



THE OFFICIAL USE OF INTERNATIONAL CURRENCIES – ASSESSMENTS AND IMPLICATIONS

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Abstract:

The paper analyses the official use of international currencies as reserve currency (store of value) and anchor currency (unit of account). Examining the role as a reserve currency we note that the US dollar is the main reserve currency even if it recorded a decline given the decrease of the value of the US dollar reserve holdings and the gradual diversification of the currencies used. Since 2010, the euro's share decreased continuously may be due to the Eurozone crisis and the euro's depreciation against the US dollar. Then we show that the US dollar dominates as an anchor currency, though it was temporary abandoned during crisis time, having more than a regional dimension. At the same time, the use of the euro in exchange rate arrangements appears mainly in the regions that have close links with the euro area. Over the last few years, we have witnessed a gentle orientation towards a multimonetary world, especially regarding the use of the international currencies as reserve currency given the diversification of the currencies in which central banks understand to hold international reserves and the increasing share of the nontraditional currencies in total foreign exchange reserves.

Key words: *reserve currency, anchor currency, international currencies*

1. Introduction

The official use of international currencies is analyzed as reserve currency and anchor currency, considering the general functions of an international currency as store of value and unit of account respectively.

2. International currencies as reserve currencies

From a value of USD 93.1 billion in 1970 (78.5% of developed countries and 21.5% of developing countries), total international reserves (including gold) increased significantly to USD 6.9 trillion in 2007, USD 10.7 trillion in 2011 and USD 13.1 trillion in 2014 (at constant prices and exchange rates). This growth in reserves was fueled by net inflows of private capital. In particular in response to '90s crises, developing

countries increased their preventive holdings of international reserves, accounted for 53.8% of total international reserves in 2000 and 75% in 2011.

In 2014, foreign exchange reserves, the largest component of international reserves, recorded 88.4% of total reserves, of which emerging and developing countries hold almost two-thirds, according to IMF.

The value of China's official reserves doubled in 2011 compared to 2007, reaching USD 3.9 trillion in 2014, China holding the first position in the ranking of countries with the largest international reserves, followed by Japan and Russian Federation (in 2007) or Saudi Arabia (in 2014), as shown in Table 1.

Table 1. Top of the countries with the largest international reserves (including gold) in 2007-2014

| Country | Total reserves, including gold (billion, current USD) | | | | | | | | Place | |
|--------------------|---|--------|--------|--------|--------|--------|--------|--------|-------|-----|
| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | '14 | '07 |
| China | 1546.3 | 1966.0 | 2452.9 | 2913.7 | 3254.7 | 3387.5 | 3880.4 | 3900.0 | 1 | 1 |
| Japan | 973.3 | 1030.8 | 1049.0 | 1096.1 | 1295.8 | 1268.1 | 1266.8 | 1260.7 | 2 | 2 |
| Saudi Arabia | 309.3 | 451.3 | 421.0 | 459.3 | 556.6 | 673.7 | 737.8 | 744.4 | 3 | 4 |
| Switzerland | 75.2 | 74.1 | 134.6 | 270.8 | 330.6 | 531.3 | 536.2 | 545.8 | 4 | 10 |
| USA | 277.5 | 294.0 | 404.1 | 488.9 | 537.3 | 574.3 | 448.5 | 434.4 | 5 | 5 |
| Russian Federation | 478.8 | 426.3 | 439.3 | 479.2 | 497.4 | 537.8 | 509.7 | 386.2 | 6 | 3 |
| Brazil | 180.3 | 193.8 | 238.5 | 288.6 | 352.0 | 373.2 | 358.8 | 363.6 | 7 | 8 |
| Korea | 262.5 | 201.5 | 270.4 | 292.1 | 306.9 | 327.7 | 345.7 | 362.8 | 8 | 7 |
| Hong Kong | 152.7 | 182.5 | 255.8 | 268.7 | 285.4 | 317.4 | 311.2 | 328.5 | 9 | 9 |
| India | 276.6 | 257.4 | 284.7 | 300.5 | 298.7 | 300.4 | 298.1 | 325.1 | 10 | 6 |

Source: World Bank, *World Development Indicators*, 2015

The literature identifies several *determinants of reserve holdings*, namely: size of economy, trade openness, balance of payments volatility (Bordo and Eichengreen, 1998); the depth and liquidity of the financial markets (Chinn and Frankel, 2008a, 2008b); opportunity cost (Landell-Mills, 1989). The IMF (2003) finds five key factors: economic size, current account vulnerability, capital account vulnerability, exchange rate flexibility and opportunity cost.

