Foreign Currency Demand since 2002 – Evidence from Five Central and Eastern European Countries

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Introduction

Evidence presented in earlier CESifo articles (Sinn, 2001; Stix, 2001) showed that the demand for Deutsche mark declined substantially before the euro cash changeover in Central and Eastern European countries. This development raised the issue of whether the euro will enjoy the same degree of confidence as the Deutsche mark or other legacy currencies from the euro area or whether residents of Central and Eastern European countries will eventually switch into local or other foreign currencies, notably the US dollar.

Now, two years later, we know more. In particular, we were able to observe that the euro was successfully established and that no large scale portfolio shifts to the US dollar took place in Central and Eastern Europe. Despite this, only very little is known about how demand for euro cash evolved and what attitude people have towards the euro.

Therefore, this article provides an overview of the development of the extent of cash and asset substitution in five selected Central and Eastern European countries since 2002 – four of them now members of the European Union with the perspective of euro introduction before or around the turn of this decade. In particular, these countries are the Czech Republic, the Slovak Republic, Hungary, Slovenia and Croatia. The data used are mainly derived from representative surveys about the extent of foreign currency holdings commissioned by the Oesterreichische Nationalbank – described in more detail in Stix (2001). The surveys have been conducted biannually (spring and fall) since 1997, with the most recent survey results being from November 2004.

Specifically, we address the following questions: How has the changeover to euro banknotes and coins affected the extent of foreign currency holdings? How have foreign currency deposits evolved? What attitudes do people have towards the euro? And finally, when do people expect the adoption of the euro in their country?

Foreign currency holdings: From Deutsche mark and Austrian schilling to the euro

Figure 1, which summarizes the evolution of foreign currency holdings in percent of respondents since 1997, shows that in each of the countries a substantial share of the population held foreign currencies. Typically, the Deutsche mark was held most, usually followed by the Austrian schilling, sometimes closely (Slovak Republic, Hungary), and the US dollar (with the exception of Croatia where the US dollar was the second most important foreign currency). Furthermore, and as discussed in Sinn (2001), it is clearly visible that the share of those holding Deutsche marks declined with the approach of the euro cash changeover (with the exception of Slovenia).

The surveys conducted in spring and fall 2002 revealed that, in the course of the cash changeover, a substantial fraction of the stock of Deutsche marks, Austrian schillings and other euro area currencies that circulated in these five countries were exchanged into euros.[1] Also, a sizeable percentage of respondents exchanged their foreign currency holdings for local currencies whereas the exchange into US dollars was modest.[2]

The evolution of euro cash holdings after January 2002

After the decline of foreign currency holdings before and around the euro cash changeover, an upward trend in the share of the population that held euros can again be observed during the year 2002 in all five countries (Fig. 1). If seen over the years 2003 and

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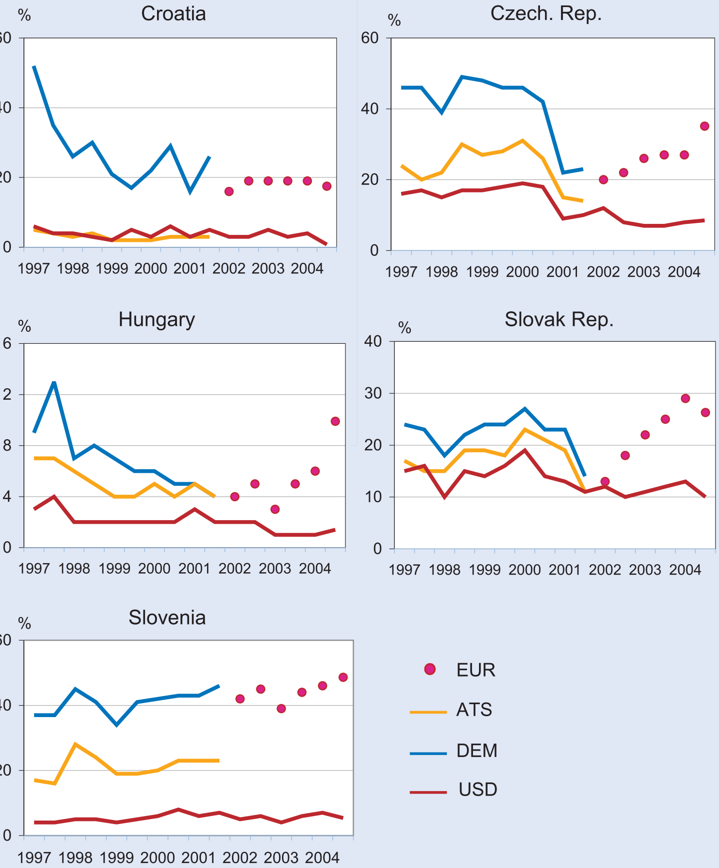
[1] The surveys conducted in 2002 show that the exchange of Deutsche mark into euro was particularly strong in Croatia 85 percent (of all those persons who held Deutsche mark around December 2001/January 2002), Slovenia 79 percent, and lower in Hungary 57 percent, the Czech Republic 48 percent, and the Slovak Republic 50 percent.

