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# The International Monetary System: New Evidence Concerning a Transition to Multipolarity

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## Abstract

This article focuses on the transition of the international monetary system to a multipolar structure. The international monetary system continuously evolves, reflecting developments in the world economy. The main problem of the current international monetary system is its dependence on one key currency which still remains the US dollar. The authors of this study address the issue of a transition towards a multipolar system by examining currency concentration. The primary objective of this work is to establish whether or not the current international monetary system shows signs of transitioning towards multipolarity. To achieve this, the authors have used tools measuring the level of market concentration. The change of polarity of the international monetary system is analysed with concentration ratios and the Herfindahl-Hirshmann index. The theoretical part focuses on definitions of key terms essential for this study, such as international monetary system, currency polarity, global currency, and currency concentration. For the practical part, data were sourced from the databases of global institutions, namely the International Monetary Fund (IMF), Bank for International Settlements (BIS), Society for Worldwide Interbank Financial Telecommunications (SWIFT) and the European Central Bank (ECB). This part focuses on a period of time between 2001 and 2019, and the results indicate that the current international monetary system shows signs of transitioning towards a multipolar structure. The level of currency concentration of the key reserve currencies dropped slightly, although not enough to cause a qualitative change of the current international monetary system. This study may serve as a base for future research on this topic.

## Introduction

The weakening role of the US dollar in the international monetary system and the transition to a multipolar monetary structure have been the subject of many studies. For a long time, the international monetary system, with the US dollar as the global currency, constituted a unipolar structure. In the 1980s, this dominance was challenged by the Deutsche mark and the Japanese yen. Yet, not even they were able to succeed in replacing the dollar as the world's reserve currency (Eichengreen, 2011; 2019a). After the global financial crisis of 2007-2008, the sustainability of the US dollar dominance became a matter of great debate once again (Masson & Dailaimi, 2009; Zhou, 2009; Cohen, 2011; Obstfeld, 2011; Fahri et al., 2011). At the G20 meeting in Paris in 2010, the reform of the international monetary system was proposed by the French president, Nicolas Sarkozy. (Bennhold, 2010) Due to the debt crisis in the Eurozone in the following years, this reform was postponed.

In connection with the creation of a single European currency, the Deutsche mark was replaced by the euro in 1999, while due to the strengthening position of the Chinese economy within the global economy, the Japanese yen was partly replaced by the Chinese Renminbi, especially in Asia (Subramanian & Kessler, 2013). Historically, the dollar has played a critical role in European region (Eichengreen 2019a). The use of dollar and euro is on the same level in European region today. For geographical distribution of dollar, euro and renminbi in European region see Liu et all. (2019). In 2020, with the world on the verge of another global recession, discussions on the future structure of the international monetary system have come to the fore once more (Carver & Pringle, 2020). The last two decades have brought an increase in the importance of newly industrialized states in the world economy (Lowe, 2016), a deepening of global economic imbalances in the balance of payments current accounts

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(Ito & McCauley, 2019) and a worsened state of the US and Eurozone economies in the global economy (International Monetary Fund, 2020a). Changes concerning the world economy and systemically significant national (or regional) economies have an impact on the international monetary system and constitute the key determinants with regard to its quality and future development. At the same time, the limited role of Emerging Market Economy (EME) currencies is in sharp contrast with their growing significance in the global economy (Sedláček, 2018).

Due to these reasons, many authors talk of a necessity for the international monetary system to shift towards multipolarity. Eichengreen (2019b) regards the current dominance of the US dollar in the international monetary system to be a historical anomaly. The transposition to multipolar monetary system should be realized in short or medium term as a consequence of increasing of economic position of Emerging markets, especially Chinese economy. However, this conclusion, the so-called Berkley view, is inconsistent with the Harvard view, the main representative of which is Gita Gopinath, chief economist of the International Monetary Fund. According to Harvard view is current monetary arrangement sustainable in short and medium term. This hypothesis is supported by empirical facts that mostly 60 per cent of identified global foreign exchange reserves take the form of dollars, that more than 60 per cent of the foreign currency liabilities and assets of banks are in dollars, and that the share of world trade invoiced in dollars far exceeds the share of the United States in global imports and exports (Gopinath, 2017; Eichengreen, 2019b). The transition towards a multipolar monetary structure is also the subject of this study, aiming to capture the current development within the international monetary system by measuring the so-called currency concentration. Changes in currency concentration may indicate a gradual transition to a multipolar monetary system.

