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The International Role of the Euro: State of Play and Economic Significance



Policy Department for Economic, Scientific and Quality of Life Policies
Directorate-General for Internal Policies
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The International Role of the Euro: State of Play and Economic Significance

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Abstract

This paper summarises recent trends in the international use of the euro and potential benefits and drawbacks of acquiring the status of an international currency, with a focus on implications for monetary policy. The benefits of international currency status are found to likely be limited and the effects on monetary policy to be ambiguous. The international role of the euro could be strengthened by policy initiatives in specific markets or as a by-product of improvements in the soundness of euro area economic and fiscal policies.

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LIST OF ABBREVIATIONS

BIS	Bank for International Settlements
CLS Bank	Continuous Linked Settlement Bank
COFER	Currency Composition of Official Foreign Exchange Reserves
COFER	Currency Competition of Official Foreign Exchange Reserves
EA	Euro area
ECB	European Central Bank
EU	European Union
EUR	Euro
FX	Foreign Exchange
GBP	Great British pound
GDP	Gross domestic product
IMF	International Monetary Fund
JPY	Japanese yen
NBER	National Bureau of Economic Research
OTC	Over-the-counter
UK	United Kingdom
US	United States
USD	United States dollar

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EXECUTIVE SUMMARY

- **20 years after its introduction, the role of the euro as an international currency remains under debate.** While the euro has become and remains to be the second most important currency in the international financial system, by most measures it continues to lag the US dollar by a wide margin.
- **Following a rise in importance in the first decade since its inception, the euro experienced a setback between 2008 and 2014 in the wake of the global financial crisis and the European sovereign debt crisis.** These developments suggest that the euro's international use is highly dependent on the stability of the euro financial markets and the credibility of the euro area institutions.
- **International currency status is not necessarily a binary variable but can be a matter of degree.** A currency can be of different international importance to private and public users along different roles and functions – a currency does not have to be equally important as an international medium of exchange, unit of account, and store of value, respectively.
- **High demand for a currency as an international store of value will reduce external financing costs for the issuer.** On the flipside, there is a concern that this results in currency overvaluation reducing the international price competitiveness of domestic firms. Overall, however, domestic agents are set to benefit, although the size of the “exorbitant privilege” may be relatively small in the current low interest rate environment.
- **The effects of international currency status on the effectiveness of monetary policy are ambiguous.** On the one hand, an increased international transmission with positive spillbacks to the domestic economy and a reduced exposure of domestic prices to exchange rate shocks make it easier for a central bank to hit its target for inflation or economic activity. On the other hand, lower effects of monetary policy on import prices as well as blurred signals from monetary aggregates can also complicate matters.
- **Being the issuer of an international currency can change one's relationship with the rest of the world.** On the one hand, it can enable the issuer to achieve non-monetary side objectives because foreign agents may be forced to follow domestic financial regulations. On the other hand, international pressure on the issuer may arise to deviate from own policy preferences in order to accommodate foreign needs (e.g. provide financial support in times of economic trouble abroad).
- **Strengthening the international role of the euro can be pursued along different lines.** The euro's international attractiveness could rise as a natural outcome of improved, more consistent institutional arrangements in the euro area leading to credible and sound economic and fiscal policies. Policy could also try targeting individual markets, such as emerging economy debt markets or energy markets, with interventions in order to increase the international use of the euro.

1. INTRODUCTION

After its inception in 1999, the euro quickly established itself as a key international currency on global financial markets. An upward trend in the popularity of the euro as a reserve currency and emerging concerns around the soundness of US economic policy in the longer term even led to speculation by some economists that the euro might surpass the dollar as the leading international currency over the next decades (Chinn and Frankel, 2005). However, the trend towards the euro reversed with the global financial crisis which emerged in 2008 and strengthened the dollar for two reasons: The dollar still acted as a safe haven asset despite the fact that the crises originated in the US and the subsequent eurozone crisis affected trust in the sustainability of the euro area.¹

The perception in the literature is that the dollar has cemented its status as the world's leading international reserve currency while the euro is not living up to its full potential (Ilzetki et al., 2020, Maggiori et al., 2020). Another major change in the international monetary system is the ongoing internationalisation of the renminbi on the back of the relentless growth of the Chinese economy both in absolute terms and as a share of the world economy.

Against this backdrop, the aim of this paper is to summarise recent trends in the international use of the euro and inform the discussion about the desirability of an increased internationalisation of the euro. Section 2 briefly reviews the evidence on the international share of the euro with respect to its role as reserve currency, as an anchor currency for other countries, as currency for international transactions, and as denominator currency in the loans and debt markets. Section 3 discusses potential benefits and drawbacks of acquiring the status of an international currency, with a focus on implications for monetary policy. Finally section 4 concludes.

¹ The dollar appreciated sharply during the 2008 financial crisis against most currencies. Negative macroeconomic shocks during the crisis triggered a significant strengthening of the US dollar, rather than a weakening (Fratzcher, 2008).

2. EMPIRICAL EVIDENCE – CURRENT STATUS

An international currency is broadly defined as a currency that is used not only by domestic agents but by residents of foreign countries as well. Currencies generally can be used to fulfil three related but distinct roles – medium of exchange, store of value, and unit of account. Following Chinn and Frankel (2005), one can further distinguish between public and private use of a currency. Table 1 provides an overview of the resulting six use cases, and the different associated international roles a currency can assume.

