

# Euro Cash in Central, Eastern and Southeastern Europe

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*A considerable part of the euro banknotes issued since 2002 is in circulation in Central, Eastern and Southeastern European (CESEE) countries. This can be attributed to the fact that numerous economic agents resorted to currency substitution in a parallel safe haven currency during the crisis arising in the course of their countries' transition to a market economy. On the other hand, euro cash holdings are related to some countries' upcoming accession to the European Union, which will oblige them to adopt the euro.*

*Although countries have caught up economically, the degree of euroization in CESEE countries has hardly receded over the past years. According to surveys conducted by the Oesterreichische Nationalbank (OeNB), economically significant amounts of euro cash are primarily held by households in Southeastern Europe, which – unlike households in Central Europe – use euro cash as a store of value and partially as a means of payment in addition to their respective local currency.*

*Policies introduced in CESEE countries to stabilize economies after the outbreak of the financial and economic crisis in 2008 have ultimately increased the public's confidence in the security of its savings deposits. The recent drop in euro cash holdings can therefore be attributed not only to the depletion of euro cash reserves during the crisis to finance necessary expenditures. It also seems to reflect a medium-term tendency to shift portfolios from (euro) cash to (euro) deposits.*

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Since the introduction of the first euro banknotes, the value of euro banknotes in circulation has quadrupled from EUR 221 billion (January 2002) to EUR 884 billion (January 2012). In terms of value, approximately 25% (ECB, 2011) to 40% (Augustin, 2011; Bartzsch et al., 2011a, 2011b) of all euro banknotes are in circulation outside the euro area, to a considerable part in CESEE countries.

The demand for foreign currency cash in CESEE countries goes back many years, long before euro banknotes were even issued. On the one hand, the use of a foreign currency (Deutsche mark, Austrian schillings, euro or U.S. dollars) as a secondary currency shows

many similarities to dollarization in Latin America. On the other hand, the different institutional framework conditions in Europe require us to consider new explanations. Political declarations of intent and partly completed accession negotiations pave the way for CESEE countries' integration into the European Union in the medium or long term. Therefore, these countries will eventually be obliged to join the Economic and Monetary Union (EMU) and to introduce the euro.

Economic agents' use of a parallel safe haven currency (de facto dollarization or de facto euroization<sup>2</sup>) has far-reaching economic consequences.<sup>3</sup> (1) A high foreign currency share in mone-

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<sup>2</sup> As opposed to de jure euroization, when the euro is introduced as legal tender – either unilaterally, as in the case of Kosovo and Montenegro, or multilaterally, as in case of an accession to EMU.

<sup>3</sup> An analytical overview of macroeconomic and macrofinancial risks of dollarization can be found in Levy-Yeyati (2006). Pann et al. (2010) discuss the different risks of foreign currency loans for financial stability, focusing particularly on the CESEE region.

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tary aggregates reduces the effectiveness of monetary policy instruments in controlling output and inflation. (2) Seigniorage, the profit made issuing banknotes in the local currency, shifts from national central banks (NCBs) to those issuing the parallel currency. (3) A large share of foreign currency loans increases credit risk by adding an element of exchange rate risk. (4) High levels of household cash holdings withdraw money from the economic cycle that could be much more productive if it were provided as loans for investments. (5) Any capital imports used to compensate this lack of capital result in current account deficits and have a destabilizing effect on the financial markets. (6) Finally, large cash holdings in foreign currency tend to entail non-declared payments, which means that governments lose part of their tax revenues.

Apart from these economic considerations, a certain procedure has to be followed to officially become an EMU member (*de jure* euroization). To fulfill the convergence criteria, a country

must have a national currency and a capital market in its currency. Hence, the Eurosystem keeps stressing that a high degree of euroization does not constitute a “shortcut” for the adoption of the euro.<sup>4</sup>

Against the background of the macroeconomic implications and risks for the stability of the financial markets, the amount of data available on the degree of *de facto* euroization was very limited. In particular, reliable data on the share of euro cash in total cash in CESEE countries was lacking. To fill this gap, the OeNB has been conducting semiannual surveys in ten CESEE countries since fall 2007. The collected data from individual interviews not only help us draw a map of euroization (cash, deposits and loans); they also allow us to infer causal relationships regarding households’ use of foreign currencies and in particular the euro. This paper predominantly focuses on euro cash held by households. Information on foreign currency deposits and loans may be found in the numerous other OeNB publications on this topic.

Box 1

### OeNB Euro Survey

*As a preparation for launching euro banknotes, the OeNB had commissioned semiannual surveys on the use of foreign currencies in five countries close to Austria (Croatia, the Czech Republic, Hungary, Slovakia and Slovenia) between 1997 and 2007. The underlying goal was to (1) assess the amount of Deutsche mark, Austrian Schillings and U.S. dollars in circulation in these countries, and (2) to establish a realistic forecast of the demand for euro banknotes in these countries. One particularly interesting question was whether households and businesses in Austria’s partially strongly dollarized neighboring countries would exchange their Deutsche mark and Austrian schilling cash hoards for euro, U.S. dollars or local currencies, or place them in bank accounts.*

<sup>4</sup> This is a problem that countries with a high degree of *de facto* euroization face (e.g. Croatia), as do countries with *de jure* euroization (Kosovo, Montenegro). In the latter, a lack of sound institutions has given rise to the introduction of the Deutsche mark and subsequently the euro as legal tender, while at the same time the Eurosystem insists that the respective countries comply with the official accession procedure.

