The U.S. Dollar Dominance: Origins, Status Quo, and Implications for Europe

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Summary

The dominance of the U.S. dollar in the global financial system remains the key pillar of international trade and monetary stability but faces growing challenges in a rapidly changing world. Historically rooted in the Bretton Woods system and the establishment of the petrodollar system, the dominant status of the U.S. dollar has shaped global economic structures for decades. However, coordinated efforts of the emerging powers within the BRICS+ community of states and the rise of decentralized cryptocurrencies are beginning to challenge its hegemony. These developments have significant implications for Europe and ultimately Germany, where economic dependence on the U.S. dollar raises concerns about monetary sovereignty and geopolitical influence. At the same time, these developments open opportunities for greater financial diversification and the promotion of strategic autonomy. Analyzing the key factors influencing the dominance of the U.S. dollar and the current challenge to its future offers important perspectives. It can help European actors to develop diplomatic strategies to be able to act in an appropriate way in an increasingly multi-polar and dynamic supranational financial environment.

Zusammenfassung

Die Dominanz des U.S.-Dollars im globalen Finanzsystem ist nach wie vor die Grundsäule des internationalen Handels und der Währungsstabilität, steht aber in einer sich rasch verändernden Welt vor wachsenden Herausforderungen. Historisch verwurzelt durch das Bretton-Woods-System und die Etablierung des Petrodollarsystems prägt der dominante Status des U.S.-Dollars die globalen Finanzsysteme seit Jahrzehnten. Die koordinierten Bemühungen aufstrebender Mächte innerhalb des BRICS+ Staatengemeinschaft und der Aufstieg dezentraler Kryptowährungen beginnen jedoch, seine Vormachtstellung in Frage zu stellen. Diese Entwicklungen haben erhebliche Auswirkungen auf Europa und letztlich auch auf Deutschland, wo die wirtschaftliche Abhängigkeit vom

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U.S. Dollar Bedenken hinsichtlich der Währungssouveränität und des geopolitischen Einflusses aufkommen lässt. Gleichzeitig eröffnen diese Entwicklungen Chancen für eine stärkere finanzielle Diversifizierung und die Förderung strategischer Autonomie. Die Betrachtung der zentralen Einflussfaktoren für die Dominanz des U.S.-Dollars und der aktuellen Herausforderungen für seine Zukunft bietet wichtige Perspektiven. Sie unterstützt europäische Akteure bei der Entwicklung diplomatischer Strategien, um in einer zunehmend multipolaren und dynamischen Finanzlandschaft adäquat agieren zu können.

JEL classification: E4, E5, F13, F33, F45, F51, F53, G15

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"The idea that the BRICS Countries are trying to move away from the Dollar while we stand by and watch is OVER. We require a commitment from these Countries that they will neither create a new BRICS Currency, nor back any other Currency to replace the mighty U.S. Dollar or, they will face 100% Tariffs, and should expect to say goodbye to selling into the wonderful U.S. Economy. They can go find another 'sucker!' There is no chance that the BRICS will replace the U.S. Dollar in International Trade, and any Country that tries should wave goodbye to America."

President-elect Donald J. Trump, Dec. 1, 2024, on X (former Twitter)

1. Introduction

For more than seven decades the U.S. dollar has been the world's reserve currency, playing a unique and predominant role in the international financial and monetary system. This phenomenon, known as the "U.S. dollar dominance", is a complex and multifaceted system that extends far beyond the borders of the United States, having significant implications for the domestic U.S. economy, as well as at the global level not only in the economic sense, but also in the geopolitical one (see e.g. Prasad 2009 and more recently, Arslanalp et al. 2022).

Over the last two decades, however, observers such as Eichengreen (2011) have questioned the long-term prospects of the status quo against the background of the economic and political rise of China and India in particular. In a broader context, this skepticism is also linked to the rise of the so-called BRICS (originally Brazil, Russia, India, China, and South Africa) and the emergence of privately issued digital currencies. The economic rise of emerging economies as well as newly industrialized countries (NICs) has led to a new sense of self-confidence and a desire to pursue own economic policies and political agendas detached from the U.S. dollar and the U.S. interests. Particularly in commodity and oil trade, the U.S. is seeing its position of power challenged by counterparts who have become more economically relevant. The Russian war of aggression on Ukraine that started in February 2022 has added more momentum to the de-

bate, with the great majority of countries in the so-called Global South not adhering to the sanctions devised by the U.S. and the European Union (Stoner 2024).

Given these structural shifts in the international financial and geopolitical system, it is far from clear whether the U.S. dollar will maintain its predominance in the international financial system in the long run. The aim of this short essay is to discuss the causes, effects, and prospects of the U.S. dollar dominance and its possible repercussions for the global economy and for Europe and Germany in particular. The importance and influence of the U.S. dollar in geopolitical tensions in relationship with the emergence of the BRICS+ as an economic and political counterpart to the United States will be examined in more detail, culminating in the discussion of what implications a hegemonic position of the U.S. dollar in the international financial system may have for Europe and Germany.

2. A Bird's Eye View on the Origins and Status Quo of the U.S. Dollar Dominance

2.1 Origins and Status Quo

It is widely acknowledged that the origins of the U.S. dollar dominance date back to the Bretton Woods Conference in July 1944, where the need for a unified reserve currency to bring stability and efficiency to the war-torn global economy was recognized by the victors of World War II (WWII). Indeed, at the Bretton Woods Conference a plan was designed to promote the economic recovery needed after two world wars by establishing a dominant anchor currency as a universally accepted currency for trade and financial transactions. The U.S. dollar was the natural candidate for the role of the world's reserve currency in the newly established monetary order due to a variety of reasons: First and foremost, U.S. economy benefited over proportionally from participation in and victory of WWII, which solidified its status as the global largest economic power (Eichengreen 2021). At the time, the U.S. economy was characterized by high productivity, a stable financial sector, and liberal foreign trade (Whitham 2013). Moreover, due to WWII, the U.S. had accumulated a large share of the world's gold reserves in its central bank (Subacchi 2008; Eichengreen 2021). The U.S. dollar was thus established at Bretton Woods as the world's reserve currency, with the participating countries being obliged to allow the exchange rate of their currencies to deviate from the U.S. dollar only within a certain fixed range. As the U.S. guaranteed the exchange of the U.S. dollar for gold, this system of fixed exchange rates against the U.S. dollar allowed an indirect convertibility of these currencies into gold via conversion into U.S. dollars (Subacchi 2008).

