

## **International Reserve Diversification—A Proposal for the G20**

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France under its G20 presidency has put forward as a priority for the G20 a reform of the international monetary system. The adoption of a multiple-currency international monetary system and in particular the integration of emerging markets currencies into the system has repeatedly been invoked as a desirable reform outcome over the medium term. The present note proposes an international reserve diversification fund to promote the gradual adoption of emerging markets currencies in central bank international reserve portfolios to help lay the foundations for a transition to a multiple-currency regime. Such fund—in principle close to the Asian Bond Fund—would also respond directly to recent proposals by the Chinese and Russian authorities to establish greater reserve currency diversification and by France to promote the internationalisation of emerging markets currencies.<sup>1</sup> Agreement on or giving further considerations to such fund is seen as a possible critical deliverable for France's G20 presidency.

The international reserve diversification fund is based on the assumptions that:

- i) the international monetary system would benefit from the integration of several new currencies;
- ii) emerging markets currencies represent the main integration target amid the increasing economic weight of emerging markets;
- iii) current international reserve allocation patterns may no longer be sustainable amid the significant size of reserve portfolios and their domestic and markets impact;
- iv) the adoption of currencies and their underlying instruments is feasible even with limited liquidity, without full currency convertibility being established, without currencies being fully floating and without the need for countries to incur external deficits;
- v) such integration can be undertaken most efficiently through a commonly agreed framework to facilitate coordination and overcome prevailing obstacles to adoption and anchor market expectations that changes to international reserve allocation will be orderly;
- vi) assets under management need to be large to make a meaningful contribution; the fund could initially target to reach US\$0.5 trillion (about 5 percent of foreign exchange reserves) to be built up over 5 years;
- vii) the implied appreciation of the adopted currencies is considered desirable if and when such appreciation is multilateral in nature;
- viii) the mixed record of past initiatives of reserve substitutions can be overcome through adequate design.

The integration of emerging markets currencies rests on the fundamental notion that the international monetary system is about shared responsibilities. The participation of several currencies in the system increases the numbers of stakeholders that have a direct interest in its orderly functioning. Currencies will differ in their capacity to serve the system with primary responsibilities to rest with the main reserve currencies while secondary currencies could assume complementary functions before gradually responding to broader reserve currency functions. This would be expected to ease dependence and burden on individual currencies and allow the system to be more balanced and stable.<sup>2</sup>

Emerging markets are set to represent 20 of the 40 largest economies by 2015 in terms of GDP at market prices and half of world GDP at market prices by 2020. They have contributed on average to half of world GDP growth in 2005-10 and are projected to make three fifth of world GDP growth in 2011-15. Economic fundamentals of emerging markets have improved considerably on average with government debt being on average significantly lower than of main reserve issuing countries. Recent economic history and economic policy suggest that increasing economic weight will be conducive to greater currency proliferation. However, this

will naturally in large part depend on whether emerging markets are willing to adopt policies consistent with currency internationalisation.

The amount of reserves poses new challenges for central banks given its effect on domestic monetary conditions and quasi-fiscal implications. The size of reserves also raises significant concerns about the effect on markets for price discovery and price formation and of sudden changes in reserve composition.<sup>3</sup> This suggests that past reserve allocation practices may no longer be sustainable in a large reserve holdings environment supporting the notion of the fundamental need for greater reserve diversification.

The pattern of reserve allocation and resistance to greater reserve diversification is due in part to the limiting properties of alternative currencies but also to incumbency advantages of the main currencies. Currency diversification is seen to rest principally on the notion of complementarity rather than substitutability. New currencies may only gradually fulfil most reserve functions. Full capital convertibility is therefore not seen as essential for adoption but certain minimum conditions need to be met to facilitate access to underlying instruments. The earlier adoption of the mark and yen as reserve currencies during the 1970s and 1980s also took place while both currencies were not fully convertible for capital account transactions. Currencies may also serve a reserve function role even when they are not fully flexible as shown by e.g. the French franc that was pegged to the German mark prior to the introduction of the euro. The emergence of the mark and yen and also of the euro further illustrates that reserve currency issuing countries do not need to incur balance of payments deficits as Germany and Japan and the Eurozone had been running current account surpluses.