Table 1: Roles of an international currency

	Government	Private Sector
Store of value	International reserves	Currency substitution (private dollarization)
Medium of exchange	Vehicle currency for foreign exchange intervention	Invoicing trade and financial transactions
Unit of account	Anchor for pegging local currency	Denominating trade and financial transactions

Source: Own compilation based on Chinn and Frankel (2005) and Krugman (1984).

The **store-of-value function** relates to a currency's reserve status. In general, reserve currencies are hard currencies which are easily obtainable and are traded freely in international markets. In this respect, we may measure the international role of a currency by its share in international reserve holdings (Section 2.1).

A currency is an international **medium of exchange** if it is used by non-residents to make payments, be they related to the trade of goods and services or capital flows. Private non-residents may also use the international currency as a vehicle if it is cumbersome to directly exchange two smaller currencies. To evaluate the medium of exchange function, we look at transaction volumes on international currency markets (Section 2.2). This can be further decomposed into financial transactions and trade transactions as well as into different currency instruments (spot, forwards, swaps).

In its role as a **unit of account**, an international currency will feature on invoices for imports and exports. For example, oil and other commodity contracts are mostly denominated in US dollar, making it an important unit of account. One reflection of the role as a unit of account is the use of an international currency as an anchor for a local currency peg (Section 2.3). An international currency can also be used to denominate credit claims in foreign countries (Section 2.4).

Of course, these functions are interrelated. For example, in order to be attractive as a unit of account for loans in a foreign banking system, one would expect that the currency's value should be quite stable, thus also making it a good store of value.

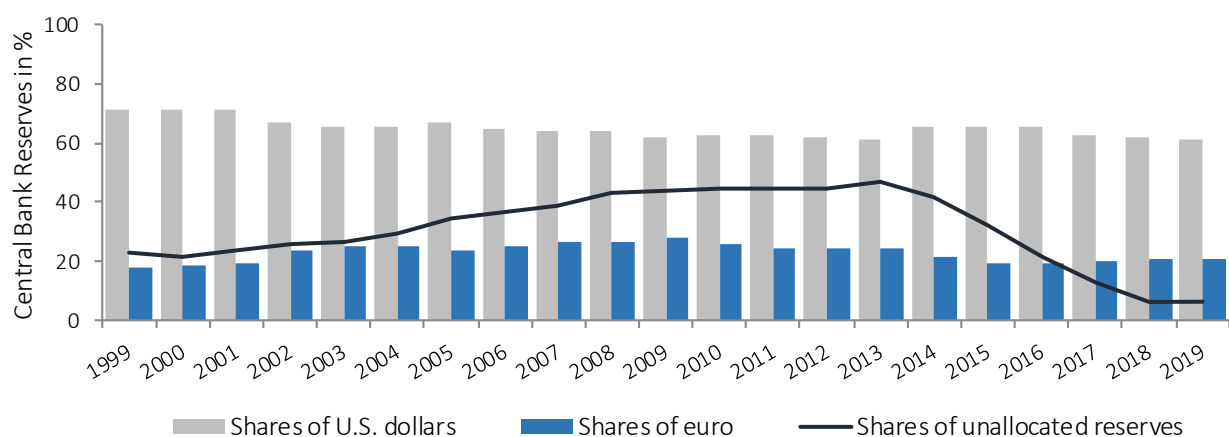
2.1. Official reserve holdings

International official reserve holdings are difficult to interpret for various reasons. An increased share of the US dollar relative to the euro can for example reflect both a success of the US dollar and a decline of the euro. Inspecting the total share of the euro in terms of global reserve holdings can also lead to multiple interpretations since other currencies, like the Chinese renminbi, may have increased their share. Disentangling the effects of economic developments or policy actions in Europe on the position of the euro as an international reserve currency can therefore be a rather difficult task.

Figure 1 shows the share of the euro and the US dollar of those reserve holdings for which the currency is known since 1999. The US dollar has been the main global reserve currency since it replaced the British pound after World War I². The global financial crisis, which had its origin in the US, did actually not reduce the attractiveness of the US dollar as measured by its share in international reserves. In contrast, during the global financial crisis and the eurozone sovereign debt crisis, the euro indeed lost importance as a reserve currency between 2008 and 2014. More recently, the euro managed to recoup part of the lost ground as its share in total reserves increased from 13% to 19% from 2015 to 2019. In the end, however, the euro's share in 2019 was only slightly higher than at its inception in 1999.

The Chinese renminbi which is being reported since 2016, has more than doubled its share by 2019, but it still accounts only for a modest share of all allocated foreign reserves (in 2019: 2%) and is currently only the 8th most important international reserve currency.

Figure 1: Currency reserves since 1999



Note: The figure shows the ratio of euro and US dollar reserves to total allocated reserves. The dark blue line reports the share of unallocated reserves to total reported currencies. Data comes from the IMF's COFER-data. Countries report confidentially the currency composition of the foreign reserve currency. Allocated reserves mean those foreign currency reserves that can be allocated to various reserve currencies based on the reported information. The total is the sum of allocated and unallocated reserves. The best data coverage of allocated reserve currency is reached in 2019 when the share of unallocated reserves decreases to 6.35%.

