

# Cross-border portfolios: assets, liabilities, and non-flow adjustments<sup>1</sup>

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## Abstract

We document patterns of cross-border asset and liability positions, focusing on EME Asia and a five-year period around the global financial crisis. On EME Asia's external portfolio, we calculate cumulative five-year losses – or, more accurately, negative non-flow adjustments – of almost \$600 billion. The “losses” are quite small relative to GDP, amounting to only 1% of GDP on the asset side. “Losses” are relatively small in part because of the substantial home bias in portfolios – the external portion of EME Asia's portfolios is small – but also because of modest average annual returns on foreign equities and foreign bonds.

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## 1. Introduction

Cross-border investment has surged over the last few decades. Gourinchas et al (2012) note that in 1971 US external claims and liabilities were 17% and 11% of GDP, respectively, but by 2007 had exploded to 119% and 131%. IMF (2014) reports that debtor and creditor countries now have net positions amounting to 15% of global GDP and that many countries have gross “stock imbalances” of around 50% of their GDP (eg Turkey at –50%, Germany at +50%).

Given the growth and size of cross-border positions, it is natural to worry about their inherent risks. IMF (2014) notes that large debtor economies are vulnerable to changes in market sentiment; economies with large net liability positions may become victims of disruptive external financial market conditions, including the sudden drying up of external financing (Catão and Milesi-Ferretti (2014)). Lane et al (forthcoming) note that international positions are so large that small exchange rate movements can generate large cross-border valuation adjustments.

Obstfeld (2012) uses the term “non-flow adjustments”, which include the effects of price and exchange rate movements as well as survey sample and other statistical adjustments. We will follow the Obstfeld use of the term, as non-flow adjustments, while less exciting, is clearly more accurate than other terms used in literature such as valuation adjustments (which is one component of non-flow adjustments), gains or losses, or wealth transfers.<sup>4</sup> It is not that non-flow adjustments are necessarily benign. Obstfeld (2010, 2012) shows that with ever-expanding gross cross-border positions, more volatile “non-flow adjustments” have been evident and should be expected to persist.

In this paper we document the patterns of cross-border asset and liability positions, focusing on emerging Asia and the period from just before the global financial crisis (2006) to just after (2011). We, like Obstfeld and others, document large non-flow adjustments, with five-year net cumulative losses totalling almost \$600 billion for emerging market economies in Asia (EME Asia). Much (\$511 billion) of the cumulative non-flow adjustments were on the liabilities side of the balance sheet – that is, foreigners’ earnings in EME Asia – whereas on the asset side EME Asia lost just less than \$100 billion.

The cumulative non-flow adjustments on the asset side are small, however, when expressed as a share of GDP; they amount to just 1% of average 2006 and 2011 GDP. This is due to at least two reasons. First, home bias is alive and well in EME Asia. The external positions, especially the positions of private investors, are quite small relative to GDP. Second, even though our sample spans the global financial crisis (GFC) and thus asset returns were volatile, we compute that over the five-year period private EME Asia investors lost very little on their foreign equity portfolios (0.7% annually) and gained a bit (0.8% annually) on their foreign bond portfolios. When external positions are relatively small and returns are near zero, gains or losses on the international portfolio are modest.

The paper proceeds as follows. In the next section we discuss necessary caveats on the data. The main point of that section is that, while we have made a good faith effort to reconcile at times inconsistent data sources to present a complete picture

<sup>4</sup> See also Curcuru et al (2008) on this point.

of country-level foreign investments, our estimates are necessarily somewhat rough. In Section 3 we discuss the cross-border portfolios, along with the magnitude of non-flow adjustments. In Section 4 we briefly explore why EME Asia's non-flow adjustments are small relative to GDP. We conclude in Section 5.

## 2. A caveat on data

We begin with a description of the data. We stress that numbers reported in this paper should be viewed as estimates from imperfect and at times inconsistent data sources. They constitute our best guesses given the data constraints, but the reader should view the reported numbers as approximations illustrating the orders of magnitude of asset allocations.

Data on the overall size (by asset class) of countries' external assets and liabilities are from the IMF's International Investment Position (IIP). Such data are subject to revisions that at times can be substantial, but in general can be thought of as the most accurate estimate currently available. Somewhat less accurate are the data on the geographical distribution of cross-border positions. Data on external portfolio debt and equity assets and liabilities are from the IMF Coordinated Portfolio Investment Survey (CPIS) data set, which has many well documented shortcomings.<sup>5, 6</sup> External flows are from IMF Balance of Payments (BOP). Again, the magnitudes are likely to be reasonably accurate – given what is currently known – and the geography less so. Data that are straightforward to measure, and so should be accurate, include domestic stock market capitalization (from the World Bank's World Development Indicators database, or WDI), domestic bond market capitalization (from the World Bank's Financial Development and Structure Dataset), and GDP (WDI).