The introduction of new currencies is believed to depend to a large extent on the existence of a favourable institutional framework rather than market forces alone. This is consistent with historic patterns of the emergences of sterling based on the colonial sterling area, the dollar given its central role under the Bretton Woods system of fixed exchange rates and the mark with the adoption of the European Monetary System. A common framework would allow coordination of new currencies purchases and minimise possible market and balance of payments implications in line with past proposals on reserve substitution.<sup>4</sup> It would also help critically to overcome possible negative externalities from first-time adoption and address internal shortcomings with central banks that exhibit limited familiarity with emerging markets currencies. The reputational concern and associated “headline risk” given in some instances public accountability of central banks can also be mitigated if investments take place under a common international initiative. This is particular relevant in the context of emerging markets currencies. The adoption of a common framework is also seen as critical to guide market expectations that central bank reserve diversification will be gradual and is assumed to aid stabilisation of exchange markets.

The proposed international reserve diversification fund needs to hold assets sufficiently large to have a meaningful impact on reserve allocation patterns. The fund would target assets under management to reach US\$0.5 trillion (about 5 percent of foreign exchange reserves) to be built-up gradually over 5 years. The size of the fund can be adjusted over time depending on overall reserve markets conditions. Subscription to the fund consists of central banks acquiring shares of the fund against international reserves. The fund would invest its resources in local currency emerging markets fixed-income instruments of a given range of currencies and subscriptions would not imply a change in the level of international reserves. Subscriptions would be on a voluntary basis but would be conducted under a common agreement in line with provisions under the central banks gold sales agreements.<sup>5</sup>

The adoption of new currencies would incur an exchange rate appreciation against the existing main reserve currencies all else being equal as the allocation would correspond to a capital inflow. The multilateral nature of the exchange rate appreciation is seen to mitigate concerns of individual countries about a possible loss of competitiveness.

The record of past initiatives aimed at facilitating an exchange of central banks reserves for new assets has been mixed. The IMF SDR substitution account failed to be established in 1974 and 1980, in part due to inherent weaknesses of the SDR itself, but in particular amid the inability to

assign possible exchange losses arising from SDR holding.<sup>6</sup> The BIS-supported Asian Bond Fund launched in 2003 has remained insignificant in terms of assets under management believed to be due to the fact that its broad investment strategy, covering currencies some of which with weak credit attributes and unlikely to play a significant international role in the foreseeable future, has made central banks reluctant to assume exposure to the fund;<sup>7</sup> political considerations to guide inclusion have also derailed a similar recent initiative by the BIS for Latin America. The Basle group arrangements seeking cooperation among G10 central banks plus Switzerland, the sterling “safety net” in the 1960s and 1970s, to allow for an orderly unwinding of unwanted so-called sterling balances can be considered relatively successful.<sup>8 9</sup>

The note reviews the pattern of international reserve allocation, describes some main elements of emerging markets local currency fixed-income assets and outlines the main features of the proposed international reserve diversification fund. The note does not analyse whether a multiple-currency regime is welfare enhancing. However, the note supposes that currency diversification can make a significant contribution to overcome the disadvantages associated with the Triffin dilemma and thereby lead to greater exchange rate stability.<sup>10</sup>

### **International reserve allocation**

Since the 1960s, the composition of international reserves has changed from being constituted predominantly of gold, to becoming increasingly dominated by foreign exchange of which dollar and sterling represented the bulk under the Bretton Woods system, to broader currency allocation and with the adoption of the euro to again a narrower currency allocation. The decline of sterling and rise of the mark illustrate that currency reserve composition in the past has changed significantly during a relative short period of time. The composition by assets has changed more recently from holdings principally in bank deposits, to allocations to treasury securities and most of late to limited allocations to credit instruments.

