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Will the Euro Ever Replace the US Dollar as the Dominant Global Currency? (WP)

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Summary
Very few currencies –so far only three– have been able to become leading or dominant international currencies in the world's history. Those that have done so tend to become monopolistic due to the centripetal forces derived from the existence of economies of scale, economies of scope and network externalities in their use.

However, these centripetal forces tend to be counterbalanced by the opposing centrifugal forces derived from the need by investors to diversify their asset portfolios by currency due to the existence of a negative correlation between the two leading currencies. This is the reason why the incumbent currency is always followed by a competing second candidate currency.

The euro's share in the different international markets is, on average, still much smaller than the US dollar's, with minor exceptions. The rate of growth of its share, in the 10 years since its creation, was high at first and lower later, coinciding with an accumulation of global imbalances. In any case, its present rate, if maintained, could be enough to overtake the US dollar before the end of this century.

The euro's share in the world's financial markets would receive a major boost if the UK were to adopt it, given London's position as one of the world's two leading financial markets, both in euros and in US dollars. Furthermore, the UK has the EU's second-largest GDP after Germany. In any case, the Euro Area (EA) is slowly expanding with the possibility of new EU members and other potential candidates joining in the future. At present, this is not the case with the US dollar.

In the medium term, higher inflation risks in the US than in the EA could accelerate the diversification by central banks and sovereign wealth funds away from the US dollar and into the euro.

Nevertheless, there are two major handicaps that will make very difficult for the euro to overtake the US dollar as a dominant currency. The first is that the EA still has a very

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fragmented banking and capital market, which makes it more difficult to fully exploit economies of scale and of scope and network externalities. The second is that since the EU and the EA are only unions of independent nations and not a federal state, it will be extremely difficult to overtake the US dollar and maintain a dominant international role while the governance of the EU and EA remains unchanged.

Meanwhile, other currencies, such as the renminbi, are slowly increasing their share, while large emerging countries are increasingly requesting the creation of a global currency. However, this does not mean that the euro will be displaced as the main candidate to replace the US dollar in the long term or as the leading pan-European currency.

Lessons to be Learnt from the History of Dominant Currencies

Historical evidence has shown that only three currencies have been able to become dominant throughout the world's history. The Dutch guilder was the dominant currency during the 17th and 18th centuries, even when Spain and France were the dominant political and military powers, while it was only after the First Industrial Revolution that the pound sterling was able to displace the guilder. Sterling was able to retain its hegemonic position during the 'gold standard' until World War Two, although the US had overtaken the UK in terms of total GDP by the end of the 19th century, had achieved a higher volume of trade after World War One and the dollar was the only currency convertible into gold at a fixed price in the 1920s. The US dollar took the lead just after World War Two and has held it until today. There are a few important lessons to be learnt from this historical experience.

The first lesson is that the displacement of the dominant currency by its challenger takes a long time to materialise. Usually, the incumbent currency tends to coexist with the challenging currency for many decades –or more than a century– before it is displaced. The guilder and sterling did so for more than a century before the latter overtook the former and sterling and the US dollar coexisted as the two major currencies for more than five decades before the dollar took the lead. The Deutschemark and the yen have been coexisting with the dollar as secondary currencies for some decades until the creation of the euro 10 years ago made it the new challenger to the dollar.

The second lesson is that only the countries that are more open and more active in the international trade of goods, services and capital and which have developed leading trade and financial centres are able to take their currency to a dominant position, sometimes independently of which country was the political and military power at the time. For instance, Spain was the world's leading military power for more than a century, invading parts of France, Italy and the Low Countries and conquering large parts of America. But, during the same time, the Netherlands were the largest trade and financial power,

Amsterdam was the world's financial centre and the guilder was the dominant currency. The US was the dominant military power many years before its currency became hegemonic, because the UK was still a strong economic and financial power and London was the world's trade and financial centre.

Nevertheless, at present, these three factors are combined in one country. The US is the world's leading economic, financial and military power all at the same time, so it will be extremely difficult to displace its currency from its dominant position, given that the EA is less important financially, economically and militarily than the US. Financially, the EA's stock market capitalisation is US$5.8 billion versus US$9.5 billion in the US (plus its main competing financial centre is London, outside the EA, which has a market capitalisation of US$1.8); economically, because the EA's GDP is still smaller than that of the US (US$12.6 billion versus US$14.3 billion); and, militarily, the US has an annual military budget of US$630 billion dollars and the EU, at US$314 billion, only half that (the EA spends only US$230 billion: France US$70 billion, Germany US$46 billion, Italy US$40 billion and Spain US$19 billion). Moreover, US expenditure on nuclear weapons comes under the Department of Energy and the wars in Iraq and Afghanistan are funded through supplemental appropriation bills.

The third lesson is that, although in every country the currency is used by its citizens because it has the full guarantee of the State that issues it, in the international markets this guarantee is not a sufficient condition to make it of preferred use. Private economic agents are the ones that, in the last instance, decide which currency to use for their international transactions. These agents have a number of requirements for deciding which currency to use. The first is that it should be issued by a strong, open and competitive economy that itself accounts for a large share of the world's trade and financial transactions. The second is that the country that issues the currency should have a very large and efficient financial system that is well developed and regulated, very deep and liquid, allowing economic agents to finance their transactions at very competitive costs and at high speed. Large volumes and low transaction costs are the two key drivers for private economic agents to prefer a foreign currency to their own national one and a different financial market to their own in which to transact.

