Challenges for Emerging Economies in the Face of Unconventional Monetary Policies in Advanced Economies

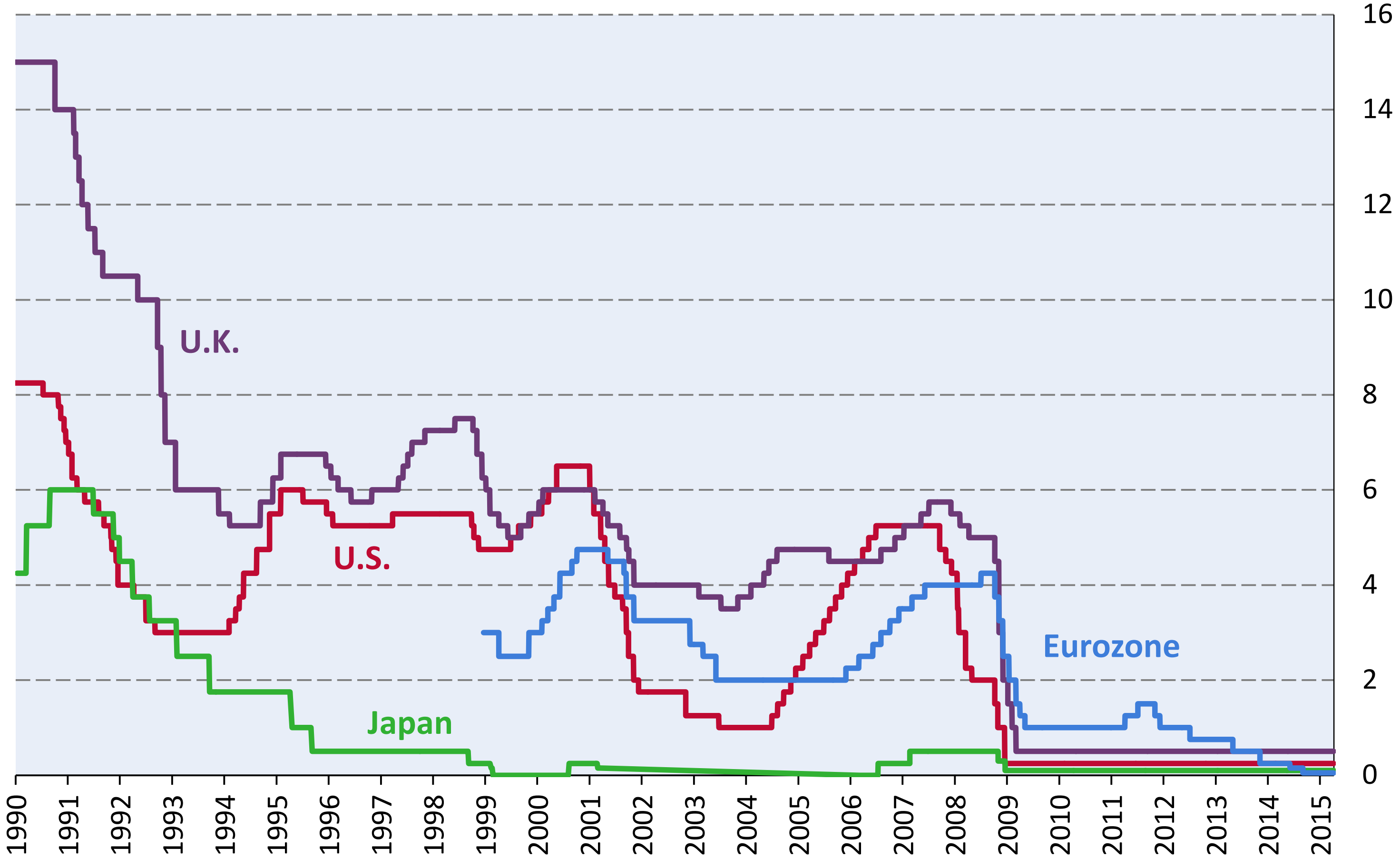
April 2015

BANCO DE MÉXICO

Figure 1.

Advanced Economies: Central Bank Target Rate

%

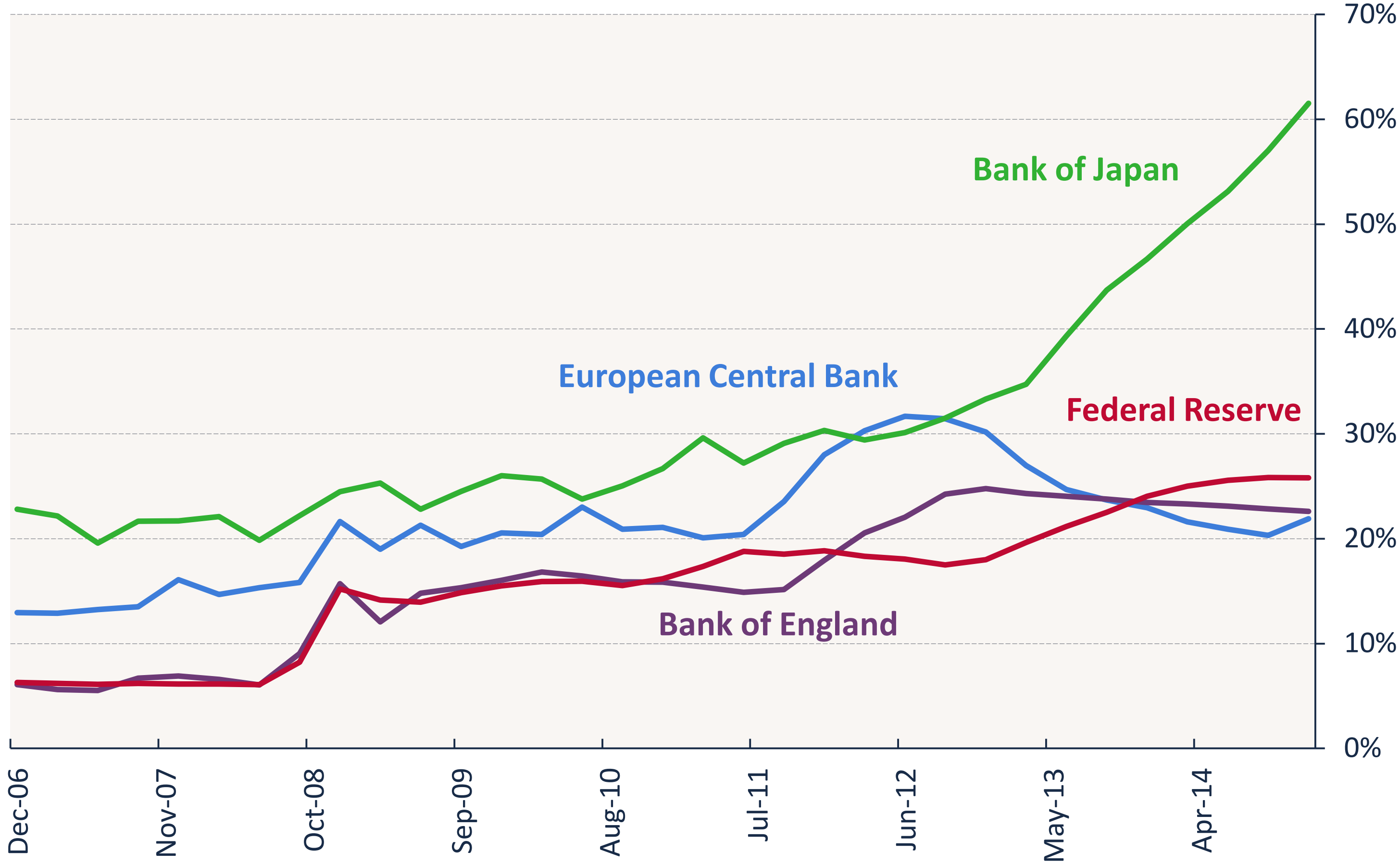


Source: Bloomberg.

