European Commission

ISSN 2443-8022 (online)

The Role of the Euro in Southern Neighbourhood Countries

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DISCUSSION PAPER 163 | JUNE 2022

EUROPEAN ECONOMY

Economic and Financial Affairs

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Authorised for publication by Annika Eriksgaard, Director for International Economic and Financial Relations, Global Governance.

This paper exists in English only and can be downloaded from https://ec.europa.eu/info/publications/economic-and-financial-affairs-publications_en.

Luxembourg: Publications Office of the European Union, 2022

PDF ISBN 978-92-76-44630-9 ISSN 2443-8022 doi:10.2765/419855 KC-BD-21-020-EN-N

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Directorate-General for Economic and Financial Affairs

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Juan José Almagro Herrador, Mihai Macovei and Moritz Bizer

Abstract

This paper explores the role of the euro in the Southern neighbourhood of the EU, notably in Algeria, Egypt, Israel, Jordan, Lebanon, Libya, Morocco and Tunisia. Our analysis is based on a survey conducted by the European Commission in 2021 on the use of the euro and other currencies in these countries, as well as other relevant sources and is performed across five main dimensions: cross-border trade transactions, remittances, foreign exchange reserves, external public debt and the commercial banking sector. It finds that the use of the euro in Southern Neighbourhood countries is higher, on average, than in the world and in the EU's Eastern Neighbours (Armenia, Azerbaijan, Belarus, Georgia, Moldova and Ukraine), although the US dollar remains the foreign currency of reference in the region. The US dollar's continued strong role reflects historical developments and monetary arrangements, as well as the greater liquidity and dominant role of the US dollar in global financial markets.

The region remains a heterogeneous group, with the euro playing a more prominent role than the US dollar in Maghreb countries (i.e. Algeria, Morocco and Tunisia). The extensive use of the euro for trade invoicing across countries seems highly correlated with the depth of economic and trade relations with euro area countries and the EU at large. Around one third of inward remittances are denominated in euro and over one third of the external public debt stock is denominated in euro on average, higher than the global average. The banking sector and foreign reserves remain heavily dollarised across countries. Based on these findings, the paper highlights new areas, such as green finance and NextGenerationEU bond issuance, which together with other policy initiatives could foster a higher use of the euro in the region.

JEL Classification: E41, E42, E52, E58.

Keywords: Southern Neighbourhood, euro, international currency, foreign exchange reserves, exchange rate, invoicing currency, external public debt, foreign deposits and loans.

Acknowledgements: We would like to thank Lucian Briciu and Piotr Bogumil for reviewing the paper and providing a range of constructive suggestions, Pedro Carpintero and Costanza Caprini for assistance with statistics as well as Annika Eriksgaard and Bettina Kromen for their useful comments. We would also like to thank officials from the Southern Neighbourhood countries for their kind cooperation with regard to a survey we carried out in 2021 on the role of the euro in their international dealings.

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ABBREVIATIONS

BdA	Bank of Algeria
BdL	Banque du Liban
BIS	Bank for International Settlements
Bn	Billion
BoI	Bank of Israel
CBE	Central Bank of Egypt
CBJ	Central Bank Jordan
CBL	Central Bank of Libya
CBT	Central Bank of Tunisia
COVID-19	Coronavirus disease 2019
DCFTA	Deep and Comprehensive Free Trade Area
DZD	Algerian Dinar
EBA	European Business Association
EBRD	European Bank for Construction and Development
ECB	European Central Bank
EMU	Economic and Monetary Union
EU	European Union
EUR	Euro
EaP	Eastern Partnership
FDI	Foreign Direct Investment
FTA	Free Trade Agreement
FX	Foreign Exchange
FY	Fiscal Year
GDP	Gross Domestic Product
IFI	International Financial Institution
IMF	International Monetary Fund
IROE	International Role of the Euro

JRC	Joint Research Centre
JOD	Jordanian Dinar
LBP	Lebanese Pound
LYD	Libyan dinar
Mln	Million
MENA	Middle East and North Africa
NIS	New Israeli shekel
PA	Palestinian Authority
PP	Percentage points
SDR	Special Drawing Rights
TND	Tunisian dinar
US	United States
USD	United States dollar

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1. SETTING THE SCENE: INSTITUTIONAL FRAMEWORKS AND EXCHANGE RATE DEVELOPMENTS

This paper examines the role of the euro in the European Union's Southern Neighbourhood ([1]), with a focus on Algeria, Egypt, Israel, Jordan, Lebanon, Libya, Morocco and Tunisia. It follows up on a similar study done on the use of the euro in the Eastern Partnership (Neykov and Robert, 2021). Euro area countries and the EU have very close historical ([2]), economic and political ties with the Southern Neighbourhood, with bilateral relationships generally governed through the EuroMediterranean Association Agreements, which came into force from the early to mid-2000s ([3]). For most of the countries, the EU is the largest trading partner, as well as a hefty source of investment, tourism and remittances.

The economic situation and outlook in the EU's Southern Neighbours is surrounded by a particularly high degree of uncertainty following Russia's invasion of Ukraine. The economic impact will be felt both through direct channels (disrupted international trade, tourism, food and energy supplies and higher prices) and indirect ones (lower external demand and more difficult and expensive access to external financing). The macroeconomic outlook in the region has severely deteriorated as the war weighs on growth, raises inflationary pressures with a significant negative social impact and prompts a widening of budget and current account deficits. In this extremely challenging geopolitical situation, it is important to understand how international relations evolve, including the use of key currencies in the region. The reorientation of international trade and investment patterns following heavy economic and financial sanctions against Russia and the increase in external financing needs in the region may interact with other fundamental factors and underpin a greater use of the euro in the EU's immediate neighbourhood.

In line with the detailed discussion around currency internationalisation provided in Kenen (1983), and Chinn and Frankel (2007), as summarised by Neykov and Robert (2021), the international performance of a currency derives from its capacity to function as store of value, means of exchange and unit of account. Following this reasoning, a currency's international position is determined by the degree to which it is used in *international reserves*, in *global exchange markets*, as a vehicle in which *international bonds* are denominated, as a unit in which to invoice and settle *trade transactions*, and as an *anchor currency* for the exchange rates of other countries (a more extensive presentation of the literature on the internationalisation of the euro can be found in Annex II).

This analytical framework continues to show that only the US dollar, the euro and the Japanese Yen can be regarded as fully displaying the features of international currencies, with a significant share across all categories (Graph 1.1). The pound sterling, the dominant international currency in the first half of the 20th century, still plays a relevant role as the fourth-most widely held reserve currency worldwide but fulfils a lesser role across the other categories. China continues to support the renminbi's internationalisation ([4]) which has notably gained significant weight in trading relations with the Southern Neighbourhood, although the lack of full convertibility of the renminbi and the country's capital controls still hamper its broader international use.

([1]) The EU established its privileged partnership with the Eastern and Southern shores of the Mediterranean back in 1995 with the launch of the Euro-Mediterranean Partnership at the Barcelona Conference. EU cooperation with the Southern Neighbourhood takes place in the framework of the European Neighbourhood Policy (ENP) and includes ten partner countries: Algeria, Egypt, Israel, Jordan, Lebanon, Libya, Morocco, Palestine, Syria and Tunisia. The designation Palestine shall not be construed as recognition of a State of Palestine and is without prejudice to the individual positions of the Member States on this issue.

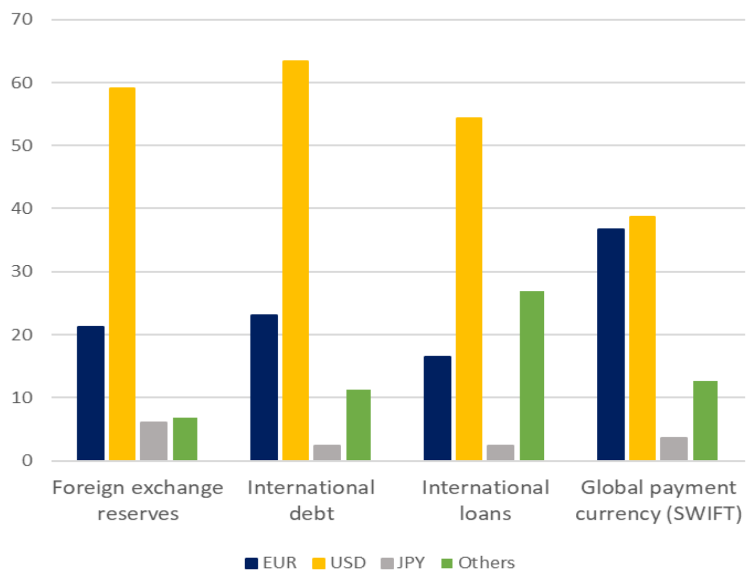
([2]) Shared history also reflected in local currencies: the word "dirham" (Morocco) derives from the Greek *drachma*. The word "dinar" (Algeria, Jordan, Tunisia, Libya) derives from the silver *denarius* coin of ancient Rome, while the pound (Egypt, Lebanon, Syria) is linked to the *libra,* basis of the monetary system of the Roman Empire. The Lebanese pound and Syrian pound are also both called "lira" (ليرة) in Arabic, memento of the Venetian lira, popular currency during centuries in the Eastern Mediterranean trade.

([3]) At bilateral level, the EU has concluded Association Agreements (AAs) with every Southern Neighbourhood country (except Libya and Syria).

([4]) People's Bank of China "Report on the Internationalisation of RMB in 2021".

The international role of the euro has remained broadly stable in recent years at global level. Since it was launched over two decades ago, the euro has been the second most important international currency across all relevant indicators, but consistently behind the US dollar. According to the latest ECB report on the international role of the euro, the euro area currency represented around 21% of international reserves of foreign central banks at end-2020 (ECB 2021). As shown in Ito and Chinn (2014), trade relations can play an important role for the choice of an invoicing currency. Reflecting the EU's status as the world's largest trading block, some 60% of extra-euro area exports of goods were invoiced in euro in 2020. The share of the euro in international loan markets remained broadly stable in 2020 at 16%. Businesses and foreign governments also use the euro for global payments and issuing debt. The share of the euro in the outstanding amounts of international debt securities was about 23% at end-2020. The euro has become a key currency in international green bond markets, which have grown rapidly over the past decade.

Graph 1.1: **Overview of the international monetary system**



(1) Figures are provided for Q4 2020.

Source: ECB, The international role of the euro (2021) based on figures from the BIS, CLS Bank International, IMF and SWIFT.

While reflecting market participants' choices, the international role of the euro is also underpinned by relevant EU policies. It notably continues to be primarily supported by efforts toward a deeper and more complete Economic and Monetary Union, including advancing the Capital Markets Union, in the context of the pursuit of sound economic policies in the euro area. However, the discussion around the international role of the euro which has been relaunched by the European Commission and the EU Council ([5]) has highlighted the need to bolster the euro's role and strengthen the EU's strategic autonomy ([6]). This political initiative follows the 2018 Communication *Towards a stronger role of the euro* that advocates an active policy to promote the international use of the euro ([7]). The European Stability Mechanism has also recently published a paper focused on the main drivers of the euro's global role and the policies to support it ([8]). At a regional level, the EU *New Agenda for the*

([5]) Statement of the members of the Euro Summit, 25 March 2021: https://www.consilium.europa.eu/media/48975/25-03-21-eurosummit-statement-en.pdf

([6]) European Commission (2021), The European economic and financial system: fostering openness, strength and resilience: https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A52021DC0032&qid=1611728656387

([7]) Communication Towards a stronger international role of the euro: Commission contribution to the European Council and the Euro Summit (13-14 December 2018): https://ec.europa.eu/commission/sites/beta-political/files/communication_-_towards_a_stronger_international_role_of_the_euro.pdf.

([8]) Hudecz, G, E. Moshammer, A. Raabe and G. Cheng (2021), "The euro in the world", ESM Discussion Paper 16.

Mediterranean ([9]) (2021) also indicates that a stronger use of the euro in the region would reinforce links with the EU and facilitate economic and financial stability. It would also ensure a better match between the region's main trade and investment partners and diversification in the currency mix used for payments, trade and risk management ([10]).

The main objective of this paper is to explore the foreign currency use in the Southern Neighbourhood countries across several dimensions (trade invoicing, remittances, public debt issuance, international reserves and liabilities and deposits) and identify possible areas to strengthen the role of the euro. We also provide a comparative perspective with the use of the euro in the Eastern partnership ([11]), complementing the analysis contained in Neykov and Robert's precursory paper on the East. The trends and data depicted in the paper stem primarily from the results of two surveys about the international role of the euro conducted for the Southern Neighbourhood countries in 2021 and for the Eastern Partnership economies in 2019, respectively. Due to the low availability and quality of data in various countries, the comparisons and graphs are adapted accordingly throughout the paper. Discussions among experts during two high-level seminars ([12]) organised to further discuss the role of the euro among EU neighbours provide additional useful input for the paper.

Section 1 provides a brief overview of exchange rate arrangements and monetary policy frameworks in the region, as well as a study on global currency zones in the region, looking at the co-movement of currencies in the region with the euro and other key currencies. *Section 2* provides an overview of the use of the euro among EU's Southern Neighbours, comparing it with its use at global level and in the Eastern Partnership countries. A short review of recently available literature on the internationalisation of the euro, with a particular focus on the Southern Neighbourhood, is presented in Annex II. The following *sections 3-7* analyse the main outcomes from the dedicated survey of national administrations DG ECFIN conducted in 2021 on the use of the euro and other currencies in the region. They look at the international dealings of the regional countries in trade and trade invoicing (section 3), remittances (section 4), foreign exchange reserves (section 5), external public debt (section 6) and foreign currency deposits and loans (section 7), outlining a number of factors that influence the euro's international reach in the region. The final section summarises the findings and presents potential avenues to enhance the use of the euro, including the increase in bond issuances denominated in euro and euro-denominated green bonds.

1.1. EXCHANGE RATE ARRANGEMENTS AND MONETARY POLICY FRAMEWORKS

Exchange rate arrangements are a key institutional feature influencing the use of foreign currencies in an economy. The majority of monetary arrangements among the EU's neighbours, both in the East and the South, are still based on conventional or soft pegs to the US dollar (Jordan and Lebanon in the South) or composite baskets (Morocco and Libya). Although there is a strong divergence between *de jure* and *de facto* exchange rate regimes, and most EU neighbours are moving towards inflation targeting regimes, the US currency remains key in setting official exchange-rate quotations, which gives the latter an advantage for accounting and statistical purposes, financial transactions and financial holdings. There has been no significant shift in exchange rate arrangements, although the onset of the COVID-19 pandemic in early 2020 resulted in increased volatility in financial markets and significant interventions by a number of central banks in their foreign exchange markets.

The Southern Neighbourhood's local currencies display different patterns (the frequency and degree of changes in a currency's value) against the US Dollar and the euro over time (see Graph 1.2 for quarterly changes in exchange rates of the euro and US Dollar against local currencies). This is consistent with the correspondent exchange rate regimes and the use of different currencies for establishing exchange-rate quotations against other currencies. As expected, regimes that are more flexible can experience higher degrees of volatility, although the

([9]) Joint Communication: Renewed partnership with the Southern Neighbourhood - A new agenda for the Mediterranean (2021): https://www.eeas.europa.eu/sites/default/files/joint_communication_renewed_partnership_southern_neighbourhood.pdf.

([10]) For a more detailed historical perspective on the EU's policy on the IRoE, see Temprano Arroyo, H. (2022).

([11]) The Eastern Partnership is a joint policy initiative that aims to deepen and strengthen relations between the EU, its Member States and six of its Eastern neighbours - Armenia, Azerbaijan, Belarus, Georgia, Moldova and Ukraine.

([12]) The international role of the Euro – Workshop with the Southern Neighbourhood countries (European Commission, November 2021) and The role of the euro in the Eastern Partnership (February 2021).

extent of all these effects varies substantially across country. Some studies in the past (e.g. Schnabl, 2008) have shown no significant impact of exchange rate stability on growth in the region. This could also be due to the fact that exchange rate pegs have often been supported by capital account and interest rate controls.

