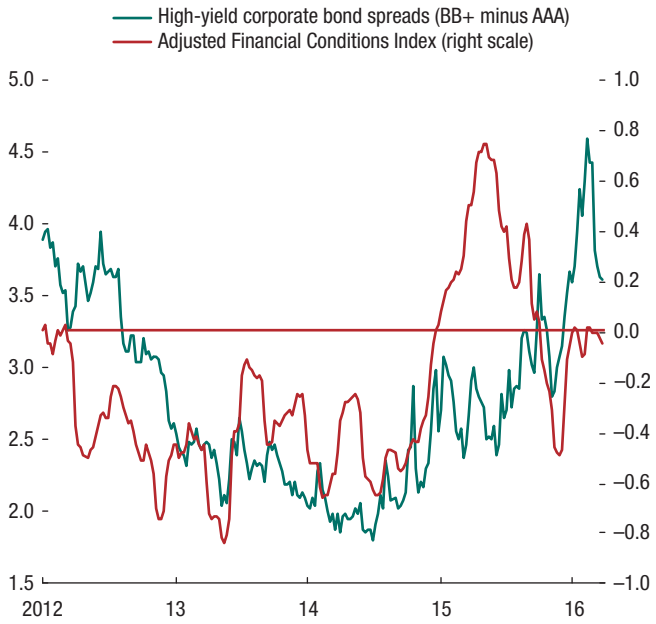
1. Building on Asia's Strengths during Turbulent Times

Recent Developments and Near-Term Outlook

Although growth in the Asia-Pacific economies is expected to decelerate slightly to about 5¼ percent during 2016–17, the area remains the most dynamic region of the global economy. Asia's growth moderation partly reflects a still-weak global recovery and ongoing but necessary rebalancing in China. Downside risks have also increased. With external demand faltering, domestic demand should remain a major driver of activity across most of the region. Domestic demand, particularly consumption, will continue to be propelled by robust labor market conditions, lower commodity prices, and disposable income growth, along with, in some countries, macroeconomic stimulus. These factors will partially cushion the blow from languid external demand and increasingly tighter financial conditions. To strengthen the region's resilience to global risks, policymakers should push ahead with structural reforms to raise productivity and create fiscal space while supporting demand as needed.

Figure 1.1. United States: Financial Conditions



Sources: Haver Analytics; and U.S. Federal Reserve Bank of Chicago.

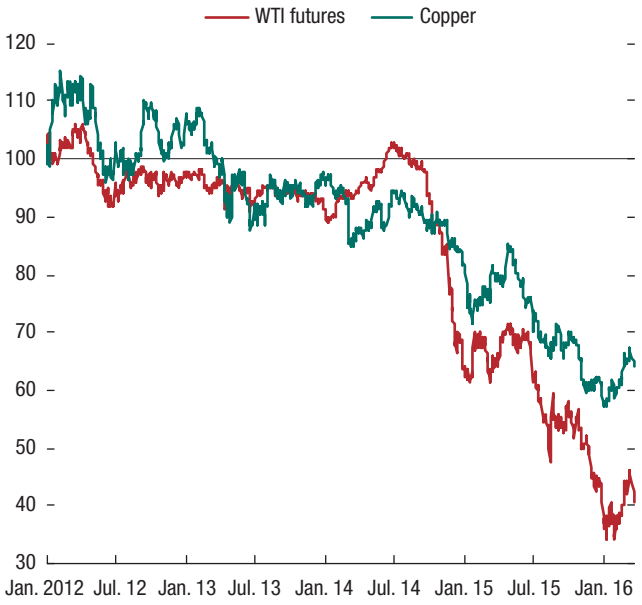
The Global Backdrop: Weakening Recovery and Financial Volatility

Economic prospects in major advanced and many emerging market economies remain challenging, and downside risks have become more dominant. While growth in the euro area remains sluggish, in the United States, domestic demand remains solid, as housing and labor markets have strengthened. Meanwhile, China has continued to rebalance its economy, which has contributed to a slowdown. However, financial conditions have tightened somewhat (Figure 1.1), led by the appreciation of the dollar and higher corporate spreads, and external demand has weakened. Despite monetary policy tightening in December 2015, longer-term Treasury rates remain low because of increased market expectations of slower monetary policy normalization as growth expectations have moderated. Major emerging market economies, especially Brazil and Russia, are in recession, and general sentiment toward emerging markets continues to be weak, reflecting a combination of lower commodity prices, policy uncertainty, and geopolitical tensions.

World growth is forecast to increase to 3.2 percent and 3.5 percent in 2016 and 2017, respectively, from 3.1 percent in 2015. In the United States and the euro area, growth is expected to remain largely flat, with domestic demand continuing to be the driver, particularly private consumption, with improved job market conditions and continued lower commodity prices (Figure 1.2) underpinning growth in disposable income. This should help offset the effect of heightened uncertainty arising from financial market volatility. Despite considerable differences, major emerging

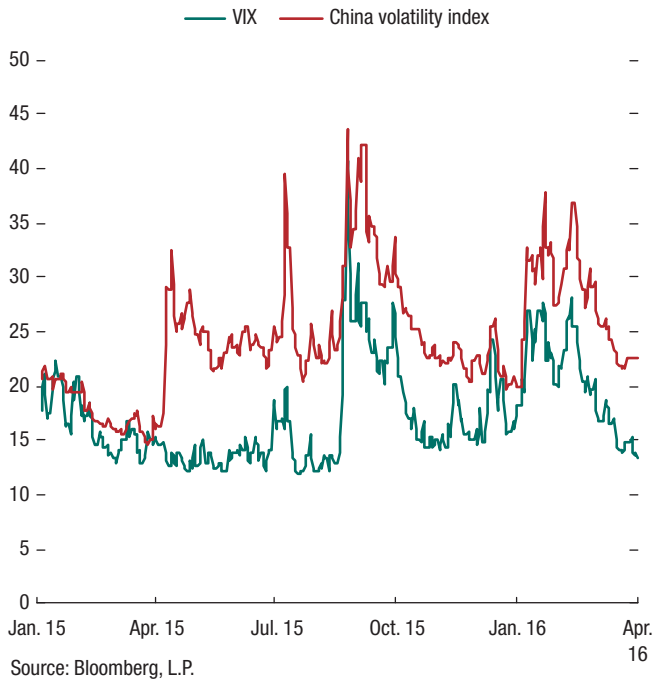
This chapter was prepared by Roberto Guimarães-Filho. Socorro Santayana and Kathie Jamasali provided production assistance, and Dulani Seneviratne and Shi Piao provided research assistance.

Figure 1.2. Global Commodity Prices
(Index, 2012 January 1 = 100)



Sources: Bloomberg, L.P.; and IMF staff calculations.
Note: WTI = West Texas Intermediate.

Figure 1.3. Market Volatility



Source: Bloomberg, L.P.
Note: VIX = Chicago Board Options Exchange Volatility Index.

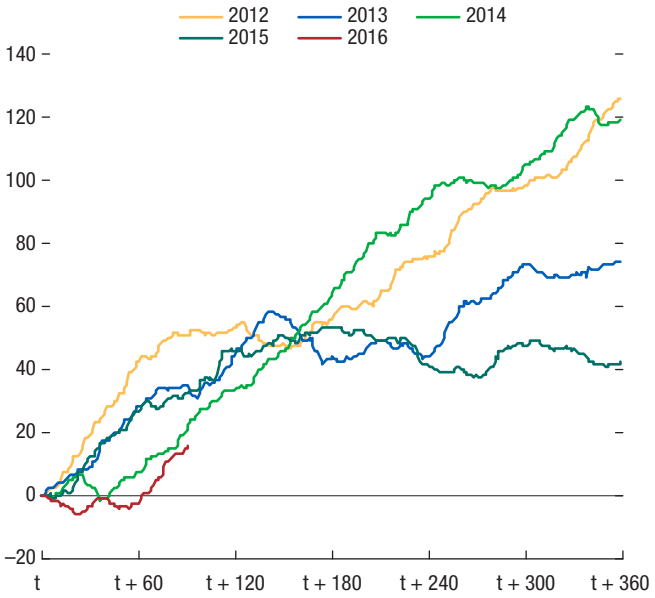
market economies are projected to see a modest acceleration in growth, especially in 2017, though this partly reflects a projected gradual improvement in countries currently in recession.

The balance of risks is on the downside, as reflected in the turmoil in financial and commodities markets in early 2016. The turmoil and its associated spike in financial volatility (Figure 1.3), ignited by a combination of factors, including weak data releases and market perceptions of policy uncertainty in China and globally, have hit equity markets in advanced and emerging market economies and led to sharp depreciations across many emerging market currencies. Financial stocks have been hit particularly hard, reflecting a number of concerns, including weaker growth, the potential impact of negative interest rates on bank earnings, and banks' exposures to the commodities sector. In addition, investors pulled money out of emerging markets at the fastest rate since 2011 at the height of the euro area crisis. Political tensions and policy uncertainty in a number of countries, and concerns about asset quality in some major emerging markets, including some in emerging Asia, have also contributed to the overall economic uncertainty.

Regional Financial Developments: Tightening Conditions

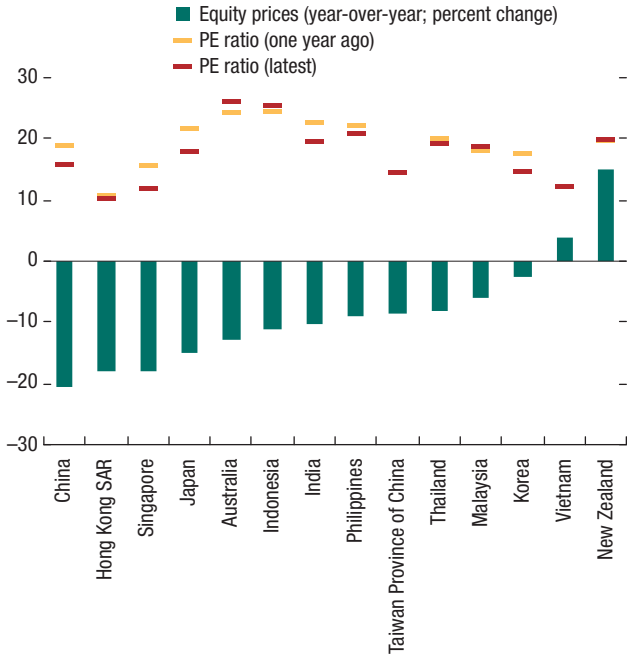
Asia experienced a substantial reduction in (and in some cases reversal of) net capital inflows starting in mid-2015, reflecting global and regional factors. Sentiment toward emerging markets started weakening in early 2015. The sharp decline in equity prices in China and uncertainty about the shift in China's exchange rate policy led to further spikes in volatility and bouts of outflows. Two factors—asynchronous monetary policy in advanced economies and uncertainty regarding the timing and pace of further monetary policy tightening by the Federal Reserve—have led to heightened interest rate volatility and rising spreads, fueling outflows and pressures on emerging market currencies. Cumulative portfolio inflows to major Asian emerging market economies (excluding China) reached $40 billion in 2015, one-third of

Figure 1.4. Asia: Cumulative Portfolio Flows
(Billions of U.S. dollars)



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

Figure 1.5. Asia: Equity Prices and Price-to-Earnings (PE) Ratios
(Change in stock market index; percent)



Sources: Bloomberg, L.P.; and IMF staff calculations.

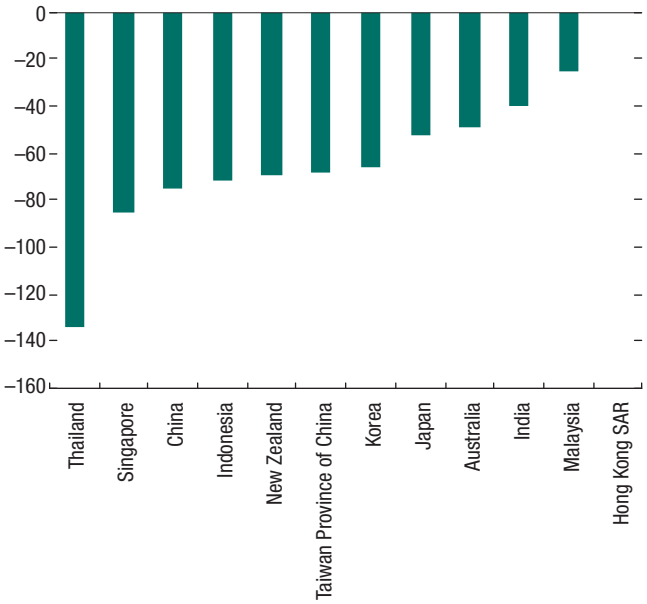
the level attained in 2014 (Figure 1.4). China has seen large outflows following its decision to make its exchange rate more market determined in August 2015, with total capital outflows reaching an estimated $900 billion in 2015. So far in 2016, the region has experienced a decline in portfolio inflows (bonds and equities combined), and outflows from China alone averaged $100 billion during January–February.

The spike in risk aversion and capital flow reversals led to large declines in major regional stock markets in 2015 and early 2016 (Figure 1.5). Given China's large run-up in stock prices fueled by margin lending in 2014 and early 2015, prices in China are still above June 2014 levels, though they are down sharply year to date. Although sovereign bond yields have declined since mid-2015 (partly because of lower inflationary pressures and lower international rates—Figure 1.6), sovereign credit default swap (CDS) spreads have gone up and, in most economies, they are currently higher than levels that prevailed on the eve of the "taper tantrum" episode in May 2013 (Figure 1.7).

Exchange rates have remained volatile and have depreciated across most of the region, especially against the dollar. Since the broad-based appreciation of the dollar started in mid-2014, major Asian currencies have lost an average of 10 percent in relation to the dollar (Figure 1.8). In real effective terms, the depreciations have been generally smaller and have tended to follow the drop in terms of trade (for example, Australia and Malaysia). China and Vietnam, on the other hand, have seen their currencies appreciate in real effective terms, as they have moved much more closely with the dollar. In India and Indonesia, the real appreciation since mid-2014 has also reflected higher relative inflation. The Japanese yen has depreciated (relative to mid-2014) as Abenomics continues with strong monetary expansion. However, the yen has recently appreciated, reflecting safe haven flows, positive terms-of-trade effects, and a stronger current account balance, despite the introduction of negative interest rates by the Bank of Japan in January 2016.

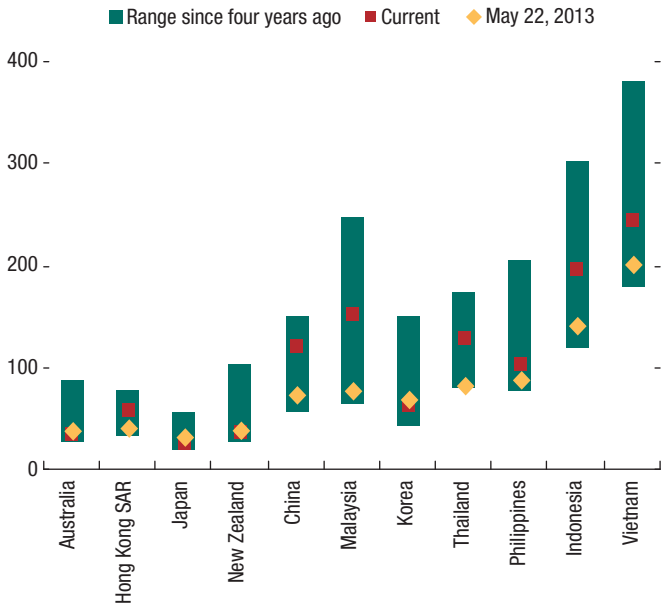
Foreign exchange reserves have declined as most central banks in the region have reacted to

Figure 1.6. Asia: Ten-Year Sovereign Bond Yields: Change since End-June 2015
(Basis points)



Sources: Bloomberg, L.P.; and Haver Analytics.

Figure 1.7. Sovereign Credit Default Swap Spreads
(Levels in basis points; five-year)



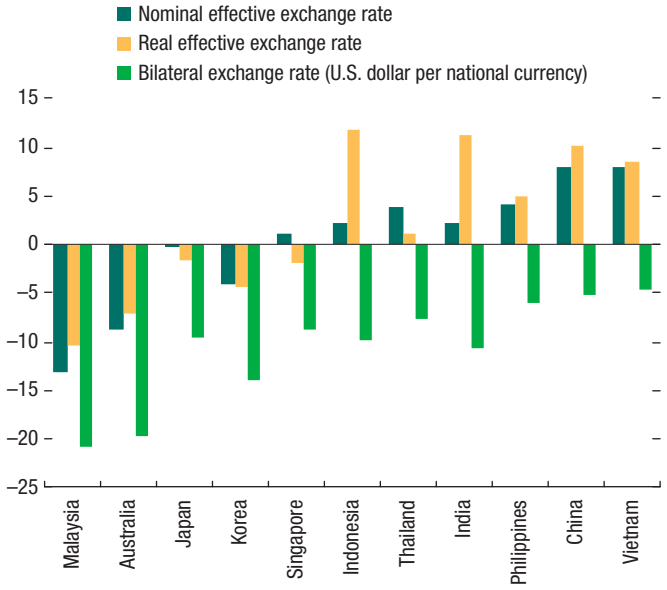
Source: Bloomberg, L.P.

depreciation pressures since mid-2014, when risk aversion started increasing (Figure 1.9). China has had a large decline in reserves—about $790 billion—during that period from their high level of nearly $4 trillion, with the pace of decline accelerating since the second half of 2015. Malaysia and Singapore saw large reserve losses in 2015 as their central banks intervened in the foreign exchange market. Despite intervention by regional central banks to cushion the blow from external shocks and smooth exchange rate volatility, implied volatilities remain generally elevated, and risk reversals are pricing further depreciation, except in the case of the Japanese yen.

Financial conditions in the region have started to tighten, but the effects of rising spreads and capital outflows have been partly mitigated by currency depreciation and monetary easing.[1]

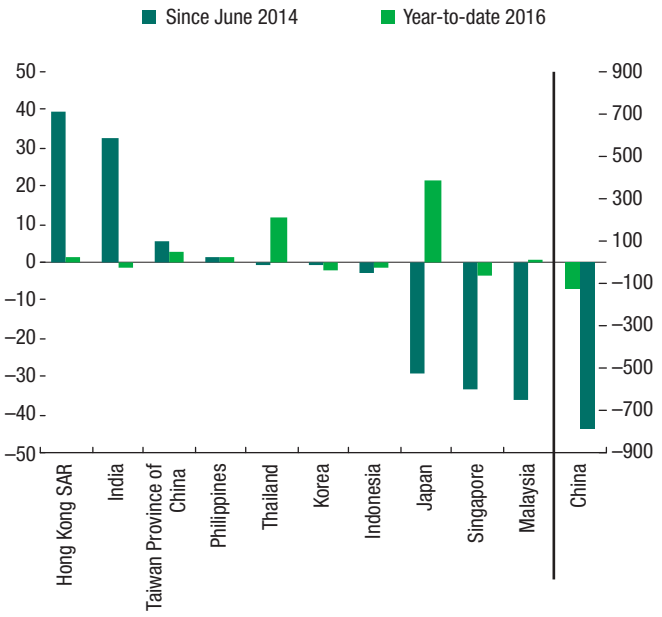
[1]Financial condition indices estimated for the largest 14 economies suggest that overall conditions are tightening across most of the region, especially where currencies have remained more stable in nominal effective terms (for example, Hong Kong Special Administrative Region and the Philippines).

Figure 1.8. Selected Asia: Exchange Rates
(Percentage change since June 2014)



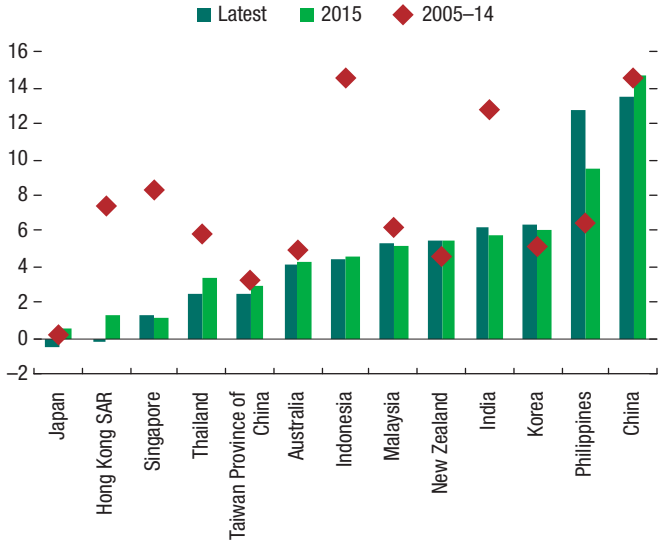
Sources: CEIC Data Company Ltd; Haver Analytics; and IMF staff calculations.
Note: A positive value represents appreciation of the national currency.

Figure 1.9. Selected Asia: Foreign Exchange Reserve Accumulation
(Billions of U.S. dollars)



Sources: CEIC Data Company Ltd.; Haver Analytics; and IMF staff calculations.

Figure 1.10. Selected Asia: Real Private Sector Credit Growth
(Year-over-year; percent)



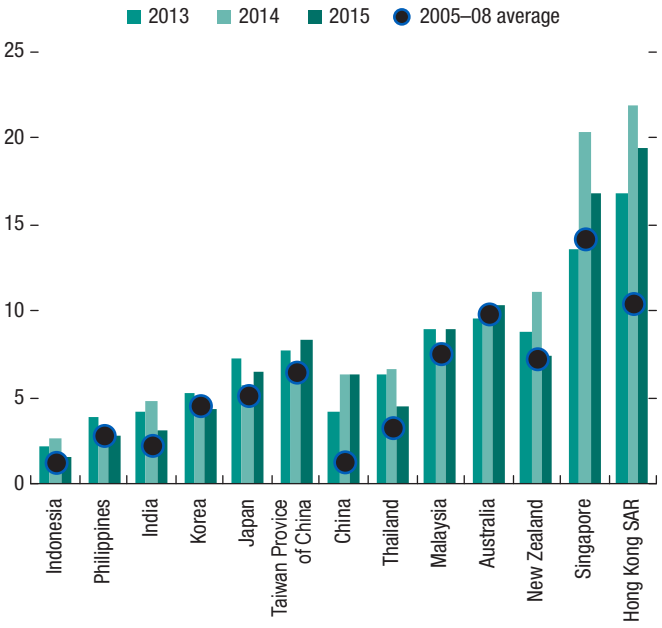
Sources: CEIC Data Company Ltd.; Haver Analytics; and IMF staff calculations.
Note: Private sector credit is based on the depository corporations survey.

