

How are reduced interest rate differentials affecting euroization in Southeastern Europe? Evidence from the OeNB Euro Survey¹

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Euroization is a widespread phenomenon in many Central, Eastern and especially Southeastern European countries. From the literature on euroization we derive potential implications of the recently observed reduced interest rate differential between local and foreign currencies for households' demand for cash holdings, foreign currency deposits and foreign currency loans. We contrast these hypotheses with recent changes in households' observed saving and borrowing behavior in the region. To this end, we combine information from the OeNB Euro Survey with data from national central banks. The different dynamics of asset and liability euroization observed in the recent period of reduced interest rate differentials in the euroized countries of Southeastern Europe by and large match the theoretical expectations. Based on the literature and the data compiled in this article we conclude that fostering trust in institutions, sustaining macroeconomic stability, providing incentives for saving in the local currency and pursuing a comprehensive policy mix of macro- and micro-prudential measures will help to maintain financial stability and to reduce euroization.

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The use of the euro as a parallel safe haven currency for saving and borrowing (referred to as de facto euroization or financial euroization) is a common phenomenon in many Central, Eastern and Southeastern European (CESEE) countries that have not yet joined the euro area. The global environment of currently low interest rates has led to smaller differences in interest rates on local versus foreign currency deposits and loans in the region (i.e. interest rate differentials). In this descriptive study, we investigate the potential impact of lower interest rate differentials on euroization. In doing so, we discuss the latest evidence from the OeNB Euro Survey, building on a number of research papers, some of which were (co-)authored by OeNB researchers on the topic of euroization in CESEE. Given the nature of the micro data, we adopt a household perspective across this descriptive study.

First, we describe the extent of euroization and interest rate differentials in the region. Second, we briefly reflect on how very low interest rates and, in particular, lower interest rate differentials between local and foreign currencies would generally impact on households' saving and borrowing decisions. Third, we look at the empirical evidence based on OeNB Euro Survey data, with a particular focus on Southeastern Europe, and finally, we draw some policy conclusions.

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1 Euroization and interest rate developments in Central, Eastern and Southeastern Europe (CESEE)

Before discussing the impact of low interest rates and narrower interest rate differentials on euroization, we present some stylized facts on the extent of euroization and summarize the main findings of the literature on asset and liability euroization. This is followed by some stylized facts on interest rate developments in the region since 2012.

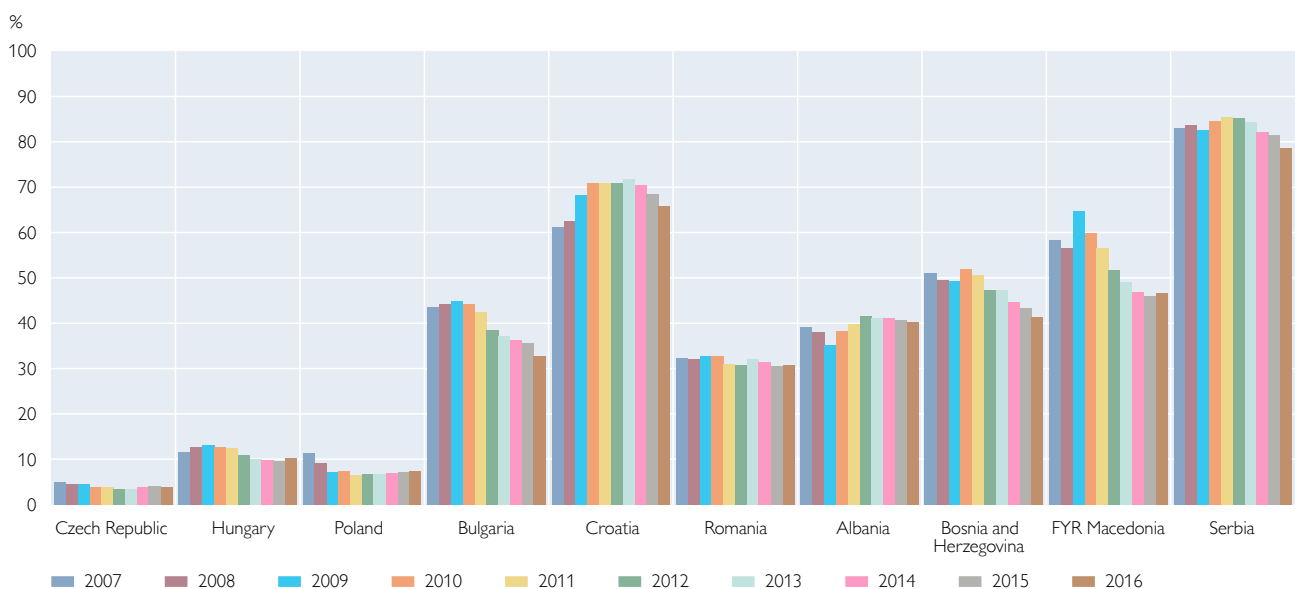
1.1 High and persistent degree of asset euroization in Southeastern Europe