The fourth lesson is that the same dominance of a currency in the world markets tends to create the necessary conditions for another currency –or currencies– to emerge as a competitor. In a world of multiple currencies and free multilateral trade, the agents that engage in international transactions between countries have the problem of coordinating the purchases and sales of the currencies they need. As the purchase of a currency by an agent is not easily compensated by the simultaneous sale of another currency by another agent, the financial intermediaries must make their clients wait or hold large inventories of different currencies. Nevertheless, when the volume of transactions in one currency is very large, the waiting time or inventory volumes are very low, reducing the costs of the

transaction. The greater the use of a currency, the greater its liquidity, the lower its bid and ask spreads and the more attractive it becomes until it ends up achieving a kind of natural monopoly.

Hence, the currencies that are able to reach a high level of international use tend to become monopolists due to the centripetal forces derived from the economies of scale and agglomeration effects caused by economies of scope and network externalities in currency markets. International currencies derive their value from their use by citizens and companies of other countries. Thus, there is a strong bias in favour of increasing even further the currency that is being most used that is known as having a 'positive feedback' (Arthur, 1990). Therefore, the value of a dominant currency depends more on its past performance than on its intrinsic value, since its value is based on its relative level of use.

It works in a similar way to international languages, that also show large network externalities. Today, the dominant language in the world is English, not because it is intrinsically superior to others but because it is the most used as a second language and the more it is used, the more it tends to be used by others. A person who speaks English as a second language tends to interact with a larger number of other people and to have access to more information and knowledge than others who do not. In the end, he improves his potential more than with other languages.

However, fortunately for other leading currencies, it becomes increasingly difficult for the dominant currency to maintain such a monopoly position since these centripetal forces are increasingly counterbalanced by the opposing centrifugal forces that emerge as a consequence of the portfolio diversification of financial assets, which tend to reduce the risk of the concentration by investors on a single currency by diversifying their allocation to other currencies. These centrifugal forces are very powerful, since currencies offer much larger diversification opportunities than any other financial instrument, such as fixed income or equities. The average price of all currencies, by definition, does not show any trend and diversifying therefore tends to reduce a portfolio's covariance and risk.

This diversification outcome is even stronger between the two leading currencies today, given that when the euro rises the dollar falls and vice-versa. The more global the financial markets, the more fixed-income securities and equity prices tend to move in the same direction due to the increasing interconnection and contagion of the different financial markets, as occurred in the recent credit crisis. Therefore, currency diversification becomes increasingly necessary to reduce portfolio risk. This is the main reason why the euro is becoming a growing challenger to the dollar in a very short period of time, mainly in terms of asset allocation by portfolio managers, while the yen remains the third choice, despite the dollar's dominance.

Finally, for a currency to achieve a leading or dominant position it should not only be strong but also have a very well proved record of stability. This is a very important distinction. Naturally, the optimum for a dominant currency is to achieve both features, but in reality this is not always the case: sometimes one currency can be very stable but might be losing value against another currency that is more volatile. However, in the long run, investors tend to favour stability over temporary strength, because by definition they are, on average, risk averse. Importers and exporters of goods and services and long-term savers and financial investors tend to give much more importance to currency stability because most of them are not short-term speculators and do not want any exchange risk. Only the more opportunistic investors favour short-term value over long-term stability.

The real test for a dominant currency is when there is a large-scale financial crisis and risk aversion is at its highest. Then, the true dominant currency is not always able to reach the status of a safe haven. At times of financial stress, volatility and risk aversion, investors tend, on the one hand, to unwind trades and return home and, on the other, to seek a safe haven. If the country of issuance of the dominant currency is very large, then the homeward-bound effect makes its currency appreciate versus other currencies at riskier times, but this does not mean that it has achieved the status of safe haven, which occurs when a currency gains strength by attracting investors who have not had a prior national attachment to that currency. This has traditionally been the case of the Swiss franc and, sometimes, gold and commodities have also become safe havens.

Nevertheless, in the panic that broke out in September-October 2008, after Lehman's was allowed to go bankrupt, there was a huge flight to quality and safety by investors world-wide, including Americans, to dollar-denominated assets. This led to a very large appreciation of the dollar versus most other currencies and a much smaller one versus the euro, the yen and the Swiss franc, showing that the dollar was the safest world currency. The same happened at the turn of the millennium.

Relative Weight of the Euro as an International currency

An international currency is one that is used by non-residents as a means of exchange, unit of account and measure of value. Therefore, the best way to measure the role of the euro as an international currency is through its relative presence and weight in three different international markets: (1) the international liability management market; (2) the international asset management market; and (3) the foreign exchange market. The underlying concept, based on a portfolio balance framework, is that the international weight of a currency is determined by the balance between the demand for assets and the supply of liabilities denominated in that currency.

International Liability Market

In the international liability market, the stock of euro-denominated securities outstanding in the international markets has seen a very large surge since the euro's introduction. First, according to the ECB, in a narrow sense –excluding domestic issuance of debt securities at constant exchange rates, ie, adjusted by valuation effects–, the share of euro-denominated debt securities of the total stock grew from 20% at the start of EMU in 1998 to a peak of 33.8% in mid 2005, although since then it has declined to 31.3% at the end of 2007 and increased in 2008 to 32.2% of the total of a US$9.6 trillion. By contrast, the dollar's share of the total stock outstanding steadily decreased from 49% of the total at the start of EMU in 1998 to 41% in 2005, when its share peaked, but increased again to 44.2% at the end of 2008, out of a total US$9.6 trillion. This has been possible thanks to the slow decrease of the share of yen-denominated debt securities, that declined from 18% of the total in 1998 to 8% in 2008.

Secondly, measured in 'broad or global' terms –ie, including domestically-issued debt securities–, the relative percentage shares of debt securities denominated in the two currencies at the end of 2008 were 29.5% of the total (US$24.6 trillion) in euros and 39.8% in dollars (US$33.2 trillion) out of gross total of US$83.5 trillion. The percentages in 2006 were 27.8% in euros and 42.2% in dollars, out of a total of US$68 trillion. Hence, the share of total debt securities in dollars has dropped by 2.4 percentage points and the share of debt in euros has risen by 1.7 percentage points.

