

## GOLD AS A FOREIGN EXCHANGE RESERVE OF CENTRAL BANKS

Dragan Golijan, professor

Tijana Šoja, dipl. ing. (Viši stručni saradnik za upravljanje portfolijom)

**Abstract:** *Gold, as a precious material, has always attracted attention and had one of the very important roles in trade flows. Once, while there was no money in today's paper form, gold has served as the primary means of payment. The role of gold is different today, though still significant, especially in critical conditions that are characteristic of today's global economy. This paper will make the parallels between the behavior of the BRIC<sup>33</sup> countries, and their aspirations for growth in share of gold reserves in the current circumstances, and the countries of Western Europe, on the same basis, in the period after World War II, before the moment of the introduction of convertibility of their currencies. In addition, it will indicate the transfer of gold between countries, its "movement" through the recent history and present state and position of the gold reserves.*

**Keywords:** *gold, international monetary system, the price of gold, foreign exchange reserves, central bank*

### INTRODUCTION

The price of one ounce of gold today achieves record levels. Until a year ago price of an ounce of gold stood at USD 930, while ten years ago was only USD 270. Today is at the much higher level and record level of about US\$ 1,300.

From the earliest civilizations, gold is considered very valuable metal. It led to the conquest, the creation of the colonies, encouraged the search in remote areas, and even inspired the great works of world poetry. Gold is used to represent the main means of payment. Today it is used as well, so to say the currency, since it is used for making jewelry, awards, medals, etc. In addition, gold is a safe haven for capital in crisis and uncertain times.

Demand for gold, which recently has a strong tendency to increase, led to a record gold price, as noted above. Gold buyers today are not just wealthy investors. Even „ordinary“ people who do not have huge sums of money available for business investment, buying small amounts of gold on the stock market - largely because of expectations that they will make a profit on this investment. Most analysts predict further expansion of the gold price. Forecasts ranging up to USD 1,500 - USD 1,600 per ounce of gold.

The fear of inflation also affects the growth of gold prices. In accordance with the present conditions, some analysts predict short-term inflationary pressures in the U.S. and other developed countries. On the other hand, some analysts estimate such a scenario in which unsustainable debt of the United States and Europe affect the central bank to carry out a devaluation of their currencies. Such moves could lead to hyperinflation like those in Latin America during '70s and '80s, and in Germany between two wars - which would be reflected in the drastic rise in the price of gold.

---

<sup>33</sup> BRIC – Brasil, Russia, India, and China

Historically, the price of gold is rising when U.S. dollar is falling and vice versa. However, in recent times that is a situation where the dollar and gold rise in parallel, where it has nothing to do with the weakening dollar, but euros, analysts said. How long will the gold price to record growth – no one knows that and that cannot be determined with precision. This paper gives an overview of the movement of gold, as foreign exchange reserves, starting in 1948, until today, in fact, ended in 2010.. Specifically cover different periods that were crucial in the movement of gold - primarily the Bretton Woods International Monetary System - to 1971, with emphasis on the crisis of the international monetary system 1966 -1971. After that, it describes the movement of gold between the 1971 – 1997, in what was seen as reducing the role of gold. Also, it is extremely important moment of „migration“ of gold from Europe in the „southern“ countries, strengthening the of gold BRIC countries position, and the question of signing the Golden agreement of central banks.

## **GOLD AS A FOREIGN EXCHANGE RESERVE OF CENTRAL BANKS**

If we look balance sheets of central banks and other financial institutions, which have this precious metal in their portfolios, the structure of their monetary aggregates M1, we notice that the largest reserves of gold located at the Fed, the Bank of Italy, the Central Bank of Suisse, Central Bank of France, and Bundes bank. Among central banks and countries with less than gold in their portfolios are the Central Bank of Japan, the Bank of England, and the Central Bank of China, which recently rapidly increase gold reserves. Since gold has no longer a critical role in the monetary system, as was the case in the system of Bretton Woods, similarities between this system and the BRIC countries of postwar Western European nations is now being observed. In both cases, countries are accumulating gold, which implied more rapid economic development and contributed to strengthening the credibility of the currency.

