



2013 SPILLOVER REPORT—ANALYTICAL UNDERPINNINGS AND OTHER BACKGROUND—SUPPLEMENTARY INFORMATION

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GLOBAL CAPITAL FLOWS

Global Capital Flows and Unconventional Monetary Policy¹

The countries that have engaged in unconventional monetary policies (UMP)—euro area, Japan, United Kingdom, and United States—have not witnessed large portfolio investment outflows. If anything, portfolio investment outflows from UMP countries have declined in recent years, but there have been important directional changes. Specifically, residents of UMP countries have stepped up their purchases of securities issued by non-UMP countries, with non-European advanced economies and Latin American countries benefiting the most from these portfolio reallocations. These and other recent trends in global capital flows and debt securities markets are documented in this note using different data sources.

Recent Trends in Portfolio Investment from UMP Countries

1. Portfolio investment flows out of UMP countries declined in recent years (Figure 1).

Net portfolio investment outflows from these countries (i.e., residents' net purchases of foreign bonds and equity) ebbed since 2008, especially those from the euro area (EA) and the United States, while outflows from Japan were on a rise until 2011. The EA and the US remained *net* recipients of portfolio investment (net inflows minus net outflows) while net outflows picked up for Japan and the United Kingdom in 2012.

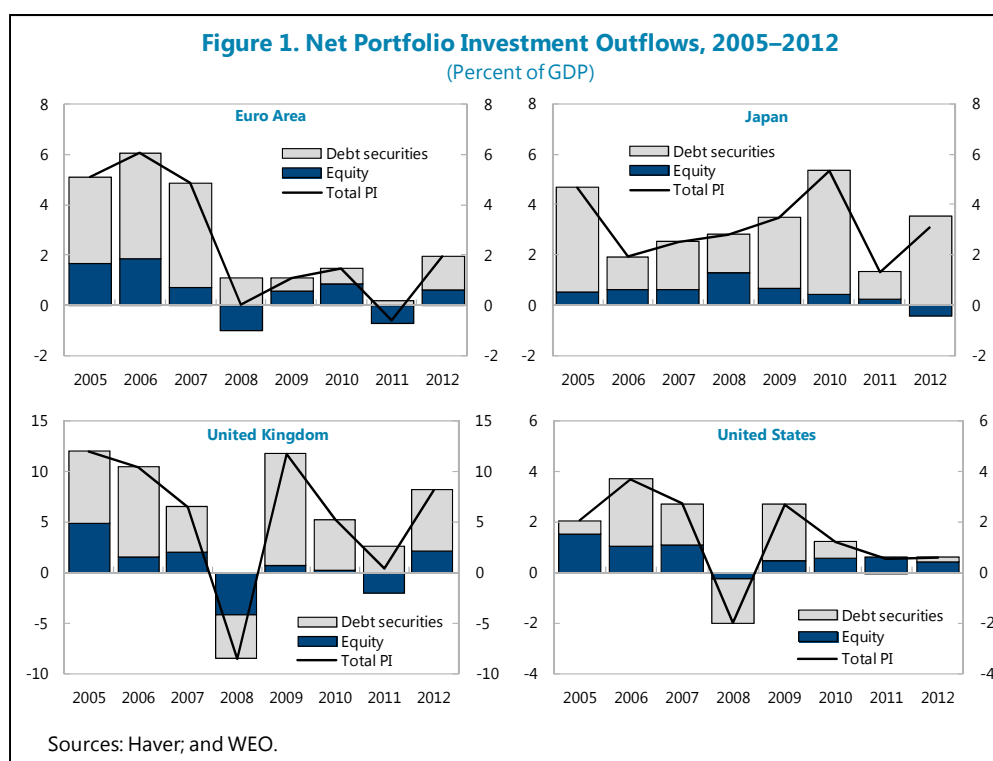
2. External portfolio investment by residents of UMP countries has shifted from other UMP countries to the rest of the world.

Using the IMF's Coordinated Portfolio Investment Survey (CPIS) database, which for each participating country reports a geographical breakdown of its portfolio assets by destination, we look at portfolio holdings of debt and equity securities by UMP and non-UMP countries prior to the global financial crisis (end-2007) and for the latest available year (end-2011). Our analysis extends the exercise conducted in the 2012 Spillover Report—which looked at recent trends in U.S. portfolio flows— by including other UMP countries.² For the purposes of this exercise, we treat portfolio investment by residents of one euro-area member in another as external portfolio investment. In interpreting the results, it is important to take into account that changes in shares reflect not only purchases and sales of securities by foreign residents ("active" portfolio rebalancing) but also the impact of exchange-rate movements and changes in the valuation of securities, as well as in some cases changes in coverage of the underlying surveys. Our main findings can be summarized as follows:

¹ Prepared by Lusine Lusinyan (WHD), Gian Maria Milesi-Ferretti (WHD), and Andrew Tiffin (SPR).

² In particular, the 2012 Spillover Report found little evidence that U.S. investors had stepped up their purchases of foreign securities in search of higher yields, despite record-low U.S. interest rates. However, the composition of U.S. purchases of foreign securities changed towards bonds issued by Australia, Canada, and Latin American countries and away from EA and U.K. debt securities.

- Debt securities (Table 1).** Between 2007 and 2011, there was a 3.3 percentage point shift in UMP country residents' external portfolio debt holdings; from other UMP countries to the rest of the world. Holdings by UMP residents of portfolio debt securities issued by other UMP countries, which stood about \$11.9 trillion at end-2007, increased by just \$64 billion by end-2011. While three quarters of UMP countries' total holdings of foreign debt securities still consisted of securities issued by other UMP countries at end 2011, this share was down from 78.3 percent at end-2007. Instead, UMP residents' holdings of debt issued by the rest of the world increased by \$680 billion, reaching close to \$4 trillion by end-2011 (with the share in total external holdings of debt securities by UMP country residents rising from 21.7 percent to 24.9 percent).³



³ The debt figures above do not include debt holdings that form part of countries' international reserves.

