

## OeNB REPORTS

# CESEFF

## PROPERTY MARKET REVIEW

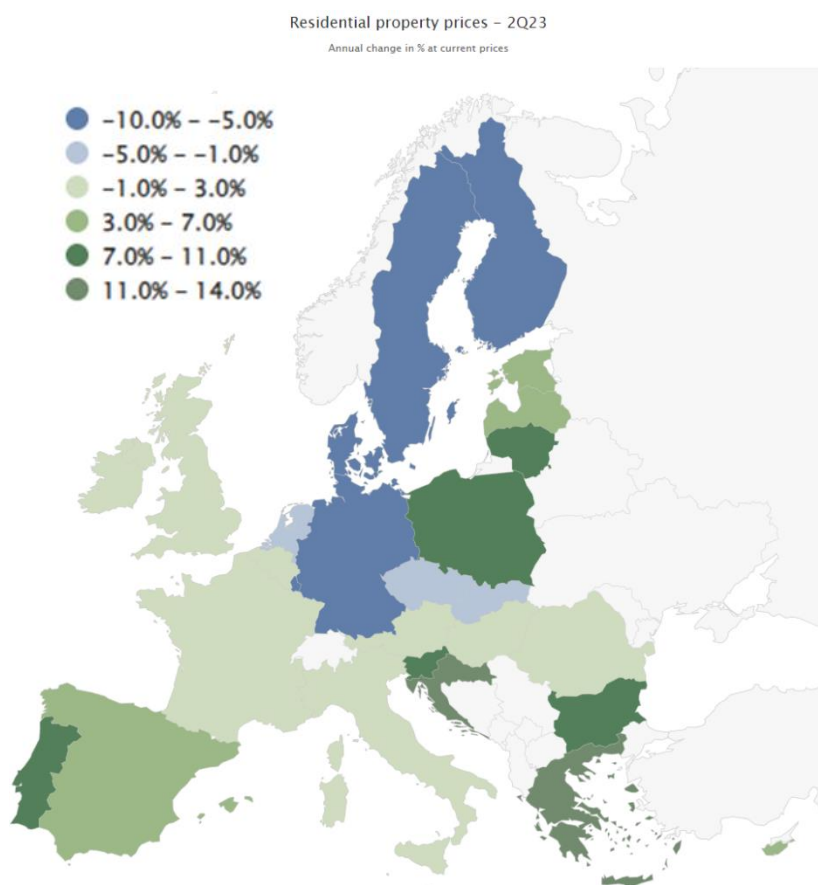


# CESEE Property Market Review

## Housing market trends in the first half of 2023

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Housing markets in Central, Eastern and Southeastern Europe (CESEE) visibly cooled down in the first half of 2023. The nominal annual growth of house prices (GDP-weighted average) moderated to around 6% in the first and 4% in the second quarter of 2023, compared to full-year growth of more than 13% in 2022. If we look at the financing side, we see that housing loan growth also weakened in most CESEE countries in the first half of 2023. The reasons for this cooling appear to be more or less the same everywhere: Surging inflation came along with rising interest rates that made debt financing more difficult. Additionally, households face heightened (economic) uncertainty that may have caused them to reassess their plans to buy a house. Some households may have adopted a wait-and-see position, expecting house prices to moderate further. More favorable alternative investment options could also be a factor that has caused households to be more reluctant about buying a house at this stage. For the construction sector, weaker demand for housing appears to be one of the key concerns. The construction sector is also burdened by overall high costs of construction and accelerated growth of financing and refinancing costs. From a structural point of view, many CESEE countries face a considerable shortage of housing, particularly of adequate housing. Regarding financial stability risks, the debt service capacity of many households, particularly those with a variable rate housing loan, might be stretched given still elevated inflation in most CESEE countries and the prospect of higher loan installments.



Source: ECB, Eurostat.

