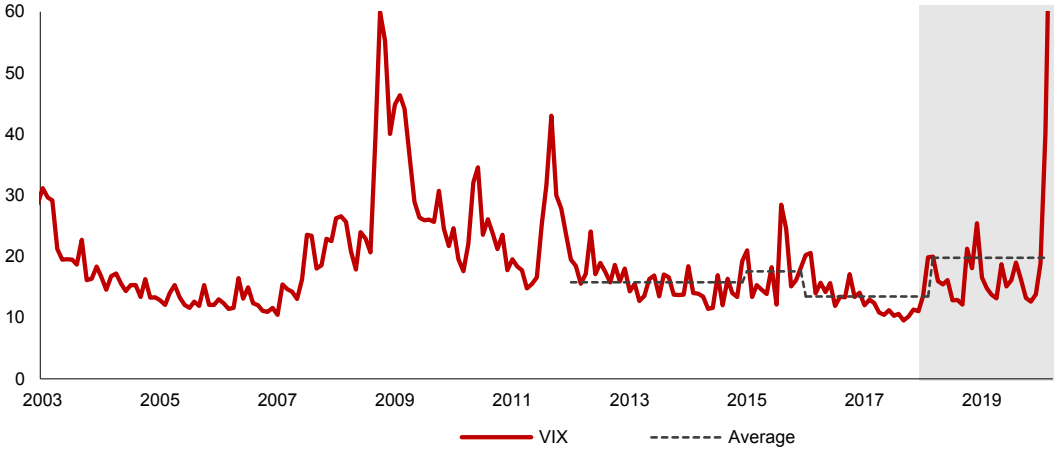
Sources: Haver Analytics; and AMRO staff calculations.
Note: Calculations are based on yields and policy rates of Indonesia, Korea, Malaysia, the Philippines, and Thailand.

Figure 1.28. Global Economic Policy Uncertainty Index, as of February 2020



Sources: Economic Policy Uncertainty (www.policyuncertainty.com); and AMRO staff compilations.
Note: The Global Economic Policy Uncertainty Index is a publicly available dataset constructed from the GDP-weighted average of national indices that reflect the relative frequency of own-country newspaper articles discussing "economic policy uncertainty." EU = European Union; PM = prime minister; UK = United Kingdom; US = United States.

Figure 1.29. The CBOE Volatility Index (VIX), as of March 2020



Sources: Haver Analytics; and AMRO staff calculations.
Note: CBOE = Chicago Board Options Exchange; VIX = CBOE Volatility Index.

Box 1.5:

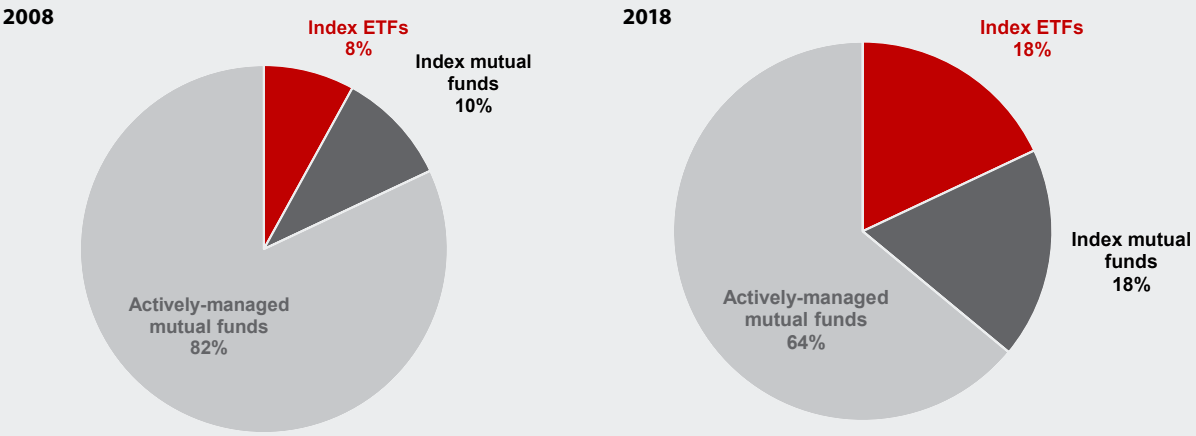
Reweighting of Global Investment Indices and Their Implications for Regional Capital Flows

In 2019, major equity and bond index providers announced their intention to increase the weighting of China's securities in their respective benchmark indices over the course of 2019–20. The reweightings carry important implications for cross-border capital flows. Global indices, such as the MSCI Emerging Markets Index (MSCI-EM), the FTSE Emerging Markets Index (FTSE-EM) and the Bloomberg Barclays Global Aggregate Index (BBGA) cover a sizable share of investible markets in the world. For example, the MSCI-EM is tracked by an estimated USD 1.9 trillion worth of passive funds, while the BBGA is the benchmark for some USD 2.5 trillion in assets under management (AUM). When the weighting of a particular market increases (decreases), global fund managers tend to raise (reduce) their allocations to that market, while pulling out (injecting) funds from (into) others, assuming no change in their AUM. Although the extent varies across investment strategies, such asset reallocations could induce capital movements across markets, affect asset prices, and exert pressure on currencies.

Fund managers apply active or passive strategies, or a hybrid of both. A passive fund manager aims to deliver the total returns of a particular index. He/she typically holds portfolios that mirror or closely track the constituents of the respective benchmark indices and rebalances almost mechanically when the composition or weights of those indices change. In contrast, an active fund manager does not necessarily track benchmark indices closely but rather, aims to use his/her skills or untapped information (for example, "big data") to search for excess returns ("alpha"). The literature suggests that a one percentage point increase in a market's weighting in a benchmark stock (bond) index is associated with an average 0.9 (0.6) percentage point increase in a passive fund's allocation and 0.6 (0.4) in an active fund's allocation to that market, after other country, industry and fund characteristics are accounted for (Williams, Raddatz, and Schmukler, 2017).[1] Hence, the "benchmark effect" could be significant, especially given that passive fund management has been gaining traction in recent years (Figure 1.5.1).

Back-of-the-envelope calculations suggest that China could see sizable inflows into both its onshore stock and bond markets over time, as a result of the index re-weightings, while Korea and major ASEAN EMs would lose out (Table 1.5.1):[2]

Figure 1.5.1. United States: Composition of Mutual Fund Market



Sources: Investment Company Institute; and AMRO staff calculations.
Note: ETF = exchange-traded fund.

[1] Passive funds, in this context, include both explicit and closet indexing funds. They closely, but may not completely, track an index. Hence, the benchmark effect is about 0.9 (0.6) for stocks (bonds), on average, rather than 1.

[2] See Sun (2019) for a more detailed breakdown estimated allocations.

- *Ceteris paribus*, the rebalancing of the MSCI-EM weights could result in a reallocation of an estimated USD 85 billion into China's A shares, or 1.3 percent of its market capitalization. Reweighting of the global bond indices are likely to be significant for China's domestic bond market as well, with projected capital inflows of nearly USD 71 billion. Indeed, with index rebalancing still underway, overseas investors had already increased their holdings in Chinese domestic equities and bonds by CNY 950.1 billion (USD 135.9 billion) and CNY 477.6 billion (USD 68.3 billion), respectively, between end-2018 and end-2019 (Figure 1.5.2).

- Total capital outflows from Malaysia, Indonesia, the Philippines, and Korea that are attributable to the re-weighting effect of the MSCI-EM and FTSE-EM could amount to an estimated USD 22 billion, about the same size as their equity portfolio outflows in 2018, when the region was hit by sell-offs in emerging market risk assets (Figure 1.5.3). Thailand, the only ASEAN market that received a major weighting boost from MSCI-EM, saw strong equity portfolio inflows after the announcement, but has subsequently readjusted to other news.

- Redemptions of local currency debt securities from the rest of the region (including Korea, Singapore, and other ASEAN markets) would amount to an estimated total of USD 2.5 billion, given their small aggregate weights in the BBGA. Such magnitude could be considered modest compared to the volatility in the actual bond market flows over the past year and a half (Figure 1.5.3).

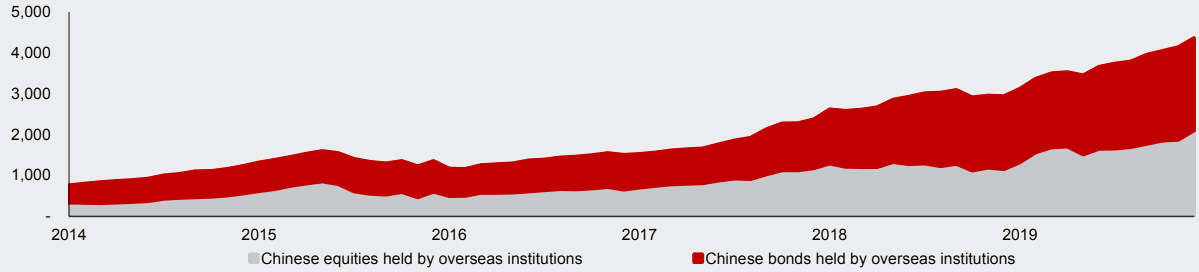
While some regional markets may experience capital outflows, mitigating factors could potentially offset any significant impact. The phased-in implementation of the adjustments should help to smooth capital flows, while the continuing inflow of new AUM across constituent markets—assuming that global investment funds grow at the average annual compound growth rate of the past decade—should result in a largely neutral outcome for most of the ASEAN+3 members. Aside from the index re-weightings, macro-financial factors and risk sentiment also play crucial roles in the determination of capital flows. Throughout 2019, trade tensions and concerns over a global economic slowdown saw a deterioration in risk sentiment. Consequently, Indonesia, Malaysia, Korea, and Thailand bond markets collectively recorded net inflows of USD 22 billion in 2019, despite estimates pointing to minimal capital movement as a result of index rebalancing, highlighting the importance of investor preference for safer assets in the region and their search for yield among EMs.

Table 1.5.1. Global Markets: Net Flows from Reallocations and New Assets under Management
(Billions of US dollars unless indicated otherwise)

Constituent	Capital flows from reallocation			Total capital flows from reallocation		Capital flows from new AUM			Total capital flows	
	MSCI EM	FTSE Russell EM	Bloomberg Barclays GA	Amount	Percent of FX reserves	MSCI EM	FTSE Russell EM	Bloomberg Barclays GA	Amount	Percent of FX reserves
United States	0.0	0.0	-32.0	-32.0	-7.1	0.0	0.0	18.6	-13.3	-2.9
Euro area	0.0	0.0	-17.4	-17.4	-2.1	0.0	0.0	10.1	-7.2	-0.9
Japan	0.0	0.0	-11.9	-11.9	-0.9	0.0	0.0	6.9	-5.0	-0.4
Singapore	0.0	0.0	-0.1	-0.1	0.0	0.0	0.0	0.1	-0.1	0.0
Hong Kong	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
China, Offshore	-32.3	-6.7	0.0	-38.9	-1.2	37.1	4.2	0.0	2.3	0.1
China, Onshore	85.0	19.3	70.9	175.3	5.5	4.2	0.7	2.7	182.8	5.7
Korea	-14.9	0.0	-0.9	-15.8	-3.9	17.1	0.0	0.5	1.9	0.5
Taiwan, China	-11.6	-2.4	0.0	-14.0	-2.9	13.3	1.5	0.0	0.8	0.2
India	-9.0	-2.3	0.0	-11.3	-2.7	10.4	1.4	0.0	0.5	0.1
Brazil	-8.4	-1.7	0.0	-10.1	-2.6	9.6	1.1	0.0	0.6	0.2
Thailand	17.8	-0.7	-0.2	16.9	8.0	3.8	0.4	0.1	21.2	10.0
Malaysia	-2.5	-0.6	-0.2	-3.3	-3.2	2.8	0.4	0.1	0.1	0.1
Indonesia	-2.4	-0.5	-0.2	-3.0	-2.4	2.7	0.3	0.1	0.1	0.1
Philippines	-1.2	-0.3	0.0	-1.5	-1.2	1.4	0.2	0.0	0.1	0.1
South Africa	-6.0	-1.4	0.0	-7.4	-14.9	7.1	0.9	0.0	0.5	1.0
Others	-14.7	-2.9	-8.0	-25.5	–	16.8	1.8	4.7	-2.3	–

Sources: Bloomberg Finance, L.P.; Bloomberg Barclays Indices; FTSE Russell; Invesco; Investment Company Institute; and AMRO staff estimates.
Note: AUM = assets under management; EM = emerging market; FX = foreign exchange; GA = global aggregate; MSCI-EM = MSCI Emerging Market Index.

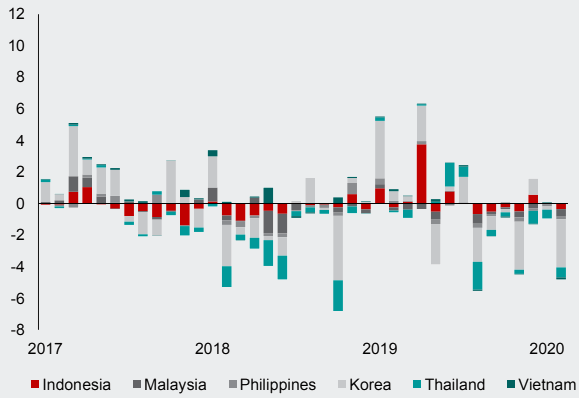
Figure 1.5.2. China: Foreign Holdings of Domestic Assets
(Trillions of Chinese renminbi)



Source: People's Bank of China.

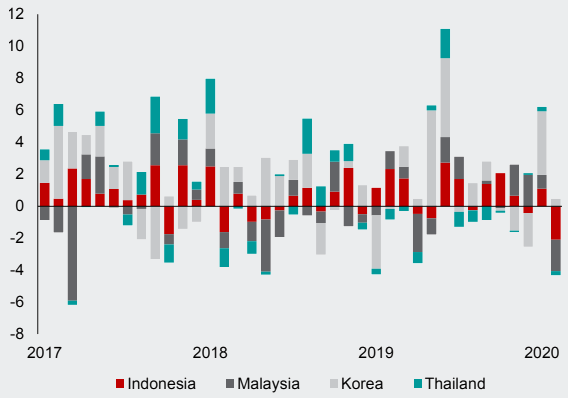
Figure 1.5.3. ASEAN-4, Korea, and Vietnam: Net Foreign Portfolio Investment Flows
(Billions of US dollars)

Equities



Sources: National authorities; and AMRO staff calculations.
Note: ASEAN-4 refers to Indonesia, Malaysia, the Philippines, and Thailand.

Bonds



Sources: National authorities; and AMRO staff calculations.
Note: ASEAN-4 refers to Indonesia, Malaysia, the Philippines, and Thailand.

This box was prepared by Wei Sun.

Box 1.6:

What Will Drive US Treasury Yields?

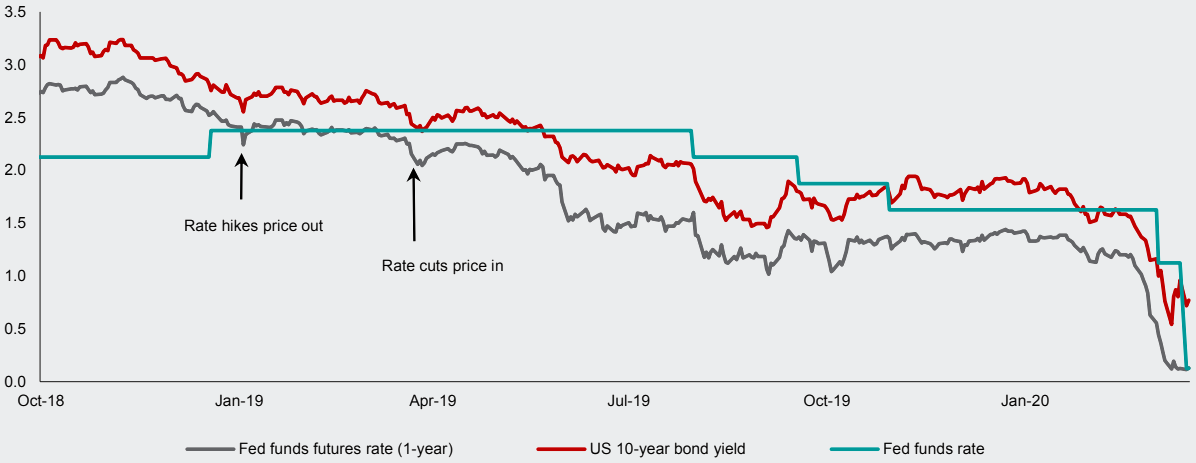
The fall in US Treasury yields since Q4 2018 has been driven to a large extent by market expectations related to the US Federal Reserve's (US Fed's) policy stance. The pricing out of US Fed hikes, followed by the pricing in of cuts in the forward space were accompanied by similar drops in US Treasury 10-year yields (Figure 1.6.1). Since October 1, 2018, the 12-month forward rate expectations have explained almost 50 percent of the daily volatility in US Treasury 10-year yields, with a beta of 0.90 (Figure 1.6.2). The US Fed did indeed deliver three 25 basis point cuts in H2 2019, citing global developments and low inflation while remaining comfortable on domestic labor market and economic activity and another cumulative 150 basis points of emergency cuts in March 2020, in response to concerns over the economic impact of the COVID-19 pandemic.

The period between the October 30, 2019 Federal Open Market Committee meeting (FOMC), when the US Fed cut for the third time, and end-December 2019 provides an interesting case study of market behavior. During this time, US Treasury yields rose from 1.69 percent to 1.92 percent (23 basis points) and the corresponding change in US Fed rate expectations (in 1 year's time) rose by 17 basis points. The higher beta of US 10-year yields indicates that its sensitivity rises when markets expect the US Fed to take a less dovish stance in the future. In other words, if the situation is ripe for rates to rise, then the move in 10-year yields would be much sharper than if vice-versa. A couple of key developments at the time had diminished market expectations of further easing:

- *US-China Phase One trade agreement*. Trade tensions between the United States and China had cast a shadow over the global economic outlook since mid-2018, and an important concern for the FOMC members in terms of its impact on business investment, exports, and manufacturing production. Concerns began to ease on growing expectations of a Phase One trade deal, which was eventually announced on December 12, 2019, and signed on January 15, 2020.

- *Inflation*. The US Fed typically considers (1) 12-month average personal consumption expenditures (PCE) and core PCE as an inflation gauge; (2) market-based measures of inflation compensation, that is, breakeven yields; and (3) survey-based measures of longer-term inflation expectations. While PCE and core PCE fell in 2019 and remain well below the US Fed's 2 percent target (Figure 1.6.3), breakeven yields have drifted higher since October 2019 (Figure 1.6.4). Separately, survey-based measures of inflation have remained above 2 percent, despite having declined in 2019.

Figure 1.6.1. United States: Treasury 10-Year Yields and Fed Funds Rates
(Percent)

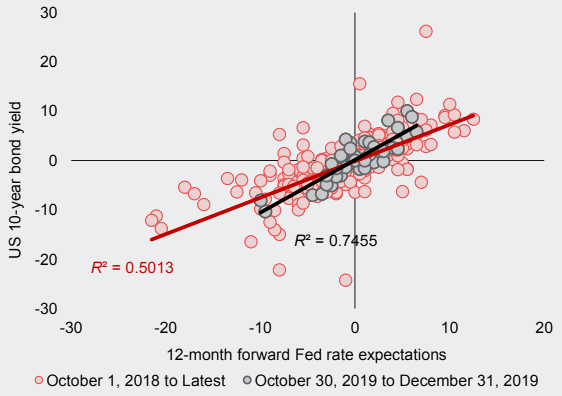


Sources: Haver Analytics; and AMRO staff calculations.

The global spread of the coronavirus, COVID-19, since end-2019 dragged down US Treasury yields and priced in increased expectations of US Fed easing. On March 3, 2020, the US Fed delivered a surprise inter-FOMC 50 basis point interest rate cut and followed up with a 100 basis point cut on March 15, 2020. The magnitude of these cuts appear to have fully met market expectations, and no further easing is expected, nor any reversals in the foreseeable future. But, is there a scenario where US Treasury yields may rise toward the end of the year once the pandemic situation stabilizes? Indeed, the rise in yields could be rapid if any expectation of US Fed tightening appears on the horizon and markets start pricing in the unwinding of the rate cuts delivered in 2019 and Q1 2020. In the event that positive sentiment and improving global growth prospects become the main drivers of higher yields, ASEAN+3 emerging markets could also benefit from capital inflows.

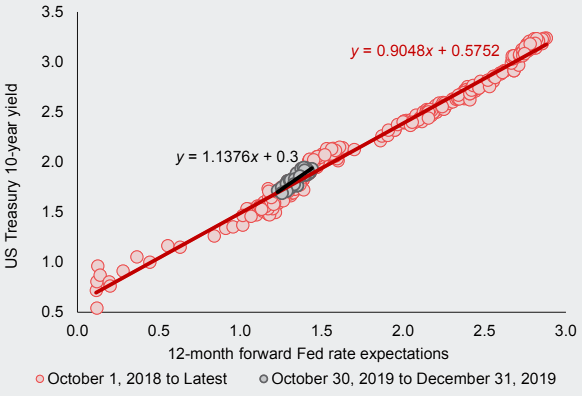
Figure 1.6.2. United States: Treasury 10-Year Yields and Fed Funds Futures Rates (12-month forward)

Daily change, basis points



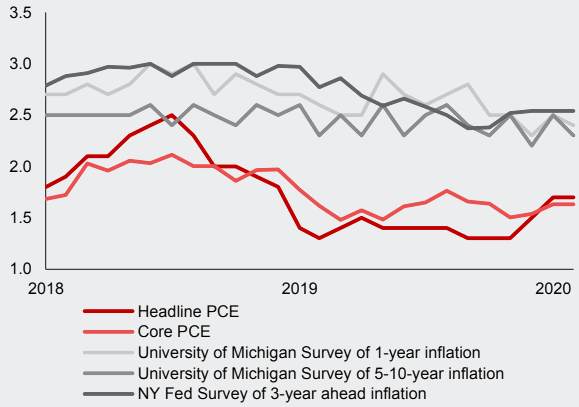
Sources: Haver Analytics; and AMRO staff estimates.

Percent



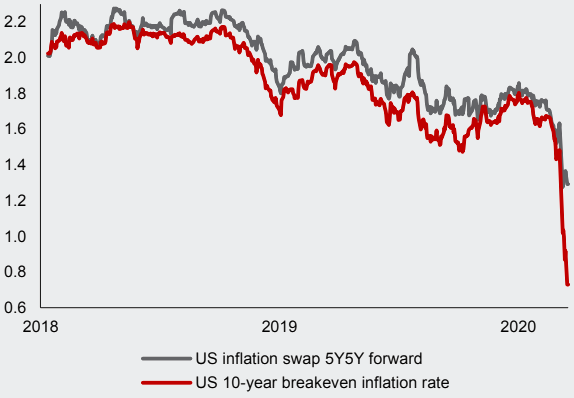
Sources: Haver Analytics; and AMRO staff estimates.

Figure 1.6.3. United States: Personal Consumption Expenditures and Survey-Based Inflation Measures
(Percent)



Source: Haver Analytics.
Note: NY Fed = Federal Reserve Bank of New York; PCE = personal consumption expenditures.

Figure 1.6.4. United States: Market-Based Inflation Compensation
(Percent)



Source: Bloomberg Finance, L.P.
Note: The 5-year, 5-year (5Y5Y) forward inflation expectation rate is a measure of expected inflation (on average) over the 5-year period that begins five years from the day of quotation. The 10-year breakeven inflation rate reflects the market's expectation of inflation in the next 10 years, on average.

This box was prepared by Prashant Pande.

Box 1.7:

Risks and Challenges to Regional Financial Stability amid Very Low Interest Rates

The interest rate environment has changed dramatically over the past decade. Global central banks lowered their policy interest rates significantly and/or expanded their asset purchase programs after the global financial crisis (GFC) to bail out banks and facilitate economic recovery. Population aging, the ostensible decline in productivity, and income inequality have also been blamed for stagnant investment and consumption demand (Summers, 2013), pushing interest rates even lower. Market interest rates have been falling across advanced economies (AEs), into negative territory in the euro area and Japan (Figure 1.7.1), with the latter contributing some 43 percent of the USD 14 trillion in negative yielding bonds globally, as of October 2019 (Figure 1.7.2). The emerging market (EM) economies in the ASEAN+3 region are no exception—their key interest rates have continued to decline over time (Figure 1.7.3). Low interest rates carry important financial stability implications. To the extent that they are driven largely by global factors, domestic policies alone are unlikely to be effective.

Bank profitability is affected by interest rates, posing an important concern for financial stability in the ASEAN+3 region, given their dominance as a source of financing. The existing empirical evidence suggests that net interest income typically increases (decreases) with interest rate rises (declines) (Alessandri and Nelson, 2015; Borio, Gambacorta, and Hofman, 2015; Bikker and Vervliet, 2017). In an environment of persistently low interest rates (and a flattening yield curve), the ability of banks to generate profits from their traditional lending and funding businesses is reduced with the compression of their net interest margins (NIM), given that they tend to borrow short term and lend long term. While low interest rates may spur the demand for credit, they also make deposits less attractive, hence intensifying competition for the latter. Lower interest margins may also force banks take on more risky loans or increase non-interest income, through fee-based services and increased trading activity (CGFS, 2018). Even in the absence of greater risk-taking, a future snapback in interest rates could be challenging for financial institutions.

Figure 1.7.1. Advanced Economies: Negative Interest Rate Bonds
(Trillions of US dollars; percent)

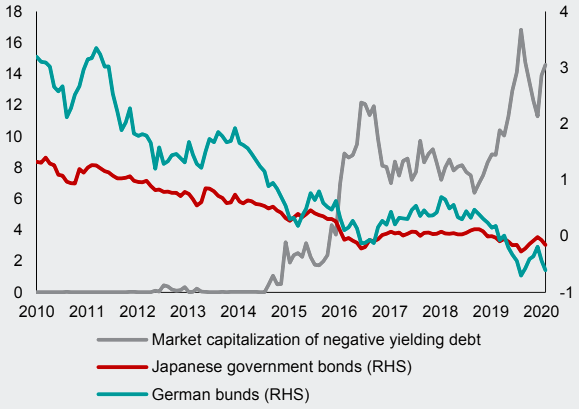
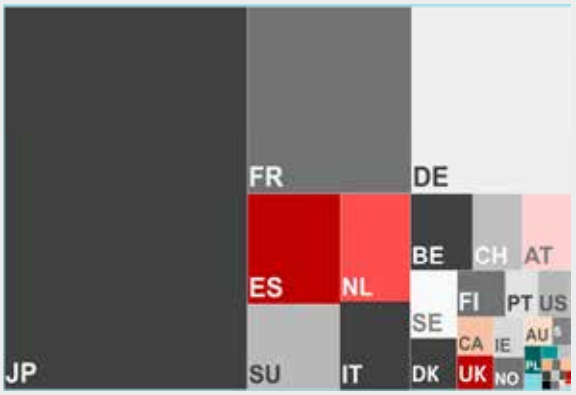


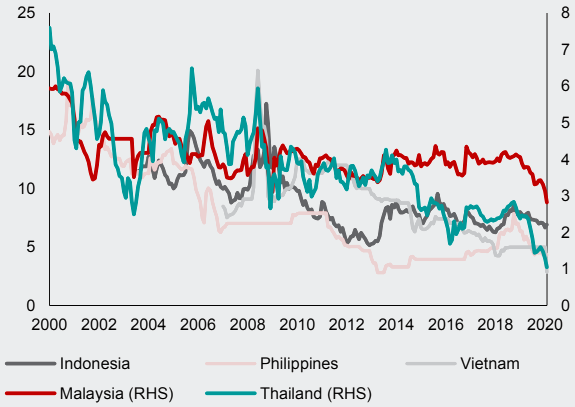
Figure 1.7.2. Advanced Economies: Share of Negative Interest Rate Bonds, as of October 2019
(Percent)



Source: Bloomberg Finance, L.P.
Note: The area of country color block represents the percentage of total negative yield bonds issued by entities in the economy. AT = Austria; AU = Australia; BE = Belgium; CA = Canada; CH = Switzerland; DE = Germany; DK = Denmark; ES = Spain; FI = Finland; FR = France; IE = Ireland; IT = Italy; JP = Japan; NL = Netherlands; NO = Norway; PL = Poland; PT = Portugal; SE = Sweden; SK = Slovakia; SU = Supranational; UK = United Kingdom; US = United States

Insurance companies, currently less systemic than banks but a growing segment of the ASEAN+3 financial system, may be more exposed to the "lower for longer" environment. In contrast to banks, insurers' liabilities tend to be of longer duration than their assets, resulting in negative duration gaps, which make them more vulnerable to falling interest rates (CGFS, 2018). Low discount rates boost the value of insurers' liabilities by more than the value of their assets, thus weakening solvency. The existence of surrender options

Figure 1.7.3. ASEAN-4 and Vietnam: 10-Year Government Bond Yields
(Percent)



Source: Haver Analytics, as of Feburary 2020.

in some life insurance contracts—which could become attractive if there is a sharp rebound in interest rates—could drain insurers' liquidity; while payouts associated with guaranteed life products may not fall as much as interest rates when the latter falls below guaranteed minimum levels.

Even a major economy such as Japan appears to be hostage to global interest rate trends. The autoregressive distributed lag (ARDL) model, following Poghosyan (2012) and Akram and Das (2017), is used to study the long- (x) and short-run (z) determinants of 10-year Japanese government bond (JGB) yields (y), such that:

$$(1) \qquad \Delta y_t = \alpha + \emptyset(y_{t-1} - \beta_0 - \beta_1 x_{t-1}) + \gamma \Delta z_t + \epsilon_t,$$

where,
x represents potential economic growth, net debt-to-GDP ratio, inflation, the US Treasury bill rate and the JPY/USD forward point, which structurally explain the market interest rate according to the Neoclassical growth model and interest rate parity theory;
z includes the average growth rate of bank loans and debt security issues, denominated in US dollars, euro and Japanese yen; yield-to-worst of the Bloomberg Barclays Global Aggregate Index (BBGA); 3-month Japanese yen (JPY) London Interbank Offered Rate (LIBOR); the Bank of Japan's (BOJ's) asset holding as a ratio of GDP; and the Global Economic Policy Uncertainty Index (Baker, Bloom, and Davis, 2015), capturing the short-term factors inspired by Keynesian theory (Keynes, 1936).
β and γ measure the extent to which the long- and short-term variables influence the movements of the JGB yield; and
$\emptyset$ on the error correction term will be negative, if the JGB yield returns to long-term trend after deviating temporarily.

Global financial conditions are found to significantly affect the 10-year JGB yields. The estimation results indicate that JGB yields move in tandem with US interest rates (Table 1.7.1). Meanwhile, its short-term dynamics are predominantly related to the global liquidity of major funding currencies and that of the BBGA, which consists of investment-grade fixed-rate bonds from 24 markets and is thus reflective of global interest rates and risk sentiment, highlighting the important influence of global factors. Japan's monetary policy, as represented by the 3-month JPY LIBOR rate and the BOJ's asset holdings to GDP, have also contributed to the movements in JGB yields, although some of the "news" have presumably been captured in the global variables. Economic policy uncertainty does not appear to provide significantly more information in explaining JGB yields.

The protracted period of low interest rates has had significant impact on the profitability of Japanese banks and could increase the solvency and exchange rate risks of life insurers. Given that banks typically have shorter-term liabilities and longer-term assets, this duration mismatch improves their net asset valuations as interest rates fall. Japanese banks have been selling down their investment securities over time, mostly noticeably their JGB holdings, to realize capital gains to compensate for the declining interest income and consequently, increasing their

Table 1.7.1. Autoregressive Distributed Lag Model: Long- and Short-Term Determinants of 10-Year Japanese Government Bond Yields

Factor	Coefficient	*P*-value
Long-term		
Constant	3.39	0.00
Debt-to-GDP	-0.02	0.00
Potential growth rate	-0.50	0.00
Inflation	0.06	0.15
3-month US Treasury bill rate	0.48	0.00
JPYUSD 3-Month forward points	1.57	0.00
Adjusted *R*-squared: 0.78		
Short-term		
Error correction term	-0.08	0.05
Yield of Bloomberg Barclays Global Aggregate Index	0.36	0.00
Global liquidity	-0.06	0.01
Economic policy uncertainty	0.00	0.18
3-month JPY LIBOR rate	0.26	0.06
BOJ asset holdings to GDP	-0.01	0.06
Adjusted *R*-squared: 0.58		

Sources: Haver Analytics; policyuncertainty.com; and AMRO staff estimates.
Note: BOJ = Bank of Japan. JPY = Japanese Yen; LIBOR = London Inter-bank Offered rate.

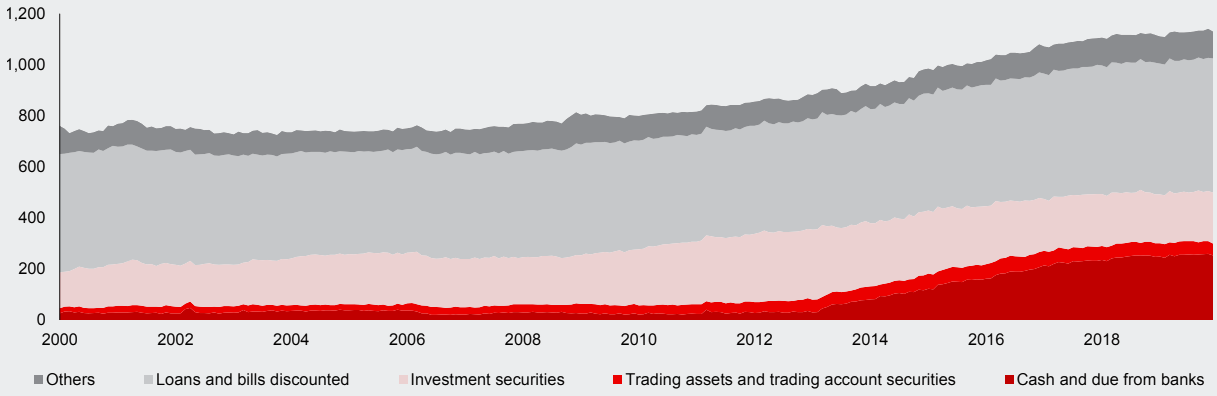
cash holdings (Figure 1.7.4). However, they will face tremendous pressure in seeking new sources of profit once their domestic security holdings are depleted. Meanwhile, Japanese life insurers are confronted with rising solvency concerns, as the duration mismatch between shorter-term assets and longer-term liabilities would weaken their net asset valuations if interest rates fall. They are also faced with greater exchange rate risks as they have resorted to increasing their holdings of higher-yielding foreign securities, from an average 19 to 25 percent over the past 5 years (Figure 1.7.5).

Japanese financial institutions remain sound as they venture abroad but they are dealing with a different mix of risks and challenges as they rebalance their portfolios. Some life insurers have reportedly increased their appetite for less liquid assets, such as infrastructure, real estate, and EM assets, including those from the Asian region, and are reducing the currency hedging ratios of their foreign investments (Figure 1.7.6). Japanese banks hold approximately 15 percent of global collateralized loan obligations, and despite investing in mostly high-credit quality tranches, may still face valuation risks if conditions in those markets were to abruptly change (Figure 1.7.7). Hence, credit, liquidity, and exchange rate risks are becoming increasingly intertwined within the portfolios of Japanese financial institutions.

Policy easing by the G3 central banks has also led to more accommodative monetary policy in EM Asia, with attendant implications for their banking sectors. Since the US Federal Reserve embarked on its monetary policy easing phase at the onset of the GFC in 2008, policy rates in the region have moved correspondingly lower. The liquidity injected by AE central banks through balance sheet expansions has also contributed to pushing interest rates lower in regional EMs, with some collateral impact on their financial institutions. In EM Asia, credit growth has been higher than deposit growth since the start of the era of easy G3 monetary policy (Figure 1.7.8), while NIM slowed initially before rising to much higher levels (Figure 1.7.9). In conjunction with the weakening return on assets, other sources of income for the region's banks have generally not increased and banks remain reliant on interest income.

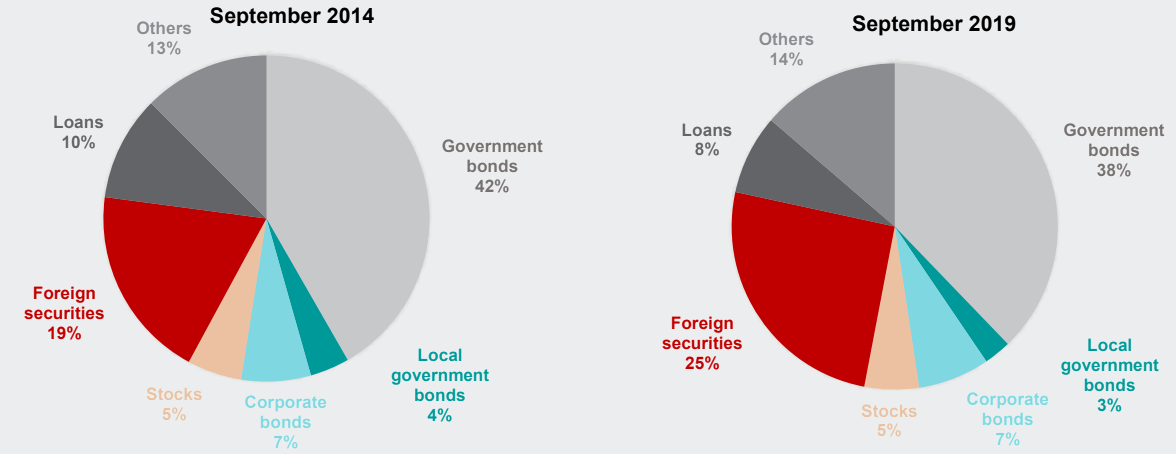
Lower interest rates may also induce a false sense of security about banks' credit risks. They may motivate banks to reduce their provisioning likely because banks expect lower loan losses as probabilities of default on outstanding loans decline (Borio, Gambacorta, and Hofmann, 2015; Bikker and Vervliet, 2017). Within the ASEAN+3 region, the aggregate non-performing loans (NPLs) net of provisions ratio fell following the decline in interest rates, but have been trending slightly upwards over the past six years as yields started firming up (Figure 1.7.10). The drop in the ratio has also corresponded with loan growth exceeding the growth in nominal GDP, suggesting a '"denominator effect" (Figure 1.7.11). Given that NPLs tend to lag the issuance of loans, any snapback in interest rates or economic downturn could result in a rapid rise of the former, potentially threatening the solvency of banks, especially if provisions are insufficient.

Figure 1.7.4. Japan: Asset Allocation of Domestically Licensed Banks, Domestic Branches
(Trillions of Japanese yen)



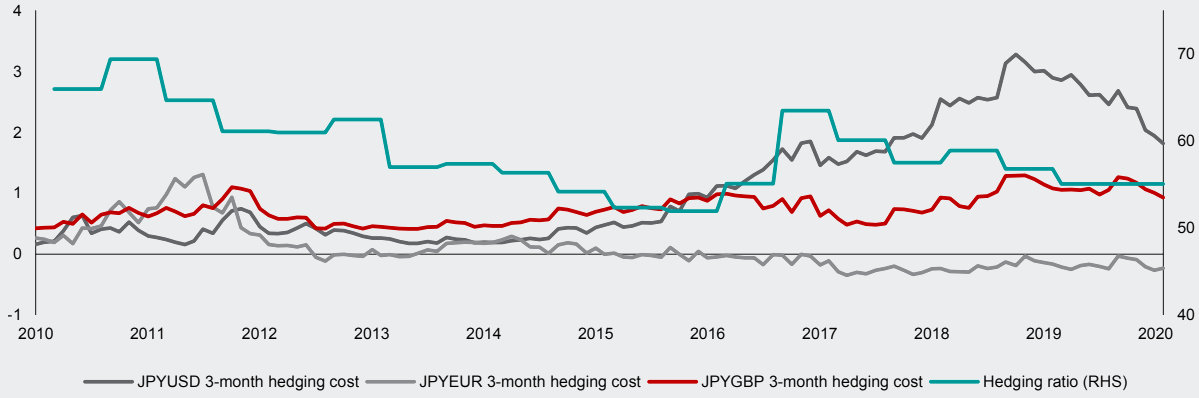
Source: Bank of Japan.

Figure 1.7.5. Japan: Asset Allocation of Life Insurers



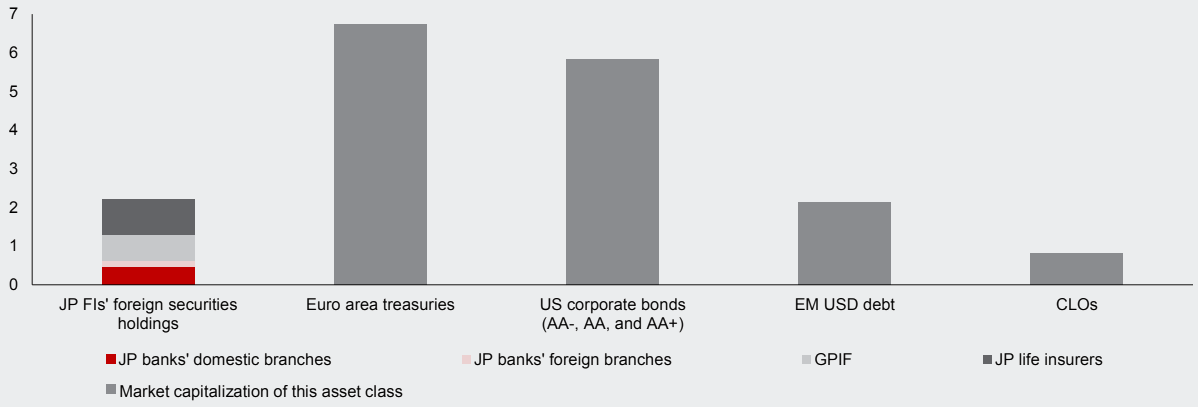
Source: The Life Insurance Association of Japan.

Figure 1.7.6. Japan: Hedging Costs and Ratios of Life Insurers
(Trillions of US dollars)



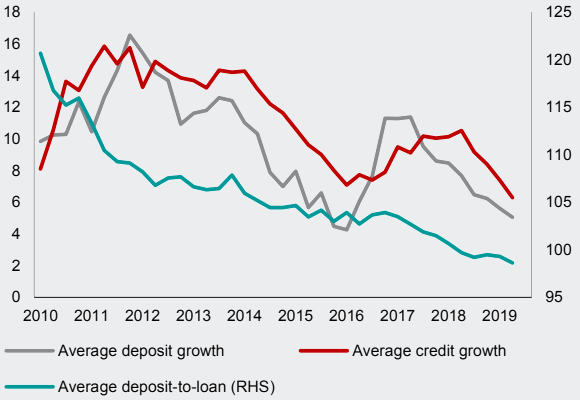
Source: Bloomberg Finance L.P.
Note: The hedging cost is the annualized 3-month forward points as a percent of the principal amount for Japanese yen-based investors. The hedging ratio is for nine Japanese life insurers.

Figure 1.7.7. Japan: Foreign Securities Holdings of Banks, Life Insurers, and the GPIF Relative to Market Capitalization of Various Global Asset Classes
(Trillions of US dollars)



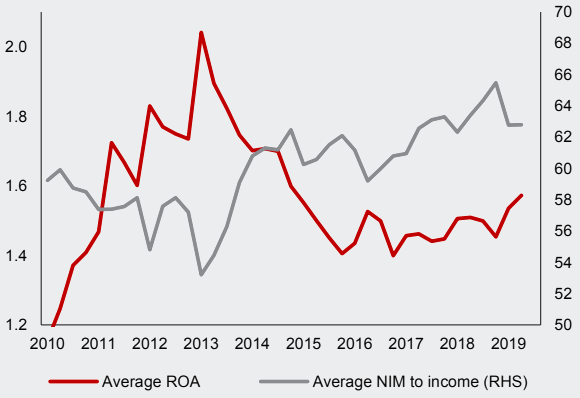
Sources: Bank of Japan; Bloomberg Finance L.P.; The Life Insurance Association of Japan; J.P.Morgan; Scope Ratings; and AMRO staff calculations.
Note: Data are as of September 2019; GPIF data are as of June 2019; the market capitalization of CLOs are estimates. Calculations assume that the investment securities of JP banks' foreign branches are foreign currency denominated. CLO = collateralized debt obligations; EM = emerging market; FI = financial institution; GPIF = Government Pension Investment Fund; JP = Japan; US = United States.

Figure 1.7.8. Selected ASEAN+3 Economies: Credit, Deposit, and Deposit-to-Loan Ratio
(Percent year-over-year; percent)



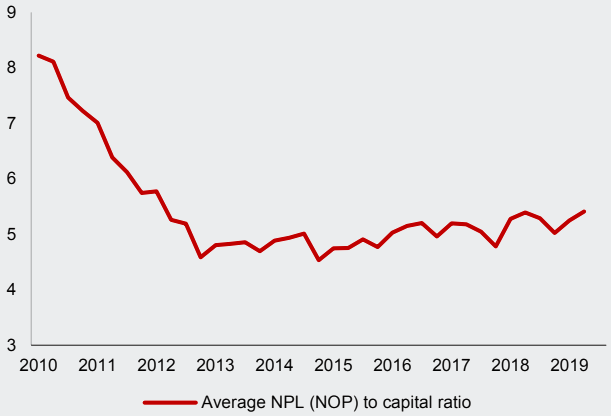
Sources: Haver Analytics; and AMRO staff calculations.
Note: Constituents comprise China, Hong Kong, Indonesia, Malaysia, Singapore, the Philippines, and Thailand.

Figure 1.7.9. Selected ASEAN+3 Economies: Banking Sector Net Interest Margin and Return on Assets
(Percent)



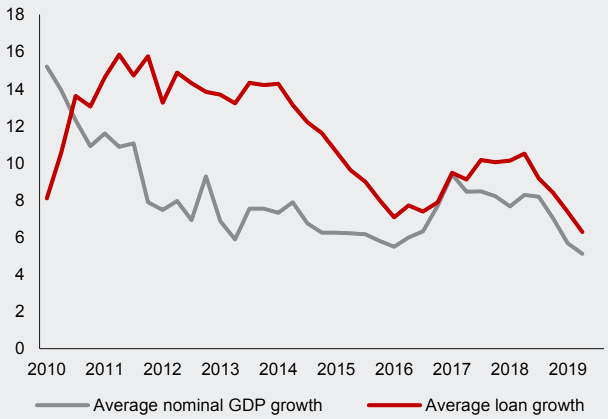
Sources: Haver Analytics; and AMRO staff calculations.
Note: Constituents comprise China, Hong Kong, Indonesia, the Philippines, Singapore, and Thailand. NIM = net interest margin; ROA = return on assets.

Figure 1.7.10. Selected ASEAN+3 Economies: Non-Performing Loans Net of Provisions to Capital Ratio
(Percent)



Sources: Haver Analytics; and AMRO staff calculations.
Note: The NPL ratio is averaged for China, Hong Kong, Indonesia, Malaysia, the Philippines, Singapore and Thailand. NOP = net of provisions; NPL = non-performing loan.

Figure 1.7.11. Selected ASEAN+3 Economies: Nominal GDP and Loan Growth
(Percent)



Sources: Haver Analytics; and AMRO staff calculations.
Note: Nominal GDP and loan growth are averaged for China, Hong Kong, Indonesia, Malaysia, the Philippines, Singapore, and Thailand.

This box was prepared by Wei Sun and Prashant Pande with contributions from Laura Grace Gabriella.

Box 1.8:

The Specter of Economic Policy Uncertainty over Regional Asset Prices

The transmission of economic policy uncertainty to asset prices is quantified using a global vector autoregression (GVAR) model. An important feature of the GVAR approach is that it is able to estimate the direct and feedback effects of a shock across a large set of countries, taking into account real and financial sector linkages.

A GVAR model consists of linked country augmented VAR (VARX*) models estimated in two stages:

- The first step is to estimate a *VARX** (p_i, q_i) model for country for $i = 1,\ldots, N$:

$$x_{i,t} = a_{i,0} + a_{i,1}t + \sum_{j=1}^{p_i}\alpha_{i,j}x_{i,t-j} + \sum_{j=0}^{q_i}\beta_{i,j}x^*_{i,t-j} + \sum_{j=1}^{l_i}\gamma_{i,j}d_{t-j} + u_{i,t},$$

  where the $k_i \times 1$ vector of endogenous variables, $x_{i,t}$, is conditioned on its lagged values of order p_i, contemporaneous and lagged values of order q_i of the set of foreign variables $x^*_{i,t}$, and global variables d_t; a constant, $a_{i,0}$; linear trend, t; and idiosyncratic errors, $u_{i,t}$, that are assumed to be $u_{i,t} \sim iid(0, \Sigma_{ii})$. The foreign variables are calculated as weighted averages of other countries' endogenous variables, using either bilateral trade or financial weights. Both foreign and domestic variables are assumed to be I(1) weakly exogenous with respect to the parameters of the VARX* model.

  The second step is to solve the GVAR model as a global system by stacking the country-specific endogenous variables into a vector of $K = \sum_{i=0}^{N} k_i$ variables via a link matrix that contains weights capturing bilateral exposures between countries in the model.[1] (See Pesaran, Schuermann, and Weiner (2004) and Dées and others (2007) for the model's theoretical framework).

The vector of domestic variables consists of several key macro-financial variables. They comprise: (1) the natural logarithm of real GDP; (2) inflation; (3) the natural logarithm of bilateral exchange rates (2010 = 100); (4) the natural logarithm of equity price index (2010 = 100); (5) short-term (3-month interbank) interest rates; (6) long-term interest rates (10-year sovereign bond yield); and (7) nonresident portfolio investment flows (12-month sum) as a share of GDP. The "uncertainty" variable enters the GVAR model in the form of a global variable, and is proxied by the Global Economic Policy Uncertainty (GEPU) Index. The sample comprises monthly data from July 2003 to June 2019. For consistency in frequencies, the quarterly real GDP series is interpolated exponentially.[2] The model covers 13 economies: China, euro area, Hong Kong, India, Indonesia, Japan, Korea, Malaysia, the Philippines, Singapore, Thailand, the United Kingdom, and the United States.

A mix of trade and financial weights are used to derive the weighted average of the foreign variables. Trade weights, calculated as the 2015–18 average of a country's bilateral trade exposures (exports and imports data published in the IMF's Direction of Trade Statistics) to another country in the model, are used for real GDP, inflation, and exchange rates. The rest of the variables—equity prices, short- and long-term interest rates, and capital flows—are aggregated using financial weights, calculated from the bilateral portfolio investment asset data (2017–18 average) from the IMF's Coordinated Portfolio Investment Survey.

The GVAR model results point to an immediate downward impact on financial markets from a spike in "uncertainty." Specifically, a one standard error shock to the GEPU translates to an 18 percent increase in uncertainty in the first month ($t = 0$), which then recedes over 18 months. Generalized impulse response functions are generated for each variable in the model to illustrate the systemwide impact of the uncertainty shock, and these are summarized as follows (Figure 1.8.1):

- The transmission to equity markets is immediate and could be statistically significant. Stock prices decline by 0.3–1.6 percent at the instance

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1 See Pesaran, Schuermann, and Weiner (2004), and Dées and others (2007) for a discussion on the model's theoretical framework.

2 Estimated in EViews.

of the shock, and the response then eases off in succeeding months. The immediate impact is generally greater (and transmission quicker) for the advanced economies and the more developed financial markets in the region, such as Hong Kong, Korea, and Singapore. The response is also statistically significant at the 10 percent level for most equity markets, persisting for 2–4 months and even over a span of 8–9 months in the case of the euro area and Japan.

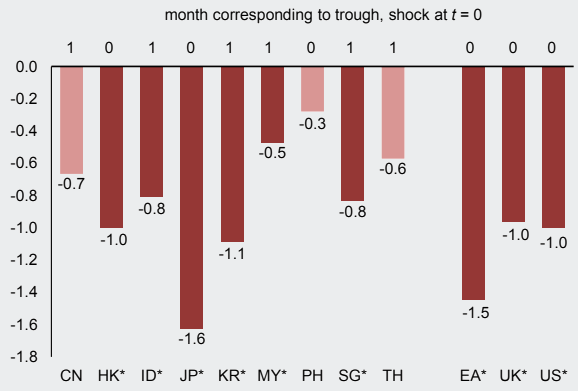
- Likewise, exchange rates react quickly following increased uncertainty. The yen appreciates by about 0.2 percent at the instance of the shock. The Hong Kong dollar, which is linked to the US dollar, also appreciates, although its peak response typically occurs 2 months after the shock. The rest of the currencies in the model depreciate within a range of 0.1–0.5 percent against the US dollar at the trough, 1 to 2 months after the shock. Developed markets like the euro area and the United Kingdom, as well as the more open markets, Korea and Singapore, record relatively sharper and statistically significant depreciations. Although Indonesia's economy is not as externally-oriented, the Indonesian rupiah also weakens by as much as the Singapore dollar, likely a reflection of its vulnerability to capital flow reversals, given the substantial foreign presence in the local currency bond market.

- The impact on long-term interest rates is more pronounced and quicker than on short-term rates. The increase in uncertainty is mostly associated with a 1–4 basis-point decline in the 10-year bond yields, with statistically significant peak effects occurring within 0–2 months from the onset of the shock. Hong Kong appears to be more affected, with an 8.5 basis-point decline at the peak, 2 months after the shock. Indonesia exhibits a persistent 3 basis-point increase in yields for 7 months, although the response is not statistically significant, similar to China, the Philippines, and Thailand. The response of short-term rates is relatively muted, except for Hong Kong and the Philippines, which exhibit more pronounced responses at the peak, and it is delayed for many countries relative to long-term yields. There are also fewer countries whose short-term rates exhibit statistically significant responses. The results are reflective of short-term interest rates being more a function of monetary policy settings than long-term rates, which tend to respond faster to market sentiment.

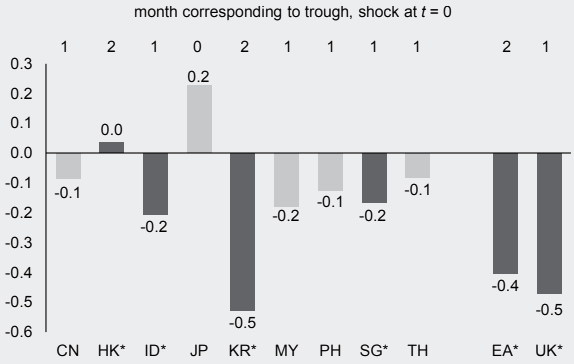
- Increased global policy uncertainty triggers an immediate outflow of nonresident capital from Asia. The outflows persist for 1 month from Indonesia and up to 8 months from the Philippines, while Korea, Malaysia, and Thailand record modest inflows soon after a shock. Japan experiences mild outflows initially, but thereafter records significantly large inflows; Hong Kong reacts similarly, although its responses are not statistically significant.

Figure 1.8.1. GVAR: Market Responses to an Increase in Economic Policy Uncertainty

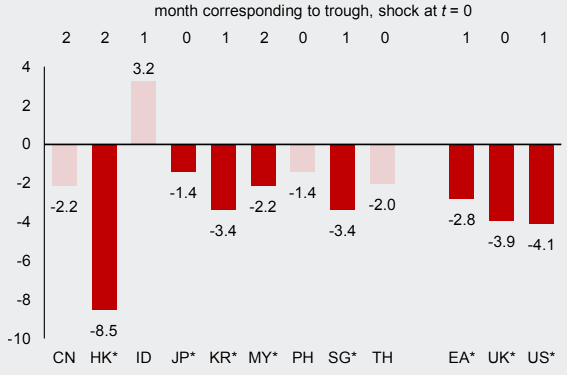
Real Equity Prices: Peak Response
(Percent change from baseline)



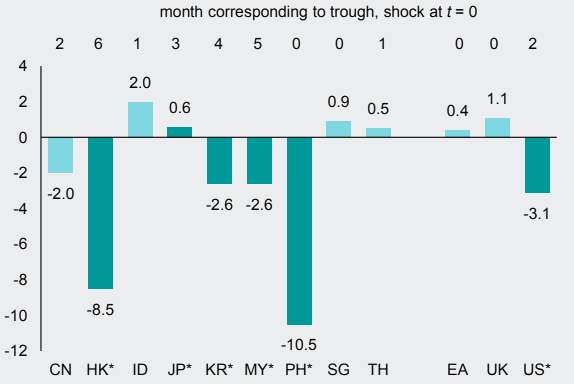
Exchange Rate: Peak Response
(Percent change from baseline)



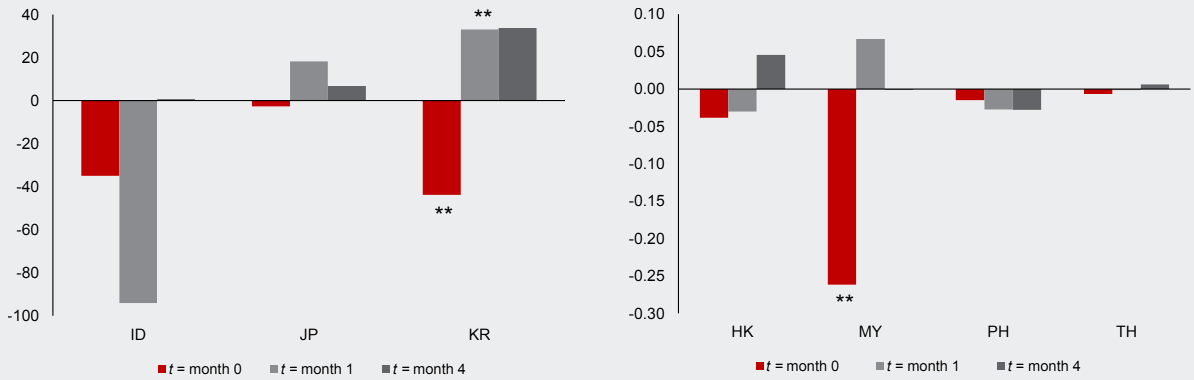
Long-Term Interest Rates: Peak Response
(Basis points from baseline)



Short-Term Interest Rates: Peak Response
(Basis points from baseline)



Non-resident Portfolio Investment Flows: Response
(Percentage points from baseline)



Sources: Haver Analytics; policyuncertainty.com; Refinitiv; and AMRO staff estimates.
Note: Darker-colored bars, *, and ** refer to responses that are statistically significant at the 10 percent level. GVAR = Global Vector Autoregressive; EA = euro area; UK = United Kingdom; US = United States.

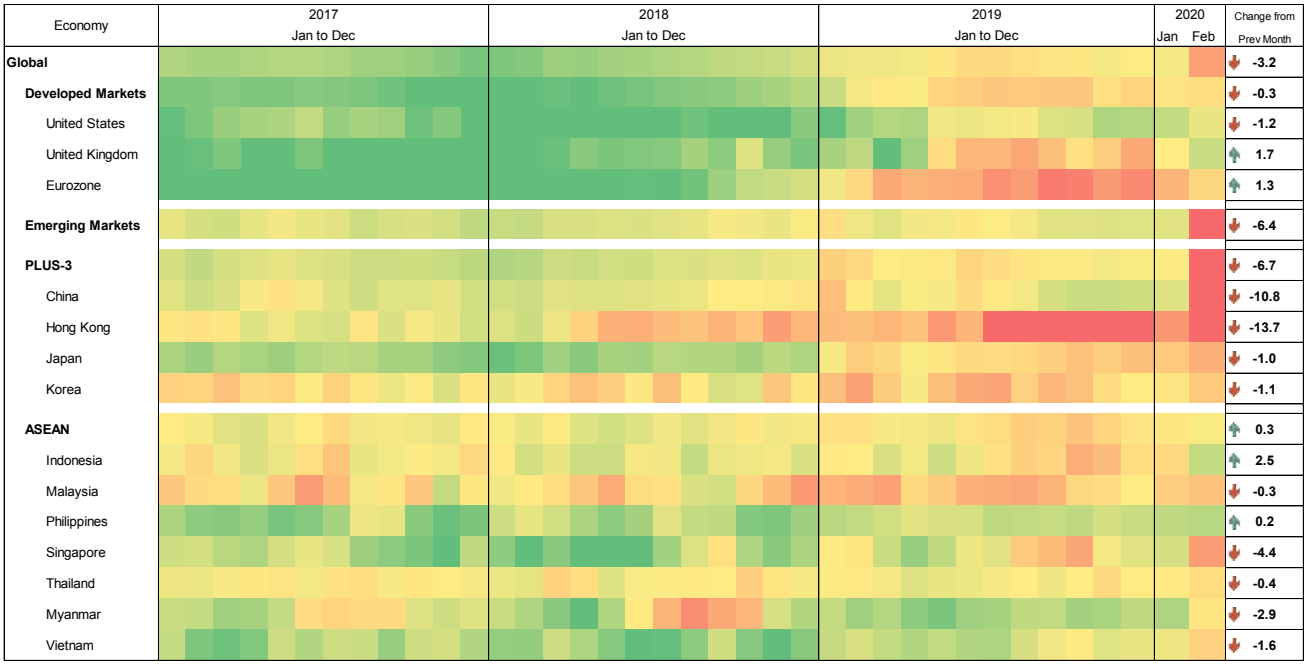
This box was prepared by Diana del Rosario and Trung Thanh Vu.

IV. Growth Drivers and Detractors

Before the COVID-19 pandemic disrupted economic activity in the ASEAN+3 countries, there were indications that the region's manufacturing sector may be turning the corner. Specifically, the weakening trend in 2019 appeared to be bottoming out for the majority of ASEAN+3 economies, following 12 months or more of weakening, as reflected in the Purchasing Managers' Index (PMI) for manufacturing (Figure 1.30). During this period, the PMI for Myanmar, the Philippines, and Vietnam remained above 50, that is, monthly manufacturing activity had consistently strengthened, with Vietnam, in particular, benefiting in part from trade diversion as a result of the US-China trade tensions. However the negative impact of the coronavirus epidemic on manufacturing activity worldwide manifested in February 2020.

Electronic products (and their export) constitute a major component of the regional manufacturing base and hence production trends in the industry are bellwether indicators for overall industrial production. The ASEAN+3 region has also become a major source of demand for technology products, with the rising purchasing power of its middle class. Consequently, the weak manufacturing activity seen in 2019 was, in part, attributable to the slump in demand for technology exports from the region's key markets.

Figure 1.30. ASEAN+3 and Selected Advanced Economies: Purchasing Managers' Index for Manufacturing

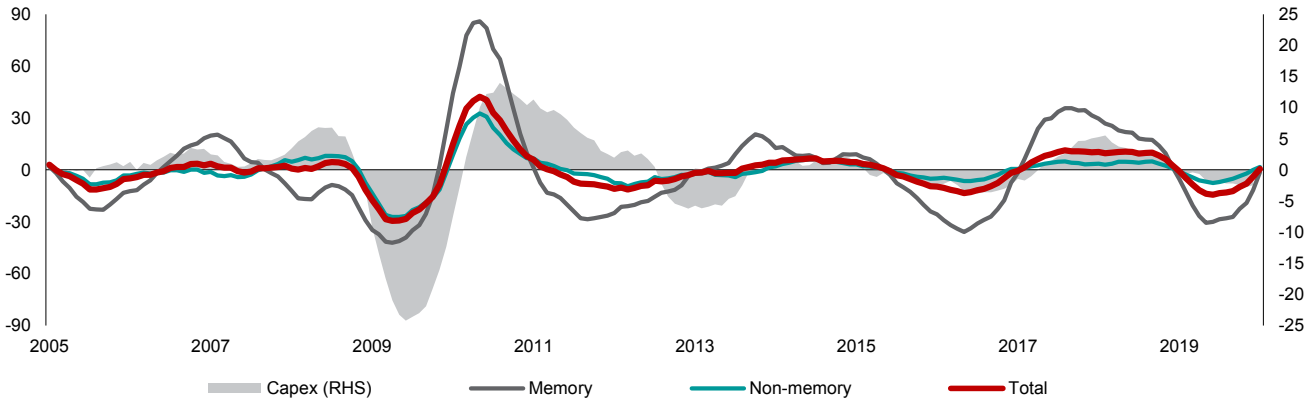


Source: IHS Markit.
Note: The Purchasing Managers' Index (PMI) readings are coded by colors: The deeper the red, the further below (< 45) from the diffusion level of 50; greener denotes the further above (> 55) from 50. Hong Kong and Singapore PMIs represent whole economy PMIs. A PMI reading above 50 denotes an increase in manufacturing activity over previous month, and a reading below 50 denotes otherwise.

The initial recovering outlook for manufacturing is reflected in the global semiconductor cycles. They last peaked in August 2017 for memory semiconductors, and in September 2018 for the non-memory segment (Figure 1.31). AMRO's analysis suggests that both cycles have troughed and are turning around, particularly that of memory semiconductors (Box 1.9). This development would have augured well for manufacturing activity in the region, notably in Korea, home to some of the world's largest semiconductor companies, and Malaysia and Singapore, where some of the world's biggest chip makers have set up their regional operations. However, the coronavirus pandemic is likely to put a halt to, or at least delay, the turnaround in the sector.

The empirical evidence suggests that the global capital expenditure (capex) cycle tends to trail the semiconductor cycles. This trend bodes well for the outlook for corporate investment and herald positive spillovers for the economy at large, in the near to medium term. Once the pandemic subsides, any recovery in semiconductor sales would likely be the "first wave" of demand boosting regional growth, followed by the "second wave" capex, which should provide a further bump to growth.

Figure 1.31. Global Semiconductor and Capex Cycles
(Percent year-over-year, 6-month moving average)

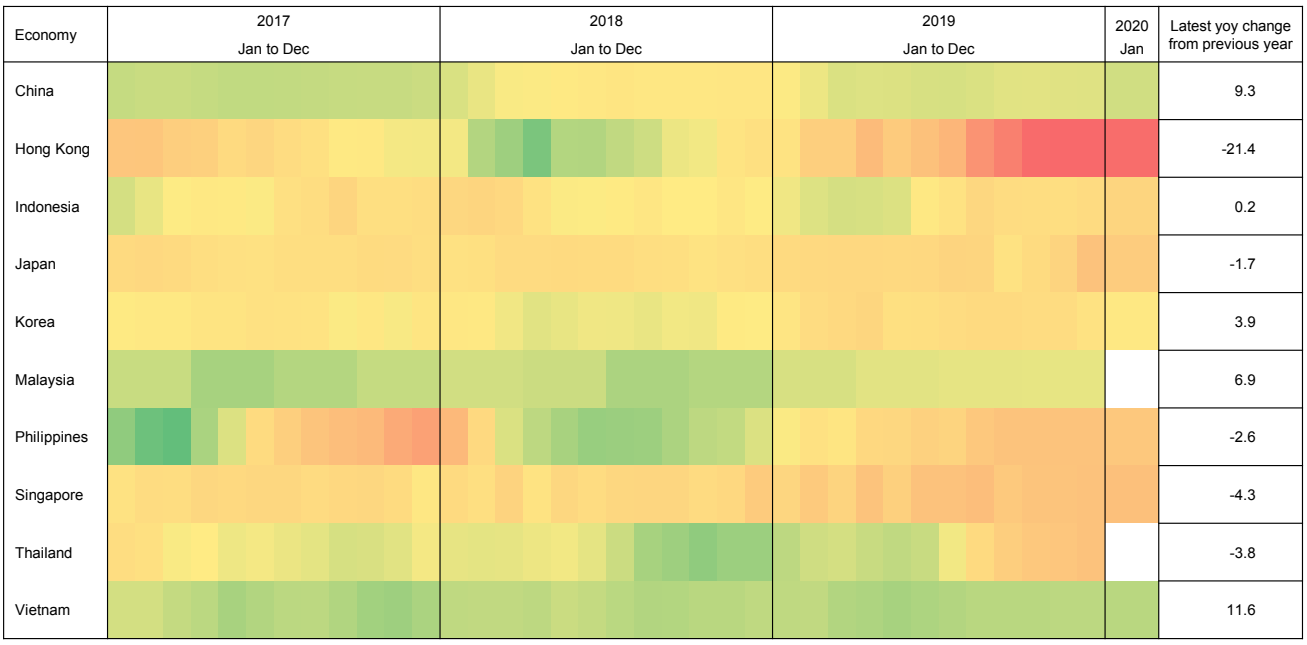


Sources: Haver Analytics; WSTS Inc.; and AMRO staff estimates.
Note: All cycles are estimated by applying the Hodrick-Prescott filter (Hodrick and Prescott, 1997) separately, with a smoothing factor lambda of 14,400. Semiconductor data represent global sales; capex data are for the euro area, Japan, and the United States.

