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# REGIONAL COOPERATION AND INTEGRATION

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## Progress and Issues

**Five years after the global financial crisis, the world economy is in transition; many uncertainties are keeping markets volatile, potentially threatening economic stability.**

Since the 2008/09 global financial crisis, economic growth in advanced economies continues to be anemic and below trend. While the recovery there has been largely L-shaped, emerging economies—particularly those in Asia—showed a relatively rapid V-shaped return to growth. This year, however, these roles have begun to reverse. The long recovery in advanced economies is strengthening, while growth in emerging economies has started to moderate. Merely the announcement that the United States Federal Reserve (US Fed) might soon begin tapering its quantitative easing (QE) program destabilized financial markets across emerging economies—in particular, India and Indonesia. And, while the US Fed's September decision to wait before starting the unwinding process gave Asia some short-term reprieve, the October US government shutdown, if protracted, could threaten its own recovery and threaten economic growth globally.

Regardless, the level of uncertainty increases as the global economy begins to navigate its transition phase. And as a result, volatility—particularly in emerging financial markets—will increase as varied and conflicting responses interact. Significant and persistent market volatility hampers the real economy, deterring consumption and investment, threatening economic stability, and damaging growth.

One immediate uncertainty is the evolution of monetary and fiscal policy in advanced economies and its impact on the global economy. While the eurozone is emerging out of recession and the US continues its plodding recovery—despite the unprecedented policy support—when and how to ease that support and normalize policy will have a highly uncertain impact on the global economy. The recent financial turmoil and market volatility surrounding the US Fed's decision *not* to begin unwinding in mid-September was a clear demonstration of its uncertain impact globally. Add to this continued fiscal uncertainty in the US and the (however remote) risk of a US public debt crisis disrupting global markets. And to round it off, it remains uncertain that Japan will

adopt policies that make its fiscal path and public debt dynamics sustainable over the medium term.

Another uncertainty is how global markets—and economies in general—react to an increasingly multi-polar world. The global economy, while still influenced by its dominant players, no longer relies on a single driving force. Globalization is undergoing significant structural change. And its major players—the US, European Union (EU), the People's Republic of China (PRC), Japan, and emerging economies collectively—are all amid major structural adjustments 5 years after the global financial crisis. The impact of these structural adjustments on themselves—and particularly on each other—is also uncertain.

The third uncertainty comes from the evolving development paradigm—the relationship between growth and welfare. Asia continues to see rapid and, increasingly, resilient growth. But emerging Asia's growth has come with growing inequality—both by income and non-income measures. And it brought with it resource depletion and environmental degradation. Asia is in search of a new development paradigm, one that balances growth with welfare and the environment. The uncertainty is whether Asia can find a properly balanced development paradigm—and then work out ways to achieve it.

**To sustain growth in these uncertain and volatile times, strengthening regional cooperation and integration is critical.**

While some uncertainties are policy related, they are mostly structural and probably long-lasting. Uncertainties and resulting market volatilities could leave Asia more vulnerable to external shocks now more than ever. Uncertain macroeconomic policies in advanced economies will complicate macroeconomic management and undermine economic stability in emerging economies. A global economy undergoing significant structural change will challenge every economy to adapt and adjust. And any policy misstep could have unintended consequences—on itself and others. Therefore, strengthening cooperation globally and regionally is paramount—to maximize the

benefits of integration and minimize its costs and risks.<sup>1</sup> Maintaining open regionalism is essential. It has served the region well in the past, and will likely continue to do so.

Global and regional integration can promote economic growth by allocating resources more efficiently and effectively. By expanding markets and the sources of inputs, regional integration can also increase economies of scale and might also increase returns to scale—thus raising productivity. Several recent studies show human exchange and communication is one of the deepest roots of mankind’s historical development.<sup>2</sup> Asia needs continued support from partners in other regions to tackle its development challenges. With various subregions working together, more can be done toward creating a truly integrated Asia. And cooperation is central in tackling global uncertainties and negative spillovers from national policies. History also shows that crises and uncertainties have been the driving force behind rising integration in Asia—a catalyst for regional cooperation. Behind-the-border reforms, enhanced information and knowledge-sharing, and seeking consensus on key policies can help prepare for and address increased financial market volatilities in the region.

### Evolving macroeconomic policies, particularly monetary policy, and structural adjustment in major economies could shape the progress of cooperation and integration in the region.

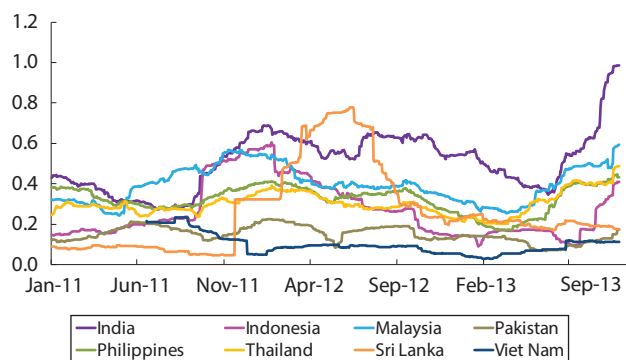
Notwithstanding growing uncertainties, major advanced economies will sooner or later have to normalize unconventional macroeconomic policy. Globally, this could be a game changer, and there are numerous variables at play, making the dynamics of this transition complicated. A high degree of co-movement in Japanese and US business cycles in recent years suggests that emerging Asian economies will likely feel the impact of macroeconomic policy changes in major economies (see *Macroeconomic Interdependence*, page 26).

As mentioned, the expectation of the US Fed tapering QE has already spurred financial market volatility. The May 2013 ‘tapering’ announcement triggered a massive selloff of emerging market equities, bonds, and

<sup>1</sup>For an analysis of the costs and benefits of integration, see ADB. 2012. *Asian Economic Integration Monitor July 2012*. Manila, pp. 59–62.

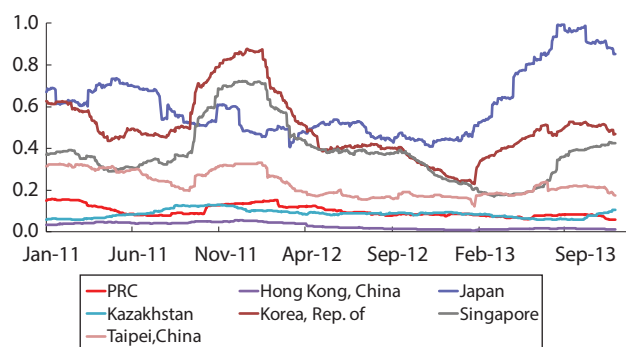
<sup>2</sup>See for example, E. Spolaore and R. Wacziarg. 2013. How Deep Are the Roots of Economic Development?. *Journal of Economic Literature*. 51(2), pp. 1–45.

**Figure 10: Standard Deviation of Exchange Rates—South and Southeast Asia**



Note: Based on 3-month rolling standard deviation of daily percentage change of currency against \$. Data up to 30 September 2013.  
Source: ADB calculations using data from Bloomberg.

**Figure 11: Standard Deviation of Exchange Rates—PRC, Japan, Kazakhstan, and NIEs**

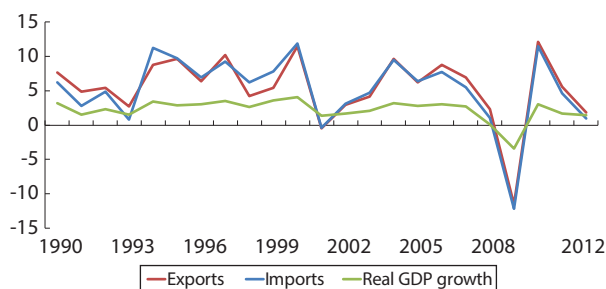


PRC = People’s Republic of China, NIE = newly industrialized economy.  
Note: Based on 3-month rolling standard deviation of daily percentage change of currency against \$. Data up to 30 September 2013.  
Source: ADB calculations using data from Bloomberg.

currencies—raising exchange rate movements across the region (**Figures 10, 11**). As a result, macroeconomic management in Asia has become more difficult, with policymakers more inwardly focused, trying to manage flow-on effects of potential policy unwinding. Financial market and exchange rate volatility could further weaken financial—and even trade—flows. And that would weaken market integration (see *Financial Integration*, page 17).

Despite the strengthening recovery in major advanced economies, thus far it has not led to a revival in export orders from Asia. Advanced economies’ growth in import volumes of goods and services has been below growth in gross domestic product (GDP) during the past year (**Figure 12**). The US has improved its current account deficit—from 3.2% of GDP in mid-2011 to 2.4% by mid-2013. In contrast, the PRC’s current account surplus as a share of GDP fell from 10.2% in 2007 to

**Figure 12: Growth in Trade Volume of Goods and Services—Advanced Economies (y-o-y, %)**



Note: Advanced economies include Australia; Austria; Belgium; Canada; Cyprus; Czech Republic; Denmark; Estonia; Finland; France; Germany; Greece; Hong Kong, China; Iceland; Ireland; Israel; Italy; Japan; the Republic of Korea; Luxembourg; Malta; the Netherlands; New Zealand; Norway; Portugal; San Marino; Singapore; Slovak Republic; Slovenia; Spain; Sweden; Switzerland; Taipei, China; the United Kingdom; and the United States.  
Source: *World Economic Outlook 2013*, International Monetary Fund.

2.5% in early 2013. These unwinding global imbalances suggest substantial structural transformation has begun in major economies as well as the global economy in general. As external demand is expected to remain weak despite some improvement, domestic and regional demand must strengthen to sustain growth in the region. The economic structure of the region needs to transform to increase productivity and efficiency, allowing households more income to boost consumption. To date, the share of consumption to output in Asia declined from a peak of 69.1% in 2001 to 59.9% in 2012 (Figure 13). The drop in consumption share occurred across all subregions—most pronounced in East Asia, where it fell from 67.9% to 56.5% during the same period.

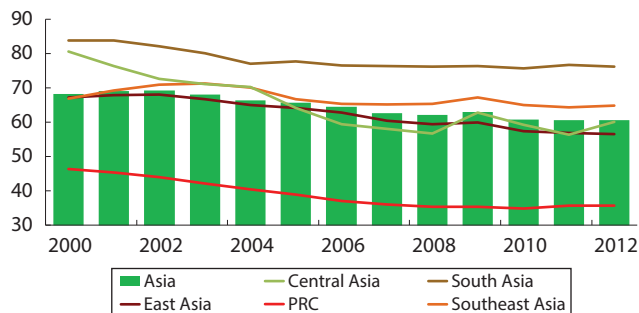
## As the economic and financial landscape shifts, progress in regional cooperation and integration in Asia has been mixed.

Progress in Asia's regional cooperation and integration (RCI) has shown strengths and weaknesses. Rising from 45% in 1990 to 55% in 2012, intra-Asian trade has clearly increased. In recent years, however, cross-border trade and equity flows have slowed modestly since 2010 despite growing intraregional foreign direct investment (FDI), bond holdings, and tourism (Figure 14).<sup>3</sup>

There was a slight easing in intraregional trade during 2012, partly reflecting weaker global trade growth and

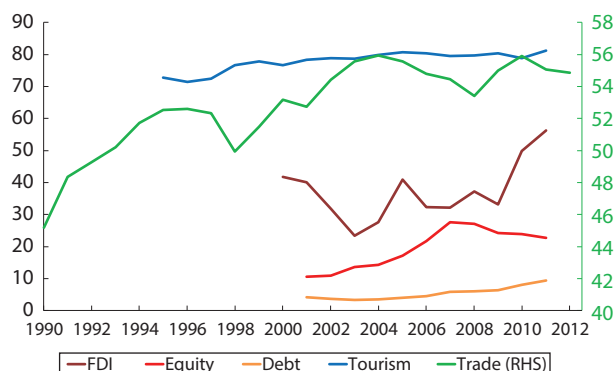
<sup>3</sup>Due to lack of complete data, intraregional FDI only covers the 10 Association of Southeast Asian Nations (ASEAN) economies (Brunei Darussalam, Cambodia, Indonesia, the Lao People's Democratic Republic, Malaysia, Myanmar, the Philippines, Singapore, Thailand, and Viet Nam); Australia; the PRC; Hong Kong, China; India; Japan; Pakistan; the Republic of Korea; and New Zealand. This is a smaller set compared with those covered in previous issues of the Asian Economic Integration Monitor.

**Figure 13: Consumption—Asia (% of GDP)**



PRC = People's Republic of China.  
Note: Asia excludes the Pacific as data unavailable. Data for the PRC refer to final household consumption expenditure. Central Asia excludes Afghanistan, Tajikistan, Turkmenistan, and Uzbekistan as data unavailable. South Asia excludes Bhutan and the Maldives as data unavailable; data starts in 2002 for Sri Lanka and 2005 for Pakistan; Bangladesh and Pakistan refers to fiscal year data ending June, India ending March, and Nepal ending July. Southeast Asia excludes Myanmar as data unavailable; data for Malaysia starts 2005.  
Source: ADB calculations using data from CEIC and national sources.