[2] Deutsche mark were exchanged into local currencies by about 21 percent to 36 percent (of those persons who held Deutsche mark around December/January 2002) in the respective countries. Deutsche mark were exchanged into US dollar by about 10 percent in the Slovak and in the Czech Republic. In the other countries the corresponding shares are very low (between 2 percent and 5 percent).

Figure 1

EVOLUTION OF FOREIGN CURRENCY HOLDINGS
in percent of the population



Note: Values on vertical axis show the percentage of respondents that held foreign cash.

Source: Survey results, OeNB.

2004, covered by the last four surveys, one can observe that the euro has gained importance in the Czech and Slovak Republics, in Hungary and in Slovenia, whereas the share of the population that held euros remained roughly constant in Croatia.

In absolute terms, about 49 percent of Slovenians, 26 percent of Slovaks, 35 percent of Czechs, 18 percent of Croats and 10 percent of Hungarians held euros in November 2004. In the Slovak Republic and in Slovenia, this share is now higher than for the Deutsche mark in any year since the surveys were started (1997).

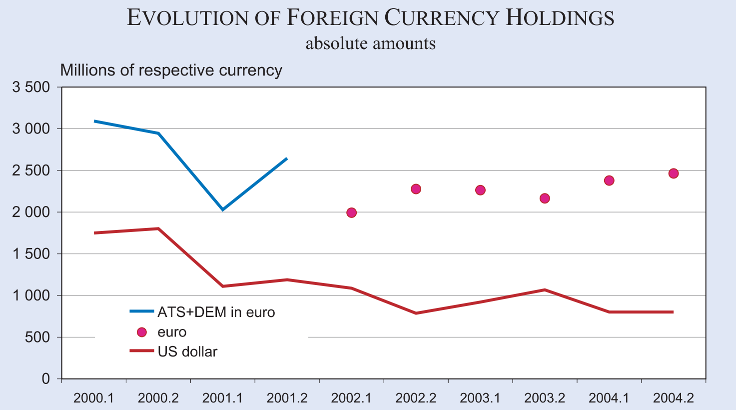
Although the share of the population with foreign currency holdings is an important indicator, it is the amount of foreign currencies circulating in these countries that is relevant from a monetary policy perspective. To account for this, we have estimated foreign cash stocks from survey responses about the amount of respondents' holdings.[3] However, before turning to an interpretation of the resulting figures, it should be noted that estimated currency amounts from survey responses are very likely to understate true holdings[4] – nevertheless, we consider trend changes over time as useful in indicating changes in the overall demand for the currencies analyzed.

The accumulated results for all five countries are shown in Figure 2. The calculations yield the result that joint holdings of Deutsche marks and Austrian schillings decreased from 2000 to early 2002 by about one third – which is in line with the evidence from the population shares (Fig. 1). For the period after the cash changeover, our calculations indicate again a slowly increasing demand for euros. However, this increase (about 24 percent from spring 2002 to fall 2004) has not made up for the decline in the demand for Deutsche marks and Austrian schillings prior to 2002. For the US dollar, the projections reveal a downward trend over the period from 2000 to 2004, with the value in 2004 being about half the value obtained for the year 2000.