Although the gold reserves held by central banks, the way of using them depends on the policy of the country which has a key role in reaching „gold“ decisions. If the central bank is independent, it can lead to tensions between monetary and the legitimate government on the issue of which strategy to adopt when trading gold.

In the case of the Eurosystem, the revenue from the sale of gold is intended for the central banks that made the sale. However, the main shareholder of the country is the central bank and it is an indirect recipient of the sales revenue later. According to the IMF report, in September 2010, total world gold reserves are recorded level of 30,535.6 tons.

The largest share of total reserves of gold had U.S., the IMF, and Germany.

This data is evident from Table No. 1

	Ounces of gold in mil.	Gold/tons	The value of the reserves i (USD* billions)	The value of gold (in % of central bank balances)	Reserves of gold (in %M1)	The share of gold in foreign exchange reserves in %	The share of gold in GDP in %
<b>USA</b>	<b>261,50</b>	<b>8.134,20</b>	<b>357,50</b>	<b>15,30</b>	<b>20,50</b>	<b>75,30</b>	<b>2,50</b>
<b>Germany</b>	<b>109,40</b>	<b>3.402,10</b>	<b>149,50</b>	<b>17,00</b>	<b>9,70</b>	<b>70,40</b>	<b>4,40</b>
<b>IMF</b>	<b>90,80</b>	<b>2.823,10</b>	<b>124,10</b>	<b>2,30</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>
<b>Italia</b>	78,80	2.452,10	107,80	24,10	9,70	22,40	5,00
<b>France</b>	78,30	2.435,60	107,00	17,10	11,00	58,50	4,00
<b>China</b>	33,90	1.054,50	46,30	1,20	1,30	1,70	0,90
<b>Switzerland</b>	33,40	1.040,20	45,70	15,30	10,30	16,50	8,10
<b>Japan</b>	24,60	765,30	33,60	2,40	0,50	3,00	0,60
<b>Russia</b>	24,30	756,10	33,20	6,30	10,70	6,80	2,60
<b>Netherlands</b>	19,70	612,50	26,90	14,20	6,30	58,20	3,30
<b>India</b>	17,90	557,80	24,50	15,70	1,30	9,20	1,80
<b>ECB</b>	16,10	501,50	22,00	0,70	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>
<b>Great Brittany</b>	10,00	310,30	13,60	3,40	0,80	17,60	0,60

\* Value of an ounce of gold is \$ 1,367.00

Source: Natixis, Economic Research, 19/01/2011, pp.2.

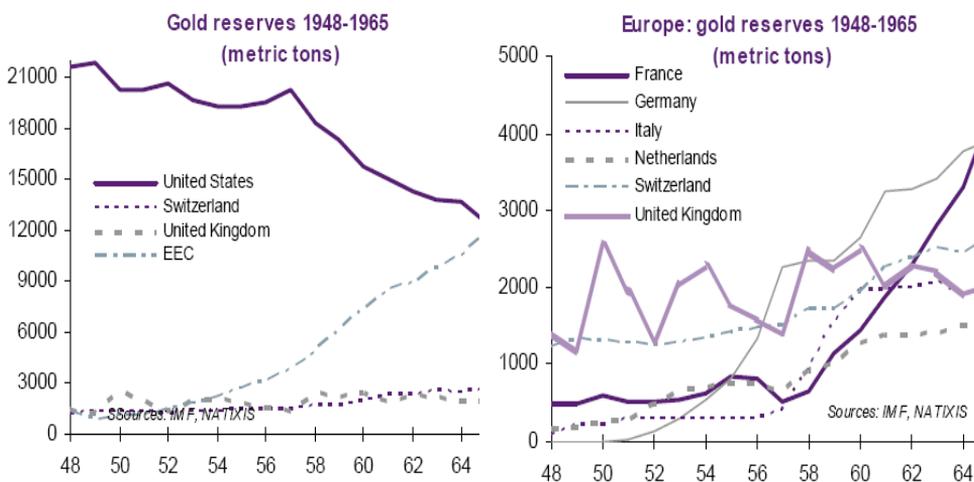
## **GOLD RESERVES IN THE BRETTON WOODS SYSTEM**

It is generally known that the Bretton Woods system was formally established after the Second World War and stayed until 1971. The system has implied the introduction of gold - exchange standard, where parity of national currencies is assessed and expressed in gold or dollars. Countries have their currencies exchange rate pegged to the dollar, given that the dollar was freely convertible into gold (at a fixed rate \$ 35 per ounce of gold), therefore, all countries, and the rate of their currency was pegged to the dollar, had a fixed value in terms of gold. Exchange rates were not strictly (rigidly) fixed but

fluctuation (deviation) ranging from 1% up and down from parity were allowed.<sup>34</sup> To member states were allowed to carry out the initial exchange parities of their currencies in the face of severe balance of payments difficulties (fundamental disequilibrium of balance of payments).

