I. Navigating an Uncertain Global Environment

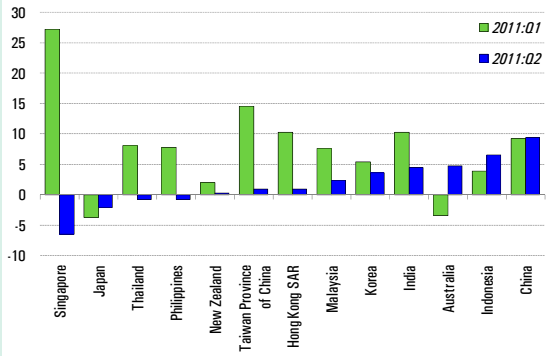
A. Resilient Domestic Demand Amid Pockets of Inflation Pressure

Global economic activity weakened in the first half of 2011. In advanced economies, the recovery was dragged down by the continued fragility in private sector balance sheets, as financial markets were buffeted by a series of shocks, including greater euro area sovereign risks and the credit downgrade of the United States. The increased uncertainty over the global outlook and greater risk aversion in financial markets spilled over to Asia in August and September 2011, with leveraged investors liquidating profitable positions in the region to cover their losses elsewhere. As a result, many Asian financial and currency markets experienced declines of magnitudes similar to those experienced in mid 2010.

After a strong start in the first quarter of 2011, economic activity in Asia has also moderated (Figure 1.1). Sluggish demand in advanced economies and supply-chain disruptions after the tragic March 2011 earthquake and tsunami in Japan led to a broad-based decline in industrial production and export growth across Asia (Figure 1.2). High frequency indicators, including manufacturing purchasing managers' indices (PMI) and export orders, suggest that the moderation of activity continued in the third quarter of 2011.

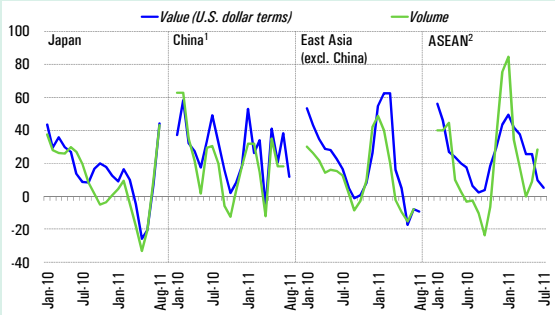
By contrast, Asian domestic demand has proven generally resilient in 2011. Employment gains and real wage growth supported private consumption, and high capacity utilization boosted private investment. Financial conditions have remained accommodative in most of Asia (Figure 1.3), as increases in interest rates were offset partly by higher inflation in some economies (such as Korea, Malaysia, and Thailand), and real effective exchange

Figure 1.1. Selected Asia: Real GDP at Market Prices
(Quarter–over–quarter percent change; SAAR)



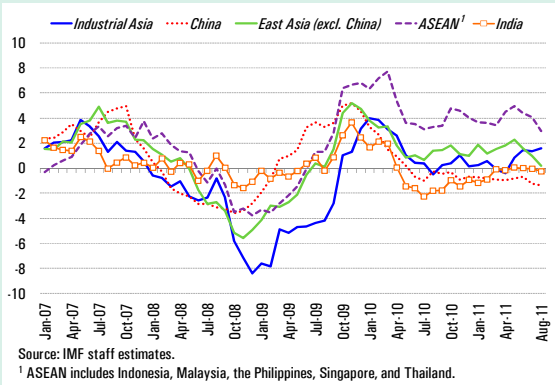
Sources: CEIC Data Company Ltd.; Haver Analytics; and IMF staff calculations.

Figure 1.2. Selected Asia: Exports of Goods
(3–month percent change of 3–month moving average, SAAR)



Sources: CEIC Data Company Ltd.; Haver Analytics; and IMF staff calculations.
[1] Adjusted for Chinese new year effect.
[2] ASEAN includes Indonesia, Malaysia, the Philippines, Singapore, Thailand, and Vietnam.

Figure 1.3. Selected Asia: Financial Condition Index (FCI)
(Index; increase = loosening of financial conditions, zero=neutral)

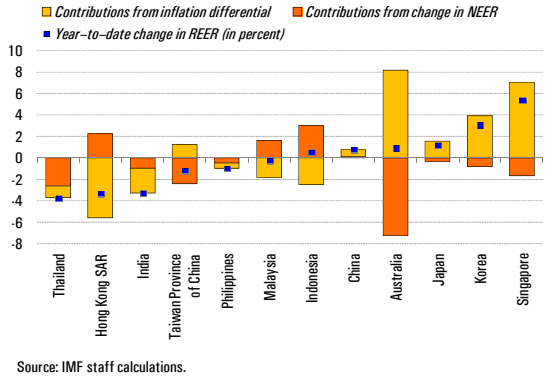


Source: IMF staff estimates.
[1] ASEAN includes Indonesia, Malaysia, the Philippines, Singapore, and Thailand.

Note: The main authors of this chapter are Sonali Jain-Chandra and Olaf Unteroberdoerster.

Figure 1.4. Selected Asia: Contributions to Year-to-Date Changes in REER

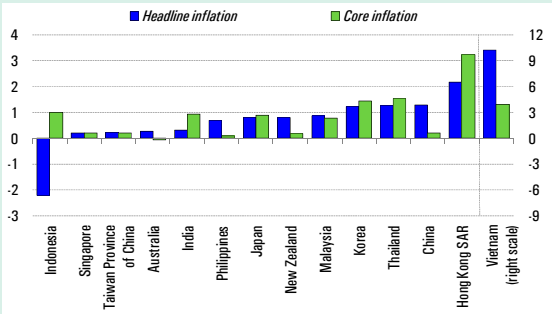
(In percentage points; as of August 2011)



Source: IMF staff calculations.

Figure 1.5. Selected Asia: Change in Inflation Rates since January 2011[1]

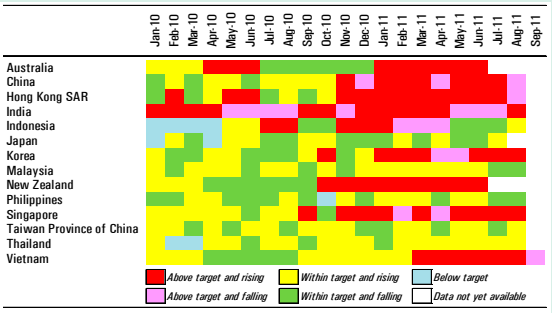
(In percentage points; change in year–over–year rates)



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

[1] Data as of August 2011 except for Australia and New Zealand (2011:Q2); Japan (July 2011), and Vietnam (September 2011).

Figure 1.6. Selected Asia: Inflation Target Tracker[1]



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

[1] Year–over–year headline inflation rates are used (core inflation for Thailand). For economies without any explicit target, one standard deviation bands around 2000–10 average headline inflation (year over year) used as target band.

rates have generally not strengthened during 2011, except in a few commodity exporters, including Indonesia, Australia, and New Zealand, as well as in Korea and Singapore (Figure 1.4). By contrast, monetary policy normalization and slowing credit growth have contributed to tighter financial conditions in China and India.

Notwithstanding the moderation in growth, inflationary pressures across the Asia and Pacific region remain elevated. Headline inflation continued to increase in most economies and averaged 5.5 percent (year over year) in July 2011, compared with 4.6 percent in January (Figure 1.5). In particular, inflation has continued to rise in China, Hong Kong SAR, Korea, and Vietnam, and remains above central banks' explicit or implicit targets in many cases (Figure 1.6). Inflation has been driven by commodity prices, but also in many economies by sustained demand pressures. Indeed, core inflation has increased in Hong Kong SAR, India, Indonesia, Korea, Malaysia, and Thailand, as second-round effects of previous commodity price rises have fed through to generalized inflationary pressures. Inflation expectations have also risen since the first quarter of 2011 in a number of economies. In contrast to the rest of the region, Japan's deflationary pressures persisted, with core inflation that excludes food and energy prices still in negative territory as of July 2011.

The dynamics and composition of growth in 2011 have varied across Asia:

- In much of Industrial Asia, economic activity has been significantly influenced by natural disasters. In Japan, the earthquake and tsunami led to a sharp contraction in domestic demand. In Australia, cyclones and flooding disrupted mineral output, although strong global demand for coal and iron pushed the terms of trade to 60-year highs and supported private investment. New Zealand's economy, however, continued to expand despite the impact of the January 2011 earthquake.

- In East Asia, growth has been held up by strong domestic demand. In China, gains in wages and

employment supported private consumption, whereas strong private investment, including real estate investment, offset a slowdown in public investment. Growing financial and economic integration with the mainland helped cushion Hong Kong SAR and Taiwan Province of China against weaker external demand from advanced economies. In Korea, continuing easy financial conditions and wage growth supported private domestic demand.

- In several ASEAN economies, strong domestic demand, particularly investment, helped mitigate the slowdown in export growth. In addition, commodity exporters, such as Indonesia and Malaysia, benefited from the rise in commodity prices through mid-2011. Inflation concerns have persisted in Vietnam (Box 1.1).

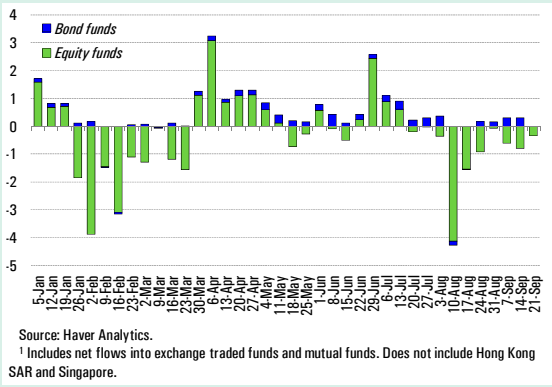
- In South Asia, private consumption remained robust in India on account of rising disposable income, but investment was subdued partly on concerns over governance and the global outlook. In Bangladesh, buoyant credit growth amid a still-accommodative monetary stance continued to fuel domestic demand, while in Sri Lanka activity benefited from greater political stability. In Nepal, domestic demand was subdued on investor concerns over banking system fragilities and a decline in remittances from the Middle East.

