

# Increasing the International Role of the Euro: A Long Way to Go

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## List of Abbreviations

AUD	Australian dollar
BIS	Bank for International Settlements
CAD	Canadian dollar
CLS	Continuous Linked Settlement
CHF	Swiss franc
CPI	Consumer Price Index
EA	Euro area
ECB	European Central Bank
EIB	European Investment Bank
ESM	European Stability Mechanism
EU	European Union
EUR	Euro
Fed	Federal Reserve Board (of the United States)
GBP	British pound (pound sterling)
GDP	Gross Domestic Product
GFC	Global financial crisis
GG	General government
HICP	Harmonised Index of Consumer Prices
IMF	International Monetary Fund
JPY	Japanese yen
p.p.	Percentage points
PPP	Purchasing power parity
QE	Quantitative Easing
RMB	Renminbi
SDR	Special Drawing Rights
SWIFT	Society for Worldwide Interbank Financial Telecommunication
UK	United Kingdom (of Great Britain and Northern Ireland)
US	United States (of America)
USD	United States dollar
WWI	First World War (1914-1918)
WWII	World War II (1939-1945)

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# Abstract

The euro is the second most important global currency after the US dollar. However, its international role has not increased since its inception in 1999. The private sector prefers using the US dollar rather than the euro because the financial market for US dollar-denominated assets is larger and deeper; network externalities and inertia also play a role. Increasing the attractiveness of the euro outside the euro area requires, among others, a proactive role for the European Central Bank and completing the Banking Union and Capital Market Union.

# 1. Introduction

Just before the launch of the common currency project in Europe, there were optimistic expectations that the euro (EUR) would play an important global role and could become a serious competitor to the US dollar (USD) (see e.g. Bergsten, 1997; Mundell, 1998; Portes and Rey, 1998). However, this happened only partly. A decade later, Chinn and Frankel (2008) predicted that the EUR may overtake the USD as the leading international reserve currency in 2015, which never happened. The USD has remained the dominant international reserve currency and the dominant currency in private trade and financial transactions (ECB, 2019). Although the EUR has the status of a global currency, it occupies the second position, behind the USD, according to all available metrics.

For the first 20 years of its existence, the international role of the EUR was not a matter of concern for European Union (EU) governing bodies or the European Central Bank (ECB). The ECB's official position could be interpreted as a lack of interest or even reluctance to increasing its role (see Eichengreen et al., 2018, p. 173). The situation started to change with the 2018 State of the Union Address in which President of the European Commission Jean-Claude Juncker called for doing more '*...to allow our single currency to play its full role on the international scene.*' (Juncker, 2018). This was put in the context of strengthening Europe's sovereignty and, most likely, was a reaction to the increasing incidences of protectionism and unilateralism of the US administration under President Donald Trump (Sandbu, 2019). The importance of increasing the international role of the EUR has been confirmed by the President of the newly appointed European Commission, Ursula von der Leyen (2019).

While the political or geopolitical goal of these declarations seems to be clear, there are at least three questions to be answered. First, is accomplishing such a goal feasible, at least in the foreseeable future? Second, what should be done to achieve this goal – that is, what factors determine the actual global position of individual currencies? And third, what are the potential costs and benefits of increasing the international role of the EUR? Answering each of these questions requires an economic rather than a political analysis.

This paper attempts to answer the above three questions<sup>1</sup>. The paper's structure reflects their logical sequence. In Section 2, we analyse the international role of the EUR according to the various available metrics. In Section 3, we discuss the factors which determine the demand

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1 This is a revised and updated version of the briefing paper prepared for the European Parliament's Committee on Economic and Monetary Affairs, Monetary Dialogue, June 2020 – see Dabrowski (2020) for the original version. The views and opinions presented in this paper can be attributed only to the author and not necessarily to the European Parliament or any institution with which the author is affiliated.



for an international currency. In Section 4, we try to assess the potential costs and benefits of increasing the international role of the EUR. Section 5 contains a summary of our discussion.

Our working hypothesis is that while the various policy measures undertaken by EU governing bodies and the ECB may increase the global use of the EUR, it has no chance to overtake the dominant role of the USD in the foreseeable future.

The analytical narrative, which is supported by a simple statistical analysis, is the dominant methodological approach in our study. We use statistical data from the ECB, Eurostat and the International Monetary Fund (IMF).

When we write about the ‘international’ role of the EUR, we mean its role beyond the borders of its statutory jurisdiction – that is, beyond euro area (EA) countries.

## 2. International role of the Euro (data analysis)

In this section, we analyse the available statistical data, primarily the data published in ECB (2019), which are based on the ECB's own statistical sources and those of the IMF and the Bank for International Settlements (BIS). The data illustrate various aspects of the international role of the EUR. Our analysis covers the period of 1999-2018 or a shorter period if the data for the full 20 years are not available. In Subsection 2.1, we discuss changes in the composite index of the international role of the EUR computed by the ECB. Subsection 2.2 deals with the EUR as the official reserve currency. In Subsection 2.3, we analyse the role of the EUR in various types of international financial transactions. In Subsection 2.4, we look at the use of EUR cash outside the EA. Subsection 2.5 is devoted to the role of the EUR in trade invoicing and the international payment system. Subsection 2.6 contains a summary of our empirical analysis.

### 2.1. Composite index of the international role of the EUR

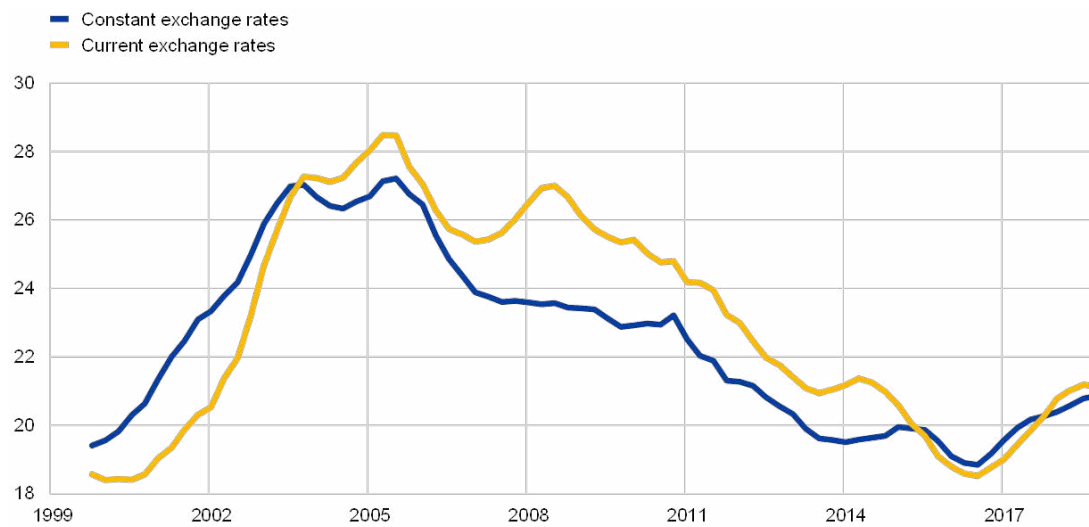
The ECB has computed the composite index of the international role of the EUR (see ECB, 2019, Chart 1, p. 5). It is an arithmetical average of several detailed indicators, part of which will be discussed in the subsequent subsections: the shares of the EUR at constant or current exchange rates (depending on availability) in stocks of international bonds, loans by banks outside the EA to borrowers outside the EA, deposits with banks outside the EA from creditors outside the EA, foreign exchange settlements, global foreign exchange reserves and the share of the EUR in exchange rate regimes globally.

Clearly, the construction of such a composite index may raise a methodological debate as it gives equal weight to various detailed metrics of uneven importance and also disregards the potential cointegration of some of them. For example, the share of the EUR in the official international reserves of central banks may be dependent, to some degree, on the role of the EUR as an anchor currency in exchange rate regimes. There are also other problems, such as the varying frequency in publishing detailed data and adding stocks to flows. Nevertheless, with all of these methodological reservations, the composite index can serve as a useful introduction to an analysis of detailed metrics.

Figure 1 presents the changes in the composite index since the beginning of 1999 – that is, the launch of the common currency project. During the first seven years of its existence, the index increased steadily – cumulatively by 8 percentage points (p.p.) in constant exchange rates and by 10 p.p. in current exchange rates (between 2003 and 2008, the EUR appreciated

substantially against the USD – see Subsection 3.4). Extrapolation of this increasing trend led to optimistic forecasts that predicted the possibility of the EUR overtaking the USD as the dominant reserve currency (see Chinn and Frankel, 2008).