Table 1.1: **Exchange rate and monetary policy frameworks in the Southern Neighbourhood**

	Monetary Policy Framework				
Exchange rate arrangement	**Exchange rate anchor**		**Monetary aggregate target**	**Inflation targeting framework**	**Other**
	US dollar	**Composite**			
Conventional peg	Jordan	Libya			
Stabilised arrangement	Lebanon	Morocco (1)			
Floating				Israel	
Crawl-like arrangement			Algeria(2)		Egypt (2,4) Tunisia (3,4)

1) Within the framework of an exchange rate fixed to a currency composite, the Bank Al-Maghrib adopted a monetary policy framework in 2006 based on various inflation indicators, with the overnight interest rate as its operational target to pursue its main objective of price stability.

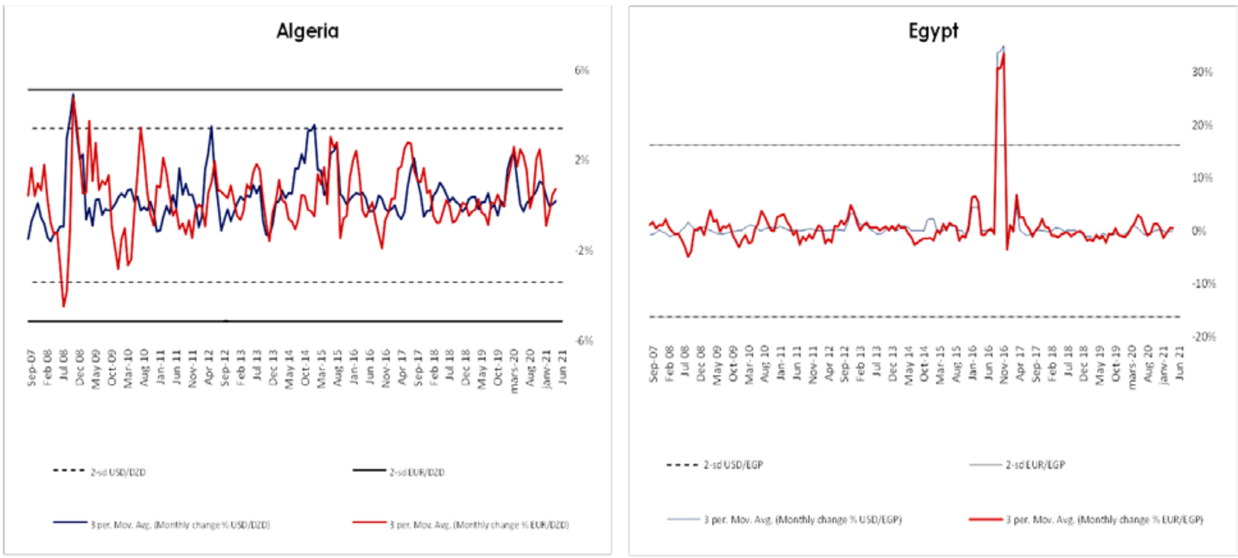
(2) The country maintains a de facto exchange rate anchor to the US dollar.

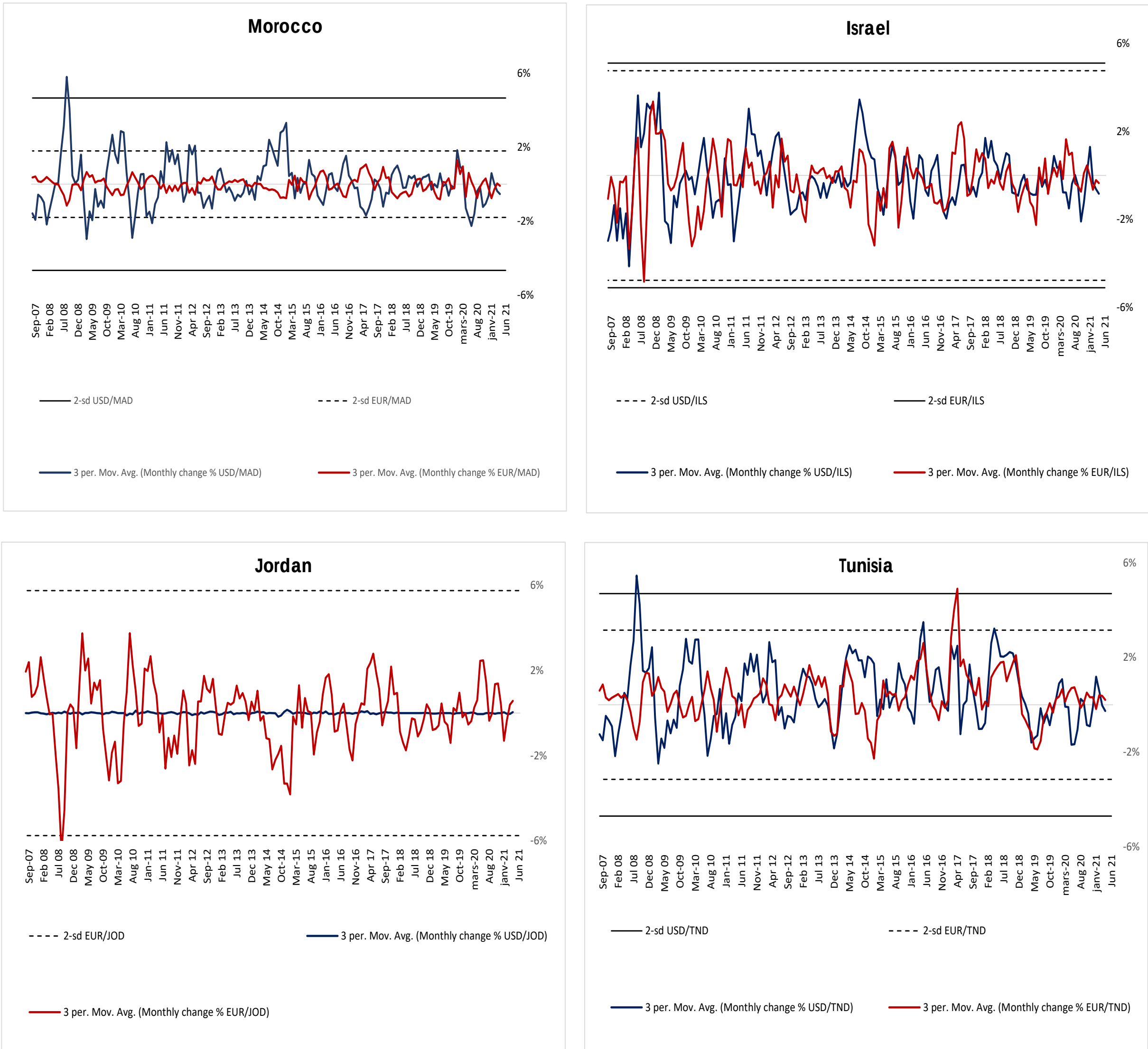
(3) The country maintains a de facto exchange rate anchor to the euro.

(4) The central bank is in transition towards inflation targeting.

Source: IMF.

Graph 1.2: **Exchange rate dynamics**





Source: Investing.com.

1.2. GLOBAL CURRENCY ZONES

Rather than looking at a range of indicators of its use across different dimensions, the international role of a currency can also be measured by estimating how shocks to the currency in question propagate to other currencies. Estimating how much a currency acts as an anchor for the exchange rates of other countries with exchange rates co-moving is therefore one way of splitting the global economy into currency areas, i.e. group of countries with exchange rates moving strongly in tandem with the US dollar, the euro or other major currencies. In the Southern Neighbourhood, we can observe that a soft peg ([13]) to a currency basket dominated by either the euro or the US dollar can approximate the exchange rate regimes of most of countries.

In this section, we will refine the above observations and look at the extent to which each Southern Neighbourhood country belongs to a given currency zone following the method developed by Frankel, Stein and Wei (1995). The principle is the following: an economy belongs to a given currency zone if its currency varies less against this currency than against others. Co-movement arises from exchange-rate regime itself, but also from the underlying trade relations and difference in monetary policies (McCauley and Shu, 2018).

([13]) Soft peg defined as a type of exchange rate regime where the central bank intervenes to keep the domestic currency's value relatively stable against a reserve currency or a basket of currencies.

Specifically, using monthly averages, we estimate how much each country in the Southern Neighbourhood co-moves with the US dollar, the euro, the renminbi, the pound sterling, the Japanese yen and the Russian rouble over rolling windows of 36 months in the 2000-2021 period. These currencies were selected as they constitute the main currencies used globally and allow the comparison with the findings from a similar exercise done for the EU's Eastern Partnership countries. To prevent outliers during currency crises from producing spurious results, we exclude monthly observations of any currency that depreciates by 10% or more against the US dollar (Ilzetzki et al, 2017). The beta coefficients are allowed to vary over time at the monthly frequency. We use the US dollar as numeraire ([14]) and estimate the following regression:

$$\Delta e_t^{i/\$} = \alpha_i + \beta_{i€t}\Delta e_t^{€/\$} + \beta_{i¥_{\mathrm{CN}}t}\Delta e_t^{¥\mathrm{CN}/\$} + \beta_{i£t}\Delta e_t^{£/\$} + \beta_{i¥_{\mathrm{JP}}t}\Delta e_t^{¥\mathrm{JP}/\$} + \beta_{i₽t}\Delta e_t^{₽/\$} + \varepsilon_{i,t}$$

where $e_t^{i/\$}$ is the bilateral exchange rate of currency *I*, against the US dollar while $e_t^{h/\$}$ on the right-hand side of the equation is the exchange rate of the euro, the pound sterling, the yen and the Russian rouble against the US dollar. The movements of each local currency against the US dollar on the left-hand side are reduced to a weighted average of the movements of the euro, the renminbi, the yen, the pound sterling and the ruble against the US dollar on the right-hand side, leaving a residual idiosyncratic movement. Thus β_{iht}, the estimated coefficient on the rate of change in the exchange rate of key currency *h* vis-à-vis the US dollar in period *t*, represents the weight of *h* in the behavioural basket. The dollar's weight is calculated as $\hat{\beta}_{i\$t} = 1 - (\hat{\beta}_{i€t} + \hat{\beta}_{i£t} + \hat{\beta}_{i¥t} + \hat{\beta}_{i₽t})$. Hence, if a currency is pegged to the US dollar, then $\sum_{h=1}^{H} \widehat{\beta_{ih}} = 0$ so that $\hat{\beta}_{i\$t} = 1$. To contrast and compare the weight of the US dollar to the weight of the euro, the same procedure was applied with the euro as numeraire and a higher weight means a stronger co-movement for the local currency. We have introduced the results on a map depicting the EU's Southern neighbourhood (Graphs 1.3 and 1.4).

Our estimates indicate that the US dollar shows a dominant role (as shown by a lower volatility of the local/USD exchange rate) in driving the exchange rates for most countries in the Southern European neighbourhood. However in Libya, Tunisia and Morocco the sensitivity of the local currency relative to the euro is broadly equivalent or lower than that of the US dollar. This is particularly true for Tunisia and also, but to a lesser extent, for Morocco, where the volatility of local currency exchange rate relative to euro also remains lower than those against the US dollar.

However, in the remaining countries the US dollar undisputedly carries the biggest weight in the systematic co-movement of exchange rates. This also holds true for Libya and Algeria, where the euro carries some considerable weight despite the US dollar's overall dominance -linked to hydrocarbon exports-, even though a significantly smaller one than in Tunisia or Morocco. These findings also seem to reflect the different

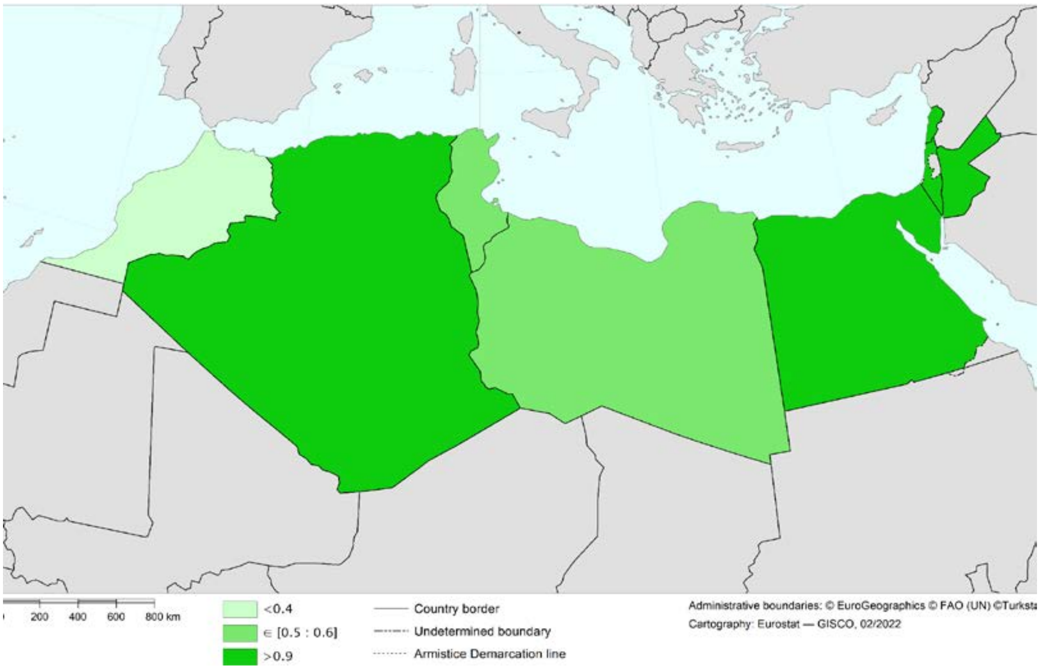
importance of the US dollar in international energy markets, mostly for the main hydrocarbon exporters in the region (Algeria, Libya) as well as possibly in official reserves. The other currencies included in the regression only have a very limited impact in explaining the co-movement of the local currency with both the US dollar as well as the euro ([15]).

As a result, the countries in the region can cautiously be divided into the two Maghreb and Mashriq sub-regions, with the euro having more weight in the Maghreb region while US dollar appears to dominate the Mashriq one. This is also in line with the specific institutional arrangements, where the US dollar plays a predominant role in the Mashriq. Complementing these results, the following sections aim to shed more light on the role of the euro and its drivers building on the results of a dedicated survey to countries in the region.

([14]) Ma and McCauley (2011) demonstrate that the same Frankel-Wei results are obtained with the US dollar and the IMFs special drawing rights as numeraire. In principle, the currency anchoring and the degree of anchoring are two separate questions.

([15]) Also, partial evidence on the currency composition of official foreign exchange reserves shows a strong association between the dollar share of such reserves and the weight of the dollar in the movements of the domestic currency (McCauley and Chan (2014); Ito et al (2015)). This alignment of portfolios and domestic currency co-movement is also observed in largely private portfolios, i.e. in the dollar share of claims on BIS-reporting banks by country (McCauley and Chang Shu 2018).