Domestic demand is anticipated to continue to anchor growth in the region. Despite a tumultuous 2019, retail sales in the region had held up favorably across several countries, notably China, Malaysia, and Vietnam (Figure 1.32). Indeed, China—one of the main drivers of regional growth—has been rebalancing toward domestic demand, with contributions to growth from exports having declined since the GFC, reflecting the general slowdown in global trade. Other economies recorded a weakening in retail sales—often for idiosyncratic reasons such as the ongoing social unrest in Hong Kong; the consumption tax hike in Japan; the economic slowdown due to the US-China trade tensions in a highly open economy such as Singapore; and an economic slowdown and high household indebtedness in Thailand. This weakness is expected to continue, at least in H1 2020, as the COVID-19 pandemic takes its toll on consumer confidence. More generally, however, with consumption from the expanding middle class set to continue rising, and significant opportunities for investment waiting to be tapped, domestic demand is expected to play an increasingly important role in sustaining regional growth going forward.

However, in the shorter term, the spread of the COVID-19 suggests that the trajectory and composition of growth in the region could change significantly in 2020. AMRO's assumption that the main pandemic episode will run for about 4 months means that the largest impact on economic activity in the region is expected to fall in H1

Figure 1.32. Selected ASEAN+3 Economies: Retail Sales
(Percent year-over-year, 3-month moving average)



Sources: CEIC Data; Haver Analytics; and AMRO staff estimates.
Note: Linear interpolation of the quarterly data for Malaysia. yoy = year-over-year.

2020, through several key channels. They include:

- *A huge knock to the services sector.* In particular, tourism and its ancillary industries are expected to be significantly affected until the pandemic is brought under control. Most economies in the region have benefited from the rapid growth in tourist arrivals from China, which made up almost 80 percent of visitors in Hong Kong in 2018, and more than 30 percent in Cambodia, Korea, and Vietnam, and only slightly lower in Thailand and Japan (Figure 1.33). Chinese tourism, which has been a titan for the region's services export, has become its Achilles heel, as the COVID-19 lockdown in China has halted tourist outflows, while tourists from elsewhere in the region and the rest of the world have also largely stopped all travel activity. In other words, regional economies with large tourism sectors, and especially those with a high share of Chinese visitors, are being particularly hard hit. Indeed, the drop in Chinese travel and tourism is already being felt across the region.

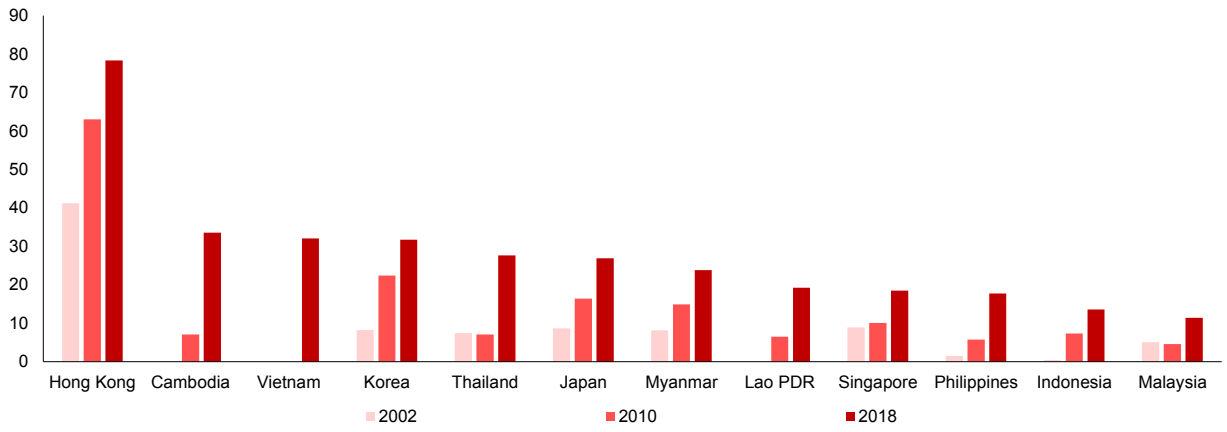
- *Disruptions to intra-regional and global trade in goods.* Many regional economies are open and well-integrated into regional and global supply chains, of which China is an important node (Figure 1.34). Goods trade between China and the ASEAN region has increased substantially over the last two decades (Figure 1.35), while the share of goods exports to China has risen for most regional economies—to more than a quarter of GDP for Vietnam, and more than 10 percent for Malaysia, Korea, and Lao PDR (Figure 1.36). This pipeline has been interrupted by the impact on demand and production in China. In addition, any decline in US demand as a result of the pandemic would be a big blow for the region, as the United States is a key destination for the region's exports (see Figure 1.11).

- *Disruptions to domestic production and demand.* With the COVID-19 pandemic, regional economies will be affected both directly through infections, as well as indirectly from the implementation of measures to contain the virus. Similar to China, economic activity will be significantly hurt as a result of disruptions to own domestic production and consumption. Quarantines are impacting the retail and hospitality sectors, while private investment is likely to be influenced by the corresponding deterioration in business confidence.

Consistent with assumptions of an intense but relatively short-lived pandemic, AMRO expects disruptions to be transitory. Following a sharp slowdown in growth in Q1 2020, manufacturing and trade are expected to rebound quickly, in line with China's (and the region's) demand for intermediate and final goods, as production ramps up (Figure 1.37). However, the recovery in the services sector could be more gradual, given that supply tends to be more constrained by labor, and demand by consumers' availability.

Meanwhile, the uncertainty of the trade relationship between China and United States will continue to cast a shadow over the growth outlook. This relationship has gone through significant angst since 2018, and has been the bellwether for business confidence and trade activity globally, and more so regionally. Analyses of AMRO's up- and downside scenarios around its baseline growth projections suggest that it could asymmetrically add up to 0.5 percentage point to aggregate ASEAN+3 growth in 2021 if the progress made to date were to continue, but subtract up to 0.6 percentage point if tensions were to reignite (Box 1.10).

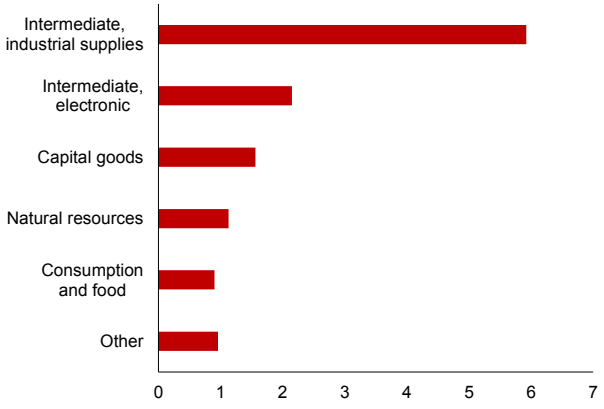
Figure 1.33. ASEAN+3 excluding China: Share of Visitors from China
(Percent of total)



Sources: Haver Analytics; national authorities; and AMRO staff calculations.
Note: Lao PDR = Lao People's Democratic Republic.

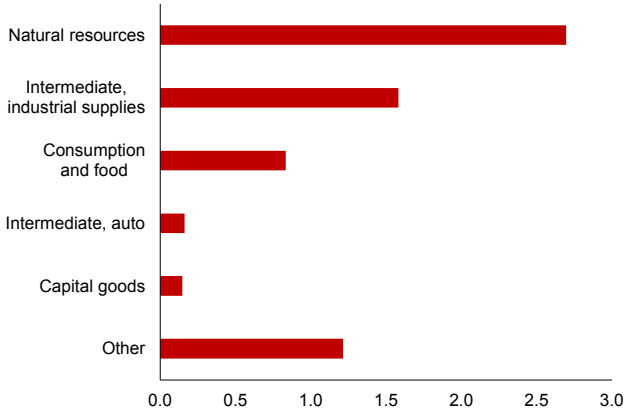
Figure 1.34. Goods Exports to China and Hong Kong, 2018
(Percent of GDP)

ASEAN-5 and Vietnam



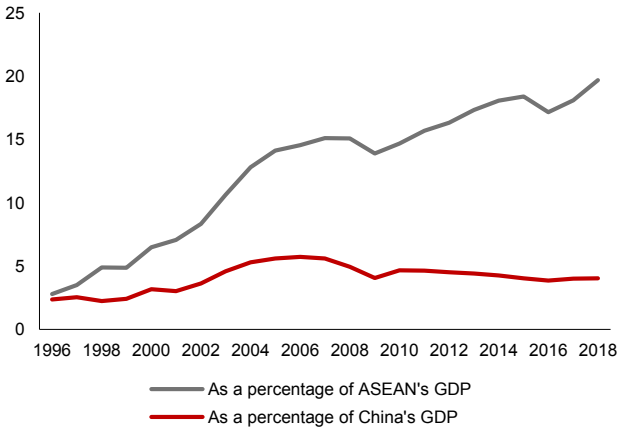
Sources: CEIC Data; United Nations International Trade Statistics Database; and AMRO staff calculations.
Note: ASEAN-5 = Indonesia, Malaysia, the Philippines, Singapore, and Thailand.

BCLM



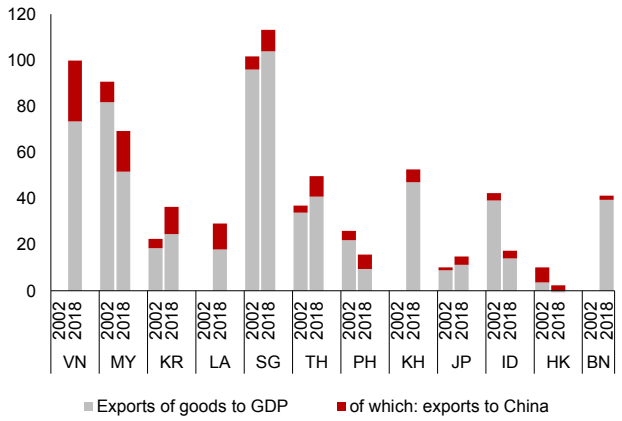
Sources: CEIC Data; United Nations International Trade Statistics Database; and AMRO staff calculations.
Note: BCLM = Brunei, Cambodia, Lao PDR, Myanmar.

Figure 1.35. China and ASEAN: Bilateral Goods Trade
(Percent of GDP)



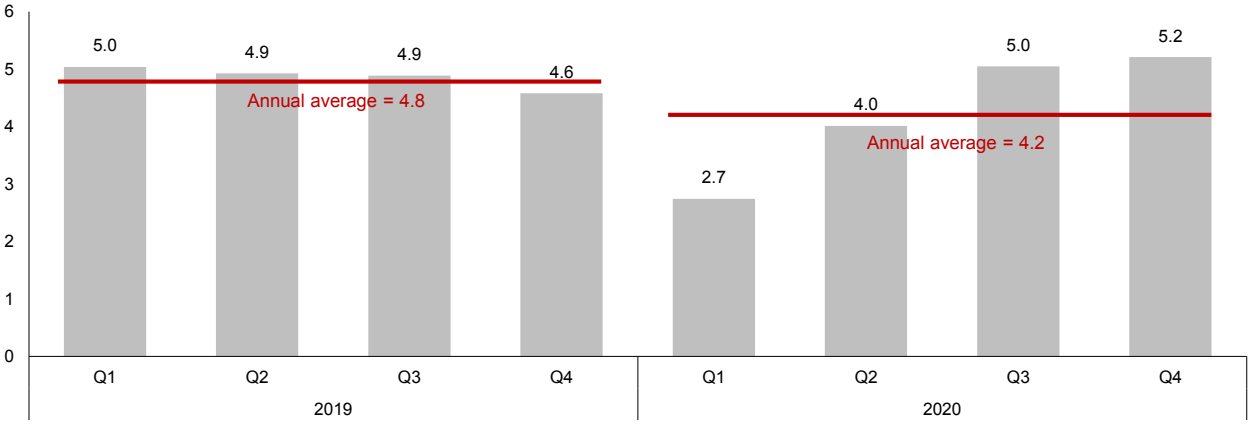
Sources: CEIC Data; and AMRO staff calculations.

Figure 1.36. ASEAN+3: Goods Exports by Economy, 2002 and 2018
(Percent of GDP)



Sources: Haver Analytics; and AMRO staff calculations.
Note: BN = Brunei; HK = Hong Kong; ID = Indonesia; JP = Japan; KH = Cambodia; KR = Korea; LA = Lao PDR; MY = Malaysia; PH = the Philippines; SG = Singapore; TH = Thailand; VN = Vietnam

Figure 1.37. ASEAN+3: Projected Quarterly Growth Profile for 2020
(Percent, annualized)



Sources: Haver Analytics; and AMRO staff estimates.

Box 1.9:

Are Global Semiconductor and Capex Cycles on the Upturn?

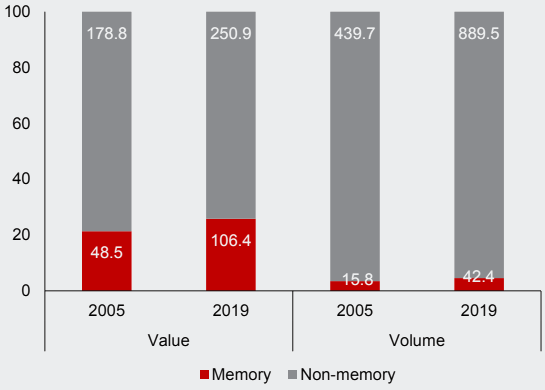
Chips, or semiconductors, are an integral component in electronic devices, and thus the cornerstone of modern technology. The Asia-Pacific region is the largest producer, reflecting shifting production patterns of electronic equipment away from traditional markets, such as the United States, toward this region (Semiconductor Industry Association, 2019). As the single largest producer, China accounted for half of the region's semiconductor sales as of the end of 2018. Other countries in the region, such as Singapore and Japan, are also key production bases for US semiconductor manufacturers.

Semiconductors are generally categorized into two broad groups. They comprise memory chips (such as computer RAMs and flash drives) and others (such as micro-components, analog devices, and optoelectronics), which are grouped together and categorized as non-memory chips (Figure 1.9.1). The memory chip segment has returned to positive growth, in year-over-year terms, during 2019 (Figure 1.9.2). Meanwhile, the sale of non-memory semiconductor chips—which had previously been buoyed by strong global demand for analog and microprocessing unit devices in 2018—fell in 2019 but the decline appears to have slowed.

The demand for semiconductors is typically highly cyclical. Given its importance to the ASEAN+3 economies, cyclical analysis of global semiconductor sales provide an indication of potential demand for the region's exports and, consequently, its growth outlook. The separate memory and non-memory semiconductor cycles tend to move broadly in tandem, although the former has a longer cycle duration (41 months on average) compared to the latter (33 months on average), and has been more volatile (with a standard deviation of 25 percent compared to 9 percent) (Table 1.9.1). These cycles have lengthened in recent years—prior to 2005, the cycle duration for the memory segment was approximately 25 months, or 16 months shorter, while the cycle for the non-memory segment was approximately 26 months, or 7 months shorter.

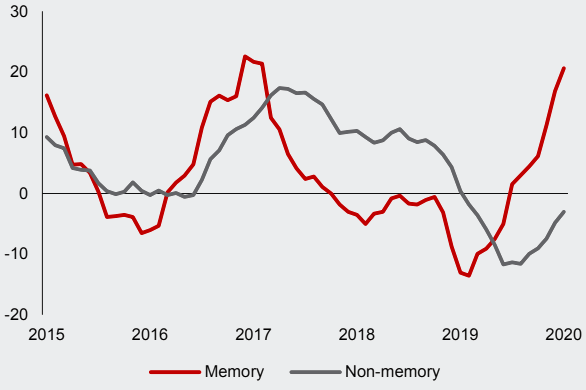
The empirical evidence suggests that recovery in the demand for technology has historically led to new capital expenditure (capex) and vice-versa. Since 2005, the capex cycle has, on average, lagged the memory semiconductor cycle by 3 months and the non-memory semiconductor cycle by 2 months, on average. The correlation between the semiconductor cycle and the capex

Figure 1.9.1. Global Semiconductor Industry: Share of Memory and Non-memory Sub-sectors
(Percent)



Sources: WSTS Inc.; and AMRO staff calculations.
Note: Figures in boxes are actual US dollar values and volumes for each category.

Figure 1.9.2. Global Demand for Memory and Non-memory Semiconductor Products
(Percent year-over-year)



Sources: WSTS Inc.; and AMRO staff calculations.

cycle is about 0.66, higher for non-memory (0.76) than memory products (0.45);[1] the capex cycle has generally been less volatile (with a cyclical standard deviation of 6.6), peaking last in February 2018. These findings support the notion that the ASEAN+3 region could look forward to an eventual recovery in investment as well, post-COVID-19 pandemic, to provide an additional boost to growth.

Our analysis is supported by additional evidence. First, inventories for three of the largest memory semiconductor producers have been building up strongly over the last two years, suggesting a slowdown in sales and echoing the cyclical downturn.[2] However, more recent data point to some inventory drawdown, accompanied by gradual increases in price.[3] Second, industry forecasts also presage a gradual recovery in 2020 (albeit likely with a delay now), with an even stronger positive trend in 2021. Finally, technological progress should provide growth opportunities, particularly in relation to the adoption of 5G technology, which is expected to increase the demand for electronic devices. This particular development could be positive for memory semiconductors, as the memory content in electronic devices is expected to increase with these new technological advances (AMRO, 2020b).

Table 1.9.1. Semiconductors and Capex: Cycle Duration and Standard Deviation
(Months)

Sector	Duration				Standard deviation
	Expansion	Contraction	Full cycle	Lag time of capex cycle	Sample period
Overall semiconductor	17.0	16.2	33.2	1.4	11.4
Memory chips	17.5	23.5	41.0	3.1	24.9
Non-memory chips	16.8	16.6	33.4	2.2	8.7
Capex	16.4	17.3	33.7	-	6.6

Sources: WSTS Inc.; and AMRO staff calculations.
Note: The length of cycles is calculated using data from January 2005 to January 2020 applying the methodology described in Harding and Pagan (2002).

This box was prepared by Marthe Hinojales, Anne Oeking, and Trung Thanh Vu.

[1] Correlations calculated for January 2005 to January 2020. The correlation between semiconductors and electronic exports is 0.91.

[2] Samsung, Micron, and SK Hynix account for nearly 60 percent of global NAND flash products and about 95 percent of global DRAM products (see AMRO, 2020).

[3] Data are as of September/October 2019.

Box 1.10:

US–China Trade Scenarios and Their Impact on Regional Growth

The Phase One trade agreement between the United States and China, signed on January 15, 2020, has lowered tensions considerably, although the complex trade dynamics between the world's two largest economies remain a key risk to the global economy. Upside and downside scenarios around the US-China trade relationship are simulated to estimate their potential impact on AMRO's baseline projections for 2020 and 2021 (Table 1.10.1), which already incorporate the COVID-19 impact:[1, 2]

- The upside scenario has both countries expediting trade negotiations, including on rolling back earlier tariffs, prompting an increase in business and consumer confidence amid greater clarity on the global economic outlook.

- The downside scenario contemplates a re-escalation in US-China trade tensions, with the United States imposing tariffs on the December 2019 tranche and provoking retaliation from China. The tariff increases disrupt financial markets and global trade, while dampening domestic demand via a decline in business and consumer confidence.

The two risk scenarios would affect aggregate ASEAN+3 and ASEAN growth almost symmetrically. Under the downside risk scenario, aggregate ASEAN+3 growth in 2020 would be lower than ASEAN's mainly because it starts from a much lower baseline (Figure 1.10.1), with a slightly larger impact of 0.1 percentage point (Figure 1.10.2). The upside scenario impact would be roughly similar for both the ASEAN+3 and ASEAN economies:

- Hence, ASEAN+3 growth could fall within the 4.1–4.3 percent range in 2020, and 4.4–5.5 percent in 2021, depending on which scenario plays out. In other words, realization of the upside scenario

Table 1.10.1. AMRO's US-China Trade Scenarios and Underlying Assumptions

Scenario	Assumptions
Baseline	• Tariff tranches from 2018 up to September 2019 remain in effect, with limited tariff exclusions. • Tariff hikes for the December 2019 tranche are suspended. • Phase One trade deal is in effect (from February 14, 2020, as announced). • Ongoing COVID-19 pandemic severely dampens regional growth via a decline in goods and services trade.
Upside risk	• Phase Two negotiations commence and include the potential rollback of earlier tariffs. • Although there is no explicit guidance on possible rollbacks, business confidence over the progress in the US-China trade negotiations rises. A modest +1.0 percentage point shock to world confidence is assumed to reflect cautious optimism.
Downside risk	• Trade tensions re-escalate for various reasons, for example, difficulties with the implementation aspects of the Phase One agreement; impasse over aspects of a Phase Two deal after negotiations commence. • The United States imposes tariffs on the December 2019 tranche (15 percent on USD 160 billion of Chinese exports to the United States) and China retaliates. • Global confidence declines amid heightened global uncertainty (which is modeled through a 1 percentage point decline in "confidence" in 2020, in line with a 4 percent decline in US and China equity prices as recorded in recent trade escalation episodes, *the impact of which will be felt more in 2021.*

Source: AMRO staff estimates.
Note: We assume no domestic policy responses over the simulation horizon to estimate the full impact from the two scenarios.

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[1] Simulations are run using the Oxford Economics' Global Economic Model (GEM), which covers 80 economies in detail and six regional blocks (including emerging markets and Asia-Pacific) interlinked through trade, prices, exchange rates, and interest rates. Essentially an error-correction model, the GEM estimates how quickly a dependent variable returns to its equilibrium state after a shock to its independent variables. Hence the model approximates both the short- and long-term effects of variables. In the short term, the model exhibits 'Keynesian' features: sticky factor prices and aggregate demand-determined output. In the long term, prices adjust fully and the equilibrium is determined by supply factors such as productivity, labor and capital; rising growth, by boosting demand, will lead to higher prices. For this exercise, only the short-term estimates are produced and discussed. The extended model covers all ASEAN+3 economies; the underlying dataset is updated every month.

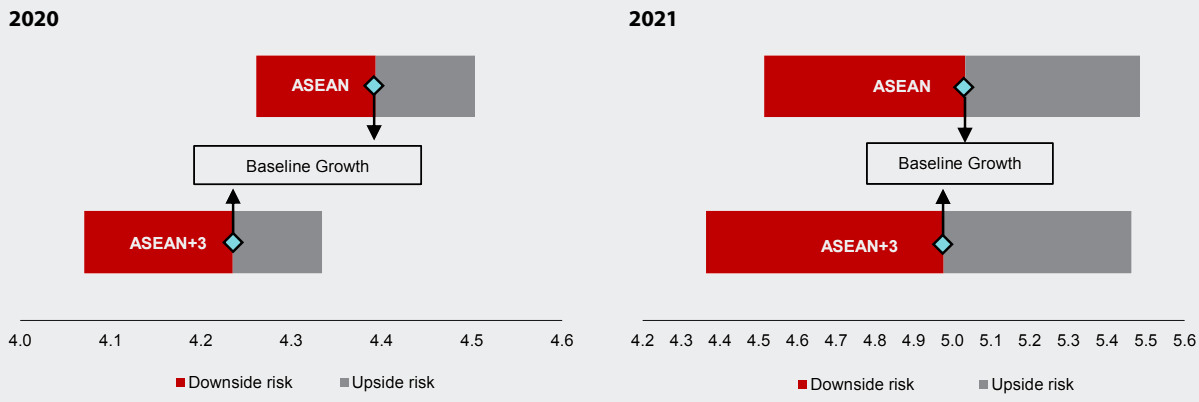
[2] A weakness of the model is that it does not capture trade and investment diversion trends that have been observed in some Asian economies as the US-China trade tensions escalated.

could add 0.1 percentage point to AMRO's baseline regional growth projections for 2020, and 0.5 percentage point for 2021. On the other hand, realization of the downside scenario could reduce AMRO's ASEAN+3 baseline growth by 0.2 and 0.6 percentage point in 2020 and 2021, respectively.

- Separately, ASEAN's growth would range between 4.3–4.5 percent in 2020, and 4.5–5.5 in 2021. The upside could translate to 0.1 and 0.5 percentage point increases in AMRO's baseline projections for 2020 and 2021, respectively; while the downside could mean 0.1 and 0.5 percentage point reductions for the same periods, respectively.

The results suggest that the outlook for risks to AMRO's baseline is slightly tilted to the downside, while the wide dispersion around the 2021 outlook point to greater uncertainty ahead. Export-oriented economies such as Singapore, Korea, and Hong Kong would be most exposed either way. Economies that are more domestic demand-driven like the Philippines, or that are less integrated in global supply chains, such as Lao PDR and Myanmar, would be less susceptible. Separately, Cambodia and Vietnam, which have been benefiting from trade diversion, would likely gain US market share to offset the slowdown in trade within the region.

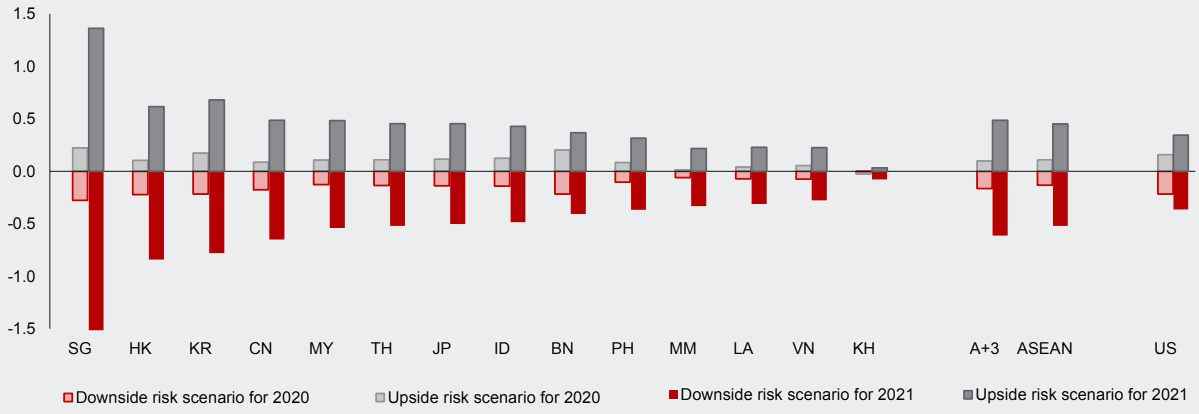
Figure 1.10.1. AMRO's US-China Trade Scenarios: Impact on GDP Growth by Region
(Percent year-over-year)



Sources: Oxford Global Economic Model; and AMRO staff estimates.
Note: ASEAN = Association of Southeast Asian Nations; ASEAN+3 = ASEAN; China (including Hong Kong); Japan; and Korea.

Sources: Oxford Global Economic Model; and AMRO staff estimates.
Note: ASEAN = Association of Southeast Asian Nations; ASEAN+3 = ASEAN; China (including Hong Kong); Japan; and Korea.

Figure 1.10.2. AMRO's US-China Trade Scenarios: Impact on GDP Growth by Economy
(Percentage points from baseline)



Sources: Oxford Global Economic Model; and AMRO staff estimates
Note: First bar for each economy refers to impact on 2020, second bar refers to 2021. A+3 = ASEAN+3; ASEAN = Association of Southeast Asian Nations; BN = Brunei; CN = People's Republic of China; HK = Hong Kong; JP = Japan; ID = Indonesia; KH = Cambodia; KR = Korea; LA = Lao People's Democratic Republic; MM = Myanmar; MY = Malaysia; PH = the Philippines; SG = Singapore; TH = Thailand; VN = Vietnam; US = United States.

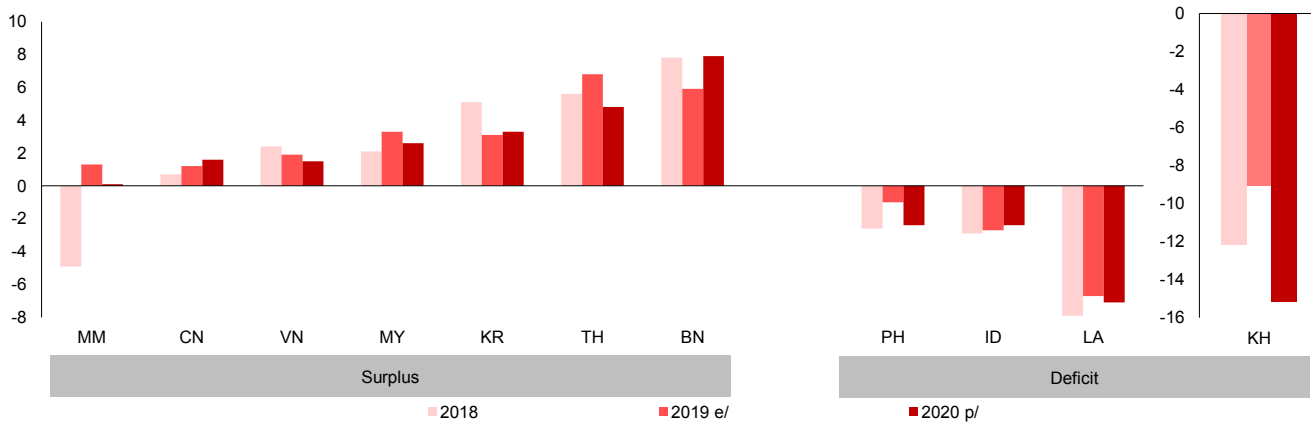
This box was prepared by Edmond Chiang Yong Choo, Diana del Rosario, and Anne Oeking.

V. Policy Positions and Prescriptions

Regional growth was relatively robust in 2019 despite having been battered by strong external headwinds from the US-China trade conflict. The resilience of the ASEAN+3 economies is attributable to their strong economic fundamentals, sound financial systems, and disciplined macroeconomic frameworks. In particular, the external positions are strong as most economies have been running current account surpluses or only small deficits (Figure 1.38). Fiscal policies are generally conservative as reflected in narrow fiscal deficits (Figure 1.39), and low to moderate government debt levels. The monetary authorities tend to be disciplined with several adhering to an inflation targeting framework; as a result, inflation in the regional economies is relatively low and inflation expectations remain well-anchored (Figure 1.40).

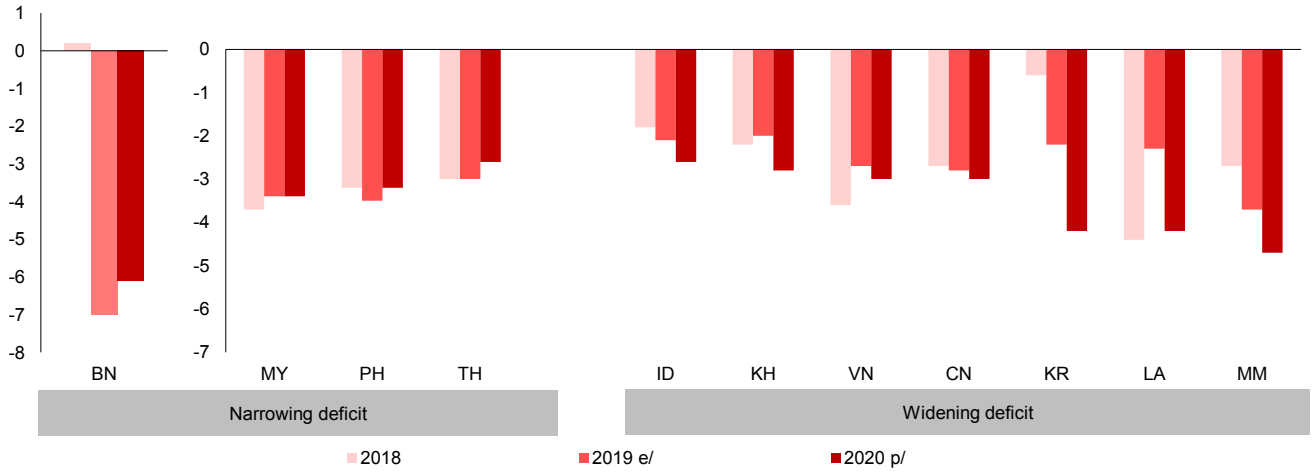
Skillful use of the various policy levers by regional policymakers to ensure that the policy mix is effective will be more important than ever in 2020. As demonstrated by the ASEAN-4 countries, appropriate and timely combinations of policy responses were instrumental in helping those economies weather the market turbulence in 2018 (Box 1.11). Encouragingly, the ASEAN+3 countries still have some room to adopt more accommodative monetary and fiscal policies, while at the same time, maintain tight macroprudential policies to safeguard financial stability. Importantly, the region's economies also have substantial reserves and exchange rate flexibility as buffers against the shocks that are materializing.

Figure 1.38. ASEAN+3: Current Account Balance
(Percent of GDP)



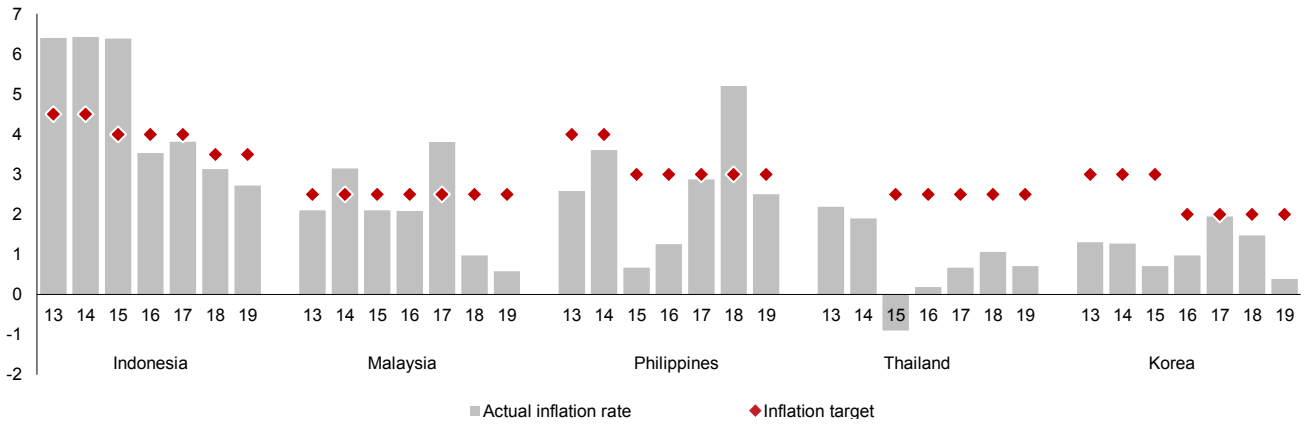
Sources: National authorities; and AMRO staff estimates and projections.
Note: e/ refers to AMRO staff estimates, p/ refers to AMRO staff projections; BN = Brunei; CN = People's Republic of China; ID = Indonesia; KH = Cambodia; KR = Korea; LA = Lao People's Democratic Republic; MM = Myanmar; MY = Malaysia; PH = the Philippines; TH = Thailand; VN = Vietnam.

Figure 1.39. ASEAN+3: Fiscal Balance
(Percent of GDP)



Sources: National authorities; and AMRO staff estimates and projections.
Note: e/ refers to AMRO staff estimates, p/ refers to AMRO staff projections; BN = Brunei; CN = People's Republic of China; ID = Indonesia; KH = Cambodia; KR = Korea; LA = Lao People's Democratic Republic; MM = Myanmar; MY = Malaysia; PH = the Philippines; TH = Thailand; VN = Vietnam.

Figure 1.40. ASEAN-4 and Korea: Actual Inflation vs Inflation Target
(Percent year-over-year, annual average)

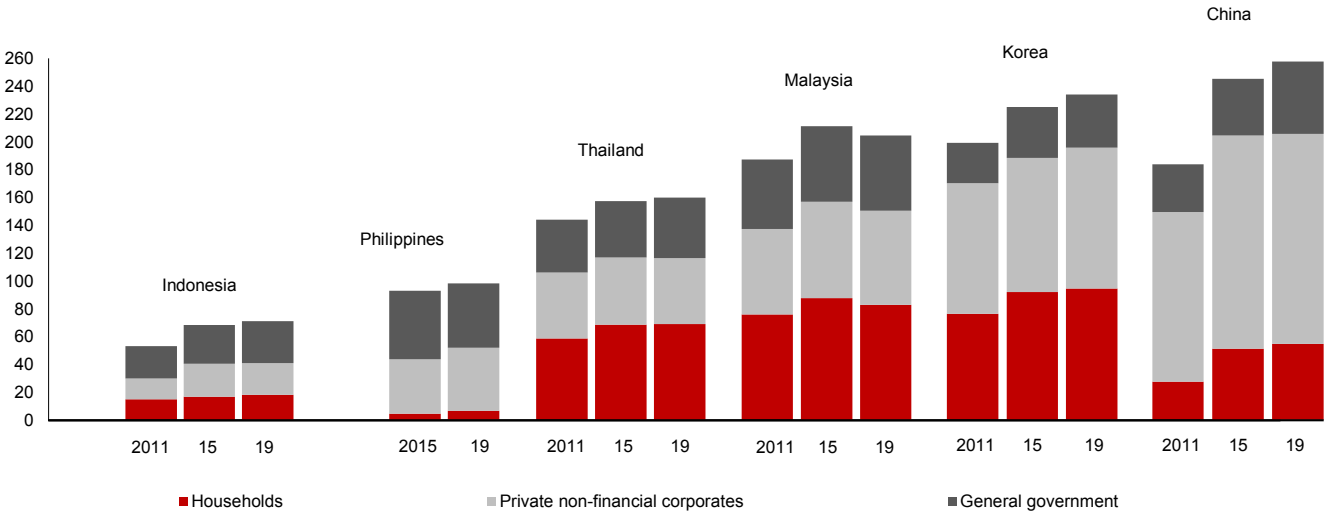


Sources: National authorities; and AMRO staff estimates.
Note: Malaysia is not officially an inflation targeting economy; the long-term average is used in this instance.

The sustainability of debt will be an important consideration in formulating fiscal, monetary and macroprudential policies. Among the region's EMs and Korea, total debt remains high as a proportion of GDP, except for Indonesia and the Philippines, but its growth appears to have moderated (Figure 1.41). The expansion of aggregate debt levels slowed across most countries between 2015 and 2019, compared to the big jumps between 2011 and 2015. Private sector debt has dwarfed government debt in the majority of countries, split almost equally between household and non-financial corporates in Korea, Malaysia, and Thailand, and dominated by the corporate sector in China and the Philippines.

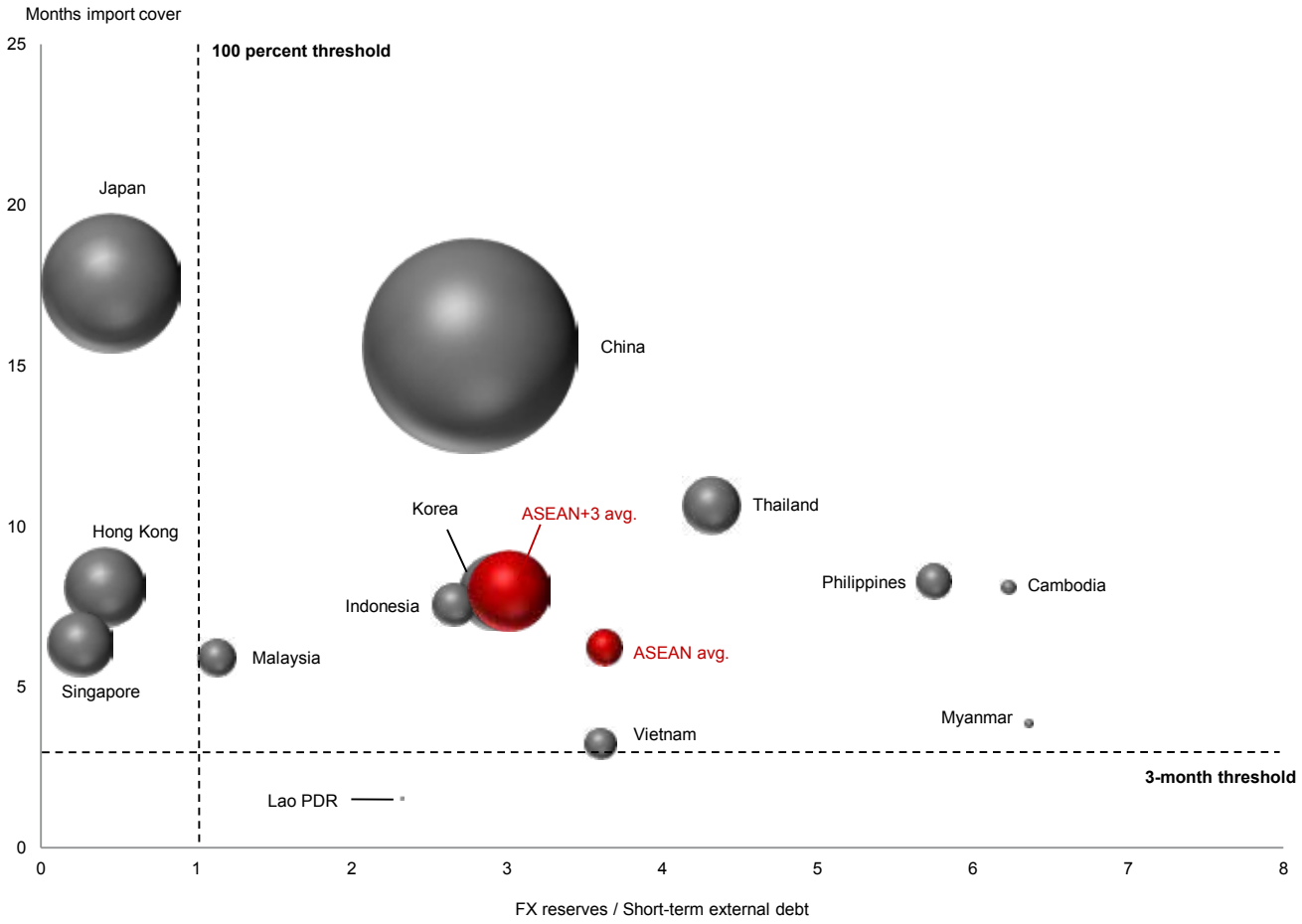
The foreign exchange reserves of the ASEAN+3 region economies—which, in aggregate, account for about half of the world's international reserves—either increased or remained stable in 2019. Notwithstanding the strong headwinds to the external sector this past year, reserve adequacy ratios in many countries still comfortably exceed the rules of thumb, in terms of imports (3 months) and short-term debt (100 percent coverage) (Figure 1.42), as well as their respective IMF Reserve Adequacy Metrics (Figure 1.43). The two largest pools of reserves in the world, China and Japan, rose further, to USD 3.2 trillion and USD 1.3 trillion, respectively. The reserves-to-short-term debt ratios of Japan, Hong Kong, and Singapore are all below 100 percent because these three economies are financial centers with global banks that have large short-term foreign liabilities on their balance sheets (which are included in the denominator as part of their short-term debt). Lao PDR is the only country with a reserve adequacy ratio below 3 months of gross imports but the ratio rises above 3 months if one were to use gross imports net of FDI imports.

Figure 1.41. Regional Emerging Markets and Korea: Household, Non-Financial Corporate, and Government Debt
(Percent of GDP)



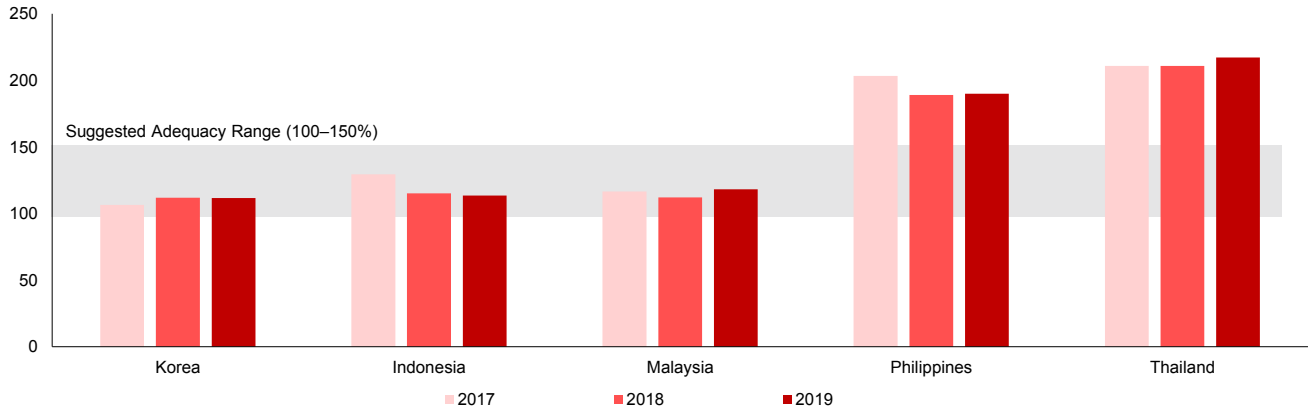
Sources: Haver Analytics; national authorities; and AMRO staff calculations.
Note: 2019 data refer to Q3 2019.

Figure 1.42. ASEAN+3: Adequacy of Foreign Exchange Reserves



Sources: International Monetary Fund; national authorities; and AMRO staff calculations.
Note: Based on latest available data. Import coverage includes imports of goods and services. Size of bubble denotes the relative amount of international reserves in US dollars. avg = average; FX = foreign exchange; Lao PDR = Lao People's Democratic Republic.

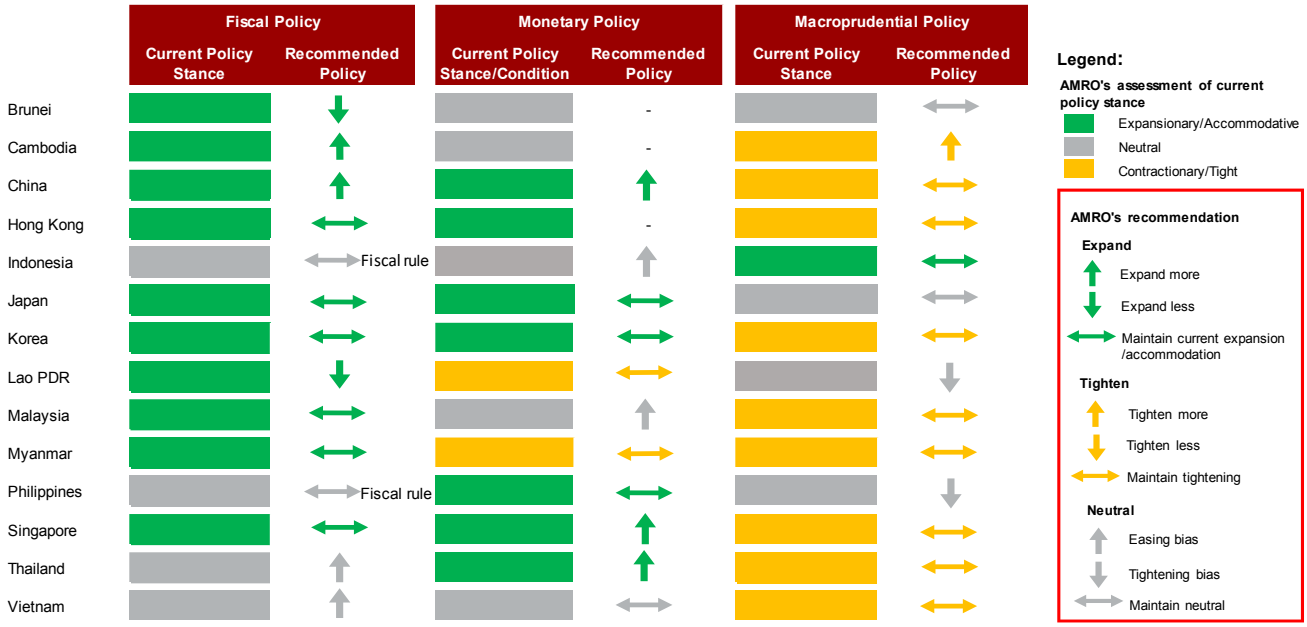
Figure 1.43. ASEAN-4 and Korea: Reserves over Reserve Adequacy Metric
(Percent)



Sources: International Monetary Fund; and national authorities.
Note: The IMF ARA Emerging Market metric comprises four indicators which could be potential risks to the balance of payments: (1) export income, (2) broad money (3) short-term debt, and (4) other liabilities to reflect other portfolio investment outflows. Each component is risk-weighted based on the 10th percentile of observed capital outflows from EMs during exchange market pressure periods. ARA = assessing reserve adequacy.

The policy stance of regional economies is assessed to be largely unchanged from a year ago. Fiscal policy remains largely expansionary or neutral; monetary policy is either neutral or accommodative across most countries; and the majority have opted to maintain a tight macroprudential policy stance to safeguard financial stability amid easier financial conditions (Figure 1.44). With a few exceptions on the macroprudential side, AMRO is generally of the view that countries should either maintain their existing stance or adopt an easing bias, particularly in light of the COVID-19 pandemic, which has significantly weakened the regional outlook.

Figure 1.44. ASEAN+3 Policy Matrix: AMRO Staff Assessment of Current Policy Stance and Recommendations



Source: AMRO staff estimates.

Fiscal Policy

Public finances in the ASEAN+3 region are generally sound, allowing some leeway for fiscal policy. The national debt-to-GDP levels are still moderate by international standards, although the general government debt-to-GDP ratios for most regional economies have risen over the past several years. In China, central government debt is low and stable by international standards, at below 20 percent of GDP, while local government debt is just above 20 percent of GDP, excluding the debt of the local government financing vehicles. Government debt levels in Indonesia, the Philippines, and Thailand are about 40 percent of GDP or lower—and in Thailand's case, the amount is well below its self-imposed threshold of 60 percent—while Indonesia's general government (and non-financial corporate, including SOE) debt has increased in recent years to finance much-needed infrastructure projects. Malaysia's government debt-to-GDP ratio is 53 percent, higher than regional peers but below the self-imposed ceiling of 55 percent, and the government has committed to reduce the level over the medium term.

Fiscal policy will play an important role this year, to help support economies that are most affected by the fallout from the spread of the COVID-19. Nearly all economies have adopted or maintained an expansionary or neutral fiscal policy stance, although some may have to do more to support growth, especially China, Hong Kong, and Thailand:

- China has been among the most proactive in pulling the fiscal policy lever in recent years. It had appropriately adopted an expansionary fiscal policy stance to support the economy through the external pressures from the US-China trade conflict. The government recently introduced additional fiscal measures to support the domestic economy as the coronavirus epidemic had taken a heavy toll on economic activity (Table 1.2). To alleviate the difficulties faced by businesses, the government announced that it would be providing support in the form of sharing some interest payments, funding the cost of storing and distributing strategic (medical) items, as well as providing tax concessions and reducing or exempting fees. While AMRO expects the economy to rebound strongly in H2 2020, additional fiscal stimulus may still be needed.

- Although Japan's fiscal stance has been on a gradual consolidation trend, fiscal policy can play a pivotal role in the short term, in maintaining growth momentum amid the consumption tax hike and the COVID-19 pandemic. Beyond 2020, the government needs to continue its consolidation efforts to achieve its own target primary balance by fiscal year 2025. The Korean economy was severely affected by the US-China trade conflict and growth slowed sharply in 2019; economic activity has also been severely affected by the virus outbreak in Q1 2020. The government has responded by adopting an expansionary fiscal policy position to support growth and economic restructuring.

- Hong Kong has also taken an expansionary fiscal policy stance to shore up growth and the job market, following nearly a year of social unrest, and the authorities stand ready to do even more. With the spread of the coronavirus to Hong Kong, the government announced a strong package of measures to support workers and businesses, and to boost the economy. Singapore was also badly hit by spillovers from the US-China trade conflict and growth plunged to 0.7 percent in 2019. The government deployed targeted and

temporary stimulus measures in its 2020 budget to support the economy from the effects of the epidemic. Brunei's economy is just recovering from a severe downturn following the collapse in oil prices in 2016; its fiscal policy stance has been expansionary, but with an appropriate policy bias toward consolidation over time as the economy recovers.

- Indonesia and the Philippines have been less affected by the US-China trade tensions, and have both assumed a neutral fiscal policy stance. Indonesia's economy has been resilient to shocks and growth has been stable at about 5 percent. Fiscal policy is directed at supporting infrastructure investment but the budget deficit is constrained by the 3 percent ceiling under the fiscal rule. Within this constraint, fiscal packages were announced in early-2020 to provide support to sectors/industries affected by the coronavirus. Economic growth in the Philippines declined in 2019, relative to 2018, because of a prolonged delay in passing the budget and the ban on public works spending during the election. Consequently, the government has been ramping up fiscal spending to boost growth to its potential rate.

- Like many other countries in the region, Thailand's economy was badly affected by the US-China trade conflict and, like the Philippines, by a delay in passing the budget. The government enacted fiscal measures in late 2019 to support the economy, but the overall fiscal stance is neutral and could be more expansionary. The COVID-19 pandemic is having a major impact on the Thai economy because of its large tourism industry. While the authorities' fiscal stimulus plan is an appropriate step, they should adopt more expansionary fiscal policy, given the expected economic slowdown. Similarly, Malaysia's fiscal stance has turned moderately expansionary following the introduction of a stimulus package to deal with the impact of the disease. The government is trying to strike the right balance between containing the fiscal deficit and supporting the economy against increased external headwinds, and has committed to expedite the implementation of development projects.

- Unlike many of the ASEAN+3 economies, CLMV gained from trade and investment diversion as a result of the US-China trade tensions. However, they too are being negatively affected by the pandemic, and fiscal policy—where space is available—should focus on specific priorities:

  – Cambodia's fiscal policy stance is expansionary but it should prioritize resources toward supporting structural reforms, and continue efforts to improve public sector efficiency and revenue collection. Myanmar's fiscal policy is also appropriately expansionary, targeting both capital expenditure and social spending.

  – Vietnam's economy grew strongly last year, in part benefiting from diversion of China's exports. Its fiscal policy stance is neutral and in line with its medium-term consolidation efforts.

  – The economy of Lao PDR was negatively impacted by natural disasters in 2019 and growth fell to 6.0 percent. Amid a stagnant growth outlook for 2020, it has adopted an expansionary policy stance. However, the authorities need to remain committed to the fiscal consolidation plan, considering the tight fiscal space and high repayment burden.

Table 1.2. The COVID-19 Epidemic in China: Macro-financial Policies to Support the Economy, as of February 7, 2020

Sector	Policy	Implementation
The epidemic is assessed to be temporary; China's economy resilient and with room to maneuver.		
Authorities have imposed a lockdown on Wuhan, the epicenter of the disease, and quarantine in other major cities, and extended the Lunar New Year holidays by several days.		
Fiscal	The fiscal balance for 2020 has already taken into account some uncertain factors, such that the expenditure for epidemic prevention and control is guaranteed, and the impact on the fiscal budget is expected to be relatively limited.	The central government will help businesses through a package of policies, such as sharing of some interest payments, funding the cost of storing and distributing strategic (medical) items, tax concessions, and reduced or exempted fees.
		The tax authorities shall ensure strict policy implementation of these tax concessions and fees cuts.
Monetary and financial	The PBC will balance using monetary policy to support growth and keeping the leverage level stable. In the entire financial system, the proportion of NPLs, attributable to SMEs, is relatively small, and banks are expected to have sufficient resources to cope with an increase in NPLs.	The PBC injected liquidity through open market operations to ensure adequate liquidity in the banking system, and signalled the strengthening of countercyclical adjustments, and thus stabilize market expectations.
		Many small and micro enterprises have experienced temporary difficulties as a result of the epidemic, The CBIRC will work with banks to help increase financing and reduce financing costs for SMEs.
		There is the possibility of postponing the implementation of the new rules on asset management. The PBC and CBIRC are conducting technical assessments.
		The PBC has released CNY 300 billion in special central bank lending to back financial institutions in providing credit support at preferential interest rates for key businesses engaged in the production, transportation or sale of vital medical supplies and daily necessities.

Sources: People's Bank of China; and AMRO staff estimates.
Note: CBIRC = China Banking and Insurance Regulatory Commission; CNY = Chinese renminbi; NPL = non-performing loans; PBC = People's Bank of China; SME = small- and medium-sized enterprises.

Monetary Policy

Easier global financial conditions have provided welcome relief for the region. With global financial conditions easing and inflation expectations largely well-anchored, central banks have been able to maintain or ease monetary policy to support growth and cushion the effects of the COVID-19 pandemic. More specifically:

- In China, the Loan Prime Rate published by the National Interbank Funding Center, under the authorization of the People's Bank of China (PBC), decreased by 10 basis points from August 2019 to January 2020. The central bank also reduced its reserve requirement ratio (RRR) by a cumulative 100 basis points during this period. The aim was to support the financial deleveraging efforts by regulators and mitigate the effects of the US-China trade conflict on the economy by ensuring that banks have sufficient liquidity to lend to the corporates, especially the small- and medium-sized enterprises. The PBC has since taken steps to inject liquidity into the banking system via open market operations, and released CNY 300 billion in special central bank lending to back financial institutions in providing financial assistance to key businesses. It still has some monetary policy space if needed.

- In Japan, the current easy monetary policy stance should continue, to support growth and counter disinflationary pressures, and the BOJ should stand ready to ease further if necessary.

- The Bank of Korea (BOK) cut its policy rate by 50 basis points in 2019 to counter the sharp slowdown in the economy and the low inflation. In March 2020, the BOK cut the base rate by an additional 50 basis points and lowered the interest rate on the Bank Intermediated Lending Support Facility, also by 50 basis points, at its Emergency Policy Review Meeting. The aim was to reduce the volatility in Korea's financial markets and to mitigate the adverse impact of the COVID-19 pandemic on growth and inflation. It has maintained its accommodative stance and should consider easing further if growth weakens markedly and disinflation persists as a result of the pandemic. The output gap remains negative and inflation is well below target, thus providing room for further rate cuts if necessary.

- The Monetary Authority of Singapore (MAS) eased its monetary policy stance slightly in October 2019 to help cushion the economy from the impact of the US-China trade conflict. In anticipation of the likely hit from the COVID-19 outbreak, the MAS signaled to the markets that there was scope for the exchange rate to ease, which caused the exchange rate to depreciate, thereby easing monetary conditions. It should be prepared to ease further if growth slows significantly and inflation remains low.

- Among the BCLMV group, monetary conditions are either neutral or contractionary. Monetary conditions in Brunei and Cambodia are assessed to be neutral. The State Bank of Vietnam cut its policy rate by 25 basis points in September 2019, in line with easing global financial conditions, although the policy stance remains neutral. The economy is likely to be affected by the spread of the coronavirus, in part through damage to its tourism industry, and may require some support from monetary policy; for now it is particularly important for Vietnam to ensure prudence in banks' lending activity to avert any potential build-up of risks in the banking system. Myanmar has appropriately kept monetary policy relatively tight in an effort to phase out fiscal monetarization, while credit growth has moderated in tandem with the enforcement of a stricter banking regulatory regime. Lao PDR moved to a contractionary stance in 2019, which was, and remains, appropriate as the exchange rate has come under pressure and inflation is tracking upward.

For some of the EMEs, the monetary policy stance is reflected to a great extent in the divergence between their current policy rates and those implied by their respective Taylor Rule estimates (Figure 1.45):

- Bank Indonesia cut its policy rate by 25 basis points in February 2020, following four rate cuts for a total of 100 basis points in 2019—against the backdrop of easier global financial conditions—in line with maintaining inflation within the target corridor and supporting the economic growth momentum. It also lowered the RRR for Conventional Commercial Banks and Islamic Banks/Islamic Business Units twice in 2019, by a total of 100 basis points, to ensure adequate liquidity in the banking system. As suggested by AMRO's estimated Taylor Rule level, there may be room for further accommodation if imminent downside risks were to intensify, as long as inflation remains under control and financial stability is maintained.

- Bank Negara Malaysia has taken pre-emptive measures to support the economy by cutting the policy rate by a total of 75 basis points between May 2019 and March 2020, and lowering the statutory RRR by 50 basis points in November 2019. While the current policy rate is fairly in line with the Taylor Rule implied rate, the central bank has space to ease policy further in the event of a sharp growth slowdown, complementing the government's fiscal policy initiatives to deal with the COVID-19 pandemic, stimulate growth, and encourage domestic investment.

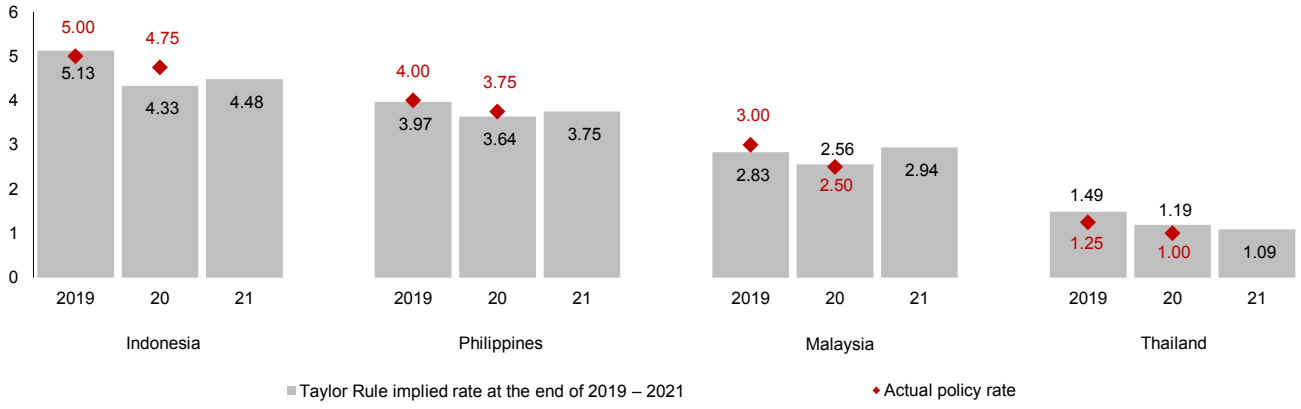
- The Bangko Sentral ng Pilipinas made concerted cuts to its policy rate following the sharp decline in inflation to below the target range, and to provide support to the economy. The policy rate was reduced by a cumulative 75 basis points in 2019 and the RRR by 400 basis points to increase liquidity and reduce the funding cost of banks. More recently, the Philippine central bank cut its policy rate by another 25 basis points and shifted to an easing bias—which it should maintain—as a pre-emptive move to provide support amid the effects of the Taal volcano eruption and Typhoon Tisoy, as well as the trade and economic uncertainties in the global economy. The current policy rate is approximately neutral, and AMRO forecasts that inflation—which has slowed sharply to an annual average of 2.5 percent—will remain within the target 2–4 percent range in 2020.

- The Bank of Thailand (BOT) cut the policy rate by 25 basis points each in August and November 2019 amid low inflation and weak growth prospects. The BOT reduced its policy rate by another 25 basis points in February 2020, to cushion the economy from the effects of the COVID-19 epidemic (especially from the expected hit to the tourism sector) and the budget delay; AMRO forecasts that inflation will come in below the new inflation target band. In view of the weakening economy, the BOT should maintain an easing bias and be ready to ease further if needed.

Markets have priced in a dovish shift in monetary policy in some of the ASEAN+3 economies. Interest rate swaps, which provide a good indication of market perceptions of the future path of interest rates, show that policy-easing expectations had increased in Korea, Malaysia, and Thailand over the past three months (Box 1.12). The swap market pricing for monetary policy action in Korea has been realized (50 basis point rate cut on March 16, 2020). Meanwhile, the market is pricing a larger than 40 basis point cut for Malaysia (in addition to the actual 50 basis point reduction in the year to date), and a 48 percent probability of another 25 basis point cut by Thailand (even after the 25 basis point cut in February). In other words, market expectations are lower than AMRO's Taylor Rule estimates for Malaysia and Thailand.

However, a prolonged period of low interest rates can result in a build-up in financial imbalances, especially in countries where the stock of private sector debt is already high. Moreover, as discussed in Section III, they also weaken the profitability of banks and result in asset-liability mismatches on the balance sheets of insurance firms. The risk of fast-rising credit could be mitigated to some extent by the judicious use of macroprudential policies.

Figure 1.45. ASEAN-4: Current Policy Rates and Taylor Rule Estimates
(Percent year-over-year)



Sources: National authorities; and AMRO staff estimates and projections.
Notes: End-2019–21 Taylor Rule implied rates are computed based on AMRO's GDP and inflation projections. The 2019 actual policy rate refers to the latest policy rate announced in 2019: Indonesia (December 19, 2019), Malaysia (November 5, 2019), the Philippines (October 16, 2019), and Thailand (November 6, 2019). The 2020 actual policy rate refers to the latest policy rate announced in early 2020: Indonesia (February 20, 2020), the Philippines (February 6, 2020), Thailand (February 5, 2020), and Malaysia (March 3, 2020).

Macroprudential Policy

In general, countries should ensure that any build-up in financial imbalances amid the current low interest rate environment is contained, while not dampening economic growth in the face of strong domestic and external pressures. Policymakers have generally maintained tight macroprudential policies across the region in the past year (see Figure 1.44). Indeed, the relatively flat growth in overall household debt relative to GDP has been attributable, in part, to the effectiveness of macroprudential measures (see Figure 1.41):

- Indonesia has adopted an accommodative macroprudential policy stance, with the rest of the economies in the region either keeping to their tight or neutral positions. With low property valuations, a financial cycle in the recovery phase, and an economy in mid-cycle, the Indonesian authorities should maintain their current policies. Korea and Thailand should continue with their tight—and Malaysia with its tightened—macroprudential policy stance, given their large household debt stocks, and especially for Korea, where house prices in specific prime areas are continuing to surge. Similarly, China has appropriately maintained its tight stance, which is being offset somewhat by lower interest rates, given that hukou reform will likely lift the property market in some key tier-2 cities and the neighboring ones. The Philippines has taken a neutral stance, and should tighten policy if needed.

- The BCLMV group should either maintain or move to a tighter stance. Brunei's macroprudential policy stance has appropriately shifted from being accommodative to neutral this past year with credit growth recovering. Lao PDR is encouraged to increase its foreign exchange reserve requirements to build a larger buffer for banks against any tightness in foreign exchange liquidity; Cambodia should tighten prudential policy, while introducing measures to help contain banks' credit risks in the real estate sector, and continue to upgrade the regulatory framework. Vietnam has made efforts to rein in credit growth to non-productive sectors and gradually reduce the asset-liability maturity mismatch on banks' balance sheets.

