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2016 Global Opportunity Index

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Global Opportunity Index: Focus on–, Asia Focus*:*

Beyond FDI[1]

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(working paper version, see http://www.globalopportunityindex.org/ for more information)

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Executive Summary

Cross-border flows play a key role in supporting investment and ultimately economic growth. Until recently, regulators tended to favor Foreign Direct Investments (FDI) because direct investment in the country's productive assets has traditionally been viewed as more stable than portfolio flows. Yet recent strengthening of portfolio flows to emerging markets and to meet the existing investment needs in many countries is forcing a reassessment: Market-based investment cannot be ignored, and could bepart of public-private partnership to facilitate a more diversified and even allocation of international financial resources.

With a special focus on Asia, the report first assesses the attractiveness of Asian countries based on the *2016 Global Opportunity Index*, then provides a closer look at the composition of Asia's capital inflows—focused on FDI and portfolio investment.

Key Findings for Asia:

- The *2016 GOI* suggests that the region is strong when compared to the rest of the world, especially in terms of business perception. Yet it would benefit from a harmonization in the financial infrastructure and support systems and from a deepening of its financial markets.
- Intra-regional capital flows are unevenly distributed. There is significant potential for capital flows to play a greater role in financing investment in Asia, but this will depend on financial integration of the region's peripheral markets.
- Asia as a whole has the potential for portfolio investment to play a greater role in capital flows; capital market deepening has the potential to attract institutional investors.
- Major challenges to regional financial integration in Asia include:
    - Corporate debt and the reemergence of currency mismatch.
    - Lack of regional coordination of capital controls and other macroprudential policy that may influence potential investors' decisions.

Key Findings for Capital flows:

- Portfolio flow composition shows that concerns regarding volatility should be reframed as concerns regarding overexposure to certain type of financing that may fuel financial distress.
- FDI can take many forms and is linked to different type of investors. A better understanding at a more granular level of FDI and more generally of capital flows is necessary to design policy focused on attracting the type of funding needed by the economy.

1. Introduction

In 2016, China assumed the G20 presidency by declaring that it "stands ready to work together with all members toward an innovative, invigorated, interconnected, and inclusive world economy." One of the key items in the agenda is the enhancement of "cooperation and coordination on Global Investment Policy," a priority based on the clear understanding that investment is crucial to trade and economic growth. In preparation for their July meeting, both UNCTAD and the OECD pointed out that a majority of the 2015 investment policy changes introduced by the G20 countries enhanced openness to foreign investment. For the first time since its release, the UNCTAD-OECD monitoring exercise includes information regarding measures concerning international capital movements other than FDI. This change reflects the recent shift in regulators' approach to capital flows.

Capital is essential for economic growth, but domestic supply is limited and countries have to rely on international sources. Up to recently, regulators tended to favor foreign direct investments (FDI) inflows perceived to be a direct investment in the country's productive assets and more stable than portfolio flows. Yet, recent strengthening of portfolio flows, especially channeled to emerging markets by institutional investors, and the existing investment gap in many countries are forcing a reassessment: market-based investment cannot be ignored and could become part of a public-private partnership to facilitate a more even allocation of international financial resources. Ultimately, diversification in the composition of capital flows is a pertinent issue for countries interested in enhancing their financial stability.

Asia is an interesting case for a variety of reasons. First, it replaced Europe as the main destination of FDI in 2014. Second, the financial crisis of 1997 led several Asian countries to take a proactive approach to macroprudential policy tools such as capital flows control. The region's resilience to the global crisis is commonly linked to these regulations. Third, the region's economic heterogeneity contrasts with its numerous trade agreements and highlights the need for financial integration, such as the one planned by the ASEAN Economic Community, to maintain and strength regional growth. Chang, Kaltani, and

Loayza (2009) show that financial and trade liberalization tend to amplify one another's impact on growth. Finally, the financial integration and development of Asia is important for the region itself and the world: As the fastest growing region for the near future, Asia may be not only the global growth driver, but also the lender of tomorrow for many developed economies.[3]

This report investigates capital flows in Asia and their diversity or lack thereof. Its contribution to the public discussion is twofold. First, the *2016 Global Opportunity Index (GOI)*, reported only for the Asia and the Pacific region, provides an overview of the region's attractiveness for investors. Each nation's assessment is based on a combination of five categories, each one capturing a different aspect of the country's appeal: economic fundamentals, financial services, business perception, institutional framework, and international standards and policy. Second, the report provides a more in depth look at the capital flows for a selected group of Asian countries.

Our report highlights several points that can be summarized as follows. First, the *2016 GOI* shows that the region appears strong when compared to the rest of the world, especially in terms of business perception. Yet, it would benefit from a harmonization in the financial infrastructure and support systems (banking, insurance, advice, network) and a deepening of the financial markets. Such changes would strengthen the region's attractiveness for portfolio inflows and insure a more even distribution of capital flows in general. Second, the steps required to reach broader integration in the region should account for countries' comparative advantages and be designed around the notion of complementarity among these economies. Finally, our analysis also reaches two conclusions that are relevant beyond Asia. While the volatility of portfolio flows is often cited as an issue, it shows that the problem is the overexposure to certain financing that may fuel financial distress. Similarly, FDI can also take many forms and is linked to different type of investors. There is a high degree of heterogeneity across countries in the form that FDI takes and who the investors are, which suggests that there is no "one size fits all" policy prescription for attracting investment.

The report proceed as follows: Section 2 reports the *2016 GOI* for the Asia-Pacific region s. Section 3 discusses the composition of Asia's capital inflows, especially FDI and portfolio investment, while Section 4 focuses on market depth and financial stability. Finally, Section 5 assesses the potential and challenges..

[3] Karolyi et al. (2015) show that the past FDI pattern and trade agreements influence current international investment portfolios of emerging markets.

2. GOI: Asia Focus

The Global Opportunity Index considers economic and financial factors that influence investment activities as well as key business, legal and regulatory policies that governments can modify to support and often drive investments. Overall, the GOI tracks countries' performance on 54 variables aggregated in five categories, each measuring an aspect of the country's attractiveness to investors.

- **Economic Fundamentals (EF)** indicates the current economic strength of a country vis-à-vis the global economic outlook. The assessment focuses on the country's macro-performance, trade openness, quality and structure of the labor force, and modern infrastructure.
- **Financial Services (FS)** measures the size and access to financial services in a country by looking at the country's financial infrastructure and access to credit.
- **Business Perception (BP)** measures explicit and implicit costs associated with business operations such as tax burden, transparency, etc.
- **Institutional Framework (IF)** measures the extent to which an individual country's institutions provide a supportive network to businesses.
- **International Standards and Policy (ISP)** reflects the extent to which a country's institutions, policies, and legal system facilitate international integration by following international standards.

The assigned composite index value is the average score of the five categories (called component scores). Each variable is normalized from 0 to 10. Within each category, the normalized variables are given equal weight and aggregated, resulting in a normalized category score between 10, indicating the most favorable conditions for investment, and 0, signaling the least favorable. The index covers 136 countries.[4] Table 1 reports the index when focusing on the 25 countries of the Asia-Pacific region, while the box plots presented in Figure 1 provide insightful information regarding the spread of the rankings across regions and categories. These box plots allow for a visual comparison of the overall ranking and the sub-ranking, as well as a comparison between the composite score distribution across regions (see Appendix A.0 for more details).

The main messages of the *2016 GOI* can be summarized as follows:

[4] Based on data availability the 2016 edition ranks 123 countries.

- Overall, the spread of the Asia-Pacific region's performance is in line with what is observed for the rest of the world which confirms the level of heterogeneity in the region. Economies such as Hong-Kong, New Zealand, Australia and Singapore rank in the top 10 globally, and 10 out of the 25 economies considered in the region rank in the *2016 GOI* top 50.
- Overall the region appears strong when compared to the rest of the world, especially in terms of business perception.
- The two categories that seem to be lagging are International Standards and Policy and Financial Services.

Figure 1: Distribution of global and sub-categories rankings

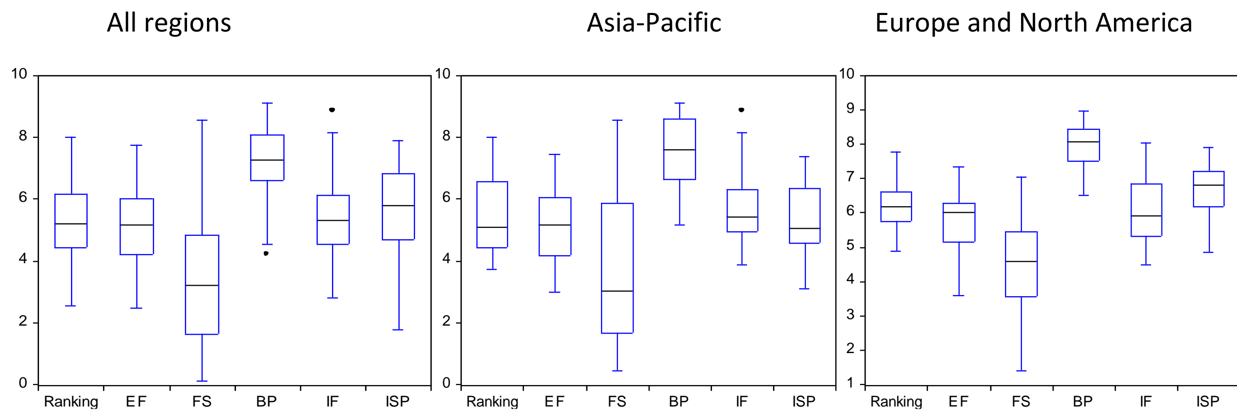
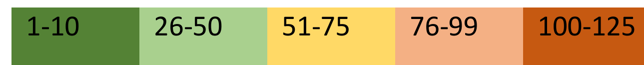


Table 1: Global Opportunity Index focusing on Asia

Country	Ranking	Sub-categories				
		Economic Fundamentals	Financial Services	Business Perception	Institutional framework	International Standards and Policy
Hong Kong	1					
New Zealand	3					
Australia	5					
Singapore	6					
Japan	9					
South Korea	11					
Malaysia	26					
Thailand	41					
Kazakhstan	42					
China	46					
Mongolia	60					
Azerbaijan	62					
Indonesia	67					
Viet Nam	70					
Philippines	76					
India	79					
Sri Lanka	80					
Brunei	83					
Kyrgyzstan	90					
Tajikistan	96					
Nepal	99					
Cambodia	102					
Bhutan	107					
Pakistan	112					
Bangladesh	115					



In the overall GOI

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3. The Composition of Asia's Capital Inflows

Capital inflows broadly encompass transactions that increase nonresidents' financial claims on the country in question. These can come in many forms that vary widely in terms of the type of economic activity financed and the type of foreign investor. These are grouped into three categories: foreign direct investment (FDI), portfolio investment, and banking inflows. Boxes 1 and 2 give definitions of inflows, outflows, and the three categories.

Asia and the Pacific's share of global capital inflows has grown rapidly, with the growth concentrated in FDI and banking inflows (see Figure 2).[5] In 2014 and 2015 the region attracted attention for surpassing the euro area as the world's top destination for FDI. (See, for example, United Nations Conference on Trade and Development, 2016.) However, this recent phenomenon is mainly due to a precipitous fall in FDI flows to the euro area from 2013 to 2014. During this time Asia's FDI inflows grew at a steady but moderate pace, and even fell slightly in some Asian countries, notably China.[6]

Box 1: Flows direction

Capital inflows to a country capture transactions which generate changes in nonresidents' financial claims on the country. For example, a foreign firm acquiring a stake of ownership in a domestic firm from its domestic owner via foreign direct investment (FDI) or a nonresident buying a bond issued by a domestic firm (or government) are forms of capital inflows.

Capital outflows capture transactions which generate changes in residents' financial claims on nonresidents. For example, a resident acquiring from a nonresident a direct ownership stake in a foreign firm or a resident's purchase from a nonresident of a foreign stock are forms of capital outflows.

Additional details are provided in Appendix A.1.

[5] Regional shares of total global capital inflows disaggregated by category—FDI; portfolio investment; and banking flows—for the same five-year periods as depicted in Figure 2 are provided in Appendix A.2.
[6] The euro area's FDI inflows fell from $1.25 trillion in 2013 to $470 billion in 2014, driven mainly by decreases in Luxembourg and the Netherlands, while FDI to East Asia and the Pacific increased from $585 billion to $606 billion (calculations based on IMF *International Financial Statistics*). It should be noted that a significant amount of FDI inflows to the Luxembourg and the Netherlands are in holding companies and ultimately funds productive activity elsewhere (Jenniger and Fetzer, 2015). The time path of capital flows for a selection of East and Southeast Asian countries is provided in Appendix A.3.

