# 1. Good Times, Uncertain Times: A Time to Prepare

The world economy continues to perform well, with strong growth and trade, rising but still muted inflation, and accommodative financial conditions, notwithstanding some increased financial market volatility in early 2018. Driven partly by the procyclical tax stimulus in the United States, near-term economic prospects for both the world and Asia have improved from the already-favorable outlook presented in the October 2017 Regional Economic Outlook Update: Asia and Pacific. Asia is expected to grow by about 5½ percent this year, accounting for nearly two-thirds of global growth, and the region remains the world's most dynamic by a considerable margin. But despite the strong outlook, policymakers must remain vigilant. While risks around the forecast are broadly balanced for now, they are skewed to the downside over the medium term. Key risks include further market corrections, a shift toward protectionist policies, and an increase in geopolitical tensions. With output gaps closing in much of the region, fiscal policies should focus on ensuring sustainability. Given still moderate wage and price pressures, monetary policies can remain accommodative in most Asian economies for now, but central banks should stand ready to adjust their stances as inflation picks up, and macroprudential policies should be used appropriately to contain credit growth. Many Asian economies face important medium-term challenges, including population aging and declining productivity growth, and will need structural reforms, complemented in some cases by fiscal support. Finally, the global economy is becoming increasingly digitalized, and some of the emerging technologies have the potential to be truly transformative, even as they pose new challenges. Asia is already a leader in many aspects of the digital revolution, but to remain at the cutting

This chapter was prepared by Sergei Dodzin (lead), Joong Shik Kang, and Simon Paroutzoglou, under the guidance of Koshy Mathai. Substantial input was provided by Keiko Honjo (RES), Sarwat Jahan, Dirk Muir, Medha Madhu Nair, Tahsin Saadi Sedik, Piyaporn Sodsriwiboon, Cormac Sullivan, Irene Zhang, and country teams. Alessandra Balestieri and Socorro Santayana provided excellent production assistance.

edge and reap the full benefits from technological advances, policy responses will be needed in a range of areas, including information and communication technology, trade, labor markets, and education.

# **Global Context**

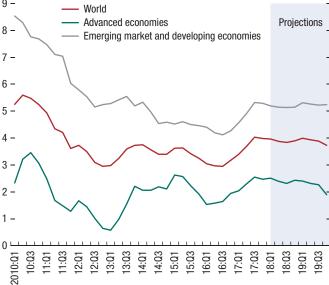
Growth continues to be strong, with the cyclical upturn that started in mid-2016 continuing through 2017. Global output is estimated to have grown by 3.8 percent in 2017, 0.2 of a percentage point higher than projected in the October 2017 World Economic Outlook and the fastest since 2011 (Figure 1.1). The pickup in growth was broad-based, with growth accelerating in about three-quarters of the economies, but especially strong for the advanced economies. Global investment, which had slowed in the previous two years, recovered strongly in both advanced and emerging market economies, partly driven by the technology cycle and the launch of new products. World trade picked up in turn, with global trade volume growth rising to 5 percent in 2017 from 2.3 percent the year before (Figure 1.2).

Headline inflation has increased since September with the recent rise in oil and food prices, but core inflation and wage growth remain muted. Inflation picked up in advanced economies from 0.8 percent in 2016 to a still moderate 1.7 percent in 2017, while declining in emerging market and developing economies from 4.3 to 4.1 percent (Figure 1.3). Despite the pickup in activity and falling headline unemployment rates in many economies, wage growth has been tepid, reflecting weak productivity growth and continued labor market slack in the form of low participation rates and high levels of involuntary part-time work.

Notwithstanding some episodes of increased financial market volatility this year—sparked first by growing concerns about higher inflation in the United States and a faster pace of monetary

Figure 1.1. Real GDP Growth





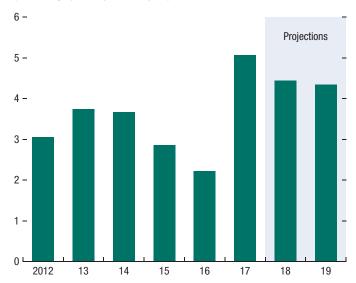
Sources: IMF, World Economic Outlook database; and IMF staff calculations.

policy normalization, and later by announcements of tariff increases and fears of escalation—overall global financial conditions remain accommodative and supportive of the recovery. As most central banks maintained their accommodative policies amid weak inflation, investors continued their search for yield given low interest rates, an improved economic outlook, and increased risk appetite. Across the world, companies' operating surplus exceeded investment requirements, and companies used internal resources and available credit for share buybacks and other financial transactions, further boosting asset prices (Figure 1.4). And despite some recent turmoil, emerging markets generally continued to experience large capital inflows and very low borrowing spreads (Figure 1.5).

The near-term global outlook continues to be strong, as noted in the April 2018 *World Economic Outlook*, with growth projected at 3.9 percent in both 2018 and 2019 (Figure 1.1). Recent developments point to strong momentum, which could continue. The US tax reform and budget will provide substantial front-loaded stimulus to the United States and the global economy, and

Figure 1.2. World: Volume of Total Exports of Goods and Services

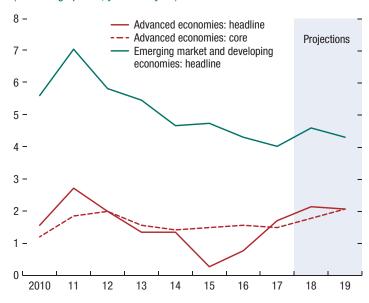
(Percentage points, year over year)



Sources: IMF, World Economic Outlook database; and IMF staff calculations.

Figure 1.3. Price Inflation: Headline and Core

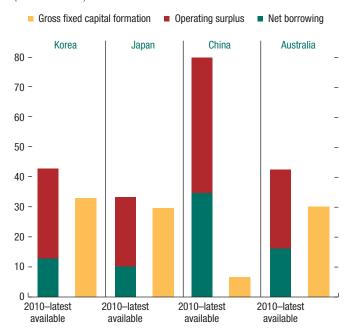
(Percentage points, year over year)



Sources: IMF, World Economic Outlook database; and IMF staff calculations.

financial conditions remain favorable (see the discussion in the April 2018 *Global Financial Stability Report*). Over the medium term, however, global growth is expected to slow to 3.7 percent,

Figure 1.4. Selected Economies: Sources and Uses of Funds (Percent of GDP)



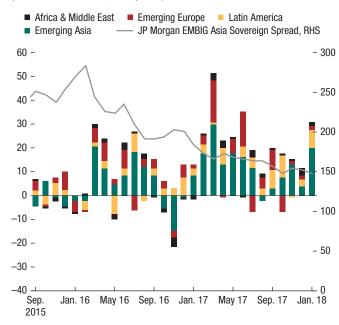
Sources: Bank for International Settlements; Bloomberg Finance L.P.; CEIC Data Co.; IMF, *Balance of Payments Statistics*; IMF, *Monetary and Financial Statistics*; IMF, *World Economic Outlook*; Organisation for Economic Co-operation and Development; and IMF staff calculations.

partly reflecting population aging and lackluster productivity growth in advanced economies.

The global forecast is surrounded by considerable uncertainty, particularly given the important changes to tax, trade, and monetary policies in the United States and possible further policy responses from other economies. Risks around the outlook appear to be broadly balanced in the near term but tilted to the downside in the medium term. While the current cyclical rebound could continue to surprise on the upside, a sudden tightening of global financial conditions, possibly triggered by inflation surprises and revised market expectations of monetary policy tightening, could weigh on global demand. At the same time, continued easy financial conditions also pose risks over the medium term, as they could lead to a further buildup of financial vulnerabilities over time. The US fiscal stimulus heightens medium-term risks by contributing to an increase in US debt as well as a (temporary) buildup of global imbalances. A shift toward inward-looking policies remains

Figure 1.5. Total Portfolio Flows

(Billions of US dollars, basis points)



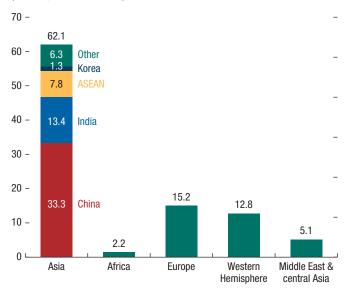
Sources: Bloomberg Finance L.P.; Institute of International Finance; national sources; and IMF staff calculations. Note: RHS = right scale.

an important risk, as highlighted by recent tariff actions and announcements. An increase in geopolitical tensions, climate change, and cybersecurity breaches pose additional risks to the outlook.

# **Regional Developments**

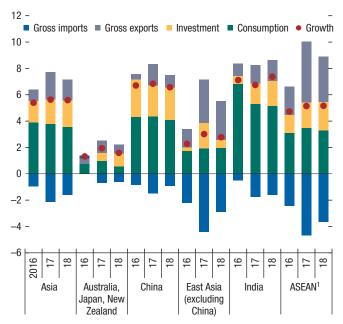
Growth in Asian economies has picked up in line with global developments. Asia grew by 5.7 percent in 2017, up 0.3 of a percentage point from the year before, with the pickup broad-based across the region (Table 1.1). Asia continues to be both the fastest-growing region in the world and the main engine of the world's economy, contributing more than 60 percent of global growth (three-quarters of which comes from China and India) (Figure 1.6). Consumption and investment continue to be major contributors. The contribution of net exports remained small, but the strong growth of gross exports and imports suggests that the recovery in external demand (both inside and outside the region) was an

Figure 1.6. Contribution to Global Growth by Region (Percent, 2017 estimates)



Sources: IMF, World Economic Outlook; and IMF staff estimates. Note: Regional categories based on IMF classification. ASEAN = Indonesia, Malaysia, Philippines, Singapore, Thailand, Vietnam.

Figure 1.8. Selected Asia: Contributions to Projected Growth (Percentage points, year over year)

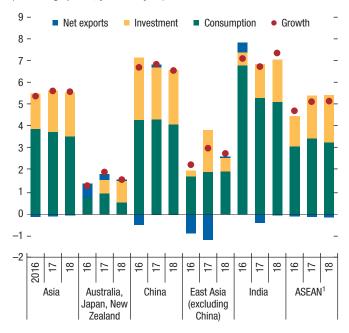


Sources: IMF, World Economic Outlook database; and IMF staff calculations. 

<sup>1</sup>ASEAN = Indonesia, Malaysia, Philippines, Singapore, Thailand, Vietnam.

important driver of GDP growth in Asia (Figures 1.7 and 1.8).

Figure 1.7. Selected Asia: Contributions to Projected Growth (Percentage points, year over year)

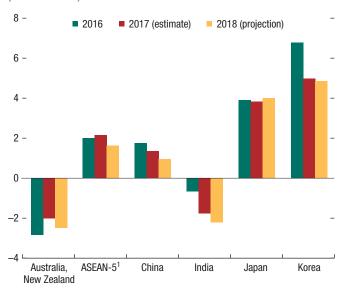


Sources: IMF, World Economic Outlook database; and IMF staff calculations. <sup>1</sup>ASEAN = Indonesia, Malaysia, Philippines, Singapore, Thailand, Vietnam.

While rising domestic demand and the pickup in oil prices helped reduce current account balances in large surplus economies, including China and Korea, many Asian emerging market and developing economies continued to run moderate current account deficits on the back of ongoing capital investments. Overall, the current account surplus for the region narrowed to 2.1 percent of GDP, down by ½ percent from 2016 (Figure 1.9 and Table 1.3).