## Literature Review

There is no single definition for the term International Monetary System (IMS). Němeček (2000) describes it as a summary of mutual connections between currencies and monetary systems of individual states and regions. It is a collection of objectively existing links between the individual currencies and the whole, as well as between the whole and the individual currencies. Fahri et al. (2011) and Mateos et al. (2009) characterize the international monetary system as a group of rules, agreements and institutions, which in turn determine the currency and exchange rate policy, their international coordination, the exchange rates and the provision of international liquidity. A similar explanation is given by Serval and Tranié (2015) and the International Monetary Fund (International Monetary Fund, 2019b).

Because of its connection to the actual development of the global economy and international economic relations, the international monetary system is an important sphere of economic theory research (Civín, 2018). To meet the requirements for the development of international economic relations, any historical form of the international monetary system must fulfil three basic conditions:

- allow free international movement of goods, services, capital, and persons (convertibility),

- ensure the stability of the real value of monetary liabilities and receivables arising from the international movement of goods, services, capital, and persons (stability),

- guarantee international payment relations (liquidity) (Němeček, 2000).

An international monetary system with a multipolar structure comprises of at least three autonomous centres of currency strength, where the currencies (legal tender) of these countries fulfil all the private as well as official monetary roles described in Table 1 (Cohen, 2016).

The transition to a multipolar international monetary system has been the subject of a number of expert studies (Rogoff, 2001; Cohen, 2008; Chinn & Frankel, 2008; Mateos et al., 2009; Masson & Dailaimi, 2009; Dailami & Masson, 2011; Fahri et al., 2011; Cohen & Tabitha, 2013; Campanella, 2014; Sipko, 2016) and is described and examined in many professional monographs (Eckert, 2012; Rickards, 2014; Cohen, 2016; Eichengreen, 2011; 2019a; Ocampo, 2017).

**Table 1.** The Roles of International Money.

| Function of money (currencies) | Medium of exchange | Store of value | Unit of account |
|---|---|---|---|
| Levels of analysis | | | |
| Private | Vehicle currency, Trade settlement, exchange trading | Investment, Debt (incl. capital function) | Trade invoicing |
| Official | Intervention currency | Reserve currency | Exchange rate anchor |

**Source:** Cohen (2016), modified by authors

**Table 2.** Future International Monetary Systems Architecture Proposals.

| Architecture | Key currency | Leaders |
|---|---|---|
| Flexible exchange rates | USD, EUR, CNY (previously JPY) | USA, Eurozone, China (MP) |
| SDR / Bancor standard | SDR / Bancor | USA, G-20, IMF (MP) |
| Gold standard | Gold & USD | USA (UP) |
| BRICS declaration | Currency basket | BRICS (MP) |

**Source:** Own processing of information found in Dailami and Masson (2011), Kotecha (2011), Mateos et al. (2009), Amanto and Fantacci (2014) and Rickards (2014)

These studies provide an outline of a possible future concept of the international monetary system that is based on three key reserve currencies –the US dollar, the euro and the Chinese renminbi (Japanese yen before). This is the most likely scenario for the future organization of international monetary system (Margininean – Orastean, 2020). The deep analysis why renminbi could be used such a one of global reserve currency is presented by Eichengreen and Kawai (2014). The transition to a multipolar structure is conditional on the partial weakening of the US dollar, the euro maintaining a stable international position, and a significant strengthening of the Chinese renminbi. Currently is going on discussion about the revision of SDRs currency basket that will come into force in the middle of the next year. Due to the latest encouraging development of the Chinese economy, there is an expectation that the renminbi will increase its share in the currency basket of the SDRs. See Table 2 for a list of other possible future concepts of the international monetary system (MP – Multipolar Monetary system, UP – Unipolar Monetary System).

