

### BOX 3.3 Within-region spillovers

*Most countries are predominantly linked to major advanced markets in close proximity. Within-region ties are closest in Europe and Central Asia (ECA) and East Asia and Pacific (EAP), and particularly pronounced in trade and remittance flows. The largest within-region spillovers originate from China, Russia, and Brazil while those from other large emerging markets are limited.*

While spillovers from BRICS are often large, those from other large emerging markets (EM) and frontier markets (FM) may also be strong within regions and especially to neighboring countries.

This box adds granularity, and expands the coverage of Chapter 3, in the following directions.

- How do within-region and global linkages compare across regions?
- How do within-region spillovers compare across regions?

#### How do within-region and global linkages compare across regions?

**Global integration.** Several developing country regions are highly open to global trade (Figure 3.3.1). Exposures to global financial investment, however, tend to be lower—indeed, for several regions, remittances have been as large a source of inflows as foreign direct, portfolio, or bank investment flows. The relative importance of these links differs across regions.

- EAP and ECA consist of countries that are highly open to trade and receive sizeable amounts of foreign direct investment (FDI) and portfolio investment but limited remittance inflows from outside the region.
- Large oil exporters in the Middle East and North Africa (MNA) are deeply integrated into global trade, and some are a large source of remittances. Following a sharp slowdown since 2005, the region now receives modest FDI inflows and little portfolio investment.

Latin America and the Caribbean (LAC) and South Asia (SAR) are generally less open to trade than other regions.<sup>1</sup> However, LAC has received sizeable FDI. SAR receives large remittance inflows from outside the region but limited FDI and portfolio investment (World Bank 2015e).

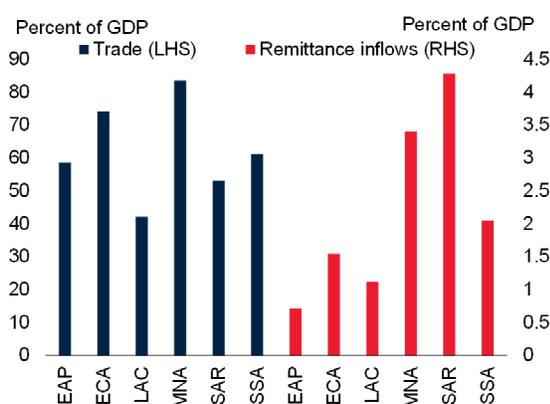
Note: This Box was prepared by Jesper Hanson, Raju Huidrom, and Franziska Ohnsorge.

<sup>1</sup>LAC is generally less open to trade than other regions, although there is considerable heterogeneity across the region.

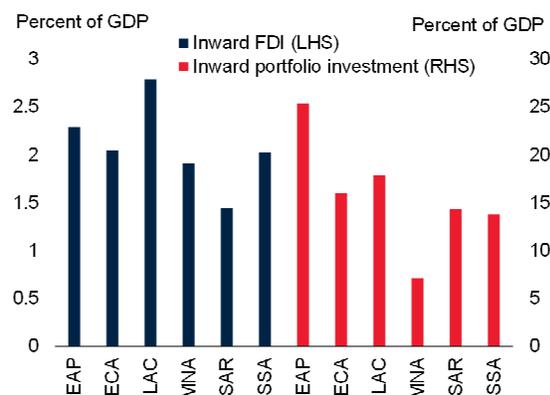
### FIGURE 3.3.1 Openness

*Most regions are highly open to global trade. Remittances inflows are of similar or greater magnitude to FDI for several regions. Over time, portfolio inflows have led to the accumulation of some sizable liability positions, especially in LAC.*

#### A. Trade and remittance inflows, 2014



#### B. FDI inflows and stock of portfolio investment liabilities, 2014



Sources: WDI; World Bank; UNCTAD; CPIS database.

Note: In percent of each region's GDP. Regions are defined as all non-advanced market countries in each region. EAP = East Asia and Pacific; ECA = Europe and Central Asia; LAC = Latin America and the Caribbean; MNA = Middle East and North Africa; SAR = South Asia; SSA = Sub-Saharan Africa.

Emerging and frontier markets in SSA are, on average, well integrated into global trade and receive considerable FDI and remittance inflows.