The main features of international reserves holdings today are (Table 1, Figure):

- i) Amount: The stock of central bank total reserves minus gold has increased by about US\$0.7 trillion during 2010 to about US\$9.2 trillion.<sup>11</sup> Reserves constitute on average about 14 percent of GDP for all countries and 27 percent of GDP for emerging markets. Reserves holdings remain highly concentrated with the 3 largest holders (China, Japan, Russia) representing about 50 percent of total reserves holdings and the 10 largest about 70 percent with only 25 countries holding foreign exchange reserves of more than US\$50 billion.
- ii) Currency: Reserve composition by currency has been subject to continuous change (in part due to exchange rate fluctuations). The dollar has a share of 61 percent and the euro of 27 percent in 2010 compared with 71 percent and 18 percent in 2000, respectively. Other currencies, excluding sterling, yen and the Swiss franc, have increased from less than 2 percent in 2000 through 2008 to 4 percent in 2010 indicating that a somewhat greater adoption of more currencies has occurred.
- iii) Securities (U.S. securities):<sup>12</sup> Reserves are predominantly held in securities. Treasury securities represent about 63 percent of total central banks' securities. Purchases of agency securities has accelerated through 2008 but declined since. Treasury bills had normally represented only a small proportion of total treasury securities purchases but from August 2008 through August 2009 purchases of treasury bills accelerated significantly representing 100 percent of total treasury securities purchases indicating a significant shortening of the average maturity of treasury securities over that period and highlight central bank responsiveness to changes in investment conditions.
- iv) Gold: Central banks maintain large gold holdings but concentrated in a small number of advanced economies institutions (U.S., Germany, Italy and France hold more than 50 percent of total central bank gold reserves). Gold reserves at market prices represent about 10 percent of total reserves in 2010 compared with 12 percent in 2000.

- v) Special drawing rights (SDRs): Total holdings of SDRs have increased significantly with the August 2009 allocation. Total SDRs still only represent about 3 percent of total foreign exchange reserves.
- vi) Bank deposits: Bank deposits have steadily declined as a percentage of total reserves. During 2008 bank deposits fell sharply as central banks withdrew significant amounts in response to mounting bank distress raising concerns for bank stability about the pro-cyclical nature of reserve allocations.
- vii) Market concentration: Central banks (and other official financial institutions) hold about 45 percent in 2009 of total marketable U.S. treasury notes and bonds compared with 19 percent in 2000.
- viii) Quasi-fiscal costs: The cost of holding reserves is estimated to have increased significantly amid higher local interest rates and increasing reserve amounts (the cost can be measured by the difference between the total return on reserve assets and total costs of funding net of sterilisation costs (cost of carry)). Additional significant costs can occur in the event of an appreciation of the local currency against the currencies of the reserve holdings.

**Table 1. International reserve composition**

	1950	1960	1970	1980	1990	2000	2010†
<i>Foreign exchange reserve composition (percent)</i>							
U.S. dollar	42.0	53.1	75.9	66.7	50.6	71.1	61.3
British pound	58.0	33.5	12.5	3.0	3.0	2.8	4.0
German mark	...	...	1.5	15.1	16.8	...	...
Japanese yen	...	...	...	4.2	8.0	6.1	3.6
Swiss franc	...	...	...	3.2	1.2	0.3	0.1
French franc	...	...	0.4	1.7	2.4	...	...
ECU/euro*	...	...	...	...	9.7	18.3	26.9
Other	...	13.4	9.7	6.1	8.3	1.5	4.0
Total reserves (US\$bn)	48	60	94	987	1,271	2,228	10,236
Total reserves minus gold (US\$bn)	15	22	56	398	913	1,971	9,153
Emerging markets (US\$bn)	7	6	16	159	251	1,050	6,738
Percent of reserves minus gold	45.7	29.2	27.9	39.8	27.5	53.2	73.6
SDRs (US\$bn)	...	...	3	22	30	28	314
Emerging markets (US\$bn)	...	...	1	7	9	9	117
Percent of reserves minus gold	...	...	6.1	5.6	3.3	1.4	3.4
Gold reserves (US\$bn)**	33	38	39	589	358	256	1,083
Percent of total reserves	69.3	63.8	41.0	59.7	28.2	11.5	10.6
Emerging markets (US\$bn)	3	3	4	83	49	37	220
<i>Memorandum items</i>							
Bank deposits (US\$bn)	...	...	...	171	251	400	851
Percent of total reserves minus gold	...	...	...	43.0	27.5	20.3	9.3
<i>U.S. securities composition (percent of total foreign official holdings of U.S. securities)</i>							
U.S. treasury securities	...	...	...	...	84.1‡	71.4	62.9***
U.S. agency securities	...	...	...	...	3.6‡	13.5	24.3***
<i>Foreign official holdings of U.S. securities (percent of U.S. securities)</i>							
U.S. treasury securities	...	...	...	...	10.9‡	18.5	44.7***
U.S. agency securities	...	...	...	...	0.6‡	2.5	11.0***