*In fall 2007, the OeNB decided to expand both the circle of countries (five EU Member States: Bulgaria, the Czech Republic, Hungary, Poland and Romania; five (potential) candidate countries: Albania, Bosnia and Herzegovina, Croatia, FYR Macedonia and Serbia), and the number of questions, striving to explain different aspects of the euroization phenomenon in these countries. Ever since, the OeNB Euro Survey has been conducted twice a year (in May/June and in October/November). A sample of 1,000 interviewees (representing the population aged 15 and older) per country and survey is used. Data are obtained from face-to-face interviews. For further details on the OeNB Euro Survey, see Dvorsky et al. (2008) and [ceec.oenb.at](http://ceec.oenb.at). The website also shows selected results and a list of publications on the topic.*

Section 1 of this paper examines how the euro came to CESEE countries. Section 2 draws a current map of euroization for CESEE countries and discusses changing motives for holding euro cash. Section 3 looks at household portfolio decisions and summarizes the results of the first analytical findings of the OeNB Euro Survey project. In section 4, current economic-political developments and their implications for the use of euro cash are examined: (1) the recent crisis on the global financial markets, and (2) the call for capital markets in national currencies. Section 5 provides a summary as well as an outlook.

## 1 How Did the Euro Come to the CESEE Region?

Foreign currency use is not a new phenomenon in CESEE countries. Many of these countries have a long history of parallel currencies. In analogy to what happened in the countries of Latin America in the second half of the 20<sup>th</sup> century, macroeconomic crises arising before, during or after the transition from planned economies to market economies triggered the use of foreign currency. Hyperinflation, banking and currency crises as well as debt crises went hand in hand with this transition. In all these cases, rationally acting households and businesses tried to avoid the erosion of the (external) value of their national currency and sought a safe haven in a parallel currency (Dean

and Feige, 2004). By opting for currency substitution, economic agents essentially imported price and foreign currency stability, i.e. economic framework conditions that their national institutions were no longer providing to a sufficient extent.

In the 1990s, the CESEE region went through numerous banking crises (table 1). Changing over from a centralist, one-dimensional banking system to a two-tier banking system turned out to be a difficult process in many countries (i.a. Albania and Croatia). Undercapitalized banks holding a large number of defaulted loans garnered a poor financial reputation. Subsequently, private investors withdrew their deposits, and bank runs became commonplace. Although numerous banks were “rescued” (either by receiving capital injections from the government or by being sold to foreign investors), ultimately, several loss-generating banks were closed (19 banks in Bulgaria alone). Newly installed deposit insurance systems were able to save small investors from loss, but in many cases confidence levels in the banking system were permanently affected.

Concurrently with the banking crises, there was a series of depreciations and there were periods of hyperinflation, which led to a massive deterioration of purchasing power of the national currencies. Periods of hyperinflation beset Bulgaria, Poland and Romania as well as the countries of former Yugos-

Table 1

### Overview of the Banking, Currency, and Hyperinflation Crises

	Banking crisis	Currency crisis	Hyperinflation	Highest annual inflation rate during the hyperinflation period
	%			
Czech Republic	1996			x
Hungary	1991			x
Poland	1992		1989–1991	585
Bulgaria	1996	1996	1991, 1996–1997	1,248
Romania	1990	1996	1992–1993	243
Albania	1994	1997		x
Bosnia and Herzegovina	1992		1992–1993	x
Croatia	1998		1992–1993	1,497
FYR Macedonia	1993		1992–1993	1,664
Serbia (Yugoslavia)		1995, 1998, 2000	1992–1994	352,412,743,467,369

Source: Laeven, L. and F. Valencia (2008), NCBs.

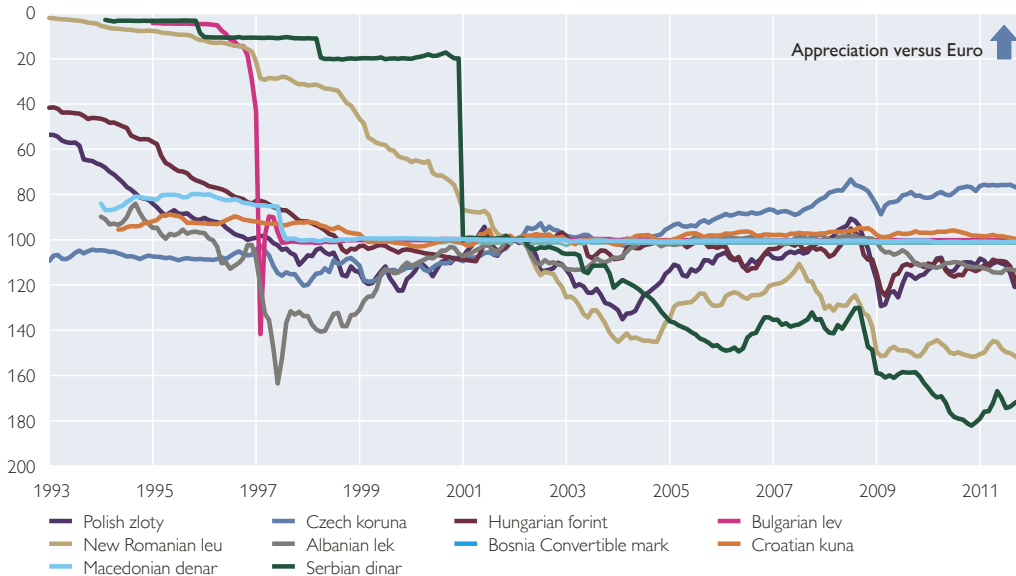
lavia. In the constituent Republic of Serbia, hyperinflation brought forth extremely high inflation rates between 1992 and 1994. Currency crises led to massive depreciations in Albania, Bulgaria, Romania and Serbia (chart 1).