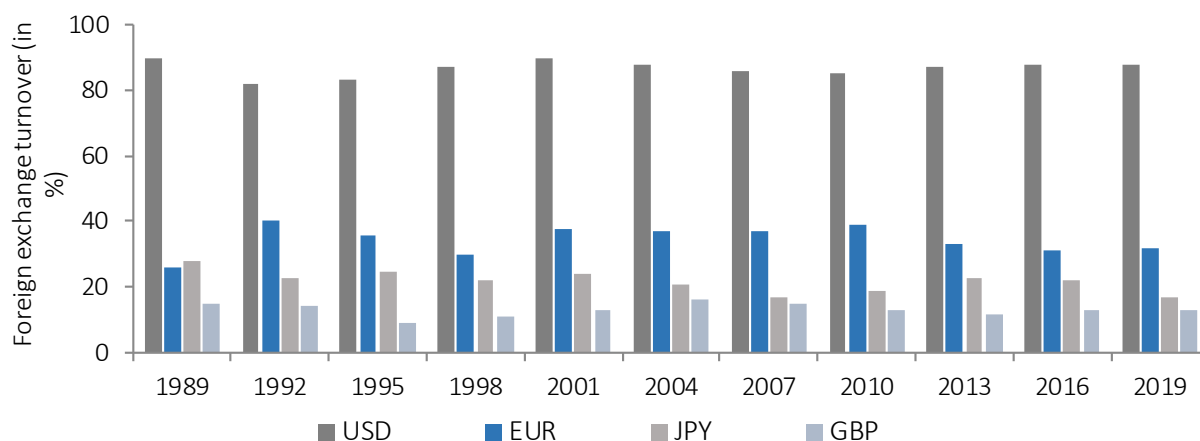
Source: International Monetary Fund's Currency Composition of Official Foreign Exchange Reserves (COFER), own calculations.

² See Eichengreen (2011).

2.2. Transaction volume

Data on exchange rate transactions is provided by the Continuous Linked Settlement (CLS) bank and the Bank for International Settlements (BIS). Figure 2 provides a long-run perspective based on turnover from the BIS Triennial Survey since 1989. Similar to the trend in currency reserves, we find that the euro lost ground after 2007 but stabilised since 2013. The share of 2019 compared to 2001 has slightly decreased by six percentage points.

Figure 2: Share of foreign exchange turnover of major currencies, 1989-2019



Note: This figure shows the share of foreign exchange turnover. Each currency was one side of the transaction. German marks transactions are used prior to the inception of the euro.

Source: BIS Triennial Survey of FX and OTC derivatives trading. Own computations.

We also consider high frequency data from CLS Group which constitutes the world's largest multi-currency cash settlement system. CLS acts on behalf of 60 settlement members comprising the world's largest financial institutions and over 24 000 third-party clients, including banks, funds, non-bank financial institutions and multinational corporations.³ Note that all trades include two currencies, meaning that the euro transaction volume covers all trades in which the euro is involved as one trading side (and that the total amounts to 200%).

If we analyse the euro transaction volume relative to the US dollar and to the overall trading volume, we find that 32% of all transactions include the euro between 2011 and 2018. For all instruments, the average ratio relative to the US dollar is on average 33%, which illustrates the dominant role of the dollar as an international currency as the euro area economy is almost 75% of the size of the US economy. Table 2 provides figures for a disaggregated perspective giving the respective currency shares on spot, forward and swap market for three sub-periods.

³ CLS processes 500 000 FX trades per day worth over USD 1.55 trillion on average getting the majority of trade confirmations within 2 minutes of execution. CLS covers more than 50% of global FX transaction volumes (spot, swap and forward) for 33 currency pairs.

Table 2: Euro transaction volume relative to all transactions

	Share of euro transaction relative to all transactions in %	Share of euro transactions relative to dollar transactions in %
2011-2015	spt: 37.5, orf:33.3, swp:28,8	spt:43.8, orf:47,8, swp:30,04,
2015-2017	spt: 33.4, orf: 33.6, swp: 27,6,	spt: 39.5, orf:42.2 swp: 30,1
2017-2018	spt:36.2, orf:33,9, swp:28.6	spt:42.8, orf:45.7, swp:30.3

Note: This table shows the share of euro foreign exchange turnover relative to all transactions and dollar transactions, respectively, for spot (spt), forward (orf) and swap (swp) markets.

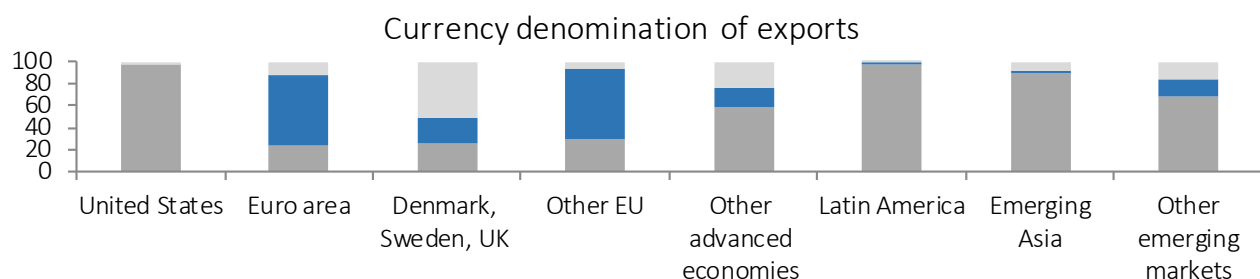
Source: CLS Bank and own calculations.