As in other regions, inflation has largely remained subdued despite a pickup in growth. While headline inflation rose slightly in 2017 because of oil prices, core inflation remained low and wage pressures were muted (Table 1.2). The puzzling phenomenon of low inflation is taken up in Chapter 2, which suggests that the decline in commodity prices since 2013 was a major driver, that expectations have become more backward-looking, and that the Phillips curve may have flattened in recent years, possibly on account of factors such as increasing automation and integration with global value chains that have

**Figure 1.9. Asia: Current Account Balances** (Percent of GDP)



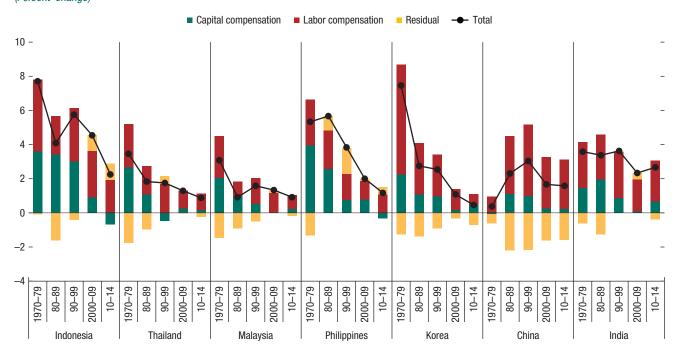
Sources: IMF, World Economic Outlook database; and IMF staff calculations. 

<sup>1</sup>ASEAN-5 = Malaysia, Philippines, Singapore, Thailand, Vietnam.

reduced labor's bargaining power. Technological progress and the decline in capital costs could also be contributing factors (Figure 1.10).

Notwithstanding the equity market declines in early 2018, overall financial conditions in the region remained favorable, as the impact of the US Federal Reserve's gradual policy normalization was largely offset by a further strengthening in risk appetite. Stock markets rose sharply through the end of January 2018 and, despite weakening thereafter, are still up over the past year. Sovereign bond yields generally declined, supported by continued capital flows into the region (Figures 1.11 and 1.12). After some outflows in late 2016, net portfolio inflows resumed in the first half of 2017 and continued through the second half of the year, albeit at a slower pace (Figures 1.13 and 1.14). With the US dollar weakening, most Asian currencies continued to appreciate during 2017 and into 2018.

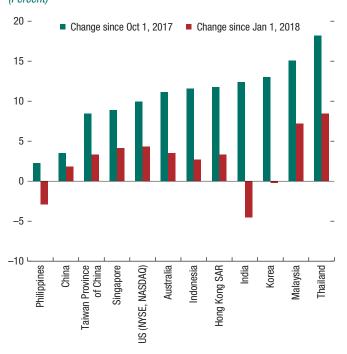
**Figure 1.10. Selected Economies: GDP Deflators—Contribution by Components** (Percent change)



Sources: Penn World Table 9.0; and IMF staff calculations.

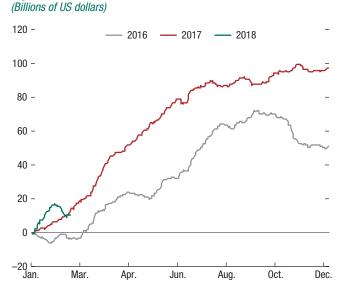
Note: The figure presents the percentage change decomposition of the GDP deflator into changes in capital cost contribution  $p_k$  labor cost contribution w, and change in the residual  $A_t$  (proxy for aggregate productivity change and other effects):  $\frac{dc}{c} = -\frac{dA_t}{A_t} + \alpha_t \frac{dp_k}{p_k} + (2 - \alpha) \frac{dw}{w}$ 

**Figure 1.11. Asia: Equity Market Capitalization** *(Percent)* 



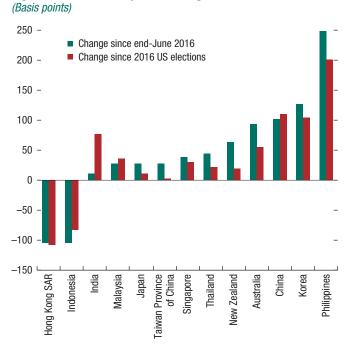
Sources: Bloomberg Finance L.P.; Haver Analytics; and IMF staff calculations.

Figure 1.13. Asia: Cumulative Portfolio Flows



Sources: Bloomberg Finance L.P.; Haver Analytics; and IMF staff estimates. Note: Equities coverage: India, Indonesia, Korea, Philippines, Sri Lanka, Taiwan Province of China, Thailand, Vietnam; bonds coverage: India, Indonesia, Korea, Thailand.

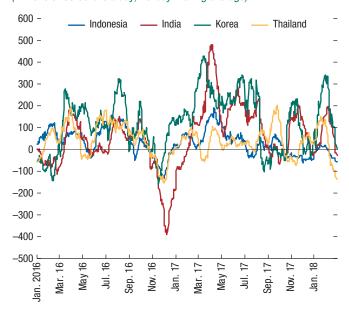
Figure 1.12. Asia: Ten-year Sovereign Bond Yields



Sources: Bloomberg Finance L.P.; Haver Analytics; and IMF staff calculations.

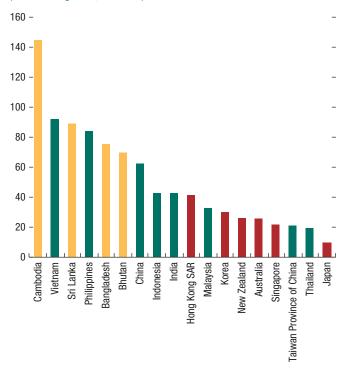
Figure 1.14. Selected Economies: Portfolio Flows

(Millions of US dollars a day; 28-day moving average)



Sources: Bloomberg Finance L.P.; Haver Analytics; and IMF staff calculations.

Figure 1.15. Selected Asia: Real Private Sector Credit Growth (Cumulative growth, 2013–17)



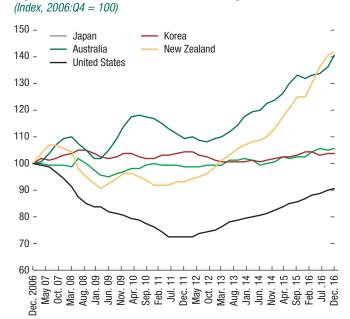
Sources: CEIC Data Co.; Haver Analytics; and IMF staff calculations. Note: Private sector credit is based on the depository corporations survey.

Credit growth in the region remained strong, resulting in a further buildup of corporate leverage and household debt from already high levels (Figure 1.15 and Box 1.1). Strong credit growth also contributed to a further rally in house prices in some economies in the region (Figures 1.16 and 1.17). Several economies, including Australia, Hong Kong SAR, Korea, and Singapore, used macroprudential measures to limit risks in housing markets, and house prices have begun to show some signs of stabilization in recent months.

Developments in individual Asian economies were as follows:

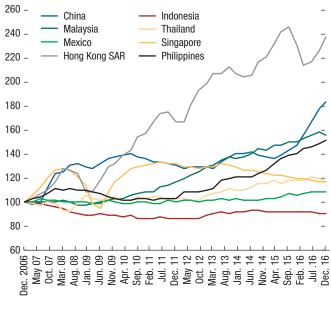
 In China, GDP growth accelerated to 6.9 percent in 2017, reversing the trend moderation over the last few years, bolstered by stronger-than-expected external demand and a supportive macro policy mix. Consumption slowed despite a still tight labor market and accounted for less than 60 percent of total GDP growth. Investment

Figure 1.16. Advanced Economies: Housing Index



Sources: IMF Research Department; and IMF staff calculations.

Figure 1.17. Emerging Market Economies: Housing Index (Index, 2006:Q4 = 100)



Sources: IMF Research Department; and IMF staff calculations.

also slowed on cooling private real estate investment, which was offset somewhat by still robust public infrastructure as well as the first acceleration in manufacturing

- investment in five years. On the supply side, the service sector remained the key driver, reflecting growth in the new economy, especially information technology. Despite a strong pickup in the producer price index (PPI), headline consumer price index (CPI) inflation remained contained, while core inflation rose steadily to above 2½ percent. (Box 2.1 in Chapter 2 discusses PPI and CPI inflation in China.)
- In Japan, GDP growth picked up strongly in 2017 to 1.7 percent, from 0.9 percent in 2016, driven by rising global demand, strengthened business investment, and short-term fiscal support. Exports have increased strongly, more than offsetting a rebound in imports. Headline inflation picked up in the second half of 2017 owing to higher global energy and commodity prices, and recent evidence suggests an uptick in inflation expectations. Nevertheless, underlying inflation (excluding fresh food and energy) remains subdued. The real effective exchange rate depreciated by 5 percent in 2017, while the current account surplus rose slightly to 4 percent of GDP.
- In *India*, the economy is recovering from temporary disruptions from the November 2016 currency exchange initiative and the July 2017 rollout of the new Goods and Services Tax. Growth rebounded strongly to 7.2 percent in the third quarter of FY2017/18, up from 6.1 percent in the first half of the fiscal year. CPI inflation in FY2017/18 is estimated at 3.6 percent, close to the midpoint of the target band (4 percent ±2 percent), reflecting low food price inflation in the first half of the year.
- Growth in *Korea*, after slowing in the second part of 2016, picked up in 2017, supported especially by buoyant investment, while recent geopolitical tensions have had a limited impact. The output gap, nonetheless, remains negative. Inflation pressure has been subdued, with core inflation remaining below 2 percent. The current account surplus narrowed but

- remained elevated at 5.1 percent of GDP in 2017, down from 7 percent in 2016.
- Australia's recovery from the end of the mining boom advanced further in 2017 despite setbacks from temporary factors, but domestic demand momentum is not yet broad-based. Aggregate demand was led by strong investment, while consumption remained subdued, held back by weak real income growth. Employment grew strongly in 2017 but wage growth has remained weak. Inflation increased to 2 percent in 2017 but is still slightly below the target range of 2–3 percent. The housing market is cooling in the eastern capitals, and price increases have moderated in real terms. New Zealand continued to enjoy a period of solid expansion that extends back to 2011. Record strength in net migration, accommodative monetary policy, improving services exports, and continued strong terms of trade have been the major growth drivers.
- Growth in *Hong Kong SAR* in 2017 is estimated at about 3.8 percent, driven mostly by private consumption, and recent high-frequency indicators point to a continuing expansion. External conditions strengthened in 2017, with the current account surplus estimated at 3 percent of GDP. The labor market has been tight, but wage and price pressures have been contained. Despite increasing policy rates amid US tightening, financial conditions remain accommodative. Asset prices saw robust gains—house prices, for instance, rose by over 25 percent between March 2016 and December 2017, after falling somewhat in late 2015 and early 2016—while liquidity stayed ample.