**Figure 1: Composite index of the international role of the EUR, 1999-2018, % of total stocks/ flows, at current and Q4 2018 exchange rates; four quarter moving averages**



Source: ECB (2019), Chart 1, p. 5.

However, this did not happen. After reaching its highest share in 2006, the international role of the EUR started to diminish, and this tendency continued over the next 11 years, both in constant and current exchange rates. Broadly speaking, by 2016 it had returned to its starting share from 1999, reversing all gains made in the meantime. In 2017-2018, the composite index demonstrated some improvement.

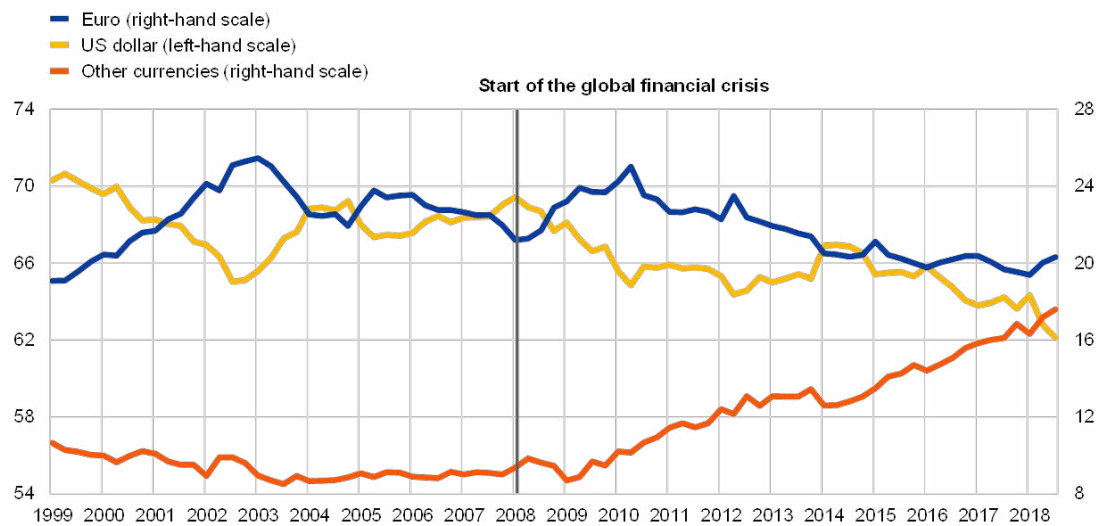
## 2.2. The EUR as an official reserve currency

Figure 2 provides us with data on the role of the EUR as an official reserve currency – that is, the currency in which central banks hold their international reserves. The shape of the curve, which shows the share of the EUR in the total international reserves of central banks (at constant Q4 2018 exchange rates to eliminate the impact of fluctuations in exchange rates), is somewhat different than that of the composite index (see Figure 1).

The share of the EUR in global international reserves shows fewer fluctuations than the composite index – between 19 to 25% of the total and two peaks – in 2003 and 2010. Interestingly,

the share of the USD decreased from 70 to 62% in the examined period of 1999-2018, with some fluctuations in the meantime. Consequently, the share of other currencies (including the Japanese yen [JPY], British pound [GBP], Chinese renminbi [RMB], Swiss franc [CHF], Australian [AUD] and Canadian [CAD] dollars) has increased by 8 p.p. since 2009. If this trend continues, it can suggest a more diversified portfolio for official reserves in the future.

Figure 2: Shares of EUR, USD and other currencies in global official reserves, 1999-2018, % of total stock, at constant Q4 2018 exchange rates.



Source: ECB (2019), Chart 3, p. 8.

### 2.3. The role of the EUR in international financial transactions

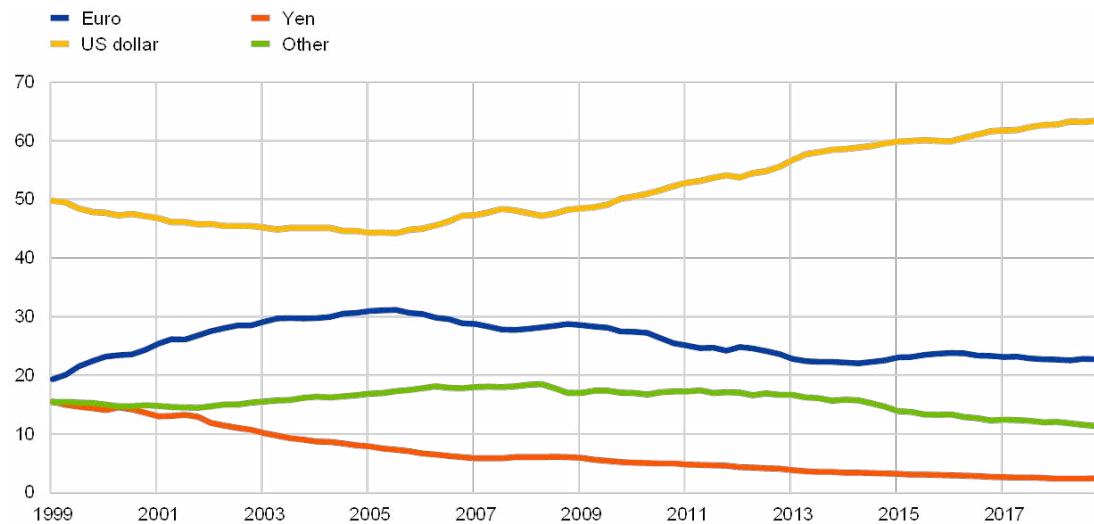
Among the various types of international financial transactions and instruments, we will analyse those for which there are available comparable statistical data.

Figure 3 presents the shares of the major currencies in the stock of outstanding international debt securities for the period of 1999-2018 (at constant Q4 2018 exchange rates). The role of the USD is absolutely dominant here and has been steadily increasing since 2006 at the cost of the EUR, JPY and other currencies. While at the launch of the EUR, the gap was 2.5-fold in favour of the USD, it increased to more than 3-fold in 2018.

The picture looks a bit different for international loans (Figure 4) and quite different for international deposits (Figure 5). In both cases, the USD plays a dominant role, similar to debt

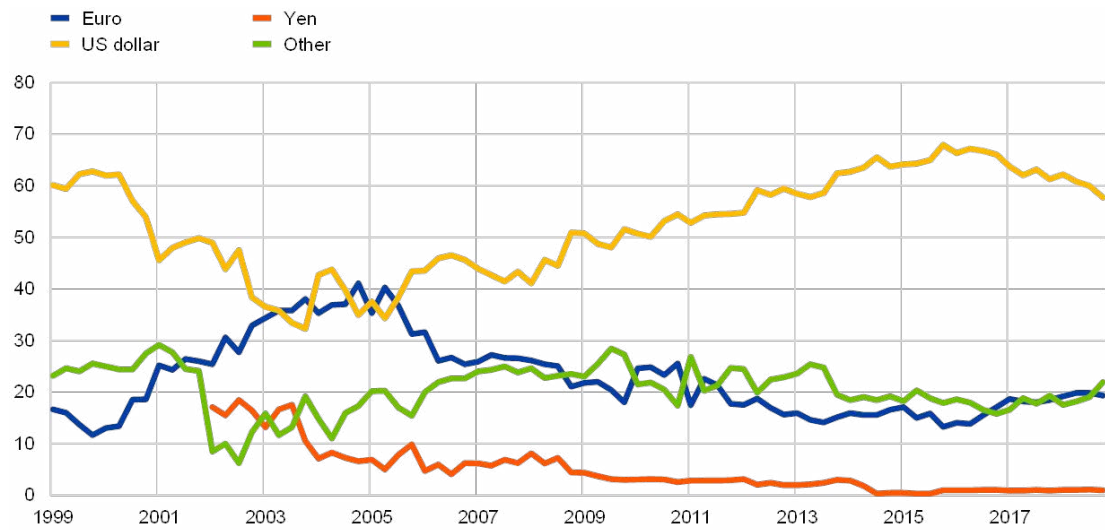
securities (Figure 3), but the sizes of the gap and the dynamics differ. The share of international loans denominated in EUR grew rapidly from its inception until 2005, while the share of loans denominated in USD declined. As a result, shares of both equalled approximately 40% of the total around 2004-2005. However, since 2006, this trend was reversed in favour of the USD. In 2016, the share of the USD approached 70% and the share of EUR-denominated loans fell below 20%. In 2017-2018, the gap between the two major currencies started to narrow again but remained substantial (in favour of the USD). In the meantime, the share of JPY-denominated loans declined to almost zero, while the share of other currencies has fluctuated around 20% since 2006.