Historically, a qualitative change of the international monetary system was related to its natural "unrestrained" transformation, which reflected the economic and political fundaments in countries issuing the key currencies. However, due to the inertia factor and the network effect, the transformation of the international monetary system was slow (Chinn & Frankel, 2008; Eichengreen, 2019a).

According to the studies mentioned, a multipolar monetary structure would help stabilize the world economy. An increase in the supply of reserve assets naturally solves the Triffin dilemma (Portes, 2012), the "inherent conflict in a national currency also serving as a global reserve currency, because domestic and international policy goals do not generally match" (Bordo & McCauley, 2017). A multipolar monetary system enlarges the fiscal capacity on which the supply of secure assets is based, thus eliminating the future risk of their shortage (Zhou, 2009). Monetary dominance is distributed more evenly among more key currencies and the countries issuing them. As a result, a multipolar international monetary system becomes more symmetric (Fahri et al., 2011).

Similarly, Krejčí (2014) claims that the transition from a unipolar to a bipolar or multipolar international monetary structure constitutes a straightforward change of the system through a qualitative structure transformation. A precise definition of the term monetary polarity is therefore necessary. Monetary polarity constitutes a certain number of autonomous centres of currency strength. Currency strength combines two aspects – autonomy and influence. The highest level of autonomy and influence in the international monetary system is achieved by countries whose currencies are the most important from the systemic point of view. The distribution of currency strength can be measured with concentration indicators, thus allowing concentration to demonstrate the position of a specific currency on a certain scale (currency pyramid) (Cohen, 2016). The advantage of using concentration lies in a more precise differentiation of the individual currency strengths within the international monetary system as a whole. The general consensus is that the higher the concentration is in a particular economic system, the lower the level of competitiveness (Mansfield, 1993). The currency concentration in the international monetary system can be defined as the "market" share of internationalised currencies in private and official monetary operations within the international monetary system (in accordance with Table 1). Currency concentration can therefore be studied at the level of individual currencies, currency blocs as well as the international monetary system as a whole (Cohen & Tabitha, 2013; Cohen, 2016).

## Methods

In this research article, we strive to verify the following scientific hypothesis:  Between 2001 and 2019, the currency concentration in the international monetary system showed a downward trend, yet the international monetary system did not show signs of multipolarity. For our purpose, we use methodology by Cohen and Tabitha (2013), with several new parameters and indicators added. The trend of transition towards a multipolar monetary structure may be verified quantitatively by a falling coefficient of the currency concentration and increased levels of currency competitiveness in the international monetary system.

Currency concentration may be measured with two tools, namely the concentration ratios (N-subjects ratios) and the Herfindahl-Hirschman index (HHI). A more detailed description of this concept can be found in the original source: Hirschmann (1964). The N-subject ratios and the Herfindahl-Hirschman index are often used in

economics to examine the level of market competition. For practical application, see Zemplinerová (1999). A partial currency concentration can be expressed as a ratio of a particular currency on the total volume of transactions within a specific currency role (according to Table 1).

$$CR_X = \sum_{i=1}^{x} S_i \tag{1}$$

where

$CR_X$      concentration ratio x currencies,

$S_i$      % the share i-th currency within an individual function,

x      the total number of systemically important currencies.

Since the concentration ratios constitute a rough indicator, it is advisable to also use the Herfindahl-Hirschman index, which considers the sum of the squares of the shares of all selected currencies in the international monetary system (Hirschman, 1964). This indicator provides a notion of the competitive structure of the key currencies in the current international monetary system.

$$HHI = \sum_{i=1}^{n} S_i^2 \tag{2}$$

where

$HHI$      Herfindahl-Hirschman index,

$S_i^2$      % the share i-th currency within an individual function,

n      the total number of systemically important currencies within an individual function.

The measuring of currency concentration is based on private as well as official roles of world currencies. In an ideal case, statistics for all the roles of world currencies from Table 1 would have been included. This is, however, effectively impossible. Where the role of currency interventions is concerned, statistics are not available, or they are published with considerable delay (Cohen & Tabitha, 2013). Central banks and governments prefer that data on these operations be confidential and non-public.