However, even as borrowing costs have started to rise, domestic credit growth and corporate bond issuance, while moderating, have remained relatively strong (Figures 1.10 and 1.11), as companies try to take advantage of still-favorable global liquidity conditions. Credit growth (adjusted for inflation) in 2015 remained close to the average for the previous decade in a number of economies, including Australia, China, Korea, New Zealand, and the Philippines. Foreign bank lending, on the other hand, has continued to lose momentum (Figure 1.12). Corporate debt issuance (including syndicated loans) has declined in a number of economies, in some cases reflecting idiosyncratic factors and lower commodity prices.

Debt levels are high across most of the region, owing to several years of buoyant credit growth and the growing importance of corporate bond issuance.

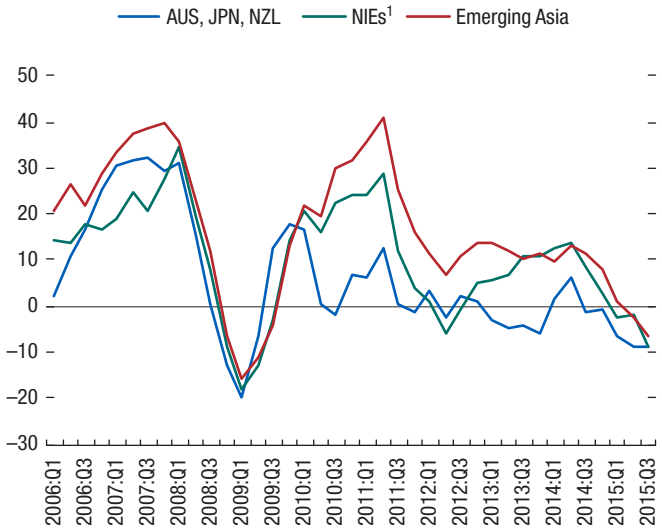
- Corporate-debt-to-GDP ratios have increased faster in Asia than in other major parts of the global economy since 2009 and are particularly high in China, Hong Kong

Figure 1.11. Asia: Nonfinancial Corporate Sector Debt Issuance



Sources: Dealogic; and IMF, World Economic Outlook database.
Note: Includes both bond issuance and syndicated loan issuance. Data compiled on residency basis.

Figure 1.12. Consolidated Foreign Claims
(Immediate risk basis; year-over-year change; percent)



Sources: Bank for International Settlements, International Banking Statistics database; and IMF staff calculations.
Note: AUS = Australia; JPN = Japan; NZL = New Zealand; NIEs = newly industrialized economies.
[1]Newly industrialized economies include Hong Kong SAR, Korea, Singapore, and Taiwan Province of China.

SAR, and Korea. In addition, there are pockets of high leverage (in less profitable firms) across the region (see, for example, the April 2015 *Global Financial Stability Report* and April 2014 *Regional Economic Outlook: Asia and Pacific*).

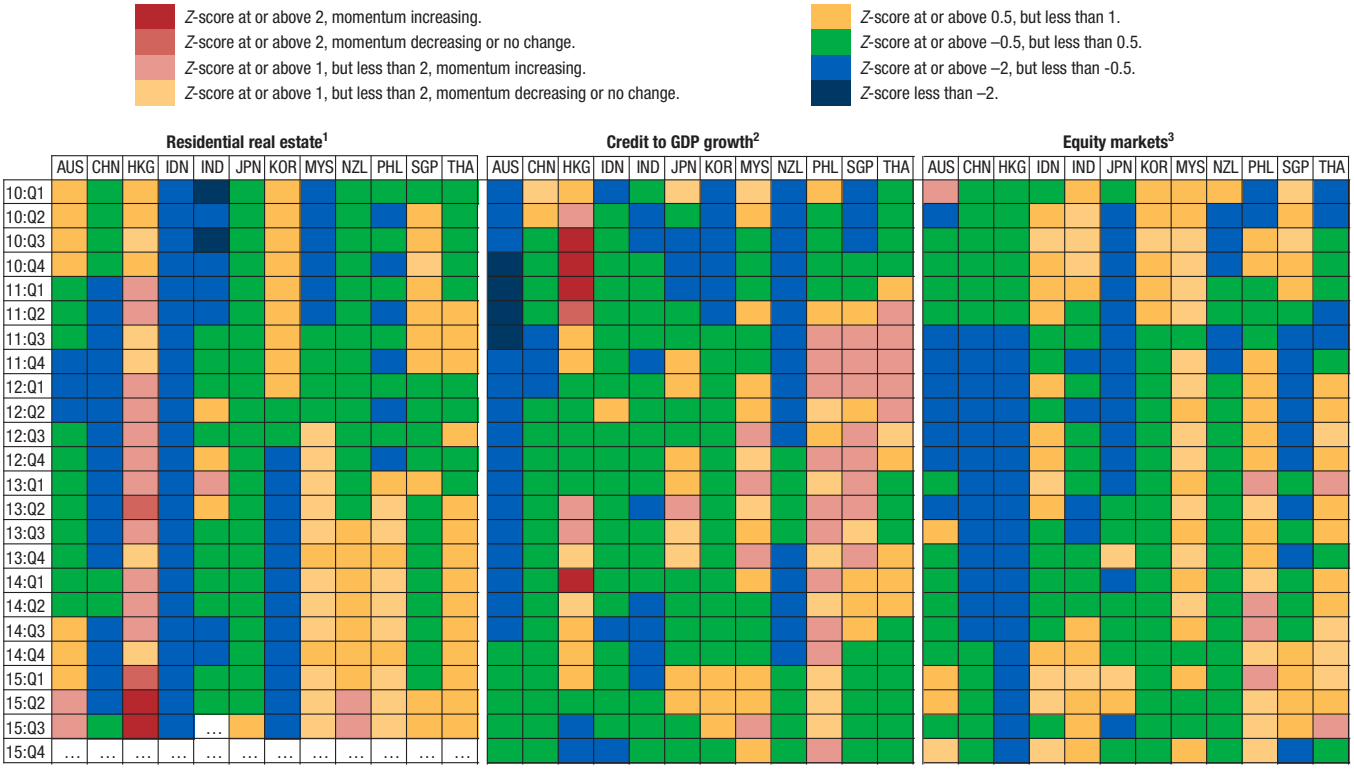
- Household indebtedness has also increased considerably since the global financial crisis, particularly in Hong Kong SAR, Malaysia, Singapore, and Thailand. Although part of the credit growth reflects financial deepening, some growth has been above that implied by fundamentals (for example, measured by slow-moving trends), which has led to the emergence of substantial "credit gaps" in a number of countries (see discussion later in the chapter). House prices appear to have benefited from strong credit growth, and in some cases, such as those of Australia and New Zealand (Box 1.1), policymakers and regulators have introduced measures to tame the house price cycle. In Korea, a recoupling of household debt and house prices has also triggered policy responses (Box 1.2).

The financial stability heat map points to risks associated with house prices and equity market overvaluation.[2] Notably, house prices in Australia, Hong Kong SAR, and New Zealand are above their medium-term trends. In the case of equity markets, the recent correction has brought price-to-earnings ratios close to historical levels, but benchmark equity indices are above norms in several economies, including Indonesia and the Philippines. Asset markets have started to correct in some economies, reflecting moderating growth and heightened volatility (Figure 1.13). In a few cases, measures to contain financial risks from margin financing (for example, in China and Thailand) have been partly responsible for corrections in equity markets.

- Despite indications that asset quality has started to deteriorate in a number of economies across Asia, banks have generally strengthened their balance sheets. Tier 1 capital levels have increased slightly across many economies, with substantial differences (Figure 1.14). Although they exceed regulatory requirements, capital levels are relatively lower in India and China; capital buffers are stronger in Hong Kong SAR and Indonesia. Liquidity has remained broadly stable, but more substantial declines have been seen in India, Indonesia, Malaysia, and Singapore. Banks' profitability has improved across most of the region as growth has boosted noninterest revenues, but profitability indicators remain low in Japan and Korea, partly reflecting the low nominal interest rate environment (Figure 1.15). Nonperforming loans have declined as nominal growth remains robust and real rates have started to increase only recently as inflation has dropped. While levels of nonperforming loans remain relatively low

[2]Given the rapid credit growth in the region and the fact that the *z*-scores are based on country-specific simple time-trend averages, deviations from trend are generally smaller than the credit gaps shown in Figure 1.26, as the latter are based on low-frequency trends.

Figure 1.13. Asia: Financial Stability Heat Map



Note: Colors represent the extent of the deviation from the long-term median expressed in number of median-based standard deviations (median-based *Z*-scores). Medians and standard deviations are for the period starting 2000:Q1, where data are available. Country abbreviations are International Organization for Standardization (ISO) country codes.
[1]Estimated using house price-to-rent and price-to-income ratios.
[2]Year-on-year growth of credit-to-GDP ratio.
[3]Estimated using price-to-earnings and price-to-book ratios.

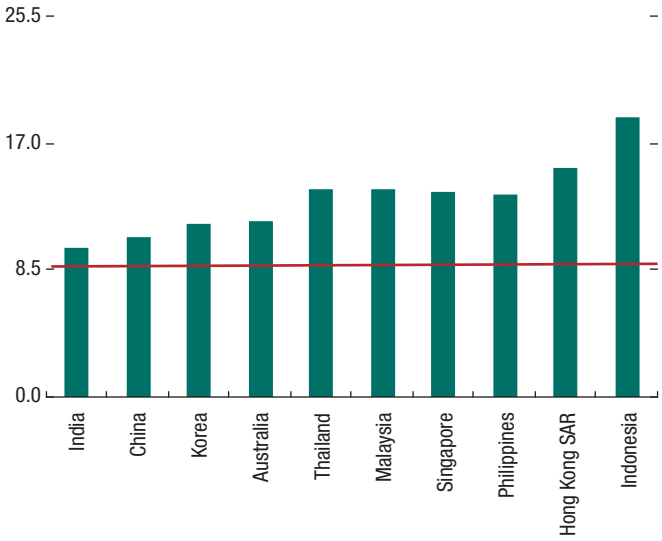
across most economies in the region, they remain relatively high in India, especially when restructured loans are taken into account (Figure 1.16).

Regional Activity: Sluggish Exports and Resilient Domestic Demand

Economic activity in the region moderated in the second half of 2015.

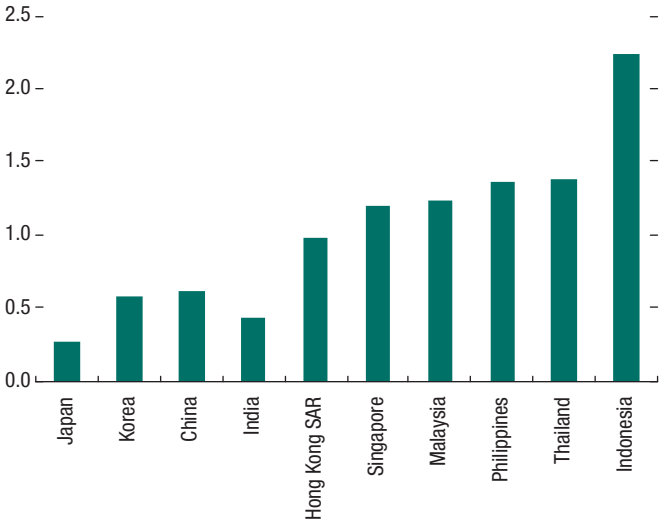
- GDP growth in the fourth quarter of 2015 continued to moderate in China, Japan, Singapore, and the rest of East Asia (Figure 1.17). However, momentum was relatively robust elsewhere, including in Indonesia, the Philippines, and Vietnam.
- Exports of most major regional economies, in nominal terms, declined sharply in the second half of 2015, particularly to the United States and the euro area (Figure 1.18). Exports to China and Japan also contracted, by an average of about 15 percent in annual terms. Export volumes declined by less than the nominal values and have started to show some improvement in sequential terms. Electronics exports have been resilient in some segments, with lower-cost producers such as Vietnam continuing to benefit as they move up the value-added chain. But "hollowing out" is still taking place in higher-cost economies. Purchasing managers' indexes suggest that export growth is likely to remain subdued across most of the region.
- Despite weaker investment growth in China and (mostly in major commodity-related industries) in Australia, Indonesia, and Malaysia, domestic demand has been the bright spot in the region and underpinned growth in 2015. Retail sales (Figure 1.19) and

Figure 1.14. Ratio of Regulatory Tier 1 Capital to Risk-Weighted Assets
(Percent)



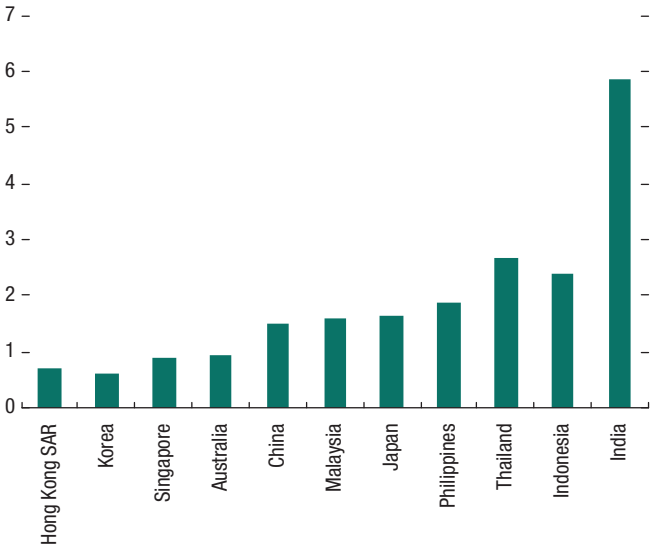
Source: IMF, Financial Soundness Indicators database.
Note: Data are as of 2015 for Hong Kong SAR, India, Indonesia, Japan, Malaysia, the Philippines, Singapore, and Thailand; as of 2015:Q3 for Australia; as of 2015:Q2 for China; as of 2014:Q2 for Korea.

Figure 1.15. Return on Assets
(Percent)



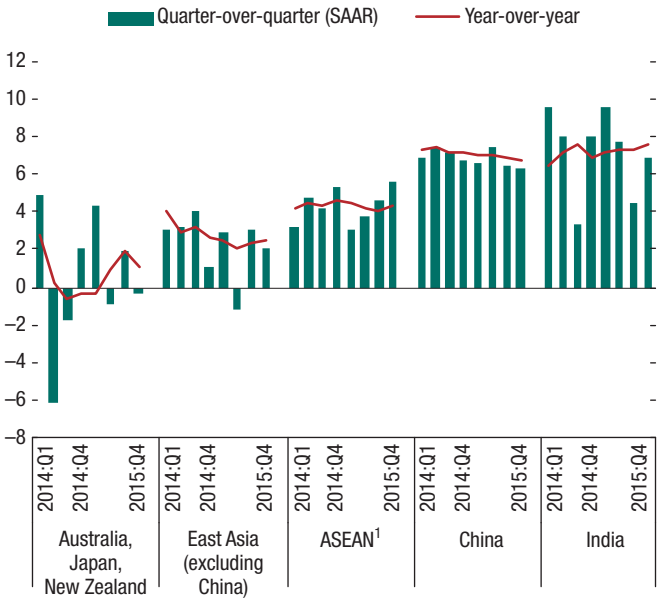
Source: IMF, Financial Soundness Indicators database.
Note: Data are as of 2015 for Hong Kong SAR, India, Indonesia, Japan, Malaysia, the Philippines, Singapore, and Thailand; as of 2015:Q3 for Australia; as of 2015:Q2 for China; as of 2014:Q2 for Korea.

Figure 1.16. Ratio of Nonperforming Loans to Total Gross Loans
(Percent)



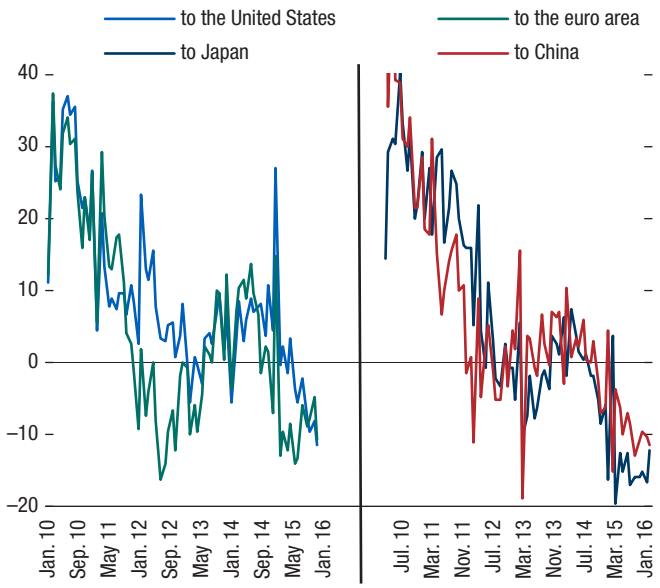
Source: IMF, Financial Soundness Indicators database.
Note: Data are as of 2015 for Hong Kong SAR, India, Indonesia, Japan, Malaysia, the Philippines, Singapore, and Thailand; as of 2015:Q3 for Australia; as of 2015:Q2 for China; as of 2014:Q2 for Korea.

Figure 1.17. Asia: Changes in Real GDP at Market Prices
(Percent)



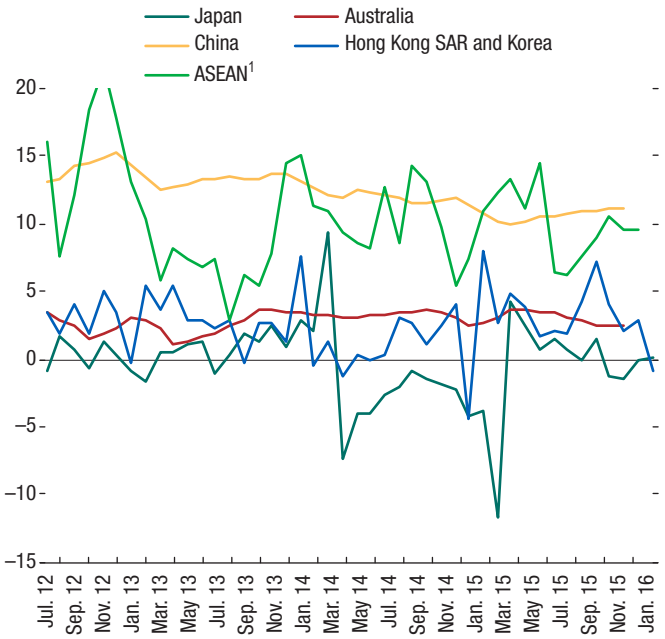
Sources: CEIC Data Company Ltd.; Haver Analytics; IMF, World Economic Outlook database; and IMF staff calculations.
Note: SAAR = seasonally adjusted annualized rate.
[1] ASEAN includes Indonesia, Malaysia, the Philippines, Singapore, and Thailand.

Figure 1.18. Selected Asia: Exports to Major Destination
(Year-over-year percent change)



Sources: CEIC Data Co. Ltd.; Haver Analytics; and IMF staff calculations.
Note: Selected Asia includes China, Hong Kong SAR, Japan, Korea, Malaysia, Taiwan Province of China, Thailand, the Philippines, Singapore, and Vietnam. Indonesia is excluded because of data lags.

Figure 1.19. Selected Asia: Retail Sales Volumes
(Year-over-year percent change)



Sources: CEIC Data Company Ltd.; Haver Analytics; and IMF staff calculations.
[1]ASEAN includes Indonesia, Malaysia, the Philippines, Singapore, and Thailand.

private consumption have been relatively robust in China, helped by the consumers' shift toward services and still-robust growth in disposable incomes. However, inflation-adjusted retail sales, while still growing at a robust pace across much of Asia, have decelerated in Hong Kong SAR and Korea. In Japan, retail sales and private consumption have also been weak as lower equity prices and weak nominal wage growth weigh on consumer sentiment, despite the tight job market.

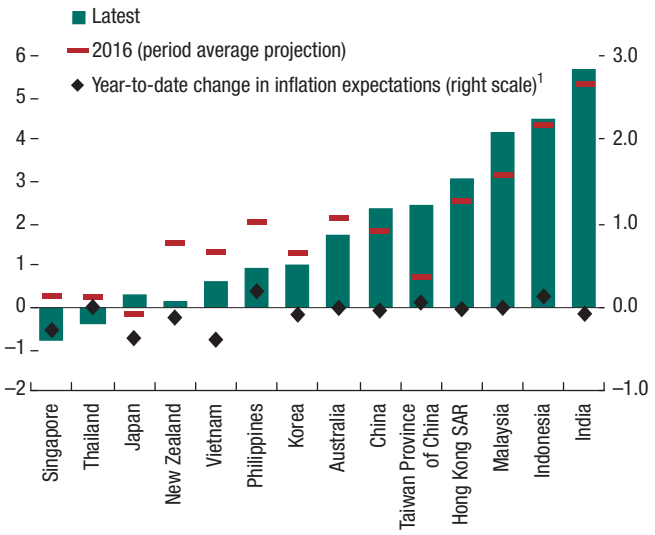
Lower commodity prices have helped keep inflation low.

- Among the largest economies, headline inflation exceeded 4 percent in 2015 only in India and Indonesia (Figure 1.20). In the other major economies, inflation was between –1 percent and 3 percent, and in most cases, it ended the year below October 2015 *World Economic Outlook* projections. Inflation expectations (from Consensus Forecasts) also dropped in all major Asian economies, suggesting that downward pressures from lower global food and fuel prices have been substantial.

- Core inflation has been low across the major Asian economies (Figure 1.21). Moreover, core inflation has dropped considerably, especially since June 2014, when oil prices started their descent. This suggests that in addition to slack in some economies, some deanchoring of expectations and higher pass-through to core inflation (from global inflation and domestic headline inflation) has occurred.