Fischer (2001) argues that the level of reserves is a decisive factor in explaining, predicting and managing economic and financial crisis. Some voices argue that the accumulation of international reserves is justified for reasons of precaution (Lee, 2004; Medoza, 2004), of need for protection against volatile capital flows and, for countries hit by the Asian crisis, of the intention not to call for funding from IMF (Stiglitz, 2006). Others show that at least since 2000 the reserves accumulation in emerging Asia is not justified by reason of precaution, in terms of insurance against financial market volatility and capital account crises (Jeanne, 2007). Dooley, Folkerts-Landau and Garber (2003) believe that the accumulation of reserves reflects the intervention of central banks in Asia in order to avoid an overvaluation of the national currency against the US dollar in order to stimulate export growth.

IMF (IMF, 2010, p. 22) considers that the accumulation of reserves in recent years is a subsidiary product of policies aimed at more of a tendency "against the current appreciation" than strengthening of preventive buffers. The huge stocks of international reserves that developing countries have created at the end of the Asian crisis are a clear testimony that, outside periods of crisis, currencies of the major emerging countries are under permanent pressure of appreciation, thereby exceeding its value. This endangers the competitiveness of affected countries on the international market and destroys the welfare trade effects.

In conclusion, the policy of international reserves accumulation in the last decade is not only the result of a national policy selfish objective, but also of the weaknesses of a monetary system that works without clear rules regarding the exchange rate and with variate currency arrangements.

Regarding *the currency structure of international reserves*, according to Eichengreen (2005) it was the following during 1899-1995 (Table 2): In 1899, the share of the British pound holdings of international reserves was 64% while the German mark and the French franc stood at close positions, 15% and 16% respectively; In 1913, the British pound had less than half of the international reserves (48%), the French franc has doubled the share reaching 31% and the German mark remained constant at 15%; In the interwar period, the British pound, the US dollar and the French franc were the main reserve currencies of the world; In the second half of the twentieth century, the US dollar was the first reserve currency (84.5% in 1973), the shares of other currencies greatly decreasing (before the `70s, the British pound was the second reserve currency but was replaced later by the German mark). The share of US dollar decreased in the late `80s and the early `90s (from 66% in 1987 to 56.4% in 1995) while the British pound, the French franc and the German mark `shares registered a slight increase (Orăștean, 2013).

**Table 2. The currency structure of international reserves in 1899-1995
(% of total)**

| Currency | 1899 | 1913 | 1973 | 1987 | 1995 |
|-----------------|-------------|-------------|-------------|-------------|-------------|
| USD | - | - | 84.5 | 66.0 | 56.4 |
| GBP | 64 | 48 | 5.9 | 2.2 | 3.4 |
| FRF | 16 | 31 | 1.2 | 0.8 | 1.8 |
| DEM | 15 | 15 | 6.7 | 13.4 | 13.7 |
| JPY | - | - | - | 7.0 | 7.1 |
| Others | 5 | 6 | 1.7 | 10.6 | 17.6 |

Source: Eichengreen, B., (2005), *Sterling's Past, Dollar's Future: Historical Perspectives on Reserve Currency Competition*, NBER Working Paper, 11336, pp. 28-29

In the *second half of `90s* it is recorded an upward trend of the US dollar, from 56.4 in 1995 to 71.1% in 2000, levels not seen since the `70s. The maximum share of

the US dollar, 71.5% in 2001 concurred with the historical peak of the US dollar since March 2002.

The *period 2000-2014* is characterized by reducing the US dollar share as the main currency reserve (from 71.1% in 2000 to 62.9% in 2014) and reinforcement of the euro as the second international reserve currency (from 18.3% in 2000 to 22.2% in 2014).

The decline of the US dollar was determined by the decrease of the value of US dollar reserve holdings and the gradual diversification of currencies used. The US dollar share of international reserves was 63.4% for developed countries in 2014 (compared to 69.7% in 2000) and 62.2% in the emerging and developing countries (compared to 74.9% in 2000).