Relevant statistics are also unavailable for data concerning the role of currency as a unit of account and the means for monetary calculation. What is more, the settlement currency and the actual payment currency may be different (Lacina, 2007). When a particular currency serves as an "anchor currency," then its level may be measured and expressed in numbers. Yet, even in this case, it proves to be a complicated process with several fundamental limitations. World reserve currencies function as anchors if other national or regional currencies are focused on them, in any exchange rate way (Němeček, 2000). Nevertheless, not every type of such currency focus is entirely evident. For comparison purposes, countries that anchor their legal currency to the US dollar and the euro are listed. Firstly, Dollarization and euroization (according to the International Monetary Fund: Exchange arrangements with no separate legal tender), secondly, Currency board arrangements and thirdly other conventional fixed peg arrangements. Other currency arrangements from the soft peg category are not included (International Monetary Fund, 2019a). This role of currency shall be dealt with separately in this study.

Other roles of currency in the context of monetary concentration shall be examined as follows: The role of currency as a medium of exchange at a private level of use shall be analysed on the basis of time series, using data published by the Bank for International Settlements (Triennial survey of global foreign-exchange market activity). Data are taken from the statistics on global foreign exchange turnover and OTC (Over the counter) derivatives global turnover (Bank for International Settlements, 2020).

In addition, there are the ratios of the individual currencies on international payments from the Society for Worldwide Interbank Financial Telecommunication (SWIFT) database, available for 2010 to 2019. A similar approach has been taken when analysing the role of currency as an investment medium. Here, currency concentration is examined in two ways: as ratios of selected currencies on the international banking market (Banks' cross-border positions on residents of All countries) and as ratios of selected currencies on the international bond market (Debt securities statistics) (Bank for International Settlements, 2019; Society for Worldwide Interbank Financial Telecommunication, 2020).

Moreover, we will focus on the role of reserve currency at the official level (foreign exchange reserves). Here, we draw on data published by the International Monetary Fund within the COFER database (Currency Composition of Official Foreign Exchange) (International Monetary Fund, 2020b). In order to analyse currency concentration, the following key currencies are of pivotal importance: US dollar, euro, Japanese yen, British pound, and Swiss

franc. The renminbi share of allocated foreign-exchange reserves is not available until 2016 when was renminbi included into Special Drawing Rights basket. Table 4 presents current concentrations share of renminbi for year 2019. After the onset of the global financial crisis in 2008, which resulted in the strengthening position of the Chinese economy within the global economy, the Chinese renminbi began increasingly appearing as another key currency.

## Results

To start with, Table 3 illustrates the level of currency concentration of two key currencies (N=2), the US dollar (USD) and euro (EUR), and subsequently of five reserve currencies (N=5); the US dollar, euro, Japanese yen (JPY), British pound (GBP), and Swiss franc (CHF). The lower part of this table shows the average when taking into account the four main indicators of currency concentration (Foreign Exchange (FX) turnover, Banking (cross-border) Claims, International (Debt) Securities, Foreign Exchange (FX) reserves), and also when considering six indicators in total (OTC derivatives and Global payments added).

