

# Current risks in the CESEE residential property market: evidence from the OeNB Euro Survey

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*After a pronounced boom-bust cycle during the global financial crisis, house prices in Central, Eastern and Southeastern Europe (CESEE) are now recovering but still remain below precrisis levels. Evidence from the OeNB Euro Survey of households shows that every third household considers finding a new residence difficult, with the perceived difficulty being particularly high in areas of low bank penetration and among low income households and households whose highest level of education is primary education. Foreign currency mortgage holders are found to be more frequently in arrears in Hungary and Serbia than in other CESEE countries; the exchange rate and interest rate differential risks of foreign currency mortgages have increased in several countries, however. Loan arrears are high in general, and households in arrears are at their financial limits. At the same time, demand for housing loans is found to be increasing again.*

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Strong fluctuations of house prices can have major repercussions on the financial position of households and eventually on the risk-bearing capacity of borrowers. Cesa-Bianchi et al. (2015) show that house prices in emerging markets grow faster and are more volatile than in advanced economies, and that global liquidity shocks have a stronger impact on house prices and consumption in emerging markets. During the crisis, Central, Eastern and Southeastern Europe (CESEE)<sup>2</sup> experienced a pronounced boom-bust cycle of both house prices and credit growth. Empirical evidence shows that the rise of house prices in CESEE in the run-up to the crisis had no longer been justified by economic fundamentals, which eventually resulted in a sharp price correction (Ciarlone, 2012; Huynh-Olesen et al., 2013; Égert and Mihaljek, 2007). Recently, house prices in CESEE have recovered but have not reached precrisis levels.<sup>3</sup>

Prior to the crisis, the overall improvement of borrowing conditions strongly pushed up demand for housing loans in CESEE,<sup>4</sup> which was particularly amplified by funding provided by foreign banks to their local subsidiaries (Huynh-Olesen et al., 2013). Given the massive inflow of capital to CESEE, foreign currency lending (in particular denominated in euro and Swiss franc) became a widespread phenomenon that also boosted the asset price boom (ECB, 2012).

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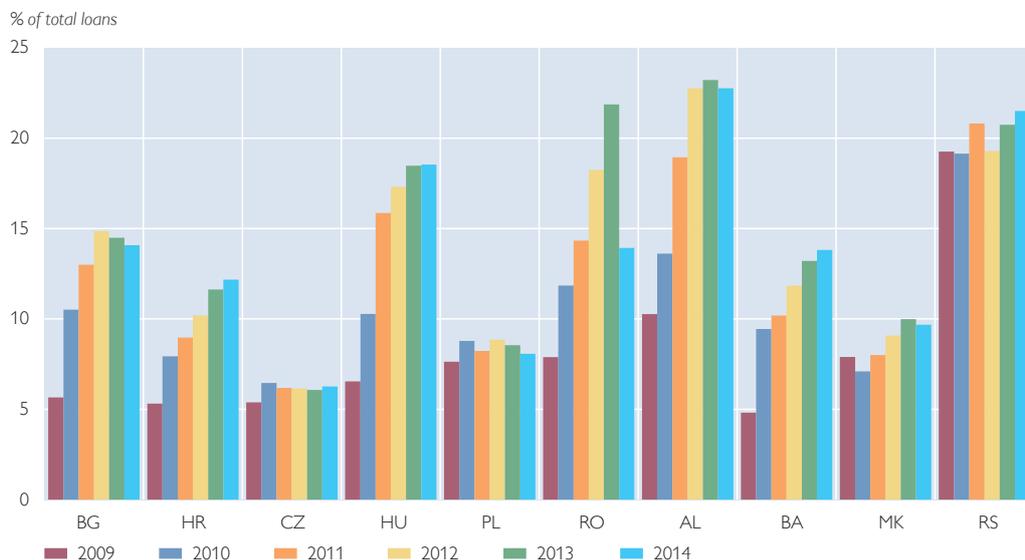
<sup>2</sup> In this paper, CESEE refers to the countries covered by the OeNB Euro Survey: Albania, Bosnia and Herzegovina, FYR Macedonia, Bulgaria, Croatia, Czech Republic, Hungary, Poland, Romania and Serbia and, in contrast to other definitions, does not include those countries in the region that use the euro as legal tender.

<sup>3</sup> See annex for recent data on house price and credit growth developments in CESEE.

<sup>4</sup> The share of housing loans in GDP now ranges from about 5% in Bosnia and Herzegovina to 21% in the Czech Republic. Shares are much higher than in the earlier 2000s but they are still well below ratios observed in Western European economies. In most CESEE countries, housing loans play a more important role than consumption loans and lending for other purposes.