The status of an international reserve currency serves as a foundation for global economic and geopolitical influence, providing the issuing country with numerous strategic advantages. First and foremost, the issuing country of an international reserve currency can earn significant profits by providing internationally demanded liquidity (Ivanova 2010; Canzoneri et al. 2013). As discussed e.g. by Klein and Neumann (1990) as well as Siripurapu and Berman (2023), the demand for the reserve currency by other countries can be interpreted as a low-interest loan to the reserve currency issuer. This allows the issuing country to refinance itself at significantly lower interest rates than would be possible without the reserve currency status. The former French finance minister, Giscard d'Estaing, described this profitable situation for the United States as an "exorbitant privilege" in 1965 (Canzoneri et al. 2013). Indeed, then as now, the U.S., as the issuing country of the world's reserve currency, generated seigniorage gains of 3% of U.S. gross domestic product (GDP) annually, which has significantly strengthened the U.S. economy (Tasley 2022). Certainly, seigniorage is not a phenomenon exclusively specific to the U.S. dollar but exists for money-issuing central banks worldwide. However, in the specific case of the U.S. dollar's status as an international reserve currency, a significant seigniorage gain can be observed due to the high demand and issuing of the U.S. dollar (Ivanova 2010). Second, the issuing country of a reserve currency can secure additional welfare gains by conducting its trade in goods in its domestic currency. These gains arise from reduced exchange rate risk and transaction costs, which not only benefit domestic firms engaged in international trade, but also increase overall economic efficiency (Kannan 2009). Third, issuing the world's reserve currency gives the issuing country considerable geopolitical influence, as it can control global financial flows and more effectively implement economic measures such as sanctions (Costigan et al. 2017). This currency dominance strengthens its political bargaining position, as it acts as a central player in international trade and financial relations and is better able to assert its interests globally. Finally, the monetary policy of the issuing country of a reserve currency occupies the central stage of the international financial system, making it the anchor of global finance, as it is the case of U.S. dollar.

These advantages do not come, however, without costs. To establish the U.S. dollar as the world's currency, U.S. policymakers agreed to liberalize and deepen U.S. capital markets during the Bretton Woods era, exposing the U.S. financial system to a constant demand for U.S. government bonds from the rest of the world. In the two decades following the establishment of the Bretton Woods system, global demand for U.S. dollars rose steadily, leading to an increasing current account deficit, as predicted by the so-called "Triffin Dilem-

¹ In addition, the size and depth of the capital market, the free convertibility of the U.S. dollar and the confidence in American institutions make the U.S. economy a safe haven for financial investments (Gopinath and Stein 2021; Schmidt 2022).

ma", until 1971, when the "Nixon shock" in August of that year declared the end of the gold peg for good (Subacchi 2008). As the United States did no longer pursue a stability-oriented monetary (and fiscal) policy in the face of its ongoing armed conflict in Vietnam and the need to finance it, the Bretton Woods system weakened significantly. The participating countries were now faced with the challenge of supporting this weak position of the U.S. dollar by central bank interventions through currency purchases. The Bundesbank for example had to buy up to six billion U.S. dollars in early 1971, releasing 22 billion Deutsche Mark into the market (Bundesbank Magazin 2013). In the face of this pressure on the dollar, which was being exerted on the economies of the participating countries, the emerging economic power in Europe, Germany, refused to continue to support the U.S. dollar through its central bank's foreign exchange operations because of inflationary consequences for the domestic currency (Schulmeister 2009; Bundesbank Magazin 2013).

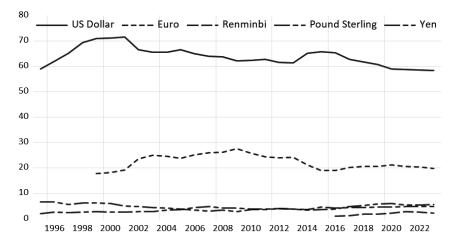


Figure 1: Composition of global foreign exchange reserves by currency (in %)

Source: International Monetary Fund, Currency Composition of Official Foreign Exchange Reserves, International Financial Statistics (IMF Data 2023).

However, the U.S. dollar has maintained its status as the world's leading reserve currency ever since the end of the Bretton Woods fixed exchange rate system. As it can be clearly observed in Figure 1, while the share of the U.S. dollar in the global foreign exchange reserves experienced a continued decline (from more than 70% in 2001 to a share of just under 60% in 2023² – about the same

 $^{^2\,}$ One possible explanation for this development is the declining share of the U.S. in global value added: In a direct comparison to 1960, when the U.S. generated about 40 % of global GDP, this share has fallen to 15 % in 2022 (Schmidt 2022).

level as in 1999), the U.S. dollar is still by large the world's leading reserve currency. The Euro, in contrast, has only a share of about 20% currently, a similar amount as at the time of its introduction in 1999, in contrast to the predictions of Chinn and Frankel (2007), who considered the Euro as a serious threat for the U.S. dollar dominance. The Chinese Renminbi, on the other hand, represents only a share of about 3% of the global foreign currency reserves in stark contrast to the economic and geopolitical size of the People's Republic of China.

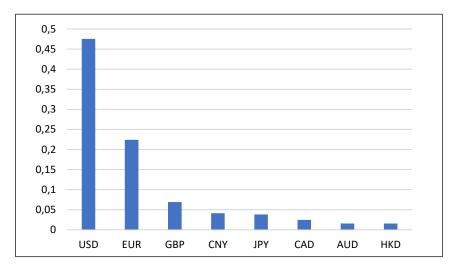


Figure 2: Share of top eight international payment currencies in September 2023

Source: SWIFT RMB Tracker 06/2024 (SWIFT 2024).

As discussed e.g. by Subacchi (2008), two of the main reasons for this decades-long continuity are *a*) the U.S. dollar as the common denominator for the invoicing of internationally traded goods and services (see also Georgiadis et al. 2021), and *b*) the dominant currency, the so-called petrodollar, for the denomination of economically essential commodities (especially oil). As illustrated in Figure 2, the U.S. dollar now occupies a prominent position in the global payment system with a share of just under 47% of global payment currencies, while the euro is in second place with a share of just under 24% and the pound sterling is in third place with a share of just over 7%. These stark discrepancies between the currencies reveal a tendency among players to use the U.S. dollar heavily, for a variety of reasons that will be discussed below. Not only is the dollar the primary benchmark for international payments, but it also dominates the global debt market. For example, in 2021, 64% of global debt and a 55% share of international lending were denominated in U.S. dollars (ECB 2022). The sec-

ond-ranked currency in this manner, the euro, follows with a share of just under 22 % (ECB 2022).