Figure 2.

Advanced Economies: Assets in the Balance of Central Banks

% of GDP

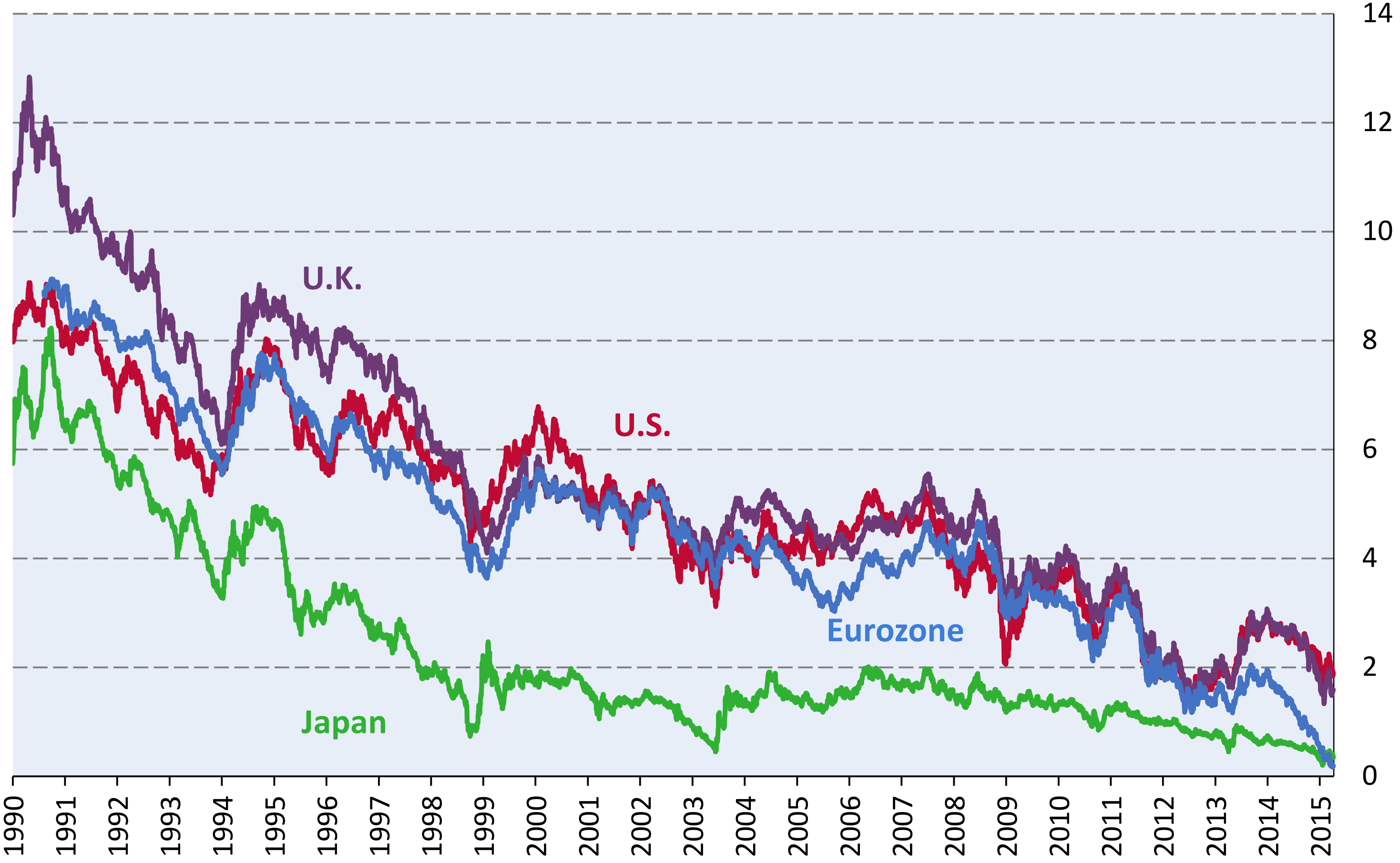


Source: Haver Analytics.

Figure 3.

Advanced Economies: 10-Year Interest Rates

%

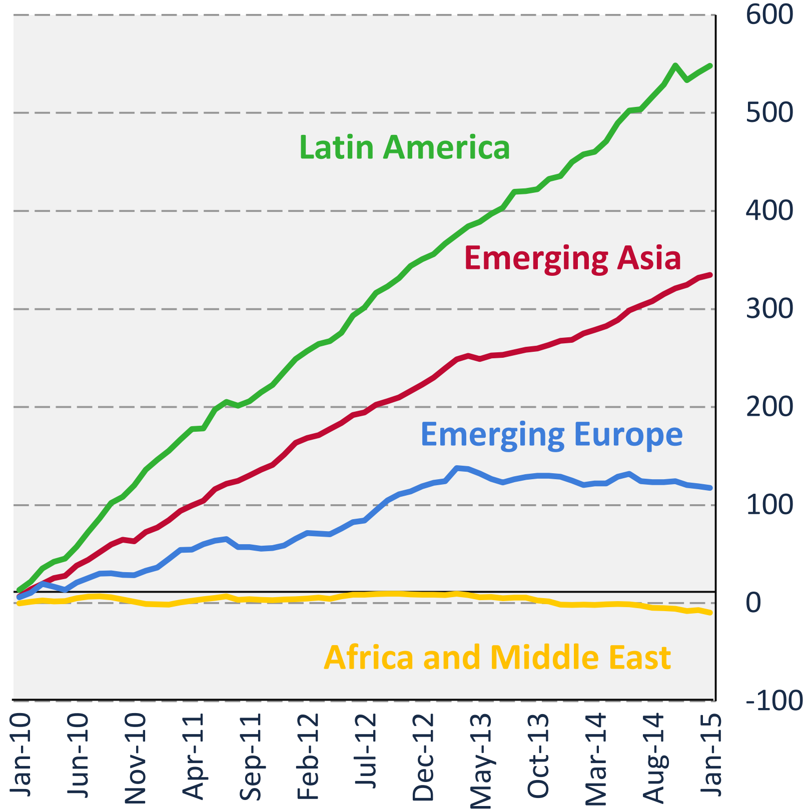


Source: Bloomberg.

Figure 4.