**Figure 14: Progress of Integration—Regional Indicators (intraregional as % of total)**



FDI = foreign direct investment.  
Notes:  
**FDI**—includes ASEAN; Australia; the People's Republic of China; Hong Kong, China; India; Japan; Pakistan; the Republic of Korea; and New Zealand. Data for Australia and New Zealand start from 2001.  
**Trade**—national data unavailable for Bhutan, Kiribati, Nauru, Palau, Timor-Leste, and Tuvalu; no data available on the Cook Islands, the Marshall Islands, and the Federated States of Micronesia.  
**Equity holdings**—based on investments from Hong Kong, China; India; Indonesia; Japan; Kazakhstan; the Republic of Korea; Malaysia; Pakistan; the Philippines; Singapore; Thailand; and Vanuatu. Excludes Oceania. Recipient data unavailable for Azerbaijan, Bhutan, the Federated States of Micronesia, Palau, Samoa, Tonga, Turkmenistan, and Tuvalu. Data from 2001 to 2011.  
**Bond holdings**—based on investments from Hong Kong, China; India; Indonesia; Japan; Kazakhstan; the Republic of Korea; Malaysia; Pakistan; the Philippines; Singapore; Thailand; and Vanuatu. Excludes Oceania. Recipient data unavailable for Azerbaijan, Bhutan, the Federated States of Micronesia, Palau, Samoa, Tonga, Turkmenistan, and Tuvalu. Data from 2001 to 2011.  
**Tourism**—does not include Oceania. Data until 2011.  
Source: ADB calculations using data from Bloomberg; CEIC; Asia Regional Integration Center; ADB; *Coordinated Portfolio Investment Survey*, International Monetary Fund; *Direction of Trade Statistics*, International Monetary Fund; *World Economic Outlook Database October 2013*, International Monetary Fund; and United Nations World Tourism Organization.

slowing Asian trade with the US and EU. In turn, this affected parts and components trade within Asia—seen by the marked decline of PRC and Japanese trade with key regional suppliers. The slowdown in PRC economic growth may have also led to the easing in intraregional trade.

Cross-border equity flows also slowed slightly and equity returns in the region have moved less synchronously thus far in 2013. While Japan's equity markets were strong as the positive effects of Abenomics began to affect the real economy, equity markets in most newly industrialized economies (NIEs) contracted in step with the growth slowdown in the PRC and weak subregional trade. PRC stock indexes also fell following weaker manufacturing and export growth, along with tightened liquidity. Combined, cross-border equity flows were weak in East Asia, setting the pace for equity flows in the region generally. Growth in remittance inflows also slowed, particularly to South Asian economies, though remittance inflows to some other countries (such as the Philippines) continue to show solid growth (see *Labor Mobility*, page 31).

Interestingly, intraregional FDI, and bond markets and tourism flows within Asia have shown greater resilience. Intraregional FDI flows for emerging East Asian economies increased significantly in 2010 and 2011, due to strong growth prospects in emerging markets and rising FDI outflows from Japan, the PRC, and the Republic of Korea. The region's large domestic markets and key role as export base also helped boost intraregional FDI. Bond markets in emerging East Asia also expanded rapidly. Through March 2013, emerging East Asia's local currency bond markets expanded 12.1% year-on-year to \$6.7 trillion, with corporate bonds rising faster (19.5%) year-on-year. Bond market growth is driven primarily by East Asian bonds—which are generally perceived as more stable.<sup>4</sup> Local currency bond markets also benefitted from the ASEAN+3 Asia Bond Markets Initiative (ABMI).<sup>5</sup> In addition, intraregional bank credit flows have risen significantly after the global financial crisis, particularly from Japan and Australia to other emerging Asian economies (see *Asia's Rising Exposure to Intraregional Bank Lending*, page 21). This not only deepened financial linkages in the region, but also increased the risk of contagion through financial channels.

Regional tourism also rebounded strongly with a global recovery in tourist arrivals. Improvements in intraregional tourism reflected robust income growth in the region as well as policies that foster greater intraregional cooperation and coordination in tourism.

## While progress in RCI is uneven across subregions, linkages between them are growing stronger, with most showing growing trade, financial, and tourism links with the rest of Asia.

Among subregions, East Asia and Southeast Asia show a higher degree of cross-border flows relative to the other subregions.<sup>6</sup> For instance, 35.9% of East Asia's trade and 24.5% of Southeast Asia's trade was within itself, as opposed to single-digit shares in Central Asia, South Asia, and the Pacific and Oceania. Also, 16.6% of East Asia's equity flows were within itself (6.8% for Southeast Asia), with hardly any in Central Asia and South Asia (**Table 2**).

Despite the uneven picture, links across subregions are strong. For instance, trade flows from the Pacific and Oceania, Southeast Asia, South Asia, and Central Asia to Asia remain sizeable, accounting for 61.9%, 42.5%, 30.2%, and 22.8% of each subregion's trade, respectively. Equity holdings in Asia from Southeast Asia (39.3%), South Asia (19.9%) and Central Asia (12.0%) are significant. Also, 5.7% of South Asia's external bond holdings are Asian. Tourism between subregions is also significant in South Asia (34.5%), Southeast Asia (20.9%), the Pacific and Oceania (12.1%), and in Central Asia (5.4%).

## In response to the global financial crisis, many countries worldwide resorted to trade restrictions to protect domestic markets from external competition.

For instance, among the Group of 20 (G20), some 100 trade-restrictive measures were put in place just in the past 7 months—in addition to many introduced over the past few years (**Table 3**).<sup>7</sup> The measures this year alone affected 0.5% of G20 merchandise imports and 0.4% of total world imports. These included trade remedy actions and tariff increases. While affecting only a small proportion of global trade, it is clear increasing protectionism only slows the expansion of world trade—essential for the global recovery. If at all, reforming behind-the-border restrictions and increasing trade facilitation are central to increasing goods and services trade in the region (see *World Trade Facilitation Negotiations: Asian Perspectives*, page 47).

<sup>4</sup>See ADB. 2013. *Asia Bond Monitor September 2013*. Manila.

<sup>5</sup>For details of the ABMI, see ADB. 2012. *Asian Economic Integration Monitor July 2012*. Manila.

<sup>6</sup>See ADB. 2012. *Asian Economic Integration Monitor July 2012*. Manila.

<sup>7</sup>G20 includes Argentina, Australia, Brazil, Canada, the PRC, France, Germany, India, Indonesia, Italy, Japan, the Republic of Korea, Mexico, Russian Federation, Saudi Arabia, South Africa, Turkey, the United Kingdom, the United States, and the European Union.

**Table 2: Progress in Regional Integration (2008–2012)**

Subregions	Production Networks and Trade		Capital Markets		Macroeconomic Links		Migration	
	Intra-subregional FDI (%)	Intra-subregional Trade (%)	Intra-subregional Equity Holdings (%)	Intra-subregional Bond Holdings (%)	Intra-subregional Output Correlations	Intra-subregional Tourism (%)	Migrant to Population Ratio (%)	
Central Asia	–	5.89 ▼	0.40 ▲	–	0.28 ▲	28.13 ▲	1.56 ▼	
East Asia	56.73 ▲	35.93 ▼	16.60 ▲	3.41 ▲	0.63 ▲	74.28 ▲	0.26 ▲	
South Asia	– ▲	4.43 ▼	0.54 ▼	14.99 ▼	0.24 ▲	12.04 ▼	0.47 ▼	
Southeast Asia	16.60	24.52 ▲	6.76 ▼	8.35	0.52 ▲	69.73 ▲	0.66 ▲	
The Pacific and Oceania	0.32	7.94 ▼	–	–	0.13 ▲	3.51 ▼	0.09 ▼	

Subregions	Inter-subregional FDI (%)	Inter-subregional Trade (%)	Inter-subregional Equity Holdings (%)	Inter-subregional Bond Holdings (%)	Inter-subregional Output Correlations	Inter-subregional Tourism (%)	Migrant to Population Ratio (%)
	Central Asia	–	22.77 ▲	12.01 ▼	– ▲	0.30 ▲	5.36 ▲
East Asia	6.03	17.25 ▲	4.43 ▲	6.07 ▲	0.40 ▲	9.76 ▲	–
South Asia	21.31	30.24 ▲	19.92 ▲	5.65 ▲	0.31 ▲	34.54 ▲	–
Southeast Asia	46.64	42.46 ▲	39.29 ▲	32.08 ▲	0.39 ▲	20.93 ▲	–
The Pacific and Oceania	13.58	61.95 ▲	–	–	0.21 ▲	12.10 ▲	–

TOTAL	FDI (%)	Trade (%)	Equity Holdings (%)	Bond Holdings (%)	Output Correlations	Tourism (%)	Migrant to Population Ratio (%)
Asia	45.60 ▲	54.85 ▲	25.84 ▲	12.29 ▲	0.33 ▲	80.03 ▲	0.51 ▼
Central Asia	–	28.66 ▲	12.41 ▼	–	0.30 ▲	33.50 ▲	–
East Asia	62.75 ▲	53.17 ▼	21.03 ▲	9.47 ▲	0.44 ▲	84.04 ▲	–
South Asia	21.31 ▲	34.66 ▲	20.46 ▲	20.64 ▼	0.30 ▲	46.58 ▲	–
Southeast Asia	63.24	66.97 ▲	46.05 ▲	40.43 ▲	0.42 ▲	90.66 ▲	–
The Pacific and Oceania	13.90	69.89 ▲	–	–	0.19 ▲	15.61 ▲	–

▲ = increase from 2000–2007 average; ▼ = decrease from 2000–2007 average; – = data unavailable.

FDI = foreign direct investment.

Note: Data calculated for Asia unless otherwise noted. Total Asia equals total intra-Asian using intraregional data.

†Total Asia equals total intra-Asian (using intraregional data).

**FDI**—includes ASEAN; Australia; the People's Republic of China; Hong Kong, China; India; Japan; Pakistan; the Republic of Korea; and New Zealand. Data for Australia and New Zealand start from 2001.

**Trade**—national data unavailable for Bhutan, Kiribati, Nauru, Palau, Timor-Leste, and Tuvalu; no data available on the Cook Islands, the Marshall Islands, and the Federated States of Micronesia.

**Equity holdings**—based on investments from Hong Kong, China; India; Indonesia; Japan; Kazakhstan; the Republic of Korea; Malaysia; Pakistan; the Philippines; Singapore; Thailand; and Vanuatu. Excludes Oceania. Recipient data unavailable for Azerbaijan, Bhutan, the Federated States of Micronesia, Palau, Samoa, Tonga, Turkmenistan, and Tuvalu. Data from 2001 to 2011.

**Bond holdings**—based on investments from Hong Kong, China; India; Indonesia; Japan; Kazakhstan; the Republic of Korea; Malaysia; Pakistan; the Philippines; Singapore; Thailand; and Vanuatu. Excludes Oceania. Recipient data unavailable for Azerbaijan, Bhutan, the Federated States of Micronesia, Palau, Samoa, Tonga, Turkmenistan, and Tuvalu. Data from 2001 to 2011.

**Output correlations**—based on simple averages of 3-year rolling bilateral correlations of annual growth rates (difference of natural logarithms) of detrended gross domestic product series (2005 base year). Data unavailable for Afghanistan, the Cook Islands, the Marshall Islands, the Federated States of Micronesia, Myanmar, Nauru, Palau, Timor-Leste, and Tuvalu.

**Tourism**—does not include Oceania. Data until 2011.

**Migrant to population ratio**—share of migrant stock to population in 2010 (compared with 2000 estimate). Does not include Oceania. Data unavailable for Afghanistan and Pakistan.

Source: ADB calculations using data from Bloomberg; CEIC; *Asia Regional Integration Center*, ADB; *Coordinated Portfolio Investment Survey*, International Monetary Fund; *Direction of Trade Statistics*, International Monetary Fund; *World Economic Outlook Database October 2013*, International Monetary Fund; *Bilateral Migration Database 1990–2000*, World Bank; *Bilateral Migration Matrix 2010*, World Bank; United Nations Conference on Trade and Development; and United Nations World Tourism Organization.

**Table 3: Number of Measures Restricting Trade—G20**

Type of Measure	Mid-May to mid-Oct 2010	Mid-Oct 2010 to mid-Apr 2011	May to mid-Oct 2011	Mid-Oct 2011 to mid-May 2012	Mid-May to mid-Oct 2012	Mid-Oct 2012 to mid-May 2013
Trade remedy	33	53	44	66	46	67
Import	14	52	36	39	20	29
Export	4	11	19	11	4	7
Other	3	6	9	8	1	6
Total	54	122	108	124	71	109
Average per month	10.8	20.3	18	17.7	14.2	15.6

G20 = Group of 20.

Source: WTO–OECD–UNCTAD, 2013. *9th Report on G20 Trade and Investment Measures June 2013*. Geneva.

## History clearly shows that crises promote regionalism, which in turn builds greater resilience against future crises.

While no one wants financial crises, they tend to accelerate the impetus for greater RCI. For instance, during the 1997/98 Asian financial crisis, government cooperation in monitoring the crisis impact and in building financial safety nets supported market-led integration. After the 2008/09 global financial crisis and 2011 eurozone debt crisis, the proliferation of free trade agreements and expansion of regional safety nets in Asia also helped build resilience to future shocks.<sup>8</sup>

Various forms of regionalism also deliver huge benefits. This is a key lesson learned from the various subregional groupings—which have emerged to promote more closely identified common interests. For instance, ASEAN has shown that deeper trade, better developed and integrated financial markets, and seamless logistics and infrastructure provide a solid foundation for new, sustainable and inclusive growth. The Greater Mekong Subregion (GMS) has also shown the importance of building economic corridors to link less-developed and landlocked countries with high-growth economies and foster more inclusive growth and greater convergence in development. ASEAN is also poised to benefit from the freer movement of goods and services, investment, skilled labor, and capital, even if it must overcome many challenges to reach the milestone of an ASEAN Economic Community (AEC) by end-2015. The recent financial turmoil could offer a new boost to strengthen integration—as crises have in the past—even as it looks beyond 2015 (see *Toward an ASEAN Economic Community—and Beyond*, page 34).

## National and global approaches are no longer sufficient to address key challenges facing the region, and regional cooperation is an important means to craft regional solutions.

Traditional growth models must change, and globalization is undergoing significant structural change—with emerging markets and developing economies expected to remain the engine of global growth. Also, uncertainties and volatilities have immense global and regional dimensions with national policies insufficient to cope with shocks or mitigate their effects. There are also several transboundary issues—ranging

from climate change, transboundary haze, health risks and territorial disputes—which are beyond the scope of national or bilateral actions (see *Regional Public Goods*, page 23).