Third, in terms of net issuance by year, in 2007 those issued in euros, US$336 billion, were less than half those issued in dollars, US$752 billion, shares of 25.5% and 56.9% respectively. But in 2008 those issued in euros, US$180 billion, overtook those issued in dollars, US$112 billion, respectively accounting for 47.2% and 29% of the total. Therefore, the large drop in issuance, due to the 2008 financial crisis, has affected the issuance of dollars relatively more than the euro issuance.

In narrow terms, the debt securities issued by residents and held by non residents accounted for the largest share (12.5% of the total issued in euros), with a total outstanding amount of €2.1 trillion. Those issued by non residents and held by residents accounted for 8.6% of the total issued and amounted to €1.5 trillion, while those issued by non residents and held by non residents had a share of 4.7% of the total issued and only amounted to €791 billion. The rest, 74.3% of the total, was not considered international since it was issued by residents and held by residents and amounted to €12.6 trillion.

However, using the BIS figures combined with those reported by the US Treasury, the share of securities held by non residents in dollars of the total issued in dollars was 27%, while the share of those in euros held by non residents was only 17% of the total issued. In the case of entirely international debt securities –that is, issued by non residents and held by non residents– the dollar share is higher than the euro-denominated share and,

finally, the same can be said about the share of dollar-denominated debt securities issued in the US and held by non residents, which are larger than those issued in the EA and held by non residents.

Within these securities the relative weight in the fixed income markets is still far more important than in the equity markets. The reason for this asymmetry is the persistence of national, structural and institutional impediments to achieve a pan-European equity-trading framework. It is true that the European equity markets are increasingly pricing company stocks on the basis of pan-European economic factors, taking into account the industrial sector effects more than the purely national ones, but still the 'home exchange bias' remains the rule for most European shares. As a consequence of this very slow process of integration of the European equity markets, the EA equity markets remain smaller than their US and sometimes than the UK counterparts, even taking into consideration the relative size of their economies. At the same time, trading activity is thinner and transaction costs are higher both in trading and post-trade settlement.

Therefore, it is taking more time than expected to reach a relative size big enough to compete with the US market. At the end of 2008, the market capitalisation of the US equity market was US$9.4 trillion, down from US$13.9 trillion in 2006 (35.2% of the world total and 67% of US GDP), the EA's was US$5.8 trillion, up from US$5.3 trillion in 2006 (21.7% of the world total and 46% of EA GDP), while the UK alone reached US$1.8 trillion, down from US$2.7 trillion (6.8% of the world total and 65% of UK GDP). If the UK, Sweden and Denmark were to join the euro, the EA's market capitalisation would be US$7.9 trillion, closer to the US total. After the crisis, the gap between the two has decreased, given that the rate of growth of the EA's equity markets has been much faster, despite starting from a much lower level.

On the contrary, fixed income securities markets have been much faster in realising the greater potential gains of introducing a single currency. The elimination of exchange rate risk and the convergence of yield curves within the EA have reduced the importance of economic factors that had previously led to the segmentation of the European bond markets. Therefore, borrowers can now tap into a very large and expanded investor base with a single issue, making the euro an attractive alternative to the dollar as a currency of denomination for debt, and, as a result, bond issuance has soared. EA borrowers, both public and private, have accounted for most of the increase in issuance volumes, although the biggest shift has been the increasing share of private sector borrowers.

As in the case of debt securities, the stock of outstanding bonds and notes (excluding money market instruments) declined in the second half of 2008, reaching lower levels than in previous years. The share of issuance by financial institutions in the total stock of international bonds and notes denominated in euros stood at 71.3%, versus 54.4% in dollars, while the share of sovereign issuers denominated in euros remained smaller (6%)

than in the case of those denominated in dollars (11.4%). Financial institutions located in the UK were the largest issuers of euro-denominated bonds and notes. By residence of the issuer, the UK, Denmark and Sweden together issued 47.5% of the total, followed by issuers resident in North America, with 23.3%. But the euro's share of the stock of international debt securities by region shows that the central and eastern European EU accounts for 78.7%, the UK, Denmark and Sweden for 58.8%, North America for 53.3% and Africa for 42.5%.

The euro bond market is still far from reaching its full potential. There are several reasons for this: the legacy of its national origins still presents some obstacles for full integration and for further deepening; there is no central debt agency for government bonds and, hence, no co-ordination of the new issuance schedule; and the lack of a single benchmark yield curve in the euro bond market is symptomatic of these factors because no single borrower can provide the necessary volume and liquidity across the maturity spectrum in order to fulfil this role. While swaps have provided some proxy reference for a yield curve, it remains an imperfect one because of the less-than-perfect link between the swap market, which is based on corporate issues, and the futures market, which is based on government issues.

As for the euro's share in the stock of outstanding international or cross-border loan markets, at the end of 2008 the euro's share of total loans was 22.2%, up by one percentage point, while the dollar's share was 51%, down one-and-a-half percentage points. The euro's share of the loans by EA banks to non-bank borrowers outside the EA was 38.2% of the total, mainly to non EA Europe. By contrast, the euro's share of the loans made to EA borrowers stood at 56.8% of the total, while the dollar's was 31.6%. Finally, the euro's share in purely international loans was only 17.6%, versus the dollar's 54.3%.

International Asset Management

In the international asset management market, currency diversification has notably increased. Investors inside the EA have been keen buyers of foreign securities denominated in euros, especially bonds, but euro-denominated assets were less successful with non EA-based investors until 2005, although the trend changed dramatically after that. Japanese asset managers were initially much more attracted by euro-denominated assets, although later the fall of the euro's relative value discouraged them. On the contrary, investors in the EA are large-scale buyers of dollar-denominated US securities. Although bonds are the major instruments of non-European attraction, the surge in euro equities purchases by foreigners has been increasing.