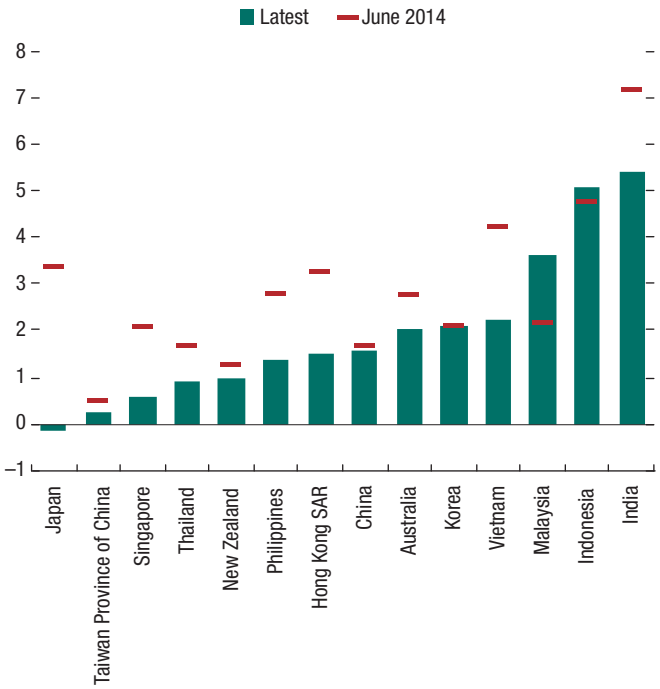
Current account balances generally improved across major Asian economies in 2015, helped by lower commodity prices (Figure 1.22). Overall, Asia's current account surplus rose to an estimated 2.5 percent of GDP for the year, up from 1.7 percent in 2014. This overall improvement masks considerable heterogeneity across the region. However, as discussed in detail in Chapters 2 and 3, the collapse in global and

Figure 1.20. Asia: Headline Inflation and Expectations
(Year-over-year; percent)



Sources: CEIC Data Company Ltd.; Consensus Economics; Haver Analytics; IMF, World Economic Outlook database; and IMF staff calculations.
Note: For India, inflation expectations and the 2016 projection are on a fiscal-year basis.
[1]In percentage points.

Figure 1.21. Selected Asia: Core Inflation
(Year-over-year percent change)

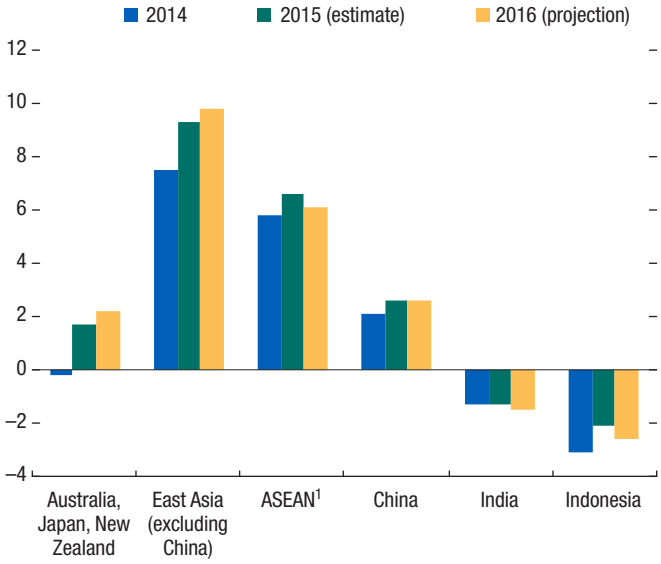


Sources: CEIC Data Company Ltd.; and Haver Analytics.

regional trade has also affected current account outturns in Asia.

- China experienced a sizable drop in exports in 2015, but import compression (partly caused by lower commodity prices and lower imports of investment goods) boosted its trade balance, with the current account rising to about 2.7 percent of GDP. The services balance declined, as tourism and other services imports picked up.
- East Asia (notably Korea) and the Association of Southeast Asian Nations (ASEAN) saw rising current account surpluses (in percent of GDP) in 2015, with Korea's surplus rising to 7.8 percent of GDP and Singapore's reaching 19.7 percent of GDP. The Philippines and Thailand also recorded sizable surpluses (2.8 percent and 9.4 percent of GDP, respectively). Although Indonesia has a large commodities-oriented exporting sector, it has also benefited from lower oil prices, as it is a net oil importer. By contrast, Malaysia—given its exposure to commodities—saw its historically

Figure 1.22. Asia: Current Account Balances
(Percent of GDP)



Sources: IMF, World Economic Outlook database; and IMF staff calculations.
[1]ASEAN includes Malaysia, the Philippines, Singapore, Thailand, and Vietnam.

large surplus drop by about one-third to 2.9 percent of GDP in 2015.

- Meanwhile, India experienced an improvement in its trade balance in 2015, as it benefited from the lower global oil prices, although this was partly offset by weaker exports. Compared with those in 2013/14 (when oil prices averaged close to $100 a barrel), India's trade and current account balances improved by 0.8 percent and 0.4 percent of GDP, respectively.

Developments in specific countries show considerable heterogeneity:

- In *China,* growth slowed to 6.9 percent in 2015, in line with the official target of about 7 percent. Growth was largely underpinned by the services sector, as manufacturing activity and construction decelerated sharply, particularly in nominal terms. Robust labor markets in urban areas and steady disposable income growth supported domestic consumption (particularly in services), partly offsetting weaknesses in investment and manufacturing. As in other regional economies, exports have decelerated sharply, but as noted above, the contribution from net exports was only slightly negative at –0.2 percentage point given the sharp contraction of imports. While headline GDP suggests steady growth, the momentum weakened at the end of the year. For example, fourth-quarter growth (seasonally adjusted annual rate) dropped to 6.4 percent, nearly half a percentage point lower than the average of the first three quarters. In addition, nominal growth decelerated faster than real growth, reaching 5.9 percent in 2015 (4.5 percent in the second half of the year). Nominal growth was also particularly weak in the manufacturing sector, which has hurt corporate profitability.

- *Japan*'s GDP growth picked up to 0.5 percent in 2015, reflecting inventory accumulation and a higher contribution from net exports, which was supported by the weaker yen. Private consumption remained weak, despite a pickup in real labor income and lower oil prices. Investment in plants and equipment was subdued as well. Although export growth moderated, the contribution of net exports to growth was positive, and services exports were robust (particularly tourism). Growth disappointed in the fourth quarter (–1.1 percent in seasonally adjusted annual rate terms), especially as domestic demand, particularly private consumption, lost momentum. The decline in fuel prices put substantial downward pressure on headline inflation, but core inflation edged up. Inflation expectations of households and firms trended downward.

- *India* remains on a strong recovery path, with growth reaching 7.3 percent in 2015. Growth was supported by the large terms-of-trade gain (about 2½ percent of GDP), which also lowered inflation and reduced the current account deficit. That, in turn, helped bolster business and consumer sentiment. Growth also benefited from large foreign direct investment (FDI) inflows.

- *Australia*'s economy decelerated in 2015 following years of a mining-led boom, with growth slowing to 2.5 percent in 2015. However, growth picked up in the second half of 2015, helped by robust labor market conditions and residential investment. *New Zealand* recorded 3.2 percent growth in 2015, benefiting from the earthquake reconstruction efforts.

- In *Korea,* growth decelerated to 2.6 percent in 2015, with the momentum weakening in the last quarter. External sector performance was substantially weaker than expected, and domestic demand indicators were generally sluggish. *Hong Kong SAR* experienced a drop in growth in 2015, with GDP advancing by 2.4 percent, as both domestic and external demand faced strong headwinds and with a noticeable decline in tourist inflows from China.

- *ASEAN* economies experienced steady growth in 2015 (averaging more than 4½ percent during 2014–15), but economic

cycles within *ASEAN* continue to diverge. The growth momentum lost some steam in *Malaysia*, mostly because of the terms-of-trade deterioration (which had an impact on the contribution from net exports) and fiscal tightening, and decelerated slightly in *Indonesia*, despite robust growth in disposable income and consumption. Despite the impact of lower net exports, real GDP growth remained robust in the *Philippines*, with domestic demand benefiting from favorable terms of trade. *Thailand* saw a pickup in growth, especially as public investment accelerated and private consumption grew more strongly. Net exports contributed to growth as terms of trade improved and tourism recovered. *Vietnam* continued to capitalize on strong demand for its exports and FDI in manufacturing; as a result, growth accelerated.

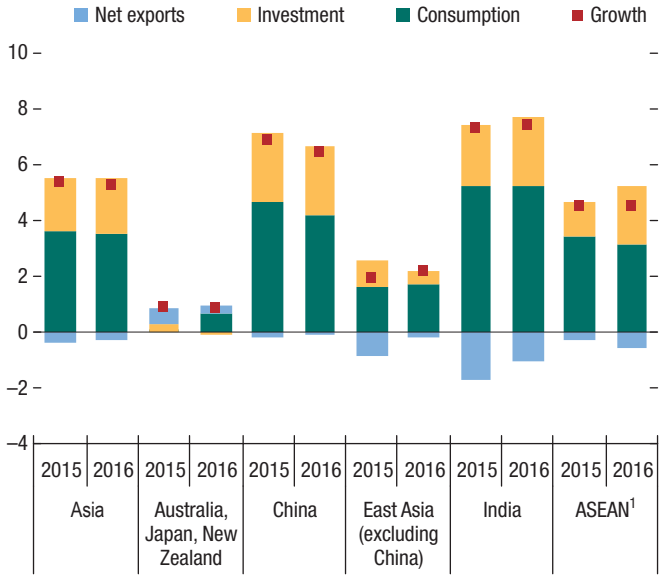
- Growth in *frontier economies* and *small states* has, on average, been relatively robust and steady over the past couple of years, though there have been variations. *Bangladesh*, for example, experienced solid growth in 2015 as it continued to benefit from lower commodity prices and strong FDI inflows, while *Sri Lanka*'s economy grew at 4.8 percent. *Bhutan, Fiji,* and the *Solomon Islands* recorded steady growth on the back of natural-resources-related sectors (not affected by the decline in commodity prices) and tourism.[3] Growth in *Mongolia*, on the other hand, dropped sharply in 2015 on weak commodity prices and policy tightening, and in *Maldives* following policy uncertainty and political tension.

Near-Term Regional Outlook: Growth Slides Further

Asia is expected to continue to experience gradually slowing growth.

- GDP growth is forecast at 5.3 percent in both 2016 and 2017 (Figure 1.23 and Table 1.1), 0.1 percentage point lower than the forecasts in the October 2015 Asia and Pacific Regional Economic Outlook Update. Although Asia is expected to remain the global growth leader, its rate of growth is projected to be nearly half a percentage point below its GDP growth rates in 2012–13, before financial conditions started tightening and concerns about global activity and trade came to the forefront.
- Asian trade is expected to remain weak, with sluggish global growth, weak investment growth in major economies and commodity exporters, and increasing spillovers from China (see Chapter 2 for details). Most major regional economies and subgroups are projected to experience negative contributions from net exports, with the exception of Australia.
- Domestic demand remains resilient, with robust labor market conditions and healthy disposable income growth. In addition, in most economies, real incomes are being

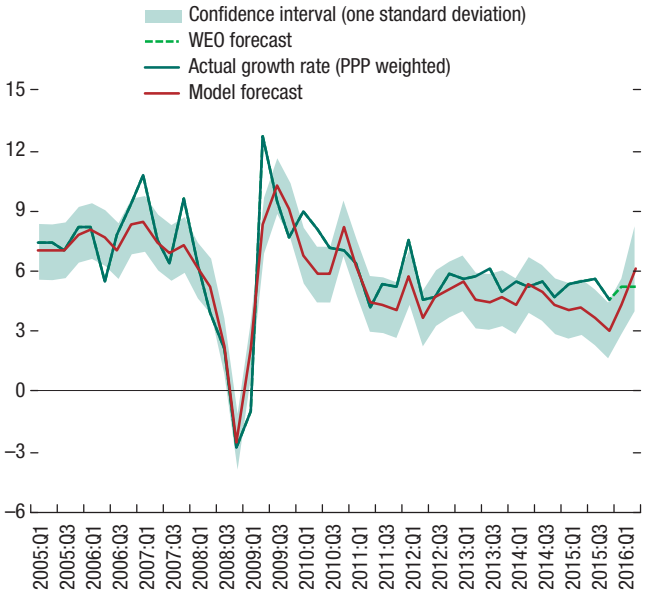
Figure 1.23. Selected Asia: Contributions to Projected Growth
(Year-over-year; percentage points)



Sources: IMF, World Economic Outlook database; and IMF staff calculations.
[1]ASEAN includes Indonesia, Malaysia, the Philippines, Singapore, Thailand, and Vietnam

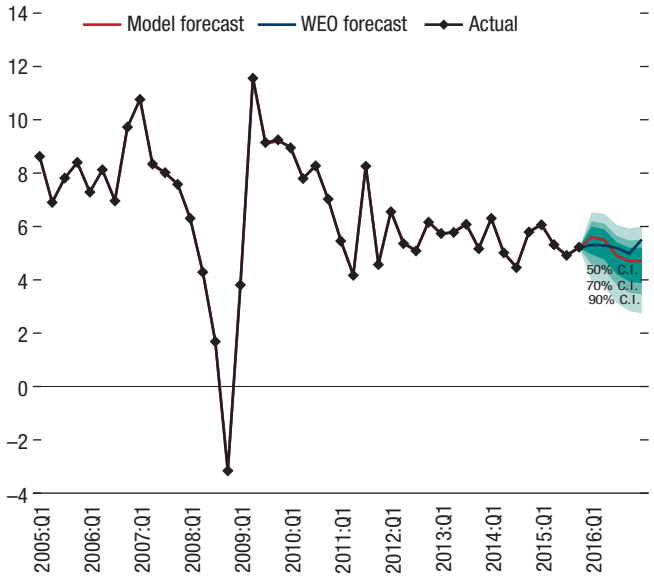
[3]These include, for example, water exports in Fiji, logging in the Solomon Islands, and hydroelectricity exports in Bhutan.

Figure 1.24. Indicator Model for Asia: Projected versus Actual Real GDP Growth
(Quarter-over-quarter annualized rate; percent)



Source: IMF staff estimates.
Note: PPP = purchasing power parity; WEO = IMF, *World Economic Outlook*.

Figure 1.25. Gordon Equity Price Model for Asia: Projected versus Actual Real GDP Growth
(Quarter-over-quarter annualized; percent)



Source: IMF staff estimates.
Note: C.I. = confidence interval; WEO = IMF, *World Economic Outlook*.

boosted by lower commodity prices and low inflation. However, despite still-robust credit growth, what has hitherto been the dynamism of domestic demand in the region will be partly sapped by high household and corporate leverage, as well as tightening financial conditions. Heightened volatility in financial markets has led to lowered risk appetite and dented business and consumer sentiment in many economies.

High frequency data, leading indicators, and tighter global financial conditions are generally consistent with weaker growth momentum. The Asia and Pacific Department's indicator model for growth in Asia (which draws on a number of high frequency indicators for several economies in the region) points to a mild deceleration of regional GDP growth over the near term (Figure 1.24). Moreover, forward-looking growth rates extracted from equity prices point to a continuation of subdued growth momentum (Figure 1.25). Tighter global financial conditions are also expected to be a drag on growth in Asia: a further hardening of financial conditions in the United States would contribute to capital outflows and tighter financial conditions in Asia. Finally, although the credit cycle has started to turn, credit growth is expected to remain mildly supportive of domestic demand in the near term.

Country-specific factors will also play an important role in shaping growth dynamics in the region (Tables 1.1, 1.2, and 1.3):

- In *China*, GDP growth is projected to remain robust but continue to slow gradually to 6.5 percent this year (the lower end of the government's target) and 6.2 percent in 2017. The growth slowdown reflects ongoing necessary rebalancing. On the demand side, consumption growth is expected to continue to outperform investment. Consumption is expected to be underpinned by rapid growth in disposable income, robust labor market conditions in major urban areas, and proconsumption structural reforms. Consumption of services is expected to

remain particularly strong. The slowdown in investment, which is necessary for durable rebalancing, will be driven mostly by continued unwinding of overcapacity, especially in real estate and related upstream industries such as coal and steel. Monetary accommodation (following a series of interest rate and reserve requirement cuts in 2015) and an easing bias to monetary policy as well as the announced on-budget fiscal stimulus should provide some offset.

- In *Japan*, GDP growth is projected to remain at 0.5 percent in 2016, slowing to –0.1 percent in 2017 as the widely anticipated consumption tax rate hike (from 8 to 10 percent) takes effect. Fiscal stimulus measures adopted through the supplementary budget provide an important offset and are expected to boost growth by about 0.5 percentage point. The trade slowdown, particularly in China and other major emerging markets, and the recent appreciation of the yen are expected to be a drag on investment and exports. Private consumption is projected to grow modestly, underpinned by lower commodity prices, targeted fiscal transfers, and rising labor force participation, while nominal wage growth is expected to remain subdued. The Bank of Japan has taken further accommodative measures as part of its quantitative and qualitative easing (QQE) program, such as introducing negative interest rates on marginal excess deposits. QQE is expected to support private demand by further lowering longer-term interest rates and spreads, which will help by maintaining accommodative financial conditions.
- *India*'s growth is projected to strengthen to 7.5 percent in 2016 and 2017. Activity is expected to continue to be underpinned by private consumption, which has benefited from lower energy prices and higher real incomes. An incipient recovery of private investment is expected to help broaden the recovery. Higher levels of public infrastructure investment and government measures to reignite investment projects should help crowd-in private investment. Weak exports and sluggish credit growth (stemming from weaknesses in corporate sector and public sector banks' balance sheets) will weigh on the economy.
- *Australia*'s growth is expected to remain stable at 2.5 percent in 2016 (below potential) and pick up in 2017. Mining investment will continue to contract, but fiscal automatic stabilizers and the exchange rate depreciation are expected to provide some offset. In *New Zealand*, growth is expected to drop to 2.0 percent in 2016 before rising in 2017, moving the economy closer to potential.
- In *Korea*, growth is expected to rise to 2.7 percent this year and to 2.9 percent in 2017. Domestic demand will be underpinned by an improving housing market, lower oil prices, and last year's monetary easing. Exports have continued to disappoint owing to weak growth in trading partners.
- In *Hong Kong SAR*, growth is expected to decelerate to 2.2 percent in 2016 before picking up modestly to 2.4 percent in 2017. While headwinds from higher interest rates and slower growth in China are expected to have an impact on tourism and retail sales, an expansionary fiscal impulse of about 1 percent of GDP in 2016/17 should provide a boost to domestic demand.
- Developments in *ASEAN* will remain uneven, reflecting the bloc's heterogeneity. In a number of major ASEAN economies, the turning of the credit and housing cycles and the rise in benchmark lending rates and spreads are expected to have an impact on domestic demand, and recent declines in equity markets have dented sentiment. Headwinds from the weak global recovery, a broader tightening of financial conditions, and high debt are also expected to exert a drag on growth.
    - In *Indonesia*, GDP is projected at 4.9 percent in 2016 and at 5.3 percent in 2017. Exports are expected to remain weak as low commodity prices hit major exporting

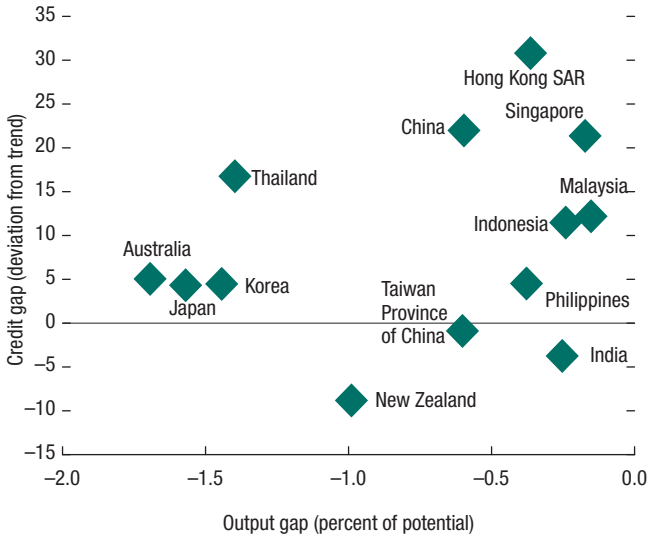
sectors, but domestic demand is projected to remain resilient, partly owing to strong public investment (including that by state-owned enterprises). Private consumption will be helped by lower fuel prices, but gains in this area will be partly offset by lower disposable income growth in rural areas and cuts in electricity subsidies.

- In *Thailand*, growth is expected to continue to recover slightly to 3 percent this year and to 3.2 percent in 2017, driven by public spending, a pickup in private consumption, and the continued growth of tourism. Public infrastructure investment is critical to domestic demand in the near term, both directly and by crowding-in private investment, which has been sluggish. Continued monetary accommodation, a modest fiscal stimulus, and lower energy prices will support domestic demand.
- Growth in the *Philippines* is projected to increase to 6 percent this year and to 6.2 percent in 2017. The modest uptick in growth is expected to be driven by the continued strength of domestic demand, which will more than offset the drag from net exports. The latter will remain subdued, but spillovers from China are and will continue to be smaller than in other parts of the region (see Chapter 2). Domestic demand will benefit from higher public consumption and investment growth, but private demand is also expected to remain buoyant, helped by low unemployment, low oil prices, and higher workers' remittances. Private investment growth is expected to remain robust owing to improvements in public infrastructure and implementation of public-private partnership projects.
- Growth in *Malaysia* is projected to moderate to a still-robust 4.4 percent in 2016 before recovering to 4.8 percent in 2017. Domestic demand is expected to remain resilient, and while credit growth is projected to slow, monetary conditions should remain supportive. Consumption growth will also be supported by a temporary cut in pension contributions, tax relief for lower-income taxpayers, and expanded federal transfers to lower-income groups. Investment will decelerate somewhat, partly because of weakness in the export sector, low commodity prices, and political uncertainty.
- *Singapore*'s growth has slowed sharply and is projected to decelerate further to 1.8 percent this year before recovering to 2.3 percent in 2017, reflecting structural and cyclical factors. Growth is constrained by the aging of the labor force, tighter limits on inflows of foreign workers, and the transition costs of ongoing economic restructuring.
- In *Vietnam*, exports and FDI are expected to perform well as cost-sensitive producers continue to be attracted by the country's large labor force and generally low wages. GDP growth is expected to decelerate to a still-robust 6.3 percent in 2016 and to 6.2 percent in 2017.

- *Frontier economies* and *small states* are expected to continue to record steady growth. On the strong side, *Bangladesh*'s growth is expected to accelerate to 6.6 percent in 2016 and to 6.9 percent in 2017, helped by lower commodity prices and strong investment in the manufacturing sector. In *Myanmar*, growth is projected to accelerate, partly helped by lower levels of political uncertainty and strong investment. By contrast, *Mongolia*'s growth is projected to further slow to less than 1 percent this year, reflecting weak mining output. Some small states will also experience a mild growth slowdown as tourism revenues and remittances grow more slowly. *Fiji*, for instance, is expected to grow at 2.5 percent in 2016 as tourism and other sectors are affected by the supply-side disruptions in the aftermath of the recent cyclone. Despite the expected slowdown in logging, the economy of the *Solomon Islands* is projected to grow by 3 percent.