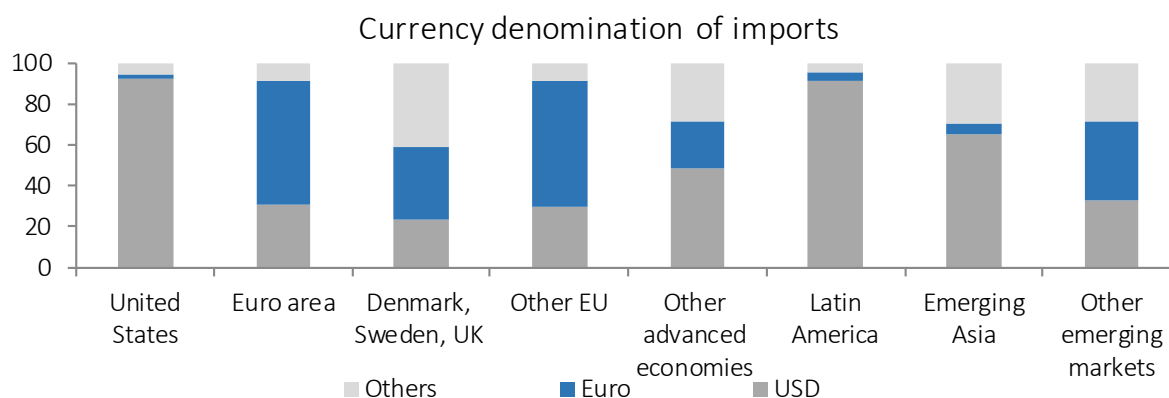
The findings show that most shares slightly decreased in 2015-2017 compared to 2011-2015 but recovered more recently in 2017-2018. It also becomes apparent that the share in spot and forward markets is substantially higher than the share in the swap market. The trades involving the euro compared to those involving the dollar clearly exceed (or are very close to) 40% in spot and forward markets. Recent evidence shows that the increase in swaps outpaced that of spot trading so the lower share of the euro on this market could also reduce the overall share. An important additional observation is that US dollar is on the other side of 95% of all renminbi transactions, implying that an increase in renminbi trading is likely to increase the share of the dollar simultaneously.

It is also central to take into account that the largest amount of exchange rate transactions is not driven by trades of goods and services across countries. Recent evidence shows that financial motives are the key drivers behind the growth in foreign exchange rate markets. We therefore also analyse the role of the euro for trade denomination separately.

Figure 3 shows the use of the US dollar and the euro in exports and imports of goods. Estimates are averaged over 1999-2015. According to Figure 3, the US dollar is the dominant invoicing currency in international trade. This is true in particular for trade outside Europe. In Asia and South America, trade is mainly invoiced in US dollar. The estimates of Figure 4 also emphasize the regional role of the euro since its share is relatively high only for the euro area, non-euro area European countries and countries close to the European Union. The share of the euro as an invoicing or settlement currency for extra-euro has been mostly stable over the last decade, fluctuating around 60% of extra-euro area exports and 50% of extra-euro area imports. The US dollar share is even quite large in Europe reflecting the dominant role of the US dollar in commodity and raw material trade. Overall, the euro and the US dollar combined account for about 66% of international payments.

Figure 3: Currency denomination of goods exports and imports (in %)





Note: This figure shows the average share of exports from the respective country group, and imports into that country group. Estimates represent averages across all years starting in 1999 until 2015. The estimates for the euro area include also intra-euro area trade.

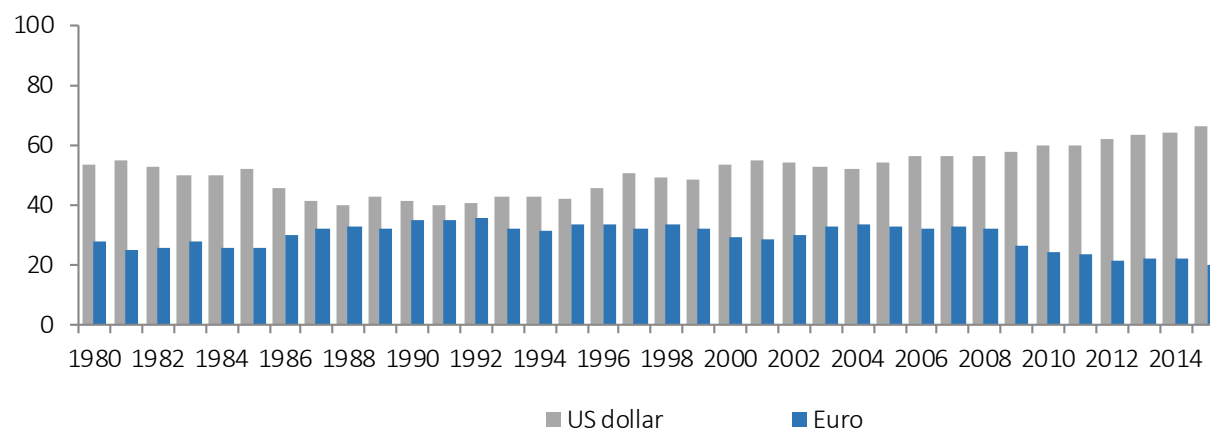
Source: Gopinath (2015), own calculations.