Euroization is fairly widespread, especially in Southeastern Europe (SEE), as reflected, for example, by the asset euroization index for CESEE households shown in chart 1. Asset euroization is defined as euro cash holdings (taken from the OeNB Euro Survey) and foreign currency deposits (from monetary statistics provided by central banks) in relation to total cash holdings and total deposits in each economy. Our sample contains a set of countries with different exchange rate and monetary policy regimes. Two countries maintain a currency board (Bosnia and Herzegovina, and Bulgaria), two have a managed float (Croatia and the Former Yugoslav Republic of Macedonia) and the remaining six let their currency float. In principle, one would expect that countries with a fixed exchange rate show a lower degree of euroization as there is less necessity to hedge against exchange rate fluctuation. Yet, this is not what we observe in CESEE.

Asset euroization is not an issue in the Czech Republic, Hungary and Poland, where its level is low. In countries like Bulgaria, Romania, Albania, Bosnia and Herzegovina, and more recently in FYR Macedonia, asset euroization is at a medium level. Croatia and in particular Serbia have continuously shown very high levels of

Chart 1

Euroization index for the household sector



Source: National central banks, OeNB Euro Survey.

Note: Euroization index = (euro cash + foreign currency deposits) / (total cash + total deposits). For details see Scheiber and Stix (2009).

euroization.³ Against this backdrop, the remainder of this study focuses on the SEE countries with a medium to high euroization level.

It is a well-established fact that asset euroization in SEE is a persistent phenomenon, even though we have observed some decrease in Bulgaria, Bosnia and Herzegovina, and FYR Macedonia in recent years. The question arises why households in SEE still prefer to save in foreign currency despite sustainable macroeconomic stabilization over the last decade.

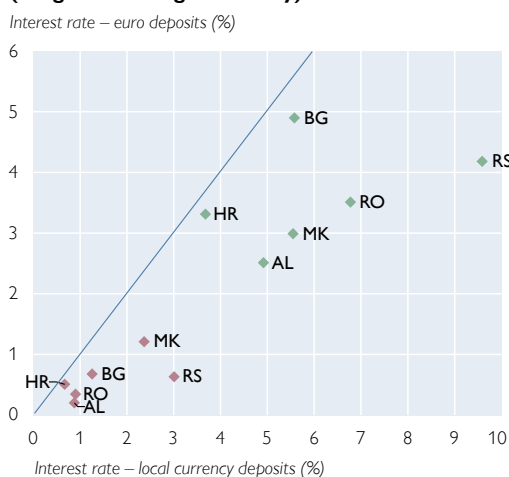
1.2 Decline in interest rate differential between local currency and the euro

Over the past few years, interest rates across all market segments declined notably in SEE countries.⁴ More importantly, the interest rate differential between local currencies and the euro declined, too. The international interest rate environment certainly induced some policy spillovers, which led to very low money market rates in Croatia, Romania and FYR Macedonia and to – slightly higher, but still – low rates in Albania and Serbia. Money market rates even turned negative in Bulgaria and Bosnia and Herzegovina, which is not surprising given that under these countries' currency board arrangements, their policy rates are driven by the monetary policy of the euro area.