**Figure 3: Currency composition of outstanding international debt securities, 1999-2018, % of total, at Q4 2018 exchange rates**



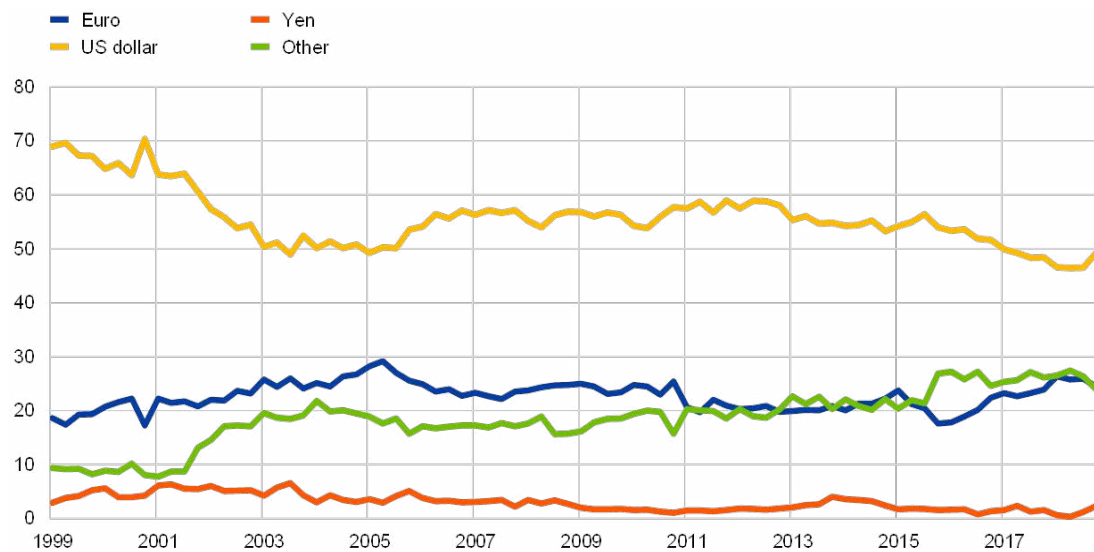
Source: ECB (2019), Chart 10, p. 20.

Figure 4: Currency composition of outstanding amounts of international loans, 1999-2018, % of total, at Q4 2018 exchange rates



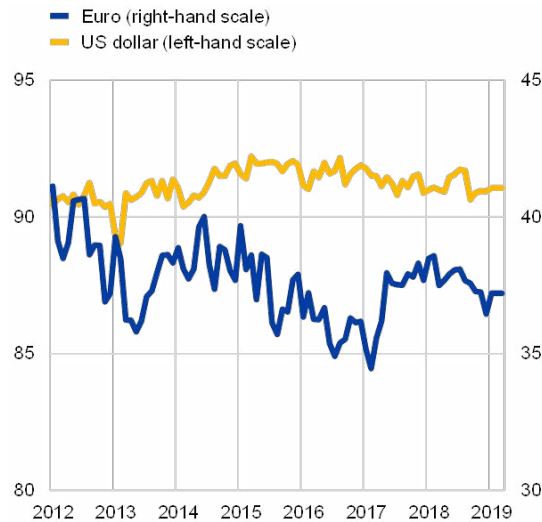
Source: ECB (2019), Chart 16, p. 26.

Figure 5: Currency composition of outstanding amounts of international deposits, 1999-2018, % of total, at Q4 2018 exchange rates



Source: ECB (2019), Chart 17, p. 27.

Figure 6: Share of foreign exchange transactions settled in CLS, % of total



Note: The shares add to 200% because forex transactions involve two currencies

Source: ECB (2019), Chart 9, p. 8.

Finally, the share of EUR foreign-exchange transactions settled by CLS (Continuous Linked Settlement)<sup>2</sup> is less than half of that for USD, and the gap between both currencies increased during the examined period of 2011-2019.

Regarding deposits (Figure 5), the share of the USD has been declining steadily (by approximately 20 p.p. between 1999 and 2018) and the same concerns the JPY; the share of the latter is now close to zero. The share of the EUR fluctuated between 20-30%, while the cumulative share of other currencies increased and is now at the same level as the EUR.

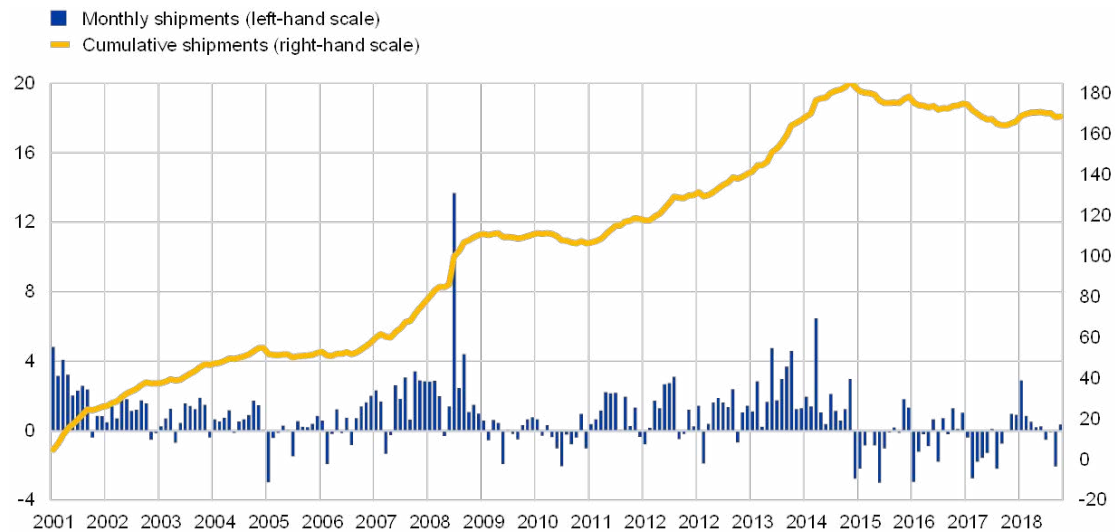
## 2.4. The use of EUR cash outside the euro area

EUR banknotes and coins are used outside the EA for both transaction purposes and as a store of value. First, two European countries – Kosovo and Montenegro – use EUR as their own domestic currency (unilateral official euroisation). The same concerns four European microstates (Andorra, Holy See, Monaco and San Marino) and the overseas territories of France and the Netherlands. Second, using EUR cash is a practical solution for tourism and travel as well as for conducting some other cross-border transactions. Third, using EUR is often a form of currency substitution which results from limited trust in domestic currencies (spontaneous euroisation).

<sup>2</sup> The CLS is a global inter-banking system for the settlement of foreign exchange.

For obvious reasons, both the flows and stock of EUR cash outside the EA cannot be measured precisely. Rough estimates can be conducted only in an indirect way, for example, using the statistics on net shipments of EUR banknotes to destinations outside the EA (Figure 7). According to ECB (2019) estimates, the highest stock of EUR banknotes outside the EA – amounting to approximately EUR 180 billion – was reached in 2015. Geographically, it is predominantly concentrated in the closest EU neighbourhood (ECB, 2019, Chart 21, p. 25).

**Figure 7: Net monthly shipments of EUR banknotes to destinations outside the EA (EUR billions; adjusted for seasonal effects), 2001-2018**



Source: ECB (2019), Chart 20, p. 34.

A comparison with other currencies – for example, the USD – is even more difficult. According to Goldberg (2010), the estimated stock of USD cash outside US boundaries amounted to 580 billion in March 2009. Comparing this to the total USD cash in circulation, which amounted to 853.2 billion at the end of 2008<sup>3</sup>, it was 68%. If the same relationship held at the end of 2018, it would mean that the stock of USD cash outside the United States amounted to 1,137 billion (the total stock of USD cash in circulation amounted to 1,671.9 billion). In other words, the stock of USD cash outside the United States was approximately six times larger than the stock of EUR cash outside the EA.

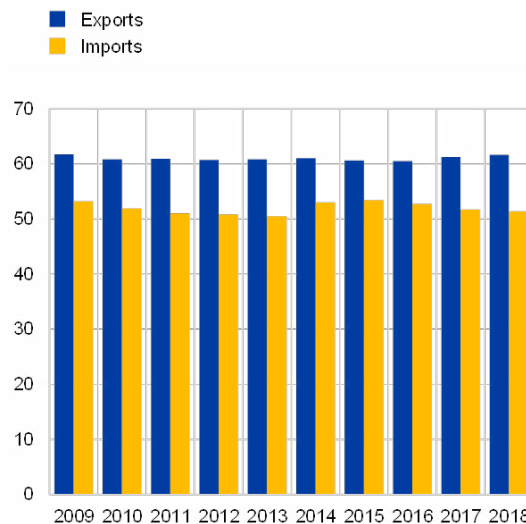
3 [https://www.federalreserve.gov/paymentsystems/coin\\_currircvalue.htm](https://www.federalreserve.gov/paymentsystems/coin_currircvalue.htm).