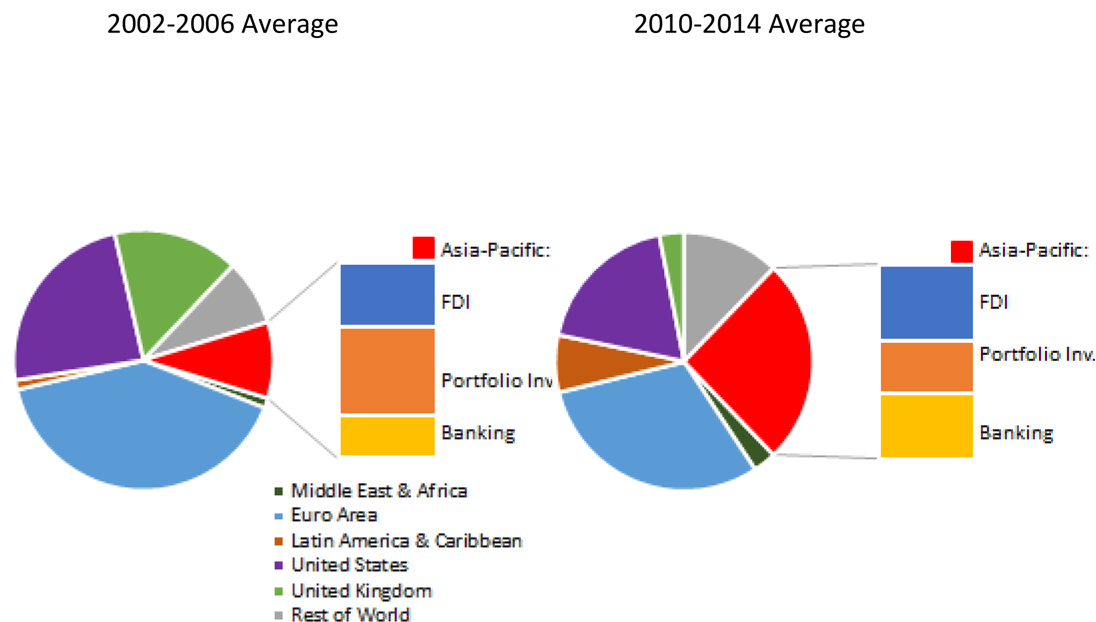
Box 2: Different Types of Capital Flows

Foreign direct investment inflows mainly measure transactions that increase nonresidents' direct equity in domestic firms with controlling interest, commonly defined as a share of ownership of at least 10 percent, net of any divestment. These include retained earnings. Loans from nonresident parent companies to their domestic subsidiaries, net of repayment, are also accounted for as FDI.

Portfolio investment inflows consist of nonresidents' purchases from residents of equity and debt securities originally issued by residents, net of nonresidents' sales to residents of these securities. The securities mainly consist of common stock and bonds, the markets for which are collectively referred to as capital markets. Bonds originating from public as well as private issuers are included.

Any capital flows not accounted for as FDI or portfolio investment are grouped together as ***banking flows***. These consist mainly of loans (net of repayment) from nonresidents, primarily foreign banks; nonresidents' deposits in domestic banks; and domestic firms' trade credit and other accounts payable to nonresidents.

Figure 2. Global capital flows by destination region



Sources: IMF International Financial Statistics; authors' calculations.

Notes: Regional country groups follow World Bank classifications, but are restricted to countries with complete data available for both five-year periods.[7] East Asia and the Pacific includes Australia, Cambodia, China, Hong Kong, Indonesia, Japan, S. Korea, Laos, Macao, Mongolia, Myanmar, New Zealand, Papua New Guinea, the Philippines, Singapore, Thailand, Vietnam, and a number of small Pacific island nations.[8]

With China facing structural challenges to sustain growth and the onset of a severe aging problem, and Japan long in decline, investors' attention has increasingly turned to the heterogeneous set of small- and medium-sized countries that make up the rest of the region. Whether these countries can maintain the region's status as the world's preeminent destination of capital flows will depend on their coordinated ability to achieve regional financial integration.

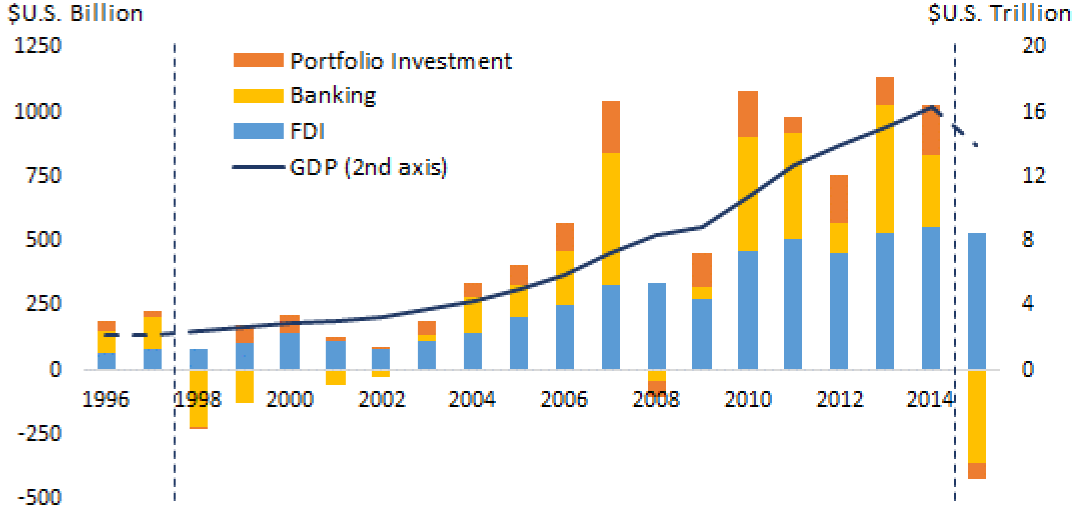
When the composition of Asia and the Pacific's capital inflows are viewed in aggregate, the portfolio investment component is still in large part a story of Japan, which accounted for 53 percent of the total for the 2002-2006 period and 42 percent for 2010-2014. While a relative stagnation of inflows to Japan—reflected in the decrease in its share of the regional total—explains part of the decrease in

[7] The 2010-2014 period was selected based on having the latest data available for enough countries to construct reasonably comprehensive group aggregates, and the 2002-2006 period was selected on the basis that it precedes the global financial crisis while also avoiding contamination from direct effects of the 1997 Asian financial crisis.

[8] Malaysia is excluded from the sample due to incomplete data on banking flows.

portfolio investment as a proportion of Asia' total capital inflows, the same basic pattern holds for a grouping that excludes Japan, as shown in Figure 3.

Figure 3. Composition of capital inflows, selected Asian countries, 1996-2015



Sources: IMF International Financial Statistics and World Economic Outlook.

Notes: The group consists of China, Hong Kong, India, Indonesia, South Korea, Laos, Myanmar, the Philippines, Singapore, Thailand, and Vietnam.[9] India and Indonesia lack data for 2015 and Hong Kong lacks data for 1996-1997; these breaks in comparability are indicated with dashed lines.

Figure 3 shows that while all three types of capital flows to Asia have grown substantially over the last two decades, collectively keeping pace with the region's economic growth, portfolio investment has lagged. Portfolio investment inflows to the region as a whole are significantly smaller than FDI or banking inflows.

Furthermore, it illustrates that the components of Asia's capital inflows show significantly different behavior. FDI tends to be the most stable form of capital flows, while banking flows are the least stable—being highly procyclical and sensitive to external shocks—and portfolio investment falls somewhere in between. Thus, given the region's heavy reliance on banking, a greater role for portfolio

[9] East and Southeast Asian countries were selected based on data availability, with Japan excluded in order to focus on other countries in the region; Malaysia is excluded from the sample due to incomplete data on banking flows.

investment inflows would not necessarily raise the overall volatility of the region's inflows—even setting aside the possibility that deepening capital markets may lead to more stable portfolio investment flows.

One other noteworthy development in Asia's pattern of capital inflows is the reversal of the banking and portfolio components in 2015. This reversal was largely comprised of reductions in loans and deposits in China, and thus mainly reflects factors specific to that country—for example an unwinding of the carry trade—rather than a general regional phenomenon.[10] Relatively minor roles in the reversal were played by reductions in deposits in Hong Kong and Singapore and portfolio disinvestment in Hong Kong and Thailand.[11]

a. The Composition of Asian Foreign Direct Investment Inflows

FDI inflows can be sorted into three main categories: (1) M&A and greenfield investment, (2) increases in equity via retained earnings, and (3) loans from foreign parents to their subsidiaries in the reporting country. M&A and greenfield investment make up the most straightforward form of FDI, in which a non-resident buys (controlling interest in) or establishes a firm. A more disaggregated look at the balance of payments data (sourced from the IMF's International Financial Statistics) shows that M&A and greenfield investment comprise a slight majority of FDI, accounting for 54 percent of total FDI inflows into Asia and the Pacific between 2005 and 2014 (compared to 56 percent of global FDI flows over the same period).

Foreign investors may also increase equity in home firms via retained earnings. This form of FDI is significant in Asia, accounting for 24 percent of FDI between 2005 and 2014 (and 18 percent of global FDI). It may constitute reinvestment, or may be held by the firm as cash or financial assets or used to service liabilities. While strictly speaking this is also true of some part of the flows counted as M&A and greenfield investment, these financial uses play a greater role in the case of retained earnings. The uses of this relatively flexible component of FDI vary significantly between countries and over time within a given country. Between 2005 and 2014, retained earnings accounted for 80 percent of FDI in Hong Kong

[10] Chinese capital flows during this period are explored by Savard, Wilhelmus, and Wong (2016).

[11] Deposit and loan inflows are roughly equal in magnitude on average for the region as a whole, but for most countries in the region loan inflows are somewhat greater than deposits, with the notable exceptions of China where the two components are about equal in importance, and Hong Kong and Singapore where inflows of deposits tend to be significantly greater than inflows of loans (Appendix A.3).

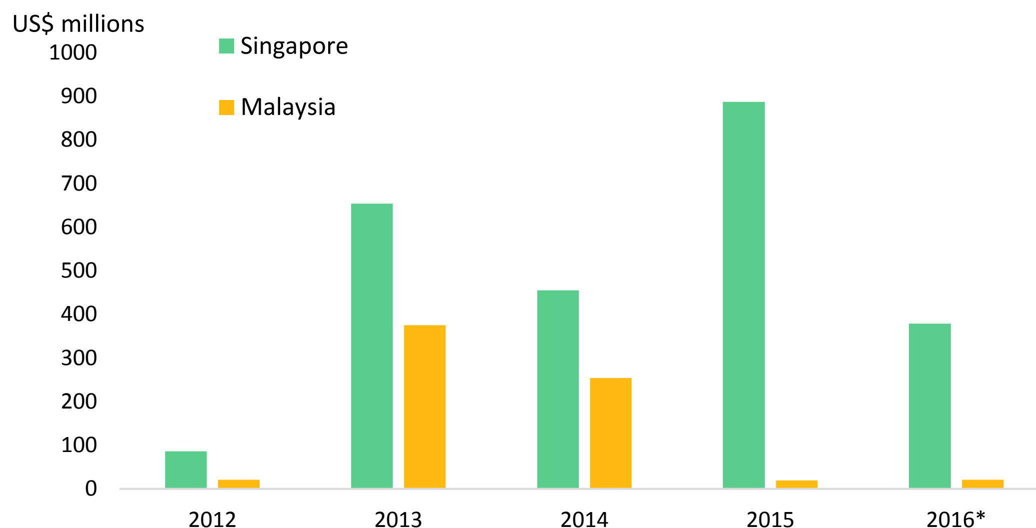
on average, 65 percent in Korea, and 57 percent in Thailand; in the other countries in the region this component of FDI is moderate or insignificant.[12]

Lastly, the debt type of FDI flow accounted for 14 percent of FDI into Asia and the Pacific between 2005 and 2014 (compared to 21 percent for its share of global FDI). Use of this type of investment flow varies significantly within the region as well. These loans from foreign parent companies to their subsidiaries accounted for 37 percent of FDI inflows for Mongolia over the period, 36 percent in the Philippines, and -49 percent in Malaysia (reflecting repayment; this component accounted for 100 percent of Malaysia's FDI inflows in some earlier years, likely driven by particular forms of capital controls). The debt component makes up smaller though still significant (typically 5 to 20 percent) of FDI inflows in most other Asian countries.

While most foreign direct investors are multinational enterprises in industries related—either horizontally or vertically—to that of the target company, private equity and venture capital (VC) firms have emerged as sources of funding as well. Sovereign wealth funds like Singapore's Temasek Holdings have been early players in the region, investing in local VC firms and setting the stage for the entry of foreign VC firms. Private equity, VC firms, and sovereign wealth funds will likely play a growing role in FDI in the region over time. Presently they mainly perform niche roles, for example investing in frontier markets in the Mekong Delta region, and in the IT, health, and biotech sectors in the region's relatively advanced economies, mainly Singapore and Malaysia. (See Figure 4 for recent trends in these two countries.)

[12] These particular countries have 2015 data available, but 2014 is used as the cut-off year for comparison to the regional aggregate; including 2015 does not make a substantial difference in the averages.

Figure 4. Venture capital in Singapore and Malaysia.