Using reported data, we calculate returns using two approaches. For each BOP asset class – portfolio equity, portfolio debt, foreign direct investment FDI, and the so-called "other" (which we will refer to as banking) – we compute implied returns from the IIP as the change in value of the IIP position minus BOP flows. This is surely not accurate; in particular, any inconsistency in revisions to IIP and BOP data will confound this approach. Thus, as pointed out in Obstfeld (2012), these valuation changes are more accurately labelled "non-flow adjustments" rather than return. As a check, for the two asset classes for which off-the-shelf returns indices are available (portfolio equities and portfolio debt), we also compute returns using MSCI total equity return indexes and JP Morgan GBI USD-denominated total return indexes. For portfolio equities and portfolio debt, we computed returns both ways (imputed "non-flow adjustments" from IIP and BOP, as well as using returns indices); our final estimates are a function of both approaches. For banking and direct investment, off-the-shelf returns indices that would enable a careful cross-check are not available, so what we call returns below are best thought of as Obstfeld's non-flow adjustments.

<sup>5</sup> An informative paper on a particular shortcoming of the CPIS data is Felettigh and Monti (2008).

<sup>6</sup> The geographical distribution of external DI assets and liabilities positions is available from IMF Coordinated Direct Investment Survey (CDIS), although we do not use such information in this paper.

### 3. Cross-border portfolios: assets, liabilities, and non-flow adjustments

In this section, we first present the evolution of the shares of “risky” (specifically, portfolio equity plus FDI) and “safe” (specifically, debt securities and deposits or loans) in aggregate EME and advanced economy (AE) assets and liabilities. We then examine by country the size and geography of cross-border positions before turning to the direction and magnitude of wealth transfers. In most of our analysis, we examine snapshots from just before the GFC in 2006 to just after, in 2011, as well as changes between those two dates.

#### 3.1 Risky and safe assets and liabilities: the stylised facts

An oft-repeated stylised fact is that emerging market economies (EMEs) are long in relatively safe developed country assets, whereas advanced economies (AEs) are typically long in relatively risky EME assets. The world changed after the GFC in many ways. A reasonable question is whether this pattern also changed.

We start by dispensing with the terms risky and safe. What is termed in the literature “safe” debt securities and bank deposits or loans can be as risky as the assets which usually carry the “risky” label (specifically, portfolio equity plus FDI). In fact, the so-called safe assets are likely to stand behind most crises. Thus, we will use the terms “equity” to mean portfolio equity plus FDI and “debt” to be debt securities and deposits or loans.

Stylised facts about the nature of cross-border portfolios come from the Lane and Milesi-Ferretti (2007) External Wealth of Nations (EWN) global data set of the components of countries’ foreign assets and foreign liabilities. We examine the data set to compare cross-border holdings before and after the crisis (eg 2006 and 2011, the end of the EWN data set) while presenting not only “total” but also the assets side, separating out “private assets” and “reserve assets”.

Graph 1 presents, using EWN data through 2010, the Equity + FDI share in liabilities and assets for EMEs and AEs. The liabilities graph (top graph of Graph 1) shows that most AE liabilities are in bonds/banking (70%) while most EME liabilities are in equity/FDI (60%). The assets graph (lower graph of Graph 1) provides one view of the extent foreign portfolios are in “equity” and “debt” assets. Note one takeaway from Lane and Milesi-Ferretti (2007), which used the EWN data through 2004, was that EMEs’ foreign assets were tilted away from equity/FDI and towards debt/banking. In 2004, only 18% of EMEs’ foreign assets were in equity/FDI; the other 82% were in debt/banking. This contrasted strikingly with AEs’ foreign portfolio, which had an almost 40% weight on equity/FDI. Two things have occurred since 2004. One, AEs’ weight on equity/FDI has fallen and EMEs’ weight on these has risen, such that the two are not substantially different, with both in the 30–35% range. Two, we must recognise that the EME Total line in Graph 1 includes both private and official EME investors. EMEs tend to have relatively large reserve holdings, which tend to be in bonds. The EME Private line in Graph 1 omits official reserve holdings and shows that private-sector EME portfolios now have equal portion in “debt” and “equity” foreign assets. Moreover, private sector EME portfolios now have a much higher share of equity/FDI than the equity/FDI share in AE portfolios.

### 3.2 Country details on the composition of cross-border assets and liabilities

Table 1 provides further detail on foreign assets, specifically the “equity” and “debt” foreign portfolios from IIP data. Note that in the table *Total is Equity plus Debt plus Reserves*, where *Equity* is defined as portfolio equity + FDI and *Debt* is portfolio bonds + banking. The top half of the table shows that in 2006 the bulk (61%) of EME Asian foreign assets were in reserves, while most private EME foreign assets were in “debt” assets (29% of total, of which most were in banking) and “equity” private foreign assets were small (10% of total, mostly in FDI). The bottom half of Table 1 shows a more recent (2011) snapshot. In 2011, the bulk (64%) of EME Asian foreign assets was still in reserves. Of private EME foreign assets, most were in “debt” assets (overwhelmingly in banking, representing a large increase since 2006), and “equity” private foreign assets were a small but increasing share (still mostly in FDI).