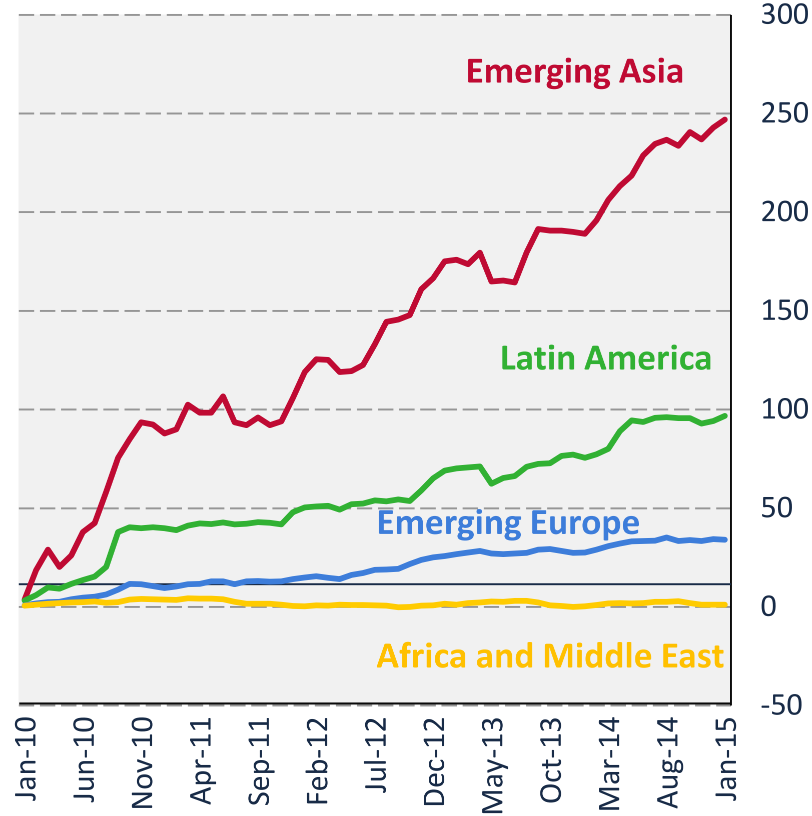
Non-resident Flows to Emerging Market Debt

Accumulated flows in billions of dollars
(since January 2010)



Non-resident Flows to Emerging Market Equity

Accumulated flows in billions of dollars
(since January 2010)



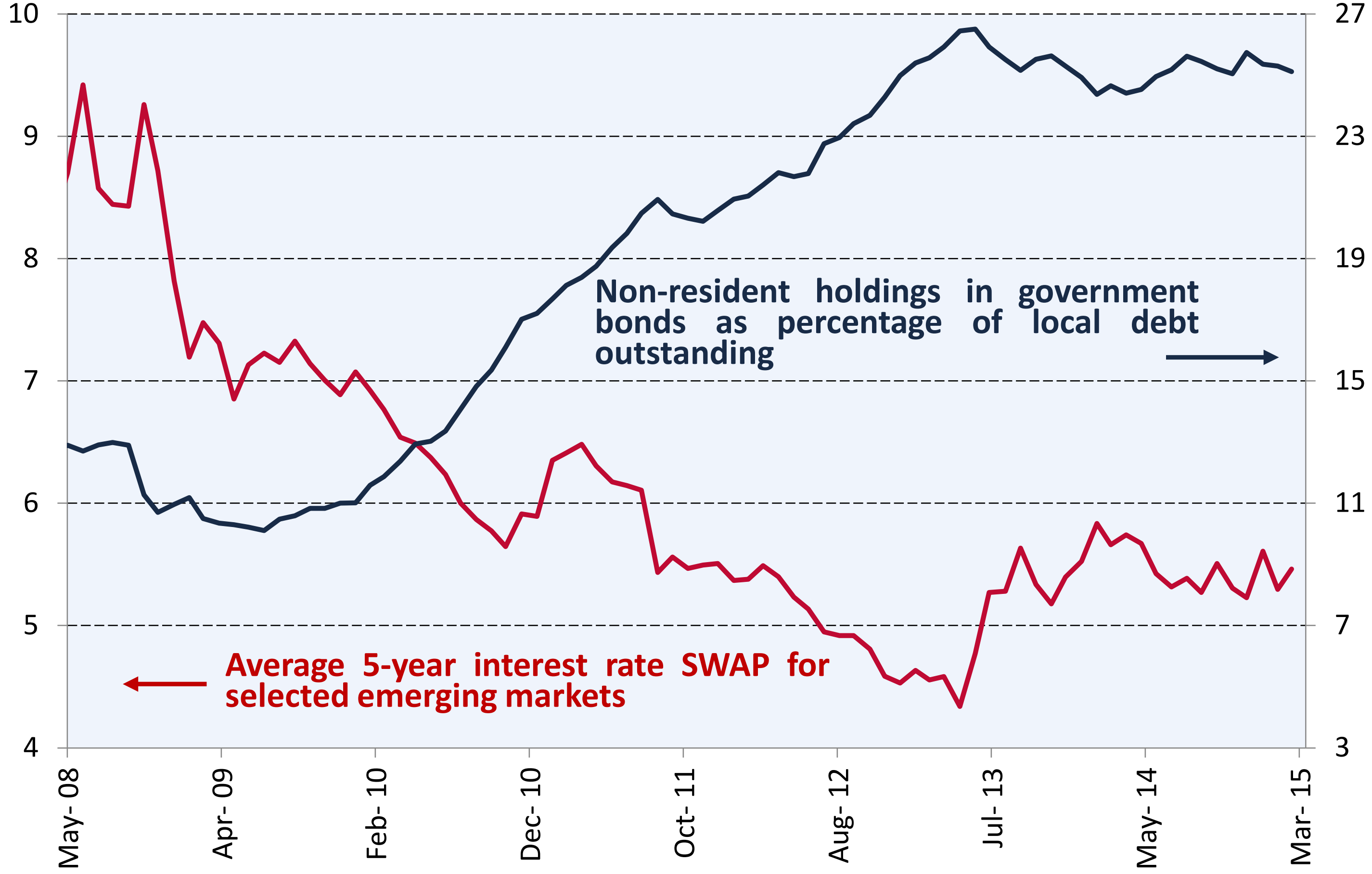
Source: Institute of International Finance.

Note: The IIF builds this index based on information gathered from 30 emerging market countries members of the Institute. Within the information that the IIF uses are the balance of payments and published reports by 12 countries for fixed income and 13 countries for equity. About half of all sources of information that concern nonresident flows are published by corresponding central banks and have monthly periodicity with a one month lag. The other half is obtained from weekly reports published by stock markets or by central banks with practically no time lag. Among the members there is Argentina, Brazil, Chile, China, Colombia, Hungary, India, Indonesia, Malaysia, Mexico, Peru, Poland, Russia, South Africa and Turkey.

Figure 5.

