

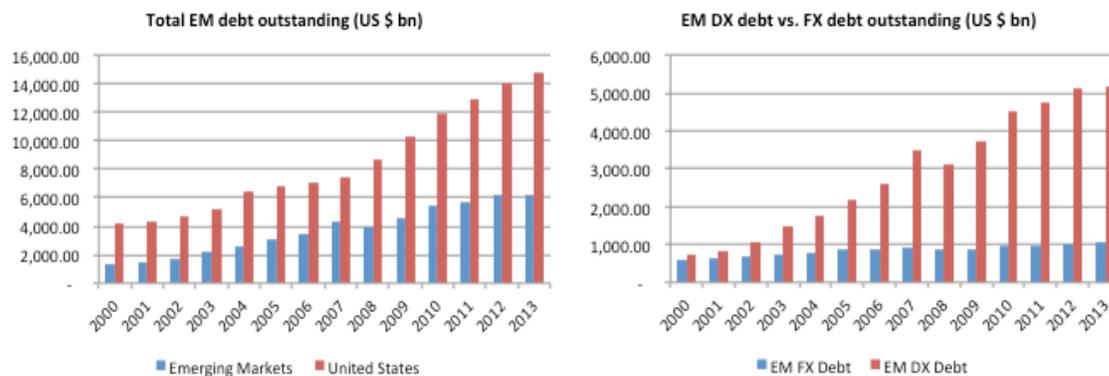
FINANCIAL ADVISORY & BANKING

Sovereign Debt Management Forum 2014

Background Note for Plenary 2

Changes in the investor base for Emerging Market public debt: What has happened in the last decade and what do we see going forward?

Introduction



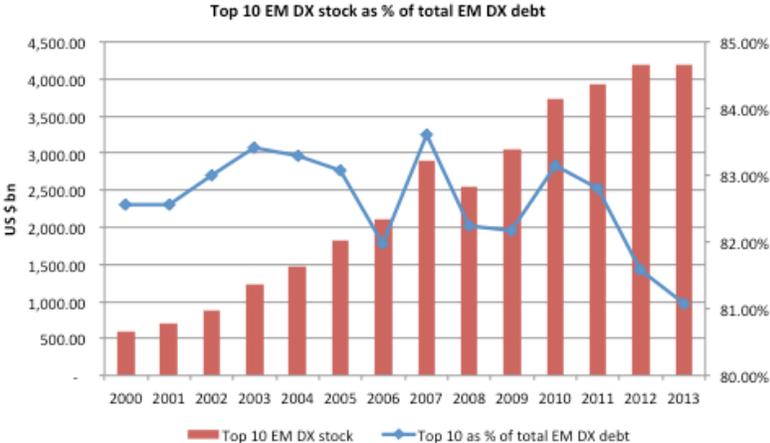
Source: Bloomberg

The market capitalization of emerging market (EM) tradeable sovereign debt grew significantly during the last 14 years, reflecting a change in how EM sovereigns are meeting their funding needs. While sovereign debt outstanding for 55 EM countries¹ amounted to \$1.3 trillion in 2000, 13 years later it had grown fivefold to \$6.2 trillion. As below graph indicates, growth in EM tradeable debt has been driven by growth of the EM local debt market (EMDX). While EM external debt (EMFX) almost doubled over this period from \$576 billion to \$1.0 trillion, EM local currency debt increased sevenfold from \$716 billion to \$5.2 trillion. At the end of 2013, the share of EM local currency debt accounted for 83% of the total.

The market for emerging market local debt is quite concentrated though with the largest three issuers (China, Brazil, and India) accounting for more than 50% of outstanding local currency debt. China is now the largest single issuer of local currency sovereign debt with an outstanding market value of \$1.3 trillion at the end of 2013, followed by Brazil with \$912 bn

¹ Define emerging country as every country outside of G7, Western Europe, the US, Canada, Australia and New Zealand with a per capita income of below \$20,000.

and India with \$618 bn. As below chart indicates, the ten largest issuers account for 81% of local currency debt market and 74% of overall EM debt. Asia dominates the local currency debt market, with the East Asia Pacific region accounting for 35.3% of total EM local currency debt, followed with 28.4% by Latin America and the Caribbean and 16% by Europe and Central Asia.