Chart 1

## Nonperforming loans in CESEE



The CESEE economies were hit particularly hard by the global financial crisis, with private consumption declining on average in seven out of ten countries and real income stagnating or even decreasing between 2009 and 2013 (EBRD, 2011; Corti and Scheiber, 2014). In combination with the house price bust, this has left most CESEE countries with a high share of nonperforming loans (NPLs) in total loans (chart 1).<sup>5</sup>

Against this background, this paper interlinks developments in CESEE residential property markets as seen from a macroeconomic perspective with unique evidence from the OeNB Euro Survey of CESEE households. In particular, we address the following questions: What are the most prominent structural features of CESEE residential property markets and how are these related to demand for housing and, more specifically, housing finance? What are the characteristics of current mortgagors and of existing mortgages, and how vulnerable are mortgagors? Finally, looking at the high percentage of NPLs, we examine which households are in loan arrears and provide some indication on the chances for an improvement in the financial situation of mortgage-holding households.

The next section describes the data source used, i.e. OeNB Euro Survey data. Section 2 discusses specific structural aspects of CESEE housing markets which impact the demand for housing finance. Section 3 zooms in on housing finance, analyzing the risk-bearing capacity of current mortgagors and the outlook for resolving NPLs. In the last section, we summarize our results and discuss some policy implications.

<sup>5</sup> For most countries, data on NPLs are only available as the NPL share in total loans, while for Croatia, Hungary, Poland and Serbia disaggregated data are available as well. Except in Hungary, NPLs of households have a lower share in total loans than NPLs of nonfinancial corporations.

## 1 The OeNB Euro Survey

The data source we use is the OeNB Euro Survey of households, which has been carried out on commission of the OeNB in Albania, Bosnia and Herzegovina, Bulgaria, Croatia, the Czech Republic, FYR Macedonia, Hungary, Poland, Romania and Serbia on a semiannual basis since fall 2007. The latest survey wave took place in fall 2014. In each survey wave, a representative sample of 1,000 individuals is polled in each country in a multi-stage stratified random sampling procedure. The sample is representative of the country's population with regard to age, gender and region. The target population comprises residents aged 15 years or older. Interviews are carried out face-to-face at the respective respondent's home. The survey collects information on households' loan and saving decisions as well as their economic sentiments and expectations and focuses on the role of the euro in households' portfolios. We specifically utilize the data collected during the survey wave of fall 2014, which included a number of questions related to the housing market and, in particular, to housing finance.<sup>6</sup>

## 2 Housing markets in CESEE

Generally, CESEE housing markets are strongly heterogeneous, given the different strategies countries followed during the transition process (OECD, 2002). However, they also exhibit some common characteristics.<sup>7</sup> One well-known but striking feature of residential property markets in CESEE is the dominance of owner-occupied housing: on average 80% of households (according to the OeNB Euro Survey) own their primary residence<sup>8</sup>, compared with 67% in the euro area (according to Eurostat). Mostly, the high levels of owner-occupied housing in CESEE go back to the privatization or restitution process at the beginning of transition (for more details, see Hildebrandt et al., 2012) but they also result, in part, from a lack of rental housing (Amann and Bezgachina, 2013). In addition, mortgage financing is not very widespread in general, but more prevalent in the CESEE EU Member States than in the Western Balkan countries, possibly because credit markets are more developed there.

The high degree of homeownership in CESEE prompts the question whether there is actually any significant demand for housing and housing finance in the region. While the OeNB Euro Survey shows that most respondents are very satisfied with their current residence, housing deprivation<sup>9</sup> is considerably higher in CESEE than for the EU-28 average (Eurostat, 2012). The low quality of the CESEE housing stock is largely attributable to underinvestment during socialist times and also to the high share of poor homeowners who obtained their homes in the course

<sup>6</sup> Further details on the OeNB Euro Survey are summarized by Brown and Stix (2015), and selected results can be found at [www.oenb.at/en/Monetary-Policy/Surveys/OeNB-Euro-Survey.html](http://www.oenb.at/en/Monetary-Policy/Surveys/OeNB-Euro-Survey.html).

<sup>7</sup> For an overview of the main structural features of housing markets, refer to Hildebrandt et al. (2012), Mihaljek and Subelyte (2014) and IIBW (2013).

<sup>8</sup> All averages for the entire sample of countries included in the Euro Survey are weighted by sampling weights and each country's population size.

<sup>9</sup> According to Eurostat, severe housing deprivation is defined as the percentage of the population living in a home which is considered overcrowded while also exhibiting at least one of a set of specific housing deprivation measures. Housing deprivation is a measure of poor amenities and is calculated by referring to homes with a leaking roof, no bath or shower and no indoor toilet, or a home that is considered too dark. For more details, see [ec.europa.eu/eurostat/statistics-explained/index.php/Glossary:Severe\\_housing\\_deprivation\\_rate](http://ec.europa.eu/eurostat/statistics-explained/index.php/Glossary:Severe_housing_deprivation_rate).

Table 1

**Demand elasticity of homeowners, mortgagers and non-owners**

Answers to the Euro Survey question: "I strongly prefer to stay in the area of the town/village where I currently live and would cut back on other expenses rather than consider a move."