Non-Resident Holdings in Local Currency Government Bonds

Percentage

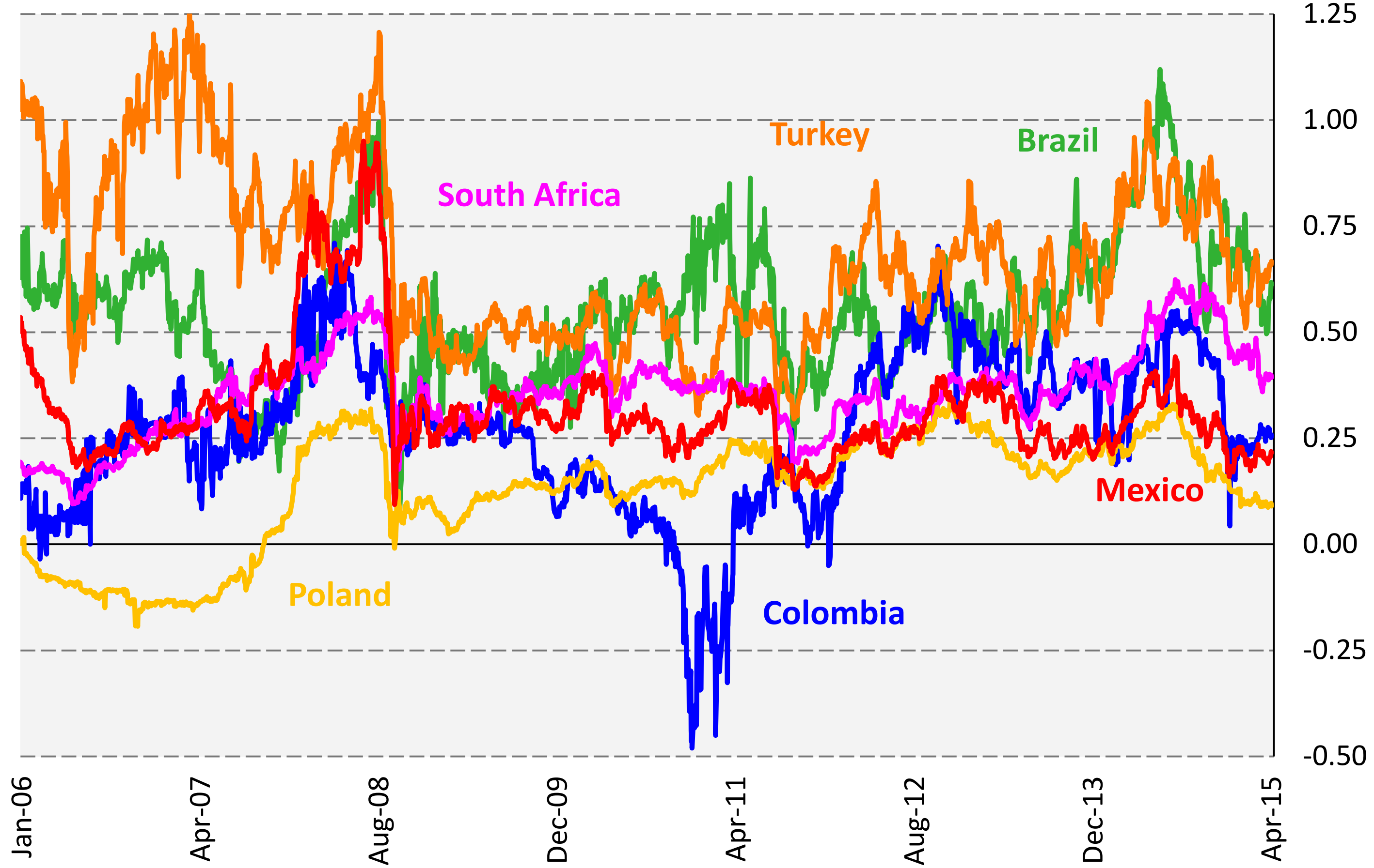


Source: Ministries of finance, central banks and other national authorities.

Note: Non-resident holdings of the following countries: Mexico, Peru, Colombia, Brazil, Indonesia, Malaysia, Thailand, Poland, Turkey, Israel, Russia, Hungary, South Africa and South Korea (since December 2009).

Figure 6.

Carry to Risk
Index

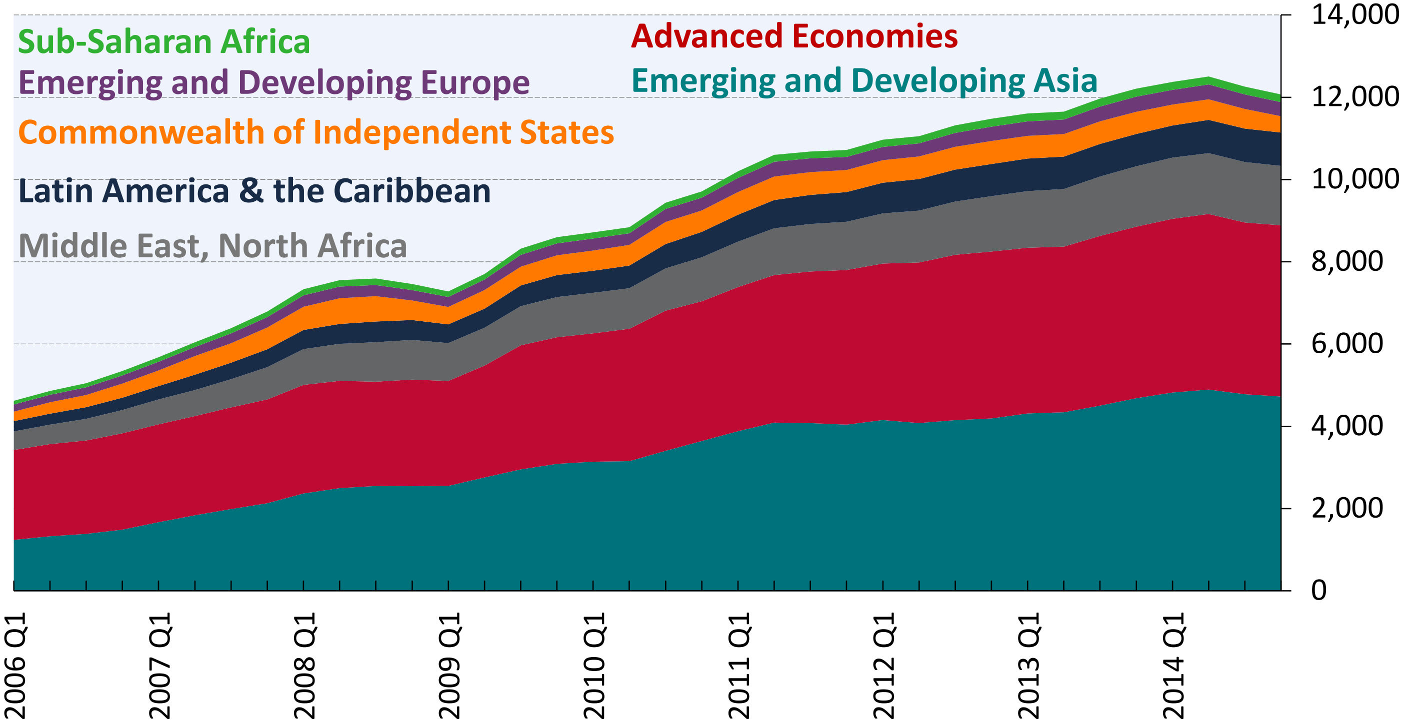


Note: Carry to Risk is calculated based on the implied spread between local rate and foreign rate in FX forwards with three-month maturity. This spread is adjusted using the implied volatility in FX options with three-month maturity.
Source: Central Bank of Mexico using information from Bloomberg.

Figure 7.

International Reserves

Billions of dollars



Source: : International Monetary Fund (IMF).

*Advanced Economies.- Canada, Germany, France, Italy, Spain, Japan, United States & United Kingdom.

Commonwealth of Independent States.- Armenia, Azerbaijan, Belarus, Georgia, Kazakhstan, Kyrgyzstan, Moldova, Russia, Taijikistan, Turkmenistan, Uzbekistan & Ukraine.

Emerging and Developing Asia.- Bangladesh, Bhutan, Brunei Darussalam, Cambodia, China, Fiji, India, Indonesia, Kiribati, Lao P.D.R., Malaysia, Maldives, Marshall Islands, Micronesia, Mongolia, Myanmar, Nepal, Palau, Papua New Guinea, Philippines, Samoa, Solomon Islands, Sri Lanka, Thailand, Timor-Leste, Tonga, Tuvalu, Vanuatu, and Vietnam.

Emerging and Developing Europe.- Albania, Bosnia and Herzegovina, Bulgaria, Croatia, Hungary, Kosovo, Lithuania, FYR Macedonia, Montenegro, Poland, Romania, Serbia, and Turkey.

Latin America & Caribbean.- Antigua and Barbuda, Argentina, The Bahamas, Barbados, Belize, Bolivia, Brazil, Chile, Colombia, Costa Rica, Dominica, Dominican Republic, Ecuador, El Salvador, Grenada, Guatemala, Guyana, Haiti, Honduras, Jamaica, Mexico, Nicaragua, Panama, Paraguay, Peru, St. Kitts and Nevis, St. Lucia, St. Vincent and the Grenadines, Suriname, Trinidad and Tobago, Uruguay, and Venezuela.