In Serbia, the dinar was devalued three times between 1996 and 2000<sup>5</sup> and has been losing further purchasing power since 2003. Bulgaria's currency experienced a similarly drastic drop in value. Not until the Bulgarian lev was linked

Chart 1

### Exchange Rate against the Euro

Local currency/EUR, index 2002 = 100 (monthly average)



Source: The Vienna Institute for International Economic Studies database, Eurostat, Thomson Reuters, National Bank of Yugoslavia.

<sup>5</sup> The Serbian dinar (official exchange rate) depreciated by 70% against the Deutsche mark in November 1996, by 45% in April 1998 and by another 80% in December 2000.

Table 2

**Inflation Reduction since 1993**

	1993 to 1996	1997 to 2001	2002 to 2006	2007 to 2011
<i>Average annual inflation rate in %</i>				
Czech Republic	12,2	6,0	1,5	2,6
Hungary	23,3	12,3	4,8	5,3
Poland	28,9	9,9	1,9	3,5
Bulgaria	88,1	261,5	5,6	5,7
Romania	120,3	68,8	13,1	6,1
Albania	14,4 <sup>1</sup>	11,6	3,0	3,1
Bosnia and Herzegovina	×	7,3 <sup>2</sup>	2,3	2,9
Croatia	438,8	4,9	2,4	2,9
FYR Macedonia	121,2	2,6	1,3	3,1
Serbia	89,5 <sup>3</sup>	64,3	13,9	9,0

Source: The Vienna Institute for International Economic Studies database, National Bank of Yugoslavia, National Bank of the Republic of Macedonia.

<sup>1</sup> Value refers to 1994 to 1996.

<sup>2</sup> Value refers to 1998 to 2001.

<sup>3</sup> Value refers to 1995 to 1996.

to the Deutsche mark and subsequently to the euro did it stabilize. Finally, the (new) Romanian leu has been losing ground since the beginning of the 1990s.

However, macroeconomic crises were not the only determinants in this game. More or less politically driven actions or a lack of corporate governance came into play as well. During the civil war in former Yugoslavia, for example, private foreign currency accounts were frozen because the government lacked foreign exchange assets. Many owners of such accounts have, to this date, not been reimbursed. Ultimately, this means that they have been expropriated. In Albania, Bulgaria and the FYR Macedonia, the population's confidence in a stable banking system fulfilling its promises was undermined when the pyramid schemes broke down.

These phases marked by a loss in confidence in the local currency coincided with the gradual opening of the CESEE economies, in particular the economies of the countries of former Yugoslavia. Throughout this process, the population was increasingly ex-

posed to the Deutsche mark but also the Austrian schilling. Tourism, which had started to flourish along the Adriatic coast in the 1970s, as well as remittances migrant workers sent home, brought large amounts of foreign currency into the region. Generally, these payments were not exchanged for local currency. On the contrary, a kind of "secondary market" came into existence. Tourist services were offered and paid in Deutsche mark, real estate and durable consumer goods were increasingly traded in Deutsche mark as well.

Up to now, this pattern has hardly changed. After the introduction of euro banknotes and coins on January 1, 2002 (cash changeover), Deutsche mark cash holdings were, for the most part, directly exchanged for euro cash holdings (Stix, 2002). Only a small part of the cash held in Deutsche mark was transferred to euro or local currency deposits after the introduction of the euro. This behavior is consistent with what we have experienced in dollarized economies: Once people have lost confidence in the stability of their own currency and in their banking system, this trust

can hardly be regained. Although the economies may have become more stable<sup>6</sup> (table 2) and prospects better, the degree of dollarization hardly recedes even decades after the experienced crisis. Economic agents proceed to hold and use foreign currency. This phenomenon reflects persistence and hysteresis effects but also the existence of positive network externalities if the secondary currency has proved to be a trustworthy means of payment (Feige, 2003; Reding and Morales, 2004).

Having euro cash holdings and transacting other economic activities in euro are also linked to the population's current expectations regarding their country's future accession to the euro area. In principle, all EU Member States are contractually obliged to introduce the euro in the medium term; and even countries that are still far from joining the European Union consider themselves potential members of the euro area. The latest summit decisions on the EU's enlargement strategy have, in fact, supported this view.