- In other low-income countries and Pacific Island economies, commodity exporters such as Mongolia and Papua New Guinea benefited from high mineral prices in the first half of 2011, and new garment quotas in European markets contributed to buoyant exports in Cambodia. In Mongolia, growth has also been fueled by expansionary macroeconomic policies, which boosted underlying inflation above the authorities' target. However, in a number of Pacific Island economies, high commodity prices continued to weigh on growth, although the strong Australian dollar boosted tourism flows.

Net capital flows into emerging Asia have moderated so far in 2011 relative to 2010, following the sharp rise in global risk aversion. Within the region, however, there are large disparities: in the first half of 2011, capital inflows remained strong in China, reflecting increased borrowing by mainland firms from Hong Kong SAR, and in India and Indonesia, where strong growth prospects and interest rate differentials attracted large equity and bond inflows, respectively. In East Asia (excluding China) and Singapore, however, concerns about slowing growth led to net capital outflows. Although direct investment and banking inflows to Asia have been relatively resilient, equity and bond inflows have been volatile, with equity recording sharp outflows since August 2011 (Figure 1.7).

Figure 1.7. Emerging Asia: Equity and Bond Funds—Weekly Net Flows in 2011[1]

(In billions of U.S. dollars)



Source: Haver Analytics.

[1] Includes net flows into exchange traded funds and mutual funds. Does not include Hong Kong SAR and Singapore.

B. An Uncertain Global Environment Poses Downside Risks

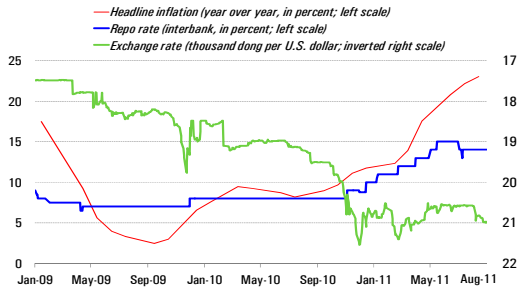
Looking ahead, we expect growth in Asia to be slightly lower than envisaged in the April 2011 *Regional Economic Outlook* (IMF, 2011b). For the region, growth is forecast to average 6¼ percent in 2011 and 6¾ percent in 2012, about ½ and ¼ percentage point less than our April 2011 forecast (Table 1.1).

The somewhat weaker growth forecast for Asia mainly reflects the deteriorating outlook for exports to advanced economies. The downward revision of

Box 1.1. Vietnam: Stabilization at the Crossroads

Vietnam entered 2011 with a legacy of expansionary policies adopted in response to the global economic crisis. Accommodative monetary policy and fiscal expansion sustained for too long had led to excessively high investment. The ensuing erosion of market confidence in the currency, together with rising commodity prices, resulted in a spike of inflation (figure). To tackle these challenges, the authorities in February 2011 announced a comprehensive stabilization package centered on monetary tightening as well as a rationalization of public investment. The dong was devalued and the flexibility of the official exchange rate increased, key policy interest rates were raised in several steps, and administrative measures taken to stem the flow of domestic currency into gold and increase the supply of foreign exchange to the financial system.

Vietnam: Inflation, Repo Rate, and Exchange Rate



Sources: Country authorities; and IMF staff calculations.

This strategy has been broadly successful, but has now reached a crossroads. The exchange rate stabilized at the new level, and credit growth began to slow. International reserves rose substantially. However, output growth slowed, while inflation continued to rise rapidly. With slower growth, pressure has been building on the State Bank of Vietnam (SBV) to loosen policies once again. In response, the SBV lowered the repo rate in July 2011, suspended recently introduced limits to the loan-to-deposit ratio, and recommended that banks lower lending rates. The SBV also kept dong liquidity at high levels, to support smaller and weaker banks. With confidence still fragile, these steps have led markets to question the authorities' resolve to sustain tight policies, although the prime minister has reemphasized the importance of low inflation and the SBV has maintained its credit growth target of below 20 percent.

For Vietnam to overcome macroeconomic instability and preserve the gains already made in the first part of 2011, it is critical to maintain tight monetary policies—supported by accelerated fiscal consolidation—until inflation expectations are firmly under control, confidence in the dong is restored, and reserves are rebuilt further. At the same time, it is important to strengthen the financial system through building capital and liquidity cushions, promoting the restructuring of small banks, and continuing to curb foreign currency lending.

Note: The main author of this box is Alexander Pitt.

about ¾ percentage point to advanced economies' growth in 2012 is estimated to have a first-round impact on growth in the region of between ¼ and ½ percentage point, depending on the degree of exposure of individual economies to exports. The impact would be smaller for domestic-demand-based economies, such as China, India, and Indonesia, and larger for highly open economies that specialize in income-sensitive, high-tech consumer and investment goods, such as Korea, Singapore, and Taiwan Province of China. Adverse regional supply-chain disruptions are not expected to play a major role in the future, as Japanese production in key sectors returned to normal levels by late summer (Figure 1.8).

The fundamentals for domestic demand in the region remain strong and are expected to cushion the impact of weaker external demand on overall growth for the rest of 2011 and in 2012 (Figure 1.9):[1]

[1] Model-based staff estimates of the drivers of private consumption and investment in Asia suggest that labor market conditions (wage and employment growth) are the leading drivers of consumption growth, while capacity utilization and consumption growth are major drivers of investment.

- In Industrial Asia, reconstruction investment will be the main driver of domestic demand growth in Japan, while investment in mining will propel growth in Australia.

- In East Asia, more spending on social housing is expected to support investment in China. Moreover, accommodative financial conditions and high capacity utilization should boost private investment in Korea, while strong employment is expected to sustain private consumption in Hong Kong SAR.

- In more advanced ASEAN economies, in addition to favorable labor market conditions and high capacity utilization, greater public investment projects will provide an additional boost to domestic demand in Indonesia, Malaysia, the Philippines, and Singapore. In Thailand, the new government is seeking to stimulate domestic demand through measures to increase disposable income and private investment.

- In India, robust disposable income growth (including from high agricultural prices) and accommodative financial conditions are expected to support private consumption and investment.

Headline inflation is expected to peak during the second half of 2011 and decelerate gradually in 2012. But inflation is expected to remain above the mid-point of the target range in most Asian economies (Figure 1.10), as commodity prices fall only slightly, domestic demand pressures persist, and inflation spillovers from key regional economies remain elevated. The September 2011 *World Economic Outlook,* (WEO) (IMF, 2011d) projects fuel and nonfuel commodity price inflation in 2012 to recede by 3.5 percent and 4.5 percent, respectively—a mild deceleration relative to the sharp run up in 2010–11. Moreover, output gaps in many Asian economies will remain positive in 2012. Finally, inflation in China is expected to settle at levels that, while lower than the peak in 2011, are higher than in the recent

Table 1.1. Asia: Real GDP

(Year-over-year percent change)

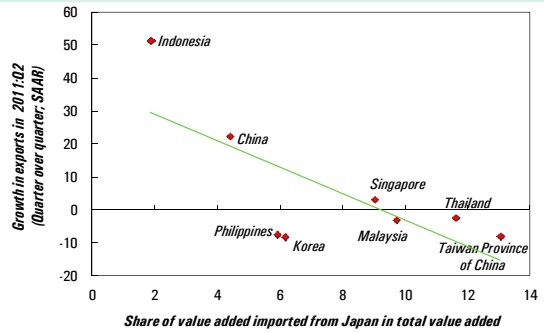
	Actual data and latest projections			Difference from April 2011	
	2010	2011	2012	2011	2012
Industrial Asia	**3.7**	**0.0**	**2.5**	**–1.7**	**0.2**
Australia	2.7	1.8	3.3	–1.2	–0.2
Japan	4.0	–0.5	2.3	–1.9	0.2
New Zealand	1.7	2.0	3.8	1.1	–0.3
East Asia	**9.8**	**8.5**	**8.2**	**–0.2**	**–0.4**
China	10.3	9.5	9.0	–0.1	–0.5
Hong Kong SAR	7.0	6.0	4.3	0.6	0.1
Korea	6.2	4.0	4.4	–0.5	0.2
Taiwan Province of China	10.9	5.2	5.0	–0.2	–0.2
South Asia	**9.8**	**7.7**	**7.4**	**–0.4**	**–0.3**
Bangladesh	6.4	6.3	6.1	0.0	–0.5
India	10.1	7.8	7.5	–0.4	–0.3
Sri Lanka	8.0	7.0	6.5	0.0	0.0
ASEAN	**7.6**	**5.3**	**5.5**	**–0.1**	**–0.1**
Brunei Darussalam	2.6	2.8	2.2	–0.3	–0.5
Cambodia	6.0	6.7	6.5	0.2	0.0
Indonesia	6.1	6.4	6.3	0.2	–0.2
Lao P.D.R.	7.9	8.3	8.4	0.8	1.0
Malaysia	7.2	5.2	5.1	–0.3	–0.1
Myanmar	5.5	5.5	5.5	0.0	0.0
Philippines	7.6	4.7	4.9	–0.3	–0.1
Singapore	14.5	5.3	4.3	0.1	–0.1
Thailand	7.8	3.5	4.8	–0.4	0.3
Vietnam	6.8	5.8	6.3	–0.5	–0.5
Emerging Asia[1]	**9.5**	**7.9**	**7.7**	**–0.2**	**–0.3**
Asia	**8.3**	**6.3**	**6.7**	**–0.5**	**–0.2**

Source: IMF staff projections.

