Long Term Finance Highlights

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Reinventing Bretton Woods Committee

Local bond market development and new reserve currencies

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The development of local bond markets depends critically on central bank foreign exchange reserve allocations. Central banks have played an important role in supporting main reservable assets, in particular Eurozone, U.K. and U.S. government securities and have recently increasingly been making allocations to new reservable assets including smaller currencies. At the same time, given the size of potential and actual central bank allocations there is mounting concern that new reservable assets will be subject to undue exchange rate and bond market volatility. The establishment of a foreign exchange reserves allocation framework—similar in approach to the central bank gold sales agreement—would therefore help channel central bank resources towards the orderly expansion of local bond markets and mitigate unwanted effects from large-scale reserves reallocations.

Central banks hold about US$11,000 billion in foreign exchange reserves today. Reserves and allocation policies are highly homogenous and concentrated in a narrow range of asset classes (Table 1 and Table 2):[1]

- Currency composition: The dollar has remained the dominant currency with 62 percent of foreign exchange reserves denominated in dollars in 2012 though lower when compared with its post-Bretton Woods system peak of 73 percent in 2001. The euro represents the second most important currency with 24 percent down from its 2009 high of 28 per cent. Euro-denominated reserves remain highly concentrated in securities issued by Austria, Finland, France, Germany and the Netherlands representing an estimated 90 percent of euro securities holdings (while representing half of Eurozone (12) government securities outstanding) and showing a significant reduction in "peripheral" Eurozone securities since 2007. Second tier currencies comprise the yen and the pound with about 8 per cent of total foreign exchange reserves. Historic patterns reveal that changes in currency composition can occur rapidly with the decline of the pound in 1960-70 and the rise of the mark in the 1970s and the yen in the 1970-1980s.

- New reservable assets: The emergence of new currencies has been an important recent development in foreign exchange reserve allocation following considerable consolidation of reserve holdings by currency with the introduction of the euro. Other currencies, not further disclosed, have increased to 5.5 percent of total reserves in 2012 up from 1.8 percent in 2007. The most important currencies among the new currencies on the basis of country allocations are the Australian dollar and Canadian dollar as well as the Swedish krone and Danish krone. Recent allocations to other currencies are believed to also include the Korean won and Malaysian ringgit. Allocations to the Chinese renminbi are estimated to remain small.

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Long Term Finance Highlights

- Asset composition: Foreign exchange reserves are estimated to consist predominately of government securities. For the U.S., 70 percent of U.S. securities held by the official sector are in treasury securities with 14 percent in agency securities and 13 percent in equities. The share of equities is considered to be attributable in large part to official holdings of entities other than central banks. Securities survey data show that the share of equities was 1.6 percent for securities held as reserve assets.[2] Bank deposits are estimated not to exceed on average 5 percent of total foreign exchange reserves.[3]

- Reservable asset markets: Central banks dominate the main reservable asset markets. The global market for treasury securities represents about US$24,000 billion approximated by treasury securities benchmark indices. Main reservable securities have a market capitalisation of US$21,500 billion and US$15,000 billion excluding Japan. For the U.S., data surveys indicate that foreign official holdings of treasury securities represent about 40 percent of marketable treasury securities.[4] The market for smaller currencies is estimated to represent US$2,800 billion, of which some may not immediately qualify as foreign exchange reserves assets due to access restrictions, credit and other criteria (e.g. in China due to capital account controls, in India due to quotas and in Brazil due to taxation). Using securities allocations in new reservable assets in proportion to Other currencies (see Table 1), the share of reserves represents about 35 percent of GBI eligible securities of Australia, Canada, China, Denmark, Korea, New Zealand, Norway, Singapore and Sweden.[5]

The development and depth of local treasury markets remain highly uneven. Market size is naturally correlated with the size of the underlying economy but may also be a function of government financing needs. Market depth is indicative of the proportion of liquid securities to total securities and the asymmetry of liquidity distribution in the market, approximated by the inclusion rate in the GBI indices (see Table 2). New reservable securities have on average a lower inclusion rate than the main reservable securities. The harmonisation of government securities to obtain higher index inclusion could be a key principle to guide local market development. However market practices differ, in the U.S., the on-the-run treasury securities, most recent issues, are estimated to represent the bulk of total liquidity in the treasury market. Possible asymmetric distribution of market liquidity may therefore exacerbate given asset allocation patterns.