However, the current sovereign debt crisis in some euro area countries has dampened enthusiasm for a speedy euro introduction. A number of governments have adjourned their officially declared accession date or postponed it by many years.<sup>7</sup> According to the Flash Eurobarometer (European Commission, 2011), there has also been a shift in public attitude: The share of respondents believing that the euro would not be adopted "within the next five years or would never" be introduced has generally been increasing since the year 2010; in the Czech Republic and

in Hungary it even exceeded 50% of all respondents in May 2011. In Latvia and Lithuania, on the other hand, the introduction of the euro in neighboring Estonia on January 1, 2011, has spurred optimism. Bulgaria, a country with a currency board firmly tying the lev to the euro, is optimistic as well. Almost half of the Bulgarian respondents expect the euro to be introduced no later than in two to three years.

## 2 Current Map of Euroization and Degree of Currency Substitution

The OeNB Euro Survey provides direct as well as indirect evidence on the use of euro cash: direct evidence on the dissemination and the amount of euro cash held; indirect evidence in the form of opinions stated by respondents on preferred portfolio composition and perceived (payment) behavior.

### 2.1 Dissemination of Euro Cash and Changing Motives for Holding Euro Cash

It is generally very common to hold euro cash in CESEE countries (chart 2). Euro cash holdings are particularly widespread in FYR Macedonia and Serbia, where, before the outbreak of the financial and economic crisis, 43% (FYR Macedonia) and 41% (Serbia) of all respondents claimed to hold euro cash. In Albania, Croatia and the Czech Republic, the share came to between 28% and 32%. In the remaining countries, levels were significantly lower at 9% and 16% of all respondents. However, since the beginning of the financial crisis (September 2008) the degree

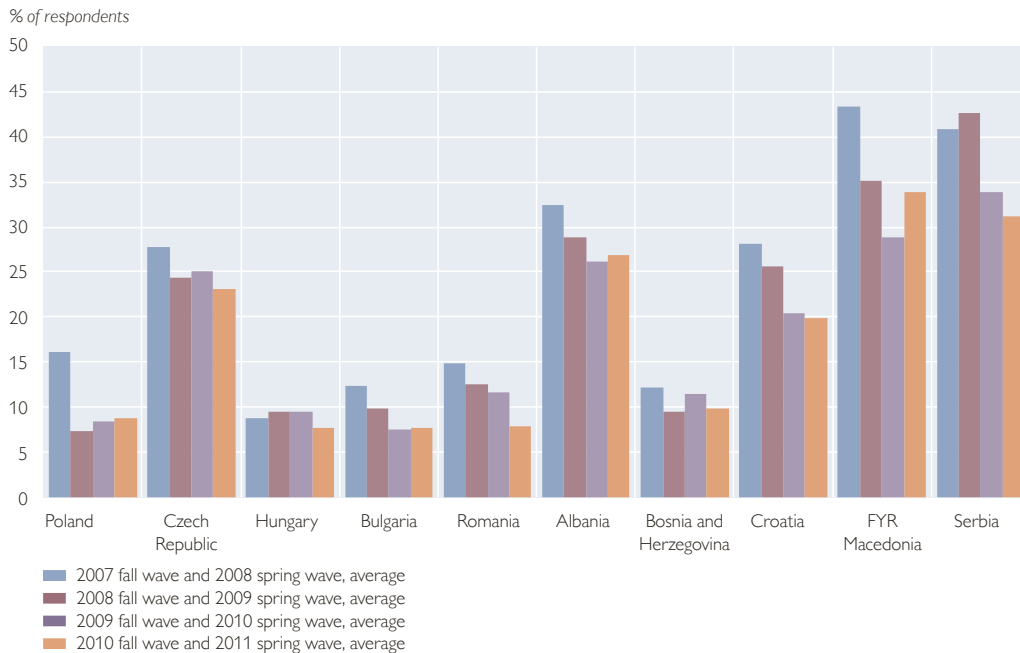
<sup>6</sup> Note the different macro stabilization policies: The Baltic countries, Bosnia and Herzegovina as well as Bulgaria stabilized their currencies by introducing fixed exchange rate regimes. Albania, FYR Macedonia and Croatia manage their exchange rates against the euro. The Czech Republic, Hungary, Poland, Romania and Serbia have floating exchange rate systems, but their central banks pursue explicit inflation targets.

<sup>7</sup> The latest results of the OeNB Euro Survey also show that the relative advantage the euro had over local currencies in terms of household confidence has strongly melted since May/June 2010 (see [ceec.oenb.at](http://ceec.oenb.at)).



Chart 2

### Dissemination of Euro Cash Holdings



of euro cash dissemination has clearly dropped in eight out of ten countries. Levels remained stable merely in Bosnia and Herzegovina as well as Hungary.

Cash fulfills various functions: Among other purposes, it serves as a store of value (hoarding) and as a general means of payment (transaction motive). Depending on the region, these two functions are more or less relevant (Dvorsky et al., 2008). In Central and Eastern Europe (CEE; the Czech Republic, Hungary and Poland), euro cash is held primarily to make payments when traveling abroad. However, in Southeastern Europe (SEE; Albania, Bulgaria, Bosnia and Herzegovina, Croatia, FYR Macedonia, Romania, Serbia), euro cash is predominantly used as a store of value. The latest survey results have shown that this regional pattern is still valid (Beckmann et al., 2011). According to Stix

(2004), the store of value motive had been more important than the transaction motive in CEE before 2002, when people were holding Deutsche mark and Austrian schilling notes and coins. Hoarding foreign currencies became less common when these countries' economies started to prosper, the banking system developed, and the population gained confidence in its local currency. At the same time, motives changed. Foreign currency cash holdings were increasingly used to make payments abroad, which is the predominant motive to hold foreign currency cash in advanced economies as well.