Regarding the euro, when it was introduced in 1999 took the weights of the German mark and the French franc in total international reserves, setting up this position as a reserve currency after the US dollar, but before some currencies such as the British pound, the Japanese yen and the Swiss franc. It followed a period of sudden increase (from 17.9% in 1999 to 25.2% in 2003) and then a relatively constant movement around 25%, followed again by a rise to a historic high of 27.6% in 2009. Since 2010, the euro's share decreased continuously from 26.2% in 2010 to 24.7% in 2012 and 22.2 in 2014. This decline may be due to the Eurozone crisis and the euro's depreciation against the US dollar. The share of the euro in reserves of developed countries was 22.8% in 2014 (compared to 18.4% in 2000) and 21.5% in the emerging and developing countries (compared to 18% in 2000).

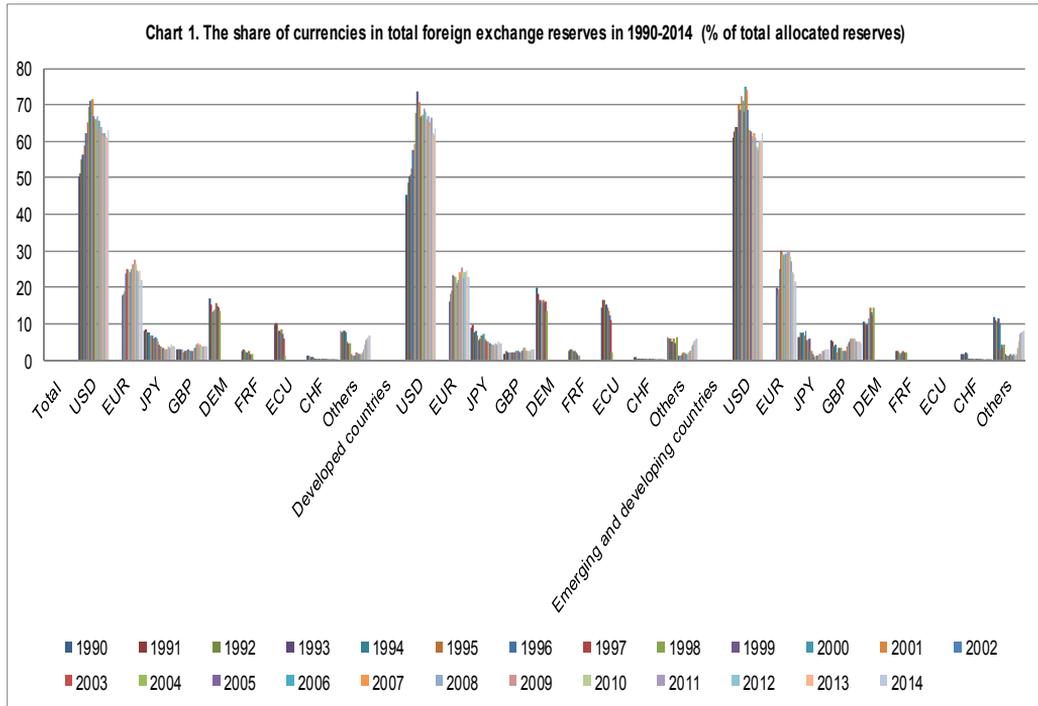
In 2014 it was recorded relatively equal weights of the Japanese yen and the British pound, 4% and 3.8% of international reserves.

The share of all other currencies in total foreign exchange reserves has grown reaching 6.8% in 2014 from 1.4% in 2000, but this increase was more significant since 2007 when raise the importance of non-traditional reserve currencies (the Chinese renminbi, the Australian dollar, the Canadian dollar). These currencies have a higher share in emerging and developing countries, 8.1% in 2014 respectively, compared to 5.8% in developed countries.

During the global crisis, the US dollar and the euro` shares fell from 64.1% in 2007 to 62.9% in 2014, and from 26.3% in 2007 to 22.2% in 2014 respectively.

In 2014, information regarding the currencies structure of international foreign exchange reserves were available for 52.5% of total. In fact, the share of unallocated reserves, for which there is no information on the currencies composition, recorded an alarming increase (affecting the quality of research), from 22.6% in 1999 to 47.5% in 2014.

Chart 1 shows the evolution of currency composition of global foreign exchange reserves in 1990-2014.