Table 2 provides information on equity and debt liabilities. In 2006, the bulk (60%) of EME Asia’s liabilities was in equities, with most of those being direct investment. Of the debt liabilities, the vast majority (83%) were in banking. In 2011, the composition of liabilities was similar, with more equity than debt, more FDI than portfolio within equity, and more banking than bonds within debt. The composition is quite different in advanced economies, where liabilities are more debt than equity with roughly equal shares of FDI and portfolio within equities and of bonds and banking within debt.

### 3.3 Magnitude of non-flow adjustments

One view of the risks inherent in cross-border positions comes from valuation gains and losses on international positions. Table 3 shows gains and losses – so-called valuation changes but more accurately referred to as non-flow adjustments – in foreign portfolio (debt and equity) positions over the 2006–11 period. Valuation changes for all countries but the United States are implied not observed and hence are subject to the problems highlighted in Curcuru, Dvorak and Warnock (2008) and Curcuru, Thomas, and Warnock (2013). The table shows that private sector valuation changes for the international assets of most Asian EMEs were negative over the 2006–11 period, with the region’s losses totalling \$86 billion. Indonesia and India had the largest losses (\$50 billion and \$24 billion, respectively); much of the losses appear to have been in cross-border banking positions. Most countries’ reserves positions gained in value; a notable exception is China. Turning to liabilities, the valuation changes for the liabilities of Asian EMEs were mostly positive over the period, in sharp contrast to AEs’ liabilities, which had negative valuation adjustments.

The overall picture provided by Table 3 is that Asian EMEs lost on their foreign portfolios and provided foreigners with positive returns – a so-called “wealth transfer” to foreign investors. The table includes all asset classes – portfolio debt and equity, FDI, and banking – but we have a clearer picture of the portfolio debt and equity positions so we focus next on them.

Most of the losses by Asian investors on their foreign assets were in their portfolio investments. Table 4 focuses on the asset side and shows that Asian EMEs lost \$63 billion on their private cross-border portfolio debt and portfolio equity

holdings, with all of the losses coming from cross-border bonds (and most of those being on China's external portfolio). This is miniscule compared with the \$1.2 trillion lost by AE investors. Again, these valuation changes are imputed and are broadly consistent with the moves of broadly based market indexes, but they may be confounded by inconsistencies and revisions of positions and flow data and so are best termed "non-flow adjustments".

### 3.4 Geography of cross-border portfolio debt and equity positions

At the heart of any portfolio's returns are geographic allocations, the country weights within the portfolio. Indeed, the geographic allocations of EME Asian investors vary widely across countries. Table 5 provides information on the geography of foreign portfolio debt and equity positions as of 2006 (top panel) and 2011 (lower panel) from the CPIS. In 2006, private EME Asian equity and debt holdings were primarily in Europe and Japan, with the exceptions of the Philippines (tilted towards the United States) and India and Indonesia (large equity positions within EME Asia). By 2011, there was evidence of switching of portfolio holdings from Europe to Japan: EME Asian equity and debt holdings were primarily in Japan, with still substantial holdings in Europe and EME Asia. And there were declines in the large Philippine positions in US equities and large Indian and Indonesian equity positions in EME Asia observed in 2006.

Turning to the geographic distribution of liabilities, in 2006 the geography of investors in EME Asia's equities was about one third North America, one third Europe, and one fifth Japan. In contrast, 75% of debt investors were from Europe and Asia and only 15% from North America. In 2011, the geography was similar, but with a bit more equity investment from Japan.

### 3.5 The size of cross-border portfolios

The above analysis focused on proportional allocations and provided no indication of the size of the cross-border portfolios. Table 6 shows that private EME foreign portfolio (debt and equity) holdings are quite small relative to GDP. For EME Asia as a whole, private foreign equity holdings totalled only 6% of GDP in 2006, falling to 2% by 2011. Foreign debt holdings were similarly small. In contrast, advanced economies' holdings of foreign equities and foreign bonds were much larger at close to 40% of GDP. EME Asia's reserves are larger – about a third of GDP – but private EME investors' foreign equity and foreign bond portfolios are small.

The large amount of reserves prompts the question of whether countries with large reserves also have large foreign liabilities.<sup>7</sup> One view is that reserves accumulation is self-insurance in that governments have acquired reserves as a policy response to the private sector's accumulation of FX liability. Graph 2 suggests that the evidence is weakly consistent with this view.

<sup>7</sup> We thank Taka Ito for posing this question.

## 4. Why are EME Asia's non-flow adjustments so small?

Tables 3 and 4 suggest that private EME Asia's cumulative losses on their external portfolios were of the order of \$86 billion, of which \$63 billion was on positions in portfolio debt and equity, and reserve accounts had gains of \$10 billion. These gains and losses are quite small relative to GDP, amounting to only 1% of the average GDP of 2006 and 2011. In this section we briefly explore why the non-flow adjustments were so small.