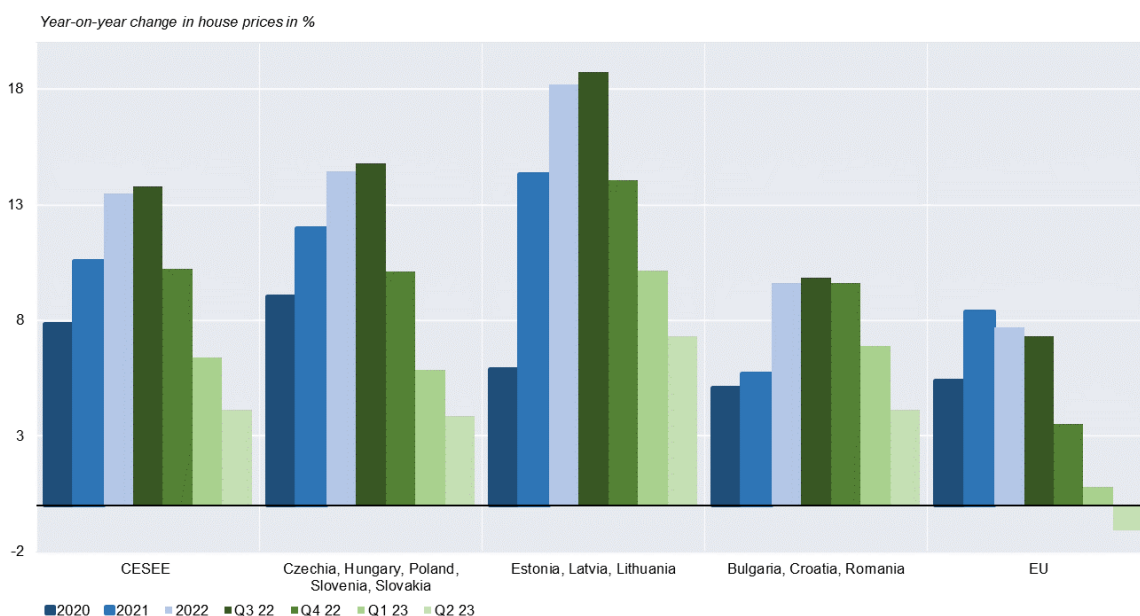
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Cutoff date for data: October 6, 2023.

## House prices moderated across CESEE

After strong growth of more than 13% in 2022, annual house price growth<sup>2</sup> in CESEE decelerated to 6.4% in the first quarter and further to 4.1% in the second quarter of 2023 (GDP-weighted average; see chart 1).<sup>3</sup> With growth below 4% in the second quarter of 2023, house price dynamics were weakest in the country group of Czechia, Hungary, Poland, Slovakia and Slovenia. Average growth was highest in the Baltic countries (7.3%, year on year), although it registered the strongest drop compared to the same period of 2022, falling by more than 14 percentage points. If we compare CESEE with the overall EU average – with CESEE accounting for 11 out of 27 EU countries – we find that average house price growth in CESEE continued to be higher than in the EU. Average house price growth in the EU turned negative in the second quarter of 2023 (–1.1%, year on year), largely driven by Germany, where house prices declined by almost 10%.

Chart 1

### Strong slowdown in house price growth in the first half of 2023



At the country level, annual house price growth weakened strongly in Czechia in the first and second quarter of 2023, dropping to 0.9% and –2.9%, respectively, after growth had amounted to almost 17% in 2022. In Slovakia, house price growth was also negative in the second quarter of 2023 (–1.9% annually), with annual growth coming down from 7.6% year on year in the first quarter of 2023 (following close to 14% in 2022). In Hungary and Romania, growth also moderated significantly but remained positive. In the other CESEE countries, growth eased to a lesser extent. In Poland, growth even gained some speed in the second quarter of 2023 (amounting to 7% year on year compared to 5.8% year on year in the first quarter of 2023).

<sup>2</sup> Based on data provided by Eurostat.