Table 1. Debt Securities						
2007				2011		
To \ From	UMP	Non-UMP		To \ From	UMP	Non-UMP
	(USD billions)				(USD billions)	
UMP	11,856	2,463		UMP	11,920	2,454
Non-UMP	3,281	705		Non-UMP	3,960	837
To \ From	UMP	Non-UMP		To \ From	UMP	Non-UMP
	(Percent)				(Percent)	
UMP	78.3	77.7		UMP	75.1	74.6
Non-UMP	21.7	22.3		Non-UMP	24.9	25.4
Sources: CPIS; and IMF staff calculations.						
Note: UMP includes euro area, Japan, United Kingdom, and United States.						

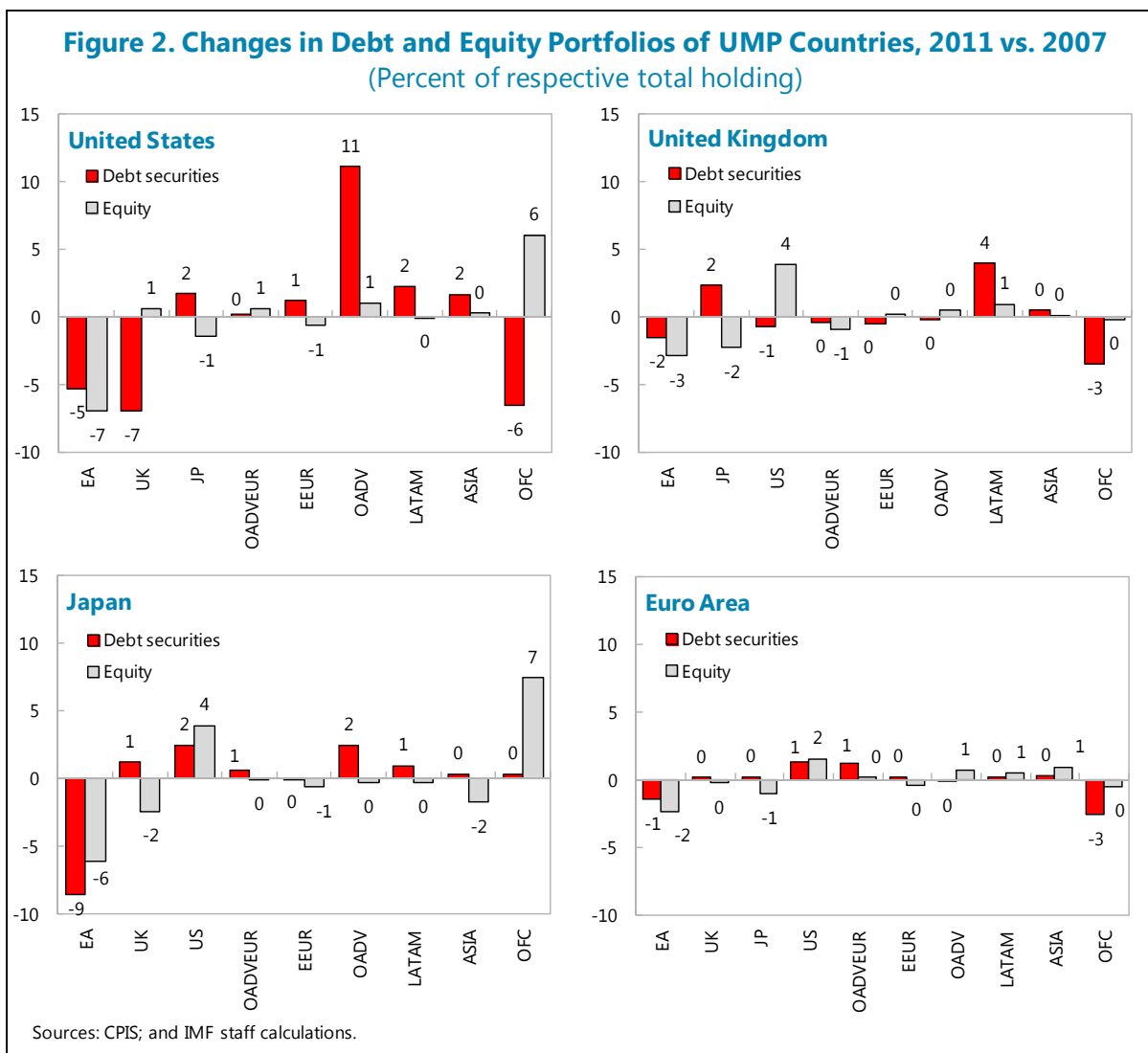
- Equity (Table 2).** The shift in UMP countries' portfolio allocation from other UMP countries to the rest of the world was larger for equity securities than for debt securities, amounting to about 5½ percentage points of UMP countries' total external equity portfolio. In particular, the share of the rest of the world in UMP countries' total equity portfolio stood at 40.7 percent by end-2011, up from 35.3 percent in end-2007.

Table 2. Equity						
2007				2011		
To \ From	UMP	Non-UMP		To \ From	UMP	Non-UMP
	(USD billions)				(USD billions)	
UMP	8,500	2,371		UMP	6,203	2,382
Non-UMP	4,634	1,449		Non-UMP	4,266	1,381
To \ From	UMP	Non-UMP		To \ From	UMP	Non-UMP
	(Percent)				(Percent)	
UMP	64.7	62.1		UMP	59.3	63.3
Non-UMP	35.3	37.9		Non-UMP	40.7	36.7
Sources: CPIS; and IMF staff calculations.						
Note: UMP includes euro area, Japan, United Kingdom, and United States.						