Middle East & North Africa.- Afghanistan, Algeria, Bahrain, Djibouti, Egypt, Iran, Iraq, Jordan, Kuwait, Lebanon, Libya, Mauritania, Morocco, Oman, Pakistan, Qatar, Saudi Arabia, Sudan, Syria, Tunisia, United Arab Emirates, and Yemen.

Sub-Saharan Africa.- Countries in the continent that lie south of the Sahara Desert (such as South Africa).

Figure 8.

Net Non-resident Holdings of Emerging Markets´ Government Bonds

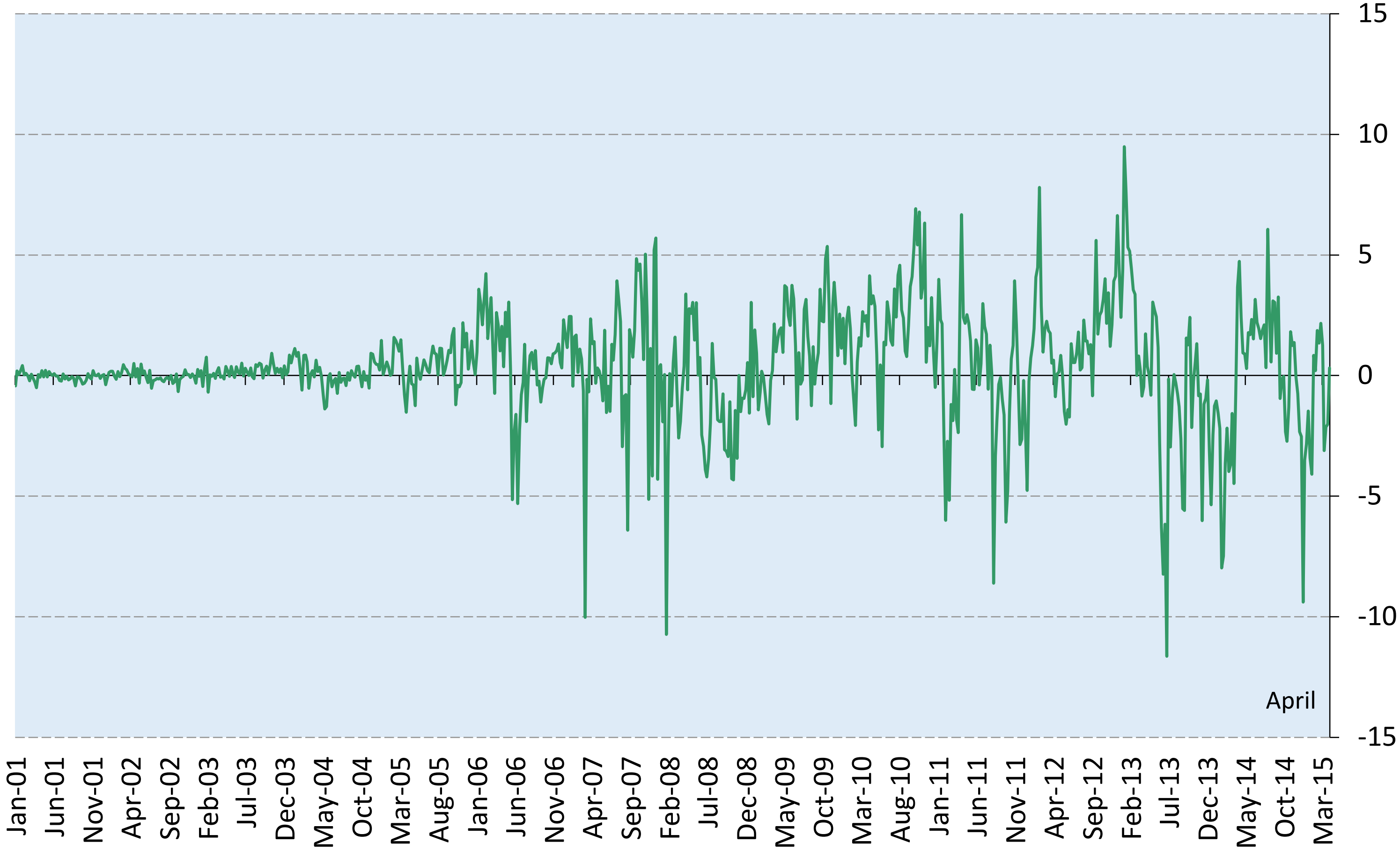
Percentage of International Reserves

Source: Ministries of finance, central banks and other national authorities.
Note: Average percentage of foreign holdings on local bonds for the following countries: Mexico, Brazil, Indonesia, Malaysia, Thailand, Poland, Turkey, Israel, Hungary and South Korea (since December 2009).

Figure 9.

Emerging Economies: Capital Flows (Debt and Equity)

Weekly Billion USD

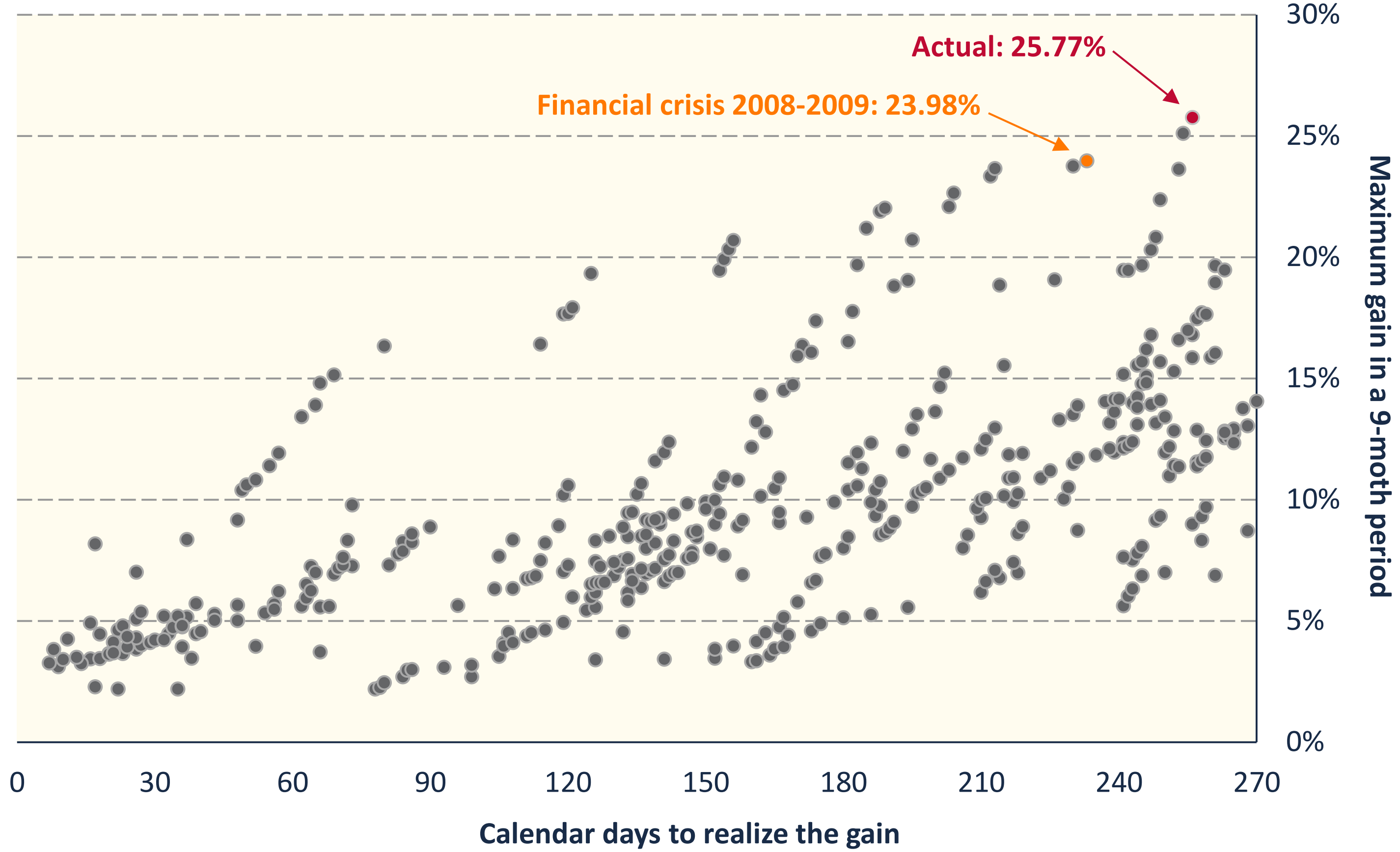


Source: Emerging Portfolio Fund Research.