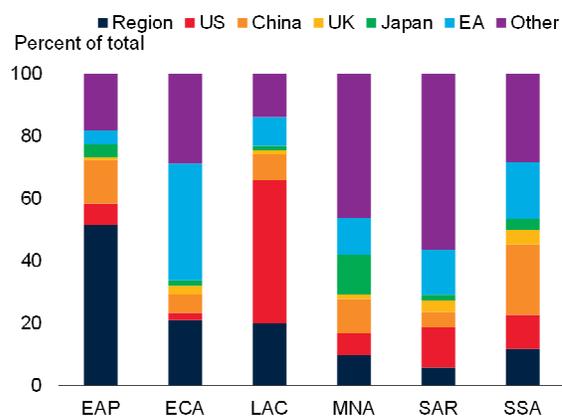
**Integration with large advanced markets.** Most regions tend to be closely linked to a neighboring major economy. For LAC, the United States is the single largest trading

**BOX 3.3 Within-region spillovers (continued)**

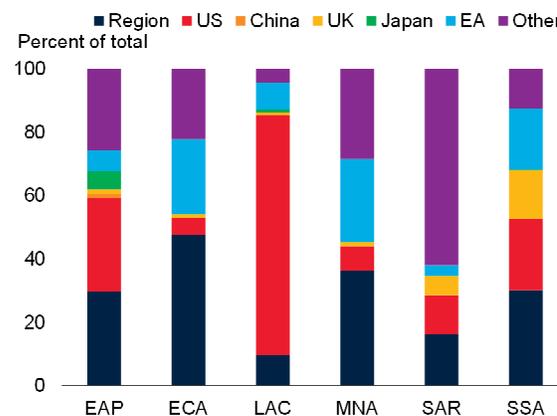
**FIGURE 3.3.2 Within-region integration**

*Within-region trade links are strongest in EAP, ECA, and LAC. Remittances from inside the region are sizeable, except for the LAC region. Except in EAP, internal FDI flows are generally quite low compared to those from the rest of the world. MNA has considerable within-region ODA flows.*

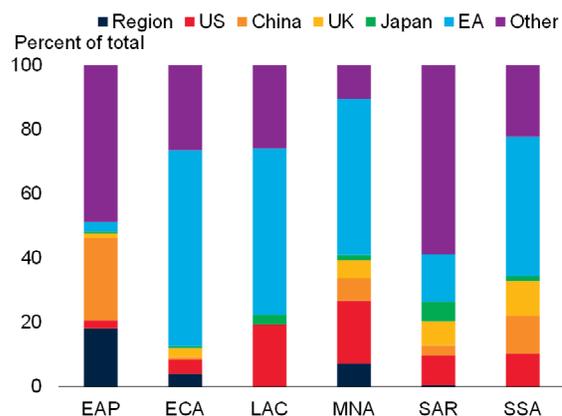
**A. Trade**



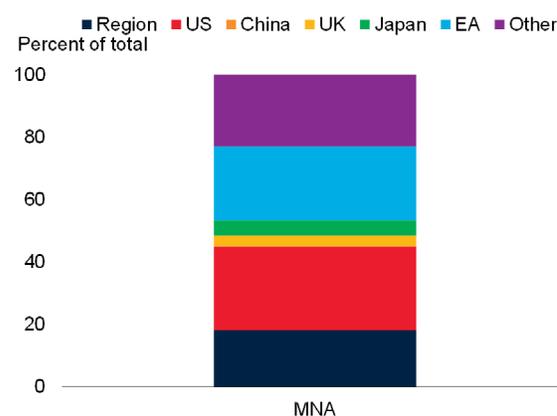
**B. Remittance inflows**



**C. FDI inflows**



**D. Official development assistance**



Sources: WITS; Bilateral Remittances Database; CDIS database; CPIS database.  
 Note: In percent of each region's total. Regions include countries of all income categories, except for United States, Canada, Euro Area, and Japan. EA = Euro Area.  
 A. 2011-14 average. B. 2014. C. 2011-13 average.

partner and source of remittances and other financial flows. The Euro Area and China play similar roles for ECA and EAP, respectively. Partly reflecting greater geographical distance to the world's largest economies, MNA, SAR, and SSA are more diversified in their trade and financial ties.

**Within-region integration.** Several regions have strong within-region trade and remittance links (Figure 3.3.2). In EAP, ECA, and LAC, within-region trade accounts for 20 percent or more of the total. In MNA, limited within-region trade reflects similar export specialization, especially of oil-exporting countries. Remittance inflows from

countries within the region represent more than 30 percent of the total for EAP, ECA, MNA, and SSA. Intra-region FDI, in contrast, is low, with the exception of EAP where both Japan and China are important sources for FDI to support supply chain integration. Likewise for official development assistance, with the exception of MNA.