Source: Thomson Reuters.

Note: *2016 data are for Jan. 1 through July 26.

There is significant scope for greater FDI between Asian countries in building and restructuring global value chains, as well as in businesses oriented toward satisfying local consumer demand as incomes rise and access to credit expands.[13] While intra-regional FDI between East and Southeast Asian countries is substantial on aggregate, in large part this is accounted for by flows between China and Hong Kong (International Monetary Fund, 2015). Even leaving these two countries aside to examine FDI between Southeast Asia's small- and medium-sized countries, the lion's share of intra-regional investment is accounted for by only a few countries, Singapore and Malaysia in particular. Box 3 illustrates this by zooming in on M&A between firms in ASEAN countries.

In summary, East and Southeast Asian countries have had broad success in attracting FDI but through a variety of channels. There is a high degree of heterogeneity across countries in the form that FDI takes and who the investors are. This suggests that there is no "one size fits all" policy prescription for attracting investment. At the same time, intra-regional FDI in particular is unevenly distributed. Thus, there is significant potential for intraregional FDI to play a greater role in financing investment in

[13] To some extent investment in global value chains has already shifted within the region, for example with a movement of electronics manufacturing from China to Vietnam (United Nations Conference on Trade and Development, 2016)

Southeast Asia, but this will depend on an expansion of financial integration in the region to its peripheral markets.

Box 3. Singapore and Malaysia dominate intra-regional M&A

Mergers & Acquisitions: Singapore and Malaysia Are the Big Players

A substantial portion of FDI between Southeast Asian countries is in the form of M&A. Table B.1 summarizes deal-level data on M&A bilaterally. It shows a strong regional heterogeneity with most of the deals concentrated in a few countries. Singapore and Malaysia, and to a lesser Thailand, are home to the acquiring firm in the vast majority of deals. The bulk of target firms are in Singapore, Indonesia (with its attractive consumer market as the largest economy in the region), and secondarily in Malaysia and Thailand.

Table B.1. Mergers and acquisitions between acquirer and target firms in ASEAN 6 countries. Number of deals and total deal value in US$ millions, 2002-2015 Totals

			Acquirer	**Country**				
		Indonesia	Malaysia	Philippines	Singapore	Thailand	Vietnam	*Total*
Target Country	Indonesia		106 ($3,700)	2 ($8)	91 ($4,600)	13 ($285)		*212 ($8,600)*
	Malaysia	4 ($205)		3 ($321)	187 ($3,700)	4 ($31)		*198 ($4,200)*
	Philippines		12 ($177)		12 ($36)	4 ($125)		*28 ($338)*
	Singapore	14 ($657)	143 ($8,800)	5 ($83)		12 ($10,100*)	1 ($70)	*175 ($19,700)*
	Thailand		40 ($723)	1 ($101)	54 ($3,600)			*95 ($4,500)*
	Vietnam		10 ($110)	2 ($55)	13 ($112)	7 ($108)		*32 ($385)*
	Total	*18 ($862)*	*311 ($13,500)*	*13 ($568)*	*357 ($12,100)*	*40 ($10,600*)*	*1 ($70)*	*740 ($37,700)*

Sources: Bloomberg, authors' calculations.

Notes: Deal counts are underestimated due to missing deals and incomplete information on the acquirers' and their targets' countries of residence. Deal value is still more underestimated due to missing data on deal value for 25 percent of those deals which have sufficient data to be included in deal counts. Total deal values greater than $1 billion are rounded to the nearest $100 million. Only completed deals are reported. Year attribution is based on date of deal completion rather than announcement. The year 2002 was selected as the start year simply because it is the first year with a large sample of deal level data on cross-border M&A available from Bloomberg. *More than 80 percent of the total deal value of Thai acquisitions for the period are accounted for by one deal completed in 2013, the acquisition by ThaiBev (primarily in the brewing and distillation business) of roughly a two-thirds share of Fraser and Neave (a diversified company with food and beverage and publishing businesses) for about $8.58 billion.

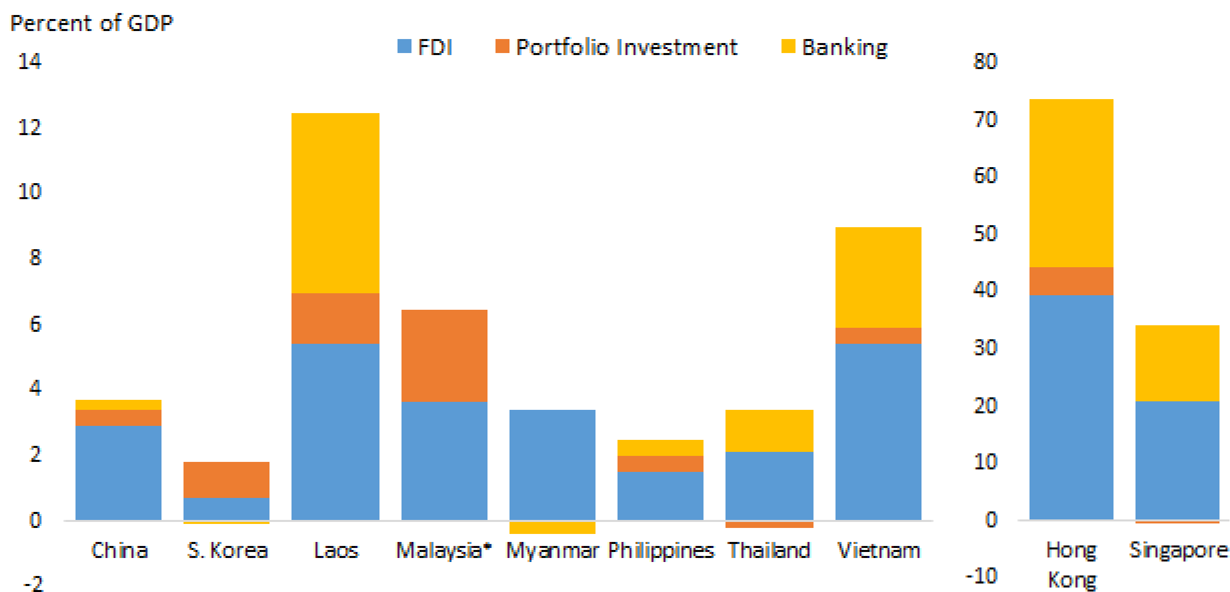
From 2002 to 2015 the intra-ASEAN share of ASEAN's total inward cross-border M&A decreased from 40 percent of deals completed between 2002 and 2006, to 26 percent of deals completed between 2010 and 2015. At the same time the intra-ASEAN share in terms of deal value rose from 22 percent to 31 percent, driven by a catching up of average intra-regional deal size which increased from $22 million to

$82 million, compared to a change from $40 million to $69 million for ASEAN's inward deals overall. While larger deals may be a sign of greater sophistication, which in one sense is a promising sign for the future of investment among ASEAN countries, it is sobering to note the context. This space is still dominated by acquirers in Singapore and Malaysia, while the Philippines and Vietnam—and to an even greater degree Cambodia, Laos, and Myanmar—continue to lag.

Heterogeneity in Portfolio Investment Inflows

Asian countries are highly heterogeneous in the level of development and the structure of their financial markets. Any measure of capital inflows into the region as a whole obscures this heterogeneity both in terms of the magnitude (relative to economic size) and in the composition of inflows. This heterogeneity is illustrated in Figure 5. Perhaps counterintuitively, the financial centers of Hong Kong and Singapore attract little portfolio investment as a proportion of their total capital inflows. Together with China, they help explain the low share of portfolio investment in the region's total inflows.

Figure 5: Capital Inflows by type, 2011-2015 annual average



Sources: IMF International Financial Statistics and World Economic Outlook; authors' calculations.

Notes: Only countries with complete data for the 5-year period are depicted (this excludes Cambodia, India, and Indonesia).

*Malaysia lacks data on banking inflows, so in this case only the other two components are shown.

These three countries—China, Hong Kong, and Singapore—do have significant capital markets, as reflected in the *Financial Services* component of the *2016 GOI*. In addition to well capitalized stock markets, they have sizeable markets for corporate as well as public bonds (although bond markets are notably smaller than stock markets in the cases of Hong Kong and Singapore). Nevertheless, for all three countries portfolio inflows are small relative to FDI and banking inflows. For China, FDI inflows are dominant; for Hong Kong and Singapore both banking and FDI inflows are large relative to portfolio inflows. However, in the case of Hong Kong it should be noted that portfolio inflows are large for its economic size.

South Korea and Malaysia likewise have developed capital markets, and unlike the above three countries portfolio investment flows into Korea and Malaysia make up a large proportion of total capital inflows.[14] Thailand roughly follows the same pattern, albeit with somewhat smaller capital markets in terms of capitalization relative to GDP.

Indonesia and the Philippines have sizeable stock markets and markets for public bonds for their economic size (even more so for the Philippines than Indonesia in both cases), but had insignificant markets for corporate bonds until a very recent increase in issuance.[15] Outside of the immediate East and Southeast Asian region—but of interest in itself and because it has some economic ties there—India fits this pattern as well.

Cambodia, Laos, Myanmar, and Vietnam receive very little portfolio inflow. Generally, they have fairly insignificant capital markets, although Vietnam does have a small but growing stock market (with market capitalization of 26 percent of GDP as of 2015). Mongolia and most Central Asian and South Asian countries also fit into this group.

Comparing the equity and debt components of portfolio investment inflows (Appendix A.3), for Asia and the Pacific as a whole debt, securities account for 64 percent of portfolio investment inflows on average (for 2001-2015), and 73 percent for ASEAN countries. However, a substantial part of the debt component consists of sovereign bonds.[16]

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[14] Malaysia has incomplete balance of payments data for years after 2009 and for years earlier than 2002, so inferences regarding the overall composition of Malaysia's capital inflows are based mainly on that older data from 2002 to 2009.
[15] Cambodia, India, and Indonesia are excluded from Figure 5 due to lacking annual balance of payments data for 2015 at the time of writing; inferences regarding the composition of their capital flows are based on annual data through 2014 and/or quarterly data through 2015q3.
[16] Alfaro, Kalemli-Ozcan, and Volosovych (2014) give a detailed breakdown and analysis of the private and public components (on both the creditor and debtor sides) of net capital flows for a large set of developing countries.

Just as Asian countries' portfolio investment *inflows* are highly heterogeneous in terms of magnitude and composition, so too are their portfolio investment *outflows*. To build a more complete picture of Asia's participation in global capital markets, we now turn to the assets side.

i. Asset Holdings in Asia

The *Financial Services* component in the *2016 GOI* is the most heterogeneous and spread out category. This does not necessarily come as a surprise: while Singapore and Hong Kong are financial hubs, many of the other Asian countries' capital markets are still in a developing stage. One of the main difficulties for Asia in a globalizing world has been the approach towards free capital flows and how to protect domestic economies from sudden changes in flow direction. The recent increase in capital flows from and to Asia have been a hot-topic for some while now and with it more attention has been given to private security holdings of these countries, see Figure 6. To analyze those the IMF's Coordinated Portfolio Investment Survey (CPIS) dataset is used, which records the stock of net acquisitions and disposal of private portfolio investments of a country.[17] The actual holdings of most countries within the Asian region—Hong Kong and Singapore are an exception—are still rather low, mainly due to the fact that higher outflows are a new phenomenon. Even China only holds a stock of $287 billion, a number similar to that of Poland[18].