2.3. Euro and dollar as a currency anchor

Another dimension related to the role of an international function as a unit of account is the role as anchor currency. Figure 4 provides the share of countries anchored to euro and the USD. To approximate the international reach of the euro, all countries are weighted by their share in world GDP. Data on anchored currency comes from Ilzetzi et al. (2019). The anchor to each currency is based on currency composition of foreign trade invoicing, external debt denominated, and central bank foreign reserves, and the central bank’s historical practices. It should therefore be considered as a combined measure and is not solely based on the exchange rate regime.

Figure 4 shows that the share of countries which anchor their currency to the US dollar has increased substantially while the share of countries pegged to the euro has decreased markedly, resulting in a widening gap between the US dollar and the euro. The role of the euro has declined with nearly 25 percent of world GDP anchored to the euro at its inception, compared to only 15 percent in 2015 (Ilzetzi et al., 2020). However, part of this evolution reflects the strong increase in China’s GDP and the stronger growth in the US compared to Europe.

Figure 4: Share of countries weighted by their share in world GDP (in %), 1980-2015



Source: The figure shows the share of countries (weighted by their share in world GDP) anchored to the US dollar or euro. The anchor to each currency is based on currency composition of foreign trade invoicing, external debt denominated, central bank foreign reserves, and the central bank’s historical practices. It should therefore be considered as a combined

measure and is not solely based on the exchange rate regime. See Ilzetzki et al. (2020), GDP data comes from the World Bank. Own calculations.

A different question is how many countries adopt the euro as an official exchange rate anchor and this number has essentially been constant. The Table 3 summarises countries and territories with an exchange rate regime directly linked to the euro. All countries which strongly rely on the euro as a currency are geographically closely linked to Europe. This is in line with the evidence that demand for euro banknotes has mainly been exported to, and imported from, euro area neighbouring regions (ECB, 2019).

Table 3: Countries and territories with exchange rate regimes linked to the euro

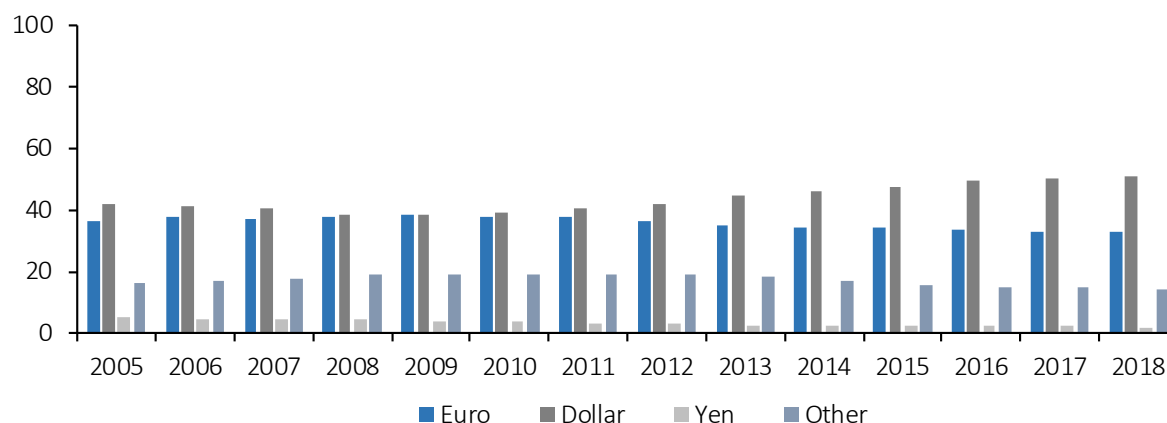
Region	Exchange rate regime	Countries	Monetary policy framework
Non-euro area EU Member States	ERM II	Denmark	Exchange rate anchor
	Euro-based currency boards	Bulgaria	Exchange rate anchor
	Tightly managed floating regimes	Croatia	Exchange rate anchor
	(Managed) floating regimes	Czech Republic, Hungary, Romania	Inflation targeting framework
	Pro memoria: free floating regimes	Poland, Sweden, United Kingdom	Inflation targeting framework
EU candidate and potential candidate countries	Unilateral euroisation (no separate legal tender)	Kosovo, Montenegro	Other
	Euro-based currency boards	Bosnia and Herzegovina	Exchange rate anchor
	Stabilised arrangements with the euro as a reference currency	Republic of North Macedonia	Exchange rate anchor
	Crawling pegs or crawl-like arrangements involving the euro	Serbia	Inflation targeting framework
	(Managed) floating regimes	Albania, Turkey	Inflation targeting framework
Other countries	Euroisation	European microstates, some French overseas collectivities	Other
	Pegs based on the euro	CFA franc zone, CFP franc zone, Comoros, Cabo Verde, São Tomé and Príncipe	Exchange rate anchor
	Stabilised arrangements with baskets involving the euro	Singapore	Exchange rate anchor
	Crawling pegs or crawl-like arrangements involving the euro	Botswana, Islamic Republic of Iran	Exchange rate anchor
		China	Monetary aggregate target
		Tunisia	Other
	Pegs and managed floats based on the SDR or other currency basket involving the euro	Algeria, Belarus	Monetary aggregate target
		Fiji, Kuwait, Libya, Morocco, Syria	Exchange rate anchor
		Samoa, Vanuatu	Other

Source: Data is of end April 2019, ECB (2019). Own compilation.