Regional Breakdown of Changes in Portfolio Investment Assets by UMP countries

- Non-European advanced economies have been an important destination of UMP countries' portfolio debt outflows** (Figure 2, and Appendix Table 1 for the list of countries). In particular:

- Main beneficiaries.** U.S. and Japan’s holdings of debt securities issued by other non-European advanced economies’ (Australia, Canada, Israel, and New Zealand) almost doubled between 2007 and 2011, with their share rising from 16 percent to 28 percent and from 4½ percent to over 7 percent in the United States and Japan, respectively. Latin American countries were the second largest beneficiaries of UMP countries’ portfolio reallocation, followed by advanced European countries outside the euro area and Asian economies. In particular, holdings of Latin American bonds in the U.K., Japanese, and U.S. portfolios increased by 4 times, almost 3 times, and 1½ times, respectively. As well, by end-2011, the value of debt securities issued by Asian economies in the Japanese and U.S. portfolios more than doubled in U.S. dollar terms compared to end-2007. Changes in regional reallocations of equity portfolios varied among UMP countries, but generally favored U.S. equities and, to some extent, equities of other advanced countries.



- **Main losers.** UMP-country residents divested away from euro area countries in particular. In nominal U.S. dollar terms, Japanese and U.K. investors increased somewhat their exposure to bonds issued by euro area countries, while residents of other euro area countries and U.S. investors reduced their exposures. Still, the relative share of euro area bonds in UMP countries' total bond portfolio declined for all UMP countries (for instance, in the case of Japan, this share dropped from 32 percent to 24 percent between 2007 and 2011). With the exception of Japan, UMP countries also reduced significantly their holdings of bonds issued by offshore financial centers (OFC).

4. **We also examine the changes in total portfolio liabilities of non-UMP countries between 2007 and 2011 (Figures 3a-3c).** These changes complement the above estimates derived from the CPIS because they also reflect changes in the size of holdings by investor countries that do not report to the CPIS (CPIS-reporting countries are shown in Appendix Table 1). Specifically, we look at the stock of total portfolio liabilities (debt and equity securities) from individual countries' international investment position (IIP) data and break it down into (i) holdings from UMP countries as reported in the CPIS, (ii) holdings of non-UMP countries reporting to the CPIS, and (iii) holdings of non-reporting countries, derived as a residual. This analysis is reported for the sample of 12 countries with the largest increase in their total portfolio liabilities between 2007 and 2011. While the relative contribution of UMP, non-UMP CPIS-reporting, and non-reporting countries varied across countries, on average, UMP countries accounted for about two-thirds of the nominal increase in portfolio liabilities (in U.S. dollar terms) of the selected 12 countries. Most of the remaining one-third increase in portfolio liabilities came from non-UMP CPIS-reporting countries.

Figure 3a. Advanced Economies: Portfolio Liabilities, by Origin
(USD billions)