The relationship between reservable assets, market development and market structure is well established. The central banks gold sales agreements have been aiming to protect the gold market from oligopolistic sellers.[6] Adoption of a similar framework to the gold sales agreement by central banks would allow new currencies and underlying reservable assets to be integrated in central bank reserves portfolios gradually. At the same time, central banks' penetration of new markets would help deepen markets and increase asset price stability and liquidity. An increase in the adoption of new reservable securities, assuming allocation exclusively to treasury securities, from the current estimated 5.5 percent to 10 percent of total reserves would, all else being equal, increase the share of central banks in total treasury securities holdings, from 35 percent to about 70 percent equivalent to the estimated share in highest grade euro treasury securities.

Central banks have become key drivers for treasury securities performance and local bond market developments.[7] In key reservable markets, asset performance and market development have in large part been endogenous to central bank reserve allocations. The adoption of new reserve currencies could usefully provide support for local bond markets. At the same time, the gradual introduction of new reserve currencies remains essential to preserve stability in exchange rates and bond markets. Central banks could consider establishing a framework akin to the central bank gold sales agreement—reserve allocation limit framework (RALF)—by which central banks constrain their new allocations to e.g. an increase of 5 percentage points of total foreign exchange reserve holdings over the next 5 years. This would help mitigate undue volatility of the main reservable and new reservable asset markets, help guide market expectations, support desired orderly reserves diversification and provide critical support for the development of local bond markets.[8]

Long Term Finance Highlights

Table 1: International reserves

	1950	1960	1970	1980	1990	2000	2007	2012†
Foreign exchange reserve composition (percent)								
U.S. dollar	42.0	53.1	75.9	66.7	50.6	71.1	64.1	61.8
British pound	58.0	33.5	12.5	3.0	3.0	2.8	4.7	4.1
German mark	...	...	1.5	15.1	16.8	...	...	...
Japanese yen	...	...	...	4.2	8.0	6.1	2.9	4.1
Swiss franc	...	...	...	3.2	1.2	0.3	0.2	0.3
French franc	...	...	0.4	1.7	2.4	...	...	...
ECU/euro	...	...	...	...	9.7	18.3	26.3	24.1
Other	...	13.4	9.7	6.1	8.3	1.5	1.8	5.5
Foreign exchange reserves								
US$bn	15	22	56	398	913	1,936	6,704	10,779
Memorandum items								
U.S. long-term securities composition (percent of total foreign official holdings of U.S. securities)								
Treasury securities	...	...	...	...	84.1‡	71.4*	56.6*	70.4*
Agency securities	...	...	...	...	3.6‡	13.5*	29.2*	14.4*
Equities	...	...	...	...	11.0‡	13.4*	10.4*	12.9*
Foreign official holdings of U.S. long-term securities (percent of U.S. securities)								
Treasury securities	...	...	...	...	10.9‡	18.5*	42.0*	39.9*
Agency securities	...	...	...	...	0.6‡	2.5*	11.9*	9.0*
Equities	...	...	...	...	0.4‡	0.3*	0.8*	1.8*
Securities held as foreign exchange reserve assets (percent of total securities)**								
Australia	...	...	...	...	...	0.50‡‡	1.09	1.86††
Canada	...	...	...	...	...	0.71‡‡	0.55	1.65††
China	...	...	...	...	...	0.00‡‡	0.01	0.05††
Denmark	...	...	...	...	...	0.63‡‡	0.20	0.40††
Korea	...	...	...	...	...	0.00‡‡	0.00	0.16††
New Zealand	...	...	...	...	...	0.05‡‡	0.03	0.04††
Norway	...	...	...	...	...	0.10‡‡	0.20	0.27††
Singapore	...	...	...	...	...	0.00‡‡	0.01	0.17††
Sweden	...	...	...	...	...	0.24‡‡	0.50	0.54††
Total	...	...	...	...	...	2.22‡‡	2.58	5.14††
Equities	...	...	...	...	...	1.47‡‡	1.93	1.58††
Austria, Finland, France, Germany, Netherlands (of total Eurozone (12))								
percent	...	...	...	...	...	82.1‡‡	80.4	88.5††

Source: IMF, U.S. Treasury. IMF data based on allocatedreserves.† September; ‡ June 1994; ‡‡ 2001; †† 2011; * June; ... not available; **CPIS survey (table 6) percent of allocated securities including non-euro countries with allocations in excess of US$500 million in securities in 2011.