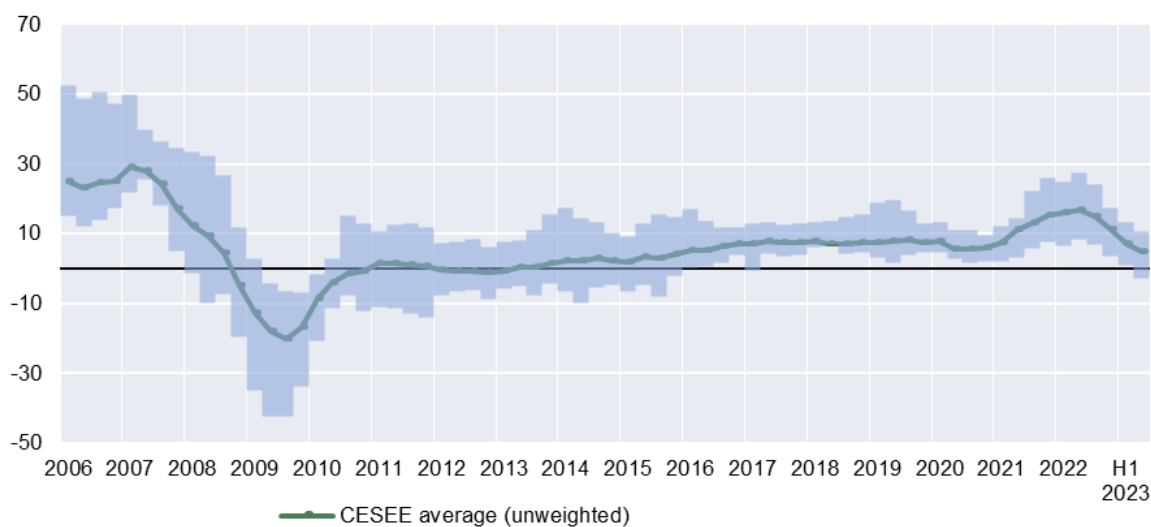
<sup>3</sup> House price growth rates (in nominal and real terms) as well as additional indicators relevant for housing market analysis are provided for all EU member states in the annex of the pdf version of this report.

In the current house price cycle, average (unweighted) house price growth in CESEE reached its peak in the second quarter of 2022, at almost 17% year on year, before growth started to come down. Moreover, the spread between highest and lowest growth rate narrowed by more than 5 percentage points over this period (chart 2). It is worth noting, in a longer-term perspective, that before the global financial crisis of 2007–2008 (GFC), average house price growth in CESEE was much higher and amounted to almost 30% year on year in the first quarter of 2007. Moreover, the spread remained relatively large for a long period of time and reached up to 40 percentage points during the GFC before price dynamics started to be more aligned from 2012 onward.

Chart 2

### Spread of house price growth in CESEE

Year-on-year change in %



Source: Eurostat, authors' calculations.

Note: Highest and lowest growth rate in CESEE and CESEE average (unweighted). Time series start: CZ and HR: Q1 09; LV, LT and SK: Q1 07; HU and SK: Q1 08; PL: Q1 11; and RO: Q1 10.

Housing sales also have responded fast to the changing economic environment. Looking at the number of housing transactions of newly built and existing dwellings, we observe that annual growth already turned negative in the course of 2022 in Bulgaria, Hungary, Poland and Slovenia<sup>4</sup>. In Hungary and Slovenia, housing transaction growth was reported to be around –30% year on year in the first and second quarter of 2023, respectively. In Bulgaria, housing sales slumped annually, falling by 8% in the first and 15% in the second quarter of 2023.

### In a nutshell: some key drivers of housing market moderation in CESEE<sup>5</sup>

As mentioned in our last report<sup>6</sup>, the outbreak of the war in Ukraine was an incisive event for the CESEE economies (and beyond) and marked a turning point in housing market dynamics as well. Housing demand has been dampened by various factors: Apart from less favorable financing conditions for housing loans because of increased inflationary pressure followed by monetary

<sup>4</sup> Data on housing sales are provided by Eurostat. The database, however, only covers the CESEE countries Bulgaria, Hungary, Poland (no data available for 2023) and Slovenia.