Inflation dynamics are expected to remain benign across most of the region. Headline inflation is

Figure 1.26. Asia: Output Gap versus Credit Gap



Sources: Bank for International Settlements (BIS); CEIC Data Company Ltd.; IMF, World Economic Outlook database; and IMF staff calculations.
Note: The output gap is based on IMF country team estimates for 2016. Credit gap is calculated as deviation from the trend credit-to-GDP based on a one-sided Hodrick-Prescott filter with lambda of 400,000; credit gap as of 2015:Q3. The underlying credit-to-GDP data are based on BIS's broader credit definition; China's credit-to-GDP series is adjusted by removing the local government financing vehicle components, and Indonesia's credit-to-GDP for 1988:Q1–Q4 is adjusted to remove the impact of the currency devaluation.

expected to remain low, aided by the recent declines in oil prices, and, in some cases, slowing growth and excess capacity in some sectors. Headline inflation is projected to average 2.4 percent in 2016, before rising modestly to 2.9 percent in 2017 as the effects of lower oil prices wane (Table 1.4). Estimated output gaps for major regional economies also suggest that there is sufficient slack across the region, which together with low expected inflation, will help keep inflationary pressures at bay (Figure 1.26). There are considerable regional differences, with inflation expected to average less than 2 percent in East Asia, while remaining considerably higher in South Asia. In addition, inflationary pressures remain substantial in a few frontier economies and low-income countries, including Myanmar and Nepal.

Monetary and fiscal policies are broadly accommodative across most of the region. Policy interest rates are generally low in nominal and real terms, and while the latter have generally increased with the decline in inflation, they remain close to or below historical norms. For example, with the exception of those in India and Indonesia, real rates are below 1 percent in all major regional economies and are negative in a number of them (Figure 1.27). In a number of economies, nominal policy rates are broadly in line with the levels implied by augmented Taylor rules (which include exchange rates and foreign interest rates) (Figure 1.28). Longer-term government bond yields also point to broadly supportive settings. On the fiscal front, changes in the cyclically adjusted fiscal balances in 2016 are generally expected to be small—with the exceptions of those in Australia, Japan, and to a lesser extent, Malaysia (Figure 1.29). In 2017 fiscal policy is projected again to remain largely neutral, except in the case of Japan as the second value-added-tax hike takes effect (even though the authorities would likely consider offsetting fiscal measures).

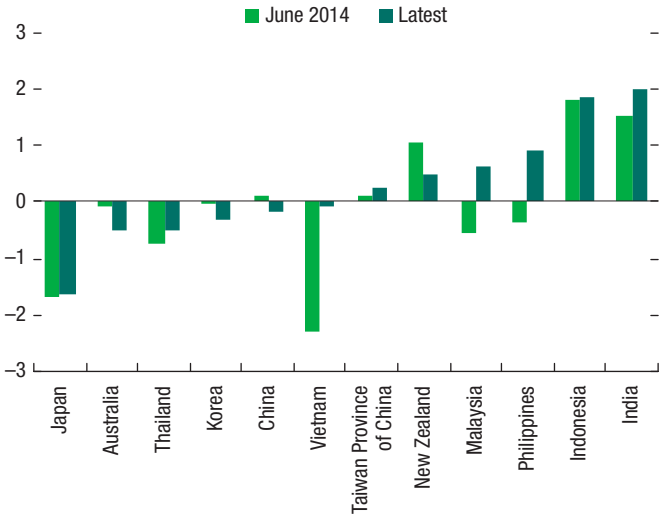
Risks to the Outlook: Downside Risks Are Looming Large

Downside risks continue to dominate the economic landscape and have increased relative to the October 2015 Regional Economic Outlook Update. Slower-than-expected global growth, larger spillovers from China in the near term, and tighter global financial conditions combined with high leverage could have an adverse impact on regional growth. Asynchronous monetary policies in major advanced economies will likely continue to lead to greater exchange rate and capital flow volatility. Further progress and implementation of trade agreements could boost trade, and durably low commodity prices could further help commodity importers.

The China Risk Factor: Potentially Bumpier Rebalancing and Larger Spillovers

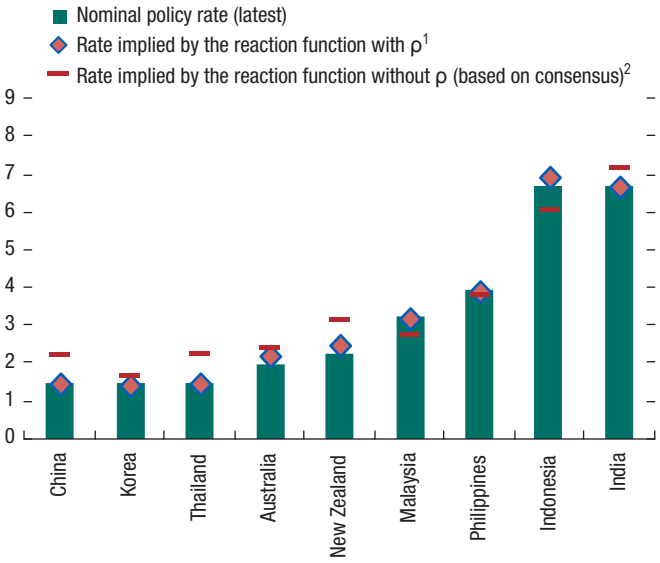
China is proceeding with an important and necessary economic transition as it rebalances its economy more toward consumption and services (Figure 1.30). This will make growth in China more sustainable over the medium term and thus will benefit the regional and global economy (Chapter 2).

Figure 1.27. Selected Asia: Real Policy Rates
(Percent)



Sources: CEIC Data Company Ltd.; Consensus Economics; Haver Analytics; and IMF staff calculations.
Note: Real policy rate is based on a one-year-ahead inflation forecast from Consensus Economics. For Japan the uncollateralized overnight rate is used. For India, the three-month treasury bill rate is used as the proxy for the policy rate.

Figure 1.28. Estimated Central Bank Reaction Functions
(Percent)

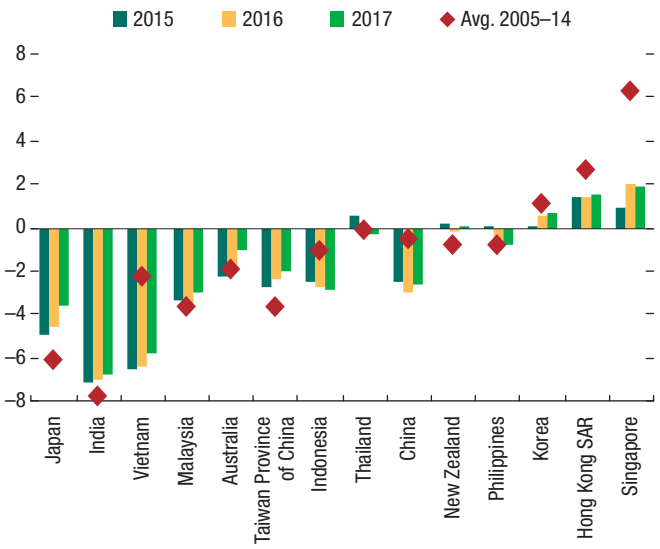


Sources: Haver Analytics; and IMF staff estimates.
Note: As of April 1, 2016 with monthly data.
[1]Estimated as $i_t = \rho^* i_{t-1} + (1-\rho)^*(\alpha + \gamma_1 E_t[\pi_{t+1}-\pi^*] + \gamma_2 E_t \text{OutputGap}_{t+1} + \delta_1 \text{REER}_t + \delta_2 \text{US\_3Myield}_t) + \varepsilon_t$
[2]Estimated as $i_t = \alpha + \gamma_1 E_t[\pi_{t+1}-\pi^*] + \gamma_2 E_t \text{OutputGap}_{t+1} + \delta_1 \text{REER}_t + \delta_2 \text{US\_3Myield}_t + \varepsilon_t$

In the short term, however, the transition could have adverse spillovers, especially as China now accounts for about one-half of regional growth and is the top trading partner of most major regional economies, particularly in East Asia and ASEAN. Exposures in terms of value added are also substantial for a number of Asian economies, particularly those in regional supply chains (see Chapter 2).

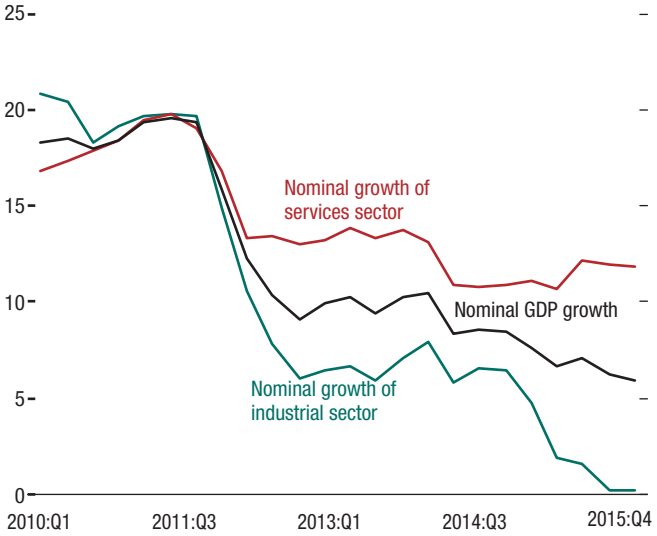
Growth spillovers from China are clearly on the rise (see Box 2.1). For example, the estimated growth elasticity of Asian emerging market economies to China is about 0.3, much larger than in 2006. In the case of frontier and low-income Asian economies, the average growth impact of China is estimated to have grown by threefold (to nearly 0.2). The direct hit from weaker Chinese imports would also be compounded by the further potential drop in some commodity prices (though other supply factors and global growth are also behind the drop), having a further negative impact on growth prospects of commodity exporters (Australia, Indonesia, Malaysia, and New Zealand; see Chapter 3).

Figure 1.29. Selected Asia: Cyclically Adjusted Fiscal Balance
(Percent of GDP)



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

Figure 1.30. China: Economic Activity Indicators
(Year-over-year; percent)



Sources: CEIC Data Company Ltd.; and IMF staff calculations.

Financial sector vulnerabilities in China remain a risk, especially as the economy needs to deleverage. Risks associated with recent rapid credit growth and increasing disintermediation into the nonbank financial system may emerge, particularly if growth slows more markedly. The high levels of nonperforming loans in the banking system could also create problems down the road, especially as efforts to rebalance will require some reallocation of credit to new sectors. Financial intermediation outside of the banking system has continued to grow rapidly and remains an important source of systemic risk (see also the April 2016 *Global Financial Stability Report*).

Financial shocks emanating from China have also become increasingly important. China's financial linkages with the rest of Asia are growing fast, particularly cross-border banking exposures and equity market interlinkages (see Box 2.3). Regional equity markets have become highly connected with China, directly and indirectly via Hong Kong SAR. The analysis in Chapter 2 shows that shocks from China's equity markets have recently had large effects on equity markets elsewhere in the region, particularly in those economies more closely integrated with China. Moreover, ongoing capital account and financial liberalization along with the internationalization of the renminbi are likely to increase financial interlinkages.

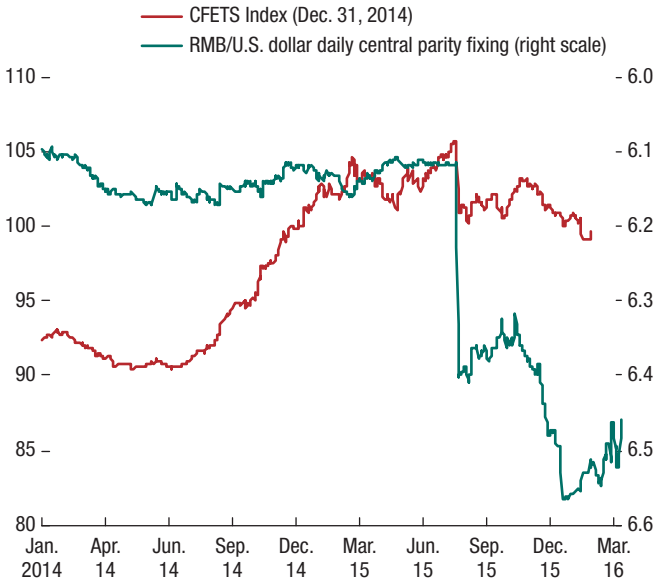
As an additional risk, efforts to rebalance the economy—which inherently will be bumpy given the substantial structural changes underway—could lead to unexpected demand shortfalls. These shortfalls could trigger uneven policy responses (such as overreliance on monetary or credit policies). This could occur, for example, if the services sector does not grow fast enough to absorb the jobs lost in manufacturing or investment weakens very quickly. For example, to make up for the shortfall in investment and in the absence of far-reaching state-owned-enterprise (SOE), financial, and fiscal reforms to boost consumption, the government may rely on monetary expansion. This would not help with the process of rebalancing including from debt-led investment. Incomplete reforms or insufficient progress, as in the case of SOE reforms, could also dent future growth prospects by delaying modernization efforts and efficiency gains.

Less-than-clear communication about policy interventions could also increase uncertainty about policy priorities and goals.

- Some financial sector reforms have proceeded well. For example, the liberalization of deposit rates in October 2015 removed all formal interest rate controls, which bodes well for the allocation of savings.
- However, the new exchange rate mechanism introduced in August and the emphasis on the exchange rate basket in December reportedly contributed to bouts of financial volatility in China and across global financial markets (Figures 1.31 and 1.32). More recently, communication efforts by the People's Bank of China have contributed to bolstering market stability.[4]

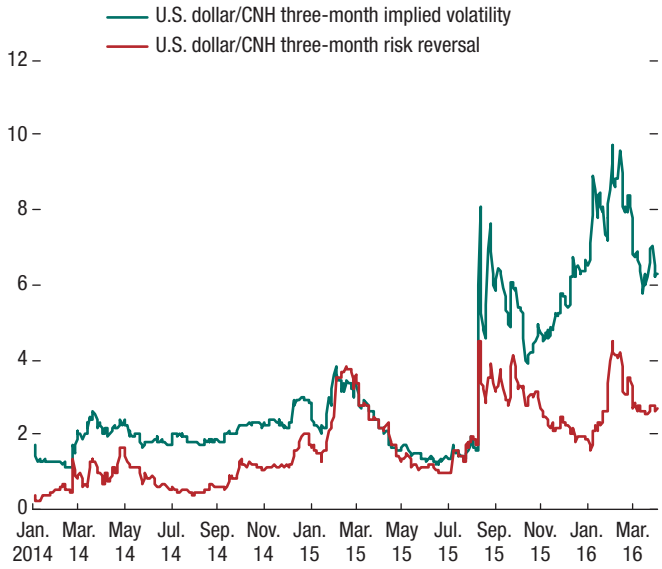
[4]Simple estimations of a regression with the changes in the renminbi exchange rate (against a numeraire) on the dollar and the reference China Foreign Exchange Trade System basket show that the weight of the dollar is very high, close to 90 percent. However, given that the authorities may be gradually adjusting the exchange rate to the *level* of the basket, taking into account the levels of the

Figure 1.31. China: Daily Exchange Rate



Source: Bloomberg, L.P.
Note: CFETS = China Foreign Exchange Trade System; RMB = renminbi.

Figure 1.32. China: Three-Month Implied Currency Volatility and Risk Reversal



Source: Bloomberg, L.P.
Note: CNH = Chinese offshore spot exchange rate.

- Past interventions in the stock market have also created policy uncertainty, and new interventions could further destabilize confidence if not properly calibrated and coordinated with other reform efforts. Greater policy uncertainty could lead to disorderly financial market conditions. This would, in turn, further reduce investor confidence and lead to higher risk premiums and spreads.

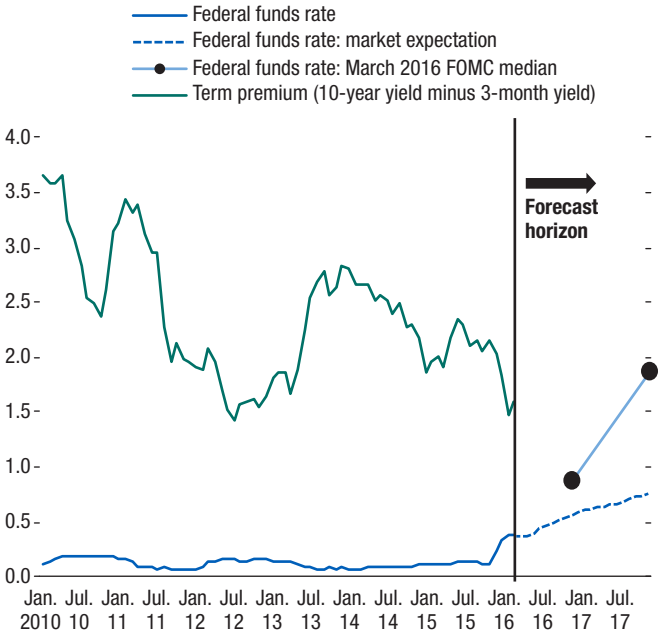
The Leverage Risk Factor: High Debt and Tighter Financial Conditions

The turning of the credit and financial cycle amid high debt poses a substantial risk to growth in Asia. This risk can materialize along several dimensions.

- First, an unexpected tightening of U.S. interest rates or a sudden increase in the term premium (see discussion later in the chapter) is likely to fan capital outflows from emerging Asia, putting downward pressure on currencies, as occurred during the taper tantrum episode in May 2013 (Figure 1.33). Evidence in Ananchotikul and Zhang (2014) shows that exchange rate, equity price, and government bond yield volatilities are strongly affected by changes in global risk aversion and capital flows.
- In addition, as U.S. short-term rates have remained close to the zero lower bound for more than half a decade, longer-term rates (particularly the 10-year rate on Treasuries) became the focal point of market participants trying to gauge financial and liquidity conditions. Measures of uncertainty of U.S. longer-term rates such as the conditional volatility of the 10-year yield, or the Merrill Lynch Option Volatility Estimate (MOVE) (based on implied volatility from options on interest rate futures) show that uncertainty about U.S. monetary policy has remained substantial. In addition, increases in this type of uncertainty are strongly associated with exchange rate depreciations across most of

exchange rate and the basket is critical. Results based on vector error correction models (which incorporate the level relationship between the renminbi and the basket) suggest that the weights on the basket might have increased since mid-December 2015.

Figure 1.33. United States: Interest Rates



Source: Bloomberg, L.P.
Note: FOMC = Federal Open Market Committee.

emerging Asia and with appreciation of the Japanese yen (Box 1.3), much like the effect of shocks to the Chicago Board Options Exchange Volatility Index (VIX) on capital flows and exchange rates in the global financial cycle literature (Rey 2015).

- The tightening of global financial conditions and the decline in domestic asset prices would contribute to a broader tightening of domestic financial conditions. For example, house prices in a number of economies, including Australia, Hong Kong SAR, and New Zealand, have benefited from low interest rates. But in these markets, some indicators have already turned (for example, sales), and prices could decline should interest rates rise too quickly or their paths become too uncertain. Overall, a tightening of credit conditions would likely have an impact on house prices and, in turn, households' balance sheets, leading to further retrenchment in credit and creating a feedback loop. While domestic monetary policy could potentially offset the effect of a tightening of global financial conditions on domestic financial conditions, exchange rate depreciation may constrain the standard monetary policy response.
- Higher domestic interest rates, particularly if accompanied by a sharp drop in growth and depreciating currencies, could severely weaken firms' and households' balance sheets. As asset quality deteriorates, both demand and supply for credit are likely to retrench, leading to a fall in domestic demand and triggering a financial accelerator effect as credit contractions could further dent activity and creditworthiness. As in other episodes of financial market turbulence, economies with stronger fundamentals (including stronger financial institutions) and policy buffers are likely to fare better in case the capital flow reversal and tightening of financial conditions prove to be severe and long lasting.

Other Risk Factors: Trade Disruptions, Geopolitics, Natural Disasters, and Derisking

In Japan, Abenomics has been successful in terms of its impact on the yen and stock prices. Expected inflation measures have also remained low and relatively entrenched. On the positive side, since October 2012, the yen has dropped in value by some 30 percent, and despite the recent declines in stock prices, the Tokyo Stock Price Index (TOPIX)/Nikkei is up by 40 percent (Figure 1.34).[5] Although Abenomics has been supportive, durable gains in growth have so far proved elusive. The real effects of Abenomics have been much more modest, especially after the consumption tax hike in early 2014, which led to a sharp drop in consumption. In addition, despite the weaker exchange rate, net exports have not provided much of a boost to broader activity. Nominal and real wage growth has also

[5]Asset prices and the yen responded strongly to the announcement of the expansion of QQE in October 2014, with the yen weakening by nearly 3 percent and the TOPIX stock market index rising by 4.3 percent.

Figure 1.34. Japan: Equity Prices and Exchange Rate
(December 3, 2012 = 100 for equity prices)

Source: Bloomberg, L.P.

disappointed, even as labor market conditions have been generally robust. Entrenched inflation expectations on the part of firms—measured for example by the Tankan (Short-Term Economic Survey of Enterprises in Japan) survey—and uncertainty about future demand have held back firms' investment (Box 1.4), and the rising share of part-time employment has added lower-paid workers to the labor force (Aoyagi, Ganelli, and Murayama 2015).

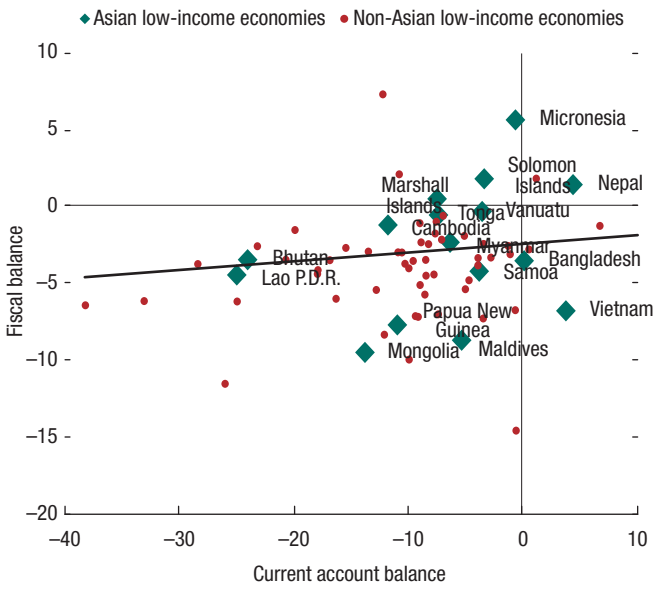
If Abenomics does not succeed in bolstering nominal wage growth and inflation expectations, growth is likely to remain sluggish. This could lead to an overreliance on expansionary monetary policy and a weaker exchange rate. In such a scenario, economies with strong trade and FDI linkages with Japan, such as Indonesia and Thailand, would experience the greatest impact, but adverse spillovers from Japan would also be felt elsewhere. In addition, the low-interest-rate environment generated by accommodative monetary policy might impact the long-term profitability of banks, insurers, and other financial institutions (see, for example, Chapter 1 in the April 2016 *Global Financial Stability Report*).