Box 1.11:

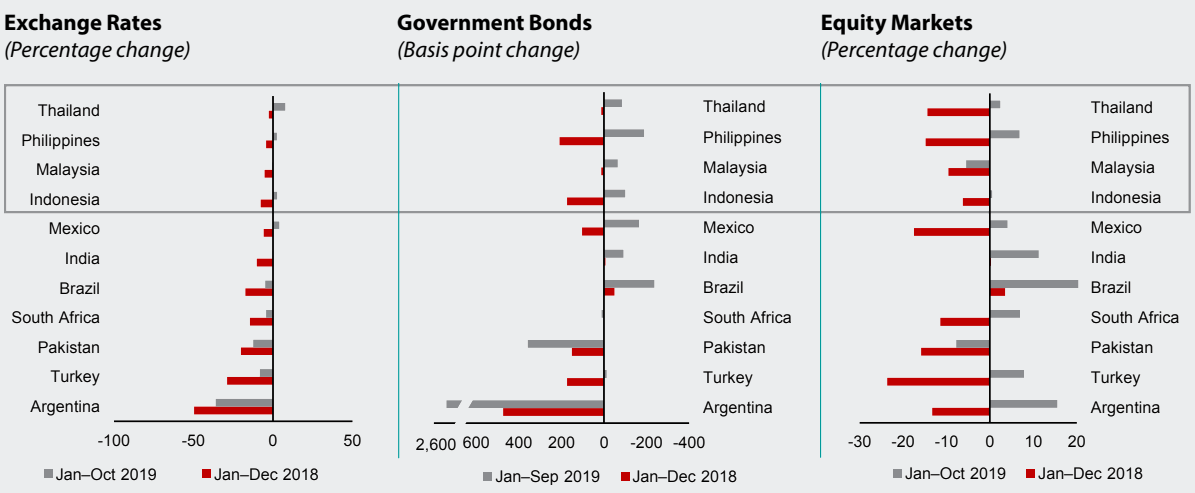
How the ASEAN–4 Weathered the Emerging Market Turbulence in 2018

Financial markets in emerging market (EM) economies, including the ASEAN-4, experienced turbulence through much of 2018 as a result of tighter global financial conditions and rising risk aversion among global investors. In particular, the US dollar strengthened and US Treasury yields increased on aggressive US Federal Reserve (US Fed) rate hikes, while rising uncertainties over the US-China trade tensions led to heightened risk aversion among global investors. Against this backdrop, investors rebalanced their holdings in EM assets, including the ASEAN-4. As a result, EM currencies depreciated, bond yields went up, and equity market returns were compressed in 2018 (Figure 1.11.1).

Regional EMs were supported by timely policy responses, which helped them to weather the downturn in the global financial cycle and remain resilient against external shocks. In particular, the Philippines and Indonesia raised policy rates pre-emptively and concertedly, by a total of 175 basis points each, in 2018, to address rising inflation (in the Philippines) and to stem capital outflows (in Indonesia) (Table 1.11.1). In other regional EMs, policymakers either paused interest rate cuts (in Malaysia) or implemented one rate hike (in Thailand). Regional authorities also calibrated their policy mixes by:

- lowering the reserve requirement ratio (the Philippines),[1] and relaxing macroprudential measures (Indonesia)—to mitigate the impact of rate hikes on bank liquidity;
- maintaining flexible exchange rate, while conducting intermittent interventions to smooth volatility;
- stepping up the development of a hedging market to provide investors with more options to hedge against exchange rate volatility, with the introduction

Figure 1.11.1. Selected Emerging Markets: Financial Market Developments, 2018–19



Sources: Haver Analytics; and AMRO staff calculations.
Note: Negative values for nominal exchange rate changes indicate currency depreciation. The axis for government bond yields is reversed, with yield rises on the left-hand side, to denote a decline in the value of bonds, consistent with the depreciation in exchange rates and fall in stock prices. bps = basis points.

Table 1.11.1: Selected Emerging Markets: Policy Responses in 2018

Policy Response	AG	IN	MX	ZA	TR	ID	MY	PH	TH
Number of rate hikes	5	2	4	1	2	6	0	5	1
Total size of rate hikes (bps)	4,080	50	100	25	1,600	175	0	175	25

Sources: Haver Analytics; and AMRO calculations.
Note: bps = basis points; EM = emerging market; AG = Argentina; IN = India; ID = Indonesia; MX = Mexico; MY = Malaysia; PH = the Philippines; ZA = South Africa; TH = Thailand; TR = Turkey.

[1] The Bangko Sentral ng Pilipinas also cut rates by 75 basis points in 2019, not only to mitigate the impact on liquidity from the rate hike in 2018 but also from capital outflows, and the government front-loaded issuance in early 2019.

of a domestic non-deliverable forward instrument (Indonesia).

Capital inflows largely resumed following those prompt policy actions (Figure 1.11.2) and macroeconomic stability was maintained in the region, relative to EMs elsewhere (Table 1.11.1 and Figure 1.11.2).

Notwithstanding the easing in global financial conditions in 2019, fragile investor sentiment posed an important risk to capital flows in the region, given the weaker global growth outlook and US-China trade tensions. The dovish pivot by the US Fed and other advanced-economy central banks supported the recovery in some EM currencies, stabilization in bond yields, and a rebound in equity markets (Figure 1.11.2). Regional policymakers took the opportunity to ease monetary policy in a benign inflationary environment. However, with some regional EMs increasingly reliant on portfolio investment (debt securities) flows since the global financial crisis (GFC), driven in part by increased foreign holding of local currency bonds (Figures 1.11.3 and 1.11.4),[2] any rise in risk aversion toward EMs could yet trigger capital flow reversals. Research shows that as the composition of global liquidity moves away from bank loans toward other sources of financing, such as equity and bonds, post-GFC, sudden shifts in investors' risk attitude could in fact propagate faster than in the past (Habib and Venditti, 2019).

Indeed, there appears to be significant correlation between heightened investor risk aversion and capital outflows from bond markets in Indonesia and Malaysia. These two represent investor bellwethers, with the largest shares of foreign investment in local currency (LCY) denominated government bonds, of about 38 percent and 24 percent of total bonds outstanding, respectively, as of end-2018 (Figure 1.11.5). Consistent with the methodology in Kim, Kim, and Choi (2013) and AMRO (2018c), a generalized methods of moments (GMM) approach incorporating push (external) and pull (domestic) factors, is used to explain the quarterly changes in non-resident holdings of LCY-denominated bonds issued by the governments of Indonesia and Malaysia (Table 1.11.2).[3] Preliminary findings suggest that:

- Among the push factors, global risk aversion, as measured by the VIX, is negatively correlated with non-resident holdings in both Indonesia and Malaysia, while bond yield spreads are positively correlated.

- Among the pull factors, inflation is found to negatively correlate with non-resident bond flows for both economies. Other significant pull factors include real GDP growth for Indonesia, and the current account balance and local currency appreciation for Malaysia.

In addition to the timely and sound mix of macroeconomic policies, the resilience of regional EMs against market shocks also highlights the crucial role of structural reforms in strengthening resilience against external shocks. The implementation of broadly sound policies and reforms post-crisis to strengthen macro-financial fundamentals has been key to anchoring inflation expectations, upholding fiscal prudence, maintaining growth momentum, and safeguarding financial stability. These achievements are all the more stark when juxtaposed against developments in other EMs (Figures 1.11.6 and 1.11.7). Going forward:

- The current account deficits in Indonesia and, to a lesser extent, the Philippines, are likely to persist for the foreseeable future as a result of rising (infrastructure) investment needs to support long-term growth potential. Hence, it is important to accelerate structural reforms to improve the investment climate and attract (more stable) foreign direct investment to finance the current account deficit.

- Further financial deepening to develop domestic financial (capital) markets (as implemented by Malaysia)—particularly applicable to Indonesia and the Philippines, whose markets remain relatively shallow with a modest domestic investor base—with the presence of long-term institutional investors such as pension funds and insurance firms, could offer some protection against global shocks (Figure 1.11.8).

- Although the risk of capital flow reversals has been less acute for Malaysia and Thailand, their comfortable current account surpluses suggest low or insufficient foreign investment, and hence the desirability of increasing investment and enhancing investment efficiency.

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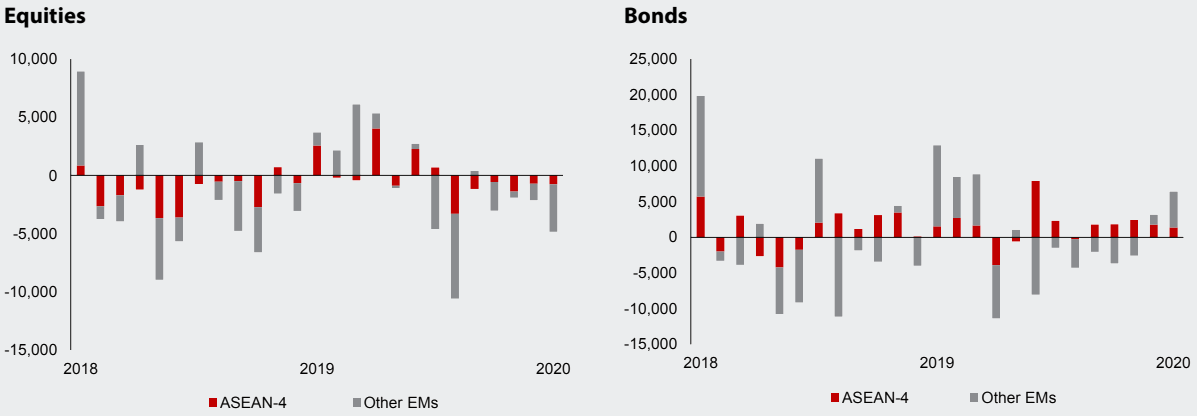
[2] In Thailand's case, part of flows are motivated by safe-haven demand (with expectations of currency appreciation), rather than by funding needs.

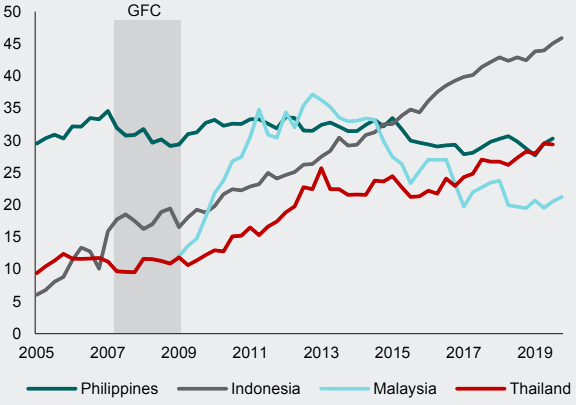
[3] For a review of the existing literature on EM capital flow drivers, see Ahmed and Zlate (2014), Bowman, Londono, and Sapriza (2015), Ahmed Hannan (2017), Avdjiev and others (2017), and Habib and Venditti (2019). The common push factors include global risk aversion, as measured by the CBOE Volatility Index (VIX); and US economic and monetary conditions relative to EMs, as reflected in the differential in growth and interest rates; and the broad dollar index (DXY), which measures the value of the US dollar against a basket of six currencies (the euro, Japanese yen, UK pound sterling, Canadian dollar, Swedish krona, and Swiss franc). Pull factors that attract capital inflows to EMs include inflation; trade openness; the exchange rate regime; capital account openness; institutional quality, as well as financial development.

Figure 1.11.2. Emerging Markets: Net Monthly Non-Resident Portfolio Investment Flows
(Millions of US dollars)



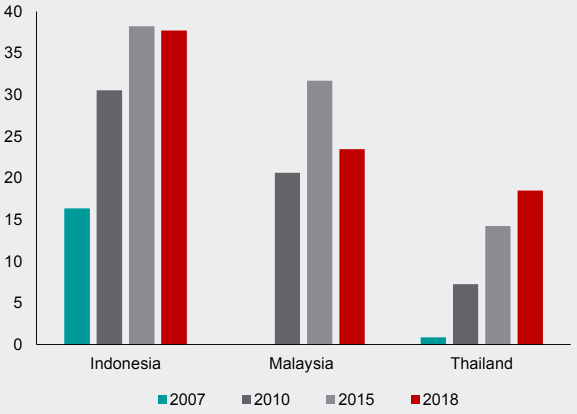
Sources: Institute of International Finance; and AMRO staff calculations.
Note: ASEAN-4 = Indonesia, Malaysia, the Philippines, and Thailand. Other EMs comprise Brazil, India, Mexico, Pakistan, and South Africa; EM = emerging market.

Figure 1.11.3. ASEAN-4: Debt Securities Held by Foreign Bond Investors
(Percentage of gross external debt)



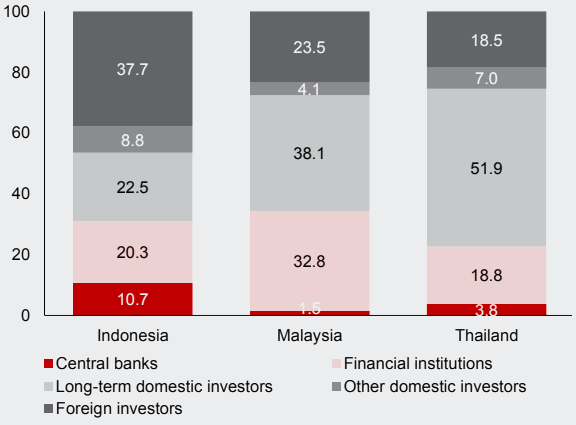
Sources: National authorities; and AMRO staff calculations.
Note: GFC = global financial crisis. Debt securities are denominated in both local and foreign currencies.

Figure 1.11.4. Selected ASEAN Economies: Foreign Holding of Local Currency Government Bonds
(Percentage of total bonds outstanding)



Sources: Asian Development Bank; and AMRO staff calculations.

Figure 1.11.5. Selected ASEAN Economies: Government Bond Profile by Investors, 2018
(Percentage of total bonds outstanding)



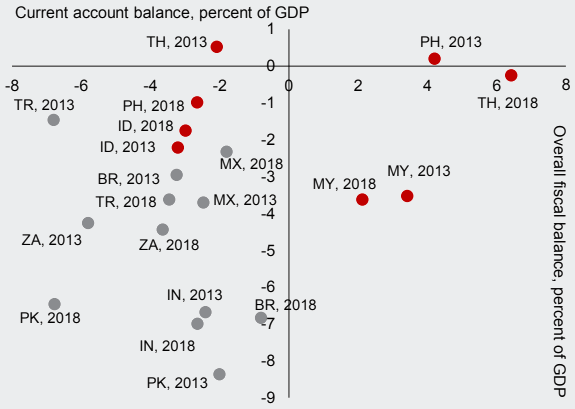
Sources: Asian Development Bank; and national authorities.
Note: Data refer to local currency government bonds only. Long-term domestic investors include insurance firms, social security funds, and/or contractual savings funds, and mutual funds.

Table 1.11.2. Indonesia and Malaysia: Determinants of Non-Resident Holdings of Local Currency Government Bonds

Variable	Indonesia	Malaysia
Sample	**2005:Q3 – 2018:Q4**	**2009:Q2 – 2018:Q4**
Constant	-0.645	0.272
Push factors		
DXY	-0.007	-0.003
Global VIX	-0.931***	-0.633*
World GDP (US)	0.025	n/a
Push/Pull factors		
Bond yield spread over UST	0.094*	0.856***
Pull factors		
Domestic GDP	0.226*	0.004
Inflation	-0.026***	-0.250**
Current account balance	0.004	0.113***
Domestic currency strength	0.015	0.303***
Domestic currency volatility	0.425	n/a
Domestic stock index	0.003	-0.080
Diagnostic check		
Durbin-Watson	1.489	1.668
J-statistic	4.406	3.950
(*p*-value)	0.819	0.786

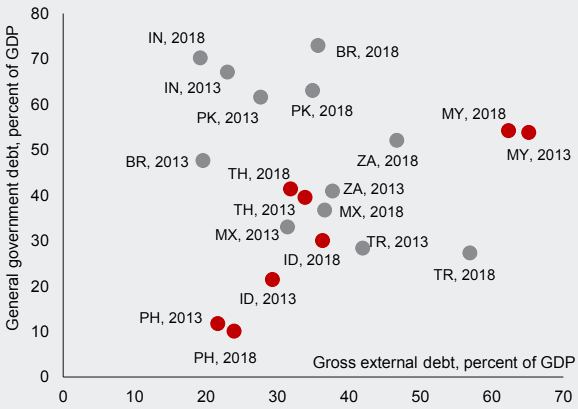
Sources: CEIC Data; national authorities; and AMRO staff estimates.
Note: DXY = US Dollar index; VIX = CBOE Volatility Index; UST = US Treasuries; *, **, and *** indicate significance at 10 percent, 5 percent, and 1 percent levels, respectively.

Figure 1.11.6. Selected Emerging Markets: Current Account and Overall Fiscal Balance, 2013 and 2018



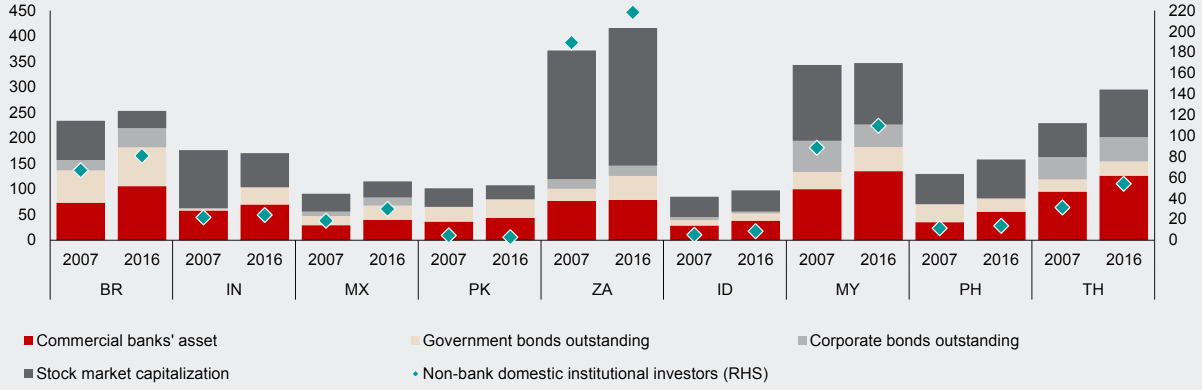
Sources: Haver Analytics; and AMRO staff calculations via ARTEMIS.
Note: BR = Brazil; IN = India; ID = Indonesia; MX = Mexico; MY = Malaysia; PK = Pakistan; PH = the Philippines; ZA = South Africa; TH = Thailand; TR = Turkey.

Figure 1.11.7. Selected Emerging Markets: Public and External Debt, 2013 and 2018



Sources: Haver Analytics; and AMRO staff calculations via ARTEMIS.
Note: BR = Brazil; IN = India; ID = Indonesia; MX = Mexico; MY = Malaysia; PK = Pakistan; PH = the Philippines; ZA = South Africa; TH = Thailand; TR = Turkey.

Figure 1.11.8. Selected Emerging Markets: Financial Sector Depth
(Percent of GDP)



Sources: CEIC Data; national authorities; World Bank Global Financial Development Database; and AMRO staff calculations.
Note: BR = Brazil; IN = India; ID = Indonesia; MX = Mexico; MY = Malaysia; PK = Pakistan; PH = the Philippines; ZA = South Africa; TH = Thailand.

This box was prepared by Thi Kim Cuc Nguyen and Sumio Ishikawa.

Box 1.12:

What Swap Markets are Saying about the Policy Rates of Selected ASEAN+3 Economies

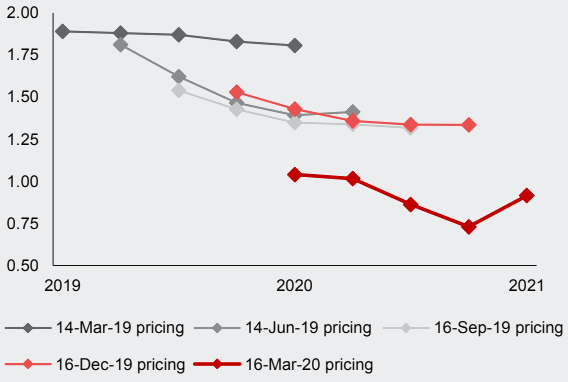
Interest rate swaps (IRS) are a key indicator of market expectations of the future path for rate changes. As instruments, an IRS enables the exchange of one stream of interest payments for another. The "price" of this instrument is the fixed leg of the IRS that is set such that the present value of all future cash flows equates that implied by the cash flows of the floating leg. By construct, the price changes in line with market expectations of the future path of the floating leg.

The term structure of the IRS curve can be used to derive the forward implied floating leg. Theoretically, the floating leg is a function of two variables: (1) the policy rate; and (2) liquidity conditions. An example of this is the 3-month London Interbank Offered Rate (LIBOR), which is the floating leg for US dollar swaps. It is dependent on not only the US Federal Federal Reserve (hereafter "US Fed") funds rates, but also US dollar liquidity conditions. Tight liquidity causes the LIBOR to rise even if the policy rate does not change. Assuming that liquidity conditions do not fluctuate much, the path of floating leg should closely resemble the market's expected change in the policy rate.

This framework could be applied to derive the policy expectations of ASEAN+3 emerging markets. Specifically, IRS markets serve as good indicators of monetary policy for Malaysia, Korea, and Thailand (China and Hong Kong also have active swap markets but the policy rates and the floating leg of their IRS are not closely linked).[1] The COVID-19 pandemic had raised expectations of a dovish response by regional central banks. Indeed, while Malaysia and Thailand have already delivered cuts, expectations of further reductions remain as of March 16, 2020, while there is no expectation of any further reduction in Korean rates:

- In Korea, swap markets are pricing in a 12 basis point fall in the 3-month Certificate of Deposit (CD) rate—the floating leg for Korea's IRS—over the next 12 months (Figures 1.12.1 and 1.12.2). The current spread between the 3-month CD rate and the policy rate (0.75 percent) of 29 basis points (1.04 – 0.75 percent) is elevated compared to basis points. Assuming that the elevated spread normalizes to (that is, compresses by) 14 basis points, then the difference of -2 basis points (12 – 14 basis points) vis-à-vis the

Figure 1.12.1. Korea: 3-Month CD Rate Pricing
(Percent)



Sources: Bloomberg Finance, L.P.; and AMRO staff calculations.
Note: The 3-month CD rate is the floating leg for Korea's interest rate swap rate.
CD = certificate of deposit.

Figure 1.12.2. Korea: 3-Month CD Rate Implied Levels
(Percent)

Date	3M CD Rate	Implied Level (Percent)			
		3M Fwd	6M Fwd	9M Fwd	12M Fwd
16-Mar-20	1.040	1.02	0.86	0.73	0.92
16-Dec-19	1.530	1.43	1.36	1.34	1.34
16-Sep-19	1.540	1.43	1.35	1.34	1.32
14-Jun-19	1.810	1.62	1.47	1.39	1.41
14-Mar-19	1.890	1.88	1.87	1.83	1.81
Date	**3M CD Rate**	**Change in Level (Basis points)**			
		3M Fwd	6M Fwd	9M Fwd	12M Fwd
16-Mar-20	1.040	-2	-18	-31	-12
16-Dec-19	1.530	-10	-17	-19	-20
16-Sep-19	1.540	-11	-19	-20	-22
14-Jun-19	1.810	-19	-34	-42	-40
14-Mar-19	1.890	-1	-2	-6	-8

Sources: Bloomberg Finance, L.P.; and AMRO staff calculations.
Note: The average spread between the 3-month CD rate and policy rate over the last 5 years is +14 basis points vs. the current spread of +29 basis points.
CD = certificate of deposit; fwd = forward; M = month.

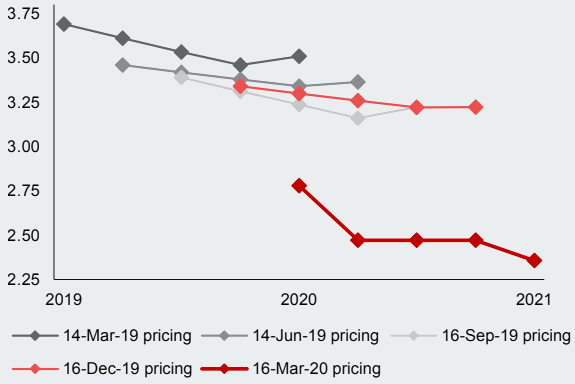
[1] The lack of liquid swap markets in Indonesia, the Philippines, Cambodia, Lao PDR, and Vietnam precludes their analyses while the exchange rate is Singapore's main monetary policy tool.

12-month forward represents market expectations of a small 8 percent probability of a 25 basis point cut. Compared to the pricing 3 months ago, the 12- month implied rate has fallen from 1.34 percent to 0.92 percent, suggesting increased expectations of monetary easing. That said, a 50 basis point rate cut has been delivered and no further action is expected of the Bank of Korea at this point, as per the swap market pricing.

- Despite two rate cuts in 2020 (one each in January and March) by the Malaysian central bank, expectations of further easing remain elevated (Figures 1.12.3 and 1.12.4). Swap markets priced in a fall in 3-month Kuala Lumpur Interbank Offered Rate (KLIBOR) from 2.78 percent to 2.36 percent in a year's time. Compared with the pricing 3 months prior, easing expectations have increased significantly as the 12-month ahead pricing fell from 3.22 percent (12 basis points of easing or 48 percent probability of a 25 basis point cut) to 2.36 percent (50 basis points of realized cut and 42 basis points of further easing, that is, a 100 percent probability of another 25 basis point cut and a 68 percent probability of a further 25 basis point cut).

- Market expectations of further monetary policy easing in Thailand have risen despite the 25 basis point cut on February 5 (Figures 1.12.5 and 1.12.6) but the policy action is front-loaded. The IRS floating leg, represented by the 6-month forward exchange rate, shows that the implied floating leg after 1 year is 0.88 percent. It implies a 48 percent probability of a 25 basis point cut, from the current 1.00 percent level. The latest pricing is also lower than that seen three months ago, of 1.26 percent, indicating that the market's easing expectations have increased significantly. The implied floating rate after 6 months is 0.60 percent, which translates to a 100 percent probability of a 25 basis point cut and another 60 percent probability of a further 25 basis point cut.

Figure 1.12.3. Malaysia: 3-Month KLIBOR Pricing
(Percent)



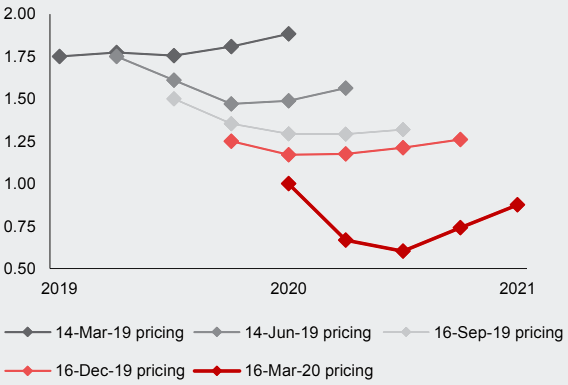
Sources: Bloomberg Finance, L.P.; and AMRO staff calculations.
Note: The 3-month CD rate is the floating leg for Korea's interest rate swap rate.
CD = certificate of deposit.

Figure 1.12.4. Malaysia: 3-Month KLIBOR Implied Levels
(Percent)

Date	3M KLIBOR	Implied Level (Percent)			
		3M Fwd	6M Fwd	9M Fwd	12M Fwd
16-Mar-20	2.780	2.47	2.47	2.47	2.36
16-Dec-19	3.340	3.30	3.26	3.22	3.22
16-Sep-19	3.390	3.31	3.24	3.16	3.22
14-Jun-19	3.460	3.42	3.38	3.34	3.36
14-Mar-19	3.690	3.61	3.53	3.46	3.51
Date	**3M KLIBOR**	**Change in Level (Basis points)**			
		3M Fwd	6M Fwd	9M Fwd	12M Fwd
16-Mar-20	2.780	-31	-31	-31	-42
16-Dec-19	3.340	-4	-8	-12	-12
16-Sep-19	3.390	-8	-15	-23	-17
14-Jun-19	3.460	-4	-8	-12	-10
14-Mar-19	3.690	-8	-16	-23	-18

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

Figure 1.12.5. Thailand: 6-Month Forward Exchange Rate Pricing
(Percent)



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

Figure 1.12.6. Thailand: Forward Exchange Rate Implied Levels
(Percent)

Date	Policy Rate	Implied Level (Percent)			
		3M Fwd	6M Fwd	9M Fwd	12M Fwd
16-Mar-20	1.000	0.67	0.60	0.74	0.88
16-Dec-19	1.250	1.17	1.18	1.21	1.26
16-Sep-19	1.500	1.35	1.29	1.29	1.32
14-Jun-19	1.750	1.61	1.47	1.49	1.56
14-Mar-19	1.750	1.77	1.75	1.81	1.88

Date	Policy Rate	Change in Level (Basis points)			
		3M Fwd	6M Fwd	9M Fwd	12M Fwd
16-Mar-20	1.000	-33	-40	-26	-12
16-Dec-19	1.250	-8	-7	-4	1
16-Sep-19	1.500	-15	-21	-21	-18
14-Jun-19	1.750	-14	-28	-26	-19
14-Mar-19	1.750	2	0	6	13

Sources: Bloomberg Finance, L.P.; and AMRO staff calculations.
Note: fwd = forward; M = month.

This box was prepared by Prashant Pande.

Appendix I: Selected Key Macroeconomic and Financial Indicators

	2018	2019 e/	2020 p/	2021 p/
Brunei Darussalam				
Real GDP growth (percent year-over-year)	0.1	3.9	3.5	2.9
Headline inflation (period average, percent year-over-year)	1.0	-0.4	0.1	0.1
Current account balance (percent of GDP)	7.8	5.9	7.9	6.1
General government fiscal balance (percent of GDP)	0.2	-7.0	-6.1	-6.8
Cambodia				
Real GDP growth (percent year-over-year)	7.5	7.1	6.2	6.9
Headline inflation (period average, percent year-over-year)	2.5	1.9	2.1	2.1
Current account balance (percent of GDP)	-12.2	-9.1	-15.2	-17.9
General government fiscal balance (percent of GDP)	-2.2	-2.0	-2.8	-2.0
China				
Real GDP growth (percent year-over-year)	6.6	6.1	5.3	6.1
Headline inflation (period average, percent year-over-year)	2.1	2.9	2.3	2.0
Current account balance (percent of GDP)	0.4	1.2	1.6	1.5
General government fiscal balance (percent of GDP)	-2.6	-2.8	-3.0	-2.9
Hong Kong, China				
Real GDP growth (percent year-over-year)	2.9	-1.2	-0.5	1.8
Headline inflation (period average, percent year-over-year)	2.4	2.9	2.5	2.6
Current account balance (percent of GDP)	4.3	5.2	4.2	4.5
General government fiscal balance (percent of GDP)	2.4	-1.5	-5.0	-2.0
Indonesia				
Real GDP growth (percent year-over-year)	5.2	5.0	4.9	5.2
Headline inflation (period average, percent year-over-year)	3.3	3.0	2.9	3.0
Current account balance (percent of GDP)	-2.9	-2.7	-2.4	-2.2
General government fiscal balance (percent of GDP)	-1.8	-2.1	-2.6	-2.0
Japan				
Real GDP growth (percent year-over-year)	0.3	0.7	0.1	0.6
Headline inflation (period average, percent year-over-year)	1.0	0.5	0.3	0.4
Current account balance (percent of GDP)	3.5	3.6	3.5	3.6
General government fiscal balance (percent of GDP)	-2.2	-2.9	-3.2	-2.8
Korea				
Real GDP growth (percent year-over-year)	2.6	2.0	2.0	2.6
Headline inflation (period average, percent year-over-year)	1.5	0.4	0.9	1.0
Current account balance (percent of GDP)	5.1	3.1	3.3	3.7
General government fiscal balance (percent of GDP)	-0.6	-2.2	-4.2	-4.1

	2018	2019 e/	2020 p/	2021 p/
Lao People's Democratic Republic				
Real GDP growth (percent year-over-year)	6.3	6.0	6.1	6.5
Headline inflation (period average, percent year-over-year)	2.0	3.3	4.3	2.3
Current account balance (percent of GDP)	-7.9	-6.7	-7.1	-7.3
General government fiscal balance (percent of GDP)	-4.4	-2.3	-4.2	-3.7
Malaysia				
Real GDP growth (percent year-over-year)	4.7	4.3	4.0	4.6
Headline inflation (period average, percent year-over-year)	1.0	0.7	1.5	2.0
Current account balance (percent of GDP)	2.1	3.3	2.6	2.8
General government fiscal balance (percent of GDP)	-3.7	-3.4	-3.4	-3.0
Myanmar[1]				
Real GDP growth (percent year-over-year)	6.8	6.8	6.0	6.9
Headline inflation (period average, percent year-over-year)	4.0	8.6	7.5	6.0
Current account balance (percent of GDP)	-4.9	1.3	0.1	-0.9
General government fiscal balance (percent of GDP)	-2.7	-3.7	-4.7	-3.7
The Philippines				
Real GDP growth (percent year-over-year)	6.2	5.9	6.2	6.6
Headline inflation (period average, percent year-over-year)	5.2	2.5	3.0	3.2
Current account balance (percent of GDP)	-2.6	-1.0	-2.4	-2.5
General government fiscal balance (percent of GDP)	-3.2	-3.5	-3.2	-3.2
Singapore[2]				
Real GDP growth (percent year-over-year)	3.4	0.7	0.8	2.6
Headline inflation (period average, percent year-over-year)	0.4	0.6	0.7	1.5
Current account balance (percent of GDP)	17.2	17.0	15.6	15.4
General government fiscal balance (percent of GDP)	0.7	-0.3	-0.9	0.3
Thailand				
Real GDP growth (percent year-over-year)	4.2	2.4	1.5	3.2
Headline inflation (period average, percent year-over-year)	1.1	0.7	0.5	0.9
Current account balance (percent of GDP)	5.6	6.8	4.8	6.0
General government fiscal balance (percent of GDP)	-3.0	-3.0	-2.6	-2.8
Vietnam				
Real GDP growth (percent year-over-year)	7.1	7.0	6.6	6.8
Headline inflation (period average, percent year-over-year)	3.5	2.8	3.3	3.1
Current account balance (percent of GDP)	2.4	1.9	1.5	1.7
General government fiscal balance (percent of GDP)	-2.7	-2.7	-3.0	-2.8

Sources: National authorities; and AMRO staff estimates.
Note: e/ refers to AMRO staff estimates, p/ refers to AMRO staff projections. Data refer to calendar year, except for general government fiscal balances and Myanmar. Data for 2019 refer to AMRO staff estimates, for those that are not yet available.
[1] FY18/19 onwards are based on a new fiscal year starting from October, after half-year interim FY18 during April and September 2018. The real growth rate in FY18/19 is estimated on a new base year FY15/16, compared to the previous year, which was based on FY10/11 prices. The figures for Balance of Payments in FY18/19 were estimated based on the three quarters of available data.
[2] 2019 data refer to actual data.

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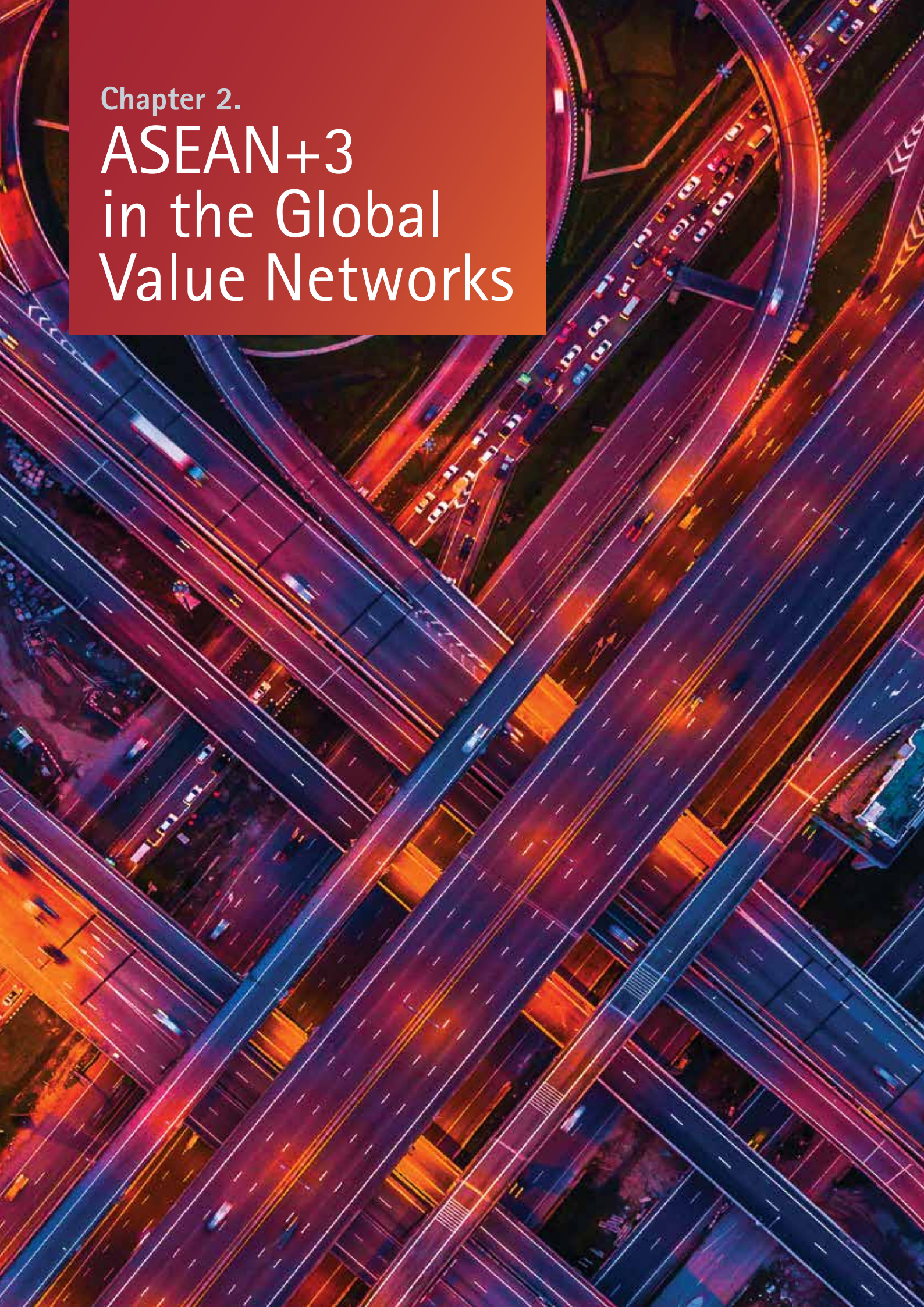
Chapter 2.

ASEAN+3 in the Global Value Networks



Highlights

- The ASEAN+3 region has become much more resilient and developed over the past few decades—emerging from crises strongly, coping well with global forces that challenge its growth, and riding on opportunities related to technological advancement and greater regional integration.

- The transition to the technology-driven "new economy" is pervasive. No sector will remain untouched for long. This means that developing and newly emerging economies—including those in the ASEAN+3 region—have limited time to develop capacity to apply new technologies and move up production value chains, many of which are cross-border.

- The tried-and-tested manufacturing-for-exports strategy remains relevant for the developing economies in the ASEAN+3 region. They should leverage their low labor cost to promote labor intensive industries as an entry point into the production networks and move up the technological value chain. A parallel track is needed to develop services as a second driver of growth and employment.

- The global economy is weaker and anti-globalization sentiments are on the rise. However, the region is facing these challenges from a position of strength as it is now both a production powerhouse and a huge source of final demand. Led by China, the region has achieved rapid progress up the income ladder and is now a much bigger part of the global economy. Rapid urbanization and the emergence of the middle class have transformed the region into the world's largest market for consumer products and services. Regional demand has become a major driver of growth for the region. At the same time, the region should remain open to trade and investment with the rest of the world.

- On the supply side, regional economies should leverage the new digital technology to meet the rising demand of the region. The new growth paradigm creates more options to generate growth by promoting industries that develop products and services to meet customized demand regionally and globally. There is also scope to boost domestic capacity, to reduce vulnerability to disruptions to global production networks that may occur from time to time.

- ASEAN+3 countries, particularly ASEAN economies, must remain open and embrace further integration to sustain growth catch-up. They need to develop hard and soft infrastructure and connectivity, review and revamp policies and regulatory frameworks to facilitate cross-border movement of goods and services and seamless payments.

- Policymakers need to develop human capital, facilitate freer cross-border flow of skilled labor and professionals, and put in place strong social security systems to protect workers, including those in the gig economy. The new economy puts a premium on innovation, creativity, and soft skills, and the gig economy is likely to be an integral part of it.

- The COVID-19 pandemic, while highly regrettable, presents an opportunity for the region to demonstrate its collective resilience and commitment to work on solutions that safeguard and strengthen ASEAN+3 countries' shared long-term interests. These interests are varied. Countries in the region have sufficient capacity to rise to the challenge, and shape its future together.

I. The New Growth Environment: Rising Interconnectedness amid Slowing Trade Growth

Countries in the ASEAN+3 region have successfully ridden the tide of globalization to grow their economies and improve standards of living for their people. In the five decades up to the mid-2000s, world trade grew at twice the rate of global GDP. With advanced economies in the west providing ready markets for their products, ASEAN+3 economies embarked on a "manufacturing for exports" strategy, leveraging on relatively abundant (and low-cost) labor as the cornerstone of comparative advantage in the early years. With trade openness came financial openness, and foreign investments—both from within the region and from the United States and Europe— which helped finance current account deficits and funding gaps. Over time, ASEAN+3 economies upskilled labor, embraced technology, and moved up the value chains.

The global environment today is more complex, and more challenging, than that which confronted ASEAN+3 economies in the initial period of their economic development. Deepening concerns in advanced economies about the gains from trade (and how they are distributed at the national level), and misgivings about "unfair" trade practices and "forced" technology transfers, have spilled over into nationalist sentiments and anti-globalization policies. At the same time, the world is more interconnected than ever. The Fourth Industrial Revolution (4IR) is redefining production and value creation across manufacturing and services and has spawned an explosion in data flow and information exchange even as expansion of conventional cross-border trade in goods slows.

This chapter examines the implications of this dichotomy—rising nationalist policies amid an acceleration in globalization and interconnectedness—for growth and economic integration in the ASEAN+3 region. It builds on AMRO (2019a) theme on the importance of building and enhancing capacity and connectivity within and across countries—to seize opportunities in the new economy, and as safeguard against protectionist policies globally. Specifically, this chapter delves into the impact of technology and rising regional affluence on the positioning of ASEAN+3 economies in global value chains (GVCs), and what this means for national comparative advantage and welfare-enhancing growth going forward.

This chapter is organized as follows. The remainder of Section 1 reflects on key global developments driving future growth in the region. Section 2 describes the emergence of Factory Asia. It traces the evolution of comparative advantage in ASEAN+3 economies, and emerging challenges to traditional growth models, highlighting how deepening intra-regional demand has played a key role in strengthening the region's growth and resilience. Section 3 shifts to the demand side and the emergence of Shopper Asia. It discusses the structural changes and growth rebalancing taking place in the region, including analyzing key developments at the sectoral level in several rapidly developing industries, as a new growth paradigm centered on "Factory Asia, Shopper Asia" emerges. Section 4 addresses some implications of the digital economy for sustaining equitable growth. Section 5 concludes with key takeaways and policy implications.

Key Drivers: Protectionism, GVC Transformation, Asia's Rise, New Growth Models

Four key developments will shape the region's growth prospects.

First, trade tensions and protectionist policies will continue to impinge on the expansion of cross-border movement of goods and services. The global financial crisis (GFC), the European Sovereign Debt Crisis, and the resultant disruption in world economic growth has put a pause to the rapid increase in world trade. The crises have brought home to advanced economies the painful message that they are not immune from the discipline of global financial markets. Alongside recriminations about financial excesses, national attention in the United States and Europe have turned to the implications of globalization—specifically, who reaps the benefits, and who pays the price when things go wrong.

The current US-China trade tensions will see ups and downs, but the backlash against globalization in advanced economies—hitherto the proponents of free and unrestricted trade[1]—is unlikely to go away entirely. The protagonists

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The authors of this chapter are Foo Suan Yong (lead), Marthe Hinojales, Vanne Khut, and Trung Thanh Vu, with advice from Sanling Lam (Consultant).

[1] Major advanced economies and key international institutions in which these countries played leadership roles drove the formulation of a set of policies for shaping international trade and global growth, based heavily on free-market principles. The Washington Consensus also involved recommending market-oriented structural reforms for emerging market economies (EMEs), which would in turn benefit from assistance by advanced economies to cope with stresses arising from global shocks and attendant financial market turbulence, including those that would lead to or be accompanied by adverse shifts in sentiment toward EMEs.

and the flashpoints will vary. However, there seems to be a "normalization" of trade tensions worldwide even as new trade ties are being formed, and old ones renegotiated. Already, the US-China trade conflict is estimated to have shaved about 0.5 percentage point off 2019 global growth.

Second, the technology-driven New Economy, encompassing the 4IR and greater role of services (World Economic Forum, 2018) will transform today's GVCs. New technology will redefine what it means to produce (create value) and consume, and even how and in what form this exchange takes place. Conventional GVCs describe distinct and location-specific economic activities that are linear and sequential (forming a "chain", with upstream and downstream processes). Looking ahead, value creation and delivery in the new economy is perhaps better characterised as taking place in global value networks (GVNs).

These new-look GVNs cover cross-border movements of goods and services captured in trade statistics, as well as the vast and often-instantaneous transfers of digital information and services across the globe. If services are under-measured in trade statistics (G24, 2019), data flows and digital services are even more so. Linkages within GVNs are complex, and they evolve quickly and sprout new connections in response to emerging ideas, changing demand, and technology or policy barriers. These explain why trade restrictions directed at new economy industries are hard to enforce and are, at best, only temporarily effective before they are circumvented. In other words, market forces will continue to spur the development of GVNs, and it is up to countries, especially emerging market economies (EMEs) to find ways to be competitive and to thrive within these GVNs.

Third, the global center of gravity for economic activities (both supply and demand) will continue to shift to Asia. Since China's accession to the World Trade Organization (WTO) in December 2001, its emergence as a global production force to be reckoned with, and pulling in other Asian countries into its supply chain, has been a familiar narrative (AMRO, 2018a). Rising regional income and demand have not been unexpected. However what probably caught the world by surprise was the speed and extent at which China and the region have grown, and how they have unleashed and reshaped final demand for goods and services in the last decade.[2] No longer is the region merely producing goods destined for final consumption and investment in the western advanced economies as in the decades before 2000. With high growth and the most rapidly rising middle class in the world, the region has become the final destination for many consumer products and services, including those from the west. Not only that, China's voracious appetite for commodities and natural resources has driven up prices and given commodity-producing economies a major boost.

With Asia as formidable in its appetite for consumer goods and services as it is in contributing to world production, globalization is increasingly anchored by Factory Asia and Shopper Asia. Against slowing and more unpredictable demand from the west, economic and financial integration within the ASEAN+3 region is both a strategic play and a reflection of market forces.

Fourth, new growth models will emerge as digital technologies and shifting global political economy disrupt, transform and shake up comparative advantage and growth prospects for advanced and developing economies across the world.

Globalization used to mean the advanced North exporting capital (and capital-intensive goods) and technology to the developing South, in return for imports of low-tech labor-intensive consumer goods—to the benefit of both. Employment and wages rise in developing countries with abundant low-skilled labor as they are soaked up in the factories, while advanced economies enjoy higher returns to capital invested abroad, more highly paid skilled workers, and cheap consumer goods. Heckscher-Ohlin (H-O) models of trade imply countries specialize in producing goods in which they enjoy a relative factor advantage, thereby cementing the North-South divide.

New technologies and innovations allow and compel countries (and economic networks within and across countries) to leapfrog and develop new comparative advantages. China is arguably the prime example of how certain industries or enterprises within a large country can be globally competitive while other segments remain very much "part of the developing world."

Growth and economic development in the ASEAN+3 region—across countries that are diverse in their geographies, populations, resource endowments, and technological developments—have adhered to an orderly and linearly progressive path. In a graphic depiction of the H-O model of comparative advantage, the flying geese model (popularized by the Japanese economist Akamatsu Kaname in the 1960s) describes how countries at different levels of economic development move up the value chain as they catch up with the technology and acquire the production structure (and comparative advantage) of the economies ahead of them. With Japan at the head of the pack, a second wave of economies (Korea, Taiwan Province of China, Singapore, Hong Kong) emerged in the 1960–70s. This was followed by the ASEAN-4 (Indonesia, Malaysia, the Philippines, and Thailand) in the 1970–80s, China in 1980–90s, and then CLMV (Cambodia, Lao PDR, Myanmar and Vietnam) in the 1990–2000s (AMRO, 2018b).

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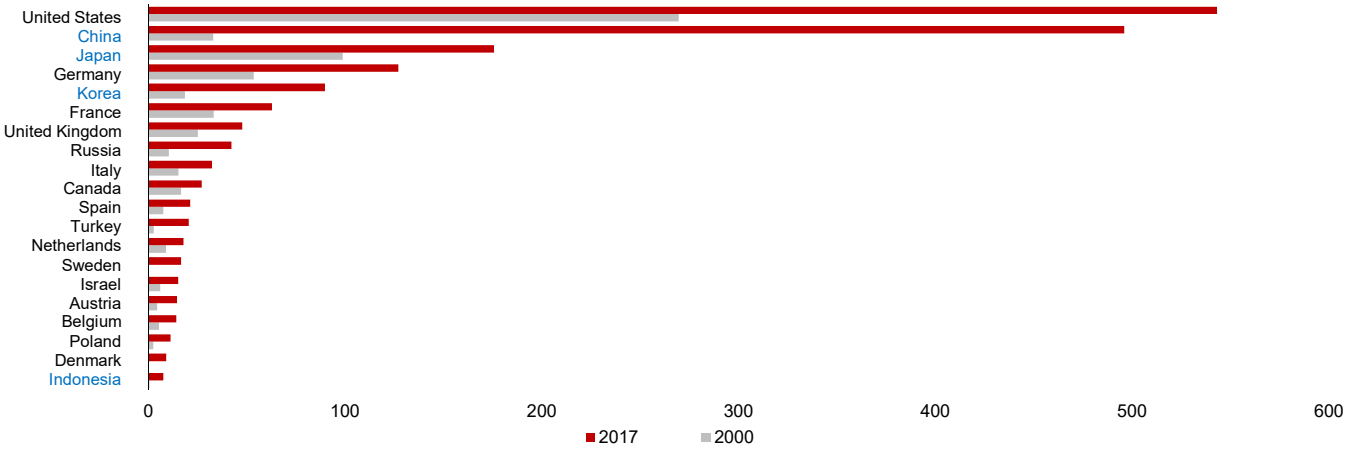
[2] See, for example, Michael Spence's reflections in "What my Younger Self Never Expected." *Project Syndicate*, January 3, 2020. Spence noted that the emergence of the developing world was the "most significant unanticipated occurrence" in his lifetime; in fact, the term "Third World" betrayed a belief that under-development was a semi-permanent condition.

China—a continental-size economy with a huge population comprising 30 plus provinces with very diverse endowments of human and natural resources—has grown rapidly. The country has been able to leapfrog and operate across a whole spectrum of value chains (from cutting-edge technology to low-cost mass production) for many products. In doing so, it has disrupted the traditional pattern of progression and status quo. In other words, the H-O model of comparative advantage operates within China (and its diverse regions) as it would across nations. China's per capita GDP is still well below that of advanced economies, and cost-based manufacture-for-exports remains a significant part of its growth and employment creation strategy.

Critically, without intending to do so, the sheer speed and modality of China's growth mean that China has in recent years played a major role in the region's economic integration. It has done so mainly through the production and supply chain networks it has spun across the region, which had started taking shape clearly even by the mid-2000s. And these developments have ultimately made it critical for China to pursue a more active strategy towards a broader and more balanced economic integration with the region, involving the emergence of multi-track production structures, increased importance of domestic consumption, and the rise of the services sector (Khor and Tan, 2006).

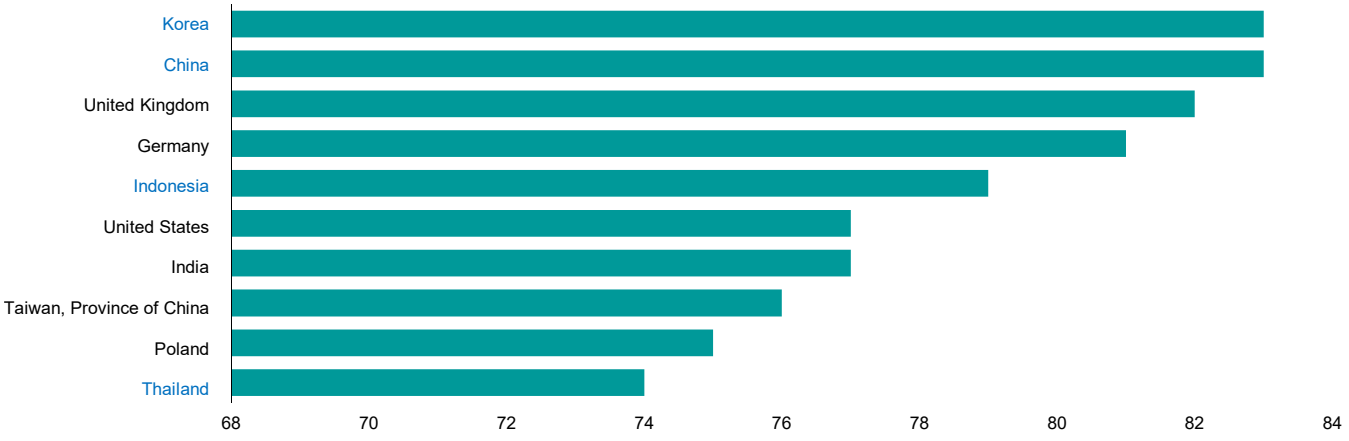
At the same time, China has moved much closer to the technological frontier in many products and services—ranging from smartphones and artificial intelligence (AI)-enabled home appliances to e-commerce platforms and digital payment systems. Determined to build on its progress, China now ranks among the top three in the world in research and development (R&D) expenditure (Figure 2.1) and online shopping penetration (Figure 2.2), the number of patents lodged annually, the number of top global enterprises, and the share of mobile payments and e-commerce volumes. AMRO's projections suggest that by the year 2035 (AMRO, 2018a), China could attain advanced economy status (Figure 2.3), with yet more technological innovations and productivity gains playing a key role even as its population ages.

Figure 2.1. Top 20 Economies: Gross Domestic Expenditure in Research and Development
(Billions of current PPP dollars)



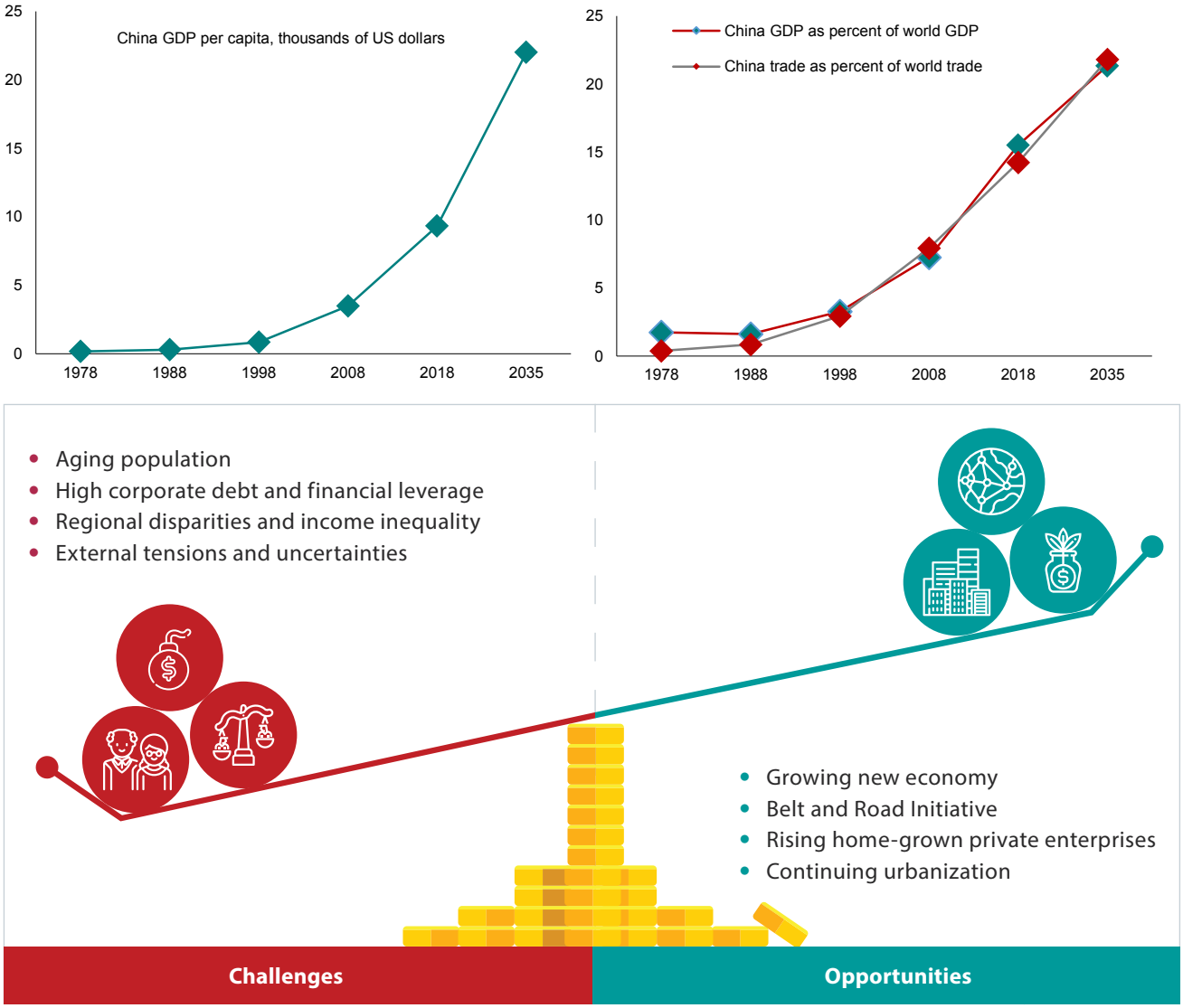
Source: United Nations Educational, Scientific and Cultural Organization.
Note: Countries in blue are ASEAN+3 member economies.

Figure 2.2. Markets with the Highest Online Shopping Penetration Rate
(Percent of online population)



Source: Statista.
Note: Data are as of Q2 2017. Countries in blue are ASEAN+3 member economies.

Figure 2.3. China's GDP and Trade Performance



Sources: National authorities; and AMRO staff calculations.

II. Rise of Factory Asia: Leveraging Comparative Advantage

ASEAN+3 economies have embraced globalization on their path to economic prosperity. By necessity as well as by design, they embarked on an export-oriented strategy—harnessing comparative advantage and continually moving up the economic value chain. There were bumps along the way. The Asian Financial Crisis (AFC) in the late-1990s was a stark reminder of the risks of unconstrained borrowing. It also drove home the need to strengthen their macroeconomic fundamentals, improve governance and regulatory frameworks, build policy and financial buffers, and develop and deepen financial markets for a more balanced growth, even as the region stayed open to global competition, trade and investment. The lessons from the AFC stood the countries in good stead during the GFC a decade later. ASEAN+3 economies did not waver from their globalization path even as they rebalanced their economies in the face of weaker external demand.

The next phase of growth in the region is taking place amid relentless globalization and the technological revolution. For developing and emerging economies, progression along manufacturing value chains remains a viable development strategy. For others, digital technologies and the new economy offer fresh options and opportunities to create new products and services, and plug into global networks (KPMG, 2018). By and large, the growth path for all will be less linear, and less predictable.

Development of the Regional Supply Chain: Heckscher–Ohlin, with Ricardian Elements

Through the 1960s to the 2000s, trade and investment across ASEAN+3 economies, and with the rest of the world, have followed the principles of the H-O model of comparative advantage. As countries moved up the skills and technology ladder, the structure of their production and exports—and where they placed on GVCs—shifted to higher value-added (VA) activities. At the same time, new developing economies with basic skills and technology ventured into industrial production and established a niche at the bottom of value chains.

In the early years, foreign capital and technology from multilateral development banks such as the World Bank and the Asian Development Bank (ADB), bilateral donors, and from multinational companies (MNCs) in Japan, United States, and Europe were key to financing infrastructure and investment needed for economic growth. Over time, as ASEAN+3 economies grew and moved up value chains, savings, and current account surpluses from within the region contributed more to closing the funding gaps.

In the 1970s to 1990s, trade and GVCs in the region were driven by foreign direct investment (FDI) from Japan, the United States, and Europe into ASEAN countries. Japan had recovered and industrialized rapidly from the 1950s onward, and by the early 1980s had emerged as a manufacturing powerhouse, and was running consistent current account surpluses. Korea, Taiwan Province of China, Hong Kong, and Singapore started with low-cost manufacturing in garments and footwear but soon upgraded to higher VA exports in consumer electronics, semiconductors, shipbuilding and car manufacturing and began running current account surpluses in the 1990s.

The ASEAN-4 economies, with a low-productivity agrarian and natural resource base, were keen on transitioning to manufacturing-for-export growth to provide employment for an expanding labor force in order to reap the benefits of the demographic dividends for growth; what they lacked was the capital, knowhow, and markets.

In the context of the H-O (factor endowment) model, Japan and western advanced economies were relatively abundant in capital and technology, while most of Asia had abundant and lower-cost (unskilled or semi-skilled) labor. Trade and investment were mutually beneficial. For Japan and other advanced economies, outward FDI earned higher returns for savings and higher premiums for its manufacturing technology. On the flip side, in the ASEAN countries, inward FDI from Japan and other advanced economies helped finance current account deficits, created manufacturing jobs, and raised incomes for their workers.

The sharp appreciation of the Japanese yen after the 1985 Plaza Accord provided additional impetus for Japan to maintain its competitiveness in manufacturing by relocating segments of the production value chain which are more labor-intensive abroad, especially to neighboring ASEAN countries, which are relatively more abundant in labor. This allows the Japanese manufacturers to lower the overall cost of production and remain competitive. This move by Japanese MNCs to outsource segments of the production value chain abroad to optimize the overall cost of production, led to the fragmentation of the production value chain and the development of regional supply chains in Asia.

China's accession to the WTO in December 2001 added a major player to global and regional GVCs. The early years of China's open door policy saw a natural progression of international trade and production based on the conventional H-O model, with gains from globalization following previous trends. China, with a labor force of more than 700 million then, had an obvious comparative advantage in labor-intensive industries such as textile, garments, and low-end consumer electronics, and was hungry for capital and new technology. A "manufacturing for exports" strategy suited China's circumstances in the early years of opening-up, when the country was poor and the domestic market was not able to absorb the output of the manufacturing sector.

For the United States and other advanced economies, China was another hugely abundant source of lower-cost labor for their FDI and global production network. The H-O model paired Chinese labor with Japanese and Western capital and knowhow to produce lower cost consumer goods, and international trade provided the markets and conferred gains to both workers and owners of capital.

For the ASEAN-4 economies, hitherto the choice location for labor-intensive products, China's formidable comparative advantage in labor underlined the urgency to move up the value chains if they were to stay on the manufacturing-for-export growth strategy. The ASEAN-4 countries had an early start and advantage over China, at least initially, in providing a familiar and well-understood business environment for foreign investors. As China went into labor-intensive processing industries, the ASEAN-4 economies had to move up the production value chains and attract investments in higher skills and technology-intensive products such as car assembly, semiconductors, disk drives, televisions, and higher-end consumer electronics.

The more advanced ASEAN+3 countries (today's high-income ASEAN+3 economies), having relinquished comparative advantage in low-cost labor much earlier, rightly pursued and nurtured comparative advantage in skills- and technology-intensive industries and services. These include products and sectors such as mobile phones, automobile, shipbuilding,

robotics, and business and financial services. In the context of the H-O model, their development model, and aspired position on the GVC, was not dissimilar to that of the United States and Europe. Like Japan in the 1980s, they also started to optimize their production cost structure by outsourcing the more labor-intensive part of the production value chain to the more labor-abundant economies of ASEAN and other parts of the world. In particular, Hong Kong fully outsourced its manufacturing production to Dongguan in the 1990s. Singapore lost its electronics and disk drives industries to Malaysia and Vietnam. Korea moved its assembly operations of mobile phones and TVs to Vietnam in the late 2000s. China has started to move its garments industries to the CLMV countries and other developing countries in recent years.

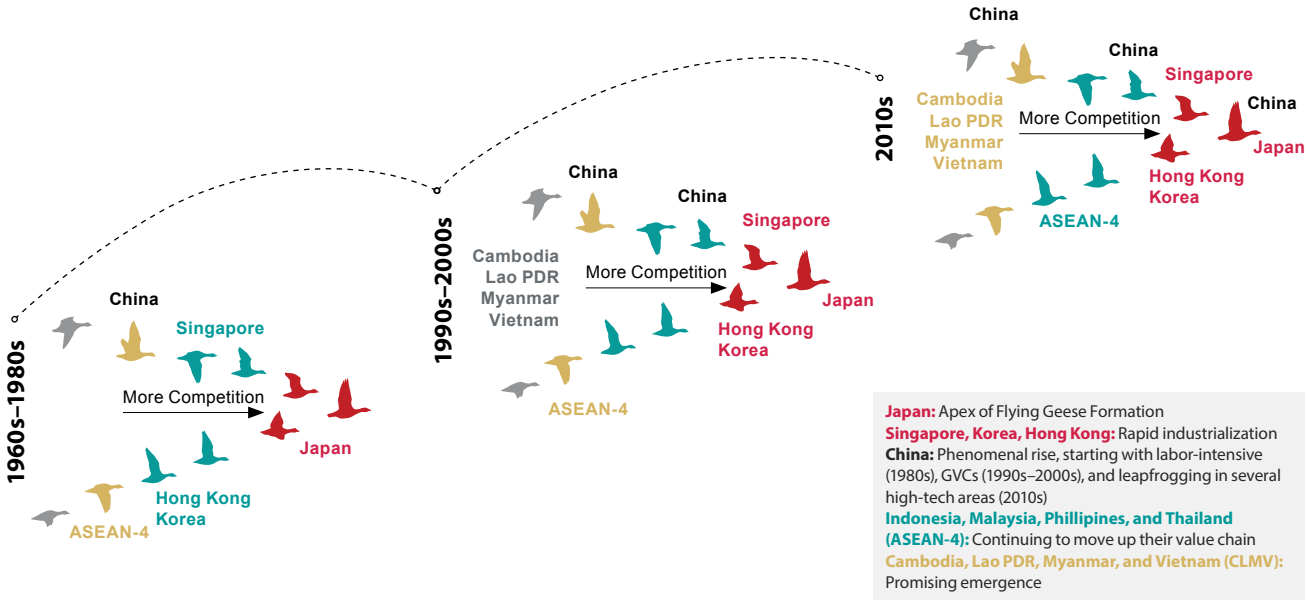
The CLMV countries, which became members of ASEAN in the 1990s, provided an alternative source of low-cost labor to China. The CLMV countries' participation in the regional production network now leveraged on their new-found comparative advantage in niche industries vacated by China, such as garments and footwear. This would sustain the flying geese formation for a while, but not for long.

The 4IR and China's progression from low-cost manufacturing to skills- and technology-intensive industries and services have disrupted the hitherto "linear" evolution of comparative advantage. According to the flying geese model, China's massive advantage in labor should push (or compress) other economies progressively up the value chains, and technology leaders would be driven to innovate further. Increasingly educated and skilled labor would move into professional and high value-add services, and manufacturing exporters would mechanise and automate production processes to remain competitive. China and other emerging market economies continued to bring up the rear.

However, that has turned out not to be the case. The sheer size of China's population and its absolute advantage in labor had driven the share of the labor cost component in manufacturing production down sharply. Indeed it fell to the low single digits in some cases, with most of the VA in the upstream (R&D and design) and downstream (marketing, sales, and services) segments.[3] A development strategy predicated solely on comparative advantage in labor would be untenable for China if it were to move up the technology ladder to advanced economy level and raise labor productivity and wages across the country.