However, at a more granular level, security holdings can provide a partial view into the recent development and linkages within the region as well as global markets. After the financial crisis policymakers and regulators came to realize that it is necessary to get a deeper understanding of the international financial markets and more disaggregated datasets. Especially for individual countries it is essential to understand their holdings beyond the simple stock, e.g. in what asset classes and at what maturities. There are some key takeaways from the analysis of security holdings for some of the bigger ASEAN countries:

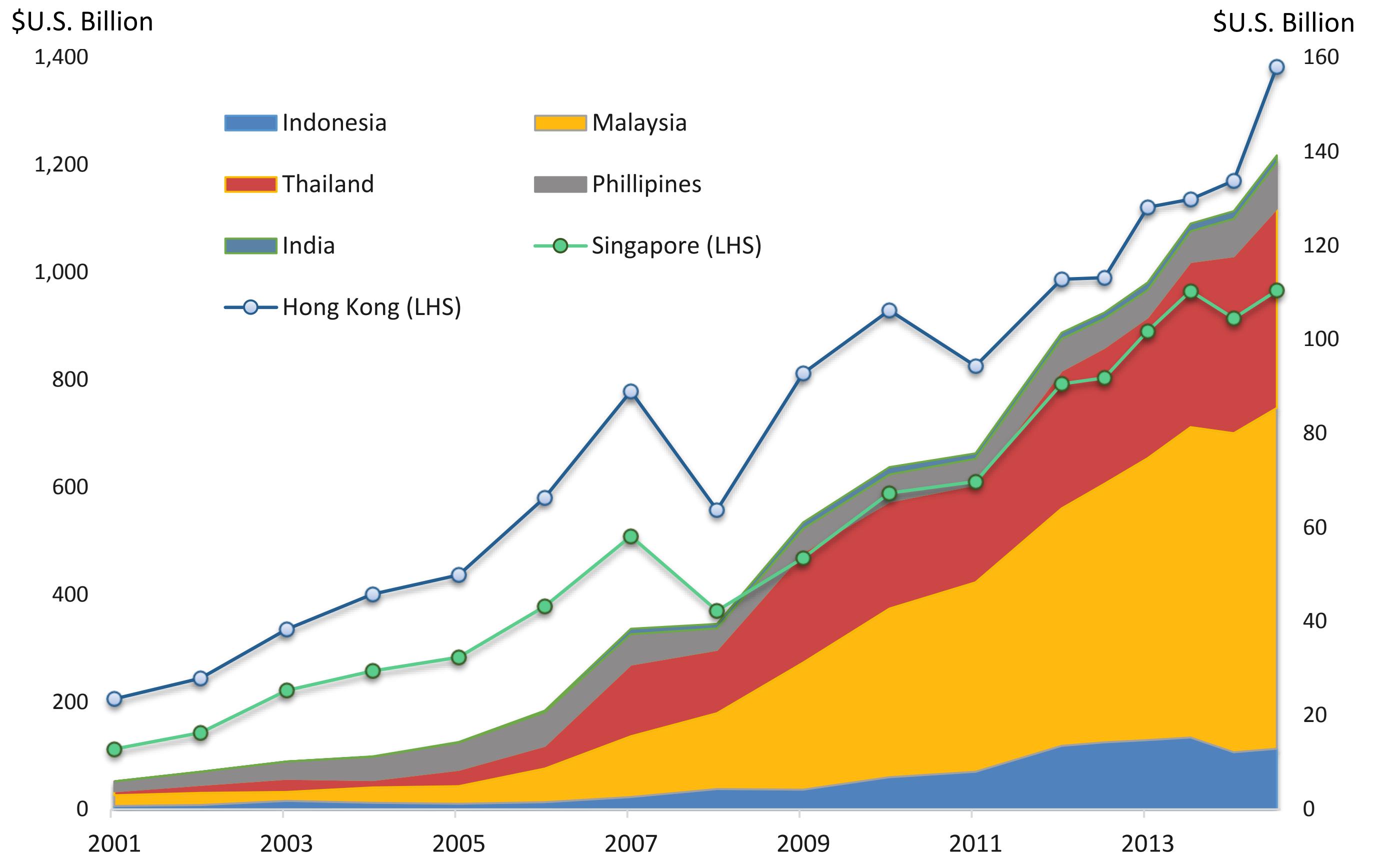
- Total holdings have moved in line with increased capital outflow and inflows and have doubled since the financial crisis.
- The share of holdings of neighboring countries is consistently growing and a major share is held within the region.

[17] Mesny (2006).
[18] Poland has total investment holdings of $245 billion.

In line with the *2016 GOI*, the major economies can be sorted into three groups, representing their current state of integration into global financial services.

The first group is highly integrated into the global financial system and plays a key role in the capital flows to and from the region. Hong Kong and Singapore both hold roughly a trillion dollars or more in securities, $1.4 trillion and $965 billion respectively. Hong Kong has a special role in the flow of capital from and to China. Beginning in 2010 its total holdings of Chinese securities reached more than $400 billion in 2015, more than double the pre-crisis amount. The second largest holdings of Hong Kong are in offshore centers, mainly the Cayman Islands with $343 billion of the total $362 billion. Most of them are in investment funds that are partly used to finance, among other activities, M&A abroad. This outlines one of the main difficulties of financial hubs' data, as in the case of Hong Kong almost half of its total holdings are concentrated into the U.S. and offshore center, with the latter mainly being an intermediary. It should be mentioned that in the third group, Indonesia is a clear outlier when it comes to market size—a total capitalization of over half a trillion dollars. At the same time the market is still slightly behind the second group in regards to listed firms and the economy's dependence on corporate finance through market-based instruments.

Figure 6: Total Security Holdings of Asian Countries.



Source: IMF Coordinated Portfolio Investment Survey.

Note: Chinese holdings are not available prior to 2015.

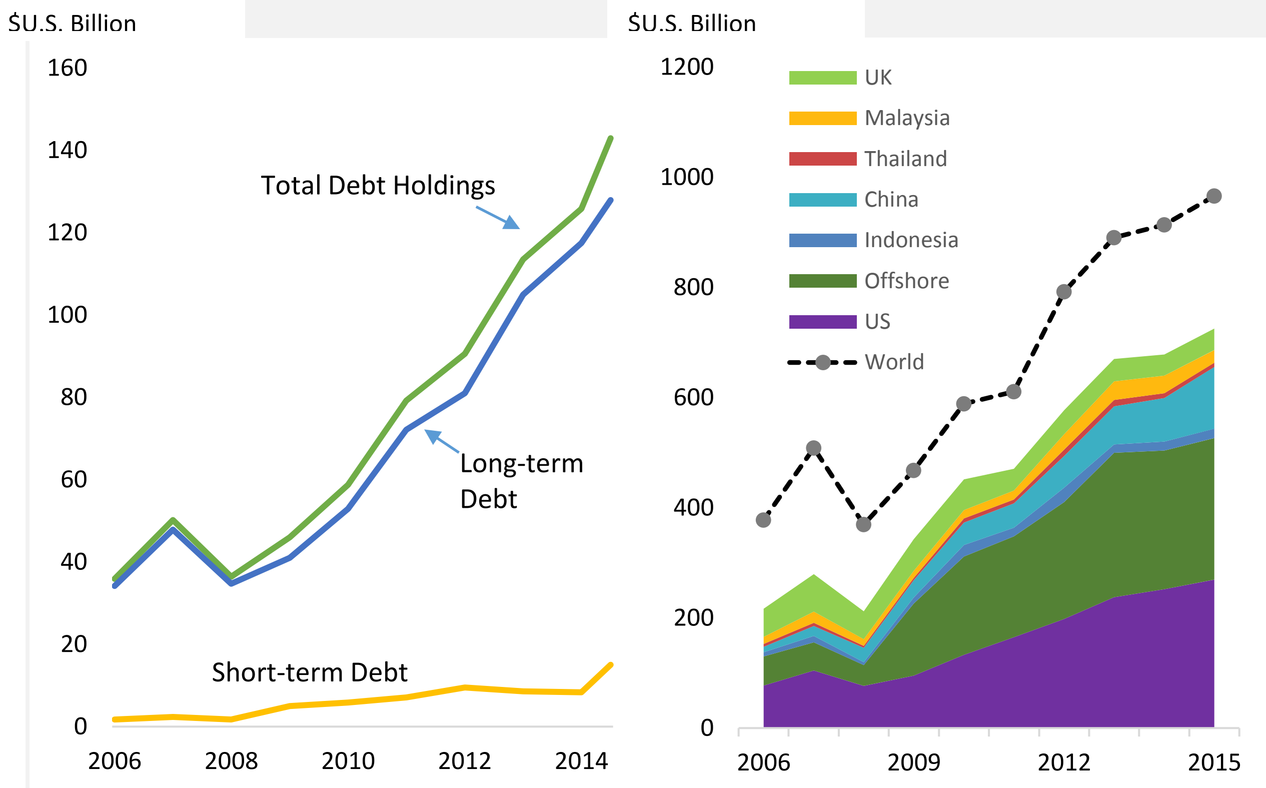
Box 2. **Singapore and Malaysia**

Singapore, in contrast to Hong Kong, has a much more diversified holding pattern, with most of its investment holdings in the U.S., a total of $270 billion. Figure B.1 shows that the increase in U.S. holdings is mainly due to equity securities and long-term debt securities, mostly government bonds. The second largest holding is in the offshore category, mainly due to securities with undefined counterparties, which have increased ten-fold from less than $20 billion to more than $200 billion since 2008.

Malaysia has an overall small amount of total private portfolio investment holdings, $72 billion in 2015 (see Figure B.2), with investments in Singapore and the U.S. accounting for more than 50 percent of the

total. This underlines Singapore's special role as a globally connected financial hub, offering a variety of financial services not available in neighboring countries. Most of Malaysia's exposure to the U.S. has been through equity rather than debt—$17.9 billion and to $3.7 billion, respectively—with equity accounting to more than 80 percent of total holdings.

Figure B.1: Distribution of Singapore's total debt and total investment holdings

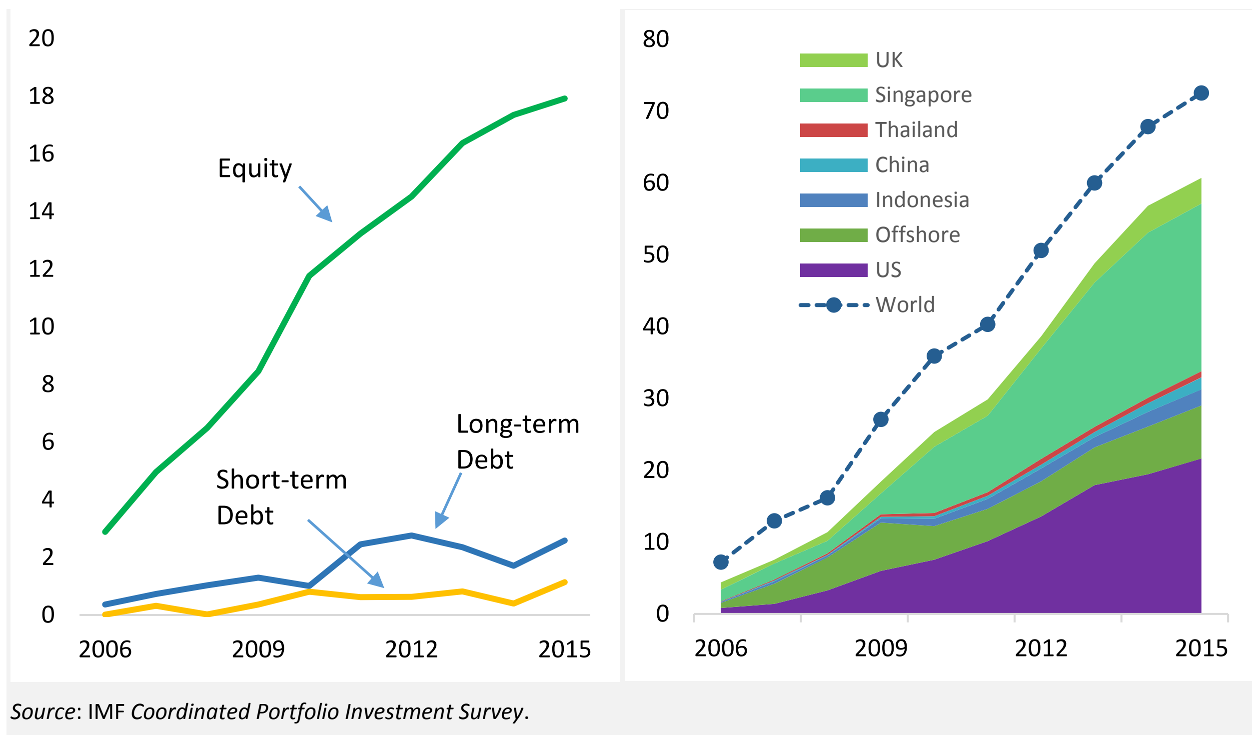


Source: IMF *Coordinated Portfolio Investment Survey*.

Figure B.2. Malaysia's total investment holdings and composition

US$ Billions

US$ Billions



Source: IMF *Coordinated Portfolio Investment Survey*.

ii. Foreign Fund Flows

From an investor standpoint, risk diversification and increased returns are a major motivation for internationalization of portfolios, especially in current times of low interest rates. Table 2 and Figure 7 show that flows from funds domiciled in the U.S. to a sample of Southeast Asian countries are highly correlated, indicating the difficulties that investors have in collecting and interpreting country specific risks. These correlations measure how strongly U.S. funds' investment (or disinvestment) in different countries are related to each other. High (Low) correlation, measured at highs of 1 (-1) between two countries indicates a perfect positive (inverse) relationship—e.g. a value of 1 would indicate that flows to (or reversals from) two given countries always move in tandem.

The correlation is especially pronounced for bond flows, indicating that investor flows are less driven by country specific macroeconomic developments and are mainly dominated by overarching perceptions of the world and the region. This causes bond flows from foreign funds to move in unison when reacting to a global change in perception.[19] Singapore is an exception - being a much larger and more sophisticated financial market than its ASEAN peers - showing flows that are much less aligned with its neighbors.

[19] See Forbes et al. (2016) or Chantapacdepong and Shim (2014).

Table 2: Correlation of bond and equity flows from U.S. funds.