Regional cooperation remains a key strategy to find solutions to regional issues. RCI can also deliver new sources of growth that are more sustainable and inclusive. In the coming years, key RCI priorities could include

- promoting greater policy dialogue;
- nurturing stronger regional institutions;
- developing deeper and more inclusive regional capital/financial markets;
- strengthening regional financial safety nets; and
- developing greater cross-border connectivity to link East and Southeast Asia with South Asia and Central Asia.

The succeeding sections will discuss the progress and issues affecting RCI across its many dimensions.

## Intraregional Trade in Services

### Services has become an important aspect of trade integration in Asia—it is now as important as Asia's trade in goods; and, more importantly, its structure is very different from goods trade.

There is very limited research on services trade in Asia, partly because data are scarce. This is particularly true when it comes to regional trade integration. While much has been written on the subject, nearly all research focuses exclusively on goods trade. A few studies mention services trade integration, but to date no substantial analysis of trade in services in Asia exists.<sup>9</sup> Naturally, this makes it difficult to understand and track the progress of Asia's trade integration in services.

However, enough data are available—for the PRC; Hong Kong, China; Japan; the Republic of Korea; and Singapore—to attempt an analysis in comparison with

<sup>8</sup>See ADB. 2013. *Asian Economic Integration Monitor March 2013*. Manila.

<sup>9</sup>ADB's 2010 publication, *Institutions for Regional Integration*, argues that regional integration in services trade is insignificant compared with goods trade, though its empirical analysis on services trade remains preliminary. See ADB. 2010. *Institutions for Regional Integration*. Manila.

## Box 1: Intraregional Trade Share and Intraregional Trade Intensity

The formulae to compute intraregional trade share and intraregional trade intensity are given below:

$$\text{Intraregional Trade Share} = T_{ii}/T_i$$

$$\text{Intraregional Trade Intensity} = (T_{ii}/T_i)/(T_i/T_w)$$

where

$T_{ii}$   $\equiv$  exports of region  $i$  to region  $i$  plus imports of region  $i$  from region  $i$

$T_i$   $\equiv$  total exports of region  $i$  to the world plus total imports of region  $i$  from the world

$T_w$   $\equiv$  total world exports plus imports

Intraregional trade share measures the amount of the region's members' trade with each other to their total trade worldwide. In certain cases, however, it is inappropriate for cross-regional comparisons. First, the share can rise when more countries are included in the group even if, in fact, there is no regional trade bias among its members. Second, the share can increase substantially when a large trading nation is included in the group even without any regional trade bias.<sup>1</sup>

<sup>1</sup>See M. Plummer, D. Cheong, and S. Hamanaka. 2010. *Methodology for Impact Assessment of Free Trade Agreements*. Manila: ADB; World Trade Organization. 2010. *Measuring Trade in Services (Training Module)*. Geneva.

Intraregional trade intensity is a better measure of regional bias because it takes into account the region's weight in total world trade. To compute intraregional trade intensity, the intraregional trade share is divided by the region's total trade share in world trade. If the intensity indicator is more or less than 1.0, then the region's trade has accordingly a positive or negative regional bias toward itself.<sup>2</sup> For instance, if a region's share of world trade is 10% and its intraregional trade share is 10%, the resulting intensity becomes 1.0 (neutral regional bias), because the likelihood of trading within or outside the region is the same—10%. If a region's share in world trade is 10% and its intraregional trade share is 20%, the resulting intensity of 2.0 implies the region's trade has a strong positive bias, because its intraregional intensity is twice as much as it is globally. The reverse also holds when the intraregional share is below the region's share of world trade—for example, a 5% intraregional trade share in a region with 10% of world trade, a 0.5 intensity which implies a negative bias.

<sup>2</sup>It must be noted though that the indicator only takes into consideration internal bias and not external bias. A regional trade introversion index is more suitable to measure trade interdependence as it considers both intraregional and external trade bias.

Europe and North America.<sup>10</sup> Does Asia's services trade have a positive regional bias? If so, is it greater or less than that of goods trade? And is the regional bias of services trade in Asia greater or less than that in Europe and North America?

There are two main indexes used to assess the level of trade interdependence within a region: (i) intraregional trade share and (ii) intraregional trade intensity. Intraregional trade share is widely used and easy to calculate, providing a snapshot of trade interdependence in a particular region. However, it does

<sup>10</sup>Four Asian economies—Hong Kong, China; Japan; the Republic of Korea; and Singapore—publish relatively comprehensive services trade statistics. Given the increasing significance of the PRC in services trade, it has been included using mirror statistics from services trading partners. For Europe, France, Germany, Italy, the Netherlands, Spain, and the United Kingdom (UK) are included—as these six dominate European services trade and publish relatively comprehensive sets of statistics. For North America, the three members of the North America Free Trade Agreement (NAFTA)—Canada, Mexico, and the United States (US)—are included. Mexico does not have comprehensive services trade so mirror data are used.

not measure trade bias, as it is not regionally weighted against world trade. A more suitable indicator for comparing regional bias across regions is intraregional trade intensity, which accounts for the weight of the region in the world trade (**Box 1**).

For the services trade analysis, the United Nations (UN) Service Trade Statistics database is used. It is based on the International Monetary Fund's (IMF) Balance of Payments Manual 5, which covers 11 sectors: (i) transport; (ii) travel; (iii) communications services; (iv) construction services; (v) insurance services; (vi) financial services; (vii) computer and information services; (viii) royalties and license fees; (ix) other business services; (x) personal, cultural, and recreational services; and (xi) government services.<sup>11</sup> The three major sectors for intraregional services trade in Asia are transport (36.5%), travel (29.9%), and other business

<sup>11</sup>For the further discussions on services trade classifications, see ADB. 2013. Trade Integration. *Asian Economic Integration Monitor March 2013*. Manila.

services (16.1%). However, capturing the trade amount beyond these three sectors is difficult for statistics agencies, and regarding them as “minor” sectors would be misleading. They may appear “minor” partly because transactions are not fully captured by statistics.<sup>12</sup> While international services trade is classified into four modes of supply in trade liberalization negotiations, UN Service Trade Statistics mainly cover Mode 1 (cross-border transactions).<sup>13, 14</sup>

**Intraregional trade intensity—better than trade share when comparing regional bias across regions—shows Asia as the only region globally where services and goods trade intensity are at almost the same level.**

The difference between goods and services trade is significant for Asia and North America (in particular, North America’s intraregional trade share in services is half that of its share in goods trade) (Figure 15). In absolute terms, while Asia’s intraregional trade share is the lowest among the three in the case of goods, its intraregional trade share in services is higher than North America, but lower than Europe. However, as mentioned, intraregional trade share is difficult to compare between regions.

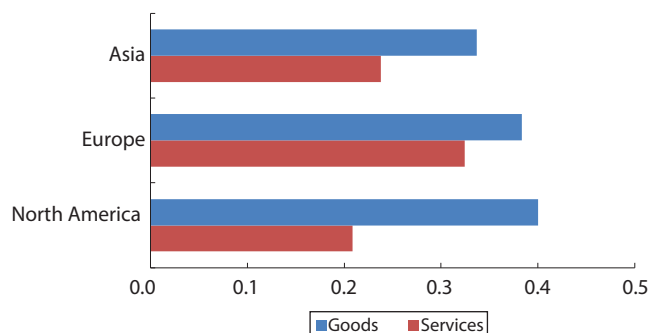
A clearer understanding of the level of services trade integration comes from analyzing the intraregional trade intensity index (Figure 16). In Asia’s case, trade intensity of services and goods is almost the same—Asia is the only region that has a comparative level of services trade intensity to goods trade intensity. Asia’s intraregional trade share in services is lower than goods because Asian countries are still relatively small services trade players (not because of the level of regional services trade bias).

<sup>12</sup>In fact, the sum of sectors is usually smaller than total services trade. In addition, mirror statistics (import versus export) at the sectoral level differ significantly.

<sup>13</sup>Mode 1 is “cross-border” services transactions, where both services suppliers and consumers remain in their respective countries as the services cross borders. Mode 2 is “consumption abroad”, where consumers move across the border to consume services. Mode 3 is “trade through a commercial presence”. Here, corporate services suppliers, such as foreign banks, move across borders to supply services in foreign markets. Mode 4 is the “movement of natural persons”, in which individual services suppliers, such as engineers, move across borders to supply services.

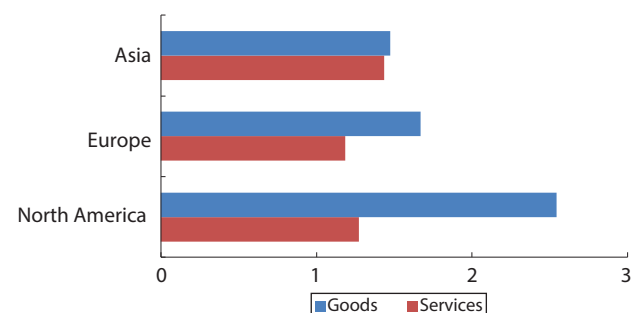
<sup>14</sup>Services trade statistics include some services trade other than Mode 1 because services are usually transacted under a combination of supply modes. For example, computer and information, other business services and personal, cultural, and recreational services are delivered through Modes 1 and 4. In the case of construction, Modes 3 and 4 may be involved. Travel is services consumption by travelers, and therefore falls under Mode 2. For details, see A. Maurer et al. 2008. *Measuring Trade in Services*. In A. Mattoo, R. Stern and G. Zanini (eds). *A Handbook of International Trade in Services*. Oxford: Oxford University Press.

**Figure 15: Intraregional Trade Share, 2010**



Note: Asia refers to the People’s Republic of China; Hong Kong, China; Japan; the Republic of Korea; and Singapore. Europe refers to France, Germany, Italy, the Netherlands, Spain, and the United Kingdom. North America refers to Canada, Mexico, and the United States. Source: ADB calculations using data from *Direction of Trade Statistics*, International Monetary Fund (for goods) and *Service Trade Statistics*, United Nations (for services).

**Figure 16: Intraregional Trade Intensity, 2010**



Note: Asia refers to the People’s Republic of China; Hong Kong, China; Japan; the Republic of Korea; and Singapore. Europe refers to France, Germany, Italy, the Netherlands, Spain, and the United Kingdom. North America refers to Canada, Mexico, and the United States. Source: ADB calculations using data from *Direction of Trade Statistics*, International Monetary Fund (for goods) and *Service Trade Statistics*, United Nations (for services).

In fact, the PRC is the second largest goods trader, while only the fourth largest services trader. Likewise, Japan is the fourth largest goods trader, but the sixth largest services trader.

In the case of North America, services trade intensity is significantly below that of goods trade; services about half that of goods, the same as its intraregional services trade share. In other words, North America’s lower intraregional services trade share is due to a regional bias factor, not a weight factor. This also consistent with common understanding of US trade: it is a global services trader, while a regional goods trader. In the case of Europe, intraregional trade intensity of services is slightly below that in goods, just as in the case of intraregional trade share. Thus, again, Europe’s slightly lower intraregional services trade share than in goods is due to a regional bias factor, not weight.

Thus, it can be said that while Asian countries trade services with each other intensively, their weight in the



**Table 4: The Status of Determinants of Services Trade**

	Common Language	Archipelagic Nature	Services RTA Networks
Asia	High	High	Low
Europe	Low	Low	High
North America	High	Very Low	High

RTA = regional trade agreement.

Notes: Asia refers to the People's Republic of China; Hong Kong, China; Japan; the Republic of Korea; and Singapore. Europe refers to France, Germany, Italy, the Netherlands, Spain, and the United Kingdom. North America refers to Canada, Mexico, and the United States.

"High" status leads to higher regional bias in services than goods. For example, higher level of archipelagic nature leads to more trade in services than goods, because the lack of land border creates unfavorable condition to goods trade rather than services trade.

Source: S. Hamanaka. 2013. Cross-regional comparison of trade integration: The Case of Services. *ADB Working Paper Series on Regional Economic Integration*, No. 108. Manila: ADB.

global services trade has been relatively insignificant. It is wrong to argue that intraregional services trade in Asia is insignificant just because its intraregional services trade share is low. In absolute terms, Asian countries do trade heavily with non-Asians, but relatively, they also trade a great deal within the region. Also interesting is that Asia's regional bias in services trade is higher in absolute terms than in either North America or Europe. For the intensity of goods trade, however, Asia is lowest among the three regions. In short, Asia is the only region where regional services trade intensity is comparable to its goods trade bias, and the lower intraregional services trade share compared with its goods trade is because of weight, not regional bias.

Asia's relatively high regional bias in services trade can be explained by two determinants (Table 4).<sup>15</sup> The first is the common language factor. There seems to be a consensus that the common language factor affects services trade much more than in goods trade.<sup>16</sup> If two countries share the same language, the likelihood of deepening services trade rather than goods trade increases. This is understandable because language is crucial in supplying services. In fact, Asia has a relatively high-level of a shared language (Chinese); again, more essential to services trade than goods trade. The second determinant is the archipelagic nature of the region. Many studies show that a common land border affects

<sup>15</sup>For the review of determinant factors of goods and services trade, see S. Hamanaka. 2013. Cross-Regional Comparison of Trade Integration: The Case of Services. *ADB Working Paper Series on Regional Economic Integration*. No. 108. Manila: ADB.