	Homeowners	Mortgagers	Non-owners	Null hypothesis: a=b	Null hypothesis: a=c
	( a )	( b )	( c )		
	%			p-value	
Bulgaria	63	64	33	0.90	0.00
Croatia	50	42	35	0.01	0.00
Czech Republic	43	48	31	0.29	0.00
Hungary	41	36	22	0.64	0.00
Poland	41	38	34	0.58	0.18
Romania	54	42	33	0.07	0.00
Albania	53	77	45	0.09	0.89
Bosnia and Herzegovina	42	33	32	0.33	0.00
FYR Macedonia	50	54	41	0.61	0.10
Serbia	54	49	37	0.60	0.01

Source: OeNB Euro Survey, fall 2014.

Note: EU countries and non-EU countries in alphabetical order.

of the privatization or restitution process but are not able to cover maintenance costs (IIBW, 2013). This view is substantiated if one compares the socioeconomic characteristics of homeowners with those of non-owners. We find that the percentage of unemployed respondents is higher among homeowners.<sup>10</sup>

Sinai and Souleles (2005) argue that if the owner-occupation rate is high (and the rental rate low), a large share of the population is well-hedged against house price volatility. Indeed, apart from featuring high ownership rates, CESEE housing markets are also marked by low transaction levels. According to OeNB Euro Survey evidence, between 5% (Hungary) and 29% (FYR Macedonia) of respondents have never moved house in their lives.

Table 1 suggests that demand elasticity is also lower among homeowners than among non-owners. Interestingly, in this respect there is no significant difference between homeowners and mortgagers. However, macrodata evidence suggests that the stabilizing effect of high ownership rates is small.

### 3 Housing finance

While housing loans are higher than consumption loans (Lahnsteiner, 2013), the percentage of CESEE households holding a mortgage is fairly low at 5% on average across the countries covered by the OeNB Euro Survey – in particular when compared with the euro area, where this rate stands at 23% (ECB, 2013). As discussed in the introduction, foreign currency loans are widespread in CESEE. On average, 35% of households with a mortgage have a foreign currency mortgage. In contrast to Austria, where foreign currency loans are almost exclusively used to finance real estate (Albacete and Lindner, 2015), foreign currency loans in CESEE are also used to finance consumption: 44% of households with a foreign currency loan

<sup>10</sup> This result may also indicate that the residential property market puts a strain on labor mobility, but investigating this question in more detail is beyond the scope of this paper.

Chart 2

### Mortgages in CESEE



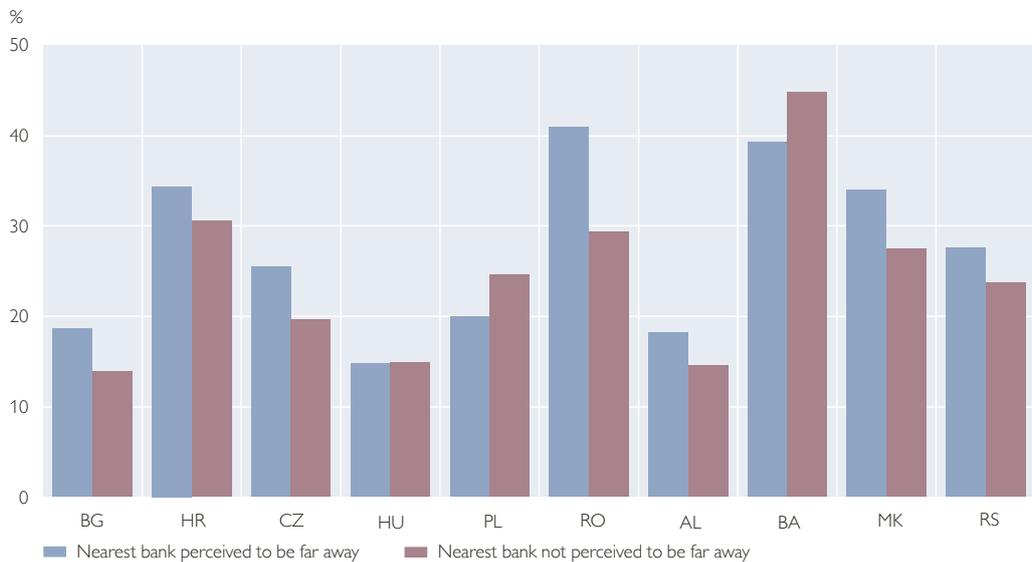
Source: OeNB Euro Survey, 2010–14.

hold this loan for consumption purposes, 56% hold it to finance a house or apartment.

The low participation in taking out housing credit in CESEE may partly be explained by the high percentage of homeownership. However, on average every fourth respondent states that it would be difficult to find a new apartment or house if they wanted to move. Chart 3 shows that the perceived difficulty is particularly high in areas with low bank branch density (except in Bosnia and Herzegovina). Respondents with a low educational level, with low income or unemployed respondents are also significantly more likely to say that finding a new home is difficult.

Chart 3

### Perceived difficulty to find a new residence



Source: OeNB Euro Survey, fall 2014.