Domestic political and international geopolitical tensions could cause substantial trade disruptions, leading to a generalized slowdown across the region. Strong intraregional supply linkages could amplify shocks. Domestic political tensions can also rise as a result of inequality (see Chapter 4), fracturing policy frameworks and creating policy uncertainty. In the case of low-income countries and frontier economies, large current account and fiscal deficits (Figure 1.35) would amplify the effect of policy uncertainty on the economy.

Natural disasters pose a major perennial risk to most Asian and Pacific economies. Particularly vulnerable are low-income countries, because of their poorer infrastructure, and small states (including many Pacific islands), because of their geographical susceptibility to natural disasters and climate change (Box 1.5). For example, the ongoing effects of El Niño and the recent cyclone in Fiji have the potential to undermine growth prospects and fiscal sustainability. Small states are nearly three times more susceptible to natural disasters than the average country (Cabezon and others 2015, Figure 1.36, and Box 1.6). In addition, the incidence of natural disasters in small states has increased markedly over the past two decades, as have the damages and the costs of reconstruction. Small states also face the challenge of further derisking by global banks, which could undermine financial inclusion and growth, particularly through remittances.[6] Global banks are cutting off correspondent bank relationships (with local banks and money transfer operators) because of difficulties managing anti–money laundering and combating the financing of terrorism (AML/CFT) risk. Relationships with correspondent banks are becoming more difficult (Bhutan,

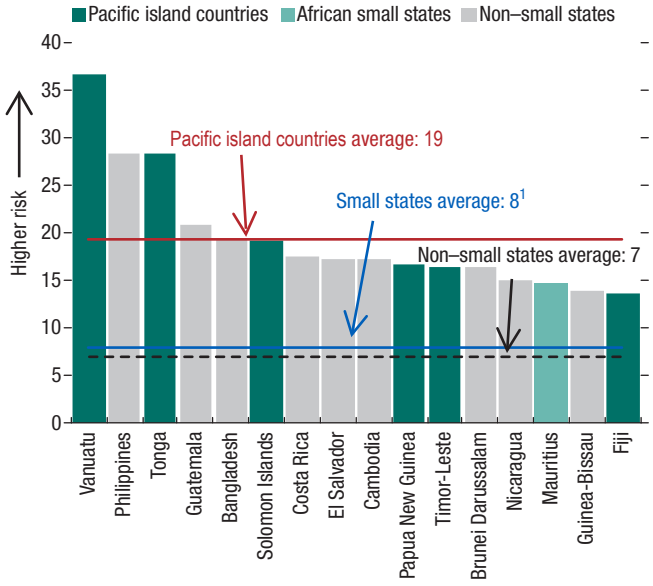
[6]Derisking by global banks covers a variety of phenomena, ranging from wholesale reduction in financial services, an unintended consequence of regulatory efforts or business decisions, to a risk-based implementation of international standards (for example, correspondent bank relationship terminated owing to weak controls for anti–money laundering and combating the financing of terrorism in the respondent bank).

Figure 1.35. Low-Income Economies: Current Account and Fiscal Balances
(Percent of GDP, 2013–15 average)



Source: IMF, World Economic Outlook database.

Figure 1.36. Natural Disaster Risks: World Risk Index, 2014, Top 16
(Percentage points)



Source: *2014 World Risk Report.*
Note: Index combines exposure to natural hazards, coping, and adaptive capacities.
[1]Excludes Pacific island countries.

Maldives, Marshall Islands, Samoa, and Vanuatu), and in some cases money transfers are becoming more costly and complex (Maldives, Samoa, and Vanuatu). Remittances are also becoming more costly (Samoa and Tonga).

Regional and multilateral trade agreements and durably low commodity prices could, in contrast, provide an upside to trade and growth. For example, implementation of the Trans-Pacific Partnership (TPP) could benefit current TPP member countries, and its broadening could serve others, such as Indonesia, the Philippines, and Thailand, more than one-third of whose exports are to TPP member countries. In addition to tariff reductions, the TPP covers a wide range of areas, such as services, intellectual property, government procurement, and other nontariff issues. Tariff reductions will be substantial and immediate, and other provisions in the agreement could spur needed reforms (see discussion later in the chapter), boosting overall productivity. While some special phasing-ins are lengthy (for example, in the automobile sector), overall regional supply chains could deepen, providing a further boost to trade and activity. Regional trade in services, which is important and growing very rapidly (Box 1.7), could get a further boost as a result of harmonization and market access rules. Finally, durably lower commodity prices will further boost disposable income in commodity importers, which could help growth by more than expected in the forecast period.

Policy Recommendations

Bolstering Demand, Creating Policy Space, and Implementing Supply-Side Reforms

Although the global economic panorama remains turbulent, policymakers in Asia will need to continue to build on the region's strengths. Harnessing Asia's potential will call for strong implementation of a wide-raging policy agenda, including enhanced communication of policy frameworks and goals. Structural reforms, aided by fiscal policy, should support economic transitions and

bolster potential growth. Monetary policy should remain focused on supporting demand and addressing near-term risks, including from large exchange rate depreciations and deflationary shocks. Policies to manage risks associated with high leverage and financial volatility will play an important role, including exchange rate flexibility, targeted macroprudential policies, and in some cases, capital flow measures. Finally, policy recalibration should not lead to a buildup in vulnerabilities.

Flexible Monetary, Exchange Rate, and Macroprudential Policies

Recent bouts of financial volatility underscore the need for flexible and proactive monetary and exchange rate policies. Effective communication of policy goals can also play a role in bolstering confidence and lowering market volatility.

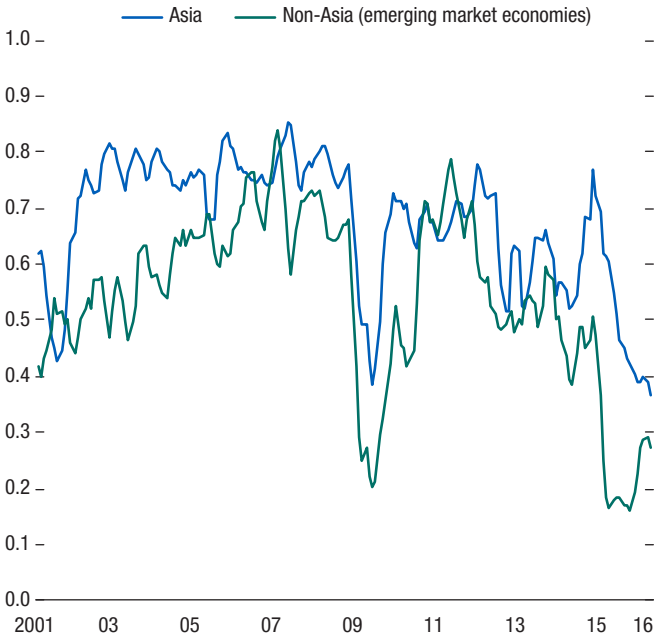
With monetary policy broadly in line with historical patterns (see Figure 1.27), current monetary settings are appropriate to support growth while providing insurance against risks. Nonetheless, should growth disappoint, monetary policy could be used to support demand, as most economies have relatively subdued prospects for inflation, particularly if fiscal space is limited. But in some cases, large exchange rate depreciations and balance of payments pressures may warrant a more cautious approach. In the case of economies with high policy credibility and low inflation, central banks should use monetary support to offset the effects of global uncertainty and tighter global liquidity on domestic financial conditions (see Box 1.3).

- The cases of Japan and China are quite distinct from those of most other economies. In Japan, monetary policy actions should remain focused on lifting inflation expectations, which will require long-lasting and credible monetary expansion. In addition, monetary policy should be coordinated with other policies to restore the inflation momentum and improve the transmission mechanism. In China, the challenge is to ensure that credit growth slows gradually and flows to more productive sectors. This goal will require a vigilant approach to monetary policy and avoid easing policy too aggressively, as it would likely contribute to overcapacity and the buildup of systemic risks. Most emerging Asian economies (excluding China) have room to cut policy rates as inflationary pressures remain relatively low and inflation expectations are generally low and stable.

Exchange rates should remain the first line of defense against external shocks. Recent episodes of financial volatility have shown that even large reserve buffers can be insufficient to arrest such volatility. Although exchange rate flexibility should remain the main shock absorber as in the recent past (Figures 1.37 and 1.38), foreign exchange intervention should be deployed to reduce risks of disorderly market conditions. However, foreign exchange intervention should not be used to resist currency movements reflecting changing fundamentals or as a substitute for macroeconomic policy adjustments.

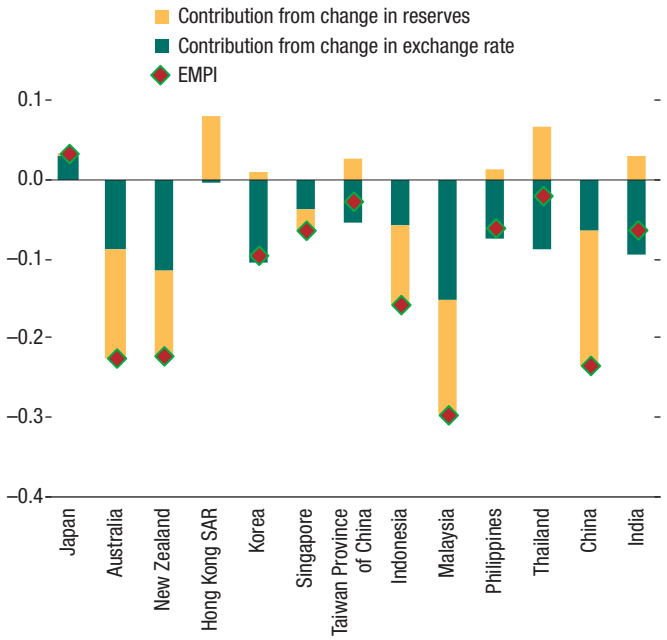
Macroprudential and financial policies should continue to be used to bolster financial stability and mitigate systemic risks. As volatile capital flows and asset prices will continue to create challenges and risks to financial and macroeconomic stability, the proactive use of macroprudential policies will be needed along with measures to rebuild buffers to prepare for market volatility. Asia's wide use of macroprudential policies and its regulatory apparatus have contributed to bolster financial stability, but closer monitoring of risks and intersectoral linkages (across different segments of the financial system) will also be critical to identify the sources of risks and their transmission channels. In other areas, including the corporate and household sectors, efforts should be stepped up to better identify the pockets of leverage and fragility stemming from the concentration of debt (across, for example, households with different income levels and other financial buffers). For example, more recently, a number of economies in the region (Korea, Hong Kong SAR, New Zealand, and Singapore) have leaned heavily on macroprudential tools to contain risks associated with rising house prices and household leverage. Capital flow measures could

Figure 1.37. Asia: Resistance Index
(Larger = more intervention; three-month moving average)



Source: IMF staff calculations.

Figure 1.38. Asia: Exchange Market Pressure Index (EMPI)
(Rate of change in U.S. dollar/local currency exchange rate plus rate of change in reserves; year-over-year)



Source: IMF staff calculations.

also be considered should capital flow volatility and reversals lead to increases in systemic risk and dislocations in domestic financial markets. However, as in the case of macroprudential policies, capital flow measures should not be used as a substitute for exchange rate or other necessary macroeconomic policy adjustments.

Rebuilding Fiscal Buffers and Implementing Structural Reforms

Gradual fiscal consolidation is desirable for most economies to rebuild policy space. Fiscal consolidation should be undertaken together with adjustments to the composition of spending to allow for further infrastructure and social spending in a number of economies. Fiscal recalibration should also help address spending pressures associated with demographic transitions in the region. Moreover, real growth in public spending has been high across most of the region, suggesting that there is room for a gradual adjustment over time, including in relatively rigid public spending components such as wages. That said, if downside risks eventuate, automatic stabilizers should be allowed to operate, and targeted stimulus should not be ruled out, especially if monetary policy traction is low. Other factors should be taken into account:

- *Debt levels*. As structural fiscal positions have remained generally weaker than before the global financial crisis (when countercyclical stimulus was appropriately used) and public debt remains relatively high in some cases (notably *Japan*, and to a lesser extent *India* and *Malaysia*), gradually rebuilding fiscal space should remain a priority. While there has been progress in identifying consolidation measures, *Japan* needs to adopt a credible medium-term fiscal plan with sufficient measures to achieve the fiscal year 2020 primary surplus goal and to make room for near-term stimulus that will help support activity. *India's* captive domestic investment base, favorable debt maturity structure and currency composition are mitigating factors,

but a concrete fiscal adjustment path would help. Where debt levels are low (for example, Korea), fiscal stimulus to counter demand shortfalls should be considered.

- *Need to support broader reforms and structural change*. Fiscal adjustment needs to be weighed against the need to cushion the blow from economic rebalancing and, in certain circumstances, the negative short-term impact of structural reforms (see the April 2016 *World Economic Outlook*, Chapter 3). In the case of China, as central government debt is relatively low, on-budget fiscal support that boosts consumption, reduces precautionary savings, and increases the productivity of the services sector should be considered. Scaling down off-budget investment should also be part of the policy measures aimed at helping rebalancing. At the same time, fiscal reforms to bolster local government finances, the quality of expenditures, and fiscal consolidation over the medium term are important. In Vietnam, where debt levels are high, fiscal consolidation is needed to provide space for potential bank and SOE restructuring costs.
- *Revenue mobilization and infrastructure needs*. Domestic revenue mobilization efforts should proceed, especially in Indonesia and frontier and lower income countries (for example, Cambodia, Mongolia, Myanmar, and Vietnam), where revenue ratios are generally low and infrastructure gaps are large. In some cases where debt levels are low and fiscal risks are more manageable, deficit-financed infrastructure investment could also be considered provided that it is of high growth impact.
- *Dependence on commodities*. In commodity exporters, fiscal consolidation should continue because fiscal stimulus could increase fiscal vulnerabilities, triggering spikes in risk premiums and capital flow reversals. Reductions in fiscal vulnerabilities are likely to lessen external risks as well. Malaysia, for instance, has reduced its budget's dependence on oil- and gas-related revenues and broadened the tax base through the introduction of the goods and services tax in April 2015.
- *Risk of natural disasters*. In small states and some low-income countries, revenue mobilization and prudent fiscal policies are critical to build large buffers to deal with costly (and frequent) natural disasters. Natural disaster risks in many countries in the region have been on the rise, and fiscal policy is often the primary tool to reignite reconstruction efforts and prevent sharp and sustained drops in growth.

Pushing ahead with structural reforms will be critical to ensure that Asia remains the global growth leader. Structural reforms are needed to help rebalance demand and supply, reduce domestic and external vulnerabilities, increase economic efficiency and potential growth, reduce inequality (see Chapter 4), and foster more inclusive growth. In a number of economies, reforms can also help address climate change and improve the environment, particularly in large countries that rely heavily on fossil fuels such as China, India, and Indonesia. Past reforms (for example, those in India in the early 1990s and in China starting in the late 1970s) have been shown to have been highly effective, including by fostering economic and trade diversification and facilitating Asia's entry in global markets. Recent reforms to rationalize subsidies are also encouraging, as most major economies in the region have eliminated fuel subsidies, which will bolster fiscal positions if oil prices go up. The agenda varies across economies:

- In *China*, reforms should focus on improving the allocation of credit and reducing the dependence of growth on credit. This would rebalance the economy away from debt-led investment. In this connection, leveling the playing field between SOEs and the private sector, and continuing with the reforms to improve corporate governance to rekindle the equity markets as a source of corporate financing will remain priorities. A

comprehensive strategy to address weak firms and excessive debt and eliminating implicit guarantees will also be important in this context. Other reforms to facilitate investment in the services sector are also priorities. Fiscal reforms to enhance social safety nets will be critical to reduce precautionary savings and sustain the consumption growth.

- In *Japan*, reforms to reduce the extent of duality in the labor market are needed, which will help unclog the transmission from labor market conditions to wage increases. Reforms to increase female labor force participation and to deregulate product markets that would improve labor productivity (especially in the services sector), will also be important. Finally, implementing further corporate governance reform could help spur corporate investment by deploying firms' cash holdings.

- In *India*, policymakers should capitalize on the favorable economic momentum to speed up structural reform implementation. Additional steps in relaxing long-standing supply bottlenecks, especially in the mining and power sectors, as well as further labor market reforms to increase labor market flexibility in the formal sector, are crucial to achieving faster and more inclusive growth. The long-awaited goods and services tax should be implemented, as it would create a single national market, enhance economic efficiency, and boost GDP growth.

- Across *ASEAN and low-income countries*, reforms to improve the business climate and address the infrastructure gap are needed. The estimated infrastructure gap exceeds 50 percent of GDP in ASEAN countries (McKinsey Global Institute 2015), and financial sector reforms would be critical to allow a more efficient and risk-based intermediation of savings toward those investments. As banks are not best positioned to finance long-duration projects, further developing bond markets and other forms of long-term finance remain high on the agenda. In frontier economies such as *Vietnam*, reforms to improve economic efficiency need to be reinvigorated, including progress on SOEs and state banking reforms. To address derisking in *small states*, authorities and international stakeholders should clarify regulatory expectations, including on AML/CFT systems.

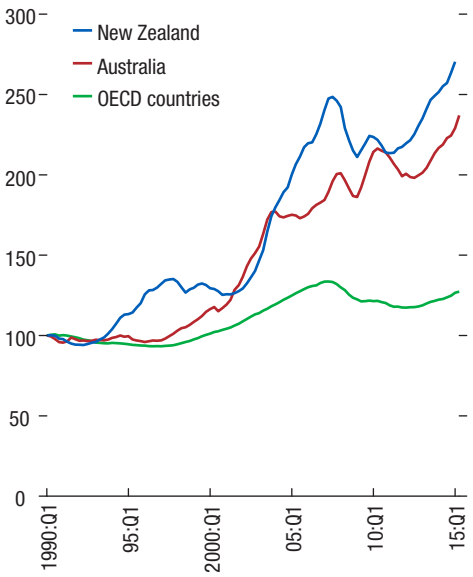
Box 1.1. Housing Sector Developments in Australia and New Zealand: Diverging Tales

House prices in Australia and New Zealand have more than doubled in real terms since 1990, rising substantially faster than the Organisation for Economic Co-operation and Development (OECD) average (Figure 1.1.1). This increase has often been attributed to the liberalization of their banking systems during the 1980–90s and the transition to lower interest rates in the last decade (see Hunt 2015; Ellis 2005). The rise in house prices has been accompanied by a sharp increase in household debt, with debt-to-income ratios roughly tripling since the 1990s in both countries and mortgage debt accounting for a substantial share of the total. Household debt-to-income ratio is a key variable from a financial stability and macroeconomic risk perspective as it reflects the risks borne by households and the possible amplification of house price declines to the macro economy (Debelle 2004; April 2014 *Regional Economic Outlook: Asia and Pacific*, Chapter 2).

The housing market in both Australia and New Zealand appears to reflect moderate overvaluation. Valuation ratios such as price to income are now above historical norms. While some of that is expected given low interest rates (allowing higher debt to be serviceable), other fundamental factors such as income per capita, interest rates, and working-age population suggest moderate overvaluation (see IMF 2015a, 2016c). The financial stability heat map also suggests that prices are currently higher than recent trends (Figure 1.13).

Concerns about house price inflation have been prominent for well over a decade and have triggered regulatory and prudential responses. Recently, the authorities in both countries have stepped up measures. In October 2013, the Reserve Bank of New Zealand (RBNZ) placed a temporary "speed limit" on high loan-to-value ratio (LVR) residential mortgage lending, whereby banks must restrict new mortgages at LVRs more than 80 percent to no more than 10 percent of their total residential mortgage lending. Although house price inflation in Auckland initially moderated in response to the measures (and tighter monetary policy), it has subsequently accelerated. In May 2015, the RBNZ announced additional measures (effective November 2015): (1) residential property investors (though not owner-occupiers) in Auckland are required to have a deposit of at least 30 percent; (2) the existing 10 percent speed limit for loans at high LVRs is retained in Auckland, while it is increased elsewhere to 15 percent to reflect the more subdued housing market conditions there; (3) a new class for loans to residential property investors was established and expected to attract a higher risk weighting than owner-occupier mortgages; (4) the 2015/16 budget introduced a new property sales tax for nonprimary residences that are bought and sold within two years; and (5) the government announced a tightening of reporting and taxation rules for foreign buyers.

Figure 1.1.1. Real House Prices
(1990 = 100)



Sources: Organisation for Economic Co-operation and Development (OECD); and IMF staff calculations.

The Australian Prudential Regulatory Authority (APRA) has stepped up its supervisory intensity through a gradual and targeted approach. It advised banks in December 2014 that it would focus on higher-risk mortgage lending (interest-only and high loan-to-income or loan-to-value ratios), issuing guidelines to limit growth of investor lending to 10 percent a year, and strengthening loan

This box was prepared by Dan Nyberg and Adil Mohommad.

Box 1.1 *(continued)*

affordability. In response to the recommendations of the Financial Sector Inquiry, APRA announced that large banks would need to hold more capital against residential mortgage exposures by raising the average risk weight (to 25 percent) for large banks. Recent data suggest that house price inflation is gradually responding to the regulatory measures, but it is too early to assess whether such inflation is at more sustainable rates.

Can the banking sector withstand a housing downturn? Four large Australian-owned banks account for the bulk of banking sector assets in both Australia and New Zealand. Against this background, the authorities in both countries have collaborated on stress testing, including a combined scenario with a severe downturn in the housing market (40 percent cumulative decline) (APRA 2014). While this extreme scenario would have a substantial adverse impact on profitability and capital ratios, with losses on residential mortgages accounting for about one-third of total credit losses, minimum capital requirements are not breached. However, banks with substantially reduced capital ratios would be constrained in their ability to raise funding, impacting credit growth and aggregate demand.