<sup>16</sup>F. Kimura and H-H. Lee. 2006. The Gravity Equation in International Trade in Services. *Review of World Economics*. Weltwirtschaftliches Archiv. 142 (1). pp. 92–121; A. Lejour and J.W. de Paiva Verheijden. 2004. Services Trade within Canada and the European Union: What do They Have in Common? *CPB Discussion Paper*. No. 42; C. Lennon. 2009. Trade in Services and Trade in Goods: Differences and Complementarities. *WiiW Working Papers*. No. 53. Vienna: The Vienna Institute for International Economic Studies; K. Head, T. Mayer, and J. Ries. 2009. How Remote is the Offshoring Threat? *European Economic Review*. 53 (4). pp. 429–444.

goods trade more than services trade.<sup>17</sup> A common land border has a larger positive impact on goods rather than on services trade between two countries. This is also understandable given the types of goods that can be easily delivered via land transportation. However, most Asian nations are separated by water—no common land borders—which favors services trade over goods trade.

The explanatory power of joining regional trade agreements (RTAs) is ambiguous when comparing goods and services trade. But this is partly because most studies compare the impact of a goods agreement on both goods and services trade, not the impact of a services agreement on services trade. However, recent studies find that a goods agreement has a small positive impact on services trade, while a services agreement has a larger positive impact on services trade.<sup>18</sup> Thus, RTAs seem to have a larger impact on services than goods if they include a substantial services component (or chapter). Supposing that RTAs covering services have a larger impact on services than goods, one could argue that the poor status of services agreement networks in Asia would have a negative impact on the regional bias in services trade relative to goods.

In order to further integrate Asia's services trade, effective regional services agreements would be necessary. The poor status of services RTA networks in Asia creates unfavorable conditions for regional bias in services trade relative to goods trade. In contrast, both Europe and North America have region-wide services agreements. If there were effective services agreement networks in Asia—or even a regional services agreement—the regional bias (regional integration) in services would have been much higher than that in goods.

## Updates on Financial Integration

**The impact of the 2008/09 global financial crisis continues to affect financial integration in Asia due to the region's high degree of interdependence with the world economy.**

In response to the crisis, advanced economies, particularly the US, used QE—large-scale purchases of government securities and other securities—to

<sup>17</sup>See footnote 16.

<sup>18</sup>I. Park and S. Park. 2011. Regional Liberalisation of Trade in Services. *World Economy*. No. 34. pp. 725–740.

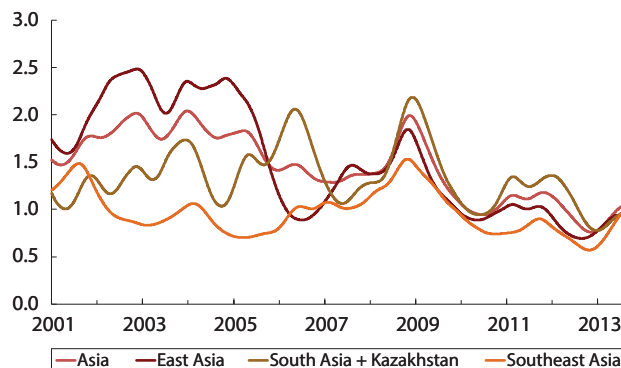
prevent their economies from falling into recession, and in so doing helped stabilize global economic conditions. The effect on Asia was felt more on financial markets than on the real economy. In advanced economies, the availability of this new liquidity also helped improve market confidence and spurred economic activity, facilitating the start of the recovery. However, the massive injection of money also had an unintended effect of encouraging large capital inflows into developing Asia's financial markets as investors searched for higher yields. When announced in April 2013, Japan's qualitative and quantitative easing also triggered volatility in Asian equity, bond, and currency markets. And when the US Fed announced in May its plans to taper quantitative easing as the US economy strengthened, foreign capital began flowing out of the region.

**While price co-movements among Asian equities increased in 2009 and 2012 in response to the global shock and eurozone crisis, daily equity returns were less synchronous in 2013, with increased dispersion observed across all subregions.**

The combined impact of (i) expectations of unwinding easy monetary policy worldwide, (ii) the slowdown of economic growth in the PRC, (iii) political tensions in the Middle East, and (iv) a variety of domestic risks, created a trend of increased dispersion among Asia's financial markets (Figure 17). In East Asia, Japan's stock markets surged while others in the subregion were more subdued (Figure 18). Japan's equity market showed strong growth as Abenomics began to boost the real economy.<sup>19</sup> In contrast, equity markets in the NIEs fell as exports and economic growth eased in H12013—in response to slower growth in the PRC. Stock indexes in the PRC continued to drop amid weaker manufacturing and export growth, along with tightened liquidity as authorities slowed credit expansion—particularly in the “shadow” banking system. In Southeast Asia, equity markets were mixed. They rose early in the year as strong domestic demand insulated the subregion from global weakness—boosting market confidence—but declined beginning in June as the US Fed's statement of impending tapering of quantitative easing spread fears of capital flow reversals. Equity markets in South Asia and Kazakhstan also showed diverging trends with most

<sup>19</sup>Abenomics refers to “three arrows” or policy measures introduced by Prime Minister Shinzo Abe shortly after his reelection in December 2012. The three arrows comprise of massive fiscal stimulus, aggressive monetary easing, and structural reform to enhance the country's competitiveness.

**Figure 17: Cross-Market Dispersion of Equity Returns (%)**



Note: Cross-market standard deviation of daily stock market returns, detrended using Hodrick-Prescott (HP) filter. Asia includes East Asia, South Asia plus Kazakhstan, and Southeast Asia. East Asia includes the People's Republic of China; Hong Kong, China; Japan; the Republic of Korea; Mongolia; and Taipei, China. South Asia includes Bangladesh, India, Pakistan, and Sri Lanka. Southeast Asia includes Indonesia, Malaysia, the Philippines, Singapore, Thailand, and Viet Nam. Data until 16 September 2013. Source: ADB calculations using data from Bloomberg.

markets stabilizing, except for Pakistan's bullish market, which rose strongly on the back of rising banking and construction stocks.

**The movements of Asian bond yields continue to be less synchronous, as the selloff by foreign investors affected economies perceived to be more vulnerable.**

The coefficient of variation of 10-year bond yield spreads for Southeast Asian economies has increased, largely driven by an increase in Indonesian bond yields (Figure 19). These reflect deteriorating current account conditions and rising inflation. Bond yields in Thailand also increased in July as its fiscal position, current account position, and growth prospects weakened. However, bond yields in Malaysia and the Philippines have remained relatively stable as they continue to run current account surpluses. In East Asia, bond yields have generally been unaffected by capital outflows as these economies are perceived to be more stable. Meanwhile, 10-year bond yields for South Asia closely follow India and have shown very limited movement over time.

**Despite the significant selloff of Asian equities and bonds, foreign direct investment inflows have become more stable, due to the region's large domestic markets and key role as an export base.**

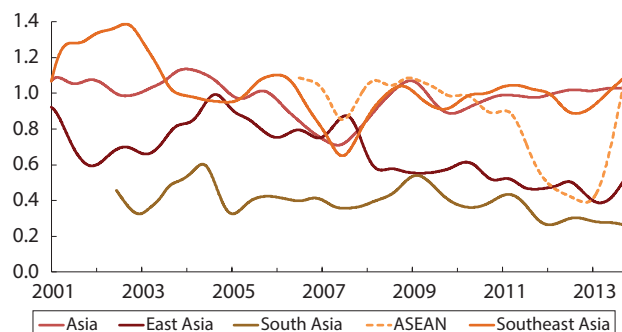
In 2011, total FDI inflows to the ASEAN; Australia; the PRC; Japan; the Republic of Korea; Hong Kong, China; India; Pakistan; and New Zealand topped \$251 billion,

**Figure 18: Growth of Stock Price Indexes—Asia (%)**



BAN = Bangladesh; PRC = People's Republic of China; HKG = Hong Kong, China; IND = India; INO = Indonesia; JPN = Japan; KAZ = Kazakhstan; KOR = Republic of Korea; MAL = Malaysia; MON = Mongolia; PAK = Pakistan; PHI = Philippines; SIN = Singapore; SRI = Sri Lanka; TAP = Taipei, China; THA = Thailand; VIE = Viet Nam.  
 Notes: Data refer to the main index in each economy. For the PRC, daily stock price indexes of combined Shanghai and Shenzhen composites, weighted by their respective market capitalization. For India, Bombay Stock Exchange 100.  
 Source: ADB calculations using data from Bloomberg.

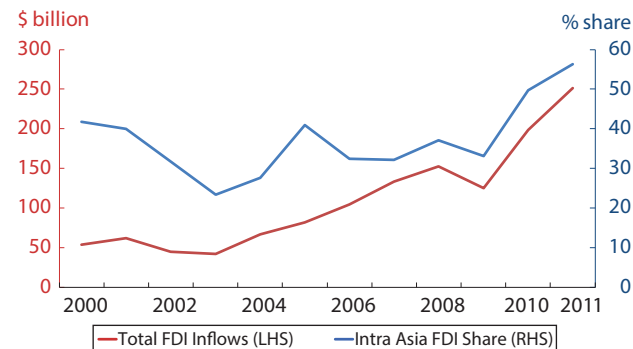
**Figure 19: Coefficient of Variation of 10-Year Bond Yield Spreads**



Note: Coefficient of variation of 10-year government bond yield spreads over benchmark United States Treasuries, detrended using Hodrick-Prescott (HP) Filter. Asia includes East Asia, South Asia, and Southeast Asia. East Asia includes the People's Republic of China; Hong Kong, China; Japan; the Republic of Korea; and Taipei, China. South Asia includes India, Pakistan, and Sri Lanka. ASEAN-4 includes Indonesia, Malaysia, the Philippines, and Thailand. Southeast Asia includes ASEAN-4 plus Singapore and Viet Nam. Data until 16 September 2013.  
 Source: ADB calculations using data from Bloomberg.

\$99 billion more than the levels during the 2008/09 global financial crisis (Figure 20). During the same period, the share of intraregional FDI to total inflows also increased from 37.1% in 2008 to 49.8% in 2010 and to 56.3% in 2011. Part of the reason for increasing intraregional FDI shares is the increased outward orientation of FDI from the PRC, Japan, and the Republic of Korea. By country, the PRC and Japan continue to dominate FDI inflows although the PRC's share may fall as labor costs rise and the economy diversifies and shifts some manufacturing to other parts of the region. Among economies receiving sizeable FDI inflows are Hong Kong, China; Singapore; the Republic of Korea; Malaysia; India; Thailand; and Indonesia.

**Figure 20: FDI Inflows and Intraregional FDI Share—Asia**

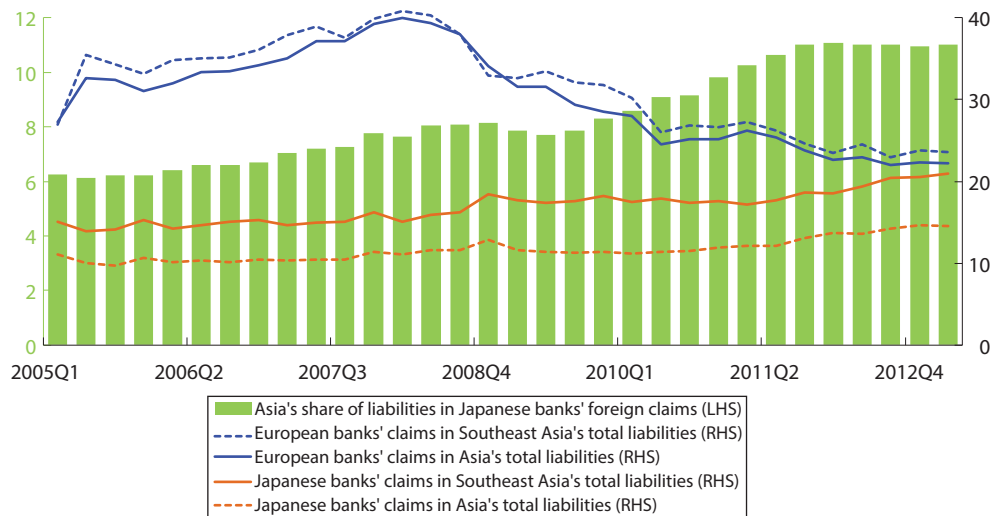


FDI = foreign direct investment, LHS = left-hand scale, RHS = right-hand scale.  
 Note: Asia includes ASEAN; Australia; the People's Republic of China; Hong Kong, China; India; Japan; Pakistan; the Republic of Korea; and New Zealand. Data for Australia and New Zealand start from 2001.  
 Source: ADB calculations using data from ASEAN Secretariat, and national sources.

### Japanese bank lending in the region continues to rise, offsetting some of the retrenchment by European banks after the 2008/09 global financial crisis.

The share of Asian international borrowing from Japanese banks remained slightly above 10% in the last quarter of 2012, continuing the buffer against declining European exposure (Figure 21). Japanese bank claims on Asian liabilities to foreign banks increased from 11.1% in the first quarter of 2005 to 14.5% in the fourth quarter of 2012; and on Southeast Asia's liabilities from 15.1% to 20.9% during the same period. European bank lending

**Figure 21: Japanese and European Banks' Foreign Claims in Asia (% share of total claims)**



LHS = left-hand scale, RHS = right-hand scale.

Notes: European banks (excluding United Kingdom banks) based on Bank for International Settlements (BIS) definition.

Asia excludes Australia, Japan, and New Zealand due to differences in the structure of their economies with the rest of Asia.

Total foreign claims of banks from 22 BIS reporting economies.

Source: ADB calculations using data from Bank for International Settlements (Table 9D). Data accessed 11 July 2013.

decreased from 27.2% to 22.2%, and 26.9% to 23.6% in Asia and Southeast Asia, respectively (**Box 2**).

### Going forward, the progress of financial integration in the region will largely reflect how recent financial market volatility plays out.