Note: Results are based on the Euro Survey question "Please tell me whether you agree or disagree with the following statement: In my country, it is easy to find a new apartment/house if you want to move." Values show the percentage of respondents who disagree or strongly disagree with this statement. The perceived bank distance is based on the Euro Survey question "Please tell me whether you agree or disagree with the following statement: For me it takes quite a long time to reach the nearest bank branch."

Turning to demand for mortgages itself (chart 4), we observe that the share of households that applied for a mortgage between 2000 and 2014 differs considerably between countries. Linking mortgage applications with information on perceived bank distance, we find that in Bulgaria, Croatia and Romania the percent-

Chart 4

### Mortgage applications and rejections in CESEE since 2000



Source: OeNB Euro Survey, fall 2013.

Note: Results are based on the following Euro Survey questions: "Since the year 2000, have you or any member of your household ever contacted a bank with a view of obtaining a loan?" If respondents reply "yes," the following question is asked: "What was the purpose of the loan(s) for which you contacted your bank?" Possible answers are: "To finance a house or apartment/for consumption goods/to finance a car/for education/for other purposes." The chart only shows the responses of respondents who answered "to finance a house or apartment." Loan rejection rates are based on the question: "Since the year 2000, has a bank ever discouraged you from applying for a loan or ever refused a loan?"

age of mortgage applications is significantly lower among households in areas with low bank penetration.

Chart 4 also shows the share of households whose mortgage application was rejected, with the rejection rate for households that applied for a loan ranging from 7% in Poland and Bosnia and Herzegovina to 18% in FYR Macedonia. In line with expectations based on macrodata evidence, the rejection rate is found to have increased significantly after 2008 (from an average of 9% to 18%). Rejection rates are particularly high among respondents with only primary education, those with low incomes, and unemployed respondents. Together with the evidence on the perceived difficulty of finding a new home, this suggests that residential property

Table 2

### Socioeconomic characteristics of mortgagers in CESEE

	Homeowners	Mortgagers	Non-mortgagers
% of respondents			
<b>Household size</b>			
One person	15	7	15
Two persons	31	23	32
Three or more persons	54	70	53
At least one child living in the household	32	55	30
<b>Monthly household income after taxes</b>			
1–33 income percentile	28	16	29
34–66 income percentile	24	27	24
67–100 income percentile	23	36	22
Information on income refused	25	21	26

Source: OeNB Euro Survey, 2011–14.

market policies should address possible obstacles to access to housing finance in particular for the socioeconomically vulnerable.

At the same time, this observation also indicates that when granting mortgage loans, banks selected households with better risk-bearing capacities. This is confirmed in table 2, which compares mortgagors to other homeowners and shows that mortgages, on average, are held by larger, higher-income households in urban areas.<sup>11</sup> Comparing households holding a foreign currency mortgage to households holding a local currency mortgage, we do not find that the basic indicators of risk-bearing capacity differ significantly.<sup>12</sup>

As to mortgage characteristics, the Euro Survey shows that the majority of mortgages in CESEE EU Member States were taken out before the global financial crisis, unlike in the Western Balkans, where the majority of mortgages were taken out after 2008. The latter may be related to the fact that these countries were hit by the global financial crisis slightly later than more advanced economies in CESEE. The same regional division holds when we look at maturities, which are much shorter in the Western Balkans. Households' ability to repay mortgages, of course, also depends on the characteristics of the mortgage itself. Table 3 shows that in four out of ten countries the majority of mortgagors hold mortgages with fixed interest rates; in the remaining countries, the majority of mortgagors are exposed to interest rate changes.

Combining the information on the year loans were taken out with data on average interest rates from the respective national central banks, table 3 also shows that the initial interest rates on mortgages denominated in local currency ranged from 5% in the Czech Republic to 22% in Serbia, compared with a maximum of 9% in FYR Macedonia for mortgages denominated in foreign currency. The bottom panel of table 3 shows that at the time loans were taken out the interest rate differential between local and foreign currency loans was sizeable – e.g. up to 18 percentage points in Serbia. However, in all countries surveyed, the interest rate differential has decreased; in Romania it is now zero and in Bulgaria it is even negative.<sup>13</sup> Thus, for holders of foreign currency loans with a flexible exchange rate, the cost advantage has declined.

In addition to declining interest rate advantages, foreign currency borrowers in some CESEE countries had to face substantial depreciations of their local currencies. Table 4 shows the percentage change in the exchange rate for euro-denominated loans between the year the loan was taken out and 2014. Even though table 4 does not take into account swings in the exchange rate between the year the loan was taken out and 2014, which may also have been to the advantage of mortgagors, it shows that on average the exchange rate is now less advantageous for borrowers than at the time the loans were taken out.