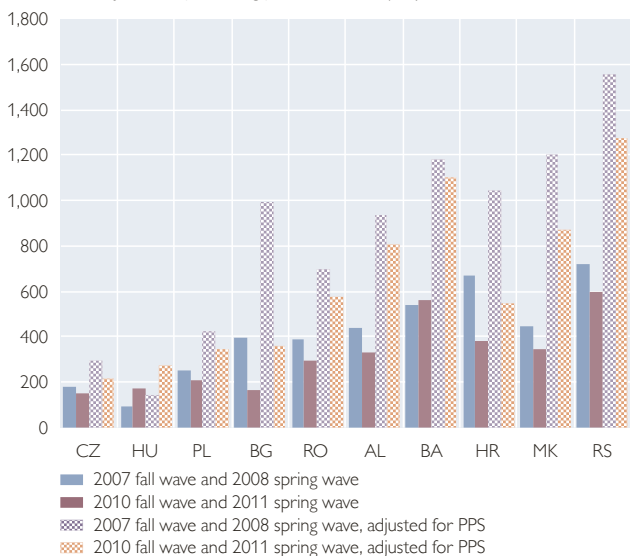
### 2.2 Amounts of Euro Cash Held

The regional divide between the dominant motives "payments abroad" versus "hoarding" are also reflected, as one would expect, in the amounts of euro cash held. While precrisis median

## Amounts of Euro Cash Held by Individuals

### Median Euro Cash Holdings

EUR or EUR adjusted for purchasing power standards (PPS)



### Per Capita Euro Cash Holdings (Projection)

EUR



Source: OeNB Euro Survey.

Note: Values are based on categorical replies. Median values were calculated using linear interpolation between class limits. Purchasing power adjustments are based on the PPS exchange rates provided by The Vienna Institute for International Economic Studies database. Per capita values are extrapolated for the entire population aged 14 years and over. For details, see Scheiber and Stix (2009).

values were at EUR 90 to EUR 255 in CEE, SEE values ranged from EUR 390 to EUR 720 (chart 3, left panel). After adjusting these values for purchasing power standards – i.e. taking into account local price levels – it becomes evident that these are economically significant amounts households in SEE have been hoarding “under their mattresses,” so to speak.<sup>8</sup>

The results of the OeNB Euro Survey show that, in the wake of the financial and economic crisis in the CESEE region, not only the degree of dissemination but also the amount of euro cash held per capita decreased (chart 3, right panel). The drop in per capita amounts was particularly severe in those countries that featured sub-

stantial withdrawals from savings accounts in fall 2008 (Albania, Bosnia and Herzegovina, Croatia, Serbia). A possible explanation for this somewhat counterintuitive phenomenon is given by Dvorsky et al. (2010): Households that had taken their money out of the bank in fear of bankruptcy put some of it back in their savings accounts after the impending crisis was averted. However, some of the withdrawn money was spent to maintain a living at a time when incomes were declining and jobs were lost. The reduction in the projected amounts of euro cash held in the last two years seems to be linked to the crisis-related withdrawal of deposits also in the other SEE countries.<sup>9</sup>

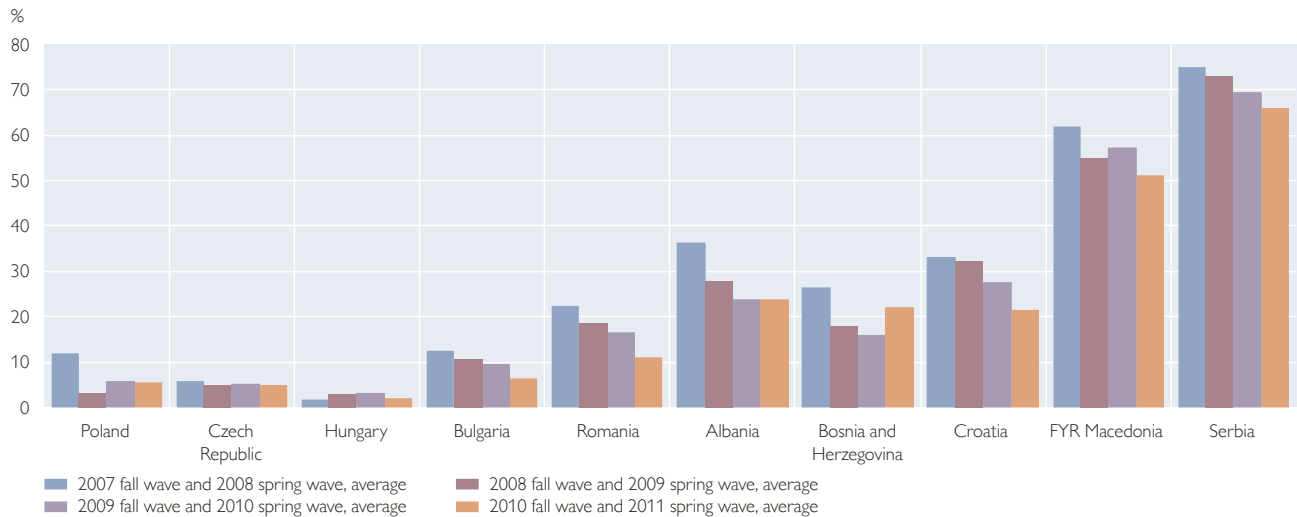
<sup>8</sup> The ratio of euro cash (median) to the average gross monthly income averages 20% in CEE and 69% in SEE.