Chart 2

Decline of interest rates and interest rate differentials for household deposits from 2012 to 2016

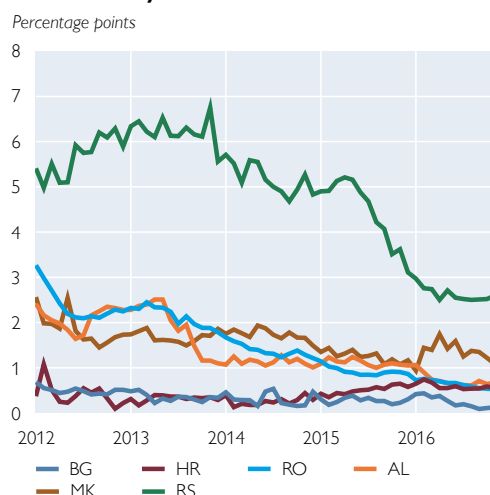
Interest rates on new deposits (weighted average maturity)



Source: National central banks.

Note: Red diamonds = Dec. 31, 2016, green diamonds = Jan. 31, 2012.

Interest rate differentials between local currency and euro



Source: National central banks, authors' own calculations.

Note: Interest rate differential for household deposits with agreed maturity (weighted average).

³ Note that the household sector includes nonprofit institutions serving households. If those were excluded, the ratio for Serbia would be even higher at around 90%.

⁴ We do not investigate the reasons for this decline in interest rates in this paper. More specifically, we do not differentiate between low interest rates as a result of the current phase of globally low interest rates and low interest rates as a result of the successful catching-up process in the region. Such an analysis would go beyond the scope of the present paper.

The left panel in chart 2 shows that interest rates on household deposits declined strongly between 2012 (green diamonds) and 2016 (red diamonds).⁵ This holds true not only for euro deposits (to be read from the y-axis) but also for local currency deposits (x-axis). Moreover, interest rates on euro deposits always remained below those on local currency deposits (i.e. below the 45-degree line).

The right-hand panel in chart 2 shows that the differential between foreign-currency and local-currency interest rates on deposits also decreased substantially in some countries (in Bulgaria and Croatia the differential was already narrow in 2012). The pronounced country differences imply that apart from a purely mathematical regularity, international policy spillovers and swings in global risk sentiments, domestic developments must also have played a role. The differential shrank particularly strongly in Serbia, which is very likely related to successful macroeconomic stabilization in recent years.

Moreover, interest rates on household loans as well as the interest rate differential between local and foreign currency loans to households have declined in a similar way since 2012.

2 Theoretical considerations

In this section we will review some general explanations provided in the literature for the high degree of euroization in CESEE:

Ritzberger-Grünwald and Stix (2007) show that the economic history of a country has a greater influence on euro cash holdings than inflation or exchange rate expectations. Furthermore, expectations of euro adoption positively influence euro cash holdings.

Deposit substitution is to a large extent demand-driven (Brown and Stix, 2015; Zettelmeyer et al., 2010). We know from the OeNB Euro Survey that households have broad access to a wide range of saving products in domestic and foreign currency, yet they choose to save primarily in foreign currency (Beckmann et al., 2013). Brown and Stix (2015) provide evidence that deposit euroization is strongly related to expected price and exchange rate stability, i.e. monetary expectations – meaning that foreign currencies are considered to act as an insurance against the local currency’s high exchange rate volatility – and network effects, meaning that households are more likely to use foreign currency deposits the more widespread deposit euroization is in a country. However, network effects can only partly explain the observed degree of persistence. Furthermore, the authors show that monetary expectations are related to both individual experience of financial crises in the early 1990s as well as to respondents’ assessments of current policies and trust in institutions. Somewhat surprisingly, there are no differences between age cohorts. Even young people who lack the personal experience of the 1990s crises seem to have entrenched in their minds that foreign exchange deposits are safer than domestic currency deposits.