Figure 10.

USD Appreciation over a 9-month Period 1/ and Days it Took to Reach the Highest Level

Percentage, days

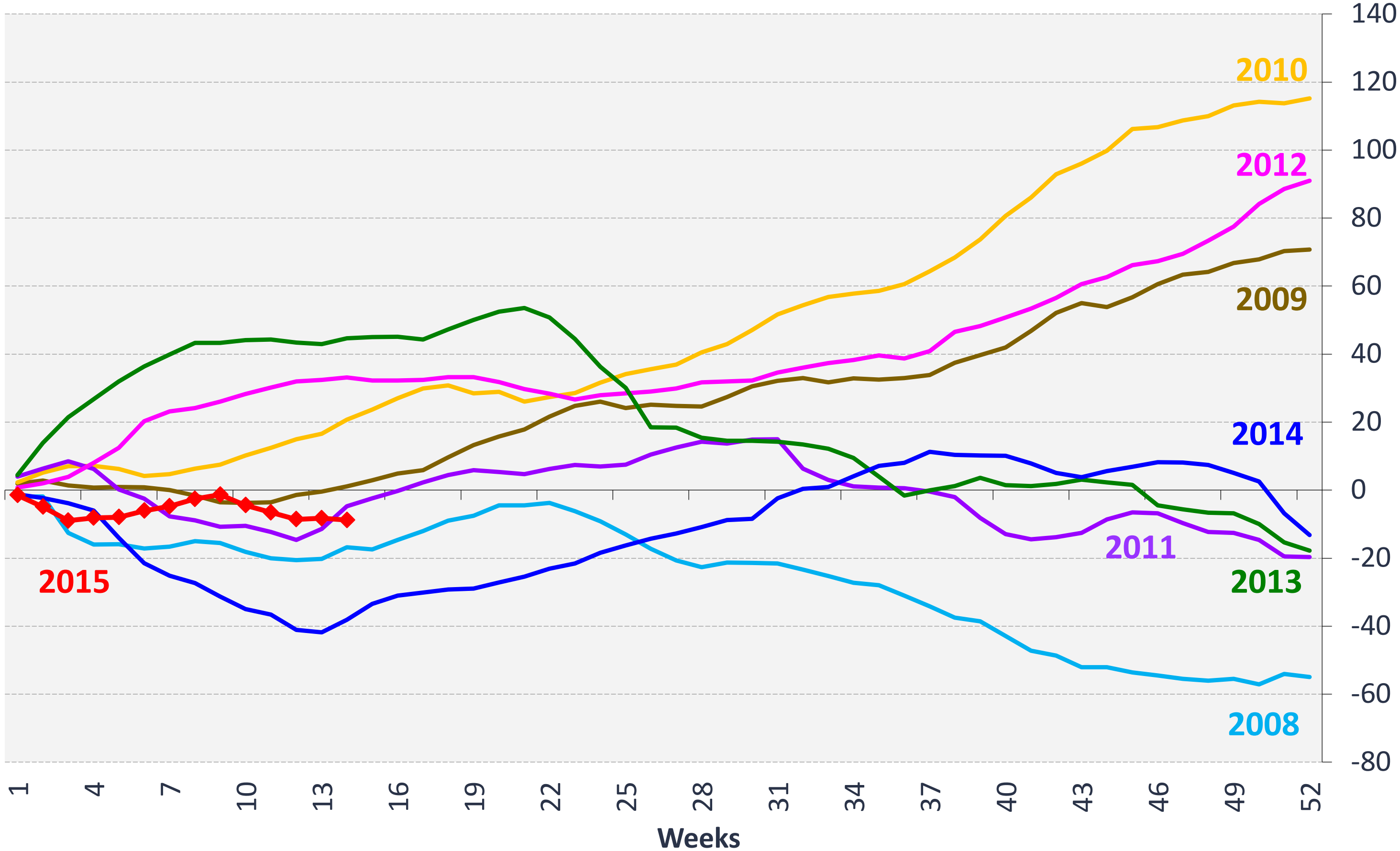


1/ The USD appreciation was computed using the DXY Index.
Source: Banco de Mexico's own calculations using data from Bloomberg.

Figure 11.

Emerging Economies: Accumulated Capital Flows to Emerging Markets (Debt and Equity) 1/