As the store-of-value function of the reserve currency is key for its reserve currency status, U.S. policymakers have an additional supranational reason to enforce a low inflation environment. Central banks around the world therefore monitor interest rate decisions by the U.S. Federal Reserve, as this has both a directional and market-influencing character (see e. g. Kim 2000.)³ The international financial system and the (national) institutions behind it are driven predominantly by the Fed's economic policy sentiment. As the recent literature on the Global Financial Cycle has documented (Bekaert et al. 2013; Rey 2013; Strohsal et al. 2019; Proaño et al. 2024), U.S. monetary policy affects financial conditions and economic growth worldwide through its impact on investors' risk appetite.

2.2 The Petrodollar System

The previously mentioned invoicing of oil trade in U.S. dollars is a particularly important aspect not only from the economic, but also from the geopolitical point of view. The hegemonic position of the U.S. dollar in oil trade goes back to the establishment of so-called "petrodollar" system in the 1970s through the agreement between the United States and Saudi Arabia, then and now the world's largest oil exporter, to conduct oil transactions exclusively in U.S. dollar. In return, Saudi Arabia was to receive arms supplies and political support from the United States (Mathews and Selden 2018). In doing so, the United States strengthened its geopolitical power, which was in danger of faltering after the failure of the Bretton Woods system, maintaining and underpinning its global economic policy relevance (Costigan et al. 2017). These developments were preceded by the 1973 oil crisis⁴ that led in a drastic increase in oil prices by as much as 400% per barrel in 1973 which in turn triggered a global energy crisis and an intensification of inflationary tendencies caused by energy price increases.

Out of the necessity to intervene to ensure the global economic policy stability of oil-importing countries, OPEC aligned itself with the strongest economy from a global perspective, the United States, and its reserve currency, the U.S. dollar (Mathews and Selden 2018). Indeed, the U.S. economy was considered one of the most stable and, due to the independence of its central bank, the

³ See also Mackowiak (2007); Bluedorn and Bowdler (2011) for empirical studies on the traditional channels of U.S. international monetary policy transmission, as well as Bradlow and Park (2020) for a more recent contribution.

⁴ The oil crisis was triggered by an oil embargo imposed by OPEC members on countries that had supported Israel in the Yom Kippur War.

Federal Reserve System, and the depth and liquidity of its financial markets, one of the most trustworthy (Cao 2016; Schmidt 2022; Whitham 2013). The U.S. dollar had already been used as the standard currency and "common denominator" in many international transactions for goods and services due to its reserve currency status. In addition, network effects and related economies of scale and scope increased the attractiveness of the U.S. dollar to also be used as a single currency for oil invoicing and pricing (He and Yu 2016). Finally, the global economy at the time also lacked alternative currencies of comparable size that could provide price stability for such transaction volumes (Eichengreen 2011; Costigan et al. 2017). The decision to invoice oil in U.S. dollars also had the advantage for OPEC countries of keeping their revenues in an already strong and widely used currency, which reduced inflation and exchange rate risks and protected the real value of their revenues (Amuzegar 1978). Further, OPEC's decision to price oil in U.S. dollars and to accept and settle payments in this reserve currency as the standard meant that oil-importing countries held and still hold their foreign exchange reserves in U.S. dollars to purchase fossil fuel.

The petrodollar system thus created, consolidated, and further expanded the geopolitical power position of the United States. As a result of the petrodollar system and the associated high U.S. dollar reserves of oil-importing states, the global economy was subjected to "dollarization". The United States, through its reserve currency status and the accompanying catalog of possible sanctions that could affect local and international economies, was thus able to enforce its political interests in the Middle East, especially in the oil-rich regions, reinforcing its global hegemony (Costigan et al. 2017). Possible sanctions include controlling access to key financial infrastructures as well as access to global capital markets, freezing currency assets and cutting off vital dollar liquidity. Such measures could not only disrupt local economies, but also put pressure on international companies and financial institutions located in the affected region to comply with U.S. policy (Zoffer 2019). The dominance of the U.S. dollar was thus no longer limited to cross-border trade in goods and services, but in this context also extended to global oil trade. To consolidate this dominance over the decades, the United States supplied armaments to states in oil-rich regions and promoted economic stability and security in the Gulf region with the aim of safeguarding oil production (Mathews and Selden 2018; Miller 2022).

Although critics of the petrodollar's dominance are growing louder, the U.S. dollar is still the dominant trading currency in the oil business, so most international oil transactions are still conducted in it and will remain so for the foreseeable future (Mathews and Selden 2018). This is partly because the Chinese government does not want to jeopardize its domestic economy by running current account deficits through the status of a vehicle currency, as it does with the U.S. dollar and the U.S. economy (Miller 2022). Thus, the global influence of the petroyuan is still limited as China maintains capital controls and the yuan/

renminbi peg. Furthermore, crude oil futures trading on the Shanghai Commodity Exchange is limited to a single grade of crude oil, which is mainly used in Asia and is not aligned with global demand. Although the power of the petroyuan is limited in certain ways, it is already perceived by the Unites States as a competitor to the petrodollar (Cao 2016).

Against this background, the question of whether a singular "petrocurrency" is still appropriate at all, is therefore increasingly being discussed (Miller 2023). Indeed, the petrodollar system and the U.S. international economic order behind it are under pressure to maintain their global hegemonic position due to declining popularity of the United States and rising geopolitical tensions around the world (Miller 2023; Cao 2016). In addition, numerous oil exporters and importers have already begun to denominate and invoice their oil sales and purchases in a currency other than the U.S. dollar to reduce their dependence on the U.S. dollar while strengthening their trade relations with partner countries that also prefer alternative currencies (Mathews and Selden 2018; Cao 2016). On the one hand, this can be seen as a diversification of the oil trade of the major exporting and importing nations, but on the other hand, it can also be seen as a symbol that the monopoly position of the U.S. dollar in this area is beginning to break (Cao 2016). For example, China, the world's largest oil importer, introduced its own crude oil futures trading on the Shanghai Commodity Exchange in 2018, which is settled exclusively in yuan (Mathews and Selden 2018). The Russian gas company Gazprom has also settled most of its gas and oil deliveries in euros and yuan since the annexation of Crimea and the ensuing Western sanctions (Miller 2022; Cao 2016). In addition, Saudi Arabia, as the world's largest oil exporter, has shown flexibility for continuing to denominate and invoice its oil transactions in different currencies (Miller 2022; Cao 2016).