A combination of entrepreneurship and innovation, hard work, discipline and learning has allowed China to come close to technological leadership in some high-tech industries. This has unfolded even as the country continues to retain comparative advantage in traditional manufacturing. As a result, some provinces and cities such as Shenzhen and Hangzhou, have moved up value chains to the production frontier of certain industries while other provinces, especially the inland ones, follow behind as in the flying geese formation (Figure 2.4).

Figure 2.4. Flying Geese Formation and China's Leapfrog Within



Sources: AMRO staff.
Note: GVCs = global value chains.

[3] See for example, United Nations Conference on Trade and Development (2015). GVC studies in the 1990s for branded, high-end consumer products such as the Barbie Doll and the Apple iPhone showed that China's share of the total value added was in the order of 3.5–4 percent, with the lion's share captured by skilled wages, managers' salaries, and profits as part of the foreign value-added share (well over 95 percent). More recent case studies suggest that the share of labor in total production cost remained low (e.g. 3.4 percent in 2011 for Chinese rubber tires).

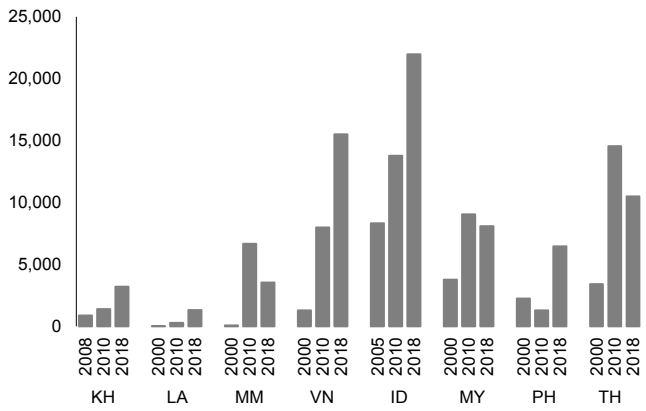
Moving up GVCs—Technological and Skills Upgrading and Structural Change

The manufacturing sector remains a key engine of growth and employment in the ASEAN+3 region even as the 4IR takes off and the new economy gains momentum (Figure 2.5). MNCs have played a key role. The role of MNCs in the geographic location of FDIs to leverage on shifting comparative advantage in the ASEAN+3 economies is captured extensively in the development literature. This includes models developed by Markusen (1983), whose framework complements the H-O model by highlighting the important role of MNCs in locating investments and production in different countries in order to reduce costs and optimize output by leveraging on their respective comparative advantages (Figures 2.6 and 2.7).

Figure 2.5. Selected Economies: Manufacturing Sector Indicators

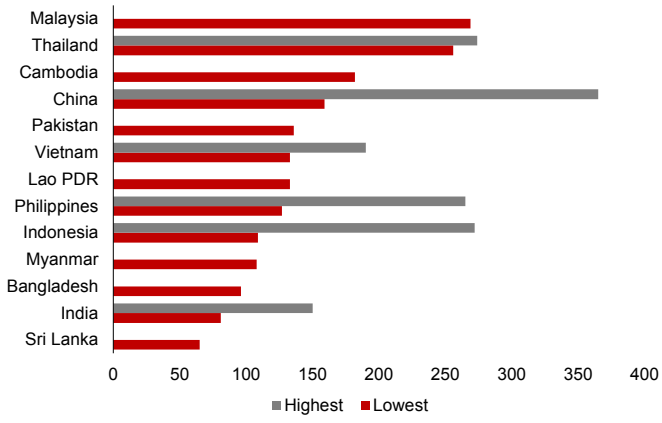
Sources: International Labor Organization; national authorities; The World Bank; and AMRO staff calculations.
Note: Value-added data for China and Myanmar are available from 2004 and 2001, respectively. The latest data point for Hong Kong and Japan is 2017. Employment data for Hong Kong is not available. The latest employment data point for Lao PDR is 2017. Employment data points for Myanmar refer to 2015, 2017, and 2018, while for Brunei, the data points refer to 2001, 2014, 2017. Singapore's employment data start from 2001. China's employment data refers to number of employees in manufacturing sector as percent of total employee. BN = Brunei Darussalam; CLMV = Cambodia, Lao PDR, Myanmar, and Vietnam; CN = People's Republic of China; HK = Hong Kong, China; ID = Indonesia; JP = Japan; KH = Cambodia; KR = Korea; LA = Lao PDR; MM = Myanmar; MY = Malaysia; MX = Mexico; PH = the Philippines; SG = Singapore; TH = Thailand; US = United States; VN = Vietnam.

Figure 2.6. Selected ASEAN+3 Economies: FDI Inflows
(Millions of US dollars)



Sources: United Nations Conference on Trade and Development; and AMRO staff calculations.
Note: KH = Cambodia; FDI = foreign direct investment; ID = Indonesia; LA = Lao PDR; MM = Myanmar; MY = Malaysia; PH = the Philippines; TH = Thailand; and VN = Vietnam.

Figure 2.7. Selected Economies: Monthly Wage Comparison, 2019
(US dollars)



Source: Compiled by Cambodia's Ministry of Labor and Vocational Training using exchange rate from xe.com as of January 1, 2019.
Note: Vietnam's minimum wage is set differently by regions: region I (USD 190), region II (USD 168), region III (USD 148) and region IV (USD 133). Cambodia's minimum wage refers to wages in garment sector.

Thailand's experience illustrates how its manufacturing exports have remained resilient in the face of shifting comparative advantage, by upgrading and becoming more integrated into the regional production network (AMRO, 2019b). Thailand was an early beneficiary of outward FDI by Japanese MNCs. The economic and trade linkages between these two countries have continued to deepen as Japan grows its high-tech industries, and Japanese small and medium-sized enterprises (SMEs) invest abroad. Japanese factories operating in Thailand have gradually increased the share of procurement from local firms and Japanese affiliates in Thailand. At the same time, Thai companies have

developed and outgrown their role as domestic supplier of parts to the Japanese MNCs. They have actively sought out opportunities to plug into new production networks driven by China, for example by supplying electronics and auto parts to manufacturers in Chongqing and Chengdu. Similarly, in Malaysia, MNCs such as Intel, B. Braun Medical, and OSRAM have spawned a cluster of local suppliers while their operations have evolved from production to regional headquarters performing R&D function and marketing to support their regional production and distribution.

Indonesia and the Philippines offer an interesting variant on the manufacturing for exports strategy. Like Thailand and Malaysia, both economies started off on the industrialization strategy in the 1970s and 1980s with FDIs from the MNCs of Japan and other advanced economies. However, the move up the value chain in the Philippines was hampered by critical constraints in 1970–80s, when the economy experienced heightened political and economic instability. At the same time, many Filipino workers went overseas, attracted by higher-paying jobs abroad. As a result, the manufacturing sector in the Philippines remained at the lower end of the value chain. However, in the 2000s and 2010s, the Philippines with its relatively well-educated English-speaking labor force was able to attract FDIs in the business process outsourcing (BPO) industry, which has since spread across the archipelago creating jobs and earning foreign exchange. The BPO is a relatively high-skill service industry employing college graduates and hence represents a move up the GVC for the Philippines. For Indonesia, a resource-rich economy with a large population, the manufacturing sector continued to grow but shifted its focus from exports to cater to the large and growing domestic consumer market (ADB and Islamic Development Bank, 2019), especially after the AFC while exports shifted to the commodity sector, which grew rapidly and enjoyed a price boom in the 2000s.

The traditional manufacturing-for-exports strategy that has served ASEAN-4 economies well will continue to be relevant for the CLMV economies. The agriculture sector accounts for a diminishing share of GDP as CLMV economies diversify out of agriculture and natural resources, and leverage on inward FDI and technology transfer to create higher-paying manufacturing jobs for their people (Figure 2.8). However, for these relative latecomers, the manufacturing sector's contribution to both GDP and employment is likely to peak lower and earlier than it did for the ASEAN-4 countries.[4]

Vietnam has been highly successful in attracting FDIs, especially from Korea and Japan, and is the most advanced among the CLMV countries in developing its manufacturing sector, which has diversified from garments[5] into electronics and car assembly. In Cambodia, garment manufacturing is dominant, accounting for more than 10 percent of GDP and two-thirds of manufacturing employment.[6] In Lao PDR, the manufacturing sector consists of garments and other labor-intensive industries. Myanmar has embarked on an industrialization program to attract FDI in labor-intensive industries such as weaving and garments, food products, and basic electronic devices (EuroCham Myanmar, 2019). Progress had been solid—industry (mainly manufacturing) accounted for about one-third of Myanmar's GDP by 2018. Unit labor costs in Vietnam (Figure 2.9) and the rest of the CLMV countries are expected to remain lower than in China, Thailand, and Malaysia. This gives them an edge in labor-intensive manufacturing as they expand from garments to other consumer goods (Figure 2.10). In other words, CLMV economies have leveraged on their relatively low-cost but increasingly skilled labor (Figures 2.7 and 2.11).

The technological and skills upgrading as these economies move up the GVCs has led to a shift in their production structure, from agriculture into manufacturing and services, and an increase in productivity. The share of agriculture has diminished over time as these economies have become more industrialized and also as they become technologically more advanced and move up the income ladder. At the same time, the size of the services sector would increase as the economies continue to move up the value chains and make further progress toward becoming high-income economies.

The Philippines' experience provides an excellent case study of the impressive improvement in productivity as the economy restructures from agriculture toward manufacturing and services. In the post-crisis period, the Philippines' labor productivity gains have occurred at a quicker pace than their regional peers, most notably in the past 3 years—with more than half of the overall improvement driven by between-sector productivity gains than by within-sector productivity gains (Box 2.1). Strong government efforts have helped to close productivity gaps in the country's manufacturing and services sectors vis-à-vis their regional neighbors. Further progress can be made if both the government and private sector address persistent challenges such as many workers from the agriculture sector heading not for more productive industries, but instead other low-paying jobs in construction and services, and large numbers of skilled workers continuing to move to higher-income countries where wages are much higher.

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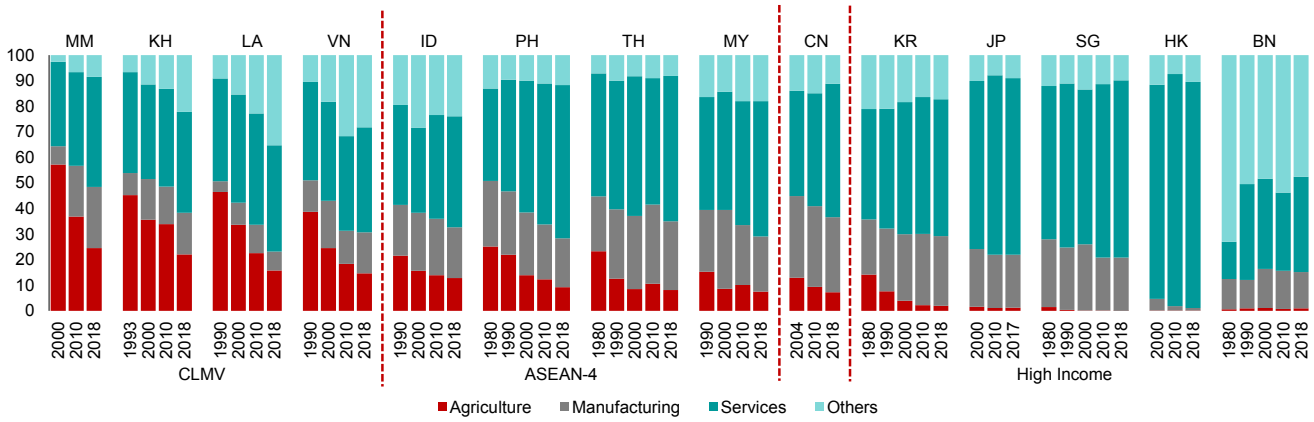
4 See AREO 2018.

5 Garment sector refers to textiles, clothing, footwear, and travel goods.

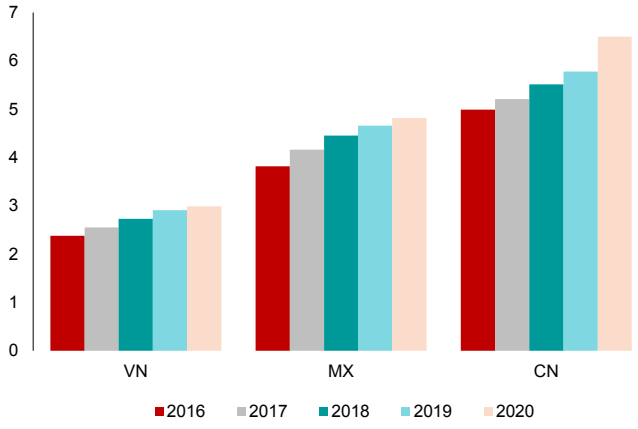
6 Sources: National authorities; and AMRO staff calculations.

Figure 2.8. ASEAN+3: Shares of GDP by Sectors
(Percent of GDP)



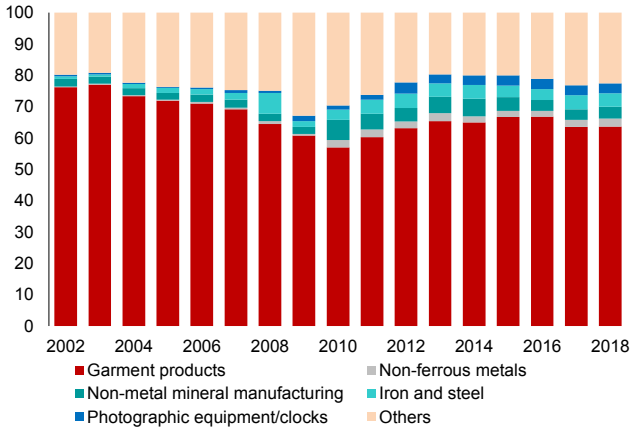
Source: The World Bank.
Note: The latest data point for Myanmar's manufacturing sector is 2017. ASEAN-4 = Indonesia, Malaysia, the Philippines, and Thailand; BN = Brunei Darussalam; CLMV = Cambodia, Lao PDR, Myanmar, and Vietnam; CN = People's Republic of China; HK = Hong Kong, China; ID = Indonesia; JP = Japan; KH = Cambodia; KR = Korea; LA = Lao PDR; MM = Myanmar; MY = Malaysia; PH = the Philippines; SG = Singapore; TH = Thailand; VN = Vietnam.

Figure 2.9. China, Vietnam, and Mexico: Unit Labor Cost
(US Dollars)



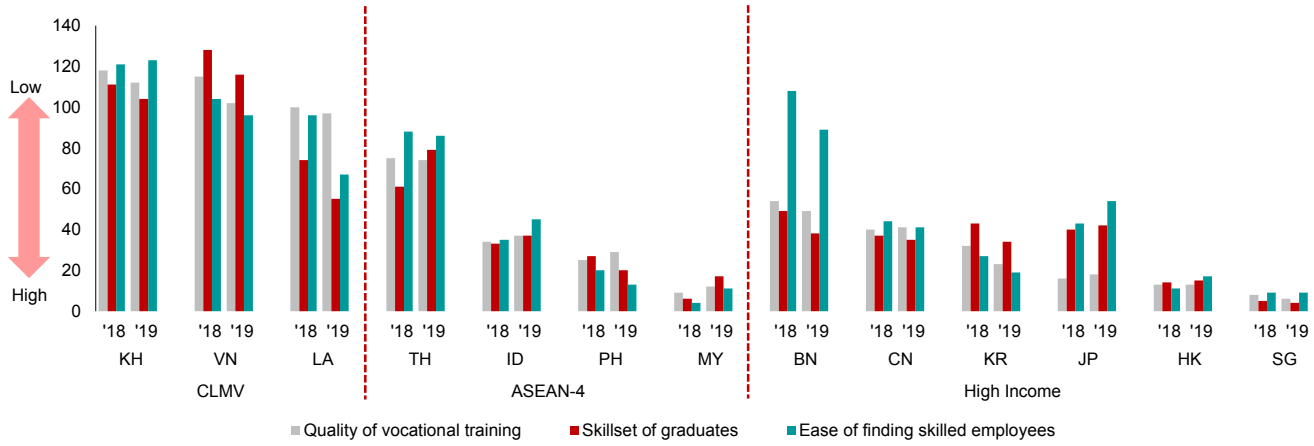
Source: Statista.
Note: The data refers to costs per hour in US dollars. CN = People's Republic of China; MX = Mexico; VN = Vietnam.

Figure 2.10. CLMV: Exports of Manufactured Goods by Component
(Percent of total manufactured goods exports)



Sources: World Integrated Trade Solution (WITS); and AMRO staff calculations.
Note: Garment products are the sum of product codes 61, 65, 83, 84, 85 (WITS).
CLMV = Cambodia, Lao PDR, Myanmar, and Vietnam.

Figure 2.11. ASEAN+3: Ranking of Quality of Vocational Training, Ease of Finding Skilled Employees, and Skillset of Graduates



Source: World Economic Forum.
Note: No data available for Myanmar. ASEAN-4 = Indonesia, Malaysia, the Philippines, and Thailand; BN = Brunei Darussalam; CLMV = Cambodia, Lao PDR, Myanmar, and Vietnam; CN = People's Republic of China; HK = Hong Kong, China; ID = Indonesia; JP = Japan; KH = Cambodia; KR = Korea; LA = Lao PDR; MY = Malaysia; PH = the Philippines; SG = Singapore; TH = Thailand; VN = Vietnam.

4IR—Implications for Manufacturing, Labor Market, and the Broader Economy

Manufacturing productivity, apart from being driven by further innovation, will benefit from the emergence and increasingly wide application of a number of key 4IR technologies. These include: (1) data, blockchain, computational power and connectivity; (2) analytics and intelligence; (3) human-machine interaction; and (4) advanced production methods (McKinsey & Company, 2019c). For example, the use of data analytics and AI will optimize the control and maintenance of machinery, and the identification and fixing of quality issues; 3D printing reduces the lead time for critical parts; and demand forecasting and inventory tracking are instrumental in adapting and customizing the speed of manufacturing. These trends toward automation and the use of robotics and AI technology in production suggest that even though value creation in manufacturing will continue to grow, the substitution of labor by machines and technology is likely to lead to a further trend decline of employment in the manufacturing sector (see Figure 2.5).

Provided that ASEAN+3 economies can learn how to harness—not necessarily originate—these cutting-edge technologies, the gains for growth and employment could be substantial. Indeed, a study by McKinsey & Company (2019d) suggests that the impact of new technologies for value creation in ASEAN economies could be in the range of USD 200 billion to USD 600 billion by the year 2025 (Figure 2.12).

At this juncture, the adoption of higher technology for manufacturing and other industries varies widely across countries and sectors in the ASEAN+3 region, although all countries recognize its importance for enhancing competitiveness and productivity of the economy. Indeed each of the ASEAN countries has come up with its own national strategic plan on how to leverage on digital technologies in the 4IR to improve the competitiveness of manufacturing and other industries in order to move up production value chains (Figure 2.13).

Malaysia's energy group Petronas and Indonesia's mining equipment maker PT Trakindo Utama, for instance, have started to digitize their operations. Both countries are also actively promoting digital services such as ride sharing and e-commerce, which leverage on the digital technology. More critically, Malaysia's growth strategy continues to reflect a forward-looking approach, supported by timely structural reforms, with strategies to prepare the country for embracing the "new economy" being pursued under its Industry4WRD Blueprint, National Internet of Things Strategic Roadmap, Digital Free Trade Zone initiative, and eCommerce Strategic Roadmap.

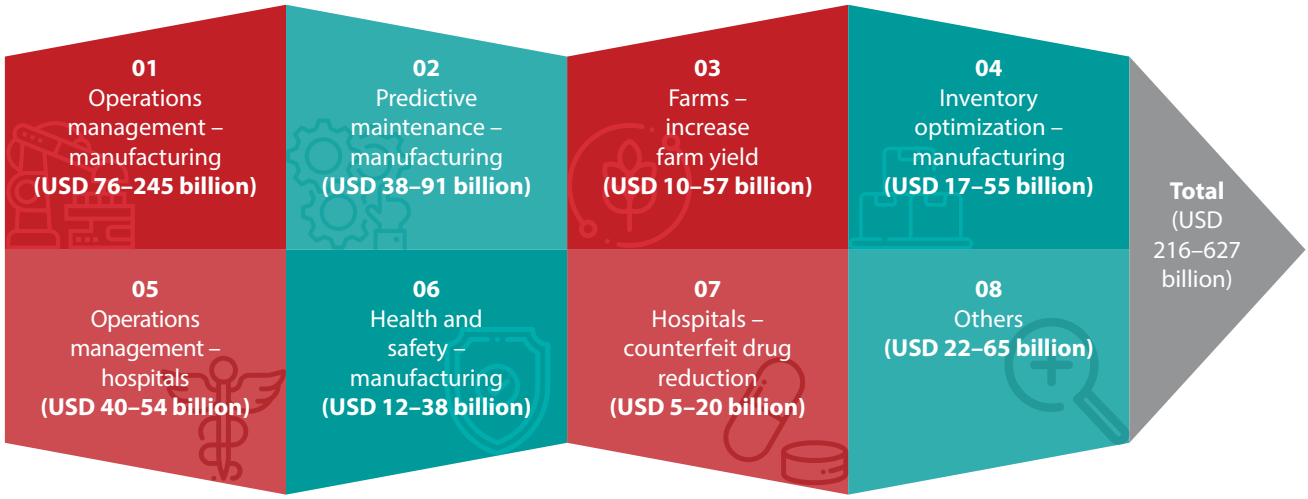
For Indonesia, the country's initiative to leverage on digital technologies in the 4IR, pursued under the ambit of its "Making Indonesia 4.0" project, involves focusing on five manufacturing sectors at the initial phase, and possibly further broadening of its scope. There is considerable diversity across the five industry sectors: food and beverage, textile and clothing, automotive, chemical, and electronics; and the development of all five entails concerted efforts to apply newer technologies to enhance productivity, capacity to meet domestic demand, and enhance export competitiveness.

In the Philippines, the authorities recognize that many of the jobs in the BPO industry, such as call centers, would be made redundant by robots over time. They are therefore preparing the industry to upgrade itself to knowledge process outsourcing. In Thailand, efforts to continue deepening the technological capacity of key industries such as automobiles have borne fruit. The country has also diversified into other areas such as niche tourism, which is now a key growth driver. In Vietnam, the strategy of attracting FDI from advanced economies such as Korea and Japan, to continue pushing the manufacturing sector forward as a key generator of growth and employment continues to be effective. It is also consistent with prevailing policy thinking based on the experiences of EMEs and developing countries (WEF, 2018).

New measures of revealed comparative advantage (RCA) suggest that the new economy ushered in by the digital transformation has provided a productivity premium to China and other ASEAN+3 economies (ADB, 2019). Technology adoption rates and digital gains are coming from a low base, and most ASEAN+3 economies are relatively unencumbered by legacy technology infrastructure. China's rise as an innovation and digital technology powerhouse, facilitated through strong indigenous entrepreneurship, massive investment in R&D, and continued attraction of inward FDI, has allowed it to compete head-to-head with advanced economies in a growing number of products and services. China accounted for about half of all patent applications worldwide in 2018, compared to about 20 percent for the United States in second place. RCA measures based on value-added exports, instead of gross exports, indicate China and ASEAN+3 economies are more competitive in both manufacturing and services than traditional RCA measures[7] might suggest (Figures 2.14 and 2.15).

[7] As in Balassa (1965).

Figure 2.12. Potential Economic Impact of New Technologies on ASEAN Economies



Source: McKinsey & Company (2019d).

Figure 2.13. Selected ASEAN+3 Economies: Diversifying Growth Drivers

Indonesia

- Indonesia is poised to realize its tourism potential, benefiting from initiatives such as the "10 New Balis", alongside enhanced connectivity and tourism-related infrastructure development.
- "Making Indonesia 4.0" project involves focusing on five manufacturing sectors at the initial phase, such as food and beverage, textile and clothing, automotive, chemical, and electronics. The development of all five entails concerted efforts to apply newer technologies to enhance productivity, capacity to meet domestic demand, and enhance export competitiveness.

Philippines

Three key areas are coming into focus:

- Institutional framework
- Human capital, and technology platforms
- For BPO/ KPO, the objective is to move from fairly basic and standardized products to much more advanced and high-VA areas.

Malaysia

Industry 4.0 strategy seeks to develop synergies between manufacturing, services, and digitalization. The aims are to be:

- A strategic partner for smart manufacturing,
- A key destination for high-technology industries, and
- A total solutions provider for ASEAN manufacturing.

Target sectors include mechanical engineering, aerospace and medical devices.

Thailand

- Besides striving to move up manufacturing value chains, Thailand is developing its travel and tourism sector.
- Its Industry 4.0 strategy adopts a two-pronged approach, the first limb based on opportunities emanating from changes in global conditions, and the second limb looking to maximize strengths which Thailand has already built up.

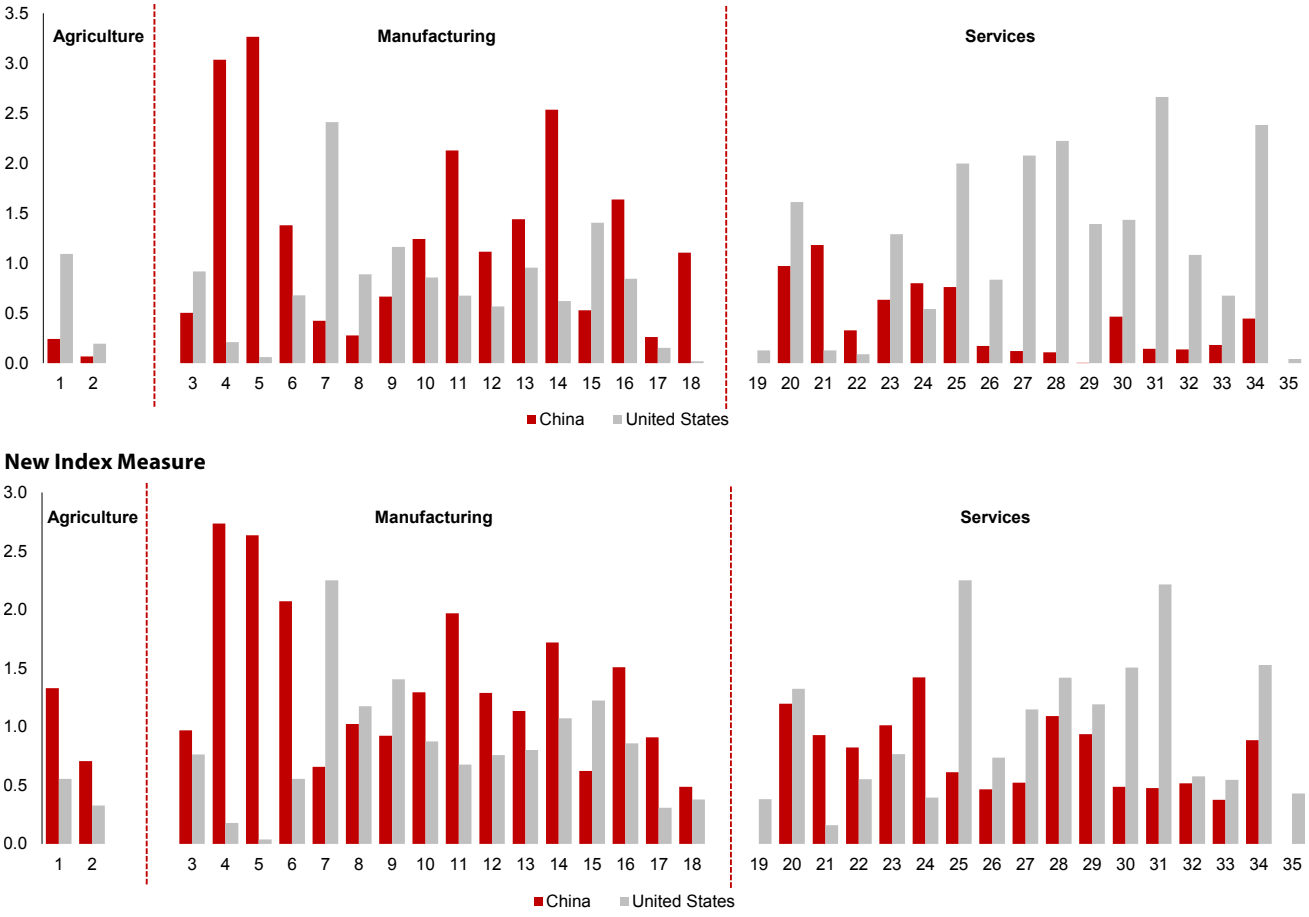
Vietnam

Its focus is on upgrading the manufacturing industry through domestic efforts and drawing more FDIs.

- Korea, for instance, is investing quite heavily in more advanced manufacturing in Vietnam, where the overall package of infrastructure/ labor force/ costs makes the country an attractive location for such manufacturing activities.

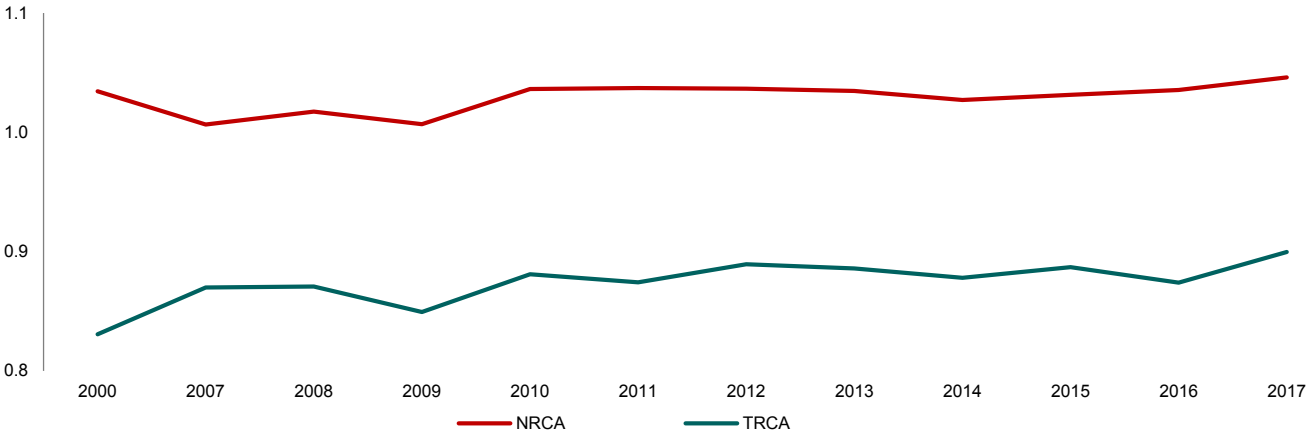
Source: AMRO staff.
Note: BPO = business process outsourcing; KPO = knowledge process outsourcing; VA = value-added.

Figure 2.14. Measures of Revealed Comparative Advantage, 2017



Sources: Asian Development Bank; Wang, Wei, and Zhu (2018); and AMRO staff calculations.
Note: The RCA (revealed comparative advantage) index calculates the relative advantage or disadvantage of a certain country in a certain class of goods or services as evidenced by trade flows. A country with a high RCA in a sector product is considered to have an export strength in that sector product. The higher the value of a country's RCA for a sector product, the higher its export strength therein. 1 = agriculture; 2= mining and quarrying; 3 = food, beverage, and tobacco; 4 = textiles; 5= leather products and footwear; 6 = wood; 7 = pulp and paper products; 8 = coke, refined petroleum; 9 = chemicals; 10 = rubber and plastics; 11 = other nonmetallic minerals; 12 = basic metals and fabricated metals; 13 = machinery; 14 = electrical and optical equipment; 15 = transport equipment; 16 = manufacturing; 17 = utilities; 18 = construction; 19 = motor vehicle sale and repair; 20 = wholesale trade; 21 = retail trade; 22 = hotels and restaurants; 23 = inland transport; 24 = water transport; 25 = air transport; 26 = other transportation; 27 = post and telecommunications; 28 = financial intermediation; 29 = real estate activities; 30 = other business activities; 31 = public administration; 32 = education; 33 = health and social work; 34 = other community work; 35 = private households with employed persons.

Figure 2.15. ASEAN+3: Comparative Advantage
(Index)



Sources: Asian Development Bank; Wang, Wei, and Zhu (2018); and AMRO staff calculations.
Note: NCRA = new revealed comparative advantage measure; TRCA = traditional revealed comparative advantage measure. The RCA (revealed comparative advantage) index calculates the relative advantage or disadvantage of a certain country in a certain class of goods or services as evidenced by trade flows. A country with a high RCA in a sector product is considered to have an export strength in that sector product. The higher the value of a country's RCA for a sector product, the higher its export strength therein.

III. A New Growth Paradigm: Factory Asia, Shopper Asia

Skills upgrading and the adoption of new technology (H-O 4.0 with Ricardian enhancements) have allowed ASEAN+3 economies at different stages of development to continuously enhance competitiveness and move up manufacturing value chains. This development model has served the region well and will continue to apply to some sectors and some countries in the region.

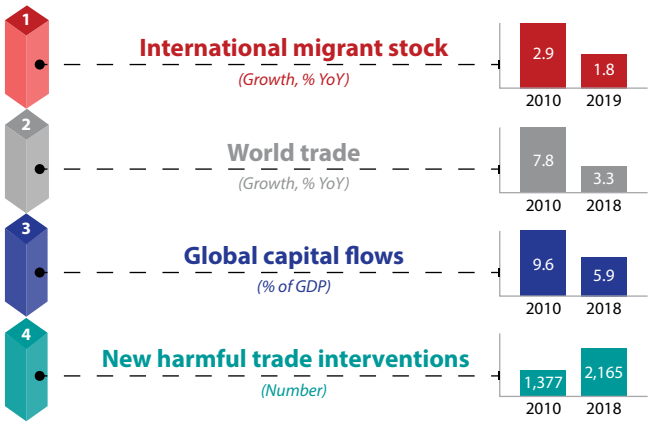
The next phase of growth in ASEAN+3 economies will feature new goods and services customized for Shopper Asia, as well as an upgraded Factory Asia to supply the old products more efficiently and cheaply. The combination of supply-side factors and demand drivers will propel the region to be an even more vibrant innovation and consumer hub. This will happen provided that the region can address several challenges, including those related to labor upgrading and mobility, unsupportive policies and regulations, and impediments to freer cross-border trade.

Deglobalization, Growth Rebalancing, and Regional Integration

Increasing traction for nationalist and the populist movements in the United States and Europe since the 2008 GFC and the 2010 European sovereign debt crisis, including the US-China trade tensions and policies taken by many governments to curb immigration, have prompted speculation about reversals in globalization, or "deglobalization" (Figure 2.16). The Bank for International Settlements (BIS) has acknowledged that globalization has slowed post-crisis, but insists that globalization is "not in retreat".[8] For emerging markets, openness to FDI has continued to increase even as trade globalization plateaued or declined slightly[9, 10] (Figure 2.17).

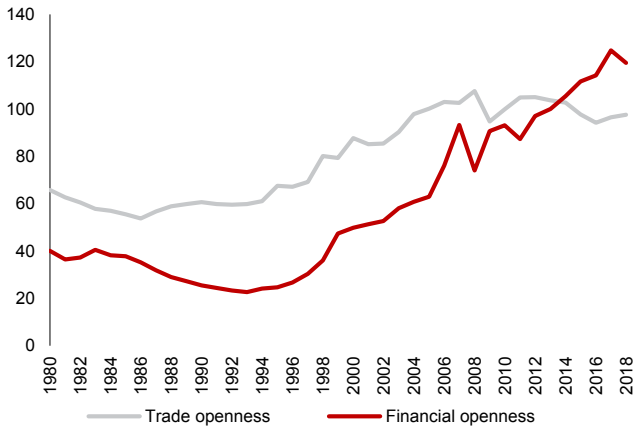
ASEAN+3 economies, while not immune to the backlash against globalization as reflected in some trading partners' pullback of trade with ASEAN+3 member economies (Figure 2.18), have continued to embrace a development strategy that is open to trade and foreign investments. First, *intra*-regional trade has increased over this period. The share of intra-regional trade in total ASEAN+3 trade rose from 32.7 percent in 1990, to 45.0 percent in 2000 and 46.6 percent in 2018 (Figure 2.19). Second, data on the VA contribution of exports to GDP tell a story of growth rebalancing within the region.

Figure 2.16. Selected Indicators of Globalization



Sources: World Trade Organization; United Nations Conference on Trade and Development; Global Trade Alert; and AMRO staff calculations.
Note: YoY = year-over-year.

Figure 2.17. Emerging Market Economies: Trade and Financial Openness
(Percent of GDP)



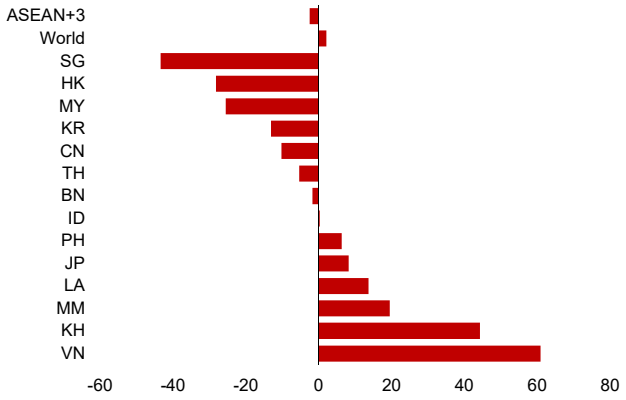
Sources: The World Bank; United Nations Conference on Trade and Development; and AMRO staff calculations.
Note: RoW = rest of the world

[8] Bank for International Settlements (2017).

[9] Bank for International Settlements (2018).

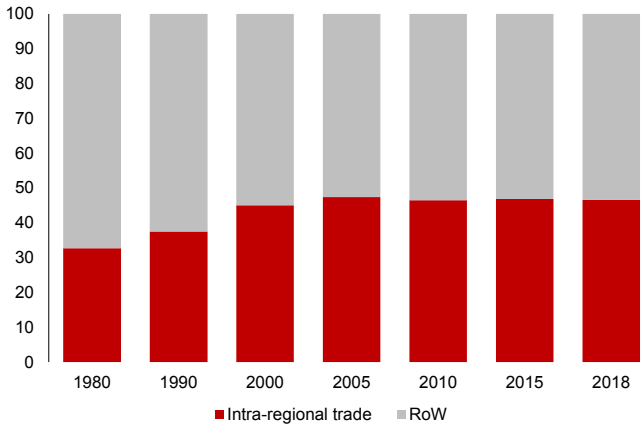
[10] The Bank for International Settlements' EMEs economies are Algeria, Argentina, Brazil, Chile, China, Colombia, Czech Republic, Hong Kong, Hungary, India, Indonesia, Israel, Korea, Malaysia, Mexico, Peru, the Philippines, Poland, Russia, Saudi Arabia, Singapore, South Africa, Thailand, Turkey, and United Arab Emirates. Trade openness is the sum of exports and imports of goods and services. Financial openness is the sum of FDI inward and outward stocks. The ratios are calculated using unweighted averages.

Figure 2.18. Change in Total Trade in Goods and Services as Share of GDP, 2010 versus 2018
(Percent of GDP)



Sources: The World Bank; and AMRO staff calculations.
Note: BN = Brunei Darussalam; CN = People's Republic of China; HK = Hong Kong, China; JP = Japan; ID = Indonesia; KH = Cambodia; KR = Korea; LA = Lao PDR; MM = Myanmar; MY = Malaysia; PH = the Philippines; SG = Singapore; TH = Thailand; VN = Vietnam.

Figure 2.19. ASEAN+3: Structure of Trade in Goods
(Percent of total trade in goods)



Sources: The World Bank; and AMRO staff calculations.
Note: RoW = rest of the world.

Applying the import-adjusted method for analyzing GDP components and their respective contributions to ASEAN+3 economies' growth through the years, the net contribution of external demand to GDP in the region has stayed at an average 20 percent since 2005[11] (Figure 2.20). However, there is great variation within the region.

In China and the ASEAN developing economies, which had traditionally depended on the United States and Europe for export markets, the global financial crisis and European sovereign debt crisis led to a collapse in external demand and a major rebalancing of growth toward domestic demand. The governments in these economies undertook expansionary macroeconomic policies to boost domestic investments, especially in infrastructure and real estate, and spur domestic consumption (Figure 2.21). The contribution of external demand to GDP in China, the ASEAN-4, and Vietnam fell sharply from 27.4 percent in 2005 to 19.4 percent in 2015 (Figure 2.22).[12] The tilt toward domestic demand is also reflected in a reduction in the share of domestically manufactured goods that were bound for extra-regional exports from China, the ASEAN-4, and Vietnam over the period, while the share of intra-regional exports increased significantly (Figures 2.23 and 2.24). Particularly notable is the reduction in the share of ASEAN exports to the United States and Europe from 37 to 27 percent while the share of exports to the ASEAN+3 region rose from 35 to 40 percent.

In the more mature high-income ASEAN+3 economies with slower growth rates, aging populations, and relatively saturated consumer markets, the contribution of external demand to GDP was relatively stable in the 10 years from 2005 to 2015. In Korea, the contribution of exports to GDP increased from 2005 to 2011 but declined from 2011 to 2015 in the aftermath of the global financial crisis and European sovereign debt crisis. Similarly, in Hong Kong and Singapore, the two major financial and business hubs, external demand as a share of GDP declined slightly from 2005 to 2015 but remained relatively high, as a share of GDP, reflecting the openness of these two economies (Figure 2.20).

Three key factors will help ASEAN+3 economies develop their competitive advantage in the new economy: an increasingly connected and well-diversified region, trade and investment-friendly government policies, and a history of economic resilience and adaptability. The combination of supply-side factors and demand drivers will propel the region as a vibrant and dynamic innovation and consumer hub as the nature of globalization changes.

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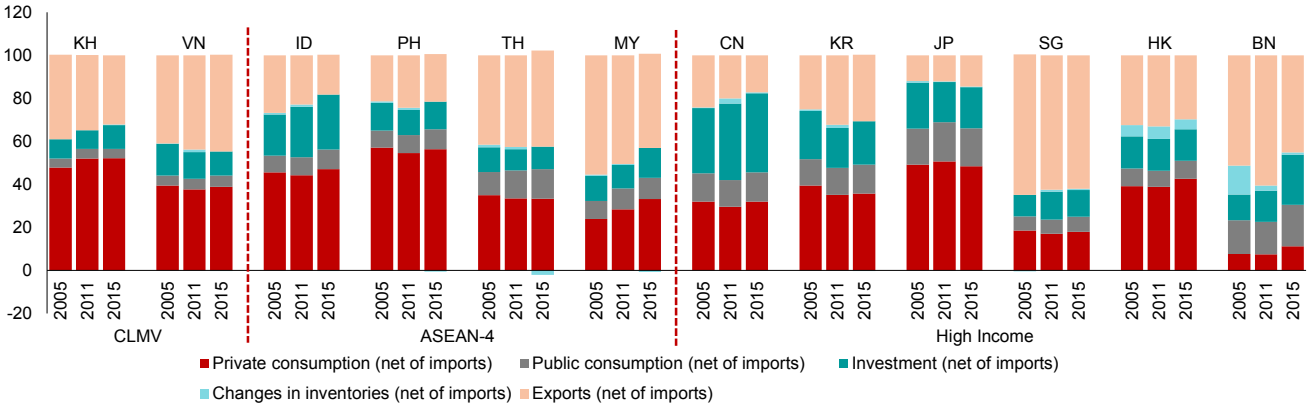
[11] See discussion on the conventional vs. the import-adjusted methods to national income accounting in AMRO (2019a), Chapter 1, p. 8.

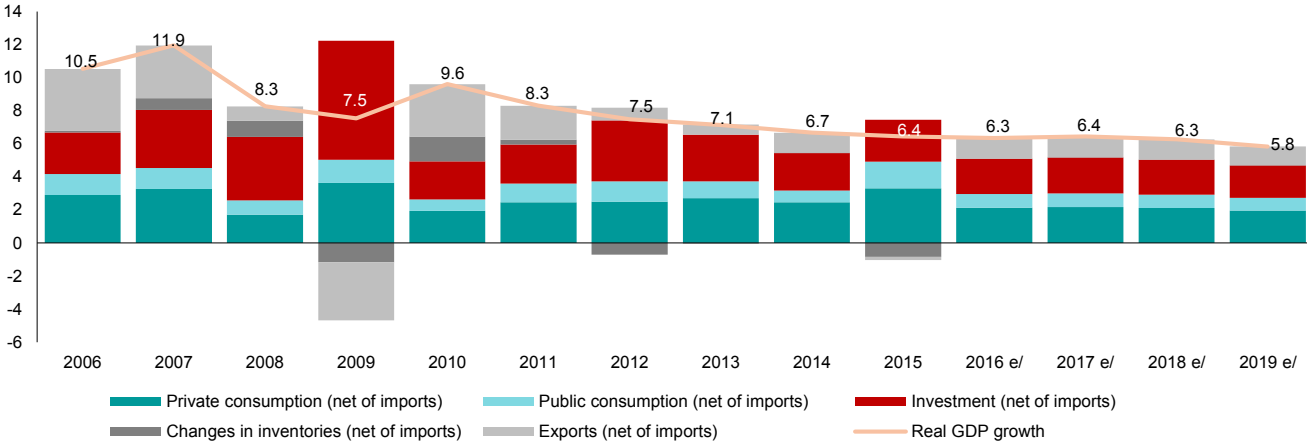
[12] The decline is especially stark in China (from 24.7 percent to 17.3 percent), while the contribution of external demand in the ASEAN-4 and Vietnam fell more modestly, from 35.9 percent in 2005 to 30.3 percent in 2015.

Figure 2.20. ASEAN+3: Composition of GDP, Import-Adjusted Method
(Percent of GDP)



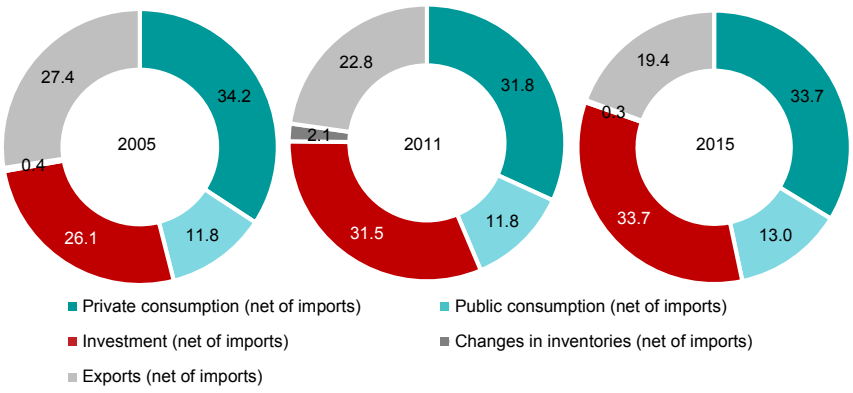
Sources: Organization for Economic Co-operation and Development (OECD); and AMRO staff calculations.
Notes: OECD Input-Output Tables are only available from 2005 to 2015. Data for Lao PDR and Myanmar are not available. ASEAN-4 = Indonesia, Malaysia, the Philippines, and Thailand; BN = Brunei Darussalam; CLMV = Cambodia, Lao PDR, Myanmar, and Vietnam; CN = People's Republic of China; HK = Hong Kong, China; ID = Indonesia; JP = Japan; KH = Cambodia; KR = Korea; MY = Malaysia; PH = the Philippines; SG = Singapore; TH = Thailand; VN = Vietnam.

Figure 2.21. ASEAN-4, China, and Vietnam: Contributions to GDP Growth, Import-Adjusted Method
(Percentage point)



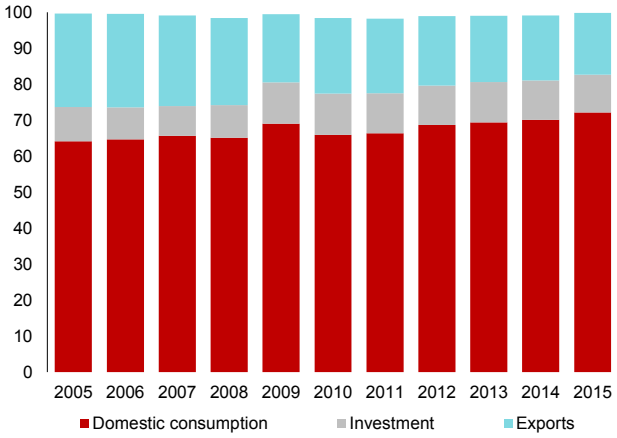
Sources: Organization for Economic Co-operation and Development; and AMRO staff calculations.
Note: OECD Input-Output Tables are only available from 2005 to 2015. Therefore, 2016–19 estimates of each component are based on 2015 shares. Real GPD growth is actual data.
ASEAN-4 = Indonesia, Malaysia, the Philippines, and Thailand.

Figure 2.22. ASEAN-4, China, and Vietnam: Shares of GDP Components, Import-Adjusted Method
(Percent of GDP)



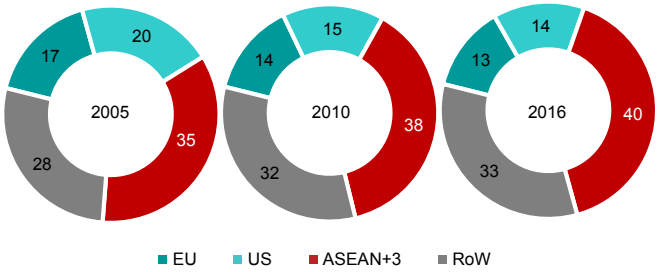
Sources: Organization for Economic Co-operation and Development; and AMRO staff calculations.
Note: ASEAN-4 = Indonesia, Malaysia, the Philippines, and Thailand.

Figure 2.23. ASEAN-4, China, and Vietnam: Shares of Domestically Manufactured Goods for Domestic Demand and for Exports
(Percent of total output)



Sources: Organization for Economic Co-operation and Development; and AMRO staff calculations.
Note: ASEAN-4 = Indonesia, Malaysia, the Philippines, and Thailand.

Figure 2.24. ASEAN: Shares of Value-Added Exports
(Percent)



Sources: Organization for Economic Co-operation and Development; and AMRO staff calculations.
Note: ASEAN's value-added exports exclude Lao PDR and Myanmar due to data constraints. EU = European Union. US = United States; RoW = rest of the world.

Factory Asia: Deepening Intra-Regional Production and Trade Network

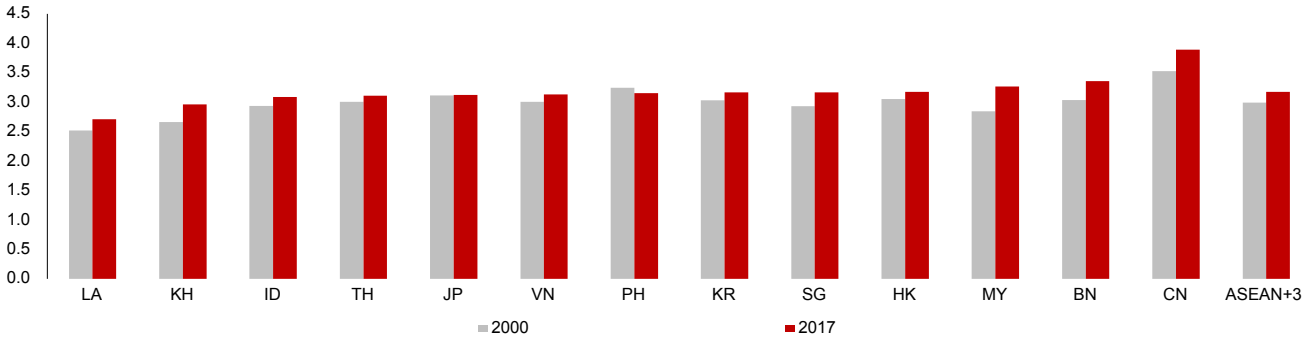
Factory Asia embodies the region's comparative advantage in production, underpinned by the rise of China and its role in global and regional value networks. Exported manufactures from ASEAN+3 countries now collectively account for 36.4 percent of world exports in 2018, from less than 15 percent in 1990. The production (and value) network in the region has become more complex and intertwined. Estimates by the ADB and AMRO suggest that the number of production stages (from primary inputs to final products) has, without exception, increased in ASEAN+3 economies from 2000 to 2017 (Figure 2.25).

In China, the number of in-between stages has increased by an average 10.3 percent between 2000 and 2017. China is known for its integrated supply chains and hard-to-match production ecosystems, with a high concentration of players across low-, mid-, and high-value products. Even so, more and more lower-end labor-intensive activities are being outsourced or relocated to lower labor cost CLMV economies, thus lengthening the supply chains for overall efficiency gains. The domestic VA content of the region's goods exports has slightly declined since the 2000s, from 82.4 percent to around 81.8 percent (Figure 2.26).

The lengthening of production stages within the region is also consistent with a shift in the composition of ASEAN+3 imports, from final goods to intermediate goods. The region's share of world imports in intermediate goods has outpaced its share in final goods (Figure 2.27).

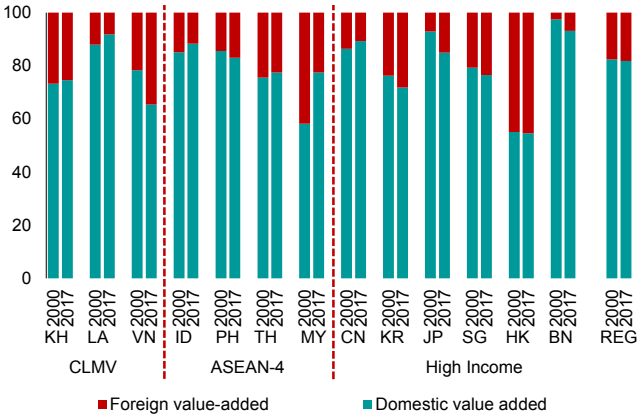
Factory Asia, which increasingly resembles a services hub, is much more involved in value creation through R&D, product designs, and customizing service experience. The digital economy offers fresh value propositions that play to the region's competitive advantage as technological capability and skill levels improve. China is an increasingly important node in the GVNs for services. AMRO's estimates of on the interconnectedness of services exports using ADB input-output tables indicate that China's weight, and the extent of its integration into the global services network, have

Figure 2.25. Average Production Lengths in Global Value Chains
(Number of stages)



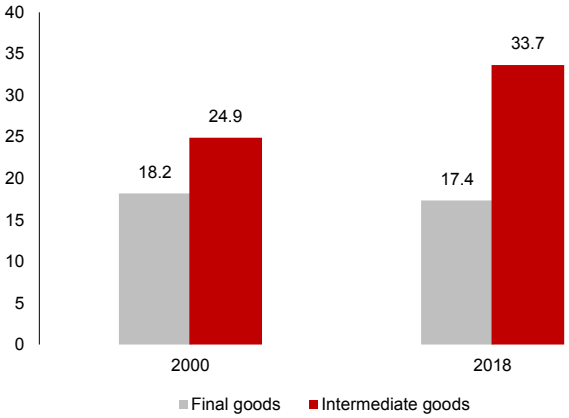
Sources: Asian Development Bank; and AMRO staff calculations.
Notes: Length of production is measured by the average number of production stages that take place between the primary inputs from one sector to the final products in another sector (which could be within the same country, or with another country). BN = Brunei Darussalam; CN = People's Republic of China; HK = Hong Kong, China; ID = Indonesia; JP = Japan; KH = Cambodia; KR = Korea; LA = Lao PDR; MY = Malaysia; PH = the Philippines; SG = Singapore; TH = Thailand; VN = Vietnam.

Figure 2.26. ASEAN+3: Value Added in Goods Exports
(Percent of total exports)



Sources: Asian Development Bank; and AMRO staff calculations.
Note: ASEAN-4 = Indonesia, Malaysia, the Philippines, and Thailand; BN = Brunei Darussalam; CLMV = Cambodia, Lao PDR, Myanmar, and Vietnam; CN = People's Republic of China; HK = Hong Kong, China; ID = Indonesia; JP = Japan; KH = Cambodia; KR = Korea; LA = Lao PDR; MY = Malaysia; PH = the Philippines; REG = regional; SG = Singapore; TH = Thailand; VN = Vietnam.

Figure 2.27. ASEAN+3: Imports by Use
(Percent of world imports of product category)

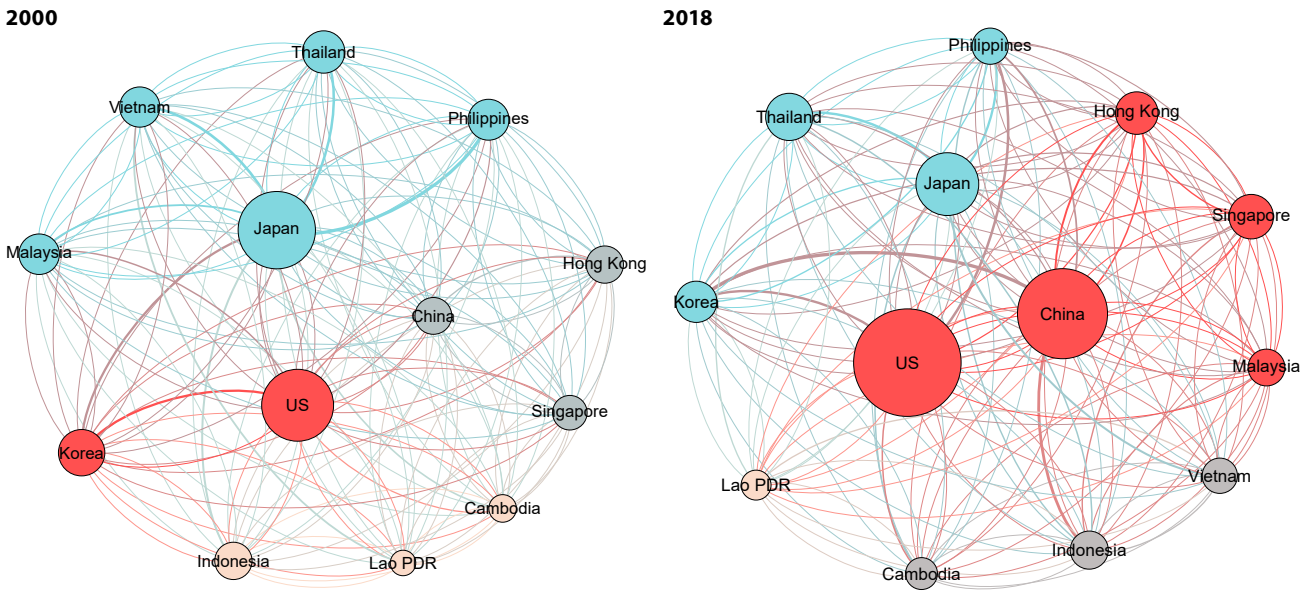


Sources: Asian Development Bank; Wang, Wei, and Zhu (2017); and AMRO staff calculations.

increased significantly since 2000. China's services exports have become more integrated not just within the ASEAN+3 region, especially with Hong Kong and Singapore, but also the United States (Figure 2.28).

Thailand's automotive industry is an excellent example of how technology and capacity upgrading has enabled an ASEAN country to be part of a more competitive Factory Asia. Developed and broadened over decades, Thailand first offered its initially low-cost worker as labor inputs for inward FDI by Japan's manufacturers. Subsequently, the more highly skilled and adaptable segments of its workforce absorbed technological knowhow from the Japanese; more and more home-grown Thai companies developed capacity to manufacture parts and components; and Thailand gradually developed much deeper capacity across a broad automotive ecosystem. At this juncture, Thailand's automotive industry is priming itself to transition more fully to "new economy" production—including having a wide range of services featuring in almost all automotive components and stages of production. This effort is timely as modern automotive value chains are seeing an increasingly wide range of services feature in almost all components and stages of production. AMRO staff estimates of automotive services exports for ASEAN economies suggest that Thailand has indeed become one of the most important hubs that provides automotive services within the ASEAN region, with the domestic value add of automotive services exports by Thailand being nearly twice the total of other ASEAN countries combined. Looking ahead, there is potential for a more substantive (sub) regional production network to develop, with Thailand's automotive industry currently most connected with that of Indonesia and Vietnam (Box 2.2).

Figure 2.28. China's Integration into Global Value Networks for Service Exports



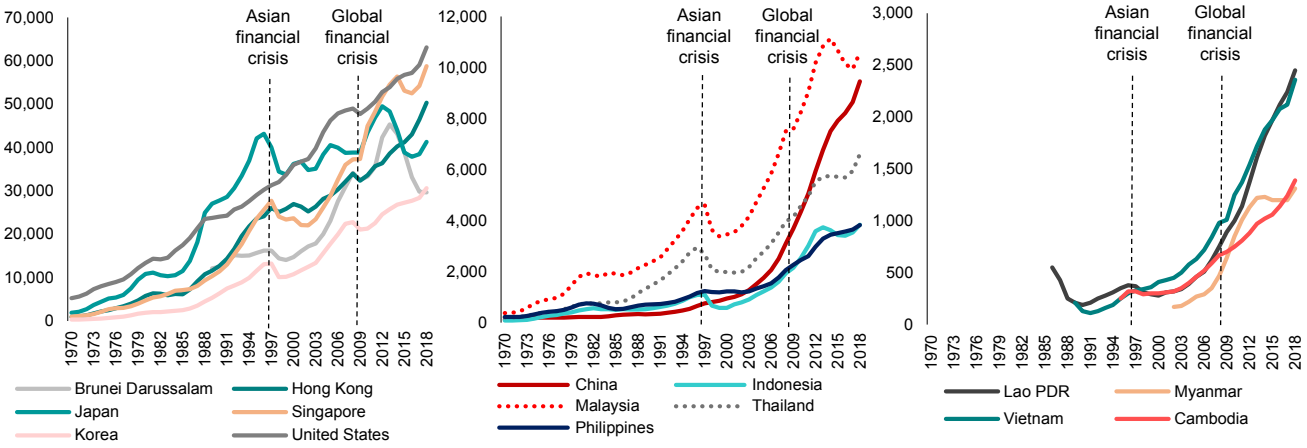
Sources: Asian Development Bank Multi-Regional Input-Output Tables; and AMRO staff calculations.
Note: The node size represents the weighted degree of the economy in the value chain. The node color represents the community to which the economy belongs. Community is detected using methodology outlined by Blondel and others 2008. The arrow thickness is scaled according to the volume of trade in value added of service export. Services include all business and personal services.

Shopper Asia: From Rags to Riches

As noted in the previous section, ASEAN+3 economies have been successful in using the manufacturing-for-exports strategy to industrialize and move up the production value chain and income ladder. Most of them started the industrialization process as poor agrarian economies with per capita income ranging from USD 200 to USD 500 per annum. They have since grown into middle- to high-income economies (Figure 2.29). The first wave of economies (Korea, Taiwan Province of China, Singapore, and Hong Kong), which started the industrialization in the 1960s–70s, have moved up the income ladder to become high-income economies. Their per capita incomes have risen from USD 400–USD 1,800 in 1960s–70s to USD 30,000–USD 60,000 in 2018. The second wave of economies from the ASEAN region (Indonesia, Malaysia, the Philippines, and Thailand) started their industrialization in the 1970–80s, and they have since become middle-income economies with per capita income ranging from USD 3,500 to USD 10,500. China followed shortly after in the 1980s–90s, and it has grown so rapidly that its per capita income is already at USD 10,000. The CLMV countries started later in the 1990s–2000s, and they have also been catching up. Their per capita incomes have risen rapidly and are now in the lower middle-income range of USD 1,300 to USD 2,500 (Figure 2.29). The combined GDP of the ASEAN+3 countries has risen from 11.7 percent of global GDP in 1970 to 27.4 percent in 2018.

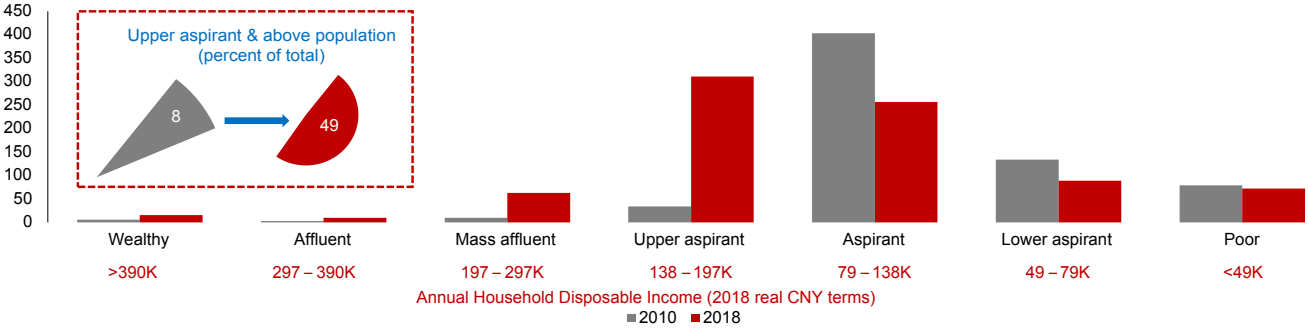
A direct result of such phenomenal growth catch-up is that the ASEAN+3 region is set to drive about half the increase of global middle-class expenditure up to 2030 (AMRO, 2018b), with the bulk of this accounted for by the Chinese population's increasingly affluent households (Figure 2.30). Indeed, Chinese consumer spending accounted for a hefty 31 percent of global household consumption growth between 2010 and 2017. Data and surveys (McKinsey & Company, 2019b, 2020) suggest that both new entrants to the middle-class ranks and those who are moving up within the middle class have been increasing their consumption expenditure buoyantly year after year. A case in point is total sales on all platforms for the 2019 Double 11 online sales hitting a record CNY 410 billion (USD 59.3 billion), up 31 percent from 2018, compared to the US *online* Thanksgiving Black Friday sales of USD 7.4 billion, itself a record. Another case in point is China's demand for luxury goods being anticipated to double over the next 5 years, from about CNY 770 billion to CNY 1.23 trillion—accounting for some 40 percent of the global market (Figure 2.31).

Figure 2.29. Gross National Income Per Capita, Atlas Method
(US dollars)



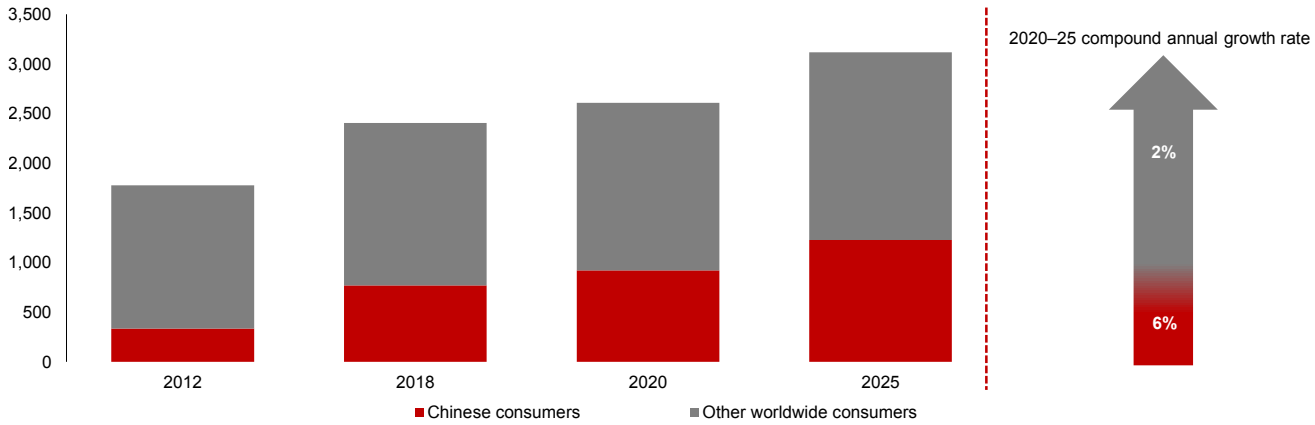
Source: The World Bank.