<sup>11</sup> *Income, in particular, is correlated with education and labor market status – mortgagors are more frequently employed and have secondary or tertiary education (detailed results are available from the authors upon request).*

<sup>12</sup> *This is in line with Beckmann et al. (2015), who show that in terms of socioeconomic characteristics the most pronounced differences exist between creditors of domestically owned banks and creditors of foreign-owned banks. Detailed results are available from the authors upon request.*

<sup>13</sup> *This calculation does not take into account interest rate swings between the year the loan was taken out and 2014.*

Table 3

**Interest rates and interest rate differential**

Type of interest rate	Fixed rate loans	Variable rate loans	Number of observations	
<i>% of respondents holding a mortgage</i>				
Bulgaria	63	38		106
Croatia	41	59		307
Czech Republic	36	63		255
Hungary	35	65		266
Poland	55	45		92
Romania	50	50		104
Albania	81	19		79
Bosnia and Herzegovina	80	18		154
FYR Macedonia	63	37		113
Serbia	48	50		56
Initial interest rate	Median rate		Maximum rate	
	Local currency loans	Euro-denominated loans	Local currency loans	Euro-denominated loans
<i>%</i>				
Bulgaria	8.305	7.845	10.086	8.6
Croatia	10.033	5.468	15.455	7.742
Czech Republic	4.992	..	5.514	..
Hungary	10.952	4.467	13.002	7.813
Poland	6.59	5.045	8.032	6.948
Romania	8.726	6.393	11.185	6.69
Albania	12.537	7.995	13.671	8.442
FYR Macedonia	13.013	8.979	14.303	9.397
Serbia	21.64	5.62	21.69	5.62
Interest rate differential local versus foreign currency loan	At the time the loan was taken out			In 2014
	Minimum	Median	Maximum	Median
<i>Percentage points</i>				
Bulgaria	0.37	0.93	1.49	-0.43
Croatia	3.59	4.78	7.71	4.37
Hungary	2.14	5.55	8.81	1.06
Poland	0.10	1.08	2.52	2.13
Romania	2.31	2.74	5.75	0.00
Albania	3.40	5.08	6.66	1.84
FYR Macedonia	2.61	3.71	5.32	2.61
Serbia	12.01	16.02	17.72	11.12

Source: OeNB Euro Survey, national central banks.

Note: The percentage of variable versus fixed rate loans is based on Euro Survey results. The initial interest rate is obtained by combining information from the Euro Survey about the year in which the loan was taken out with data from the respective national central banks on the interest rate of housing loans. The interest rate differential is calculated only for foreign currency loans as the difference between the rate on local currency loans minus the rate on foreign currency loans (obtained from the national central banks) at the time the loan was taken out and in 2014. Central bank data on interest rates are not always available for the year in which the loan was taken out. In such cases, the earliest available interest rate is used. Bosnia and Herzegovina is excluded as interest rate data have only been available since 2012. EU countries and non-EU countries in alphabetical order.

Amid unfavorable developments for holders of foreign currency mortgages, however, CESEE households in general were hit particularly hard by the global financial crisis, with private consumption declining on average in seven out of ten countries and real income stagnating or even decreasing between 2009 and 2013 (EBRD, 2011; Corti and Scheiber, 2014). Chart 5 illustrates that the effect of the

Table 4

### Exchange rate developments affecting households holding mortgages in euro

	Mean	Minimum	Maximum
	Percentage change since mortgage was taken out		
Croatia	3.20	-0.12	12.22
Hungary	20.13	10.04	24.46
Poland	7.03	4.02	10.61
Romania	20.74	-0.31	123.08
Albania	8.47	-1.61	14.06
FYR Macedonia	0.41	0.07	0.71
Serbia	27.82	3.69	60.74

Source: OeNB Euro Survey.

Note: The values show the percentage change in the average annual exchange rate from the year the euro-denominated loan was taken out to 2014. Positive values indicate a depreciation of the local currency against the euro. Bulgaria and Bosnia and Herzegovina are not shown as they operate a currency board. In the Czech Republic, there are no euro-denominated mortgages.

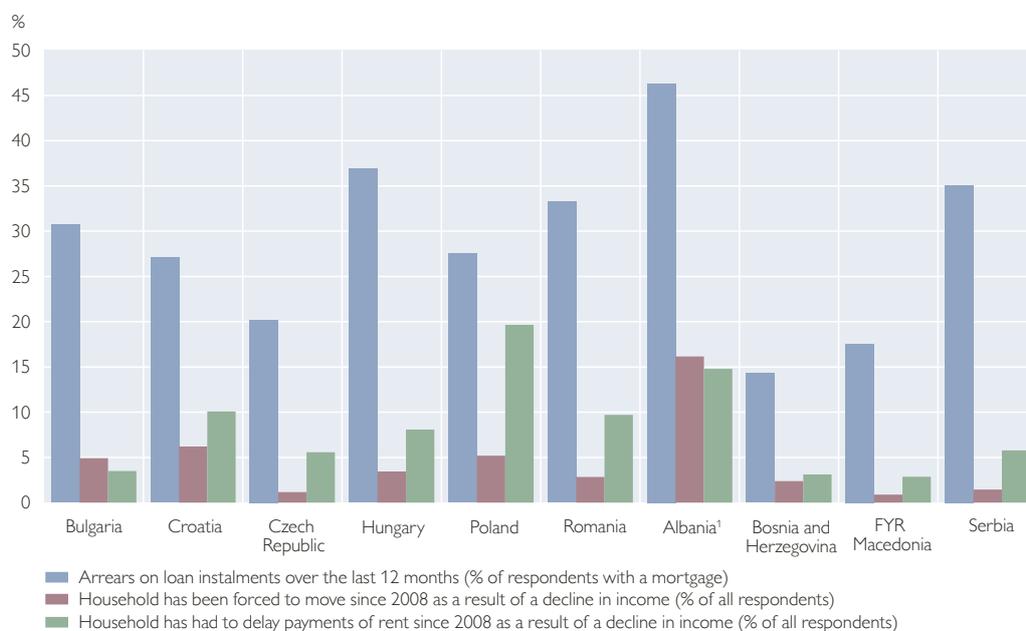
crisis on CESEE households also affected the housing market. Looking at all survey respondents, including those who do not hold a mortgage, between 1% (FYR Macedonia) and up to 16% (Albania) state they have had to move house since 2008, and up to 20% (Poland) of respondents say they have been late with rent payments as a result of a decline in income.