Due to the complexity of the global commodity trading system and the associated political interdependencies, tensions, ancillary actors, and impacts, it is difficult to predict the future of the petrodollar and petroyuan, as well as other alternatives. Given the numerous variables and influencing factors, some of which are unknown, both political and economic, as well as the multitude of forces affecting the petrodollar system, a comprehensive analysis is needed to forecast the future of the petrodollar. Thus, the future of the U.S. dollar as a reserve currency for commodity transactions and trade remains volatile, but what is certain is that more and more players are trying to secure shares in global (oil) trade and try to break the omnipresent dollar dominance. Finally, an additional factor to be taken into account in this context is the emergence of green technologies aimed to alleviate global warming (Sharif et al. 2022; Habib et al. 2020). While the extraction and use of oil derivatives represented the very essence of the transportation industry for decades, the emergence of electromobility industries particularly in China (Altenburg et al. 2022; Habib et al. 2020) may have far-reaching consequences for the petrodollar system, as economies both in the

industrialized and the developing world become less dependent on oil derivatives, and thus on the petrodollar system.

In addition to the economic and geopolitical benefits related to the U.S. dollar invoicing of oil trade, the issuing country of the reserve currency is also able to assert geopolitical interests at the global level through the management of its exchange rate against other currencies. The appreciation and depreciation of a reserve currency can lead to significant fluctuations in the accumulated debt burden of countries holding the reserve currency. This debt burden-link gives the exchange rate of the reserve currency state a significant position of power that also affects the internal political and social stability of the leading currency-dependent states (Ivanova 2010; Bracke and Bunda 2011).

3. An Emerging Counterpart: The BRICS+

3.1 De-Dollarization

Over the past decade, the de-dollarization of global financial markets has been pushed for primarily by the BRICS countries (Cao 2016; Hirst and Tokatlian 2023). These efforts by countries of this non-negligible size and economic influence are attracting the attention of the modern business world and fueling discussions about the future of the international financial system. As economically significant emerging economies and rising economic powers, the BRICS countries have set themselves the task of collectively reducing the existing norms of the international financial system, and particularly the dominance of the U.S. dollar, within a global framework. This agenda has profound implications not only for the BRICS countries themselves, but for the global financial system. We take a closer look at the de-dollarization movement in global financial markets and the related goals of the BRICS countries in the following.

Since the formation of the BRICS community of states in 2009, these countries have strived to strengthen their economic and financial sovereignty and to reduce their dependence on the U.S. dollar significantly by creating and promoting alternative currencies and financial instruments (Cao 2016; Saaida 2023), diversifying their currency portfolios to be less vulnerable to currency risks and fluctuations in the U.S. dollar, and by strengthening autonomy in financial matters to become less susceptible to external financial pressures (Costigan et al. 2017). Also, for this reason, the BRICS countries have established institutions such as the New Development Bank (NDB), which settles in member countries' national currencies rather than in U.S. dollars and conducts transactions through BRICS Pay rather than SWIFT, to support alternative sources of financing for their member countries and increase their independence from Western financial institutions and governments (Cao 2016; Liu and Papa 2022).

The financial sanctions imposed by Western nations and international financial institutions on selected BRICS states since the annexation of Crimea by Russia in 2014, and the start of the Russian war on Ukraine in 2022 have certainly increased the geopolitical relevance of these newly created institutions (Ferragamo 2024).

3.2 BRICS+: A Unified Monetary Union?

Some of the participating countries and NICs see the creation of a common BRICS currency as a means of breaking the global dominance of the U.S. dollar, but the implementation of this project will be a major challenge for the policy-makers involved. For instance, India's government opposes this proposal by its main proponent Brazilian President Lula da Silva, and the leaders of China, Russia, and South Africa are generally dismissive of the idea (Ferragamo 2024; Saaida 2023).

Objectively, it is a challenge to recognize a community of states such as the BRICS as a cohesive "bloc", as there are non-trivial tensions among its members given their different geopolitical, economic and ideological realities and perspectives. While the most populous member states, China and India, share strategic ambitions to counter Western dominance, their long-standing border disputes and military conflicts underscore the deep-rooted rivalries that challenge united action and ultimately "unity" (Westcott 2021). The ideological divide between democracies committed to free elections, such as Brazil, India and South Africa, and authoritarian regimes, such as China and Russia, also highlights the structural differences that make cooperation difficult. While these nations share common goals, such as reducing Western influence and promoting multipolarity, their different political systems and strategic priorities sometimes stand in the way of deeper integration. Proposals such as Brazilian President Lula da Silva's to create a common BRICS currency face additional obstacles as trust, economic alignment, and political will remain limited among members with competing interests (Ferragamo 2024; Saaida 2023). The recent 16th BRICS Summit in Kazan, Russia, in late October 2024, also shows how Putin, the President of the Russian Federation, which currently holds the chairmanship of the BRICS states, expressed reservations about the idea of a centralized and unified BRICS currency and postponed the decision on such a currency for an unspecified period (Dolgin and Turner 2024). The path to the homogenization of a unified alliance of states remains uncertain for the time being and may be delayed indefinitely due to ongoing disputes and tensions between (member) states.

3.3 Sovereignty and Independence of the BRICS+

Driven by the common goal of preserving the sovereignty and autonomy of national economies independent of the U.S. dollar, the BRICS community of states expanded to become BRICS+ in January 2024, when Egypt, Ethiopia, Iran, and the United Arab Emirates joined the club (Suri and Tripathi 2023; Saaida 2023; Dolgin and Turner 2024; Destatis 2024). Saudi Arabia has also been formally invited to join the BRICS+ but has yet to make an official statement (Dolgin and Turner 2024; Destatis 2024). Accordingly, this new constellation of states is seen by U.S. government officials as a challenge to the hegemonic position of the U.S. dollar, since the key geopolitical power of the U.S. dollar depends largely on the dollar quotation and settlement of oil transactions (Liu and Papa 2022). Numerous economic benefits associated with the hegemonic position of the U.S. dollar in the global financial system, in particular the previously discussed seignorage, would therefore be jeopardized and could pose major financial problems for the United States (Cao 2016).