Source: BIS, IMF, U.S. treasury. Ashmore calculation. †September 2010. \*1999 introduction of euro; ‡ 1994;\*\* at market prices (London gold price); \*\*\* June 2009; ... not available

Reserves are projected to continue to increase significantly. Projections based on future needs as approximated by standard metrics of reserve coverage, including imports, short-term external debt and broad money, and maintenance of prevailing exchange rate policy frameworks suggest that international reserves could grow by a pace similar to recent years of US\$0.8 to US\$1.2 trillion per year. This implies that total reserves minus gold are likely to top US\$10 trillion within the next year.

## Emerging markets local fixed-income markets

Emerging markets local fixed-income markets have developed rapidly. Many key emerging markets exhibit securities markets properties today exceeding or similar to those of smaller advanced economies. However, inter-emerging markets differences with regard to currency convertibility and the development of their securities markets are significant and determine in large part actual allocation opportunities. The increasing incorporation of best practice market infrastructure facilities, e.g. payments, settlement and custody is expected to continue on average to further improve market and trading conditions. Local currency fixed income investment funds are among the fastest growing emerging markets investment funds more generally and offer a large allocation opportunity set including local currency government bonds and money market type instruments.

**Table 2. International reserve asset markets**

Liquid government bonds

	2002	2007	2011‡
Market capitalisation (US\$ bn)†			
JP Morgan GBI Global			
Japan	1822	3125	5678
United States	1754	2330	5578
Germany	636	1071	1193
United Kingdom	334	669	1132
China ††	...	205	377
Canada	150	216	347
Netherlands	168	254	304
Korea **	35	195	266
India ††	49	108	228
Brazil *	0	109	200
Australia	27	37	139
Mexico* **	18	75	115
Denmark	78	73	108
Sweden	62	77	89
South Africa * **	36	50	73
Russia *	...	5	31
JP Morgan GBI-EM Broad	174	899	1473
JP Morgan GBI-EM Global	125	545	826
<i>Memorandum items</i>			
Emerging markets domestic securities	2315	6501	9011#
Government securities	1465	4448	5786#
of world government securities	9%	17%	15%#

Source: BIS; JP Morgan.

† Inclusion in JP Morgan GBI indices is based on liquidity as measured by various liquidity proxies; see JP Morgan, JP Morgan government bond indices, January 2002; JP Morgan, Introducing the government bond index-emerging markets (GBI-EM) family of indices, December 2009.

†† JP Morgan GBI-EM Broad. Not readily accessible for external investors.

\*JP Morgan GBI-EM Global.

\*\* JP Morgan GBI Broad.

‡ February 2011; #September 2010.

Emerging markets local currency government bond markets have a market capitalisation of about US\$1.5 trillion (JP Morgan Government Bond Index-Emerging Markets (GBI-EM) Broad). The benchmark investment universe is US\$0.8 trillion when excluding countries that are not readily accessible (Argentina, China and India) due to prevailing capital account restrictions (JP Morgan GBI-EM Global Diversified (GBI-EM GD)). The GBI-EM GD thus represents about 15 percent of the United States equivalent benchmark government securities index (JP Morgan GBI United States) (Table 2).<sup>13</sup>

Emerging markets offer deep and liquid markets in shorter-duration instruments in the form of forward contracts and other money market-type instruments that may also qualify as reservable assets. The supply of shorter duration instruments often exceeds that of longer dated notes and bonds and allows liquid and scalable investments.

The bond index securities also may not be fully representative of actual securities investment opportunities. The stock of total government securities in emerging markets is US\$5.8 trillion (of which China and India represent US\$2.2 trillion) and therefore offer other non benchmark securities investment opportunities. Emerging markets government securities represent on average about 15 percent of total government securities.