Source: Bloomberg.

Changes in the investor base of EM local currency debt

With the increase in outstanding EM debt, foreign holdings of this debt increased significantly. A recent study by Serkan et al (2014) analyse foreign ownership of local currency debt for 21 EM countries (accounting for 88% of total EM local debt of the 55 countries surveyed). Overall for these 21 countries captured, foreigners held 13% of tradeable EM debt outstanding at the end of 2013. In 10 countries foreigners held at least 20% of this debt and in six countries foreigners held more than 30%. With 51% of foreign ownership of local EM debt, Peru had the highest participation of countries surveyed. Finally, China’s and India’s share of foreign ownership in their domestic local currency debt market is below 2% of outstanding total due to capital controls on foreign flows (see below table).

Notwithstanding, as below table indicates, Egypt and Argentina saw a significant drop in foreigners holding local currency bonds, each for different reasons.

Foreign Ownership of Emerging Markets Local Currency Sovereign Debt

Federal government debt, all maturities, amounts outstanding, by issuer
(In billions of US dollars)

Country	DX Stock (USD billions)			Foreign Holdings (USD billions)		Foreign Holdings (% of DX stock)	
	Dec-06	Dec-13	Dec-13 % of GDP	Dec-06	Dec-13	Dec-06	Dec-13
China	448.09	1,340.27	14.50%	0.09	22.54	0.02%	1.68%
Brazil	511.84	859.48	38.27%	14.75	138.39	2.88%	16.10%
India	337.46	680.49	36.26%	0.89	8.36	0.26%	1.23%
Mexico	157.08	379.80	30.12%	11.90	140.04	7.57%	36.87%
Poland	120.55	191.17	36.94%	25.61	66.76	21.25%	34.92%
Turkey	153.15	189.78	23.14%	21.20	40.86	13.84%	21.53%
Malaysia	56.20	146.27	46.82%	4.72	43.00	8.40%	29.40%
Russia	39.05	120.57	5.75%	0.99	29.84	2.55%	24.75%
South Africa	63.89	114.34	32.61%	5.49	43.28	8.59%	37.85%
Thailand	48.78	104.04	26.87%	1.33	18.11	2.73%	17.41%
Philippines	43.48	84.08	30.91%	-	12.14	0.00%	14.44%
Colombia	37.87	82.35	21.78%	-	5.30	0.00%	6.43%
Indonesia	46.55	77.22	8.89%	6.11	23.17	13.12%	30.01%
Egypt	18.62	65.43	24.06%	3.46	0.14	18.57%	0.21%
Hungary	53.52	57.61	44.32%	15.42	23.25	28.81%	40.36%
Argentina	32.74	37.20	6.10%	5.50	1.19	16.80%	3.20%
Ukraine	-	30.06	16.94%	-	1.45	0.00%	4.83%
Romania	-	27.12	14.30%	-	6.05	0.00%	22.30%
Peru	3.70	12.81	6.33%	1.01	6.55	27.21%	51.08%
Lithuania	1.42	3.30	7.19%	0.02	0.53	1.26%	16.09%
Bulgaria	1.44	3.16	5.95%	-	0.03	0.00%	0.98%

Source: IMF Sovereign Investor Base Dataset for Emerging Markets, Arslanalp and Tsuda (2014)

The increase in foreign investor interest in EM spurred the development of indices that include various EM countries using various country, liquidity, and instrument criteria. Indices allow investors to manage their asset portfolios passively tracking the index, or, actively using the index as a performance benchmark. Institutional investors typically use indices to manage their exposures (see appendix for a list of indices in the EM debt space), therefore creating demand for countries' bonds included in the specific index.