The surveys have also collected information on the motives behind the decision to hold foreign currencies, allowing for a comparison between the Deutsche mark and the euro. As reported in Stix (2002), shortly after the euro introduction, the motives of holding euros were not much different than for the Deutsche mark. This has changed: when comparing the years 1999 to 2000 and 2003 to 2004, euro holdings are motivated less as a general reserve and more by spending purposes abroad in comparison to the Deutsche mark. Also, it is found that the euro's use

[3] For a description of how amounts are calculated, see Stix (2001).
[4] E.g. respondents may not reveal their true holdings, neither illegal nor business holdings are included, etc.

Figure 2



Note: Projected euro and US dollar amount held in all five countries.

Source: Survey results, OeNB.

for domestic transaction purposes is limited. In particular, 9 percent of Croatians and Slovenians answered that they made payments in euros during the last six months (as seen from November 2004). For all other countries, these values are significantly lower.[5]

The evolution of euroization in deposits

To obtain a broader picture about the degree of currency substitution, one also has to consider asset substitution. Analyzing only asset or currency substitution alone, which is sometimes necessary due to data constraints, could give rise to misinterpretation. For example, statistics by the ECB provide evidence that a significant increase of euro-denominated deposits was observed in the months prior to year-end 2001 in the countries of former Yugoslavia and in the then accession countries (ECB, 2002).[6] Therefore, the above mentioned decline in (legacy) cash holdings before and around the cash changeover might be explained by the fact that parts of foreign currency cash holdings were exchanged into foreign currency deposits.

As for cash holdings, one can analyze the degree of asset substitution from two sides: first, one can study the share of the population having foreign currency savings accounts; and second, one can directly analyze the share of foreign currency deposits in total deposits, which is available from national central banks. The difference between these two measures is that the former gives an indication about how widespread foreign currency deposits are among households whereas the latter also includes business deposits.

Concerning the first measure, column one of Table 1 presents the percentage of all savings account holders (taken as the average over the last four surveys) with a savings account denominated in foreign currency. As can be expected, there are marked differences between countries: For example, 57 percent of all Croatians with a savings account have an account denominated in foreign currency. This share is by far larger than in other countries: in Slovenia and the Slovak Republic, about 19 percent to 25 percent have a foreign currency savings account; in the Czech Republic and Hungary, the respective numbers are about 9 percent and 7 percent. In the next two columns, these percentages are split into those who only have foreign currency savings accounts and those who dispose over both foreign and local currency savings accounts. Here, the numbers reveal that out of those having a foreign currency account, typically the vast majority of respondents also has a local currency account. Only in Croatia do 23 percent of savings account holders rely solely on foreign currencies.

This evidence therefore indicates that currency substitution is still of importance in Croatia and, to a

Table 1
The role of foreign currencies for household savings

	account in foreign currency (%)	if foreign currency account: local & foreign currency (%)	if foreign currency account: only foreign currency (%)
Croatia	57	35	23
Czech Rep.	9	9	1
Hungary	7	6	1
Slovenia	25	24	1
Slovak Rep.	19	18	1

Note: Values represent averages over the last three surveys and are expressed in percent of those having a savings account (excluding non-responses). If the second and third column do not sum to the first column, then this is due to reounding.

Source: Survey results, OeNB.

[5] These figures are based on a rather low number of observations and hence need to be treated with some caution.
[6] The increases in foreign currency deposits in these countries ranged from 50 percent to 80 percent (ECB, 2002, p. 51).

Table 2
The share of euro-denominated deposits

	12/2001	12/2002
Croatia	72	57
Czech Rep.	7	7
Hungary	11	9
Slovak Rep.	9	9
Slovenia	38	

Note: Values represent the percentage of euro deposits in total deposits.