<sup>5</sup> Numerous studies analyze the determinants of house prices in greater depth. One recent study covers the EU countries (Cevik and Naik, 2022), another Slovakia (Kupkovič and Cesnak, 2023).

<sup>6</sup> See Property Market Review Q1-Q2/23, the OeNB's predecessor publication to CESEE Property Market Review (now published in the OeNB's new Reports series).

tightening (see next section), deteriorating economic prospects, an erosion of households' purchasing power and confidence losses are weighing on housing demand, among other factors. Moreover, the cost-of-living crisis has been affecting a large share of the population and households might simply not be able to afford buying a house. On the supply side, higher construction costs might deter (prospective) house builders from starting a building project (or might delay completion). Housing markets may also have lost steam because alternative investments are becoming more attractive. Of course, there are also other factors that tend to drive house prices up. High construction costs, for instance, are reflected in higher house prices. Moreover, country-specific factors play a role. In Croatia, for example, the EU country with the highest house price growth rate in the second quarter of 2023, a large share of house purchases, particularly on the Adriatic coast, were carried out by nonresidents, which also pushed up house prices. In addition, government support measures targeting the purchase of residential property are also decisively impacting housing market dynamics, which is also the case for other CESEE countries (see below).

### **First CESEE central bank began cutting interest rates again in September and October 2023**

The end of the low interest rate environment clearly marked a turning point for housing market dynamics in CESEE<sup>7</sup> but now the interest rate hiking cycle appears to have come to an end in the inflation-targeting CESEE countries. Narodowy Bank Polski was the first country to lower its key policy rate (in two steps in September and October 2023) from 6.75% to 5.75% against the background of a weakening economy and reduced inflationary pressure. Magyar Nemzeti Bank left its base rate unchanged but lowered its operational policy rate (i.e. on the one-day deposit tender) from 14% to 13% (and the one-day deposit standing facility rate from 12.50% to 12% at the end of September 2023).<sup>8</sup> The other two inflation-targeting countries – Czechia and Romania – have not changed their key policy rates since July 2022 and January 2023, respectively. In the euro area CESEE countries (Croatia, Estonia, Latvia, Lithuania, Slovenia and Slovakia) as well as in Bulgaria (which operates under a currency board), lending rates are linked to policy changes by the European Central Bank (ECB), which has increased its key policy rates in several steps since mid-2022. In the first half of 2023, interest rates for housing loans started to moderate somewhat in some countries, particularly in Hungary and Poland (chart 3).

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<sup>7</sup> Due to high inflation, the non-euro area inflation-targeting central banks (Czechia, Hungary, Poland and Romania) started to raise their unprecedentedly low key interest rates in several steps from mid-2021 (Czechia: last hike in July 2022 to 7%; Hungary: last hike in September 2022 to 13%; Poland: last hike in August 2022 to 6.75%; and Romania: last hike in January 2023 to 7%).

<sup>8</sup> Moreover, Magyar Nemzeti Bank made changes to its monetary policy toolkit to simplify it. For more information, please see its [press release](#) of September 26, 2023.

### Financing costs for housing in CESEE



Source: ECB.

Note: Annualized agreed rates (quarterly averages) for housing loans (new business), denominated in local currency.