A breakdown by currency of the funds under management shows that, at the end of 2006, the euro had a 0.7% share in the US and Canada and of 27.8% in non EA European countries (the UK, Denmark, Sweden, Switzerland, Norway, Monaco and Liechtenstein), while the US dollar's share was of 97.1% in the former and of 14.4% in the latter. It is

interesting that at the end of 1999 the euro's share was only 0.2% in the US and Canada and that the dollar's share was 26.8% in non EA Europe; thus, the euro has seen an increase in both areas, although as a total it is still far below the dollar.

In other regions, the euro is dominant in non EA EU countries, where the average euro shares of total portfolios are around 50% with the exception of Poland (only 22%), Romania (100%) and Switzerland (39%). By contrast, the dollar is dominant in non Japan Asia, where its average share is more than 80%, with the exception of India (17%), Japan (44%, versus only 20% in euros), Latin America (95%) and Russia (92%, versus only 4% in euros –but growing fast–).

The cross-border deposit markets (excluding interbank deposits) have also dropped due to the crisis, from a peak of US$7 trillion in 2007 to US$5.8 trillion at the end of 2008. The euro's share in the international deposit markets was 22.4% at the end of 2008, compared with the dollar's share of 60%. The largest share of euro cross-border deposits was held by non EA residents in EA banks (50.8% of the total), followed by EA residents in non EA banks (46.3%), and the euro's share in purely international deposits by non EA residents in non EA banks was 21.7%. The euro's share of deposits held by OPEC countries was 18%, compared with the dollar's 77% share. In Russia the euro's share was much closer to the dollar's share of 51%.

Foreign Exchange Market

The crisis has also been felt in the foreign exchange markets, prompting a halt in 2008. Using data from Reuters and EBS, which accounted for close to 90% of all transactions and the continuous linked settlement system (CSL), at the end of 2008 daily volumes were down from US$2.7 trillion in 2007 to US$2.4 trillion in the last quarter of 2008. The euro's share was 42% of the settlements of the CLS system while the dollar's share was just above 90%, the sum of currency percentage shares being close to 200% as both of the currencies involved in a settlement of foreign exchange trade are counted individually. In some segments of the foreign exchange markets, the global financial turmoil resulted in a temporary drying-up of liquidity and caused considerable dysfunctions in normal market operations. This was particularly the case for some interbank foreign-exchange swap markets, making it difficult for banks to refinance their foreign-exchange positions. In response to this market disruption, some central banks established an exceptional and case-by-case reciprocal currency swap lines.

The global derivatives markets, after experiencing significant expansion in 2007 and the first half of 2008, suffered a contraction in the second half of 2008. Notional principal outstanding decreased to US$650 trillion, following a peak of US$766 trillion in the second quarter of 2008. The notional value of credit default swaps (CDS) declined to US$42 trillion from its peak in 2007 because of operational risk problems, but the market value of outstanding CDS positions, which are a proxy to counterparty risk, increased

from US$2 trillion in 2007 to US$6 trillion at the end of 2008. The euro's share, net of valuation effects owing to exchange-rate fluctuations, increased over the review period. In the market for OTC-traded interest-rate derivatives, it rose from 35.6% to 37%, reaching the same level as the dollar's share. The euro's share in the OTC-traded foreign exchange derivatives increased from 37.1% to 42.1%, while the dollar remained stable at 80% of the total. The main losers were the yen and currencies from emerging economies.

The global market for asset-backed securities (ABS) became one of the largest in the world thanks to the increasing use of credit securitisation by banks. The traditional securitisation of ABS reached US$18.8 trillion, while the synthetic one –that isolates the credit risk from the underlying loan, creating a separately negotiable claim measured by the notional amounts of CDS– reached US$41.9 trillion. The US accounts for 67.9% of the total issuance, followed by the EA's 10.6%, the UK's 9.6%, the offshore centres' 7.2%, Australia's 1.7% and Japan's 1.5%. The largest proportion, 85.4%, was in the issuer's currency, while those issued by SPVs from offshore centres were mainly denominated in US dollars (85.4%), euros (4%) and Japanese yen (5.1%). Net of valuation effects owing to exchange-rate fluctuations, the dollar's share was 76% at the end of 2006 and fell to 38% at the end of 2008, while the euro increased its share from 46% in 2006 and 2007 to 58.8% at the end of 2008.

The euro is also quite widely used in the invoicing and settlement of international trade in goods and services. Taking into account only global merchandise trade, the euro's average share in 2007 was 28.9% (up from 18.2% in 2001), of which 39.2% was for EA countries, 32.6% for non EA EU countries and 5.4% for the rest of the world. Regarding the trade of EA member countries with non EA countries within the EU, in 2007 the euro's share of merchandise exports ranged from 39.2% in Greece to 79% in Slovenia, while for merchandise imports the percentages were 34.9% and 73.1%, respectively. Nevertheless, the dollar is still the dominant currency, accounting for close to 65% of global trade. Energy and commodity exporters invoice in dollars almost 100% of their exports, Asian countries invoice over 80% of their exports in dollars and even EU member countries invoice more than 30% of their exports in dollars.

The euro's share of total foreign currency reserves is not easy to determine, as around 46% of foreign exchange reserves held by developing and emerging countries cannot be allocated according to their currency composition and another 46% of the global reserve accumulation in the last three years is unknown. Asian countries in particular do not disclose the currency composition of their foreign-exchange reserves The IMF's Currency Composition Official Foreign Exchange Reserves (COFER) data remains the only official source. The latest data published by the IMF are for 2008 and show that the euro's share, at constant 2008 exchange rates, reached 26.6% of total global reserves (up from 23.1% in 1999 and 25.3% in 2007), while the dollar accounted for 64% of the total (down from 66%

in 1999 and 65.4% in 2007). The yen's share was 3.3%, down from 6.4% in 1999 but up from 2.9% in 2007.