Looking at the liability side of households, recent research concludes that both demand and supply factors play a role. Most borrowers had a choice between a local currency loan and a foreign currency loan (Beckmann et al., 2015). The main determinants of households’ demand for foreign currency loans are low interest rates, a lack of trust in the local currency, and high inflation or exchange

⁵ Bosnia and Herzegovina is excluded from chart 2 because of a lack of data.

rate volatility (Crespo Cuaresma et al., 2011; Fidrmuc et al., 2013). Furthermore, expectations that the euro may be introduced in the foreseeable future play a role in some countries as well as a lack of knowledge on the risk inherent in foreign currency loans (Beckmann and Stix, 2015).

Households' preference for foreign-currency deposits implies that banks are highly euroized on the liability side. Therefore, in order to avoid currency mismatches in their balance sheets, banks have an incentive to lend in foreign currency. While foreign currency customer deposits are a major source of banks' foreign-currency funding, foreign-owned banks obviously also have access to foreign-currency funding from their parent banks. Basso et al. (2011) provided empirical evidence for transition countries that increasing access to foreign funding as well as substantial interest rate differentials between local and foreign currencies matter for the dollarization or euroization of both loans and deposits. However, Beckmann et al. (2015) show that foreign-currency funding from parent banks was not the main driver of loan euroization in CESEE, since lending practices between foreign-owned and domestically owned banks did not differ much, except in Hungary and Croatia. Moreover, given that parent bank funding has become less plentiful since the financial crisis, domestic foreign-currency deposits strongly determine the currency structure of banks' asset side as well.

Turning toward the influence of interest rates, we would expect that (very) low interest rates render cash hoarding more attractive for households as they reduce the opportunity cost of holding cash. However, in this particular region, the preference for saving in cash is significantly related to households' lack of trust in banks, memories of past banking crises and weak tax enforcement (Stix, 2013). Against this backdrop, the observed increase of trust in banks in some SEE countries in recent years may be a countervailing factor that mitigates the expected effect.

Furthermore, low interest rates certainly reduce the cost of borrowing for households. This should lead to a higher demand for new loans. Moreover, banks experience a compression in interest margins in a low interest rate environment, which could induce them, at least in theory (and to the extent that funding is available) to issue more loans in an attempt to substitute price for quantity. This was, in fact, observed in Switzerland, Denmark and Sweden during the recent years of ultra-low interest rates, where banks compensated for compressed interest rates by stepping up new lending and increasing fees (Scheiber et al., 2016; Madaschi and Pablos Nuevo, 2017). In the SEE region, however, some banks are still deleveraging, a legacy from the global financial crisis, and this might provide room for alternative forms of nonbank borrowing.⁶

In small open economies, and especially in those where the use of foreign currencies is high, such as SEE countries, saving and borrowing decisions are not only determined by the level of domestic interest rates but also by the interest rate differential between local and foreign currencies. Hence, we will briefly review the impact of compressed interest rate differentials. A considerable share of SEE households save in foreign currency in order to protect the purchasing power of their

⁶ For instance leasing, buying on credit, private loans, internet loans (peer-to-peer) or payday lending. There is not much evidence on this subject to date. Stern (2017) provides a first stocktaking of activities of fintechs in the region.

savings. A narrower differential actually compresses the insurance premium;⁷ as a result, it should become even more attractive to save in euro or in other foreign currencies. In contrast to this, some households may search for yield and may prefer the relatively higher remunerated local currency deposits. This would make saving in the local currency more attractive. The net effect remains an empirical question and we will present some empirical evidence in the next section.

Moreover, Ize and Levy Yeyati (2003) have shown that minimum variance portfolio (MVP) considerations affect the currency denomination of household deposits, assuming that the uncovered interest parity holds and that the interest rate does not play an important role in determining the currency denomination of deposits – which seems reasonable in a long-run perspective. The MVP theory suggests that deposit substitution will increase if households expect a higher volatility of domestic inflation or a lower volatility of the real exchange rate. Yet, in the short run, the uncovered interest parity can be violated and households deviate from the MVP: they increase the share of foreign currency assets in their portfolios (and decrease the share of foreign currency liabilities) as the real interest rate differential widens (Basso et al., 2011). Furthermore, Rajkovic and Urosevic (2017) have empirically shown that in the long run, households in euroized economies base their saving decision on the relative volatilities of inflation and nominal depreciation rates (which is in line with the MVP hypothesis) and do not take into account the interest rate differential, whereas in the short run, deposit euroization is additionally driven by the real interest rate differential (which is in line with the insurance premium hypothesis).