<sup>9</sup> This is consistent with the OeNB's cash logistics developments (Augustin, 2011; Krsnakova and Oberleithner in this issue): Net inflows of euro banknotes from CESEE countries via the Austrian banks' subsidiaries in these countries have partly been above average since spring 2009.



Chart 4

### Currency Substitution Index



Source: OeNB Euro Survey.

Note: Currency substitution index = ratio of euro cash to euro cash plus national currency in circulation. For details on the calculation see Scheiber and Stix (2009).

### 2.3 Degree of Currency Substitution by Country

Although per capita euro cash holdings have subsided recently, non-EU countries still display a significant degree of currency substitution. The currency substitution index measures the relative weight of euro cash in an economy's total cash in circulation. This is projected from OeNB Euro Survey results. In FYR Macedonia and Serbia, for instance, this index is above 50% (as measured by the monetary aggregate M0). Thus, the amount of euro cash in circulation has exceeded the amount of local currency in circulation (chart 4). This is particularly notable as respondents' statements regarding the amount of cash held are subject to underreporting due to the sensitive nature of the question. Depicted values are therefore likely to represent the lower bound of actual euro cash holdings.

The currency substitution index shows the following geographic pattern: A very high degree of de facto currency substitution is found in FYR

Macedonia and Serbia, and a medium degree of around 20% in Albania, Bosnia and Herzegovina as well as Croatia. In contrast, in EU Member States the rather low or very low degree of currency substitution measured since the beginning of the financial crisis in September 2008 has continued to recede and is around 10% or even lower. However, one thing holds true for all countries: currency substitution is generally on the decrease. There is a long-term trend away from euro cash to (euro) deposits (Beckmann et al., 2011).

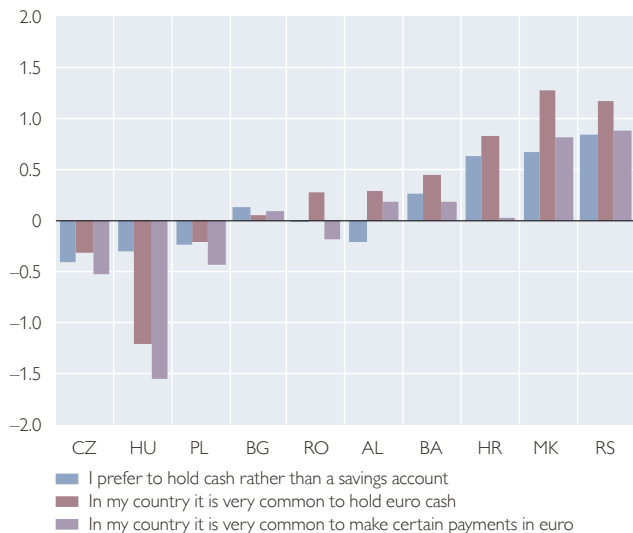
### 2.4 Indirect Evidence: High Cash Preference and Payment Behavior

The sensitive nature of the OeNB Euro Survey's direct questions to be answered by households may give rise to some doubt in the reliability of the results. Thus, indirect questions on the degree of agreement with general statements, common behavior of fellow citizens, or own preferences are an important additional source of information. Replies to control questions confirm

## Preferences and Perceived Payment Behavior

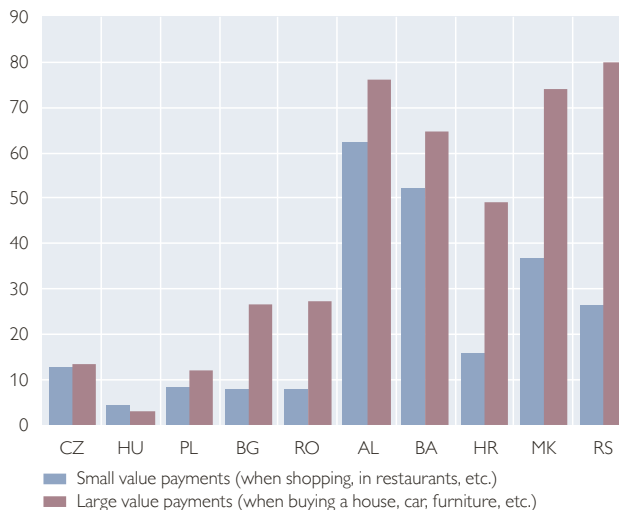
### Preferences for Cash, Euro Cash and Payments in Euro

Normalized sample median (–2.5 strongly disagree, 0 neutral, 2.5 strongly agree)