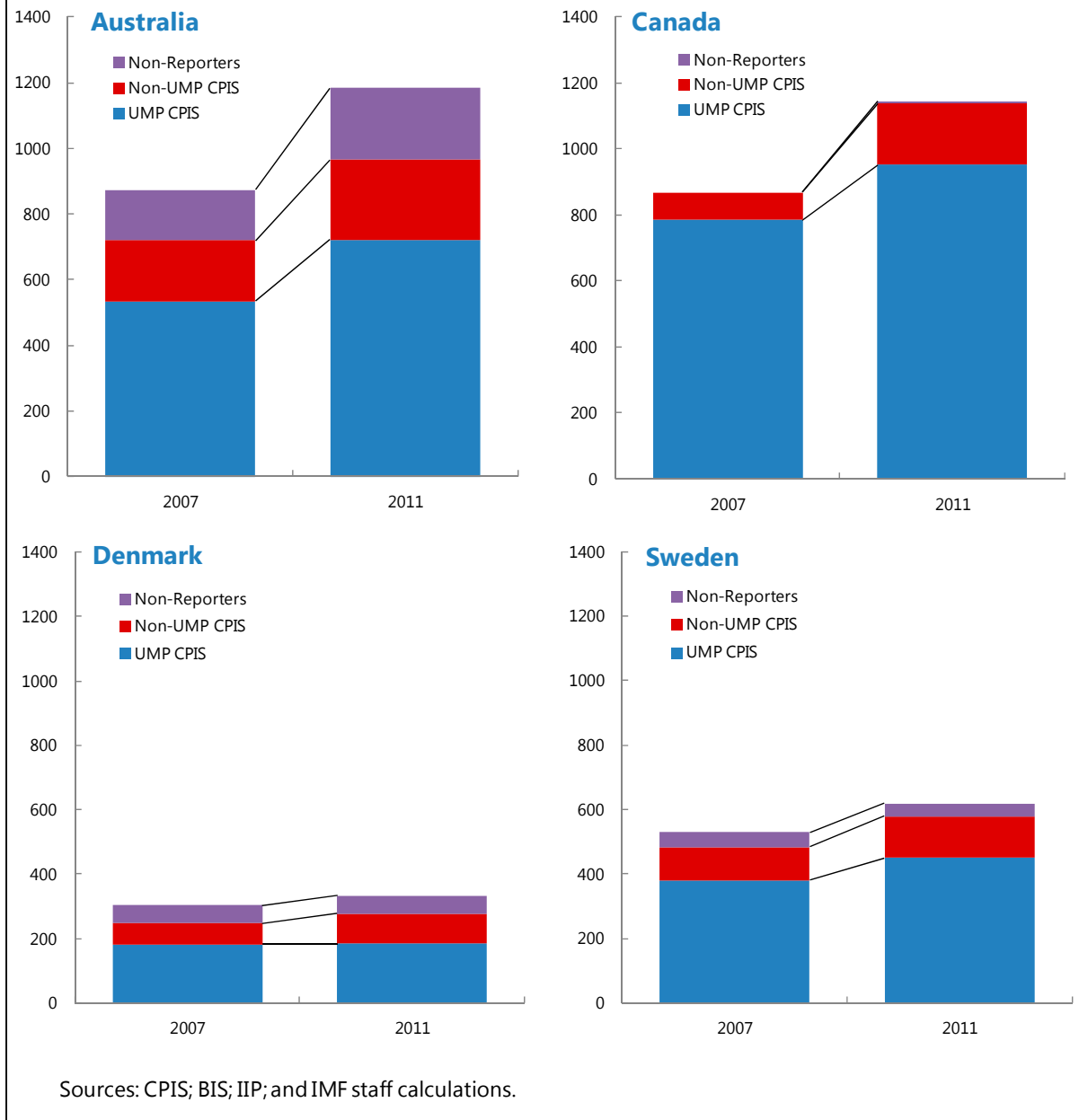
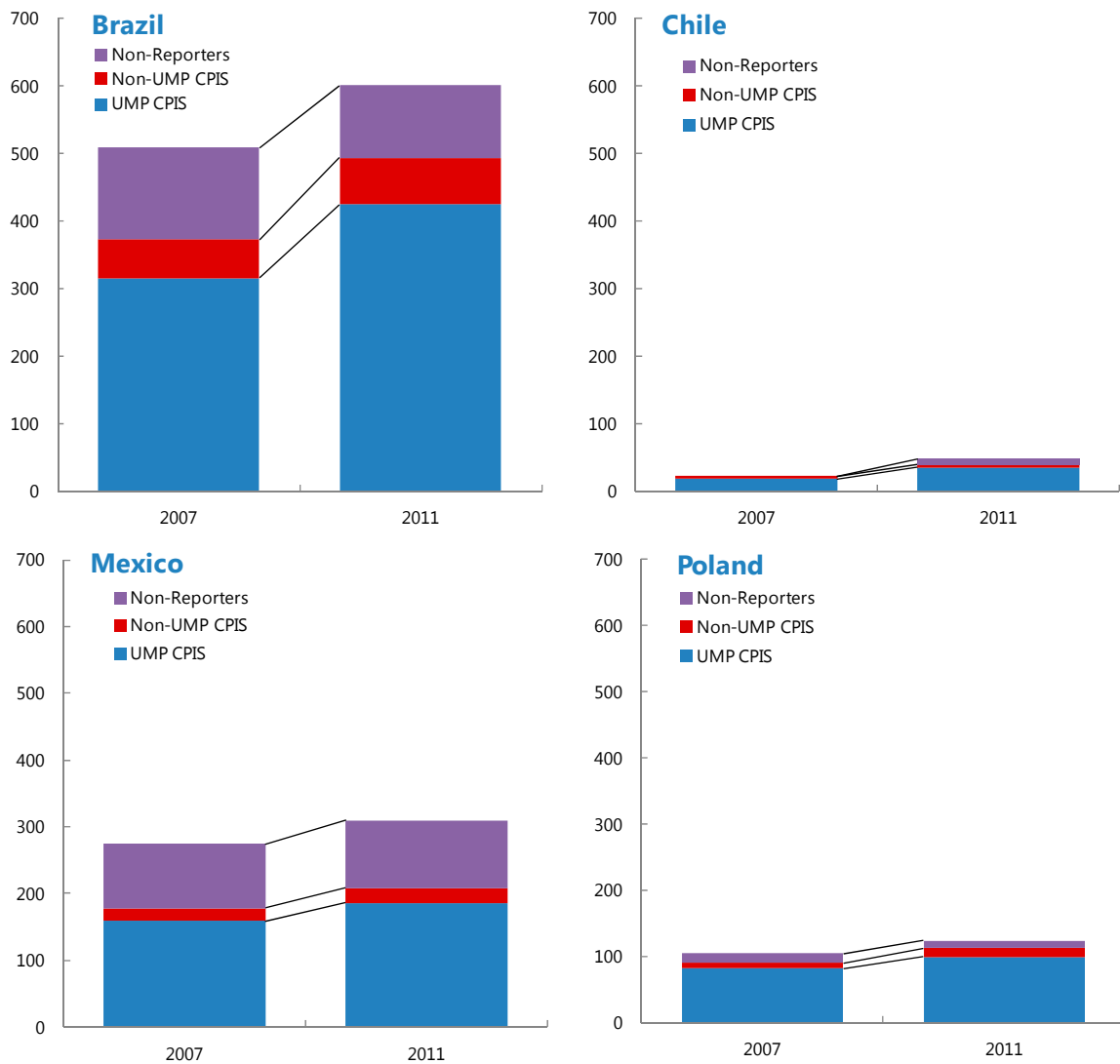
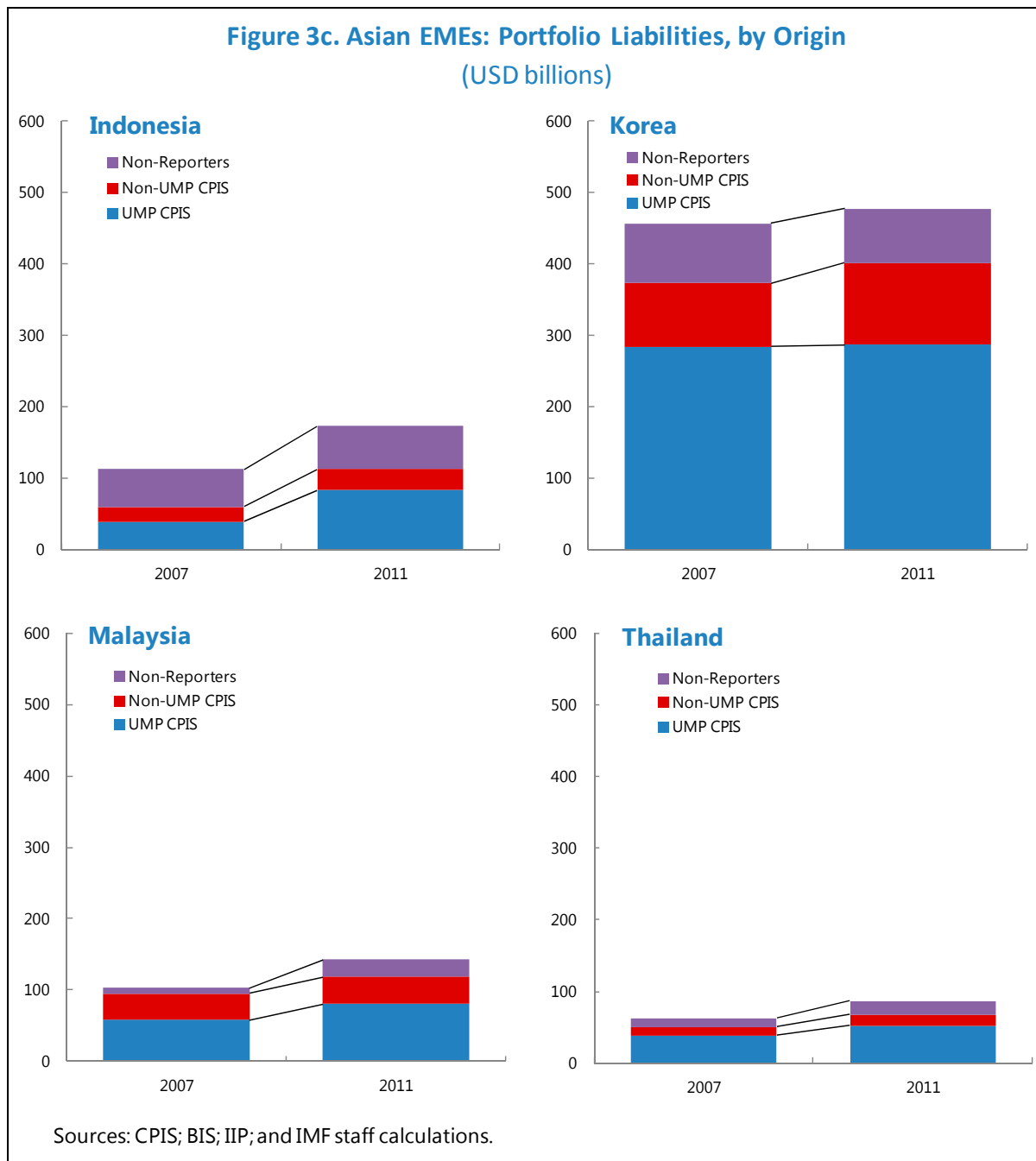