Nevertheless, many administrative and political issues of the BRICS system remain to be resolved before a significant de-dollarization can affect the hegemony of the U.S. dollar in the international financial system. How exactly this intercontinental "political project", as South African central bank governor Lesetja Kganyago calls it, is to be implemented by BRICS+ is unclear, as the creation of a dollar-independent financial system will also require the creation of a banking union, a fiscal union, and a central bank, and it is not yet clear where these will be located. Critics therefore doubt its feasibility, as previously mentioned that the participating states have economic, political, and geographical disparities and harmonious decision-making in this heterogeneous community may only function to a limited extent for these reasons (Dhanda 2013; Saaida 2023). In addition, the pursued de-dollarization could initially have a negative impact on the domestic economies of the BRICS+ countries, as higher trade costs arise due to the initial complexity of the transition to alternative currencies and the loss of the economies of scale of the U.S. dollar system could lead to trade barriers between economic actors (Yifan 2024; Dolgin and Turner 2024; Sadek 2023). Moreover, some BRICS+ countries, especially China, which hold a high volume of deposits in U.S. government bonds, do not have too strong an ambition to weaken the U.S. dollar excessively, as they themselves are among the world's largest creditors of the U.S. and therefore still heavily invested in it (Cao 2016).

The feasibility of the BRICS+ countries' de-dollarization plans is therefore a complex and multifaceted political issue that depends on numerous factors, such as the implementation of the agreements reached at the annual BRICS+ summits, the strength of economic and political relations between the countries, and other external factors, such as geopolitical developments in the face of global tensions and global economic trends. Although the BRICS+ countries are

making steady progress within the framework of economic policy (free) trade agreements, it is difficult to predict to what extent and at what speed these ambitious plans can be realized. Until then, the established dominance of the U.S. dollar in international financial markets will remain.

3.4 The Impact of Sanctions in the BRICS+ World

Beyond these considerations regarding the possible establishment of a new BRICS-based reserve currency, the growing importance of the BRICS+ in the international geopolitical context is best illustrated by the sanctions imposed by the United States and Western Europe against Russia since the latter's war against Ukraine in 2022. In reaction to Russia's military aggression against Ukraine, the U.S., the EU, the U.K., and Switzerland, agreed in the spring of 2022 to freeze Russia's foreign exchange reserves, which amounted to about \$300 billion (European Council 2023). As a result, the foreign exchange held in bank accounts in these countries was withdrawn from the Russian central bank and was no longer available to support the Russian ruble (Masters 2023). At the time, the Russian central bank's total reserves amounted to about \$640 billion, so the freezing of such a volume of foreign exchange was not without consequences for Russia's domestic economy and foreign trade (European Council 2023; Schmidt 2022). In response to this, the Russian currency depreciated by more than 40 %, forcing the Russian central bank to react to the currency's decline with a temporary increase in the key interest rate to 20% and capital controls to prevent liquidity outflows (Davis and Patel 2023). In addition, the U.S. suspended trading in Russian government bonds and stopped the settlement of interest and principal payments by U.S. banks to avoid financing the Russian government. Similarly, the largest Russian banks were excluded from the SWIFT system, which is of fundamental importance for cross-border trade in goods and (financial) services. SWIFT is the world's most established provider of global communication services for the exchange of information on financial transactions, which still has a noticeable impact on Russia's economic performance today (European Commission 2022; Petersen et al. 2023). It is precisely because of this dependence on Western institutions and their vulnerability to sanctions that communities of states such as the BRICS+ are increasingly trying to free themselves from such dependencies.

The sanctions sparked a debate about whether the measures imposed were too restrictive for the Russian economy. Critics argued that this might push certain governments to reconsider their future alignment with Western ties. For instance, new opportunities could arise within the BRICS community of states, enabling Russia to continue its commodity trade despite being excluded from the Western-dominated U.S. dollar financial system. This was exemplified by new commodity supply agreements between India and China with Russia fol-

lowing the war in Ukraine (Siripurapu and Berman 2023; Petersen et al. 2023). Ultimately, Russia's exclusion from U.S. dollar reserves has led to the Chinese renminbi becoming the most traded currency in Russia and thus U.S. sanctions having a limited impact on Russian economic performance (Siripurapu and Berman 2023).

Finally, the Russian invasion has reignited discussions about the global importance of the U.S. dollar, and the hegemony of the U.S. dollar has increasingly been described as a global "sanctions weapon". With the armed conflict still ongoing and no end in sight, it remains to be seen how the economic and political balance of power between the parties involved will evolve in the future. The use of the U.S. dollar as a sanction tool and its status has once again underscored the power and influence of the U.S. in the international financial system and geopolitics and highlighted the close and complex relationship between politics and economics in a modern global financial landscape (Smart 2019; Petersen et al. 2023).

4. The Rising Importance of Cryptocurrencies

The emergence of privately issued digital or cryptocurrencies and of decentralized finance in general may also pose a significant threat to the dominance of the U.S. dollar in the global financial system in the future. Indeed, while the use of cryptocurrencies as foreign currency reserves is still negligible at the global level, they are becoming increasing important in the financial portfolios of households around the world. For instance, while 16 % of adult U.S. Americans have bought or held cryptocurrencies and similar adoption rates are observable in Mexico (16%) and Spain (12%), for instance, in some countries of the so-called "Global South" like Nigeria (45%) and Argentina (35%) these are much higher (The White House 2022; Statista 2024). Similarly, as discussed by Pew (2024), an increasing number of firms and investors around the world are creating cryptocurrency-based wealth storage (together with the associated infrastructure) preferably in form of stablecoins, i. e. digital currencies that peg their value to an external reference currency with a relatively stable value like the U.S. dollar.

One might think that such a practice may provide further support for the dominance of the U.S. dollar. However, as Pew (2024) e.g. argues, the fact that many of the institutions and firms engaged in these practices (such as the Hong Kong-based iFinex with its U.S. Dollar Tether stablecoin) are outside the U.S. oversight and jurisdiction may become a problem if they decide to change the rules for the uses of their stablecoins. For instance, they may redefine the basket of reference currencies for their stablecoins in detriment of the U.S. dollar, undermining its importance as a reserve currency. Further, as these third-party stablecoins are linked with the corporate risk of the issuing compa-

nies, an adverse corporate-linked event that is unrelated with the U.S. economy may still undermine the U.S. dollar credibility in the financial markets. Additionally, initiatives by countries such as El Salvador of allowing bitcoin as legal tender in the context of currency restructuring due to domestic political and economic instability (Alvarez et al. 2022; Bertaut et al. 2023), while still not relevant at the global level, could be taken seriously and monitored closely.