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

Figure 1.8. Selected Asia: Trade Links to Japan and Export Growth in 2011:Q2

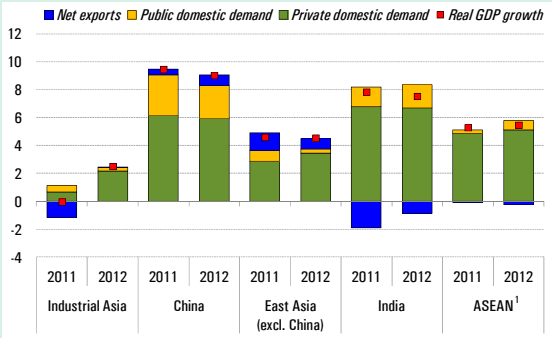
(In percent)



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

Figure 1.9. Selected Asia: Contributions to Projected Growth

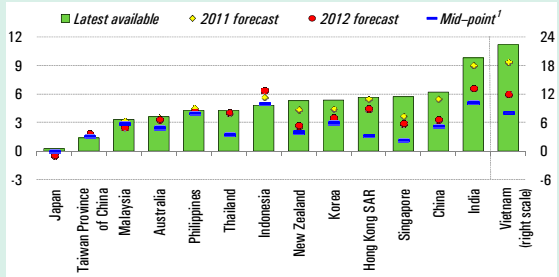
(In percentage points; year over year)



Source: IMF staff projections.

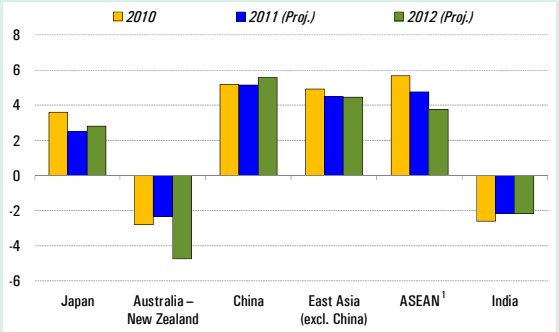
[1] ASEAN includes Indonesia, Malaysia, the Philippines, Singapore, Thailand, and Vietnam.

Figure 1.10. Selected Asia: Headline Consumer Price Inflation
(Year over year; in percent)



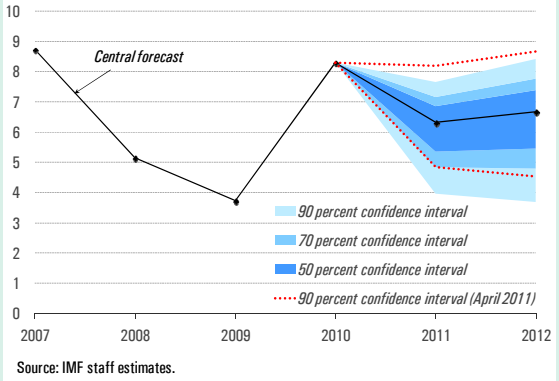
Sources: CEIC Data Company Ltd.; Haver Analytics; and IMF, WEO database and staff projections.
[1] Mid–point refers to the center of the inflation target band (headline for Australia, Indonesia, Korea, New Zealand, and the Philippines; and core inflation for Thailand), and average headline inflation over 2005–07 for other economies. Wholesale prices used for India.

Figure 1.11. Selected Asia: Current Account Balances
(In percent of GDP)



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

Figure 1.12. Asia: GDP Growth
(Central forecast and selected confidence intervals; in percent)



Source: IMF staff estimates.

past— with spillovers to inflation in the rest of Asia (Box 1.2).

Notwithstanding a somewhat greater contribution to growth from domestic demand in the near term, Asia's current account surplus relative to the region's GDP is expected to narrow only moderately in 2011, to 3 percent of GDP from 3½ percent in 2010, and to remain broadly unchanged in 2012. This reflects the somewhat varied progress toward rebalancing across the region. External surpluses are likely to increase in East Asia, notably in China, but to decrease in several ASEAN economies (including Indonesia, the Philippines, and Thailand), in part reflecting public programs to boost investment (Figure 1.11).

C. Stress in the Euro Area and United States: Spillovers to Asia

Near-term risks to the forecast are tilted decidedly to the downside, more so than they were six months ago (Figure 1.12). A worsening of the financial turbulence in the euro area poses an extreme downside risk for Asia. The panic sell-offs across Asian financial markets and safe-haven flows into Japan that occurred when European troubles intensified in August-September 2011 demonstrate that there is "no place to hide" when advanced markets come under pressure. Asia may be affected through several channels, including:

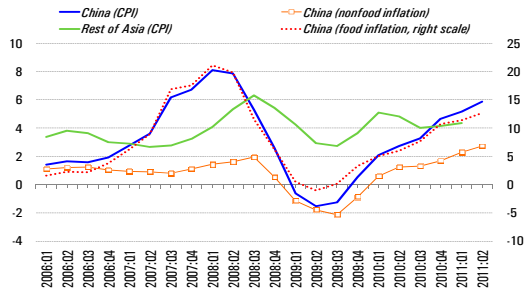
- *Liquidation of foreign investor positions.* Since 2009 investors from advanced economies have built up substantial positions in Asian markets, including Indonesia and other Asian sovereign debt markets (Figure 1.13). A sudden liquidation of these positions could trigger a loss of confidence, and contagion could spread from bond and equity markets to currency and other markets. "Crossover" investors in Asia—funds that are benchmarked against a mature market index but engage in investments in Asian emerging markets to boost returns—have expanded in recent years and they could cut positions more quickly than dedicated funds that are benchmarked against a regional index.

Box 1.2. How Large Are Chinese Inflation Spillovers to the Region?

Chinese inflation has been relatively elevated in recent quarters (first figure), and demographic and policy changes (such as the removal of subsidies on input costs) are expected to result in a structural increase in inflation over the coming years.

A structural model is used to assess the extent to which China's inflation spills over to prices across Asia. In the model, the rest of Asia is affected by commodity price fluctuations as well as two China-specific shocks: an aggregate supply shock associated with, for example, weather-related supply disruptions, and an aggregate demand shock associated with buoyant domestic conditions.[1]

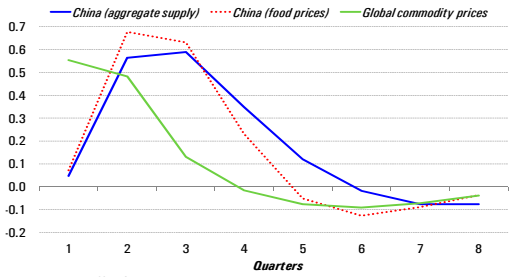
China and Rest of Asia: Inflation
(Year over year; in percent)



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

The results suggest that China's supply and demand shocks can have significant spillovers to the region. A one standard deviation supply shock appears to raise inflation in the rest of Asia by about 60 basis points (second figure). A 1 percentage point increase in Chinese inflation induced by a supply shock raises inflation across the region by about 25 basis points. Similar results are found when China's food price index is used in place of the CPI, suggesting that supply shocks are tightly linked with disruptions to the availability of food (for example, because of droughts, floods, and livestock diseases). In fact, 30 percent of Chinese inflation variation is explained by aggregate supply shocks, of which only 3 percentage points is due to nonfood price fluctuations.

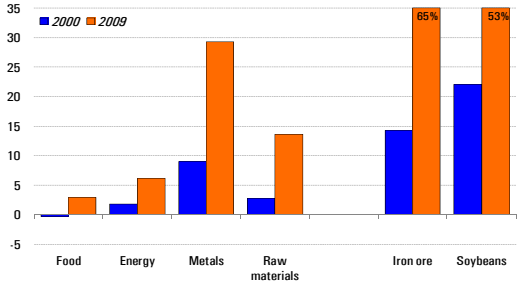
Rest of Asia: Impulse Response of Inflation to Selected Shocks[1]
(In percent)



Source: IMF staff estimates.
[1] Response to one standard deviation shocks.

Chinese demand shocks seem to spill over to the region through their influence on global commodity prices:

China: Share of Global Commodity Trade
(Net imports in percent of world imports)



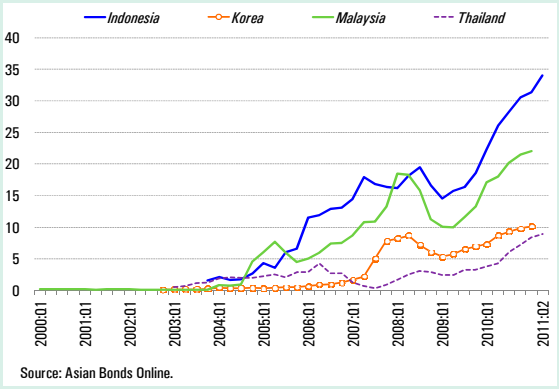
Source: IMF staff calculations.

- China has become a dominant importer across a range of commodities. China's demand for industrial inputs, in particular metals, has increased dramatically over the last decade (third figure). For example, as of 2009, China accounts for 65 percent of world iron ore imports. By contrast, China has not yet assumed as large a role in global food imports (with the exception of soybeans), although its share is rising.