Figure 3b. Latin American and Eastern European EMEs: Portfolio Liabilities, by Origin (USD billions)



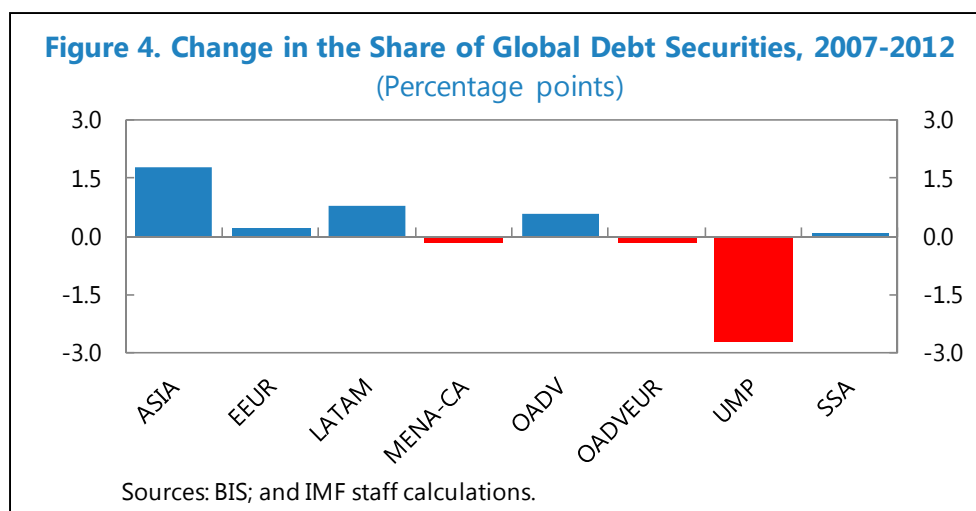
Sources: CPIS; BIS; IIP; and IMF staff calculations.



Debt Securities Markets: The Role of UMP Countries

5. **Changes in holdings of foreign portfolio debt securities by UMP countries could also reflect shifts in the relative size of destination markets.** In turn, the change in market size can reflect exchange rate movements or issuance volumes. For this reason we examine next the change in the outstanding stock of debt securities by region, and how these changes relate to the shift in the investment pattern of UMP countries.