## 2.5. The role of the EUR in trade invoicing and the international payment system

The USD is used more frequently as an invoicing currency than the EUR, especially in the trade of basic commodities such as oil. The ECB (2019, Chart 18, p. 28) provides statistics on the share of the EUR as an invoicing currency in extra-EA exports and imports of goods (Figure 8).

Figure 8: Share of EUR in invoicing of extra-EA trade in goods, % of total, 2009-2018

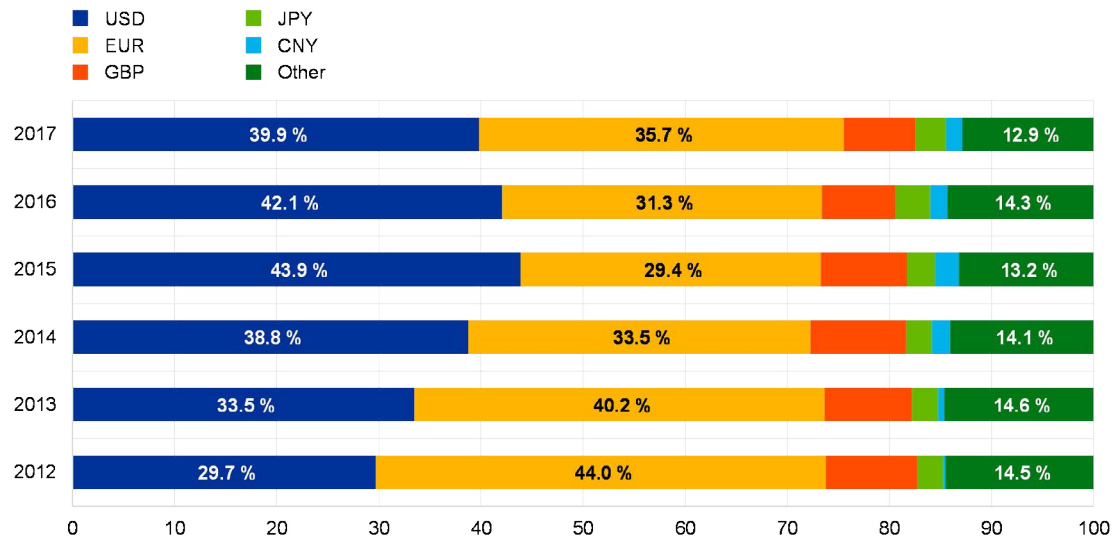


Source: ECB (2019), Chart 18, p. 28.

It appears fairly stable since 2009, when data begin, with approximately 60% of extra-EA exports and slightly over 50% of imports being invoiced in EUR. That is to say, not all EA external trade is invoiced in EUR. This relates, for example, to EA trade with the United States or with emerging market and developing economies where the USD dominates as the invoicing currency. In the case of trade between third countries, the EUR is rarely used as an invoicing currency. Overall, Gopinath (2015) estimated the share of EUR invoicing in the global trade in goods at around 30% while the share of USD invoicing stayed at around 40%.

The share of EUR in global payments registered by the Society for Worldwide Interbank Financial Telecommunication (SWIFT) is higher than that estimated in respect to trade invoicing but less stable over time (Figure 9). Nevertheless, the importance of the EUR is here comparable with the USD. It is worth noting, however, that payments registered by SWIFT concern more than just trade transactions and settlements.

Figure 9: Currency composition of global payments, % of total, 2012-2017



Source: ECB (2018), Chart 7, p. 11.

## 2.6. Summary of empirical findings: the EUR as the second most important world currency

The empirical analysis conducted in Subsections 2.1-2.5 leaves no doubt that the EUR enjoys the status of the world’s second most important currency after the USD. However, the leading position of the USD seems to remain unchallenged despite expectations that the launch of the EUR project may undermine USD dominance (see Section 1 and Subsection 3.1). Furthermore, while the international importance of the common European currency gradually increased in the early years of its operation (and, therefore, fuelled hopes for its potential global dominance in the future), this trend was largely reversed after 2005. Taking into consideration this unfavourable trend, Ilzetzki et al. (2020) discuss the underperformance of the EUR in its international role and how it appears to be ‘*punching below its weight*’. In Section 3, we will analyse the factors which allow the USD to continue its leading position and prevent the EUR from overtaking the USD’s role.

The detailed analysis conducted in Subsections 2.2-2.5 demonstrates that the international importance of the EUR is uneven across different segments of the financial market and its various roles. The EUR is more important in the international payment system, the deposit market and in creating international reserves in central banks. It is less important in the debt securities market and in other segments of the stock market.

## 3. Factors determining demand for international currencies

In this section, we will discuss the factors that may determine the demand for international currencies both from a historical and a contemporary perspective. Subsection 3.1 contains a review of an academic debate on the factors that may underpin a currency's global dominance. In Subsection 3.2, we determine the list of factors for the purpose of the subsequent detailed analysis. In Subsection 3.3, we discuss the role of private sector preferences versus government policies and regulations. Subsection 3.4 addresses the question of confidence in currency stability. In Subsection 3.5, we analyse the size, depth and legal infrastructure of financial markets as a determinant of a global currency choice. Subsection 3.6 deals with the question of network externalities and incumbent inertia. In Subsection 3.7, we look at the size of a host economy, its trade potential and the size of the existing currency area.

### 3.1. Determinants of a currency's global dominance – a recurrent subject of academic debate

The academic debate on the factors which may help a currency obtain or lose the status of a dominant one has been conducted several times and in various contexts: historical, contemporary, and *ex ante* (predicting what can happen in the future).

One of the most popular topics, especially in economic history literature, concerned the circumstances that led to the replacement of the GBP with the USD as the dominant global currency – why and how it happened, and how much time this process took (see e.g. Eichengreen, 2005).

The introduction of the EUR in 1999 and the initial years of its functioning provided another impulse to discuss this issue, in an *ex ante* perspective (see Lim [2006] for an overview of this debate). As mentioned in Section 1, there was a group of 'optimists' who predicted that the EUR may overtake the USD – see e.g. Bergsten (1997), Mundell (1998), Portes and Rey (1998), and Chinn and Frankel (2008). However, there were also 'pessimists' who claimed that although the EUR would be an important regional currency, it would not challenge the dominant global role of the USD (Cooper, 1997; McKinnon, 1998; Truman, 2005).

Another round of debate – more policy-oriented and of a normative character – took place in the aftermath of the global financial crisis (GFC) of 2007-2009 and was triggered by the substantial depreciation of the USD between 2003 and 2008 and the rapid increase of the US current account deficit. Large emerging market economies – in particular, China and Russia – were

both concerned with the loss of value of their international reserves, which were held mainly in USD, and driven by geopolitical ambitions. As a result, the idea to gradually replace the USD with the IMF's Special Drawing Rights (SDR) as the global reserve currency was presented by the Governor of the People's Bank of China and backed by the governments of Russia and Brazil in Spring 2009. It was also the subject of the work of the so-called Stiglitz Commission (Stiglitz, 2010). Regardless of its merit, the proposal to replace the USD with SDR did not take into consideration the preferences of the private sector (Subsection 3.3), network externalities and incumbent inertia (Subsection 3.6), and other market-related factors (Carbaugh and Hendrick, 2009; Dabrowski, 2010).

Since 2018, the increasing protectionist and unilateralist tendencies in US foreign and economic policy together with the EU's political desire to increase the international role of the EUR (Section 1) have triggered a new round of both academic and policy debate on the threats to the dominant role of the USD (see e.g. The International Economy, 2020). The twentieth anniversary of the introduction of the EUR has served as an additional impulse to this debate (see Ilzetzki et al., 2020).

In 2020, the global economic crisis caused by the COVID-19 pandemic gave another impulse to this debate. The mismanagement of the pandemic in the United States and the expected rise in its fiscal and current account deficits may undermine the leading role of the US dollar (Roach, 2020). On the other hand, the common fiscal response of the EU may help in advancing an international role of the EUR through an increased supply of 'safe' assets (Claeys & Wolff, 2020).

### **3.2. Factors that can facilitate a currency's international role**

Among the many specifications concerning the factors that may facilitate the international role of a currency, we would like to concentrate on two of them: Lim (2006) and Efstathiou and Papadia (2018).

Lim (2006) identifies five major facilitating factors:

- Size of the host economy;
- A well-developed financial sector;
- Confidence in the currency's value;
- Political stability; and
- Network externalities.