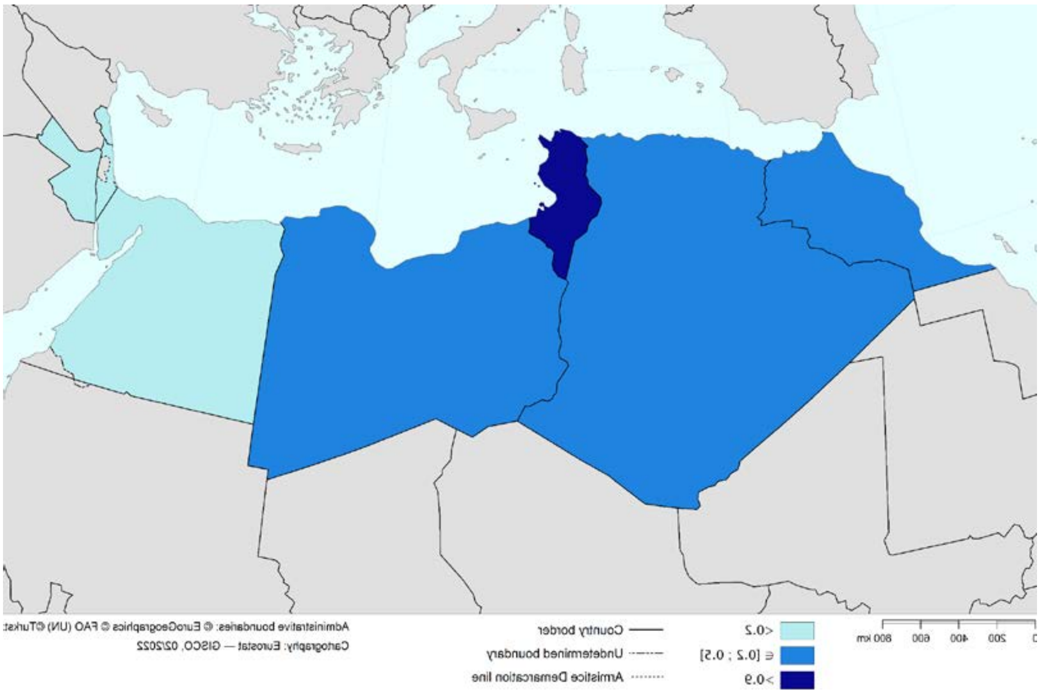
Graph 1.3: **Estimated co-movement with the US dollar**



(1) The boundaries and names shown and the designations used on these maps do not imply official endorsement or acceptance by the European Union.

Source: Commission staff calculations based on figures from the national administrations.

Graph 1.4: **Estimated co-movement with the euro**



(1) The boundaries and names shown and the designations used on these maps do not imply official endorsement or acceptance by the European Union.

Source: Commission staff calculations based on figures from the national administrations.

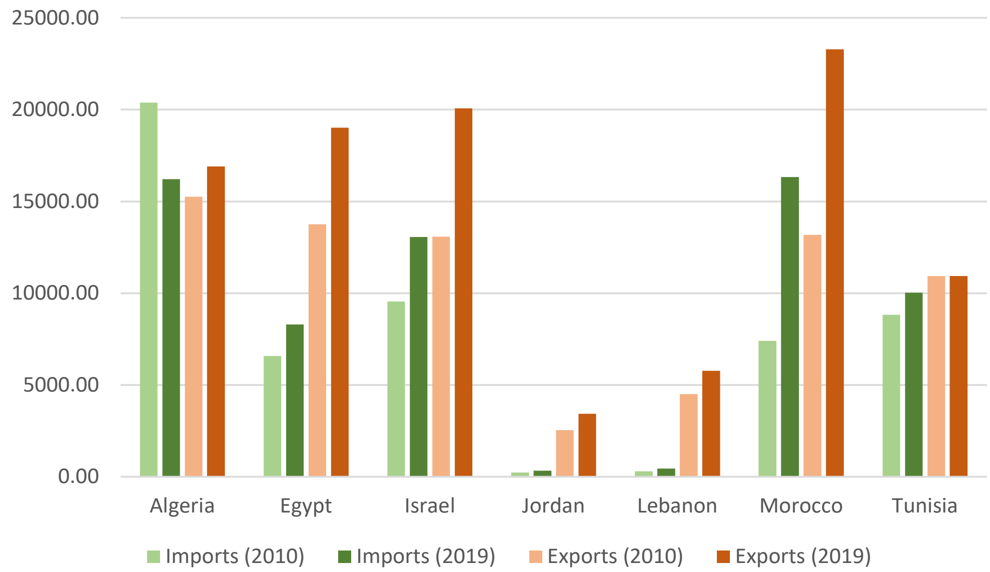
2. OVERVIEW ON THE USE OF THE EURO

2.1. SURVEY ON THE USE OF THE EURO AND OTHER CURRENCIES

In the first half of 2021, the European Commission conducted a survey with the help of National Banks and Ministries of Finance from the Southern Neighbourhood on the use of the euro and other currencies in their countries. The data was gathered for the period 2016-2020 or the most recent available figures. The survey covered five main dimensions of currency use: (i) *international trade transactions*, with a breakdown between exports and imports of goods, including currency invoicing patterns on certain goods categories and trading partners (ii) *inward remittances*, (iii) *foreign exchange reserves*, including notable change in their composition, and swap lines available with other central banks, (iv) *public debt*, with a breakdown between domestic and external debt and (v) *banking sector* (excluding central banks), with a breakdown between bank loans and deposits and bank foreign assets and liabilities.

The following sections of the paper analyse the results of the survey for the Southern Neighbourhood countries and compare them with the ones for the Eastern Partnership economies obtained in a corresponding survey conducted in 2019, and with global averages as per ECB's most recent report on "The international role of the euro" from June 2021. As the lack of available data renders the survey replies sometimes incomplete ([16]), its results and the composite indices derived should be best regarded as a broad indicator of on-going trends in the use of the euro. Therefore, the paper tries to complement whenever possible the quantitative analysis with a qualitative one based on additional explanatory questions included in the survey, anecdotal evidence and the conclusions of the Seminar on the international role of the euro in the Southern Neighbourhood organised at the end of 2021.

Graph 2.1: **Bilateral trade of goods between EU27 and Southern neighbourhood countries (EUR mln)**



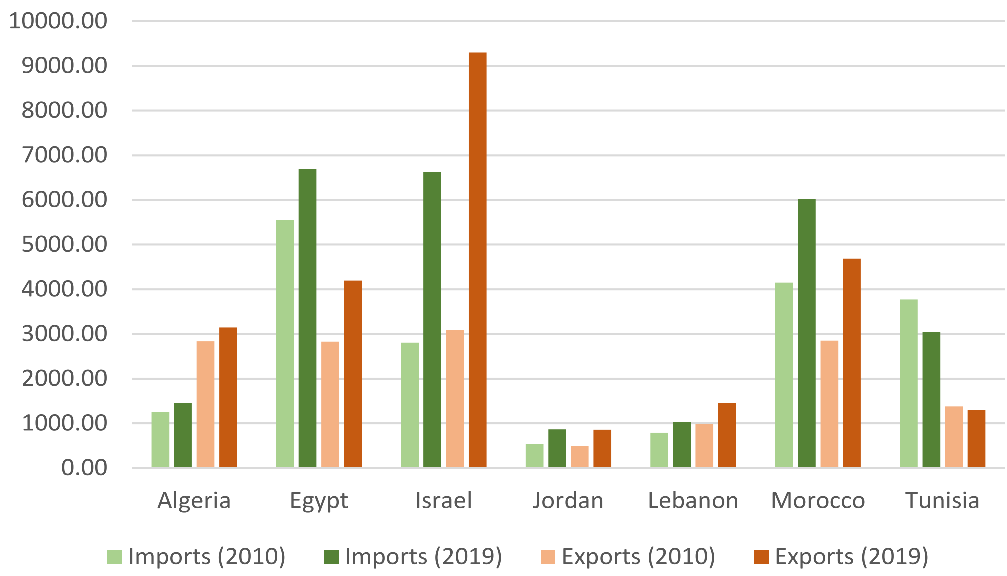
Source: Commission staff calculations based on figures from Eurostat.

([16]) No data is available for Libya, which is not included in the analysis. However, the Libyan economy remains heavily dollarised because of its reliance on the hydrocarbon sector.

Overall, the composite index built on the results of the survey shows that the average use of the euro in the Southern Neighbourhood (28%) is slightly above the world average (25%), and higher than in the Eastern Partnership (EaP) (21%). This is only natural given strong business and trade ties with the EU (more than 40% of the EU's Southern Neighbours trade is conducted with the EU 27), significant tourism activity, worker remittances and capital flows originating in the EU countries. Moreover, an increase in the use of euro in the Southern Neighbourhood in recent years seems to have gone hand in hand with a bigger diversification from exports of oil, gas and commodities towards manufacturing goods for the EU markets. By contrast, the EaP countries also enjoy strong historical and economic links with Russia, which entails a broader circulation of the Russian rouble and the US dollar. The latter circulates widely in the region given close historical ties with the Russian rouble and energy-rich Russian export base.

The depth of the trade and financial links to the EU varies widely among EU's Southern Neighbours, which is also reflected in an uneven use of the euro. Countries like Morocco, Tunisia and Algeria depend on the European

Graph 2.2: **Bilateral trade of services between EU27 and Southern neighbourhood countries (EUR mln)**



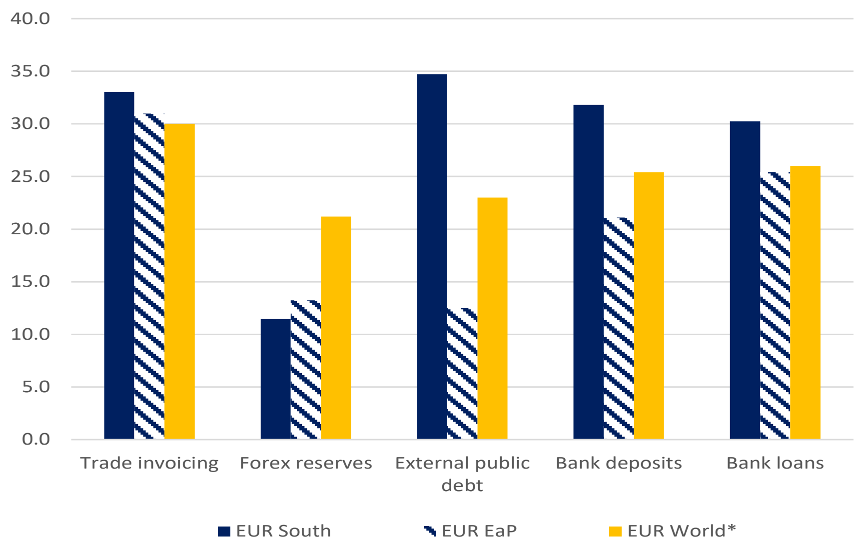
Source: Commission staff calculations based on figures from Eurostat.

market for around two thirds of their goods exports and have closer financial and migratory links, whereas Israel and Egypt, although having substantial trade relations with the EU, also trade extensively with other countries. Finally, Jordan, Palestine and, to a lesser extent, Lebanon receive substantial EU assistance but have a very low volume of trade with the EU. The positive evolution of bilateral trade relations with the EU for both goods and services over the past ten years is illustrated in Graphs 2.1 and 2.2. In order to present a more accurate picture of bilateral trade, trade data from 2019, i.e. pre-Covid 19 crisis, is used in instead of 2020. The important role played by the US dollar in some of the Southern Neighbours' monetary arrangements (see section 1) reduces the attractiveness of the euro in the region and enhances heterogeneity among the individual countries. Another limiting factor for the use of the euro is the significant share of oil and gas exports, but also metals and agricultural products, with many of these being internationally quoted in US dollars, in the total exports of countries like Algeria, Libya and Egypt.

2.2. GLOBAL AND REGIONAL COMPARISONS

The composite index that we built is based on the arithmetic average of individual indices across four main dimensions: (i) trade invoicing, (ii) foreign-exchange reserves, (iii) external public debt, and (iv) domestic bank loans and deposits denominated in foreign currency (Graph 2.3). In order to be consistent with the methodology used for the EaP countries and by the ECB, the composite index does not include data on remittances.

Graph 2.3: **Overview: The euro in the Southern Neighbourhood vs the Eastern Partnership and the World in 2020**



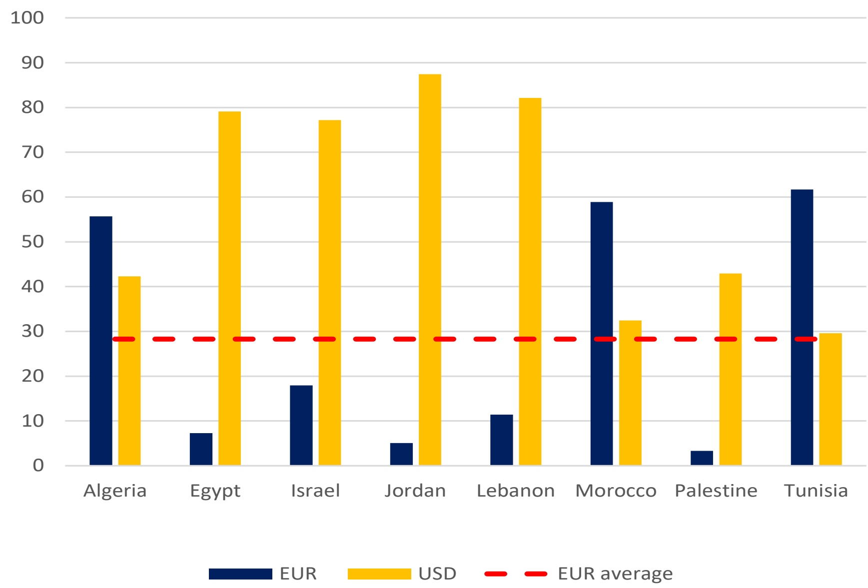
(1) Overall composite index.

Source: Surveys 2019/2021 DG ECFIN; ECB (2021) The international role of the euro.

As noted previously, it shows that with a euro share above 28%, the Southern Neighbourhood uses the euro more than the world (about 25%) and the EaP (around 21%). Yet, in spite of strong political and economic ties to the EU, the euro still plays a more limited role in the Southern Neighbourhood compared to the US dollar whose share averages about 57%, in line with currency use patterns in the EaP and the World.

The Southern Neighbourhood displays, on most indicators, a higher use of the euro than the global average or the EaP across all individual dimensions, with the external public debt being in the lead. The only exception is the indicator for the foreign exchange reserves, where it is slightly lower than in the EaP and almost 10 pp lower

Graph 2.4: **Composite index of the use of the euro across Southern Neighbourhood countries**



(1) Libya's overall position could not be determined due to lack of data.

Source: Survey 2021 DG ECFIN; National administrations than the world average. This exception can be explained by the bias towards the US dollar in the official reserve holdings of energy exporting countries, in particular Algeria and Egypt, and also by the prevailing monetary and exchange rate arrangements. At the same time, the fact that the euro is used in private financial transactions in the Southern Neighbourhood more than in the rest of the world or the EaP is consistent with a deeper integration of trade and business flows.