2.4. Bank assets by currency of denomination

We also assess the role of the euro as an international unit of account in terms of debt denomination and its share in the stock of international debt securities

Figure 5: Share of debt denominated in different currencies (in %)



Note: This figure shows percentages of outstanding debt (at constant exchange rates, end of period).

Source: ECB (2019). Own calculations.

Figure 5 shows that the share of US dollar denominated debt has increased over the last decade while the share of other currencies has decreased. The figure overall confirms the predominance of the US dollar and the euro's second place. A different picture emerges if we focus on debt flows rather than stocks. Here we observe an increase in the share of the euro and a decline in the share of the US dollar. Emerging market borrowers increasingly use the euro as a funding in order to diversify their currency exposures (ECB, 2019). In 2019, euro-denominated credit overtook for example US dollar-denominated credit as the largest stock of foreign currency credit to emerging Europe (BIS, 2020).

To sum up, the euro has acquired a prominent international role since its inception in 1999, although with some fluctuations. In particular, the euro has become and remains the second most important currency in terms of reserve holdings, transaction volumes and debt denomination.

3. THEORETICAL ASSESSMENT OF BENEFITS AND COSTS OF BEING AN INTERNATIONAL CURRENCY

This chapter provides an overview of the theoretical reasons why it may or may not be desirable to be the issuer of an international currency. In the literature, many different costs and benefits are attributed to possessing international currency status (cf. Cohen, 2012; ECB, 2019). Table 4 summarises the different proposed costs and benefits, which will be examined in more detail below.

Table 4: Proposed benefits and costs of an international currency

Benefits	Costs
Reduced transaction and hedging costs Increased seigniorage, lower external financing costs Higher macroeconomic flexibility, monetary policy autonomy Stronger international monetary policy transmission with positive spillbacks Reduced impact of exchange rate shocks on domestic prices Political leverage, reduced exposure to unilateral decisions of others Increased reputation	Currency overvaluation External constraints on policy, dangers from capital flow volatility Blurred signals from monetary aggregates Lower effects of monetary policy on import prices Increased international responsibilities

As noted in Chapter 2, the term “international currency” can refer to a range of different properties. Cohen (2012) distinguishes the roles of international money along two dimensions. The first dimension refers to the traditionally proposed functions of money (medium of exchange, unit of account, and store of value), while the second distinguishes private from official agents (cf. table 1 for an overview of the different possible roles). Furthermore, international currency status does not need to be defined as a binary variable, with a currency either being dominant on the international stage or not. Rather, there can be degrees of international importance. The respective degrees of international importance across the different roles determine which costs and benefits fall towards the issuer of a particular currency. For example, if a currency is used as a medium of exchange and unit of account, this may create certain microeconomic benefits (lower transaction costs), but as long as it is not used as a store of value, no seigniorage gains will materialise. Looking at the other dimension, one might, for instance, see official reserve holdings lending themselves more easily to political pressure than private use in financial markets.

The costs and benefits are also not constant across time. Most directly, they may depend on the current stage in the life cycle of an international currency. Seigniorage gains and increased policy flexibility are highest early on, but later, external constraints grow (if early seigniorage gains are produced by capital inflows, one later faces the risk that these flows reverse). Other developments, independent of the individual currency, can also lead to changes over time. For example, the current low interest environment and a shift away from banknotes towards electronic payments have reduced the potential for seigniorage, and the development of enhanced monetary analysis tools as well as financial globalisation for all currencies may make the danger of volatile “hot money flows” less relevant.

The rest of the section looks at the proposed benefits and costs one by one:

Reduced transaction and hedging costs include a number of possible benefits accruing mostly to domestic agents. Home banks with privileged access to the resources of the issuing central bank might be able to earn “denomination rents” (cf. Swoboda 1968). However, it is not clear to what extent such rents could persist under competitive pressure on financial markets. Furthermore, access privileges likely have eroded over time: for example, over the last decade, central banks have markedly increased the provision of foreign exchange swap lines between each other, aiming to make it easier for foreign banks to access liquidity in certain currencies. But even if these privileges exist, the political shifting of resources between different agents such rents represent may well not be an advantage to the economy as a whole. Non-financial companies could also benefit from lower exchange rate risks when they are able to use the home currency in foreign business contracts, although Genberg (2010) cautions against overestimating gains from this. It should be noted that exchange rate risks do not disappear by simply changing the currency in which a contract between two parties from different currency areas is denominated. For example, if a contract between a US and a euro area company is switched from being denominated in US dollar to euro, then the payment streams may become more stable from the point of view of the euro area company but less so from the US company’s perspective. Insofar as this shift is costly to the US company (and beneficial to the euro area company), one would, in a competitive market, expect this to be reflected in goods pricing, i.e. US companies should demand a higher euro price. Furthermore, it stands to reason that usually companies care less about the fluctuations in the value of payment streams from a single contract, and more about the balance between the inflows and outflows associated with many different contracts. In particular, it may be costly if revenue and costs face independent exchange rate shocks. For this reason, companies – in particular those that are not primarily based in the euro area – may find it attractive to conduct their international business primarily in a single currency (such as the US dollar), so that foreign revenues and costs exhibit closer co-movements. Finally, citizens travelling abroad may benefit from the convenience of being able to use their own money.