### Perceived Payment Behavior of Residents

% of respondents



Source: OeNB Euro Survey 2007 fall and 2008 spring

Note: The respondents' degree of agreement or disagreement with the respective statements was assessed on a scale of 1 to 6. For calculating the mean values, all "don't know" and "no answer" replies were excluded. The questions to determine perceived payment behavior was "When you think about the past six months: Have you noticed residents making payments in euro in your country?"

the above statements made on regional differences in the use of euro cash in CESEE countries (chart 5, left panel). Results show a clear preference for holding cash versus deposits for Bosnia and Herzegovina, Croatia and particularly for FYR Macedonia and Serbia. Furthermore, the majority of respondents in Southeastern European countries – above all in FYR Macedonia and Serbia – agrees with the statement that it is very common to hold euro cash. However, euro cash is not just hoarded; it is literally in circulation. In particular in non-EU countries, the majority of respondents states that (1) it is very common in their country to make certain payments in euro, and that (2) they have observed fellow citizens making payments in euro in the last six months

(chart 5, right panel). Apparently, euro cash is used especially to pay for major investments.<sup>10</sup>

Anecdotal evidence for Southeastern Europe has revealed that real estate and cars are often paid for in euro and that some purchases and rental prices are indexed to the euro. Frequently, even the prices displayed on these goods are quoted in euro. In Albania, Bosnia and Herzegovina, and – to a lesser extent – in FYR Macedonia and Serbia, consumers seem to make some smaller purchases in euro as well, e.g. furniture, electrical and electronic devices.

The majority of respondents holding euro cash in FYR Macedonia and Serbia state that they use the euro as a unit of account for certain purchases;

<sup>10</sup> This is remarkable insofar as payments in foreign currency have been prohibited by law in Croatia, FYR Macedonia, Serbia, and, since 2010, in Bosnia and Herzegovina. In reality, people often find creative ways of getting around this ban.

to a smaller degree (an average of about 27%), this behavior can also be found in other SEE countries.

OeNB Euro Survey data show that a high degree of currency substitution in a country correlates positively with both a preference for cash among respondents ( $r = 0.86$ ;  $R^2 = 0.74$ ) and the observed frequency of euro payments made in a country by its residents ( $r = 0.87$ ;  $R^2 = 0.76$ ). The former correlation indicates a complex interaction of cash preference and euroization. The latter one suggests positive network externalities.

### 3 Which Factors Determine Household Portfolio Decisions?

As discussed in section 1, economic crises (triggered by the transition process or by wars) have led to currency substitution in CESEE countries. Despite an overall stabilization of the economies and the partly strong economic growth, some SEE countries still feature a high degree of currency substitution. How can the differences in euro cash holdings among countries be explained? What are the determinants of household demand for euro cash?

Household portfolio composition is based on the interplay of two elements: the cash versus deposits decision and the foreign currency versus local currency decision. The underlying preferences for these decisions are determined by various (supply- and demand-side) factors that influence a person's subjective assessment of return and risk. Recent literature underlines the central role confidence (in the security of deposits, in the stability of banks, or

in positive economic developments) plays in households' financial decisions (Stix, 2011; Coupé, 2011; Beck and Brown, 2011; Guiso et al., 2004). Furthermore, there is evidence that past periods of crises have a lasting effect on household preferences (Mudd et al., 2010; Osili and Paulson, 2008; Stix, 2010).<sup>11</sup>

In a first step, Scheiber and Stix (2009), using bivariate correlation, examined whether differences among countries in cash euroization can be explained with arguments cited in the literature on dollarization. The authors use three variables of euroization: the degree of euro cash dissemination, the currency substitution index, and the indirect variable "In my country it is very common to hold euro cash." The following factors have been identified as important determinants for explaining differences among countries: governance quality, confidence in the banking system, a history of deposit confiscation (primarily in FYR Macedonia and Serbia), access to banking services, and the frequency of euro payments (network effects). Current inflation levels, past perceived inflation, remittances and income in euro hardly correlate with the three dependent variables or have no impact on them at all.

At the respondent level, there is a significant correlation between a strong cash preference and euro cash holdings (Stix, 2011). Euro cash is considered a safe haven asset and is used by households in SEE as a store of value. Micro-economic estimates show that a lack of confidence in the banking system (in particular a perceived lack of deposit security) is a key factor in explaining

<sup>11</sup> This phenomenon is also explained with hysteresis (Reding and Morales, 2004). This means that economic agents – because of an earlier period of crisis they experienced and the subsequent loss of confidence in the banking system or in the local currency – consider it quite likely that their economy could be hit by another crisis.

households' strong preference for cash in SEE. The recollection of past banking crises aggravates this effect. Furthermore, weak institutions, e.g. the poor quality of jurisdiction<sup>12</sup> or tax collection,<sup>13</sup> as well as a low penetration of banks constitute significant factors for explaining the strong preference for cash.

These findings confirm earlier research results on euroization in the region (Kraft, 2003; Ritzberger-Grünwald and Stix, 2007; Stix, 2010): The degree of persistence in the use of euro cash in SEE can primarily be explained by factors related to previous economic crises experienced by respondents. This limits the scope of economic policies aimed at confining euroization. Macroeconomic stabilization measures in themselves are insufficient to regain economic agents' confidence.