Hence, two different states are possible: First, the recent decline in the interest rate differential is associated with an increase in deposit euroization. This implies that the short-run factor “insurance premium” drives the dynamics of euroization, referred to as the transitory component of euroization. Or second, the interest rate differential and the level of deposit euroization move in the same direction, implying that a common and more fundamental underlying determinant of euroization in the long run has changed (referred to as the permanent component of euroization).

Turning to the borrowing decisions of households, it is clear that borrowing in foreign currency becomes relatively less attractive in an environment of a narrow interest rate differential, provided consumers are able to properly assess foreign currency risk. Again, banks could compensate for the decline in the differential through an increase in the volume of lending or by focusing more on fee income. If, for the reasons outlined above, foreign currency deposits at banks increase in the low interest rate environment, the increase in the volume of bank lending could be tilted toward foreign currency as banks strive to contain currency mismatches.

To sum up, in the presence of low interest rates and a narrow differential between interest rates in local and those in foreign currencies, demand for foreign currency deposits may go up (down) if short-run (long-run) determinants of euroization dominate the process, while at the same time taking out foreign currency loans may become less attractive to households.

⁷ *The interest profit which is foregone by transferring savings from local currency deposits with a higher yield to lower interest-bearing foreign currency deposits can be seen as an insurance premium against the loss in purchasing power arising from a real depreciation of the local currency.*

3 Empirical evidence from the OeNB Euro Survey

In the following we will combine information from the OeNB Euro Survey⁸ with data from national central banks to examine the impact of low interest rates and a reduced interest rate differential on euroization. To this end, we review three major aspects of euroization – cash holdings, deposits and loan demand – and the way they are affected by a reduction in the interest rate differential.

3.1 Limited impact on cash holdings

Chart 3 shows how households' preferences for cash holdings (left-hand panel) and households' actual per capita cash holdings (right-hand panel) have changed over time.

Clearly, there is a high preference for saving in cash in SEE. Even households with a savings account tend to agree with the statement that they prefer to save in cash. Households' cash preference is highly persistent and related to a number of factors, such as weak institutions, tax evasion, lack of trust in banks and network effects in the use of foreign currency cash (Stix, 2013). Against the backdrop of the low interest rate environment and the decrease in the interest rate differential,

Chart 3

Cash preference and real cash holdings from 2012 to 2016

Cash preference over time

% of respondents with savings deposits

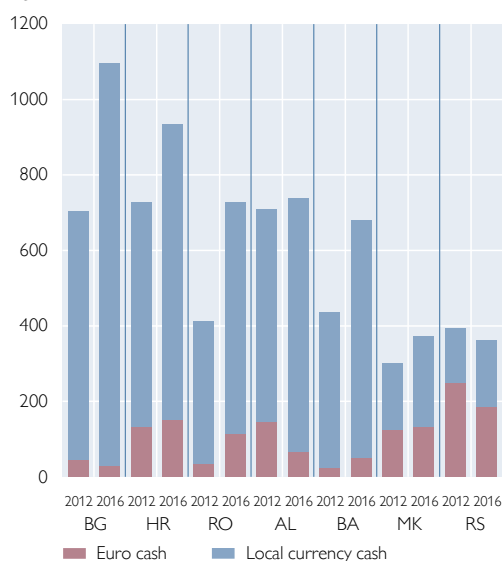


Source: OeNB Euro Survey.

Note: Percentage of respondents who have a strong cash preference, derived from the statement "I prefer to hold cash rather than a savings account."

Inflation-adjusted cash holdings per capita

EUR



Source: OeNB Euro Survey, national central banks.

Note: Per capita holdings in local currency and euro projected for the population aged 15 and older; adjusted for inflation.