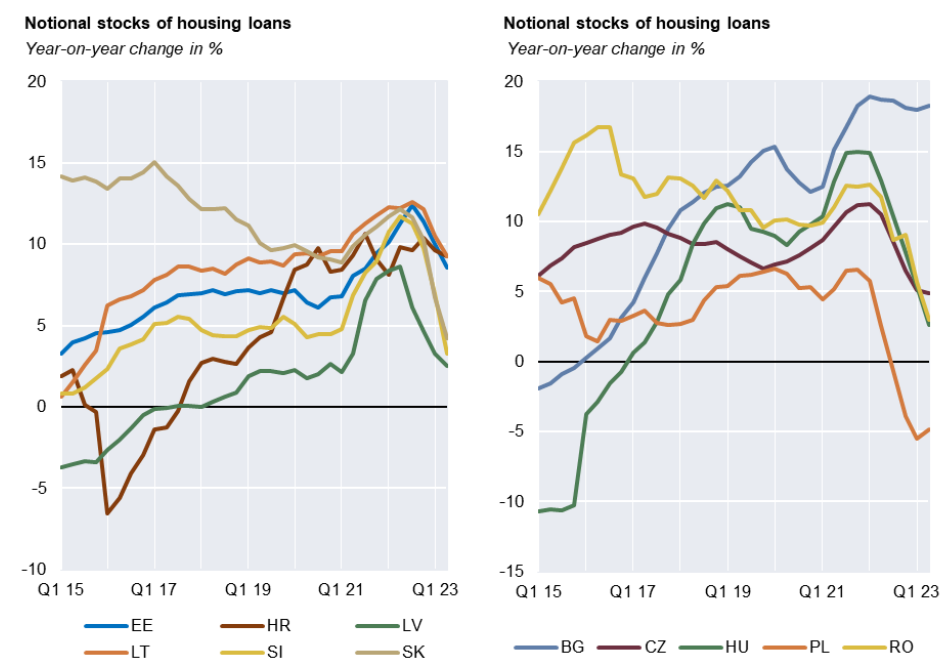
Substantially higher financing costs took their toll on housing loan growth, and bank lending continued to ease in the first half of 2023 in most CESEE countries. In Poland, for instance, (nominal) housing loan growth even turned negative in the third quarter of 2022.<sup>10</sup> Apart from higher financing costs, elevated economic uncertainty among households and deteriorating economic fundamentals had a negative impact on lending activity for CESEE in general. Apparently, housing loan growth remained high in Bulgaria and, according to the Bulgarian National Bank (2023), strong housing loan dynamics can be largely explained by a limited transmission of the ECB policy rate to the interest rate for housing loans given a liquid Bulgarian banking sector with strong competition, higher individual loan volumes amid rising house prices as well as households' preference to purchase real estate rather than use any other form of investment or saving. In the first and second quarter of 2023, new lending for housing, i.e. without re-negotiated housing loans, deteriorated in almost all CESEE countries, most strongly in Czechia, Hungary, Poland, Slovenia and as well as in Slovakia.<sup>11</sup> Only Bulgaria saw continuously robust growth in the first and second quarter of 2023.

<sup>9</sup> In the following charts, countries are grouped according to their euro area membership status. Euro area members: Estonia, Croatia, Latvia, Lithuania, Slovenia, Slovakia); non-members of the euro area: Bulgaria, Czechia, Hungary, Poland, Romania.

<sup>10</sup> As already mentioned in our last report, the decline in housing loans is also related to overpayments and early repayments as a reaction to rising interest rates, not only to weaker demand. In addition, banks have tightened their lending standards (Narodowy Bank Polski, 2023).

<sup>11</sup> Growth rates for housing loans (new business) are provided in the annex of the pdf version of this report.

### Visible decline in housing loan growth all over CESEE except Bulgaria



### Some changes to government measures targeting CESEE housing markets

As discussed in earlier editions of the OeNB *Property Market Review*, the footprint of governments can be considered as substantial in many CESEE housing markets. In Croatia, for example, the housing loan subsidy program that was introduced in 2017 is being blamed for contributing to house price inflation and for weighing on housing affordability (Kunovac and Zilic, 2022). In spring 2023, a new round of housing subsidies was introduced, but the law will expire by the end of 2023 and a newly designed support scheme is under review (IMF, 2023). In Poland, the so-called “First Home Programme” was launched in July 2023; it comprises two pillars: the 2% Safe Mortgage and the Home Savings Account. Both pillars are targeted at homebuyers under the age of 45. The first pillar provides access to loans with a fixed interest rate of 2% for the first ten years, the second pillar allows people to save with the guarantee of receiving a state bonus.<sup>12</sup> While Poland extends its housing support measures, Hungary, by contrast, plans to apply stricter eligibility criteria in 2024 for the family housing subsidy scheme (comprising a non-refundable allowance and a loan with subsidized interest rates) and the prenatal baby support loans (an unsecured, interest rate-free loan).<sup>13</sup> Starting next year, the amount for each subsidy support measure will increase, but the Family Housing Allowance will only be allocated in communities with a population below 5,000. For the prenatal baby support loan, women must be 30 at most when applying for it (previously, the age limit had been set at 40 years).<sup>14</sup>