Another canonical advantage is **reduced external financing costs**, including the closely related ability to earn **international seigniorage**, a factor known as the “exorbitant privilege”. Seigniorage earnings stem from the government’s ability to have its central bank issue zero-yielding liabilities, namely banknotes, as well as pay comparatively low interest rates on commercial banks’ reserve holdings. However, in the current global monetary environment, which includes very low interest rates, this traditional seigniorage channel is less relevant. If a currency achieves a certain measure of international status, this may well mean that foreigners want to acquire more of this currency than otherwise. This increase in demand for domestic financial assets (including bonds as well as banknotes) can reduce borrowing costs substantially. For example, Gräb et al. (2019) estimate that additional demand produced by foreign official reserve holdings has reduced long-term yields of highly rated government debt by about 1.1 percentage points in the euro area and 1.6 percentage points in the US. In the euro area, the benefits are concentrated on those sovereigns with the soundest fiscal positions. Note that the benefit to the domestic economy as a whole from lower interest rates on government bonds is smaller than the headline reduction in interest rate expenses for the fiscal authorities because some government bonds are held by other domestic agents as well (such that lower interest expenses are partially offset by lower incomes for those bond holders). Other borrowers apart from the government may be able to benefit from lower financing costs as well (cf. e.g. Warnock and Warnock, 2009; Gourinchas and Rey, 2005). In essence, foreigners give up additional traded goods and services in order to acquire domestic bonds and banknotes, which is a real gain to the domestic economy. Insofar as it is easier to take on external debt, constraints on monetary and fiscal policy are also softened (**higher macroeconomic flexibility**), although it should be noted that these gains tend to erode once they are used.

But foreign demand for the domestic currency is also associated with a number of risks. First, there is an argument that international currency status would lead to detrimental **currency overvaluation**: due to increased demand for the currency, it appreciates, reducing the competitiveness of exporters and those competing with importers. However, this argument relies on the fallacy that sees exports as gains and imports as losses to the domestic economy. In fact, the ultimate aim of economic activity is the ability to consume goods (and services). Hence the possibility to import additional goods without ever giving anything in return but newly issued banknotes, this would be an advantage to the domestic economy from a welfare point of view (as explained above, this is what underlies the benefit of lower external financing costs/international seigniorage). However, it is possible that a sudden appreciation of a currency due to an unexpected gain in international status produces some turbulences in the short run by shifting relative prices (note also that this would not only produce the postulated losers but also winners, most notably domestic importers), but in the long run one would expect relative prices to adjust. There is also the argument that the value of a global currency moves with the global economic cycle, specifically that it tends to appreciate in crisis times because investors are looking for a safe haven. This is argued to be detrimental to the country issuing the global currency because its exporters would lose price competitiveness at precisely the time when economic conditions are already deteriorating. However, one should also note that such an appreciation supports the valuations of domestic assets reducing the financial strains usually associated with an economic crisis.

Second, in order to persuade foreign investors to hold on to their accumulated balances, the international status of the currency needs to be preserved, which places **external constraints on policy**. This is important since a withdrawal of foreign demand would reverse the reduction of financing costs mentioned above. Third, even if the international status is secure in the long run, there may be dangerous **capital flow volatility**, with rapid movements in and out of the currency in the short run. **Blurred signals** from less stable money demand would make it more difficult to appropriately target interest rates or money growth.

The international status of a currency may also affect the effectiveness of the monetary policy of the issuing central bank. For instance, there is the possibility of a **stronger international monetary policy transmission with positive spillbacks**. For example, an expansionary monetary policy for an international currency would not only ease domestic financing conditions, but those of trading partners as well, producing additional stimulus. Also, if a lot of trade contracts use the domestic currency, the **impact of exchange rate shocks on domestic prices** may well be reduced. While this helps the central bank insofar as it weakens one source of price instability, it also means that the **effects of monetary policy on import prices** will be lower, hampering monetary policy transmission through this channel.

A different reason for the desire to increase the international stature of a currency is to **reduce exposure to unilateral decisions of others** (or in order to be able to exert **political leverage** oneself). The issuer of a dominant currency controls access to financial resources (including infrastructure) that others find vital. To a certain degree, it can therefore dictate the behaviour of foreign entities through the use of its own financial regulations. For example, as long as foreign parties want to continue to have access to these resources, they may also have to comply with restrictions on certain trades and business practices outside the jurisdiction of the dominant currency issuer or uphold sanctions against other foreign parties.

Finally, there is the intangible benefit of an **increased reputation** which may confer a certain degree of soft power. At the same time, however, the issuer of an international currency may also find herself pressured into **increased international responsibilities** in times of economic trouble abroad. For

example, she may be expected to modify domestic monetary policy or provide subsidised loans to ease a foreign crisis.