### **Emerging Markets Reserve Diversification Fund**

The proposed emerging markets reserve diversification fund (EMRDF) is intended to offer a diversified exposure to the most important emerging markets currencies and their underlying securities as a one-stop reserve allocation solution. Selected currencies would only include high grade G20 emerging markets currencies and investments would be predominately in government and central bank securities and where access is constrained in forward foreign exchange contracts including on a non-deliverable basis. The fund would be available only to central banks. Currency allocation would rest on GDP weights of the currency issuing countries—countries' weights would be limited to not more than 20 percent of the total portfolio with the excess distributed proportionately—augmented by a credit and currency accessibility filters. to allow for adequate diversification.

EMRDF rests on three fundamental principles:

- i) Investment universe: Investments would be limited to currencies that are believed to be able to play a credible international role in the foreseeable future and meet minimum credit attributes. The aim is not to provide broad diversification but rather to seek exposure to currencies central banks consider sufficiently relevant for inclusion.
- ii) Commercial nature: The fund will follow strict commercial considerations to ensure its attractiveness.
- iii) Exchange losses: Central banks would assume all exchange rate losses resulting from their exposure to the fund. However, the fund is seen as a vehicle to foster greater currency diversification and therefore as supporting greater immunisation against exchange losses.

EMDRF would aim to play a constructive role in the development of emerging markets local securities markets. The fund could become a key vehicle to promote demand for longer-dated securities, foster best market practice and thus support governments in lengthening maturities and build liquid benchmark yield curves. The fund would therefore also be highly conducive to advancing conditions for the internationalisation of emerging markets currencies.

The fund would seek to gain a special status to be exempt from prevailing capital account controls in countries where restrictions apply. This is consistent with exemption regimes for central banks under the Asian Bond Fund and previously under the European Monetary System. The actual fund size would depend on obtaining exemption regimes in the respective countries. Where exemptions cannot be obtained country weights may be adjusted downwards accordingly. Securities availability may also constrain actual investments even where no explicit restrictions exist. The fund would seek to obtain special security issues from the relevant countries to be able to assume targeted allocations.