5. Implications for the European Union and Germany

Given the euro's second place in the international reserve currency ranking and the absence of other alternatives, a decline of the U.S. dollar dominance in the decades to come may directly affect the euro and by extension the European Union (EU), and Germany in particular. Indeed, the recent developments in the international gas and oil markets and the waning geopolitical importance of the petrodollar system driven by the green transition away from fossil fuels may benefit the euro particularly in the long run. Whether the role of a reserve currency issuer aligns with EU's long-term objectives, and whether the EU would be willing to put this agenda forward decisively is however unclear, given the important responsibilities and macroeconomic consequences that such a role would entail.

Two central preconditions for the euro to gain a more important role as an international reserve currency is the decrease in the fragmentation of the EU's financial system, and the issuance of EU bonds – which would be considered by financial markets as safe assets similar to U.S. government bonds. Such steps could also facilitate the financing of much needed large-scale investment projects for the socio-ecological transitions, strengthening the euro's role in the international financial landscape. This would exert an appreciation pressure on the euro and would lead to a deterioration of the current account surpluses ran by many European economies, Germany in particular. While such a development would be advantageous from a macroeconomic point of view - as it would finance the much-needed investment for the socio-ecological transition in Europe –, it is far from clear whether it would be understood and accepted by politicians and the public in general, who often misinterpret large and persistent current account surpluses as an encouraging sign of competitiveness (see e.g. Horn 2018 for a critique of this view). In contrast, an active policy aiming at changing the current practice of the U.S. dollar invoicing of goods and services towards the euro would probably be disadvantageous, as it may not be well received by the incoming U.S. administration, as hinted by the clear-cut statement on Twitter quoted at the beginning of this piece. Instead, policies aimed at improving the EU's long-term economic prospects are likely to be well received by international financial markets, strengthening the euro. Indeed, given the high geopolitical and economic uncertainty prevailing around the world nowadays, Europe should consolidate and enhance its role as the world's beacon of stability not only on political, but also on social, economic, and geopolitical terms.

This implies re-evaluating some long-standing certainties like the robustness of transatlantic relations. Based on a common political worldview and similar economic agendas, the economic and political interests of Europe and Germany were more than often aligned, or at least not in stark contrast, to those of the United States over the last seventy years. As a result, Western Europe profited at least passively from the economic and financial stability provided by the U.S. dollar dominance and, in more general terms, the Pax Americana. Donald Trump's election as the new U.S. president in Nov. 2024 makes this certainty look much less certain, though. Indeed, while a full-fledged trade war with the United States is up to date not likely despite of the saber-rattling rhetoric of the president-elect, Europe should no longer take the unconditional U.S. support for granted, either in military, economic or political terms. Instead, Europe and Germany should look to create or strengthen economic bonds and alliances with NIC and emerging countries with sound democratic systems and common values (such as the MERCOSUR countries). In this context, the planned EU-MERCOSUR free trade agreement (that would link the world's third largest common market with about 300 million people to the Europe Union) should be of the highest priority for Europe. Given the European colonial past of Latin America countries (what implies among other things common societal values), this continent should be much higher on the European economic agenda, also because it is already on the radar of other geopolitical players, as the inauguration of China's deepwater megaport of Chancay in Peru in November 2024 illustrates exemplarily.

As previously discussed, new alliances of states such as the BRICS - and since 2024, BRICS+ - are attempting to break the hegemony of Western financial systems by both political and economic means to establish their own monetary and economic order. With the oil-rich states of the Middle East, the BRICS have already gained important trading partners and influential economies for the global economy. Nevertheless, it should be noted that the heterogeneity of the BRICS(+) community includes major disparities between its alliance partners. This could lead to significant challenges in the implementation of its economic policy agenda due to internal struggles, which might reduce the real threat to the U.S. dollar and its institutions. Because of the manifold reasons mentioned, the creation of a BRICS(+) currency that could dethrone the U.S. seems highly unrealistic at the moment. Europe should exploit the still lacking cohesion of the BRICS(+) community and, through an intensified economic cooperation with some of the BRICS countries like Brazil, India and South Africa, for example, weaken a further consolidation of the BRICS(+) community and at the same time, strengthen the role of the euro in the international financial landscape. For this to successfully occur, the currently fragmented political landscape in the European Union would have to be fixed, and the European Union's foreign policy should reflect such a political cohesion.

While the end of the U.S. dollar dominance is still not in sight and therefore does not represent an imminent threat, it should be clear that a loss of confidence in the anchor currency system would have far-reaching economic and geopolitical consequences. In such a scenario, the U.S. dollar would devaluate significantly, which could lead to massive foreign exchange sales on the foreign exchange markets, resulting in a liquidation of reserve holdings (Carbaugh and Hedrick 2008). This would jeopardize the U.S. exorbitant privilege, and all the associated benefits (Lahiri 2023). This scenario would also be possible without a general loss of confidence in the United States if influential lead currency creditor countries like China decided to liquidate their currency reserve holdings, for example, for geopolitical reasons (Besten et al. 2023). This, however, would hurt those creditor countries themselves, as the devaluation of the U.S. dollar would lead to a sharp decrease in the value of their own assets (Carbaugh and Hedrick 2008).

Against this multifaceted background, the current and prospective threats against the U.S. dollar dominance should be closely monitored by Europe and Germany. The development of economic and political strategies to strengthen Europe's role in the future economic and geopolitical landscape, also exploiting the euro's non-negligible role in global finance, should be of the highest priority, as old alliances are not certain anymore and new alliances are to be consolidated.

References

- Altenburg, T., Corrocher, N., and Malerba, F. (2022): China's leapfrogging in electromobility. A story of green transformation driving catch-up and competitive advantage, Technological Forecasting and Social Change, 183.
- Alvarez, F. E., Argente, D., and Van Patten, D. (2023): Are cryptocurrencies currencies? Bitcoin as legal tender in El Salvador. Science, 382(6677). https://www.science.org/doi/10.1126/science.add2844 (accessed 30.11.2024).
- Amuzegar, J. (1978): OPEC and the Dollar Dilemma, Foreign Affairs, 56(4), 740 750.
- Arslanalp, S., Eichengreen, B., and Simpson-Bell, C. (2022): The Stealth Erosion of Dollar Dominance: Active Diversifiers and the Rise of Nontraditional Reserve Currencies, IMF Working Paper No. 22/58.
- Bekaert, G., Hoerova, M., and Lo Duca, M. (2013): Risk, uncertainty and monetary policy, Journal of Monetary Economics, 60(7), 771 788.
- Bertaut, C., von Beschwitz, B., and Curcuru, S. (2023): The International Role of the U.S. Dollar. FEDS Notes, Washington: Board of Governors of the Federal Reserve System. https://doi.org/10.17016/2380-7172.3334.
- Vierteljahreshefte zur Arbeits- und Wirtschaftsforschung, 2 (2025) 2