One reason for the small computed gains and losses is that there is still considerable home bias in EME Asia. Private EME Asia's external portfolios are quite small, as we showed in Table 6.<sup>8</sup>

But another reason for the small computed gains and losses is that EME Asia's returns on foreign equities and bonds were modest (Table 7). Average annual returns on EME Asia's external portfolios were modest at -0.7% for foreign equities and +0.8% on foreign bonds. Small external portfolios and modest rates of returns produce modest valuation gains and losses.

A comparison of the returns in Table 7 and the returns that would be implied from Table 4 is constructive and gets at the heart of why we are so hesitant to use the labels valuation changes and gains or losses. Table 7 shows our best guesses at returns on external portfolios, whereas the valuation adjustments in Table 4 are really non-flow adjustments that can include effects of statistical revisions (see Curcuru, Dvorak and Warnock (2008) and Curcuru, Thomas and Warnock (2013)). To compute the returns used in Table 7 we compared the return implied by the non-flow adjustments with relevant off-the-shelf returns indices. We note that off-the-shelf returns indices are reasonable but imperfect measures of the returns on a country's external portfolio, so the comparison is not foolproof. That said, for equities the implied returns for some countries were much too high or too low relative to returns computed from countries' MSCI index changes. Similarly, implied returns for bonds differ from returns observable from major indices. In particular, Table 4 suggests losses on EME Asia's external bond holdings, whereas Table 7 (our best guess) shows positive returns.

## 5. Conclusion

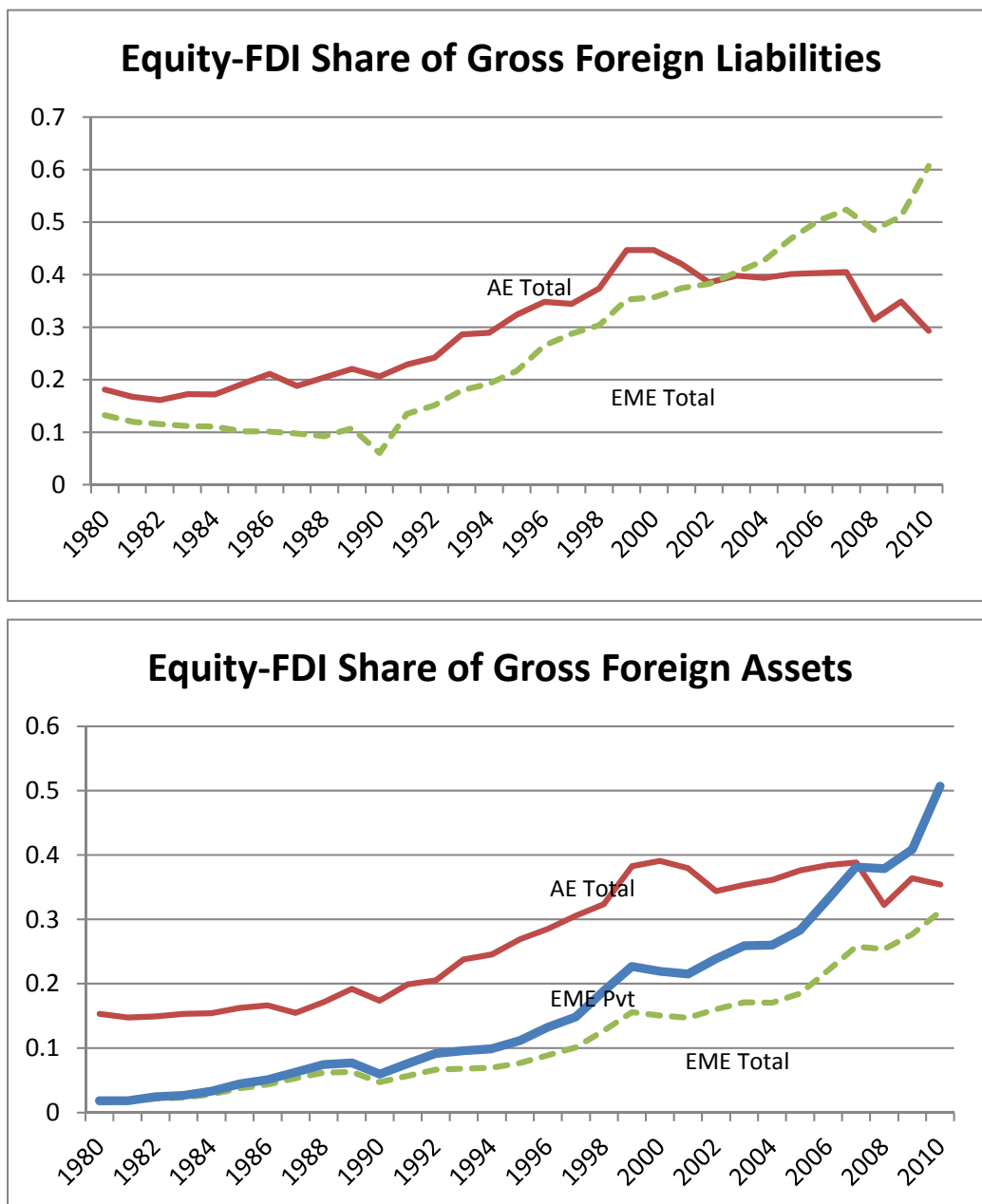
In this paper we have provided a descriptive analysis of cross-border asset and liabilities positions. We show that cross-border positions are, at least in most EMEs, small relative to GDP. Not surprisingly, the non-flow adjustments on the external portfolios – what some might call valuation adjustments or even international