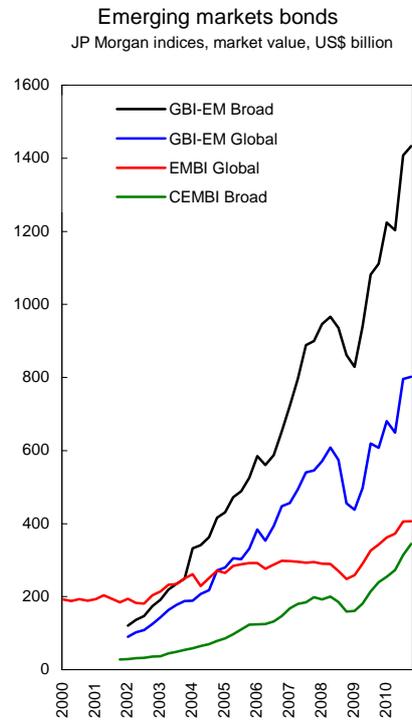
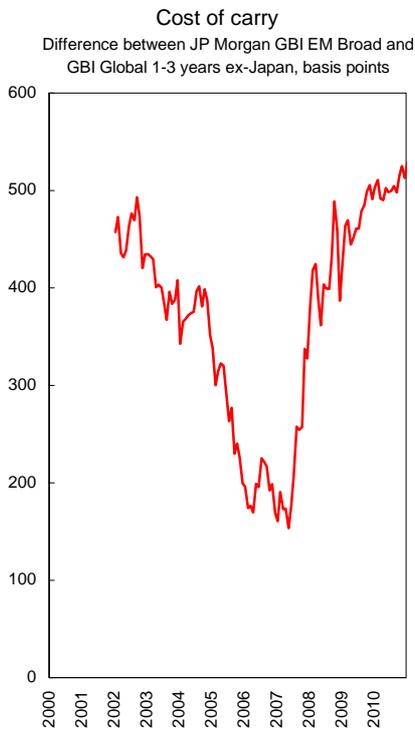
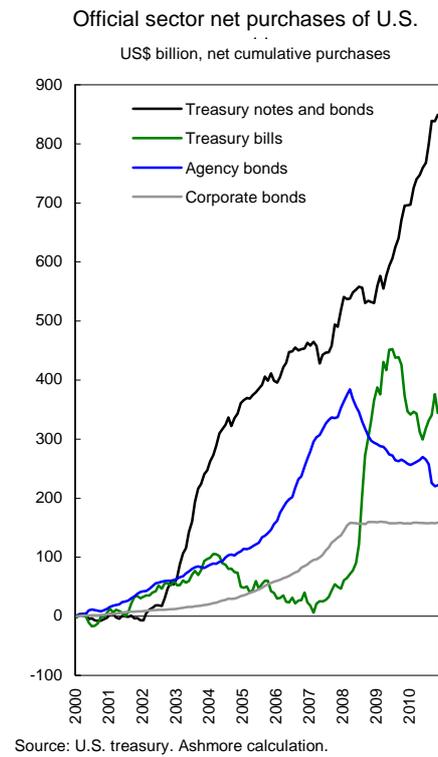
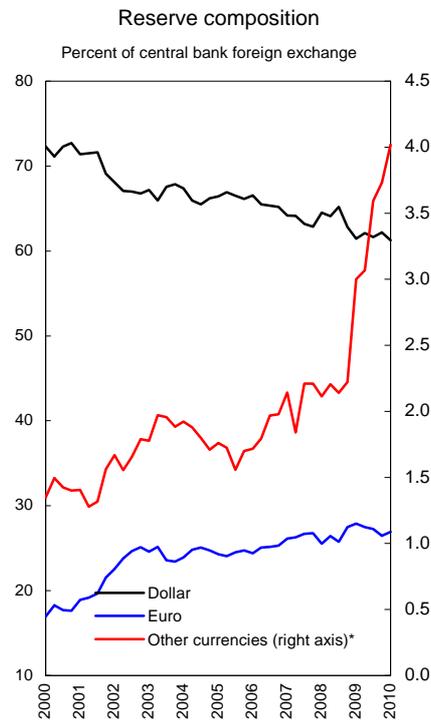
Central banks would acquire shares in the fund denominated in dollars against provision of resources in main reserve assets. In a first step, the acquisition of shares of the fund would correspond to a substitution of reserve assets and will alter the composition but not the level of reserves. In a second step, local investments, corresponding to a capital inflow, would increase international reserves by the invested amount. The fund would seek initially to make investments directly with local treasuries where treasury securities are acquired. This would

allow bypassing the local foreign exchange and government securities markets and effectively sterilise the capital inflow assuming that local treasuries would deposit proceeds with their central banks. The nature of the investment composition of the fund implies that participating central banks may hold a partial exposure to their own securities given the investment universe. Some central banks may choose to hedge this exposure.

EMRDF fund could aim to target an initial investment of US\$0.5 trillion to be funded and invested gradually over 5 years. As such the fund would represent about 5 percent of current central bank foreign exchange reserve holdings and about 30 percent of the market capitalisation of the JP Morgan GBI Broad. Investments by the fund would be closely coordinated with local governments but must not be limited to investments in government bonds.

EMRDF's legal, custodial and administrative structures would be based on the highest industry standards. The fund would allow daily dealing and is seen as compliant with the IMF definition for international reserves and provisions under pooled assets of the IMF Balance of Payments Manual Sixth Edition.

**Figure. International reserves indicators**



JP Morgan Government Bond Index Emerging Markets (local currency government bond index)  
 JP Morgan Emerging Markets Bond Index (external debt government and quasi government bond index)  
 JP Morgan Corporate Emerging Markets Bond Index (external debt corporate debt index).