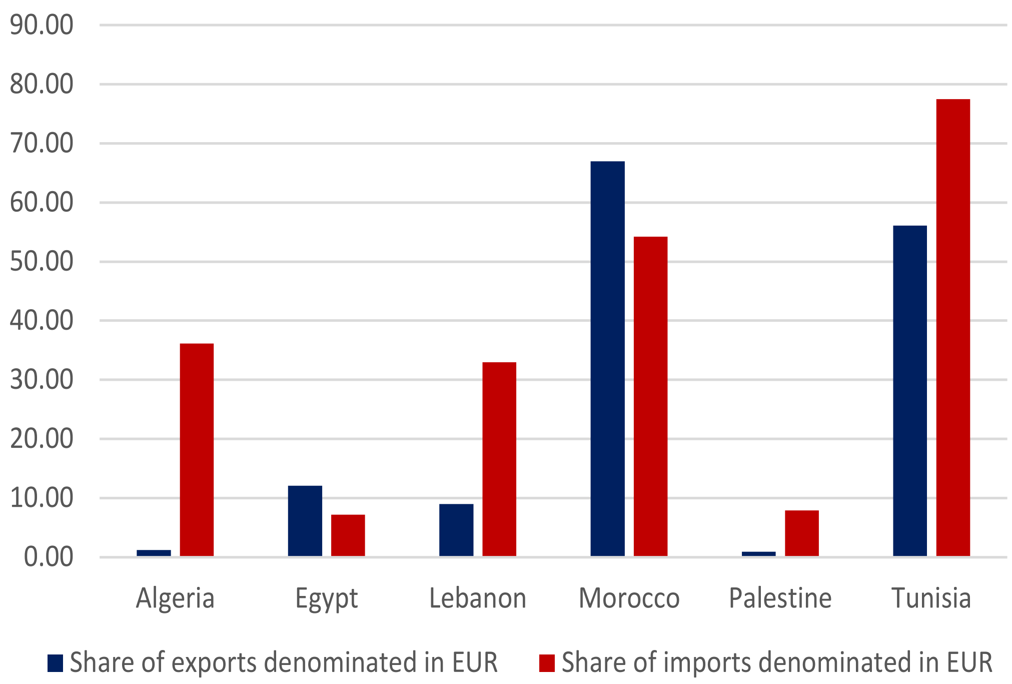
There are, however, large differences in the use of the euro among the diverse group of the EU's Southern neighbours. Aggregating across the different dimensions set out above, the composite index of the use of the euro for each country (Graph 2.4) identifies a first group of three euro-oriented countries – Algeria, Morocco and Tunisia, which use the euro on average more than the US dollar. This corresponds well with the exchange rate co-movement discussed in section 1.2 on the exchange rate anchor properties of the euro, which shows higher co-movement for the Maghreb countries. It also reflects their deep economic integration with the EU in terms of bilateral trade, capital and financial flows and remittances. Comparing again to the Eastern Partnership, only one country in that region (Moldova) uses the euro more than the US dollar. By contrast, the rest of the EU Southern Neighbours have a very modest use of the euro at less than 20% of transactions in Israel and less than 10% of trades in Egypt, Jordan and Palestine. This second group featuring a hefty US dollar inclination has a lower use of the euro than the majority of EaP countries, which display between 20% to 30% of their foreign currency dealings in euro.

In the remaining of the paper we zoom in into the use of the euro across the economic and financial dimensions mentioned above in order to identify more granular trends and policies that could facilitate a broader access to euro as a payment means and financial instrument in the region.

3. THE EURO IN TRADE AND TRADE INVOICING

The survey data reveal an extensive use of the euro for trade invoicing in the Southern neighbourhood countries, with a weighted average of close to 30% of exports and 35% of imports denominated in euro. These figures exceed slightly the corresponding weighted averages in EaP countries (29% of exports and 32% of imports in euro) and the estimated share of the euro in global trade invoicing of around 30% ([17]). The euro is the dominant currency for trade invoicing in Morocco and Tunisia and frequently chosen as invoice currency for imports also in Lebanon and Algeria (over one third of total imports) (Graph 3.1). In other countries such as Egypt and Palestine, the share of trade denominated in US dollars significantly exceeds the one of the euro. As the use of the euro for trade invoicing is, inter alia, a reflection of the level and structure of trade relations and financial flows, statistics on bilateral trade and foreign direct investments between the EU and its Southern Neighbours can help explain the use of the euro for invoicing in the region.

Graph 3.1: **Trade invoicing in euro in 2020 (%)**

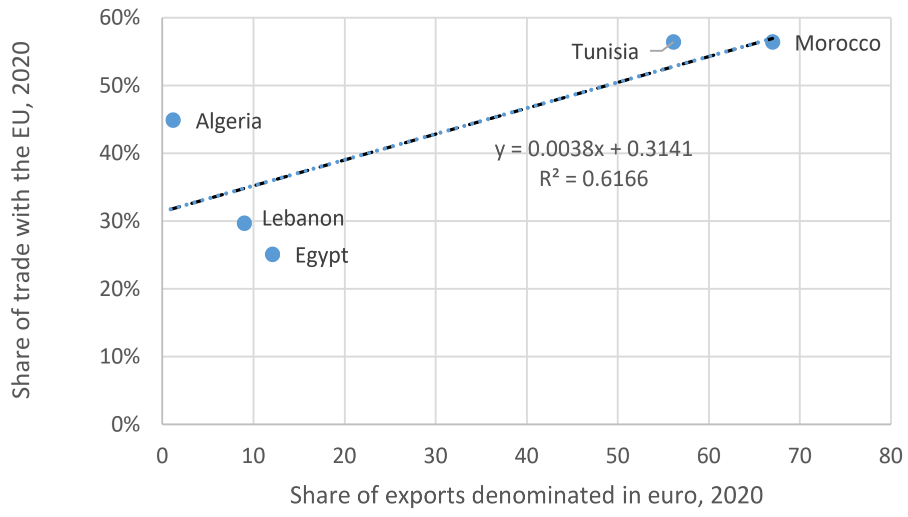


Source: Survey 2021 DG ECFIN; National administrations.

([17]) ECB: The international role of the euro report, June 2021.

3.1. CORRELATION BETWEEN TRADE-INVOICING AND TRADE WITH THE EU

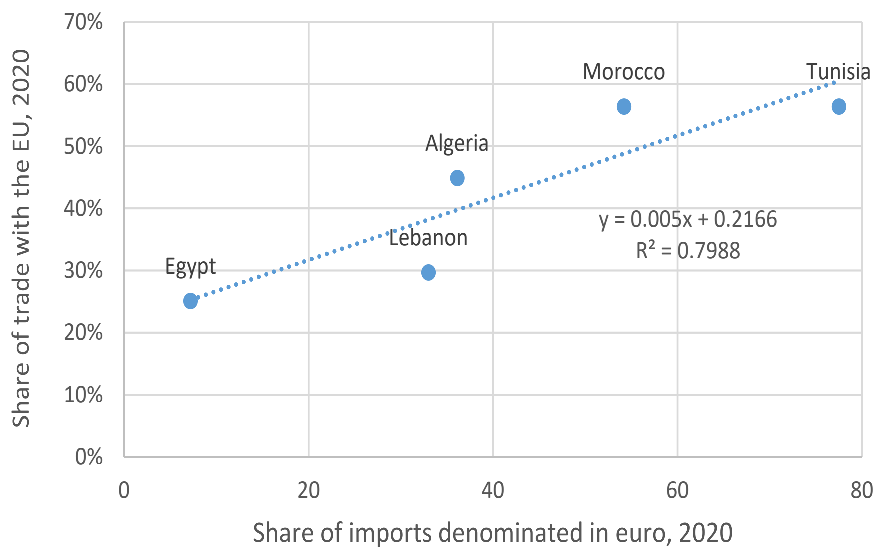
Graph 3.2: **Correlation share of trade and euro denominated exports**



Source: Survey 2021 DG ECFIN; National administrations.

As in the case of EaP countries, the use of the euro as invoicing currency for exports seems to be highly correlated to the depth of trade relations. There are also some outliers, in particular Algeria and Egypt, on account of their significant energy exports, as explained above (Graph 3.2). In Lebanon, the persistent high dollarisation since the late 1980s might explain the below the average use of the euro in export invoicing. For the remaining countries, Morocco and Tunisia, trade invoicing is in line with their high share of exports to the EU.

Graph 3.3: **Correlation share of trade and euro denominated imports**



Source: Survey 2021 DG ECFIN; National administrations.

With a weighted average of around 35% of total, the euro is more extensively used for trade invoicing of imports than for exports. Again, higher shares of imports denominated in euro seem to correspond to closer trade ties with the EU and vice versa. In Algeria and Lebanon, invoicing of imports in euro seems to align more closely and almost mirrors the share of imports from the EU of about one third of total (Graph 3.3).

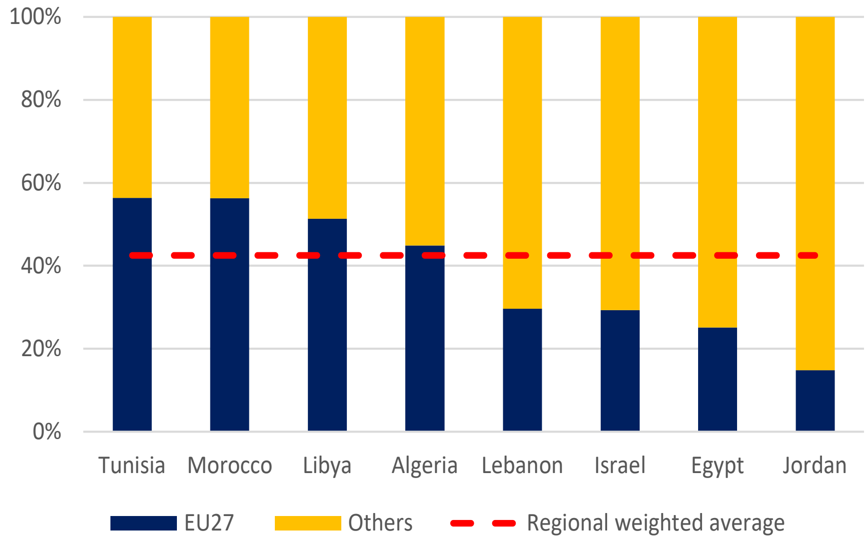
In Morocco and Tunisia, the euro is not only the preferred currency for the invoicing of imports, but also exceeds the share of imports from the EU. This might be due to the prominence of European investment in both countries, including in export-oriented special free trade zones or offshores regimes, as well as the closer integration of foreign affiliates and domestic companies with the corresponding value chains in many sectors where both countries display high degrees of participation (including agri-food, clothing and leather, mechanical-electrical, services or textiles). Given the share of imports from the EU of around 25% of total, the euro seems to punch below its weight in import invoicing in Egypt.

3.2. TRENDS IN TRADE WITH THE EU

Important trade links between the EU and the region ([18]) play a crucial role in this aspect. In 2020, the weighted average share of trade in goods of Southern Neighbourhood countries with the EU reached around 43% of their overall trade, with large divergences between countries (Graph 3.4). For Morocco, Tunisia, Libya and Algeria the EU27 represent their most important trading partner, as more than or close to half of their trade takes place with the EU. For the remaining countries, the EU is an important trade partner but to a lesser extent. EU Southern Neighbours generally run large trade deficits with the EU.

Between 2010 and 2020, trade of goods has considerably increased in value with all of the countries in the region, except for Algeria and Tunisia, where both imports and exports of goods have decreased compared to 2010 levels, under the impact of the COVID-19 pandemic. Morocco witnessed the most significant uptick in exports of goods with the EU which increased by more than 50% compared to 2010 levels. The same could be observed with regard to imports from the region. The only outlier seems to be Tunisia, which signed its FTA with the EU the earliest, where trade flows in both directions have decreased to some extent, in line with modest growth, limited diversification, reduced access for agricultural exports and the relative erosion of effective

Graph 3.4: **Total trade by partner in 2020 (%)**



Source: World Trade by reporter and partner, IMF DoTS.

([18]) The Euro-Mediterranean Association Agreements established free trade areas (FTA) between the EU and most of its Southern Neighbours (with the exception of Syria and Libya), and essentially cover trade in goods. Negotiations to create Deep and Comprehensive Free Trade Areas (DCFTAs) have also been launched with Morocco and Tunisia.

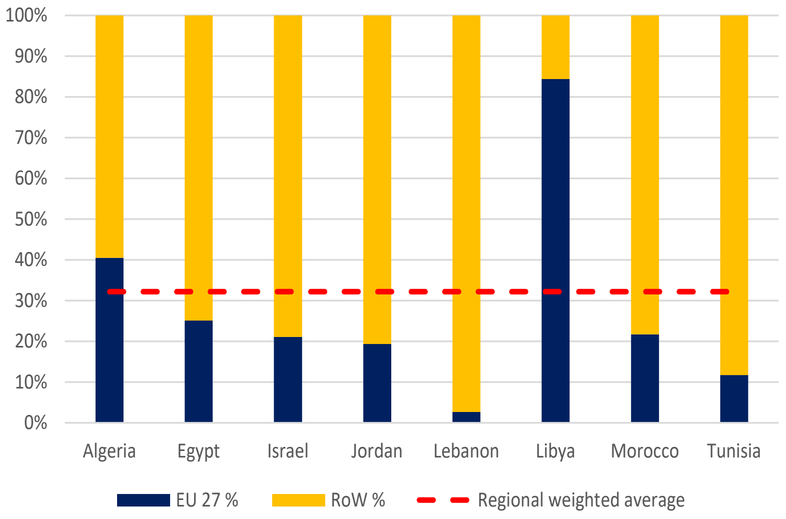
preference margins associated with the Euro-Med FTAs ([19]). However, Tunisia has also seen the most pronounced gains in diversification and export complexity to the EU market. Another notable development, over the past decade, has been the rise of trade with China, which is now among the top-three importers for most countries in the region.

As for the rest of the world, ***services*** are becoming increasingly important in the trade relations between the EU and the region, having advanced at a fast pace from 2010 to 2019. The tourism sector plays a special role in this regard. In 2019, Morocco recorded a very large inflow of tourists coming from abroad (5,9 million Moroccans living abroad as well as around 7 million foreign tourists, of which around 60% came from the EU-27) relative to a population of around 35 million people. Egypt also reported around 13 million tourists in 2019, of which 8.4 million (65%) stem from Europe. Tunisia received almost 9.5 million tourists in 2019, with almost 30% coming from Europe.

3.3. THE ROLE OF FDI IN THE SOUTHERN NEIGHBOURHOOD

The depth of economic and trade relations between the two regions is also determined by important ***FDI flows*** from the EU to the countries under scrutiny. The origin and currency composition of FDI flows impact the use of the euro in the region both in terms of direct financial transfers and indirectly, in terms of creating production capacities which may later serve as an export base towards the EU. With a weighted average of around 32% of the total, EU investments in the region play an important role which, however, varies considerably across countries. While being the most important source of FDI in Libya with over 80% of the total, and constituting a major source of FDI in Algeria with around 40%, in most countries investments from the EU play a more moderate role with a share of around 20% of the total (Graph 3.5).

Graph 3.5: **Inward FDI stock, end-2019**



Source: Eurostat; UNCTAD.

As expected, the different degrees regarding the use of the euro in trade invoicing seem to reflect primarily the depth of investment and trade links to the EU, showing a strong correlation between trade shares with the EU and the denomination of exports and imports in euros. The Maghreb countries, due to their strong trade links with the European markets show a more extensive use of trade invoicing in euros. At the same time, some important commodity markets (notably energy) are internationally labelled in US dollars, prompting also a high use of this currency by exporters of hydrocarbons.

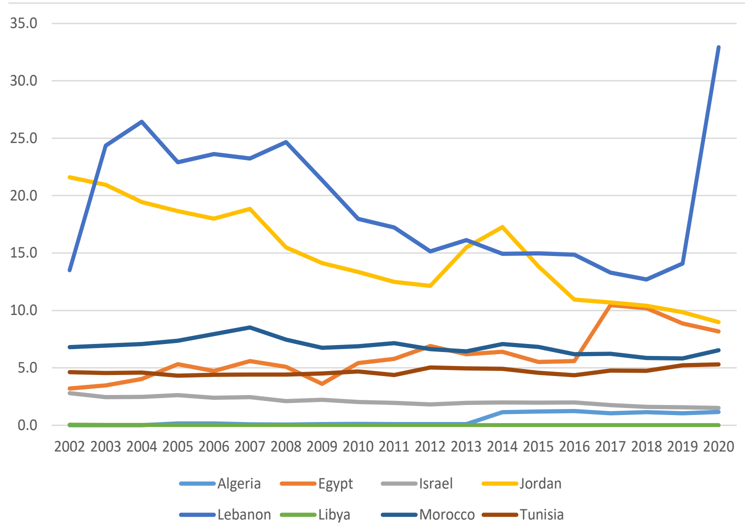
([19]) Trade data show also that in the cases of Egypt, Jordan, Lebanon, Morocco and Tunisia, while the overall trade balances have deteriorated, bilateral balances with the EU either improved or deteriorated less rapidly since the entry into force of the Euro-Med FTAs, suggesting that trade with the EU might have been a mitigating factor (European Commission 2021).

4. THE EURO IN REMITTANCES

Remittances are an important source of income for most countries in the Southern neighbourhood due to large outward migration flows driven by feeble economic conditions, such as low incomes and levels of GDP per capita, subdued foreign investment and insufficient job creation for predominantly young populations. In 2017, remittances already exceeded official development assistance as well as foreign direct investments in the region, totalling almost 55 billion US dollars (Sridi and Guetat, 2020).