<sup>8</sup> Of course, even small external positions can be problematic when debt is denominated in foreign currencies. On this dimension, EME Asia is doing quite well, with 96% of its bonds denominated in local (not foreign) currencies (Burger et al (forthcoming)). Even Latin America, the poster-child for "original sin", now has only 25% of its bonds denominated in foreign currencies, down from more than 50% only a decade ago. Another potential problem spot is EME Asian bond issuance through offshore subsidiaries; see, for example, McCauley et al (2013).

wealth transfers – are quite small too. In the context of the literature on international wealth transfers – after we get past taking issue with a term that suggests a zero-sum outcome – we can say that EMEs weathered the crisis relatively well because they have severe home bias and their annual average external returns were modest.

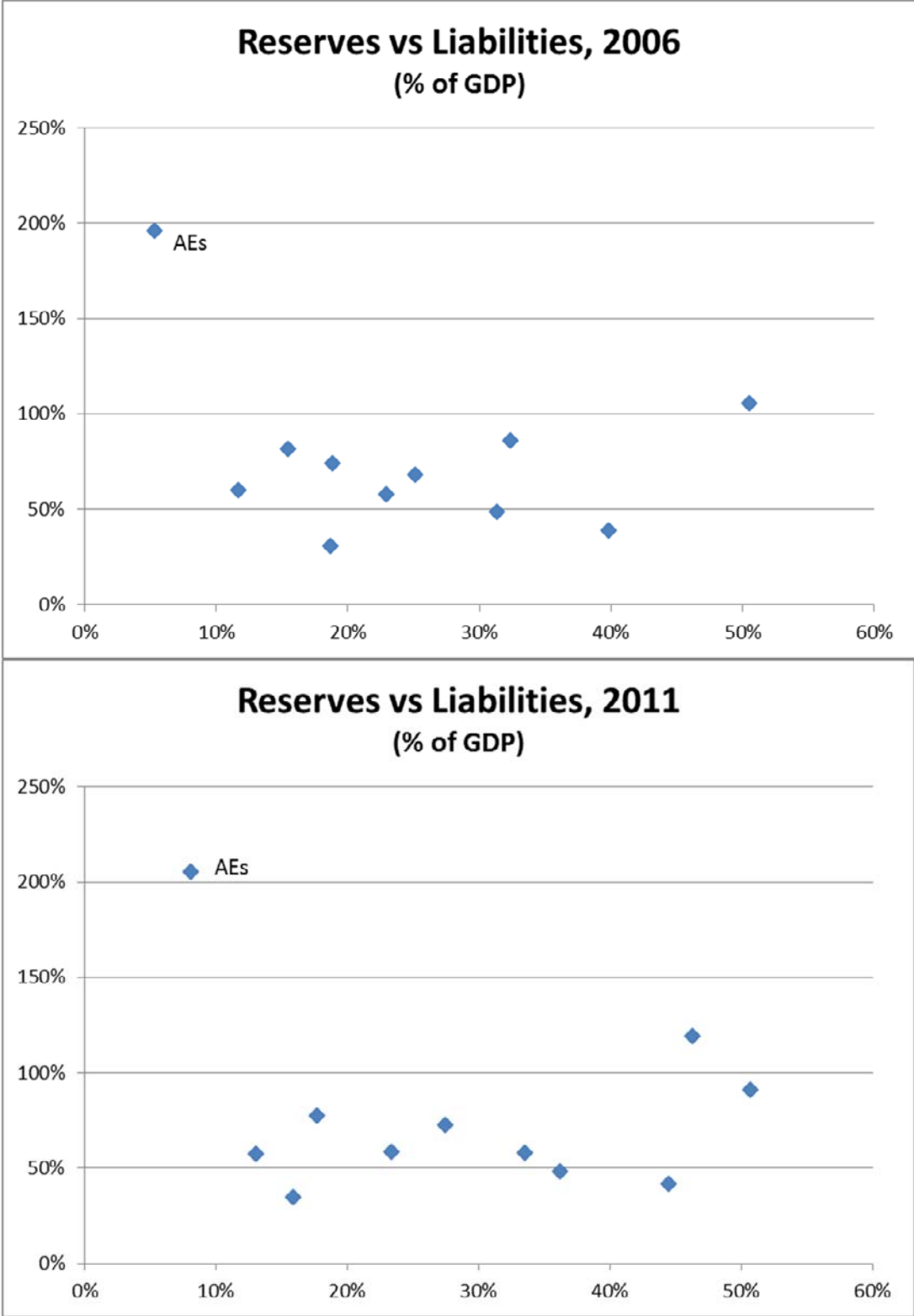


**Graph 1: Equity-FDI share in foreign assets and liabilities**



Source: EWN data of Lane and Milesi-Ferretti (2007) updated through 2010. Notes: In both charts, EME Total is dashed line and AE Total is thin solid line. In the bottom chart, EME Private is the thick blue line.