Regarding mortgages, survey results on loan arrears are, of course, not directly comparable to aggregate results on NPLs (chart 1). Chart 5 shows that up to 29% (Hungary) of respondents with a mortgage had been in arrears on loan repayments during the

year prior to the Euro Survey interview. Unlike the analysis of aggregate data, our analysis of survey results also shows whether repayment difficulties are higher for holders of foreign currency mortgages. We find that loan arrears on mortgages in foreign currency are significantly higher than loan arrears on local currency mort-

Chart 5

### Households' financial difficulties



Source: OeNB Euro Survey.

<sup>1</sup> For Albania, data on arrears are for fall 2014 only.

Note: Data on arrears represent the average of values from fall 2010 to fall 2014. Data on the categories "forced to move" and "delayed rent payment" are for fall 2013. Results are based on the following Euro Survey questions regarding loan arrears: "Has your household been in arrears on loan repayments once or more during the last 12 months on account of financial difficulties?" Values show the percentage of mortgagors who replied "Yes, once" and "Yes, twice or more." For the phrasing of the remaining two questions, see notes to table 5. EU countries and non-EU countries in alphabetical order.

Table 5

**Mortgagers: financial situation and outlook**

Mortgagers...	In arrears	Not in arrears
	% of mortgage-holding households	
...reduced the amount spent on everyday expenses	89	79
...reduced or postponed larger expenditures	87	70
...reduced money set aside for savings	59	55
...utilized savings or sold possessions	55	33
...delayed payment of other bills	67	17
...received financial help from family or friends	48	22
...borrowed money from another source	33	11
...increased working hours or took up additional work	47	29
...had to take more than seven financial measures to cope with the crisis	48	9
...could borrow a significant amount from family/friends	43	52
...expect financial situation of their household to improve	42	46

Source: OeNB Euro Survey.

Note: Results are based on the Euro Survey question "Since the outbreak of the economic crisis in 2008, has your household had to take any of the following measures as a result of a decline in income or other economic difficulty? Please name all that apply." Respondents could choose from a list of 15 different possible reactions. Values given under "...had to take more than seven financial measures to cope with the crisis" represent the percentage of respondents who named more than 7 reactions out of the total of 15. The category "...could borrow a significant amount from family/friends" is based on the question "Generally speaking, would you have the possibility to borrow a significant amount of money from the family or a friend?" Values represent the percentage of respondents who answered "Yes, almost certainly" or "Yes, probably." The category "...expect financial situation of their household to improve" is based on the following question: "Please tell me whether you agree or disagree with the following statement: Over the next 12 months, I expect the financial situation of my household to get better." Values represent the percentage of respondents who agree with this statement.

gages in Serbia and Hungary; in the remaining countries there is no significant difference.

However, while we find that the percentage of mortgages held with foreign-owned banks is roughly equal to that held with domestically owned banks (34% versus 35%), we find that arrears on mortgages held with domestically owned banks are significantly higher (27% versus 23%). This is in line with results presented by Beckmann et al. (2015) showing that foreign-owned banks have debtors with higher incomes.

One central question in the research on mortgage arrears is whether households strategically default on their mortgage (e.g. Guiso et al., 2013), especially when they expect that law enforcement is weak or that the government will bail them out. Table 5 provides descriptive evidence on the severity of households' loan arrears and expected income developments. It shows that mortgagers in loan arrears are significantly worse off than mortgagers who are not in arrears. At the same time, they do not expect their income situation to improve. According to the literature, households that default strategically will usually be able to meet other payments and also have access to informal sources of borrowing (Anderson et al., 2013). The descriptive evidence presented in table 5 suggests that in CESEE, mortgagers in loan arrears are genuinely unable to pay and that there is little indication of strategic default.

#### 4 Conclusion

In this paper, we provide an update of macroeconomic developments in the residential property markets in Central, Eastern and Southeastern Europe (CESEE), complemented with unique evidence from the OeNB Euro Survey about CESEE

households' assessment of their current housing situation, demand for housing loans and the risk-bearing capacity of households holding a mortgage.