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<sup>1</sup> Xiaochuan Zhou (2009), "Reform of the international monetary system," People's Bank of China website <http://www.pbc.gov.cn/english/detail.asp?col=6500&id=178>, 23 March 2009; President of Russia (2009), "Russian proposals to the London Summit (April 2009)," President of Russia website <http://eng.kremlin.ru/text/docs/2009/03/213995.shtml>, 16 March 2009. Présidence de la République, Priorités de la présidence française du G20 en 2011, Dossier de presse de présentation de la présidence française du G20 et du G8,

<sup>2</sup> The idea follows in principle the proposal laid out by Robert Roosa, "Assuring the free world's liquidity," Federal Reserve Bank of Philadelphia, Business Review Supplement, September 1962. Roosa, a leading U.S. treasury official at the time, proposed that the United States should start accumulating currencies of other countries to control the supply of dollars for international liquidity requirements. He thought this would allow bringing other currencies into "mutual sharing of some of the responsibilities which the international reserve system must itself carry." While the other currencies would not be "equally capable of serving the multitude of functions required of a reserve currency," they could be complements. Roosa concluded that this would be one of the most reliable developments to follow in recognising that "as long as changes occur in the degree of confidence in the dollar or in other currencies, it will be impossible to escape pressures."

<sup>3</sup> E.g. the Financial Times on 7 July 2010 featured the headline "China rules out 'nuclear option' on T-bills" arguing that China has no plans to reduce significantly its holdings of U.S. government securities.

<sup>4</sup> For a more recent proposal for a common framework for reserve diversification see Truman, E. and Wong, A. (2006), "The case for an international reserve diversification standard," Institute for International Economics Working Paper 06-02, Washington D.C.

<sup>5</sup> The current third Central Bank Gold Agreement in force covers the gold sales of the Eurosystem central banks, Sweden and Switzerland over 5-year period (27 September 2009 to 26 September 2014). The agreement stipulates that annual gold sales will not exceed 400 tonnes and that total sales over the agreement period will not exceed 2,000 tonnes. This followed similar agreements of 1999 and 2004. The first Central Bank Gold Agreement (also known as the Washington Agreement on Gold) was announced on September 26, 1999 and responded to increasing concerns that uncoordinated central bank gold sales were destabilising the market, driving the gold price sharply down. At the time, central banks held nearly a quarter of all the gold estimated to be above ground (equivalent to around 33,000 tonnes in September 1999) so their actions were of key interest to the gold market (Gold Council).

<sup>6</sup> On the substitution account, see e.g. Kenen, P. (2010), "The substitution account as a first step toward reform of the international monetary system," Peterson Institute for International Economics, Policy Brief, March 2010.

<sup>7</sup> The BIS launched the Asian Bond Fund in 2003 in response to a proposal from EMEAP central banks with the aim to facilitate the re-investment of a small portion of Asia's reserves back into the region while at the same time aiding the development of regional capital markets (BIS).

<sup>8</sup> The Banker commented that "the [Basle] arrangements are symbolically important as the first concrete step to help phase out sterling's long role as a reserve currency," The Banker, "Sterling policy now," February 1977, page 15.

British Prime Minister Callaghan coined the phrase "safety net" within the context of the financial support package for the British pound in 1977. The Times (12 January 1977) reported that Callaghan announced a "financing facility [...] as a safety net for Britain's sterling balances." The Times (7 February 1977) posted as headline "Safety net if reserves drop below US\$6750 million" to describe the then newly established support mechanism for the British pound.

The IMF 1977 Article VIII report described the measures as "keeping with one of the main purposes of the arrangement to permit an orderly diminution in official sterling balances to working levels [...]. The U.K. representative said that they intended to continue to encourage official holders to reduce their balances to working levels [...]" IMF (1977), United Kingdom—Staff Report for the 1977 Article VIII consultation, Washington D.C., 30 June 1977 (SM/77/155).

<sup>9</sup> On a survey of the modalities of the decline of the British pound as a reserve currency, see Schenk, C. (2009), "The retirement of sterling as a reserve currency after 1945: Lessons for the US Dollar?" mimeo, University of Glasgow, May 2009.

<sup>10</sup> For a recent review of the Triffin dilemma, see Mandeng, O (2009), "A new Triffin dilemma," Central Banking February 2009.

<sup>11</sup> The amount of reserves excludes in many instances holdings of other financial public sector institutions like sovereign wealth funds.

<sup>12</sup> Data refer to holdings of U.S. securities only due to availability.

<sup>13</sup> Instrument inclusion for the JP Morgan GBI indices is based on liquidity thereby showing actual allocation and trading opportunities.