At the end of World War II the U.S. held about 75% of total gold reserves (21,700 tons), which is justified given that the dollar was the center of a new international monetary system and other things, the full convertibility into gold. Dollar, as the only currency that could be freely converted into gold has become an international reserve currency (fixed „exchange rate“ of exchange was U.S. \$ 35 per ounce of gold.). During this period Great Britain was the second largest owner of gold reserves, where having only 5% of total gold reserves. Meanwhile, Switzerland has, for its neutrality during World War II and the geographical position take third place in terms of gold reserves. Swiss gold reserves amounted to 4% of total world gold reserves.<sup>35</sup> From World War II Europe came completely destroyed. Difficult period of economic growth in Western Europe contributed to the fact that the slow accumulation and generating foreign currency reserves in dollars. Since 1958, when European currency could again be converted to dollar, foreign currency were piled up in the U.S. and they were massively converted into gold at the Fed, which resulted in the reduction of gold in the U.S. Following chart shows the movement of gold in 1948 – 1965:

Chart 1: Trends in gold in tons in period 1948-1965



Source: Natixis, *Economic Research*, 19/01/2011, pp.3.

As noted, the curve that follows the movement of gold at the Fed, USD, records a sharp drop from 1958. This trend continued until 1971. On the other hand, the EEC had a tendency to increase gold reserves. As for European countries, it shows that all countries which have been captured in the analysis, recorded increase in gold reserves. The biggest trend was recorded in Germany and France.

<sup>34</sup> Acin, Đ., „Međunarodni ekonomski odnosi“, Pigmalion, Novi Sad, 2003. godine, str.183.

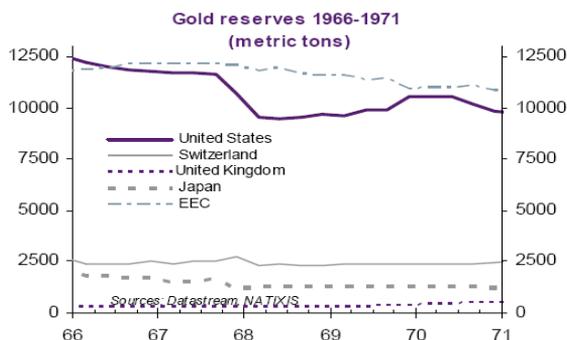
<sup>35</sup> Bordo, D., M., Dittmar, R., „Gold, Fiat Money and Price Stability“, National Bureau of Economic Research, Cambridge, 2003. str.13.

## THE CRISIS OF THE INTERNATIONAL MONETARY SYSTEM, THE PERIOD 1966-1971

In general, the international monetary system has become unstable over time, a significant part as a result of spending significant sums of money for financing the war in Vietnam. International monetary system was attempting to „reconcile“ the two opposing goals. On the one hand, in order to gold-exchange standard function correctly, the U.S. must be able to protect USD/gold parity, which required a strict monetary discipline on their part. On the other hand, from the moment when dollar became the international currency and reserve, the U.S. had to offer dollars to the world in order to maintain growth throughout the country and avoiding the risk of deflation. In line with this, the U.S. had to accept a high current account deficit. As long as the relation between the dollar and gold reserves in the United States was 1, there was no doubt that the U.S. cannot guarantee for USD/gold the exchange rate.<sup>36</sup>

In order to save the international monetary system, the countries of Western Europe have agreed that in 1966, suspended the ability to convert dollars into gold, while the U.S. opposed the current rate of exchange, i.e. the existing fixed exchange rate - USD 35 per ounce of gold. U.S. President Nixon's decision to suspend convertibility of dollars into gold in 1971, which marked the collapse of the Bretton Woods system. After that, on the scene came fluctuating exchange rate and gold no longer had initially significant role in the monetary system. At the end of 1971, United States possessed 9,000 tons of gold.<sup>37</sup>

Chart 2: Gold reserves in period 1966 – 1971 in tons



Source: Natixis, *Economic Research*, 19/01/201, p.3.