Many CESEE countries went through a pronounced boom-bust cycle of house prices during the financial crisis. Recently, there has been some indication that house prices are recovering but so far they have not returned to precrisis levels. Since the global financial crisis, housing loan growth has been very low or even negative in some CESEE countries.

Evidence from the OeNB Euro Survey confirms that the rate of homeownership remains high in CESEE and that the majority of CESEE households are satisfied with their current residence. At the same time, almost every third respondent states that finding a new residence would be difficult. The perceived difficulty of finding a new residence is particularly high in areas with lower bank penetration. Despite the strong precrisis growth in mortgage finance, participation in mortgages remains relatively low in CESEE compared with the euro area countries. This may indicate a need for improving access to loans in order to meet the demand for housing. However, better access to loans should be complemented by governments taking steps to improve the regulation of housing markets and housing finance systems.

We also find that the perceived difficulty in finding a new residence is particularly high among low income households and those whose highest level of education is primary education. Mortgage rejection rates are also particularly high among this group. Thus, other measures – especially with regard to the rental market – may be needed to address the demand for housing of socioeconomically vulnerable households. Supporting the development of the rental market may also help improve labor mobility, which is particularly important for the Western Balkan countries, which post very high (structural) unemployment rates.

Regarding the stock of existing mortgages, we find that mortgagors, in general, are more creditworthy and appear better equipped to bear adverse shocks. While the share of foreign currency loans remains high, however, it is now declining in the majority of CESEE countries following policy measures to curb foreign currency lending. We find that the risks emanating from both the exchange rate and the interest rate differential for households holding a foreign currency mortgage have increased. At the same time, the percentage of loan arrears is higher among holders of foreign currency mortgages than among holders of local currency mortgages only in Hungary and Serbia.

In general, the ratio of nonperforming loans (NPLs) to total loans is high and increasing in most countries analyzed. Looking in more detail at the financial position of households in loan arrears, we do not find evidence that households are defaulting strategically. Instead, we find that they are at their financial limits, and that focusing on restructuring foreign currency loans only will not suffice to resolve the NPL problem.

This is particularly important as survey evidence shows that demand for mortgages is growing again in CESEE. If banks do not meet this rising demand, households may resort to informal, unregulated sources of borrowing.

## References

- Albacete, N. and P. Lindner. 2015.** Foreign currency borrowers in Austria – evidence from the Household Finance and Consumption Survey. In: *Financial Stability Report 29*. 90–109.
- Amann, W. and K. Bezgachina. 2013.** Implications of housing privatization for Europe. In: *Housing Finance International – The Quarterly Journal of the International Union of Housing Finance*. Winter.
- Anderson, F., S. Chomsisengphet, D. Glennon and F. Li. 2013.** The changing pecking order of consumer defaults. *Journal of Money, Credit and Banking* 45(2–3). 251–275.
- Beckmann, E., A. Roitner and H. Stix. 2015.** A Local or a Foreign Currency Loan? – Evidence on the Role of Loan Characteristics, Preferences of Households and the Effect of Foreign Banks. *Focus on European Economic Integration Q1/15*. 24–48.
- Brown, M. and H. Stix. 2015.** The Euroization of Bank Deposits in Eastern Europe. *Economic Policy* 30(81). 95–139.
- Cesa-Bianchi, A., L. F. Cespedes and A. Rebucci. 2015.** Global liquidity, house prices and the macroeconomy: evidence from advanced and emerging economies. Working Paper No. 522. Bank of England.
- Ciarlone, A. 2012.** House price cycles in emerging economies. Banca d'Italia Working Paper 863.
- Corti, M. and T. Scheiber. 2014.** How Did CESEE Households Weather the Crisis? Evidence from the OeNB Euro Survey. In: *Focus on European Economic Integration Q2/14*. 76–87.
- EBRD. 2011.** Transition Report 2011: Crisis and Transition – The People's Perspective. London.
- ECB. 2012.** Financial stability challenges for EU acceding and candidate countries: Making financial systems more resilient in a challenging environment. ECB Occasional Paper 135. September.
- ECB. 2013.** The Eurosystem household finance and consumption survey. Results from the first wave. *Statistics Paper Series No 2*. April.
- Égert, B. and D. Mihaljek. 2007.** Determinants of house prices in central and eastern Europe. BIS working paper No 236.
- Guiso, L., P. Sapienza and L. Zingales. 2013.** The determinants of attitudes toward strategic default on mortgages. *The Journal of Finance* 68(4). 1473–1515.
- Hildebrandt, A., R. Martin, K. Steiner and K. Wagner. 2012.** Residential Property Markets in CESEE EU Member States. In: *Focus on European Economic Integration Q1/12*. 8–30.
- Huynh-Olesen, D., K. Steiner, A. Hildebrandt and K. Wagner. 2013.** Residential Property Prices in Central, Eastern and Southeastern European Countries: The Role of Fundamentals and Transition-Specific Factors. In: *Focus on European Economic Integration Q2/13*. 52–76.
- IIBW. 2013.** Housing review 2013 on 23 countries in the Europe and Central Asia region. IIBW Institute for Real Estate, Construction and Housing, Vienna. Austria.
- Lahnsteiner, M. 2013.** Private Sector Debt in CESEE EU Member States. In: *Focus on European Economic Integration Q3/13*. 30–47.
- Mihaljek, D. and A. Subelyte. 2014.** Do we understand what drives house prices? In: E. Nowotny et al. (eds.). *Financial cycles and the real economy: lessons for CESEE countries*. Edward Elgar. 147–170.
- OECD. 2002.** Housing finance in transition economies. Paris: OECD.
- Sinai, T. and N. Souleles. 2005.** Owner-occupied housing as a hedge against rent risks. *Quarterly Journal of Economics* 120. 763–789.