**Table 3.** Concentration Ratios results (in %).

| Currency use | 2001 | 2004 | 2007 | 2010 | 2013 | 2016 | 2019 |
|---|---|---|---|---|---|---|---|
| FX turnover (vehicle) (N=2) | 64.0 | 62.7 | 61.3 | 62.0 | 60.2 | 59.5 | 60.3 |
| FX turnover (vehicle) (N=5) | 85.5 | 84.4 | 80.8 | 81.1 | 80.2 | 79.1 | 77.6 |
| OTC derivatives (N=2) | 78.0 | 79.0 | 71.0 | 73.0 | 77.0 | 75.0 | 74.0 |
| OTC derivatives (N=5) | 93.0 | 94.0 | 90.0 | 90.0 | 89.0 | 88.0 | 85.0 |
| Banking claims (N=2) | 78.5 | 82.1 | 79.3 | 81.3 | 79.0 | 79.3 | 78.4 |
| Banking claims (N=5) | 96.1 | 95.4 | 94.4 | 93.5 | 90.5 | 89.7 | 88.7 |
| International securities (N=2) | 72.0 | 76.7 | 78.6 | 78.6 | 80.6 | 84.1 | 84.6 |
| International securities (N=5) | 89.7 | 92.8 | 93.8 | 94.1 | 94.1 | 95.0 | 95.4 |
| FX reserves (N=2) | 90.7 | 90.2 | 90.0 | 88.0 | 85.5 | 84.5 | 82.0 |
| FX reserves (N=5) | 98.7 | 98.1 | 98.2 | 95.7 | 93.6 | 93.0 | 92.0 |
| Global payments (N=2) | | | | 73.8 | 72.3 | 72.9 | 74.6 |
| Global payments (N=5) | | | | 86.6 | 85.5 | 85.2 | 85.4 |
| Average (4 functions, N=2) | 76.3 | 77.9 | 77.3 | 77.4 | 76.3 | 76.9 | 76.3 |
| Average (4 functions, N=5) | 92.5 | 92.7 | 91.8 | 91.1 | 89.6 | 89.2 | 88.4 |
| Average (6 functions, N=2) | | | | 76.1 | 75.8 | 75.9 | 75.6 |
| Average (6 functions, N=5) | | | | 90.2 | 88.8 | 88.3 | 87.3 |

**Source:** own research and calculations, data from Bank for International Settlements (2019; 2020), International Monetary Fund (2020b) and Society for Worldwide Interbank Financial Telecommunication (2020)

When we look at data concerning the period between 2001 and 2019 (Tab. 3), it is immediately obvious that no multipolar monetary system was created during this period. The dominance of two key currencies, the US dollar and the euro, is clear. Although other reserve currencies, the Japanese yen, British pound or Swiss franc, continue to be used in the international monetary system, the chances of them becoming a global reserve currency are currently effectively non-existent. The ratio of these currencies on the market in any of the currency roles is not higher than 10 %. Such a low ratio cannot be considered a currency pole.

The main challenger of the US dollar and the euro, the Chinese renminbi, does not yet hold a comparable ratio when considering all the observed indicators (see Tab. 4). This is primarily due to extensive foreign exchange restrictions and the "non-openness" of the capital account (Prasad, 2016; Coase & Wang, 2019). However, the gradually increasing importance of the Chinese renminbi is evident across all the concentration ratios except Bank Claims for which data are not available (Bank for International Settlements, 2019; 2020; International Monetary Fund 2020b; Society for Worldwide Interbank Financial Telecommunication 2020).

The dominance of the US dollar and the euro demonstrates the bipolar character of the current international monetary structure. Auboin (2012) mentions a duopolistic market character. From the microeconomic point of view, the global OTC currency market represents precisely this type of oligopoly, where there are two dominant currencies and a competitive fringe in the form of other reserve currencies. Mansfield (1993) defines the following types of arrangements that may be, among others, applied also to the international monetary system. In a structure called the "near-unipolar system," the ratio of the leading currency ranges between 45 and 50 %, while

at the same time no other currency has a ratio higher than 25 %. When we assess all the categories measured individually, it may be said that in 2019, the international monetary structure most closely resembles the so-called "near-unipolar" system (Tab. 4.)

**Table 4.** Near Unipolar Monetary System (values in %).

| 2019 | FX turnover (vehicle) | OTC derivatives (N=5) | Banking Claims | International Securities | FX reserves | Global Payments | Average (all functions) |
|---|---|---|---|---|---|---|---|
| USD | 44.2 | 50.0 | 45.9 | 46.6 | 61.6 | 42.5 | 48.5 |
| EUR | 16.2 | 24.0 | 32.5 | 38.0 | 20.3 | 32.1 | 27.2 |
| CNY | 2.2 | 1.0 | n/a | 0.1 | 2.0 | 2.2 | 1.5 |

**Source:** own research and calculations

The aggregate indicators of the currency concentration of the US dollar and the euro do not show any significant changes in their average (Tabs. 3 and 4). A different picture emerges when studying the currency concentration with regard to the selected five reserve currencies (see Tab. 3). In the period in question, their average concentrations indicate a downhill trend. According to the databases of the International Monetary Fund and the Bank for International Settlements, the concentration of the five most important world currencies in the international monetary system is decreasing in relation to the other currencies, in particular to the currencies of countries from the EME group.