For governments, the inclusion of their bonds in an index often is followed by a compression of yields resulting from higher investor demand and improvement in local market liquidity. Though various index products are available, investment banks typically do not track the magnitude of assets managed against these indices. JP Morgan however is an exception. JP Morgan data indicates that \$554 bn are indexed against their various indices (including hard currency index), equivalent to 9% of overall outstanding EM tradeable debt. Assets managed against the hard currency index (EMBI Global Diversified), smaller in size, increased to \$310 bn in 2014 from \$178 bn in 2007 while assets managed against the EM local currency market index

increased ten fold, from \$21 bn to \$221 bn in September 2014 (JP Morgan September 2014). Extrapolating, JPMorgan data indicates that the market cap of debt of countries allocated to the index could amount to roughly \$830 bn, implying that more than a third of outstanding debt is managed against EM indices.

Why have foreigners increased their exposure to local market debt?

Surveys suggest that the increase in the EM debt allocation of foreign investors since 2008 is driven by the search for yield in a world where interest rates are low and central banks in the major high-income countries follow expansionary monetary policies to stimulate growth. The emergence of EB debt as a viable asset class took place with the view that many EMs had seen significant improvement in their economic fundamentals after the Asian and LATAM crises. Inflows were further supported by better liquidity in local markets and overall improvement in debt issuance, taxation regimes and reduction in capital controls. And up to 2013, inflows in EM local currency debt markets were also supported by the view that EM currencies will strengthen given EM's growth differential with developed markets and their lower level of government debt.

There is limited systematic information available that provides color on how institutional investors (pension funds, insurance companies, sovereign wealth funds) view emerging market debt and whether they have created a strategic asset allocation (therefore the commitment to the asset class is longer-term as the decision making process of these entities is more time consuming) or have moved into EM opportunistically. Institutional investors tend to be desirable investors from the point of view that they tend to have a longer term investment horizon and therefore tend to be more stable investors, for example, as compared to retail investors.

Anecdotal evidence suggests that the increase in allocation to EM debt is driven by both types of investors. A number of institutional investors have opportunistically expanded eligible assets in their fixed income and credit portfolios to EM debt (also reflected in fact that Barclays Ag or the Citi WGBI Index now have an explicit allocation to EM sovereign debt in their respective indices although this allocation is with less than 2% weight at the index level). At the same time, there is evidence to suggest that a number of investors have created an explicit SAA allocation for EM local currency sovereign debt. For example, a survey of 16 US public pension plans (which are among the largest 200 plans worldwide as per Tower's yearly survey) reveals that nine public plans have allocations to EM local currency sovereign debt. Eight of these

allocations were part of their strategic asset allocations. But in most cases, the allocations tend to be on the lower side, i. e. below 5% of Plan assets (see Appendix table).

Conclusion

A number of studies suggest that foreign capital inflows into domestic local currency debt has significantly reduced long-term government yields (Peiris 2010; EBeke and Lu 2014). Studies, however, are inconclusive as to whether an increase in foreign participation in local markets leads to higher rate volatility with its potential adverse effect on local economies.

As most investors quote search for yield as an important driver of the decision to move into EM, there is concern that appetite for EM local debt may wane if rates in US and Europe normalize with US being perceived to be closer to the end of ultra-low rates with rates expected to rise (albeit from very low levels) in 2015.

Notwithstanding, during last year's "tamper tantrum", i.e. concerns about the end of QE in the US and the rise in US rates in the middle of 2013, foreign ownership of local bonds remained relatively stable. Roughly one third of countries actually saw increases in foreign ownership (JP Morgan, September 2014).