At the end of 2008 the euro's share of foreign currency reserves was 22.1% in the advanced countries (down from 22.3% in 1999 and the same as in 2007) and 31.1% in the emerging and developing countries (up from 24.9% in 1999 and 29.6% in 2007). The dollar's share was 68.1% in the advanced countries (up from 65.7% in 1999 and 66.9% in 2007) and 59.8% in the developing countries (down from 66.9% in 1999 and 61.3% in 2007). As a reminder, in 1998 the share of the present EA currencies was as follows: deutschemark 12.2%, French franc 1.4%, Dutch guilder 0.4% and ECU 5%, that is, a total of 19%. Therefore, the euro's share has increased by 7.6 percentage points since then.

According to the ECB (2008), the currency composition of global foreign exchange reserves can reflect changes in the relative weight of individual reserve-holding countries more than changes in currency preferences. It is conceivable that emerging-market central banks intervened to defend their currencies in the second half of 2008 mainly by selling dollar-denominated assets, since a large share of their foreign reserves appear to be held by countries which manage their exchange rate against the dollar. It has been shown that in 2005 two-thirds of foreign-exchange reserves with a known currency composition were held by countries which use the dollar as a reference in their exchange rate policy.

Nevertheless, since the currency composition of very large foreign currency reserve holdings are not known, the shares are only partial and not as relevant as they were only five years ago. Fifty percent of total reserves are disclosed, 24% are not disclosed and another 26% are held by sovereign wealth funds (SWF) and are only estimated because they are not exactly known. It is also important to look at the euro's share of central-bank deposits held at BIS-reporting banks, which show that the euro's share has increased to close to 30% coming from only 22% in 2004, while the dollar's has declined from 65% five years ago to only 57% at the end of 2007.

Finally, it is also important to show the euro's share of large-banknote holdings circulating outside the EA and its comparison with the dollar's, that is, the use of the euro as a 'parallel currency' in third countries. Euro banknotes circulating outside the EA cannot be estimated with precision. The Eurosystem regularly publishes an estimate of the lower end of the accumulation over time of net shipments of euro banknotes by EA monetary financial institutions to destinations outside the EA. According to this measure, around €95 billion worth of euro banknotes were estimated to be in circulation outside the EA at the end of December 2008, that is, around 13% of total euro banknotes in circulation. Since this is an estimate at the lower end, the real percentage could be closer to 20% rather than 13%. In March 2009 the total figure had risen to €105 billion.

Another measure can be obtained from the figures reported by 35 globally-active banknote wholesale banks, serving most of the foreign currency market. However, other wholesale banks do not report, so the figure can only be guessed at. According to these reports, the regional breakdown of euro banknote purchases and sales for destinations outside the EA was as follows in 2008: (1) purchases from non EA Europe accounted for 59% of the total (of which 43% were non EU members, 12% non EA EU members and 4% from the rest of Europe), from Asia and Oceania for 23%, from the Middle East for 9% and from the rest of the world for 8%; (2) euro banknote sales to non EA Europe accounted for 89% of the total (Eastern Europe 45% –particularly Russia, Turkey and Ukraine–), EU non EA countries for 21% (mainly the UK), the rest of Europe for 23% (mainly Switzerland), Asia and Australia for 5%, Africa for 2%, the Middle East for 2%, North America for 1% and Latin America for 1%.

According to FED and ECB estimates, euro banknotes overtook dollar bills in 2004 as a percentage of domestic GDP, rising from 5.6% in 2003 to more than 7% in 2006, while the dollar fell from 6% in 2003 to only 5.7% in 2006. The ratio of dollar bills in circulation to euro banknotes in circulation has dropped from 1.3 in 2003 to 1.0 in 2006 at PPP exchange rates and to 0.9 at current exchange rates. The main reason is that euro banknotes have a higher denomination (€200 and €500) than dollar bills (US$100). In any case, I believe that, as Europeans, we should not be proud of the rapid and increasing use of large-denomination euro banknotes, because they are mostly used for irregular or illegal activities, both in the EA and abroad.

The Euro's Future as a Global Currency

During the past two years papers and articles have tried to prove that the euro will overtake the dollar sooner rather than later. They look at the historical evidence of how the dollar slowly overtook sterling between 1897 and 1945, consider that the same might now happen between the euro and the dollar and conclude that the first might overtake the second within the next two decades. According to them, sterling's decline was part of a wider pattern whereby the UK lost its economic pre-eminence, including colonies, military power and other trappings of the international economy. Now they see the same happening to the US, which might have reached a state of imperial over-stretch, as the UK did before. On the one hand, they see the euro as a more serious challenger to the dollar than any other previous currency; on the other, they see that, as with the UK and sterling before, the US is on a 25-year long trend of depreciation of its currency.

Most papers take the euro's increasing share in the total foreign exchange reserves held by central banks as a measure of its international role, because they believe that similar considerations might apply to the other criteria of international currency status, such as trade invoicing, debt and equity, cash and deposits and foreign exchange transactions denomination. They have chosen foreign currency reserves because of their huge growth

in recent years in emerging countries and their need to diversify their large holdings through different currencies. Global foreign exchange reserves have risen by 160% since 2000, mainly due to global imbalances. For instance, China now has three times and Japan twice the reserves the EA has, whose volume has already been matched by Russia.