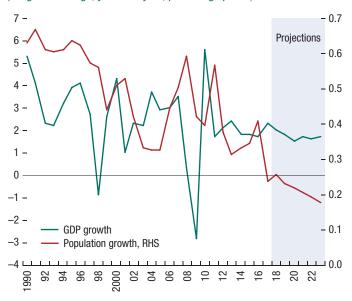
#### Association of Southeast Asian Nations (ASEAN)

 In *Indonesia*, growth picked up slightly to 5.1 percent in 2017, led by fixed investment. Headline inflation remained below 4 percent, while core inflation remained stable at

- about 3 percent. The balance of payments stayed in surplus, with gross international reserves reaching eight months of imports in December 2017. Supportive capital inflows and last year's ratings upgrade to investment grade have buoyed financial markets. In 2018, the rupiah has remained stable, bond yields have fallen, and equities have risen, notwithstanding the earlier market correction.
- Thailand's growth improved in 2017, supported by strong goods exports and buoyant tourism, as well as resilient private consumption, while both private and public investment have disappointed. Despite higher growth, inflation remains very low and is projected to remain below the target range in the near term. The large current account surplus (10.8 percent of GDP in 2017) remains excessive, reflecting an undervalued exchange rate, weak private investment due to structural bottlenecks, high precautionary savings as a consequence of poorly developed social safety nets, and rapid population aging. A boost in tourist arrivals from China also contributed. Reserve accumulation continues at a fast pace—as of December 2017, international reserves stood at \$239 billion, up nearly \$42 billion from the end of 2016 and well above IMF adequacy metrics.
- Singapore's growth is estimated at 3.6 percent in 2017, driven by a cyclical recovery in trade, including stronger external demand for electronics products. The economic recovery is broadening from externally oriented manufacturing sectors to domestic service sectors as the economy continues its transition to a labor-lean and innovation-based growth model. Headline inflation remains moderate, averaging 0.6 percent in 2017, although higher than in 2016 on account of rising global oil prices. Core inflation, which excludes private accommodation and private transport, rose to 1.5 percent in 2017.
- Malaysia's economy grew by 5.9 percent in 2017, driven by private consumption, with

- private investment and public consumption also contributing, and supported by increased global demand for electronics. After peaking at 4.9 percent in March 2017, headline inflation fell, averaging 3.8 percent for the year, partly reflecting improved commodity terms of trade. Core inflation also fell, driven by lower services and durable goods inflation.
- Growth in the *Philippines* reached 6.7 percent in 2017, led by strong consumption and exports. Inflation picked up to 3.2 percent, still within the target band of 2–4 percent, and edged up further in January 2018 owing to the temporary effects of tax reform implementation and higher energy prices. The current account recorded a small deficit of 0.4 percent of GDP in 2017, partly reflecting higher imports of capital goods for infrastructure investment. The banking sector remains healthy, although credit to the consumer and real estate sectors grew rapidly.
- Economic performance was strong in much of the rest of ASEAN as well. In Vietnam, growth reached 6.8 percent in 2017, supported by strong exports and accommodative monetary policy, while inflation remains contained on account of low import prices and the dollar peg. Cambodia's growth in 2017 is estimated at 6.9 percent, backed by higher public spending and robust construction and tourism activity, while inflation picked up to nearly 3 percent. And in Lao P.D.R., growth was strong at 6.8 percent, but the economy faces significant macro-financial imbalances. In Myanmar, however, growth dropped to 5.9 percent in 2016/2017 given a temporary suspension of construction permits in Yangon as well as a weakening of agriculture, while inflation dropped to 6.8 percent. And in Brunei Darussalam, growth recovered to 0.5 percent in 2017, turning positive for the first time since 2012, mainly driven by the non-oil-and-gas sector.

Figure 1.18. GDP and Population Growth: Advanced Asia (Weighted average, year over year; percentage points)

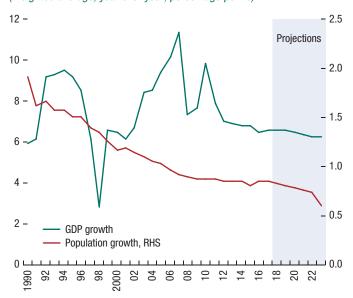


Sources: IMF, World Economic Outlook database; and IMF staff calculations. Note: Advanced Asia = Australia, Japan, New Zealand, and the countries of newly industrialized Asia—Hong Kong SAR, Korea, Singapore, Taiwan Province of China. RHS = right scale.

#### Other economies

Performance in other frontier economies was generally strong, with some exceptions. Growth rose above 7 percent in Bangladesh, with consumption the main driver. In Nepal, growth accelerated to 7.5 percent in 2017 as activity recovered from the 2015 earthquakes and subsequent trade disruptions, while inflation fell to a multiyear low of 4.5 percent as a consequence of low food prices. In Mongolia, which is currently implementing an IMF-supported program, higher commodity prices and coal export volumes pushed GDP growth to 5.1 percent, despite substantial fiscal consolidation. But growth in Sri Lanka, also under an IMF-supported program, is estimated to have fallen to 3.1 percent on account of droughts and floods that affected agricultural production, as well as slowing construction. A number of frontier and developing economies have seen rapid credit growth (Box 1.1)

Figure 1.19. GDP and Population Growth: Emerging Asia (Weighted average, year over year; percentage points)



Sources: IMF, World Economic Outlook database; and IMF staff calculations. Note: Emerging Asia = China, India, Indonesia, Malaysia, Thailand, Philippines, Vietnam, Mongolia. RHS = right scale.

• Growth in *Pacific island economies* remained about 2.6 percent in 2017, broadly unchanged from the year before. In *Fiji*, growth jumped to 3.8 percent given the recovery from Cyclone Winston, while in *Papua New Guinea* and *Timor-Leste*, growth remained relatively subdued, partly reflecting weak commodity export prices. Cyclone Gita caused widespread destruction in a number of economies, including *Tonga* and *Samoa*.

# **Regional Outlook**

Asia's strong economic performance is expected to continue in the near term. Growth for the region overall is forecast at 5.6 percent in both 2018 and 2019—up by about 0.1 of a percentage point from projections in October 2017—while emerging Asia is projected to grow by about 6½ percent in both years (Table 1.1). Growth also remains robust in per capita terms (Figures 1.18 and 1.19). With strong growth and consequent import demand, along with higher oil prices, current account

balances are expected to decline further for the region to about 1¾ percent of GDP in 2018–19 (Figure 1.9). Inflation is projected to be subdued, at about 1½ percent on average in advanced economies and about 3¼ percent on average in emerging markets (Table 1.2).

The favorable near-term outlook is driven by strong global growth, which should support Asia's exports and investment, as well as still accommodative policies and financial conditions, which should underpin domestic demand. As noted above, the US tax reform and budget will boost investment and growth in the United States in the short term—though without substantial long-term effects on the level of GDP—with spillovers to Asia, as highlighted in Box 1.2.

The outlook for individual Asian economies is as follows:

- Growth in *China* is projected to moderate to 6.6 percent in 2018 as financial, housing, and fiscal tightening measures take effect, and as net exports contribute less.
- In *Japan*, rising global demand and increased private investment are expected to carry forward into 2018. While average headline inflation is projected at 1.1 percent in 2018, core inflation is expected to be much lower, at 0.5 percent. Wage increases are expected to remain modest despite tight labor market conditions.
- India's growth, projected at 6.7 percent in FY2017/18, should recover to 7.4 percent in FY2018/19, making India once again one of the region's fastest-growing economies. The recovery is expected to be underpinned by a rebound from transitory shocks as well as robust private consumption. Medium-term headline CPI inflation is forecast to remain within but closer to the upper bound of the Reserve Bank of India's inflation-targeting band (4 percent ±2 percent). Medium-term growth prospects remain positive, benefiting from key structural reforms, including the landmark national Good and Services Tax reform. The current account deficit in

- FY2017/18 is expected to widen somewhat but should remain modest, financed by robust foreign direct investment inflows.
- In *Korea*, the cyclical recovery is expected to continue, with growth of about 3 percent in 2018 and 2019 and consumer price inflation stable at about 2 percent. Private consumption will benefit from the large minimum wage increase and policies supporting employment and social spending. Investment growth should remain positive, although the contribution of construction and facilities investment is expected to decline on account of tighter macroprudential policies. Net exports will also contribute to growth, and the current account surplus is expected to remain elevated at about 5 percent, reflecting the high saving rate.
- Australia's recovery is expected to accelerate, driven by infrastructure investment and private consumption. Inflation is forecast to return to the midpoint of the target range within the next three years. The baseline outlook assumes a soft landing in the housing market, with price growth slowing gradually, reflecting increased supply, demand shifts toward renting, and eventually higher interest rates. New Zealand's growth is expected to be above trend in the near term and to moderate toward trend in the medium term in the face of lower net migration, less earthquake reconstruction spending, and weaker residential investment.
- Hong Kong SAR's strong growth is expected to remain strong at about 3.6 percent in 2018, while the current account surplus is forecast to remain stable at about 3.1 percent of GDP. CPI inflation is projected to increase to 2.2 percent for 2018 and to rise gradually thereafter.

#### **ASEAN**

• *Indonesia*'s growth is projected to increase to 5.3 percent in 2018 and 5.5 percent in 2019, led by a pickup in investment and

consumption driven by infrastructure activity and stronger commodity prices. Inflation is projected to remain near the center of the target band (3.5 ±1 percent). The current account deficit is projected to remain contained at 1.9 percent of GDP in 2018, helped by firmer commodity prices and robust exports. Over the medium term, real GDP growth is projected at 5½ percent.

- Thailand's growth is forecast at 3.7 percent in 2017 and 3.5 percent in 2018, while inflation is projected to remain below the 2.5 percent midpoint of the target range in 2018. The current account surplus is projected to decline but still remain very large.
- In *Singapore*, growth is projected at 2.9 percent in 2018, easing to 2.7 percent in 2019 and about 2.6 percent over the medium term. The current account surplus will remain elevated in the near term. Headline inflation is expected to rise to 1.2 percent in 2018, partly on account of higher oil prices, and to stabilize at about 1 percent thereafter, while core inflation should move closer to 2 percent over the medium term.
- *Malaysia*'s GDP growth is projected at 5.3 percent in 2018, slightly above potential. Despite a small positive output gap, there are no signs of inflation pressure. Growth is expected to converge to its potential of about 5 percent in the medium term, with inflation about 2.5 percent.
- In the *Philippines*, growth is projected at 6¾ percent in 2018–19 and about 7 percent over the medium term, led by robust infrastructure investment and private consumption. Inflation should remain within the target band of 2–4 percent, but the authorities will need to watch carefully for building inflation pressure, as well as rapid credit growth. The current account deficit is projected to widen to 0.5 percent of GDP in 2018.
- The outlook is favorable for much of the rest of the ASEAN economies as well.
   Vietnam's growth is expected to continue at

6½ percent in the near and medium term, with inflation remaining in the range of 4 percent. In Myanmar, growth is expected to pick up toward the estimated potential of 7 to 7.5 percent over the medium term, reflecting continued strong foreign direct investment inflows and an improvement in public investment spending and efficiency. Cambodia's medium-term growth is projected to slow to about 6 percent on account of a moderation in the credit and real estate cycles, coupled with ongoing challenges in improving economic diversification and competitiveness. Growth in *Lao P.D.R.* is expected to continue at about 7 percent in the near and medium term, while in Brunei Darussalam, growth is expected to pick up to 1 percent in 2018 reflecting higher oil output.

#### Other economies

- The outlook for other frontier economies is mostly positive. In Bangladesh, growth should slow slightly to 7 percent in FY2018, while inflation should drop toward target as the effects of food price shocks wane. In Nepal, growth is expected to slow to 5 percent in 2018 following the post-earthquake rebound, and inflation is expected to rise to 6 percent as food prices normalize and activity begins to run up against capacity constraints. Sri Lanka's economy should recover from the recent weather-related shocks, with growth rising to 4.4 percent and inflation dropping to 5 percent—the midpoint of the target range by the end of 2018. In Mongolia, growth is expected to remain strong in 2018 and pick up sharply over the medium term as a major new mine comes onstream.
- Growth in *Pacific island economies* is expected to pick up slightly in 2018–19 to about 3 percent, helped by growing tourist arrivals, higher commodity prices, and stronger fishing revenues. Inflation is expected to remain low in most economies. The outlook, however, is subject to significant downside risks related to natural disasters.