Issues for Discussion

- What have been the drivers of the capital flows into EM markets? Which countries have particularly benefitted from foreign capital inflows and why? What are the benefits? And are these drivers reversible or are many of the changes observed structural?
- Does the increase in foreign holdings of EM local currency debt create vulnerabilities for EM countries, especially for those countries where debt held in foreign hands is substantial. What are the sources of vulnerability for countries? And how can they be managed?
- What is the composition of these foreign flows (institutional investors such as pension, insurance and sovereign wealth funds; foreign central banks, foreign banks and foreign retail investors)? Has the composition of foreign investors changed over time and what is the effect on the reversibility of capital flows?
- What are the objectives of the various foreign investors? To what extent do the investment strategies vary by type of investors and what is the impact on capital flows to countries?
- To what extent do investors differentiate between EM markets and what are the driving factors of this decision (macro-economic indicators; liquidity, hedging instruments available, capital controls).

- Can herding behavior be observed in these markets and what drives herding behavior of market participants?

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- Appendix -

Table 1. Emerging Markets Sovereign Debt Indices

Index Name	Ticker	Inception	Market Cap (USD billions)	Number of Constituents	Country Criteria	Liquidity Criteria	Instrument Criteria
J.P.Morgan Government Bond Index - Emerging Markets Broad/Diversified	GBI-EM	Jun-05	1,594	18	GNI per capita below the Index Income Ceiling (IIC) for 3 consecutive years.	i. Daily pricing available ii. Regularly traded in size at acceptable bid-offer spreads; readily redeemable for cash. iii. Low index replication costs.	i. Fixed coupon or zero coupon. ii. Bonds with option features are excluded. iii. At rebalance date, maturity > 13 months. iv. No explicit face value minimum.
J.P.Morgan Government Bond Index - Emerging Markets Global/Diversified	GBI-EM	Jan-06	993	16	i. GNI per capita below the Index Income Ceiling (IIC) for 3 consecutive years. ii. Accessible to majority of foreign investors. Does not include markets with capital controls.	i. Daily pricing available ii. Regularly traded in size at acceptable bid-offer spreads; readily redeemable for cash. iii. Low index replication costs.	i. Fixed coupon or zero coupon. ii. Bonds with option features are excluded. iii. At rebalance date, maturity > 13 months. iv. No explicit face value minimum.
J.P.Morgan Government Bond Index - Emerging Markets Diversified	GBI-EM	Jan-06	873	14	i. GNI per capita below the Index Income Ceiling (IIC) for 3 consecutive years. ii. Directly accessible. No impediments for foreign investors.	i. Daily pricing available ii. Regularly traded in size at acceptable bid-offer spreads; readily redeemable for cash. iii. Low index replication costs.	i. Fixed coupon or zero coupon. ii. Bonds with option features are excluded. iii. At rebalance date, maturity > 13 months. iv. No explicit face value minimum.
Citi World Government Bond Index	WGBI	Dec-84	20,361	23	i. Minimum A- by S&P, A3 by Moody's for entry. Below BBB- by S&P; below Baa3 by Moody's for exit. ii. Fully accessible to foreign investors.	No explicit liquidity criteria but minimum market size of at least USD 50 billion, EUR 40 billion, JPY 5 trillion for entry; below USD 25 billion, EUR 20 billion, JPY 2.5 trillion for exit.	i. Fixed coupon ii. Investment grade iv. Minimum maturity of 1 year. v. Minimum issue size varies by market.
Citi Emerging Markets Government Bond Index	EMGBI	Dec-07	918	14	i. Minimum C by either S&P or Moody's. ii. Fully accessible to foreign investors.	i. Minimum market size of at least USD 10 billion for entry; below USD 5 billion for exit. ii. Low index replication costs.	i. Fixed coupon ii. Minimum C by either S&P or Moody's. iv. Minimum maturity of 1 year. v. Minimum issue size varies by market.
Barclays Emerging Markets Local Currency Government Bond Index	EMLCTRUU	Jul-08	-	22	i. World Bank Income group classifications of low/middle income OR International Monetary Fund (IMF) classification as a non-advanced country. Additional countries that bond investors classify as EM. ii. Market investability	Minimum market size of at least USD5bn equivalent.	i. Fixed coupon Treasuries. Inflation-linked bonds excluded. Private placements ineligible. ii. Investment grade, high yield, and unrated securities permitted. iii. Minimum maturity of 1 year. iv. Minimum issue size varies by market.
Barclays Emerging Markets Local Currency Government Universal Bond Index	LCEMTRUU	Jul-08	-	25	i. World Bank Income group classifications of low/middle income OR International Monetary Fund (IMF) classification as a non-advanced country. Additional countries that bond investors classify as EM. ii. Market investability	Minimum market size of at least USD5bn equivalent.	i. Fixed coupon Treasuries. Inflation-linked bonds excluded. Private placements ineligible. ii. Investment grade, high yield, and unrated securities permitted. iii. Minimum maturity of 1 year. iv. Minimum issue size varies by market.