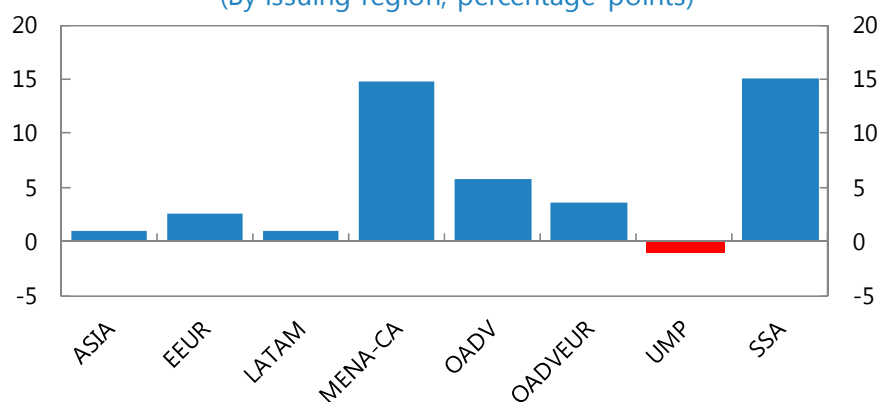
6. **The global share of debt securities issued by UMP countries has declined since 2007 (Figure 4).** Total outstanding debt securities are estimated to have increased from \$75.1 trillion in 2007 to \$98.4 trillion in 2012 (according to staff calculations based on BIS estimates), of which debt securities issued by UMP country residents comprised \$61.1 trillion in 2007 and \$77.4 trillion in 2012. Thus, over 2007–2012, the share of debt securities issued by UMP countries declined 2¾ percentage points, from 81½ percent in 2007 to 78¾ in 2012. In turn, the weight of other markets increased, particularly in Asia and Latin America as well as other advanced economies.



Debt Securities: Foreign Ownership and UMP Countries' Holdings of Foreign Debt Securities

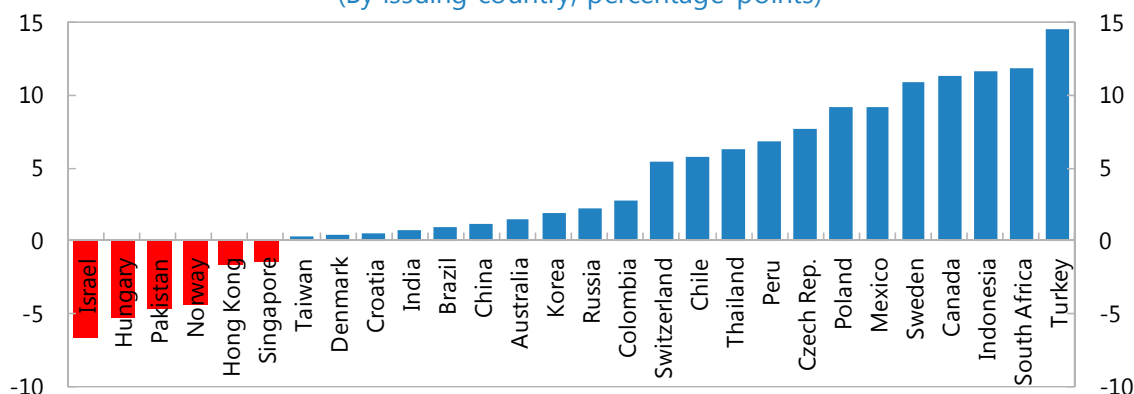
7. **Comparing BIS figures on outstanding debt securities with IIP data, it is possible to gauge the extent to which foreign portfolio investment flows have matched the recent shift in debt issuance.** For emerging markets, foreign flows have slightly outpaced new issues, with the result that the share of foreign ownership in many EMEs has increased over 2007-12, though the change varies across countries (Figure 5 and Figure 6). The increase in the foreign ownership of outstanding debt securities has been more pronounced in other advanced economies, particularly in Canada and Sweden.

Figure 5. Change in Foreign Ownership Share of Total Debt Securities, 2007-2012
(By issuing region, percentage points)



Sources: BIS; and IMF staff calculations.

Figure 6. Change in Foreign Ownership Share of Total Debt Securities, 2007-2012
(By issuing country, percentage points)



Sources: BIS; and IMF staff calculations.

Notes: For Russia and Chile, the change in foreign ownership is over 2008-2012, as the pre-2008 BIS data on debt securities are incomplete; for India, the 2007 total debt issues are derived using the BIS series available prior to the BIS debt statistics revision and the average difference between the old and revised series over March 2011-March 2012; for Hong Kong, the 2007 spike in the stock of portfolio investment debt liabilities is smoothed by using the average of 2006 and 2008 instead.

8. **The share of external holdings of debt securities by UMP-country residents in global debt securities outstanding declined from 20 percent in 2007 to 16½ percent in 2011 (Table 3).**⁴ This decline reflects primarily the behavior of euro area investors, who reduced their share of debt securities issued by residents of other euro area countries, as well as their share of securities issued in financial centers such as the United Kingdom, and the United States, and OFCs. Both the United Kingdom and the United States also saw a decline in their external

⁴ We are constrained to using the 2011 data here since the geographical breakdown of UMP countries' holdings of foreign debt securities is derived from the CPIS database, whose latest available data are for end-2011.

portfolio holdings, as a share of global debt securities outstanding. In addition to highlighting the changes in the pattern of ownership of global debt securities, these statistics clearly show that domestic holdings of debt securities issued by residents still account for the lion share of global securities' holdings.