## Risks to the Outlook

The balance of risks has improved since the October 2017 *Regional Economic Outlook Update: Asia and Pacific.* Key factors include the stronger near-term global growth outlook and the smooth transition to US monetary policy normalization. But while risks around the outlook are broadly balanced in the near term, they remain tilted to the downside over the medium term. Key uncertainties include a possible sudden tightening of global financial conditions, a retreat from global integration, a continued buildup of private sector leverage and financial vulnerabilities, and rising geopolitical tensions.

# **Upside Risks**

In the near term, growth momentum could be more durable than expected amid strong consumer and business confidence and still loose financial conditions. The implementation of fiscal stimulus in the United States as well as a stronger recovery in the euro area could lift global growth, with positive spillovers to the Asia and Pacific region. Over the medium term, the new Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP) could boost trade, investment, and growth, and successful implementation of China's Belt and Road Initiative could facilitate greater regional integration, as long as the investment scale-up does not compromise debt sustainability or project quality. Asia is also embracing the digital revolution, though to different degrees across economies. The digital revolution encompasses a broad array of new technological developments, some of which could transform economies and boost productivity and potential growth in the region over the medium term (Box 1.3).

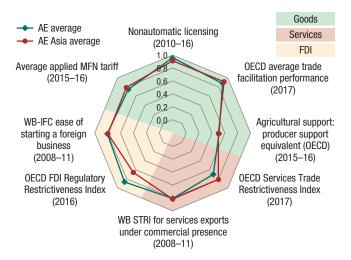
# **Sharp Tightening of Global Financial Conditions**

Net financial flows to emerging market and developing economies have picked up over the

past year as global risk appetite has recovered, leading to rich asset valuations in the region, and indeed across the world. Global equity markets, however, saw increased volatility this year, along with some capital flows toward safe havens, hinting that further asset price corrections and portfolio adjustment remain possible. An abrupt change in global risk appetite—due, for instance, to an inflation surprise in the United States or an escalation of trade tensions (see below)—could lead to a sudden, sharp increase in interest rates and a tightening of global financial conditions. And while Asia's rapid growth—which should make it attractive to capital inflows-and its increased external buffers since the 2013 taper tantrum should help, the region remains vulnerable to a global risk-off event. Such a tightening would strengthen the US dollar and euro vis-à-vis other currencies and, as international investors withdraw, bring about corrections in rich market valuations, imposing strains and sizable output costs on regional economies with high leverage, balance sheet mismatches, or US dollar pegs (see the April 2018 Global Financial Stability Report).

There is also a potential for strains in dollar funding markets for economies where financial institutions have relied on short-term external funding. Stricter liquidity supervision may increase foreign banks' holdings of dollar liquidity in the United States, restricting international supply, as discussed in the April 2018 Global Financial Stability Report. These structural changes are likely to raise the cost of funding in global markets. For example, in Japan, some internationally active regional banks are exposed to foreign exchange funding liquidity risk given that they rely on short-term foreign exchange swaps relatively more than large banks do. The potential negative funding gap for those banks would, however, account for only a very small portion of total foreign-currency-denominated liabilities of the entire Japanese banking sector (see the IMF's 2017 Japan Financial Sector Assessment Program).

Figure 1.20. Advanced Economies: Overall Trade and Foreign Direct Investment Regime



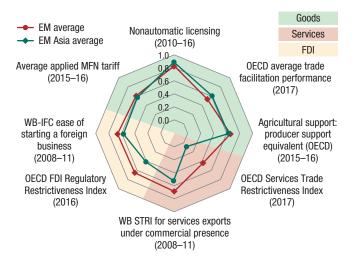
Source: Cerdeiro and Nam (2018).

Note: AE = advanced economy; FDI = foreign direct investment; MFN = most favored nation; OECD = Organisation for Economic Co-operation and Development; WB-IFC, World Bank, International Finance Corporation; WB STRI = World Bank, Services Trade Restrictiveness Index.

# **Retreat from Global Integration**

Gains from globalization have not been shared equally. Particularly in some advanced economies, weak economic growth, stagnant wages, and high unemployment, accompanied by rising income inequality, have increasingly popularized inward-looking policies that could prompt a retreat from global integration and hinder the political consensus for needed market-friendly reforms. Notwithstanding the CPTPP, a shift toward inward-looking policies remains a risk, as highlighted by several steps taken by the United States this year, including the imposition of global safeguard tariffs on imported washing machines and solar cells and modules in January, the new tariffs on steel and aluminum in early March, and, most recently, the announcement of a Section 301 action on China's intellectual property practices that could entail new tariffs on some \$50 billion in Chinese exports to the United States and that has already induced a tariff announcement in response by China. Greater protectionism could disrupt global supply chains, lead to reduced migration (and remittances), reduce global productivity, and hurt longer-term growth. These policies could

Figure 1.21. Emerging Market Economies: Overall Trade and FDI Regime



Source: Cerdeiro and Nam (2018).

Note: EM = emerging market; FDI = foreign direct investment; MFN = most favored nation; OECD = Organisation for Economic Co-operation and Development; WB-IFC = World Bank, International Finance Corporation; WB STRI = World Bank, Services Trade Restrictiveness Index.

make tradable consumer goods less affordable and slow the pace of global economic convergence, which could harm low-income households disproportionately. In addition, uncertainty about trade policies and possible retaliation can weigh on financial markets and business confidence.

Given its trade dependence, Asia is subject to risks from inward-looking policies. The near-term economic impact of inward-looking policies could vary substantially depending on the exact nature of the measures. It appears that recently announced measures would likely have only a modest impact on overall trade and growth in the region and across the globe. But the actions have already sparked some retaliatory measures, and a serious concern is that tensions would escalate, dampening foreign direct investment and trade, disrupting major sources of growth, and disturbing financial markets.

Under any scenario for global tariff actions, Asian economies have scope to improve the openness of their trade and foreign direct investment policies. As suggested in Figures 1.20 and 1.21, this is particularly true for emerging market economies,

which lag behind comparators outside the region in terms of regulations governing services trade and foreign direct investment.

# High Private Sector Leverage and Heightened Financial Vulnerabilities

Property prices have risen substantially in a few economies in the region. Tighter financial conditions could slow or reverse property price increases, weighing on consumption via a negative wealth effect with possible second-round effects on banks' balance sheets. Some economies face external financing vulnerabilities, including from the high share of government bonds held by foreigners (including more procyclical retail investors). And as discussed further below, China faces downside financial risks related to banks' still elevated off-balance-sheet exposures, thin capital and liquidity buffers at small and medium-size banks in particular, and the ongoing reliance by both banks and shadow banking entities on implicit guarantees.

While a sudden tightening of financial conditions poses near-term risks, too long a period of easy conditions could be equally problematic, insofar as it may lead to a buildup of financial stability vulnerabilities over the medium term. A protracted period of very low interest rates and low expected volatility in asset prices could foster the accumulation of vulnerabilities, as yield-seeking investors increase exposure to lower-rated corporate and sovereign borrowers and less creditworthy households. Indeed, corporate and household leverage have both risen. If global economic sentiment remains strong and inflation muted, financial conditions could remain loose into the medium term, reinforcing yield-seeking behavior and amplifying the buildup of financial vulnerabilities. These vulnerabilities could be further exacerbated by a migration of risks toward nonbanks within domestic financial systems.

# **Geopolitical Uncertainties**

Expectations of a peaceful resolution of geopolitical tensions surrounding North Korea have increased recently, against the backdrop of the Pyeongchang Olympics, the planned inter-Korean summit, and the agreement to hold a US-North Korea summit. But risks could escalate again, particularly if the upcoming talks are viewed as unsuccessful, and in such a scenario, financial markets—which have been resilient so far—and investment could be adversely affected. While an actual conflict with US involvement remains a tail risk, tensions surrounding North Korea could reach a point where they significantly affect perceptions of regional security, causing market turbulence in South Korea, Japan, and possibly China, and denting business and consumer confidence. Territorial disputes in the South China Sea also remain a possibility.

### **Other Risks**

The outlook is also subject to other important downside risks. In China, failure to achieve the envisaged pivot from high-speed to high-quality growth could lead to continued unsustainable policies and increase financial imbalances and the probability of a sharp adjustment. In several economies, there is a risk that higher food prices could spill over to headline inflation and require monetary policy tightening. Cybersecurity breaches and cyberattacks are on the rise globally and could be highly disruptive to the global economy, particularly if they target critical infrastructure (such as the power grid or the financial market architecture) or highly interconnected entities.

Climate change and natural disasters could continue to have a significant economic impact on the region, and especially on small and low-income economies with smaller buffers. During 1980–2016, 204 natural disasters were

recorded in the 12 economies in the Pacific, implying a nearly 50 percent chance of a country being hit in any given year, and disasters caused damage averaging 14 percent of GDP (Lee, Zhang, and Nguyen, forthcoming). Finally, small states and Pacific island economies, which pay high costs for transferring remittances, face the important risk of a withdrawal of correspondent banking relationships by global banks.<sup>1</sup>

# **Longer-Term Growth Prospects**

Over the medium and long term, Asia faces some significant challenges. An important one, as discussed in the April 2017 Regional Economic Outlook: Asia and Pacific, is population aging. Many economies in Asia face the risk of "growing old before they grow rich," meaning that at the point at which the working-age share of the population starts to decline—and rapid growth thus becomes harder to achieve—they will be at income levels substantially below that of the United States: 70 percent of the United States level for Korea, 20 percent in China, and less than 40 percent for most others. Furthermore, the adverse effect of aging on growth is substantial, estimated in the range of ½ to 1 percent for China, Japan, Korea, and Thailand, and aging of course will imply substantial additional fiscal burdens for these economies, compounding the medium-term challenges.

Another headwind for Asia is slowing productivity growth. The April 2017 *Regional Economic Outlook: Asia and Pacific* found that there has been no sign of productivity catch-up or convergence recently relative to the United States, except for low-income emerging market and developing economies. The decline in productivity growth is observed across different sectors, including manufacturing and especially services. Lack of quality infrastructure also represents a critical structural weakness in most economies in the

<sup>1</sup>The IMF is providing technical assistance to help economies strengthen their anti-money-laundering/combating the financing of terrorism frameworks, and is also bringing banks and money transfer organizations together to develop concrete, industry-led solutions.

region. The digital revolution (see below) may lead to an acceleration of productivity growth, but the history of previous technological disruptions suggests that such benefits may be observed only with a delay.

Ensuring that the benefits of rapid growth are enjoyed by all will be an important challenge going forward. Many Asian economies have historically enjoyed very equitable growth, given early land reform, high-quality public education, and rapid improvements in living standards. But inequality is rising across much of Asia, and policies to foster inclusive growth will be critical going forward.

Yet another critical issue that Asia, and indeed the world, will need to confront is the rise of the digital economy. As discussed in Box 1.3, recent technological advances could represent a "fourth industrial revolution" and have the potential to be truly transformative. Asia is a leader in many areas, but some of these advances will create winners and losers and indeed may change the very growth models that economies have used for decades. The widespread use of industrial robots, for instance, may over time boost productivity growth substantially, but it also risks raising structural unemployment if alternative opportunities for displaced labor cannot be created.

Effectively harnessing the benefits of the digital revolution will require a comprehensive and integrated policy response, including revamping education and investing in physical and regulatory infrastructure to help spur competition and innovation. Policy measures will need to address digitalization-linked risks without stifling innovation. Given the profound economic implications of these technologies, an analytical chapter is planned for the October 2018 Regional Economic Outlook: Asia and Pacific that will focus on the digital economy in Asia. That analysis will take stock of key digitalization and automation developments in Asia, their implications, and how Asia compares to other regions, including in terms of policies to reap digital dividends.