	Indonesia	Malaysia	Philippines	Singapore	Thailand	Vietnam
Indonesia		0.73	0.76	0.41	0.87	0.47
Malaysia	0.98		0.64	0.56	0.74	0.35
Philippines	0.92	0.90		0.39	0.82	0.59
Singapore	0.66	0.68	0.61		0.44	0.26
Thailand	0.92	0.94	0.84	0.68		0.47
Vietnam	0.92	0.92	0.90	0.66	0.86	

Equity Flows (above diagonal); Bond Flows (below diagonal)

Source: EPFR.

The same cannot be said for equity flows, as these represent a direct claim on the residual value of a corporation and are much more dependent on the underlying corporation and the economy. There is however a clear cluster of countries that are highly correlated: Indonesia, Malaysia, Philippines, and Thailand. This indicates that even though they are mainly driven by the corporation's (expected) performance they are in part dependent on a common factor, such as a generally perceived overlap in business cycle or economic development.[20] The picture is different for both Singapore and Vietnam, which are still driven by a regional component, but much more independent from the former cluster. This can be mainly explained by the difference in market structure in the two, as Singapore is a financial hub in the region that offers investors a much more distinctive investment environment and provides financial services that might not be available in the respective local markets. Vietnam on the other hand has a much smaller market compared to any of its regional peers, with a total market capitalization of domestic firms at less than $80 million.

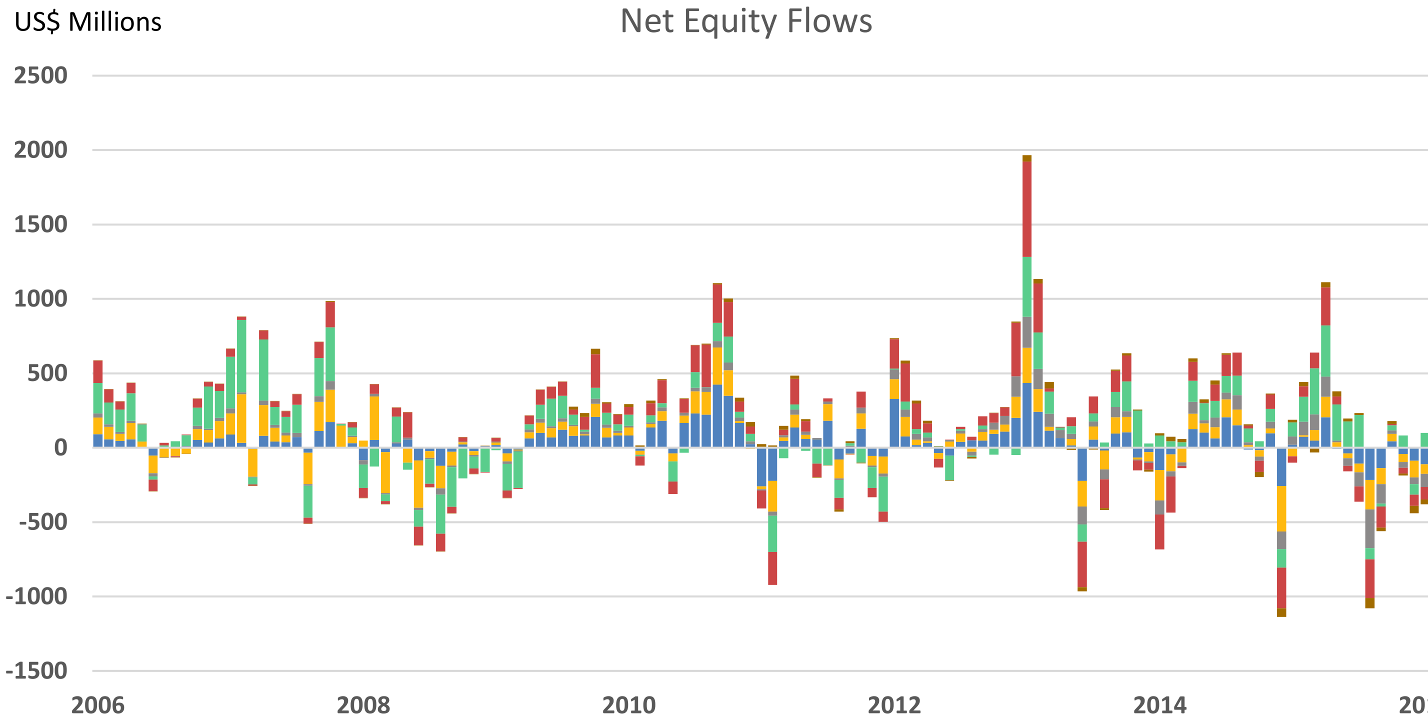
Policymakers often consider portfolio flows too volatile and procyclical for a country that is in the process of developing its domestic capital market and opening up to global capital flows. As a result, many developing countries, especially in Asia, use capital controls on portfolio flows that are perceived as being highly volatile. Figure 7 shows a different picture; the net flows are characterized by longer streaks, which in the case of bond flows lasted more than 3 years. While Equity flows are in fact more volatile than bond flows, they do show clear clustering and short-term directional trends. Hence, the

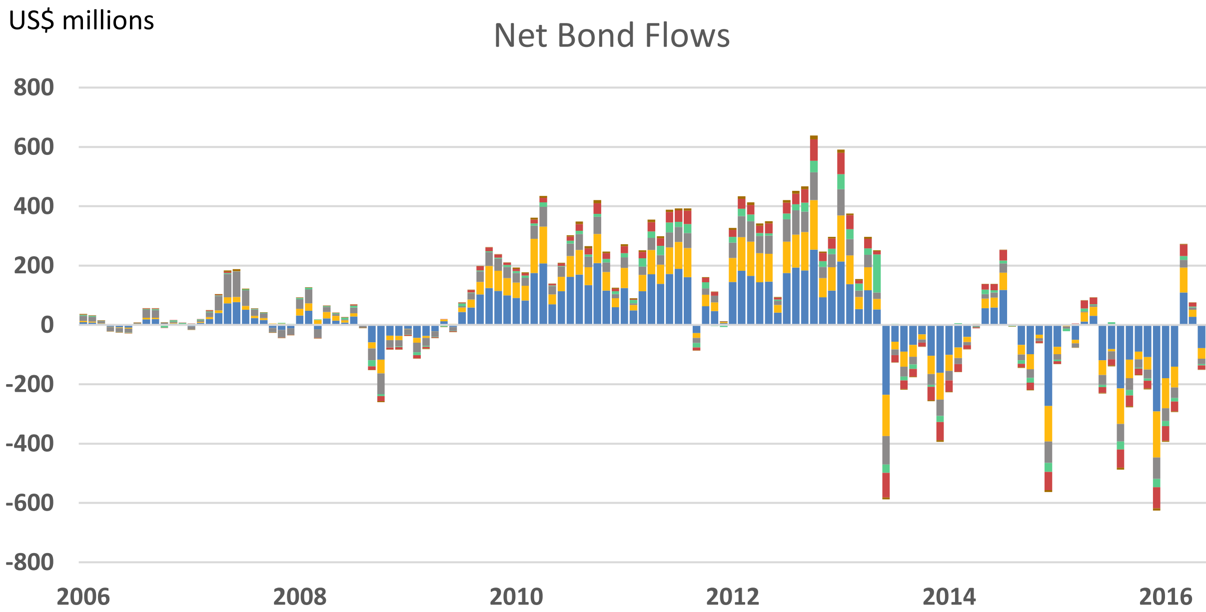
[20] See Froot, O'Connell, and Seasholes (2001).

issue for developing countries is not the level of volatility but rather the overexposure to certain financing that may fuel financial distress.

Figure 7: Equity and bond flows from U.S. domiciled funds.

Vietnam Thailand Singapore Philippines Malaysia Indonesia





Source: EPFR.

4. Market Depth and Financial Integration

The *2016 GOI* and its components shows that Asia as a region has generally been quite successful in having the right ingredients in place to attract foreign investment Many of these countries have FDI friendly set of policies , which result in FDI representing a large part of total capital flows for most of the region. Meanwhile, there is much more heterogeneity in portfolio flows. While FDI has often been viewed as a relatively desirable form of capital inflow due its relative stability, there are important reasons not to ignore the potential benefits of policies aimed at attracting other forms of capital flows, in particular by deepening capital markets to attract portfolio investment.

a. The Potential for Asian Capital Market Integration

Portfolio investment is especially suitable for large firms or projects, spreading the financing over a larger group of investors as compared to FDI deals or loans, and the benefit to investors of a relatively liquid asset means that financing can be less costly; for example, bond yields are typically lower than interest rates on loans. Portfolio investment can be the most efficacious means of financing large infrastructure projects carried out by public-private partnerships, which is of special interest in the region as infrastructure has been identified as a major area of investment need (Asian Development Bank and Asian Development Bank Institute, 2009; Ding, Lam, and Peiris, 2014) .

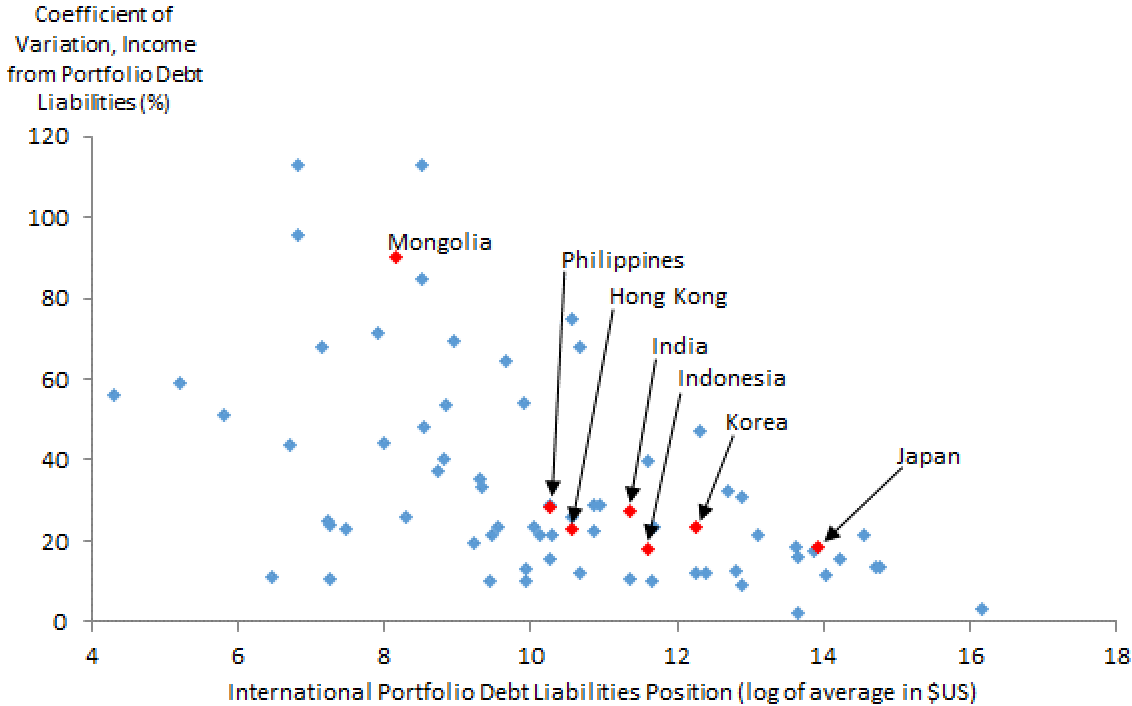
Compared with FDI, and even with loans, portfolio investment attracts relatively passive investors. However, these include large institutional investors like sovereign wealth and pension funds, which so far have only dabbled in FDI and are—at least potentially—much greater players in the region's capital markets than in FDI. Reasons for the limited development of capital markets in the region almost certainly include a lack of these institutional and other committed long term investors to contribute needed depth and stability.[21]

Figure 8 shows that deeper bond markets—measured in terms of the cumulative position of foreign investors in a country's debt securities—tend to return more stable flows of income to those investors. The causality likely goes both ways, with stable markets attracting investors, and depth leading to

[21] In the case of bond markets, an additional barrier to markets deepening has been a limited role of government bond issuance due to generally prudent fiscal policy (Eichengreen and Luengnaruemitchai, 2006).

improved liquidity and stability. For Southeast Asia's small- and medium-sized emerging market economies especially, economic size is likely a structural limitation to development of deep, sophisticated financial markets. Thus, for these countries greater financial integration within the group will be key for deepening markets and attracting institutional and other relatively long-horizon foreign investors. Having Singapore in the region—and as an ASEAN—means that greater integration may bring the benefits of access to an already thriving, globally connected financial hub.

Figure 8: Countries with Greater Cumulative Portfolio Debt Inflows Tend to Generate Less Volatile Returns (2011-2015 quarterly)



Source: Author's calculations from the IMF's International Financial Statistics.

Notes: Each point represents one country. Position is measured as of the latest available quarter (ranging from 2014q4 to 2015q4). All countries with non-zero data available on income flows for at least ten quarters in the 2011-2015 period and position data available for a quarter no earlier than 2014q4 are included. All East Asian countries (plus India) with data available are labeled.