Three plausible scenarios can illustrate some of the likely impact and mitigation measures that could be taken in response to changing conditions:

Early in the year, a key scenario is a full blown crisis—similar to the 1996/97 Asian financial crisis—arising from a disorderly tapering of quantitative easing in the US. The likelihood of this scenario has now ebbed with the US Fed postponing its plan for an early exit. More so, it is important to stress that developing Asia is now in a much stronger position to weather any storm than it was in 1997. Most economies retain current account surpluses, lower levels of external debt, and much higher levels of foreign reserves. Since 1997, the region has also made significant progress in putting in place sound macroeconomic management, financial regulation and supervision, and corporate governance.

Thus, a more plausible scenario is a temporary increase in capital outflows with moderate effects on production and economic growth. Under this scenario, capital flow volatility will likely ease as the US recovery strengthens. Only countries displaying weak fundamentals (in economic growth, fiscal and current account balances, and outstanding foreign debt, among others) will be hard hit, while others will weather any storm. Natural financial stabilizers will manage the effect, with asset prices and exchange rates adjusting gradually. Growth would only slow for key economies with large external and fiscal imbalances. But currency depreciation, for example, will make exports more competitive, helping the external balance. This scenario could worsen if countries try to inappropriately defend currencies, protect domestic markets, and support business through subsidies. Then cross-border capital flow volatility will be prolonged, hurting output, employment, and prospects for financial integration. To mitigate these risks, it may be useful for authorities to directly address the source of imbalances, adopt measures that improve the credibility of government policy and work to further boost economic competitiveness.

Another scenario is a new bubble emerging from the slower pace of US QE tapering and renewed dynamism in the PRC, which could bring back capital flows and appreciating Asian currencies. Under this condition, financial markets (equities, bonds, and currencies) would further strengthen and drive the economic recovery and

## Box 2: Asia's Rising Exposure to Intraregional Bank Lending<sup>1</sup>

Since the 2008/09 global financial crisis (GFC), Asia's regional economic and financial integration has been strengthening. One area where this has become apparent is Asia's rapidly rising exposure to intraregional bank lending, particular since 2010. Aside from the increased portfolio investment contributing to deepening regional financial integration, intraregional bank lending is becoming an emerging new source of economic growth—and financial volatility—in Asia.

Since the GFC, Asia's exposure to European bank lending decreased as a percent of borrowers' total outstanding domestic credit. This was due to European bank deleveraging in the region, precipitated by the eurozone sovereign debt crisis. European bank exposure in Asia fell from 12.1% in 2007 to 7.5% in 2012, but it was uneven across subregions. In fact, South Asia, including India, increased its exposure to European banks—from 13.3% in 2007 to 17.5% in 2012.

Similar to the effect of European deleveraging, Asia also saw a decrease in exposure to US banks—from 3.1% in 2007 to 2.5% in 2012. The exception was Asia's newly industrialized economies (NIEs)—Hong Kong, China; the Republic of Korea; Singapore; and Taipei, China—which increased their US bank lending exposure from 7.6% in 2007 to 8.9% in 2012.

### Notable features of Asia's exposure to regional bank credit flows

Despite data limitations, Asia's exposure to intraregional bank lending has several notable features that warrant further study and may hold policy implications.

First, with European banks already deleveraged and new US liquidity expected to taper, Asia's appetite for intraregional bank credit flows has been on the rise. In 2010, when the impact of the eurozone sovereign debt crisis was strongest—and European banks were pulling back from the region—intraregional bank lending rose significantly.

In particular, Asia's exposure to Japanese bank lending more than doubled between 1997 and 2012—to about \$511 billion, well beyond the \$208 billion 1997 and \$274 billion pre-crisis 2008 levels (**Box figure 1**).

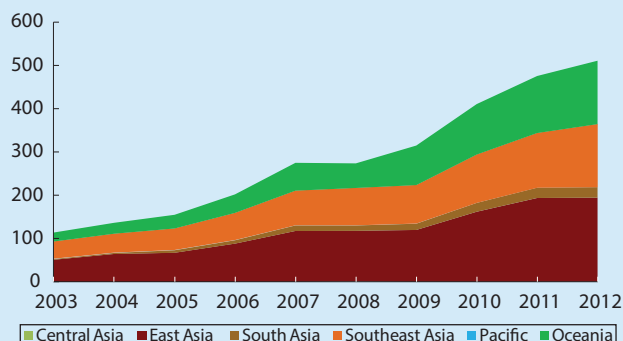
Second, by subregion, the NIEs, ASEAN-5, and South Asia all substantially increased their exposure to Japanese bank credit flows as a percent of borrower's domestic credit.<sup>2</sup> The NIEs rose from 5.2% in 2010 to 6.2% in 2012, ASEAN-5 from 4.3% to 4.8%, and South Asia from 2.0% to 2.5%.

Third, since the start of 2010, Asia's higher exposure to Japanese bank lending was accompanied by significantly more exposure to Australian banks in terms of the size of bank credit flows (**Box figure 2**).

<sup>1</sup>Asia here includes Oceania and the Pacific in describing financial links and channels.

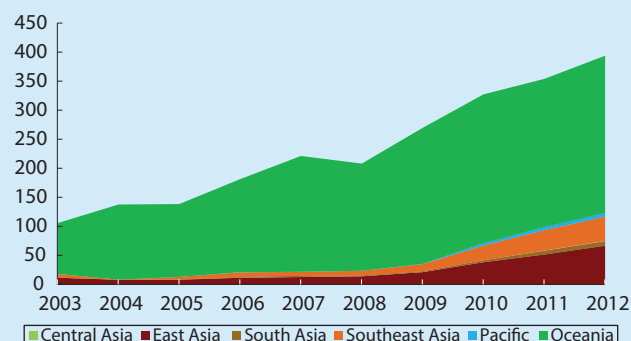
<sup>2</sup>ASEAN-5 includes Indonesia, Malaysia, the Philippines, Thailand, Viet Nam.

**1: Lending to Asia—Japanese Banks (\$ billion)**



Source: ADB calculations using data from Table 9B (Consolidated foreign claims of reporting banks—immediate borrower basis), Bank for International Settlements.

**2: Lending to Asia—Australian Banks (\$ billion)**



Source: ADB calculations using data from Table 9B (Consolidated foreign claims of reporting banks—immediate borrower basis), Bank for International Settlements.

In particular, Australian bank-lending within the region rose steeply from 2009, reaching \$393.8 billion in December 2012—almost double its size of its bank credit flows in December 2006.

### Behavior of bank credit flows

In practice, a sizable portion of cross-border flows are intermediated by Asia's banks. Cross-border bank credit flows continue to account for a substantial proportion of total cross-border flows in developing Asia (**Box table**).

From 2008Q2 to 2009Q2, emerging economies saw three important shifts: (i) capital flows were more volatile than changes in the real economy; (ii) banking sector credit flows were highly volatile; and (iii) bank credit flows reacted differently from other types of capital flows—foreign direct investment (FDI) flows remained steady, even given the heightened crisis; equity and bond portfolios rapidly reversed, but quickly recovered; while bank lending withdrew sharply (**Box figure 3**). The lesson is that banking sector

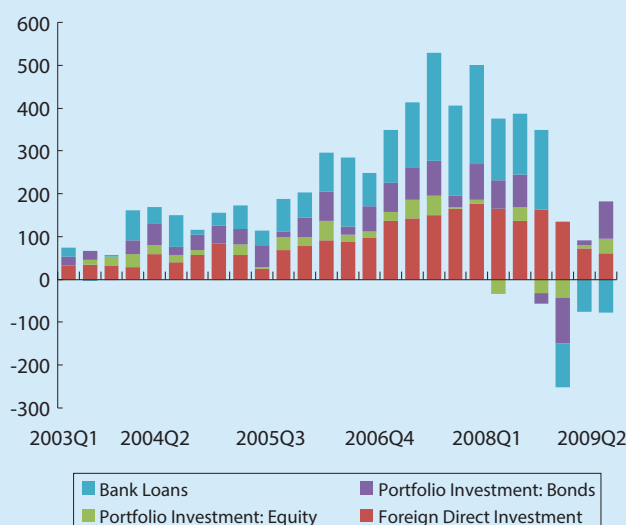
**Table: Developing Asia's Private External Financing (% of total)**

	2006	2007	2008	2009	2010	2011	2012
Bonds	12.9	9.1	8.3	15	18.7	30.1	36.6
Equities	50.2	47.1	23.1	51.1	49.2	24.6	30.5
Loans	36.9	43.8	68.6	34	32.1	45.2	32.9

Note: Developing Asia refers to: a) Bonds- the People's Republic of China, Fiji, India, Indonesia, Malaysia, the Philippines, Sri Lanka, Thailand, and Viet Nam; b) Equities- Bangladesh, Cambodia, the People's Republic of China, Fiji, India, Indonesia, Lao PDR, Malaysia Maldives, the Philippines, Sri Lanka, Thailand, and Viet Nam; c) Loans- Bangladesh, Bhutan, Brunei Darussalam, Cambodia, the People's Republic of China, India, Indonesia, Lao PDR, Malaysia, Maldives, Marshall Islands, Myanmar, Pakistan, Papua New Guinea, the Philippines, Sri Lanka, Thailand, and Viet Nam.

Source: *Global Financial Stability Report*, various issues, International Monetary Fund.

### 3: Composition of Capital Inflows (\$ billion)



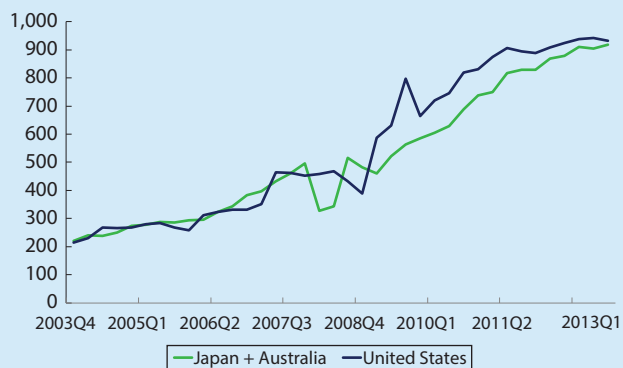
Source: Directly culled out from Figure 4.3: Liquidity-Receiving Economies: Composition of Capital Inflows, *Global Financial Stability Report April 2010*, International Monetary Fund.

credit flows appear to be procyclical and volatile, potentially exacerbating the immediate effects of short-term capital flow reversals on financial stability in times of crisis.

### Preparing policy options ahead of time

Whether Asia's recently rising intraregional bank exposure is structural or temporary remains a question. But the behavior of the region's bank credit flows show (i) a steep increase in intraregional exposure, particularly to Japanese and Australian banks; and (ii) since 2002, there have been highly correlated movements in regional and global liquidity, specifically between Japanese and Australian bank and US bank credit flows (**Box figure 4**).

### 4: Bank Credit Flows to Asia—Co-movement of Japan plus Australia and the United States (\$ billion)



Note: Developing Asia includes Asia less Australia, Japan, and New Zealand. Source: ADB calculations using data from Table 9B (Consolidated foreign claims of reporting banks—immediate borrower basis), Bank for International Settlements.

Japanese and Australian bank credit flows to the region together totaled \$904.8 billion in December 2012, almost close to the level of US bank credit flows to the region (\$942 billion). And it appears to continue its upward trend—though there remains the possibility of a sudden reversal should a shock like the 1997/98 Asian financial crisis hit the region. As the US Federal Reserve gradually enters its tapering phase, Asia needs to closely monitor financial conditions and the nature of its regional bank credit flows—in addition to its portfolio investment flows.

While crises tend to drive Asia toward greater financial integration and cooperation, they also deepen the risk of contagion by increasing the exposure to regional bank credit flows through financial channels. Research shows that cross-border bank flows mushroomed over the past decade.<sup>3</sup> Bruno and Shin (2013) also suggest the leverage cycle of global banks as being a prime determinant of contagion across borders.<sup>4</sup>

A notable caveat is that bank lending is highly procyclical, rising significantly in good times and draining rapidly during bad—whether it is caused by weak fundamentals or deteriorating macroeconomic and financial prospects. Given the financial turmoil in Asia from May to early September this year, Asia's increasing appetite for regional bank credit flows may require Asian policymakers to analyze its policy implications, and boost dialogue through regional forums to enhance financial coordination and cooperation to preserve and strengthen regional financial stability.

<sup>3</sup>See G. Hoggarth, L. Mahadeva, and J. Martin. 2010. Understanding International Bank Capital Flows During the Recent Financial Crisis. *Bank of England Financial Stability Paper*. No.8. London: Bank of England.

<sup>4</sup>V. Bruno and H.S. Shin. 2013. Capital Flows, Cross-border Banking and Global Liquidity. *NBER Working Paper* No. 19038. Cambridge, MA: National Bureau of Economic Research.

cross-border flows in the region. Consequently, countries could afford to ignore their structural imbalances in the short term, which could lay the foundation for a more difficult adjustment in the future. As in the scenario above, direct action to address the source of the imbalance and enhance competitiveness are more sustainable. Regional action to strengthen regional integration through a more harmonized regional regulatory framework and settlement mechanism could be in order, in addition to enforcing stricter regulation on short-term capital inflows into the region.

## Regional Public Goods

**Regional public goods—generally defined as a public good shared by two or more countries in a specified region—offer solutions to problems that individual countries cannot correct alone.**

Public goods vary in terms of their “publicness”, depending on how they are produced. Some require equal contributions or “weight” from participating members or countries, while others are critically dependent on the most powerful member (“best shot”), while others may depend on the actions of the weakest member. In general, however, regional goods cannot be supplied by normal market mechanisms, as potential suppliers are deterred by the knowledge they will be unable to reap the full benefits of their efforts. In addition to this “non-excludability”, regional public goods also have a “non-rivalry” character, whereby use of public goods by some does not reduce the supply for others. The two characteristics together limit the supply of goods from a single private supplier, or as in the case of regional goods, from one country.