Their argument is based, on the one hand, on the expected fact that these foreign central banks cannot keep supporting the dollar indefinitely and that they will eventually diversify part of their huge dollar holdings into alternative currencies. The recent monetary policy followed by the FED, aimed at averting a financial stability crisis, might cause an increase in inflation that will make it difficult for all the foreign currencies pegged to the dollar to be able to maintain it. One way to do so would be to peg to a basket of euros and dollars, while another would be to drop the peg altogether. On the other hand, a new reality has emerged: for the first time, these countries now have in the euro a real and credible alternative to the dollar, since it also complies with most of the exclusive characteristics of an international currency, such as stability, reliability and increasing network externalities. Moreover, the EA's total GDP is now similar to that of the US, due to the dollar's weakening, but is also growing faster thanks to the adoption by new and future EU of the euro and, later on, to its potential adoption by the UK, which would give the EA a huge boost, since it would make London the world's largest euro financial centre.

There are two question marks in this argument. The first is that by diversifying away from the dollar, they might provoke an appreciation of their own currencies which are pegged to it. However, they consider that the end result might not affect their currencies on a trade-weighted basis, but only in nominal terms. The second is that if they diversify by selling dollars and buying euros they might cause a significant drop in the dollar and a loss in value of their dollar-denominated stocks of central-bank reserves and sovereign wealth fund holdings. Nevertheless, they consider this issue inevitable since their decisions to sell tend to be individual and not collective and coordinated, so that it might be less negative for these central banks to follow the herd rather than to be at the tail-end. The main reason is that the network externalities that have helped the dollar to become increasingly used by economic agents could now start favouring the euro. Therefore, network externalities can change from developing centripetal forces in favour of the dollar to developing centrifugal forces in the euro's favour.

To become the issuer of the leading global currency brings large benefits but also large responsibilities. The benefits tend to be exorbitant according to these two papers. First, the EA will be able to increase its seigniorage in a major way, because it can issue even more billions of high-denomination €200 and €500 banknotes than it is issuing at present, that are equivalent to an un-nominated perpetual debt that pays no interest. Secondly, the EA will take over from the dollar its role as banker to the world in the sense that it will be able accept short-term deposits at low interest rates in return for long-term investments at

high average rates of return. That is, it will tend to achieve permanently higher returns on its foreign assets than the return paid for its liabilities, because foreigners will be willing to accept lower returns on their euro investments as a trade-off for security and reliability. Third, as a consequence, it will also gain the privilege of being able to finance large current account deficits for long periods of time, as the US has been doing for so many years.

The attached responsibilities of a dominant international currency are also important. First, the euro will have to continue being very stable for a long time. It will have to avoid a build-up of inflation expectations, sometimes at the expense of the EA's growth rate, in order to keep intact its hegemonic status as an international currency. As shown by recent US experience, the consequences of higher inflation in the EA could tend to be doubly negative, since not only will it tend to depreciate the euro, making it difficult for other pegged countries to maintain their pegs, but also result in even higher inflation in the EA because of the euro's depreciation.

But symmetrically, if the ECB goes too far in keeping inflation expectations under control, it might produce financial crises in other countries or even provoke deflation in the EA and the rest of the world. Moreover, the EA will not be able to abuse its privileges of issuing the leading international currency or indulge in maintaining long-term current-account deficits, as the US has done, because it could lead to the beginning of the end of the euro's hegemonic. The US has been absorbing three-quarters of all net international capital movements, which is an oxymoron for a leading international currency.

Secondly, another important responsibility inherent to being a dominant international currency is that the EA will eventually also need to take up the US's role as the world's political leader and, perhaps, even as its military gendarme. Unfortunately, that would be extremely difficult and uncertain because the EU's political governance, based on 27 national governments adopting majority decisions is totally at odds with the fast decision-making of a single federal government as in the US.

The ECB's present policy of neutrality with regards to the euro's international role is the right one. The ECB should try to make the euro the most stable currency by maintaining long-term price and financial stability. It is a hard enough task for the ECB to make the euro attractive as an international currency. The reason is that the euro's international role is the outcome of a market-driven process and not the result of interference by central banks and political authorities. To try to impose invoicing in euros to importers and/or exporters of major commodities, such as oil and gas, as proposed by some politicians, would be perceived by the markets as an intolerable interference. Private companies engaged in these activities know better than anybody else which is the optimal (and workable) currency to use in each transaction. Hence, they would only change the currency they now use if they thought it convenient to their efficiency, competitiveness

and transaction costs or because of issues concerning their confidence in its long-term value and stability.

In the meantime, if the EA's economic authorities aim to achieve a hegemonic international status for the euro, they should try to concentrate on integrating their still segmented banking and capital markets to achieve a larger and more competitive market size in order to be able to attract more issuers and investors from the rest of the world and compete on equal terms with the US financial markets, as they have already done in the money markets. Unfortunately, so far, the dominant political view in the EA's member states is still short-sighted and short-termist, derived from an old fashioned and nationalistic attitude and understanding of the financial markets that is completely at odds with an increasingly globalised economy and the huge and increasing interdependence of the financial markets. This nationalistic approach is retarding the euro's emergence as an international currency in accordance with the weight of the EA's GDP and share in world trade.

A recent experience, during the financial panic following Lehman's bankruptcy, has made evident the dollar's strength as the world's most trusted currency, since investors seeking a safe haven turned massively towards US Treasury bills and bonds, while low-income individuals in both developed and developing countries largely tried to grab up greenbacks to feel safer. It was a very rational decision because most other currencies weakened against the dollar –even the euro weakened slightly, although it still retained its role as challenger–. The question now is: has the euro any chance of replacing the dollar as a global currency in the future when last year –after US regulators and supervisors failed in their duties and after a huge drop in financial and real estate assets– the dollar attracted more investment from the rest of the world than ever before?

The main problem is that there is a major difference in the governance framework of the two currencies' issuers. The US is a federal nation with one government and one treasury, while the EU is a loose confederation of independent nations with 27 different governments and treasuries (and the EA still has only 16 members out of the 27). Had the EU had a single treasury issuing euro bonds instead of 27, the recent financial panic would have been different and the euro bonds would have competed on good terms with the US Treasury in attracting investors fleeing to safe haven nations and currencies.