According to World Bank data ([20]), personal remittances in the Southern Neighbourhood averaged about 8% of

Graph 4.1: **Personal remittances received (% of GDP)**



Source: World Bank.

GDP in 2019, which is somewhat lower than the EaP average of about 10% of GDP. Before the pandemic, some Southern Neighbours benefitted from very large inflows of remittances, such as Palestine and Lebanon at 17% and 14% of GDP respectively. The amount was high also in Jordan (10% of GDP), Egypt (9%), Morocco (6%) and Tunisia (5%) (Graph 4.1). On the other hand, Algeria – benefitting from the hydrocarbon rent, and Israel – being much richer in terms of GDP per capita, had a very low dependence on personal remittances. Libya, another oil producing country, was a net sender of remittances before the pandemic.

While remittances to the region had been expected to decrease during the pandemic, they actually increased slightly by 2% from 2019 to 2020 (World Bank, 2021). The resilience of remittances was partly due to travel restrictions which made workers wire more money back home through official channels. But it also reflects the fact that an important share of remittances originates from EU Member States ([21]), which proved to be very resilient during the pandemic (Graph 4.2). This is the case in particular for the Maghreb countries ([22]) which have an important diaspora in Europe, and to a lesser extent for Egypt, Jordan, Lebanon and Palestine, which receive large remittance inflows also from the Gulf countries.

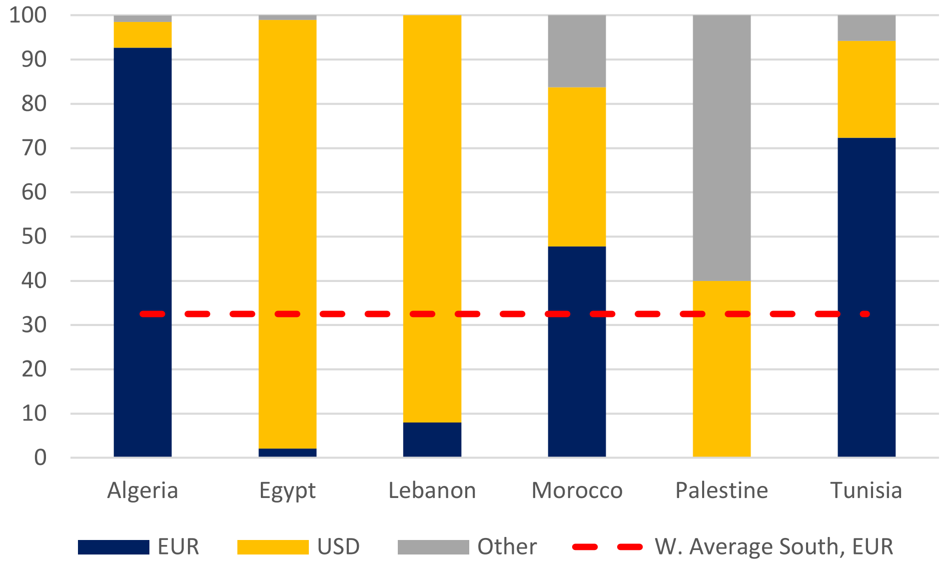
([20]) The World Bank data on personal remittances includes both personal transfers and compensation of employees. Personal transfers comprise all current transfers in cash or in kind made or received by resident households to or from non-resident households. Compensation of employees includes the income of border and short-term workers who are employed in an economy where they are not resident and of residents employed by non-resident entities.

([21]) See also Kalantaryan, S. and S. McMahon (2021). Remittances in North Africa: sources, scale and significance, EUR 30582 EN, Publications Office of the European Union, Luxembourg, 2021. Available online: JRC Publications Repository - Remittances in North Africa: sources, scale and significance (europa.eu).

([22]) About 80% of the remittances sent to Algeria in 2021 originate in France. In the case of Morocco, about 85% of remittances originate in the EU.

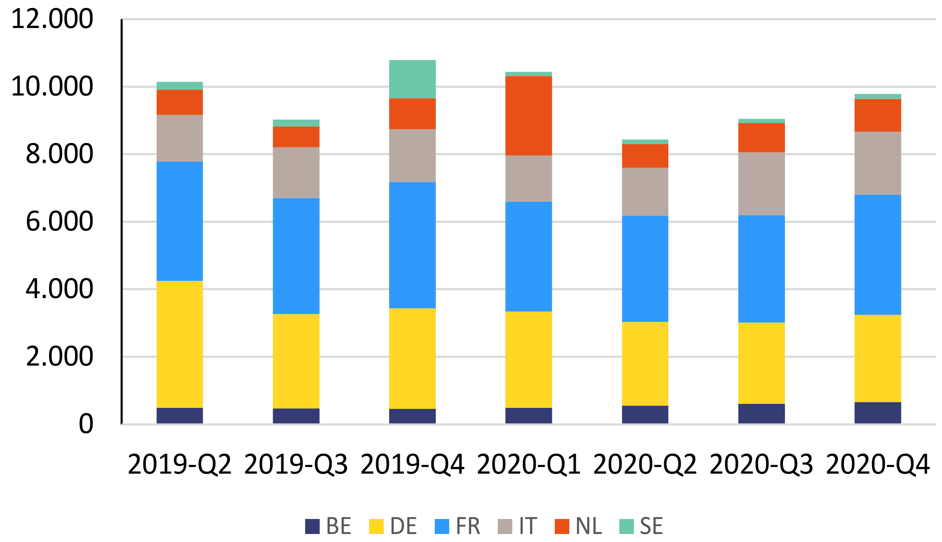
About one third of inward remittances in the Southern Neighbourhood are denominated in euro on average (Graph 4.3). The bulk of personal income transfers are denominated in euro for Algeria, Tunisia and Morocco, whereas they are negligible for Egypt, Lebanon and Palestine. In general, this follows closely the geographical

Graph 4.3: **Inward remittances by currency**



Source: Survey 2021 DG ECFIN; National administrations.

Graph 4.2: **Personal remittances sent from various EU countries (EUR mln)**



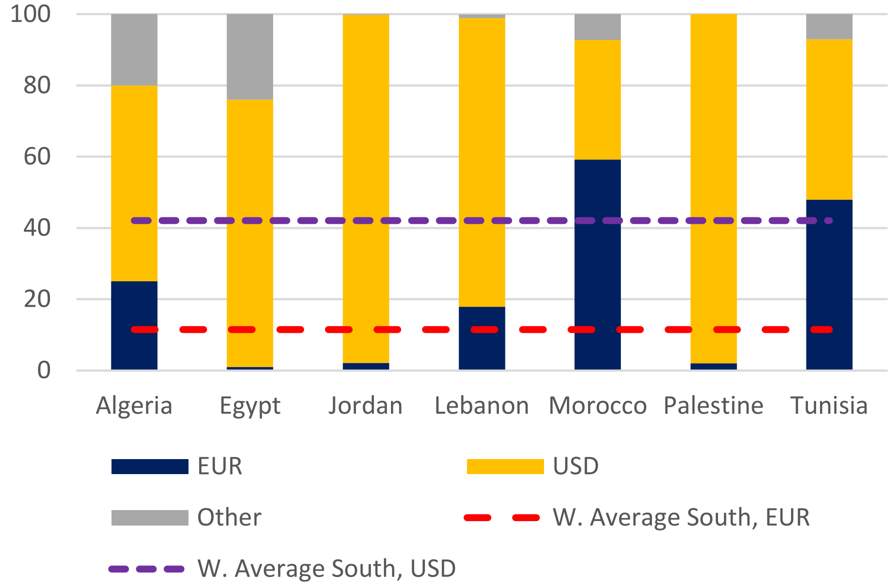
Source: Eurostat.

pattern of the remittances' origins. Overall, this resembles broadly the situation of EaP countries. Because of their stronger European ties, Ukraine, Moldova and Georgia enjoy larger remittances from the EU, of which the majority are most likely denominated in euro. Yet the levels of euro denominated remittances are somewhat lower than in Maghreb countries: about two-thirds in Ukraine and close to 40% in Moldova and Georgia. Remittances are also one of the drivers of euro banknotes circulating outside of the EA. In North Africa, but also in the Middle East, tourism and remittances enhance the foreign demand for euro banknotes (Lalouette et al., 2021).

5. THE EURO IN FOREIGN EXCHANGE RESERVES

Another dimension of interest to determine the role of the euro in the Southern neighbourhood countries are the holdings of central bank foreign reserves. With around 12% of euro denominated reserves in 2020, central banks in the region hold slightly lower shares of reserves in euro as compared to those in EaP countries (13%). The figure is also significantly below the 21% share of global foreign exchange reserves held in euro (ECB 2021). This reflects not only the important role played by the US dollar in the exchange rate regimes of the EU's Southern neighbours, but also the record low and negative interest rates in the euro area and the scarcity of euro denominated safe assets which limit the appetite for keeping foreign reserves in euros. In addition, a much higher heterogeneity than in the EaP can be noted for the Southern neighbours.

Graph 5.1: **Foreign exchanges reserves by currency**



Source: Survey 2021 DG ECFIN; National administrations.

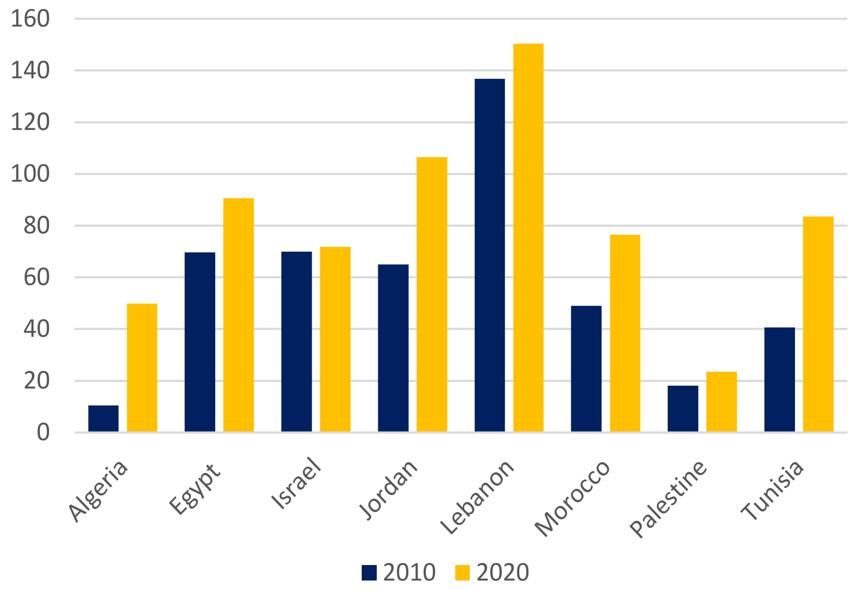
At a global level, the appeal for the euro as an official reserve currency has improved after the euro area sovereign debt crisis, partly due to economic governance reforms, but also providing evidence of the importance of trade and financial linkages for the currency composition of official exchange reserve holdings (ECB 2021). Among the EU's Southern neighbours, countries that manage their exchange rate with respect to the euro also hold a relatively higher share of their official foreign exchange reserves in euro (Morocco and Tunisia). At the same time, commodity exporters (Algeria, Libya) prefer to hold a higher share of their reserves in US dollars given the composition of their export revenues.

Overall, three groups can be identified. In the first group, Morocco and Tunisia's central bank reserve holdings in euros exceed those in dollars and in other currencies (Graph 5.1). In the second group, official reserves in euro in Algeria and Lebanon are still important at 20-30% of total. In the last country group, Egypt, Jordan and Palestine, the euro plays a modest role in official reserves. Moreover, in Algeria, Egypt, Morocco as well as Tunisia, reserves denominated in other currencies but the euro or the US dollar make up a small, but not insignificant part of central bank assets.

6. THE EURO IN EXTERNAL PUBLIC DEBT

Under the combined effect of the Global Financial Crisis and the COVID-19 pandemic, the public debt of EU's Southern Neighbours has increased significantly over the last decade from a non-weighted average of less than 60% of GDP in 2010 to more than 80% of GDP in 2020. Very large increases in public debt ratios took place in Algeria, Jordan and Tunisia, although from relatively low levels, while public debt is particularly high in Lebanon (Graph 6.1). Being part of a global trend since the Great Recession, this increase in public debt is not specific to the region, but has jumped to record levels during the COVID-19 pandemic and has important implications as regards both financing sources and long-term sustainability of debt.

Graph 6.1: **Public debt, % of GDP (2020)**



Source: Survey 2021 DG ECFIN; National administrations.

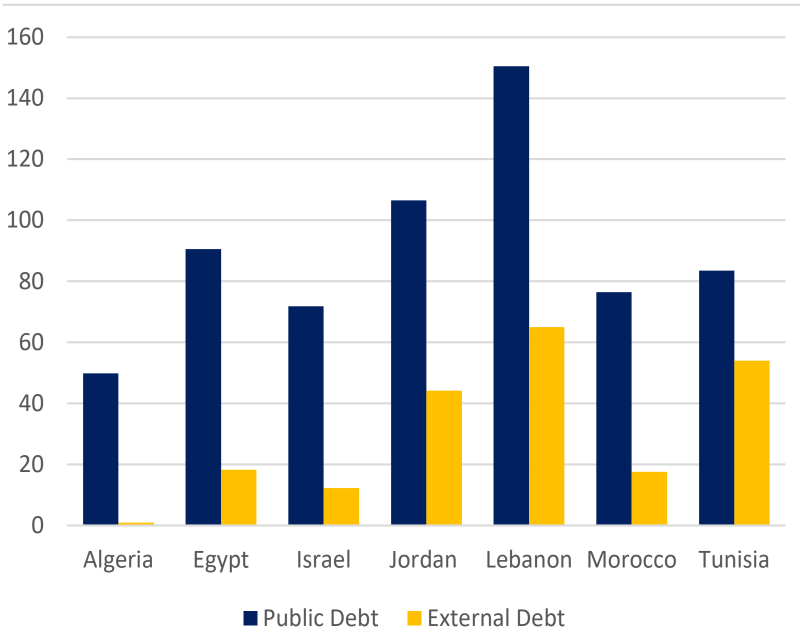
The main financing source for the growing debt stock has been domestic, including monetary easing by central banks, which accompanied other counter-cyclical spending measures during the great recession and the pandemic. Nevertheless, Southern Neighbourhood countries also resorted to larger borrowing from external sources. As shown by Eichengreen, Hausmann and Panizza (2002) emerging economies face considerable hurdles issuing debt abroad denominated in their own currency, due to the “original sin” phenomenon, i.e. usually lax monetary and fiscal policies. External public debt is mostly denominated in foreign currency in the Southern neighbours too, although its risks are mitigated by the fact that it remains at relatively moderate levels in the majority of them.

External public debt is around 50% of GDP or higher only in Tunisia and Lebanon (which also defaulted on its foreign sovereign debt in 2020 due to its combined political and economic crisis) (Graph 6.2). In the rest of the Southern Neighbourhood, external sovereign debt represents less than 20% of GDP with the exception of Jordan, where it accounts for slightly above 40% of GDP. There is obviously scope for a wider use of external financing sources in the Southern Neighbourhood, including in euros, which would alleviate the crowding out of domestic credit to the private sector and debt monetisation, which resulted in relatively high inflation levels in some countries. The likely negative impact of the Russian invasion in Ukraine and associated sanctions on many of the Southern Neighbours' fiscal position and external accounts may increase their external financing needs and influence the role of key international currencies, including the euro, in the region.

The euro accounts for approximately 35% of the external public debt stock in Southern Neighbourhood countries on average, which is much higher than its global weight as a currency for debt issuance of only about 23% and relative to the EaP countries (13%). The US dollar remains the most important foreign currency in sovereign-debt issuance in the Southern Neighbourhood (54% of the external public debt stock), also due to the fact that foreign borrowings need to broadly match the official reserves where the US dollar is overrepresented given the important role it plays in exchange rate arrangements.