## Economic integration and transmission of disease

**Increased cross-border transmission of disease—through increased human and animal mobility—is one of the most serious costs of cooperation and integration.**

Regional cooperation and integration generates both costs and benefits. Successful cooperation programs therefore strive to maximize the net benefits of cooperation and minimize risks. Unfortunately, increased cross-border transmission of diseases through better human and animal transportation can have serious deleterious effects as recent history shows. The increased speed and volume of cross-border trade from increasing economic and social integration in Asia and the Pacific has broadened the risk and spread of communicable diseases. The 2002–2003 Severe Acute Respiratory Syndrome (SARS) epidemic in Asia clearly demonstrated the significant regional social and economic impact of better regional connectivity. Ultimately the epidemic was controlled, but only through drastic and costly reductions in travel and human interaction. Aside from the human cost—nearly 800 died out of over 8,000 infected—economies suffered as well from the severe impact on business travel, Asian tourism, and air transport.

Likewise, the H5N1 avian influenza (AI) epidemic caused significant loss of life and economic consequences, particularly severe on the livelihoods of the poor—often the most at risk—in infected areas. The epidemic was controlled only after the culling of millions of chickens. The spread of drug-resistant malaria and dengue fever can also be associated with increased cross-border migration. Of over 2.5 billion people living in the tropics and subtropics at risk to dengue and dengue hemorrhagic fever, nearly 70% live in Asia and the Pacific. Dengue fever alone is estimated to cost Asian countries \$950 million a year, with Indonesia, Thailand, and the Philippines being particularly affected. The current situation of malaria in the Greater Mekong Subregion, with the emergence of resistance to artemisinin—the most effective antimalarial drug available—raises particular public health concerns, not only for border areas but through the region.

## What to do: The public goods response

### Dealing effectively with cross-border health problems—some new diseases and others re-emerging—requires strong country-level intervention and improvements in health systems at national, state or provincial, and local levels.

Given the cross-country spread of new, mutated, and traditional diseases, national efforts must be complemented by international and regional collaborative efforts.

Sustainable regional economic cooperation in Asia requires complementary mechanisms that improve disease control and emergency response capabilities. Improving the cross-border flow of information on communicable diseases—and strengthening regional surveillance and response capabilities—are central for a public goods response. Multilateral development agencies have a major role to play in helping provide the technical, economic, social, and political means of controlling cross-border disease transmission. Over the past decade, ADB, for example, has provided substantial assistance at both the regional and country levels for interventions against SARS, AI, malaria, and dengue, as well as for broader programs on communicable disease control and transboundary animal disease. This experience suggests several ways global and regional public goods can minimize and mitigate the unintended consequences of closer regional cooperation and integration.

### International norms and standards for dealing with communicable diseases have to be established and/or strengthened.

The International Health Regulations (IHR 2005)—adopted by all World Health Organization (WHO) member countries and entered into force in June 2007—provides a legal framework for identifying public health threats, assessing their risks, and putting in place effective public health responses. As well as providing a set of standards and a legal framework for information sharing, IHR 2005 requires each state to establish a national focal point to ensure adherence to reporting and verification requirements and strengthen response capabilities in surveillance. IHR 2005 is much broader than its predecessor, which focused only on cholera, plague, and yellow fever, and placed a heavier burden on signatory nations.

### Effective partnerships between many different groups and sectors are needed.

Asia's development experience has showed that effective prevention and control of cross-border disease depends on multisectoral collaboration and multi-dimensional approaches. Coordination between health authorities of neighboring countries is obvious—as most times complementary and simultaneous interventions are needed on both sides of a border. It is critical that countries understand the health policies of neighbors and that health agencies from neighboring countries cooperate at the local level. Less obvious but equally important is the need for cooperation between health authorities and those in charge of external trade, transport networks, and customs, whose primary concerns do not necessarily cover the health sector. A holistic approach to healthy borders—which ensures that investment in regional cooperation projects does not unintentionally increase cross-border health hazards—is required. Coordination between authorities responsible for human health and those overseeing animal health is also essential at both regional and national levels.

### Regional and national public health care systems to detect disease outbreak, channel interventions, and monitor and report progress on communicable disease control are needed.

Health infrastructure is a central requirement for prevention, diagnosis, and treatment of communicable disease. Local level infrastructure such as primary health care centers need to be established near international entry points in or nearby regional economic and transport corridors. Access to these physical facilities—and effective distribution of medicines—also need to be available and purpose-built social programs for mobile populations and ethnic groups may be required.

Health interventions must focus more on border areas. Health systems in border areas may require special attention in terms of financial outlays as well as the type of interventions. Health systems may be particularly weak in more isolated border areas due to physical remoteness, while being subjected to complex problems created by cross-border movements. Migrants, legal or illegal, may have even less access to health services and thereby be at great risk to communicable diseases—while at the same time stigmatized as a source of disease. The problem for Asian countries with many



different ethnic minorities who are residing on or near international political borders may complicate disease dynamics and intervention further.

Disease surveillance and reporting capabilities need to be improved for rapid response and effective treatment. The capacities of individual health workers, including their ability to function effectively in multi-country settings, are needed. Their capacity to cooperate should also be augmented by better laboratory diagnostic facilities and drug quality certification as well as by the establishment of effective institutions for cross-border and regional collaboration.

Research and knowledge transfer about diseases in poorer countries should be increased. Scientific knowledge, particularly about region-specific issues, is essential. Global and regional efforts to reduce the so-called “10/90 gap”—where some 10% of global health resources are spent on diseases that affect 90% of the world—are needed. Two approaches can be used to address this gap. First, research and development can be promoted either by establishing research facilities specializing in these neglected diseases by the public sector, or through providing incentives for public-private partnerships. A second approach would be to adopt the use of advance market commitments at the country or regional level to create a market and offer incentives to stimulate commercial development and rapid introduction of new and affordable vaccines and medicines.

### **How does one finance regional public health goods?**

Financing regional public health goods is subject to three challenges. First, despite the increase in funding over the past 20 years from new sources—such as the Gates Foundation—requirements outstrip needs. Second, financing has to be long-term with minimum volatility, which would interrupt health services and interfere with effective planning. Since the non-exclusive nature of regional public goods can reduce their attractiveness to donor agencies, as well as countries and private sector entities, securing adequate investment in regional public health goods requires innovative financing. Several innovations have been attempted in Asia and could be expanded. Tapping private sector resources from philanthropies and businesses with strong interest in corporate social responsibility (CSR) may be a useful approach. Establishing public-private partnerships—especially where there is some prospect for longer term private sector profitability—may also

be a source of investment. Financing from either multilateral or bilateral development agencies through a multi-country health fund may also play a key role in making available critical investments.

## **Designing a multi-country health fund**

**The theory of public goods—along with ADB’s own experience in regional cooperation over the past two decades—provides several possible insights on how an effective regional health fund could pool resources and could be structured.**

The fund should have minimal transaction costs. The number of actors carrying out essential functions in global health has increased dramatically since 1993, which in some cases have led to overlapping of functions and inefficiency, duplication, policy confusion, and undermining accountability. Regional cooperation is not a costless activity and consumes valuable technical and financial resources of developing countries. One way in which these problems can be minimized is to use existing regional cooperation institutions and networks, build on hard earned trust, and modify existing institutions to address new tasks rather than creating new ones.

Economies of scope and scale need to be carefully considered in the design of the fund. Strict subsidiary principles may reduce transactions costs of negotiating and supervising regional public goods. But an overly strict approach may be counterproductive when goods have important economies of scale in their production and distribution—for example, the procurement of pharmaceuticals. In such cases it may be more efficient to search for institutions with large jurisdictions. Similarly, if goods have broad economies of scope, the subsidiary approach will have to be modified and it may be more efficient to integrate different activities under the same institutional structure to take advantage of existing links.

The rationale for cooperation on regional health goods must be made clear early on. The costs and benefits of noncooperation as well as the expected benefits of cooperation to each member of a cooperative effort must be made, in particular to the government ministries in charge of overall national development and the financial purse strings.

The needs and capabilities of the weakest member of the group need to be effectively addressed for two reasons. First, the weak link needs to be provided with a rationale and the resources needed for its sustained commitment to cooperation. Second, failure in the weakest partner may derail progress of the entire initiative, for example, poor surveillance in one country may adversely affect otherwise effective interventions in other countries. Ensuring that recipients have a voice in priority setting that is at least as equal as that of donors will be critical.

The fund should have an open architecture. A strong foundational core which ensures efficient management and financial sustainability is critical. At the same time, it should be expandable and capable of handling emerging needs, new technological advances, and the participation of new partners, donors, as well as fund recipients.

## Business Cycle Synchronization

**There was a sharp rise in the degree of output correlation within Asia during the global financial crisis; afterward, it eased somewhat, yet remained at historic highs.**

Macroeconomic interdependence is the degree to which individual economies interact with one another. One frequently used measure is the correlation between national output and prices. When economies share similar industries and face common shocks, output and prices are expected to move more closely with each other. While common shocks—particularly originating in global financial markets—may remain an important driving force behind these correlations, the close co-movements could also be the result of closer trade and financial links within Asia. Well-developed production networks—which rely on intra-industry trade in parts and components—increase the synchronization of output movements.<sup>20</sup>

This section analyzes business cycle co-movements differently from previous issues of the *Asian Economic Integration Monitor*. The first difference is that deviation cycles from the trends in output are examined instead of simple output growth. The second difference is that the co-movements in business cycles of Asia's emerging economies are assessed against those of three major world economies—the PRC, Japan, and the US—rather

than pair-wise correlations between all economies in the region. These two differences offer a different perspective on business cycle co-movements in Asia to deepen understanding of Asia's business cycles in general.

In a classical cycle—as defined by the US National Bureau of Economic Research (NBER)—a recession (or economic contraction) is a period (between peak and trough) of declining economic activity spread across an economy, usually lasting for a minimum of two consecutive quarters. The trough marks the end of the downward phase and the start of the upward phase of the business cycle.<sup>21</sup> However, in many emerging economies—even during economic downturns—the level of real GDP does not fall. Therefore, the business cycle in emerging economies does not fit the classical cycle. To compensate, economists often study deviation cycles—deviations of actual output from its trend component—that exhibit similar patterns to those of classical cycles in advanced economies.

**Deviation cycles and their correlations are useful when analyzing business cycle co-movements between emerging Asian economies and major world economies.**

The Hodrick-Prescott filter is used to detrend real GDP data and extract their deviation cycles. To be consistent, the US business cycle studied here is also based on its deviation cycle, which is more or less similar to that defined by NBER (except a minor cycle between 1994 and 1996). Official seasonally adjusted quarterly GDP data from 1993 were used wherever possible. The nine emerging Asian economies (EA-9) covered include the NIEs (Hong Kong, China; the Republic of Korea; Singapore; and Taipei, China), ASEAN-4 (Indonesia, Malaysia, the Philippines, and Thailand), and India (**Table 5**).

Group correlation coefficients are the means of the respective bilateral correlation coefficients included in the group. To calculate these mean correlation coefficients, the usual bilateral Pearson's product-moment correlation coefficients first had to be transformed into Fisher's z correlation coefficients, averaged and subsequently converted back into

<sup>20</sup>ADB. 2012. Macroeconomic Interdependence. *Asian Economic Integration Monitor* July 2012. Manila.

<sup>21</sup>NBER. 2013. *US Business Cycle Expansions and Contractions*. <http://www.nber.org/cycles/cyclesmain.html>

**Table 5: Business Cycle Correlation Coefficients** (Hodrick-Prescott Filter Deviation Cycles)

	1993Q1–2013Q2	1993Q1–2003Q1	2003Q2–2013Q2
PRC–Emerging Asia-9	0.42 [0.22,0.58]	0.40 [0.11,0.63]	0.50 [0.22,0.70]
PRC–NIEs	0.48 [0.30,0.63]	0.31 [0.00,0.57]	0.62 [0.39,0.78]
PRC–ASEAN-4	0.36 [0.15,0.53]	0.54 [0.27,0.72]	0.32 [0.01,0.57]
PRC–India	0.55 [0.36,0.70]	0.10 [-0.28,0.46]	0.72* [0.53,0.85]
PRC–United States	0.17 [-0.05,0.37]	-0.12 [-0.41,0.19]	0.34* [0.04,0.59]
Japan–Emerging Asia-9	0.64 [0.48,0.75]	0.63 [0.41,0.79]	0.72 [0.53,0.85]
Japan–NIEs	0.67 [0.53,0.78]	0.64 [0.41,0.79]	0.76 [0.58,0.86]
Japan–ASEAN-4	0.64 [0.49,0.75]	0.78 [0.63,0.88]	0.74 [0.55,0.85]
Japan–India	0.43 [0.21,0.61]	0.06 [-0.32,0.42]	0.57* [0.32,0.75]
Japan–United States	0.59 [0.42,0.71]	-0.03 [-0.33,0.28]	0.85* [0.73,0.92]
Japan–PRC	0.46 [0.27,0.61]	0.50 [0.22,0.70]	0.45 [0.17,0.67]
United States–Emerging Asia-9	0.36 [0.16,0.54]	0.12 [-0.20,0.41]	0.66* [0.45,0.81]
United States–NIEs	0.49 [0.31,0.64]	0.29 [-0.01,0.55]	0.68* [0.48,0.82]
United States–ASEAN-4	0.18 [-0.04,0.38]	-0.18 [-0.46,0.13]	0.69* [0.48,0.82]
United States–India	0.50 [0.30,0.66]	0.66 [0.38,0.83]	0.43 [0.14,0.66]

ASEAN-4 = Indonesia, Malaysia, the Philippines, and Thailand. PRC = People's Republic of China. NIEs = Hong Kong, China; the Republic of Korea; Singapore; and Taipei, China.