There have been some policy efforts in Southeast Asia toward greater regional financial integration for some time, for example the ASEAN Economic Community Blueprint, ASEAN+3, the ASEAN Banking Integration Framework, and the Chiang Mai Initiative. But by many objective measures, the region is no

more integrated than it was twenty years ago.[22] Southeast Asia now appears to be uniquely well poised for intraregional integration compared to the previous phases of the region's economic and financial history. This is due to a combination of the recent expansion of rapid economic growth to the region's poorer countries; slow growth in high income countries; heterogeneity in demographics, with the potential for savings to flow from older to younger countries; and strong regional best practices in financial market regulations.[23] The encroachment on Asian markets of a slew of international financial regulatory reforms in the West provides additional impetus for the region to look inward. However, significant challenges remain.

b. Risks for the Region and Barriers to Financial Integration

Corporate Debt and the Reemergence of Currency Mismatch

For a period in Asia's history leading up to the 1997 Asian financial crisis, currency mismatch between the assets and liabilities in the region's international investment positions (IIPs) developed. Currency mismatch eventually proved to be a key source of vulnerability to shocks to capital flows and thus of financial and economic instability. This experience sparked policy initiatives to develop local currency bond markets, as well as providing the impetus to stockpile foreign exchange reserves as a buffer against external shocks.

Over the following decade many Asian countries built up massive reserves. Some bond market development manifested as well, but as the specter of currency mismatch faded policy efforts toward this end lost their urgency. For several countries currency mismatch was not just reduced but in fact *reversed*, with foreign currency assets exceeding foreign currency liabilities (see Figure 9), putting them in a position where their external balance sheets would be *strengthened* by depreciation of the domestic currency.[24] Asian countries weathered the global financial crisis relatively well, thanks in part to their reserves.[25] Gourinchas, Rey, and Truempler (2012) show that regulatory quality likely played a

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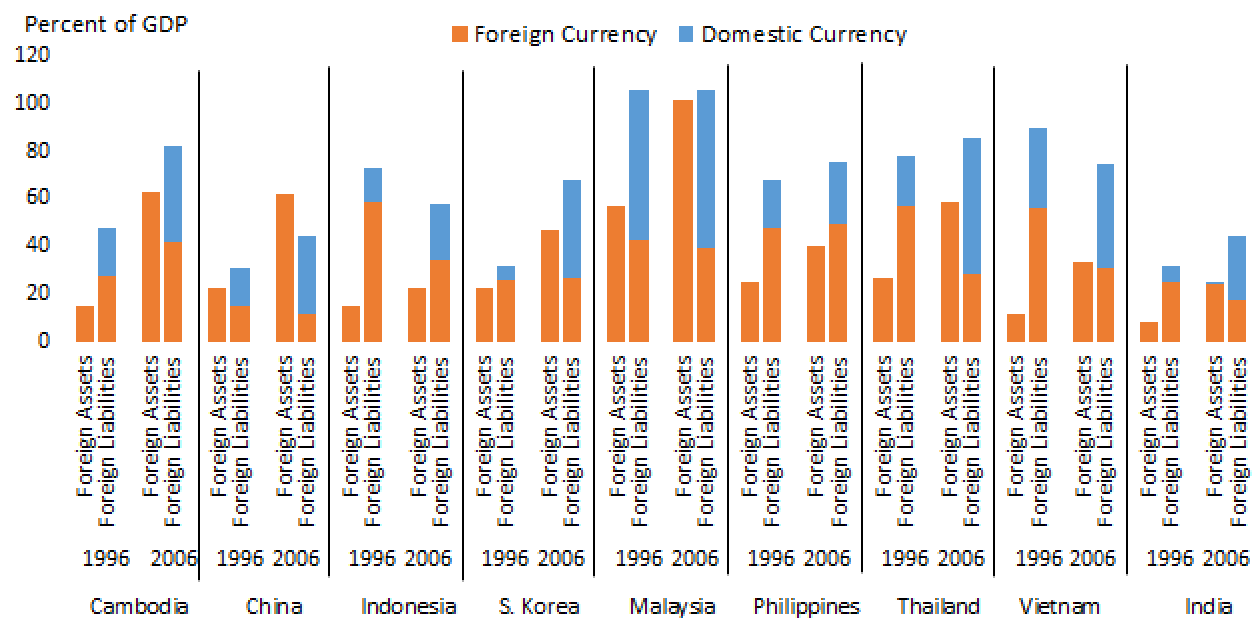
[22] A detailed historical overview and analysis of financial integration in Asia is provided by Pongsaparn and Unteroberdoerster (2011). Recent trends in financial integration in Asia are explored by the International Monetary fund (2015).
[23] Overviews of the interplay between demographics and capital flows are provided by Higgins (1998), Domeij and Flodén (2006), and The World Bank (2013).
[24] See Bénétrix, Lane, and Shambaugh (2015), whose dataset on the currency composition of countries' external assets and liabilities is publicly available. For an overview of asset valuation effects of the global financial crisis related to the composition of countries' international investment positions, see Brunnermeier et al. (2012); for the underlying research and further details, see Gourinchas, Rey, and Truempler (2012).
[25] However, the degree to which emerging markets' policy makers chose to allow currencies to depreciate vs. running down reserves varied widely; analyses of emerging markets' complex and heterogeneous vulnerabilities and policy responses to the crisis are provided by Aizenman and Hutchison (2012) and Aizenman and Sun (2012).

role in reducing the vulnerability of balance sheets; the IIPs of countries with better regulatory quality tended to have lower (or indeed negative) asset valuation losses during the crisis.

Figure 9: Foreign Currency Assets and Liabilities Preceding the 1997 and 2007-2009 Financial Crises



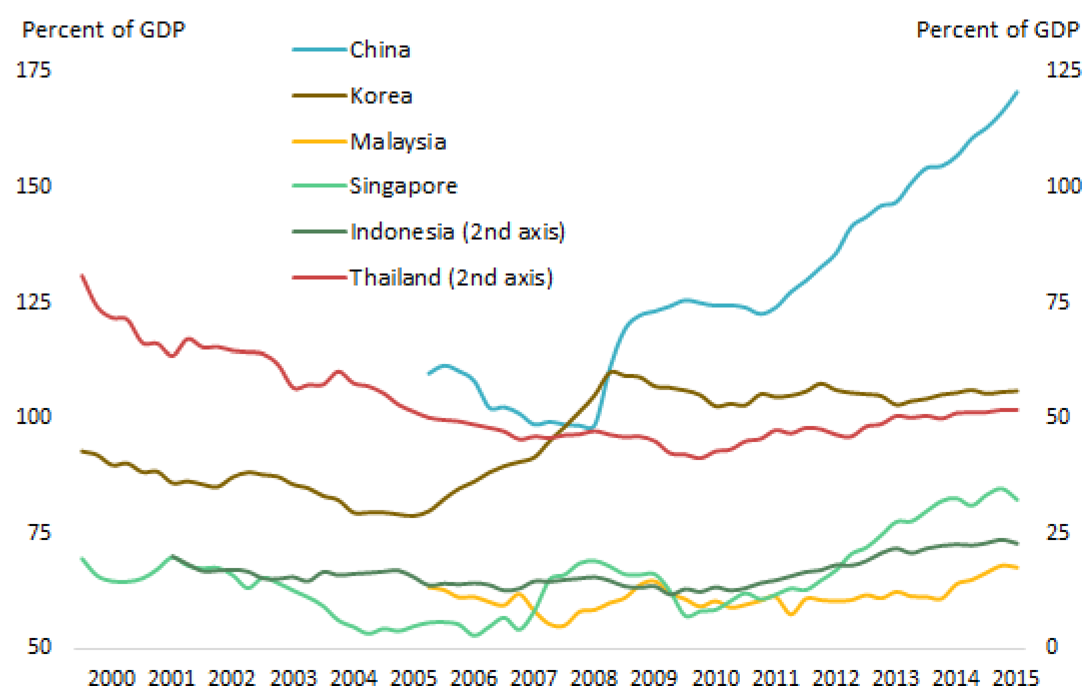
Source: Data from Bénétrix, Lane, and Shambaugh (2015).

Note: A supplemental figure for Singapore and Hong Kong is given in Appendix A.3.

In the years since the crisis, however, currency mismatch has begun to reemerge. Overall corporate debt has risen (see Figure 10), and low U.S. interest rates have encouraged dollar borrowing. Some of this dollar funding is used to finance trade or inventories of tradable goods in the home country, which does not pose a serious risk in terms of currency mismatch, or holdings of fixed assets such as real estate which is potentially much more problematic.[26] The borrowed dollars may also be traded for domestic currency financial assets to take advantage of interest rate differentials (and/or expected changes in the exchange rate), i.e. to pursue a carry trade strategy, in which case the borrowed dollars may ultimately end up, for a time, on the central bank's balance sheet in the form of reserve assets.

[26] This information is drawn from a summary of uses of dollar funding provided by McCauley, McGuire, and Sushko (2015).

Figure 10: Non-Financial Corporate Debt, 2006-2015



Source: BIS Long Series on Total Credit.

Recent research on currency mismatch emphasizes the role of dollar denominated transactions between residents, which are not reflected in external balance sheets and are thus missed in traditional measures of currency mismatch.[27] The limited data show that these foreign currency financial transactions and positions between residents are significant, and furthermore that residents tend to increase their foreign currency transactions with each other in times of turmoil when borrowing in dollars abroad becomes more difficult, which points to this underappreciated dimension of currency mismatch as a potential source of systemic risk.[28] However, the large foreign exchange holdings in most Asian countries (even after recent rundowns of reserves) puts the region's governments and monetary authorities in a relatively strong position to intervene in the event that a financial crisis arises from currency mismatch.

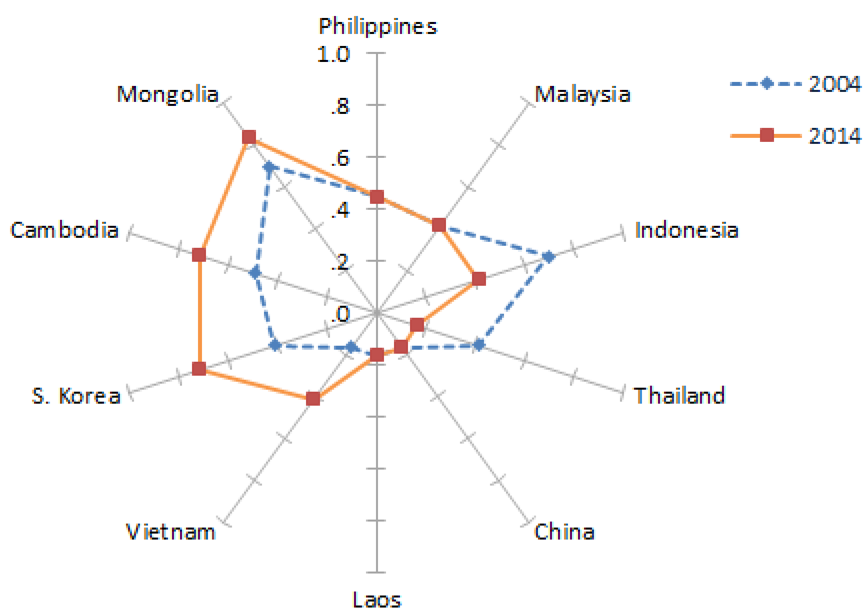
Capital Controls

While some differences between Asian countries have the potential to fuel financial integration—for example differences in market size, areas of comparative advantage, and stage of demographic

[27] See McCauley, McGuire, and Sushko (2015) and Chui, Kuruc, and Turner (2016); the general empirical patterns described in this paragraph are also drawn from these two sources.
[28] Data on capital flows and IIPs are typically not broken down by currency, and data on foreign currency financial transactions and positions between residents of a given country are even scarcer. The BIS and IMF have recently increased their efforts to collect data on currency denomination of transactions and positions to fill this gap.

transition—there are marked differences between countries' policy positions and directions which have instead been barriers to integration. High amongst these are capital controls (see Figure 11).

Figure 11: Capital Controls in East and Southeast Asia (0=least open; 1=most open)



Source: Data from Chinn and Ito (2006).

Notes: The figure shows the Chinn-Ito Index of capital openness, an aggregate measure of restrictions on capital account transactions, restrictions on current account transactions, existence of multiple exchange rates, and requirement to surrender export proceeds; the indicators used by Chinn and Ito (2006) to construct the index are drawn from the IMF's Annual Report on Exchange Arrangements database.

The region includes economies which are among the most open in the world, Singapore and Hong Kong (which were omitted from Figure 11 but both have Chinn-Ito capital openness index scores of 1 for both years depicted, indicating full capital openness). At the same time there are countries which are quite closed, or heading in that direction: China which is notorious for its capital controls; Thailand which has adopted Chinese levels of capital controls; Malaysia and the Philippines which have maintained moderately closed stances; and Indonesia which has adopted controls comparable to those of the latter two countries. On the other hand, an otherwise diverse set of countries—Cambodia, Korea, Mongolia, and Vietnam—are moving in the opposite direction, relaxing capital controls.[29] Mongolia, which just a

[29] These characterizations of countries' policy positions and directions on capital controls do not reflect changes since 2014, the latest year for which the Chinn-Ito index was available at the time of writing.

few decades ago was a satellite state of the Soviet Union, is now one of the most open countries in the region.