Efstathiou and Papadia (2018) offer a list of factors that is longer but not very different:

- Size of the country (in terms of either GDP or volume of international trade) as a proxy for network externalities and supply of 'safe' assets;
- Development of the financial market;
- Financial stability of the issuing country;
- A policy of the issuing country to promote the international use of its currency;
- Freedom of capital movements; and
- Political and military power of the issuing country.

However, as the main focus of our analysis is the relative international position of the EUR versus the USD, in the following subsections we will concentrate on only the few factors that may play, in our opinion, a crucial role in determining the demand for these currencies. We will also group them differently than the above-quoted authors.

Some of the above-mentioned facilitating factors are obvious, such as freedom of capital movement, and all currencies that play an international role meet this precondition<sup>4</sup>. On the other hand, we do not believe that the geopolitical and military power of the issuing country can play a meaningful role in global currency competition. If it played such a role, it would mean that the Russian and Chinese currencies would have a chance for global status (which is very far from reality). On the contrary, the CHF, which has played an international (although not dominant) role and enjoyed the status of a 'safe' currency for a long time is backed neither by the large size of the Swiss economy nor by its geopolitical ambitions and military potential<sup>5</sup>.

As result, we will discuss below the role of the following groups of factors:

- Private sector preferences versus government policy choices and regulations;
- Confidence in the currency's stability;
- Size, depth and legal infrastructure of financial markets;
- Network externalities and incumbent power; and
- Size of the issuing economy and currency area.

### 3.3. Private sector preferences versus government policy choices and decisions

In economies that are predominantly privately owned and market driven, the preferences of private agents in respect to the transaction and investment currency play a crucial role<sup>6</sup>. Governments, via their regulations and policies, may influence and encourage the choices of private agents (banks, enterprises and individuals), but only to some degree. By definition, they have a limited impact on the choices taken by private agents beyond their jurisdiction. In respect to domestic agents, if government regulations go too far, they risk restricting the capital account – or even current account – convertibility of their currencies, and this diminishes the chances of their currencies to play an international role (the case of many emerging market economies, for example, China and India).

There are, of course, policies that can increase the international attractiveness of a given currency, for example, the readiness of a host central bank to offer currency swaps to other central

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4 Capital controls are one of the reasons why the RMB cannot even pretend to be the dominant world currency in the foreseeable future, despite the rapidly growing potential of the Chinese economy and the increasing share of this currency in the international reserves of central banks, international loans and deposits and trade invoicing, among others (see Section 2).

5 Switzerland joined the IMF in 1992 and the UN system only in 2002.

6 This has been acknowledged by the European Commission (2018, p. 6) in its Communication on a stronger international role of the EUR, where it says '*...The decision to use a currency is ultimately made by market participants*'.

banks to support their international liquidity in times of market stress or by encouraging the use of a currency as an anchor or reserve currency by other central banks (see Subsection 3.7).

Governments may also choose the currency in which they lend and borrow, but they may be constrained in their choice by (i) the preferences of their borrowing and lending counterparts and (ii) the costs of such transactions, especially in the case of borrowing.

Private sector preferences determine, to a large degree, the composition of official reserve assets – that is, the international reserves of central banks. As their major role is backing smooth import purchases and other international payments, their composition should reflect, at least partly, the structure of the currency denomination of trade and financial transactions. If a central bank has larger international reserves, there is more room for composition choice and the ‘excess’ reserves can be invested according to either economic consideration (maximising the rate of return from the invested assets) or political/geopolitical preferences<sup>7</sup>.

Some governments, for example, of oil and other commodity exporters, establish sovereign wealth funds which serve as reserve funds for rainy days and finance investment and lending projects outside the country. As in the case of the international reserves of central banks, their currency composition is driven by a mix of liquidity considerations, the desire to maximise the rate of return on the invested assets and transaction needs (in the case of active lending and investment programmes).

### 3.4. Currency stability

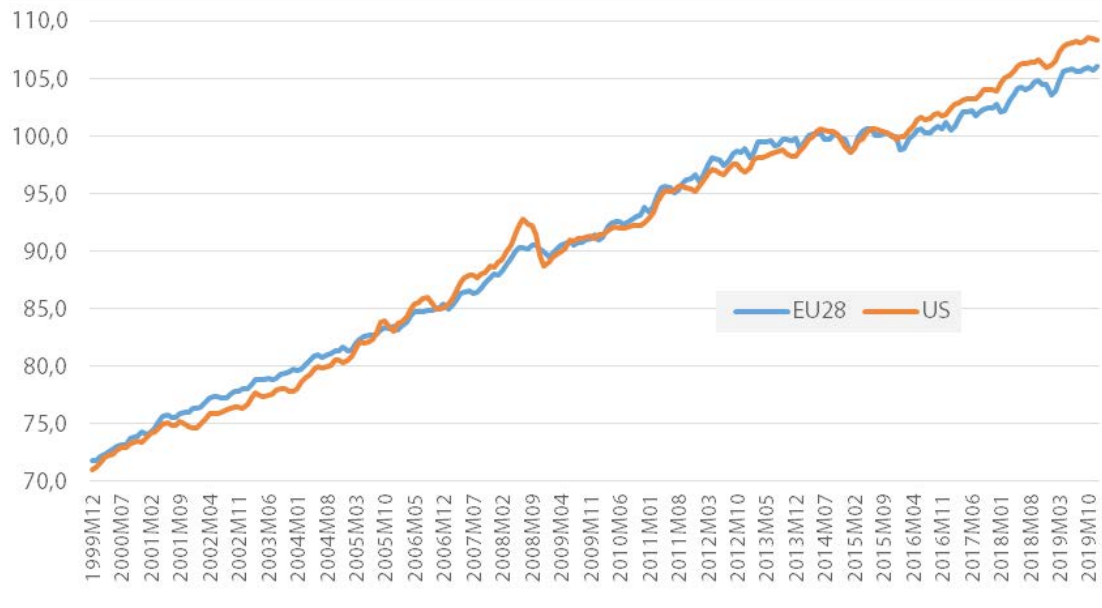
Confidence in the stability of a currency plays a crucial role in private sector choices. It is also an important criterion for central banks and governments in determining the composition of their international reserves. Stability can be interpreted in various ways, for example, as (i) price stability (low inflation); (ii) a stable exchange rate; (iii) central bank independence, its professional competence and monetary policy rules which guarantee the primacy of price stability; (iv) fiscal stability (fiscal balance or low deficit, sustainability of public debt) and the fiscal rules which guarantee this stability; and (v) institutional and political stability, which are preconditions of monetary and fiscal stability. Because all major currency areas have floating exchange rate regimes, exchange rate stability must be interpreted in a more flexible way, as a relative stability – that is, the absence of sharp and substantial fluctuations.

Figure 10 compares inflation performance in the United States and the EU since the end of 1999. The cumulative inflation figures do not differ much, with a slightly slower consumer price increase in the EU, especially since 2015. The degree of the legal and actual independence of the ECB is higher, and its statutory mandate is more concentrated on price stability than that of the US Federal Reserve Board (Fed). However, both central banks operate an inflation targeting framework.

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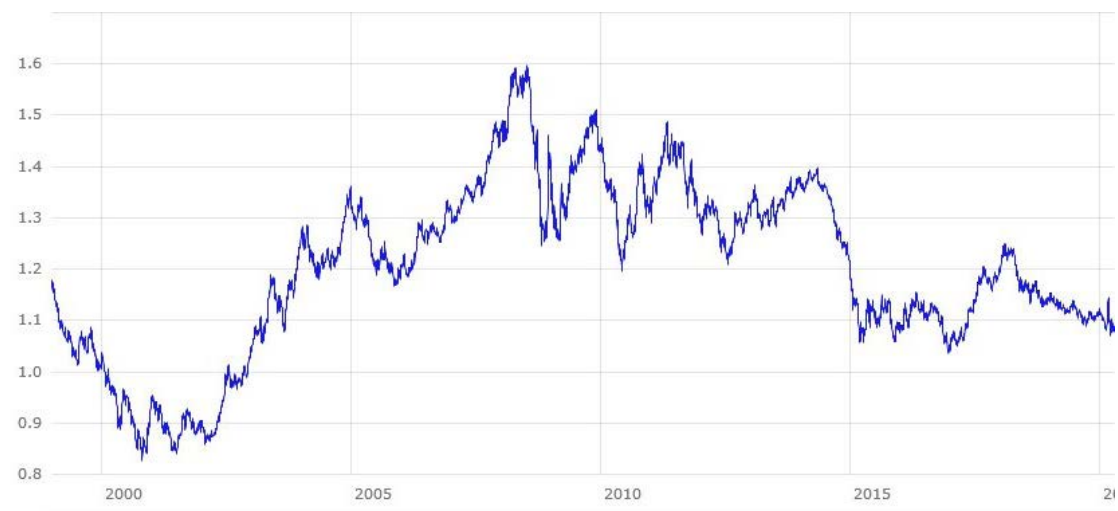
<sup>7</sup> Eichengreen et al. (2017) find that geopolitical alliances and sympathies have an impact on the composition of official reserve assets.