Note: Emerging Asia-9 includes ASEAN-4, India, and NIEs. 95% confidence intervals are reported in square brackets.

\* indicates that the statistic is significantly higher than 1993Q1–2003Q1.

Source: ADB calculations using data from Haver Analytics.

weighted correlation coefficients.<sup>22</sup> To see whether business cycle co-movements might have changed over time, the group correlation coefficients in the first half of the sample period (from 1993Q1 to 2003Q1) are compared with the correlations calculated for the second half of the sample period (from 2003Q2 to 2013Q2).

**Among the three major economies examined, Japan's business cycle was more synchronized over the past two decades with the US business cycle than with the PRC's, with the correlation between the PRC and US cycles insignificant over the full sample period.**

However, both the PRC and Japan's economies appeared "decoupled" from the US economy during the first 10 years with correlation coefficients insignificant, and became "coupled" in the next 10 years. Moreover, from 2003Q2 to 2013Q2, the correlation coefficient between Japan and the US business cycles is significantly much higher than the one between the PRC and the US, indicating the global financial crisis brought these two economies much closer together than before. The co-movement in business cycles between the PRC and Japan remained steady over the past 20 years, with the correlation coefficients more or less at 0.5.

**While business cycles in emerging Asian economies began to correlate more with the PRC's over the past two decades, the degree of output co-movements remained strong between emerging Asian economies and Japan, and significantly higher than that with the PRC and US; they grew more "coupled" with the US economy from 2003Q2 to 2013Q2 after "decoupling" from 1993Q1 to 2003Q1.**

While the mean correlation coefficient between the EA-9 and the PRC is 0.42 for the whole sample period, it was 0.40 in the first half of the sample period and 0.50 in the second half. The degree of co-movement between India and the PRC has increased most significantly—from 0.10 to 0.72—while that between NIEs and the PRC also rose from 0.31 in the first half to 0.62 in the second half. However, the mean correlation coefficient between the deviation cycles of ASEAN-4 and the PRC has fallen

from 0.54 in the first half of the sample period to 0.32 in the second half. This is because after 2003, particularly after the global financial crisis, ASEAN-4 economies maintained robust growth or even accelerated (in the Philippines), while the PRC economy gradually slowed.

The degree of co-movement in business cycles between the EA-9 and Japan remained strong over the past two decades, with a mean correlation coefficient of 0.64 in the whole sample, rising from 0.63 in the first half to 0.72 in the second half. Japan had been the largest economy in the region for many years and a major investor throughout the region, while trade and financial links between Asian economies and Japan remain strong—which underlie the close co-movements in their business cycles. The business cycles in the NIEs and ASEAN-4 are closely correlated with Japan's, as the mean correlation coefficients are above 0.60 over the whole period and its sub-samples. India's business cycle has also become more correlated with Japan's, with the correlation coefficient increasing from 0.06 to 0.57.

The degree of business cycle co-movements between emerging Asian economies and the US has changed significantly over the past two decades. While the mean correlation coefficient is 0.36 for the whole sample, it rose from 0.12 in the first half of the sample to 0.66 in the second half. The simultaneous rise and fall in economic growth before and after the global financial crisis have contributed to the significant rise in business cycle synchronization. Both the NIEs and ASEAN-4 have become more synchronized with the US, with the mean correlation coefficient between the NIEs and US rising significantly—from 0.29 in the first half of the sample to 0.68 in the second half—and that between ASEAN-4 and the US reversing from -0.18 to 0.69. This is possibly because both groups globalized more in the past 10 years than the previous decade—which was also affected by the Asian financial crisis. The reverse occurred in India, whose business cycle was less synchronized with that of the US in the most recent 10 years—with the correlation coefficient declining from 0.66 to 0.43. This indicates that India's business cycle may be driven more recently by idiosyncratic factors.

The correlation analysis also shows that the EA-9 are more correlated with Japan than with either the PRC or the US, as the mean correlation coefficient between the EA-9 and Japan is significantly higher than those for the PRC and the US. The correlation with Japan was also higher in the first 10 years, but in the decade from 2003, the mean correlation between the NIEs and the three major economies are not statistically different from each other—though the mean correlation with

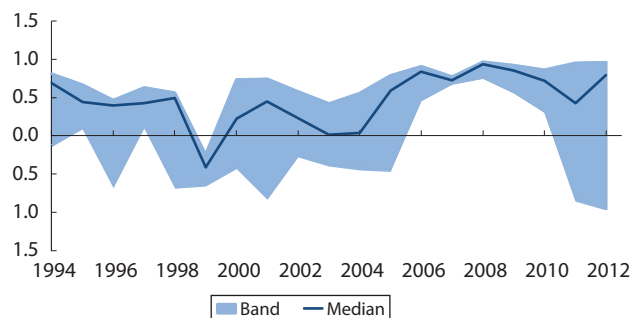
<sup>22</sup>P. G. Hoel. 1947. *Introduction to Mathematical Statistics*. New York: Wiley; A.J. Faller. 1981. Notes: An Average Correlation Coefficient. *Journal of Applied Meteorology*, 20. pp. 203–205.

Japan is slightly higher than those with the PRC and US. The correlation between ASEAN-4 and Japan is higher, but not statistically different from that with US—yet it is statistically higher than that with the PRC. In contrast, India's business cycle was more correlated with the US in the 10 years from 1993, but became significantly more correlated with the PRC the following decade.

**Business cycles in emerging Asian economies, the NIEs in particular, appear increasingly correlated with those in the PRC, possibly due to increasing trade and financial linkages between them.**

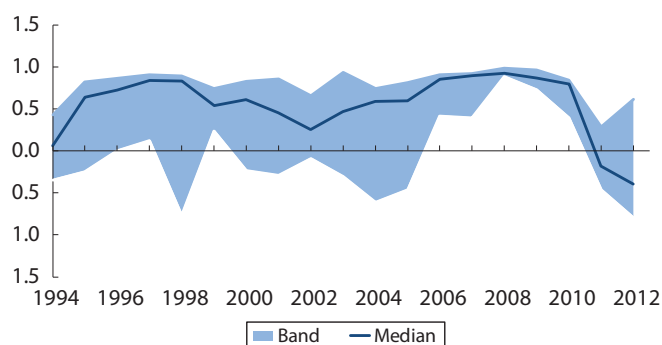
To provide a better view of the dynamics of business cycle co-movements, 3-year rolling correlation coefficients were calculated for the EA-9 with the three major economies (Figures 22, 23, 24). Constructed by the maximums and minimums of rolling correlation coefficients, the wide bands around the median correlation coefficients indicate large variations in business cycle correlations between the EA-9 and the PRC, Japan, and the US. Yet, the degree of business cycle synchronization between EA-9 and the PRC—despite a dip during the Asian financial crisis—gradually rose over the past two decades, with the median correlation remaining high even after the global financial crisis. On the other hand, the median correlations between the EA-9 and Japan or the US were high before 2008, but fell to negative after the global financial crisis. By looking at the different groupings, it is clear the NIEs became much more synchronized with the PRC in recent years, indicated by rising median correlations and narrowing bands, which drive the rise in the median correlation between the EA-9 and the PRC (Figures 25, 26, 27). The ASEAN-4, however, appear more correlated with Japan and the US, with the median correlations not falling much during the global financial crisis and rising afterward (Figures 28, 29, 30).

**Figure 22: EA-9 Business Cycle Correlation—People's Republic of China**



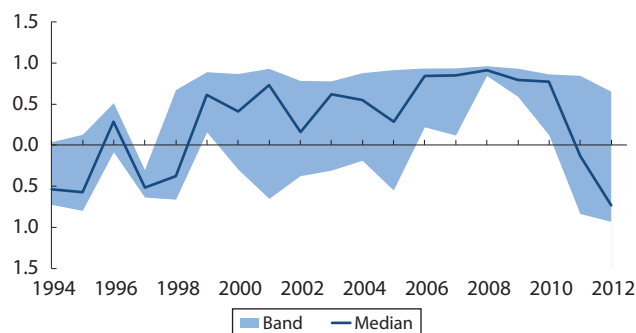
Note: Emerging Asia-9 (EA-9) includes Hong Kong, China; India; Indonesia; the Republic of Korea; Malaysia; the Philippines; Singapore; Taipei, China; and Thailand. Correlation based on cyclical Hodrick-Prescott (HP) filtered gross domestic product. Source: ADB calculations using data from Haver Analytics.

**Figure 23: EA-9 Business Cycle Correlation—Japan**



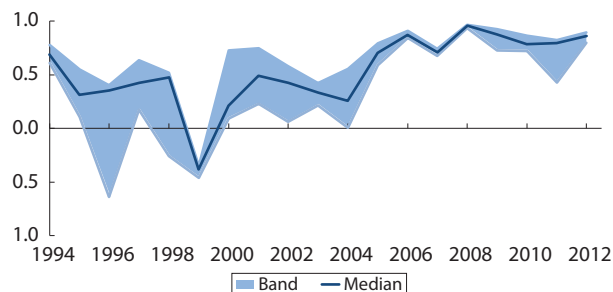
Note: Emerging Asia-9 (EA-9) includes Hong Kong, China; India; Indonesia; the Republic of Korea; Malaysia; the Philippines; Singapore; Taipei, China; and Thailand. Correlation based on cyclical Hodrick-Prescott (HP) filtered gross domestic product. Source: ADB calculations using data from Haver Analytics.

**Figure 24: EA-9 Business Cycle Correlation—United States**



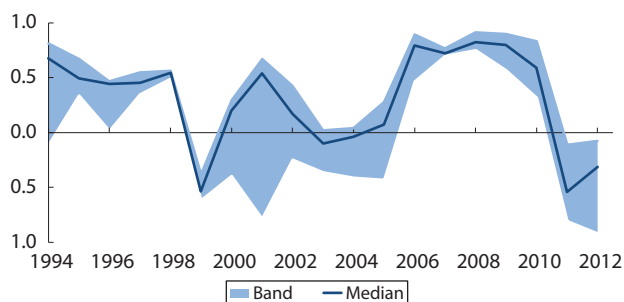
Note: Emerging Asia-9 (EA-9) includes Hong Kong, China; India; Indonesia; the Republic of Korea; Malaysia; the Philippines; Singapore; Taipei, China; and Thailand. Correlation based on cyclical Hodrick-Prescott (HP) filtered gross domestic product. Source: ADB calculations using data from Haver Analytics.

**Figure 25: NIEs Business Cycle Correlation—  
People's Republic of China**



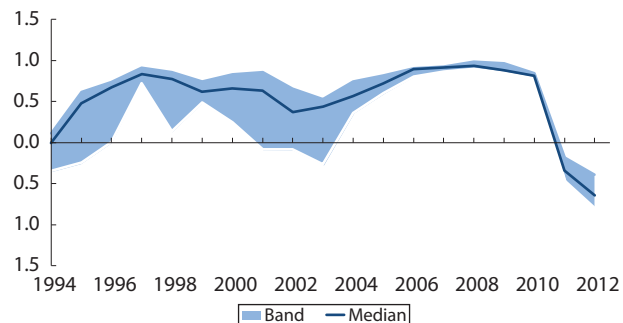
NIEs = Hong Kong, China; the Republic of Korea; Singapore; and Taipei, China.  
 Note: Correlation based on cyclical Hodrick-Prescott (HP) filtered gross domestic product.  
 Source: ADB calculations using data from Haver Analytics.

**Figure 28: ASEAN-4 Business Cycle Correlation—  
People's Republic of China**



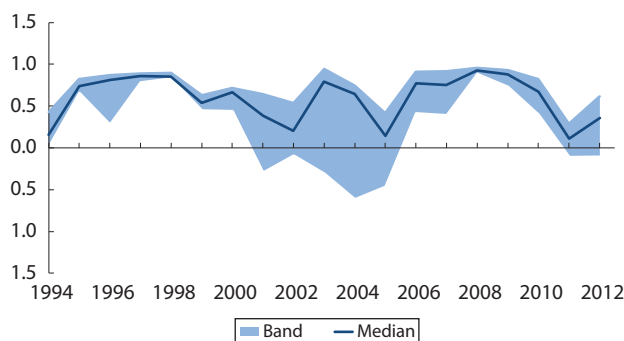
ASEAN-4 = Indonesia, Malaysia, the Philippines, and Thailand.  
 Note: Correlation based on cyclical Hodrick-Prescott (HP) filtered gross domestic product.  
 Source: ADB calculations using data from Haver Analytics.

**Figure 26: NIEs Business Cycle Correlation—Japan**



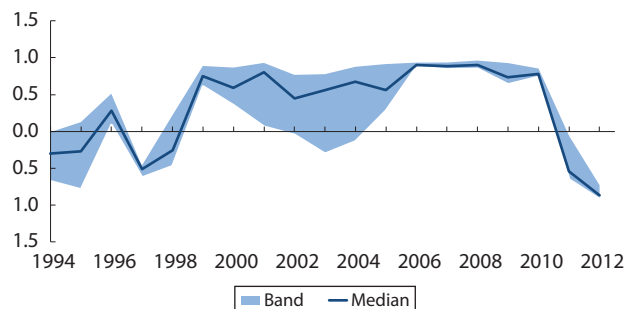
NIEs = Hong Kong, China; the Republic of Korea; Singapore; and Taipei, China.  
 Note: Correlation based on cyclical Hodrick-Prescott (HP) filtered gross domestic product.  
 Source: ADB calculations using data from Haver Analytics.