In 2019, a higher level of currency concentration was demonstrated only by currency ratios on the bond market. On the international foreign-exchange market (FX turnover), currency concentration decreased, primarily due to the lower ratio of the Japanese yen, British pound and Swiss franc. The statistics issued by the Bank for International Settlements (Bank for International Settlements, 2020) clearly show that the decrease of these ratios benefited neither the euro nor the dollar, but aided the lesser ranked currencies, such as the Australian or Canadian dollar and the Swedish krona.

As already was mentioned above, the ratio of the Chinese renminbi keeps growing across most of the currency roles, although where the level of currency concentration is concerned, it remains a side currency. By contrast, the currency concentration on the bond market (see Tab. 5) shows an upward trend, particularly due to the more extensive use of the euro caused by the consolidation and development of the European financial market. Even we thought that it is growing the role of the Chinese economy in the global economy, the use renminbi for a fixed incomes securities e.g., for financing the sovereign debt, including the corporate debt it is still relatively on very low level in comparison with the USD and EUR (European Central Bank, 2019a; 2019b).

The Herfindahl-Hirschman index generally better reflects the functional inequalities in currency polarity. The input data to calculate the Herfindahl-Hirschman indexes were obtained from the same sources as the concentration ratios. See Table 5 for the resulting values. Until 2010, a fall in currency concentration can be seen, indicating a gradual transition towards a multipolar monetary system.

**Table 5.** Herfindahl-Hirschman Indices Results.

| HHI index for IMS | 2001 | 2004 | 2007 | 2010 | 2013 | 2016 | 2019 |
|---|---|---|---|---|---|---|---|
| FX turnover (vehicle) | 0.279 | 0.272 | 0.269 | 0.268 | 0.274 | 0.277 | 0.283 |
| OTC derivatives | 0.332 | 0.332 | 0.281 | 0.294 | 0.338 | 0.341 | 0.337 |
| Banking claims | 0.346 | 0.346 | 0.327 | 0.342 | 0.328 | 0.350 | 0.327 |
| International securities | 0.312 | 0.313 | 0.339 | 0.335 | 0.342 | 0.367 | 0.371 |
| FX reserves | 0.552 | 0.493 | 0.480 | 0.458 | 0.441 | 0.472 | 0.433 |
| Global payments | | | | 0.309 | 0.293 | 0.298 | 0.310 |
| Average (4 functions) | 0.372 | 0.356 | 0.354 | 0.351 | 0.346 | 0.366 | 0.353 |
| Average (6 functions) | | | | 0.335 | 0.336 | 0.351 | 0.344 |

**Source:** own research and calculations

However, between 2010 and 2019, the concentration of all the currency sub-roles either once again rose slightly or remained almost unchanged. Only where the foreign-exchange reserves role is concerned, the currency concentration continued to fall, dropping to a value of H = 0.43, the lowest level of currency concentration since

1995 (Cohen & Tabitha, 2013). The most significant fall in currency concentration can be seen in the foreign-exchange reserves role. This is a result of a slight fall of the USD concentration and at the same time a rise in the concentration of lesser currencies. With respect to the bond market, the currency concentration indicator demonstrates an upward trend, particularly in the (post)crisis period starting in 2008, when the US dollar strengthened.

When evaluating currency concentration using the average values of the Herfindahl-Hirschman index, it is evident that the concentration at the level of the entire international monetary system has dropped slightly during the period in question. Nonetheless, there can be no claim of fundamental changes in concentration that would determine a new quality and multipolar nature of the international monetary system as a whole. It is worth noting that the currency concentration within the FX turnover and FX reserves indicators with regard to the individual currencies shows more than twice the ratio of the US dollar over the euro. However, it is evident (Tab. 5) that the currency concentration, measured with the help of the Herfindahl-Hirschman index, is different. In relation to the foreign-exchange reserve role, the concentration is significantly higher than the turnover on the FX market.