Table 2. U.S. Pension Funds

No.	Fund Name	AUM (\$ billions)	Exposure to DX EMD?	Type of DX exposure (SAA or opportunistic)	Exposure to FX EMD?	Type of FX exposure (SAA or opportunistic)	Allocation hedged?	In % AUM
1	Federal Retirement Thrift	325.7	No	N/A	None	N/A	N/A	N/A
2	California Public Employees' Retirement System	262	Yes	Opportunistic	No	N/A	No, but by policy currency must be convertible.	0.05%
3	New York State and Local Retirement System (NY State Common)	176.8	No	N/A	None	N/A	N/A	N/A
4	California State Teachers	166	Yes	Opportunistic	No	N/A	No	0.10%
5	New York City Retirement Systems	143.9	No	N/A	None	N/A	N/A	N/A
6	Florida State Board	132.4	No	N/A	None	N/A	N/A	N/A
7	Teacher Retirement System of Texas	117.1	No	N/A	None	N/A	N/A	N/A
8	New York State Teachers	95.4	Yes	SAA	Yes	SAA - Global Fixed Income Securities	Yes, by policy	unclear
9	Ohio Public Employees Retirement System	88.5	Yes	SAA - Emerging Markets Debt	Yes	SAA - Emerging Markets Debt	Not completely - Non-U.S. dollar based securities are limited to 25% of the total Fixed Income assets.	Target allocation of 3% (0-5% range) for the Defined Benefit Portfolio; 5% (2-10% range) for the Health Care Portfolio
10	Wisconsin Investment Board	83.9	Yes	SAA	Yes	SAA	Permitted but not required as per investment guidelines.	0.36%, cannot exceed 10% of global bond portfolio
11	North Carolina Retirement Systems	80	No	N/A	No	N/A	N/A	N/A
12	Washington State Investment Board	79.3	Yes	Opportunistic	Yes	Yes	No, no formal policy across funds.	1.30%
13	New Jersey Public Employee's Retirement System	74.4	No	N/A	No	N/A	N/A	N/A
14	Oregon Public Employees	70	No	N/A	No	N/A	N/A	N/A
15	Ohio State Teachers	68	Yes	Opportunistic	Yes (majority)	SAA	No	0.38%
16	Virginia Retirement System	66	Yes	Opportunistic	Yes	SAA - Credit Strategies	Not required	0.71%
17	Massachusetts Pension Reserves Investment Management	53.2	Yes	SAA - Value-Added Fixed Income	Yes	SAA - Value-Added Fixed Income	No - by policy foreign investments are unhedged	Target allocation of 2%. 21% of Value Added Fixed Income Portfolio invested in EM DX debt. 16% in hard currency. VAFI is 8.9% of total fund.
18	Iowa Public Employees' Retirement System	24.8	No	N/A	Yes	SAA - Credit Opportunities	N/A	N/A