# **Policy Recommendations**

Confronting a combination of continued strong growth, subdued inflation, and abundant liquidity that has contributed to asset price increases rather than inflation, Asian policymakers will need a carefully calibrated policy mix that promotes sustainable, inclusive growth while enhancing resilience.

With output gaps closing across much of the region, the need for continued fiscal support has diminished, and in general, economies in Asia would be well served by gearing their fiscal policies toward strengthening buffers, safeguarding sustainability, and increasing resilience. This is particularly true given the heavy fiscal burden that population aging will bring to some economies. There is, however, some heterogeneity across the region. China, India, Indonesia, and a number of other economies should aim for growth-friendly consolidation. In Japan, a premature reduction in the level of fiscal support should be avoided, and a credible framework for medium- and long-term consolidation is a key priority. By contrast, a more supportive near-term fiscal stance is appropriate in Australia and Singapore, and in Korea, a substantial expansion would be appropriate as part of a broader effort to rebalance the economy. Finally, some economies in the region should undertake tax reform over the medium term to create space for infrastructure and social spending, and to support structural reforms.

Given still relatively subdued inflation, a continued accommodative monetary policy stance is appropriate for much of Asia, with some notable exceptions. In China, where growth targets should be deemphasized and credit growth slowed, the overall stance of policies, including monetary policy, should become less accommodative. In India, given increased inflation pressure, monetary policy should maintain a tightening bias. More generally across the region, given easy liquidity conditions, the mix of monetary, macroprudential, exchange rate, and other policies needs to be considered carefully, with due regard for the risk that overly accommodative monetary conditions

may, in some circumstances, contribute to froth in financial markets.

As will be shown in Chapter 2, low inflation in Asia has been driven largely by temporary forces, including imported inflation. As commodity prices rise and other favorable global factors reverse themselves, Asian economies could well see rising inflation. Given the backward-looking nature of the process, also shown in Chapter 2, higher inflation could persist. And with some evidence pointing to a flattening of the Phillips curve, the output costs of disinflating could be higher than expected. Thus, policymakers will need to be vigilant and stay ahead of the curve in responding to signs of inflation pressure (though the response to commodity price shocks should be to accommodate first-round effects but not second-round ones). Strengthening monetary policy frameworks and central bank communications can also help make inflation less sticky (and instead more driven by expectations), and also ensure that expectations—which have been declining in many Asian economies during recent years—remain well anchored around inflation targets. Finally, exchange rate flexibility can help to insulate economies from imported inflation (whether high or low).

Macroprudential and other financial policies will continue to play an important role across the region, as suggested in a recent IMF analysis (Corbacho and Peiris 2018). Many economies need to develop and broaden their macroprudential toolkits, and those currently facing currency mismatches and rapid credit growth—including frontier and developing economies—could usefully tighten macroprudential requirements. Policymakers should, however, be aware of the limits of macroprudential policies in the context of excessive liquidity. They should also be careful in their use of capital flow management measures (IMF 2012, 2016, 2017) and should generally allow flexible exchange rates to function as a buffer against external shocks.

Finally, the current recovery momentum provides an opportunity to pursue fiscal, financial, and

#### REGIONAL ECONOMIC OUTLOOK: ASIA PACIFIC DEPARTMENT

structural reforms to lift long-term growth, enhance labor force participation rates, make growth more inclusive, and build resilience to economic shocks ("fix the roof while the sun is shining"). This calls for tailored measures—as detailed in previous *World Economic Outlook* and *Regional Economic Outlook* reports—to boost productivity and investment, narrow gender labor force participation gaps, deal with the demographic transition, address climate change, and support those affected by shifts in technology

and trade. For developing economies, these steps will also be essential for making progress toward the United Nations Sustainable Development Goals as well as promoting economic diversification. In addition, to adapt most effectively to the digital revolution, policymakers need to upgrade both physical and regulatory infrastructure, reduce lower trade restrictions (particularly in services), enhance human capital, and address labor market and social challenges.

### Box 1.1. Rapid Credit Growth in Frontier and Developing Asian Economies

Many Asian frontier and developing economies (FDEs) are currently experiencing rapid credit growth.<sup>1</sup> Cambodia, Lao P.D.R., Myanmar, Nepal, Sri Lanka, and Vietnam have seen double-digit growth in credit to the private sector for several years, and Mongolia went through a credit boom a few years ago. This could be a "good" credit expansion, reflecting improved macroeconomic prospects and financial deepening of shallow credit markets. But it could also be a "bad" expansion, signaling mounting macro-financial risks emanating from macroeconomic imbalances and unsustainable dynamics in the banking sector. Macro-financial risks facing FDEs are particularly pressing given typically weak supervisory capacity, poor risk management and underwriting standards, fewer macroprudential tools, and financial activity by nonbanks that may not be appropriately licensed and supervised.

Rapid credit growth in Asia is not a new phenomenon. Following the strong credit growth in several advanced and emerging market Asian economies in the run-up to the 1997 Asian crisis, rapid credit expansions—and in some cases, credit booms—have occurred with greater frequency in FDEs that are in a transitional stage of economic development (Figure 1.1.1). During 2011–16, 9 out of 11 credit boom episodes in Asia—as identified using the methodology in Bakker and others (2012)—were in FDEs, and five out of nine Asian FDEs experienced credit booms. Among the FDEs that had a credit boom during this period, annual real credit growth averaged nearly 23 percent, the median credit-to-GDP ratio rose from about 35 to 56 percent, and credit gaps averaged about 5 percent of GDP (and ranged up to 17 percent of GDP).

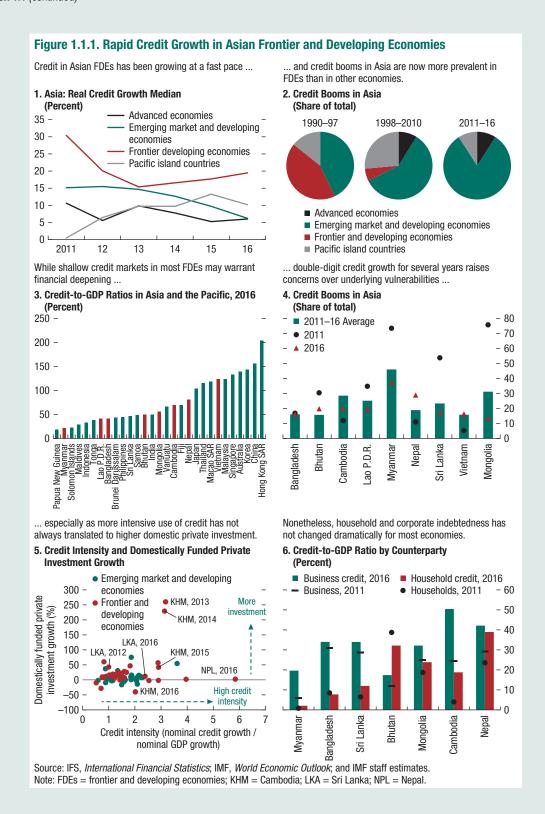
A prolonged increase in credit growth has in many cases failed to translate into a sustained increase in domestically financed private investment. For example, in Sri Lanka, the 2012 credit boom helped boost domestically financed private investment (total private investment excluding foreign direct investment), but the credit expansion in 2016 did not have the same impact. In Nepal, nominal credit grew by 32 percent—nearly six times faster than nominal GDP growth—yet domestically financed private investment rose by just 2 percent in 2016 (though the 2015 earthquakes and subsequent trade disruption might also have played a role).

The causes of rapid credit growth are not universal across FDEs. In Nepal, the credit boom was driven by strong remittance inflows, which are a key funding source for the bank-based financial sector, coupled with insufficient sterilization. On the other hand, in Cambodia, credit booms are being financed by foreign borrowing by banks and large microfinance institutions. And in Vietnam, credit growth has been led by substantial unsterilized intervention to maintain the dollar peg in the face of large capital inflows, higher banking sector credit growth targets set by the central bank, and the easing of macroprudential policy via lower risk weights on lending to the real estate and securities sectors.

Given the disparate causes of rapid credit expansions, policy options vary, but with some common elements. Most FDEs can benefit from strengthening bank and nonbank supervision and regulation, including further developing macroprudential indicators and tools, and ensuring effective crisis management and resolution frameworks. In several of the current credit boom cases, such as Cambodia, Nepal, Sri Lanka, and Vietnam, credit appears to be concentrated in real estate and related sectors. Tailored macroprudential policies can help prevent a buildup of risks, though limited capacity for, and experience with, these tools needs to be taken into account. Reducing loan-to-value ratios on real estate loans and hire purchases, introducing real estate exposure limits, and raising risk weights on these loans could all be considered, as could tools designed to prevent a migration of lending from banks to nonbanks. Fiscal policies such as taxes on land or housing—particularly for properties not used as primary residences—can also be used.

This box was prepared by Sarwat Jahan, Medha Madhu Nair, Piyaporn Sodsriwiboon, Cormac Sullivan, and Irene Zhang.

<sup>1</sup>Asian frontier and developing economies comprise Bangladesh, Bhutan, Cambodia, Lao P.D.R., Mongolia, Myanmar, Nepal, Sri Lanka, and Vietnam.



### Box 1.2. Spillovers to Asia from the US Tax Reform

The Tax Cuts and Jobs Act (TCJA) of December 2017 has many components with the potential to affect both the United States and the global economy through a number of channels. The reduction in the corporate tax rate and the move to allow the temporary expensing of investment are likely to provide a short-term boost to growth and investment in the United States, and this in turn could lead to a faster pace of monetary tightening, dollar appreciation, capital outflows from emerging markets (including in Asia), and a widening US current account deficit. Estimates presented below suggest that the direct growth spillovers to Asia will be relatively small. But the legislation also includes many other provisions that can affect firms' decisions on where and how much to invest, and that may also induce other governments to change their own tax laws. The overall impact of the legislation may thus be more substantial—and more nuanced—than initially thought.

### Understanding the Tax Cuts and Jobs Act1

Some of the key changes to corporate taxation under the TCJA are as follows:

- Rate cut: The statutory rate in the United States is cut from 35 percent, the highest among member economies of the Organisation for Economic Co-operation and Development (OECD), to 21 percent, slightly lower than the OECD average. And as noted below, the applicable rate for some activities is lower still, at 13.125 percent. The US rates are now lower than in a number of Asian economies (Figure 1.2.1).
- Capital expensing: For the next five years, corporate investments can be fully deducted in the first year instead of being depreciated over time. During the subsequent five years, the share of investment that can be expensed will be gradually reduced. Even with the move to expensing, interest remains deductible (albeit subject to tighter limits), implying a continued subsidy for debt-financed investment (at least when the limits are not binding).
- Territorial taxation and repatriation: Previously, the United States was the only remaining large advanced economy that taxed its firms on worldwide income, with a credit offered for foreign income tax paid; however, tax was deferred until profits were repatriated, which had induced firms to leave as unrepatriated a stock of profits estimated at some \$2.6 trillion. Under the new legislation, the United States joins most other advanced economies in taxing income on a territorial basis: income earned in the United



This box was prepared by Keiko Honjo and Dirk Muir.

<sup>1</sup>See the April 2018 Fiscal Monitor for a fuller description of the tax reform and its spillovers.