#### 4 Current Economic Policy Developments

Finally, apart from the above-mentioned fundamental and rather long-term considerations based on OeNB Euro Survey results, two current developments and their implications for the use of euro cash shall be examined: the recent global economic and financial crisis and the call for capital markets in national currencies.

##### 4.1 The Impact of the Recent Economic and Financial Crisis

First, the public's confidence in the banking system, in particular in the security of deposits, and their relative confidence in their national currency

are the key to the portfolio choice of households.

The outbreak of the financial and economic crisis in fall 2008 clearly showed how highly sensitive households are to portfolio issues. Particularly in SEE, the increased degree of uncertainty aggravated prevalent behavior patterns and induced a swift adaptation of portfolios: the flight to cash went hand in hand with a flight to euro holdings. According to the OeNB Euro Survey, between 5% (Hungary) and 22% (Albania) of respondents holding savings shifted their portfolios accordingly between fall 2008 and fall 2011: In the wake of the crisis, they withdrew savings from accounts and changed the currency composition of their holdings.

Interestingly enough, households adjust their portfolios at different speeds under different economic conditions: While they switch into what they consider safer assets relatively quickly in times of acute crisis, they are hesitant to revise their decisions when the economy has stabilized.

Second, the recent decline in currency substitution, i.e. lower levels of foreign currency cash holdings versus local currency cash holdings, seems to be linked not only to euro cash reserves that households spend as a substitute for decreased income due to the crisis.<sup>14</sup> In an environment of uncertain inflationary and exchange rate developments on the one hand and increasing confidence in the banking system on the other hand, portfolios may well shift from euro cash to euro deposits, possibly

<sup>12</sup> Measured as respondents' confidence in courts.

<sup>13</sup> Measured as respondents' agreement with the statement that in their country, it is very common that people pay cash to avoid taxes.

<sup>14</sup> The number of euro banknotes in circulation dropped in particular in SEE, as the issued euro banknotes partially returned to the euro area via the banking system, i.e. via the Austrian banks' subsidiaries in these countries (Augustin, 2011; Koch and Schneeberger as well as Krnsakova and Oberleithner in this issue).

leaving an economy's general degree of euroization unchanged (Feige, 2003). Beckmann et al. (2011) have published evidence for such a shift on an aggregate level in SEE. In the case of Croatia, the degree of euroization even rose as a result of an above-average increase in euro deposits.

#### **4.2 Promoting Savings Deposits – An Economic Policy Goal**

In the long term, increased financial integration, economic convergence, and access to banking services for larger parts of the population might change motives for holding euro cash in Southeastern Europe – as they have in the Czech Republic, Hungary and Poland. Instead of being a store of value, the euro may eventually be kept only for traveling and for shopping in the euro area. What used to be held as euro cash would then be paid into savings deposits and thus serve productive economic ends.

In a next step, these savings should ideally no longer be held in euro but in local currency. Thus, the predominant amount of foreign currency loans granted in some countries could be reduced substantially. This, in turn, would eliminate the currency risk involved. Several international institutions including the IMF and the EBRD have been calling for a reduction in foreign currency lending, primarily to stabilize local financial markets, but also to make them less dependent on capital imports.

To get this process started, economic policies enhancing confidence in the banking system and the local currency need to be introduced. This requires a cautious fiscal policy, reliable prudential supervisory systems, and, last but not least, comprehensive deposit insurance systems.

## **5 Summary and Outlook**

A considerable share of the euro banknotes issued since 2002 is in circulation in CESEE countries. On the one hand, crises triggered by the transition to a market economy caused economic agents to resort to a parallel currency they considered secure and stable. On the other hand, euro cash holdings are related to the upcoming EU accession of some countries and the subsequent obligation to introduce the euro.

Although the CESEE countries have caught up economically, the degree of euroization has hardly receded over the past years. According to OeNB surveys, economically significant amounts of euro cash are predominantly held by households in Southeastern Europe. In FYR Macedonia and in Serbia, the amount of euro cash in circulation exceeds the local currency in circulation in terms of value. Disparities in euro cash holdings reflect the magnitude of a crisis as well as different motives for holding euro cash. While households in the Czech Republic, Hungary and Poland primarily keep euro cash for traveling and shopping abroad, the euro is used as a store of value and partially as a secondary means of payment in SEE countries.

Numerous economic agents still consider it possible to experience a crisis similar to one they have gone through in the past. However, the financial and economic crisis in fall 2008 did not necessarily confirm their expectations: Governments intervened to guarantee liquidity as well as bank solvency, and deposit insurance systems were expanded. Nevertheless, some CESEE currencies depreciated significantly. At the beginning of the financial and economic crisis, there was a relatively rapid shift toward assets that were considered secure (such as euro- or U.S. dollar-denominated assets),

while the stable years leading up to the crisis had not been marked by a significant decrease in euroization. However, this overall rise in euro cash holdings was only short term and rather moderate.

The recent drop in euro cash holdings seems to be related not only to households' depletion of euro cash reserves in times of crisis to finance

necessary expenditures, it also reflects a medium-term trend to restructure household portfolios away from (euro) cash to (euro) deposits. This phenomenon can be interpreted as a slow recovery of confidence in the banking system or as a result of easier access to banking services for larger parts of the population in Southeastern Europe.

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