Box 1.2. Household Debt in Korea: The Role of Structural Factors and Rising House Prices

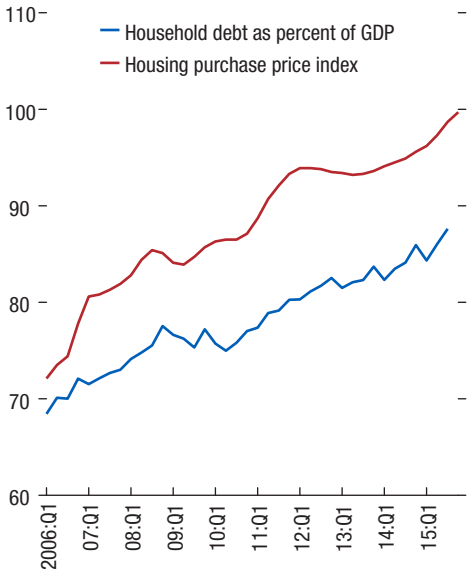
For much of the past decade, household debt in Korea rose in tandem with house prices. Although debt and house prices appeared to decouple a few years ago, the increase in debt was largely due to structural factors (Figure 1.2.1). Demographic changes were one driver—the large baby-boom generation was retiring, and many retirees in Korea take loans to purchase small businesses. A second driver was that the prices of Korea's unique *chonsei* rentals were rising in that period (the *chonsei* rental allows the tenant to loan the deposit—a large share of the property's value, often borrowed from a bank—interest free to the landlord and live rent-free).

The increase in household debt has been largely matched by a corresponding increase in household financial assets. Banks, though, have maintained solid buffers during the run-up in house prices that accelerated in 2010, and the high level of household debt (95 percent of GDP) does not seem to be a systemic threat to macroeconomic or financial stability because debt-to-net-worth ratio is relatively low at below 20 percent of GDP.

Reflecting Korea's relatively young mortgage market, a large share of houses are financed by short-term interest-only loans. This allows households to accumulate equity in other assets instead of paying down mortgage principal as personal savings rates have been high. The share of variable rate loans in Korea's mortgage market is also high by cross-country comparisons. Although variable rate loans have the advantage that lowering interest rates can reduce defaults when house prices decline, they also make households more susceptible to positive interest rate shocks.

More recently, however, debt and prices seem to have recoupled. The increase in household debt in 2015 was largely driven by increased activity in the housing market and rising house prices. While total household debt increased by 8.4 percent year-over-year in the last four quarters, mortgage loans—which account for 70 percent of total household debt—increased by 9.3 percent over the same period. A number of factors contributed to the recovery in the housing market and the corresponding increase in mortgage loans, including a series of policy rate cuts and the loosening of the loan-to-value (LTV) and debt-to-income (DTI) limits—as a result, the proportion of mortgage loans with LTV ratios near the 70 percent ceiling has surged. The aggregate household balance sheet, however, remains stable—with the ratio of household liabilities to financial assets at about 80 percent at the end of 2015.

Figure 1.2.1. Korea: Household Debt and Housing Purchase Price Index



Source: Haver Analytics.

Although household leverage is still manageable, the authorities are taking steps to address potential risks stemming from rising household debt. Recognizing the risks associated with the structure of the mortgage market, in 2015 regulators implemented the loan conversion program, aiming to increase the share of fixed-rate, amortizing loans from less than 25 percent in 2014 to 45 percent by 2017. Although the program is an important step toward developing a more stable, long-term mortgage market, it has also encouraged the shift from *chonsei* rentals to outright housing purchases,

Note: This box was prepared by Ding Ding.

Box 1.2 *(continued)*

bolstering the demand for mortgage refinancing. In addition, regulators announced a set of measures to strengthen the evaluation of debtors' repayment capacity, tightened control over household debt growth in the nonbanking sector, and phased out interest-only loans. Regulators are also closely monitoring several indicators (for example, the average and the distribution of LTV and DTI ratios across new loans over a period and outstanding loans at a given point in time, and house price growth by region and type of properties), and as in the past, have tightened the macroprudential policies to address signs of a buildup of systemic risks in the housing sector.

Box 1.3. U.S. Monetary Policy Uncertainty: What Have Been Its Effects on Asian Currencies?

After seven years, the era of zero policy interest rates in the United States has come to an end. The accommodative stance resulted in loose global liquidity conditions and large capital inflows to emerging market economies. As discussed in the main text, further interest rate hikes by the Federal Reserve could lead to a further tightening of global liquidity and capital outflows from emerging Asia and other emerging market economies. In addition, the uncertainty surrounding the path of short-term interest rates has also contributed to financial volatility.

Although the federal funds rate target is expected to increase as the U.S. economy continues to recover, the pace and magnitude of adjustment are uncertain. First, the global economic environment is more uncertain. Second, spillovers from emerging market economies might be sizable, especially for the manufacturing sector, which currently is decelerating and is generally more sensitive to the strength of the dollar. These factors have generated uncertainty about how fast and for how long the Federal Reserve will continue to remove monetary policy accommodation. The disagreement between market participants and the Federal Reserve's Federal Open Market Committee (FOMC) is reflected in the large discrepancy between the future path of the federal funds rate futures and the expectations of FOMC participants, the "dots chart" (Figure 1.33 in the main text).

The uncertainty about U.S. monetary policy increased after the global financial crisis, and examining its effects is important for understanding spillover channels. For example, the dollar has appreciated sharply on expectations of further Federal Reserve tightening, but volatility has also increased as monetary policy in major advanced economies became increasingly asynchronous (with the United States tightening and the euro area and Japan continuing with monetary accommodation). Given the low interest rate environment, market expectations have shifted to longer-term rates and other aspects of monetary policy such as instruments used to implement quantitative easing (interest rate on reserves, asset purchases, and so on). Moreover, as the quantitative easing (QE) program was focused on lowering long-term rates, news about QE was associated with movements in capital flows (Cho and Rhee 2013).

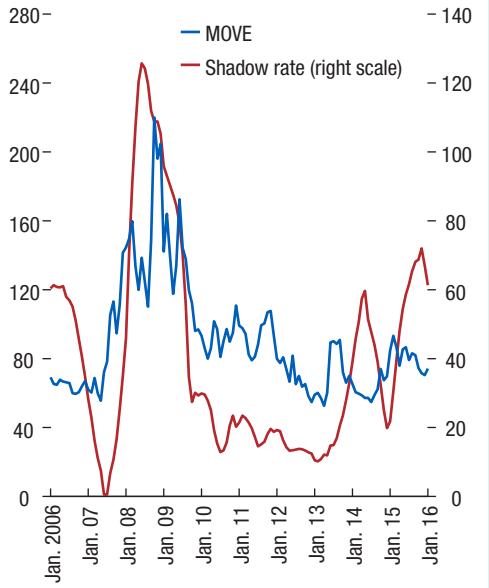
Given the increasing importance of U.S. monetary policy uncertainty, this box first examines uncertainty measures and then quantifies their effects on Asian currencies. Following the work of Rey (2015) on the global financial cycle and earlier work by Benigno, Benigno, and Nisticò (2012) on the effect of risk on exchange rates, the empirical framework applied here uses three measures of financial volatility, because it is important to control for other forms of uncertainty when trying to measure the effects of U.S. monetary policy uncertainty. First, the Chicago Board Options Exchange Volatility Index (VIX) is included to control for broader uncertainty affecting financial markets. The second uncertainty measure is the realized volatility of the federal funds rate augmented with the shadow rate for the postcrisis period. The third measure of uncertainty is the realized volatility of the 10-year Treasury rate.[1] The last two volatility measures try to capture the overall uncertainty about U.S. monetary policy, both at the short-end and long-end of the yield curve. Although there is no attempt to explicitly model uncertainty about other aspects of monetary policy, it is reasonable to assume that other monetary policy instruments would have an impact on either short- or long-term interest rates. The data show that, like the VIX, uncertainty about interest rates exhibits substantial fluctuations, with spikes during the global financial crisis and more recently during the taper tantrum and in early 2016 (Figure 1.3.1). Although the effects of the VIX have been well studied and proved to be the important driver of the global financial cycle (Rey 2015), the effects of U.S. monetary policy uncertainty are also potentially important and have not been researched as much. Intuitively, greater uncertainty about U.S. monetary policy lowers the risk-adjusted return of foreign investments (for U.S.-based investors), essentially

This box was prepared by Roberto Guimarães-Filho and Wei Liao.

[1]The VIX and other implied volatilities (the Merrill Lynch Option Volatility Estimate—MOVE) are filtered by an autoregressive equation to yield a conditional, and hence observable, measure of uncertainty that is then used in the estimations.

Box 1.3 *(continued)*

Figure 1.3.1. U.S. Interest Rate Volatility
(Annualized; basis points)



Sources: Haver Analytics; and IMF staff calculations.
Note: MOVE = the Merrill Lynch Option Volatility Estimate.

mimicking a decline in risk appetite, which could trigger outflows from emerging markets and exchange rate depreciations.

To assess the impact of U.S. monetary policy uncertainty on Asian exchange rates, several vector autoregressions (VARs) including the uncertainty measures are estimated. Following Benigno, Benigno, and Nisticò (2012), the VARs are comprised of the three aforementioned measures of uncertainty, U.S. activity, U.S. consumer price index, U.S. federal funds rate augmented with the shadow rate from Wu and Xia (2015), the slope of the U.S. yield curve (10-year yield minus the three-month yield), the three-month foreign interest rate (interbank or three-month government bond yield), foreign activity, and the bilateral real exchange rate against the dollar. The activity variable used is industrial production as the models are estimated with monthly data. The VAR basic structure is similar in structure to monetary VARs used to assess the effects on monetary policy on exchange rates by Eichenbaum and Evans (1995). The VARs are estimated economy-by-economy (average effects across different economies are also calculated), and over two sample periods, the first covers 1990–2015, and the shorter sample starts in 2008. The economies covered are Australia, China, Hong Kong SAR, India, Japan, Korea, New Zealand, Singapore, Taiwan Province of China, and Vietnam, as well as those in ASEAN-4 (Indonesia, Malaysia, the Philippines, and Thailand). Unlike in Benigno, Benigno, and Nisticò (2012), shadow rates are used for the postcrisis period, reflecting the fact that the short-term rate has been hovering around the zero lower bound.

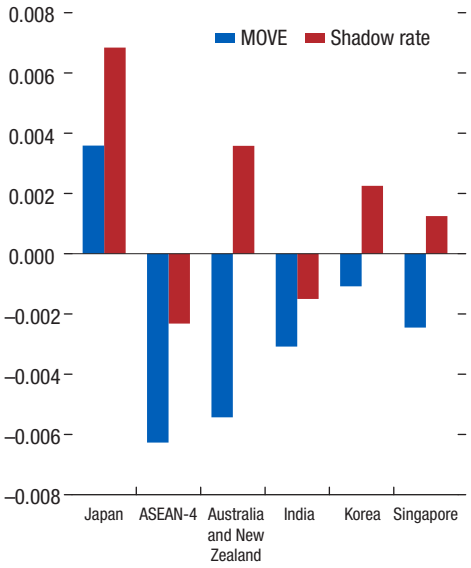
The results indicate that, with the exception of the Japanese yen, Asian currencies tend to weaken following increases in U.S. monetary policy uncertainty. This result is consistent with the intuition above, suggesting that not only the path of U.S. interest rates matter for Asian exchange rates, but also uncertainty about U.S. monetary policy.[2] The latter reflects market concerns about the magnitude and timing of future interest rate hikes. Although the results are quite heterogeneous among the currencies that weaken after one quarter (Figure 1.3.2), the Japanese yen appreciates when either measure of U.S. monetary policy uncertainty increases, consistent with their safe-haven status during risk-off episodes. In addition, the following is true:

- For the other Asian economies, their currencies appear to depreciate when term-structure volatility increases, but to various degrees. For instance, the impact of uncertainty shocks on the Indonesian rupiah seems particularly large and persistent, while the response of the Indian rupee is generally smaller. The response of the Australian dollar and the New Zealand dollar is also relatively large, consistent with previous episodes of sharp reversals in carry trades involving those currencies. In some cases (not reported in the figure), the exchange rate responses are quite small, reflecting the nominal exchange rate

[2]This is also consistent with the conjecture that changes in monetary policy affect the economy primarily by affecting risk premiums.

Box 1.3 *(continued)*

Figure 1.3.2. Effect of Increase in U.S. Monetary Policy Uncertainty on Asian Currencies
(Percentage points)



Source: IMF staff calculations.
Note: ASEAN-4 = Indonesia, Malaysia, the Philippines, and Thailand; MOVE = the Merrill Lynch Option Volatility Estimate.

regime in place (for example, Hong Kong SAR) or the degree of exchange rate management (China, Vietnam).

- Although the Singapore dollar and the Korean won are exceptions with regard to increase in uncertainty of short-term rates, they depreciate in response to shocks to the volatility of the term-structure or long-term rates. A similar behavior is also observed for the Australian and New Zealand dollars as well as the new Taiwan dollar (not reported in the figure). However, as noted above, uncertainty about monetary policy is better captured by longer-term rates (using either MOVE or 10-year Treasury bond yields) and seems quantitatively more relevant in the current environment, especially after short-term rates hit the zero lower bound.
- The results are robust along several dimensions. For example, the quantitative and qualitative results are robust to whether filtered realized volatilities or implied volatilities are used (for example, MOVE for the long-term rate). The results are also robust to the exclusion of the activity variables from the VAR.

Box 1.4. Japan's Sluggish Wages: Causes and Remedies

For the past two decades, the Japanese authorities have been trying to reinvigorate the real economy and generate higher inflation. Although inflation has risen under Abenomics, Japan's deflationary mindset has not been vanquished. As discussed in the chapter text, moderately positive inflation is essential to address cyclical issues as well as fiscal sustainability. Moderately positive inflation would also help anchor inflation expectations at a higher level, pushing up wage inflation over the longer term. Higher inflation would allow real interest rates to be lower, stimulating demand and thereby increasing nominal budget revenue growth and improving public debt dynamics.

Figure 1.4.1 demonstrates the reasons wages are hardly moving, including the following:

Secular stagnation. Japan's deflationary mindset is so entrenched that economic agents set their expectations in a backward-looking way. Unions and employees look at past headline inflation in their negotiations, rather than setting wages in anticipation of higher future prices. Public wage setting takes the same approach following developments in the private sector rather than leading in line with the authorities' inflation targets.

Flat Phillips curve. With the secular decline in inflation expectations, the trade-off between unemployment and inflation has become anchored at very low levels of inflation, especially during 1996–2012. More recently, the anchor has become positive but is still well below the Bank of Japan's inflation target and the effect of the output gap (and labor market tightness) on inflation remains weak. The lack of horizontal mobility of regular workers who prefer stability over wage increases is a contributing factor.

Limited wage bargaining power. Japan's labor market is characterized by extreme duality. In the past, most workers were hired under life-time contracts. Wage bargaining took place at the firm level in coordinated industry-wide bargaining rounds, the so-called *Shunto*. However, with the rapid rise in the share of nonregular workers, the importance of the *Shunto* has waned. Unionization rates have declined and labor conflicts have all but disappeared, suggesting a fall in the wage bargaining power of labor. As a further indication, real wages have not kept up with productivity over the past two decades, more so than in most comparable economies. These developments have helped Japan slip into and stay in a liquidity trap (Porcellachia 2016).

Restoring Sound Wage Dynamics

In addition to boosting inflation and inflation expectations, improving wage-price dynamics largely amounts to solving a coordination problem: individual firms will initiate wage and price increases only if they have reasonable expectations that others will follow. In normal circumstances, credibly anchored inflation expectations and monetary policy action would play that role. But in Japan this channel is not very effective.

Policy action is likely to be necessary on several fronts to foster sound wage-price growth:

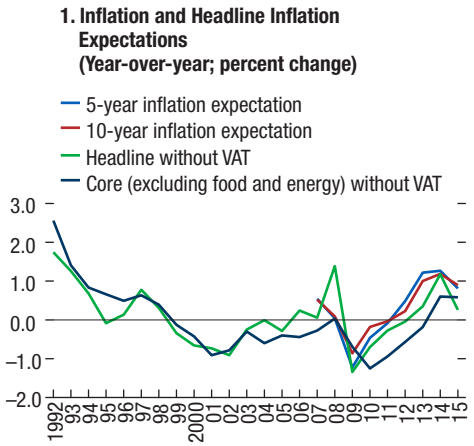
- Closing the output gap is necessary. As evidenced by the recent uptick in wages for nonregular (part-time or nonpermanent) workers, the tightening labor market is beginning to have a positive effect on wage pressure. Pursuing supportive monetary and fiscal policies will be beneficial on this front.
- Solving the coordination problem requires stronger income policies. The authorities have been rightly using moral suasion through the public-private dialogue and the tripartite commission, and decided to increase minimum wages by 3 percent per year for the next five years. They should consider further steps such as "comply-or-explain" requirements for substantial wage increases (say, 3 percent) for profitable companies, stronger tax incentives or penalties, a mandatory additional wage round, and forward-looking increases in public and publicly administered wages and prices.
- Addressing labor market duality. To promote horizontal mobility, strengthen incentives for worker training, and restore wage bargaining power, hiring under nonregular contracts needs to be curtailed. The introduction of an open-ended contract with more job security and clear hiring and firing procedures and costs would help accomplish this objective.

This box was prepared by Luc Everaert, Giovanni Ganelli, and Yihan Liu.

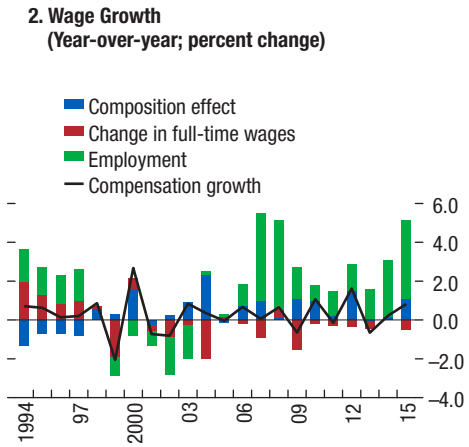
Box 1.4 *(continued)*

Figure 1.4.1. Japan's Labor Market

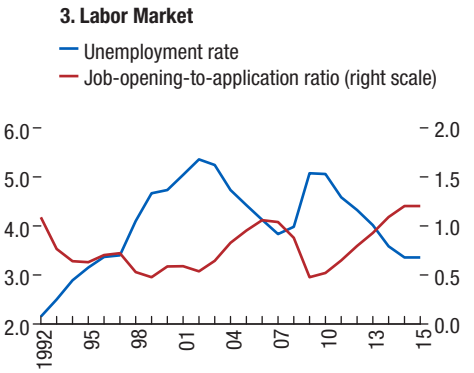
Escaping from deflation remains a challenge...



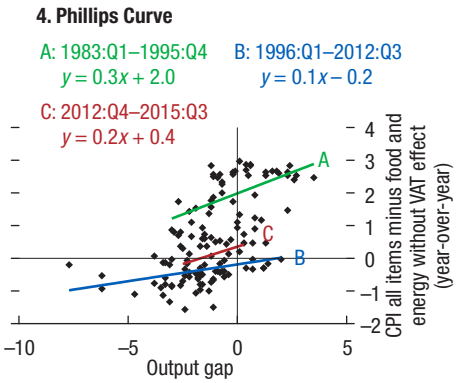
...as full time wages are hardly moving.



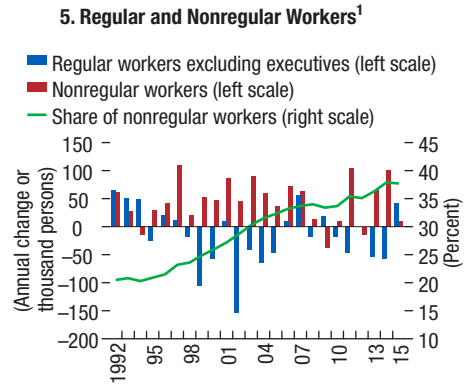
The labor market is very tight...



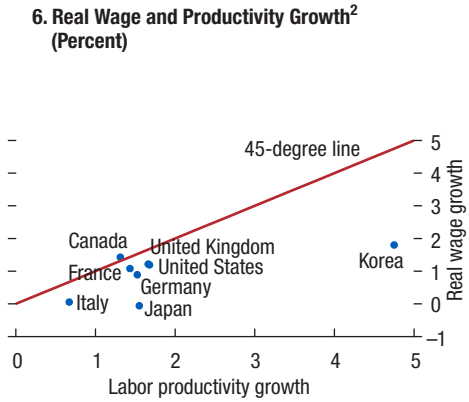
...but the Phillips curve is very flat.



Hiring consists mostly of nonregular workers...



...with real wages lagging productivity more than elsewhere.



Sources: Bank of Japan; Bloomberg, L.P.; Cabinet Office; Haver Analytics; Ministry of Internal Affairs and Communications; Organisation for Economic Co-operation and Development; and IMF staff estimates.
Note: CPI = consumer price index; VAT = value added tax.
[1]February 1985–2001, 2002–2015 January–March average.
[2]Average of 1992–2014.

Box 1.5. Paris Agreement on Climate Change and Asia-Pacific Countries

Negotiations among 195 countries resulted in the Paris global climate agreement in December 2015. The agreement reached under the United Nations Climate Change Conference (COP 21) centers on *national voluntary commitments*, through "Intended Nationally Determined Contributions" (INDCs), for the post-2020 time period to limit global temperature increases to "well below 2°C above pre-industrial levels" (while making efforts to limit the increase to 1.5°C).[1] The commitments focus on the reduction of greenhouse gases (GHG) and the implementation of other strategies ("non-GHG targets") to limit climate change.

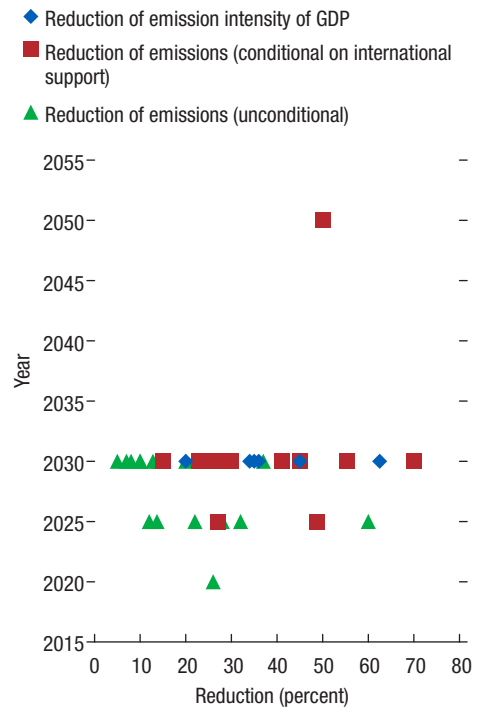
The contributions vary considerably across the Asia-Pacific region (Figure 1.5.1), and include the following:

- **Degree and nature of the target:** Most countries have submitted an *emission reduction target*, ranging from 5 percent (Bangladesh) to 60 percent (Tuvalu). Five countries (China, India, Malaysia, Singapore, and Vietnam) have submitted a target for reducing the *emission intensity of GDP*, with China committing to a reduction of 60 to 65 percent (relative to base year 2005). Many countries, such as the Pacific island countries and other small states, have also submitted "*non-GHG targets*," that is, an increase of the share of renewable energy or some activities in the "land use, land-use change, and forestry sector" (LULUCF).[2] Other developing countries, such as Lao P.D.R. and Myanmar, have only submitted non-GHG targets.