Figure 10: Index of cumulative inflation, EU-28 (HICP) and United States (CPI), Dec. 1999 – Dec. 2019 (2015=100)



Source: Eurostat - G20 CPI all-items - Group of Twenty - Consumer price index (prc\_ipc\_g20).

Figure 11: Exchange rate USD/1 EUR, Jan. 1999 – Apr. 2020

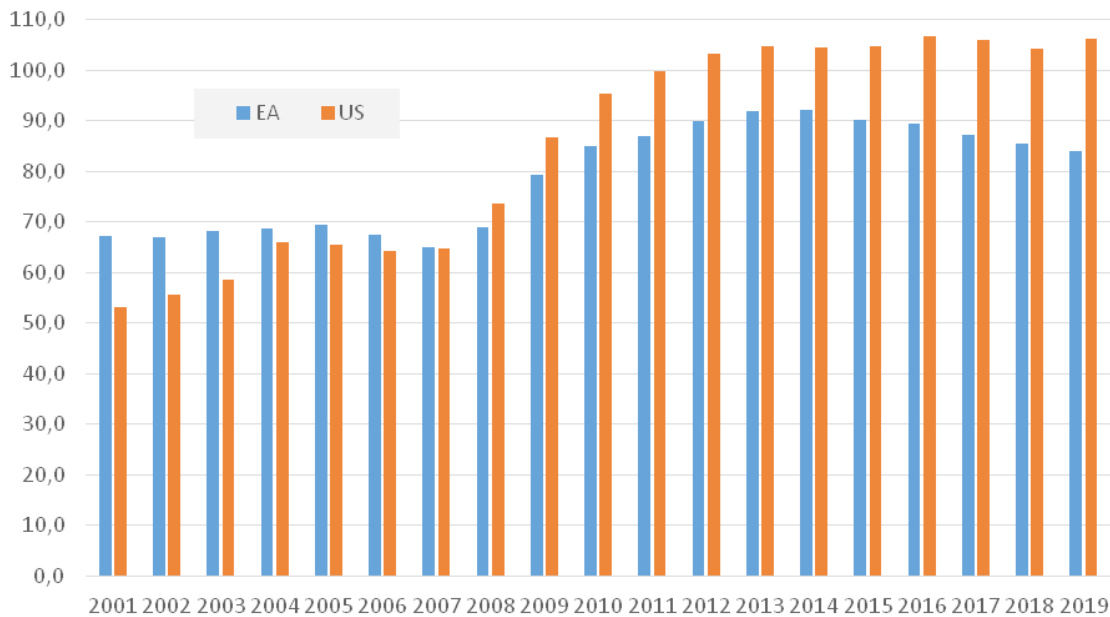


Source: [https://www.ecb.europa.eu/stats/policy\\_and\\_exchange\\_rates/euro\\_reference\\_exchange\\_rates/html/index.en.html](https://www.ecb.europa.eu/stats/policy_and_exchange_rates/euro_reference_exchange_rates/html/index.en.html)

Figure 11 shows the changes in the EUR exchange rate against the USD. Despite fluctuating within a broad range of between 0.8 and 1.6 USD for 1 EUR over the 21-year period, the amplitude of changes has diminished since 2015 to a narrower band of between 1.05 and 1.25 USD for 1 EUR. Based on the statistics presented in Figure 11, it would be difficult to claim that the EUR experienced any episodes of instability understood as a sudden collapse of its exchange rate. To some degree, the observed fluctuations resulted from asymmetric monetary policy cycles in both currency areas.

Figure 12 presents the gross general government (GG) debt data in the EA and the United States. Although the public debt burden increased substantially in both cases since the GFC, the situation in the EA looked better (before the COVID-19-related shock) as compared to the United States.

Figure 12: GG gross debt in the EA and US, % of GDP, 2001-2019



Source: IMF World Economic Outlook database, October 2019.

However, the EA has a problem with the uneven debt level across Member States. Several of them (Greece, Ireland, Portugal, Spain and Cyprus) were hit by public debt and financial crises in the first half of the 2010s and required external assistance (from the IMF, the European Stability Mechanism [ESM] and the ECB). In 2019, according to IMF World Economic Outlook



estimates<sup>8</sup>, the public debt-to-GDP ratio exceeded 100% in four EA countries (Greece – 177%, Italy – 133%, Portugal – 118% and Belgium – 101%) and was close to 100% in a further three countries (France – 99%, Cyprus – 96% and Spain – 96%). The credit ratings of several EA countries were downgraded in the first half of the 2010s (Coere, 2019). Formal fiscal rules both at the EU and national levels are tighter in the EA than in the United States, but are often either breached or circumvented (Dabrowski, 2017).

All these problems in the fiscal policy sphere have led to recurrent speculations on a potential sovereign default in the most indebted EA countries, a perspective which many market participants consider<sup>9</sup> as equal to an exit from the EA. Thus, the potential risk of the EA breakup (which may also be called ‘denomination’ risk) may have a negative impact on the attractiveness of the EUR as an international currency, at least from the time of the GFC.

To be fair, it is worth noticing that US fiscal policy is also not free from political and institutional fragility. The continuous inability of the US Congress to reach a political consensus on fiscal stabilisation has led to rapidly growing public debt since the early 2000s (see Figure 12). The repeated government closures as a result of the lack of agreement between the Administration and Congress to increase the public debt limit has undermined the credibility of US government commitments. In addition, the attack of US President Donald Trump against Fed Chairman Jerome Powell on 23 August 2019 (Hotten, 2019) put under question the readiness of the executive branch of the government to respect the Fed’s independence.

### 3.5. Size, depth and legal infrastructure of financial markets

The size and depth of financial markets, their liquidity, and the variety of the available financial instruments together with their institutional and legal infrastructure play a big role in the choice of an international currency. This is a matter of economies of scale and lower transaction costs (see e.g. McKinnon, 1998; Truman, 2005; Carbaugh and Hendrick, 2009).

In this respect, the EUR is, and always has been, in a disadvantaged position *vis-à-vis* the USD. The EA financial market is less developed, shallower and still very much fragmented along national borders (Coere, 2019). The world’s largest financial centres, such as Wall Street, the City of London or emerging centres in Asia, are outside the EA and trade largely USD-denominated instruments. The City of London, which has provided a broad spectrum of financial services for the EA and was heavily involved in trading EUR-denominated financial instruments, may cease or limit these activities soon as result of Brexit (unless the post-Brexit trade and economic

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8 [https://www.imf.org/external/pubs/ft/weo/2019/02/weodata/weorept.aspx?pr.x=35&pr.y=4&sy=2019&ey=2019&scsm=1&ssd=1&sort=country&ds=.&br=1&c=122%2C941%2C124%2C946%2C423%2C137%2C939%2C181%2C172%2C138%2C132%2C182%2C134%2C936%2C174%2C961%2C178%2C184%2C136&s=GGXW DG\\_NGDP&grp=0&a=](https://www.imf.org/external/pubs/ft/weo/2019/02/weodata/weorept.aspx?pr.x=35&pr.y=4&sy=2019&ey=2019&scsm=1&ssd=1&sort=country&ds=.&br=1&c=122%2C941%2C124%2C946%2C423%2C137%2C939%2C181%2C172%2C138%2C132%2C182%2C134%2C936%2C174%2C961%2C178%2C184%2C136&s=GGXW DG_NGDP&grp=0&a=)

9 Such a view is wrong because an exit from the EA (i.e. the reintroduction of the national currency) is not economically, legally and operationally easy (Dabrowski, 2015). This is confirmed by the experience of Greece, where in 2015 the left-wing government flirted with the idea of reintroducing its national currency but abandoned it in a last-minute decision to return to the negotiating table with the Eurogroup.

agreement between the EU and the UK will include the free flow of financial services). This will be an additional blow to the international role of the EUR.

The financial centres in New York, London, Singapore and Hong Kong also benefit from the Anglo-Saxon legal system, which is more business-friendly, especially for financial transactions, than the continental European systems. Some of them also take advantage of lower and simpler taxation and a more flexible labour market than in many EA countries. Legal, regulatory and tax factors, as well as the existence of large financial centres, may also explain the continuous international attractiveness of such non-dominant international currencies as the GBP and CHF.