Source: ECB, "Review of the international role of the euro". December 2002 and December 2003.

more limited extent, in Slovenia and the Slovak Republic. At the same time, however, in all countries the majority of respondents with a savings account do not rely solely on foreign currencies in their saving decisions which clearly shows that people have trust in their local currencies and/or banking systems. Actually, this view is supported by survey questions on how people judge the safety of deposits in their country. In a trend comparison from 2003 to 2004, we find that the trust in the banking system has, depending on the country, either markedly increased or remained roughly constant (at a high level).[7]

Concerning the second measure, the ECB has collected statistics on the share of euro deposits in total deposits in these countries for December 2001 – as previously mentioned, a month with a relatively high stock of euro-denominated deposits – and for December 2002 (Table 2). These data show that the Czech and Slovak Republics experienced a constant share of euro deposits whereas a slight decrease can be observed for Hungary. For Croatia, the respective value decreased sharply, probably reflecting portfolio shifts due to exchange rate changes.[8] Unfortunately, no figure is available for Slovenia for the year 2002. However, data from the Bank of Slovenia show that overall foreign currency deposits – not just euro deposits – expressed as a share of total deposits reached a peak at the end of 2001, declined slightly until the end of 2002 and remained constant until the end of 2003. However, in the course of the year 2004, there has been a steady increase again.[9]

What about the euro's stability?

Besides the role of foreign currencies, the surveys also allow to derive evidence about people's assessment of the stability of the euro and the US dollar. In particular, respondents are asked: „How stable will the euro and the US dollar be within the next two years?" We interpret answers on this rather general question as reflecting personal sentiment rather than an assessment of "hard" economic facts like exchange rate movements or inflation. The answers from 2004 show that about 90 percent of all respondents expect the euro to be very or rather stable in the coming two years. In contrast, only 70 percent expect the same for the US dollar. Analyzing only those who either held euro or US dollar at the time of the surveys confirms this finding: an overwhelming share of people who either held euros or US dollars believes that the euro will be stable. Also, the assessed stability has been higher for the euro than for the US dollar in all surveys since fall 2002, even among those who held US dollars.[10]

Summary and future development

The evidence presented in this paper taken together, allows to draw the following conclusions:

First, after the decline in the demand for Deutsche marks and Austrian schillings before and around the cash changeover in the countries analyzed, both the estimated amount of euro cash demand as well as the percentage of respondents that held euros increased again after spring 2002. However, in absolute terms, the demand for euro cash is now lower than in the period before its physical introduction. In contrast, a declining trend can be observed for the US dollar both in the period before and after the cash changeover.

Second, the decline in foreign cash holdings before 2002 was associated with an exchange of foreign currency cash holdings into foreign currency deposits and/or local currencies – which can be seen as a reflection of increased confidence in the banking system, economic stabilization (disinflation policies),

[7] In particular, this assessment is based on respondents with a local currency savings account answering that they view their deposits very or rather safe.
[8] These numbers, however, need to be treated with some caution first because they also include deposits of financial and non-financial corporations which might be more volatile than household deposits and second because the methodologies in compiling the statistics might differ across countries.
[9] Source: Monthly Reports of the Bank of Slovenia, Table 1.4.

[10] Data for 2002 and 2003 are only available for those who held euro or US dollar at the time of the surveys. Among euro holders, the share of those believing that the euro will be stable has been higher than 90 percent in each survey since spring 2002. Among US dollar holders, this share has increased from 86 percent to about 90 percent from spring 2002 to fall 2004. In contrast, the assessed stability for the US dollar declined from about 91 percent in spring 2002 to 67 percent in fall 2004 among euro holders and from 95 percent to 79 percent for US dollar holders, respectively.