- The growing share of China in world demand for commodities suggests that it may have an increasing influence on global commodity prices. Indeed, a 1 percentage point increase in Chinese output seems to raise commodity price inflation by about 5 percent. And commodity prices have immediate inflation spillovers to the region, through both their direct impact on domestic food and energy prices and their effect on core inflation. A one standard deviation commodity price shock appears to raise inflation in the rest of Asia by about 50 basis points. The strength of the spillover is closely associated with the weight of food and energy in CPI baskets.

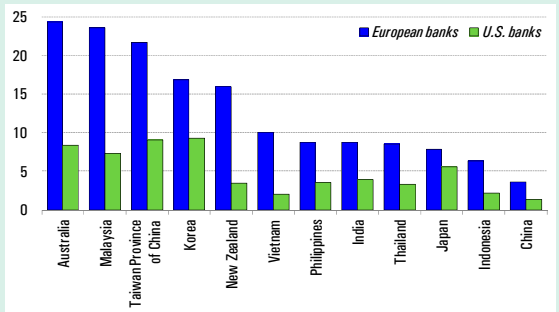
Note: The main authors of this box are Selim Elekdag and Fei Han.
[1] For further details, see Elekdag and Han (forthcoming-a).

Figure 1.13. Selected Asia: Foreign Holdings in Local Currency Government Bonds
(In percent of total outstanding bonds)



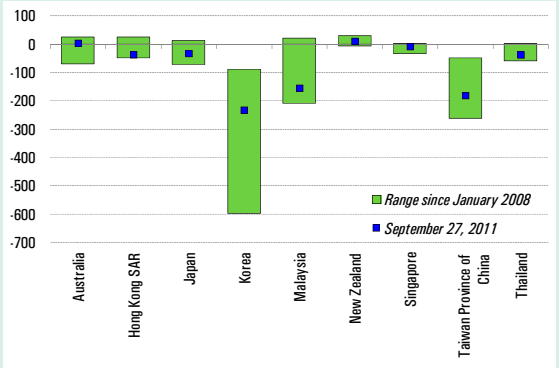
Source: Asian Bonds Online.

Figure 1.14. Consolidated Claims of European and U.S. Banks on Selected Asia[1]
(In percent of GDP; as of 2011:Q1)



Sources: Bank for International Settlements; CEIC Data Company Ltd.; Haver Analytics; and IMF staff calculations.
[1] Claims are on immediate borrower basis. Uses sum of quarterly GDP in U.S. dollar during 2010:Q2 to 2011:Q1.

Figure 1.15. Selected Asia: U.S. Dollar–Local Currency Basis Swap Spreads
(1-year tenor, in basis points; decrease implies a rise in U.S. dollar funding pressure)



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

- *Repatriation of liquidity by European banks.* Asian banks have cut exposures to European banks and sovereigns since May 2010, but contagion could still occur through foreign banks, which could sell assets, not roll over maturing loans, and cut credit lines in Asia if they face large losses at home. Such cutbacks could have a sizable impact in Asian economies that have large exposures to European and U.S. banks (Figure 1.14).

- *Loss of market liquidity in key derivative markets.* Contagion could also occur through Asian currency markets, as long and carry-trade positions are unwound. Hedge funds, in particular, in recent years have increased positions in currencies rather than in local debt and equity markets, where they can take advantage of embedded leverage in derivatives to boost returns. Although dollar funding pressures in August and September 2011 remained well below their 2008 peak (Figure 1.15), high leverage in currency derivatives makes investors vulnerable to a broader loss of confidence. A loss of liquidity in cross-currency swap markets—as in 2008—could be particularly disruptive and spill over to bank funding, as many banks rely on this market to fund dollar assets or to meet regulatory currency matching requirements, notably in Korea and Japan.

In addition to these direct channels of financial contagion, Asian economies would be greatly affected if greater financial stress in Europe were to lead to a severe economic contraction in the euro area and the United States. In addition to standard trade-channel effects, such a shock would exert substantial knock-on effects on domestic demand, in particular investment. Staff estimate that in a severe global downturn scenario, where growth in the European Union falls by 3½ percent below the current baseline for two years leading to a 1 percent slowdown in U.S. growth over the same period, GDP growth in the Asia and Pacific region could fall by 1½–4 percentage points relative to the baseline, in the absence of policy responses (Figure 1.16). Pressure points may vary across the region (Figure 1.17):

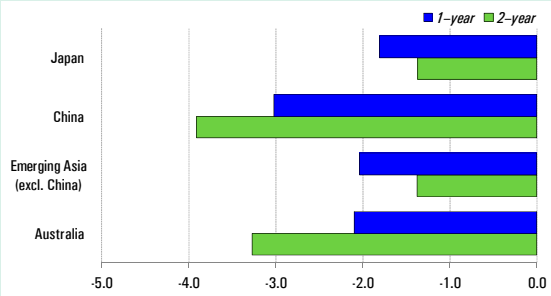
- In Japan, a rise in global risk aversion could spill over to concerns about the sustainability of sovereign debt and lead to tighter financial conditions. Australia would be affected through a sharp decline in the demand for and prices of commodities, as well as likely pressure on bank funding: both would combine to have a significant negative impact on investment. In addition, second-round effects could arise from a sharp decline in house prices.

- In East Asia, a sharp drop in China's exports would negatively affect investment in its tradable sector. Lower growth and a worsening of exporters' balance sheets would increase Chinese banks' nonperforming loans (NPLs) and lead them to significantly tighten credit conditions. A sudden large tightening of credit could trigger a property market correction, adversely affecting upstream (steel and cement) and downstream (household appliances) producers. Lower Chinese investment would also have significant spillovers to capital goods exporters, including Korea and ASEAN commodities exporters, such as Indonesia and Malaysia.

- South Asia would also be affected. In India, where corporate funding relies increasingly on external commercial borrowing and equity finance, a severe fall in investment would severely curtail growth. Furthermore, a sharp fall in remittances—including from the Middle East because of lower oil prices—would hurt domestic demand in Bangladesh and Sri Lanka.

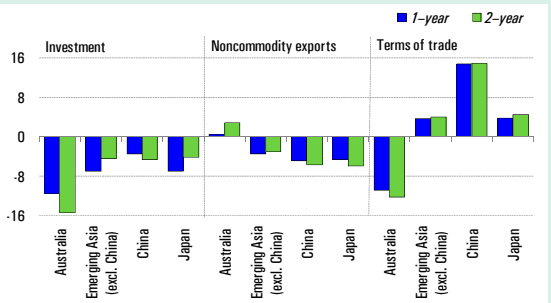
In general, trade-channel effects would exert a powerful drag on regional activity, given Asia's relatively high dependence on external demand. Greater intraregional demand could partially dampen the adverse impact from a sharply deteriorating global environment, but it is unlikely to fully offset it. Staff simulations using the IMF's Global Integrated Monetary and Fiscal (GIMF) model indicate that additional fiscal stimulus measures in China (by about 2–3 percent of GDP) would offset about one-fifth of the impact of the negative G-2 shock on output growth in emerging Asia and Japan (Figure 1.18). But

Figure 1.16. Selected Asia: Impact of Severe Global Slowdown on Real GDP Growth[1]
(Percent deviation from baseline scenario)



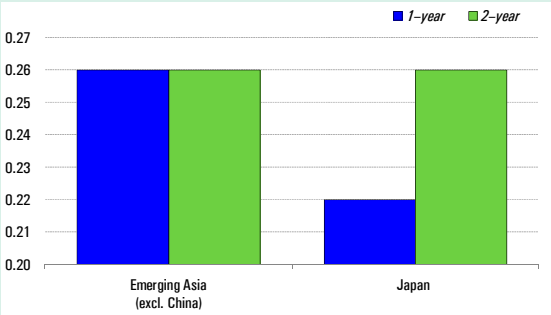
Source: IMF staff estimates.
[1] Based on the Global Integrated Monetary and Fiscal (GIMF) model imposing a –3.5 percent shock to output in Europe and –1 percent in the United States for two years. Assumes no discretionary policy response.

Figure 1.17. Selected Asia: Impact of Severe Global Slowdown on Selected Indicators[1]
(Percent deviation from baseline scenario)



Source: IMF staff estimates.
[1] Based on the Global Integrated Monetary and Fiscal (GIMF) model imposing a –3.5 percent shock to output in Europe and –1 percent in the United States for two years. Assumes no discretionary policy response.

Figure 1.18. Selected Asia: Impact on Real GDP Growth of Discretionary Fiscal Spending in China[1]
(In percentage points)



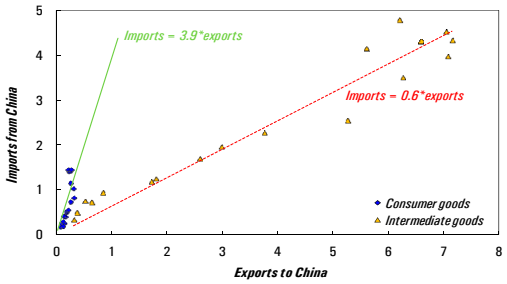
Source: IMF staff estimates.
[1] Based on the Global Integrated Monetary and Fiscal (GIMF) model assuming a 2 percent of GDP increase in discretionary fiscal spending by China.

Box 1.3. Recent Trends in ASEAN Exports to China[1]

Over the last two decades, ASEAN economies have become upstream suppliers to China, resulting in growing intermediate goods trade surpluses vis-à-vis China. For each U.S. dollar increase in intermediate goods exports to China (first figure), ASEAN countries have imported only $0.60 more of intermediate goods from China. By contrast, ASEAN economies have been net importers of consumer goods from China. For each dollar increase in consumer goods exports to China, ASEAN economies have imported nearly $4 more of consumer goods from China.