**How do within-region spillovers compare across regions?**

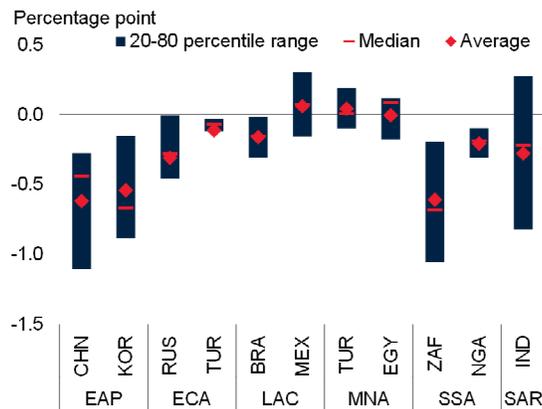
The differences in within-region economic links are reflected in spillovers from shocks in large emerging and

### BOX 3.3 Within-region spillovers (continued)

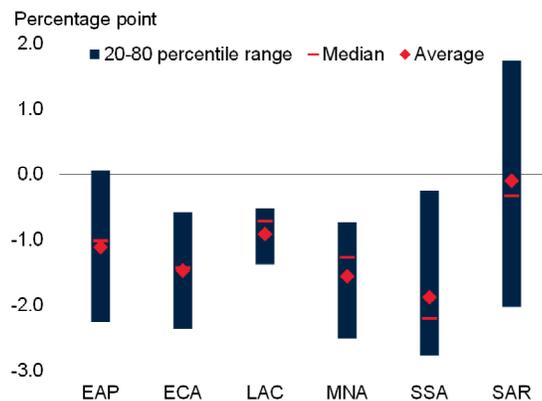
#### FIGURE 3.3.3 Spillovers from large emerging markets in each region

Strong within-region trade and remittance links are reflected in sizeable spillovers in ECA to a growth decline in Russia and, in EAP, to a growth decline in China. Other within-region spillovers tend to be modest.

##### A. Impact on growth of 1 percentage point decline in growth in large emerging markets within the region



##### B. Impact on growth of 1 percentage point decline in G7 growth



Source: World Bank staff estimates.

Note. Based on country-specific structural vector autoregressions (VARs) using the earliest possible data from 1998Q1 to 2015Q2 for 7 countries in EAP, 20 countries in ECA, 15 countries in LAC, 8 countries in MNA, 3 countries in SAR, and 4 countries in SSA. Estimation sample for the SSA region starts in 2007 and within-region spillovers in SSA are statistically insignificant. Details of the model are provided in Boxes 2.1-2.6.

B. For EAP, the shock refers to growth in G7 excluding Japan; and for SSA and ECA, the shock refers to growth in the rest of the world.

frontier markets (Figure 3.3.3). These large emerging and frontier markets include BRICS, along with Egypt, Korea, Mexico, Nigeria, and Turkey. Similar to the estimation of spillovers from BRICS, spillovers are estimated in country-specific structural vector autoregressions, including the second large emerging

market source country of shocks in each region.<sup>2</sup> Since the BRICS are typically the largest countries in their regions, shocks in these economies have the strongest spillovers inside their respective region.

- Strong within-region trade and remittance links are reflected in sizeable and often statistically significant spillovers – for example, in ECA to a growth decline in Russia and in EAP to a growth decline in China (Boxes 2.1, 2.2).<sup>3</sup>
- In other regions, spillovers are typically statistically insignificant. In SAR, a growth shock in India would have a marginal impact on growth in Pakistan and Sri Lanka, which have limited trade links with India (Box 2.5). In SSA, spillovers from growth shocks in South Africa and Nigeria are generally insignificant. In MNA, growth spillovers from Egypt and Turkey are negligible, despite the size of these two economies, because of their limited ties to other countries in the region (Box 2.3).<sup>4</sup> Similarly, growth spillovers in Mexico and Brazil on countries in LAC are, on average, modest although they can be sizeable for a few neighboring countries of Brazil with strong trade ties (Box 2.4).<sup>5</sup>

All regions are more vulnerable to growth shocks originating outside their region than shocks originating within their regions. The discrepancy is most pronounced for the highly open regions such as EAP, ECA, MNA, and SSA.

### Conclusion

The emerging market and developing economy regions are generally much more vulnerable to external growth shocks than to shocks originating within each region. The within-region spillovers are limited in scope, and tend to be concentrated among neighboring countries, reflecting modest within-region trade and financial links. However, a few countries in EAP and ECA are vulnerable to a growth slowdown in large neighboring emerging and frontier markets.

<sup>2</sup>For the SAR region, only spillovers from India are considered.

<sup>3</sup>Other studies have also found significant spillovers from Russia to ECA (e.g., Alturki, Espinosa-Bowen, and Ilahi 2009; Ratha et al. 2015) and from China to EAP (e.g., Ahuja and Nabar 2012; Inoue, Kaya, and Ohshige 2015).

<sup>4</sup>For lack of a sufficiently long quarterly data series, Gulf Cooperation Council countries could not be included in the analysis.

<sup>5</sup>For instance, Southern Cone countries (Argentina, Bolivia, Chile, Paraguay, and Uruguay), given their sizeable export linkages, are subject to spillovers from Brazil (Adler and Sosa 2014).