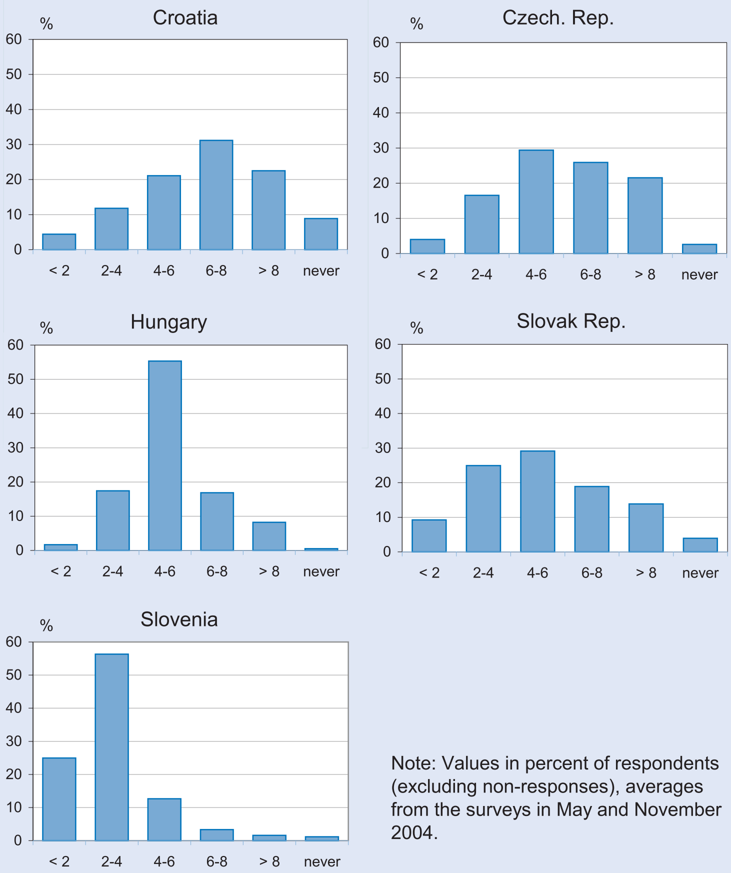
etc. In turn, the surveys suggest that the increased demand for euros since 2002 can mainly be attributed to an increased demand for transaction purposes (e.g. spending abroad) and less to demand for the purposes of hoarding.

Third, the evolution of asset substitution since 2002 does not allow for identifying a clear pattern – in some countries the share of euro deposits has declined, while in others it remained constant. However, the survey answers about the use of foreign currency savings accounts by households imply that foreign currency deposits in general and euro deposits in particular still play an important role in some countries, notably Croatia and to a lesser extent Slovenia and the Slovak Republic.

Finally, we observe that an overwhelming share of people in the countries covered by the surveys do think that the euro is a stable currency.

Figure 3

WHEN DO PEOPLE EXPECT ADOPTION OF THE EURO ?



Note: Values in percent of respondents (excluding non-responses), averages from the surveys in May and November 2004.

Source: Survey results, OeNB.

Concerning the future development, it will be interesting to observe how euroization will evolve once euro introduction moves closer. On the one hand, the required continuation of stability oriented economic policies should further decrease the demand for euros for hoarding purposes as well as the demand for euro-denominated deposits. On the other hand, one can assume that closer economic ties (trade, tourism, cross-border employment) will further increase the transaction demand for euros. Also, despite stability oriented economic policies, people could decide not to reduce or even expand euro deposits and cash holdings in anticipation of nearing euro adoption. As of now, it is rather difficult to say which effect will dominate. Ultimately, this will also depend on people's expectations about the timing of euro introduction.

Evidence on this is provided by the last two surveys from 2004 which contained the following question: "when do you believe that your country will introduce the euro?" The answers, summarized in Figure 3, reveal several interesting aspects: First, the overwhelming majority in each country believes that the euro will be introduced, at least at some point in time. Only in Croatia, which is not yet a member of European Monetary Union, about 10 percent of all respondents answer that the euro will never be introduced. Second, the views concerning the timing of an eventual euro adoption differ widely across countries. For example, 81 percent of Slovenians expect the euro within the next four years (the reference time for the adoption of the euro laid down in the Convergence Programme of May 2004 is 2007).[11] In Hungary, 55 percent expect euro introduction in four to six years, corresponding to the planned time of

[11] The reference years for the adoption of the euro are cited from: „Convergence Programme of the Republic of Slovenia" (May 2004), „Convergence Programme for the Slovak Republic" (May 2004), „Convergence Programme of the Czech Republic" (May 2004), „Commission's assessment of the May 2004 convergence programme of Hungary".

euro area accession (2010, possibly 2009). In the Slovak Republic answers are more dispersed: 29 percent expect the adoption of the euro in four to six years, while 34 percent expect euro adoption earlier and 33 percent later (the reference time is 2008 to 2009). Finally, although the median of answers for the Czech Republic is in the range of four to six years, 47 percent expect euro introduction in more than six years which is somewhat behind the conditional reference time of 2009 to 2010.

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