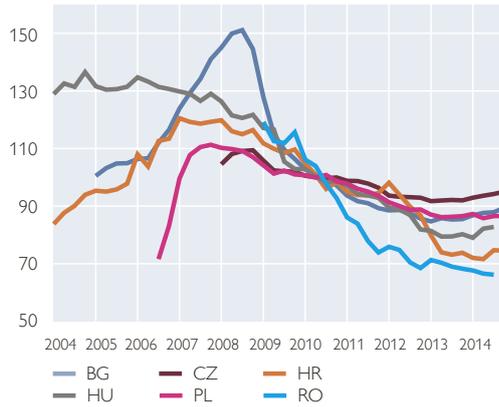
Annex

Chart A1

House prices in CESEE (in real terms)

CESEE EU Member States

Index, 2010=100



Western Balkan countries

Index, 2010=100



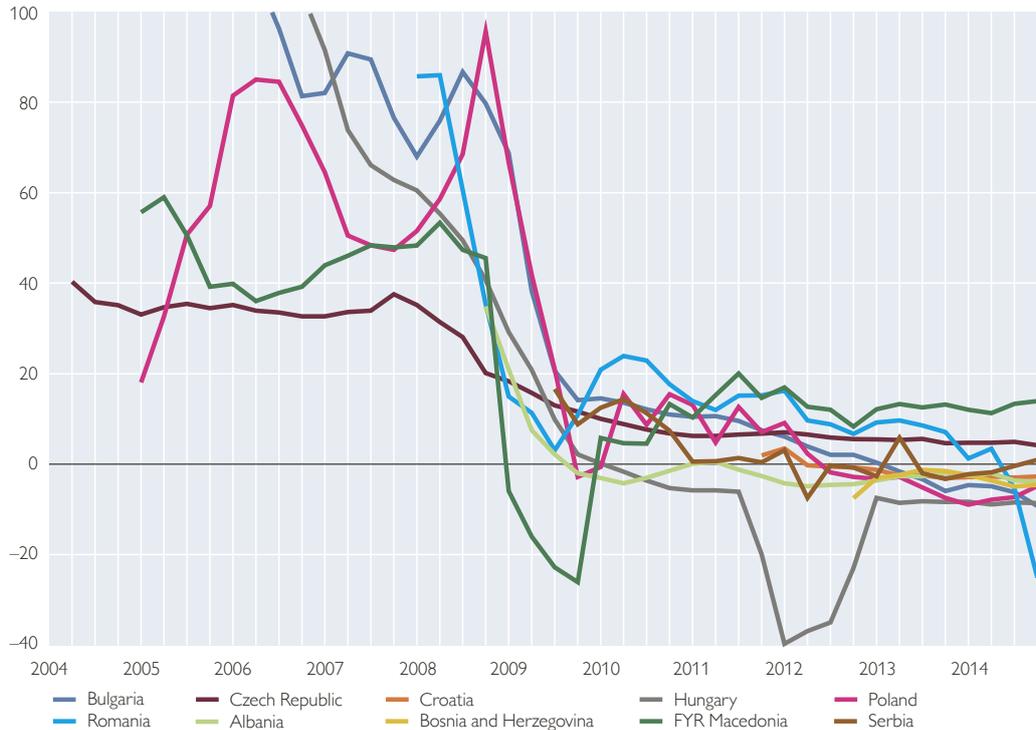
Source: BIS, Eurostat, FHB ([www.fhbindex.com/FHB-Index](http://www.fhbindex.com/FHB-Index)), national central banks, National Mortgage Insurance Corporation ([www.nkosk.rs](http://www.nkosk.rs)), wiiw. For Albania, data are not publically available.

Note: House price data cover different areas. Bulgaria: large cities; Croatia, Czech Republic, Hungary and Romania: whole country; Poland: large and medium-sized cities; Bosnia and Herzegovina: capital city (three city municipalities) and three other regional centers (Tuzla, Mostar and Zenica); FYR Macedonia and Serbia: capital city.

Chart A2

Growth of housing loans in CESEE

% , exchange rate adjusted



Source: ECB, national central banks, OeNB.