Billion USD

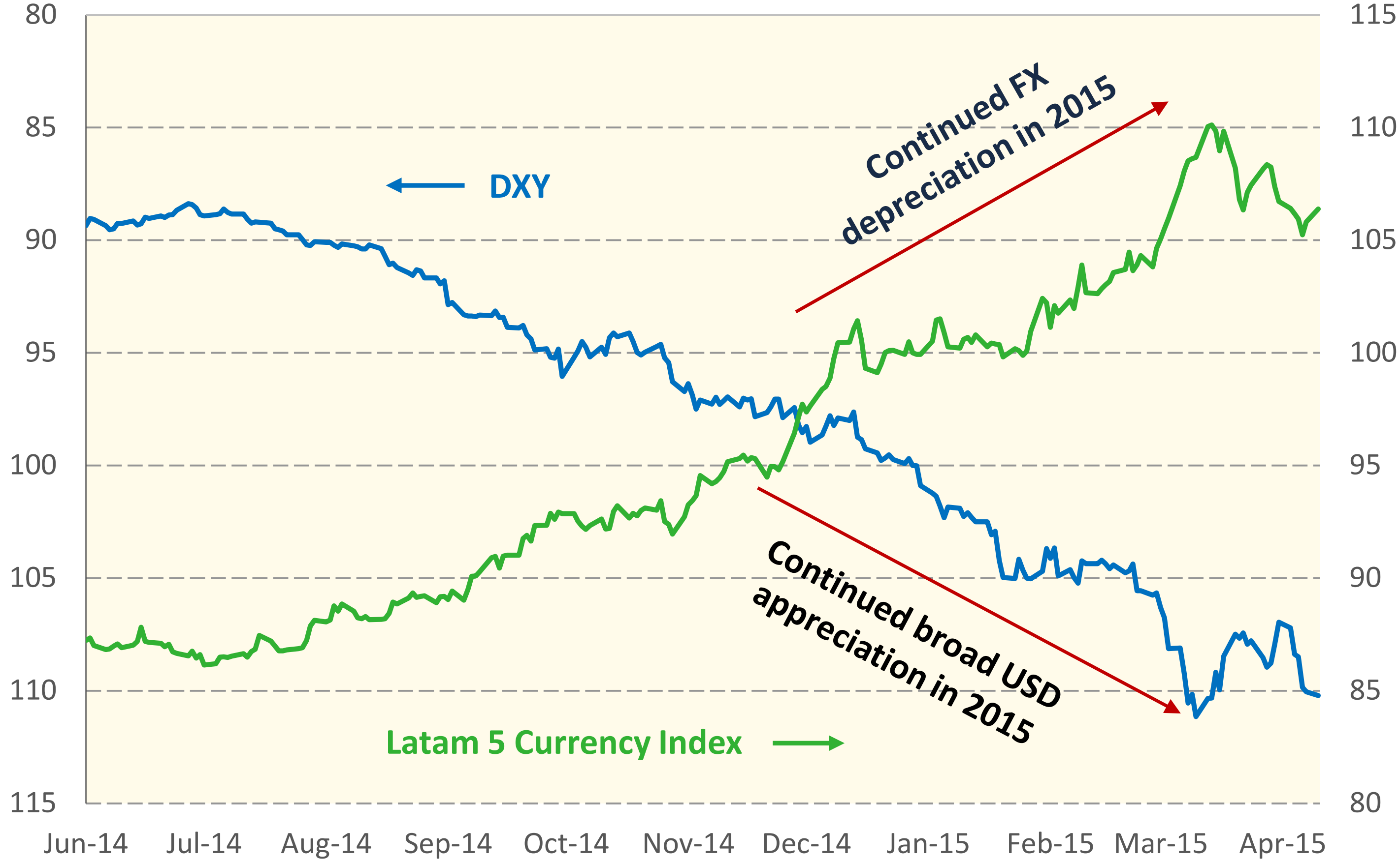


1/ The sample includes funds used to sell or buy equity and bonds from emerging markets registered in advanced economies. Flows exclude changes in market value of portfolios and changes in foreign exchange rates.
Source: Emerging Portfolio Fund Research.

Figure 12.

Latam FX Depreciation and Broad USD Appreciation

Index 31-Dec-14 =100



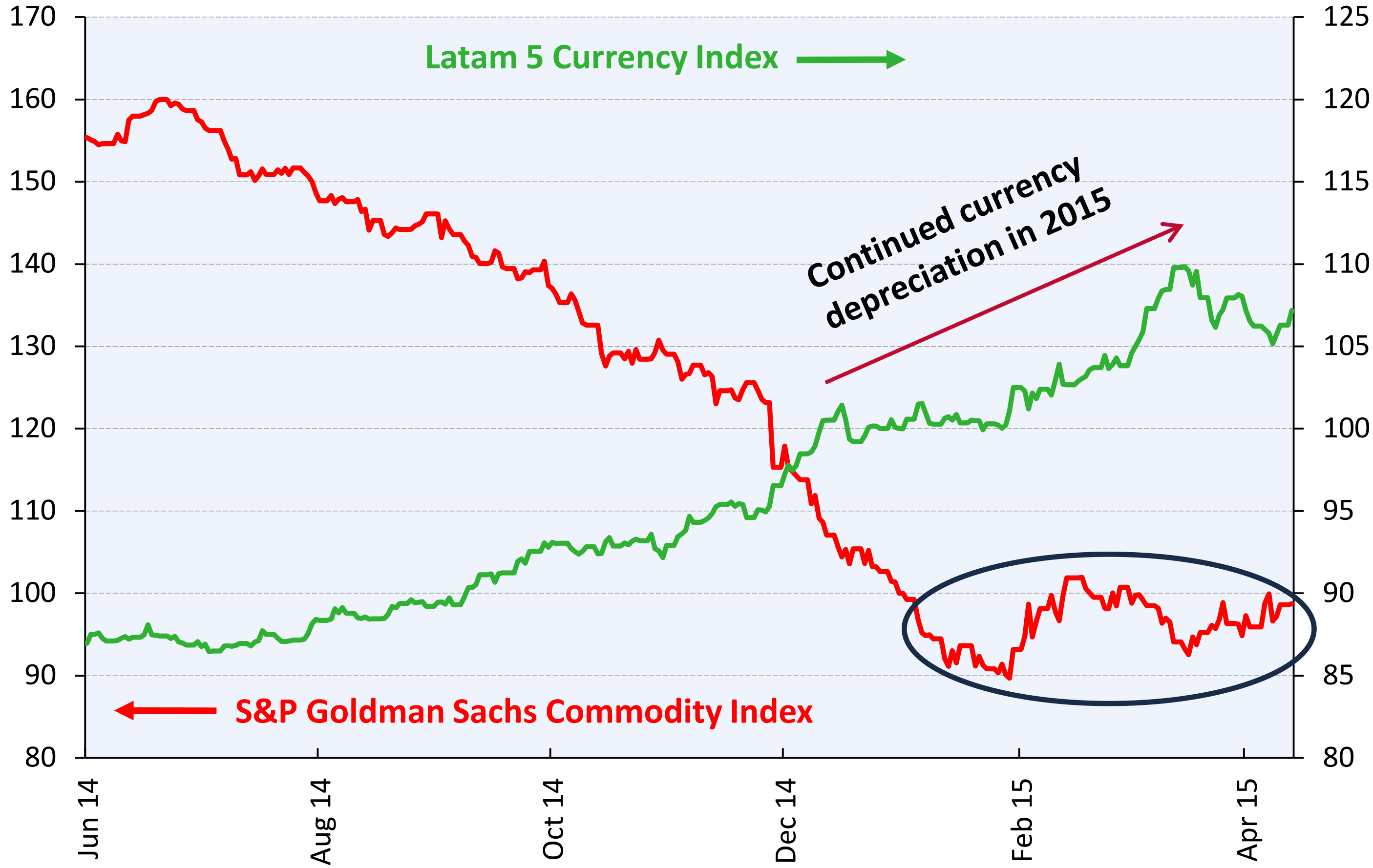
Source: Goldman Sachs Analysis replicated with Bloomberg data.

Note: Latam 5 FX Index is computed using an equally weighted average of the returns in the Mexican Peso, the Brazilian Real, the Chilean Peso, the Colombian Peso and the Peruvian Sol.

Figure 13.