Figure 2.30. China: Urban Population and Annual Household Disposable Income
(Millions of persons)



Sources: McKinsey & Company (2019g); and AMRO staff.
Note: K = thousands of Chinese renminbi.

Figure 2.31. China and the Rest of the World: Spending on Luxury Goods
(Billions of Chinese renminbi)



Source: McKinsey & Company (2019b).

Toward a New Growth Paradigm—Factory Asia Serving Shopper Asia

While Factory Asia focuses on optimizing production across the region, the digital economy creates value for Shopper Asia by expanding and customizing goods and services to meet the demand of increasingly discerning consumers. In particular, the explosion of services offers a fresh growth strategy predicated on analyzing, shaping, and enticing Shopper Asia with new and different experiences. A prime example is the booming travel and tourism sector, where intra-regional demand has propelled the sector to become key drivers of growth for several ASEAN+3 countries including Japan, Korea, Thailand, and Vietnam. The tourism sector (Box 2.3) is also a good example of how in the new economy, product differentiation will increasingly be achieved by bundling customized services with physical products to suit "micro-fine" preferences. The region's rapid income growth, the underdevelopment of the tourism industry in many countries, and the sharp increase in infrastructure investment in several countries, are factors pointing to the high potential for intra-regional tourism to take off. The benefits for growth and employment can be large, as studies have highlighted the extensive linkages that tourism has with other sectors of the economy.

To spur the development of tourism, the comprehensive ASEAN Tourism Strategic Plan 2016–2026 seeks to build on the earlier Strategic Plan 2011–2015, by addressing several areas including: single destination marketing, quality standards, human resource development, connectivity, investment, community participation, safety and security, and natural and cultural heritage conservation. The targets set for 2025 are realistic and achievable: GDP contribution increasing from 12 percent to 15 percent, share of employment rising from 3.7 percent to 7 percent, and per capita spending by international tourists increasing from USD 877 to USD 1,500.

More broadly, ASEAN+3 economies account for a rising share of the global trade in services, from 13.0 percent in 2000, to 16.4 percent in 2018 (Figure 2.32). Estimates of the concentration index for ASEAN+3 economies' exports indicate that the degree of product differentiation within the region's traded goods remains lower than that of developed economies (Figure 2.33). This gap will diminish as business models that traditionally aim for mass production for export markets outside the region, evolve to meet the demand for more tailored product offerings from within the region.

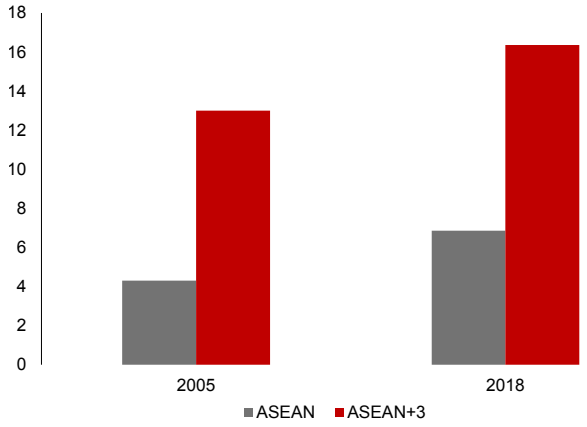
The customer-centric and user-oriented approach, and personalization of services that the new economy demands will increasingly be influenced and shaped by final demand from Asian consumers, and their cultural preferences. In the context of the global value network, as the economic center of gravity shifts to Asia, the geographical distance between first-stage production and end-use consumption will shorten even as the number of production stages increases.

Factory Asia's physical and cultural proximity to Shopper Asia in an increasingly well-connected region, trade and investment-friendly policies, and a history of economic resilience and adaptability, are three key factors that will help ASEAN+3 economies develop their competitive advantage in the new economy.

The new growth paradigm of Factory Asia serving Shopper Asia also involves the rapid development of certain sectors that enables the production capacity of the former to meet the pent-up demands of the latter. This is the story of how the upgrading of Factory Asia and the rise in incomes it has brought about, is now directly strengthening the region's ability to generate demand from within as Shopper Asia. A good example is the logistics sector, which: (1) has adapted rapidly to meet the needs of just-in-time production and delivery of goods; (2) is on the cusp of leveraging on new technologies and big data for logistics firms to provide customized services to manufacturers and retailers to reach end-consumers; and (3) has experienced the attendant productivity gains creating potential for feedback into healthy wage gains for workers in this sector

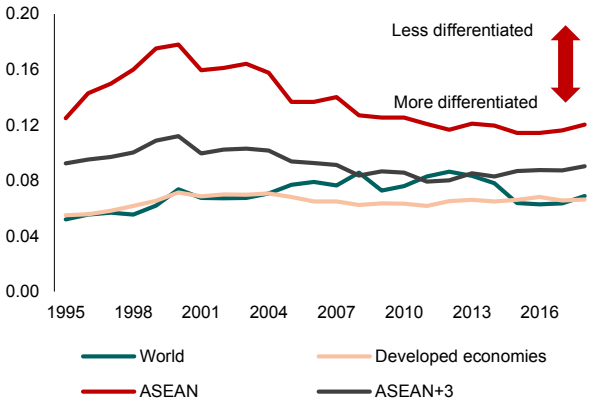
(Box 2.4). The logistics sector will play a key role in the "new economy": for just-in-time production and delivery of goods. The global manufacturing industry has expanded massively from about USD 6.1 trillion in 2000 to about USD 13.2 trillion in 2018, driven in large part by stronger demand from the expanding middle class in rapidly growing EMEs, not least China within the ASEAN+3 region. Alongside that, global e-commerce has grown markedly over the last decade, expanding from USD 495 billion in 2005 to USD 1,915 billion in 2016, according to estimates by McKinsey & Company (2017). The conventional logistics value chain is not highly automated, but new technologies are creating potential for automation and productivity gains. Recognizing this potential, ASEAN countries, including Malaysia, Thailand, the Philippines, and Vietnam, are putting considerable effort into developing their logistics sector.

Figure 2.32. ASEAN+3: Trade in Services
(Percent of world trade in services)



Sources: United Nations Conference on Trade and Development; and AMRO staff calculations.

Figure 2.33. Degree of Product Differentiation: Exports
(Index)



Sources: United Nations Conference on Trade and Development; and AMRO staff calculations.
Note: The concentration index measures the extent to which a large share of exports is accounted for by a small number of product groups. The index has a value of 1 when an economy exports only one group of products and a value of 0 if all product groups are equally represented.

The Gig Economy: Using Digital Technology to Create Value by Tapping on Latent Resources

The gig economy, a product of the digital economy, creates value and contributes to growth by tapping previously undiscovered, unutilized or underutilized skills, time, and physical assets (Box 2.5). The gig economy has spawned an ecosystem of freelancers and independent contractors—from software code writers and web developers, to ride-sharing and food delivery drivers—who would otherwise be unemployed or underemployed, and facilitated the sharing of residential and office space, cars, clothes and household items by matching (business or private) owners of these resources with demand for their (temporary) use.

China's sharing economy was valued at more than USD 400 billion in 2018, and is growing at double-digit rates. Ride-hailing companies Gojek and Grab added an estimated USD 6.6 billion to Indonesia's GDP (Ramizo, 2019). Airbnb, on-demand driving, and other gig-economy jobs provide an important source of income for households in the region, essentially monetizing the informal sector and often staving off unemployment. WeWork has helped redefine not only the co-working trend, but also the real estate landscape–by transforming its purchased (or rented) real estate into smaller and shareable areas, start-ups and smaller businesses are able to take advantage of the lower rental price that arises from the sharing of office space and equipment.

The gig economy poses challenges that ASEAN+3 policymakers need to address on two fronts: gaps in the policy or regulatory framework that prevent companies and workers from realizing the full benefits; and the negative impact of gig-economy jobs on workers' welfare and the social fabric. The low barriers to entry and flat hierarchy for employment in the gig economy discourage skills upgrading, and workers may not have access to the safeguards and pooled benefits that full-time employees take for granted—minimum wages, health benefits, and insurance coverage.

The gig economy has important implications for the future of employment. It allows businesses to meet erratic or unpredictable demand for additional labor without committing to the costs of a higher headcount and provides some level of flexibility and autonomy to individuals to vary their work-life balance. There are legitimate concerns that the gig economy tilts the balance of power in favor of big businesses and employers—who are replacing full-time employees with contract workers with little or no security or benefits. In other words, the gig economy is chipping away at middle-class job security.

The way forward for equitable and inclusive growth lies not in suppressing innovation or having policymakers micro-manage business models, but in identifying and addressing market failures or gaps in regulatory oversight specific to the gig economy. The gig economy offers good and bad jobs, as do traditional corporations, and unethical practices that exploit workers are not uncommon even in the formal sector. Labor laws and policy guidelines have evolved in past decades to provide safeguards to workers and promote fair employment terms. The current framework may not be relevant or suitable in the gig economy and should be reviewed and redesigned—in order to meet the needs of the workers in the gig economy.

Finally, to fully realize ASEAN+3 countries' gains from participating in "new economy", manufacturing activities and services, key features of the enablers of trade must be updated from time to time, so that all can work well within cross-border value chains. The challenge is to preserve the key features of a global trading system which has largely worked well but update some rules to reflect the realities of the "new economy" and thereby facilitate freer trade in goods and services (WEF and International Center for Trade and Sustainable Development, 2015).

A good example is the need to redesign the framework for rules of origin (ROOs) in international trade. In practice, "origin" is often determined by the location of manufacture and/or assembly (Escaith and Marti, 2016); yet, such an approach is fraught with difficulty in normal times, and can become highly unsatisfactory or even contentious in the current climate of heightened trade protectionist tendencies. This speaks to one of the key overarching themes of this thematic chapter, namely the disconnect between increasing global interconnectedness on one hand, and the heightening of inward-looking tendencies on the other. As the "new economy" involves rapid technological advancement and services will become more tradable end-products and a more critical driver of manufacturing, it may be useful to update some key rules governing cross-border trade, such as ROOs (Box 2.6). In particular, two elements of the new economy complicate the application (and applicability) of ROOs: the rising share of services in trade and production networks; and role of technology and intangible assets (e.g., patents, branding, franchises) in creating and delivering value to the end-consumer. The automobile industry illustrates the challenges of designing ROOs as its production network evolves to capture new technology, new services and newly tradable services. The business model increasingly involves a wide range of services such as R&D and design functions which are being carried out in advanced economies while the more labor-intensive production functions are undertaken in lower-cost economies. The travel and tourism sector is another example. Travel and tourism services in the new economy will involve many more specialized segments: air and land transport, food and beverage, consumer durables, experiential service, and payment systems. And the "residency" of value creation is dispersed in the new economy as technology allows the requisite expertise to be fed across borders, from anywhere in the world, into the travel and tourism sector of a given country.

IV. Challenges for Sustainable and Equitable Growth in the New Economy

Rapid growth and development in ASEAN+3 economies bear testimony to the benefits of globalization and increased economic and financial integration. The region boasts two of the three largest economies in the world, and households across the region have experienced remarkable improvements in standard of living within the span of one to two generations.

Factory Asia is built on the evolving comparative advantage of ASEAN+3 countries at different stages of development in a globalized world. Factory Asia enhances value for the region by leveraging on new digital technology to optimize production and establish a formidable value network for both Asia and the world. Shopper Asia is driven by the rapid emergence and sheer number of affluent and middle-class consumers in the region. The digital economy creates value for Shopper Asia by enabling and offering new services and fresh experiences and turning new-found wants and needs into expanded demand. The geographical and cultural proximity of Factory Asia to Shopper Asia gives the region added advantage in anticipating, shaping, and customizing supply to meet the demands of the world's fastest-growing consumer markets.

While overall net gains from globalization and enhanced competition were never in serious dispute, there is growing disquiet about the inclusiveness of the new economy. The debate around the world, including in ASEAN+3 economies has—for some time now—moved

to: who benefits from these gains?[13] What is good for the global economy—is that necessarily good for all nations? What is good for the people—will growth in the new economy trickle down to all or most households? Or will quantum jumps in technology (and discontinuity in relevant skills) and relentless globalization (and wage arbitrage) lead to immiserizing growth for some or even many?

In the context of the flying geese model, the development challenge facing ASEAN+3 economies is how to sustain growth and improve standards of living for countries already in the formation, alongside faster-growing economies raring to get ahead. Will the leaders of the pack continue to stay ahead by innovating and forging new value networks, or are mature economies vulnerable to stagnation, or worse, losing their pole positions? Are smaller economies in the region disadvantaged by their lack of scale on the production side and demand side (WEF and A.T. Kearney, 2018)? Can today's middle-income "sandwich" economies close the technology and skills gap with their more developed neighbors even as emerging economies catch up, or are they at risk of being stuck in the middle-income trap? How long can latecomers in the region pursue a single-minded export strategy before manufacturing comparative advantage gives way to services in the new economy?

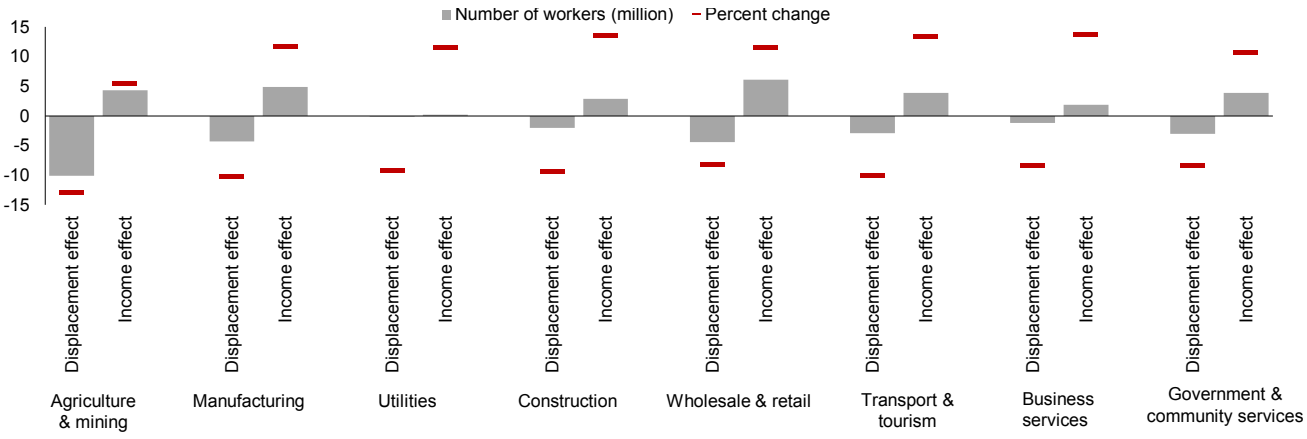
Added to the development concerns at the macro level are the distributional implications and socioeconomic consequences of the new economy on individuals and households. While technology has been credited with improving efficiency and productivity, spurring demand, and generating employment, its impact on the job market, especially middle management jobs—the cornerstone of middle-class families—has been more uneven, even disruptive in some cases. First, displaced workers may not be able to move so easily into new economy industries due to the skills mismatch. Second, jobs in the new economy are often associated with work flexibility and low overheads, a definite plus for growing industries—but not for job security, benefits, and career progression.[14] There is also a sense that economic rent in the new economy—value in excess of the minimum that factors of production are prepared to accept to remain employed—accrues to a few, and rarely to workers.

A recent Oxford Economics–Cisco study (2018) estimates that between 2018 and 2028, technological advancement and economic growth will create about 26 million higher-paying jobs across several sectors, led by wholesale and retail, manufacturing, construction, and transport, in the ASEAN-6 (Indonesia, Malaysia, Thailand, the Philippines, Vietnam, and Singapore). This will occur even as the jobs of some 28 million workers (including 9.9 million in agriculture) will be made redundant (Figure 2.34).

The way forward for ASEAN+3 economies is not to turn back the clock on globalization or put barriers in the way of technology adoption. Countries in the region have two distinct advantages over advanced economies. First, the labor force is more youthful and potentially more tech-savvy and adaptable. The region has the greatest concentration of millennials—China, followed by Indonesia, the Philippines, and Vietnam (Box 2.5). Second, social welfare—and public expectations of government-funded financial safety nets for the elderly and the unemployed—start from a lower base.

The region's resilience in the face of past adversity—during and after the Asian financial crisis—and transformation

Figure 2.34. ASEAN-6: Job Creation and Job Destruction, 2018–28



Source: Oxford Economics–Cisco (2018).

[13] Spence (2020) highlighted that during the 30–40 years after WWII, "labor income as a fraction of total income was growing, measured income inequality was declining, and a broad-based middle class was emerging." Many failed to foresee and anticipate the problems related to the widening disparities in income, wealth and opportunity across advanced and developing economies.

[14] Ride-hailing apps are reported to have depressed wages of incumbent taxi drivers by 10–30 percent. See Box 2.5 and discussion in a later section.

from agrarian economies to manufacturing and urban cities, bode well for the countries' resourcefulness in embracing technology and leveraging on the new economy for future growth. However, government programs and safety nets may be needed on top of traditional family support to address the impact of economic and social dislocation of the 4IR and new economy on individuals and households. Governments may also need to assist the private sector, especially SMEs, to manage challenges related to disruptions to traditional business models and leverage on new technologies to reinvent themselves in the new economy (Global Partnership for Financial Inclusion, 2017).

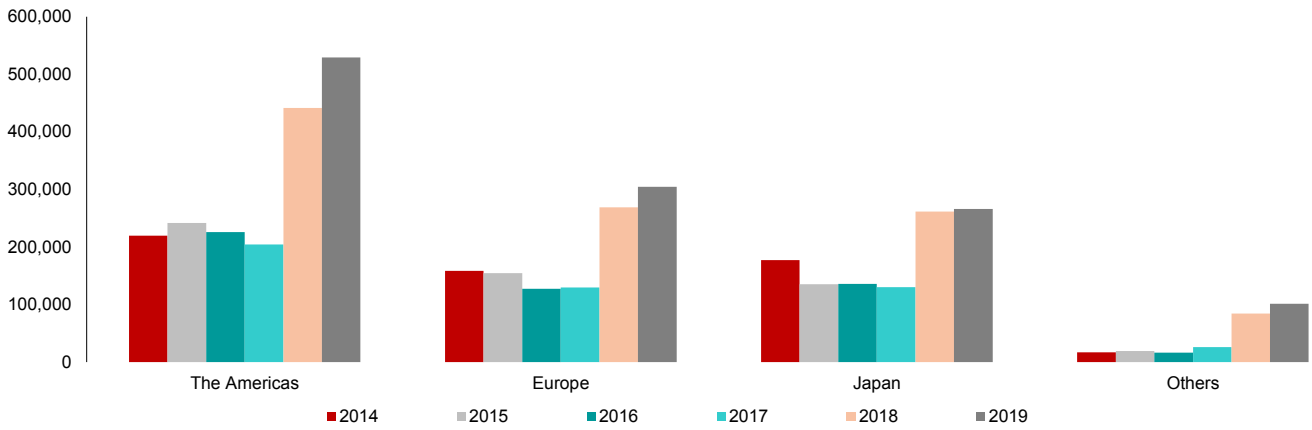
Avoiding Middle-Income Stagnation: A Differentiated Approach for ASEAN+3 Economies

ASEAN+3 economies have fared better than most in sustaining growth and staying relevant in the new economy. They have had some success in enhancing competitiveness in traditional industries and manufacturing exports while forging new pathways in new services and the digital economy. Car manufacturing, electronics, tourism, and property development are among the mainstays of the regional economy, and have been reinvented and given a new lease of life, while logistics, BPO, online gaming, ride-sharing, and e-commerce have taken off as new revenue generators.

In other words, the ASEAN+3 flying geese have regrouped and reshaped and, more importantly, are exploring lateral as well as upward progression to find new ways to create value and enhance welfare. As noted in the previous section, the 4IR and the new economy pose distinct challenges and opportunities for different groups of ASEAN+3 economies. The network effect driving both supply and demand in the digital economy confers a natural advantage to countries with large domestic markets and scope for economies of scale. At the same time, the appetite for product differentiation and services customization presents potential value-creation propositions for countries with the entrepreneurship, innovation, and technical capability to leverage on the new digital technology to create new products and services to cater to niche markets and individual preferences.

Japan, Korea, and China are competing globally to forge new value networks and establish (or cement) first-mover advantage in new economy products. Through innovative marketing and a good understanding of what works for their domestic customers, and by pioneering and testing cutting-edge technology in home markets, they have developed and customized products and services for global markets. China has leapfrogged other economies to become the world's leader in e-payments and e-commerce, accounting for 42.4 percent of global e-commerce in 2016, from just 0.6 percent in 2005. It is also the world leader in 5G network, artificial intelligence, and certain high-tech products such as drones and smart phones. Japan's Nintendo and Pokémon[15] are examples of online games in a new economy segment that have seized on technology and innovative user experience to generate new nodes and deepen its network, not just in Japan but globally. In fact, Nintendo's revenues from markets in the Americas and Europe are each larger than its revenue from Japan (Figure 2.35). Like China and Japan, Korea is a global leader in high-tech products such as 5G network, smart phone, semiconductors, and online gaming. It has also succeeded in building an entertainment industry with a global reach in K-pop music and Korean drama and film industries.

Figure 2.35. Nintendo's Revenues by Region
(Millions of Japanese yen)



Source: Statista.
Note: Year refers to fiscal year.

[15] Nintendo started as a playing card company more than 130 years ago (1889) and has since ventured into the toys, gaming, and entertainment sectors, among others. The Pokémon franchise (partly owned by Nintendo) was created in 1995, and has evolved concepts, "generations," and user interface to tap into an expanding network of old and new users.

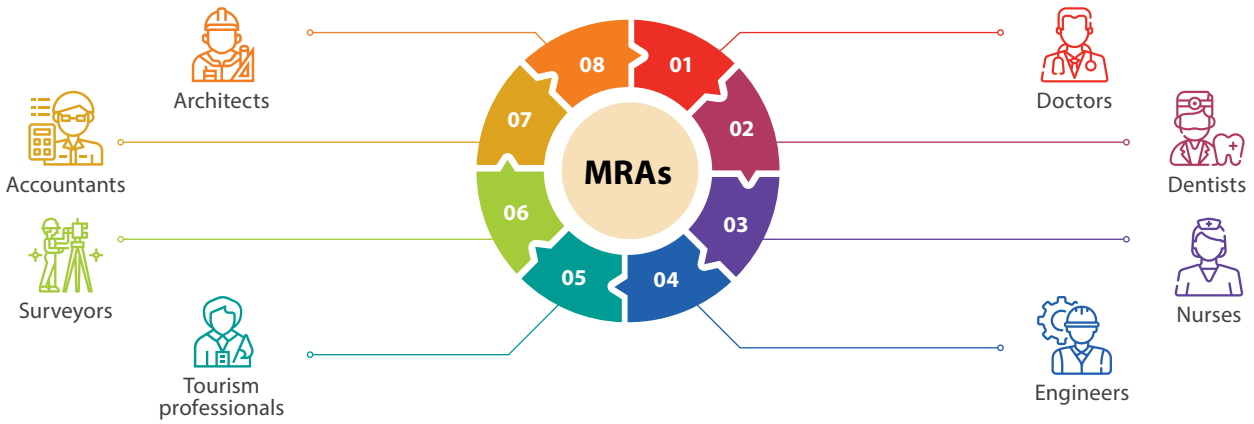
Limited Labor Mobility in ASEAN+3 Could Cap Gains from Developing Services

Throughout the ASEAN+3 region, there is a shortage of skilled workers and professionals that are needed for the development of both traditional and new economy types of services. To address this problem, ASEAN has come up with a mutual recognition arrangement scheme, which allows certain categories of skilled workers and professionals to work freely in any ASEAN country. However, the scheme is too restrictive as it covers only eight high-skilled professions: doctors, dentists, nurses, engineers, architects, accountants, surveyors, and tourism professionals (Figure 2.36) and it does not extend to the Plus 3 countries. Such limitations will likely limit the extent to which ASEAN+3 economies can gain from developing services further.

A World Travel and Tourism Council (2019) study suggests that Thailand, Korea, Vietnam, and the Philippines are among the top countries in inbound medical tourism spending (Figure 2.37), which is attributed to the countries' large pool of skilled medical practitioners/specialists alongside skilled tourism professionals. However, among these countries, some, like the Philippines, may have the largest pool of skilled nursing and tourism professionals, while Korea may have the biggest pool of doctors—both general practitioners and specialists. Allowing greater mobility of such professionals to practice in each other's country would enable the countries to close the skills gap in order to develop the medical tourism industry in their economies.

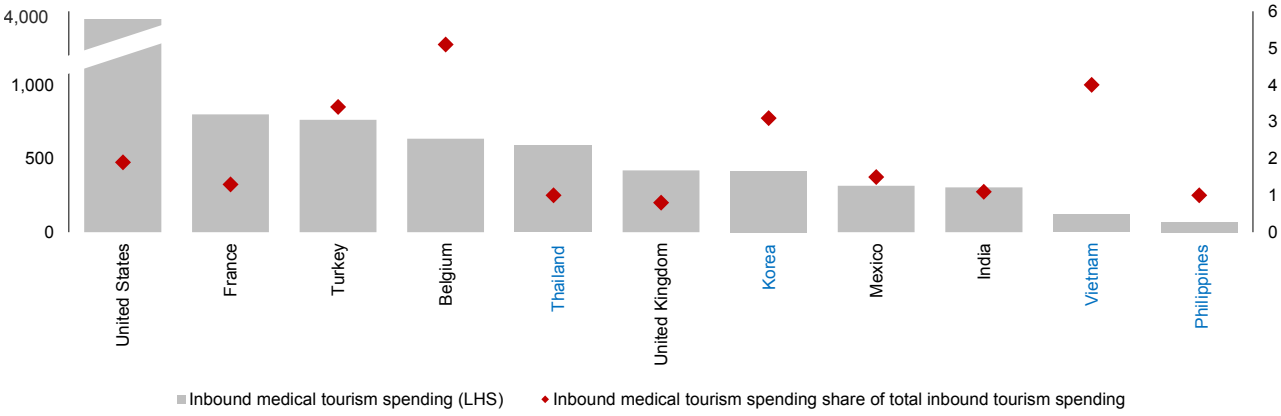
Because the production of "new economy" goods and services is so driven by advanced technology and knowhow, it is less likely than before that even the most advanced economies in the region can meet all the demands for such skills and expertise by relying on their indigenous workforce alone. This points to the need for freer flow of labor across the region, which has been very limited thus far at the regional level. Given that the region is likely to experience significant job destruction (and creation) over the next decade, greater mobility of labor is essential to mitigate the costs and smooth the transition to the new economy. If this challenge is not addressed sufficiently, the combination of lengthening value chains, labor immobility, and increased routinization (Das and Hilgenstock, 2018) is likely to put pressure on labor and limit gains from participation in value chains, or at the very least, stunt the development of different segments of the services sector domestically (Box 2.7).

Figure 2.36. Coverage of ASEAN Mutual Recognition Arrangements



Sources: ASEAN mutual recognition arrangements (MRAs); and AMRO staff.

Figure 2.37. Spending of Inbound Medical Tourism
(Millions of US dollars; percent of total inbound tourism spending)



Source: World Travel and Tourism Council (2019).
Note: Countries in blue are ASEAN+3 member economies.

Policies and Public Goods for Inclusive Growth: Capacity, Connectivity, Social Safety Nets

Public infrastructure, both hard and soft, is a public good. The 4IR and new technologies underscore the importance of building and enhancing physical, digital, and regulatory capacity and connectivity—within and across countries—in order to plug into or expand existing value networks and create new ones in the new economy. However, the challenge for policymakers is not growth per se, but inclusive growth that enhances the standard of living of their people.

Social infrastructure will be key to addressing the economic and social dislocation that comes with growth as ASEAN+3 economies embrace globalization and adopt new technologies to remain competitive. In particular, social safety nets must be put in place, or enhanced, to provide a financial backstop to workers (even as they are pushed and cajoled to upgrade) and ensure families have continued access to shelter, healthcare, and other social services. Adequate social infrastructure—as much as or more so than physical infrastructure—will need public funding and support, due to under-provision if left to the industry or the private sector (African Development Bank Group, et al., 2018).

Employment in the gig economy will be the norm as technology enables and the new economy thrives on just-in-time supply of goods and services, to meet customized and often real-time demand of consumers. Insurance, health and retirement benefits, as well as training and career development, long associated with responsible corporate employers, may not be consistent with an increasingly transactional job market, where employers can no longer internalize the benefits of staff development and loyalty, and the workers are basically self-employed. Even workers in traditional industries and companies risk loss of access to basic services if they are retrenched and unable to get back into equivalent jobs.

Policymakers need to recognize that the social and regulatory infrastructure governing labor needs to evolve just as business models and job markets have evolved in an increasingly globalized and technology-driven world. There are essentially two public goods that markets fail to provide, or under-provide, without government intervention. One, labor laws and worker safeguards should be updated to ensure they remain relevant in the new economy. For example, rules that apply only to full-time employees may incentivize companies to replace them with contract (gig economy) workers performing the same roles. Two, policymakers need to review how best to provide access to social services that are traditionally tied to employment but are not directly related to work. The solution may lie not in mandating employers across all industries and sectors to provide, say, medical and retirement benefits, but in putting in place a national framework to ensure that these services remain accessible and affordable to all workers, regardless of types of employment.[16] In addition, as employment and value networks become more regional or more global, these services (for example, insurance coverage) would have to be portable across national borders.

V. Key Takeaways and Policy Implications

This thematic chapter reflects on key global developments that will impact the region's future growth prospects, particularly the shift toward a more protectionist environment in the west, technological advances, regional integration, and the sharp rise in regional income. It considers the extent to which the region has strengthened its capacity on the production side, to remain competitive as the global economy transitions to more technologically advanced methods for producing goods and services. It also examines the extent to which the development of the regional supply chain and deepening intra-regional trade over the years has helped to strengthen the region's growth and resilience. The chapter identifies key structural shifts in the region's drivers of growth at the aggregate level and examines corresponding changes at the sectoral level for several different industries. Each of the four preceding sections highlights key developments, suggests which trends may have the most far-reaching implications, and outlines various issues which the region needs to address. This final section of the chapter will therefore pull together the key takeaways from the study and the policy implications.

First, the analyses of the factors behind the industrialization of Asia—Factory Asia—suggests that the

[16] Delinking the provision of basic services from employment is not without precedent. For example, China's work unit or danwei used to assign individuals living quarters and food in centralized canteens. Tied accommodation was a common practice in 19th and 20th century rural England; farmers' cottages were tied to their farming contributions, and parishes provided houses for the incumbent clergy.

transition to more technologically advanced methods of production is pervasive across sectors. Few sectors are likely to remain untouched for long. This implies limited time for developing and newly emerging economies—including those in the ASEAN+3 region—to embrace the new technology and enhance their capacity in order to move up the production value chain. In short, there is "no place to hide." ASEAN+3 countries must ramp up their readiness to compete in the new economy quickly, by upgrading their technological capability and skillsets to maintain and enhance their competitiveness at the sectoral level—for sustaining existing industries that have driven growth thus far, and to develop new industries that offer potential for spurring growth in the future. It is heartening to note that most ASEAN+3 economies are mindful of this challenge and have come up with their own national blueprints for guiding their economies to make this transition.

Second, the tried-and-tested manufacturing-for-exports strategy remains relevant for the region, especially for the ASEAN+3 developing countries. The analyses in this chapter corroborate the findings of AMRO (2018b) and AMRO (2019a). It confirms that while the contribution of manufacturing to growth and employment is likely to peak earlier for new entrants into the manufacturing sector than it did for the earlier batch of ASEAN+3 countries, the relatively low base of the CLMV countries implies that manufacturing-for-exports will remain key for this group of countries for some years to come. In particular, they can continue to exploit their comparative advantage in low-cost labor to attract labor-intensive manufacturing industries such as garments and footwear, as an entry point to move up the production value chain. Therefore, executing this growth strategy well is important for positioning these countries strongly in regional production networks and then in GVCs. This strategy should be complemented with a parallel track to develop services as a second driver of growth and employment.

Third, the sustained and rapid growth of the region, led by China, over the last several decades has led to a sharp rise in the region's income and its share of the global economy. The rapid urbanization and emergence of an affluent middle class has transformed the region into the world's largest market for consumer products and services—Shopper Asia. As a result, the region has become less reliant on external demand and more on intra-regional demand, which has rendered the region more resilient in the face of a more inward-looking environment in the United States and Europe. Shopper Asia offers the regional economies the prospect of growth by leveraging on the region's own technological capability and creativity to develop new products and services to cater to the growing demands of their own populations. This new growth paradigm provides policymakers with new options and opportunities to grow their economies by promoting industries that develop and customize products and services to regional demand such as cosmetics, clothing, food products, medical tourism, toys, games, theme parks, and hospitality services.

Fourth, for ASEAN+3 countries, particularly the ASEAN economies, to seize the opportunities of the new economy to continue their growth catch-up, they must remain open and become more integrated although this does not detract from the fact that there is also scope to boost domestic capacity to reduce vulnerability to disruptions to global production networks that may occur from time to time. ASEAN+3 countries need to develop the hard and soft infrastructure and connectivity to facilitate the development of the new products and services. In particular, they should review and revamp their policies and regulatory frameworks to facilitate cross-border movement of goods and services and seamless payments. Given the critical role of skills and expertise in the new digital economy, and its uneven distribution across the region, policymakers should develop a regional framework to allow and encourage skilled labor and professionals to move and work freely in the region. The new economy also puts a premium on innovation and creativity to develop new products and services and soft skills to provide the more demanding customized services. The gig economy is likely to be an integral part of the new economy with jobs that are informal, contractual and with little or no benefits of the formal sector. Hence, a critical enabling soft infrastructure is a comprehensive social security system to provide medical and unemployment insurance, and a retirement plan to those working in the gig economy.

The COVID-19 pandemic while highly regrettable, presents the region with an opportunity to demonstrate its collective resilience and commitment to work on solutions that safeguard and strengthen ASEAN+3 countries' shared long-term interests. These interests include: managing potential disruptions to cross-border production networks within the region, with considerable uncertainty over how long these disruptions may persist; finding ways to share gains in technological advancement to boost productivity and competitiveness across the region; coming together at this difficult time to address long-term challenges including those related to bringing about (even) freer flow of innovation, human capital, and investments; and finally, exploring possibilities to collaborate in strengthening social safety nets—similar to what has been done for financial safety nets (Figure 2.38).

Figure 2.38. Challenges and Policy Implications

Source: AMRO staff.
Note: CLMV = Cambodia, Lao PDR, Myanmar, and Vietnam.

Box 2.1:

Sectoral Shifts, Value Chains, and Productivity: The Philippine Experience[1]

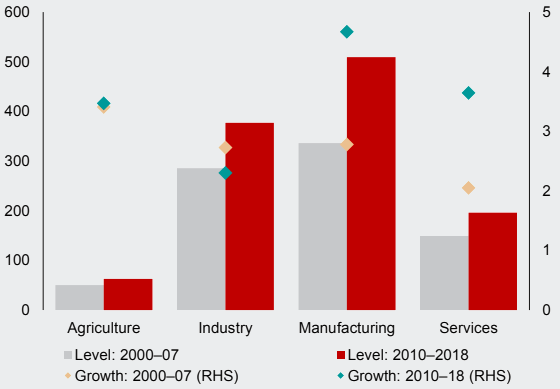
In the post-crisis period, the Philippines' labor productivity gains have occurred at a quicker pace than their regional peers, most notably in the past 3 years (Figure 2.1.1). Strong government infrastructure spending and business-friendly reforms have spurred productivity growth helping to close productivity gaps in the country's manufacturing and services sectors vis-à-vis their regional neighbors.

The improvement in labor productivity in the Philippines is driven more by between-sector productivity gains—accounting for about 60 percent of the total increase—than by within-sector productivity gains, which have picked up more slowly (Figure 2.1.2). This resource reallocation was reflected in reduced employment in the low productivity agriculture sector, and increased employment in the more productive sectors such as manufacturing and business process outsourcing services.

The Philippines' shortage of skilled labor poses a major challenge to productivity growth drive. Indeed, many workers who left the agriculture sector headed not for more productive industries, but instead took up other low-paying jobs in construction and services. This has been exacerbated by the movement of skilled workers to higher-income countries where wages are much higher such as the United States, Europe, the Gulf countries and also Singapore, Japan, Australia, and Korea (Figure 2.1.3). Efficiency in the construction sector has declined as a result of the influx of unskilled labor from agriculture over the past few years and the loss of skilled labor to other countries.

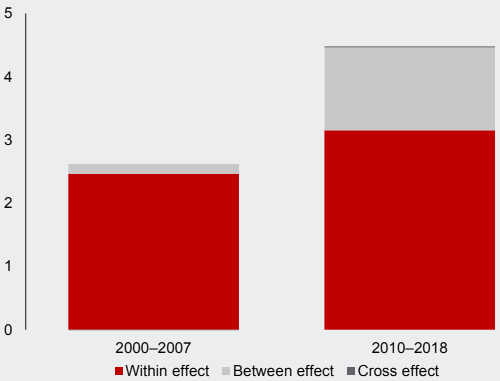
Sectoral reallocation of employment out of agriculture will continue to underpin improvements in labor productivity in the Philippines—a concept that dates back to one of Arthur Lewis' key propositions, namely that profits in the modern capitalist urban sector will create a growing supply of savings, which finances the formation of an increasing stock of capital, in turn used to employ increasingly more labor in the urban workforce. For the Philippines, as for other EMEs, longer-term growth and employment will depend on government support and policies to upskill the labor force and facilitate their entry into the expanding sectors.

Figure 2.1.1. The Philippines: Labor Productivity Across Sectors and its Growth Rate
(Thousands of PPP dollars, 2011 = 100; percent)



Sources: The World Bank; and AMRO staff calculations.
Note: Labor productivity here refers to value-added GDP per worker.
PPP = Purchasing Power Parity.

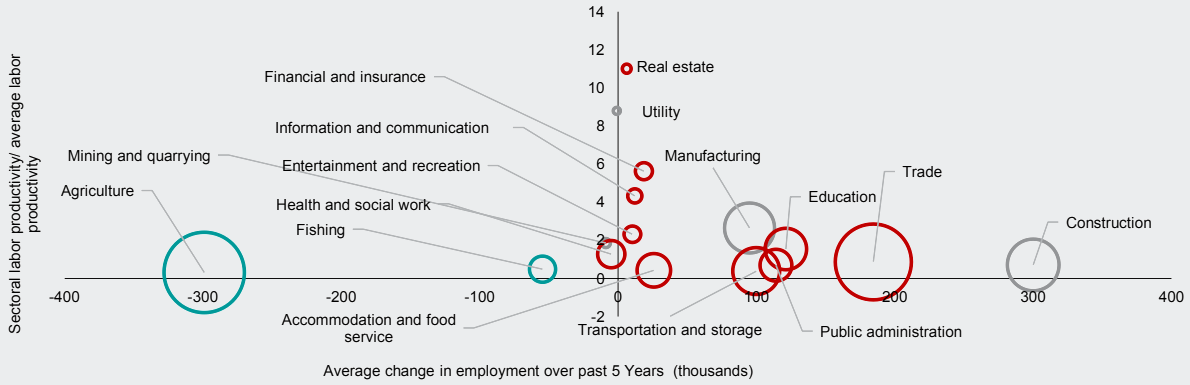
Figure 2.1.2. The Philippines: Composition of Labor Productivity Growth
(Percent)



Sources: Philippine Statistical Authority; and AMRO staff calculations.
Note: The between effect takes the labor share constant; within effect is due to labor share change; while cross effect is due to both changes in productivity and labor shares.

[1] Adapted from AMRO (2019c).

Figure 2.1.3. Employment Changes in Each Sector Relative to Its Productivity



Sources: Philippine Statistical Authority; and AMRO staff calculations.
Note: Real estate sector productivity is 23 times of the average, it is intentionally lowered to be shown in the figure; the primary sectors are in green, the secondary sectors are in grey, and the services are in red.

Box 2.2:

Reinventing the Automotive industry in the ASEAN Region

Thailand is the largest automotive producer in the ASEAN region. Its output of 2.2 million units in 2018, up from 1.4 million units in 2010, is more than the number of vehicles produced in Indonesia, Malaysia, the Philippines, and Vietnam combined (Figure 2.2.1). Leading automakers such as Toyota, Honda, and BMW have operations in Thailand, which functions as their regional headquarters, production sites, R&D centers, and/or sales offices.

The future of the automotive industry lies in (new) services. A snapshot of a typical automotive value chain shows that services already feature in almost all automotive components and stages of production and have become more diverse (Figure 2.2.2).

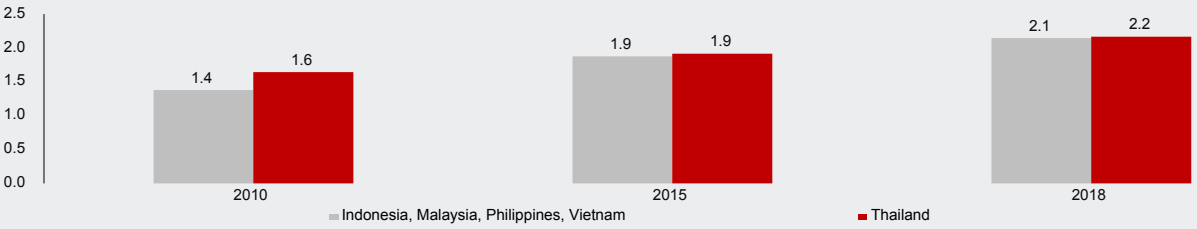
Services will play an even more important role as new economy drivers expand and reshape linkages and nodes in the automotive value network (Figure 2.2.3). For example, advancements in telecommunication such as 5G would create new digital business models and infotainment and mobility services, while autonomous driving would trigger various services for self-driving vehicles. Electric cars require new industrial designs, and quality assurance. While car-sharing would reduce vehicle sales, the business model would trigger demand for customer services, in terms of quickness of response, timeliness of arrivals, affordable peak and off-peak pricing, all of which require extensive backend support in advanced digital technology. If successfully commercialized, 3D printing would reduce the time to construct prototypes and devices, and revolutionize (simplify) the process and logistics of automotive manufacturing in favor of more services customization.

AMRO staff estimates of automotive services exports for ASEAN economies, using ADB input-output tables, confirm that Thailand is one of the most important hubs that provides automotive service within the ASEAN region in 2018 (Figure 2.2.4).[1] The domestic value-add of automotive services exports in Thailand, at USD 59.4 million in 2018 (an increase from USD 43.8 million in 2010), is nearly twice the total in other ASEAN countries. Thailand's automotive industry in the production network is mostly connected with that of Indonesia and Vietnam (as shown by the thickness of the arrows).

Thailand has the potential to absorb new technologies into its automotive industry. In 2016, Thailand had 29 universities and other institutes of learning that provided automotive and mechanical engineering programs. In addition, automakers such as Toyota and Honda provide their own employee training programs. According to projections by Thailand's Board of Investment (BOI, 2017), high-skilled labor with vocational diploma or above will account for 61 percent of all workforces in Thailand automotive industry by 2021.

Thailand has initiated or supported environment-friendly policies in connection with its automotive industry. Thailand reduced the excise tax for Eco Car from 17 percent to 12-14 percent in 2017 and is embarking on the production of pollutant-free cars. According to Thailand's Board of Investment (BOI, 2017), Thailand expects to have 1.2 million Electric Vehicle (EV) cars on the road in 2035, with more than

Figure 2.2.1. ASEAN-4 and Vietnam: Automotive Production
(Millions of units)



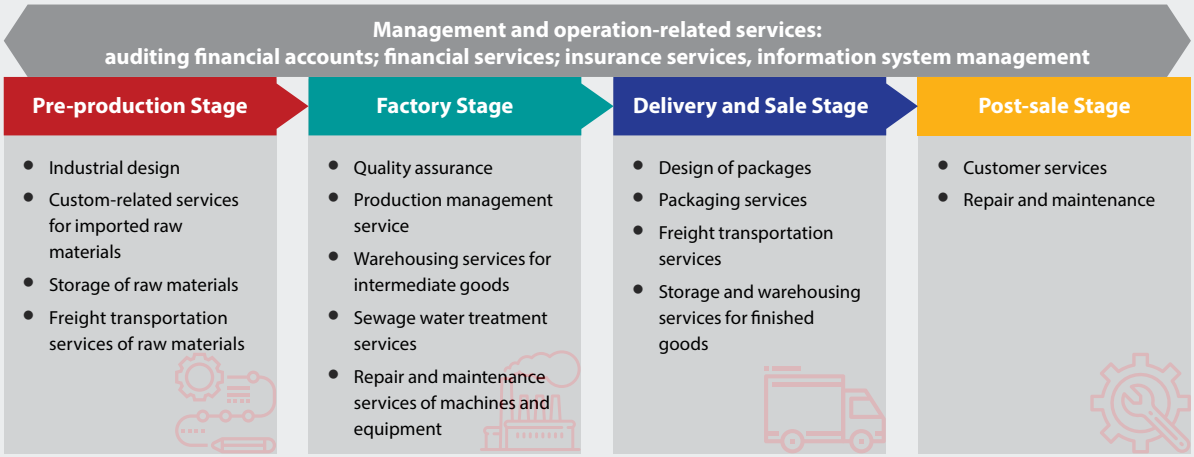
Sources: International Organization of Motor Vehicle Manufacturers; and AMRO staff calculations.
Note: The calculations in 2018 do not include the Philippines due to data constraint. ASEAN-4 = Indonesia, Malaysia, the Philippines, and Thailand.

This box was prepared by Trung Thanh Vu.

[1] Statistical identification of services in automotive industry is challenging. In the network analysis, we use the domestic value-added of Sale, Maintenance, and Repair of Motor Vehicles and Motorcycles (C19) from the ADB Multi-Regional Input-Output Table as a proxy for the services in automotive industry. The value refers to domestic value added ultimately absorbed abroad as defined in Wang, Wei, and Zhu (2018).

690 charging stations nationwide. Toyota and Panasonic are planning to establish an EV battery production plant in Thailand. Those changes could require new services, such as industrial design, quality assurance to ensure that automotive components are in line with environmental policies, thus lengthening the automotive value chains.

Figure 2.2.2. Services along the Automotive Value Chain



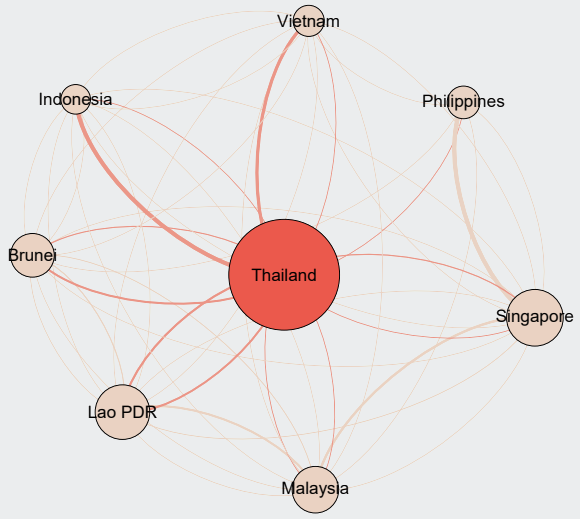
Sources: Asia-Pacific Economic Cooperation (2015); and AMRO staff.

Figure 2.2.3. Factors Affecting the Automotive Value Chain

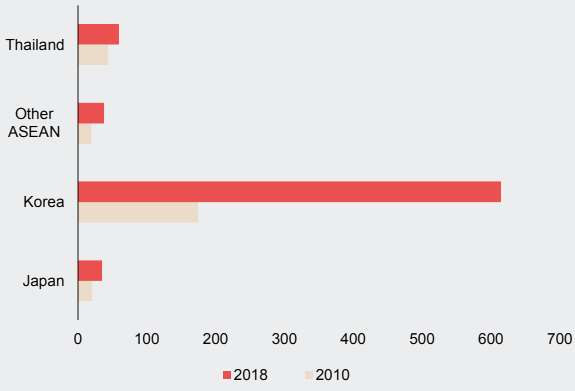
Source: AMRO staff.

Figure 2.2.4. Automotive Sector Indicators, 2018

Regional Value Chain



Service Exports
(Millions of US dollars)



Sources: Asian Development Bank Multi-Regional Input-Output Table 2018; and AMRO staff calculations.
Note: The node size represents the weighted degree of the economy in the network. The arrow thickness is scaled according to the volume of trade in value added. The trade in value added of "Sale, Maintenance, and Repair of Motor Vehicles and Motorcycles Services" (C19) from ADB Multi-Regional Input-Output Tables is used as a proxy for Service Automotive Exports. Our focus is on Thailand within ASEAN region, so Japan, Korea, and China are not included in the network graph, even though Japan and Korea are important automotive hubs in Asia.

Box 2.3:

Tourism in ASEAN+3's New Economy: Great Potential, Tough Challenges

The strong potential for the travel and tourism sector to generate more growth and employment than it has already done so far is structural in nature. This is true globally (World Travel and Tourism Council, 2019), but especially so in the ASEAN+3 region.

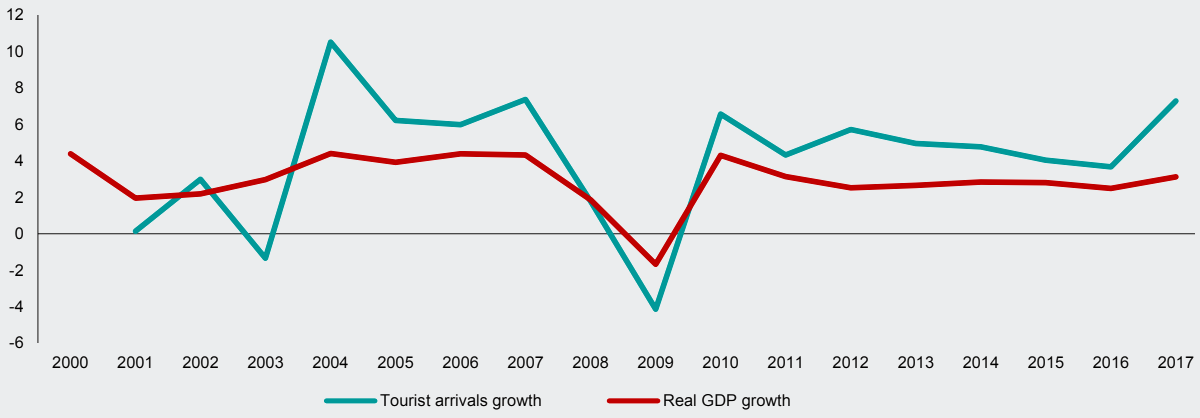
First, the rapid growth of ASEAN countries (in particular) through the post-crisis decade has benefited the region's tourism by improving its attractiveness to travellers across the world through: (1) channelling of public sector and private sector resources to improve infrastructure; (2) creating new tourist attractions and refreshing existing ones; and (3) expanding the region's own middle class with keen interest in travelling, and they often start by doing so within the region before venturing to further destinations (like the United States and Europe) when their incomes rise (Chua, Lee, and Liu, 2019).

Second, despite its steep growth, tourism volumes are actually still small relative to potential. Globally, travel demand is slowing but continues to outpace GDP growth (Figure 2.3.1), and further expansion is expected over the next decade. Regionally, China is the largest source market for the Asia-Pacific region (Figure 2.3.2). On the flip side, inbound tourist arrivals to China, while large in absolute number, remain tiny relative to most countries considering China's own population, its geographical size, and the sheer number of tourist attractions across the country.

Third, further development of the region's travel and tourism sector can leverage on existing infrastructures, ecosystems and "enablers" which have already reached a critical mass and are continuing to expand in scale and sophistication. For example: recognizing the liveability and playability of many ASEAN cities, global retailers have continued expanding in ASEAN countries, integrating their online presence with physical points of sale throughout the region.

Such developments are consistent with studies which highlight that global retailers such as Uniqlo, IKEA, and Apple continue to expand their footprints. E-commerce companies such as JD.com and Alibaba are collaborating with local groups to integrate online and physical points of sale to tap on young consumers who are both tech savvy and prefer shopping as a leisure activity (Jones Lang LaSalle, 2019). These developments are also consistent with studies which highlight that apart from its growing role in ASEAN countries' growth—the tourism sector exhibits greater linkages with other sectors than all-industry averages (ASEAN-Japan Center, 2018). Hence, it will not just help to further increase the tourism receipts of countries across the ASEAN+3 region, which have already been trending up (Figure 2.3.3), but also provide a broader boost to these economies.

Figure 2.3.1. Global Tourist Arrivals and Real GDP Growth
(Percent year-over-year)

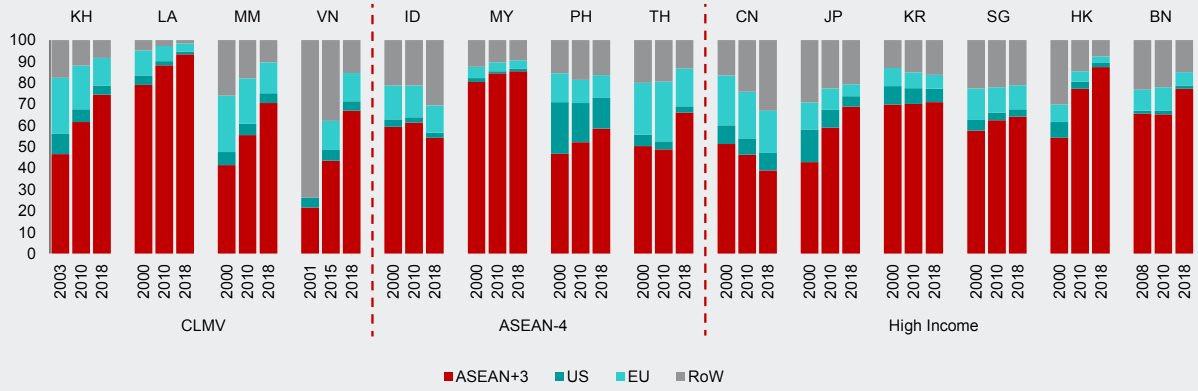


Source: The World Bank.
Note: The latest available data point for global tourism is 2017.

This box was prepared by Suan Yong Foo and Vanne Khut.

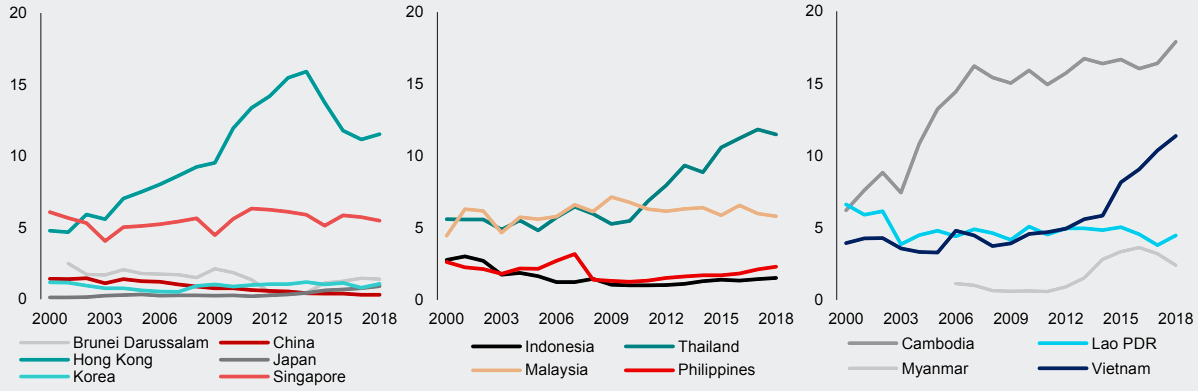
The ASEAN Tourism Strategic Plan 2016–2026 is comprehensive. It seeks to build on the earlier Strategic Plan 2011–2015, to contribute more toward ASEAN's growth becoming more inclusive, green, and knowledge-based. The two overarching strategic directions are to: (1) enhance ASEAN's competitiveness; and (2) ensure that ASEAN tourism is sustainable and inclusive. Accordingly, the Strategic Plan looks to address several areas, including: single-destination marketing, quality standards, human resource development, connectivity, investment, community participation, safety and security, and natural and cultural heritage conservation (Figure 2.3.4). The targets set for 2025 are realistic: GDP contribution increasing from 12 percent to 15 percent, share of employment rising from 3.7 percent to 7 percent, and per capita spending by international tourists increasing from USD 877 to USD 1,500.

Figure 2.3.2. ASEAN+3: Inbound Tourist Arrivals by Economy
(Percent of ASEAN+3's total inbound tourist arrivals)



Sources: National authorities; and AMRO staff calculations.
Note: Myanmar tourist arrivals data refer to visa entry only. Data for European visitor arrivals to Vietnam is not available in 2001. BN = Brunei Darussalam; CLMV = Cambodia, Lao PDR, Myanmar, and Vietnam; CN = People's Republic of China; EU = European Union; HK = Hong Kong, China; ID = Indonesia; JP = Japan; KH = Cambodia; KR = Korea; LA = Lao PDR; MM = Myanmar; MY = Malaysia; PH = the Philippines; RoW = rest of world; SG = Singapore; TH = Thailand; US = United States; VN = Vietnam.

Figure 2.3.3. ASEAN+3: Tourism Receipts by Economy
(Percent of GDP)

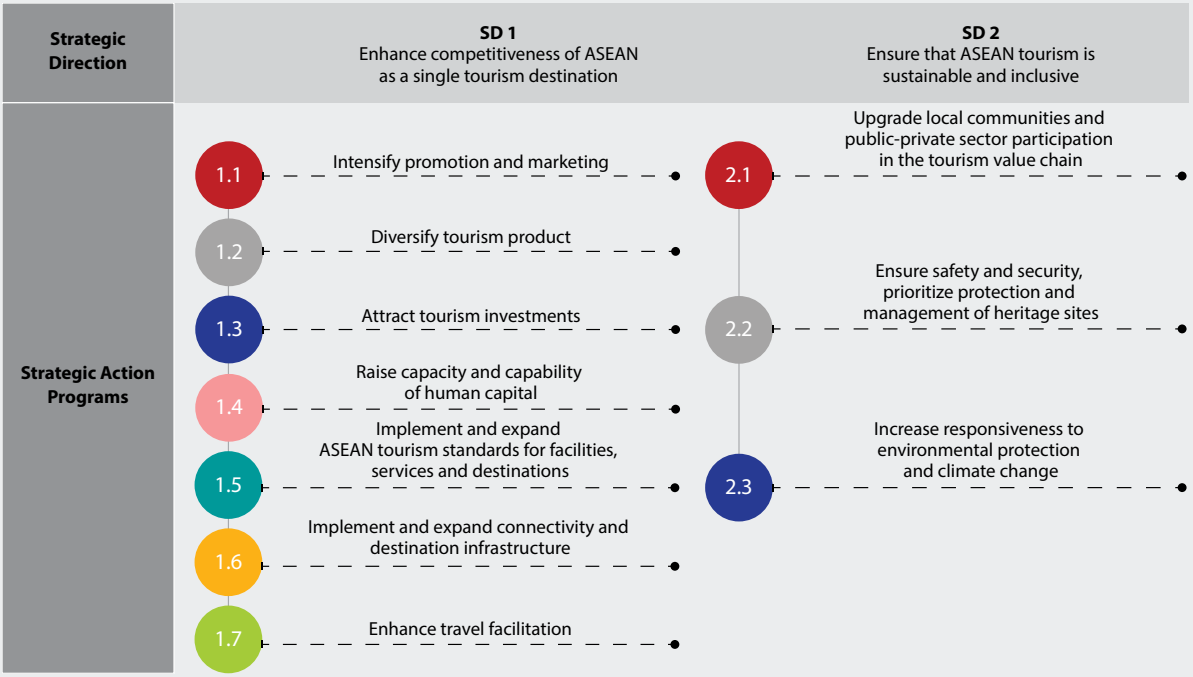


Sources: National authorities; The World Bank; and AMRO staff calculations.

The Plan could be more audacious. There is much scope for joint efforts among ASEAN and ASEAN+3 countries to tackle the "customization at large scale" challenge that is preventing the region's tourism sector from growing more rapidly. The challenge is to "deliver tailored recommendations, content, offers, and experiences, across all channels and devices, along the entire customer journey." At a global level, the potential gains are about USD 0.3–0.5 trillion (McKinsey & Company, 2019f). At the core of this is to provide tourism experiences which are unique. The Plan could also outline more detailed ideas and initiatives to woo long-haul travellers, including those from emerging market economies. In the next decade, Venezuela, Argentina, Mexico, Russia, Brazil, and India are projected to add a combined 22.6 million households whose incomes exceed USD 35,000 (Figure 2.3.5). These are a rich source of potential demand for the ASEAN+3 region's tourism services.

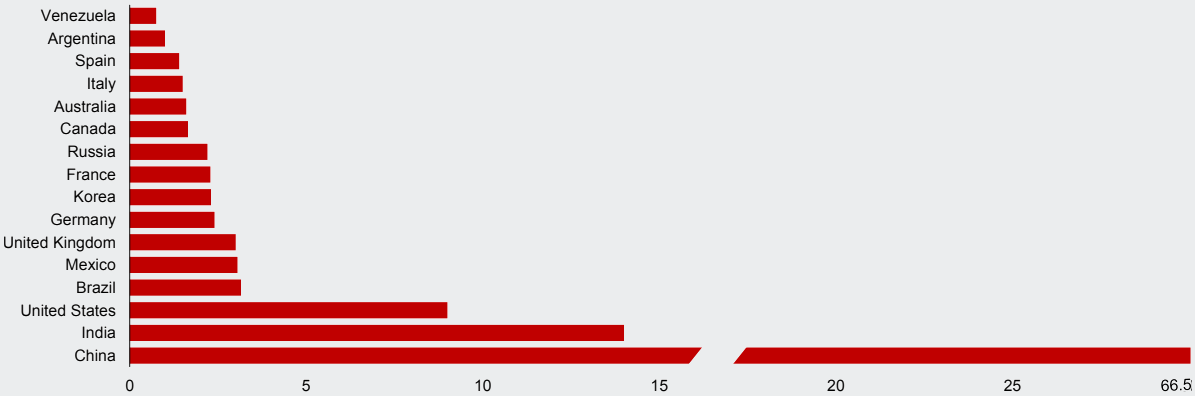
There are several stiff challenges, some of which are global in nature, while others are more specific to ASEAN+3. For this region, many countries individually are too small for their tourism offerings to be compelling—thus necessitating collaboration, and therefore very close coordination—among countries across the bloc. It also relates to the fact that integration at the individual-interface level is extremely difficult to achieve. For example, for a 1-week holiday crossing two or three ASEAN countries, a traveller might have to apply for multiple visas, purchase air tickets from a few different airlines, use several different modes of payment (credit cards, local currencies, and digital payment systems), and familiarize himself with an entirely domestic-oriented value added tax-refund system. In short, common platforms and interoperability of systems which travellers are compelled to use are still very much lacking. At the same time, "soft" issues also need to be addressed—this goes back to the "factors gap" explored AMRO (2019a). Considerations relevant for developing tourism to become a much stronger driver of growth and employment include: how to marshal public and private sector resources to supply more "domestic public goods" and "regional public goods" such as open spaces, conservation of nature, creation of free-of-charge attractions which appeal to both domestic residents and tourists, further developing cross-border transport (beyond budget airlines), and even stepping up legal protection of businesses against fake/ imitation merchandise.

Figure 2.3.4. ASEAN Tourism Strategic Plan, 2016–26



Source: ASEAN.

Figure 2.3.5. Increase in the Number of Households with Incomes Exceeding USD 35,000: 2019 versus 2029



Source: World Travel and Tourism Council.

Box 2.4:

The Logistics Sector: How Value Chains are Evolving to Meet Rising Demand

The logistics sector will play a key role in the "new economy": for just-in-time production and delivery of goods. The global manufacturing industry has expanded massively from about USD 6.1 trillion in 2000 to about USD 13.2 trillion in 2018 (Figure 2.4.1), driven largely by stronger demand from the expanding middle class in rapidly growing EMEs, not least China within the ASEAN+3 bloc.

Alongside that, global e-commerce has grown markedly over the last decade. It has expanded from USD 495 billion in 2005 to USD 1,915 billion in 2016, according to estimates by McKinsey & Company (2017). Within the ASEAN+3 region, e-commerce has expanded rapidly. China has leapfrogged other economies to become the world's leader in e-commerce, accounting for 42.4 percent of global e-commerce in 2016, from just 0.6 percent in 2005. Singapore earned USD 1.8 billion in revenue from e-commerce for the retail trade industry in 2018, and the total revenue from e-commerce is projected to increase to USD 8.5 billion by the year 2023.[1]

These trends are among the most important drivers of rising demand for logistics services in the "new economy": just-in-time production and delivery of goods; and the margins are (potentially) large. Estimates by McKinsey & Company (2019a) suggest that for every USD 100 of e-commerce sales, USD 12–20 could go toward paying for e-retailers' in-house logistics, up from USD 3–5 spent on logistics in a typical brick-and-mortar retail operation.

The conventional logistics value chain does not exhibit a high degree of automation (McKinsey & Company, 2019a, and PwC, 2016). So far, key stages of activities such as origination, first-mile transport, port/hub handling, customs clearance, long-distance transport, and inland transport are characterized by low or moderate automation; only the warehousing stage of the value chain is considered highly automated (Figure 2.4.2).

However, new technologies are creating strong potential for much more automation and productivity gains. Over the next two decades, autonomous trucking and modernization of port operations are expected to increase efficiency in the first few stages of the logistics value chain. The use of high-speed rail is expected to extend the transportation of human beings to transportation of goods. And several newer techniques such as the use of algorithms for analyzing trends and making predictions about the flow of goods, the use of optical recognition technology in sensors to scan and sort items; and the use of smart glasses for human workers to zoom in on specific locations when searching for items in storage spaces will modernize the value chain substantially.

The logistics sector value chain will likely lengthen with changing consumer preferences being a key driver, and the more advanced ASEAN economies are well-positioned, partly because of more sophisticated demand by more affluent consumers for quicker and more convenient final delivery. For example, in order to become more competitive, producers and distributors of consumer goods are moving toward the creation of networks of storage spaces and delivery/pick-up points across different countries and within countries. Data analytics and artificial intelligence will become more in demand, as these are needed to establish optimal set-ups for these networks (including whether it is more efficient to site some of these points nearer to production bases or to areas with large concentrations of end-consumers).

The more advanced ASEAN economies are well-positioned (Spire Research and Consulting, 2017). For Indonesia, key drivers include a large domestic demand base, rapid economic growth, the world's biggest archipelago with more than 17,000 islands, as well as continued improvement in infrastructure. For Malaysia, its logistics sector is among the most developed in ASEAN, and its transport infrastructure likewise—with five major ports, well-constructed highways, five international

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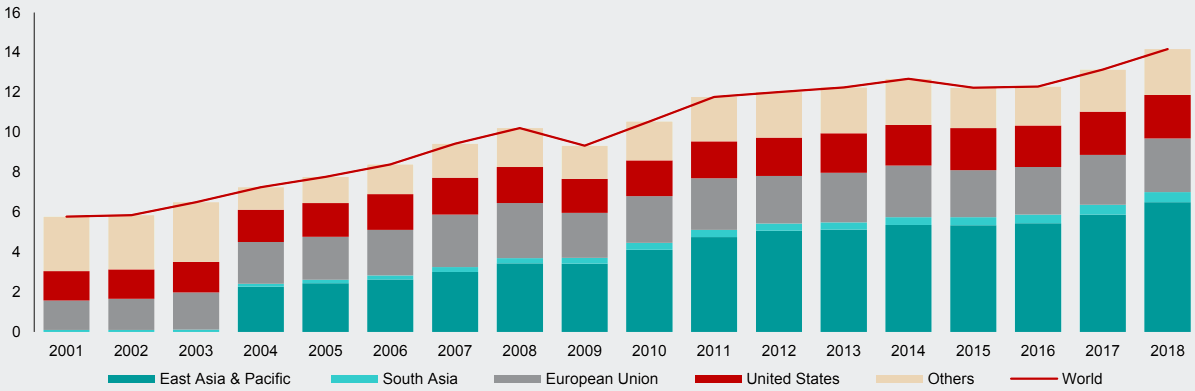
This box was prepared by Suan Yong Foo and Vanne Khut.