According to the ECB (2020), the global share of euro-denominated international debt securities remains modest, about three times lower than the ones denominated in US dollar, because, first of all, the US dollar debt market has been the most liquid historically. As shown by Iletzki et al. 2020, the share of the US dollar has increased steadily from about 45% in the 1990s to about 75% in 2020. In a typical sovereign transaction, US investors buy the majority, i.e. about 40-50% of the order book, while EU investors acquire only around 35% of it, which may argue in favour of issuing in US dollars (ECB, 2020). In addition, the appetite for emerging-market bond issues is clearly stronger amongst US dollar-based investors, because the European investors are in general more risk-averse and have traditionally focused on investment grade debt (ECB, 2020). More recently, however, due to the very low yield environment, European investors have increased their risk appetite, strengthening the demand for emerging market debt. Combined with lower borrowing costs in euro vs. the US dollar (Graph 6.3), it has led to greater interest in issuing debt in euro in emerging markets, including also in the Southern Neighbourhood.

Graph 6.2: **Domestic and external public debt, % of GDP (2020)**

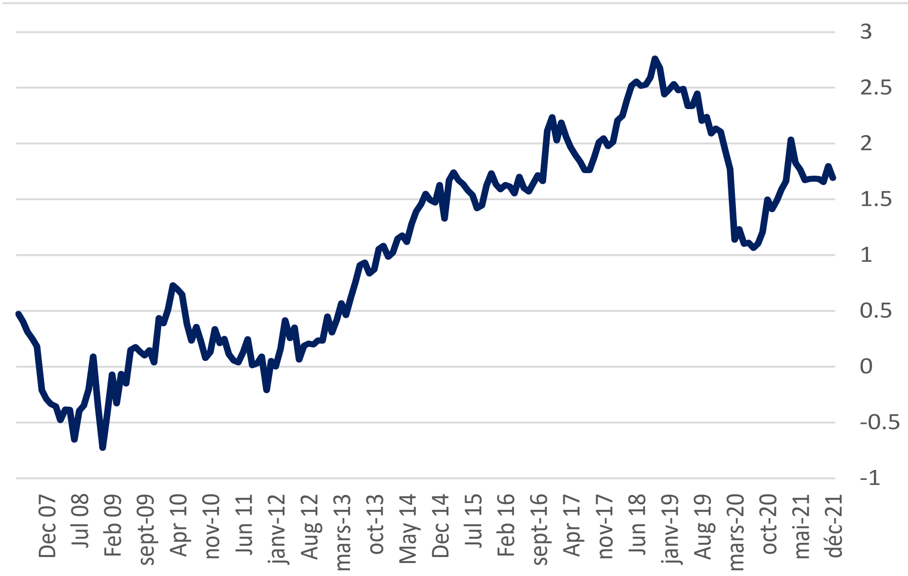


Source: Survey 2021 DG ECFIN; National administrations.

Totalling more than 750 billion US dollars in 2021, debt issuances in emerging markets have steadily grown in size and the euro is gaining traction with non-EU emerging market issuers. The US dollar remains dominant, but the share of sovereign and corporate bonds issued in euro has increased markedly from 4% in 2011 to 17% in 2020, also driven by issuers from the Southern Neighbourhood, most notably Israel, Morocco and Egypt. In addition to the still record low interest rates in euro, sovereigns in emerging markets also see the euro market as a natural hedge given their strong economic ties with the EU and an opportunity to diversify their debt instruments.

As it became clear in the seminar discussions on the international role of the euro in the region, the green finance could contribute significantly to an increased interest in the euro as currency for debt issuance. With 50% of all global issuance and 30% of international ones denominated in euros, the euro already plays a leading role in the global green bonds market. The EU's role as a pioneer in green finance (having made the first global issuance of green bonds in 2007), the promotion of sustainable finance and the introduction of the EU green bond standard are opportunities to develop EU financial markets into a global 'green finance' hub, bolstering the role of the euro as the default currency for sustainable financial products. The EU Southern neighbours show particular interest in both issuing and investing in euro-denominated green bonds. As regards the issuance of green bonds, only Egypt has made this step so far, while most treasuries in the Southern neighbours are still contemplating such issuances, according to qualitative information provided in the survey. The seminar discussions also revealed that the introduction of a digital euro could also contribute, without being a game changer, to strengthening its appeal in the region, not only for debt issuance, but also for remittances.

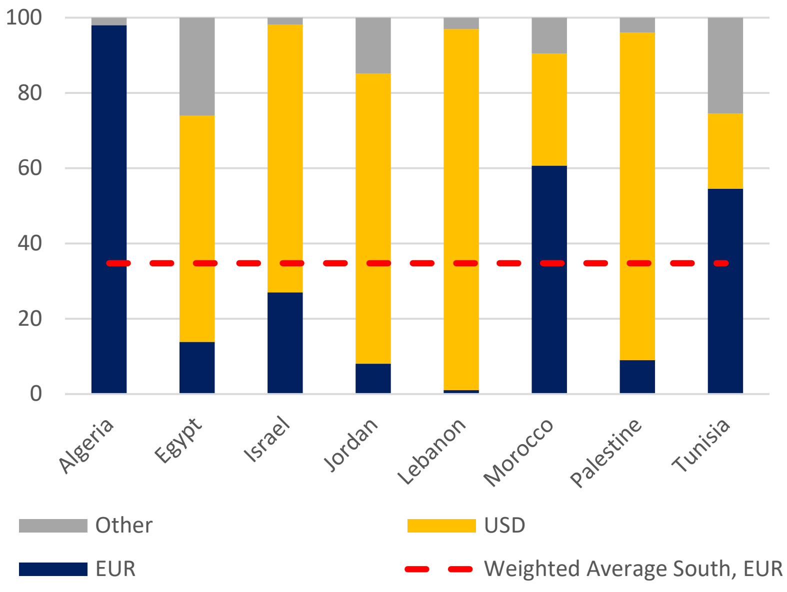
Graph 6.3: **Interest rate differential: historical spread between 10-year US Treasury Bond and Bunds (%)**



Source: Bloomberg; Staff calculations.

When the euro plays an important role in trade invoicing and private sector holdings of cash balances, the currency choice of sovereign debt issuance underpins and provides a natural hedge. Maghreb countries that are geographically and economically closer to the EU also have a dominant share of euros in their external public borrowings, i.e. 98% of total in Algeria (noting that the overall external public debt is very low at about 1% of GDP), 61% in Morocco and 55% in Tunisia. Morocco's peg to a euro and US dollar currency basket where the 60% share of the euro dominates is well reflected in the currency composition of the external public debt. By contrast, except for Israel, the external borrowing in euros in the rest of the EU Southern neighbours is very low at around or less than 10% of total. Yet, the use of the euro for external public borrowing is almost three times higher in the Southern Neighbourhood than in the EaP countries on average. Despite a rising trend for the share of euro-denominated debt in the EaP region, even the DCFTA countries Georgia and Moldova only issued between 30-40% of their sovereign debt in euros before the pandemic, while Ukraine stood at less than 20%, reflecting an overall high degree of dollarisation of the economy (Graph 6.4)

Graph 6.4: **External public debt by currency (2020)**

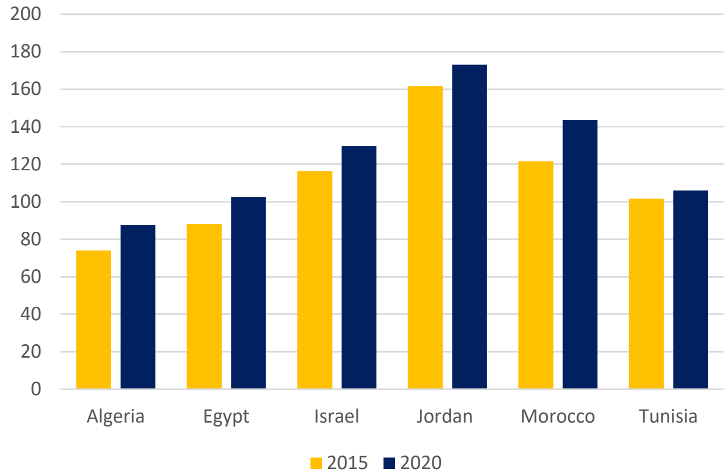


Source: Survey 2021 DG ECFIN; National administrations.

The Commission's survey includes also a qualitative part inquiring into the trends and perceived obstacles to sovereign issuance in euros and intentions to use green bonds to finance public debt. In general, respondents indicated that the currency composition of the sovereign issuance has not changed significantly in recent years. Only Morocco has initiated a gradual process to adjust the currency composition of the public external debt portfolio giving more weight to the US dollar, following the 2015 decision to update the currency weights of the dirham quotation basket to 60% euro (from 80%) and 40% US dollar (from 20%). The majority of countries do not see any obstacles in issuing sovereign bonds in euro, except for the higher liquidity of the US dollar debt market. At the same time, the issuance in euro is favoured by the proximity to the European market offering better investor recognition, the large trade activity with Europe and lower borrowing costs for euro debt. Many countries in the region, have also relied heavily in the past (and still do) on external borrowing from international donors and financial institutions such as the International Monetary Fund and the World Bank, primarily done in US dollars. The negative economic fallout of the war in Ukraine may increase again the recourse to official external financing in the region.

7. THE EURO IN FOREIGN CURRENCY DEPOSITS AND LOANS

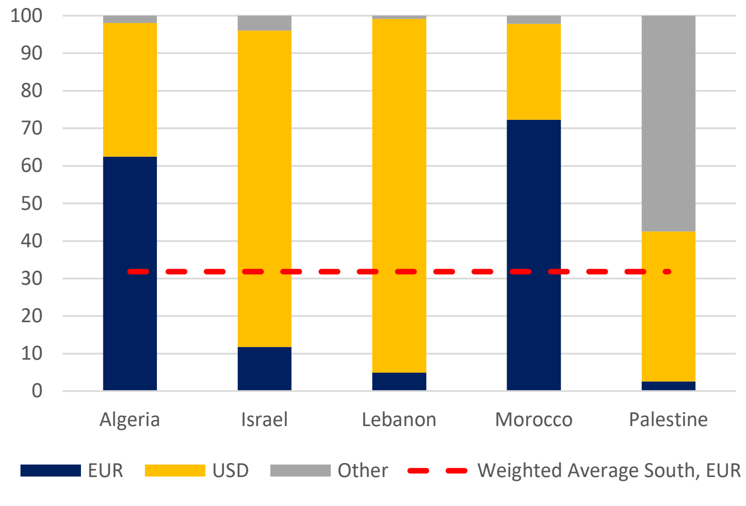
Graph 7.1: **Banking assets, % of GDP**



Source: Survey 2021 DG ECFIN; National administrations.

Like in most emerging market economies, financial depth in the Southern Neighbours is less developed in comparison to advanced economies. Moreover, financial sectors are dominated by banks. Their assets represented about 125% of GDP at end-2020, which is about three times lower than the EU average of around 350% of GDP (2019)[23]. Nevertheless, the degree of financial deepening and total banking assets have advanced gradually in recent years (Graph 7.1). There are again large discrepancies among the Southern Neighbourhood countries, with banking assets in Jordan at 173% of GDP being twice as high as in Algeria at 88% of GDP, for example.

Graph 7.2: **Foreign currency deposits, by currency, 2020 (%)**

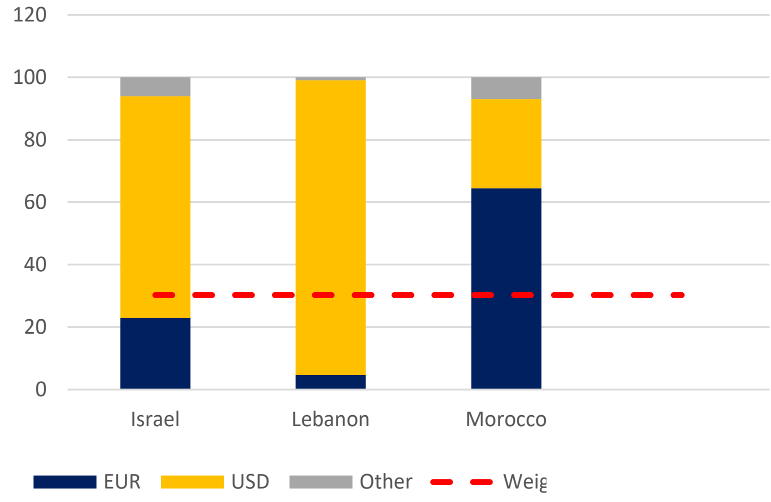


Source: Survey 2021 DG ECFIN; National administrations.

([23]) Lebanon used to be an exception in the region until recently, with a very large banking system relative to the size of the economy.

Despite progress with financial development over the past decades, financial dollarisation (understood as high shares of foreign currency deposits and credit in the banking system), remains common in developing economies, although it has declined in recent years (Bannister et al., 2018). Moreover, according to the latter,

Graph 7.3: **Foreign currency loans, by currency, 2020 (%)**



Source: Survey 2021 DG ECFIN; National administrations.

there is a significant geographical dispersion, as dollarisation, and in particular deposit dollarisation, is a prominent phenomenon in the Latin American countries and in the European transition economies, and much less common in the Middle East and North Africa (MENA) or African countries.

MENA countries are significantly less dollarised than European Eastern economies with about 15% of total deposits denominated in foreign currency vs. 50% in the latter. As regards EaP countries more specifically, Neykov and Robert (2021) found that at the end of 2018, nearly 50% of the stock of loans and 40% of the stock of deposits (weighted for the size of the economies) were in foreign currency. The limited degree of financial dollarisation in the Southern Neighbourhood may be beneficial because the broad consensus in economic literature is that financial dollarisation leads to both macroeconomic stability concerns and frictions in credit markets. Moreover, dollarisation does not necessarily improve financial development (depth and access), while the negative aspects related to weaker monetary policy transmission and financial stability risks in partially dollarised financial sectors are well documented (Catão and Terrones, 2016).

Amid the relatively low level of foreign currency denominated loans and deposits in banking sectors in most of the EU's Southern Neighbours, the US dollar remains the dominant foreign currency. Nevertheless, the euro still accounts for more than 30% of both FX deposits and loans, which exceeds the average share of the euro in international bank loans and deposits at around 17% each at end-2020 (ECB, 2021).

This relative high share of the euro is driven by Morocco and Algeria, where the euro is the dominant foreign currency used by banks, accounting for more than 60% of foreign-denominated deposits and loans (Graphs 7.2 and 7.3). Only Moldova has a similarly high level of euro usage in banking among the EaP countries. At the same time, the euro plays only a very modest role in the banking sectors deposits of Israel, Lebanon and Palestine. Specific monetary arrangements and currency composition of capital and trade flows – goods and services, such as tourism – determine again the choice of foreign currencies in domestic private transactions and financial operations.

8. CONCLUSION

The EU has deep historic, geographic and economic ties with both its South and Eastern neighbours. Hence, it is not surprising that the results of the survey conducted by the European Commission show that the composite index of the use of the euro in the Southern Neighbourhood (28%) is above the world average (25%) and even higher than in the Eastern Partnership (EaP) (21%). The EaP countries also enjoy strong historical and economic links with Russia, which entails a broader circulation of the Russian rouble and the US dollar in the region, given their historical close link. Moreover, an increase in the use of euro in the Southern Neighbourhood in recent years seems to have gone hand in hand with a deeper diversification from exports of oil, gas and commodities towards manufacturing goods for the EU markets. Nevertheless, the US dollar remains the foreign currency of reference across the region, despite the latter's stronger business and trade ties with Europe. As the Southern Neighbourhood conducts more than 40% of its foreign trade with the EU and significant tourism activity, worker remittances and capital flows originate in the EU countries, there is a potential for a larger use of the euro in the region, had the US dollar not been the dominant currency in the exchange rate arrangements of the Southern Neighbours due to its status as the world's number one reserve currency.