Selected ASEAN Economies: Trade with China by Products, 1995–2010

(In percent of total GDP)

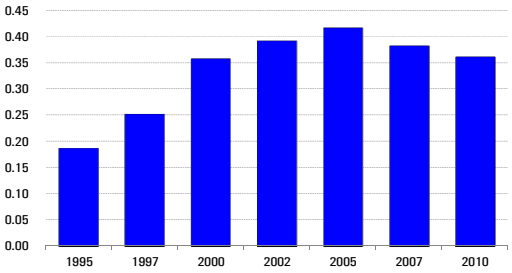


Sources: CEIC Data Company Ltd.; and IMF staff estimates.
[1] ASEAN includes Indonesia, Malaysia, the Philippines, Singapore, and Thailand.

Against this general trend, the pattern of exports to China has started to diverge in recent years. The similarity index—a measure of overlap of the composition of exports between different countries—of ASEAN economies' exports to China has been declining since 2005 (second figure). Information technology products remain the single largest export category, but are no longer the most rapidly growing one. Instead, commodities exports are gaining momentum. Specifically, the share of commodities exports—in particular iron ore (Indonesia), petroleum (Malaysia and Singapore), and rubber (Thailand)—increased to 22 percent in 2010 from 13 percent in 2005.

Selected ASEAN Economies: Similarity Index of Exports to China

(Average)[1]

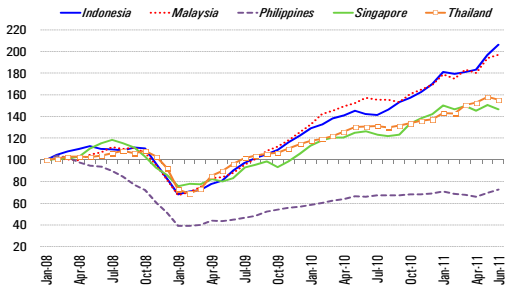


Sources: United Nations, *COMTRADE* database; and IMF staff estimates.
[1] Calculated by averaging the similarity indices over the five economies considered in this study.

The shift in favor of commodities exports has become stronger with the recovery after the global financial crisis. ASEAN exports to China recovered quickly above precrisis trends in 2009, led by Indonesia and Malaysia (third figure). The driving force behind the recovery was China's demand for commodities from fiscal stimulus-related infrastructure investment. Commodities exports will likely continue to outperform other exports. In the near term, China's strong import demand for commodities will be fueled by construction-related real estate investments, including increased outlays for social housing projects. Over the medium term, supply-chain integration of ASEAN electronics exporters with China may in part be offset by Chinese industries taking a larger share of the value chain from ASEAN medium- and high-end producers (IMF, 2011b).

Selected ASEAN Economies: Exports to China

(January 2008 = 100; 3–month moving average)



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

Note: The main author of this box is Yi Xiong.
[1] The economies considered in this box include Indonesia, Malaysia, the Philippines, Singapore, and Thailand.

increased demand from China could help especially those economies that have benefited from China's rapidly growing demand for commodities, such as Indonesia and Malaysia (Box 1.3).

D. How Vulnerable Are Asian Banks and Firms?

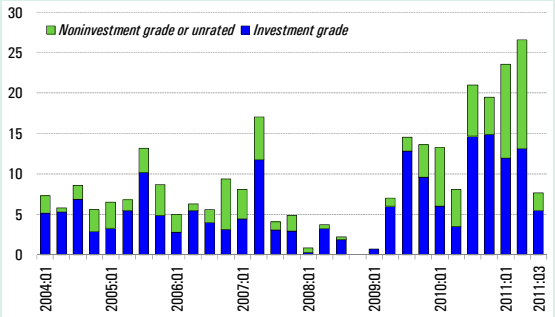
Over the medium term, a key risk for the region derives from the potential for a gradual build up of balance sheet imbalances after a protracted period of easy financial conditions (see the September 2011 *Global Financial Stability Report*) (IMF, 2011c). Indeed, Chapter II finds that the episodes of very rapid credit growth in emerging markets that ended with a financial crisis were generally characterized by high corporate leverage, rapid capital inflows, and low policy rates and borrowing costs.

How real is this risk for Asia? So far in 2011, bank credit growth has remained rapid in many regional economies, and loan-to-deposit ratios in Hong Kong SAR, Indonesia, and Thailand climbed by 6–10 percentage points over the 12-month period ending in July 2011. In addition to strong growth in bank loans, corporate debt issuance by Asian firms has picked up sharply since 2010 (Figure 1.19). At the same time, leverage in corporate Asia rose in 2009–10 (Figure 1.20), particularly in India, Korea, the Philippines, and Vietnam (Figure 1.21).

Leverage ratios are still below historical peaks, but two aspects of the current cycle suggest room for caution:

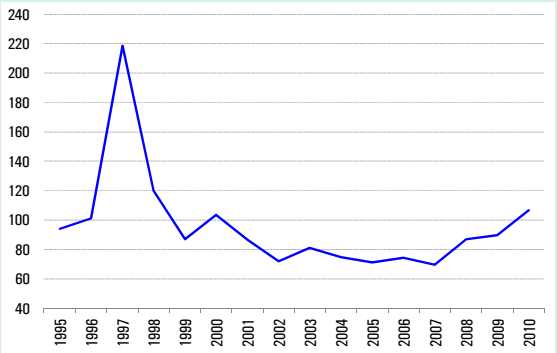
- First, while corporate leverage tends to rise as the economy recovers from a recession, the increase in leverage this time around has been far more rapid than after the 2001 recession (Figure 1.22).
- Second, the uptick in leverage in Asia has so far been more prominent for firms that are already highly indebted and in sectors where there are more concerns that excess capacity may be building up, such as construction (Figure 1.23).

Figure 1.19. Emerging Asia: External Bond Issuances by Corporations[1]
(In billions of U.S. dollars)



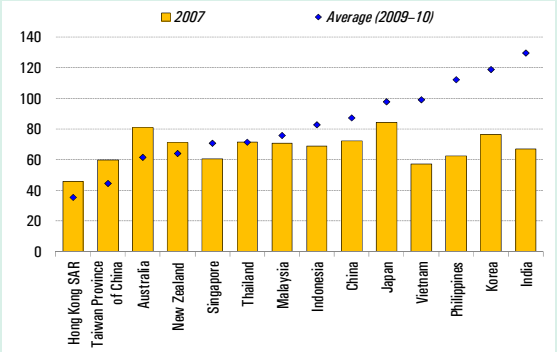
Source: Bond Radar.
[1] Data as of September 27, 2011. Includes financial and nonfinancial entities from private and public sectors.

Figure 1.20. Emerging Asia: Leverage in Corporate Sector
(Debt-to-equity ratio, market capitalization weighted average)



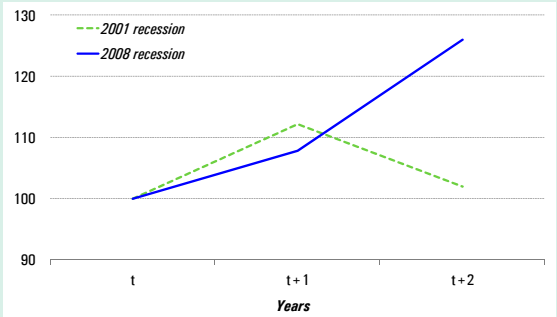
Sources: Worldscope database; and IMF staff calculations.

Figure 1.21. Selected Asia: Debt-to-Equity Ratio
(Market capitalization weighted average)



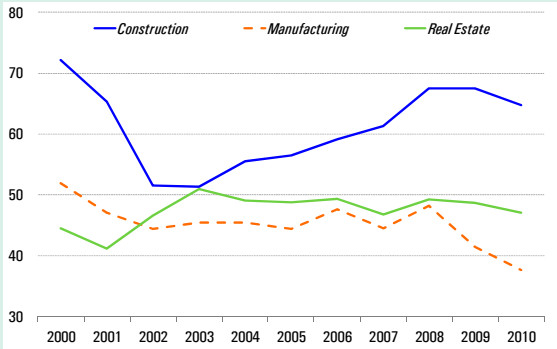
Sources: Worldscope database; and IMF staff calculations.

Figure 1.22. Asia: Debt-to-Equity Ratio during Recoveries from 2001 and 2008 Recessions[1]
(Market capitalization weighted average; beginning of recovery in year t = 100)



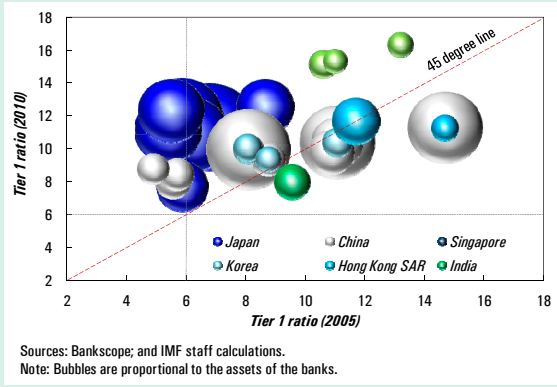
Sources: Worldscope database; and IMF staff calculations.
[1] Includes economies in recession during these two episodes.

Figure 1.23. Emerging Asia: Leverage in Different Sectors
(Debt-to-equity ratio, in percent; market capitalization weighted average)



Sources: Worldscope database; and IMF staff calculations.

Figure 1.24. Selected Asia: Tier 1 Ratio of Top 25 Banks
(In percent)



Sources: Bankscope; and IMF staff calculations.
Note: Bubbles are proportional to the assets of the banks.

It is reassuring, however, that Asian banks appear to have emerged from the global financial crisis with strong balance sheets. Most of the 25 largest Asian banks had higher Tier 1 capital ratios by the end of 2010 than in 2005 (Figure 1.24), and all comfortably meet the Basel III guideline of at least 6 percent. Moreover, profitability of Asian banks is strong, and many have raised provision coverage ratios (in the case of China, to over 200 percent of impaired loans), which should provide an additional cushion against deterioration of asset quality.