[1] The projection of total revenue from e-commerce is from Statista.

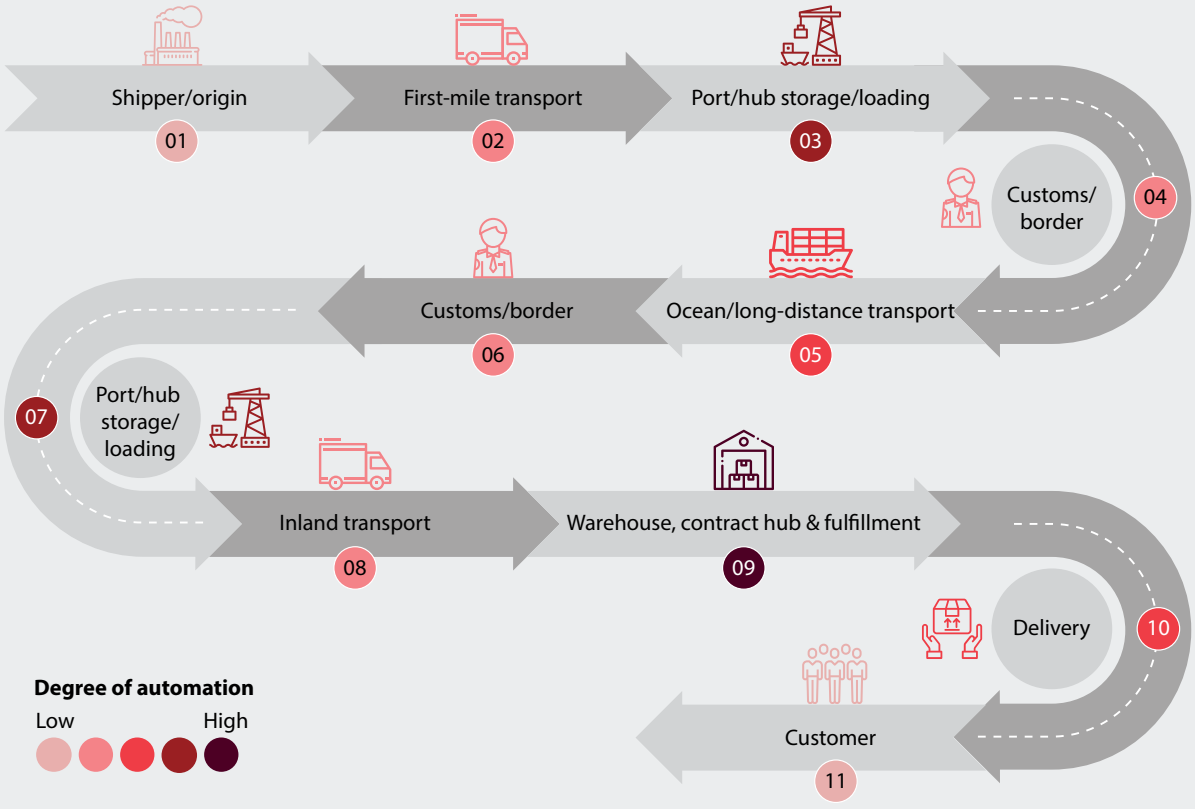
airports, and four inland ports. For Thailand, demand for its logistics services is being driven to large degree by multinational companies looking to leverage on the country's connections to ASEAN, China and India, and encouraged by the Thai government's efforts to integrate logistics services across the borders of the Greater Mekong Subregion. Vietnam and the Philippines are stepping up efforts to catch up, with the former focusing on improving infrastructure and the latter looking to service e-commerce.

Figure 2.4.1. Global Manufacturing Value Added
(Trillions of US dollars)



Source: The World Bank.
Note: East Asia & Pacific and South Asia data are available from 2004.

Figure 2.4.2. Typical Logistics Value Chain



Source: McKinsey & Company (2019a).

Box 2.5:

The Sharing Economy: Boon or Bane?

The rise of the sharing economy—also known as the gig economy, access economy, collaborative economy, or the peer-to-peer economy—is undoubtedly driven by the growth of the new economy. Technology, the advent of big data, and the ability to access this data via mobile and digital platforms, have facilitated access to and the sharing of otherwise "undiscovered", unutilized, or underutilized physical assets such as cars and apartments, as well as intangibles such as talent, time, and even unused priority privileges.

By matching demand and supply for underutilized resources, the sharing economy facilitates revenue generation for a service provider—without the typical costs associated with providing the service via traditional business models. The market for co-working spaces in the region is a primary example, with companies such as WeWork and Flyspaces offering flexible office spaces without the associated cost of renting an entire building or suite. Car-sharing services such as Grab, GoJek, and CarClub allow individual drivers to get paid on their free time, while allowing passengers more transport choices and the flexibility of hiring a vehicle on-demand without the hassle of car ownership. Similarly, proximity-based rental or marketplaces, such as Lendor, bank on the trend towards collaborative consumption by matching item owners willing to lend out household items and consumer products to those who need them, for a minimal cost. The mountain of data offered by such transactions facilitates the delivery services in a customer-tailored and timely manner.

Demographic and societal changes in ASEAN+3 countries—the challenges of urban lifestyles coupled with the re-emergence of the minimalist movement—are some of the drivers of the sharing economy. The greatest concentration of millennials in the world is in Asia (Matichard, 2018). Within the region, the largest numbers are in China, followed by Indonesia, the Philippines, and Vietnam (Figure 2.5.1). Millennials are accumulating and owning fewer things and focusing more on experiences and social relationships. Ownership of an asset, such as a home outside the city, is made increasingly less attractive by the burden of mortgage payments, compared to the freedom of flat-sharing/renting within the city and the social experiences such proximity brings, even with high rental costs.

The sharing economy is also influenced by millennials' skepticism of the motives of businesses (Deloitte, 2019). A model of "VIP (very important person) Account Sharing" in China's gaming industry—where others can "rent" VIP accounts to test in-game items prior to purchasing them—is an example of how the sharing economy offers experience and transparency to address a distrust that otherwise discourages buying behavior.

While accurate quantification of the sharing economy in the ASEAN+3 remains a challenge, the evidence for some established activities points to an encouraging potential. Ride-hailing companies Gojek and Grab have added an estimated USD 6.6 billion dollars to Indonesia's GDP in 2018. The transaction volume in China's sharing economy was about USD 439.8 billion in 2018, having grown more than 40 percent on an annual basis; the double-digit growth is expected to continue in the next few years as China's tech-savvy millennials enter the middle class (Ramizo, 2019).[1]

As the size of the sharing economy in the ASEAN+3 region expands, more and more consumers in the region could be prioritizing access to assets rather than *actual ownership*. Technology has redefined the traditional signals of wealth and success such as home and car ownership. The rise of social media reinforces the growing appetite for the sharing economy. Technology, via social media apps, allows for shareable experiences; this mindset is predominant among millennials. A global survey by Deloitte (2019) on millennial behavior points to "travel and seeing the world" as the top aspiration of respondents (57 percent), compared to home ownership (49 percent). A social media post of an Airbnb stay in a 100-year old palace[2] is likely to be more appealing and

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This box was prepared by Marthe Hinojales.

[1] State Information Center, China.

[2] An example of this is the Gudliya Suite in the Chandra Mahal Palace of Jaipur, India, (built in 1727) which went online in Airbnb in November 2019.

conducive to social interaction than a photo of an apartment or house.

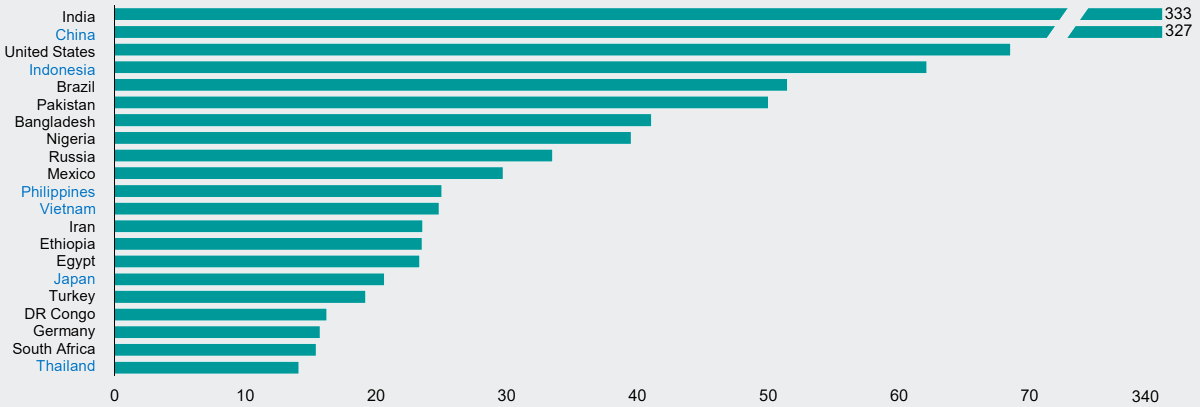
The prevalence and successes of the sharing economy also highlight its—albeit unintended—negative consequences and argue for regulation and greater oversight by the region's policymakers. Well-defined legislation governing the sharing economy appears to be lacking in most of the ASEAN+3 countries, with implemented rules and guidelines being more reactive than proactive. Companies that operate under collaborative consumption continue to be governed by a framework that had not been specifically designed for the sharing economy, allowing for grey areas prone to abuse and unethical practices.

Critics of the sharing economy in its current unregulated form point to the negative effects on wages, abuse of labor rights, waste disposal, even fraud and threat to life (DBS, 2019). Some evidence point to ride-hailing apps contributing to depressed wages of incumbent taxi drivers of at least 10 percent, to as much as 30 percent, as customers shift to these technologies, particularly in the key cities of Singapore, Jakarta, and Kuala Lumpur (Ramizo, 2019). The taxi population in Singapore, where Grab is dominant, has dropped to its lowest in a decade in 2018.

New cars bought primarily to be used for ride-hailing apps—instead of tapping on unutilized cars—are blamed for the traffic in the Philippine capital of Manila, considered among the worst in the world. China continues to grapple with its bike-sharing "graveyards," or huge piles of abandoned bikes, and the challenge of properly disposing these metal wastes. The low barriers to entry that are characteristic of the sharing economy could push younger workers to shun more challenging job opportunities and disregard the need for upskilling. The rising share of informal workers in the ASEAN+3 sharing economy means that many more are not covered by adequate social protection, minimum wage rules, and other benefits accorded to full-time workers.

ASEAN+3 policymakers need to address the actual or perceived negative social impact of collaborative consumption, while taking care not to suppress the culture of innovation—the cornerstone of the new economy—and fair competition. Legal and policy guidelines that protect informal workers engaged in the sharing economy, structured and effective feedback mechanisms for users of collaborative digital platforms, and policies that prioritize underutilized assets over new assets could help ASEAN+3 economies reap the benefits of collaborative consumption and innovation more evenly across their populations. Moving forward, the policy landscape governing the sharing economy will remain complex and tricky to navigate, as new technologies usher in new types of transactions and new demand. A flexible and regulatory framework that is robust and responsive to technological change and evolving employment models will be key to inclusive growth.

Figure 2.5.1. Top 20 Economies: Highest Millennial Population
(Millions of persons)



Source: United Nations Population Division.
Note: DR Congo = Democratic Republic of Congo. Countries in blue are ASEAN+3 member economies.

Box 2.6:

Rules of Origin in the New Economy

Rules of origin (ROOs) are a necessary artifact of the governance framework for global trade. ROOs are the criteria that determine the national source of products, to establish the legitimacy of duties and other restrictions for cross-border trade. For example, ROOs are used to determine whether imported products shall receive most-favored-nation treatment or preferential treatment, and to implement measures and instruments of commercial policy such as anti-dumping duties and safeguard measures (Dezan Shira & Associates, 2018).

For exporters and importers, and manufacturers and investors in cross-border supply chains, clarity in ROO is necessary to provide certainty and minimize disputes (or provide basis for dispute settlement). In bilateral free trade agreements (FTAs)—where two countries eliminate tariffs for trade with each other but continue to apply tariffs on trade vis-à-vis third countries—ROOs set out the conditions under which trade in a particular product is eligible for zero (or preferential) tariffs under the FTA (Figure 2.6.1).

The World Trade Organization (WTO) does not specify how ROOs should be determined but stipulates that members' ROOs must be transparent and applied in a non-discriminatory manner.

Figure 2.6.1. Functions of Rules of Origin

Source: AMRO staff.

Applying ROOs in New Production Networks

Establishing the origin of the product has become more difficult as GVCs lengthen and evolve into complex (and non-linear) production networks, and preferential trade agreements proliferate.

The international fragmentation of production (IFP) started in earnest in the late 1980s and early 1990s, and became more pronounced into the 2000s. Technological advances such as computerization, internet and wireless mobile telecommunications played a key role in IFP by allowing (and encouraging) manufacturers and countries to plug into GVCs to reduce production costs. The flip side is that interpreting ROOs have become more challenging (Estevadeordal and others, 2013).

A traditional principle of ROO is that the *country of origin* is the last country where a substantial transformation took place. "Origin" is frequently determined by the location of manufacture and/or assembly—not unreasonable for many manufacturing products. In today's production network, however, the extent of physical transformation may not correspond to value creation. The more technologically advanced a product is, and the more fragmented the (cross-border) production process is, the more difficult it is to pinpoint origin and attribute percentage value add by country of manufacture. For example, the iPhone is designed in the United States and manufactured in China, using components originating from other countries such as

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Japan and Korea. An ROO based on change in tariff classification (e.g., the one applicable to preferential trade between Australia and China) would stipulate the origin of the iPhone as China, even though the manufacturing processes in China reportedly account for about 2 percent of the final value of the end product (Coldicutt and Opeida, 2018).

Chapters on ROOs for bilateral and multilateral FTAs are often among the most contentious and difficult to seal. ROOs must not only reflect the policy intentions of parties to an FTA but also be worded in a sufficiently detailed manner to enable operationalization and enforcement. By some estimates, most of the more than 300 FTAs across the world have "customized" chapters on ROOs—and that is not factoring in other treatments such as "carve-outs."

ROOs are easiest to conceptualize and implement in the case of goods, although efforts have been made to apply them to services. A certificate of origin—a document issued by an exporter that confirms and certifies the country of origin—is often attached to the commercial invoice that accompanies a shipment of products, for submission to customs authorities. FTAs may require special forms as proof of origin before products can qualify for preferential tariff rates.

As each FTA may have its own distinct ROOs, interpreting and applying multiple ROOs could add to the challenge and costs of operating GVCs that span jurisdictions. ROOs are fraught with difficulty in normal times and can become even more challenging during heightened trade tensions.

ROOs, Services, and Value Creation in the New Economy

Two elements of the new economy complicate the application (and applicability) of ROOs: the rising share of services in trade and production networks; and role of technology and intangible assets (e.g., patents, branding, franchises) in creating and delivering value to the end-consumer.

The automobile industry (which predates the new economy) illustrates the challenges of designing ROOs (Figure 2.6.2) as its production network evolves to capture new technology, new services, and newly tradable services.

- The business model increasingly involves R&D and design functions (Deloitte, 2017) being carried out in advanced economies while the more labor-intensive production functions are undertaken in lower-cost economies (Organisation for Economic Co-operation and Development, 2016). ROOs based on value content would attribute country of origin to the place responsible for R&D and design and which contributes the lion's share of the value added—different from ROOs based on country of assembly.

- Technological advancement and specialization are enabling different parts of the R&D activities and automobile product design to be conducted in different locations. Hence, many different physical parts and components of automobiles are "manufactured" in different countries before assembly in one location. ROOs with multiple countries of origin are possible (see below) but would not be easy to implement.

- More importantly, a wide range of new services are now deemed necessary for supporting the manufacturing processes. For example, Siemens offers, specifically for automobile industry players: services across data analytics (including manufacturing plant analytics), cloud services, IT security, and digital transformation consulting. Conventional services such as human resource management, accounting, and corporate support services have become tradable and can be outsourced to a much greater extent than before.

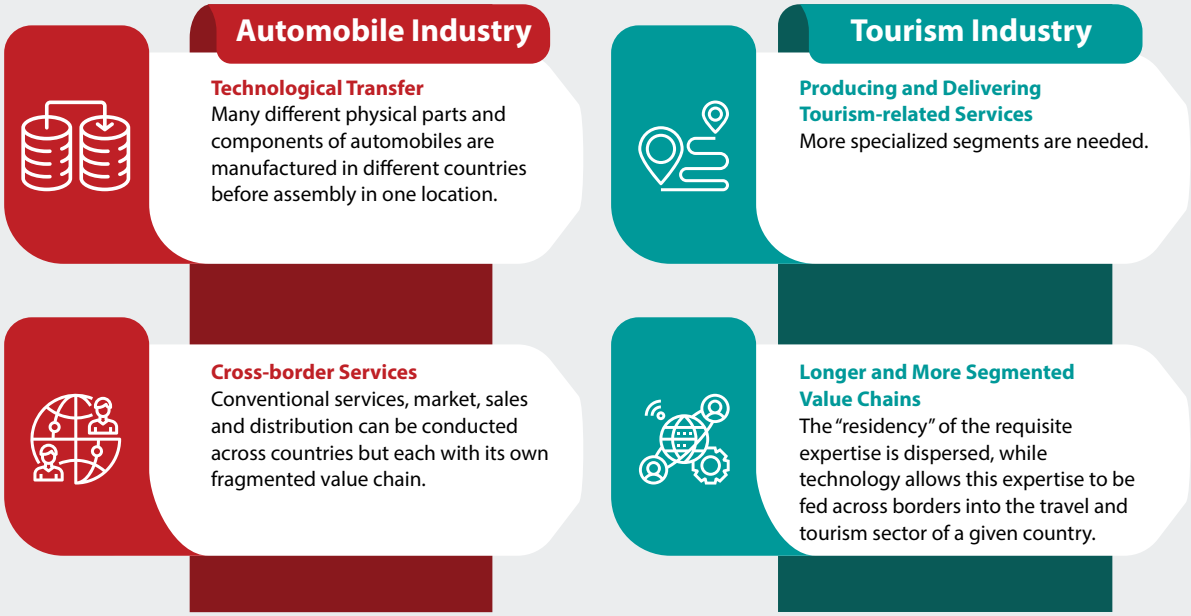
- Finally, marketing, sales, and distribution are being done across more countries than before, each in turn having a wide range of services (conventional and new) as inputs, and with its own fragmented value chain. Car financing, insurance, and after-sales care are some of the services that now form part of the automobile purchase experience.

The travel and tourism sector is another example.

- Travel and tourism services in the new economy will involve many more specialized segments: air and land transport, food and beverage, consumer durables, experiential services; and payment systems.

- The "residency" of the value creation is dispersed in the new economy as technology allows the requisite expertise to be fed across borders, from anywhere in the world, into the travel and tourism sector of a given country.

Figure 2.6.2. Rules of Origin: Challenges for the Automobile and Tourism Sectors



Source: AMRO staff.

Box 2.7:

Labor (Im)Mobility in the ASEAN+3 region

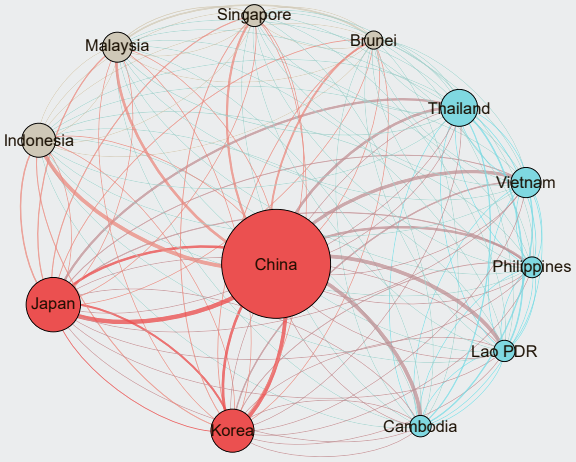
Over the past decade, intra-regional trade in goods, reflecting the development of production networks (Figure 2.7.1) grew robustly, by about 9.8 percent in 2018 with about 45.9 percent of this being trade in new economy goods (Figure 2.7.3). Yet, cross-country migrant flows (including the movement of workers) have been relatively modest over this period (Figure 2.7.2) and are much smaller than flows in Europe for instance.

Over the same period, the share of manufacturing labor in the Asia-Pacific region has decreased only slightly, by just 1.8 percentage points (Figure 2.7.4), even though the economies have become much more services driven. The standout shift has been from the agriculture sector to the services sectors, ranging from wholesale and retail trade, transport, and construction, to education and health services.

Analysis by the International Labor Organization (ILO) highlights that up to 87 percent of intra-ASEAN migrants are low-skilled workers, from five main corridors: Myanmar to Thailand, Indonesia to Malaysia, Malaysia to Singapore, Lao PDR to Thailand, and Cambodia to Thailand. The Myanmar–Thailand corridor is the largest, accounting for 2 million migrant workers or one-third of intra-migration in ASEAN. There are about 1 million migrants each from Indonesia, Malaysia, and Lao PDR moving to Malaysia, Singapore, and Thailand, respectively.

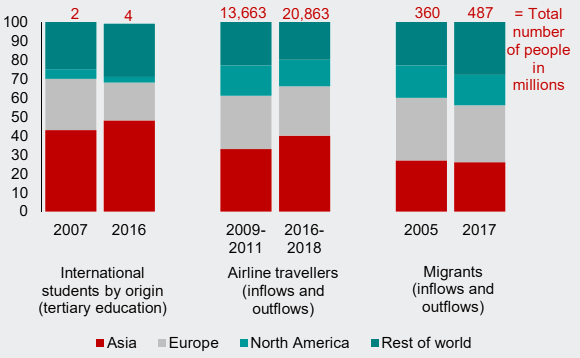
In comparison, the mobility of higher-skilled workers is more limited, due to domestic policy considerations and the inherent challenging nature of forging multilateral agreements. The ASEAN Mutual Recognition Arrangements cover eight high-skilled professions (doctors, dentists, nurses, engineers, architects, accountants, surveyors, and tourism professionals), or just 1.5 percent of ASEAN's labor force. Policy impediments could thus limit the extent to which ASEAN+3 economies can gain from participating in expanded new economy value networks.

Figure 2.7.1. Intra-Regional Trade Reflecting Production Networks



Sources: Asian Development Bank Multi-Regional Input-Output Table 2018; and AMRO staff calculations.
Note: The node size represents the weighted degree of the economy in the value chain. The node color represents the community in which the economy belongs to. Community is detected using methodology outlined by Blondel and others (2008). The arrow thickness is scaled according to the volume of trade in value added of manufacturing sectors.

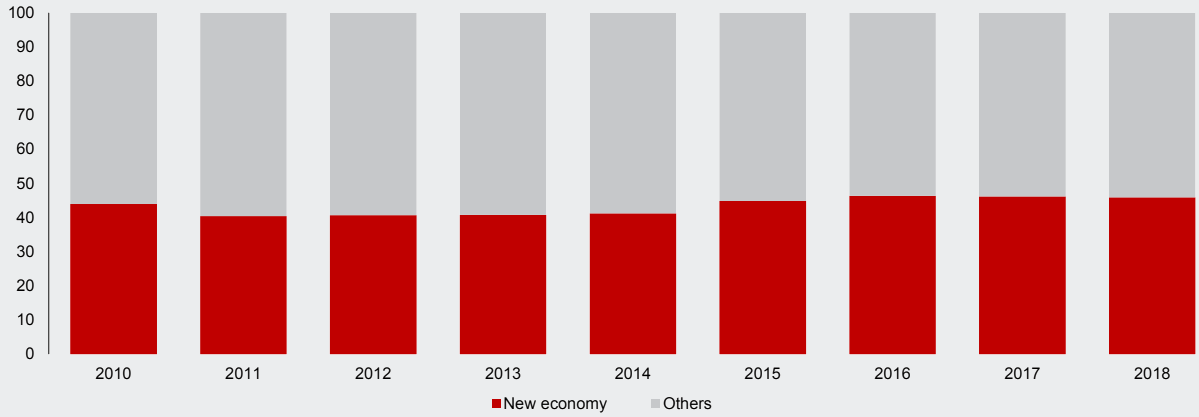
Figure 2.7.2. People Movement by Type and Geography
(Percent of total movement)



Sources: International Air Transport Association; United Nations Educational, Scientific and Cultural Organization; UN Migrant Stock; and McKinsey & Company.

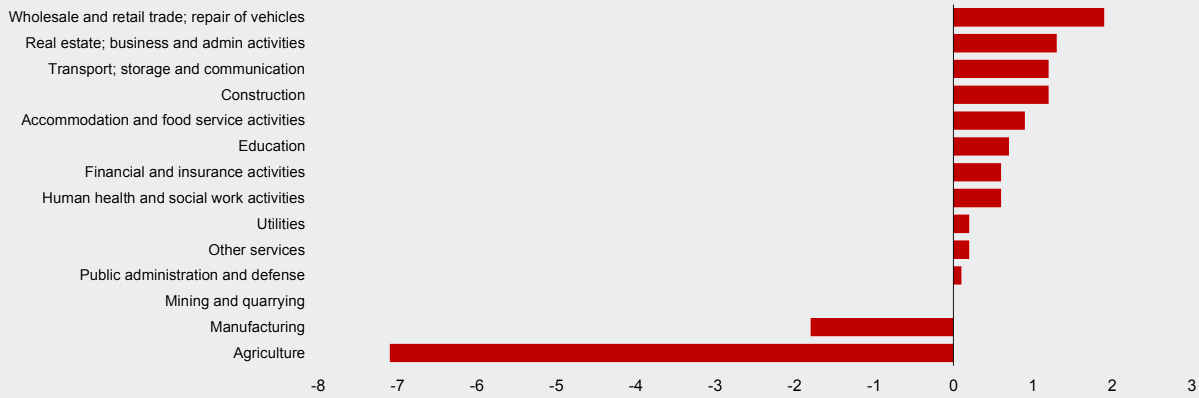
This box was prepared by Suan Yong Foo and Vanne Khut.

Figure 2.7.3. ASEAN+3: Share of New Economy Products in Total Trade
(Percent of total trade in goods)



Sources: World Integrated Trade Solution (WITS); and AMRO staff calculations.
Note: New economy products are electrical machinery, equipment, and parts thereof; nuclear reactors, boilers, machinery; vehicles/railway/tramway roll-stock; ships, boats and floating structure; aircraft, spacecraft, and parts; arms and ammunition; parts and accessories; explosives; pyrotechnic prod; match; pharmaceutical products; and photographic or cinematographic.

Figure 2.7.4. Asia-Pacific: Sectoral Distribution of Work, 2010–17
(Percentage point difference)



Source: International Labor Organization.

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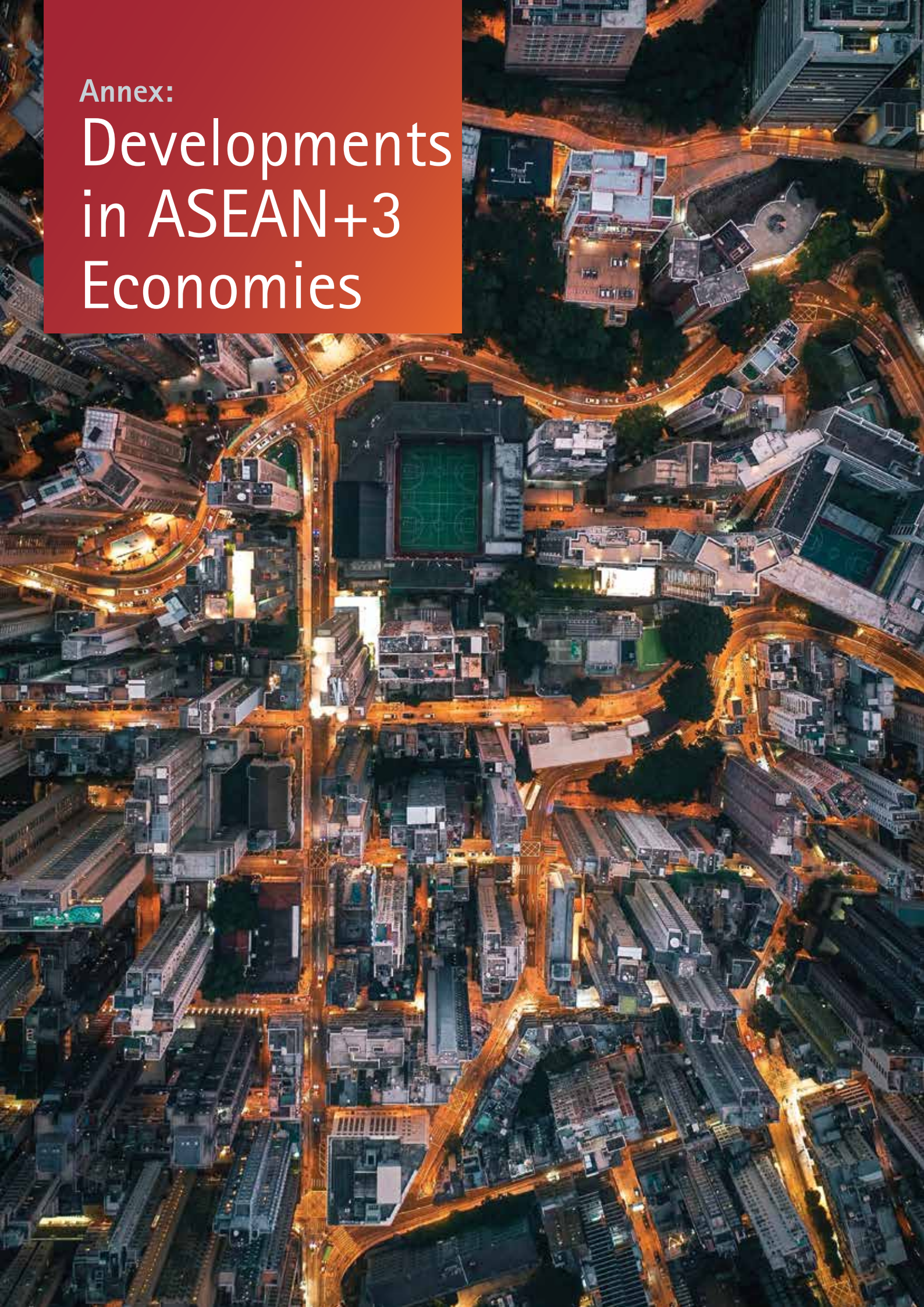
Annex:

Developments in ASEAN+3 Economies



Brunei Darussalam

The Bruneian economy recovered in 2019. After returning to positive growth in 2017, the economy experienced several quarters of low or negative growth in oil and gas production as a result of ongoing maintenance and rejuvenation work. Despite the contraction in Q1 2019, the economy grew significantly in the last three quarters and recorded growth of 3.9 percent for the whole of 2019. The rebound was mainly attributable to enhanced oil and gas production, which was boosted by the commencement of Hengyi's refinery production in November 2019. The economic recovery was also supported by strong growth in the services sector, especially the finance and the wholesale and retail sub-sectors.

Consumer price inflation has remained low and fallen into the negative territory since the beginning of 2019. After recording slightly positive inflation of 1.0 percent in 2018, period-on-period CPI inflation in 2019 fell by 0.5 percent until November, mostly attributable to lower non-food prices. For the entire year of 2019, inflation is expected to remain negative.

The external sector remained strong, despite the decline in the current account surplus in recent years. Export growth increased sharply in 2018 on the back of higher-than-average commodity prices. Amid a decline in oil and gas prices, exports were still growing quite strongly in 2019, underpinned by the increase in oil and gas production, especially in the last quarter when Hengyi came online. Import growth, which saw a boost in recent years from infrastructure and large FDI projects, has slowed with the near-completion of these projects. Meanwhile, the commencement of downstream operations has significantly increased imports of crude oil especially toward the end of 2019. Along with the widening services deficit since 2018, the current account surplus is estimated to narrow further in 2019. Overall, the external position remains strong with ample foreign assets.

The financial sector has remained sound, with low risks, and credit growth is recovering. The sector continues to be dominated by banks, which are well capitalized and have ample liquidity. Banks have remained profitable and have increased their returns in recent quarters, amid relatively low loan-to-deposit ratios, which have been increasing in recent quarters because of a recovery in credit demand. On the other hand, the gross non-performing loan ratio decreased in 2019. Credit growth recovered in 2018 and is expected to continue in 2019, in line with the economic recovery.

The fiscal position has improved in recent years, but the budget is anticipated to remain in deficit. Overall, the fiscal situation has improved considerably from a deficit of 12.9 percent of GDP in FY2017/18 to a surplus of 0.2 percent of GDP in FY2018/19, on the back of higher oil and gas revenues and continued restraint in fiscal spending. Consolidation efforts have reduced total government expenditure by 6.9 percentage points of GDP since FY2016/17. In 2019, oil and gas prices were considerably lower than those in 2018, and are expected to decline throughout 2020, which is expected to result in a budget deficit in FY2019/20.

The major risks facing the Bruneian economy in the near to medium term stem mainly from oil and gas-related factors. Given the large dependence on the oil and gas sector for GDP growth, fiscal revenue and exports, risks can arise from domestic and external factors to affect the economy through several channels. Domestically, the risks are mostly related to (1) unforeseen disruptions to oil and gas production from some mature fields; and (2) potentially lower production in downstream activities. Externally, expectations of a sharp slowdown in the major economies from the COVID-19 pandemic—potentially amplified by any resumption in trade tensions—could lead to sustained, significantly lower oil and gas prices.

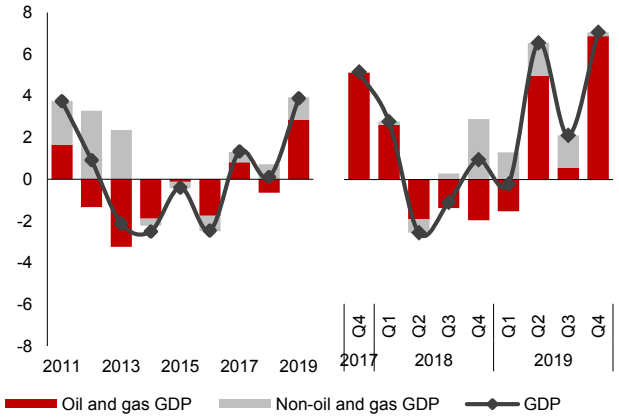
Slower momentum in economic diversification could dampen medium- to long-term prospects, while a delay in large FDI projects could negatively impact the near-term outlook. Considerable progress has been made to diversify the economy but challenges remain, in particular, the heavy reliance on the oil and gas sector. Further structural reforms and diversification momentum would enhance the growth potential of the economy, even with declining oil and gas production in the future.

The author of this country note is Muhammad Firdauz Muttaqin.

Brunei Darussalam: Selected Figures

The Bruneian economy grew strongly, especially in in Q2 and Q4 2019.

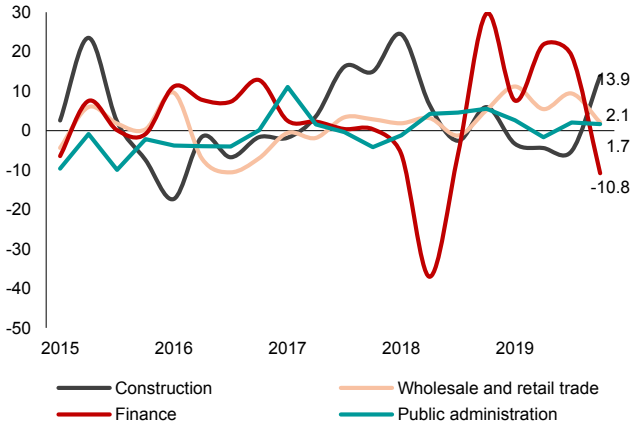
Contributions to Real GDP Growth
(Percentage points)



Sources: Department of Economic Planning and Development; and AMRO staff estimates.

The economic recovery was also driven by the non-oil and gas sector, especially the financial sub-sector, while the construction sub-sector continued to slow.

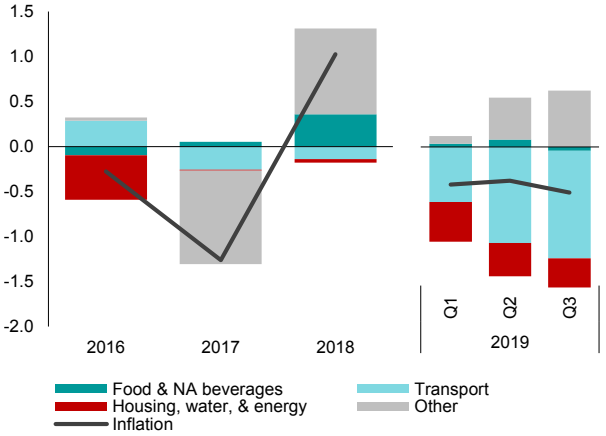
Growth in the Major Non-Oil and Gas Sector
(Percent year-over-year)



Sources: Department of Economic Planning and Development; and AMRO staff calculations.

Consumer price inflation returned to negative territory, mainly driven by falling durable goods prices.

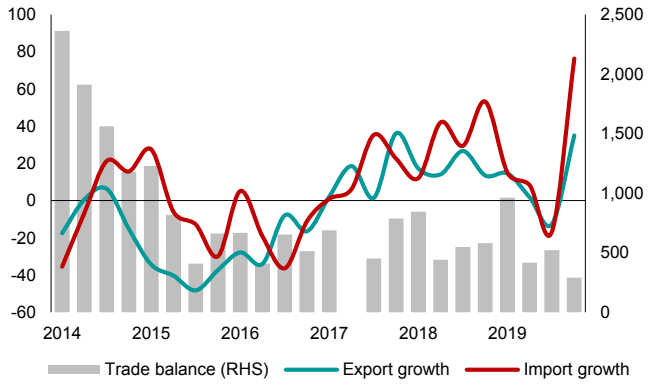
Inflation
(Percent year-over-year)



Sources: Department of Economic Planning and Development; and AMRO staff calculations. NA beverages = non-alcoholic beverages.

The trade balance surplus narrowed in 2019 on the back of low commodity prices.

Trade Balance
(Percent year-over-year; Millions of US dollars)



Sources: Department of Economic Planning and Development; and AMRO staff calculations.

The banking sector remains sound with high levels of capital, liquidity, and profitability and contained credit risk.

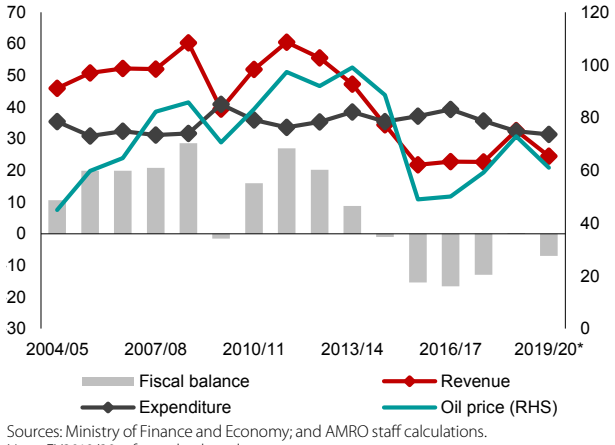
Financial Soundness Indicators
(Percent)

Indicator	2013	2014	2015	2016	2017	2018	2019 Q3
Capital adequacy							
CAR	19.4	21.4	21.5	21.5	18.3	18.4	20.1
CAR tier 1	20.4	21.4	22.8	23.2	18.1	19.2	19.7
Asset quality							
NPL gross	5.7	5.0	4.9	5.9	4.4	4.8	4.8
NPL net	1.6	2.3	2.2	3.3	1.4	2.4	2.6
Profitability							
ROA	1.4	1.4	1.3	1.0	1.4	1.5	1.8
ROE	10.2	10.1	8.7	6.4	9.5	11.4	12.6
Liquidity							
Liquid assets to total assets	56.2	53.9	45.5	50.4	51.0	51.6	47.5
Loan to deposit ratio	33.6	35.7	42.9	40.7	40.2	40.9	46.3

Sources: Autoriti Monetari Brunei Darussalam; and AMRO staff calculations. CAR = Capital adequacy ratio; NPL = non-performing loan; ROA = return on assets; ROE = return on equity.

Although the government has succeeded in restraining its expenditure in recent year, fiscal performance is strongly influenced by oil and gas prices.

Fiscal Position and Oil Price
(Percent of GDP; US dollar per barrel)



Sources: Ministry of Finance and Economy; and AMRO staff calculations.
Note: FY2019/20 refers to budget data.

Brunei Darussalam: Selected Economic Indicators

	2016	2017	2018	2019 e/
Real sector	(in annual percentage change)			
Real GDP	-2.5	1.3	0.1	3.9
Private consumption	-1.3	4.7	2.2	5.9
Government consumption	-6.5	7.4	1.6	1.8
Gross fixed capital formation	-11.1	8.0	28.1	-4.4
Exports of goods and services	-1.9	-5.3	5.7	14.9
Imports of goods and services	-10.8	1.3	28.1	13.8
External sector	(in percent of GDP, unless otherwise specified)			
Current account balance	12.9	16.4	7.8	5.9
Trade balance	18.9	19.8	17.4	–
Capital and financial account balance	-56.0	-11.8	-1.6	–
Errors and omissions	44.4	-6.8	-6.3	–
Overall balance	1.3	-2.3	-0.1	–
International reserves				
(in USD million, end of period)	3,489.0	3,488.0	3,407.0	–
Fiscal sector[1]	(in percent of GDP)			
Revenue and grants	22.7	22.7	32.6	24.4
Expenditure	39.3	35.7	32.4	31.5
Fiscal balance	-16.6	-12.9	0.2	-7.0
Monetary and financial sectors	(in annual percentage change)			
Broad money	1.5	-0.4	2.8	4.3
Domestic credit[2]	-21.2	-14.2	6.0	6.8
Private sector credit	-5.2	-5.3	-3.0	2.3
Memorandum items:				
Nominal GDP (in BND million)	15,748	16,748	18,301	18,375
Nominal GDP (in USD million)	11,412	12,136	13,556	13,511
Headline inflation (in percent yoy, period average)	-0.3	-1.3	1.0	-0.4
Exchange rate (in BND/USD, period average)	1.38	1.38	1.35	1.36

Sources: National authorities; and AMRO staff estimates.
Note: Red number denotes AMRO staff estimate. yoy = year-over-year.

e/ Refers to AMRO staff estimates, except for GDP and exchange rate.

[1] Figures are for fiscal year that run from April to March.

[2] Domestic credit is based on Domestic claims on Financial Corporation Survey data.

Cambodia

Cambodia's economy has continued to grow strongly. Real GDP growth hit an 8-year high of 7.5 percent in 2018. The garment manufacturing sector rebounded strongly on the back of surging exports after slowing down for two consecutive years. The construction sector also continued its rapid growth, supported by the robust property market and infrastructure development. Buoyant domestic demand contributed to the high growth in 2018, with higher wages, in both the public and private sectors, and strong inflows of foreign direct investment. In 2019, the global growth momentum weakened, dragged down by a broad-based slowdown in major economies amid increasing uncertainties in trade and geopolitical tensions. With weaker external demand, Cambodia's economic growth is estimated to moderate to 7.1 percent in 2019 and projected to slow down sharply in 2020 with negative spillovers from the COVID-19 outbreak in China.

Headline inflation has remained relatively subdued. It averaged at 2.5 percent in 2018, down from 2.9 percent in 2017, supported by broadly stable food and beverage prices. In 2019, headline inflation moderated further, averaging 1.9 percent year-over-year as energy prices continued to fall while food prices remained relatively stable.

The overall balance of payments has remained in surplus, as the widening current account deficit was offset by strong foreign direct investment (FDI) inflows. As import growth continued to outpace exports, the already sizable current account deficit is estimated to widen further in 2019. However, the surplus in the capital and financial account, underpinned by strong FDI inflows, fully covered the increasing current account deficit. FDI flowed largely to the financial sector and construction and real estate related activities, which accounted for about 53.6 percent of total FDI inflows as of Q2 2019. As a result, the overall balance of payments has remained in surplus, leading to a further build-up in foreign reserves. Gross international reserves went up to USD 18.8 billion as of December 2019, sufficient to cover about 9.4 months of goods and services imports.

Financial sector indicators are broadly sound. Capital adequacy ratios for both commercial banks and microfinance institutions have been improving with the implementation of new minimum capital requirements. In addition, the liquidity coverage ratio and solvency ratio of banks have been trending up well above regulatory minimum levels. As of Q3 2019, the non-performing loan ratio of banks edged up slightly to 2.5 percent, attributable in part to a stricter loan classification regime and the adoption of International Financial Reporting Standards 9. Credit growth in the private sector rebounded strongly and accelerated further to 26.2 percent in Q3 2019, driven mainly by construction and real estate related activities, which increased the concentration of credit in the construction and real estate related sector to about 28.4 percent of total credit as of September 2019.

The fiscal position has strengthened further on the back of persistently strong revenue collection. With the successful implementation of the Revenue Mobilization Strategy 2014-2018 (RMS I), domestic revenue reached a record high of 21.4 percent of GDP in 2018. As the rapid increase in public-sector wages abated, the overall fiscal deficit narrowed to 2.2 percent of GDP in 2018. The current budget surplus continued in 2018, helping the government to build up its fiscal deposit, which reached 16.3 percent of GDP as of September 2019. As the strong revenue collection continued and government spending remained contained, fiscal balance in 2019 is projected to narrow further to 2.0 percent of GDP.

High dependence on only a few markets has raised concerns over Cambodia's vulnerability to concentration risks. Given the country's high reliance on the EU market, the suspension of its Everything But Arms ("EBA") status will impact its exports. In addition, China's dominant share of FDI and tourist arrivals has increased Cambodia's vulnerability to any negative developments in China, such as a sharp growth slowdown or sudden policy changes.

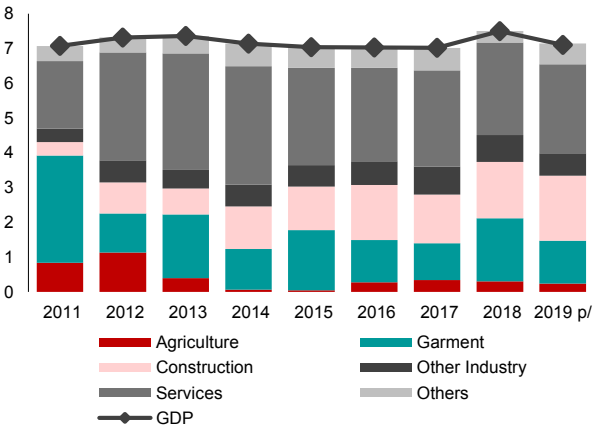
In order to maintain its high growth potential, Cambodia needs to continue its efforts to enhance competitiveness and economic diversification. The country must address its structural challenges, such as the relatively poor infrastructure, limited supply of skilled labor and rapidly rising minimum wages. It is essential to prioritize fiscal resources to support structural reforms and to continue efforts to enhance public-sector efficiency amid rising spending needs.

The author of this country note is Tanyasorn Ekapirak.

Cambodia: Selected Figures

The Cambodian economy continued to post high growth.

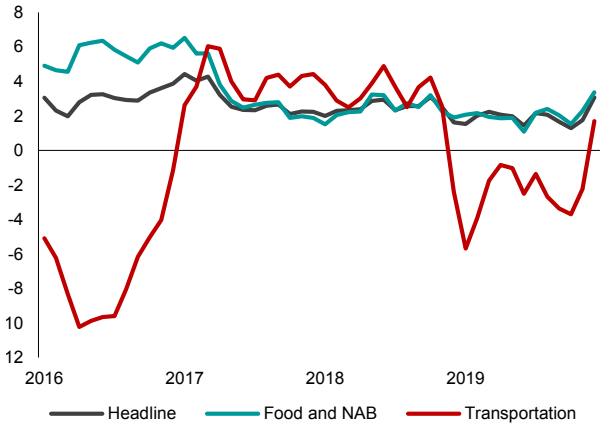
Contributions to Real GDP Growth
(Percentage points)



Sources: National Institute of Statistics of Cambodia; and AMRO staff calculations.

Headline inflation remained relatively subdued.

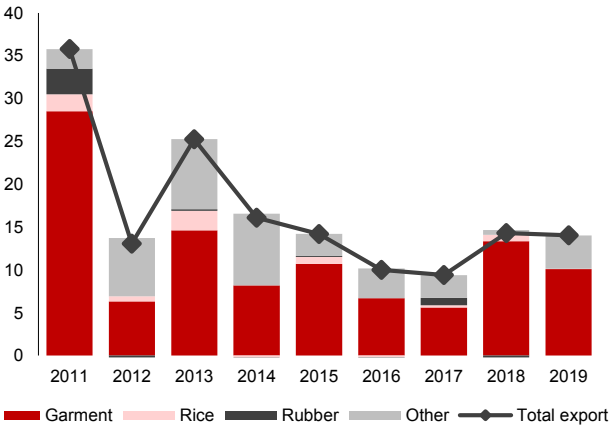
Inflation
(Percent year-over-year)



Source: National Bank of Cambodia. NAB = non-alcoholic beverages.

Exports growth remained strong in 2019.

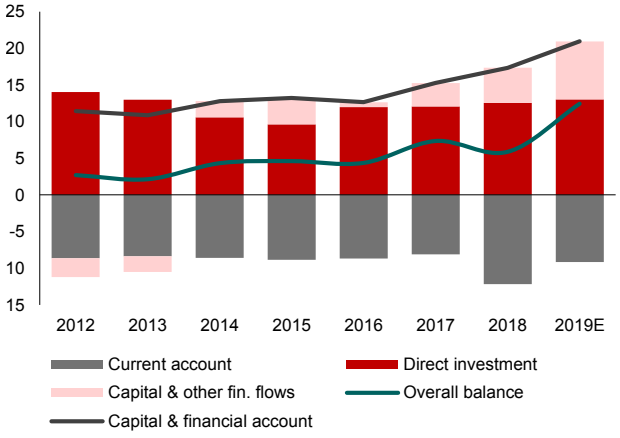
Exports
(Percentage point contribution)



Source: National Bank of Cambodia.

The large capital and financial account surpluses contributed to the overall balance of payments surplus.

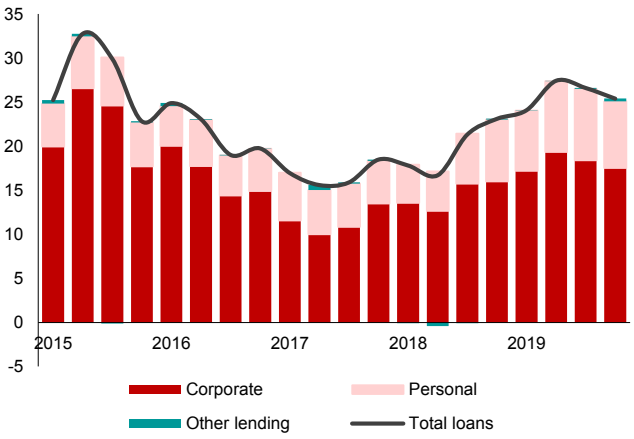
Balance of Payments
(Percent of GDP)



Sources: National Bank of Cambodia; and AMRO staff calculations.

Credit growth has accelerated since H2 2018.

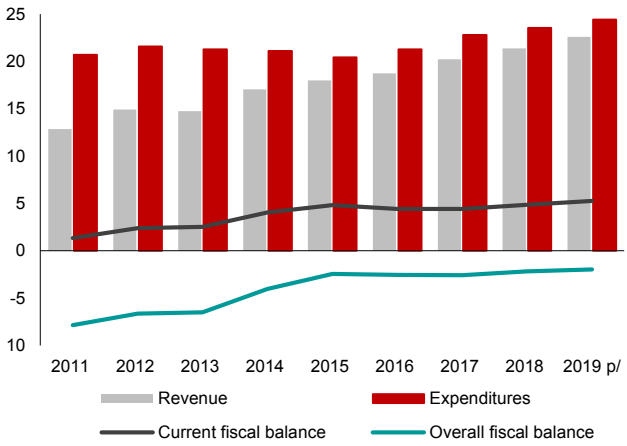
Domestic Credit Growth
(Percent year-over-year; percentage point contribution)



Sources: National Bank of Cambodia; and AMRO staff calculations.

Continued strong revenues further strengthened the fiscal position.

Fiscal Position
(Percent of GDP)



Sources: Ministry of Economy and Finance; and AMRO staff calculations.

Cambodia: Selected Economic Indicators

	2016	2017	2018	2019
Real sector	(in annual percentage change)			
Real GDP	7.0	7.1	7.5	7.1
Private consumption	6.7	4.6	5.8	5.2
Government consumption	5.7	6.5	7.9	7.8
Gross fixed capital formation	10.1	6.1	13.2	14.8
Imports of goods and services	14.7	14.7	14.7	14.7
Exports of goods and services	11.8	11.8	11.8	11.8
External sector	(in percent of GDP, unless otherwise specified)			
Current account balance	-8.7	-8.1	-12.2	-9.1
Trade balance	-19.2	-19.3	-23.8	-22.2
Capital and financial account balance	12.6	15.3	17.3	20.9
Direct investment	12.0	12.1	12.6	13.0
Portfolio investment	0.0	0.0	-0.2	0.0
Other investment	-0.7	2.0	3.7	6.9
Errors and omissions	0.4	0.5	0.7	0.7
Overall balance	4.4	7.4	5.9	12.4
External debt	50.3	51.8	53.8	49.9
International reserves (in USD billion, end of period)	9.1	12.2	14.6	18.8
Fiscal sector	(in percent of GDP)			
Revenue and grants	21.0	21.9	23.1	23.4
Expenditure	21.8	23.4	24.3	24.4
Fiscal balance	-2.5	-2.6	-2.2	-2.0
Government debt	29.2	30.0	28.9	29.4
Monetary and financial sectors	(in annual percentage change)			
Broad money	17.9	23.8	24.0	18.0
Domestic credit	21.9	15.6	21.1	21.2
Private sector credit	22.5	18.5	23.2	26.3
Memorandum items:				
Nominal GDP (in billions of KHR)	81,241.9	89,830.5	99,629.6	109,477.6
Nominal GDP (in millions USD)	20,016.7	22,177.2	24,592.8	27,000.0
GDP per capita (USD)	1,269.9	1,385.6	1,495.0	1,617.7
Headline inflation (in percent yoy, period average)	3.0	2.9	2.5	1.9
Exchange rate (in KHR/USD, period average)	4,053.7	4,045.1	4,044.8	4,052.0

Sources: National authorities; and AMRO staff estimates.
Note: Red number denotes AMRO staff estimate. yoy = year-over-year.

China

The Chinese economy grew by 6.1 percent in 2019, slowing from 6.6 percent in 2018. Growth was weighed down by the trade tensions with the United States and the deleveraging process. However, the authorities' policy responses in cutting taxes and fees and deploying measures to keep credit expansion at a steady pace helped forestall a sharp economic slowdown.

Growth is expected to undergo a short-lived deceleration in Q1 2020, due to the recent epidemic of novel COVID-19. The contagion itself and attempts to curtail its spread could lead to disruptions in economic activity and closure of some businesses. We expect a strong rebound in the second half of 2020, given the strong policy measures by the government to control the spread of the epidemic and mitigate the impact on the economy, as well as some emerging signs that the epidemic is being brought under control.

The unemployment rate is showing an uptick. Employment has continued to grow, predominantly in the services sector. Nonetheless, the unemployment rate has edged up slightly because of the slowing economy, reaching 5.2 percent in December 2019. It is likely to rise further in H1 2020 as a result of the epidemic.

Consumer price index (CPI) inflation has picked up, but it is expected to remain contained amid tepid demand. CPI inflation rose to 5.4 percent in January 2020, reflecting mainly a sharp rise in pork prices. However, pork prices are expected to decline in 2020 with the increase in production and imports. Moreover, core CPI inflation has been low and stable as a result of subdued demand, and will likely continue.

Trade negotiations with the United States have been positive. The two countries have reached a Phase One deal, signaling a de-escalation in the trade tensions. The deal put into immediate effect tariff rollbacks, expansion of trade, commitments on intellectual property rights, changes to currency practices, and the opening up of China's financial markets. Chinese and US officials are also ready to begin the second stage of talks, which could lead to further tariff reductions. The progress has reduced uncertainty, enhanced confidence and is expected to propel China's trade in 2020, boosting growth and dampening inflation.

Nonetheless, overall risks are still elevated in the near term and could persist into the medium term:

- The infection rate and duration of the epidemic are still uncertain. In addition, the virus has spread to other economies.
- Given the high levels of corporate debt, a further slowdown in the economy could lead to higher defaults and difficulties for some corporates in refinancing, particularly small- and medium-sized enterprises.
- Weaker growth could have a sizable impact on employment.
- Defaults by local government financing vehicles' debt may increase.

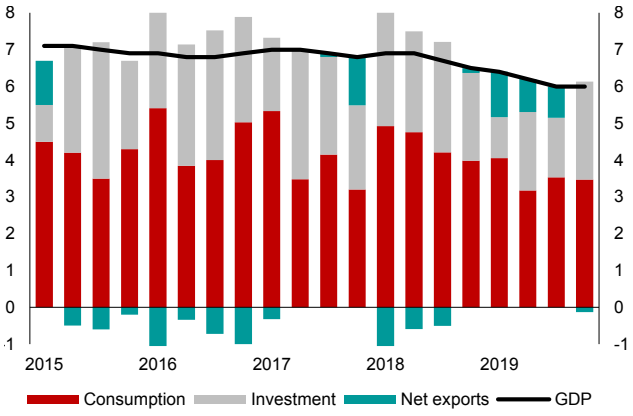
To mitigate the impact of the epidemic, Chinese authorities are taking measures to support the vulnerable groups, provide liquidity to the financial system, and ensure that production can recover when the epidemic recedes. Policy priorities in the near term will continue to focus on coping with the economic slowdown while also prioritizing the quality of economic growth and guarding against macroeconomic and financial stability risks.

The author of this country note is Simon Liu.

China: Selected Figures

Policy measures to mitigate the impact from the trade tensions with the United States has prevented a sharp economic slowdown.

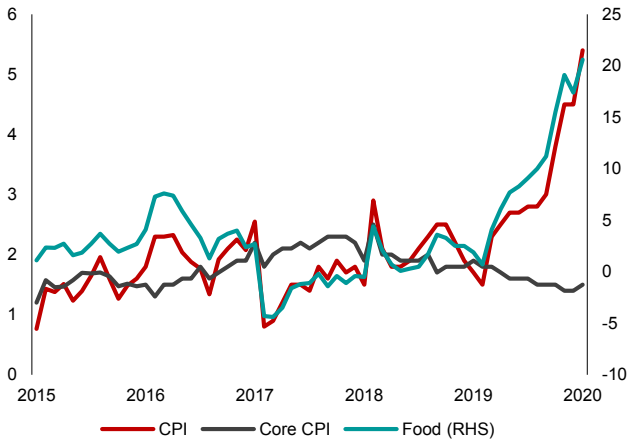
Contributions to Real GDP Growth
(Percentage points)



Sources: National Bureau of Statistics of China; Wind; and AMRO staff calculations.

CPI inflation has risen sharply as a result of the swine flu epidemic, while core inflation has remained subdued.

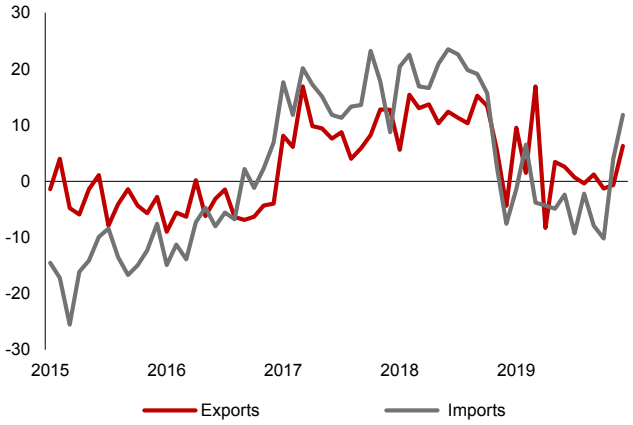
Consumer Price Index Inflation
(Percent year-over-year)



Sources: National Bureau of Statistics of China; Wind; and AMRO staff calculations.
CPI = consumer price index.

Trade rebounded strongly in December 2019, as the trade tensions eased and the global outlook improved.

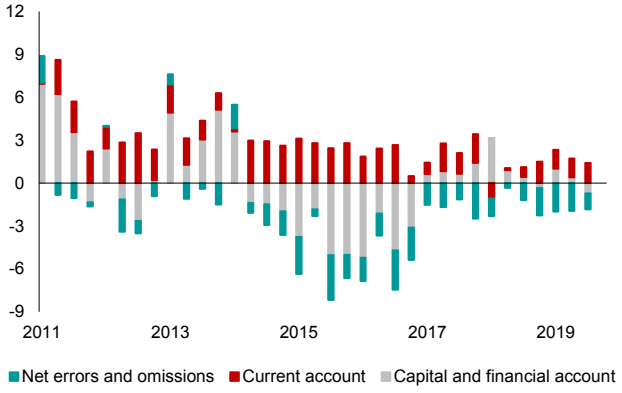
Exports and Imports
(Percent, year-over-year, seasonally adjusted)



Sources: CEIC Data; and AMRO staff calculations.

The balance of payments was largely in balance in 2019.

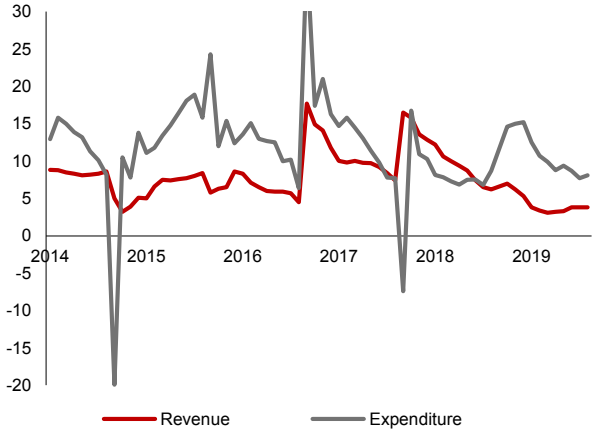
Balance of Payments
(Percent of quarterly GDP)



Sources: CEIC Data; and AMRO staff calculations.

To support the economy, the authorities have cut taxes and fees, while keeping expenditure at a high level.

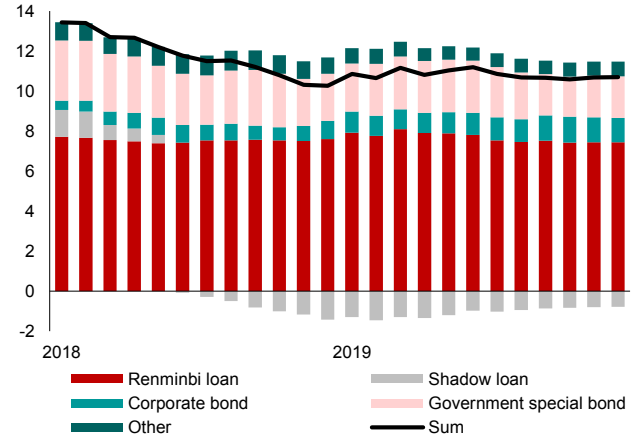
General Government Revenue and Expenditures
(Percent, year-over-year, year-to-date)



Sources: National Bureau of Statistics of China; and AMRO staff calculations.

Credit expansion has picked up slightly, supporting growth.

Total Social Financing
(Percentage point contribution, year-over-year)



Sources: People's Bank of China; and AMRO staff calculations.

China: Selected Economic Indicators

	2016	2017	2018	2019
Real sector	(in annual percentage change)			
Real GDP	6.8	6.9	6.6	6.1
Private consumption	10.3	8.4	9.5	…
Government consumption	10.6	11.9	10.9	…
Gross fixed capital formation	6.5	5.1	4.9	…
Imports of goods and services	…	15.2	12.3	…
Exports of goods and services	…	11.8	7.1	…
External sector	(in percent of GDP, unless otherwise specified)			
Current account balance	1.8	1.6	0.4	1.2
Trade balance	2.3	1.8	0.7	…
Capital and financial account balance	0.2	0.1	0.8	…
Direct investment	-0.4	0.2	0.8	…
Portfolio investment	-0.5	0.2	0.8	…
Other investment	-2.8	0.4	-0.6	…
Errors and omissions	-2.0	-1.7	-1.2	…
Overall balance	-1.9	2.5	1.3	…
Gross external debt	12.7	14.5	14.4	…
International reserves (in USD billion, end of period)	3,010.5	3,139.9	3,072.7	3,107.9
Fiscal sector[1]	(in percent of GDP)			
Revenue	22.4	22.0	21.6	21.0
Expenditure	25.3	24.8	24.1	23.8
Fiscal balance	-2.9	-2.9	-2.6	-2.8
Monetary and financial sectors	(in annual percentage change)			
Broad money (M2)	11.3	8.1	8.1	8.7
Total social financing	12.8	14.1	10.3	10.7
Bank loans in CNY	13.4	13.2	13.2	12.5
Memorandum items:				
Nominal GDP (in CNY trillion)	74.6	83.2	91.9	99.1
Headline inflation (in percent yoy, period average)	2.0	1.6	2.1	2.9
Shanghai Interbank Offered Rate, overnight (in percent)	2.2	2.8	2.6	1.7
Exchange rate (in USD/CNY, period average)	6.6	6.8	6.6	6.9

Sources: National authorities; and AMRO staff estimates.
Note: Red number denotes AMRO staff estimate. yoy = year-over-year.
[1] Refers to general government account and AMRO staff estimates.

Hong Kong, China

Hong Kong has entered a recession, reflecting a pullback of cross-border trade with Mainland China, and a sharp drop in business sentiment owing to the sociopolitical unrest and the US-China trade conflict. The deceleration in growth became sharper through 2019, culminating in a full-year contraction of 1.2 percent, and weakening external demand having spilled over to domestic activity. On an import-adjusted basis, consumption growth is shown to have been on a pronounced decelerating trend, and insufficient to offset the dip in investment.

The 2020 growth outlook is clouded, due to external headwinds, domestic sociopolitical tensions, and the potential impact of the COVID-19 outbreak. The ratification of the Phase One deal between China and the United States is expected to help lessen external headwinds, but uncertainty surrounding further agreements remains. Domestic unrest is still weighing on economic sentiment, and the COVID-19 outbreak has added yet more uncertainty. Accordingly, AMRO has revised its 2020 baseline growth forecast for Hong Kong to –0.5 percent for 2020.

Employment growth has weakened. The jobless rate has risen to 3.4 percent, while employment growth has turned more negative as a few key sectors have been shedding jobs.

Inflation pressures have increased moderately due to supply-side factors, but remain contained. Headline CPI inflation was 2.9 percent for 2019, with pork prices pushing it up from Q2 onward. Inflation pressures should stay contained into 2020, as underlying demand in the economy will be subdued.

The financial system remains resilient. Overall domestic financial conditions are accommodative. The moderation of bank credit expansion is in line with the economic slowdown. Banks have maintained strong capital and liquidity buffers and healthy asset quality. The non-performing loan ratio has been stable at a very low at 0.5 percent; the overall capital adequacy ratio is a strong at 20.6 percent; and key banks' liquidity coverage ratio are well above a high threshold of 150 percent.