- **Base year, baseline, and end year:** The emission reduction pledges and other contributions are based on a certain year or on a baseline[3] and generally refer to an end year target, mostly 2030. Micronesia, Palau, and Tuvalu have committed emission reduction targets to an even earlier end year (2025), whereas Brunei, owing to a national development plan fixed prior to COP 21, has chosen a later year (2035).

- **International support:** In some cases, national commitments depend on international support (including access to technology development and transfer, financial resources, and capacity building). Most of the Association of Southeast Asian Nations (ASEAN) countries and the majority of the small

Figure 1.5.1. Asia: Submitted Greenhouse Gas Emissions Targets by Countries



Sources: World Resources Institute; and IMF staff calculations.

This box was prepared by Jacqueline Rothfels.

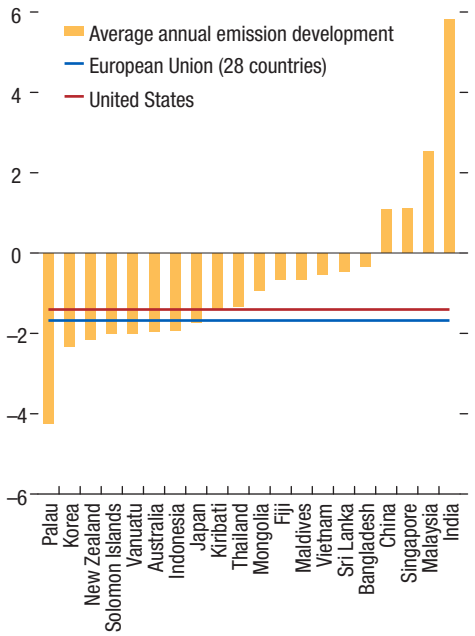
[1]The 188 countries that submitted a pledge in this agreement are responsible for 98.7 percent of global emissions. It will come into force when 55 countries representing 55 percent of global emissions have ratified it.

[2]LULUCF is defined by the UN Climate Change Secretariat as "A greenhouse gas inventory sector that covers emissions and removal of greenhouse gases resulting from direct human-induced land use, land-use change and forestry activities." Activities can provide a relatively cost-effective way of offsetting emissions, either by increasing the removal of greenhouse gases from the atmosphere (for example, by planting trees), or by reducing emissions (for example, by curbing deforestation).

[3]Under the baseline scenario (business as usual, BAU), the emissions are calculated that would arise without emission reduction efforts up to the end year. The Philippines, for example, used for the calculation of the baseline scenario the historical GDP from 2010–14, an annual average GDP growth of 6.5 percent from 2015–30, and an average population growth of 1.9 percent. This resulted in a certain amount of CO_2 emissions in the end year that serves as the baseline.

Box 1.5 *(continued)*

Figure 1.5.2. Asia: Average Annual Emission Development Necessary to Meet INDCs
(Percent)



Sources: National sources; World Resources Institute; and IMF staff calculations.
Note: INDCs = Intended Nationally Determined Contributions. Only unconditional INDCs were considered.

states have submitted those conditional pledges. To support projects, programs, policies, and other activities in the area of mitigation and adaptation in developing countries, advanced economies are urged to provide $100 billion a year by 2020 to the Green Climate Fund (GCF). Among Asian advanced economies, so far Japan has announced that it would provide ¥1.3 trillion (about $11.5 million) of public and private climate finance (1.3 times higher than the current level) to developing countries by 2020.

To calculate the annual average emission developments necessary to meet the INDCs, the different base years and different types of pledges (emission reduction target vs. reduction of emission intensity) have to be taken into account (Figure 1.5.2). Most of advanced Asia has submitted INDCs that result in emission reductions higher than the pledges of, for example, the United States or European Union. Vanuatu, ranked as the most exposed country to natural disasters and hit by a devastating cyclone in 2015 (IMF 2015a) has also committed to a relatively high annual emission reduction. Some other vulnerable states have made similar commitments. China, India, Malaysia, and Singapore, however, which have submitted INDCs based on emission intensity, do not need to lower the emissions but only need to limit the increase in emissions to meet their pledges.

One major advance of the Paris agreement is the introduction of a "pledge and review" system, but there are challenges to secure commitments. The review system enables a systematic process to check progress against and reset emission reduction objectives every five years. To ensure compliance, nations will meet every five years starting in 2020 and present updated plans on raising their emission cuts. Starting in 2023, they will also have to update the international community on their progress.

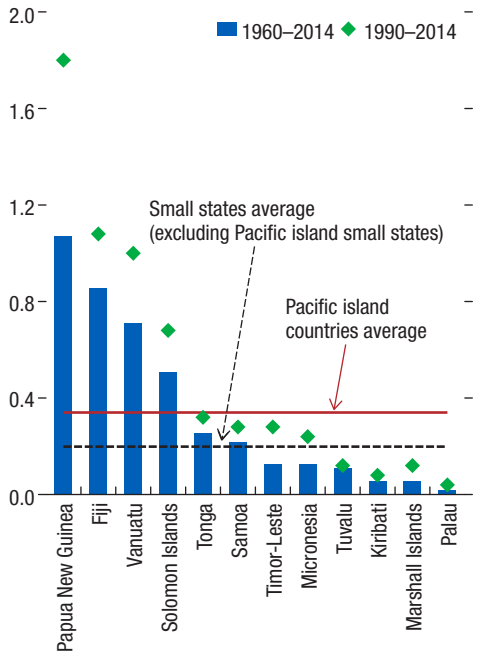
However, a major shortcoming of the Paris agreement is the lack of a binding mechanism for individual parties' reduction contributions. Since there are no penalties provided for, the degree of commitment remains relatively low. In addition, countries did not agree on specific mitigation methods to reduce carbon emissions or to trim down emission intensity of GDP. The pricing of carbon (through a tax or an emission trading system which can be designed to act like a tax) is potentially the most effective mitigation instrument, aligning private and social costs, creating revenues, being straightforward to administer, and fostering innovation toward low-emission technologies (Farid and others 2016).

Box 1.6 Cyclone Winston in Fiji

On February 20–21, Cyclone Winston hit Fiji. Winston was a Category 5 Severe Tropical l Cyclone of unprecedented force and caused floods and inflicted massive damage to the economy. At its peak, Winston had winds gusting to 325 kilometers per hour, making it one of the most severe cyclones ever in the South Pacific. The number of casualties exceeded 40, and more than 45,000 people (or 5 percent of the total population) are sheltering in evacuation centers. Whole villages have been destroyed in Koro Island. In its preliminary damage assessment, the government estimates costs of reconstruction at F$1 billion, or about 12 percent of GDP.

Although the full extent of the disaster will only be known in the coming months, the impact of the cyclone is likely to be macro-critical. Preliminary estimates indicate that the drop in agricultural production (especially sugarcane) and the damage to infrastructure, which will impact manufacturing, could shave up to 1 percentage point off GDP growth this year. Tourism is also expected to be hit, but most tourism-related infrastructure was only minimally impacted, and the cyclone hit during a seasonal lull. A pickup in construction, partly implemented with the help of the government, should provide some offset. Additional fiscal measures could further mitigate the effects on growth.

Figure 1.6.1. Pacific Island Countries: Average Number of Natural Disasters Each Year



Sources: Center for Research on Epidemiology of Disasters, International Disaster Database; and IMF staff estimates.
Note: The averages refer to 1960–2014.

The current account balance is expected to widen substantially, but foreign aid and remittances will help finance part of the infrastructure rebuilding. In the aftermath of the cyclone, Australia, China, Japan, Korea, New Zealand, Singapore, and Vanuatu have provided financial assistance for urgent relief efforts. France and India have provided logistical and material support as well. Multilateral lending institutions, some of which have a substantial presence and projects in Fiji, are expected to step up their assistance. Remittances, which currently amount to 5 percent of GDP, are expected to rise as in previous natural disasters (for example, after Cyclone Evan in 2012).

Although reconstruction spending will put pressure on fiscal and external balances, Fiji has policy buffers. International reserves cover about 5 months of imports, and public debt level is moderate at 48 percent of GDP and, before the cyclone, was expected to be on a downward path. The current account is expected to worsen by some 2–3 percent of GDP in the next couple of years, as import growth accelerates because of reconstruction spending and exports receipts drop. The fiscal balance could worsen by about 2 percent to 6.3 of GDP in 2016 as reconstruction starts. In any case, given Fiji's high and rising susceptibility to natural disasters (Figure 1.6.1), continuing to rebuild policy buffers will be critical to ensure that policies can cushion the blow from such events.

This box was prepared by Roberto Guimaráes-Filho.

Box 1.7. Rise in Services Trade: Looking Beyond Cross-Border Services

The importance of services trade has risen markedly in recent years. Services exports in gross exports increased fivefold since 1995, with its share in gross exports reaching 20 percent in 2014. Moreover, in value-added terms, the importance of services exports has risen even further. For instance, latest trade in value added data as of 2011 suggest that services sectors' exports surpassed 30 percent of the total exports. However, this may still not capture the full scope of services in gross exports as some tradable services may also be hidden in cross-border merchandise categories in the form of *indirect* services (that is, industries providing inputs into fragmented production processes in merchandise sectors).[1] Although such indirect services are not explicitly categorized as cross-border exports, they amplify the importance of services in global trade by providing domestic services tasks such as research and development (R&D), procurement, marketing, and legal services. Hence when these *indirect* services are accounted for, the share of services in global trade rises to more than 50 percent of total exports (Figure 1.7.1). During the past two decades, both indirect and direct services exports have grown annually by about 7 percent on average in terms of both total value added and domestic value added. Services sectors in China, India, and the Philippines particularly stood out by growing at double-digit rates in domestic value-added terms (Figure 1.7.2).

The share of indirect services in domestic value-added exports also remains as substantial as that of direct services. Nearly one-third of services content in domestic value added in exports come from indirect services; this phenomenon is now common in many Asian economies as well as emerging market and advanced economies outside Asia (Figure 1.7.3). For instance, advanced economies' comparative advantage in high value-added manufacturing products often relies on the comparative advantage these economies have in indirect services such as business services including R&D (Koopman, Wang, and Wei 2012). In Asia's case, part of the success in the electronics and transportation equipment sectors in Japan and Korea is indeed driven by a high revealed comparative advantage (RCA) in indirect services that support these sectors (Figure 1.7.4).[2] Compared to two decades ago, emerging Asian economies such as China and the Philippines have also attained a comparative advantage in services tasks in merchandise sectors such as electronics. India has improved its comparative advantage in services, but mostly in direct services categories that provide horizontal business services, such as supporting activities including accounting and information technology services. All in all, the notion that services are not tradable to the same extent as manufactured goods and for the most part do not exhibit the same technology dynamism could be misleading in the presence of rising indirect services that not only enter the value added of goods exported, but also increase productivity and competitiveness of a country's merchandise exports. Against this backdrop, it is important to account for the impact of exchange rate changes on indirect and direct services exports when gauging competitiveness.

Based on a panel data analysis covering 18 sectors, services exports are found to be as responsive as goods exports to changes in the real effective exchange rates (REERs).[3] Specifically, when exports are adjusted by

This box was prepared by Dulani Seneviratne.

[1]Examples of indirect services include industry-specific research and development in industries such as electronics and machinery, intellectual property rights, clinical trials in the pharmaceutical industry, and industry-specific risk management research tasks.

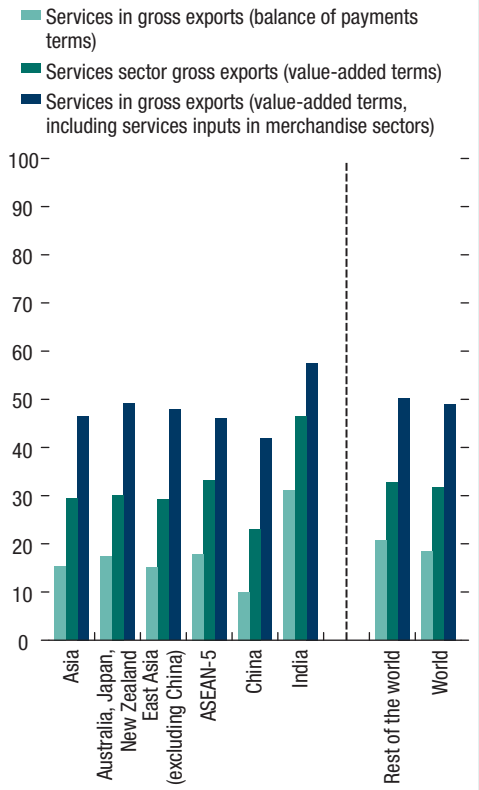
[2]RCA in services is defined as the proportion of services in sector s in country i, as a ratio of the proportion of services in sector s in the world. An RCA above 1 suggests that country i has a revealed comparative advantage in services tasks in that sector.

$$RCA = \frac{\left(\frac{DVA_{i,s}}{\Sigma_{s=1\ldots n} DVA_{i,s}}\right)}{\left(\frac{DVA_{u,s}}{\Sigma_{s=1\ldots n} DVA_{u,s}}\right)}$$

[3]The analysis is based on a panel with country-industry-time fixed effects covering 18 industries and 52 countries for years 1995, 2000, 2005, and 2010; standard errors are clustered at country-industry level to correct for heteroskedasticity and autocorrelation. The baseline specification is: $\Delta X_{i,s,t} = \alpha_t + \alpha_{i,s} + \alpha_{t,s} + \alpha_{i,t} + \beta_1 \Delta REER_{i,s,t} + \beta_2 \Delta Y_{w,t} + \varepsilon_{i,s,t}$, where $\Delta X_{i,s,t}$ is the change in volume of exports at time t measured by domestic value added in exports deflated using GDP deflators, $\Delta REER_{i,s,t}$ is the change in country-industry-specific

Box 1.7 *(continued)*

Figure 1.7.1. Share of Services Exports in Trade, 2011
(Percent of total)



Sources: Center for Research on Epidemiology of Disasters, International Disaster Database; and IMF staff estimates.
Note: The averages refer to 1960–2014. ASEAN-5 includes Indonesia, Malaysia, the Philippines, Singapore, and Thailand.

accounting for the indirect component, the response of services to exchange rate movements is not significantly different from merchandise exports' response to exchange rate movements. However, the response of indirect services is significantly different from direct services' response to exchange rate movements and twice as large, possibly due to complementarities in merchandise exports and indirect services embedded in merchandise sectors. In fact, within merchandise sectors, the difference in the response of indirect services and goods to exchange rate movements is not significantly different (Table 1.7.1). This result also highlights the prevalence of services activities in highly fragmented production processes owing to the increasing presence of global value chains.

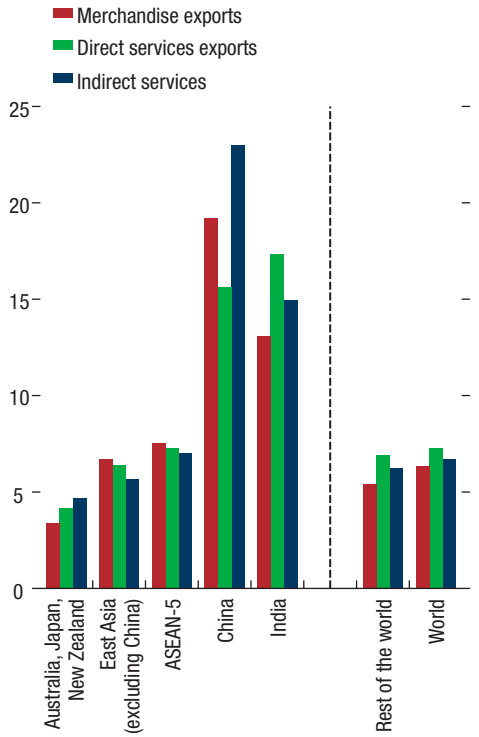
Amid rising tradable services in the form of indirect services, the traditional definition of the services trade balance may understate the true importance of trade in services. Furthermore, policies hindering services productivity are detrimental to goods exports as well, where competitiveness also depends on the comparative advantage in indirect services the sectors producing those goods utilize. A recent Organization for Economic Co-operation and Development study estimates the negative effect of services trade restrictions to be twice as large for exports as opposed to imports, given that such restrictions impose costs on local firms as well (OECD 2014). Indeed, GDP per capita of a country and the services restrictiveness show a strong negative correlation (Figure 1.7.5).

value-added-based REER at time t, and $\Delta Y_{us,t}$ is the change in global demand at time *t*. In constructing the REER, trade partner weights used are based on domestic value-added share of country *i* exported to country *j* in industry *s*, and the price is based on the GDP deflators. For robustness, we also used consumer price index–based REER and export volumes, and the overall result remained unchanged.

Box 1.7 *(continued)*

Figure 1.7.2. Annual Average Growth in Domestic Value-Added Content in Exports, 1995–2011

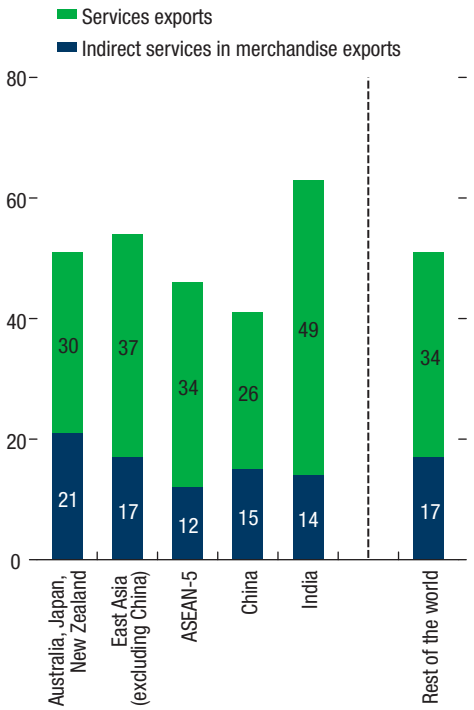
(Percent)



Sources: IMF, Balance of Payments Yearbook database; Organisation for Economic Co-operation and Development and World Trade Organization, Trade in Value-Added database; and IMF staff calculations.
Note: ASEAN-5 includes Indonesia, Malaysia, the Philippines, Singapore, and Thailand.

Figure 1.7.3. Share of Direct and Indirect Services Content in Domestic Value Added in Exports, 2011

(Percent of total domestic value added in exports)



Sources: IMF, Balance of Payments Yearbook database; Organisation for Economic Co-operation and Development and World Trade Organization, Trade in Value-Added database; and IMF staff calculations.
Note: ASEAN-5 includes Indonesia, Malaysia, the Philippines, Singapore, and Thailand.

Figure 1.7.4. Revealed Comparative Advantage (RCA) in Services Tasks in Selected Merchandise and Services Sectors

RCA above 1 | RCA above 2

	Food and beverages	Textiles	Chemicals	Basic metals	Electronics	Transport equipment	Machinery, equipment (other)	Manufacturing (other)	Wholesale, retail, hotels	Transportation and Com.	Financial intermediation	Business services
Australia	2.3	0.3	0.6	2.1	0.1	0.3	0.5	0.3	0.5	1.6	0.3	0.6
Japan	0.1	0.3	1.3	1.7	2.6	2.4	1.9	1.7	0.8	1.3	0.2	0.2
Korea	0.3	0.9	0.9	1.2	2.6	1.8	1.2	0.3	1.0	1.4	0.5	0.6
New Zealand	5.7	1.0	0.5	0.9	0.3	0.1	0.3	0.4	1.4	1.1	0.1	0.3
China	0.5	5.0	0.8	1.4	3.5	0.5	1.4	2.7	1.4	0.3	0.0	0.4
Taiwan Province of China	0.2	1.3	1.3	1.9	3.9	0.5	0.9	0.8	1.8	0.6	0.2	0.1
Hong Kong SAR	0.0	0.0	0.2	0.0	0.1	0.0	0.0	0.0	3.3	1.1	1.8	0.9
India	0.5	1.8	0.7	0.7	0.9	0.4	0.4	4.1	0.6	0.5	0.5	2.7
Indonesia	2.9	2.7	1.0	1.0	1.1	0.4	1.2	1.5	0.7	1.3	0.1	0.4
Malaysia	0.6	0.5	1.8	0.2	0.8	0.1	0.7	0.2	1.4	1.1	0.3	0.4
Philippines	0.1	0.7	0.1	0.1	4.0	0.4	0.2	0.1	2.7	0.8	0.7	0.4
Singapore	0.2	0.0	1.4	0.2	0.7	0.2	0.4	0.3	1.9	1.5	1.7	0.7
Thailand	1.7	2.3	0.6	0.4	1.8	0.2	0.3	2.2	2.1	1.6	0.0	0.3

Source: IMF staff calculations.

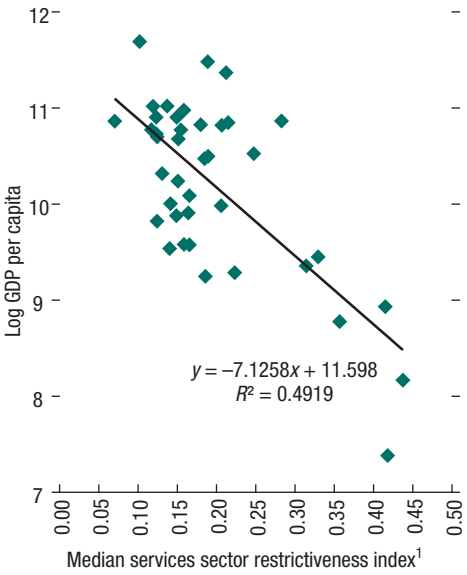
Box 1.7 *(continued)*

Table 1.7.1

	(1)	(2)	(3)	(4)	(5)
	All exporting sectors: services (direct & indirect)	All exporting sectors: merchandise goods	All exporting sectors: direct vs. indirect services	Merchandise exports: merchandise sectors	Merchandise exports: indirect services
$\Delta REER_{i,s,t}$	-0.797***	-0.732***	-0.434**	-0.956***	-0.958***
	(-5.488)	(-4.783)	(-2.024)	(-6.079)	(-5.446)
ΔGlobal demand	0.961***	0.937***	0.970***	0.805***	0.845***
	(7.151)	(6.048)	(7.294)	(6.126)	(5.506)
$\Delta REER_{i,s,t}$ × merchandise sector dummy			-0.549**		
			(-2.363)		
Additional controls	Time, country, industry FE	Time, country, industry FE	Time, country, industry FE, dummy	Time, country, industry FE	Time, country, industry FE
Number of observations	2,386	2,386	2,386	1,428	1,428
R-squared	0.187	0.188	0.190	0.255	0.207
Joint significance (H0: $\alpha 1 = \alpha 2$) [*p*-value]		(1) = (2) : 0.56		(1) = (4) : 0.28	(4) = (5) : 0.98

Source: IMF staff estimates
Note: Robust *t*-statistics in parentheses. FE = fixed effects.
*** $p<0.01$, ** $p<0.05$, * $p<0.1$.