**Table 6.** Currency anchor level.

| (bil. USD, 2019) nominal value | Dollarization | Currency board | Other conventional fixed peg | Total | % share on global GDP |
|---|---|---|---|---|---|
| US Dollar | 137 | 383 | 1,791 | 2,311 | 2.65 |
| Euro | 26 | 92 | 761 | 879 | 1.01 |

**Source:** own research and calculations

The last category analysed is the role of currency as an anchor. As mentioned, finding adequate data is a highly complicated process. The following statistics present one possibility of expressing the role of anchor currency in numbers, if only approximately. It is a rough estimate of the level of currency anchoring, at least due to two facts. In the category of soft peg exchange rate arrangements, other currencies are differently oriented to one of the world's reserve currencies. This intensely different level of monetary anchoring cannot be expressed statistically. The second reason is the very expression of monetary anchoring through gross domestic product. For individual national currencies, the gross national product would be a more accurate indicator; however, its value is not reported in officially available statistics. Table 6 illustrates the total share of GDP of those countries that have any of the three exchange rate structures mentioned above in the total world GDP (converted to US dollar at current exchange rates). Another 2.65 % of world GDP (outside the US) is "firmly anchored" to the US dollar, and 1.01 % (outside the Eurozone) in 2019 to the euro. Compared to the euro, the ratio of the US dollar in the role as anchor currency is more than double. Other reserve currencies occupy completely negligible values. It basically corresponds to the ratio of the US dollar and the euro in Table 4.

Thus, it may be stated that the current international monetary system shows a gradual transition to a multipolar structure, yet it cannot be claimed that a multipolar monetary system exists. Currently it is a narrowing the role of some reserve currencies in the international monetary system, by in particular, the USD. The latest trend of lowering the role of the USD might create better conditions for growing the role of the Chinese renminbi in the international monetary system. On the basis of the results, we therefore do not reject our scientific hypothesis: Currency concentration in the international monetary system shows a downward trend between 2001 and 2019, but the international monetary system does not show a multipolar character.

## Conclusion

The aim of this article was to address the issue of a possible change in polarity of the international monetary system through the concept of currency concentration in the first two decades of the twenty-first century. Currently the present an international monetary system based on the dominance role of the USD will pay the way for creation of the multipolar international monetary system constitutes a monetary system with three reserve currencies, i.e., USD, EUR and RMB. A multipolar international monetary system constitutes a monetary system with several world and reserve currencies. The change of polarity of the international monetary system was analysed with concentration ratios and the Herfindahl-Hirshmann index. The roles of the world reserve currencies represent the initial categories for the analysis of concentration in the international monetary system. The statistics presented herein are based on databases of supranational organizations, namely the International Monetary Fund, Bank for International Settlements and SWIFT.

Between 2001 and 2019, the level of currency concentration of the key reserve currencies dropped slightly, although not enough to cause a qualitative change of the international monetary system. This means that the US dollar remains the dominant world reserve currency. Consequently, the international monetary system shows a "near-unipolar" structure, characterised by a single dominant currency (US dollar) and one currency with a significant ratio (euro). On the basis of our results, we have not rejected the scientific hypothesis on the falling

level of currency concentration and the non-existence of a multipolar monetary system. The findings show that it is too early to talk about a rapidly advancing process of multipolarization. The currency concentration of the euro and the Chinese renminbi remains significantly lower than the US dollar. The transition towards a multipolar monetary structure is a process that would not take just one or two years but rather several decades.

The conclusions stated herein must be understood in the context of highly unfavourable economic changes during the first half of 2020. The current negative impact of the global pandemic on the deepening global economic recession may also lead to a reassessment of the current international monetary system. Despite the fact that the current world reserve currency is the US dollar, it is also possible to observe an increasing effect of the Chinese economy on the growth of the world economy, foreign exchange reserves, government bond issues, international payments, and others. This may have an impact on the operation of the current international monetary system, with a view to creating a multipolar monetary system. Currently the current dominant reserve currency is the US dollar. Due to the growing the role of the Chinese economy in the world economy will also increase the share of the renminbi not only a high level of foreign exchange reserves, but some countries and potentially companies will use a renminbi for the issuing bond, international payments and clearing, etc. This trend may have an impact on the operation of the current international monetary system, with a view to creating a new multipolar monetary system based on the USD, EUR and RMB.

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