**Graph 2: Reserves and liabilities (as a percent of GDP)**



Note: Included are the aggregates of EME Asia, EME Asia ex China, EME Other, and Advanced Economies, as well as the individual Asian countries of China, India, Indonesia, Korea, Malaysia, the Philippines and Thailand. Reserves are plotted on the horizontal axes; liabilities are on the vertical axes.

**Table 1. "Equity" and "Debt" private and reserve assets in 2006 and 2011**

		Equity (Portfolio + DI)			Debt (Portfolio + Banking)			Reserves
		Equity/ Total	DI share of equity	Portfolio	Debt/ Total	Portfolio	Banking	Reserves/ Total
				Share of Equity		share of Debt	Share of Debt	
2006	EME Asia	10	83	17	29	42	58	61
	China	5	98	2	31	51	49	64
	India	12	98	2	12	2	98	76
	Indonesia	12	96	4	37	11	89	52
	Korea	19	57	43	30	44	56	51
	Malaysia	30	89	11	20	8	92	50
	Philippines	5	95	5	50	27	73	45
	Thailand	8	83	17	37	7	93	55
	EME Asia ex China	17	76	24	27	26	74	56
	EME Other	39	69	31	35	23	77	26
	Asia Fin. Center	44	65	35	48	27	73	8
	Advanced	41	53	47	56	39	61	3
2011	EME Asia	16	82	18	20	14	86	64
	China	11	83	17	20	12	88	69
	India	26	99	1	6	0	100	68
	Indonesia	13	94	6	21	19	81	66
	Korea	33	71	29	24	18	82	42
	Malaysia	43	83	17	20	19	81	37
	Philippines	7	99	1	22	33	67	71
	Thailand	17	88	12	20	27	73	63
	EME Asia ex China	28	82	18	19	19	81	53
	EME Other	36	70	30	29	20	80	34
	Asia Fin. Center	44	65	35	46	27	73	10
	Advanced	42	64	36	54	40	60	4

Note: All numbers in percent. Total=Equity + Debt + Reserves, where Equity=Portfolio Equity + FDI and Debt=Bonds + banking. Asia financial centres include Hong Kong SAR and Singapore.

Source: IMF, *International Investment Position*.

**Table 2. "Equity" and "Debt" liabilities in 2006 and 2011**

		Equity (Portfolio + DI)			Debt (Portfolio + Banking)		
		Equity/ Total	DI share of equity	Portfolio Share of Equity	Debt/Total	Portfolio share of Debt	Banking Share of Debt
2006	EME Asia	60	64	36	40	17	83
	China	69	85	15	31	4	96
	India	45	54	46	55	9	91
	Indonesia	43	67	33	57	20	80
	Korea	60	30	70	40	29	71
	Malaysia	63	57	43	37	31	69
	Philippines	36	53	47	64	38	62
	Thailand	67	68	32	33	11	89
	EME Asia ex China	55	47	53	45	23	77
	EME Other	66	64	36	34	48	52
	Asia Fin. Center	58	75	25	42	2	98
	Advanced	39	46	54	61	45	55
2011	EME Asia	63	76	24	37	22	78
	China	70	90	10	30	4	96
	India	48	65	35	52	15	85
	Indonesia	59	69	31	41	32	68
	Korea	52	32	68	48	49	51
	Malaysia	58	67	33	42	53	47
	Philippines	39	50	50	61	37	63
	Thailand	73	69	31	27	20	80
	EME Asia ex China	55	57	43	45	35	65
	EME Other	66	72	28	34	50	50
	Asia Fin. Center	56	81	19	44	3	97
	Advanced	36	55	45	64	48	52

Note: All numbers in percent. Total=Equity + Debt + Reserves, where Equity=Portfolio Equity + FDI and Debt=Bonds + banking. Asia financial centres include Hong Kong SAR and Singapore.

Source: IMF, *International Investment Position*.