Table 3. Share of UMP Countries' Bond Holding in Global Debt Securities, 2007 and 2011

(Percent)									
2007					2011				
	EA	UK	JP	US		EA	UK	JP	US
TOTAL	12.8	2.3	2.5	2.5	TOTAL	9.4	2.1	2.7	2.3
of which:					of which:				
EA	7.9	0.9	0.8	0.7	EA	5.7	0.8	0.6	0.5
OADVEUR	0.4	0.1	0.1	0.1	OADVEUR	0.4	0.1	0.1	0.1
EEUR	0.2	0.0	0.0	0.0	EEUR	0.2	0.0	0.0	0.0
OADV	0.3	0.1	0.1	0.4	OADV	0.2	0.1	0.2	0.6
LATAM	0.1	0.0	0.0	0.1	LATAM	0.1	0.1	0.0	0.1
ASIA	0.1	0.0	0.0	0.0	ASIA	0.1	0.0	0.0	0.1
OFC	0.7	0.2	0.5	0.5	OFC	0.3	0.2	0.5	0.3
UK	1.3	-	0.1	0.6	UK	1.0	-	0.2	0.4
JP	0.2	0.1	-	0.1	JP	0.2	0.1	-	0.1
US	1.7	0.7	0.8	-	US	1.4	0.6	0.9	-

Sources: CPIS; BIS; IIP; and IMF staff calculations.

9. **Between 2007 and 2011, UMP countries' total external bond holdings, as a share of total debt securities by region, increased in other advanced economies (European and non-European) and Latin America but declined in OFCs while remaining largely unchanged in Asia and Emerging Europe (Table 4).** Note that the reported external holdings by countries participating to the CPIS captured 73 percent and 62 percent of total debt issued by the BIS-reporting OFCs in 2007 and 2011, respectively.

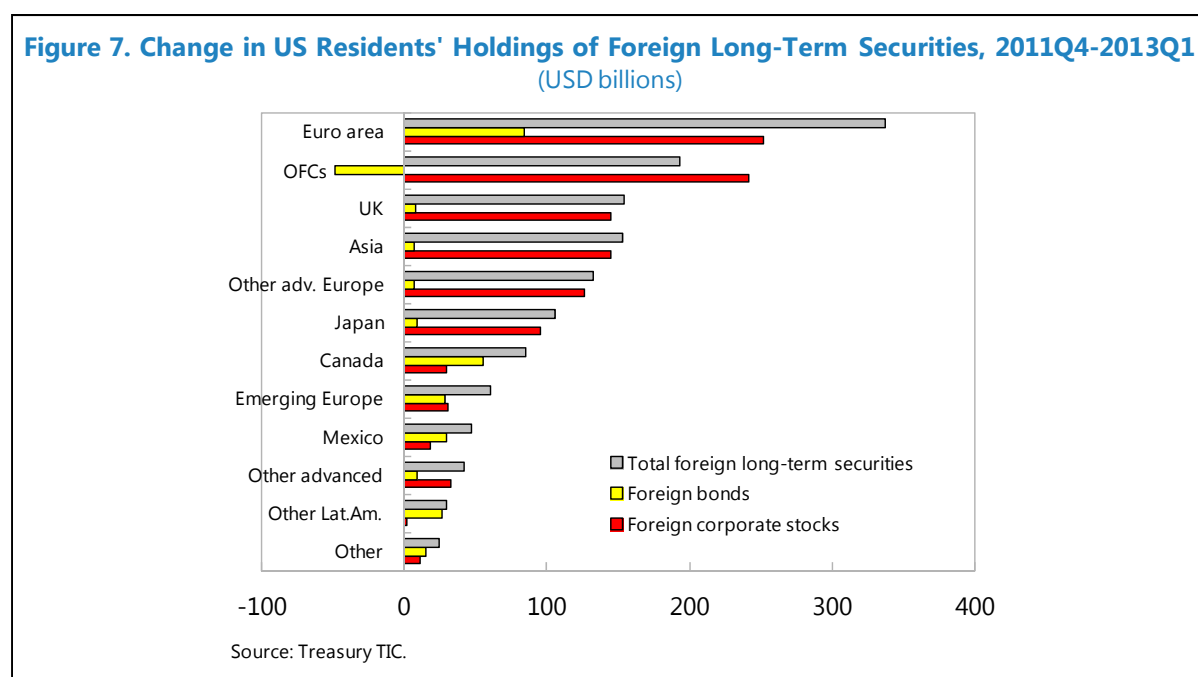
Table 4. Share of UMP Countries' Bond Holding in Total Debt Securities by Region, 2007 and 2011

(Percent)									
2007					2011				
	EA	UK	JP	US		EA	UK	JP	US
EA	33	4	3	3	EA	25	4	3	2
OADVEUR	16	3	3	5	OADVEUR	18	3	4	6
EEUR	14	4	1	2	EEUR	13	3	1	4
OADV	7	3	3	11	OADV	5	2	5	15
LATAM	3	1	0	3	LATAM	3	3	1	4
ASIA	2	1	0	1	ASIA	1	1	0	1
OFC	26	9	19	19	OFC	12	8	27	15
UK	22	-	2	9	UK	18	-	3	7
JP	1	1	-	1	JP	1	1	-	1
US	4	2	2	-	US	4	2	3	-

Sources: CPIS; BIS; IIP; and IMF staff calculations.

Recent Changes in U.S. Investment in Foreign Long-Term Securities

10. **Recent data covering 2013Q1, though limited to the United States, broadly confirm the above trends in UMP portfolio investment, with some exceptions.** U.S. holdings of foreign long-term securities grew by \$1,363 billion during 2012/13, from \$6,633 billion at end-2011 to close to \$8 trillion at end-2013Q1. Over 80 percent of this increase was due to an increase in holdings of foreign corporate stocks, primarily reflecting sizable valuation gains. While the U.S. dollar value of securities issued by other advanced countries (notably Canada) and Latin American countries continued to increase, holdings of debt securities issued by euro area country residents (particularly, Italian) picked up as well.