If EU governing bodies and the ECB want to make progress on improving the international role of the EUR, their primary task should be to complete the Banking Union and Capital Market Union as quickly as possible (see Sapir et al., 2018). This could allow for better integration of the European banking sector and stock market and help expand EUR-denominated financial instruments. And indeed, this is one of the key actions suggested by the European Commission (2018) Communication.

Some authors (Efstathiou and Papadia, 2018; Ilzetzki et al., 2020) also emphasise the role of a sufficient supply of 'safe' assets, which is particularly important for a reserve currency role (most central banks stick to restrictive rules on the quality of purchased international assets). Concerning 'safe' sovereign assets, the United States has a paradoxical advantage over the EA resulting from its expansionary fiscal policy in the last two decades. The rapidly expanding public debt of the US federal government (see Subsection 3.4) means, in practical financial market terms, a large supply of US Treasury bonds which are still highly rated. In the EA, the supply of 'safe' sovereign assets is smaller for four reasons:

- The debt instruments of heavily indebted EA countries were downgraded in the first half of the 2010s (Coere, 2019);
- The countries that continue to enjoy the highest ratings issue relatively fewer debt instruments;
- The possibility to issue 'federal' debt instruments (on an EU level) is limited to specialised institutions such as the ESM or the European Investment Bank (EIB) and, incidentally, to the European Commission (against the EU budget, which does not exceed 1% of EU GNI); and
- A large part of 'safe' sovereign assets is purchased by the ECB in the framework of quantitative easing (QE) operations.

However, if the United States does not stop the rapid growth of public debt in the near future (which will not be an easy task during and after the COVID-19 pandemic), it will risk a downgrade of its sovereign rating.

### **3.6. Network externalities and the power of incumbency**

The concept of *network externalities* is known from microeconomic and management theories. One of its definitions says that it is '*...the increasing utility that a user derives from consumption*

*of a product as the number of other users who consume the same product increases'* (McGee and Sammut-Bonnici, 2015). It applies, among others, to network industries such as telephony and digital services as well as to financial services.

Examples of network externalities may concern either commonly used goods and services that are necessary to create network effects or common technical standards such as, for example, electricity voltage, track gauge or computer software, among others. Accepting the existence of network externalities is not only a precondition of the functioning of many network activities, but it also helps to reduce transaction and operation costs. Common standards can either be set by the regulation of public authorities or created spontaneously by the market – or both.

As already mentioned, the concept of network externalities also applies to the financial market as well as to international economic and financial relations, including international currencies and international financial standards. International currencies help to facilitate trade, payments and other financial transactions, decrease their transaction costs, and minimise operational and investment risk, among others. Historically, the choice of international currency and monetary standards resulted from international agreements (the example of the gold-dollar standard in the Bretton Woods system), but more frequently – from the choices of private agents (Subsection 3.3). Once a sufficiently large number of market players accept a given currency or monetary standard, others would join this choice because, otherwise, they would risk higher transaction and operational costs (e.g. I trade or save in a given currency because my trade and financial partners are doing the same). This mechanism can explain, for example, why the USD is continuously used as an invoicing currency in the highly integrated global commodity markets (where the entire trading and financial infrastructure is USD-based).

The existence of network externalities also causes a far-reaching inertia of the existing monetary system/dominant international currency because changing it would cause too much uncertainty and cost too much. There is also a collective action problem to find a sufficient number of partners who are ready to do the same. Such a systemic inertia is characterised by Carbaugh and Hendrick (2009) as 'the power of incumbency'.

The history of global monetary systems demonstrates several examples of systemic inertia or the power of incumbency. It took two decades between WWI and WWII, including the Great Depression of 1929-1933 and two and a half decades of the Bretton Woods system after WWII to abandon completely the gold standard (Cesarano, 2009). The dethroning of the GBP (pound sterling) as the dominant currency of the international financial system by the USD also happened gradually as a result of two world wars, the Great Depression and the demise of the British empire (Eichengreen, 2005).

Since the collapse of the Bretton Woods system in 1971 (which, in fact, was a sort of crisis of the US currency), there has been continuous speculation (some of which has already been mentioned in this paper) about the imminent fall of the USD as the dominant currency. However, this has not happened yet despite the many shocks to the existing system (the most powerful shock was generated by the GFC in 2007-2009) and the mixed fortunes of the US economy. This seems to be the best evidence of the strength of network externalities and incumbent power.

### 3.7. Size of the host economy and its currency area

The size of the host economy is often considered as the obvious criterion of the international potential of a given currency and is included in the specifications of factors that determine its global position (Subsection 3.2).

Let us look at the host economies of two major currencies. In 2019, the United States accounted for 15.1% of GDP in purchasing power parity (PPP) terms and the EA for 11.2% (WEO, 2020, Statistical Appendix, Table A). At first glance, it looks like the relative size of both economies confirms the significance of this criterion. It would look even better if we used current exchange rates instead of PPP<sup>10</sup>. However, a more detailed analysis raises a number of questions. First, the share of the US and EA economies in world GDP has diminished since the 1980s in favour of the emerging market economies in Asia. However, neither China (the largest world economy in PPP terms in 2019) nor India (the fifth largest economy) have the chance to upgrade their currencies to a truly international/global status in the foreseeable future (see Subsection 3.3). Second, there are smaller (the UK) or much smaller (Switzerland) economies that have managed to sustain or even advance the international (but not dominant) status of their currencies. Third, at the end of the 19<sup>th</sup>/early 20<sup>th</sup> century, the UK – then the host economy of a global currency (the GBP) – was a smaller economy in relative terms (always below 10% of global GDP) than the contemporary United States or EA. The same concerned the post-WWII West Germany, which was the host of the second most important world currency – the German Mark. Fourth, the small difference in the size of the US and EA economies does not explain the much larger difference in the international roles of the USD and EUR presented in Section 2.

To fully understand the ‘size’ factor, it seems necessary to go beyond the formal borders of the host economy and include into our analysis the broader concept of currency area, which also includes the economies whose currencies were/still are pegged (formally or informally) to one of the major currencies, those which have strong trade, investment and financial links to this currency, or those in which a given currency in a cash form is used by economic agents (spontaneous dollarisation or euroisation).

After WWII, most of the world (apart from former communist and some other closed economies) was part of the Bretton Woods system in which the USD played an official anchor role. It continued after the collapse of the Bretton Woods system in 1971, for example, in most of Asia (see McKinnon, 2005) and Latin America. The departure of national currencies from the dollar peg happened only gradually, in the first instance in Western Europe in the 1970s (with the German Mark becoming an anchor currency) and then in Japan (in the 1980s) and other advanced economies. In the first two decades of the 21<sup>st</sup> century, the process of delinking national currencies from the USD accelerated with the introduction of inflation targeting and floating exchange rates. Nevertheless, the financial and trade systems of many countries continue to be linked to the international markets of USD-denominated financial products and goods and services in-

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10 In addition, the EA has a large share in global trade – see Subsection 2.5

voiced in this currency. It illustrates the strength of network externalities and incumbent power (see Subsection 3.6).

The ECB (2019) and Ilzetzi et al. (2020) present the results of research that attempt to identify contemporary USD and EUR currency areas. The ECB (2019) examines the strength of the comovement of national currencies with the USD and EUR. The defined USD currency area includes both Americas, most of Asia (including China, India and Indonesia), the Middle East and North Africa, Turkey, East Africa and most of the former Soviet Union except for Russia, whose currency has links to both the USD and EUR. The EUR is an anchor currency for non-EA EU countries (except the UK), countries of the European Economic Area, the Western Balkans, the Western African Economic and Monetary Union, the Central African Economic and Monetary Community and a few other African countries. Ilzetzi et al. (2020) obtained the same results.

Both analyses confirm that in terms of economic potential, the USD currency area is much bigger than that of the EUR.

## 4. Benefits and costs of increasing the international role of Euro

Increasing the international role of the EUR can bring both economic benefits for the EA and its member countries (Subsection 4.1) and costs, mainly in the form of additional constraints in monetary policy making and additional responsibilities for the ECB (Subsection 4.2).