Long Term Finance Highlights

Table 2. Treasury securities benchmark index

	Central government debt securities 2012 (USD bn)†	JPM GBI market value 2012 (USD bn)††	Index inclusion, GBI and GBI-EM, percent of debt securities	Share in index, percent of combined GBI and GBI-EM market capitalisation
United States***	11,603	7,637	66	31.36
Japan	11,364	6,236	55	25.61
United Kingdom	1,934	1,587	82	6.52
France	1,781	1,439	81	5.91
Italy	2,134	1,362	64	5.59
Germany	1,512	1,290	85	5.30
Spain	831	636	76	2.61
Belgium	424	401	95	1.65
Netherlands	419	389	93	1.60
Austria	260	260	100	1.07
Portugal	149	109	73	0.45
Ireland	120	104	87	0.43
Finland	105	94	89	0.39
Canada*	1,142	372	33	1.53
China	1,165	345	30	1.42
Korea	395	321	81	1.32
Brazil	1,127	247	22	1.01
Australia	263	228	87	0.94
India*	529	157	30	0.64
Mexico	299	142	48	0.58
Denmark	128	122	95	0.50
Poland	167	100	60	0.41
Sweden	116	95	81	0.39
South Africa	135	85	63	0.35
Malaysia*	132	72	55	0.30
Colombia*	87	71	82	0.29
Russia*	92	67	73	0.28
Turkey	194	66	34	0.27
Singapore*	112	66	59	0.27
Indonesia	77	60	77	0.24
Czech Republic	80	44	55	0.18
Thailand*	95	43	45	0.17
Israel	138	38	28	0.16
Hungary	75	34	46	0.14
Chile*	28	19	69	0.08
Peru	13	13	100	0.05
Philippines	...	4	...	0.01
Argentina**	157	...	...	0.00
Norway	76	...	...	0.00
New Zealand**	65	...	...	0.00
Saudi Arabia**	36	...	...	0.00
Total	39,559	24,354	67	100.00
Main reservable securities	32,637	21,544	80	88.46
New reservable securities	6,922	2,811	59	11.54

Source: JP Morgan, World Bank quarterly public sector debt statistics table C4. *BIS domestic debt securities general government table 16B June 2012; ** IMF WEO general government gross debt; *** U.S. Treasury marketable debt;... not available. † Q3; †† JP Morgan Government Bond Index and JP Morgan Government Bond Index-Emerging Markets December, index includes liquid bullet fixed-rate bonds where liquidity is defined as bonds trading frequently with easily available two-way pricing and narrow bid-offer spreads.

[1] Data limitations allow only inferring reserve compositions and available data may not be representative of actual reserve holdings. Data on foreign exchange reserve composition rest predominately on the IMF Currency Composition of Official Foreign Exchange Reserves (COFER) and the IMF Coordinated Portfolio Investment Survey (CPIS). However, COFER and CPIS only cover a subset of reserves due to a large proportion of unallocated reserves and may therefore not be representative of total actual reserve holdings. U.S. securities holdings are based on the U.S. Treasury International Capital System (TIC).
[2] IMF CPIS.
[3] BIS locational banking statistics Table 5C.
[4] U.S. TIC but the number seems low compared with dominant central bank reserve allocation patterns and known reserves currency composition.
[5] Ratio is based on grossing-up known distribution for allocated reserves based on IMF COFER and may overstate actual allocations. New Zealand, Norway and Saudi Arabia are not in the GBI and government securities outstanding are used to approximate market size.
[6] The five-year gold sales agreement, established for the first time in 1998, for 2009-14 postulates that signatory central banks including the IMF, commit not to exceed selling 400 tons of gold per year. The motivation for the agreement rests largely is avoiding undue downward pressure on gold due to large-scale central bank gold holdings.
[7] The adoption of quantitative easing policies by key central banks is also critical to treasury securities performance.
[8] Exemption regimes should be applied for central banks where capital account restrictions prevent securities adoption.

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