Therefore, a single euro bond issuer should be the first step the EU should take in order to increase the euro's probabilities of competing more successfully with the US dollar. Having a single bond issuer would have many advantages. A common euro bond would create one of the world's most liquid financial and would also heavily reduce the cost of funding the 27 member-state treasuries and would attract more buyers because of its larger diversification. Furthermore, a joint guaranty from the 27 would further reduce the funding costs for not only the 26 member states but also for their benchmark, Germany.

However, a joint guaranty, by which of all members guarantee the total, instead of each country guaranteeing its own tranche of the bond, would require a stricter fiscal framework for all members. The Stability and Growth Pact is insufficient because it takes several years for conditions to become binding. An alternative would be to set up a framework of transfers whereby the member states who most reduce their funding costs make transfers to those that reduce them less.

Not to have any kind of guaranty is not a solution either, since it would heighten the likelihood of a member state –or several of them– engaging in moral hazard. Another way to overcoming these problems would be to split the euro bond into senior and junior tranches, allowing weaker credits to issue bonds with a higher rating, reducing the costs for the better-credit countries by making some of the debt senior to all others could increase the rating of part of the debt.

Moreover, the present situation of the two leading currencies, the dollar as dominant and the euro as the candidate to replace it one day, might change in the future. There is an emerging competitor, the renminbi and also increasing pressure from many emerging economies in favour of a world currency. Nevertheless, these options are still far from being any real possibility. On the one hand, the renminbi would only be a possible contender if by mid-century China becomes –as expected and if its political transition is well managed– the world's largest economy in current dollars. However, even then, it will take time for it to catch up with the euro first and the dollar after that.

The Governor of the Peoples Bank of China, Zhou Xiaochuan –in a speech in March 2009 on the reform of the international monetary system– proposed the adoption of the SDR as the global reserve currency. He considered a national currency unsuitable for the role due to the 'Triffin dilemma' –ie, the problem of the issuer making compatible his domestic monetary policy objectives with the other countries' demand for a reserve currency– and because he thought that Keynes's 'bancor' is too far-fetched. The problem with the SDR is that it is not a currency but a basket of currencies in which the dollar has the greatest weighting, followed by the euro, and between the two they account for more than 85% of the total. The 'bancor' was a true international currency based on 30 basic types of merchandise, including gold, and was designed to be used only as the sole currency in international trade in order to maintain stable prices.

In any case, it is interesting to see how much things have changed in the international debt markets in the last decade. Before, creditors –ie, the developed countries– wanted a very stable global currency in order to keep the value of their assets constant, while debtors –ie, the developing countries– wanted a depreciating global currency and more inflation to reduce the value of their liabilities. Now it is exactly the other way round, China and the commodity-exporting countries are worried about the dollar's stability and

object to inflation because they are the large-scale creditors, while in the US many experts and some politicians are advocating more inflation to devalue and liquefy their debts.

Conclusion

To sum up, unless the EU can construct a political governance system similar to that of a federal state it will be very difficult for the euro to overtake the dollar as the world's dominant currency or, eventually, to maintain its status as the leading candidate to replace the dollar, although it could still be the dominant regional European currency. Were the EU to approve a European Federal constitution, the euro would have a chance of replacing the dollar as the global currency in this century. Meanwhile, the euro will continue to increase its global share of foreign currency reserves, financial and trade transactions and even exchange rate pegs and baskets in the coming years, but only as the second-best global currency.

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Bibliographical References

Alogoskoufis, George, & Richard Portes (1997), 'The Euro, the Dollar and the International Monetary System', in Paul Masson, Thomas Krueger & Bart Turtleboom (Eds.), *EMU and the International Monetary System*, Washington, IMF.

Arthur, Bryan W. (1990), 'Positive Feedbacks in the Economy', *Scientific American*, vol. 262, February.

ECB (2008), 'The International Role of the Euro', July.

ECB (2009), 'The International Role of the Euro', July.

BIS (2007), 'Triennial Central Bank Survey of Foreign Exchange and Derivatives Market Activity', September.

Bergsten, C. Fred (1997), 'The Dollar and the Euro', *Foreign Affairs*, July-August.

Bergsten, C. Fred (2002), 'The Euro versus the Dollar', Annual Meeting of the AEA, Atlanta, January.

Bordo, Michael, & Harold James (2006), 'One World Money, Then and Now', NBER Working paper 12189.

Bordo, Michael, & Harold James (2008), 'A Long Perspective on the Euro', NBER Working Paper 13815.

Cohen, Benjamin J. (1971), 'The Future of Sterling as an International Currency', Macmillan, London.

Cohen, Benjamin J. (2000), 'Life at the Top: International Currencies in the Twenty First Century', Princeton Essays in International Finance, nr 221, December.

Chinn, Menzie, & Jeffrey Frankel (2005), 'Will the Euro Eventually Surpass the Dollar as Leading International Reserve Currency?', NBER Working Paper 11510, July.

Chinn, Menzie, & Jeffrey Frankel (2008), 'The Euro May, Over the Next 15 Years, Surpass the Dollar as Leading International Currency', NBER Working Paper 13909.

Cooper, Richard (2000), 'Key Currencies after the Euro', in Robert Mundell & Armand Clesse (Eds.), *The Euro as a Stabilizer in the International Economic System*, Kluwer, Boston.

Cooper, Richard (2009), 'The Future of the Dollar', Peterson Institute for International Economics Policy Brief, nr 21, September.

Dehesa, Guillermo de la (2004), *¿Quo Vadis Europa?*, Alianza Editorial, Madrid.