The property market recovered in the first 5 months of 2019, and then came under downward pressure. Sentiment remains guarded. If the domestic unrest and the spread of COVID-19 were to be contained, residential property prices could hold up on the back of strong demand and short supply.

Hong Kong's strong fiscal position has allowed the government to ramp up measures to support growth and address socioeconomic challenges. After a pronounced 15.0 percent year-over-year increase in government expenditure in financial year (FY) 2019/20 to support growth and economic diversification and to boost social welfare, the government plans to ramp up spending further in FY2020/21, by an even larger 19.6 percent, to cushion the economy against recessionary forces. Nevertheless, the fiscal position remains strong, as fiscal reserves are about 39.5 percent of GDP, equivalent to about 22 months of government spending, and there will still be an ample balance of 26.5 percent of GDP, equivalent to about 22 months of government spending, by the end of FY2024/25.

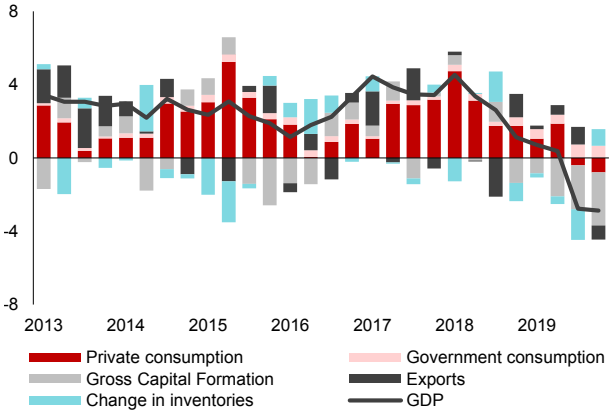
Risks to growth and confidence have heightened markedly over a short period of time. The risk of sociopolitical tensions heightening remains, while a new risk has emerged in the form of the COVID-19 outbreak, raising the prospect of a sharper decline in business sentiment and a bigger drag across trade-related services, tourism, construction activity, and real estate as well as overall economic growth. In addition, if Mainland China's growth momentum falters because of the prolonged COVID-19 epidemic and/or the US-China trade deal is rolled back, Hong Kong's growth could decelerate more sharply moving forward.

The author of this country note is Suan Yong Foo.

Hong Kong, China: Selected Figures

Hong Kong has entered a recession, with 2019 growth coming in at –1.2 percent.

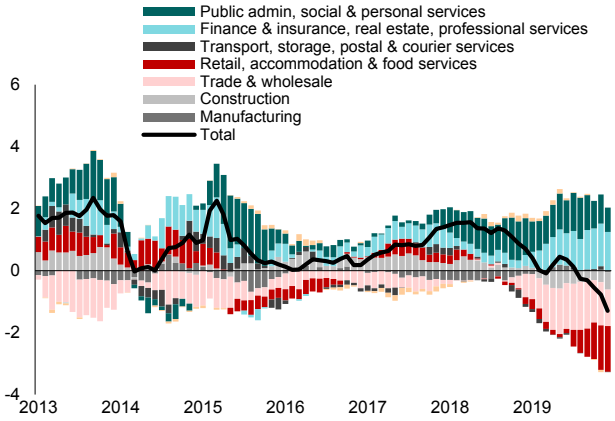
Contributions to Real GDP Growth: Import-Adjusted Approach
(Percentage points)



Sources: CEIC Data; OECD; and AMRO staff calculations

Overall employment growth has turned more negative, with a few key sectors losing significant numbers of jobs.

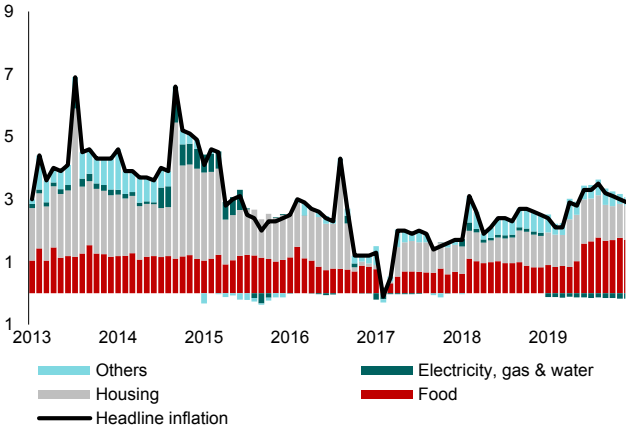
Employment Growth: Contributions by Sector
(Percentage points, year-over-year)



Sources: CEIC Data; and AMRO staff calculations.

Inflation pressures have risen moderately due to supply-side factors, but are contained.

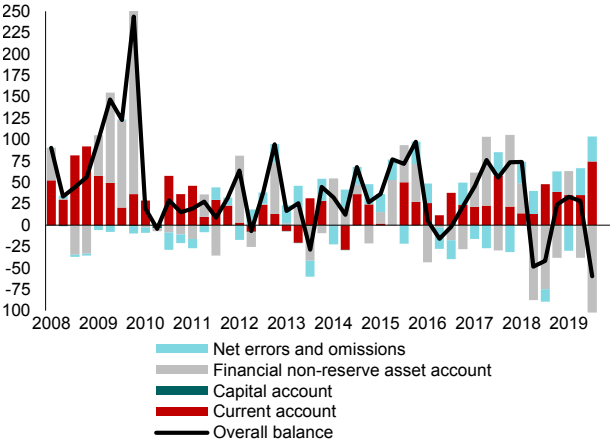
Inflation
(Percent year-over-year)



Sources: CEIC Data; Hong Kong authorities; and AMRO staff calculations.

Hong Kong's overall balance of payments has been mostly in surplus.

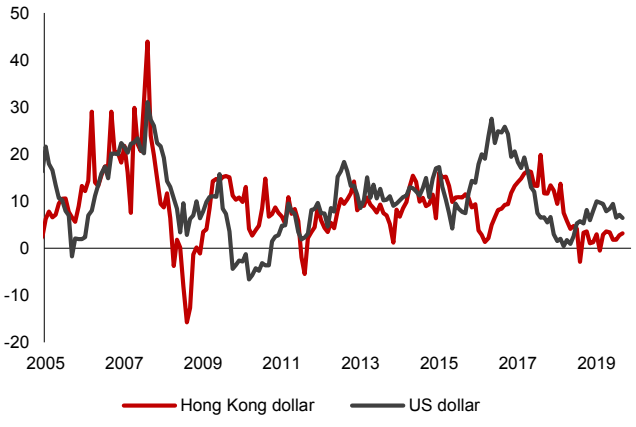
Balance of Payments
(Billions of Hong Kong dollars)



Sources: Hong Kong authorities; and AMRO staff calculations.

Capital outflows have been limited.

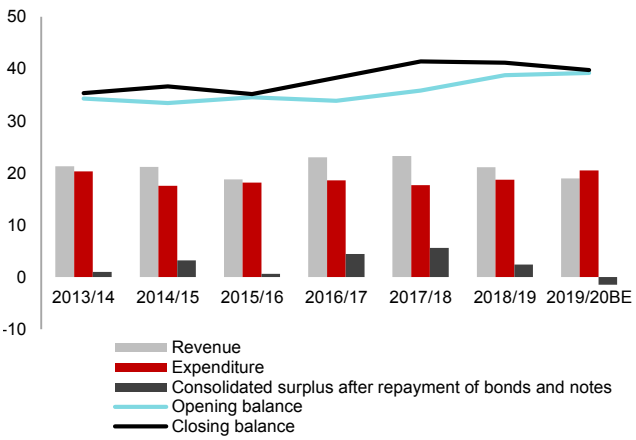
Deposits with Authorized Institutions (AIs)
(Percent year-over-year)



Sources: Hong Kong authorities; and AMRO staff calculations.

Revised estimates suggest that the government ran a small budget deficit for FY2019/2020.

Revenue, Expenditure, Closing Balance, and Consolidated Surplus
(Percent of GDP)



Sources: Hong Kong authorities; and AMRO staff calculations.

Hong Kong, China: Selected Economic Indicators

	2016	2017	2018	2019 e/
Real sector	(in annual percentage change)			
Real GDP	2.2	3.8	2.9	-1.2
Private consumption	2.0	5.6	5.3	-1.1
Government consumption	3.4	2.8	4.3	5.1
Gross domestic fixed capital formation	-0.1	2.9	1.7	-12.3
Imports of goods and services	0.9	6.6	4.6	-6.8
Exports of goods and services	0.7	5.9	3.8	-4.6
External sector	(in percent of GDP, unless otherwise specified)			
Current account balance	4.0	4.7	4.3	5.2
Trade balance	2.3	1.1	0.1	3.8
Overall balance	0.4	9.4	0.3	-
Total external debt (in billions of USD)	1,356.0	1,575.0	1,692.0	-
Gross official reserves excluding net forward position				
(in billions of USD)	386.2	432.0	424.0	433.2
Fiscal sector[1]	(in percent of GDP)			
Revenue	22.6	22.8	20.9	19.7
Expenditure	18.2	17.3	18.5	21.2
Consolidated budget balance	4.4	5.5	2.4	-1.5
Public debt	0.1	0.1	0.1	0.1
Monetary and financial sectors	(in annual percentage change, unless otherwise specified)			
Total loans (in annual percentage change)	6.5	16.1	4.4	3.5
Loan to deposit ratio	68.4	73.0	72.6	75.4
Classified loan ratio	0.7	0.6	0.5	0.5
Capital adequacy ratio	19.2	19.1	20.6	20.6
Memorandum items:				
Nominal GDP (in HKD billion)	2,490.6	2,662.8	2,842.9	2,868.1
Headline inflation (in percent yoy, period average)	2.4	1.5	2.4	2.9
Unemployment rate (in percent, period average)	3.4	3.1	2.8	3.0
Three-month HIBOR (in percent per annum)	1.0	1.3	2.3	2.3
Exchange rate (in HKD/USD, period average)	7.8	7.8	7.8	7.8

Sources: Hong Kong authorities; and AMRO staff estimates.
Note: Red number denotes AMRO staff estimate. yoy = year-over-year.
e/ Refers to AMRO staff estimates.
[1] Refers to Fiscal Year.

Indonesia

In the face of strong external headwinds, Indonesia's growth dipped but was still solid in 2019, and is expected to remain resilient in 2020. Real GDP growth moderated to 5.02 percent in 2019 from 5.17 percent a year earlier. Stable domestic consumption and resilient investment, albeit slowing, were key growth drivers in 2019 as exports contracted on the back of a weaker global economy and increased trade protectionism. Meanwhile, declining imports, induced in part by an investment slowdown, offset some moderation in overall growth. Steadfast domestic demand is expected to continue to support growth in 2020, with exports and tourism likely to be weighed down by the COVID-19 epidemic.

Inflation has been benign. Subdued commodity prices, including fuel prices, has kept inflation under control. Headline and core inflation averaged 3.0 percent and 3.1 percent (year-over-year), respectively, in 2019.[1] This is well-anchored within Bank Indonesia's (BI's) target band of 3.5 percent ±1 percent.

The current account balance has improved. The oil and gas trade deficit narrowed from 1.1 percent of GDP in 2018 to 0.8 percent in 2019, benefiting from lower oil prices and a compression in oil import volumes, partly attributable to accelerated implementation of the 20 percent biodiesel blend (B-20) policy. Although lower commodity prices and weaker external demand weighed on exports, the non-oil and gas trade surplus increased, as imports contracted even more than exports. In light of the improved trade balance, the current account deficit narrowed to 2.7 percent of GDP in 2019 from 2.9 percent a year earlier.

Net capital inflows have returned on the back of generally easier global financial conditions. Indonesian financial markets came under pressure in 2018, reflecting foreign investors' pullback from emerging markets, driven by a stronger US dollar, aggressive US Federal Reserve rate hikes and heightened US-China trade tensions. Foreign investors have since returned to net-purchasing rupiah-denominated assets, following a decline in US Treasury yields and a dovish pivot by the US Federal Reserve and other major central banks. Net FDI inflows also rebounded from a dip in 2018. Against this backdrop, the rupiah stabilized in 2019 and gross foreign reserves strengthened from USD 120.7 billion as of end-2018 to USD 129.2 billion as of end-2019.

Monetary policy has been eased in support of the economy. The overnight interbank interest rate has closely tracked BI's policy rate, which was lowered by a total of 100 basis points to 5.0 percent as of end-2019. BI's move to lower the reserve requirement ratio for rupiah deposits in 2019 by a total of 100 basis points has also provided banks with additional liquidity. Domestic credit, meanwhile, slowed from 11.75 percent at end-2018 to 6.08 percent in December 2019. In pre-empting the potential impact of the COVID-19 outbreak on domestic economic growth, BI lowered its policy rate further by 25 basis points to 4.75 percent in February 2020. The banking sector, meanwhile, remains sound with strong capital buffers and non-performing loans, albeit on the rise, contained below 3 percent of total loans outstanding.

The authorities have adopted a prudent fiscal stance. Steps have been taken to broaden the tax base and enhance tax compliance, and to improve spending quality. Notwithstanding continued efforts to enhance tax compliance, lower commodity prices and softened economic activity weighed on revenue collection in 2019. The overall fiscal deficit is therefore estimated to widen from 1.8 percent of GDP in 2018 to about 2.1 percent in 2019, which has been, however, contained below the fiscal threshold of 3.0 percent. A fiscal package has been announced in early 2020 to support industries and sectors adversely affected by the COVID-19 outbreak.

Downside risks remain mostly external. In addition to continued uncertainty emanating from global trade conflicts, risks to the downside include ongoing geopolitical tensions that may lead to a sharp rise in oil prices and the current health (COVID-19) epidemic spreading out of control. With foreign investors holding a significant share of rupiah-denominated assets against the backdrop of a shallow financial market and modest domestic investor base, Indonesia continues to face risks related to capital flow volatility. In particular, the intensified COVID-19 outbreak triggered a shift in investors' sentiment and net capital outflows from Indonesia in February and early March 2020, prompting BI to implement a package of policy measures[2] to stabilize the financial markets. Meanwhile, accelerated reforms in the areas of financial deepening, labor regulations, FDI promotion and economic diversification are expected to strengthen growth potential in the long term.

The author of this country note is Thi Kim Cuc Nguyen.

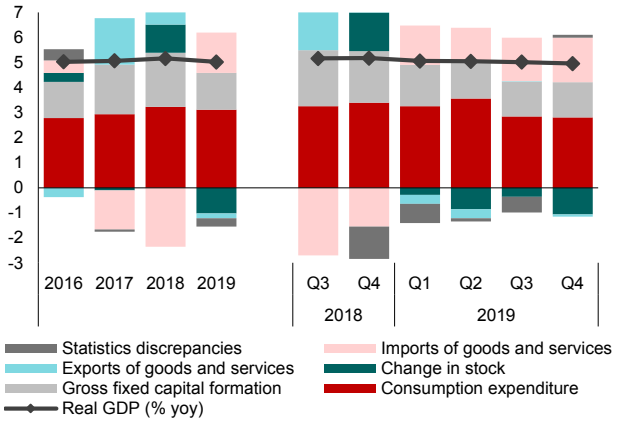
1 Headline and core inflation stood at 2.7 percent and 3.02 percent (year-over-year), respectively, as of December 2019. Data are calculated by AMRO staff using the consumer price index (CPI) data (2012 = 100) released by Statistics Indonesia. Statistics Indonesia recently rebased the CPI data using 2018 as the base year and revised the CPI basket weights accordingly. According to the new CPI data using 2018 as the base year, headline inflation averaged 2.8 percent in 2019, and stood at 2.6 percent as of December 2019.

2 Among those measures, the reserve requirement ratio (RRR) for US dollar deposits will be lowered from the current 8 percent to 4 percent, effective March 16, 2020. The rupiah RRR will also be reduced, by 50 basis points, but only for banks working with exporters and importers, effective April 1, 2020.

Indonesia: Selected Figures

Growth dipped but remained solid in 2019, supported by resilient consumption…

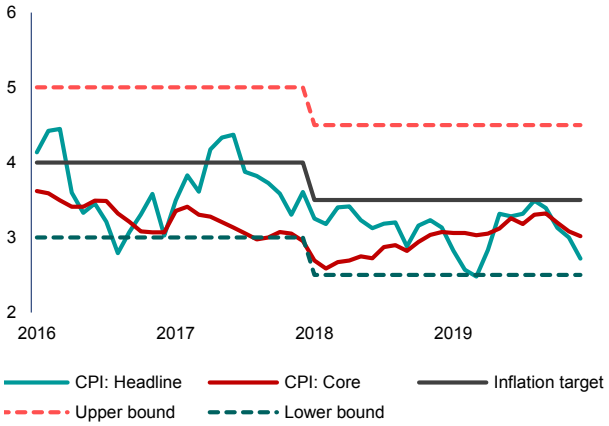
Contributions to Real GDP Growth
(Percentage points)



Sources: Statistics Indonesia; and AMRO staff calculations.

…while subdued commodity prices, including fuel prices, kept inflation well-anchored.

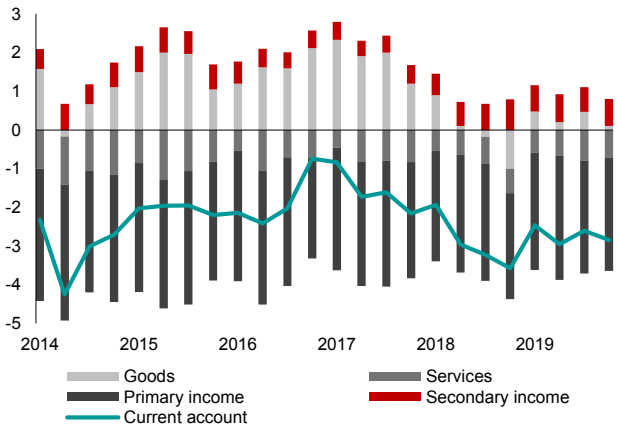
Headline and Core Inflation
(Percent year-over-year)



Sources: Statistics Indonesia; and AMRO staff calculations.
Note: CPI = consumer price index.

The improved trade balance supported a narrower current account deficit...

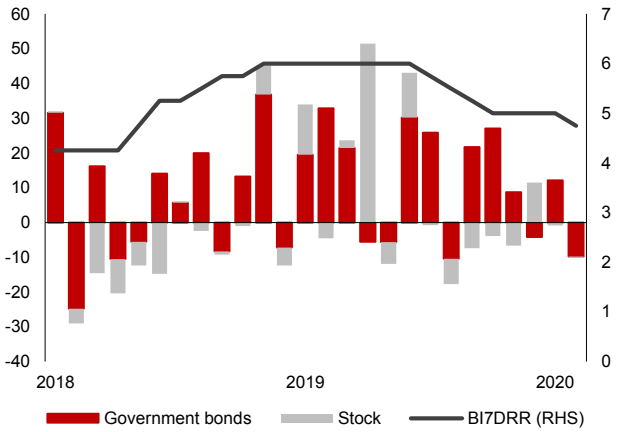
Current Account Balance
(Percent of GDP)



Sources: Bank Indonesia; and AMRO staff calculations.

…and net capital inflows resumed on the back of generally easier global financial conditions…

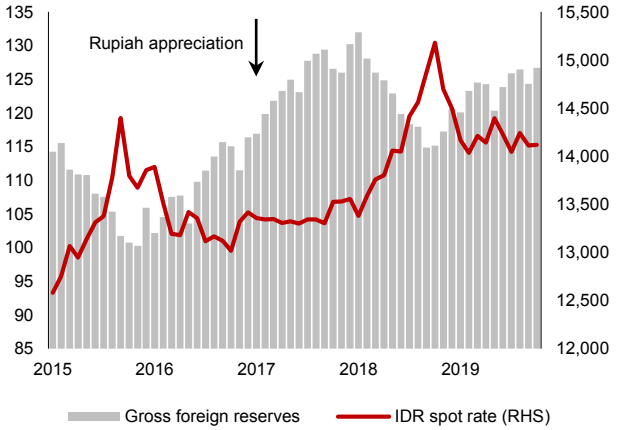
Net Capital Flows to Government Bond and Equity Market and BI Policy Rate
(Trillions of Indonesian rupiah; percent per annum)



Sources: Bank Indonesia; Ministry of Finance of Indonesia; and AMRO staff calculations. BI7DRR = Bank Indonesia 7-day repo rate.

…which underpinned reserves accumulation and a broadly stable rupiah.

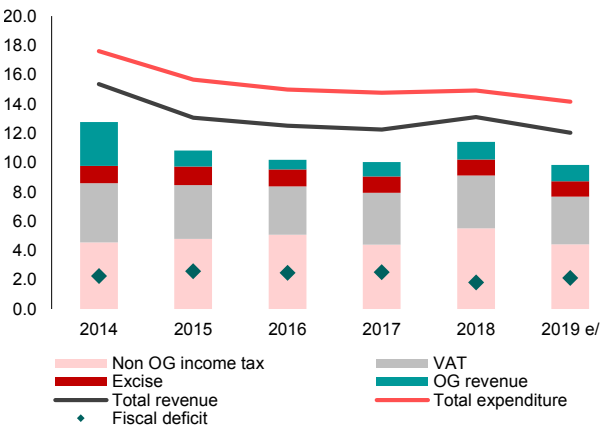
Gross Foreign Reserves and Rupiah Spot Rate
Billions of US dollars; Indonesian rupiah per US dollar)



Source: Bank Indonesia.
Note: IDR=Indonesian rupiah spot rate

The budget deficit widened in 2019, but was contained below the fiscal rule of 3 percent of GDP.

Budget Revenue, Expenditure, and Overall Balance
(Percent of GDP)



Sources: Ministry of Finance of Indonesia; and AMRO staff estimates.
Note: Data for 2019 are AMRO staff estimates. OG = oil and gas; VAT = value-added tax.

Indonesia: Selected Economic Indicators

	2016	2017	2018	2019
Real sector	(in annual percentage change)			
Real GDP	5.0	5.1	5.2	5.0
Household consumption	5.0	4.9	5.0	5.0
Government consumption	-0.1	2.1	4.8	3.2
Gross fixed capital formation	4.5	6.2	6.6	4.4
Imports of goods and services	-1.7	8.9	6.5	-0.9
Exports of goods and services	-2.4	8.1	12.0	-7.7
External sector	(in percent of GDP, unless otherwise specified)			
Current account balance	-1.8	-1.7	-2.9	-2.7
Trade balance	1.6	1.9	0.0	0.3
Capital and financial account balance	3.1	2.8	2.4	3.2
Direct investment	1.7	1.8	1.3	1.8
Portfolio investment	2.0	2.1	0.9	1.9
Other investment	-0.6	-1.1	0.2	-0.5
Errors and omissions	0.0	-0.1	-0.2	-0.1
Overall balance	1.3	1.1	-0.7	0.4
Net external debt	34.3	34.7	36.2	35.4
International reserves (in USD billion, end of period)	116.4	130.2	120.7	129.2
Fiscal sector	(in percent of GDP)			
Revenue and grants	12.5	12.3	13.1	12.2
Expenditure	15.0	14.8	14.9	14.3
Fiscal balance	-2.5	-2.5	-1.8	-2.1
Government debt	28.0	29.4	30.4	30.7
Monetary and financial sectors	(in annual percentage change)			
Broad money	10.0	8.3	6.3	6.5
Domestic credit	8.9	6.3	11.8	6.1
Private sector credit	9.1	8.0	12.5	5.5
Memorandum items:				
Nominal GDP (in IDR billion)	12,402.0	13,590.0	14,838.0	15,834.0
Headline inflation (in percent yoy, period average)	3.5	3.8	3.2	3.0
Policy rate (in percent per annum)	4.8	4.3	6.0	5.0
Exchange rate (in IDR/USD, period average)	13,305.0	13,385.0	14,246.0	14,148.0

Sources: National authorities; and AMRO staff estimates.
Note: Red number denotes AMRO staff estimate. Data for 2019, except for national income, gross foreign reserves, and memorandum items are AMRO staff estimates. Inflation data refer to the CPI series reported by Statistics Indonesia using 2012 as the base year. yoy = year-over-year.

Japan

The Japanese economy has remained resilient, underpinned by sustained domestic demand. During the first three quarters of 2019, strong GDP growth was maintained despite continued weakness in exports. Private consumption continued to show steady growth. Meanwhile, business investment stayed strong, led mainly by solid investment in the non-manufacturing sector, and notwithstanding the modest capex investment by manufacturing companies. Government consumption and public investment also provided solid support to growth. However, in the fourth quarter, the economy contracted at a sharp rate, led mainly by a marked drop in private consumption on account of the consumption tax hike and disruptions to economic activity by a series of typhoons, as well as a decline in private investment.

Looking ahead, GDP growth is forecast to be modest in 2020. Private consumption is projected to soften somewhat with the expiry of some of the government's temporary offsetting measures against the tax hike. Business investment is expected to slow amid weaker corporate profits. However, public spending should provide a boost to growth, driven by the new fiscal stimulus package. Net exports are likely to remain weak in view of the expected slowdown in the major trading partners, exacerbated by the outbreak of the COVID-19 epidemic in China.

Inflation has remained positive but at a relatively low level. CPI (less fresh food) inflation increased to 0.7 percent in December 2019 after the consumption tax was raised. The Bank of Japan's (BOJ's) preferred measure of core inflation that excludes fresh food and energy exhibited a modest upward trend amid tight labor market conditions and a positive output gap, but stayed at about 0.5 percent when the effects of consumption tax hike and policies concerning the provision of free education were excluded. Medium-term inflation expectations have been stable at about 1 percent. Going forward, consumer price inflation is likely to remain weak, well below the BOJ's 2 percent target.

The external position has been strong with its sizable current account surplus, which is in turn, supported by a large primary income surplus. The source of Japan's current account surplus has shifted from goods trade to interest and dividend incomes earned from its large overseas investments. The goods trade balance has weakened, adversely affected by the US-China trade tensions and the growth slowdown in China. The service account deficit has gradually improved in recent years, largely as a result of increasing receipts from intellectual property rights, tourism and other business services. The financial account has been driven by residents' outward investments in search of higher returns.

The financial system remains sound although financial institutions are struggling with low profitability. Credit growth continues to be relatively robust, reflecting easy monetary conditions. The banking sector has sufficient capital buffers, while non-performing loan ratios have stayed low. However, the ultra-low interest rate environment has squeezed banks' net interest margins, exerting downward pressure on profitability, especially that of regional banks which depend mostly on domestic lending. To offset declining net interest margins, major banks have been expanding their overseas lending and investing in foreign securities including structured credit products. Meanwhile, regional banks are continuing to extend loans to small firms, albeit at a slower pace.

Although the fiscal balance has been on a gradual consolidation trend, the deficit is expected to widen in fiscal year (FY) 2019 and 2020, due mainly to the new fiscal stimulus package. The fiscal deficit narrowed from 3.3 percent in FY2015 to 2.2 percent in FY2018, owing to higher growth in tax revenues, sustained expenditure discipline and low debt service burden attributable to low interest rates. Going forward, the overall fiscal deficit is projected to widen in FY2019 and FY2020, driven by the new fiscal stimulus package.

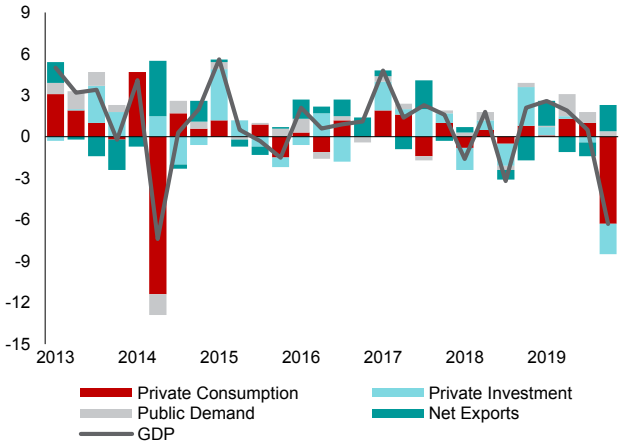
The Japanese economy is confronted with downside risks in the near term, mainly from external factors. These include a sharper-than-expected slowdown in China, re-escalation of trade protectionism including from the US-China trade tensions, and a bigger-than-expected slowdown in global growth. An extensive outbreak of the COVID-19 would reduce inbound tourists and dampen Japan's exports, in particular to China. Domestically, the effects of the consumption tax hike, implemented in October 2019, on private consumption are expected to be less severe than those of the 2014 tax hike, mainly as a result of the government's countermeasures. However, there is a risk of a prolonged weakness in private consumption amid weak consumer sentiment. Structural challenges include demographic drag from population aging and low fertility rates, prolonged easing of monetary policy, and a weakening in fiscal discipline.

The author of this country note is Jinho Choi.

Japan: Selected Figures

The Japanese economy has been resilient, underpinned by sustained domestic demand.

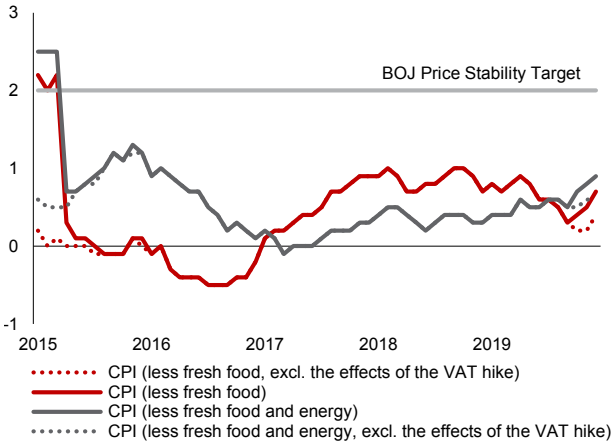
Contributions to Real GDP Growth
(Percentage points, quarter-over-quarter, seasonally-adjusted annualized rate)



Sources: Cabinet Office; and AMRO staff calculations.

Inflation has remained positive but at a low level.

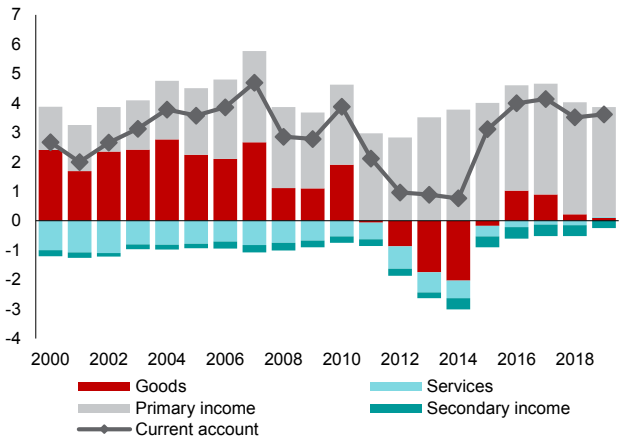
Consumer Price Inflation
(Percent year-over-year)



Sources: Haver Analytics; and Ministry of Internal Affairs and Communications.
Note: BOJ = Bank of Japan; CPI = consumer price index; VAT = consumption tax.

The current account surplus has been sizable, at about 3.6 percent of GDP in 2019.

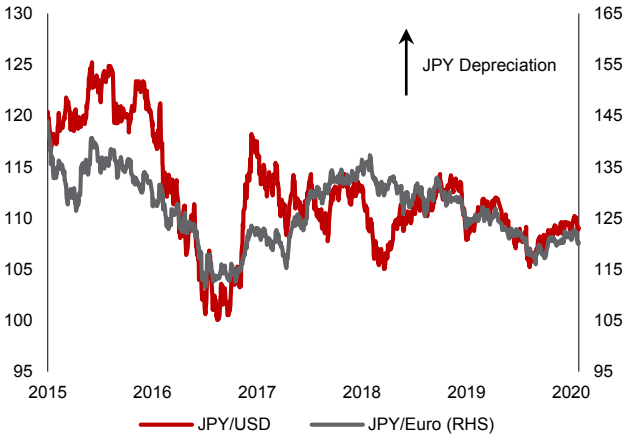
Current Account Balance
(Percent of GDP)



Source: Ministry of Finance

In 2019, the Japanese yen came under appreciation pressure before shifting to a gradual weakening trend.

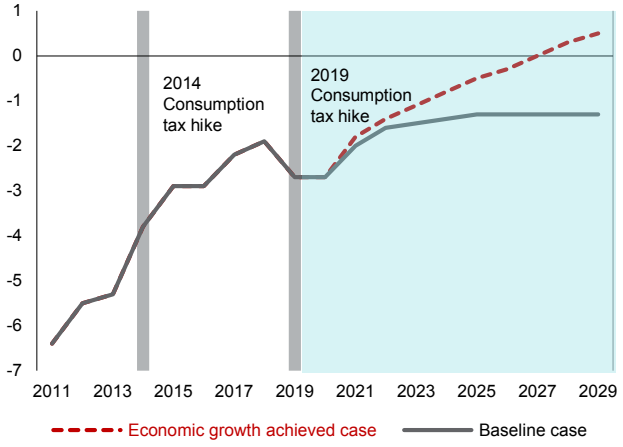
Exchange Rates
(Japanese yen per US dollar; Japanese yen per euro)



Source: Bank of Japan

The primary balance in terms of GDP is projected to stay in deficit until FY2027.

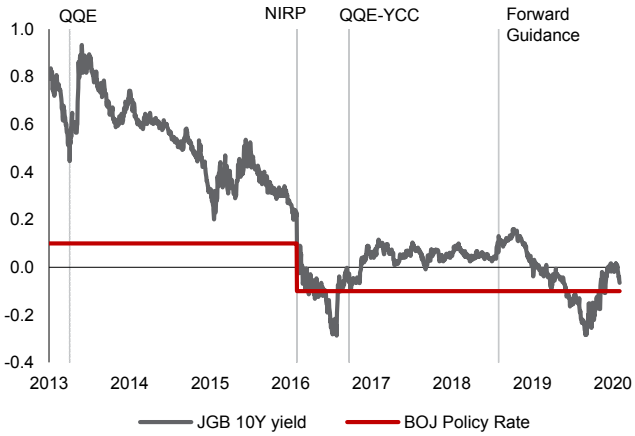
Primary Balance of Central and Local Governments
(Percent of GDP)



Source: Cabinet Office (January 2020)

The Japanese government bond yield curve flattened temporarily in Q3 2019 amid low global rates.

Government Bond Yields and Policy Rate
(Percent, annualized)



Source: Bank of Japan
Note: BOJ = Bank of Japan; JGB = Japanese Government Bond; NIRP = negative interest rate policy; QQE YCC = quantitative and qualitative easing with Yield Curve Control.

Japan: Selected Economic Indicators

	2016	2017	2018	2019
Real sector	(in annual percentage change)			
Real GDP	0.5	2.2	0.3	0.7
Private consumption	-0.3	1.3	0.0	0.1
Government consumption	1.4	0.2	0.9	1.9
Gross fixed capital formation	-0.3	3.0	0.6	1.5
Imports of goods and services	-1.6	3.4	3.4	-0.8
Exports of goods and services	1.7	6.8	3.4	-1.8
External sector	(in percent of GDP, unless otherwise specified)			
Current account balance	4.0	4.1	3.5	3.6
Trade balance	0.8	0.8	0.1	0.1
Capital account balance	-0.1	-0.1	0.0	-0.1
Financial account balance	5.3	3.4	3.7	4.5
Direct investment	2.8	3.2	2.7	4.1
Portfolio investment	5.5	-1.0	1.8	1.7
Financial derivatives	-0.3	0.6	0.0	0.1
Other investment	-2.6	0.2	-1.4	-1.9
Errors and omissions	1.5	-0.7	0.2	0.9
Overall balance	-0.1	0.5	0.5	0.5
Gross external debt	74.6	74.4	81.3	…
International reserves (in USD billion, end of period)	1,216.9	1,264.3	1,271.0	1,323.8
Fiscal sector[1, 2]	(in percent of GDP)			
Revenue and grants	35.3	35.6	36.2	36.5
Expenditure	38.7	38.2	38.4	39.4
Fiscal balance	-3.4	-2.7	-2.2	-2.9
Government debt	236.3	235.0	237.1	241.0
Monetary and financial sectors	(in annual percentage change)			
Broad money	2.1	3.0	2.1	1.9
Domestic credit	5.4	4.2	3.2	2.9
Private sector credit	4.0	5.9	4.2	3.6
Memorandum items:				
Nominal GDP (in JPY trillion)	535.5	545.9	547.1	554.5
Headline inflation (in percent yoy, period average)	-0.1	0.5	1.0	0.5
Policy rate (in percent per annum, end of period)	-0.1	-0.1	-0.1	-0.1
Exchange rate (in JPY/USD, period average)	108.8	112.2	110.4	109.0

Sources: Japanese authorities; AMRO staff estimates and projections.
Note: Red number denotes AMRO staff estimate. yoy = year-over-year.

[1] Data refer to Fiscal Year.

[2] FY2019 figures are based on AMRO staff projections.

Korea

Korea's economic growth was moderate at 2.0 percent in 2019, down from 2.9 percent in 2018. Growth was underpinned by expansionary fiscal spending and private consumption, while goods exports contracted as a result of a downturn in the global semiconductor industry, a moderation in China's growth and spillovers from the US-China trade conflict. Private investment remained subdued with a decline in facilities and construction investment. On the production side, the services sector grew robustly while manufacturing production, particularly that of small and medium-sized enterprises (SMEs), slowed down because of a slump in exports.

Employment conditions improved. The number of employed persons increased on average to 276,100 workers per month in January–October 2019, up from 97,300 workers per month in 2018. The improvement was led by the services sector, on the back of robust tourism and public sector hiring programs, while job retrenchments in manufacturing continued. By age group, increases in employment came from job creation for the elderly population and a rebound in youth employment, while the retrenchment of adults aged 30–49 continued for the third straight year.

Headline inflation stayed below the Bank of Korea (BOK)'s 2 percent target. It eased to 0.4 percent in 2019 from 1.5 percent in 2018, driven primarily by food and energy prices, and compounded by policy-induced reduction of healthcare charges and education fees. At the same time, a slowdown in the economy also dampened demand pressure, as evidenced by softening retail sales and weaker consumer sentiment.

The external position was strong with continued current account surpluses and ample international reserves. In 2019, the current account is expected to post a surplus of USD 62.4 billion, equivalent to 3.8 percent of GDP. Substantial current account surpluses have been invested overseas in search of higher returns and portfolio diversification, led by pension funds and insurance companies. Korea's net external asset position is positive and growing, reflecting its accumulated investments abroad.

The financial system is sound. Credit growth has been stable at about 6–7 percent amid low interest rates, mainly attributable to loans given to SMEs and small businesses. Meanwhile, loan demand by large corporates remained low—these firms are cash-rich and many of them have switched their financing source from bank loans to bond issuance because of lower funding costs. Household borrowing has been moderate, constrained by tighter macroprudential measures. In financial markets, Korea's equity and foreign exchange markets witnessed a temporary rise in volatility as heightened uncertainty over the global economic outlook and spillovers from the US-China trade conflict weighed on investor sentiment.

The fiscal stance is set to be more expansionary to stimulate the economy, while fiscal buffers remain ample. In 2019, central government's spending increased to 24.2 percent of GDP, rising from 22.9 percent in 2018. The supplementary budget, equivalent to 0.3 percent of GDP, was also implemented. Fiscal deficit (excluding the Social Security Fund) is expected to widen to 2.2 percent of GDP in 2019 from 0.6 percent of GDP in 2018. The government is maintaining its expansionary fiscal stance in 2020, with the fiscal deficit projected at 4.2 percent. The budget is focused on innovation-led growth and economic stimulus. It is also allocated to the sectors that support inclusive growth and job-creation. The supplementary budget is also set to support SMEs and small merchants, and provide medical facilities to the regions that are adversely affected by the spread of COVID-19.

Economic growth is most likely to stay flat in 2020, dampened by the rapid spread of COVID-19. The epidemic is estimated to soften growth in the first half of the year, but a strong recovery is expected in the second half, underpinned by a rebound in global demand for semiconductors. Upside risks to the growth outlook would come from the commercialization of the 5th generation (5G) mobile network in many countries and a rapid use of artificial intelligence. Meanwhile, the economy may face downside risks stemming from residual uncertainty over the US-China trade tensions, persistence of the COVID-19, as well as a sharper than anticipated economic slowdown in China, and advanced economies.

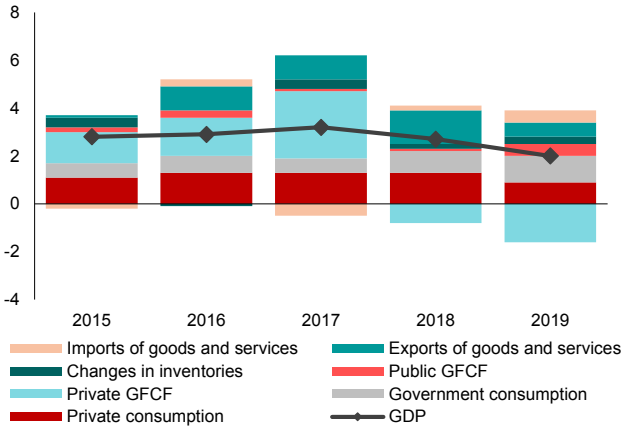
In the medium to longer term, the Korean economy will face a decline in its potential growth, stemming from structural challenges in the labor market and the corporate sector. The labor market is experiencing slower growth in the labor force and a reduction in working hours. In addition, the dualism between regular and non-regular workers continues to distort the labor market. Meanwhile, the economy is heavily dependent on the information and communications technology industry and large conglomerates. The disparity and unfair competition between large conglomerates and SMEs have discouraged the latter from investing in research and development, and technology to improve their productivity.

The author of this country note is Wanwisa (May) Vorranikulkij.

Korea: Selected Figures

Growth in 2019 was underpinned by government spending and investment.

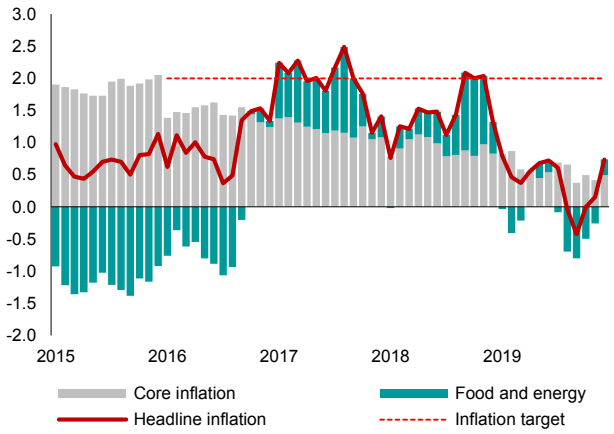
Contributions to GDP Growth
(Percentage points)



Sources: Bank of Korea; and AMRO staff estimates.
Note: GFCF = gross fixed capital formation.

Headline inflation stayed below the Bank of Korea's 2 percent target.

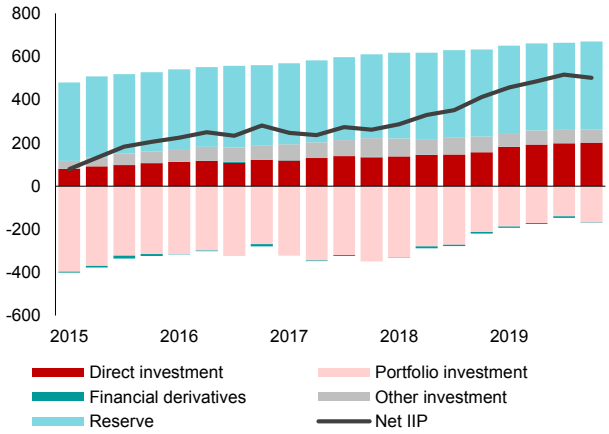
Inflation
(Percent year-over-year)



Sources: Statistics Korea; and Bank of Korea.

On the external front, Korea's net asset position expanded further on the back of accumulation of overseas direct investment.

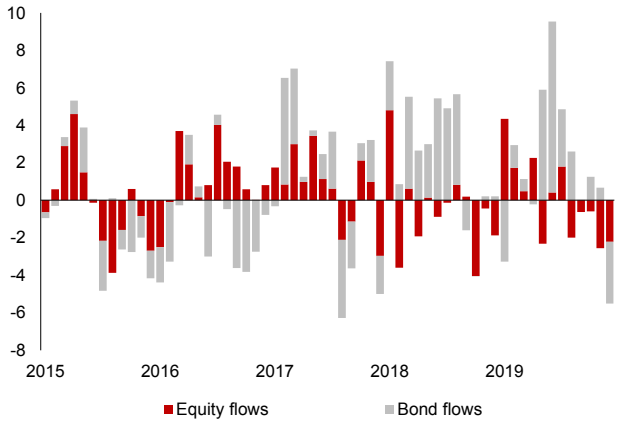
Net International Investment Position
(Billions of US dollars)



Sources: Bank of Korea; and AMRO staff calculations.
Note: IIP = international investment position.

A substantial amount of non-resident portfolio flows went into the bond market.

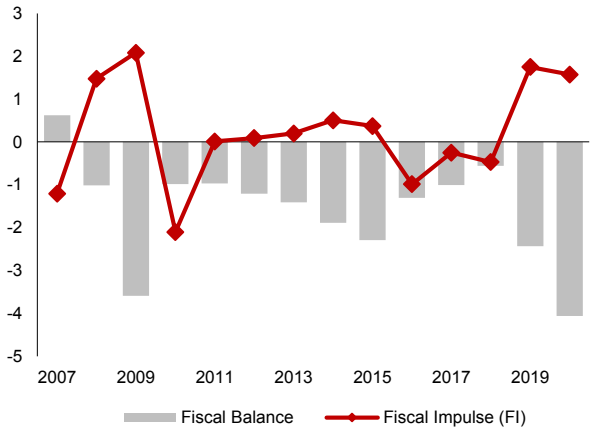
Portfolio Flows
(Percent; Billions of US dollars)



Source: Bank of Korea.

The fiscal deficit widened, reflecting more expansionary fiscal spending.

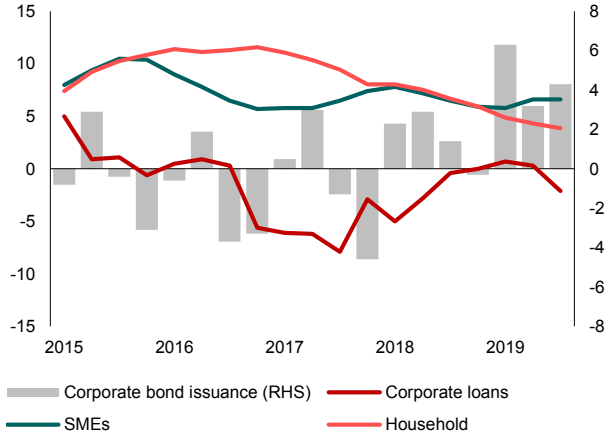
Fiscal Balance
(Percent of GDP)



Sources: Ministry of Economy and Finance; and AMRO staff estimates.
Note: FI is the difference between fiscal balance of the current and previous fiscal years. FI<0 indicates less expansionary (or more contractionary) while FI>0 indicates more expansionary (or less contractionary) policy.

Household debt grew moderately, while SME loan growth hovered at about 6 percent.

Credit Growth
(Percent year-over-year; Trillions of Korean won)



Sources: Bank of Korea; and AMRO staff calculations.
Note: SME = small and medium enterprise

Korea: Selected Economic Indicators

	2016	2017	2018	2019 [1]
Real sector	(in annual percentage change)			
Real GDP	2.9	3.1	2.6	2.0
Private consumption	2.6	2.7	2.8	1.8
Government consumption	4.3	3.9	5.5	6.3
Gross fixed capital formation	6.4	9.3	-2.5	-3.5
Imports of goods and services	5.0	8.5	0.8	-0.6
Exports of goods and services	2.3	2.5	3.4	1.5
External sector	(in percent of GDP, unless otherwise specified)			
Current account balance	6.9	4.9	5.1	3.1
Trade balance	8.2	7.4	7.2	4.6
Capital and financial account balance	6.5	5.2	3.9	3.2
Direct investment	6.5	5.5	4.7	3.7
Portfolio investment	1.2	1.1	1.6	1.5
Other investment	4.4	3.8	2.9	2.4
Errors and omissions	-0.2	-0.5	-0.1	0.4
Overall balance	0.7	0.9	-0.8	-0.7
Gross external debt	28.0	25.0	26.9	26.7
International reserves (in USD billion, end of period)	371.1	389.3	403.7	408.8
Fiscal sector	(in percent of GDP)			
Revenue and grants	23.1	23.5	24.6	24.2
Expenditure	22.1	22.1	22.9	24.7
Fiscal balance	-1.3	-1.0	-0.6	-2.2
Government debt	36.0	36.0	35.9	37.2
Monetary and financial sectors	(in annual percentage change)			
Broad money [2]	7.1	5.1	6.7	7.9
Domestic credit [3]	7.2	5.5	7.2	9.1
Private sector credit	7.3	6.3	8.0	9.0
Memorandum items:				
Nominal GDP (in KRW trillion)	1,658.0	1,740.8	1,835.7	1,888.6
Headline inflation (in percent yoy, period average)	1.0	1.9	1.5	0.4
Policy rate (in percent per annum)	1.3	1.5	1.8	1.3
Exchange rate (in KRW/USD, period average)	1,163.3	1,122.3	1,100.6	1,165.2

Sources: National authorities; and AMRO staff estimates.
Note: Red number denotes AMRO staff estimate. yoy = year-over-year.

[1] 2019 numbers are as of January 31, 2020. National income indicators are based on the advance estimate of GDP, published by the Bank of Korea. Meanwhile, other indicators are estimated by AMRO.

[2] Refers to M2.

[3] Domestic credit refers to claims of other depository corporations on domestic agencies that comprise the central government, local governments, Social Security Office, and private sector. It does not include claims of the Bank of Korea.

Lao People's Democratic Republic

The Lao PDR economy slowed in 2019 after being hit by natural disasters. Growth is estimated to have moderated to 6.0 percent as drought reduced the ability of hydropower plants to generate electricity, and floods damaged the agriculture sector, particularly rice. The construction sector and the continued rise in tourism and manufacturing activities were bright spots for the economy. Despite the newly added capacity of the hydropower plants, growth is expected to remain moderate in 2020, mainly as a result of spillovers from the COVID-19 outbreak in China and neighboring countries, particularly to the tourism sector, but also construction and manufacturing.

Inflation increased in 2019, mainly due to rising food prices. Inflation spiked to 4.6 percent in the second half of the year from 2.0 percent in the first half, because of the rice shortage following the floods in July and August, and the pork price hike as a result of the spread of African swine fever toward the end of 2019. The depreciation of the Lao kip of around 8 percent against the Thai baht also contributed to inflation in the prices of imported items. This upward pressure on food prices drove inflation for the whole of 2019 to 3.3 percent, from 2.0 percent in 2018. Meanwhile, core inflation remained subdued, falling slightly to 2.1 percent in 2019 from 2.2 percent in 2018 as the prices of core items remained stable, with some uptick seen in the indices for restaurants and hotels, from the growth in tourist arrivals.

The current account deficit improved in 2019. Hydroelectricity exports were affected as river water levels dropped to a 60-year low. Meanwhile, import growth slowed sharply following the completion of several hydropower plants and a moratorium on new government projects. Although interest payments for external debt rose markedly, the current account deficit narrowed to 4.6 percent of GDP in 2019, from 7.9 percent of GDP in 2018, driven by the fall in the trade deficit. The current account deficit was mainly financed by new loans, as FDI inflows weakened and the government repaid maturing bonds. The overall balance of payments recorded a slight surplus and gross international reserves rose to USD 997 million at the end of 2019 from USD 873 million at the end of 2018. Meanwhile, heightened pressure on the exchange rate was seen in 2019, with tight US dollar liquidity in the foreign exchange market widening the gap between commercial and parallel exchange rates, to as much as 3.3 percent by end-January 2020.

Credit growth has not fully recovered amid the slowdown of the economy. After two years of sharp deceleration, credit to the economy began to recover slowly, growing by 7.4 percent in 2019, aided by the recognition of arrears of about 3.1 percent of GDP by the government. The removal of the interest rate cap has allowed more room for banks to price in credit risks but its effect on credit growth is limited. Initiatives by the authorities to enhance access to long-term finance by micro, small, and medium enterprises (MSMEs), by providing access to concessional funds and credit guarantees, are expected to support the recovery of credit. Meanwhile, the linking of bank accounts to modern payment systems has driven the increase in deposits in the banking system.

Amid high external debt and low international reserves, the economy remains vulnerable to external shocks. An adverse shock on the exchange rate would increase the debt burden of government and have repercussions for the private sector's cash flows and balance sheets, given the partially dollarized nature of the economy. In this regard, building international reserves is critical in strengthening the buffer against external shocks.

A credible fiscal consolidation plan and better debt management are crucial. The fiscal deficit is expected to improve to 2.3 percent of GDP in 2019, from 4.4 percent of GDP in 2018, mainly driven by efforts to control expenditure. Accelerating reforms in tax policy and tax administration should be the priority to help expand the tax base and improve tax administration. On the expenditure side, there is a need to boost expenditure efficiency to meet the development needs, despite the tight fiscal space. The relatively high level of public debt and contingent liabilities require enhanced capacity and framework to effectively manage them. A skillful medium-term debt management strategy is essential, where managing the rollover risk is a priority. Instituting a framework to manage guarantees and contingent liabilities in the budget is also recommended.

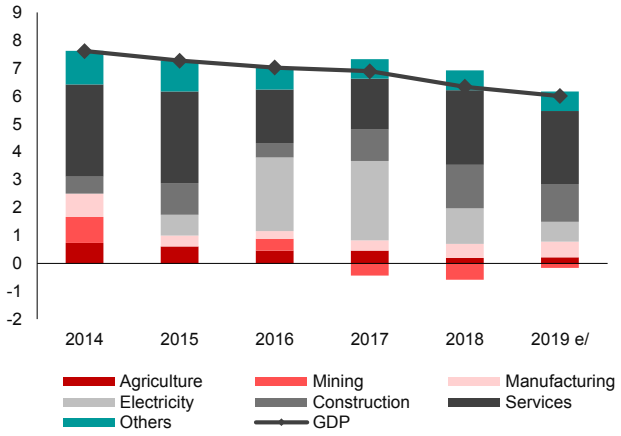
Structural reforms and economic diversification are needed to boost Lao PDR's growth potential and economic resilience. To derive greater benefits from existing and upcoming large infrastructure investments, such as the railway, expressway and hydropower plants, the government needs to clearly lay out its plans and objectives for the projects to ensure that sufficient jobs and opportunities are created for the Lao people.

The author of this country note is Paolo Hernando.

Lao People's Democratic Republic: Selected Figures

Growth in 2019 was pulled down by weak agriculture and electricity sectors.

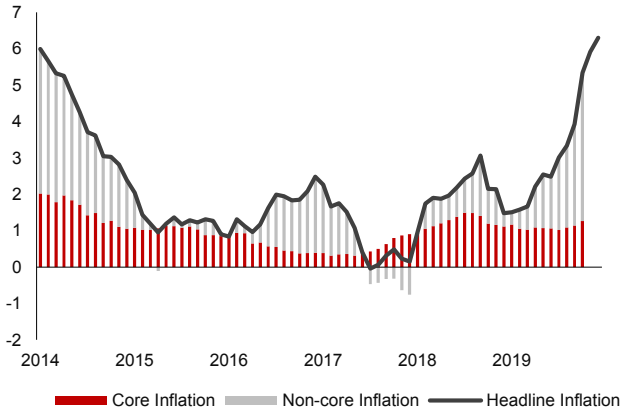
Contributions to Real GDP Growth
(Percentage points)



Sources: Lao Statistics Bureau; and AMRO staff estimates.

Inflation rose steeply in the second half of 2019 as a result of a spike in rice and pork prices.

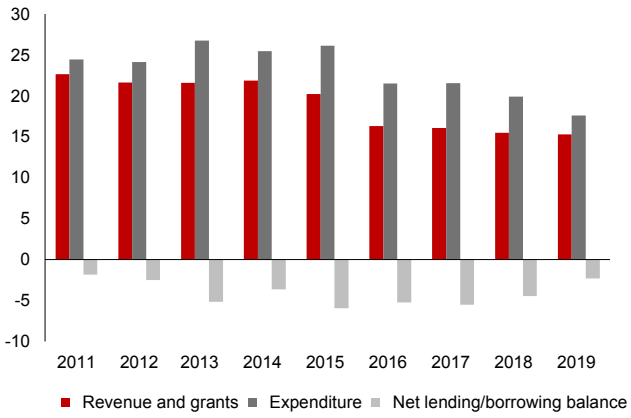
Inflation
(Percent year-over-year)



Source: Lao Statistics Bureau.

The narrowing of the fiscal deficit was mainly achieved through expenditure cuts.

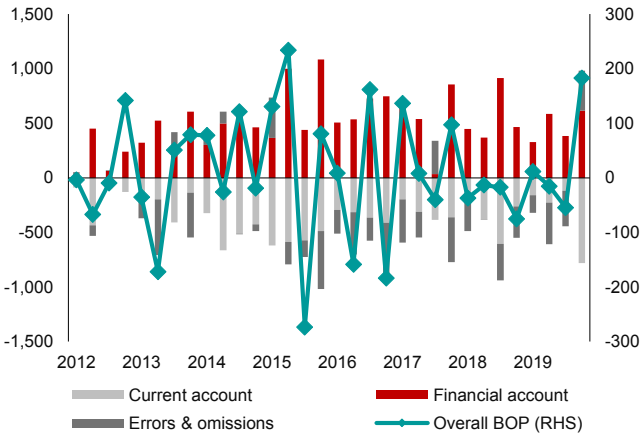
Fiscal Position
(Percent of GDP)



Source: Ministry of Finance.

The current account deficit narrowed in 2019, financed by bonds and loans as FDI fell, with slower investments from China.

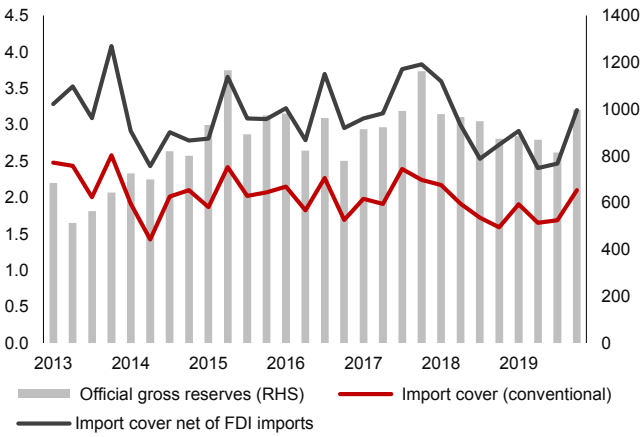
Balance of Payments
(Millions of US dollars)



Source: Bank of Lao PDR.

Foreign exchange reserves rose to USD 997 million at the end of 2019, which can cover 1.7 months of imports.

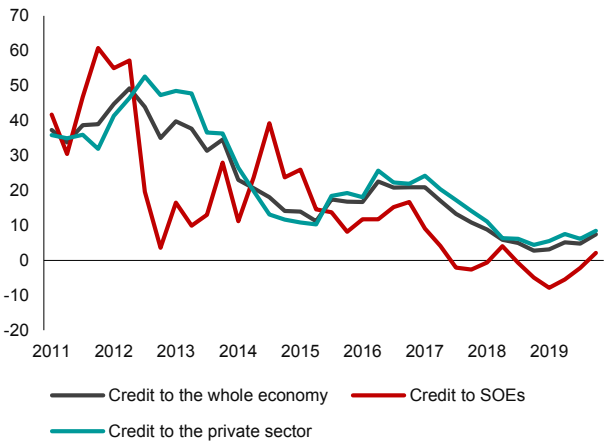
International Reserves
(Months; millions of US dollars)



Sources: Bank of Lao PDR; and AMRO staff estimates.
Note: FDI = foreign direct investment.

Credit growth remained weak owing to the slowdown in the economy and fiscal tightening.

Credit Growth
(Percent year-over-year)



Source: Bank of Lao PDR.
Note: SOE = state-owned enterprise.

Lao People's Democratic Republic: Selected Economic Indicators

	2016	2017	2018	2019
Real sector	(in annual percentage change)			
Real GDP	7.0	6.9	6.3	6.0
GDP deflator	3.0	1.8	1.9	2.7
External sector	(in percent of GDP, unless otherwise specified)			
Current account balance	-8.7	-7.5	-7.9	-4.6
Trade balance	-7.1	-4.8	-4.8	-2.7
Capital and financial account balance	16.1	12.9	12.2	10.0
Direct investment	5.8	9.8	7.3	2.4
Portfolio investment	3.2	1.9	2.8	-0.2
Other investment	6.9	1.0	2.1	7.7
Errors and omission	-8.4	-4.2	-5.1	-4.7
Overall balance	-1.1	1.2	-0.8	0.6
External debt	80.1	81.1	83.4	-
International reserves (in USD billion, end of period)	0.8	1.0	0.9	1.0
Fiscal sector	(in percent of GDP)			
Revenue and grants	16.3	16.1	15.5	15.3
Expenditure	21.5	21.6	19.9	17.6
Fiscal balance	-5.2	-5.5	-4.4	-2.3
Government debt	54.2	55.8	57.2	56.1
Monetary and financial sectors	(in annual percentage change)			
Broad money	10.9	12.2	8.2	19.0
Domestic credit	18.5	6.4	9.2	4.4
Private sector credit	22.0	14.2	4.4	7.4
Memorandum items:				
Nominal GDP (in LAK billion)	129,279.0	140,698.0	152,414.0	165,897.0
Nominal GDP (in USD billion)	15,913.0	17,063.0	18,120.0	19,122.0
Headline inflation	1.6	0.8	2.0	3.3
GDP per capita (USD)	2,409.9	2,585.1	2,777.7	2,797.0
Exchange rate (in LAK/USD, period average)	8,124.4	8,245.9	8,411.4	8,675.6

Sources: National authorities; and AMRO staff estimates.
Note: Red number denotes AMRO staff estimate. yoy = year-over-year.

Malaysia

Robust private consumption buoyed the economy amid the decline in global trade and domestic supply disruptions. The Malaysian economy expanded by 4.3 percent in 2019, the slowest pace in 10 years, as the downturn in the global electronics cycle, escalation of the US-China trade tensions, and supply disruptions in the commodities sector lowered exports and investment. Growth nonetheless held up on robust consumer spending, backed by low inflation and continued income growth. In Q4 2019, private investment also gained pace, as investment commitments in the preceding quarters were likely starting to be implemented. However, the COVID-19 outbreak has disrupted production—as reflected in lower manufacturing PMI readings in January and February 2020—and travel activity. Growth is thus expected to be subdued this year before improving in 2021.

While inflation has been low, it is expected to pick up gradually in 2020 and 2021. The shift to the sales and services tax (SST) from the previous goods and sales tax (GST) in mid-2018 depressed inflation in the first five months of 2019. Inflation subsequently picked up in succeeding months, albeit mildly, as lower fuel prices from the maintained price ceiling offset increases in food and some service items. Going forward, headline inflation is expected to rise from 0.7 percent in 2019 toward the long-term average of about 2 percent by 2021.

The external position was supported by positive sentiment among foreign bond investors for the most part of 2019 and in early 2020. The USD 3.4 billion foreign investor sell-off in the local bond market in April and May, which was triggered by news of Malaysia's potential exclusion from a key global bond index, proved short-lived. While the warning nonetheless continued to weigh on investment sentiment, net-buying among foreign investors subsequently resumed on the back of the US Federal Reserve's dovish stance and Bank Negara Malaysia's pre-emptive policy moves. Positive sentiment in the bond market contributed to the USD 2.2 billion increase in the BNM's foreign exchange reserves by end-2019, and to another USD 0.6 billion increase by mid-February 2020. However, reserves fell by USD 0.9 billion in the following weeks, amid heightened risk aversion, to USD 103.4 billion by end-February, sufficient to cover 6.0 months of goods imports and 1.1 times short term external debt. The MYRUSD exchange rate appreciated slightly in 2019, but has depreciated by nearly 5 percent since the start of 2020.

Fiscal policy strikes a balance between supporting the economy and containing the deficit. The deficit target will be maintained at 3.4 percent of GDP in 2020 to support a stimulus package to mitigate the economic impact of the COVID-19 epidemic. Prior to this development, 0.2 percent of GDP had already been set aside to accelerate the implementation of high-impact development projects as a pre-emptive measure against stronger external headwinds. In addition, the 2020 budget has a sizable allocation toward welfare assistance for low-income households, out-of-work graduates, and women re-entering the labor market, while providing incentives to accelerate the digital economy and encourage higher-value production.

Increased global uncertainty is a key risk to Malaysia's highly open economy. A prolonged COVID-19 epidemic or re-escalation of trade tensions could heighten uncertainty and pull down Malaysia's growth as consumer spending weakens—partly induced by a sharp decline in tourist arrivals—and private investment and exports shrink further. Domestically, continued disruptions to mining and palm oil production pose another downside risk to the outlook. But on the flip side, exports could likewise be supported by a stronger-than-expected upturn in the semiconductor cycle in H2 2020 and speedier commencement of operation of a large-scale refinery and petrochemical facility this year.

Heightened global economic uncertainty and greater risk aversion could result in greater market volatility, exposing Malaysia to the risk of sharp capital outflows and downward pressure on its currency and foreign exchange reserves. This risk could also be intensified by the re-weighting of major stock and bond indices to make room for China's securities at the expense of other emerging markets like Malaysia.

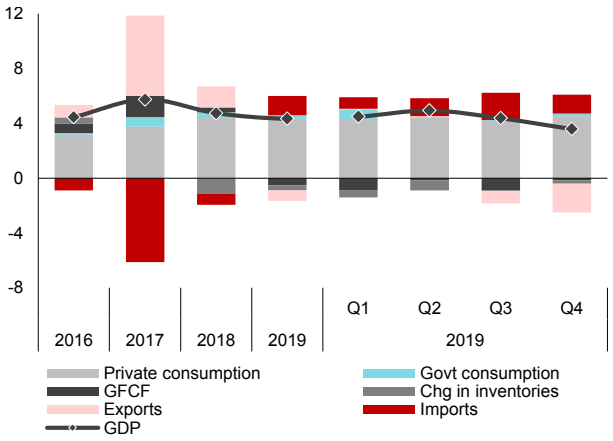
On the domestic front, the narrowing tax base limits fiscal space and constrains the progress of consolidation. The tax revenue-to-GDP ratio has declined steadily from 2015, and the replacement of the GST with the SST only adds to the deterioration in the tax ratio. The overall tax buoyancy has also fallen to a level below one since 2014, indicating the urgency to advance reforms in tax revenue mobilization.

The author of this country note is Diana del Rosario.

Malaysia: Selected Figures

Robust private consumption buoyed the economy amid the decline in global trade and domestic supply disruptions.

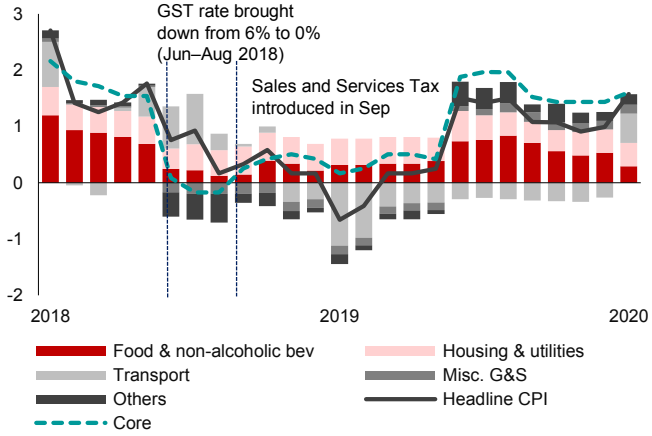
Contributions to Real GDP Growth
(Percentage points)



Source: Department of Statistics Malaysia.
Note: GFCF= Gross fixed capital formation

Lower fuel prices and the decline in food inflation contained the inflation pick-up in H2 2019.