<sup>36</sup> Since 1964, this ratio was below 1. However, in period 1970 – 1971, this ratio recorded level of 5. These movements in Bretton Woods's system were named "Triffin Dilemma".

<sup>37</sup> Barro, Robert J. "Money and the Price Level Under the Gold Standard," *Economic Journal*, 89 (1979), 12.

## PERIOD OF REDUCING THE ROLE OF GOLD - 1971 - 1997

As gold was losing a key role in the international monetary system, in its place is slowly coming dollar. These movements were so radical that the IMF, under pressure from the U.S., continued its solid sales of its gold reserves, since 1976, and during the 1978, and has changed the articles of the IMF agreement in order to prevent other countries to bind their currencies to gold.<sup>38</sup> Central banks of Western countries recognized the stabilization of its gold reserves and modified them slightly only in urgent cases.

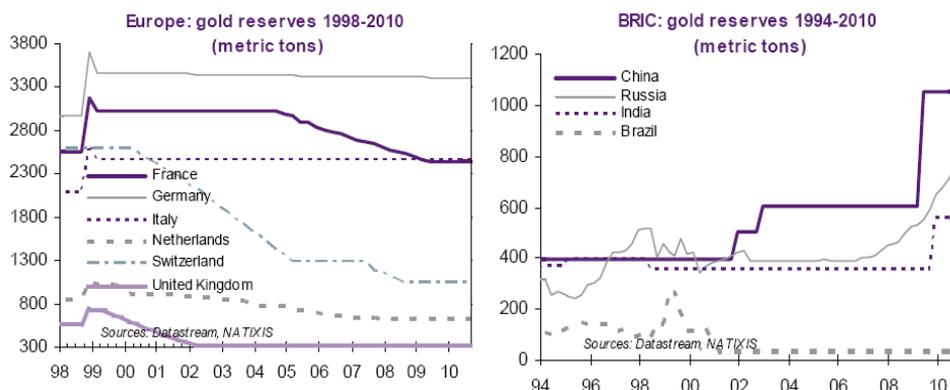
## „REMOVAL“ OF GOLD FROM EUROPE TO MARKETS IN EXPANSION SINCE 1998

Diversification of foreign exchange reserves of southern countries, since '90s of the last century showed expansion, and their willingness to increase the credibility of their currencies, have influenced the increase in gold reserves in these countries. Gold, bought by these countries, mostly comes from the „northern“ countries, primarily European. Between 2002 and 2010, these countries have bought following amounts of gold:<sup>39</sup>

- China bought 553.5 tons of gold;
- Russia increased its gold reserves for 127.3 tons (annual growth of 27.6% in 2010);
- India increased its gold reserves for 200 tons (annual growth of 56% in 2010).

Reserves of gold in the countries of Europe have recorded following movements:

Chart 3: European and BRIC reserves of gold in period 1998 – 2010



Source: Natixis, *Economic Research*, 19/01/2011, pp.4

Germany is, as you can see from the graphical view, a European country that has

<sup>38</sup> Flash Economics, *Economics Research*, Natixis, 19, January, No 49. 2010.str.4.

<sup>39</sup> Izvor: Economics Units, www.economics.com

maintained the highest level of gold reserves, while the UK recorded reduction. On the other hand, Switzerland has recorded a significant decline in gold reserves. At the same time, all BRIC countries recorded increase in foreign exchange reserves, excluding Brazil. China leads the world in volume of increasing gold reserves in period 1994 - 2010. In addition, Russia has a growing trend in gold reserves.