States will be taxed at the US rate, whereas—subject to an important qualification below—income earned overseas will be taxed only by those jurisdictions. In addition, hitherto unrepatriated profits are now deemed to be repatriated and are subject to tax at preferential rates (with those tax payments spread over an eight-year period).<sup>2</sup>

- Base-erosion provision: A new base erosion anti-abuse tax (BEAT) is introduced to limit the scope for firms (above a certain size) to shift profits out of the United States. Under the BEAT, a firm's tax liability can fall no lower than 10 percent of its income, excluding certain payments to foreign-affiliated corporations. In addition, a new global intangible low-taxed income (GILTI) tax is applied—a foreign affiliate's returns above 10 percent on tangible assets will be taxed at a rate of 10.5 percent, with a credit of 80 percent of foreign taxes paid. This implies that if a multinational's average foreign tax rate is 13.125 percent or higher—that is, 10.5 percent divided by 80 percent—no GILTI will be owed.
- Foreign-derived intangible income (FDII): The legislation offers a reduced tax rate of 13.125 percent on export income from intangible assets (defined as export income exceeding a 10 percent return on domestic tangible assets, equivalent to the GILTI), so as to reduce incentives to hold intellectual property overseas. Some questions have been raised about the consistency of this measure with World Trade Organization obligations.

What do all these changes imply for firms' investment decisions and for the prospects for tax competition? All else equal, the rate cut would be expected to spur investment overall and to attract investment back to the United States, though the BEAT may limit this effect. Expensing, particularly given that it is time-bound, should provide a substantial near-term boost to investment, although many firms already enjoyed very favorable tax treatment of investment. The move to territorial taxation should, to some extent at least, make foreign tax rates more relevant to US firms and may thus induce tax competition among these jurisdictions—rates above 21 percent will risk losing US investment back to the United States—but at the same time, the anti-base-erosion nature of the GILTI implies that rates lower than 13.125 percent may provide limited benefit to firms and thus in turn not much benefit to foreign jurisdictions dependent on US investment. Some have suggested that deemed repatriation may attract US firms' overseas cash back home, but as much of this is already invested in US assets, it is not clear how substantial the macro impact will be; the provision should, however, raise revenue. Finally, the FDII may lead some companies to keep more intellectual property back in the United States. Much of the impact will also depend on firms' assumptions about the medium-term development of the tax system.

The discussion above concentrates exclusively on the corporate provisions of the TCJA. The legislation, however, also features a number of important changes to the taxation of individuals, including personal income tax rate reductions, as well as increased exemptions under the estate tax. As discussed in the April 2018 *Fiscal Monitor*, the benefits of these changes appear to accrue mostly to richer segments of the population with relatively low propensity to consume, and the impact on overall growth is thus likely to be small.

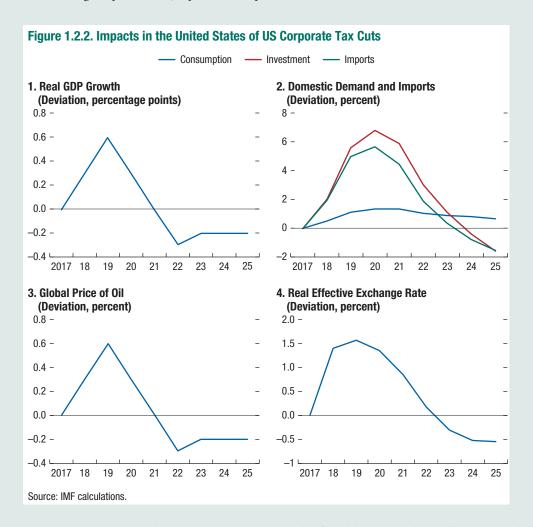
#### Modeling Growth Spillovers from the United States

The economic projections in the April 2018 *World Economic Outlook* (WEO) incorporate an IMF staff estimate of the boost to US growth and investment from the corporate tax rate cut and the expensing of investment. Many of the other effects discussed above are difficult to estimate quantitatively. It is likely that the new effective US corporate tax rates will drop below those in some Asian economies, such as Australia, China, Japan, the Philippines, and Sri Lanka. In addition, the move to territorial taxation could lead to relocation of certain types of corporate activity from Asia and toward lower-tax jurisdictions. These indirect effects are difficult to quantify as they depend on the international response to the US action.

<sup>2</sup>See, for example, the global KPMG tax rates database at https://home.kpmg.com/xx/en/home/services/tax/tax-tools-and- resources/tax-rates-online/corporate-tax-rates-table.html.

The direct spillovers to Asia from higher US growth in the baseline WEO projections, however, can be illustrated using the APDMOD module of the IMF's Flexible System of Global Models.<sup>3</sup> This analysis focuses exclusively on the TCJA and does not model the additional stimulus coming from the two-year budget agreement (though this is already factored into the baseline WEO projections). As shown later in this box, the direct impact on Asia from tax reform is relatively small.

In the model, the United States cuts its corporate taxes starting in 2018, which leads to an expansion in real GDP from 2018 to 2021, with growth being, on average, 0.3 of a percentage point higher a year (Figure 1.2.2). The US output gap, however, is already mostly closed, so the additional fiscal stimulus is inflationary and leads to additional interest rate hikes by the US Federal Reserve. Therefore, real GDP growth is lower by about 0.1 of a percentage point for the remainder of the IMF's forecast horizon. Real GDP growth then returns to its original path, as TCJA provisions expire.



<sup>3</sup>The IMF's APDMOD is an annual, multiregional, general equilibrium model of the global economy that models real GDP and its components, prices, the supply side, and global commodity markets (see Andrle and others 2015 for a complete description). Economies are linked through two global markets: one for saving and investment, priced by the global real interest rate and real exchange rates, and a driver in trade flows; and the other for commodities, especially fuels and metals. Monetary policy and fiscal policy are driven by inflation targets and debt targets in general. The commodity sectors act as global shock absorbers—for example, in a global economic expansion, some of the effects will be offset by higher global commodity prices coming from increased global demand pressures.

Growth is driven first by investment from the tax cut, increasing potential output, which also stimulates labor demand. This leads to higher incomes and consumption, but is also the primary source of inflation pressure and the short-term appreciation of the real effective exchange rate (REER). Higher domestic demand means that real imports peak 6 percent higher than in the baseline by 2020. This is the main conduit for spillovers to the Asia and Pacific region. But higher US demand also will drive commodity prices, with different effects for commodity exporters and importers.

In the long term, the real GDP effect is much less. This is because, first, provisions expire over time, and this affects firms' and households' behavior several years beforehand given their forward-looking expectations of income, wealth, and prices. Second, the generalized cut to corporate taxes reduces firms' costs for producing goods and services, leading to a long-term depreciation in the REER, undoing the short-term trade spillovers and most of the gains in global GDP and commodity prices.

The results of the simulation point to limited positive effects on Asian economies. Most of the Asia spillover effects are less than 0.2 of a percent of GDP at their peak in 2020 (Table 1.2.1). There are three main channels to consider:

- The main channel is increased exports to the United States based on increased US aggregate demand.
  This is often paired with a short-term REER depreciation, reflecting the transmission of the short-term
  US appreciation. This is the key channel for China, Japan, Korea, and some of the ASEAN economies. In
  other words, current account surpluses grow in much of Asia, worsening global imbalances.
- A secondary channel is the intra-Asia rebalancing from cross-exchange-rate effects. Some economies have
  stronger REER depreciation than others (mainly Japan and a few Association of South East Asian Nations
  economies) and as a result enjoy relatively larger gains. Some economies, however, such as Singapore and
  some other ASEAN members, instead experience an appreciation, since their trade links are less with the
  United States than with other Asian economies, particularly China, Japan, and/or Korea.

**Table 1.2.1. Cumulative Increases in Macroeconomic Indicators** (Deviation from scenario without US tax reform)

	2018 Impact	2020 Peak	2018 Impact	2021 Peak	2018 Impact	2020 Peak	
•			Currer	it Account			
	Real (	GDP <sup>1</sup>	Balance	to GDP <sup>2</sup>	Import Volumes <sup>1</sup>		
United States <sup>3</sup>	0.30	1.20	-0.26	-0.88	1.93	5.65	
	Export Volume						
Asia-Pacific	0.04	0.09	0.04	0.23	0.28	1.00	
Australia	0.03	0.04	-0.01	-0.53	0.14	0.34	
China	0.03	0.07	0.05	0.35	0.31	1.18	
India	0.03	0.06	0.02	-0.08	0.28	0.94	
Japan	0.01	0.16	0.05	0.33	0.35	1.26	
Korea	0.05	0.09	0.03	0.14	0.20	0.77	
ASEAN-54	0.06	0.13	0.05	0.10	0.19	0.59	
Rest of Asia and Pacific	0.09	0.22	0.06	0.31	0.24	0.77	

Source: IMF calculations.

<sup>&</sup>lt;sup>1</sup>Percent deviation.

<sup>&</sup>lt;sup>2</sup>Percentage point deviation.

<sup>&</sup>lt;sup>3</sup>For the United States, the current-account-balance-to-GDP peak is in 2020.

<sup>&</sup>lt;sup>4</sup>ASEAN-5 comprises Indonesia, Malaysia, the Philippines, Singapore, and Thailand.

• A third channel is the movement in commodity prices. This is a relatively minor drag on commodity importers with strong US trade links, such as China, India, Japan, Korea, and some ASEAN economies. It is more beneficial to commodity exporters such as Australia, Mongolia, and New Zealand, which have relatively small direct trade links with the United States but have second-round spillovers from higher Asian demand as they manufacture US-bound goods. For example, Australia's real GDP increases because of China's increased demand for Australia's commodities required to meet China's increased exports to the United States. But Australia's export volume gains are still less than China's overall gains from its sizable direct trade links with the United States.

The model also shows a slight widening of global imbalances. The increase in US aggregate demand implies a widening of the US current account deficit by –0.9 of a percentage point of GDP by 2021 compared with the baseline. At the same time, the current account surplus for Asia widens by over 0.2 of a percentage point of GDP compared with the baseline, led by China, Japan, and Korea. Those economies without direct links to the United States depend on spillovers from their other trading partners and resulting movements in their exchange rates—much of emerging Asia sees strengthening current account balances, while other economies, such as Australia, see a weakening.

## Box 1.3. Is Asia Ready for the Digital Revolution?

A new wave of digital innovation is reshaping the global economy, and Asia has been at the forefront in several areas, while lagging in others. The digital revolution encompasses a broad array of new technological developments. Some of these are "general purpose," and, while their future impact is uncertain, they have the potential to transform entire economies. These innovations, collectively dubbed "the fourth industrial revolution," provide opportunities and challenges. Comprehensive policies and fresh thinking are needed to reap digital dividends.

While digitalization and automation are not new, their pace of evolution has accelerated over the past few years. The latest wave of digital innovations was triggered by advances in artificial intelligence, robotics, computing power, cryptography, the explosion of big data, 3-D printing, the ubiquitous reach of the Internet, and the precipitous decline in data storage costs. The unprecedented pace of these advances may continue thanks to future breakthroughs in computing power (for example, quantum computing) and in data generation (for example, the "Internet of everything"), thus resulting in exponential increases in cognitive capability and further advances in robotics and artificial intelligence. Automation is undergoing a "Cambrian explosion" (Pratt 2015; McAfee and Brynjolfsson 2017), as these technological developments are leading to a massive increase in the diversification and applicability of automation ranging from robots to drones, self-driving cars, blockchain, and smart contracts.