- Besten, T., Di Casola, P., and Habib, M. M. (2023): Geopolitical fragmentation risks and international currencies. In: The International Role of the Euro, European Central Bank, Frankfurt am Main. https://www.ecb.europa.eu/pub/ire/article/html/ecb.ire art202306_01~11d437be4d.en.html (accessed 25.11.2024).
- Bluedorn, J. and Bowdler, C. (2011): The open economy consequences of U.S. monetary policy, Journal of International Money and Finance, 30(2), 309 336.
- Bracke, T. and Bunda, I. (2011): Exchange Rate Anchoring: Is There Still a De Facto US Dollar Standard?, ECB Working Paper No. 1353.
- Bradlow, D. and Park, S. (2020): A Global Leviathan Emerges: The Federal Reserve, COVID-19, and International Law, American Journal of International Law, 114(4), 657-665.
- Bundesbank Magazin (2013): 1973: Das Ende von Bretton Woods Als die Kurse schwanken lernten. https://www.bundesbank.de/de/aufgaben/themen/1973-das-ende-von-bretton-woods-als-die-kurse-schwanken-lernten-663622 (accessed 16 December 2024).
- Canzoneri, M., Cumby, R., Diba, B., and López-Salido, D. (2013): Key currency status: An exorbitant privilege and an extraordinary risk, Journal of International Money and Finance, 37, 373 391.
- Cao, L. (2016): Currency Wars and the erosion of dollar hegemony, Michigan Journal of International Law, 38(1), 57–118.
- Carbaugh, R. and Hedrick, D. (2008): Losing Faith in the Dollar: Can It Remain the World's Dominant Reserve Currency?, Challenge, 51(3), 93 114.
- Chinn, M. and Frankel, J. (2007): Will the Euro Eventually Surpass the Dollar as Leading International Reserve Currency? In: Clarida, R.H. (ed.): G7 Current Account Imbalances: Sustainability and Adjustment, Chicago: University of Chicago Press.
- Costigan, T., Cottle, D., and Keys, A. (2017): The US Dollar as the Global Reserve Currency: Implications for US Hegemony, World Review of Political Economy, 8(1), 104–122.
- Davis, J. S. and Patel, K. (2023): Russian ruble buckles under trade sanctions, declining export earnings. https://www.dallasfed.org/research/economics/2023/1010 (accessed 24.11.2024).
- Destatis (2024): BRICS in Zahlen, Statistisches Bundesamt. https://www.destatis.de/DE/Themen/Laender-Regionen/Internationales/Thema/allgemeines-regionales/BRICS/BRICS.html (accessed 27.11.2024).
- Dhanda, S. (2013): Rise of BRICS: Opportunities and challenges, Journal of Global Research & Analysis, 2(1), 140 146.
- Dolgin, D. and Turner, C. (2024): De-Dollarisation: More BRICS in the wall, ING Think. https://think.ing.com/articles/de-dollarisation-more-brics-in-the-wall/ (accessed 27.11. 2024).
- ECB (2022): The International Role of the Euro. June 2022. https://www.ecb.europa.eu/pub/pdf/ire/ecb.ire202206~6f3ddeab26.en.pdf (accessed 25.11.2024).

- Eichengreen, B. (2011): Exorbitant Privilege: The rise and fall of the Dollar and the Future of the International Monetary System, New York: Oxford University Press.
- Eichengreen, B. (2021): Bretton Woods After 50, Review of Political Economy Journal, 33(4), 552 569.
- European Commission (2022): Ukraine: EU agrees to exclude key Russian banks from SWIFT, European Commission European Commission. https://ec.europa.eu/commission/presscorner/detail/en/ip_22_1484 (accessed 25.11.2024).
- European Council (2023): Impact of sanctions on the Russian economy. https://www.consilium.europa.eu/en/infographics/impact-sanctions-russian-economy/ (accessed 24.11.2024).
- Ferragamo, M. (2024): What Is the BRICS Group and Why Is It Expanding?, Council on Foreign Relations. https://www.cfr.org/backgrounder/what-brics-group-and-why-it-expanding (accessed 27.11.2024).
- Georgiadis, G., Mehl, A., Le Mezo, H., and Tille, C. (2021): Fundamentals vs. Policies: Can the US Dollar's Dominance in Global Trade Be Dented?, ECB Working Paper No. 2021/2574.
- Gopinath, G. and Stein, J. (2021): Banking, Trade, and the Making of a Dominant Currency, Quarterly Journal of Economics, 136(2), 783 830.
- Habib, K., Snjólaug T. H., and Habib, H. (2020): Critical metals for electromobility: Global demand scenarios for passenger vehicles, 2015 2050, Resources, Conservation and Recycling, 154.
- He, D. and Yu, X. (2016): Network effects in currency internationalization: Insights from BIS triennial surveys and implications for the renminbi, Journal of International Money and Finance, 68, 203 229.
- Hirst, M. and Tokatlian, J.G. (2023): The end of dollar supremacy. https://www.ips-journal.eu/topics/economy-and-ecology/the-end-of-dollar-supremacy-6700/ (accessed 25.11.2024).
- Horn, G. (2018): On Current Account Imbalances, Intereconomics, 5(3), 155-158.
- IMF Data (2023): Currency Composition of Official Foreign Exchange Reserves (COFER). https://data.imf.org/?sk=E6A5F467-C14B-4AA8-9F6D-5A09EC4E62A4 (accessed 13.11.2023).
- Ivanova, M. N. (2010): Hegemony and seigniorage: the planned spontaneity of the US current account deficit, International Journal of Political Economy, 39(1), 93 130.
- Kannan, P. (2009): On the welfare benefits of an international currency, European Economic Review, 53(5), 588 606.
- Kim, S. (2001): International Transmission of U.S. Monetary Policy Shocks: Evidence from VAR's, Journal of Monetary Economics, 48(2), 339 372.
- Klein, M. and Neumann, M. J. (1990): Seigniorage: What is it and who gets it?, Weltwirt-schaftliches Archiv, 126(2), 205 221.
- Lahiri, U. (2023): The Future of Dollar Hegemony, Council on Foreign Relations. https://www.cfr.org/blog/future-dollar-hegemony (accessed 25.11.2024).
- Vierteljahreshefte zur Arbeits- und Wirtschaftsforschung, 2 (2025) 2