⁸ The OeNB Euro Survey is conducted among households in ten CESEE countries: six EU Member States (Bulgaria, the Czech Republic, Croatia, Hungary, Poland, Romania) and four non-EU countries (Albania, Bosnia and Herzegovina, FYR Macedonia, Serbia). From 2007 to 2014, surveys were conducted twice a year; from 2015, the survey frequency was reduced to once a year (autumn). Samples consist of 1,000 randomly selected respondents per country and represent the population over 14 years. Samples are representative with respect to age, gender and regional distribution. For details see <https://www.oenb.at/en/Monetary-Policy/Surveys/OeNB-Euro-Survey.html>

we can identify two countries where cash preferences have increased notably, i.e. Romania and Bosnia and Herzegovina, whereas in the other five countries under review, they seem to be unaffected by these developments.⁹

Turning to actual cash holdings (right-hand panel of chart 3), we observe some increase in real cash holdings in Bulgaria, Bosnia and Herzegovina, Croatia and Romania, and more or less unaffected levels in Albania, FYR Macedonia and Serbia.

Apart from the low interest rate environment, there might be other reasons for the observed increase in real cash holdings in some countries. Lacking stringent empirical evidence, we can only point to some events that may have had an impact. In Romania, cash holdings have increased since autumn 2016, which could be related to political developments during that time. In Bulgaria, the banking turmoil of 2015 could have undermined trust in banks. Stix (2013) showed that due to past banking crises experiences, households in the region tend to be concerned about the safety of their deposits and/or trust in banks; in other words, they are highly sensitive to any crisis signals from the banking sector, and therefore, a run on bank deposits is more likely there than in other European countries. A credible deposit insurance scheme actually contains this risk, yet evidence from the OeNB Euro Survey suggests that people's knowledge about the existence of deposit insurance schemes is still rather limited in the region. In some cases, more than 50% of respondents were not aware of a deposit insurance scheme in their country, even though it existed; and those respondents who were aware often underestimated the extent of coverage.

3.2 Impact on deposit euroization

Turning to the impact of narrower interest rate differentials on deposit substitution, we see that the left-hand panel of chart 4 shows that in Albania, Croatia and Romania, the share of foreign currency deposits in total deposits and the interest rate differential moved in opposite directions between 2012 and 2016.¹⁰ In Albania and Romania, deposit euroization increased as the interest rate differential declined, i.e. the insurance premium for holding euro deposits was reduced, while for Croatia, we observe the exact opposite pattern. As mentioned above, this pattern indicates that the change of the interest rate differential will affect mainly the transitory component of deposit euroization (Rajkovic and Urosevic, 2017).

In Bulgaria, FYR Macedonia and Serbia, by contrast, the share of foreign currency deposits and the interest rate differential moved in the same direction, i.e. both variables declined. This indicates that fundamental factors (for instance macroeconomic variables) that determine the level of permanent deposit euroization have probably changed too.

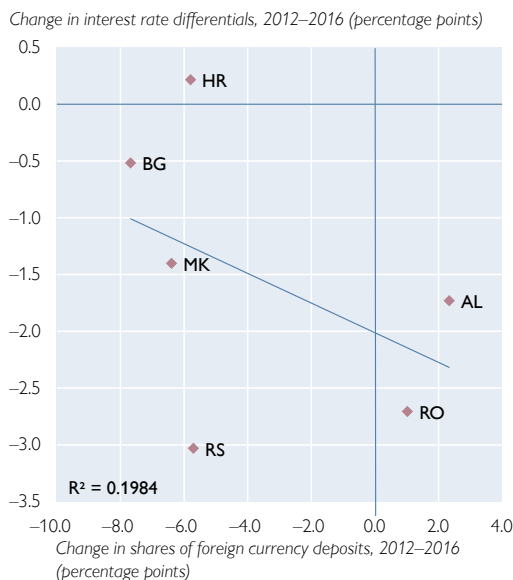
The right-hand panel of chart 4 shows that the preference for foreign currency deposits actually decreased in Croatia and Serbia. In all other countries, it remained broadly unchanged, except for Bosnia and Herzegovina, where the preference for euro deposits increased.

⁹ Note that we ignore changes that are below five percentage points because variation in the data is rather high – like in any survey data.

¹⁰ Bosnia and Herzegovina is excluded from the left-hand panel of chart 4 because of a lack of data.