E. Policy Challenges

The Near Term—Safeguarding Growth While Curbing Overheating

Against the backdrop of unusual uncertainty, a key policy issue is whether this warrants a pause in the pace of monetary tightening in many economies. Clearly, the room for pausing varies considerably across economies, depending on the magnitude of their domestic overheating pressures and vulnerabilities from their position in the credit cycle. In economies where such overheating pressures remain high (Figure 1.25), inflation remains above target, and inflation expectations have continued to rise (Figure 1.26), such as in China, India, and Korea, the current pace of monetary tightening remains appropriate.[2] In economies where inflation is within target and with greater vulnerability to a global slowdown, a pause in monetary tightening may be warranted at the current juncture, until the downside risks to growth abate (Figure 1.27). At the same time, policymakers also need to remain vigilant regarding balance sheet vulnerabilities, as

[2] For each economy, the overheating index of Figure 1.25 is a weighted average of inflation, real equity prices, real bank credit, and the current account balance as a percent of GDP (each as deviation from a linear trend, estimated over the last two decades), using the inverse of their standard deviation as weights. The color indicates the degree of overheating: a red color indicates that the index is above the 90th percentile of the distribution of the index for all economies and time periods; orange between the 75th and 90th percentiles, yellow between the 50th and 75th percentile, and green below the 50th percentile.

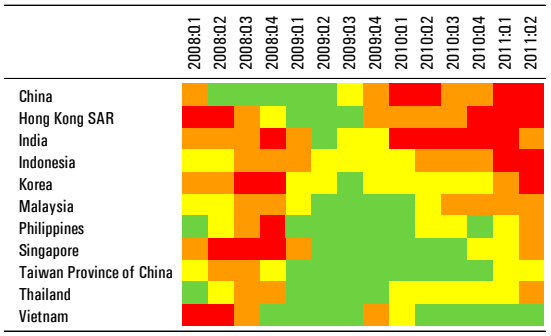
maintaining accommodative financial conditions for an extended period could fuel further credit expansion and result in lower asset quality (see Chapter II). Once the uncertainty over the global outlook is reduced, monetary tightening would need to resume.

Macroprudential measures remain an important complement to more conventional tools of monetary management. Many of the prudential measures adopted in Asia since 2010 were designed to minimize the risks to financial stability, including from large capital inflows, and may continue to be relevant in the absence of a severe global financial shock. International experience clearly suggests that strengthening the regulatory framework would play an important role in limiting adverse spillovers from a potential euro area crisis. For example, in Korea, a ceiling on the loan-to-deposit ratio has significantly reduced banks' wholesale funding, while more stringent liquidity requirements and limits on foreign exchange exposures have prevented short-term debt from returning to 2008 levels. In New Zealand, the introduction of a core funding ratio has helped reduce banks' reliance on short-term external funds. Australian banks have also reduced their short-term external borrowing, and early adoption of a requirement along the lines of the Basel III net stable funding ratio could reduce vulnerabilities further.

Allowing greater exchange rate appreciation in line with fundamentals would also help manage existing inflationary pressures in addition to helping rebalance economic growth in many economies. Moreover, enhanced upward exchange rate flexibility would reduce the perception of a one-way bet and enable the region to better deal with capital inflows that are likely to be attracted by favorable growth and interest rate differentials. Furthermore, greater upward exchange rate flexibility would mitigate additional pressures for sterilizing the impact of greater reserve accumulation on monetary aggregates (Box 1.4).

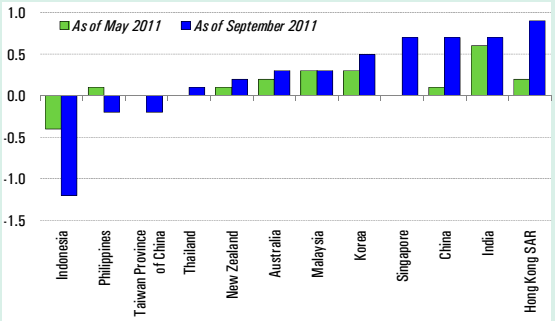
The return of fiscal policy to more neutral stances should continue, reflecting the greater difficulty in changing course for fiscal policy. In several

Figure 1.25. Emerging Asia: Overheating Map[1]



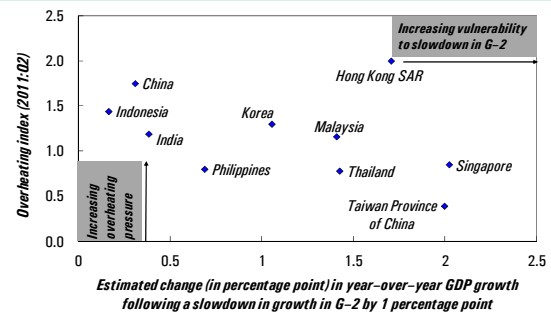
Source: IMF staff estimates.
[1] See footnote 2 for description of the overheating map.

Figure 1.26. Selected Asia: Change in Inflation Expectations for 2011 since March 2011[1]
(In percentage points)



Source: Consensus Economics Inc.
[1] For India, change in expectations of average annual wholesale price inflation for fiscal year ending in March 2012.

Figure 1.27. Selected Asia: Overheating Index and Vulnerabilities to a Slowdown in Growth in G–2[1]

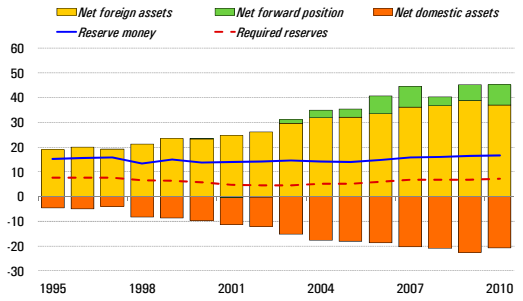


Source: IMF staff estimates.
[1] Response to a slowdown in G–2 growth are based on regression estimates, and includes effects of discretionary policy measures.

Box 1.4. Sterilization of Reserve Accumulation in Times of Large Capital Inflows

Many Asian economies have resumed reserve accumulation at a rapid pace, since large capital inflows returned to the region in mid-2009 (first figure).[1] This box argues that the extent to which central banks undertake sterilization operations to limit the effect of reserve accumulation on the monetary base typically depends on whether their policy priority is to stabilize the exchange rate or inflation, with the latter requiring stricter sterilization. In addition, the extent of sterilization appears to be influenced by the size and duration of capital inflows, as sterilization operations can be costly for central banks and can also strain the absorption capacity of banking systems.

Selected Asia: Composition of Central Bank Balance Sheet
(In percent of GDP)



Sources: Haver Analytics; and IMF staff calculations.

In the absence of sterilization data, we estimate the degree of sterilization by comparing how much net domestic assets (NDA) change relative to the monetary base in response to changes in net foreign assets (NFA), after controlling for the cyclical stance of the economy.[2] "Full sterilization" is interpreted as restoring liquidity conditions to a stance that is in line with the central bank's policy objective. For an inflation-targeting central bank, full sterilization entails adjusting liquidity post-intervention so as to keep the short-term money market rates close to the policy rate. In contrast, for a central bank that targets the exchange rate, full sterilization results in adjusting banks' cash balances so as to keep the relative supplies of domestic and foreign currencies in line with the exchange rate target. In either case, sterilization can be "full" even if changes in NFA and NDA do not cancel each other out and base money is not constant.

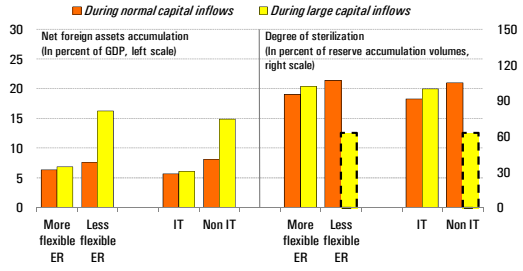
Selected Asia: Sterilization Instruments

	China	India	Indonesia	Korea	Malaysia	Philippines	Singapore	Taiwan Province of China	Thailand
Central bank notes	√		√	√	√		√		√
Reserve requirement ratio	√	√	√		√	√			
Reverse repos		√	√		√	√	√		√
FX swaps			√	√		√	√		√
Deposits at central bank			√		√	√			
Other		√	√				√	√	

Sources: Central bank publications; and country authorities.

Not all sterilization operations are captured within NDA. Central banks use a variety of instruments, including higher reserve requirements, which can withdraw liquidity from circulation without changing NDA (second figure). Thus, we proxy the volume of sterilization operations by the sum of NDA and required reserves, and also control for central banks' net forward positions.

Selected Asia: Net Foreign Assets Accumulation and Degree of Sterilization by Policy Framework[1]



Sources: Haver Analytics; and IMF, *International Financial Statistics* and staff calculations.
[1] IT refers to inflation–targeting regimes. Dashed borders indicate less–than–full sterilization at 5 percent significance level.

We find that, as expected, economies that have less flexible exchange rate regimes accumulate more reserves during surges of capital inflows than other economies (including inflation-targeting economies; third figure).[3,4] On average, all economies fully sterilize their reserve accumulation during "normal" times. However, during surges

Note: The main authors of this box are Sylwia Nowak and Ceyda Oner.