Dehesa, Guillermo de la (2006), *Europe at the Crossroads*, McGraw-Hill, New York.

Dehesa, Guillermo de la (2007), 'Las ventajas de un mundo sin dinero en efectivo', *El País*, 15/X/2007.

Duisenberg, Willem F. (2000), 'The International Role of the Euro', Calgary, 8/IX/2000.8

Eichengreen, Barry (1998), 'The Euro as a Reserve Currency', *Journal of Japanese and International Economies*, vol. 12.

Eichengreen, Barry (2005), 'Sterling Past, Dollar's Future: Historical Perspectives on Reserve Currency Competition', NBER Working Paper 11336, April.

Eichengreen, Barry, & Marc Flandreau (2008), 'The Rise and Fall of the Dollar, or When did the Dollar Replace Sterling as the Leading International Currency', NBER Working Paper 14154, July.
Feldstein, Martin (1997), 'The Political Economy of the European Economic and Monetary Union: Political Sources of an Economic Liability', *Journal of Economic Perspectives*, vol. 11, nr 4.
Frankel, Jeffrey (2000), 'Impact of the Euro on Members and Non Members', in Robert Mundell & Armand Clesse (Eds.), *The Euro as a Stabilizer in the International Economic System*, Kluwer, Boston.
Frankel, Jeffrey (2008), 'The Euro Could Surpass the Dollar Within Ten Years', *VOX*, 18/III/2008.
Galati, Gabriele, & Kostas Tsatsaronis (2003), 'The Impact of the Euro on Europe's Financial Markets', *Financial Markets, Institutions & Instruments*, vol. 12, nr 2, New York University.
Galati, Gabriele, & Phillip Woolridge (2006), 'The Euro as a Reserve Currency: A Challenge to the Pre-eminence of the US Dollar?', BIS Working Papers, nr 218, October.
Galati, Gabriele, & Alexandra Heath (2007), 'What Drives the Growth in FX Activity? Interpreting the 2007 Triennial Survey', *BIS Quarterly Review*, December.
Goldberg, Linda S., & Cédric Tille (2008), 'Macroeconomic Interdependence and the International Role of the Euro', NBER Working Paper 138.
Greenspan, Alan (2001), 'The Euro as an International Currency', the Euro Group 50, Federal Reserve Board, Washington DC, 30/XI/2001.
Hartmann, Phillip, & Otmar Issing (2002), 'The International Role of the Euro', *Journal of Policy Modelling*, vol. 24.
Hawkins, John, & Paul Masson (2003), 'Economic Aspects of Regional Currency Areas and the Use of Foreign Currencies', BIS Working Papers, nr 17, May.
Kenen, Peter (2003), 'The Euro and the Dollar: Competitors or Complements?', in M. Dumoulin & D. Duchenne (Eds.), 'The European Union and the United States'.
Kenen, Peter (2005), 'Economic and Monetary Union in Europe: Moving Beyond Maastricht', Cambridge University Press, Cambridge.
Krugman, Paul R. (1980), 'Vehile Currencies and the Structure of International Exchange', *Journal of Money, Credit and Banking*, vol. 12, nr 3.
Krugman, Paul R. (1984), 'The International Role of the Dollar: Theory and Prospect', in John Bilsson & Richard Marston (Eds.), *Exchange Rate Theory and Practice*, University of Chicago Press, Chicago.
Matsuyama, Kiminori, Nobuhiro Kiyotaki & Akihiko Matsui (1993), 'Toward a Theory of International Currency', *Review of Economic Studies*, vol. 60.
Mundell, Robert (1998), 'The Case for the Euro', *Wall Street Journal*, 24/III/1998.
Mussa, Michael (2001), 'Reflections on the International Role of the Euro', Institute for International Economics, Washington DC, November.
Papaioannou, Elias, Richard Portes & Gregorios Siorounis (2006), 'Optimal Currency

Shares in International Reserves: the Impact of the Euro and the Prospects for the Dollar', NBER Working Paper 12333.
Persaud, Avinash (2001), 'Heads the Dollar Wins, Tails, the Euro loses: the Evolution of the Dollar´s Safe Haven Status', State Street, New York, 26/XI/2001.
Pisani-Ferry, Jean, & Adam S. Posen (Eds.) (2009), 'The Euro at Ten: the Next Global Currency?', Peterson Institute for International Economics and Bruegel, Washington DC, June.
Portes, Richard (2000), 'The Role of the Euro in the World: Past Developments and Future Perspectives', London Business School, London, November.
Portes, Richard, & Heléne Rey (1998), 'The Emergence of the Euro as an International Currency', *Economic Policy*, vol. 26.
Portes, Richard (2008), 'The Rise of the Euro', *VOX*, 14/VI/2008.
Posen, Adam S. (2008), 'Why the Euro Will Not Rival the Dollar', *International Finance*, vol. 11, nr 1.
Rey, Heléne (2001), 'International Trade and Currency Exchange', *Review of Economic Studies*, vol. 68, nr 2, April.
Swodoba, Alexander (1969), 'Vehicle Currencies in the Foreign Exchange Market: The Case of the Dollar', in Robert Aliber (Ed.), *The International Markets for Foreign Exchange*, Praeger, New York.
Trichet, Jean-Claude (2004), 'The International Role of the Euro', ECB, Frankfurt, 14/V/2004.
Truman, Edwin M. (1999), 'The Evolution of the International Financial System', Remarks at the Institute for International Monetary Affairs Eighth Symposium, Tokyo, 6/XII/1999.
Truman, Edwin M. (2004), 'The Euro and Prospects for Policy Coordination', in *Euro at Five: Ready for a Global Role*, Institute for International Economics, Washington DC, February.
Woolridge, Phillip (2006), 'The Changing Composition of Official Reserves', *BIS Quarterly Review*, September.