Source: IMF, *Annual Report*, 1996-2015

It is estimated that Asian central banks currently hold about 70% of global reserves, compared with 30% in 1990, most of which (80-90%) formed of US Treasury bonds.

According to Bank of International Settlements appraisals (BIS, 2010, p. 201), the currencies structure of China international reserves is 79% US dollar and 21% euro, while China report set 70% US dollar, 20% euro and 10% others currencies.

3. International currencies as anchor currencies

One of the monetary authorities` problems, with implications for the size and the composition of international reserves and foreign exchange interventions is to make a choice for an optimal currency regime or exchange rate arrangement.

Furthermore the literature is not generous regarding the *factors that determine the option for an anchor currency*. Meissner and Oomes (2008) demonstrate empirically for a group of 100 countries in the period 1980-1998 that the key factor is trade network externalities, which means that the choice may be a suboptimal anchor currency (for example, the US dollar) and changes of the anchor currency by a small number of countries can have effects on the international monetary system. The authors identify also other factors, namely: symmetry of output shocks; currency denomination of liabilities; currency denomination of exports; regional preferences.

Bracke and Bunda (2011) give a measure of exchange rate anchoring behavior for 149 countries in the period 1980-2010, building a global indicator of exchange rate regime choice that aggregated the currency regime with the shares of individual countries in world trade. Among the factors influencing the choice of an anchor currency are listed: effects of trade networks; currency of long-term debt denomination; regional aspects.

Exchange rate arrangements are dynamic through their constant diversification and short term changes. Currency regimes are very different, from more rigid forms (currency board or peg) to free floating, based on the market exchange rate movements. Table 3 presents the exchange rate arrangements of IMF member countries during 1970-2014.

**Table 3. Classification of the exchange rate arrangements in 1970-2014
(% of IMF member states)**

| Year | Peg (hard and conventional) | Limited flexibility | Managed floating | Free floating |
|-------------|------------------------------------|----------------------------|-------------------------|----------------------|
| 1970 | 97.2 | 0 | 0 | 2.8 |
| 1975 | 63.9 | 11.1 | 13.9 | 11.1 |
| 1980 | 38.9 | 5.6 | 47.2 | 8.3 |
| 1985 | 33.3 | 5.6 | 36.1 | 25.0 |
| 1990 | 19.4 | 13.9 | 30.6 | 36.1 |
| 1995 | 13.9 | 8.3 | 38.9 | 38.9 |
| 1999 | 11.1 | 11.1 | 33.3 | 44.5 |
| 2008 | 47.3 | 5.5 | 28.2 | 19.7 |
| 2011 | 47.9 | 8.5 | 27.8 | 15.8 |
| 2014 | 44.2 | 12.4 | 28.2 | 15.2 |

Source: for the period 1970-1999, see Calvo, G., Reinhart, C., (2000), *Fear of Floating*, NBER Working Paper, 7993, p. 32 for the period 2007-2014, author's calculations using IMF data - IMF, *Annual Report on Exchange Arrangements and Exchange Rate Restrictions*, 2010-2014

As it can be seen, the `70s is characterized by a preference for fixed exchange rate regimes, while the `80 indicate an increased flexibility. 1990s still bring an increase in flexible arrangements, especially in the emerging countries of Asia and Latin America as a response to the financial crisis. The global crisis caused a shift to more fixed exchange rate regimes (47.9% in 2011), while floating regimes decrease (managed floating - 27.8% and free floating - 15.8% in 2011). In 2014, fixed regimes` share decreases to 44.2% and at the same time it is recorded an increase of the share of the exchange regimes with limited flexibility to 12.4%.

The evolution of the international monetary and financial system led to a reshaping of the role of anchor currencies, especially the US dollar. During the Bretton Woods system, the US dollar was the predominant anchor currency in the developed

countries, followed by the British pound and the German mark. In developing countries, the top positions were occupied by the US dollar, the British pound and the French franc, mainly due to France's colonial history (Rogoff et al., 2003). After 1973, the British pound has never been through the options and the US dollar declined in popularity among developed countries, some pegging their currencies to the German mark and then to the euro. Developing countries have started using the US dollar as a monetary anchor, except French colonies that continued pegging to the French franc and later to the euro. Even if the 1990s crises have made some emerging countries to temporarily abandon pegging to the US dollar, however the US dollar regained shortly the leader place as anchor currency. Something similar it happened during the global financial crisis.