Whether the region’s small- and medium-sized countries manage to achieve financial integration will be a key determinant of how attractive they will be to foreign investors, depends on how the region’s configuration of capital controls evolves. Currently there is no coordinated regional policy path when it comes to capital controls.

Conclusion

International financing is a key ingredient for continued economic growth and prosperity. Asia, for a long time, has been exceptionally successful in attracting foreign capital, a large part of it in the form of FDI. The *2016 GOI* rankings and component scores help to identify some of the attributes and policies that have made certain Asian countries successful. At the same time it identify some regional shortcomings, underlining the fact that Asian countries are highly heterogeneous in a number of dimensions. The analysis of Asia's capital inflows and asset holdings which supplements the ranking yields three key messages for policymakers and investors in Asia: (1) there is a need for regional financial integration, (2) the region could benefit from capital market deepening and a greater role of portfolio investment in its capital inflows, and (3) although the region is well poised for these developments to manifest, there are significant challenges to be overcome including rising corporate and household debt and lack of coordination on capital controls and financial regulations.

Regional Financial Integration

As shown throughout the sections, intra-regional flows are mainly limited to a very small number of country pairs, leaving plenty of room for increased market integration. The *2016 GOI* shows that Asia as a whole should focus on improving the *International Standards and Policy* area, which is consistent with the pattern that regional integration is a work in progress. The path of integration will depend on Asian countries pursuing greater policy coordination, especially towards harmonization of financial regulations and infrastructure.

At the same time, Asia's heterogeneity—for example in demographics, income and wages, financial development, and economic comparative advantages—means that policy must be tailored to countries' specificities. The regional model for integration needs to take into account countries' complementarity. A broader regional financial integration would then lead to more evenly distributed intra-regional capital flows.

Potential for Capital Market Deepening

In a globalized world that is becoming ever more intertwined there is plenty of potential to stimulate market-based foreign financing in the region. In general, portfolio investment flows are much more sensitive to common shocks than FDI, but the range of flow reversal varies widely between instruments. Portfolio investments are relatively stable compared to banking flows, which currently comprise a large part of Asia's capital inflows (and reversals of those flows). Capital market deepening has the potential

to attract different types of international investors—from institutional investors to private equity and venture capital firms—who make markets deeper and more liquid in a virtuous cycle. For example, venture capital is driven by long-term objectives and is especially beneficial for innovative sectors that are higher up the value chain, such as bio-tech and health care.

Challenges

But there are also a number of challenges to regional financial integration in Asia and some other important risks faced by the region. Corporate debt and currency mismatch have been on the rise since the financial crises in part due to a global glut of cheap credit, highlighting the risks posed by monetary policy spillover and other forms of external liquidity shocks. There is divergence in the development of capital openness of the region, reflecting a misalignment of regulatory objectives and a general lack of policy coordination. Furthermore, the region faces geopolitical risks which in some cases have hindered regional cooperation, although this topic is beyond the scope of analysis of this report. Overall, a more coordinated policy approach will not only be beneficial to individual countries but to Asia as a region and will be key in sustaining its attractiveness to investors.

Beyond Asia

This report highlights two features of capital flows that are not unique to Asia. First, a close look at portfolio flow composition shows that concerns regarding volatility should be reframed as concerns regarding overexposure to certain financing that may fuel financial distress. Second, FDI can also take many forms and is linked to different type of investors. A better understanding at a more granular level of FDI and, more generally, of capital flows is necessary in order to design policy that will focus on attracting the capital needed by the economy.

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Appendices

A.0. Boxplots

Let focus on the first diagram, “ranking”, for all the regions to provide an illustration on how to read the information:

- While the composite score can range from 0 to 10, the rectangle, or box, shows that half of the countries considered, that is between ranking 30 and 90, report a value between 4.5 and 6.2.
- The whiskers represent the remaining fifty percent of the scores’ distribution. The top 25 %, that is ranking between 1 and 29, has a composite scone ranging from 6.2 and 8 out of 10. The lowest twenty-five percent, that is ranking from 91 to 123, has a composite score ranging from 2.4 to 4.4.
- The median, represented by the black line in the box, shows that 61 countries have a composite score less than 5.
- Finally, some boxplots have black dots that represent extreme scores or outliers whose value is very different from what could be normally expected in the group of countries considered. That is countries performing extremely well or extremely poorly when compared with the group considered.
- Institutional Framework is the category with highest degree of heterogeneity across the countries and that can be the most improved with most of the scores lower than 5, on a scale of 10. New Zealand performs extremely well in this category when compared to the rest of the world

However, the notion of extreme performance is relative to the group of countries considered:

- New Zealand still performs extremely well, in terms of Institutional Framework, when compare to solely to countries within the Asia-Pacific region

A.1 Defining Capital Inflows and Outflows

Capital flows broadly encompass transactions that change nonresidents' holdings of financial claims on the country in question ("inflows", accounted for on the liabilities side of the country's balance of payments), and transactions that change residents' holdings of financial claims abroad ("outflows," on the assets side). The concept and measurement of capital flows and international investment positions used in this report follow the conventions of the balance of payments accounting system.[30] In this system, flows and positions are linked such that the change in a country's position—"position" being its level of international assets or liabilities at a given time—over the course of a time period is determined by (1) transactions in financial assets between residents and nonresidents, (2) any changes in volumes of foreign assets held by residents or domestic assets held by nonresidents that are *not* the result of transactions (for example, write-offs, debt forgiveness, or changes in residency), and (3) changes in valuation of assets (due to changes in price or exchange rates).

Capital inflows to a country refer to the liabilities side of its balance of payments, capturing transactions which generate changes in nonresidents' financial claims on the country. For example, a foreign firm acquiring a stake of ownership in a domestic firm from its domestic owner via foreign direct investment (FDI); a nonresident buying a bond issued by a domestic firm (or government) from a resident; a nonresident depositing funds in a domestic bank account in the country; or a nonresident lending to a domestic borrower, are all forms of capital inflows to the country. In this report, such transactions which increase nonresidents' claims on the country are reported with a positive sign. Transactions which reduce nonresidents' financial claims on the country are reported as negative inflows, for example if a nonresident sells an ownership stake in a domestic firm to a resident; if a nonresident makes a withdrawal from a domestic bank account; or if a resident repays some of the principal on a loan borrowed from a nonresident. When total capital inflows (or some component of capital inflows, for example total FDI inflows) are positive this means that in the relevant time period nonresidents undertook transactions which increased their financial claims on the country on aggregate, net of transactions which reduced their financial claims on the country.

Similarly, *capital outflows* from a country refer to the assets side of its balance of payments, capturing transactions which generate changes in residents' financial claims on nonresidents. Positive entries reflect transactions which increased residents' claims abroad, for example a resident acquiring from a nonresident a direct ownership stake in a foreign firm; a resident's purchase from a nonresident of a foreign stock, bond, or currency; a resident making a loan to a nonresident; or a resident depositing funds in a foreign bank account. Negative entries are generated by transactions which reduce residents' claims on nonresidents; examples of such transactions are analogous to those given above for negative capital inflows.

A special case is when claims on nonresidents are held by the reporting country's central bank or other monetary authority in the form of official foreign-exchange reserves; these are measured in a separate account in the balance of payments, and are typically not included in total capital outflows. In this report, capital outflows do not include foreign-exchange reserves except when it is explicitly mentioned that foreign-exchange reserves are included. There is no analogous distinction on the liabilities side; that

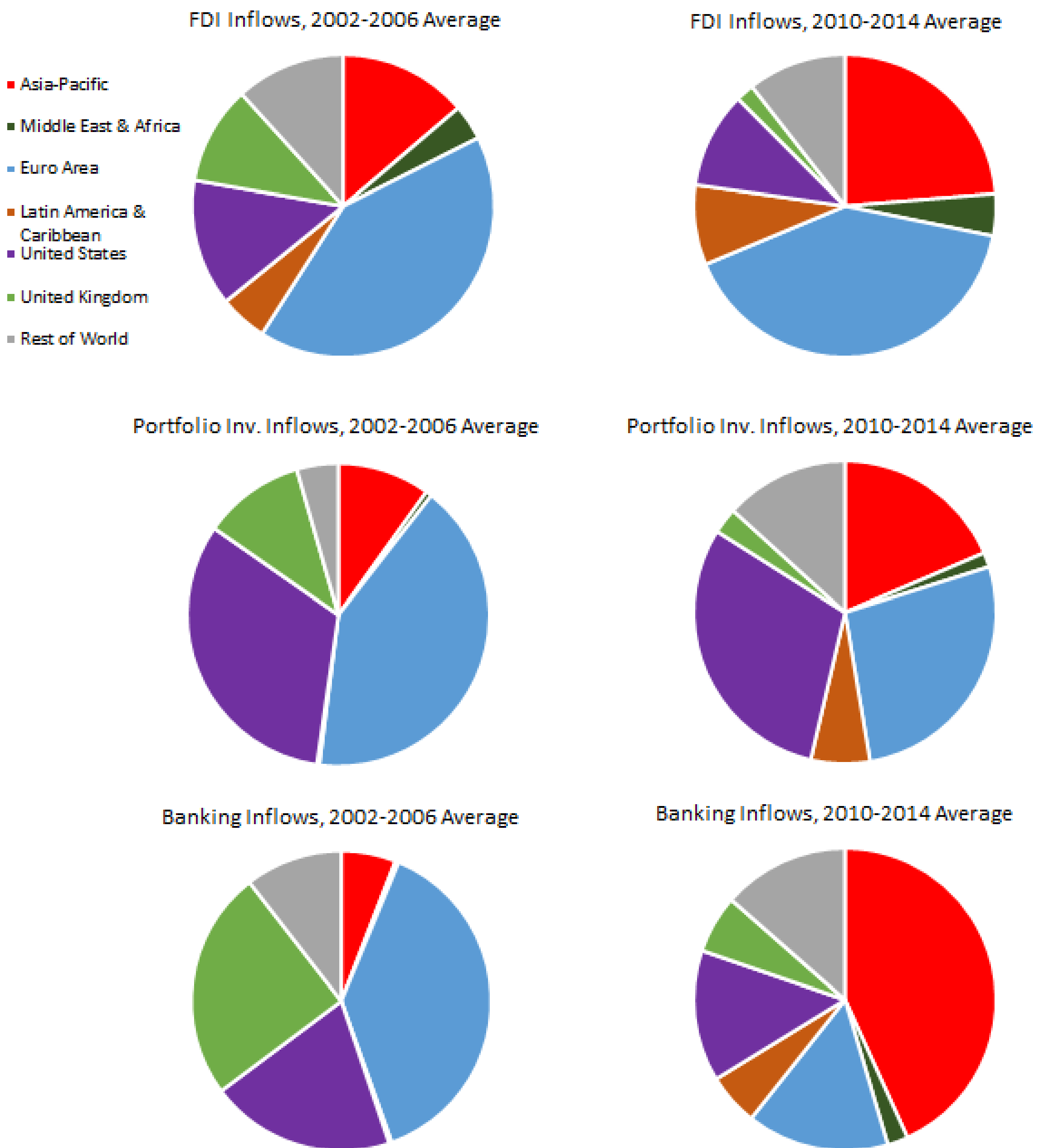
[30] For details see the IMF's Balance of Payments Manual (International Monetary Fund, 2013).

is, all transactions that generate changes in nonresidents' claims on the reporting country are included in capital inflows, regardless of whether the nonresident in question is a foreign monetary authority and classifies the claim as reserves.[31]

In the literature, the measures of capital inflows and outflows used in this report are sometimes termed "gross flows," to signify that flows on the assets and liabilities sides are being reported separately as opposed to being netted out from one another. However, as described above, each of these measures results from netting negative entries from positive entries within the relevant side of the balance sheet, and thus is not gross in the sense of capturing the gross value of transactions.

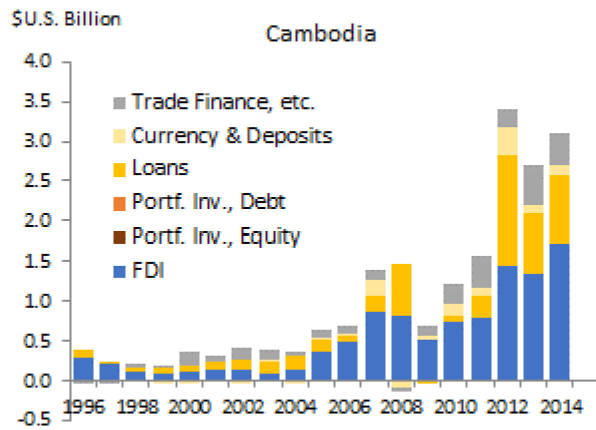
[31] In practice such a distinction on the inflows side would not make a difference for the vast majority of countries in any case, since only a small group of countries' assets (those with "reserve currencies," for example the United States) are held as reserves.