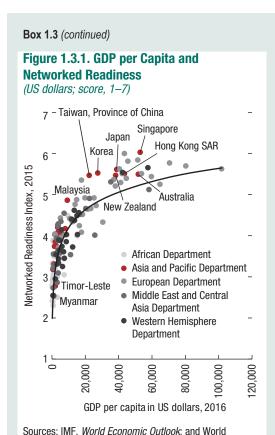
As digitalization penetrates an increasing number of activities and sectors, the boundaries between the digital and physical worlds will be blurred, and the entire world economy may be considered to be digital. The new digital technologies are general-purpose in nature, with the potential to reshape the global economy and fundamentally alter the way we live and work, in the same way that the steam engine and electricity did. General-purpose technologies have the potential to change the types of goods and services produced, where they are produced, and how they are exchanged; how production is organized and what physical and regulatory infrastructure is required to support it; and the nature of work itself.

These new technologies are automating increasingly complex activities that could previously be performed only by people. As in the past, technological progress has the potential to bring enormous benefits to societies by increasing economic growth and creating new jobs. But major transitions lie ahead that could match the scale of historical shifts out of agriculture and manufacturing (Manyika and others 2017), creating new challenges for policymakers.

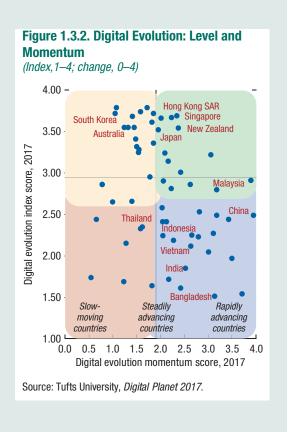
Traditionally, Asian manufacturing has been based on the supply of relatively low-cost and low-skilled labor. But artificial intelligence, robotics, and 3-D printing are expected to decrease competitiveness based on wage arbitrage alone, transforming the nature of manufacturing and leading to the reshoring of production back to developed economies (ADB and WEF 2017). Anecdotal evidence shows that "reshoring" is already happening, and economies with large pools of low-skilled labor may need to devise radically new growth models. Neither the opportunities nor the challenges have become fully apparent as the new technologies have not yet been widely diffused.

Asia is embracing the digital revolution, though there is significant heterogeneity across economies in terms of initial conditions. Moreover, while many Asian economies are advanced in the use of new technologies, few are at the frontier in terms of developing these technologies. Digitalization increases with the level of GDP per capita, and Asian economies are at the frontier relative to their peers with similar levels of economic development (Figure 1.3.1). Even for Asian economies with lower GDP per capita, digitalization is accelerating, meaning that these economies are catching up (Figure 1.3.2). Asia is the world's strongest growth market for the use of industrial robots, with about two-thirds of the world's robots being used there

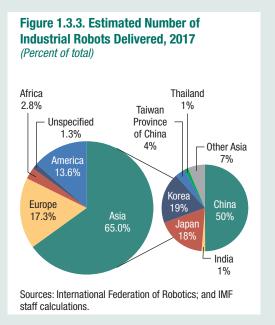
This box was prepared by Tahsin Saadi Sedik.



Economic Forum, Networked Readiness Index.



(Figure 1.3.3). China is the largest robot market in the world, with a 30 percent share of the total supply in 2016. Korea is the second largest market (14 percent), and Japan is the third (13 percent), ahead of the United States (11 percent). In terms of robot density (the number of industrial robots per 10,000 workers), Korea is the global leader, followed by Japan and Germany. E-commerce is also developing rapidly in some Asian economies. For instance, China accounted for less than 1 percent of worldwide transactions about a decade ago, but that share is now more than 40 percent (Wang and others 2017). Some Asian economies have also been at the frontier in terms of cryptocurrencies indeed, some small states have been approached by private companies to issue these as legal tender, raising a variety of concerns—and regulatory approaches vary substantially across the region. While mobile payments are expanding sharply in such economies as Bangladesh, India, and the Philippines, on average Asia is lagging sub-Saharan Africa.



Comprehensive policies and fresh thinking are needed to reap digital dividends. Policy responses will need to address digitalization-linked risks without stifling innovation. Policies to harness digital dividends include revamping education; investing in physical and regulatory infrastructure that spurs competition and innovation; reforming trade (especially in services) and investment policies; and addressing labor market and social challenges. Policy priorities differ across the region as economies' initial conditions are different. Regional and international cooperation will be key to developing effective policy responses, and the IMF can play an important role in this regard.

**Table 1.1. Asia: Real GDP** (Year-over-year percent change)

	_	Almost-	0	Difference from October 2017 World Economic Outlook				
	2015 2016 2017 2018 2019							
Asia		2016	2017	2018	2019	2017	2018	2019
Asia Advanced economies (AEs)	5.6 1.8	5.4 1.7	5.7 2.3	5.6 2.0	5.6 1.9	0.1 0.3	0.1 0.3	0.1 0.1
Australia	2.5	2.6	2.3	3.0	3.1	0.3 0.1	0.0	0.1
New Zealand	4.2	4.2	3.0	2.9	2.9	-0.4	-0.1	0.1
Japan	1.4	0.9	1.7	1.2	0.9	-0.4 0.2	0.6	0.3
Hong Kong SAR	2.4	2.1	3.8	3.6	3.2	0.2	1.0	0.1
Korea	2.4	2.1	3.0	3.0	2.9	0.3	0.1	0.0
Taiwan Province of China	0.8	2.0 1.4	2.8	1.9	2.9	0.1	0.0	0.0
Singapore	2.2	2.4	3.6	2.9	2.0	1.1	0.0	0.0
Emerging market and developing economies (EMDEs) <sup>1</sup>	6.8	6.5	6.5	6.5	6.6	0.1	0.5 <b>0.0</b>	0.1 <b>0.1</b>
Bangladesh	6.8	7.2	7.1	7.0	7.0	0.1	0.0	0.0
Brunei Darussalam		-2.5	0.5	1.0	8.0	1.8	0.0	
	-0.4							-0.7
Cambodia	7.2	7.0	6.9	6.9	6.8	0.0	0.1	0.0
China India <sup>2</sup>	6.9	6.7	6.9	6.6	6.4	0.1	0.1	0.1
	8.2	7.1	6.7	7.4	7.8	0.0	0.0	0.0
Indonesia	4.9	5.0	5.1	5.3	5.5	-0.1	0.0	0.0
Lao P.D.R.	7.3	7.0	6.8	6.8	7.0	-0.1	-0.1	-0.1
Malaysia	5.0	4.2	5.9	5.3	5.0	0.5	0.5	0.2
Myanmar	7.0	5.9	6.7	6.9	7.0	-0.5	-0.7	-0.4
Mongolia	2.4	1.2	5.1	5.0	6.3	3.1	2.5	-0.4
Nepal	3.3	0.4	7.5	5.0	4.0	0.0	0.0	0.2
Philippines	6.1	6.9	6.7	6.7	6.8	0.1	0.0	0.0
Sri Lanka	5.0	4.5	3.1	4.0	4.5	-1.6	-0.8	-0.4
Thailand	3.0	3.3	3.9	3.9	3.8	0.2	0.4	0.4
Vietnam	6.7	6.2	6.8	6.6	6.5	0.5	0.3	0.3
Pacific island countries and other small states	5.8	3.2	3.0	3.7	3.9	-0.7	-0.7	-0.8
Bhutan	6.1	6.3	6.0	7.1	7.6	0.1	-4.1	-6.2
Fiji	3.8	0.4	3.8	3.5	3.4	0.0	0.0	0.0
Kiribati	10.3	1.1	3.1	2.3	2.4	0.4	0.0	0.2
Maldives	2.2	4.5	4.8	5.0	5.0	0.3	0.4	0.2
Marshall Islands	1.9	2.0	1.9	1.8	1.7	0.0	0.0	0.0
Micronesia	3.9	2.9	2.0	1.4	0.9	0.0	0.0	0.0
Nauru	2.8	10.4	4.0	-3.0	0.0	0.0	1.0	-0.2
Palau	11.4	0.5	-1.0	1.0	4.0	-2.0	-4.5	-0.5
Papua New Guinea	8.0	2.4	2.5	2.9	2.6	-0.6	0.0	0.0
Samoa	1.6	7.1	2.4	2.5	2.8	0.3	1.5	1.0
Solomon Islands	2.5	3.5	3.2	3.0	2.9	0.3	0.0	0.1
Timor-Leste	4.0	5.3	-0.5	2.8	5.7	-4.5	-3.2	-0.3
Tonga	3.5	3.1	3.1	3.2	2.9	0.0	0.0	0.0
Tuvalu	9.1	3.0	3.2	3.5	3.1	0.0	1.0	0.9
Vanuatu	0.2	3.5	4.2	3.8	3.5	-0.3	-0.2	0.0
ASEAN <sup>3</sup>	4.8	4.8	5.3	5.3	5.3	0.2	0.1	0.1
ASEAN-54	4.5	4.6	5.1	5.0	5.1	0.1	0.2	0.1
EMDEs excluding China and India	5.1	5.1	5.5	5.5	5.6	0.0	0.1	0.1

Sources: IMF, World Economic Outlook database; and IMF staff estimates and projections.

<sup>&</sup>lt;sup>1</sup>EMDEs excluding Pacific island countries and other small states.

<sup>&</sup>lt;sup>2</sup>India's data are reported on a fiscal year basis. Its fiscal year starts April 1 and ends March 31.

<sup>&</sup>lt;sup>3</sup>ASEAN comprises Brunei Darussalam, Cambodia, Indonesia, Lao P.D.R., Malaysia, Myanmar, the Philippines, Singapore, Thailand, and Vietnam.

<sup>&</sup>lt;sup>4</sup>ASEAN-5 comprises Indonesia, Malaysia, the Philippines, Singapore, and Thailand.

**Table 1.2. Asia: Consumer Prices** 

(Year-over-year percent change)