**Table 3. Foreign positions and breakdown of changes since 2006**

	2006 position	Flows	Valuation Adjustments	2011 position
<b>Assets (excluding reserves)</b>				
EME Asia	1,095	1,438	-86	2,448
China	610	886	-17	1,479
India	54	106	-24	137
Indonesia	40	66	-50	57
Korea	225	208	-13	421
Malaysia	83	112	28	222
Philippines	28	17	-14	31
Thailand	55	42	5	102
Asia Fin. Centre	3,108	1,356	250	4,714
EME Other	1,624	1,457	-271	2,810
Advanced	64,693	16,554	-1,321	79,926
<b>Reserve assets</b>				
EME Asia	1,712	2,631	10	4,353
China	1,081	2,200	-25	3,256
India	177	112	8	297
Indonesia	43	65	2	110
Korea	239	68	-1	306
Malaysia	82	44	7	133
Philippines	23	43	9	75
Thailand	67	98	10	175
Asia Fin. Centre	263	238	7	508
EME Other	795	698	58	1,551
Advanced	1,829	750	776	3,354
<b>Liabilities</b>				
EME Asia	2,651	2,623	511	5,785
China	1,050	1,751	244	3,046
India	291	401	-37	655
Indonesia	219	114	151	485
Korea	650	178	-18	809
Malaysia	172	73	99	344
Philippines	91	30	10	131
Thailand	178	75	63	315
Asia Fin. Centre	2,523	1,254	266	4,043
EME Other	3,953	2,636	-62	6,527
Advanced	67,347	19,081	-1,130	85,299

Note: USD billions. Asia financial centres include Hong Kong SAR and Singapore.

Sources: IMF, *International Investment Position (Positions)* and *Balance of Payments (flows)*.

**Table 4. Private foreign portfolio positions and breakdown of changes since 2006**

	2006 Position	Flows	Valuation Adjustments	2011 Position	Total Changes
Total Portfolio					0
EME Asia	388	61	-63	386	-2
China	265	-17	-44	204	-61
India	1	1	-1	1	0
Indonesia	4	8	-3	8	4
Korea	98	37	-31	103	6
Malaysia	8	13	19	40	32
Philippines	7	4	-3	8	1
Thailand	5	16	0	21	16
Asia Fin Centre	958	384	117	1,459	501
EME Other	284	188	22	494	210
Advanced	27,642	4,436	-1,224	30,853	3,211
Portfolio Equity					
EME Asia	47	134	12	193	146
China	1	65	20	86	85
India	1	1	-1	1	1
Indonesia	0	1	0	1	1
Korea	37	51	-17	72	35
Malaysia	6	10	11	27	21
Philippines	0	0	0	0	0
Thailand	2	5	-1	6	4
Asia Fin Centre	517	295	-7	805	288
EME Other	150	72	48	269	119
Advanced	12,996	1,185	-1,536	12,645	-351
Portfolio Debt					
EME Asia	341	-73	-76	193	-148
China	264	-82	-64	118	-146
India	0	0	0	0	0
Indonesia	3	6	-3	7	3
Korea	61	-15	-15	32	-29
Malaysia	3	3	8	14	11
Philippines	7	4	-3	8	1
Thailand	3	11	1	15	12
Asia Fin Centre	441	89	124	654	213
EME Other	134	116	-26	224	90
Advanced	14,646	3,251	312	18,208	3,562

Note: USD billions. Excludes reserves. Asia financial centres include Hong Kong SAR and Singapore. Total changes = flows + non-flow adjustments.

Sources: Source: IMF, *International Investment Position* (Positions) and *Balance of Payments* (flows).