The importance of an international currency as an anchor currency can be quantified by the number of countries that pegged their currency to that monetary unit (see Table 4).

The use of the US dollar in various exchange rate regimes has grown rapidly at the global level and has more than a regional dimension. While many Western Hemisphere countries peg their currency to the US dollar, such phenomena can be observed also in other parts of the world, including Asia and CIS countries.

Table 4. US dollar-based exchange rate arrangements in 1995-2010 (number of countries from 207 total reporting countries)

| Exchange rate arrangement | 1995 | 2000 | 2005 | 2010 |
|--|-------------|--------------|--------------|--------------|
| Dollarized or currency board | 9 | 8 | 7 | 8 |
| Pegged | 82 | 85 | 90 | 90 |
| Maintained managed floats with US dollar as reference currency | 6 | 8 | 6 | 9 |
| Total (number and % of total 207) | 97 (47%) | 101 (49%) | 103 (50%) | 107 (52%) |

Source: Goldberg, L., (2011), *The International Role of the Dollar: Does It Matter if This Changes?* Federal Reserve Bank of New York Staff Reports, 522, October, p. 23

As noted, the US dollar maintained its dominant position as a currency anchor in the past three decades, with a share around 50%. It is estimated that the shares of the euro and the Japanese yen are far smaller, at around 7.5% and 3%, respectively (Bracke and Bunda, 2011, p. 30).

The use of the euro in exchange rate arrangements appeared mainly in the regions that have close links with the euro area – member states of the European Union that are not part of the euro area, candidate states to the European Union, European microstates, Balkan or African countries and French overseas territories – that have adopted different types of currency regimes covering the full spectrum of possible arrangements, according to Table 5.

Table 5. Euro-based exchange rate arrangements

| Exchange rate arrangements | Countries |
|--|---|
| Euroisation | European microstates (Andorra, San Marino, Vatican, Monaco) French overseas territories (Saint Barthelemy, Saint Martin, Saint Pierre and Miquelon) Kosovo, Montenegro |
| Currency board | Bulgaria, Estonia (on January 2011 adopted the euro), Lithuania (on January 2015 adopted the euro), Bosnia and Herzegovina |
| ERM II | Cyprus (since May 2005; on January 2008 adopted the euro), Denmark (± 2.25), Latvia ($\pm 1\%$; on January 2014 adopted the euro), Malta (since May 2005; on January 2008 adopted the euro), Slovakia (since November 2005; on January 2009 adopted the euro), Slovenia (since June 2004; on January 2007 adopted the euro) |
| Free floating | Sweden, United Kingdom, Hungary (since 25 February 2008), Poland, Albania, Serbia, Turkey |
| Managed floating with the euro as reference currency | Czech Republic (on 7 November 2013 adopted an exchange rate ceiling of 27 CZK/EUR), Romania, Croatia, Macedonia |
| Peg to the euro | CFA franc zone, CFP franc zone, Cape Verde, Comoros, Sao Tome and Principe |
| Crawling peg involving the euro | Botswana (since 2005) |
| Others arrangements with the euro as reference currency | Switzerland (on 15 January 2015 abandoned the exchange rate ceiling of 1.20 CHF/EUR adopted on 6 September 2011) |
| Peg and managed floating (to the SDR and to other currency baskets including the euro) | Algeria, Belarus, Fiji, Iran, Kuwait, Libya, Morocco, Samoa, Seychelles, Singapore, Syria, Tunisia, Vanuatu, Russian Federation (on 10 November 2014 abandoned the exchange rate regime based on US dollar/euro currency basket introduced in February 2005) |

Source: ECB, *The International Role of the Euro*, 2008-2015

4. Conclusions

In conclusion, regarding the official use of international currencies, the US dollar is the main reserve currency and monetary anchor, playing an important role in the exchange rate policy of the monetary authorities from different continents. The official use of the euro is concentrated in the regions that have close links with the euro area and this shows that regional trade and financial patterns are still important in the global monetary system.

Over the last few years, we have witnessed a gentle orientation towards a multimoneretary world, especially regarding the use of the international currencies as reserve currency given the diversification of the currencies in which central banks understand to hold international reserves and the increasing share of the nontraditional currencies in total foreign exchange reserves.

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