	Estimates and Latest Projections					0	Difference from October 2017 World Economic Outlook		
	2015	2016	2017	2018	2019	2017	2018	2019	
Asia	2.3	2.3	2.1	2.9	2.9	-0.2	0.1	0.0	
Advanced economies (AEs)	0.8	0.5	1.0	1.4	1.5	0.0	0.2	-0.1	
Australia	1.5	1.3	2.0	2.2	2.4	0.0	0.1	-0.1	
New Zealand	0.3	0.6	1.9	1.7	2.1	-0.4	-0.3	0.0	
Japan	0.8	-0.1	0.5	1.1	1.1	0.1	0.6	0.0	
Hong Kong SAR	3.0	2.4	1.5	2.2	2.1	-0.5	0.0	-0.3	
Korea	0.7	1.0	1.9	1.7	1.9	0.0	-0.2	0.0	
Taiwan Province of China	-0.3	1.4	0.6	1.3	1.3	-0.4	-0.1	-0.2	
Singapore	-0.5	-0.5	0.6	1.2	1.0	-0.3	-0.1	-0.6	
Emerging market and developing economies (EMDEs) <sup>1</sup>	2.7	2.8	2.4	3.3	3.3	-0.2	0.1	0.0	
Bangladesh	6.2	5.7	5.7	6.0	6.0	0.0	0.2	0.5	
Brunei Darussalam	-0.4	-0.7	-0.1	0.1	0.3	0.0	0.1	0.2	
Cambodia	1.2	3.0	2.9	3.3	3.2	-0.8	-0.2	0.0	
China	1.4	2.0	1.6	2.5	2.6	-0.2	0.1	0.1	
India <sup>2</sup>	4.9	4.5	3.6	5.0	5.0	-0.2	0.1	0.1	
Indonesia	6.4	3.5	3.8	3.5	3.4	-0.2	-0.4	-0.4	
Lao P.D.R.	1.3	1.6	0.8	2.3	3.1	-1.5	-0.4	0.0	
Malaysia	2.1	2.1	3.8	3.2	2.4	0.0	0.3	-0.6	
Myanmar	10.0	6.8	5.1	5.5	5.8	-1.4	-0.7	-0.7	
Mongolia	5.9	0.6	4.6	6.4	6.8	0.3	0.3	1.0	
Nepal	7.2	9.9	4.5	6.0	5.8	0.0	0.0	0.0	
Philippines	1.4	1.8	3.2	4.2	3.8	0.1	1.2	0.8	
Sri Lanka	2.2	4.0	6.5	4.8	4.8	0.5	-0.2	-0.2	
Thailand	-0.9	0.2	0.7	1.4	0.7	0.1	0.4	-0.9	
Vietnam	0.6	2.7	3.5	3.8	4.0	-0.8	-0.2	0.0	
Pacific island countries and other small states	3.9	4.0	3.8	2.8	2.7	-0.4	-1.4	-1.4	
Bhutan	6.3	3.9	3.4	4.1	4.6	-0.1	-0.1	-0.2	
Fiji	1.4	3.9	3.4	3.3	3.0	-0.4	-0.2	0.0	
Kiribati	0.6	1.9	2.2	2.5	2.5	0.0	0.0	0.0	
Maldives	1.0	0.5	2.8	1.5	1.7	0.2	-0.6	-0.5	
Marshall Islands	-2.2	-1.5	0.7	1.1	1.5	0.0	0.0	0.0	
Micronesia	-2.2 $-0.2$	0.5	0.7	2.0	2.0	-0.5	0.0	0.0	
Nauru	9.8	8.2	5.1	2.0	2.0	0.0	0.0	0.0	
Palau	0.9	-1.0	0.9	2.0	2.0	-0.6	0.0	0.0	
Papua New Guinea	6.0	6.7	5.2	2.9	2.5	-0.0 $-0.5$	-2.6	-2.5	
Samoa	1.9	0.1	1.3	2.9	2.5		-2.0 1.0	0.0	
						-0.5			
Solomon Islands	-0.6	0.5	-0.4	1.3	1.4	0.1	-0.4	-1.5	
Timor-Leste	0.6	-1.3	0.6	1.8	2.7	-0.4	-0.9	-0.9	
Tonga	-1.1	2.6	8.0	3.0	2.5	0.5	0.3	0.0	
Tuvalu	3.2	3.5	2.4	2.7	2.5	-0.5	-0.1	-0.3	
Vanuatu	2.5	0.8	3.1	4.8	3.4	0.5	2.0	0.5	
ASEAN <sup>3</sup>	3.3	2.4	3.0	3.2	2.9	-0.2	0.0	-0.3	
ASEAN-5 <sup>4</sup>	3.3	2.2	2.9	3.0	2.7	-0.1	0.1	-0.4	
EMDEs excluding China and India	3.8	3.0	3.5	3.6	3.4	-0.2	0.0	-0.2	

Sources: IMF, World Economic Outlook database; and IMF staff estimates and projections.

<sup>&</sup>lt;sup>1</sup>EMDEs excluding Pacific island countries and small states.

 $<sup>^{2}</sup>$ India's data are reported on a fiscal year basis. Its fiscal year starts April 1 and ends March 31.

<sup>&</sup>lt;sup>3</sup>ASEAN comprises Brunei Darussalam, Cambodia, Indonesia, Lao P.D.R., Malaysia, Myanmar, the Philippines, Singapore, Thailand, and Vietnam.

<sup>&</sup>lt;sup>4</sup>ASEAN-5 comprises Indonesia, Malaysia, the Philippines, Singapore, and Thailand.

**Table 1.3. Asia: Current Account Balance** (Percent of GDP)

		0	Difference from October 2017 World Economic Outlook					
	E							
	2015	2016	2017	2018	2019	2017	2018	2019
Asia	2.7	2.5	2.1	1.9	1.8	0.0	0.0	0.2
Advanced economies (AEs)	3.8	4.3	4.2	4.2	4.1	0.1	0.1	0.2
Australia	-4.7	-3.1	-2.3	-1.9	-2.3	-0.8	0.5	0.2
Japan	-3.1	-2.3	-2.7	-2.6	-3.0	0.8	1.1	8.0
New Zealand	3.1	3.8	4.0	3.8	3.7	0.4	0.0	0.1
Hong Kong SAR	3.3	4.0	3.0	3.1	3.2	0.0	0.0	0.0
Korea	7.7	7.0	5.1	5.5	5.8	-0.5	0.1	0.5
Taiwan Province of China	14.3	13.6	13.8	13.6	13.5	0.0	-0.3	-0.6
Singapore	18.6	19.0	18.8	18.9	18.7	-0.7	-0.6	-0.1
Emerging market and developing economies (EMDEs) <sup>1</sup>	2.0	1.4	0.9	0.6	0.6	0.0	0.0	0.2
Bangladesh	1.7	0.6	-1.2	-2.0	-2.3	-0.5	-0.8	-0.5
Brunei Darussalam	16.0	9.6	6.1	5.0	13.1	1.3	7.1	4.1
Cambodia	-9.3	-8.8	-8.8	-10.7	-9.5	-0.3	-2.1	-1.1
China	2.7	1.7	1.4	1.2	1.2	0.1	0.1	0.3
India <sup>2</sup>	-1.1	-0.7	-2.0	-2.3	-2.1	-0.6	-0.8	-0.5
Indonesia	-2.0	-1.8	-1.7	-1.9	-1.9	0.0	-0.1	-0.1
Lao P.D.R.	-18.0	-12.0	-13.0	-14.9	-13.7	-3.3	-3.9	-4.1
Malaysia	3.0	2.4	3.0	2.4	2.2	0.6	0.2	0.3
Myanmar	-5.1	-3.9	-5.3	-5.4	-5.6	1.3	1.2	1.0
Mongolia	-4.0	-6.3	-8.8	-6.4	-8.3	-3.9	2.3	4.1
Nepal	5.0	6.3	-0.4	-3.6	-3.1	0.0	-2.8	-2.1
Philippines	2.5	-0.3	-0.4	-0.5	-0.6	-0.3	-0.2	0.0
Sri Lanka	-2.4	-2.4	-2.9	-2.7	-2.5	-0.4	-0.4	-0.4
Thailand	8.0	11.7	10.8	9.3	8.6	0.8	1.2	2.5
Vietnam	-0.1	3.0	4.1	3.0	2.4	2.8	1.6	1.5
Pacific island countries and other small states	5.2	2.9	4.0	6.1	5.6	-0.5	2.2	1.8
Bhutan	-28.3	-29.1	-20.5	-19.6	-15.9	8.9	-3.0	-0.9
Fiji	-3.6	-5.0	-4.5	-5.2	-4.5	0.5	-0.5	-0.3
Kiribati	46.7	19.4	9.0	17.0	7.1	13.6	22.9	14.0
Maldives	-7.4	-24.5	-22.1	-18.0	-15.2	-4.9	-1.0	1.2
Marshall Islands	16.5	8.5	5.5	4.5	3.8	-0.5	0.1	0.0
Micronesia	4.2	3.3	3.6	3.2	3.1	0.2	0.2	0.2
Nauru	-9.5	1.7	0.7	-0.7	0.1	12.8	13.8	13.1
Palau	-7.7	-10.4	-13.6	-13.4	-13.8	-1.4	1.0	-0.8
Papua New Guinea	13.3	16.7	16.8	20.2	19.2	-1.8	2.9	2.0
Samoa	-2.8	-4.2	-1.3	-1.8	-3.4	4.5	3.2	0.9
Solomon Islands	-3.0	-3.9	-4.4	-5.0	-6.4	0.6	0.0	-0.7
Timor-Leste	6.4	-21.6	-13.0	-22.6	-24.7	-7.4	-6.7	-5.6
Tonga	-14.7	-12.7	-10.9	-12.1	-11.9	2.6	1.5	-1.2
Tuvalu	-23.8	-32.0	-19.2	-20.5	-29.7	18.5	18.5	2.3
Vanuatu	-10.6	-4.1	-9.0	-9.2	-8.6	5.4	4.4	2.3
ASEAN <sup>3</sup>	3.3	3.8	3.7	3.2	3.0	0.5	0.5	0.8
ASEAN-54	4.1	4.3	4.2	3.7	3.5	0.2	0.4	0.8
EMDEs excluding China and India	1.1	1.5	1.3	0.7	0.5	0.4	0.3	0.5

Sources: IMF, World Economic Outlook database; and IMF staff estimates and projections.

<sup>&</sup>lt;sup>1</sup>EMDEs excluding Pacific island countries and other small states.

<sup>&</sup>lt;sup>2</sup>India's data are reported on a fiscal year basis. Its fiscal year starts April 1 and ends March 31.

<sup>&</sup>lt;sup>3</sup>ASEAN comprises Brunei Darussalam, Cambodia, Indonesia, Lao P.D.R., Malaysia, Myanmar, the Philippines, Singapore, Thailand, and Vietnam.

<sup>&</sup>lt;sup>4</sup>ASEAN-5 comprises Indonesia, Malaysia, the Philippines, Singapore, and Thailand.

# References

- Andrle, M., P. Blagrave, P. Espaillat, K. Honjo, B. Hunt, M. Kortelainen, R. Lalonde, D. Laxton, D. Mavroeidi, S. Muir, S. Mursula, and S. Snudden. 2015. "The Flexible System of Global Models—FSGM." IMF Working Paper 15/64, International Monetary Fund, Washington, DC.
- Asian Development Bank (ADB) and World Economic Forum (WEF). 2017. "ASEAN 4.0: What Does the Fourth Industrial Revolution Mean for Regional Economic Integration?" ADB and WEF Whitepaper (November), Manila.
- Bakker, B. B., G. Dell'Ariccia, J. Vandenbussche, D. O. Igan, and Hui Tong. 2012. "Policies for Macrofinancial Stability:
  How to Deal with Credit Booms." IMF Staff Discussion Note 12/06, International Monetary Fund, Washington, DC.
- Corbacho, A., and S. Peiris. 2018. The ASEAN Way: Policies for Price and Financial Stability. Washington, DC: International Monetary Fund.
- Cerdeiro, D. A., and R. J. Nam. 2018. "A Multidimensional Approach to Trade Policy Indicators." IMF Working Paper, International Monetary Fund, Washington, DC.
- International Monetary Fund (IMF). 2012. "The Liberalization and Management of Capital Flows—An Institutional View." IMF Policy Paper, Washington, DC.

- ——. 2016. "Capital Flows—Review of Experience with the Institutional View." IMF Policy Paper, Washington, DC.
- ——. 2017a. "Increasing Resilience to Large and Volatile Capital Flows—The Role of Macroprudential Policies." IMF Policy Paper. Washington, DC.
- ——. 2017b. "Japan Financial System Stability Assessment."
  IMF Country Report 17/244, Washington, DC.
- Lee, D., I. Zhang, and C. Nguyen. Forthcoming. "The Economic Impact of Natural Disaster in Pacific Island Economies: Adaptation and Preparedness." IMF Working Paper, International Monetary Fund, Washington, DC.
- McAfee, A., and E. Brynjolfsson. 2017. *Machine, Platform, Crowd: Harnessing Our Digital Future.* New York: W. W. Norton.
- McKinsey. 2017a. "What the Future of Work Will Mean for Jobs, Skills, and Wages." Washington, DC.
- ——. 2017b. "Digital China: Powering the Economy to Global Competitiveness." Washington, DC.
- Pratt, A. 2015. "Is a Cambrian Explosion Coming for Robotics?" *Journal of Economic Perspectives* 29 (3): 51–60.