Figure 1.7.5. Services Trade Restrictiveness and GDP per Capita, 2014



Sources: Organisation for Economic Co-operation and Development, Services Trade Restrictiveness database; IMF, World Economic Outlook database; and IMF staff calculations.
[1]Higher index = more restrictions on services.

Table 1.1. Asia: Real GDP

(Year-over-year percent change)

	Actual Data and Latest Projections					Difference from October 2015 WEO		
	2013	2014	2015	2016	2017	2015	2016	2017
Asia	**5.7**	**5.6**	**5.4**	**5.3**	**5.3**	**0.0**	**–0.1**	**–0.1**
Emerging Asia[1]	**7.0**	**6.8**	**6.6**	**6.4**	**6.3**	**0.1**	**0.1**	**0.1**
Australia	2.0	2.6	2.5	2.5	3.0	0.1	–0.4	–0.1
Japan	1.4	0.0	0.5	0.5	–0.1	–0.1	–0.5	–0.5
New Zealand	1.7	3.0	3.4	2.0	2.5	1.2	–0.4	0.1
East Asia	**6.9**	**6.7**	**6.2**	**5.9**	**5.7**	**0.0**	**0.1**	**0.1**
China	7.7	7.3	6.9	6.5	6.2	0.1	0.2	0.2
Hong Kong SAR	3.1	2.6	2.4	2.2	2.4	–0.1	–0.5	–0.4
Korea	2.9	3.3	2.6	2.7	2.9	–0.1	–0.5	–0.7
Taiwan Province of China	2.2	3.9	0.7	1.5	2.2	–1.5	–1.1	–0.7
Macao SAR	11.2	–0.9	–20.3	–7.2	0.7	…	…	…
South Asia	**6.5**	**7.1**	**7.2**	**7.3**	**7.4**	**0.0**	**–0.1**	**–0.1**
Bangladesh	6.0	6.3	6.4	6.6	6.9	–0.1	–0.2	–0.1
India	6.6	7.2	7.3	7.5	7.5	0.0	0.0	0.0
Sri Lanka	3.4	4.5	5.2	5.0	5.0	–1.3	–1.5	–1.5
Nepal	4.1	5.4	3.4	0.5	4.5	0.0	–3.9	–0.9
ASEAN	**5.2**	**4.7**	**4.7**	**4.7**	**5.0**	**0.1**	**–0.3**	**–0.3**
Brunei Darussalam	–2.1	–2.3	–0.2	–2.0	3.0	1.0	–5.2	–0.8
Cambodia	7.4	7.1	6.9	7.0	7.0	–0.1	–0.2	–0.2
Indonesia	5.6	5.0	4.8	4.9	5.3	0.1	–0.2	–0.2
Lao P.D.R.	8.0	7.4	7.0	7.4	7.4	–0.5	–0.6	–0.1
Malaysia	4.7	6.0	5.0	4.4	4.8	0.3	–0.1	–0.2
Myanmar	8.4	8.7	7.0	8.6	7.7	–1.5	0.2	–0.6
Philippines	7.1	6.1	5.8	6.0	6.2	–0.2	–0.3	–0.3
Singapore	4.7	3.3	2.0	1.8	2.2	–0.2	–1.1	–1.0
Thailand	2.7	0.8	2.8	3.0	3.2	0.3	–0.2	–0.4
Vietnam	5.4	6.0	6.7	6.3	6.2	0.2	–0.1	0.2
Pacific island countries and other small states[2]	**1.8**	**3.3**	**3.7**	**3.3**	**3.4**	**0.1**	**–0.1**	**0.3**
Bhutan	4.9	6.4	7.7	8.4	8.6	0.0	0.0	0.0
Fiji	4.7	5.3	4.3	2.5	3.9	0.0	–1.2	0.4
Kiribati	5.8	2.4	4.2	2.7	2.5	1.1	0.9	0.4
Maldives	4.7	6.5	1.9	3.5	3.9	–1.0	0.4	–0.1
Marshall Islands	–1.1	1.0	1.6	1.8	1.8	–0.1	–0.4	0.0
Micronesia	–3.6	–3.4	–0.2	1.1	0.7	0.0	–0.6	–0.3
Palau	–2.4	4.2	9.4	2.0	5.0	5.4	–0.7	2.5
Papua New Guinea	5.5	8.5	9.0	3.1	4.4	–3.3	0.1	1.3
Samoa	–1.9	1.2	1.7	1.2	–0.1	–0.9	–0.4	0.7
Solomon Islands	3.0	2.0	3.3	3.0	3.3	0.0	0.0	–0.2
Timor-Leste	2.8	5.5	4.3	5.0	5.5	0.0	0.0	0.0
Tonga	–0.6	2.0	2.6	2.8	2.6	–0.1	0.4	0.6
Tuvalu	1.3	2.2	2.6	3.9	1.9	–0.9	–0.1	0.0
Vanuatu	2.0	2.3	–0.8	4.5	4.0	1.2	–0.5	–0.5
Mongolia	11.6	7.9	2.3	0.4	2.5	–1.2	–3.2	–1.2
Memorandum								
World	3.3	3.4	3.1	3.2	3.5	0.0	–0.4	–0.3
Asia excluding China	4.3	4.3	4.2	4.4	4.6	–0.1	–0.3	–0.3
Emerging Asia excluding China[1]	5.9	6.1	6.2	6.3	6.5	0.1	–0.1	–0.1

Sources: IMF, World Economic Outlook database (WEO); and IMF staff projections.

[1] Emerging Asia includes China, India, Indonesia, Malaysia, the Philippines, Thailand, and Vietnam. India's data are reported on a fiscal-year basis.

[2] Simple average of Pacific island countries and other small states, which include Bhutan, Fiji, Kiribati, Maldives, the Marshall Islands, Micronesia, Palau, Papua New Guinea, Samoa, Solomon Islands, Timor-Leste, Tonga, Tuvalu, and Vanuatu.

Table 1.2. Asia: General Government Balances

(Percent of fiscal-year GDP)

	Actual Data and Latest Projections					Difference from October 2015 WEO		
	2013	2014	2015	2016	2017	2015	2016	2017
Asia	**–3.1**	**–2.5**	**–3.2**	**–3.3**	**–2.9**	**–0.2**	**–0.4**	**–0.3**
Emerging Asia[1]	**–2.7**	**–2.6**	**–3.7**	**–3.9**	**–3.6**	**–0.4**	**–0.4**	**–0.3**
Australia	–2.8	–2.9	–2.8	–2.4	–1.5	–0.4	–0.6	–0.6
Japan	–8.5	–6.2	–5.2	–4.9	–3.9	0.7	–0.4	0.2
New Zealand	–1.5	–0.1	0.3	–0.1	0.1	0.6	0.0	0.0
East Asia	**–0.8**	**–0.8**	**–2.5**	**–2.7**	**–2.3**	**–0.8**	**–0.7**	**–0.5**
China	–0.8	–0.9	–2.7	–3.1	–2.7	–0.8	–0.8	–0.6
Hong Kong SAR	1.0	3.6	1.5	1.4	1.5	–2.0	–1.3	–0.6
Korea	0.6	0.4	–0.2	0.3	0.5	0.3	0.0	–0.1
Taiwan Province of China	–3.2	–2.7	–2.7	–2.4	–2.1	0.0	0.0	0.0
Macao SAR	30.2	21.4	12.7	11.9	12.3	…	…	…
South Asia	**–7.3**	**–6.7**	**–6.9**	**–6.8**	**–6.5**	**–0.1**	**–0.1**	**0.0**
Bangladesh	–3.4	–3.1	–3.9	–4.4	–4.3	–0.7	–0.6	–0.7
India	–7.7	–7.0	–7.2	–7.0	–6.7	0.0	0.0	0.0
Sri Lanka	–5.9	–6.0	–6.1	–5.4	–5.4	–0.2	1.0	0.8
Nepal	2.1	1.5	1.0	–1.4	–2.0	–0.4	0.8	0.0
ASEAN	**–1.5**	**–1.5**	**–2.1**	**–2.4**	**–2.3**	**0.3**	**–0.1**	**–0.1**
Brunei Darussalam	12.5	2.9	–9.8	–25.1	–17.4	10.0	–6.9	–4.4
Cambodia	–2.1	–1.3	0.1	–2.7	–1.9	2.1	–0.1	1.0
Indonesia	–2.2	–2.1	–2.5	–2.7	–2.8	–0.2	–0.4	–0.6
Lao P.D.R.	–5.6	–4.6	–2.9	–4.0	–4.5	2.4	2.0	1.9
Malaysia	–4.1	–2.7	–3.0	–3.3	–2.9	0.5	–0.1	–0.1
Myanmar	–2.1	0.0	–4.7	–4.7	–4.2	0.1	0.0	0.4
Philippines	0.2	0.9	0.0	–0.6	–0.8	0.1	0.0	0.0
Singapore	5.6	3.3	1.1	2.0	2.0	0.0	–0.1	–0.2
Thailand	0.4	–0.8	0.3	–0.4	–0.5	1.5	1.0	0.9
Vietnam	–7.4	–6.1	–6.5	–6.4	–5.8	0.4	0.3	0.1
Pacific island countries and other small states[2]	**4.4**	**5.1**	**0.7**	**–4.1**	**–4.0**	**2.0**	**–2.7**	**–3.4**
Bhutan	–4.0	–3.8	–2.4	–1.5	–0.7	0.0	0.0	0.0
Fiji	–0.6	–4.3	–3.2	–5.1	–2.7	2.6	–2.2	–0.7
Kiribati	9.2	20.2	–1.0	–8.3	2.6	0.1	–1.0	4.9
Maldives	–7.8	–9.4	–8.7	–13.6	–18.4	–0.9	–6.7	–11.0
Marshall Islands	0.7	0.6	0.4	0.9	–0.9	–2.0	–1.4	–0.5
Micronesia	2.9	11.2	3.0	3.0	2.3	0.2	–1.0	–1.7
Palau	0.7	3.5	5.3	4.5	2.9	3.3	3.4	1.9
Papua New Guinea	–8.0	–7.2	–7.7	–6.0	–4.7	–1.9	–4.9	–4.1
Samoa	–3.8	–5.3	–3.3	–2.2	–1.6	0.3	0.1	–0.1
Solomon Islands	4.2	1.7	–0.3	–1.4	–0.6	1.8	–0.9	–0.2
Timor-Leste	42.1	25.9	4.2	–10.4	–20.5	–5.3	–19.8	–35.0
Tonga	0.4	0.8	–2.6	–3.7	–2.5	–1.9	–2.9	–1.8
Tuvalu	26.3	36.3	27.7	–4.1	–0.4	28.6	1.3	1.2
Vanuatu	–0.2	1.0	–1.5	–9.8	–10.8	3.1	–2.1	–1.1
Mongolia	–8.9	–11.1	–8.3	–9.1	–7.1	1.4	–1.1	–0.4

Sources: IMF, World Economic Outlook database (WEO); and IMF staff projections.

[1] Emerging Asia includes China, India, Indonesia, Malaysia, the Philippines, Thailand, and Vietnam.

[2] Simple average of Pacific island countries and other small states, which include Bhutan, Fiji, Kiribati, Maldives, the Marshall Islands, Micronesia, Palau, Papua New Guinea, Samoa, Solomon Islands, Timor-Leste, Tonga, Tuvalu, and Vanuatu.

Table 1.3. Asia: Current Account Balance

(Percent of GDP)

	Actual Data and Latest Projections					Difference from October 2015 WEO		
	2013	2014	2015	2016	2017	2015	2016	2017
Asia	**1.3**	**1.7**	**2.7**	**2.7**	**2.2**	**0.1**	**0.3**	**0.3**
Emerging Asia[1]	**0.8**	**1.5**	**2.0**	**1.8**	**1.2**	**–0.2**	**–0.2**	**–0.1**
Australia	–3.4	–3.0	–4.6	–3.6	–3.5	–0.6	0.5	–0.2
Japan	0.8	0.5	3.3	3.8	3.7	0.3	0.8	0.7
New Zealand	–3.1	–3.1	–3.0	–3.7	–3.7	1.7	1.9	1.8
East Asia	**2.5**	**2.9**	**3.7**	**3.6**	**3.0**	**–0.1**	**0.1**	**0.2**
China	1.6	2.1	2.7	2.6	2.1	–0.4	–0.2	0.1
Hong Kong SAR	1.5	1.3	3.0	3.1	3.2	0.8	0.6	0.4
Korea	6.2	6.0	7.7	8.2	7.4	0.6	1.5	1.5
Taiwan Province of China	10.8	12.3	14.5	15.0	14.4	2.1	3.2	3.3
Macao SAR	42.6	38.0	26.2	20.0	17.2	…	…	…
South Asia	**–1.5**	**–1.2**	**–1.2**	**–1.4**	**–2.0**	**0.1**	**0.1**	**–0.1**
Bangladesh	1.2	–0.1	–1.1	–1.3	–1.5	–0.2	–0.2	–0.3
India	–1.7	–1.3	–1.3	–1.5	–2.1	0.1	0.1	–0.1
Sri Lanka	–3.8	–2.7	–2.0	–0.8	–1.4	0.0	1.2	0.6
Nepal	3.3	4.6	5.0	6.2	0.5	0.0	8.9	2.4
ASEAN	**1.8**	**2.9**	**3.5**	**2.9**	**2.2**	**0.4**	**0.3**	**0.0**
Brunei Darussalam	20.9	27.8	7.8	–6.9	0.7	10.9	–4.8	–4.1
Cambodia	–12.3	–12.1	–11.2	–8.3	–8.0	–0.1	2.3	2.0
Indonesia	–3.2	–3.1	–2.1	–2.6	–2.8	0.1	–0.5	–0.8
Lao P.D.R.	–28.9	–23.2	–23.2	–21.0	–19.8	5.1	1.7	0.4
Malaysia	3.5	4.3	2.9	2.3	1.9	0.7	0.2	0.1
Myanmar	–4.9	–5.6	–8.9	–8.4	–8.0	0.0	–0.1	–0.3
Philippines	4.2	3.8	2.9	2.6	2.4	–2.1	–1.9	–1.6
Singapore	17.9	17.4	19.7	21.2	20.5	–1.1	3.2	3.8
Thailand	–1.2	3.8	8.8	8.0	5.7	2.6	2.6	2.0
Vietnam	4.6	5.0	1.4	0.6	0.2	0.7	1.5	0.4
Pacific island countries and other small states[2]	**–6.2**	**–3.4**	**–1.9**	**–7.5**	**–7.7**	**6.8**	**3.3**	**–0.4**
Bhutan	–22.7	–23.1	–26.7	–24.9	–26.1	0.1	0.1	0.1
Fiji	–9.8	–7.2	–5.4	–7.9	–6.5	0.9	–1.3	0.3
Kiribati	8.3	24.0	45.7	18.7	–2.9	70.6	45.5	17.9
Maldives	–4.3	–4.1	–8.0	–7.8	–14.7	–3.4	–2.0	–9.2
Marshall Islands	–14.7	–7.3	–0.8	2.7	3.3	0.2	6.7	9.6
Micronesia	–10.0	6.8	1.0	–0.1	–0.7	0.8	0.6	1.1
Palau	–9.3	–11.8	–0.5	0.2	–10.4	7.4	8.6	–0.8
Papua New Guinea	–31.8	–4.2	2.8	0.8	3.6	–4.7	–6.5	–3.9
Samoa	–0.2	–7.6	–4.0	–4.1	–3.8	2.9	1.3	1.3
Solomon Islands	–3.5	–4.3	–2.6	–4.5	–7.8	8.6	9.5	7.2
Timor-Leste	42.7	25.1	16.5	2.0	–11.9	0.6	–13.7	–29.5
Tonga	–6.2	–8.5	–7.7	–6.6	–6.6	–1.7	–0.2	–1.9
Tuvalu	–24.1	–26.3	–26.7	–57.7	–8.9	10.1	0.3	3.8
Vanuatu	–1.4	0.5	–10.1	–15.6	–15.1	3.4	–2.6	–2.8
Mongolia	–25.4	–11.5	–4.8	–10.7	–17.7	3.6	8.8	3.2

Sources: IMF, World Economic Outlook (WEO) database (WEO); and IMF staff projections.

[1] Emerging Asia includes China, India, Indonesia, Malaysia, the Philippines, Thailand, and Vietnam. India's data are reported on a fiscal-year basis

[2] Simple average of Pacific island countries and other small states, which include Bhutan, Fiji, Kiribati, Maldives, the Marshall Islands, Micronesia, Palau, Papua New Guinea, Samoa, Solomon Islands, Timor-Leste, Tonga, Tuvalu, and Vanuatu.

Table 1.4. Asia: Consumer Prices

(Year-over-year percent change)

	Actual Data and Latest Projections					Difference from October 2015 WEO		
	2013	2014	2015	2016	2017	2015	2016	2017
Asia	**3.8**	**3.2**	**2.3**	**2.4**	**2.9**	**–0.2**	**–0.4**	**–0.2**
Emerging Asia[1]	**4.6**	**3.4**	**2.6**	**2.8**	**3.1**	**–0.2**	**–0.3**	**–0.2**
Australia	2.5	2.5	1.5	2.1	2.4	–0.3	–0.5	0.0
Japan	0.4	2.7	0.8	–0.2	1.2	0.1	–0.6	–0.4
New Zealand	1.1	1.2	0.3	1.5	1.9	0.1	0.0	–0.1
East Asia	**2.4**	**1.9**	**1.3**	**1.7**	**2.0**	**–0.1**	**–0.1**	**–0.2**
China	2.6	2.0	1.4	1.8	2.0	–0.1	0.0	–0.2
Hong Kong SAR	4.3	4.4	3.0	2.5	2.6	0.1	–0.5	–0.5
Korea	1.3	1.3	0.7	1.3	2.2	0.0	–0.5	–0.8
Taiwan Province of China	0.8	1.2	–0.3	0.7	1.1	–0.2	–0.3	–0.2
Macao SAR	5.5	6.0	4.6	3.0	3.0	…	…	…
South Asia	**9.2**	**6.0**	**4.9**	**5.4**	**5.4**	**–0.5**	**–0.2**	**–0.1**
Bangladesh	7.5	7.0	6.4	6.7	6.9	0.0	0.1	0.1
India	9.4	5.9	4.9	5.3	5.3	–0.5	–0.2	–0.1
Sri Lanka	6.9	3.3	0.9	3.4	4.5	–0.8	0.0	0.2
Nepal	9.9	9.0	7.2	10.2	11.1	0.0	2.2	2.8
ASEAN	**4.5**	**4.4**	**3.4**	**2.9**	**3.5**	**–0.4**	**–1.2**	**–0.3**
Brunei Darussalam	0.4	–0.2	–0.4	0.2	0.1	–0.4	0.1	0.0
Cambodia	3.0	3.9	1.2	2.1	2.8	0.1	0.3	–0.1
Indonesia	6.4	6.4	6.4	4.3	4.5	–0.4	–1.1	–0.2
Lao P.D.R.	6.4	5.5	5.3	1.5	2.3	0.0	0.0	0.0
Malaysia	2.1	3.1	2.1	3.1	2.9	–0.3	–0.7	–0.1
Myanmar	5.7	5.9	11.5	9.6	8.2	–0.7	–2.2	–1.0
Philippines	2.9	4.2	1.4	2.0	3.4	–0.5	–1.4	–0.1
Singapore	2.4	1.0	–0.5	0.2	1.3	–0.5	–1.6	–0.6
Thailand	2.2	1.9	–0.9	0.2	2.0	0.0	–1.3	–0.2
Vietnam	6.6	4.1	0.6	1.3	2.3	–1.6	–1.7	–1.5
Pacific island countries and other small states[2]	**3.3**	**2.5**	**1.7**	**2.2**	**2.6**	**–0.7**	**–0.5**	**–0.3**
Bhutan	8.6	9.6	7.2	6.1	6.0	0.0	0.0	0.0
Fiji	2.9	0.5	2.8	3.3	2.8	0.0	0.5	0.0
Kiribati	–1.5	2.1	1.4	0.3	0.7	0.0	0.0	0.0
Maldives	4.0	2.5	1.4	2.1	2.6	0.4	–0.4	–0.6
Marshall Islands	1.9	1.1	–4.0	–1.3	0.8	–3.4	–2.3	–1.7
Micronesia	2.0	0.6	–1.0	1.9	1.3	0.0	0.0	–0.7
Palau	2.8	4.0	2.2	2.5	2.5	0.4	0.5	0.5
Papua New Guinea	5.0	5.3	6.0	6.0	5.0	0.0	0.6	0.0
Samoa	0.6	–0.4	0.9	1.2	2.0	–0.4	–1.0	–0.1
Solomon Islands	5.4	5.2	–0.4	2.1	2.6	–4.2	–1.2	–1.4
Timor-Leste	9.5	0.7	0.6	1.5	3.8	–0.5	–0.9	0.8
Tonga	1.5	1.2	–0.1	–0.3	0.7	–1.0	–1.9	–1.3
Tuvalu	2.0	1.1	3.3	3.0	2.9	–1.4	–0.5	0.0
Vanuatu	1.3	1.0	3.3	2.5	3.2	0.2	–0.5	0.8
Mongolia	8.6	12.9	5.9	1.9	4.3	–1.7	–5.6	–3.1

Sources: IMF, World Economic Outlook database (WEO); and IMF staff projections.

[1] Emerging Asia includes China, India, Indonesia, Malaysia, the Philippines, Thailand, and Vietnam. India's data are reported on a fiscal-year basis.

[2] Simple average of Pacific island countries and other small states, which include Bhutan, Fiji, Kiribati, Maldives, the Marshall Islands, Micronesia, Palau, Papua New Guinea, Samoa, Solomon Islands, Timor-Leste, Tonga, Tuvalu, and Vanuatu.