**Figure 29: ASEAN-4 Business Cycle Correlation—Japan**



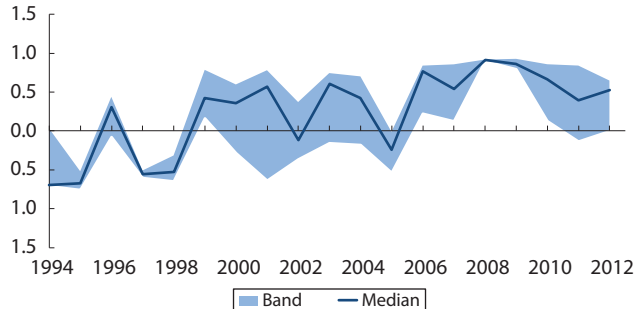
ASEAN-4 = Indonesia, Malaysia, the Philippines, and Thailand.  
 Note: Correlation based on cyclical Hodrick-Prescott (HP) filtered gross domestic product.  
 Source: ADB calculations using data from Haver Analytics.

**Figure 27: NIEs Business Cycle Correlation—United States**



NIEs = Hong Kong, China; the Republic of Korea; Singapore; and Taipei, China.  
 Note: Correlation based on cyclical Hodrick-Prescott (HP) filtered gross domestic product.  
 Source: ADB calculations using data from Haver Analytics.

**Figure 30: ASEAN-4 Business Cycle Correlation—United States**



ASEAN-4 = Indonesia, Malaysia, the Philippines, and Thailand.  
 Note: Correlation based on cyclical Hodrick-Prescott (HP) filtered gross domestic product.  
 Source: ADB calculations using data from Haver Analytics.

This suggests that a global business cycle surrounding the 2008/09 global financial crisis originated in the US. However, while the impact of recent expectations of a US tapering of quantitative easing on emerging economies indicates that emerging economies' growth may begin to diverge from the growth in the US, it remains to be seen whether this global cycle is in fact ending. There is also evidence that emerging Asian economies, particularly the NIEs, are becoming more correlated with the PRC. The expected structural adjustment in the PRC economy might also slow growth in Asia's other emerging economies because of increasing trade and financial linkages and rising macroeconomic interdependence.

## Updates on Labor Mobility and Remittances

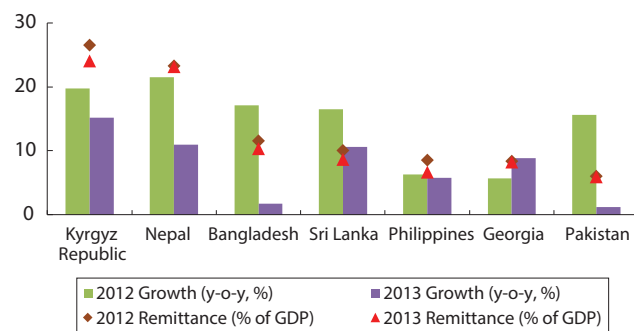
**Migrant workers continue to make substantial contributions to Asia's economies, even if growth in remittances has generally slowed this year.<sup>23</sup>**

Recent remittance data show the importance of migrant workers to Asian economies, even if remittance growth slowed in most countries. The ratio of remittance inflows to GDP in 2013 (based on latest available data) is slightly lower compared with 2012 (**Figure 31**). Growth in remittances has been slowing, particularly in South Asia, which saw especially slow remittance growth from the Middle East. Remittance growth in Nepal could be hit more by India's economic slowdown. The Philippines' slight reduction in remittance growth was due almost exclusively to a depreciated yen, which reduced the value of remittances from Japan by over 30%.

This issue examines the underlying factors for the slowdown in remittance growth in South Asia. In particular, the discussion focuses on Bangladesh and Pakistan, which—among South Asian countries—have relatively complete monthly remittance data.

<sup>23</sup>This report uses remittances as a rough proxy for labor mobility—as data are more frequently available than migrant stock data. Though remittance flows are affected by factors other than the number of migrant workers outside a source country—such as the economic conditions in source and recipient countries (including wage levels)—it is generally consistent with migrant data (see ADB. 2012. International and Regional Transmigration. *Asian Economic Integration Monitor July 2012*. Manila). Data are available for most countries on an annual basis, with some countries providing monthly or quarterly data. This report utilizes monthly and quarterly data to project flows for 2013. Countries are selected based on data availability.

**Figure 31: Remittances Growth and Ratio to GDP— Selected Asian Countries**



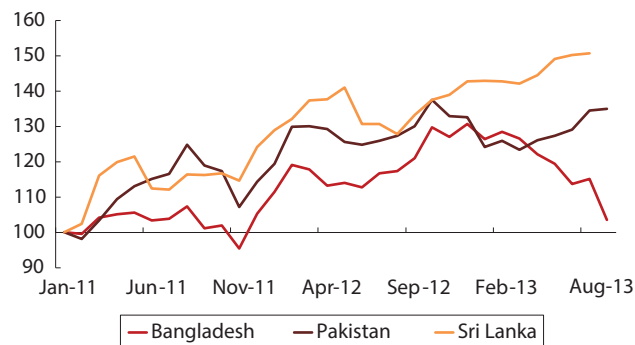
Note: Remittance growth based on average annual growth rate using monthly data except for Nepal (quarterly data). Share of GDP based on average monthly remittance flows divided by average monthly GDP. Data for 2013 until June for the Kyrgyz Republic and Nepal; July for the Philippines and Sri Lanka; and August for Bangladesh, Pakistan, and Georgia. GDP data for 2013 are WEO estimates. Source: ADB calculations using data from CEIC; *World Economic Outlook (WEO) Database April 2013*, International Monetary Fund; and national sources.

**Migrant workers remain vulnerable to changes in host country conditions; remittance inflows to South Asia, a rough proxy for labor mobility, nearly stagnated early this year.**

Remittance inflows to South Asia, which grew strongly even after the 2008/09 global financial crisis, began slowing late last year. Inflows to Bangladesh peaked in October 2012 and continued to decline until August this year; while those to Pakistan stagnated after robust growth following the 2008/09 global financial crisis (**Figure 32**). The critical factor appears to be remittances from the Middle East, the dominant destination for South Asia's migrant workers. The rise or fall in remittances appears to run in tandem with labor conditions and policies in the host country, and workers are essentially subject to the changes in conditions.

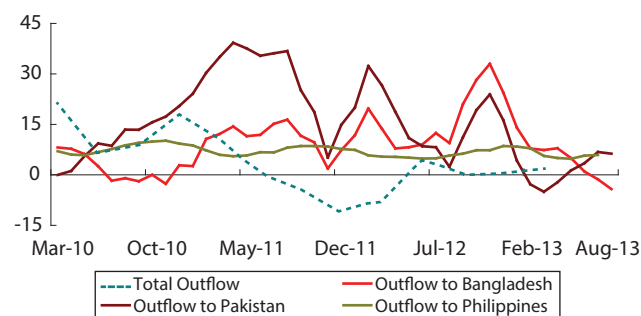
For example, the recent slowdown in remittances from the Middle East can be tied to a major change in Saudi Arabia's labor policy and weak economic outlook due to stagnated oil prices. Saudi authorities strengthened implementation of its "Nitaqat" program, which promotes employment of Saudi nationals in an economy where foreign workers comprise more than half the labor force. The program requires each company to fill a specified quota for Saudi employment as a ratio to a firm's total workforce. The required ratio varies depending on firm size and industry category. The Ministry of Labor examined Saudi employment for each private firm and categorized them into four categories to differentiate the treatment among firms in visa and employment process. A company ranking lowest, for

**Figure 32: Remittance Inflows—South Asia** (Jan 2011=100)



Note: Remittance inflows based on 3-month moving average of seasonally adjusted series. Data for Sri Lanka until July 2013. Source: ADB calculations using data from CEIC.

**Figure 33: Growth Rate of Outward Remittances—Saudi Arabia** (y-o-y, %)



Note: Growth rate based on 3-month moving average. Data for the Philippines until July 2013; quarterly data for total outflow from Saudi Arabia, until 2013Q1. Source: ADB calculations using data from Haver Analytics.

instance, cannot renew foreign worker visas, while those in the highest category can hire foreign workers from companies ranked lower in employment of Saudi nationals and obtain visas for them. The effect of the new policy is that foreign workers employed by a company with a low score should move to a company with a high score to remain in Saudi Arabia to work. The result has been a strong crackdown on illegal workers since early this year. Authorities later offered an amnesty period to correct migrant workers' status—to moderate the impact on the economy.

The program was designed to promote local employment rather than squeeze out foreign workers. But the impact on foreign workers and Saudi labor markets was significant, judging from remittance data. Growth in remittance outflows from Saudi Arabia—proxied by compensation of employees in balance of payments data—plunged in the latter half of 2011, and remained subdued until the first quarter of 2013. Accordingly, remittance growth rates to Pakistan and Bangladesh declined, particularly since late 2012 as the new policy was implemented (Figure 33). News sources report that a significant number of foreign workers categorized as “illegal” under the new policy has left Saudi Arabia and that foreign worker wages have risen in response to lower migrant labor supply. Aiming to ease the impact on Saudi Arabia's economy, the legalization of a significant number of illegal workers is said to be done, at least through the middle of this year. Given the likely adjustment process toward a new labor market equilibrium resulting from the policy, the recent shocks can be temporary, but the outlook remains uncertain, requiring close monitoring at least for the next several months.

**Relatively stable remittance inflows from Saudi Arabia to the Philippines show Filipino workers have adjusted to the new policy relatively smoothly; skill development and pre-departure training are proving to be critical factors for source country workers.**

Interestingly, despite the change in Saudi's labor policy, the growth rate of remittance flows from Saudi Arabia to the Philippines remained steady in late 2012 and early 2013. This is in contrast with the dramatic slowdown of remittance growth from Saudi Arabia to Bangladesh and Pakistan (see Figure 33). The steady remittance growth to the Philippines implies that its workers adapted to the new rules better than South Asian migrant workers (although it may also reflect an increase in remittance per worker).

The reasons for the difference between the Philippines and South Asian countries may be difficult to identify. However, one reason could be the difference in the skill composition of Filipino migrant workers. While the lack of comparable cross-country data only allows for a very indicative and rough comparison, the skill composition of Filipino workers in Saudi Arabia appears to be higher than workers from South Asian countries. Given that skilled workers are generally more resilient to host country conditions and can acquire legal status more easily, the difference in skill composition may have possibly contributed to the better adjustment of Filipino workers to the new labor environment. Another possible explanation may be the higher compliance of Filipino workers to Saudi laws due to better pre-departure preparation and training.



## Having a diversified spectrum of recipient countries can reduce the impact of shocks to labor mobility.

Economic conditions in recipient countries affect labor mobility—as several events following the 2008/09 global financial crisis show. All major source countries were affected by either the economic slowdown or policy changes in major recipient economies—the US, Europe, Russia, and the Middle East. One way to reduce remittance flow volatility would be to actively try to diversify the destinations of migrant workers.

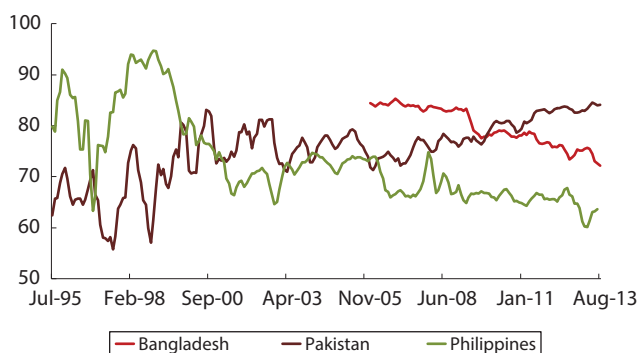
For example, host countries of Filipino workers are far more diversified than those from Pakistan and Bangladesh. Taking the share of remittances from the top five host countries to total remittances (the “top five share”) as a proxy for diversity, the Philippines shows 65% of its total remittances coming from the top five share, while it is 74% for Bangladesh and 85% for Pakistan (**Figure 34**). This greater diversity in the number of countries hosting Filipino workers reflects the change following the 1997/98 Asian financial crisis. In the mid-1990s, the top five share for the Philippines was roughly 90%, but the US share continuously declined as demand for Filipino workers elsewhere grew. The Philippines’ top five share fell to 65% and has remained steady since 2008. Upgrading migrant worker skills also contributed to the diversification. While the top five share of Bangladesh is higher than that of the Philippines, Bangladesh diversified following the 2008/09 global financial crisis by responding to the increased demand from Southeast Asia.<sup>24</sup> In contrast, Pakistan increased its reliance on Middle East jobs after the 2008/09 global financial crisis, becoming less diversified.

## To smoothen the adjustment process to changes in policy, increased cooperation between source and host countries is essential.

Regional cooperation is critically important when dealing with labor mobility—close communication between host and source countries and among source countries can help smooth the effects of worker flows in a new environment. For instance, countries can work together to foster greater predictability for both migrant workers and employers by providing timely information. They can also cooperate to improve pre-departure training for migrant workers to avoid unnecessary conflicts with host country citizens and ensure compliance to rules and laws. Source countries may share experience and knowledge on labor mobility issues, and work together in smoothing relations with host countries. Establishing regular regional dialogue between source and recipient countries can be an early option. Given that intra-Asia labor mobility is increasing, the need for regional talks on labor mobility issues is also increasing.

Summing up, the recent slowdown in remittance from the Middle East highlights the importance of (i) closer communication among host and source countries to minimize the adjustment costs to a new environment, of (ii) upgrading skills of migrant workers to increase resilience to shocks, and of (iii) diversifying migrant destinations to reduce the impact of shocks in a source country. Setting up of regular regional talks on labor mobility may help both host and source countries to benefit more from labor mobility.

**Figure 34: Share of Top Five Sources of Remittances—Bangladesh, Pakistan, and Philippines (% of total)**



Notes: Growth rate based on 3-month moving average. Data for the Philippines until July 2013. Source: ADB calculations using data from CEIC.

<sup>24</sup>ADB. 2013. International and Regional Transmigration. *Asian Economic Integration Monitor March 2013*. Manila.