## **„GOLDEN“AGREEMENT OF CENTRAL BANKS**

The ECB and fourteen central banks in 1999 signed the General Agreement on gold. The agreement was later revised several times. However, when it was signed the first time, the agreement had three objectives:<sup>40</sup>

- To regulate the sale of gold at a time when Belgium, the Netherlands, Austria, Switzerland, and the United Kingdom sold or planned to sell gold;
  - To avoid any anxieties that may lead to uncoordinated sales of gold (the price of gold in 1980 amounted to USD 850 while in 1999 this price was U.S. \$ 255);
  - To prevent the drop in prices and destabilization of those economies that depends on the gold, such as South Africa.
- Central banks of countries that in 1999 signed this agreement were ECB, Portugal, Spain, France, Belgium, Luxembourg, Germany, Italy, Switzerland, Austria, England, Ireland, Sweden, and Finland. In 2004, the agreement was signed by Greece. In 2009, the agreement was signed by Cyprus, Malta, Slovenia, and Slovakia.

## **RESUME**

Great world crisis that is current for a long time resulted in strong growth in gold prices. Today, gold recorded high prices. Whether this trend continues in the future, largely depends on the crises in the world. In line with previous analysis, we can state the following:

- Although the gold in today's monetary system has a particularly important role, as was the case in the system of Bretton Woods, it reveals similar movement on the issue of trading gold between BRIC countries today and the countries of Western Europe in the period after World War II. In fact, after World War II Western European countries actively working to increase its gold reserves, aimed at strengthening the credibility of its currency and strengthening the balance sheet position - this policy now implemented BRIC countries with the same goal. Among these countries, especially the strong growth of gold reserves recorded China. In addition, the current position of this country, the second strongest world economy, has a significant impact on global economic trends;
- Central banks that accumulate the highest levels of gold reserves are the Fed, the Central Bank of Italy, the Central Bank of Switzerland, the Central Bank of France, and the Bundes bank. The smallest gold reserves have Central Bank of Japan, the Bank of

---

<sup>40</sup>Huffman, Gregory W., and Mark A. Wynne. "The Role of Intratemporal Adjustment Costs in a Multisector Economy" *Journal of Monetary Economics* 43 (1999), 317.

England, and the Central Bank of China, and India that recently rapidly increased its gold reserves;

- It is important to note that, in addition that gold foreign currency reserves are recorded at the central bank of each country, which are covered by this survey, the key decisions on transactions in gold brings country. Therefore, it can be said that the managing gold reserves of a country depends directly on the legitimate government and its policies. The bigger is independence of the central bank, the greater is tensions between central banks and government regarding the adoption of management gold policies;

- In the case of the Eurosystem, a revenue gain by the sale of gold shall be transferred to that central bank which is involved in the transaction. The ECB is during the formulation of the initial capital define that in overall structure of the initial capital gold must have a minimum 15% share. It is not defined whether this share of gold will change later.

## REFERENCES

1. Acin, Đ., "Međunarodni ekonomski odnosi", Pigmalion, Novi Sad, 2003;
2. Bordo, D., M. Dittmar, R., "Gold, Fiat Money and Price Stability", National Bureau of Economic Research, Cambridge, 2003. Huffman, Gregory W., and Mark A. Wynne: "The Role of Intra-temporal Adjustment Costs in a Multisector Economy" Journal of Monetary Economics 43 (1999),
3. Barro, Robert J. "Money and the Price Level Under the Gold Standard," Economic Journal, 89 (1979),
4. Gavin, William T., and Finn E. Kydland. "Endogenous Money Supply and the Business Cycle," Review of Economic Dynamics Vol. 2, No. 2 (1999),
5. Goodfriend, Marvin. "Central Banking under the Gold Standard," Carnegie Rochester Conference Series on Public Policy 29 (Spring 1988):
6. Flash Economics, *Economics Research*, Natixis, 19, January, No 49, 2011
7. Friedman, Milton and Anna Schwartz, "A Monetary History of the United States: 1867- 1960", Princeton University Press, Princeton, 1963.
8. Fujiki, Hiroshi. "A Model of the Federal Reserve Act under the International Gold Standard System," Journal of Monetary Economics 50 (2003), 1333-50.
9. Fuller, Wayne, "Introduction to Statistical Time Series," John Wiley, New York, 1976

Internet sources:

[www.gold.org/government\\_affairs/reserve  
asset\\_management/central\\_bank\\_gold\\_agreements/  
www.reuters.com  
www.economics.com](http://www.gold.org/government_affairs/reserve_asset_management/central_bank_gold_agreements/)