Summary

11. **While portfolio investment outflows from UMP countries have moderated since the financial crisis, there has been a clear shift in UMP-countries' portfolio allocations towards the rest of the world.** UMP-countries' investors have divested their external portfolio away from the euro area and OFCs and towards securities issued by other advanced economies and Latin American countries. A similar pattern emerges when looking at the shares of UMP and non-UMP holdings of total debt securities outstanding by region. The global share of debt issued by UMP countries has also dropped in recent years, and the increase in the weights of non-UMP countries in the global debt market has in general been accompanied with increasing foreign presence in domestic debt markets.

Appendix Table 1. List of Countries 1/

UMP	Euro area	Other Advanced	Other Advanced Europe	Emerging Europe	Asia, ex-Japan	Latin America	MENA+Central Asia	OFC	Sub-Saharan Africa	Other
Euro area	Austria*	Australia*	Denmark*	Albania	Afghanistan	Antigua and Barbuda	Algeria	Andorra	Angola	American Samoa
Japan*	Belgium*	Canada*	Iceland*	Belarus	Bangladesh	Argentina*	Armenia	Anguilla	Benin	British Indian Ocean Territory
UK*	Cyprus*	Israel*	Norway*	Bosnia and Herzegovina	Bhutan	Belize	Azerbaijan	Aruba*	Botswana	Christmas Island
US*	Estonia*	New Zealand*	Sweden*	Bulgaria*	Brunei Darussalam	Bolivia	Bahrain, Kingdom of*	Bahamas, The*	Burkina Faso	Cocos (Keeling) Islands
	Finland*		Switzerland*	Croatia	Cambodia	Brazil*	Djibouti	Barbados*	Burundi	Falkland Islands
	France*			Czech Republic*	China, P.R.: Mainland	Chile*	Egypt*	Bermuda*	Cameroon	Faroe Islands
	Germany*			Hungary*	Fiji	Colombia*	Georgia	Bonaire, Sint Eustatius and Saba	Cape Verde	French Southern Territories
	Greece*			Kosovo*	India*	Costa Rica*	Iran, Islamic Republic of	Cayman Islands*	Central African Republic	French Territories: French Polynesia
	Ireland*			Latvia*	Indonesia*	Cuba	Iraq	China, P.R.: Hong Kong*	Chad	French Territories: New Caledonia
	Italy*			Lithuania*	Kiribati	Dominica	Jordan	China, P.R.: Macao*	Comoros	Greenland
	Luxembourg*			Macedonia, FYR	Korea, Democratic People's Rep. of	Dominican Republic	Kazakhstan*	Cook Islands	Congo, Democratic Republic of	Guadeloupe
	Malta*			Moldova	Korea, Republic of*	Ecuador	Kuwait*	Curacao	Congo, Republic of	Martinique
	Netherlands*			Montenegro, Republic of	Lao, P.D.R.	El Salvador	Kyrgyz Republic	(Curacao & St. Maarten*)	Cote d'Ivoire	Mayotte
	Portugal*			Poland	Malaysia*	Grenada	Lebanon*	Gibraltar*	Equatorial Guinea	Norfolk Island
	Slovak Republic*			Romania*	Maldives	Guatemala	Libya	Guam	Eritrea	Palau
	Slovenia*			Russian Federation*	Mongolia	Guiana, French	Mauritania	Guernsey*	Ethiopia	Pitcairn Islands
	Spain*			Serbia, Republic of	Myanmar	Guyana	Morocco	Isle of Man*	Gabon	Puerto Rico
				Turkey*	Nepal	Haiti	Oman	Jersey*	Gambia, The	Reunion
				Ukraine*	Pakistan*	Honduras	Qatar	Liechtenstein	Ghana	Saint Helena
					Papua New Guinea	Jamaica	Saudi Arabia	Marshall Islands, Republic of	Guinea	Saint Pierre and Miquelon
					Philippines	Mexico*	Sudan	Mauritius*	Guinea-Bissau	Somalia
					Samoa	Nicaragua	Syrian Arab Republic	Micronesia, Federated States of	Kenya	Tokelau Islands
					Solomon Islands	Panama*	Tajikistan	Monaco	Lesotho	US Possession in Oceania
					Sri Lanka	Paraguay	Tunisia	Montserrat	Liberia	US Virgin Islands
					Taiwan Province of China	Peru	Turkmenistan	Nauru	Madagascar	Vatican
					Thailand*	St. Kitts and Nevis	United Arab Emirates	Netherlands Antilles*	Malawi	Wallis and Futuna
					Timor Leste	St. Lucia	Uzbekistan	Niue	Mali	Western Sahara
					Tonga	St. Vincent and the Grenadines	West Bank and Gaza	San Marino	Mozambique	
					Tuvalu	Suriname	Yemen, Republic of	Singapore*	Namibia	
					Vanuatu*	Trinidad and Tobago		Sint Maarten	Niger	
					Vietnam	Uruguay*		Turks and Caicos Islands	Nigeria	
						Venezuela, Republica Bolivariana de*		Virgin Islands, British	Rwanda	
									Sao Tome and Principe	
									Senegal	
									Seychelles	
									Sierra Leone	
									South Africa*	
									Swaziland	
									Tanzania	
									Togo	
									Uganda	
									Zambia	
									Zimbabwe	

1/ * denotes a CPIS-reporting country.