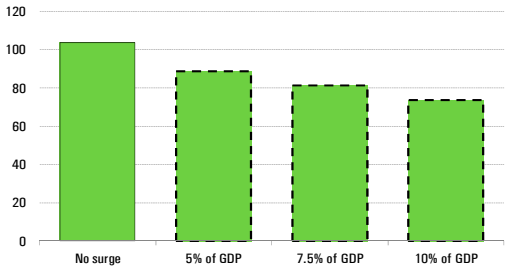
[1] The economies considered in this box are China, Hong Kong SAR, India, Indonesia, Korea, Malaysia, the Philippines, Singapore, and Thailand. For further details see Nowak and Oner (forthcoming).

[2] See Aizenman and Glick (2009). Our sample covers from 1990:Q1 to 2011:Q1. Estimates for inflation-targeters start from 2002:Q1.

of capital inflows sterilization drops to about 60 percent of reserve accumulation volumes in non-inflation-targeting economies, including exchange rate targeters.

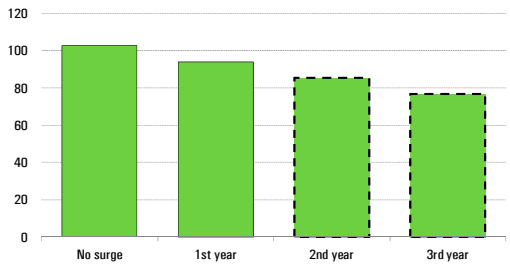
The stronger and more persistent the inflows, the lower is the degree of sterilization. When capital inflows reach 5 percent of GDP per quarter (median size in the sample), non-inflation targeters sterilize only 90 percent of accumulated reserves, and even less as capital inflows strengthen (fourth figure). On average, these economies fully sterilize during the first year of a surge, but sterilization drops to about 80 percent after three years (fifth figure).

Selected Emerging Asia: Degree of Sterilization by Size of Capital Inflows in Non-Inflation-Targeting Economies[1]
(In percent)



Sources: Haver Analytics; and IMF, *International Financial Statistics* and staff calculations.
[1] Dashed borders indicate less–than–full sterilization at 5 percent significance level. Non–inflation–targeting economies include those with less flexible exchange rate regimes.

Selected Emerging Asia: Degree of Sterilization by Duration of Capital Inflows in Non-Inflation-Targeting Economies[1]
(In percent)



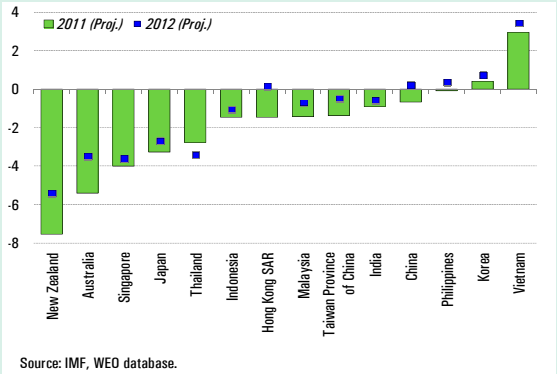
Sources: Haver Analytics; and IMF, *International Financial Statistics* and staff calculations.
[1] Dashed borders indicate less–than–full sterilization at 5 percent significance level. Non–inflation–targeting economies include those with less flexible exchange rate regimes.

The results suggest that sterilization during episodes of large and persistent capital inflows poses a challenge to monetary policymakers. For economies that manage exchange rate regimes tightly, capital inflows mean accumulating more reserves and sterilizing less. As for inflation targeters, the need to fully sterilize may limit how much the central bank can effectively intervene during surges of inflows. In either case, it may not be possible to stem a real appreciation when inflows are large and persistent, rendering sterilization ineffective in real terms.

[3] The episodes of large capital inflows are defined in Chapter 2 of IMF, 2011b.
[4] The de facto exchange rate classification is based on Ilzetzki, Reinhart, and Rogoff (2008). The inflation-targeting economies are identified in Roger (2010). "Less flexible exchange rate" refers to a de facto crawling band that is narrower than or equal to a ±2 percent, de jure crawling band, or tighter regimes.

economies, including China and Korea, the normalization of fiscal policies will be largely completed by 2012 as cyclically adjusted fiscal balances return close to their precrisis averages (Figure 1.28). However, in several emerging Asian economies, in particular many ASEAN economies and India, structural deficits in 2012 are still expected to be about 1–2½ percentage points of GDP higher than before the global financial crisis. Japan and New Zealand are also facing significant fiscal challenges on account of their post-disaster reconstruction programs. Moreover, in Japan establishing confidence in long-term fiscal sustainability through a comprehensive and credible fiscal consolidation plan remains an overriding

Figure 1.28. Selected Asia: Change in General Government Cyclically Adjusted Fiscal Balance
(Deviation from 2002–07 average; in percent of GDP)

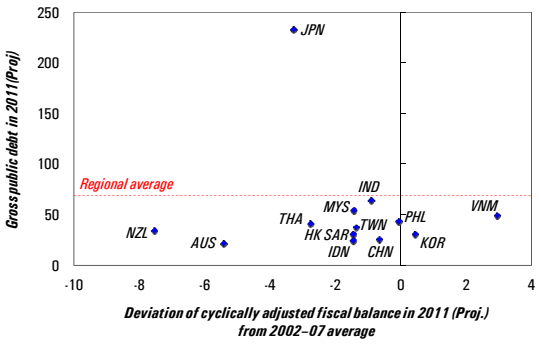


Source: IMF, WEO database.

concern. In Mongolia, the steady erosion of fiscal discipline has raised the risk of macroeconomic instability. There is an urgent need to reorient policies to contain overheating and strengthen the economy's resilience to a deterioration in the global environment. Principally, this will mean restraining fiscal spending and tightening monetary conditions.

Should extreme downside risks to growth materialize, Asian policymakers could resort, as in the past, to a menu of measures. The withdrawal of fiscal stimulus could be halted or even reversed, especially where public debt levels are low (Figure 1.29). To break the negative feedback loops and limit contagion, Asian central banks could draw on their large foreign exchange reserves and regional reserve pooling arrangements. They could reactivate central bank swap lines to support the continued functioning of cross-currency swap markets. Asian bank supervisors can also help mitigate cutbacks by foreign banks by ensuring their subsidiaries maintain sound credit and liquidity management policies.

Figure 1.29. Selected Asia: Fiscal Space
(In percent of GDP)



Source: IMF, WEO database.

The Medium Term—Making Growth More Balanced and Inclusive

From a medium-term perspective, sustaining growth in Asia will require addressing the key challenges of rebalancing growth and addressing social imbalances. Although the current global environment is making the need for Asia's rebalancing more urgent, Chapter III highlights that income inequality in Asia has risen over the last two decades, notwithstanding rapid economic growth and a notable reduction in poverty. The implication is that continued high growth alone may not be sufficient to address social imbalances and policy measures are needed to make growth more inclusive. In particular:

- As previous Asia and Pacific *Regional Economic Outlooks* have highlighted, investment in public infrastructure can help crowd in private investment, in particular where domestic investment has been relatively low, such as Indonesia, Malaysia, the Philippines, and Thailand. However, under current plans, outlays for capital spending are set to increase only marginally, and even to decline in some cases (Figure 1.30).

- Policymakers also need to find room for more social spending in support of inclusive growth, such as greater investment in education and training and social protection schemes. Indeed, public spending on social areas in Asia generally falls short of levels in comparable regions at similar levels of development even after accounting for country-specific factors, such as demographics, economic structure, and urbanization (Figure 1.31). A higher quality of spending, for example through reforms to enhance teacher performance, establish self-financing unemployment insurance mechanisms, and improve governance can help improve the effectiveness of public spending in reducing social imbalances.

  Over the longer term, Asian economies will need to deal with fiscal pressures from aging populations. In a number of Asian economies, including China and Korea, the projected living standards of the elderly are low by international comparison (Jackson, Howe, and Nakashima, 2010). As these economies grow "older," designing mechanisms for old-age income support, which may have to rely in part on public funds, will be important for avoiding old-age poverty. In Japan, promoting greater old-age labor participation is a key element of the medium-term growth strategy that would reduce

income inequality as well as enhance fiscal sustainability (Box 1.5).

How can Asian economies create the fiscal space necessary to support rebalancing and more inclusive growth? Consistent with a more neutral fiscal stance to avoid undue demand pressures, greater attention will need to be given to the composition of spending. So far, an important obstacle in Asia to reprioritizing budgets has been the approach to managing rising and volatile fuel prices. Asian governments have deployed a wide range of measures to cushion the impact of rising fuel prices since 2008, entailing substantial budgetary costs.

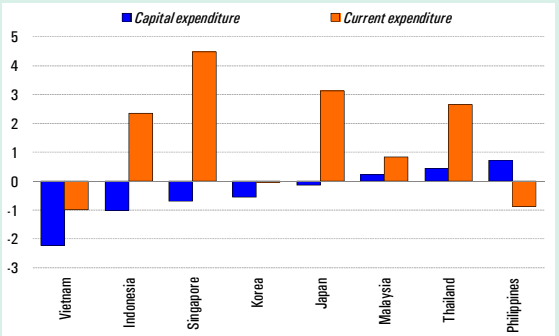
- Comparing the rise in domestic retail prices for gasoline and diesel between end-2008 and end-2010 with the changes in international prices suggests that a majority of governments in Asia cut effective taxation or increased subsidies (Figure 1.32).

- The fiscal costs from the foregone tax revenue or higher subsidies can be significant, including for low-income countries. For example, for Sri Lanka and Vietnam the fiscal cost of addressing higher fuel prices between 2008 and 2010 is estimated at about 2 percent of GDP. The budgetary impact of the rise in global fuel prices between 2008 and 2010 is substantial and, in some cases, comparable to social priority expenditures (Figure 1.33).