- Liu, Z. Z. and Papa, M. (2022): Can BRICS De-dollarize the Global Financial System? Elements in the Economics of Emerging Markets, Cambridge, Cambridge University Press.
- Mackowiak, B. (2007): External shocks, US monetary policy and macroeconomic fluctuations in emerging markets, Journal of Monetary Economics, 54(8), 2512 2520.
- Masters, J. (2023): How Frozen Russian Assets Could Pay for Rebuilding in Ukraine, Council on Foreign Relations. https://www.cfr.org/in-brief/how-frozen-russian-assets-could-pay-rebuilding-ukraine (accessed 10.11.2023).
- Mathews, J. A. and Selden, M. (2018): China: The emergence of the Petroyuan and the challenge to US dollar hegemony, The Asia-Pacific Journal, 16(22/3), 1–12.
- Miller, S. (2022): Oil Pricing Without Dollars: Is It Possible?, Energy Intelligence. https://www.energyintel.com/00000184-15bf-df66-a797-ddffc2380000 (accessed 25.11.2024).
- Miller, S. (2023): Dollar's Global Status: Not Dead, Not Immortal, Energy Intelligence. https://www.energyintel.com/00000187-8f4c-df2d-ad9f-dffe943e0000 (accessed 26.11. 2023).
- Petersen, T., Nölke, A., Rochlitz, M., Grauvogel, J., Medunic, F., Konrad, K. A., and Thum, M. (2023): Sanktionen gegen Russland: Wurde ihre Wirkung überschätzt? Eine Zwischenbilanz, ifo Schnelldienst, 76(05), 3 22.
- Pew, D. (2024): A Digital Threat to Dollar Dominance, Foreign Policy Research Institute. https://www.fpri.org/article/2024/04/a-digital-threat-to-dollar-dominance/ (accessed 30.11.2024).
- Prasad, E. (2019): Has the dollar lost ground as the dominant international currency? Brookings Institution Report. https://www.brookings.edu/articles/has-the-dollar-lost-ground-as-the-dominant-international-currency/ (accessed 25.11.2024).
- Proaño, C. R., Quero Virla, L., and Strohsal, T. (2024): How strong is the link between the Global Financial Cycle and Country-Level Macro-Financial Dynamics? A Wavelet Analysis, Unpublished manuscript, University of Bamberg.
- Rey, H. (2013): Dilemma not Trilemma: The Global Cycle and Monetary Policy Independence, Proceedings Economic Policy Symposium Jackson Hole, 1–2.
- Saaida, M. (2023): The BRICS' Move Away From US Dollar: The Implications For International Politics, International Journal of Multidisciplinary Research and Development, (10), 35 39.
- Sadek, H. (2023): Challenges facing BRICS. https://www.zawya.com/en/opinion/eco nomic-insights/challenges-facing-brics-ht67tc5a (accessed 3.11.2023).
- Schmidt, F. (2022): Derzeit kaum Alternativen zur Dollar-Dominanz in Sicht. https://www.kfw.de/%C3%9Cber-die-KfW/Newsroom/Aktuelles/News-Details_734016.html (accessed 21.11.2023).
- Schulmeister, S. (2009): Leitwährung US-Dollar: Mit der Doppelrolle überfordert. https://www.boeckler.de/de/boeckler-impuls-leitwaehrung-us-dollar-mit-der-doppelrolle-ueber fordert-9722.htm (accessed 16 December 2024).
- Sharif, A., Saqib, N., Dong, K., and Khan, S. A. R. (2022): Nexus between green technology innovation, green financing, and CO2 emissions in the G7 countries: the moderating role of social globalisation, Sustainable Development, 30(6), 1934–1946.

- Siripurapu, A. and Berman, N. (2023): The Dollar: The World's Reserve Currency, Council on Foreign Relations. https://www.cfr.org/backgrounder/dollar-worlds-reserve-currency (accessed 25.11.2024).
- Smart, C. (2019): Dollar Diplomacy. The National Interest, 159, 27 34.
- Statista (2024): Share of Respondents Who Indicated They Either Owned or Used Cryptocurrencies in 56 Countries and Territories Worldwide from 2019 to 2022. https://www.statista.com/statistics/1202468/global-cryptocurrency-ownership (accessed 30.11.2024)
- Stoner K. (2024): Is Russia Losing in Ukraine but Winning in the Global South?, Slavic Review, 83(1), 8 14.
- Strohsal, T., Proaño, C. R., and Wolters, J. (2019): Characterizing the Financial Cycle: Evidence from the Frequency Domain, Journal of Banking and Finance, 106, 568 591.
- Subacchi, P. (2008): From Bretton Woods onwards: the birth and rebirth of the world's hegemon, Cambridge Review of International Affairs, 21(3), 347 365.
- Suri, N. and Tripathi, J. (2023): The BRICS Summit 2023: Seeking an Alternate World Order? Council of Councils. https://www.cfr.org/councilofcouncils/global-memos/brics-summit-2023-seeking-alternate-world-order (accessed 24.11.2024).
- SWIFT (2024): RMB Tracker June 2024, Swift. https://www.swift.com/our-solutions/compliance-and-shared-services/business-intelligence/renminbi/rmb-tracker/rmb-tracker-document-centre (accessed 25.11.2024).
- Tasley, K. (2022): Estimating the Long-Term Fiscal Capacity of the US, NBER. https:// www.nber.org/digest/202206/estimating-long-term-fiscal-capacity-us (accessed 25.11. 2024).
- The White House (2022): Fact Sheet: White House Releases First-Ever Comprehensive Framework for Responsible Development of Digital Assets. https://www.whitehouse.gov/briefing-room/statements-releases/2022/09/16/fact-sheet-white-house-releases-first-ever-comprehensive-framework-for-responsible-development-of-digital-assets/ (accessed 30.11.2024).
- Westcott, S. P. (2021): Seizing a Window of Opportunity? The Causes and Consequences of the 2020 Sino-Indian Border Stand-off, Journal of Asian Security and International Affairs, 8(1), 7 32.
- Whitham, C. (2013): The Committee for Economic Development, Foreign Trade and the Rise of American Corporate Liberalism, 1942–8, Journal of Contemporary History, 48(4), 845–871.
- Yifan, D. (2024): What is Driving the BRICS' Debate on De-Dollarisation?, The BRICS and De-Dollarisation: Opportunities and Challenges, 2(1), 35-42.
- Zoffer, J. P. (2019): The Dollar and the United States' Exorbitant Power to Sanction, AJIL Unbound, 113, 152–156.