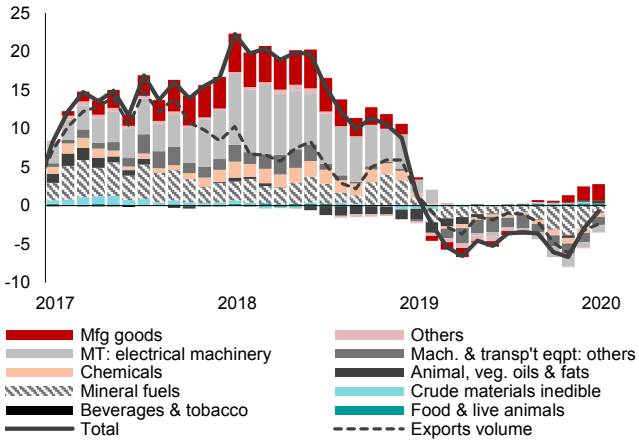
Headline and Core Inflation
(Percentage points year-over-year)



Source: Department of Statistics Malaysia.
Note: Misc. G&S = miscellaneous goods and services.

Exports took a sharp dive in 2019, led by electronics and mineral fuels.

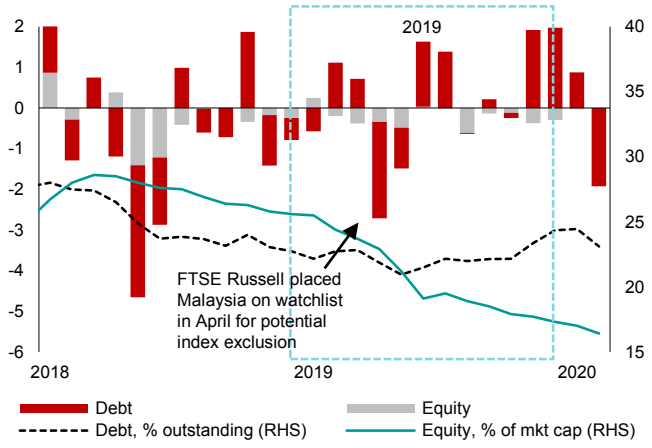
Merchandise Exports and Components
(Percent year-over-year, 3-month moving average)



Source: Department of Statistics Malaysia.

2019 through early-2020 was mostly marked by net foreign purchases in the bond market.

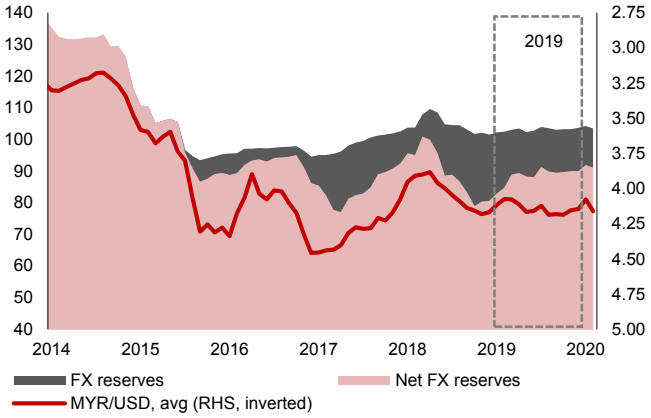
Non-resident Net Purchases and Ownership in Debt and Equity Markets
(Billions of US dollars; percent outstanding or market capitalization)



Sources: Bank Negara Malaysia; and Bursa Malaysia.

Positive foreign bond investor sentiment contributed to fairly stable reserves and MYR/USD rate in 2019.

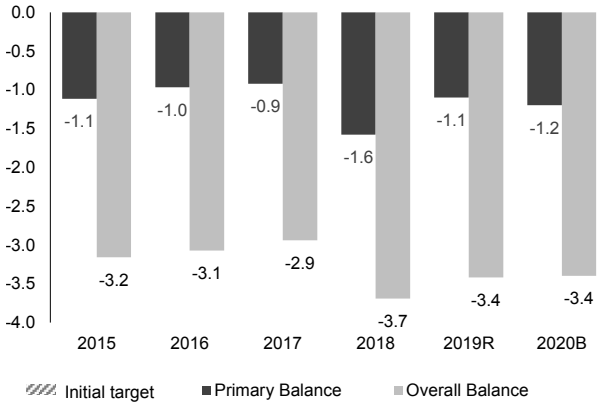
Official Reserve Assets and MYRUSD Rate
(Billions of US dollars; inverted MYRUSD rate)



Source: Bank Negara Malaysia.
Note: Net FX Reserves refer to foreign exchange reserves less Bank Negara Malaysia's net forward positions.

The 2020 Budget aims at balancing between supporting the economy and containing the deficit.

Federal Government Budget Balance
(Percent of GDP)



Sources: Department of Statistics Malaysia; and Ministry of Finance.
Note: 2019R refers to the revised 2019 Budget; 2020B refers to 2020 Budget.

Malaysia: Selected Economic Indicators

	2016	2017	2018	2019
Real sector	(in annual percentage change)			
Real GDP	4.4	5.7	4.7	4.3
Private consumption	5.9	6.9	8.0	7.6
Government consumption	1.1	5.5	3.3	2.0
Gross fixed capital formation	2.6	6.1	1.4	-2.1
Imports of goods and services	1.3	8.7	2.2	-1.1
Exports of goods and services	1.4	10.2	1.3	-2.3
External sector	(in percent of GDP, unless otherwise specified)			
Current account balance	2.4	2.8	2.1	3.3
Trade balance	8.1	8.5	8.2	8.3
Capital and financial account balance	0.0	-0.3	1.3	-2.3
Direct investment	1.1	1.2	0.8	0.6
Portfolio investment	-1.1	-1.1	-3.1	-2.5
Other investment	0.1	-0.4	3.5	-0.4
Errors and omissions	-1.9	-1.2	-2.9	-0.5
Overall balance	0.5	1.2	0.5	0.6
Gross external debt	73.2	64.5	63.9	62.6
International reserves (in USD billion, end of period)	94.5	102.4	101.4	103.6
Fiscal sector	(in percent of GDP)			
Revenue and grants	17.0	16.1	16.1	17.1
Expenditure	20.1	19.0	19.8	20.5
Fiscal balance	-3.1	-2.9	-3.7	-3.4
Primary balance	-1.0	-0.9	-1.6	-1.1
Government debt	51.9	50.1	51.2	52.6
Monetary and financial sectors	(in annual percentage change)			
Broad money	3.2	4.9	9.1	3.5
Private sector credit	5.8	5.8	8.4	4.4
Loans	6.0	3.8	7.1	4.2
Securities	4.0	23.6	18.5	5.7
Memorandum items:				
Nominal GDP (in MYR billion)	1,249.7	1,371.6	1,446.9	1,510.8
Headline inflation (in percent yoy, period average)	2.1	3.7	1.0	0.7
Policy rate (in percent per annum)	3.00	3.00	3.25	3.00
Exchange rate (in MYR/USD, period average)	4.2	4.3	4.0	4.1

Sources: National authorities; and AMRO staff estimates.
Note: Red number denotes AMRO staff estimate. yoy = year-over-year.

Myanmar

Myanmar's economy has been on a slow recovery path. Growth rebounded at 6.8 percent in fiscal year (FY) 2018/19, mainly supported by strong growth in the garment and other manufacturing activities, expansion of tourism-related services, and a recovery in the agricultural sector.[1]

Foreign investment approvals rose in 2019, amid an improving business environment, after a sharp drop in 2018. As of January 2020, manufacturers' sentiment, as gauged by PMI, remained strong following continued expansion for the last 15 months.

While growth is expected to moderate in FY2019/20 as a result of disruptions from the COVID-19 outbreak, its momentum over the medium term is likely to prevail on the back of robust expansion of the manufacturing sector and stronger fiscal support, amid an improving business environment and renewed reform momentum. The Myanmar government has launched the Medium-term Sustainability Development Plan (2018–30), which provides a framework for coordination and cooperation among government agencies toward achieving stronger and more inclusive growth.

Inflation rose to 8.6 percent in FY2018/19 due to supply factors, including food inflation and electricity tariff hikes. The effect of the one-off electricity tariff hike will likely last for about a year and fade out afterward. On the other hand, exchange rate stability from the continuing improvements in the current account balance should help contain imported inflation. Overall, inflation in FY2019/20 is expected to be softer than FY2018/19 but still remain at a relatively high level.

The current account balance has improved significantly, driven by a rebound in agricultural and mining exports, continued strong manufacturing exports, and solid expansion of tourism sector. Tourist arrivals in 2019, expanded by 22 percent, compared to 3 percent in the previous year.

Overall monetary conditions remain tight, associated with less fiscal monetarization and a stricter banking regulatory regime. Broad money growth slowed to 12.0 percent in Q2 2019 from 18.0 percent a year ago, owing to modest deposit growth. The interest rate floor and ceiling are still in place, at 8 percent and 13 percent, respectively, and uncollateralized lending is allowed with a lifted cap of 16 percent. On the other hand, credit growth slowed to 17.3 percent as of Q2 2019, from 22.0 percent on average in 2018. Credit growth has moderated in tandem with the enforcement of the stricter banking regulatory regime.

Fiscal policy is expansionary in support of growth. While the initial budget for FY2018/19 was aimed at a deficit of about 6.0 percent of GDP, the actual deficit could be lower than budgeted, at about 3.7 percent, as a result of underspending. In FY2019/20, the budgeted deficit is set to increase to about 7 percent of GDP, with more resources directed at the electricity and energy sector to address supply shortages. However, tax revenues have remained subdued.

Risks to growth stem mainly from continued ethnic tensions in the Rakhine State and uncertainties in the global economy related to the new COVID-19 epidemic and geopolitical risks. The Rakhine crisis and recurring insurgent operations in some states may continue to dampen investor sentiment and tourist arrivals, in particular from the United States and Europe. A sharp slowdown in China, potentially caused by the COVID-19 epidemic and other structural factors, could have a significantly negative impact on Myanmar's economy. Myanmar's mining and gas exports—for which China is a key market—could be affected by a sharp slowdown in Chinese demand. On the other hand, potential manufacturing relocation from China—especially labor-intensive industries— driven by the US-China trade tensions, could support the expansion of manufacturing activities in Myanmar.

The weak banking system, still in transition to comply with a more stringent banking regulatory framework, may continue to be constrained in its financial intermediation role. The lack of basic infrastructure remains the key bottleneck to sustaining high economic growth over the medium to long term. While reform efforts have resumed with a series of new policy actions in 2019, maintaining the momentum with timely implementation would be essential.

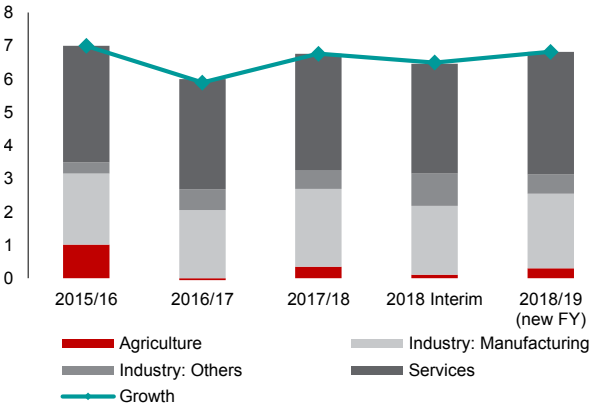
The author of this country note is Xianguo (Jerry) Huang.

[1] Myanmar started a new cycle of fiscal year from October 2018 (FY2018/19), after half-year interim FY18 during April and September 2018.

Myanmar: Selected Figures

Growth remains on a gradual recovery path in FY2018/19.

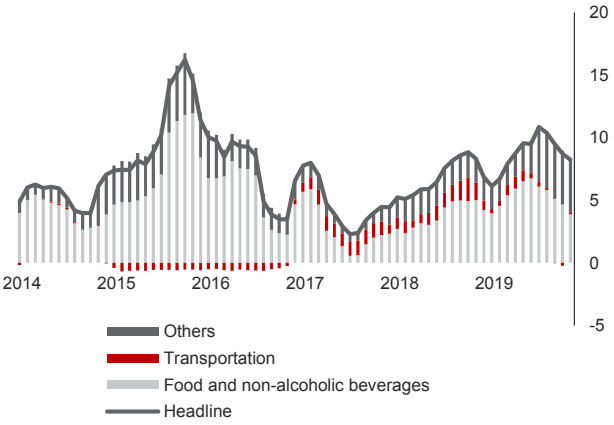
Contributions to Real GDP Growth
(Percentage points)



Sources: Ministry of Planning and Finance; and AMRO staff calculations.
Note: Myanmar started a new cycle of fiscal year from October 2018 (2018/19).The base year for GDP in 2018/19 changed to 2015/16 from 2010/11, which was the base year of GDP in the previous years.

Inflation was elevated in FY2018/19 due to food inflation and electricity tariff hikes.

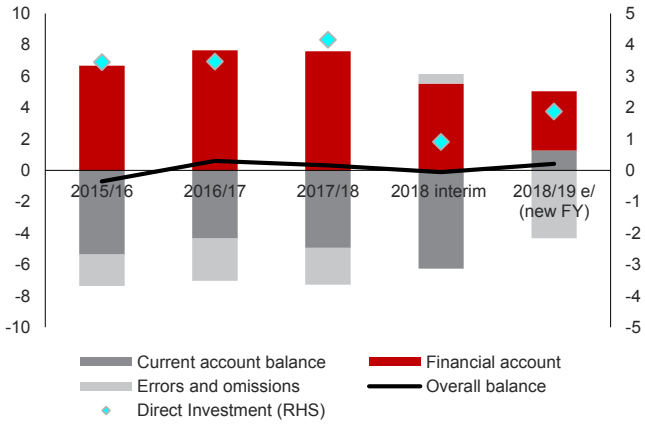
Inflation
(Percent year-over-year)



Source: Central Statistical Organization.

The current account could turn positive in FY2018/19, but with large errors and omissions.

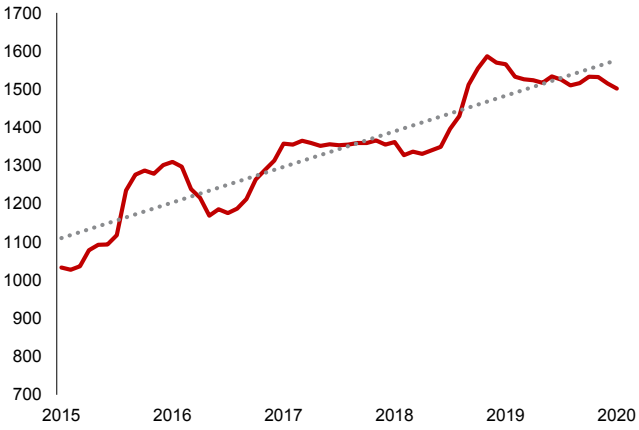
Balance of Payments
(Percent of GDP; Billions of US dollars)



Sources: Central Bank of Myanmar; and AMRO staff calculations
Notes: 2018/19 figures were estimated based on three quarters of available data.

MMK/USD was stable in 2019 as a result of the improved current account balance.

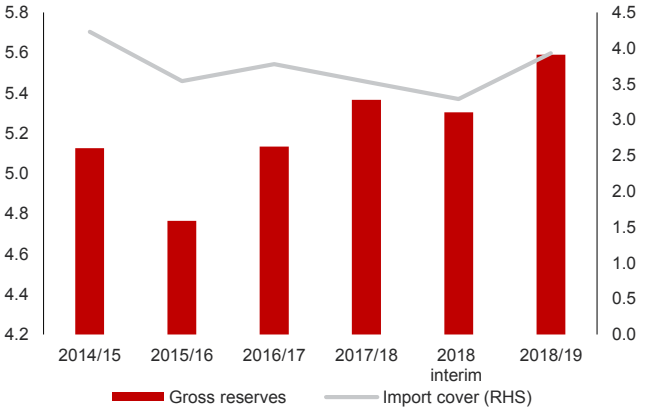
Exchange Rate
(Myanmar kyat per US dollar)



Source: Central Bank of Myanmar.

While still narrow, the foreign exchange buffer improved somewhat in FY18/19.

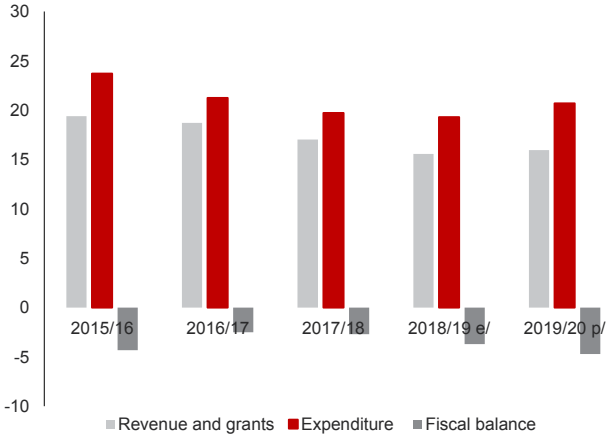
Gross International Reserves
(Billions of US dollars; months of imports)



Sources: Central Bank of Myanmar; and AMRO staff calculations.

Fiscal policy is expansionary in support of growth in FY2019/20.

Fiscal Balance
(Percent of GDP)



Source: Ministry of Planning, Finance and Industry.
Note: e/ refers to estimate. p/ refers to projection.

Myanmar: Selected Economic Indicators

	FY16/17	FY17/18	FY18	FY18/19 (new)
Real sector	(in annual percentage change)			
Real GDP	5.9	6.8	6.5	6.8
External sector	(in millions of US dollars, unless otherwise specified)			
Current account balance	-2,756.3	-3,301.1	-1,454.7	863.4
In percent of GDP	-4.4	-4.9	-6.3	1.3
Trade balance	-4,409.2	-4,696.3	-2,447.7	-2,350.3
Financial account balance	-4,835.7	-5,063.5	-1,285.9	-2,407.8
Direct investment (net)	3,469.9	4,159.1	902.5	1,870.5
Official development assistance (net)	-35.0	224.7	125.8	418.0
Overall balance	379.1	203.4	-26.7	286.2
Total external debt (in percent of GDP)	13.4	15.4	14.1	14.9
International reserves (in USD billion, end of period)	5,133.9	5,366.0	5,303.0	5,589.2
In months of imports	3.8	3.5	3.3	3.9
Fiscal sector	(in percent of GDP)			
Revenue and grants	18.7	17.0	24.1	15.6
Tax revenue	7.3	6.7	8.5	6.0
Expenditure	21.3	19.7	25.6	19.3
Capital expenditure	6.5	6.0	6.7	6.9
Fiscal balance	-2.5	-2.7	-1.5	-3.7
Primary balance	-1.2	-1.3	0.7	-2.3
Public debt	35.6	38.4	37.7	37.1
Monetary and financial sectors	(in annual percentage change)			
Broad money	19.4	18.0	18.6	11.7
Reserve money	8.8	6.0	4.6	5.0
Domestic credit	25.4	20.2	21.4	17.1
Private sector credit	33.4	23.4	21.2	18.0
Memorandum items:				
Nominal GDP (in MMK billion)	79,722.9	90,450.9	32,873.2	105,742.0
Nominal GDP (in USD billion)	63.2	66.7	23.2	69.0
Headline inflation (in percent yoy, period average)	6.8	4.0	7.1	8.6
Headline inflation (in percent yoy, end of period)	7.0	5.4	8.6	9.5
Exchange rate (in MMK/USD, period average)	1,260.6	1,355.8	1,414.0	1,532.0
Exchange rate (in MMK/USD, end of period)	1,362.0	1,335.0	1,560.0	1,535.0

Sources: National authorities; and AMRO staff estimates.
Note: Red number denotes AMRO staff estimate. FY18/19 onward are based on new fiscal year starting from October; FY18 refers to interim half-year FY;
The base year for GDP in 2018/19 changed to 2015/16 from 2010/11, which was the base year of GDP in the previous years. yoy = year-over-year.

The Philippines

The Philippine economy slowed in H1 2019 and has rebounded since Q3, reflecting the swing in government spending amid weakening external demand. Despite the turnaround, GDP growth declined from 6.2 percent in 2018 to 5.9 percent in 2019. Against weaker investment and export growth, a modest recovery in private consumption has become the main driver of growth. Going forward, growth is expected to continue to recover, led by an acceleration in government expenditure.

Inflation declined sharply, largely due to favorable supply side developments. Headline inflation fell from 5.2 percent in 2018 to 2.5 percent in 2019. The slowdown in inflation was largely attributable to base effects from the excise tax increase a year ago as well as lower oil prices on the back of excess supply in global oil markets and lower imported food prices. As global oil prices and domestic food prices seem likely to remain low and demand side pressures to remain subdued, inflation is expected to remain in the 2–4 percent target range in 2020.

The current account deficit shrank markedly, driven by the improvement in the balance of goods and services trade and primary income, while the financial account registered strong inflows. Unlike the resident driven outflows in 2018, the strong capital flows in 2019 were mainly from an increase in non-residents' holdings of domestic assets. This development has consequently led to a replenishment of the country's international reserves from the drawdown in 2018. Gross international reserves have recovered from USD 79.2 billion at the end of 2018 to USD 87.8 billion at end-2019.

Monetary conditions continued to tighten in early-2019 but has eased significantly since then. In view of the economic slowdown, continued easing of price pressures during the year, and well-anchored inflation expectations, the Bangko Sentral ng Pilipinas cut interest rates three times by a cumulative 75 basis points and lowered the Required Reserve Ratio by 400 basis points since May 2019. These policy adjustments have moved the interbank call loan rate back to the center of the interest rate corridor and eased the liquidity tightness in the banking system.

Fiscal spending was severely constrained by the delay in budget approval due to an unusually long political gridlock, compounded by the election ban in early 2019. Consequently, the fiscal deficit narrowed from 3.0 percent of GDP in the first three quarters of 2018 to 2.2 percent over the same period of 2019. However, the government has managed to catch up on its spending in Q4 2019. As a result, the fiscal deficit widened to 3.5 percent of GDP in 2019.

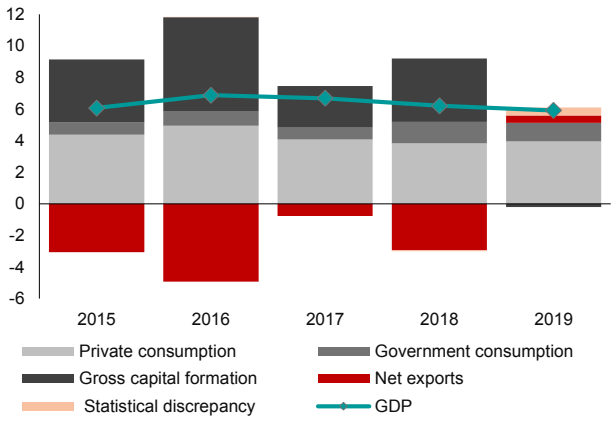
In the short term, the main risks facing the economy stem from external sources. Notwithstanding the recent easing in the US-China trade tensions, global policy uncertainties remain elevated while business sentiment remains depressed and continues to weigh on investment spending. These uncertainties could exacerbate the current slowdown in the world economy and increase global market volatilities. On the upside, global oil prices have moderated and global financial conditions have eased, following the dovish pivot by major central banks at the beginning of 2019, providing a respite for emerging market central banks. Domestically, policy restrictions on Philippine Offshore Gaming Operators (POGOs) and a ban on the establishment of new economic zones in the National Capital Region may lead to downward pressure on the property market. For the longer term, sustaining trend growth in productivity after the global financial crisis remains a challenge.

The author of this country note is by Zhiwen Jiao.

The Philippines: Selected Figures

Economic growth slowed in 2019 as a result of a budget delay and weaker external demand.

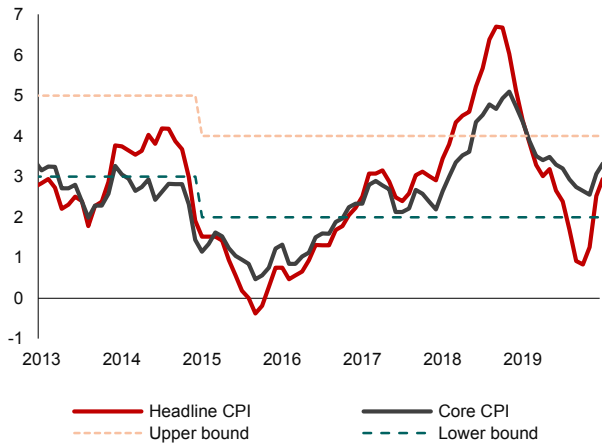
Contributions to Real GDP Growth
(Percentage points)



Source: Philippine Statistics Authority.

Inflation has decelerated sharply, dipping and staying below the target range for several months.

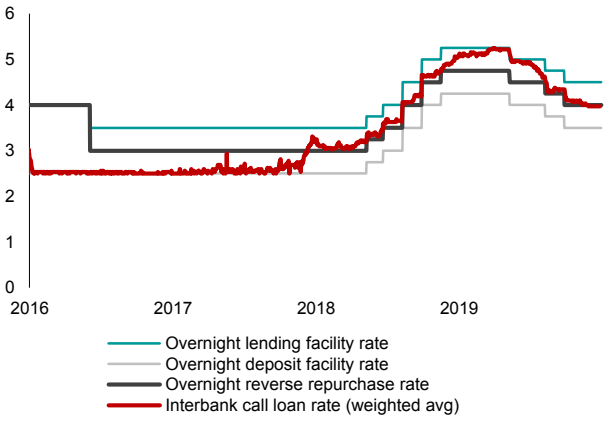
Headline CPI and Core CPI
(Percent year-over-year)



Sources: Philippine Statistics Authority; and AMRO staff calculations.
Note: CPI = consumer price index.

Monetary conditions continued to tighten in early 2019 but has eased significantly since May 2019.

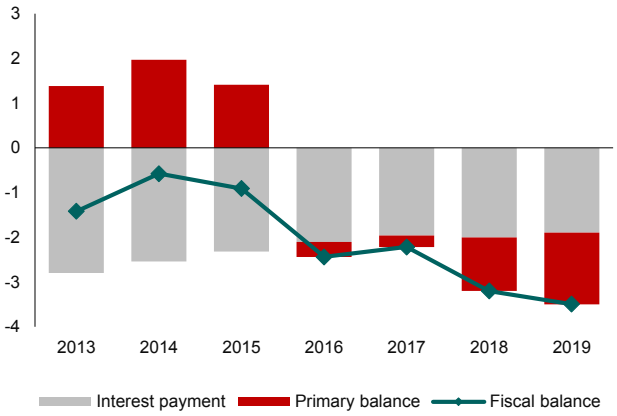
Monetary Policy and Market Rate
(Percent of GDP)



Source: Bangko Sentral ng Pilipinas.

Fiscal spending was severely constrained by the delay in budget approval due to an unusually long political gridlock in early 2019, but managed to catch up in H2 2019

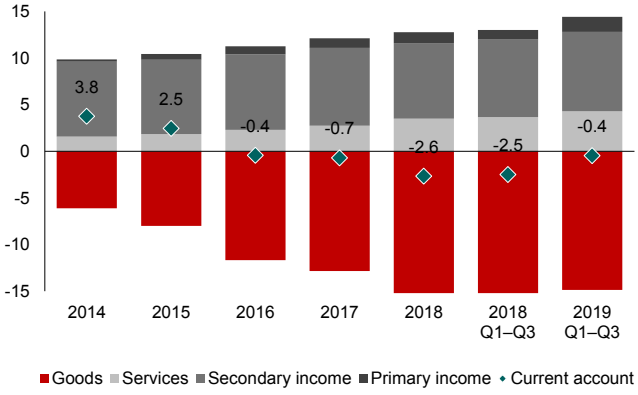
Fiscal Balance
(Percent of GDP)



Source: Bureau of Treasury.

The current account deficit shrank markedly driven by improvements in the balance of goods and services trade and primary income.

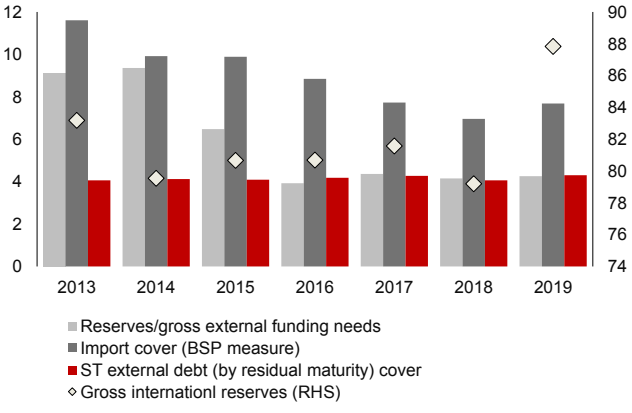
Current Account Balance
(Percent of GDP)



Source: Bangko Sentral ng Pilipinas.

International reserve adequacy has strengthened.

International Reserve Adequacy
(Times; Billions of US dollars)



Source: Bangko Sentral ng Pilipinas.
Note: Import cover refers to number of months of average imports of goods and payment of services and primary income.

The Philippines: Selected Economic Indicators

	2016	2017	2018	2019
Real sector	(in annual percentage change)			
Real GDP	6.9	6.7	6.2	5.9
Private consumption	7.1	5.9	5.6	5.8
Government consumption	9.0	6.2	13.0	10.5
Gross fixed capital formation	26.1	9.4	12.9	1.5
Imports of goods and services	20.2	18.1	16.0	2.1
Exports of goods and services	11.6	19.7	13.4	3.2
External sector	(in percent of GDP, unless otherwise specified)			
Current account balance	-0.4	-0.7	-2.6	-1.0
Trade balance	-9.3	-10.1	-11.9	-10.2
Capital and financial account balance	0.1	-0.9	-2.6	-2.6
Direct investment	-1.9	-2.2	-1.8	-1.0
Portfolio investment	0.5	0.8	0.4	-0.9
Other investment	1.5	0.6	-1.2	-0.7
Errors and omissions	0.1	-0.5	-0.7	0.8
Overall balance	-0.3	-0.3	-0.7	2.2
Net external debt	24.5	23.3	23.9	23.6
International reserves (in USD billion, end of period)	80.7	81.6	79.2	87.8
Fiscal sector	(in percent of GDP)			
Revenue and grants	15.2	15.6	16.4	16.9
Expenditure	17.6	17.9	19.6	20.4
Fiscal balance	-2.4	-2.2	-3.2	-3.5
Government debt	42.1	42.1	41.8	41.5
Monetary and financial sectors	(in annual percentage change)			
Broad money	13.4	11.3	9.0	9.8
Domestic credit	17.0	13.9	14.9	10.5
Private sector credit	16.6	16.4	15.1	7.5
Memorandum items:				
Nominal GDP (in PHP billion)	14,480.3	15,807.6	17,426.2	18,613.0
Headline inflation (in percent yoy, period average)	1.3	2.9	5.2	2.5
Policy rate (in percent per annum)	3.0	3.0	4.75	4.0
Exchange rate (in PHP/USD, period average)	47.5	50.4	52.7	51.8

Sources: National authorities; and AMRO staff estimates.
Note: Red number denotes AMRO staff estimate. yoy = year-over-year.

Singapore

Singapore's growth slowed sharply to 0.7 percent in 2019, from 3.4 percent in 2018. The sharp slowdown was partly due to contractions in the electronics and wholesale trade sectors. The decline in these sectors stemmed mainly from the ongoing U.S.-China trade conflict and the slump in demand for technology exports. However, activities in the financial services, information and communications technology, tourism-related services, and construction sectors continued to be robust.

The labor market was resilient, although signs of a softening have emerged. The strong momentum in job creation that started in H2 2018 was evident in 2019, led by services and a turnaround in the construction sector. However, resident wage growth has slowed alongside an uptick in the unemployment rate.

The Monetary Authority of Singapore Core Inflation declined in 2019 as a result of slow growth, liberalization of the retail electricity market and weaker global oil prices.

Non-oil domestic exports (NODX) have contracted, led by electronics on the back of the global electronics downcycle. Additionally, NODX to key markets, such as the EU, China and a few countries in the region, declined. However, there have been signs of a bottoming out in the semiconductor segment. Furthermore, the contraction in electronics production appear to be stabilizing, while growth in biomedical output stayed firm in 2019.

Domestic bank lending to businesses continued to grow, but that to households started to decline because of softer demand for housing loans, following the property cooling measures introduced in July 2018. The prices of and transactions in private residential properties rose gradually in 2019 compared to the sharp price increase between Q4 2017 and Q3 2018. During this period, transaction volumes for new property launches increased but resale volumes remained low. The prices of resale public housing have also stabilized.

A large stimulus package was introduced within the FY2020 Budget to mitigate the impact of the COVID-19 epidemic. Special transfers (excluding top-ups to endowments and trust funds) totaling SGD 4.7 billion were introduced to support households and businesses. Also, total expenditures are projected to grow by 7.0 percent, mainly in the areas of healthcare, public housing and transport. These policy efforts are expected to lead to an overall budget deficit of 2.1 percent of GDP and a significantly higher fiscal impulse in FY2020. Monetary policy has been eased slightly in view of the growth slowdown and subdued inflation outlook.

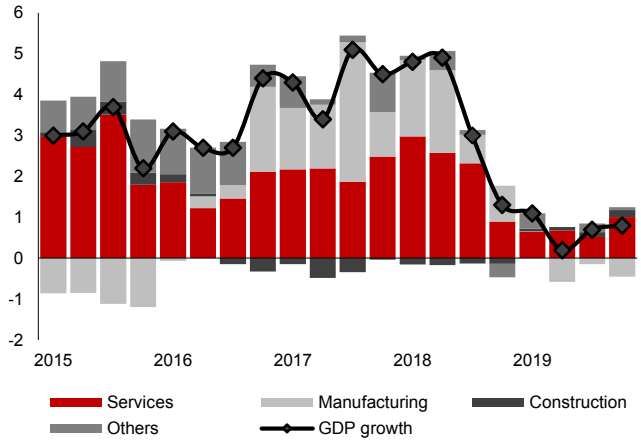
Risks to growth stem mainly from the COVID-19 epidemic, a sharp slowdown in China's growth, uncertainties surrounding the prospects of further trade negotiations between the United States and China. In addition, Singapore also faces challenges from slower productivity growth, aging, climate change, and rapidly growing socioeconomic spending needs.

The author of this country note is Justin Lim.

Singapore: Selected Figures

Singapore's growth slowed sharply to 0.7 percent in 2019 as a result of a contraction in manufacturing.

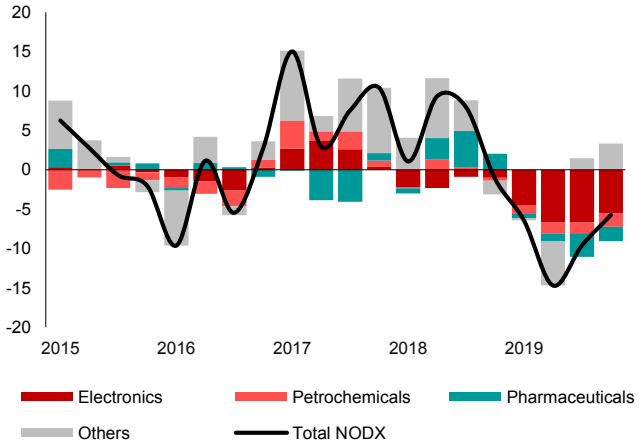
Contributions to Real GDP Growth
(Percentage points)



Source: Singapore Department of Statistics

Exports have also contracted, led by electronics.

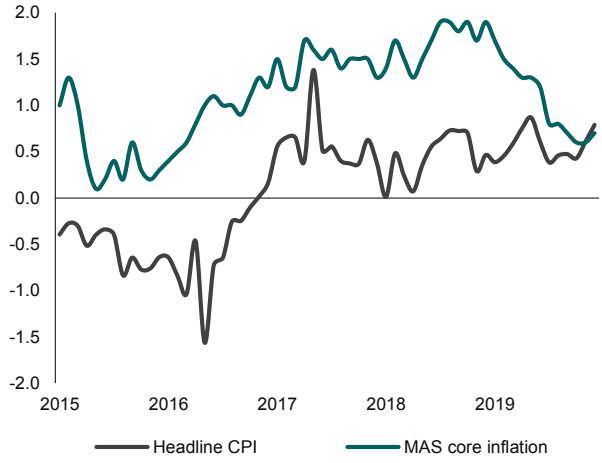
Non-oil Domestic Exports (NODX)
(Percent year-over-year contribution)



Source: Enterprise Singapore.

The Monetary Authority of Singapore Core Inflation declined in 2019.

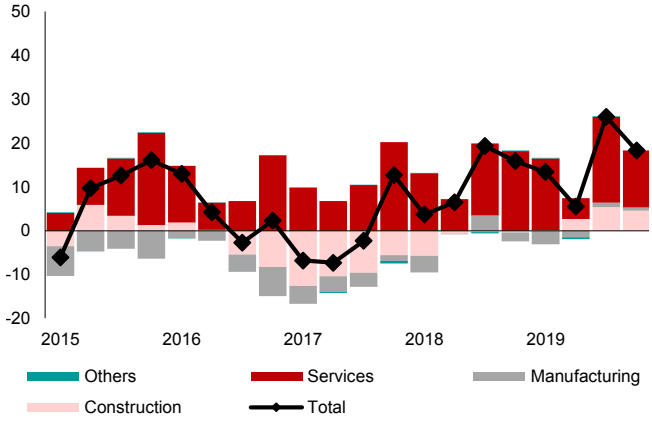
Headline and MAS Core Inflation
(Percent year-over-year)



Sources: Singapore Department of Statistics; and Monetary Authority of Singapore.
Note: CPI = consumer price index.

However, the labor market remained resilient.

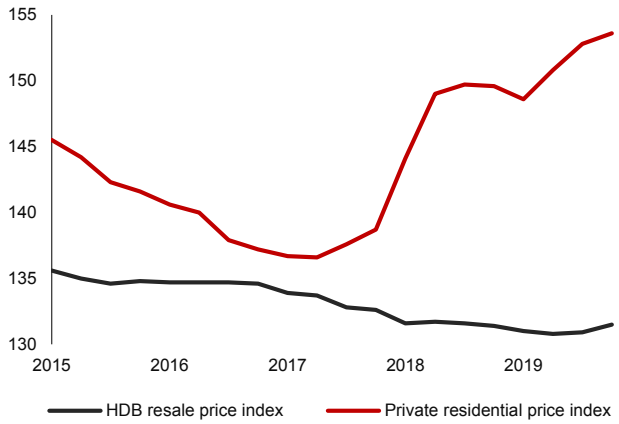
Net Change in Employment by Sector
(Change in Employment, Thousands Persons)



Sources: Manpower Research & Statistics Department; and Ministry of Manpower.

The prices of private residential properties rose gradually in the wake of the 2018 cooling measures.

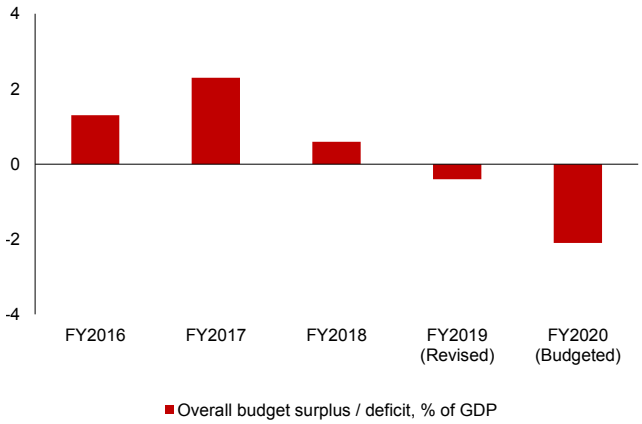
Private Residential and HDB Price Index
(Index 2009:Q1=100)



Sources: Housing and Development Board; and Urban Redevelopment Authority.

A large fiscal stimulus package was deployed to support the economy.

Overall Budget Position
(Percentage of GDP)



Source: Ministry of Finance Singapore.

Singapore: Selected Economic Indicators

	2016	2017	2018	2019
Real sector	(in annual percentage change)			
Real GDP	3.2	4.3	3.4	0.7
Private consumption	3.2	3.0	4.2	3.7
Government consumption	3.8	3.1	2.9	2.8
Gross fixed capital formation	1.5	4.2	-3.4	-0.2
Imports of goods and services	0.0	6.2	8.1	-1.6
Exports of goods and services	0.2	7.5	7.3	-1.7
External sector	(in percent of GDP, unless otherwise specified)			
Current account balance	17.6	16.3	17.2	17.0
Goods balance	28.5	28.5	27.9	26.3
Capital and financial account balance	17.6	9.1	13.2	18.7
Direct investment	-9.7	-14.3	-16.4	-19.4
Portfolio investment	4.9	9.1	9.6	27.1
Other investment	18.5	10.9	14.8	8.2
Errors and omission	-0.6	0.8	-0.7	-0.5
Overall balance	-0.6	8.0	3.4	-2.3
Net international investment position[1]	236.9	229.2	220.1	248.5
International reserves (in USD billion, end of period)	246.6	279.9	287.7	279.5
Fiscal sector[2]	(in percent of GDP)			
Revenue	15.3	15.9	14.5	14.7
Expenditure	15.8	15.4	15.3	15.4
Fiscal balance	1.4	2.3	0.7	-0.3
Government debt[3]	106.5	108.4	110.5	N/A
Monetary and financial sectors	(in annual percentage change)			
Broad money	8.4	4.2	5.1	4.4
Domestic credit	12.2	3.4	7.4	7.3
Memorandum items:				
Nominal GDP (in SGD billion)	440.2	472.1	503.4	507.6
Headline inflation (in percent yoy, period average)	-0.5	0.6	0.4	0.6
Exchange rate (in SGD/USD, period average)	1.3815	1.3807	1.3491	1.3642

Sources: National authorities; and AMRO staff estimates.
Note: yoy = year-over-year.

[1] Net International Investment Position (IIP) as a percentage of GDP indicated under reference year 2019 is computed based on the Net IIP as of end 3Q 2019; 4Q 2019 estimates will be available by end March 2020.

[2] Refers to Fiscal Year.

[3] Presently, the Singapore Government issues domestic debt securities to: (1) develop the domestic debt market using the marketable Singapore Government Securities; (2) meet the investment needs of CPF (Singapore's national pension fund) using the Special Singapore Government Securities; and (3) provide individual investors with a long-term savings option that offers safe returns using the Singapore Savings Bonds. The borrowing proceeds from the issuance of these securities under the Government Securities Act cannot be spent and are invested. Singapore is in a net asset position, where its financial assets are well in excess of its liabilities.

Thailand

Thailand's economy slowed to 2.4 in 2019 from 4.2 percent in 2018 as a result of a decline in exports as well as a slowdown in investment. Exports of goods contracted sharply amid the escalating US-China trade conflict and a prolonged downturn in the electronics cycle. Domestic election uncertainty and a prolonged transition period in forming government also dampened investment. On the production side, there was broad moderation across most sectors.

Given the impact of COVID-19 outbreak and budget delay, the economy is expected to remain soft and projected to continue growing below potential in 2020. Overall, the contribution of the external sector to growth is expected to be moderate. While domestic demand should be the main driver of growth, it is also likely to be subdued.

Inflation remains low and subdued. Headline inflation eased to an average of 0.7 percent in 2019 from 1.1 percent in 2018, driven by the decline in oil prices as well as the softening of core inflation. Going forward, inflationary pressures are expected to be subdued, reflecting the weak economic conditions and low oil prices; headline inflation is projected to average 0.5 percent in 2020, below the lower bound of the new inflation targeting band.

The external position is strong, underpinned by the sizable current account surplus and substantial international reserves. The current account surplus widened in 2019, as imports contracted more than exports. The current account surplus has been partially recycled and invested overseas, in the form of foreign direct investment by domestic corporates and portfolio investment by residents.

Financial institutions remain sound overall, with strong capital buffers and high loan-loss reserves. Overall, the banking system's non-performing loan ratio has been broadly stable. Recent regulatory reforms, including the introduction of systemically important domestic banks' regulation[1] revised mortgage loan regulations,[2] and the enactment of the Cooperatives Act, should help strengthen financial stability.

While fiscal policy remains supportive of economic growth, the fiscal deficit is budgeted to narrow from 3.0 percent of GDP in FY2018 to 2.6 percent in FY2020.[3] Expenditure has fallen from 18.6 percent of GDP in FY2018 to 18.1 percent in FY2019, and is budgeted to decline further to 17.9 percent in FY2020. As a percentage of GDP, revenue has been decreasing since FY2016 as a result of changes in tax policy and low tax buoyancy. Budget disbursements continued to be low in FY2018 and FY2019, particularly for capital expenditure.

Downside risks stem mainly from the possibility of a COVID-19 pandemic, re-escalation in global trade tensions, and a severe drought. In an adverse scenario, the virus could have a bigger than anticipated impact on the tourism sector and supply chains, while feedback between China and the global economy could have second-round effects on Thailand's growth. A possible escalation in global trade tensions could also pose further risks to export recovery, while a protracted drought would significantly impact agriculture and household incomes.

With a very low fertility rate, Thailand is aging at a relatively fast pace and is faced with the challenge of "getting old before getting rich." The Thailand 4.0 scheme and the Eastern Economic Corridor flagship projects are key strategic initiatives, and their implementation should be ramped up. Efforts to enhance potential growth should be continued in order to achieve the goal of becoming a high-income developed country as is its aspiration under the 20-year National Strategy.

The author of this country note is Ruperto Majuca.

1 The largest commercial banks, which are deemed to be "too-big-to-fail," are required to maintain additional capital.

2 A stricter loan-to-value (LTV) ratio of 70 percent is required for third and subsequent mortgages and 80 to 90 percent for second mortgages.

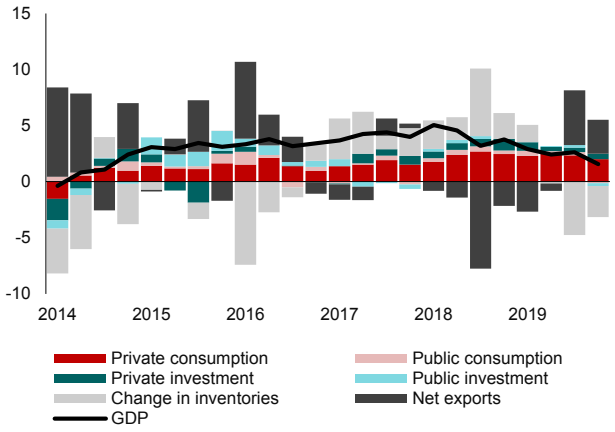
3 Thailand's fiscal year is from 1 October to 30 September.

Thailand: Selected Figures

The economy slowed in 2019 and is expected to continue growing below potential in 2020.

Contributions to Real GDP Growth

(Percentage points)

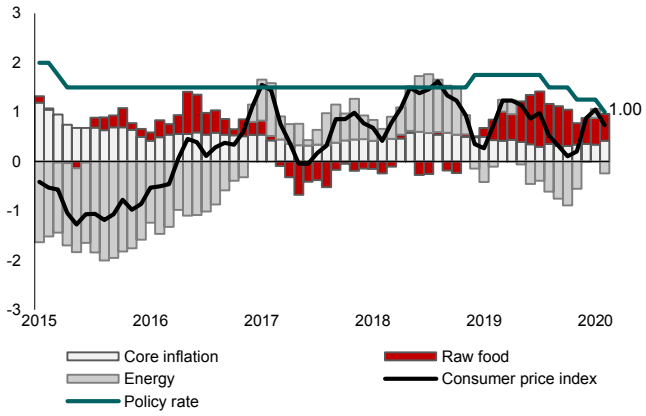


Sources: CEIC Data; and National Economic and Social Development Council.

Inflation has remained low and subdued.

Inflation

(Percent year-over-year; Percent contribution)

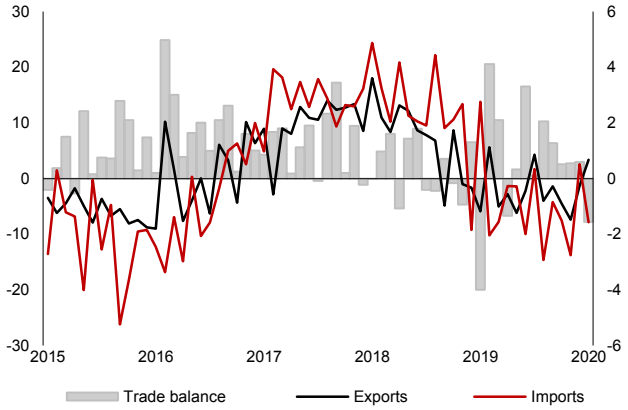


Sources: Bank of Thailand; Bureau of Trade and Economic Indices; and CEIC Data.

The current account surplus widened in 2019 as imports contracted more than exports.

Trade Balance

(Percent year-over-year; Millions of US dollars)

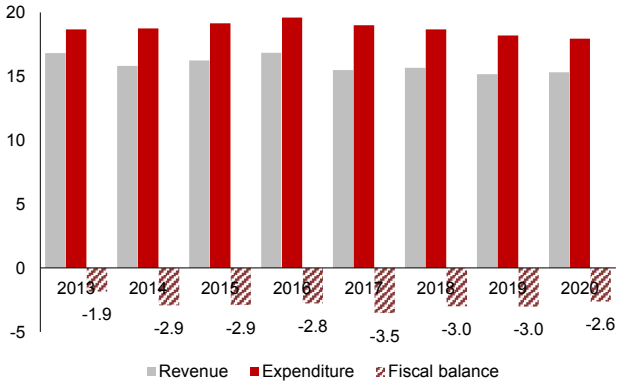


Sources: CEIC Data; and Ministry of Commerce.

Fiscal policy remains supportive of growth.

Government Fiscal Position

(Percent of GDP)

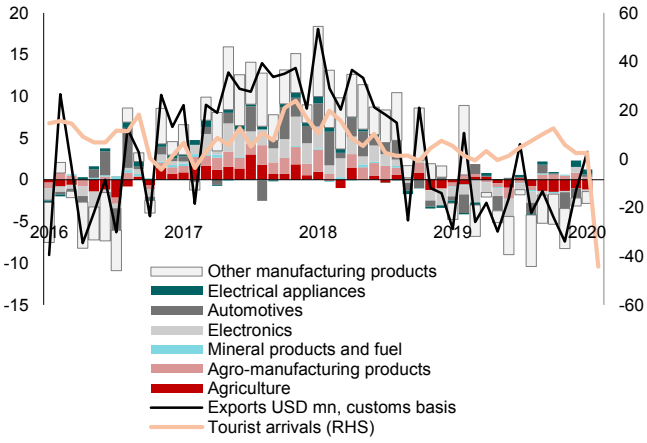


Sources: Bureau of Budget; CEIC Data; and Fiscal Policy Office.

External risks stem mainly from impact of COVID-19 outbreak, China slowdown, and a possible re-escalation in global trade tensions.

Exports and Tourist Arrivals

(Percent year-over-year; Percent contribution; Percent year-over-year)

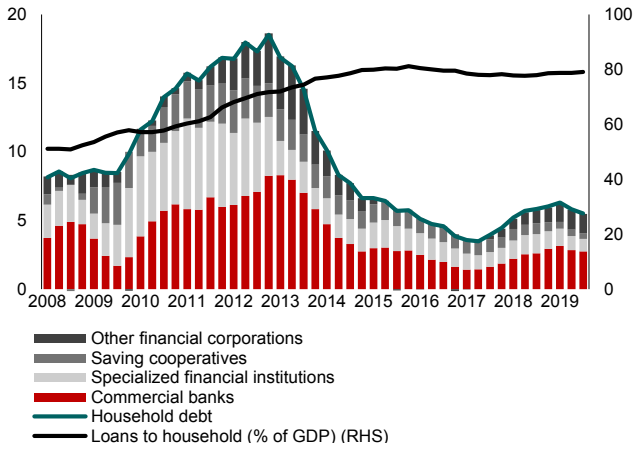


Sources: Bank of Thailand; CEIC Data; Ministry of Commerce; and Ministry of Tourism and Sport.

The household debt-to-GDP ratio, which is high compared to regional peers, has increased somewhat recently.

Household Debt

(Percent year-over-year; Percent of GDP)



Source: Bank of Thailand.

Thailand: Selected Economic Indicators

	2016	2017	2018	2019
Real sector	(in annual percentage change)			
Real GDP	3.4	4.1	4.2	2.4
Private consumption	2.9	3.1	4.6	4.5
Government consumption	2.2	0.1	2.6	1.4
Gross fixed capital formation	2.9	1.8	3.8	2.2
Exports of goods and services	2.7	5.2	3.3	-2.6
Imports of goods and services	-1.0	6.2	8.3	-4.4
External sector	(in percent of GDP, unless otherwise specified)			
Current account balance	10.5	9.6	5.6	6.8
Trade balance	8.7	7.1	4.4	4.9
Capital and financial account balance	-5.0	-2.8	-3.1	-2.3
Direct investment	-2.5	-2.2	-1.6	-1.3
Portfolio investment	-0.7	-0.5	-1.1	-1.5
Other investment	-1.8	-0.1	-0.2	-0.5
Errors and omissions	-2.4	-1.2	-1.1	-2.0
Overall balance	3.1	5.7	1.4	2.5
Total external debt	32.5	36.7	35.5	34.0
Gross official reserves excl net forward position				
(in USD billion, end of period)	171.9	202.6	205.6	224.3
Fiscal sector[1]	(in percent of FY GDP)			
Revenue	16.8	15.4	15.6	15.1
Expenditure	19.6	19.0	18.6	18.1
Budget balance	-2.8	-3.5	-3.0	-3.0
Public debt	41.8	41.9	42.1	41.2
Monetary and financial sectors	(in annual percentage change)			
Policy rate (percent per annum, end of period)	1.50	1.50	1.75	1.25
10-year government bond yield (end of period)	2.7	2.5	2.5	1.5
Memorandum items:				
Nominal GDP (in THB billion)	14,592.6	15,486.6	16,365.6	16,879.0
Headline inflation (in percent yoy, period average)	0.2	0.7	1.1	0.7
Unemployment rate (in percent, period average)	1.0	1.2	1.1	1.0
Exchange rate (in THB/USD, period average)	35.3	33.9	32.3	31.0

Sources: National authorities.
Note: yoy = year-over-year.
[1] Refers to Fiscal Year.

Vietnam

The Vietnamese economy continued to be robust, with growth recorded at 7.0 percent in 2019. The strong expansion was supported by the manufacturing sector, as well as vibrant activity in the wholesale and retail sectors. GDP growth is expected to be about 6.6 percent in 2020. Inflationary pressures picked up toward the end of 2019 due to higher food prices. Headline inflation reached 5.2 percent year-over-year in December last year as pork prices spiked, although relatively soft inflation earlier in the year helped keep average annual inflation at 2.8 percent, below the target ceiling of 4.0 percent. Inflationary pressures are expected to be elevated in 2020 to the extent that food prices remain high and taking into account possible upward adjustments in healthcare and education costs.

Surpluses in both the current account and financial account helped bolster the foreign exchange reserve buffer. The current account surplus rebounded in the second half of last year, on the back of a pickup in electronic exports. Foreign direct investment inflows remained a key driver of the financial account surplus. The robust external position was reflected in the accumulation of foreign exchange reserves, which stood at USD 79 billion as of end-2019. The Vietnamese dong was relatively stable, having depreciated by less than 2 percent vis-à-vis the US dollar in 2019.[1]

Continued fiscal consolidation helped limit the budget deficit to 2.7 percent of GDP. While lower fees and land-based revenues brought down revenue compared to 2018, the decline was offset by a slowdown in both recurrent and capital expenditure. The 2020 budget projects a fiscal deficit of 2.8 percent of GDP. Public debt, at 46.1 percent of GDP as of end-2018, is estimated to have declined to about 43.0 percent by end-2019.

Credit growth has moderated, in line with the State Bank of Vietnam's (SBV's) lower credit growth target. Against the backdrop, of the 14 percent target for 2019, banking system credit expanded by 13.5 percent. Meanwhile, monetary conditions remained relatively accommodative, especially after the SBV's lowering of key policy rates by 25 basis points in September last year.

Key risks to the real and external sectors stem mainly from uncertainties surrounding trade tensions and the global tech cycle, as well as the new COVID-19 outbreak. Although Vietnam has benefited so far from the US-China trade conflict, through FDI inflows as a result of production relocation and co-location, the ramifications for the country's exports have been mixed, with surging exports to the United States offset by cooling global demand and slowing exports to China. Vietnam's expanding number of free trade agreements should help sustain exports as the economy's main growth engine. However, the outbreak of the COVID-19 will likely dent Vietnam's growth prospects this year, to the extent that the epidemic slows its own domestic demand and subdues China's import demand and tourists coming to Vietnam, as well as through disruptions to its import of intermediate goods.

Uncertainties and turbulence in global financial markets could lead to increased volatility in capital flows. Separately, banking sector risks stem from the relatively low capital buffers and still-sizeable legacy non-performing loans (NPLs). NPL resolution has sped up, but a considerable amount of legacy NPL remains. In addition, the relatively high credit-to-GDP ratio could render the economy vulnerable to potential financial market distress.

With uncertain global financial conditions and strong domestic growth momentum, policy focus should be on maintaining macroeconomic and financial stability. The maintenance of the credit growth target of 14 percent for 2020 is prudent, while the recent cut in key policy rates could help banks manage liquidity conditions. Greater exchange rate flexibility with judicious use of exchange rate intervention to curb excessive volatility is recommended.

The SBV's continuing supervision of lending to certain sectors of the economy is warranted to mitigate the risk of an asset bubble. Further efforts to speed up bank recapitalization are strongly encouraged. In addition, the recent rapid growth in corporate bond issuances necessitates a strong regulatory framework as credit risk shifts from the banking sector to the bond market.

AMRO supports continuing efforts and reform initiatives, in line with the medium-term fiscal plan. Continuing policy efforts to enhance revenue potential will be critical in the longer term, particularly to fund growing spending needs on development and social security.

Structural reforms should also be accelerated to ensure a sustainable development path. Enhancing the financial transparency of state-owned enterprises (SOE) would be beneficial in expediting the progress of SOE equitization. Concerted efforts from relevant state agencies are crucial in addressing fiscal challenges stemming from population aging.

The author of this country note is Jade Vichyanond.

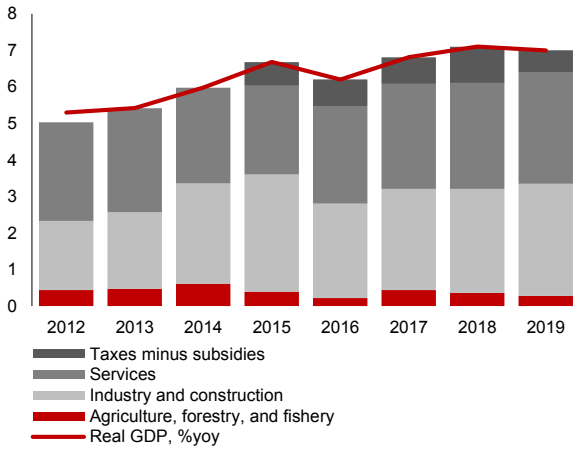
[1] These fiscal figures were calculated based on AMRO's estimates/projection of nominal GDP for 2018–20, which in turn are based on the General Statistics Office of Vietnam's recent revision of GDP data for 2010–17. According to the Vietnamese authorities, using official (unrevised) nominal GDP for 2018-2020, the fiscal deficit in 2019 was 3.4 percent of GDP and the 2020 budget projects a fiscal deficit of 3.4 percent of GDP, while public debt as of end-2018 was 58.3 percent of GDP and is estimated to have declined to about 54.7 percent of GDP as of end-2019.

Vietnam: Selected Figures

Output growth continued to be robust…

Contributions to Real GDP Growth

(Percentage points)

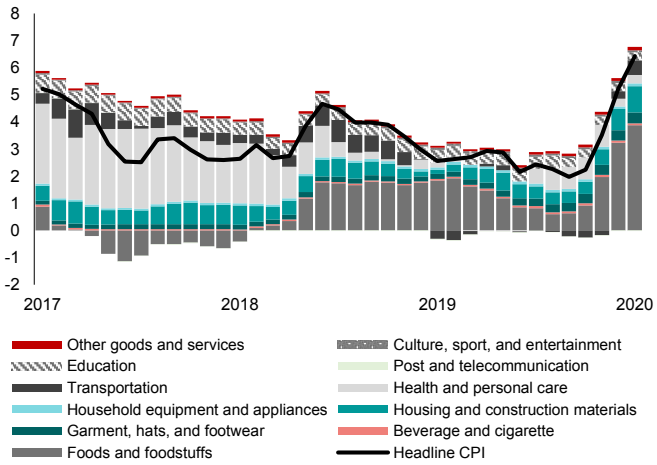


Sources: CEIC Data; General Statistics Office; and AMRO staff calculations.

…while inflationary pressures rose due to higher food prices.

Inflation

(Percent year-over-year)

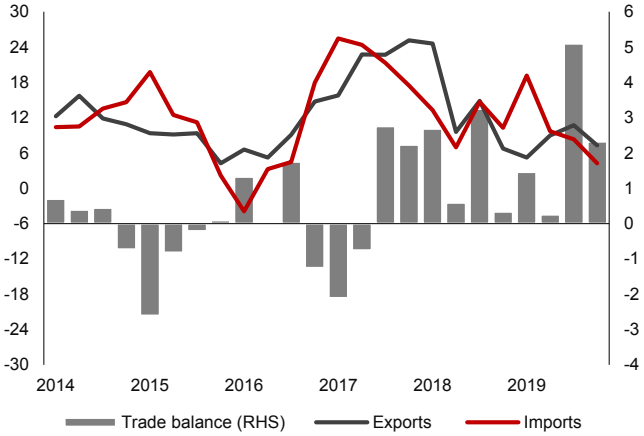


Sources: CEIC Data: General Statistics Office; and AMRO staff calculations.
Note: CPI = consumer price index.

Export growth has held up…

Trade Balance

(Percent year-over-year; Billions of US dollars)

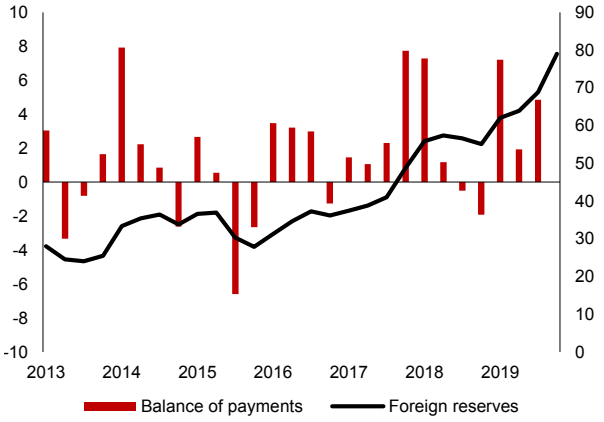


Sources: CEIC Data; State Bank of Vietnam; and AMRO staff estimates.

…which, along with continued capital inflows, led to reserves accumulation.

Balance of Payments and Foreign Reserves

(Billions of US dollars)

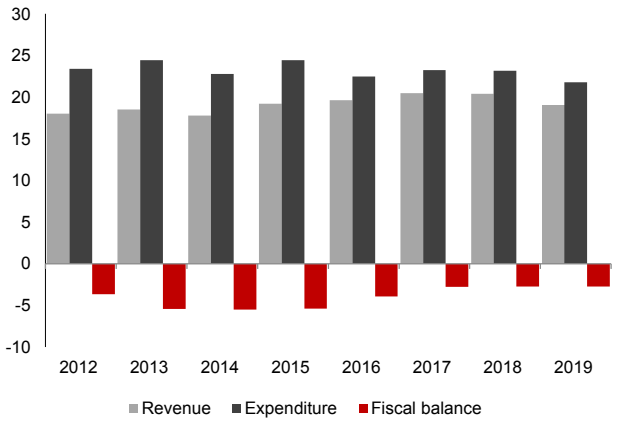


Sources: CEIC Data; State Bank of Vietnam; and AMRO staff estimates.

Ongoing fiscal consolidation kept the fiscal deficit in check.

Fiscal Revenue, Expenditure, and Balance

(Percent of GDP)

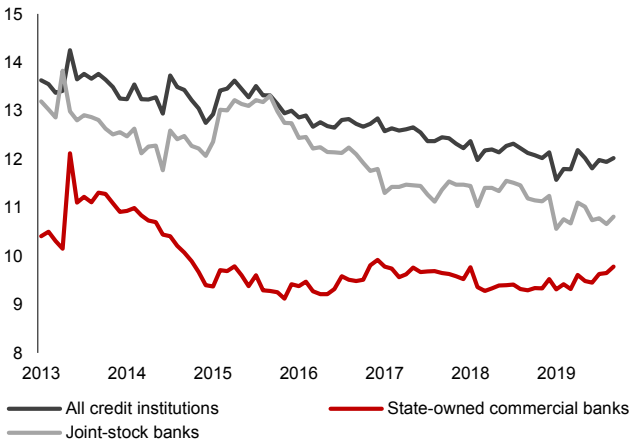


Sources: CEIC Data; Ministry of Finance; and AMRO staff calculations.
Note: The figure, which shows a 2019 deficit of 2.7 percent of GDP, are based on the new, recalculated GDP data. According to the old GDP data, which the government still uses for budget formulation, the 2019 deficit was 3.4 percent of GDP.

Capital adequacy ratios have broadly stabilized.

Capital Adequacy Ratios

(Percent)



Sources: CEIC Data; IMF; State Bank of Vietnam; and AMRO staff calculations.

Vietnam: Selected Economic Indicators

	2016	2017	2018	2019
Real sector	(in percentage point contribution to GDP growth)			
Real GDP (in annual percentage change)	6.2	6.8	7.1	7.0
Agriculture, forestry, and fishery	0.2	0.4	0.4	0.3
Industry and construction	2.6	2.8	2.9	3.1
Services	2.7	2.9	2.9	3.0
Taxes minus subsidies	0.7	0.7	1.0	0.6
External sector	(in USD billion, unless otherwise specified)			
Current account balance	0.6	-1.7	5.9	6.2
Trade balance	11.0	10.8	16.5	17.0
Capital and financial account balance	10.7	20.0	8.5	21.9
Direct investment	11.6	13.6	14.9	15.4
Portfolio investment	0.2	2.1	3.0	3.2
Other investment	-1.1	4.3	-9.5	3.3
Errors and omissions	-3.0	-5.8	-8.3	-4.0
Overall balance	8.4	12.5	6.0	24.1
Gross external debt (in percent of GDP)	35.8	38.9	38.9	39.1
International reserves (in USD billion, end of period)	36.5	49.1	54.9	79.0
Fiscal sector	(in percent of GDP)			
Revenue and grants	24.5	20.5	20.4	19.0
Expenditure	28.7	23.2	23.2	21.8
Fiscal balance	-4.3	-2.8	-2.7	-2.7
Public debt	50.9	48.8	46.1	43.0
Monetary and financial sectors	(in annual percentage change)			
Broad money	17.9	14.3	14.0	14.0
Private sector credit	18.8	17.4	13.8	13.5
Memorandum items:				
Nominal GDP (in VND trillion)	5,639	6,294	6,975	7,650
Headline inflation (in percent yoy, period average)	2.7	3.5	3.5	2.8
Exchange rate (in VND/USD, period average)	21,932	22,370	22,602	23,173

Sources: National authorities; and AMRO staff estimates and calculations.
Note: Red number denotes AMRO staff estimate. Calculations involving GDP are based on the recently revised GDP data for 2010–17 and our GDP estimates from 2018 onward.
yoy = year-over-year.

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