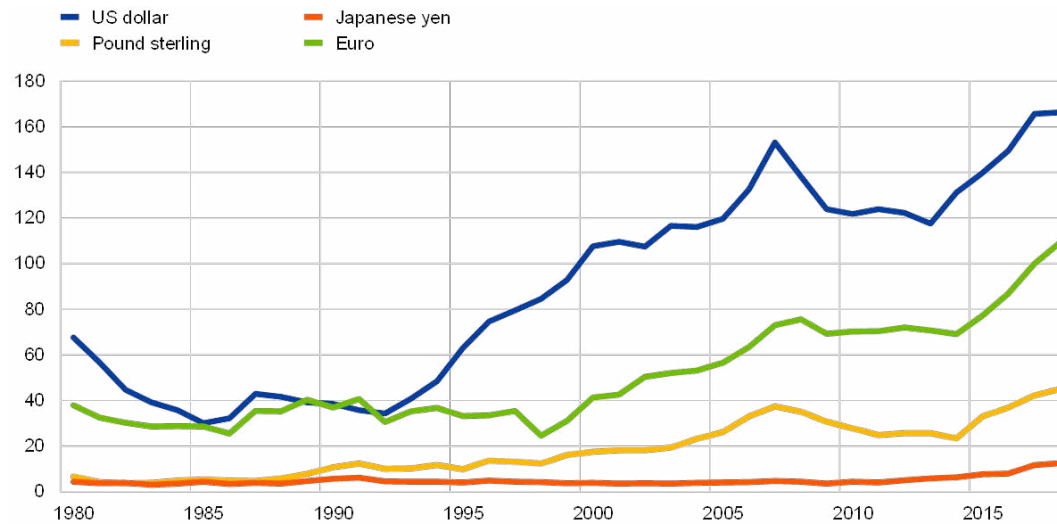
### 4.1. Benefits coming from the international role of the EUR

Increasing the international role of the EUR can bring five kinds of economic benefits (European Commission, 2018): (i) higher seigniorage; (ii) lower market interest rates; (iii) lower transaction costs and a partial elimination of exchange rate risk; (iv) a deeper market in EURdenominated financial instruments; and (v) reduced exposure to external financial institutions and the regulatory actions taken by other jurisdictions, including extraterritorial sanctions. Due to the limited scope of this paper, we will not discuss non-economic benefits, for example, increasing the geopolitical weight of the EU.

Seigniorage is central bank revenue related to issuing cash and accepting the non-remunerated reserves of commercial banks (or using a negative interest rate, as is the current ECB policy). Seigniorage, after deducting the costs of cash production and supply and other operational costs, contributes to central bank profit, a large part of which is usually transferred to a government (to Member State governments in the case of the ECB). A larger external use of the EUR will lead to increasing ECB seigniorage and profit.

Countries whose currencies are accepted as international reserve assets have the opportunity to benefit from the demand of other central banks and sovereign wealth funds for their sovereign bonds (if they are sufficiently highly rated), which leads to a decrease in their yields, other things being equal. The same benefit accrues to other high-rated private bonds and other financial instruments denominated in reserve currencies that are demanded by commercial financial institutions worldwide. The difference in yields originating from a currency status is called ‘exorbitant privilege’<sup>11</sup> in the literature (see e.g. Eichengreen, 2011). Figure 13 shows that the ‘exorbitant privilege’ is already substantial and is increasing over time due to the increasing international reserves of central banks and sovereign wealth funds in emerging market economies. The further international expansion of the EUR could further increase this premium. However, it is concentrated largely in those EA Member States whose sovereign bonds enjoy the highest rating.

11 This term was coined in the 1960s by then French Minister of Finance Valéry Giscard d’Estaing in respect to USD dominance.

**Figure 13: Estimation of the exorbitant privilege, 1980-2018, in basis points**

Source: ECB (2019, Chart 25, p. 60).

On a microeconomic level, the broader use of the EUR in international trade and financial transactions means more opportunities for EA-based economic agents to invoice in EUR, to make payments, borrow and lend, and purchase and sell financial instruments in this currency – that is, to eliminate currency conversion costs and exchange rate risk. The broader international use of the EUR may also help to deepen and diversify the market for EUR-denominated financial instruments, which would lead to decreasing financing costs. In turn, this would further increase the attractiveness of the EUR outside the EA (see Subsection 3.5), an obvious ‘virtuous circle’ effect. Finally, the broader use of the EUR would facilitate the development of EA/EU-based financial institutions and reduce the necessity to rely on the central role of US-based financial institutions in a time when US financial regulations are often used as a geopolitical rather than an economic tool.

## 4.2. Disadvantages related to the international role of EUR

Increasing the international role of the EUR also has ‘costs’, which are related to more complicated conditions for conducting monetary policy and broader international responsibilities for the ECB, other EU governing bodies and national governments in the EA.

The broader use of the EUR outside the EA means bigger monetary openness. That is, money supply in the EA will depend, to a larger degree than now, on external demand for EUR. This means a larger dependence on external monetary and macroeconomic shocks. And this was probably the main reason why the ECB in its early years and its main predecessor (the German

Federal Bank) were rather reluctant to increase the external use of its currency (ECB, 2019, pp. 38-42). At that time, monetary targeting was part of monetary policy strategy and this made monetary policy making more vulnerable to external shocks. With the increasing role of inflation targeting and interest rate policy, this constraint has been partly relaxed.

A potentially more global role of the EUR in the future will confront the ECB with the same dilemma that the US Fed has experienced for several decades – that is, to what extent the international economic and financial situation and potential external policy spillovers should be taken into consideration in monetary policy decisions (see Eichengreen, 2013). In times of global or regional financial stress, like those related to the GFC or the 2020 crisis caused by the COVID-19 pandemic, the ECB should be ready to act as the international lender of last resort by offering currency swaps to other central banks, especially in countries that are substantially euroised<sup>12</sup>. Also, other EU governing bodies and national governments should remember the international role of the EUR and be ready to provide more financial assistance to third countries in times of turmoil. National governments should also remember the potential international de/stabilising spillovers of their fiscal policies.

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12 In March and April 2020, the ECB established swap lines with the central banks of Denmark, Bulgaria and Croatia as a response to the COVID-19 crisis. In addition, on 25 June 2020, the ECB established a repo facility to provide EUR liquidity to non-euro area central banks. See [https://www.ecb.europa.eu/home/search/html/swap\\_lines.en.html](https://www.ecb.europa.eu/home/search/html/swap_lines.en.html) and <https://www.ecb.europa.eu/press/pr/date/2020/html/ecb.pr200625~60373986e5.en.html>



## 5. Summary and Conclusions

When the EUR was introduced in 1999, there were expectations that the new currency would become a successful competitor to the USD in its role of dominant world currency. However, this did not happen, and the USD has sustained its leadership position despite large current account and fiscal imbalances in the US economy, the GFC (which originated in the US financial sector), and protectionist policies and unilateralism under the Trump administration. After initial moderate gains in the early 2000s, the global position of the EUR began to weaken in 2006. And by the end of the 2010s, the EUR had a similar international weight as at its inception: it was a strong regional currency in the EU and in its neighbourhood and it was the second global currency, but far behind the leader (USD). That is to say, the international position of the EUR did not differ from the cumulative positions of its predecessors, in particular, the German mark and French franc (Ilzetzki et al., 2020).

Apart from the USD and the EUR, there is a group of four other currencies – the JPY, GBP, CHF and RMB – which play an international role, but their share in the total international reserves of central banks and various types of trade and financial transactions remains limited.

Unfulfilled expectations concerning a bigger international role for the EUR and the continuous dominance of USD are in line with the history of changes in the international monetary system. Both the departure from the gold standard and the dethroning of the pound sterling as the dominant currency took several decades and occurred only as result of dramatic events, such as the two world wars and the Great Depression, among others.

The demand for international currencies is determined largely by private sector preferences. The political or geopolitical preferences of national governments and international institutions may only marginally correct them. In turn, private sector preferences depend on the size, depth and sophistication of the financial market for a given currency, its legal and institutional infrastructure and the perception of a currency's long-term stability. Network externalities and incumbent power also play a very important role because changing the dominant currency is a costly and lengthy process for market participants.

The above historical lessons should be taken into serious consideration by EU governing bodies in their plan to increase the international role of the EUR. This plan must be realistic in the sense that the EUR does not have a chance to overtake the dominant role of the USD in the foreseeable future (if one excludes catastrophic scenarios, such as a global military conflict or a substantial reversal of globalisation). What can be achieved is a limited increase in the international role of the EUR, perhaps to the level of the composite index in 2005 (see Subsection 2.1). However, even such a moderate goal would take several years to be accomplished and would

require conducting several reforms within the EA and the EU – first and foremost, completing the Banking Union and Capital Market Union to deepen and fully integrate the financial market in Europe. Other important measures should include the rational design of the post-Brexit economic and trade relationship between the EU and the UK (to allow the City of London to continue play an important role in conducting EUR-denominated financial transactions) and a more supportive attitude of the ECB to the use of the EUR outside the EA and to adoption of the EUR by non-EA EU Member States. Some of these measures have been mentioned in the European Commission (2018) Communication, but their implementation will not be easy.

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