4. CONCLUDING REMARKS

Overall, 20 years after the euro's introduction, the euro has become and remains the second most important currency in the international financial system after the US dollar. Even after the setback due to the global financial and European debt crises between 2008 and 2014, the euro manages to maintain this position. As Chapter 2 shows, the euro is a globally accepted medium of exchange and unit of account, playing an important role in terms of foreign exchange transaction volume, trade-invoicing, and as reserve currency.

For now, there is also no evidence that the renminbi or any other currency is threatening the status of the euro as the second most important currency. However, it should be noted that China has closed in to the US in terms of size of the economy (in fact it is already the world's largest economy in purchasing power adjusted terms), and its share in world GDP continues to grow rapidly. Historically, the size of the economy and the currency status in terms of reserve holdings has been correlated. When the British pound and US dollar gained their status of as dominant international currencies, the United Kingdom and the United States were the world's leading economies and traders. Today, capital flows are much bigger than trade flows with the foreign exchange market turnover at least 14 times larger than GDP and 8 times higher than foreign trade volumes in the US (King and Rime, 2011). This also implies that the size and the level of efficiency of euro financial markets will be a key determinant of the euro's share in foreign exchange transactions. For now, China still limits capital movements but continues a stepwise process of opening up onshore markets.

There are two viewpoints with regard to the dominant role of the dollar and the implications for the euro. One perspective is that the predominance of the dollar does not present a direct problem for the euro and is largely driven by historical and geographical reasons. An alternative argument is that the exorbitant privilege of the dollar can and should be challenged and that the dominance of the dollar over the euro predominantly reflects the highly fragmented financial markets in the euro area compared to the US (Ilzetzki et al., 2020).

Based on the arguments regarding advantages and disadvantages in Chapter 3, it is unclear whether further internationalisation of the euro would provide a significant net benefit. If demand for the euro as an international store of value increases, this will reduce external financing costs for certain debtors (although this advantage might not be very substantial in the current low interest rate environment). On the flipside, there is a concern that a highly valued currency reduces the international price competitiveness of domestic firms. Overall, however, domestic agents are set to benefit from the increased demand for the currency. The effects of international currency status on the effectiveness of monetary policy are ambiguous. On the one hand, an increased international transmission with positive spillbacks to the domestic economy and a reduced exposure of domestic prices to exchange rate shocks make it easier for a central bank to hit its target. On the other hand, lower effects of monetary policy on import prices as well as blurred signals from monetary aggregates can also make its job harder. Finally, being the issuer of an international currency can change one's relationship with the rest of the world. On the one hand, it can enable the issuer to achieve non-monetary side objectives because foreign agents may be forced to follow domestic financial regulations. On the other hand, the issuer may be exposed to international pressure to deviate from domestic policy preferences in order to accommodate foreign needs, for example to provide financial support in times of economic trouble abroad.

Irrespective of whether it is advisable to do so, there are two approaches that can be used to strengthen the international role of the euro. First, the attractiveness of the euro could be increased as a by-product of improvements in the soundness of euro area economic and fiscal policies. Second,

policy makers could target individual markets with interventions in order to increase the use of the euro.

An encouraging pattern for the euro is the increasing share of new emerging market debt that is denominated in euro compared to the US dollar. A further promotion of the euro in emerging markets, in particular emerging Europe is one potential way to increase the euro's international role. Increasing the share of euro area imports and exports denominated in euro could alleviate some exchange rate risks. The US dollar, for example, is widely used as a vehicle currency for oil trade invoicing in the European Union. As long as both partners would be able to gain from lower exchange rate risks, the initiative of the European Commission to promote the use of the euro in energy contracts may prove fruitful.

Chapter 2 shows that the international status of the euro was negatively affected by the instabilities associated with the recent financial crises. To decrease the likelihood of such instabilities, Member States ultimately need to implement sound, responsible fiscal policies. Proponents argue that common European sovereign debt instruments could provide a safe asset for investors and further financial integration (cf. ECB, 2020). However, it is far from clear that a (further) substantial mutualisation of debt would increase the supply of euro assets of highest credit quality. Credit ratings of these assets would depend fundamentally on their design, how well European rules can be enforced, and how well the design will address the issue of moral hazard.⁴ Moral hazard here means that individual Member States will be less inclined to follow sound fiscal and economic policies if part of the costs of their debt is shifted onto others. With all the currently debated designs for such assets, moral hazard would remain a major issue. Note that depending on the amount of European debt that they will have to guarantee the creditworthiness of the few remaining AAA-rated sovereigns may be insufficient, leading to downgrades. In addition, it is unclear whether a common euro area debt instrument would be able to improve overall liquidity in the euro area government bond markets, and if any potential improvements in liquidity conditions would substantially decrease total financing costs. All in all, this illustrates the challenges a common debt instrument design faces.

⁴ Controversial issues include but are not limited to the question on who will guarantee these debt instruments, whether there will be a total or partial replacement of national borrowing by common debt instruments, how the seniority of common debt instruments would be structured, and whether there is any conditionality at issuance with regard to fiscal or structural reforms.

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This paper summarises recent trends in the international use of the euro and potential benefits and drawbacks of acquiring the status of an international currency, with a focus on implications for monetary policy. The benefits of international currency status are found to likely be limited and the effects on monetary policy to be ambiguous. The international role of the euro could be strengthened by policy initiatives in specific markets or as a by-product of improvements in the soundness of euro area economic and fiscal policies.

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