The Southern Neighbourhood is a heterogeneous group and the use of the euro is more prominent in the Maghreb countries (Algeria, Morocco and Tunisia use the euro on average more than the US dollar), but less so in the Mashreq region which is more heavily dollarised. The varying degrees regarding the use of the euro reflect primarily the depth of economic links to the EU. Countries like Morocco, Tunisia and Algeria, depend on the European market for around two thirds of their goods exports and have much stronger financial ties, tourism flows and remittances originating in the EU. In addition, about one third of the FDI stock in the region comes from the EU and plays an important role in economic development. Yet, foreign investment varies considerably across countries and higher investments by EU companies in the region could be an important driver for deeper economic convergence with the EU and a more prominent role for the euro in the region.

Several factors contribute to the predominance of the US dollar in the Southern Neighbourhood, but two of them are key. First, the majority of monetary arrangements among EU's neighbours, both in the East and the South, are still based on conventional or soft pegs to the US dollar (Jordan and Lebanon) or composite baskets (Morocco and Libya). Although there is some divergence between de jure and de facto exchange rate regimes, this still gives an important boost to the US dollar in the official reserves of the countries linked to the US currency. In turn, this influences also the choice of the countries' currency for foreign borrowings which typically match the official reserves and in the private transactions of economic actors, which are also reflected in a more prominent use of the US dollar in the domestic financial sector. Second, many Southern Neighbours (Algeria, Libya, Egypt and others) are still heavily dependent on commodity trade with energy, but also metals and agricultural products, with many of these commodities markets being internationally quoted in US dollars. Thus, despite the US having relatively limited trade relations with the region, the US currency retains a dominant position in trade invoicing.

Despite these structural impediments, there has been a growing interest in recent years from both Sovereigns and corporates in the Southern Neighbours to borrow in euro on international financial markets. This was mostly driven by the goal of currency diversification and natural hedging facilitated by very favourable financing conditions. Recently, the bond issuance in euros on emerging capital markets, where some issuers such as Israel, Morocco and Egypt have been very active, has increased about four times from 4% of the total in 2011 to 17% a decade later. This upward trend will be further supported by the euro's strong footprint in green finance, which could gain further traction among the EU's Southern Neighbours. Yet, the US dollar still plays a dominant role in international financial markets, which is also reflected in the foreign borrowing of Southern Neighbours due to higher liquidity and network effects that lead market participants to favour it over the euro. Record low and negative interest rates in the euro area have promoted euro denominated debt, but at the same time reduced the appetite for keeping foreign reserves in euros.

While the international role of the euro in the Southern Neighbourhood will continue to depend to a large extent on fundamentals (such as trade in goods and services, investment and capital flows) new avenues for strengthening the euro's international role have emerged in recent years and the EU's Southern Neighbours are following them with great interest. The NextGenerationEU (NGEU) bond issuances represent a very attractive investment opportunity for EU's neighbours and others. Until 2026, the EU issuance under NGEU will amount to about 150 billion euros annually on average, with maturities of up to 30 years, thereby greatly increasing the availability of safe assets in euro. In addition, green bonds issuances contribute to a renewed interest in the euro as debt currency. The euro already plays a leading role in the global green bonds market, with around half of all global issuance denominated in euros in 2020, and is also a global leader in social bonds. As it became clear in the discussions in the high level seminar with government representatives from the region, the EU's Southern neighbours show particular interest in both issuing and investing in euro-denominated green bonds. Some interest was also expressed for a possible digital euro which could contribute to strengthening its appeal in the region.

Last, but not least, the most durable way to further promote the role of the euro among the EU's Southern Neighbours is to further deepen the economic ties and integration between the two regions. To this purpose, remaining obstacles to the free flow of goods, services and capital should be reduced, increasing economic convergence, productivity and standards of living for all participating economies. Higher FDI flows from the EU to the region would accelerate this process, but are contingent on the recipient countries taking further resolute steps to liberalise their economies, improve business environments, strengthen the rule of law and enforcement of property rights. More foreign investment, including in green, digital and other key sectors, would increase the region's productivity and incomes, reducing poverty, social inequality and economic reasons for migration. Through the strong institutional ties built over decades, the EU and its Southern Neighbours can successfully work together on advancing economic integration and common prosperity, which could underpin a greater use of the euro in the region.

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ANNEXES

ANNEX 1

A.1. REGRESSION RESULTS

Regression results for the Southern Neighbourhood (USD as numeraire), 2000-2021

	Dependent variable:							
	MAD_USD	DZD_USD	LBP_USD	LYD_USD	EGP_USD	TND_USD	ILS_USD	JOD_USD
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
EUR_USD	0.738***	0.051	0.013	0.261***	-0.031	0.677***	0.152*	-0.008
	(0.021)	(0.066)	(0.009)	(0.063)	(0.048)	(0.035)	(0.082)	(0.011)
CNY_USD	-0.132***	0.029	0.005	0.168	0.119	0.154*	-0.100	0.0004
	(0.048)	(0.151)	(0.021)	(0.144)	(0.110)	(0.080)	(0.187)	(0.026)
GBP_USD	0.023	-0.118*	0.011	0.039	0.077	0.034	-.191**	0.009
	(0.021)	(0.065)	(0.009)	(0.062)	(0.047)	(0.034)	(0.080)	(0.011)
RUB_USD	0.028*	0.132***	-0.006	0.042	-0.005	0.001	0.063	-0.004
	(0.015)	(0.048)	(0.007)	(0.046)	(0.035)	(0.025)	(0.059)	(0.008)
JPY_USD	-0.009	-0.003	-0.0005	0.033	0.047	0.0002	0.135**	-0.005
	(0.014)	(0.045)	(0.006)	(0.042)	(0.032)	(0.023)	(0.055)	(0.008)
Constant	-0.074**	0.218*	-0.011	0.077	0.224***	0.343***	-0.117	0.0003
	(0.037)	(0.116)	(0.016)	(0.111)	(0.085)	(0.061)	(0.144)	(0.020)
Observations	232	232	232	232	232	232	232	232
R2	0.913	0.045	0.040	0.184	0.028	0.775	0.058	0.007
Adjusted R2	0.912	0.024	0.019	0.166	0.007	0.770	0.037	-0.015
Residual Std. Error (df = 226)	0.550	1.736	0.238	1.652	1.263	0.913	2.146	0.298
F Statistic (df = 5; 226)	477.312***	2.145*	1.872	10.202***	1.319	155.501***	2.769**	0.307
Note:						*p<0.1; **p<0.05; ***p<0.01		

	Co-moving currencies	Median of coefficients
1	EUR_USD	0.1015
2	CNY_USD	0.017
3	GBP_USD	0.017
4	RUB_USD	0.0145
5	JPY_USD	-0.00015

Regression results for the Southern Neighbourhood for the last window (USD as numeraire), 2018-2021

	Dependent variable:							
	MAD_USD	DZD_USD	LBP_USD	LYD_USD	EGP_USD	TND_USD	ILS_USD	JOD_USD
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
EUR_USD	0.507***	-0.101	0.020	0.343***	-0.152	0.877***	0.176	-0.006
	(0.095)	(0.137)	(0.027)	(0.053)	(0.114)	(0.134)	(0.230)	(0.010)
CNY_USD	-0.093	-0.015	-0.009	0.143**	-0.069	-0.226	-0.072	0.008
	(0.105)	(0.151)	(0.030)	(0.059)	(0.125)	(0.147)	(0.254)	(0.011)
GBP_USD	0.107	0.051	0.018	-0.003	0.204**	-0.149	-0.113	0.008
	(0.081)	(0.116)	(0.023)	(0.045)	(0.096)	(0.113)	(0.195)	(0.008)
RUB_USD	0.041	-0.005	-0.011	0.004	-0.063	0.001	-0.056	0.0002
	(0.041)	(0.059)	(0.012)	(0.023)	(0.049)	(0.057)	(0.098)	(0.004)
JPY_USD	0.052	0.059	-0.023	-0.076	0.145	-0.015	0.024	0.002
	(0.085)	(0.122)	(0.024)	(0.047)	(0.101)	(0.118)	(0.204)	(0.009)
Constant	-0.216*	0.399**	0.005	0.007	-0.353**	-0.169	-0.432	-0.001
	(0.113)	(0.162)	(0.032)	(0.063)	(0.134)	(0.158)	(0.272)	(0.012)
Observations	36	36	36	36	36	36	36	36
R2	0.775	0.027	0.162	0.828	0.175	0.690	0.042	0.085
Adjusted R2	0.738	-0.135	0.022	0.799	0.037	0.638	-0.117	-0.067
Residual Std. Error (df = 30)	0.651	0.937	0.184	0.365	0.776	0.912	1.572	0.067
F Statistic (df = 5; 30)	20.682***	0.168	1.159	28.814***	1.271	13.355***	0.265	0.560

Note: $^{*}p<0.1$; $^{**}p<0.05$; $^{***}p<0.01$

	Co-moving currencies	Median of coefficients
1	EUR_USD	0.098
2	CNY_USD	-0.042
3	GBP_USD	0.013
4	RUB_USD	-0.0024
5	JPY_USD	0.013

Regression results for the Southern Neighbourhood (EUR as numeraire), 2000-2021

	Dependent variable:							
	MAD_EUR	DZD_EUR	LBP_EUR	LYD_EUR	EGP_EUR	TND_EUR	ILS_EUR	JOD_EUR
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
USD_EUR	0.217***	0.414***	0.711***	0.280**	0.582***	-0.018	0.234*	0.733***
	(0.041)	(0.117)	(0.036)	(0.128)	(0.089)	(0.069)	(0.137)	(0.039)
CNY_EUR	-0.007	0.328***	0.260***	0.341**	0.328***	0.264***	0.263*	0.257***
	(0.043)	(0.120)	(0.037)	(0.132)	(0.091)	(0.071)	(0.141)	(0.040)
GBP_EUR	0.020	-0.006	0.003	-0.062	0.030	0.045	0.107	0.003
	(0.021)	(0.059)	(0.018)	(0.064)	(0.044)	(0.034)	(0.069)	(0.020)
RUB_EUR	0.025	-0.048	0.001	0.023	-0.002	0.001	0.151***	0.004
	(0.015)	(0.043)	(0.013)	(0.047)	(0.033)	(0.025)	(0.051)	(0.014)
JPY_EUR	0.006	-0.068	0.013	0.038	0.118***	0.070***	0.078	0.015
	(0.015)	(0.044)	(0.013)	(0.048)	(0.033)	(0.026)	(0.051)	(0.015)
Constant	-0.053	0.253**	0.037	0.106	0.180**	0.345***	-0.171	0.048
	(0.037)	(0.105)	(0.032)	(0.115)	(0.079)	(0.062)	(0.123)	(0.035)
Observations	232	232	232	232	232	232	232	232
R2	0.513	0.499	0.958	0.423	0.796	0.389	0.437	0.953
Adjusted R2	0.503	0.488	0.957	0.411	0.791	0.376	0.425	0.952
Residual Std. Error (df = 226)	0.555	1.568	0.481	1.716	1.189	0.920	1.840	0.521
F Statistic (df = 5; 226)	47.666***	45.041***	1,040.143***	33.179***	175.831***	28.783***	35.151***	926.493***

Note: *p<0.1; **p<0.05; ***p<0.01

	Co-moving currencies	Median of coefficients
1	USD_EUR	0.347
2	CNY_EUR	0.2635
3	GBP_EUR	0.0115
4	RUB_EUR	0.0025
5	JPY_EUR	0.0265

Regression results for the Southern Neighbourhood for the last window (EUR as numeraire), 2018-2021

	Dependent variable:							
	MAD_EUR	DZD_EUR	LBP_EUR	LYD_EUR	EGP_EUR	TND_EUR	ILS_EUR	JOD_EUR
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
USD_EUR	0.310**	0.703***	0.801***	0.305***	0.784***	0.430***	0.265	0.825***
	(0.114)	(0.138)	(0.077)	(0.077)	(0.152)	(0.156)	(0.206)	(0.068)
CNY_EUR	-0.050	0.104	0.067	0.177**	0.043	-0.197	0.277	0.083
	(0.108)	(0.131)	(0.073)	(0.073)	(0.144)	(0.148)	(0.196)	(0.065)
GBP_EUR	0.089	-0.034	-0.042	0.020	0.030	-0.182	0.028	-0.064
	(0.086)	(0.105)	(0.059)	(0.058)	(0.115)	(0.119)	(0.157)	(0.052)
RUB_EUR	0.054	-0.048	0.010	0.042	0.015	0.006	0.194**	0.019
	(0.044)	(0.053)	(0.030)	(0.030)	(0.058)	(0.060)	(0.079)	(0.026)
JPY_EUR	0.099	-0.004	0.091	0.180***	0.231*	0.022	0.164	0.076
	(0.096)	(0.117)	(0.065)	(0.065)	(0.129)	(0.132)	(0.175)	(0.058)
Constant	-0.200*	0.366**	0.019	0.031	-0.360**	-0.164	-0.439**	0.015
	(0.117)	(0.142)	(0.079)	(0.079)	(0.156)	(0.161)	(0.212)	(0.070)
Observations	36	36	36	36	36	36	36	36
R2	0.574	0.779	0.943	0.870	0.832	0.408	0.595	0.958
Adjusted R2	0.503	0.742	0.934	0.848	0.804	0.309	0.527	0.951
Residual Std. Error (df = 30)	0.679	0.825	0.460	0.458	0.905	0.932	1.231	0.408
F Statistic (df = 5; 30)	8.094***	21.107***	99.734***	40.164***	29.672***	4.134***	8.815***	135.472***

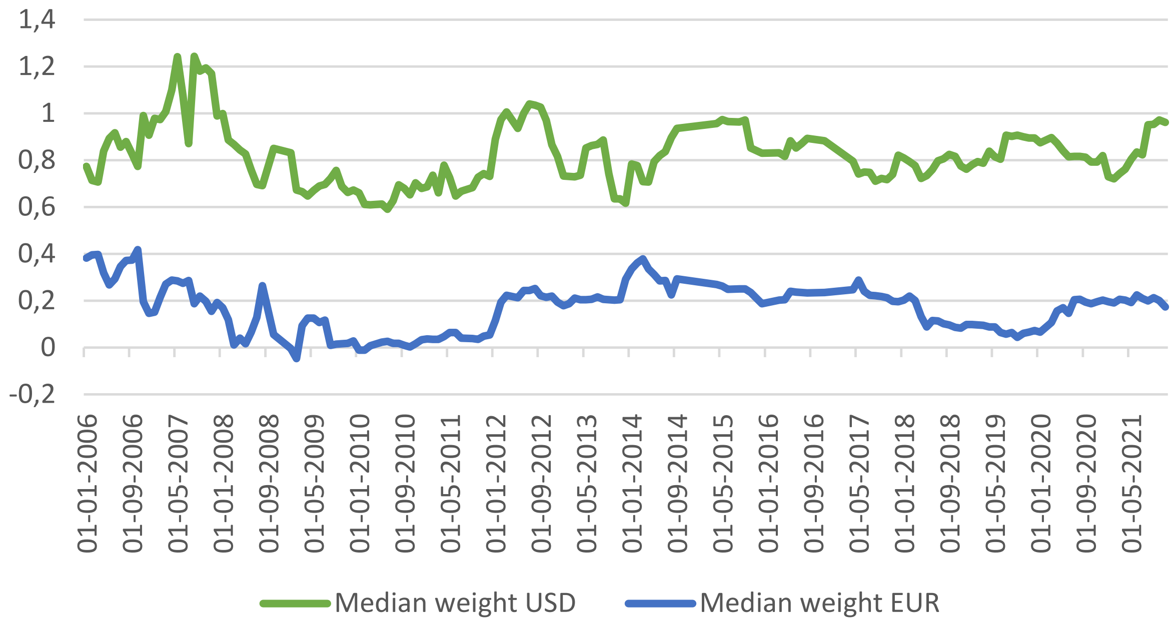
Note: *p<0.1; **p<0.05; ***p<0.01

	Co-moving currencies	Median of coefficients
1	USD_EUR	0.5665
2	CNY_EUR	0.075
3	GBP_EUR	-0.007
4	RUB_EUR	0.017
5	JPY_EUR	0.095