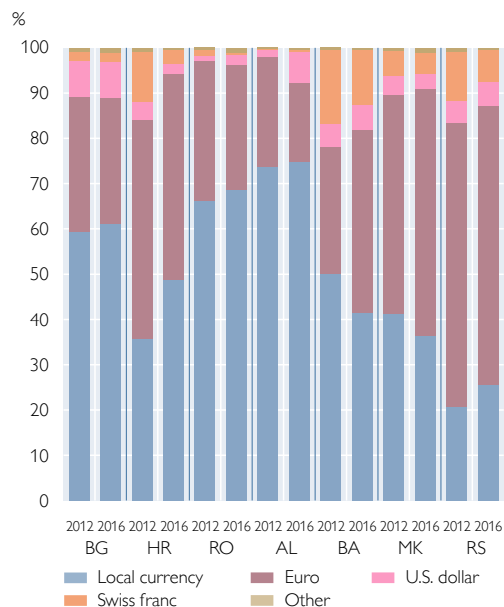
Mixed impact of interest rate environment on deposit substitution across SEE countries

Change in interest rate differentials and currency denomination of deposits



Source: National central banks, authors' calculations, OeNB Euro Survey.
Note: Interest rate differential for household deposits with agreed maturity (weighted average), local currency vs. euro.

Preference for foreign currency deposits



Source: OeNB Euro Survey, national central banks.

Note: Answers refer to the question: "Suppose you had 2 average monthly salaries to deposit in a savings account. Would you choose to deposit this amount in ...". Respondents answering "Don't know" or "No answer" are excluded.

From the policy perspective of de-euroization, with its aim of strengthening the use of the domestic currency, the decreasing preference for foreign currency deposits in Croatia and Serbia is good news. For Serbia (which is still in an early phase of de-euroization), the results suggest that recent efforts of macroeconomic stabilization (which appears to be the main driver of the observed compression of the interest rate differential) are contributing to the dinarization of household deposits. Croatia already has a longer track record of macroeconomic stabilization, evidenced e.g. by many years of exchange rate stability versus the euro, which explains among other things the rather low interest rate differential in and prior to 2012 (see chart 2). Consequently, the recent increase in the interest rate differential has strengthened demand for local currency deposits and reduced deposit substitution – as the insurance premium hypothesis expects.

3.3 Surprising rebound of demand for foreign currency loans in Albania, Croatia and Serbia

Finally, we turn to the response of loan demand to low interest rates and a narrower interest rate differential. Based on the theoretical considerations above, we would expect an increase in loan demand in response to reduced interest rates. The left-hand panel of chart 5 reports the share of respondents who plan to take out a loan within the subsequent year for the years 2008 to 2016. After the global financial crisis, loan demand dropped considerably and remained subdued for

Chart 5

Recent rebound in household borrowing tilted toward foreign currency loans

Do you plan to take out a loan within the next year?

% of respondents (period average)



Do you plan to take out a foreign currency loan within the next year?

% of respondents planning to take out a loan (period average)



Source: OeNB Euro Survey.

Note: Respondents answering "Don't know" or who refused to answer are excluded.

several years. More recently, loan demand picked up in Bulgaria, Croatia, Romania and Albania.

Given the reduction in the interest rate differential and that households are able to correctly assess exchange rate risks we would expect loan demand to be tilted, in theory, toward local currency loans. Surprisingly though, the right panel of chart 5 reveals that among those respondents who plan to take out a loan, the share of households planning to take out a foreign currency loan is on the rise in Albania, Croatia and Serbia.

From the perspective of financial stability, it is worthwhile to investigate in more detail the causes of this surprising and not necessarily desired behavior. One of the reasons appears to be debt relief measures for households indebted in foreign currency. In fact, Beckmann (2017) presents evidence that recent debt relief measures for borrowers in CESEE countries have increased expectations of future government interventions. Although expectations of government bailout do not influence loan demand as such, they significantly increase demand for foreign currency loans.

4 Policy implications

In this study we review descriptive evidence on the relationship between low interest rates, and in particular compressed interest rate differentials between local and foreign currencies, on the one hand, and households' saving and borrowing decisions in Southeastern European countries in the recent era of very low interest rates since 2012, on the other. We draw on data from the OeNB Euro Survey as well as on recently published articles based on these data and complement the picture with statistics from national central banks.