The benefits of fiscal price-stabilization strategies are not clear cut. Such strategies do little to address underlying supply and demand imbalances and are not targeted at the most vulnerable households. Substantial benefits leakage can flow instead to higher-income groups, which tend to consume more fuel than low-income households.[3] As a result, streamlining fiscal subsidy schemes while adopting carefully targeted social safety nets can go a long way in helping governments to reprioritize budgets in

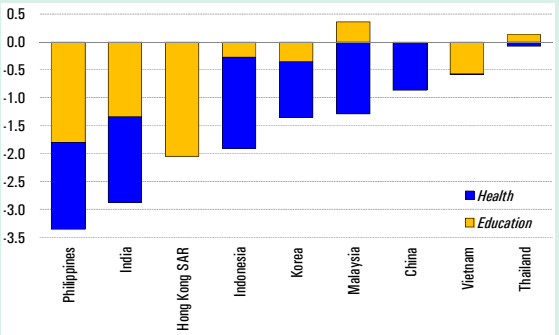
[3] Arze del Granado and others (2010) show that for a broad cross-section of low-income countries, transferring one dollar to the poorest 20 percent of households via gasoline subsidies implies a budgetary cost of 14 dollars. This result also applies broadly to Asian economies in the dataset, including Bangladesh and Sri Lanka.

Figure 1.30. Selected Asia: Cyclically Adjusted Changes in General Government Spending[1]
(2011–12 average vis-à-vis 2002–07 average; in percent of GDP)



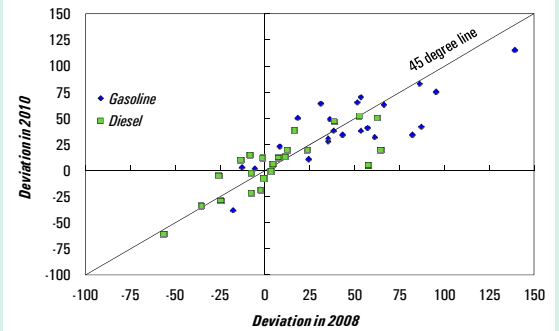
Sources: IMF, WEO database and staff calculations.
[1] Negative number means decrease (increase) in spending (revenue).

Figure 1.31. Selected Asia: Deviation from Model-Based Norms of Public Spending on Health and Education[1]
(In percent of GDP)



Source: IMF staff estimates.
[1] Based on a sample of 171 developing and advanced economies.

Figure 1.32. Selected Asia: Deviation of Retail Gasoline and Diesel Prices from International Prices
(In U.S. cents)



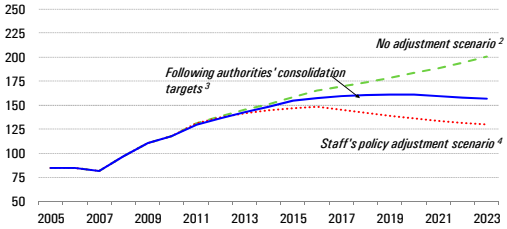
Sources: Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ); and IMF staff estimates.

Box 1.5. A Strategy for Growth and Fiscal Sustainability in Japan

In June 2010, Japan introduced a growth strategy and a fiscal management strategy to revive growth and place public debt on a sustainable footing over the medium term. The growth strategy targets raising the real GDP growth rate to 2 percent over the next decade by focusing on various key sectors, including environment and energy, health care, and science and technology. The fiscal strategy aims to halve the primary deficit in term of GDP by FY2015 and achieve a primary surplus by FY2020. In June 2011, the authorities decided on a plan to reform the social security system, including by doubling the consumption tax to 10 percent by the mid-2010s, raising the retirement age for social security, and adjusting pension benefits in line with demographic changes.

Japan: Net Public Debt[1]

(In percent of GDP)

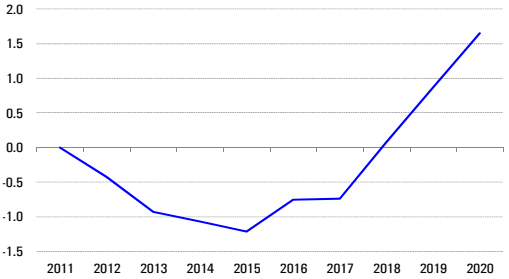


Sources: Cabinet Office; and IMF, staff estimates and projections.
[1] Net debt of the general government including the social security fund.
[2] No new tax measures are assumed.
[3] IMF staff estimates.
[4] Policy adjustment scenario assumes a 10 percent of GDP improvement (7.5 percent of GDP relative to no adjustment scenario) of the structural primary balance during 2010–20.

While the fiscal strategy is an important step toward consolidation, more needs to be done to put the net debt-to-GDP ratio on a downward path. According to staff calculations, stabilizing the net debt ratio by 2016 and reducing it to about 135 percent of GDP by 2020 would require a reduction of the primary fiscal deficit by 10 percent of GDP over a 10-year horizon (first figure). This could be achieved through a balanced approach of limiting spending growth and comprehensive tax reforms.

Japan: Impact on GDP of Adjustment Scenario[1]

(In percent of GDP)



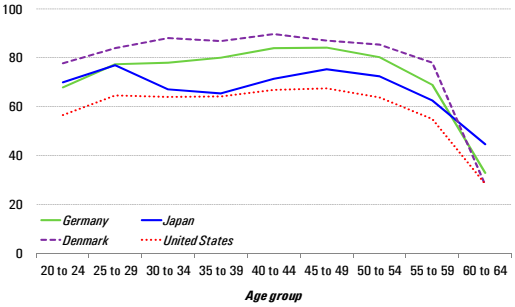
Source: IMF, staff estimates using Global Integrated Monetary and Fiscal (GIMF) model.
[1] GDP impact is measured as the deviation from the GDP level under no fiscal adjustment.

Such a fiscal adjustment could, however, depress growth in the short term. Depending on specific measures, growth could be lowered by 0.3–0.5 percentage point per year on average during the initial years of adjustment (second figure). It is, therefore, important to start the fiscal consolidation during the cyclical recovery. However, over the longer term, growth is likely to improve, supported by lower long-term real interest rates, a switch to less distortionary consumption taxes, a reduction in precautionary savings (particularly for younger generations), and improved confidence in public finances.

Reforms to raise potential growth are needed to support growth during fiscal consolidation. Building on the authorities' strategy, policies should also aim to boost employment, deepen regional integration, and promote start-ups and restructuring of small to medium-sized enterprises (SMEs).

Selected Advanced Economies: Female Labor Participation Rate by Age Group

(In percent)



Source: Organisation for Economic Cooperation and Development (OECD).

- Given Japan's shrinking labor force, policies should aim to tap underutilized sources of labor among the youth, elderly, and women. Improving access to child care would increase Japan's low female labor participation (third figure). Raising Japan's mandatory retirement age of 60 (OECD average: 64.4) would increase the share of elderly in the labor force.

Note: The main author of this box is S. Pelin Berkmen.

A new, more flexible labor contract that gradually increases employment protection would facilitate the employment of young workers and help narrow the gap between regular and nonregular workers.

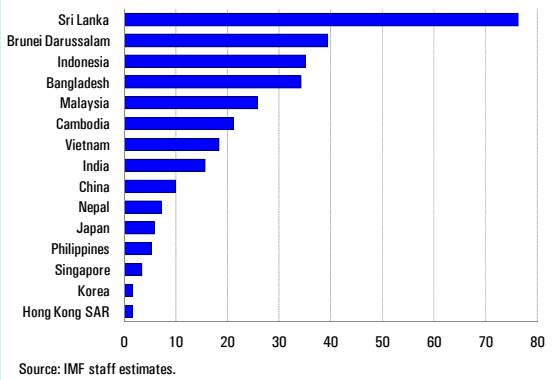
- Further trade liberalization, for example through the proposed Trans Pacific Partnership Agreement (TPP), could open the door to new export markets and greater inward foreign direct investment (FDI). Negotiations would likely cover protected sectors, and further deregulation and market opening could be a catalyst for productivity improvements, particularly in agriculture, health, and other services.
- Finally, promoting start-ups and restructuring SMEs could stimulate investment. To support start-ups, the time limit on public credit guarantees should be shortened and some preference for guarantees be given to businesses in new growth areas. Establishing asset management companies to purchase distressed loans would promote bank-led restructuring and reduce leverage in the SME sector.

support of economic rebalancing and inclusive growth.

Revenue measures can also play a role in creating fiscal space. In Japan, comprehensive tax reform with a gradual increase in the consumption tax and a reduction of the corporate tax rate (with revenue losses offset by reforms of personal income tax that reduce allowances and base exemptions) will help ensure fiscal sustainability in the face of reconstruction costs and the need to promote private investment. In low-income economies, including Cambodia and Nepal, as well as emerging economies like the Philippines, significant revenue enhancement can be achieved by efforts to strengthen tax administration.

Structural reforms are also needed to support economic rebalancing and inclusive growth, or, more broadly, sustain the high growth potential across the region. Previous Asia and Pacific *Regional Economic Outlooks* discussed the challenges involved in raising private consumption and investment. This *Regional Economic Outlook* focuses on structural reforms to address rising inequality and the role of regional financial integration in rebalancing. Chapter III reviews reforms to social protection schemes,

Figure 1.33. Selected Asia: Increase in Net Oil Subsidy
(In percent of public spending on education and health; base year = end–2008, and final year = end–2010)



Source: IMF staff estimates.

market policies, and health and education investment as key elements of a strategy to reduce the share of vulnerable households in Asian economies. Chapter IV focuses on financial policies and how to improve the quality of financial labor integration to allow better risk sharing. While greater regional financial integration would help Asian economies to reduce exposure to external shocks, it would also help economic rebalancing as measures that deepen regional financial markets would improve access to finance and strengthen domestic demand.