Median regression results from rolling 36-month regressions for the Southern Neighbourhood countries

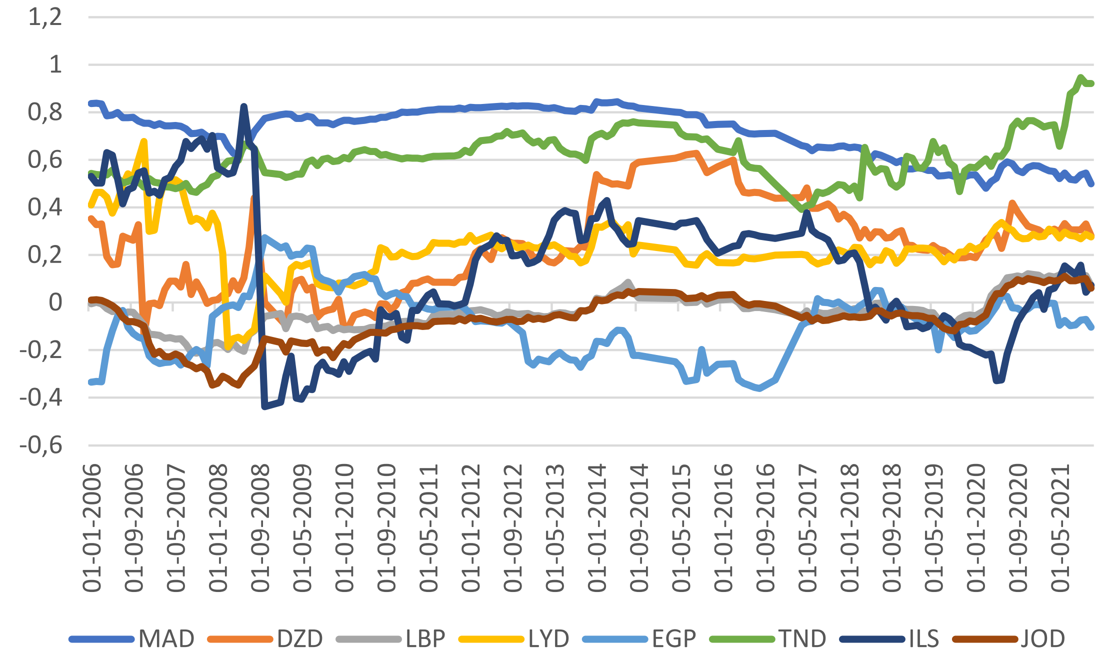
The graphs below report the median weights of the euro as well as the US dollar for each 36-month period of the 36 month window rolling regression, starting in 2006. The X-axis indicates the starting date of the 36-month window rolling regression.

Graph A.1: **Median regression results from rolling 36-month regressions for the Southern neighbourhood**



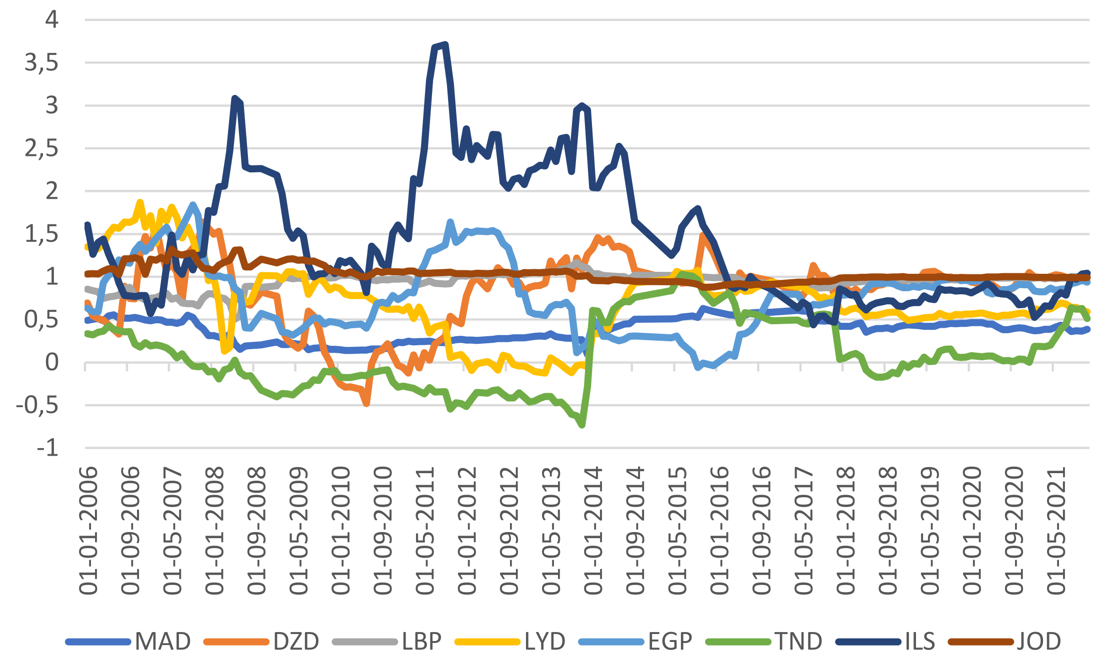
Source: Staff calculations.

Graph A.2: **Weight of the euro in Southern neighbourhood countries**



Source: Staff calculations.

Graph A.3: **Weight of the US dollar in Southern neighbourhood countries**



Source: Staff calculations.

ANNEX II

A.2. ADDITIONAL LITERATURE REVIEW ON THE INTERNATIONALISATION OF THE EURO

As the euro consolidated its position as the second most important currency worldwide, the literature assessing its international role has also become richer. In the following, the relevant empirical and theoretical literature in the field, with a particular focus on the Southern Neighbourhood, is briefly summarised along several dimensions (trade invoicing, international reserves, external public debt and remittances). Simultaneously, some implications for the use of the euro in the Southern Partnership countries are inferred.

A.2.1. Trade invoicing

While trailing the US dollar in many regards, the euro, reflecting the EU's status as the world's largest trading block, plays a significant role as an invoicing and settlement currency. In 2020, even though decreasing slightly compared to the previous year, 60%, respectively 61%, of extra-euro exports of goods and services and 51%, respectively 52%, of extra-euro imports of goods and services were invoiced in euro (ECB, 2021). Since its introduction, the euro has simultaneously gained importance as a vehicle currency in non-euro area European countries along several countries in Africa, where trade invoicing in euro exceeds the level of exports, making the euro a `regionally dominant currency' (Boz et al., 2020). With regard to the EU's Southern neighbourhood countries, the question arises to what extent this observation holds true and what other factors determine the choice of currency for trade invoicing in the area.

In a global perspective, there is a significant discrepancy between the towering role of the US dollar in global trade invoicing of 40%, with the EU's share being 30%, while it has a considerably smaller role of the United States in global trade of around 10% (Goldberg and Tille, 2008; Gopinath et al., 2020). This discrepancy is particularly striking given that 25% of global exports stem from Eurozone countries (Ilzetki, 2020). The evidence from these data confirms findings from earlier research regarding the globally dominant role of the US dollar in invoicing –despite the comparatively smaller role of the US in global trade – and the overall stability of invoicing currency patterns (Boz, 2021). The theoretical literature on the determinants of currency choice for trade invoicing identifies an array of, inter alia, mutually reinforcing reasons for the evidently persistent hegemony of the US dollar. A report by the Joint Research Center (JRC) classifies these drivers in five groups: i) transaction costs and industry characteristics (market/bargaining power, homogeneous goods); ii) inertia and market externalities; iii) exchange rate and macro-economic volatility; iv) country size and monetary union; and v) financial issues' (Langedijk et al., 2016).

An early argument by Swoboda (1968) falls under the first category and addresses the convenience factor of low transaction costs of a currency and the resulting benefits for cost considering firms and consumers. It is argued that currencies with higher liquidities offer relatively lower transaction costs and are thus the preferred medium of exchange. Furthermore, the usage of a single currency in an international market improves international comparability and transparency. Building upon this rather general argument, Devereux and Shi (2013) demonstrate with the help of a dynamic general equilibrium model, that the usage of a currency such as the US dollar as a vehicle currency offers significant efficiency gains through reducing the costs for currency trade when there is a large number of countries and currencies. In a similar fashion, McKinnon (1979) had advanced the argument that this convenience factor of lower transaction costs is particularly strong in specialised markets and homogeneous goods. Following up on this argument, Krugman (1979) further theorised that once a dominant currency in such a specialised market has emerged, changing to an alternative currency would increase transaction costs for market participants. In addition, the emergence and importance of global supply chains `have reinforced the strategic complementarities in firms' invoicing decisions' (Ilzetzki et al., 2020).

Supporting evidence in this regard was presented by Goldberg and Tille (2008) who find that the US dollar exhibits many of these features playing a particularly important role for transactions across small countries and for goods in specialised markets. The dominance of the US dollar in homogenous markets is also impressively demonstrated in its undisputed role in primary commodity markets, particularly the global oil market. Given the importance of oil and generally commodity exports in the Southern neighbourhood countries, a dominance of the US dollar in those markets is rather unsurprising.

Another early empirical analysis in the otherwise scarcely researched field is that of Ito and Chinn (2014). It offers evidence on two important dimensions regarding the role of the euro in the Southern neighbourhood countries. As their panel data analysis indicates, trade relations can play an important role for the choice of invoicing currency: the larger the share of a country's exports directed to either the US or the euro area, the higher the likelihood for the use of the respective currency for trade invoicing. Furthermore, financial openness and the state of development of financial markets can in a similar manner influence the invoicing currency choice. The evidence presented in their paper points to higher levels of trade invoicing in euro for more liberalised capital accounts and less trade invoicing in US dollars for more developed and larger financial markets.

Another aspect to consider when assessing the role of the euro in comparison to the US dollar is the role of financial markets. While the US dollar is dominant as an invoicing currency, its role in global banking and finance is even more prominent. Both roles support the US dollar's position as the dominant currency and reinforce each other. The US dollar's high share as invoicing currency in global trade leads to a high demand for safe US dollar deposits, which in turn lowers borrowing costs in what Gopinath and Stein (2018) call `an exorbitant privilege on the US dollar'. This borrowing costs-reducing effect of the US dollar's role as an international settlement currency incentivises further invoicing in US dollar, creating a positive feedback loop.

A.2.2. Foreign Exchange Reserves

The accumulation of foreign exchange reserves constitutes another key function of an international currency and, inter alia, reflects its ability to function as a store of value. Foreign exchange reserves play an important role in the international monetary system and with regard to the international role of the euro, the share of the euro in countries' foreign exchange reserves is another indicator for its international role. In 2020, while decreasing by 0.7% compared to 2019, the euro made up 21.2% of global foreign exchange reserves with the US dollar marginally falling shy of making up 60% (ECB, 2021).

The existing literature on determinants of foreign exchange reserve compositions has identified four central drivers: (i) the economic size/dominance of reserve issuers; (ii) the credibility of reserve issuers; (iii) the transactional demand of reserve holders and (iv) inertia (Iancu et al., 2020). With regard to the size and relevance of the economy backing reserve issuers, Eichengreen et al. (2016) argue that the demand for a currency increases with an economy's size, as 'size is a determinant of the capacity of a country to issue the safe and liquid assets as a form of reserves.' Moreover, the ability of a currency to function as a store of value is also decisive for its demand as a reserve currency. Countries can be discouraged to use a currency if it experiences strong exchange rate depreciations (Devereux and Shi, 2013).

Using historical data, Eichengreen et al. (2019) also demonstrate that besides economic size and credibility, also geopolitics, taking economic and security considerations into account, is driving the demand for reserves in a currency. The early adoption of one currency also incentivises other countries to follow suit, benefit from economies of scale and increasing returns. These network effects, in turn, are also interrelated with an inertial bias that influences the choice of reserve currency – to the advantage of the US dollar nowadays. The IMF (Iancu et al., 2020) presents evidence for the important and even increasing role of inertia in a recent study. Exploiting a novel database on individual economies' reserve holdings, the authors find that inertial effects play a pivotal role that appears to 'dominate economic and geopolitical effects' and that this effect is increasing since the Global Financial Crisis. Considering the EU's Southern neighbourhood countries, another finding of their study is particularly interesting. Trade links and networks do not seem to play an important role in determining foreign reserve holdings and do not explain different levels of reserve shares. Extensive trade links between some of these countries and European countries need thus not necessarily lead to higher shares of the euro held as reserves.

A.2.3. External Public Debt

The choice of currency for the denomination of external public debt also reflects the role of a currency in the world. Early scholarly work looking at foreign public debt currency composition found that emerging economies face considerable hurdles issuing debt abroad denominated in their own currency. According to Eichengreen, Hausmann and Panizza (2002), if countries suffer from this `original sin' phenomenon they inevitably must overwhelmingly take on debt in foreign currencies. At the same time, borrowing in domestic currencies has increased markedly over the last years. Ottonello and Perez (2019) show for a panel of 18 emerging economies that, on average, around three-fourths of external sovereign debt is denominated in foreign currency and the average share of debt in local currency increased from 10 percent to 39 percent. These results are in line with earlier findings by Du and Schreger (2016) that observe a decrease in external public debt in foreign currencies among major emerging economies from 85% to about half of their external public debt from the late 2000s to the mid 2010s. Furthermore, Perez and Ottonello (2016) found that the share of foreign currency in the total debt of emerging economies moves in a pro-cyclical manner: it tends to be higher during economic booms than during recessions, with a positive correlation between output and the share of debt denominated in local currency. This might be linked to abundant evidence, for both industrial and developing countries, that discretionary policy is asymmetric, with procyclicality mainly occurring in good times.

Network externalities, economies of scale and thus the size of the backing economy play an important role in determining the choice of currency in external public debt, as Chinn and Frenkel (2008) state: `an international money, like domestic money, derives its value because others are using it.' Unsurprisingly, given the higher liquidity of assets in larger markets, these are more attractive to creditors. Consequently, countries with a greater share of global output are less incentivised to denominate in other currencies and are therefore more likely to issue debt in the local currency.

Looking at current data on global foreign debt currency composition, it becomes clear that the US dollar is leading ahead of the euro and that its share has increased significantly over the last 30 years. Iletzki et al. (2020) show that the share of the US dollar has increased from 45% in the 1990s to 75% in 2020. On a distant second place, 10% of public or publicly guaranteed debt in developing countries and merely 8% of foreign sovereign debt was denominated in euro. While this is the same share the euro already held in 2000, it is considerably lower than the 13% that the German Mark and the French Franc combined had occupied prior to the euros introduction. Among those that have accumulated significant foreign public debt are also EU's Southern neighbourhood countries, while on average external debt in the MENA region was close to 100% of GDP in 2015 (Neaime and Gaysset, 2017).

A.2.4. Remittances

One of the most important financial flows between the EU and the Southern Neighbourhood are remittances. In 2017, remittances exceeded official development assistance as well as foreign direct investments in the region, totalling almost 55 billion US dollars (Sridi and Guetat, 2020). Already in 2001, Morocco, Egypt, Lebanon and Jordan were among the ten main recipients of global remittance flows. Two examples for the importance of remittances from the euro area are Morocco and Tunisia. E.g. in 2005, 82% of all remittances to Morocco and even 85% of remittances to Tunisia were sent from the euro area (Schiopu and Siegfried, 2006).

While having been expected to decrease during the turmoil of the Covid-19 crisis, remittances flows to the region increased from 2019 to 2020, largely driven by increase in remittances to Egypt and Morocco (Worldbank, 2021). Remittances are also one of the drivers of euro banknotes circulating outside of the EA. In North Africa, but also in the Middle East tourism and remittances enhance the foreign demand for euro banknotes (Lalouette et al., 2021).

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