**Table 5. The geography of foreign (private) assets and liabilities, 2006 and 2011**

2006		Foreign Destination (Assets)						Foreign Source (Liabilities)					
		Advanced				EME		Advanced				EME	
Type	Country	North				Asia	Other	North				Asia	Other
		America	Europe	Asia	Other			America	Europe	Asia	Other	Asia	Other
Equity	EME Asia	12	42	26	7	12	1	38	31	20	2	1	8
	China	0	0	98	0	1	0	29	26	42	1	1	2
	India	11	40	7	0	20	22	30	27	6	1	1	34
	Indonesia	1	1	5	1	92	0	46	39	8	1	1	6
	Korea	14	52	14	6	13	2	55	35	6	3	0	0
	Malaysia	7	16	59	8	9	1	32	39	23	2	1	3
	Philippines	71	22	5	1	1	0	55	35	8	1	0	0
	Thailand	6	33	5	47	9	0	35	43	17	2	1	1
	EME Asia ex China	13	47	18	8	13	2	43	34	8	2	1	12
	EME Other	32	58	1	4	1	4	55	41	2	1	0	1
	Asia Fin Center	12	21	8	28	31	1	44	37	12	5	2	1
	Advanced	18	53	10	7	6	5	32	57	6	2	1	2
Debt	EME Asia	39	19	28	7	5	2	16	38	35	1	4	5
	China	0	0	100	0	0	0	9	29	48	0	3	10
	India	5	1	76	0	17	0	7	45	18	1	1	28
	Indonesia	7	33	36	14	2	7	18	32	43	0	2	5
	Korea	54	23	8	10	4	2	17	36	45	1	1	1
	Malaysia	17	54	4	7	13	4	17	41	39	0	2	0
	Philippines	43	18	12	5	23	0	24	57	17	1	0	0
	Thailand	11	39	19	12	9	11	17	18	18	0	46	0
	EME Asia ex China	49	24	9	9	6	2	17	39	34	1	4	5
	EME Other	48	36	0	3	9	4	23	63	4	5	2	2
	Asia Fin Center	21	40	7	17	13	1	20	38	27	1	12	2
	Advanced	20	64	2	9	2	3	9	71	12	4	3	1
2011		Foreign Destination (Assets)						Foreign Source (Liabilities)					
		Advanced				EME		Advanced				EME	
Type	Country	North				Asia	Other	North				Asia	Other
		America	Europe	Asia	Other			America	Europe	Asia	Other	Asia	Other
Equity	EME Asia	24	13	43	5	9	5	33	30	27	1	2	7
	China	0	0	99	0	1	0	20	25	50	0	3	2
	India	13	42	9	21	13	2	30	24	10	1	1	34
	Indonesia	94	0	1	0	4	0	44	38	15	1	2	0
	Korea	35	21	13	7	15	8	50	37	11	2	0	0
	Malaysia	32	13	38	4	9	4	36	34	23	2	3	2
	Philippines	31	21	35	5	8	1	54	34	11	0	1	0
	Thailand	25	28	11	30	5	0	43	42	12	0	2	1
	EME Asia ex China	34	19	19	8	13	7	41	33	12	1	1	11
	EME Other	31	57	0	7	2	3	55	40	1	1	1	1
	Asia Fin Center	15	17	5	30	33	0	47	33	9	2	6	2
	Advanced	20	48	8	10	8	6	31	53	9	2	2	3
Debt	EME Asia	6	6	78	2	6	2	16	29	47	1	5	2
	China	0	0	100	0	0	0	2	9	84	0	3	1
	India	31	49	7	0	8	5	6	30	51	1	1	11
	Indonesia	5	44	10	4	37	1	25	36	32	3	4	0
	Korea	40	35	5	9	3	8	20	32	39	1	7	0
	Malaysia	12	18	25	8	26	10	22	37	29	1	9	0
	Philippines	30	13	6	9	41	1	29	47	19	4	1	0
	Thailand	10	10	10	6	51	13	13	41	33	0	13	0
	EME Asia ex China	24	26	10	8	24	9	19	35	36	2	6	2
	EME Other	41	44	1	2	6	6	25	55	7	6	4	4
	Asia Fin Center	22	26	10	9	32	1	19	42	27	2	10	0
	Advanced	22	59	3	9	4	4	10	65	14	3	6	2

Note: All numbers in percent of total foreign holdings. Excludes reserves.

Source: IMF, *Consolidated Portfolio Investment Survey*.

**Table 6. Portfolio debt and equity positions shares of GDP, 2006 and 2011**

	2006			2011		
	Private Foreign assets / GDP	Reserves / GDP	Foreign liabs / GDP	Private Foreign assets / GDP	Reserves / GDP	Foreign liabs / GDP
<b>Equity</b>						
EME Asia	1		11	2		7
China	0		4	1		3
India	0		6	0		6
Indonesia	0		9	0		11
Korea	4		29	6		25
Malaysia	3		28	9		23
Philippines	0		12	0		12
Thailand	1		19	2		20
EME Asia ex China	2		17	2		14
EME Other	4		20	4		13
Asia Fin Center	155		108	165		86
Advanced	38		40	30		34
<b>Debt</b>						
EME Asia	6	31	3	2	36	4
China	10	40	1	2	44	1
India	0	19	1	0	16	3
Indonesia	1	12	7	1	13	8
Korea	6	25	8	3	27	17
Malaysia	2	51	12	5	46	26
Philippines	5	19	18	3	34	13
Thailand	1	32	3	4	51	5
EME Asia ex China	3	23	6	2	23	9
EME Other	3	15	11	3	18	11
Asia Fin Center	133	79	8	134	104	10
Advanced	43	5	54	44	8	63

Note: All numbers in percent share of GDP.

Sources: IMF, *International Investment Position, Balance of Payments, Consolidated Portfolio Investment Survey*; World Bank, *World Development Indicators, Financial Development and Structure* data set; authors' calculations.



**Table 7. Average annual returns on private portfolios, 2006–11 (%)**

	Portfolio Equity	Portfolio Debt
EME Asia	-0.7%	0.8%
China	-4.2%	2.7%
India	1.3%	2.6%
Indonesia	-4.2%	1.5%
Korea	-0.6%	0.1%
Malaysia	1.9%	0.7%
Philippines	-0.8%	1.3%
Thailand	0.3%	2.0%
EME Asia ex China	-0.3%	0.3%
Asia Fin Center	-1.8%	-0.3%
EME Other	-0.8%	0.7%
Advanced	-1.8%	-0.3%

Note: Returns in this table represent our best guess at actual returns and so can differ from the returns implied in Table 4. See text for details.

Source: IMF IIP, BOP; MSCI; author's calculations

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