Latam Currency Depreciation Amid Flatter Commodity Prices in 2015

Index 31-Dec-2014 = 100



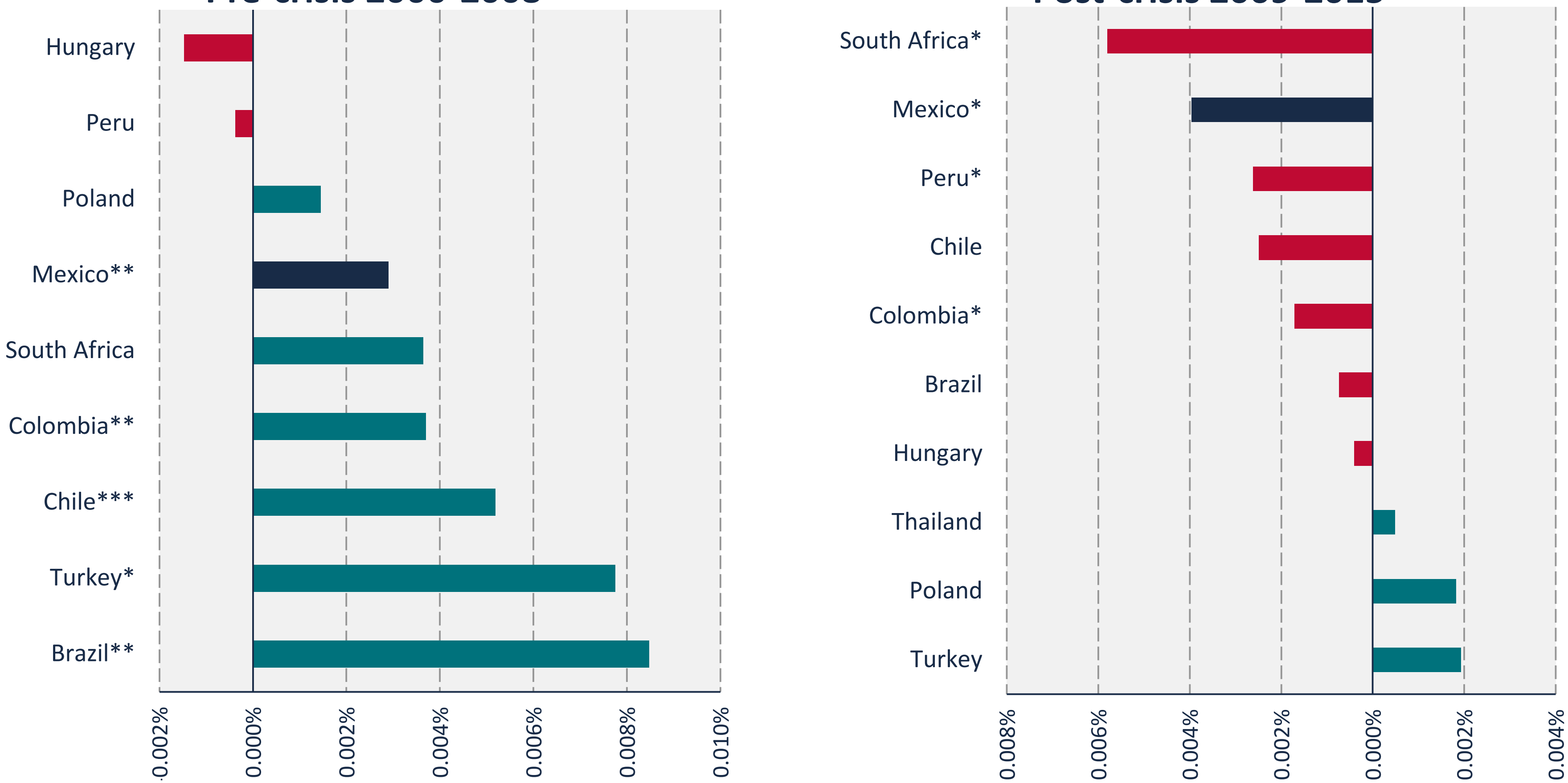
Source: Goldman Sachs Analysis replicated with Bloomberg data.
Note: Latam 5 FX Index is computed using an equally weighted average of the returns in the Mexican Peso, the Brazilian Real, the Chilean Peso, the Colombian Peso and the Peruvian Sol.

Figure 14.

Percentage Change in the Foreign Exchange Rates per unit of Difference Between the Expected Nonfarm Payrolls Data and the Observed

Percentage

Pre-crisis 2000-2008 | **Post-crisis 2009-2015**

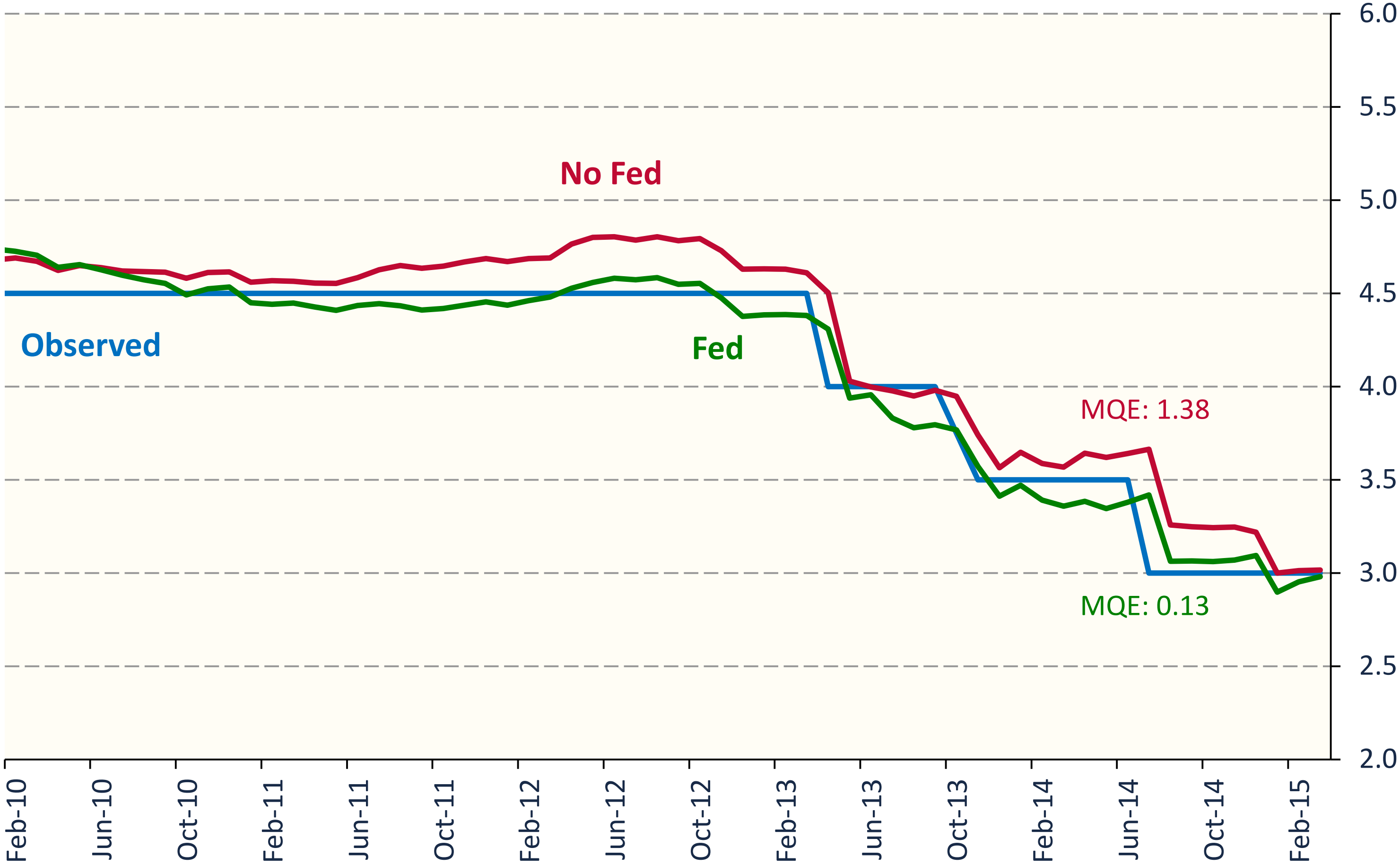


Note:*** p<0.05, ** p<0.15, *p<0.3. The percentage was calculated using a regression where the dependent variable is the percentage change on the exchange rate for each developing country currency and the independent variable is the difference between the expected Nonfarm Payrolls data and the observed.

Figure 15.

Taylor Rule for Mexico (augmented) 1/:

$$i_t = \left(r^* + \pi^* + \beta_1(\pi_t^{core} - \pi^*) + \beta_2 gap_t^{GDP} + \beta_3 i_t^{USA}\right)(1-\rho) + \rho i_{t-1}$$



1/ Estimations include data from 2000m1 to 2015m2. For the Fed Funds Rate after 2008 a shadow rate estimated by Wu and Xia (2014) is used. MQE: Mean Quadratic Error.
Source: Own calculations with data from Bank of Mexico, Haver Analytics and Wu and Xia (2014).