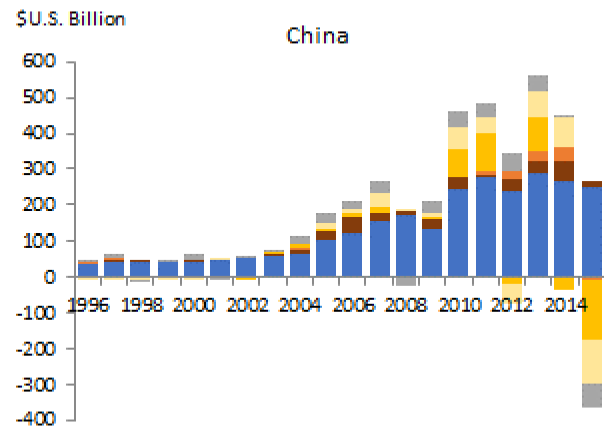
A.2 Global Capital Flows by Category and Destination Region (Supplement to Figure 2)

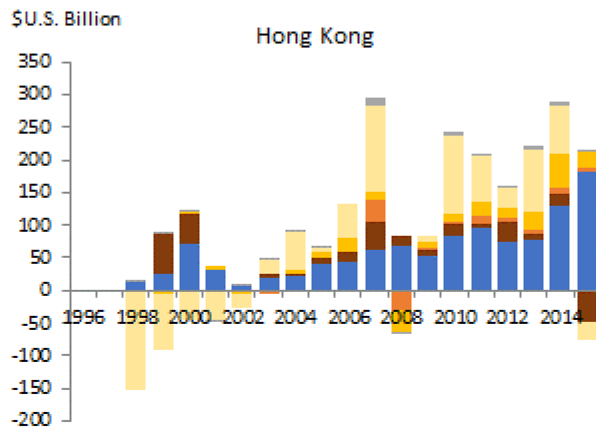


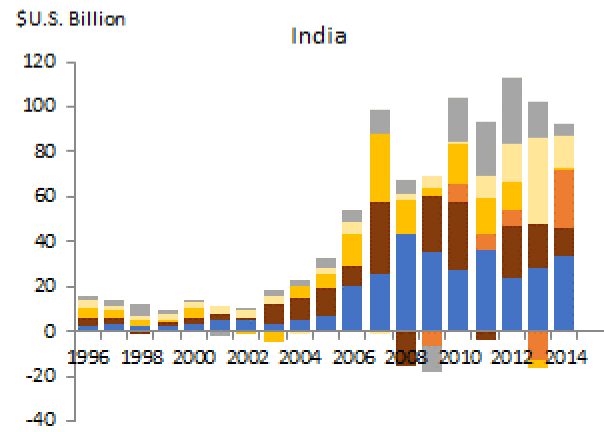
Source: IMF International Financial Statistics; authors' calculations.

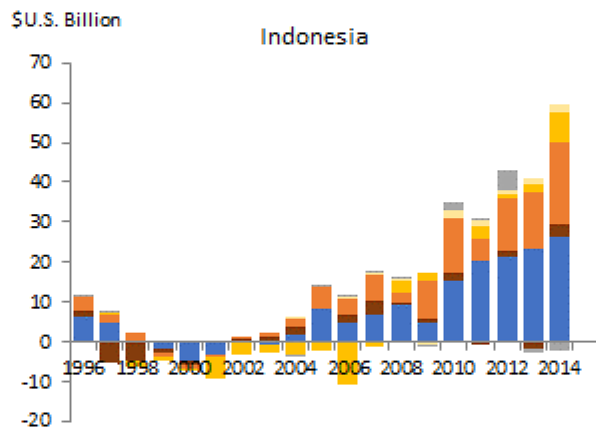
A.3 Capital Flows Composition, Selected Asian Countries, 1996-2015

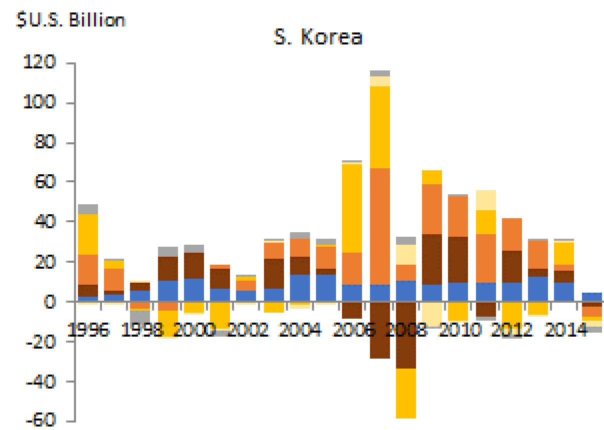


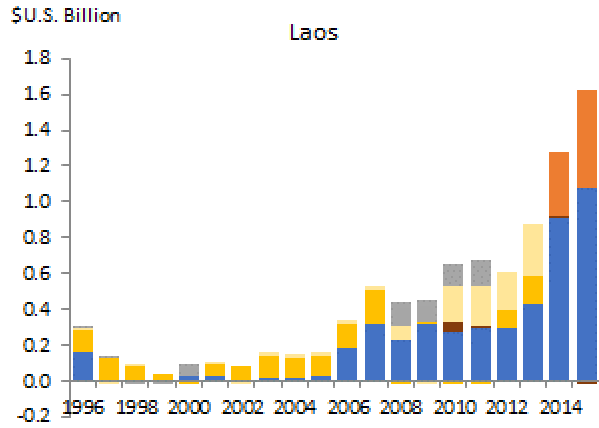


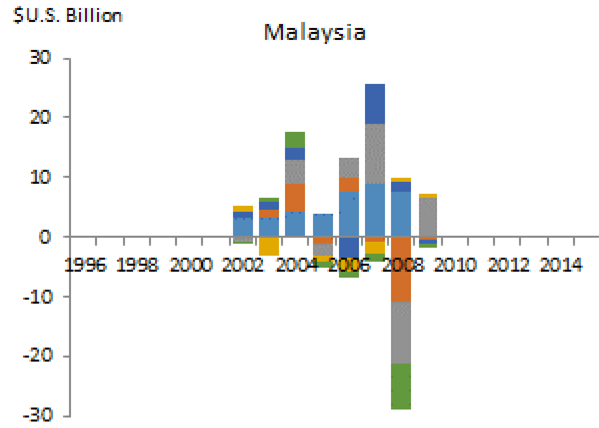


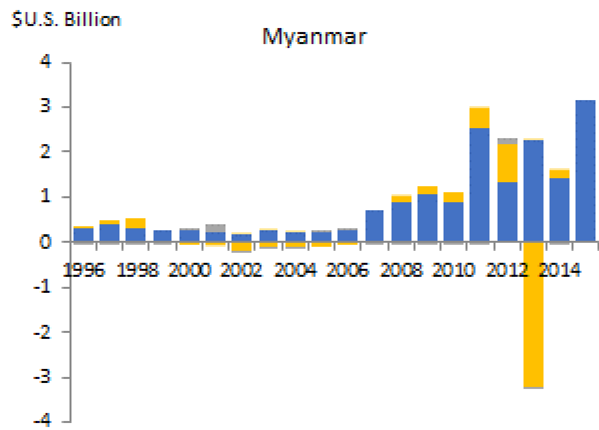


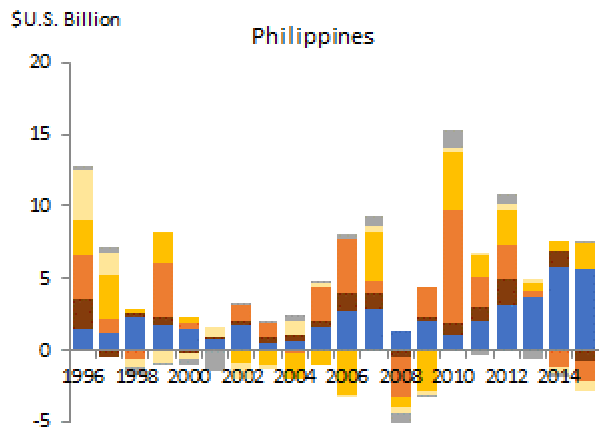


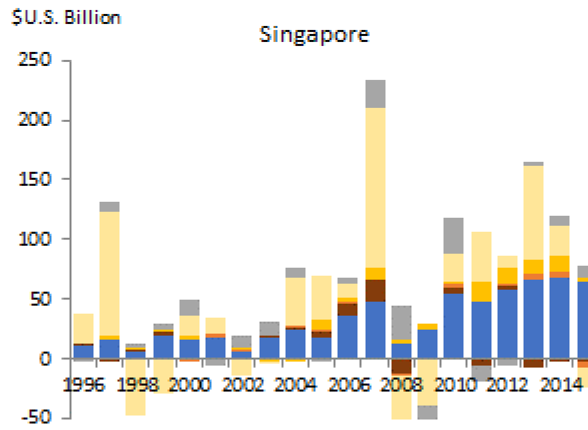


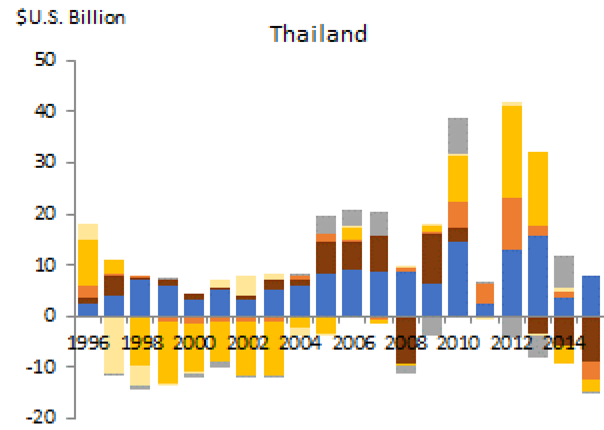

$U.S. Billion
Laos
1.8
1.6
1.4
1.2
1.0
0.8
0.6
0.4
0.2
0.0
-0.2
1996 1998 2000 2002 2004 2006 2008 2010 2012 2014

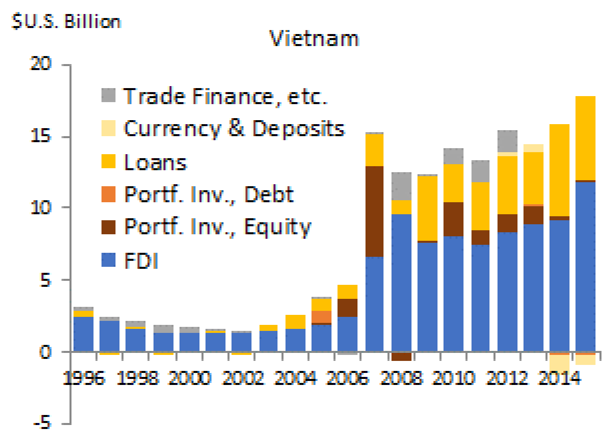

$U.S. Billion
Malaysia
30
20
10
0
-10
-20
-30
1996 1998 2000 2002 2004 2006 2008 2010 2012 2014


$U.S. Billion
Myanmar
4
3
2
1
0
-1
-2
-3
-4
1996 1998 2000 2002 2004 2006 2008 2010 2012 2014


$U.S. Billion
Philippines
20
15
10
5
0
-5
1996 1998 2000 2002 2004 2006 2008 2010 2012 2014

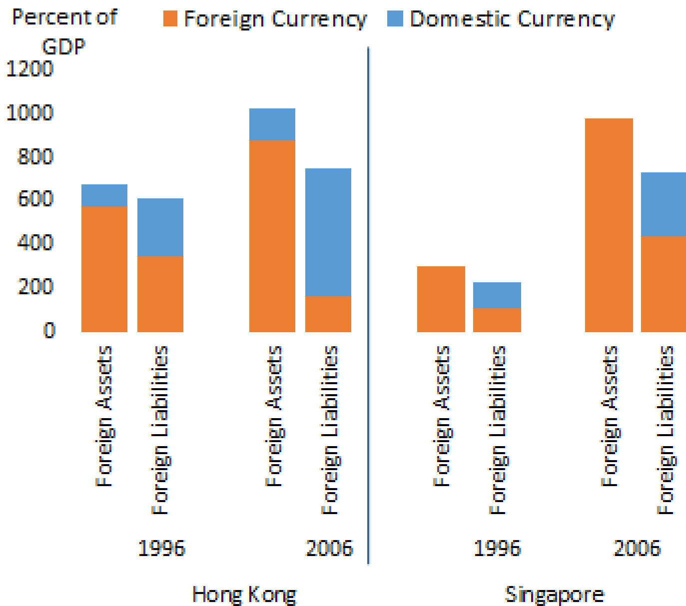






Source: IMF International financial Statistics.

A.4 Foreign Assets and Liabilities Preceding the 1997 and 2007-2009 Financial Crises, Foreign & Domestic Currency Components, Hong Kong and Singapore (Supplement to Figure 9)



Source: Data from Bénétrix, Lane, and Shambaugh (2015).

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