Concerning households' saving behavior, we find that in Albania and Romania, the decline of interest rate differentials was accompanied by an increase in deposit euroization, i.e. a decline of the implicit insurance premium for saving in foreign currency. This is an unwelcome development because it goes against the use of the

local currency and does not support the deepening of domestic financial markets based on local currencies. Moreover, a high degree of euroization in the financial sector reduces the effectiveness of monetary transmission and effectively limits the space for exchange rate movements under flexible exchange rate regimes. In order to prevent deposit euroization from rising, measures such as reserve requirements, taxes and the like could be used to raise the insurance premium for foreign currency savings. Interestingly, over the same period, the interest rate differential increased in Croatia, resulting in decreasing deposit substitution, which is considered a welcome outcome. Finally, in Bulgaria, FYR Macedonia and Serbia deposit substitution declined despite the fact that the interest rate differential has declined as well since 2012. That suggests that fundamentals that have an impact on the level of deposit substitution in the long run have improved.

From a policy perspective, measures geared at de-euroization, such as sustainable macroeconomic stabilization, inclusive growth strategies and measures that foster trust in the local currency are superior to measures that merely focus on sustaining a sufficiently high insurance premium for saving in foreign currency. Rajkovic and Urosevic (2017) argue that stabilization and trust-enhancing policies that are also geared to inclusion affect the variables that determine the permanent component of euroization. In contrast, measures that focus only on a sizeable insurance premium for foreign currency savings tend to influence only the transitory component of euroization, i.e. changing the risk-return relation but leaving households' underlying preferences for saving in foreign currency unchanged.

Increasing the insurance premium for saving in foreign currency is subject to an additional trade-off. Against the backdrop of (very) low interest rates and a rather high preference for saving in cash in some SEE countries, households may alternatively respond by increasing their euro cash holdings instead of shifting to local currency deposits. As a result, scarce capital could be withdrawn from productive ends – a likewise unwelcome development. Hence, a cautious policy mix has to accommodate all these potential reactions.

Concerning households' borrowing decisions, recent developments have changed important variables on both the supply and the demand sides. While the complex interactions on the banks' side are not part of this study, we are in a position to shed some light on the demand side of household borrowing. OeNB Euro Survey data show that the number of households planning to take out a loan within the subsequent year has picked up in some SEE countries but is still below pre-crisis levels. Concerning households' demand for foreign currency borrowing, theory would suggest that the lower interest rate differential implies lower demand for foreign currency loans. Based on descriptive results from the OeNB Euro Survey, we do not observe a general decline in the demand for foreign currency loans; in fact, it has remained fairly stable since 2012 and even started to rebound in Albania, Croatia and Serbia. This implies that other factors are relevant, too. First, efforts to minimize the overall variance of household portfolios (i.e. MVP effects) could still outweigh the effect of a compressed interest rate differential. Second, Beckmann (2017) presented evidence that recent debt relief measures for borrowers in some CESEE countries have raised households' expectations of future government interventions and significantly increased demand for foreign currency loans.

From a financial stability point of view, credit developments and potential interactions between supply-side and demand-side factors should be monitored closely

in the current environment of compressed interest rate differentials in order to detect a possible re-emergence of foreign currency lending to unhedged borrowers with insufficient risk-bearing capacities. If necessary, associated risks to financial stability should consequently be addressed via macro-prudential measures and micro-prudential supervision of banks' lending practices.

Finally, euroization in SEE, or, more specifically, households' persistent preference for saving in cash and/or foreign currency, is grounded in a lack of trust – trust in the local currency, trust in banks and trust in public institutions in general. In sum, this suggests that a strategy to reduce euroization should rest on the following three key pillars: (1) addressing the permanent component of euroization via fostering trust in institutions and sustaining macroeconomic stability, (2) providing incentives for saving in the local currency once a track record of macroeconomic sustainability has been established, and (3) implementing a comprehensive policy mix of macro- and microprudential measures that help to maintain financial stability.

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