In addition to making housing more affordable to specific population groups (e.g. young people, families), governments have implemented various measures to make the building stock more energy efficient (see also below). Hungary, for example, implemented the so-called “Green Home

<sup>12</sup> For more information see: [2% Safe Mortgage and Home Savings Account now available to Poles](#).

<sup>13</sup> The extent of support depends on the number of (planned) children.

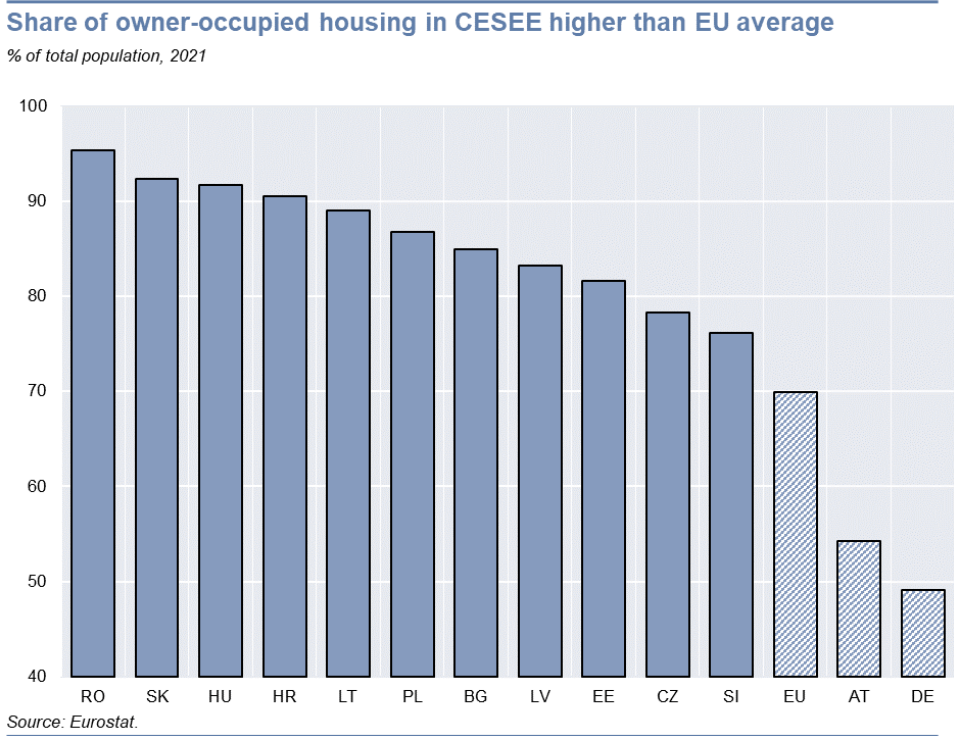
<sup>14</sup> See [online information on Hungarian family housing allowance](#).

Programme,” supporting loans for improving the energy efficiency of residential buildings. Other CESEE countries have also implemented measures to increase the energy efficiency of housing, such as partial financing of renovations (for an overview of measures to improve the energy efficiency of the housing stock, see Magyar Nemzeti Bank (2022, pp. 22–24).

**Most people in CESEE own their homes**

Generally, the CESEE housing sector is characterized by a particularly high rate of owner-occupied housing well above the EU average and much higher than in Austria and Germany (chart 5). In several countries (Romania, Slovakia, Hungary and Croatia) the share of owner-occupied housing even stands above 90%.

Chart 5



The flipside of a large share of owner-occupied housing is that the rental sector only plays a minor role in most CESEE countries and there are few alternatives to buying residential property.

**Housing demand exceeds housing supply**

Another important structural issue of CESEE housing markets is a shortage of housing, i.e. housing demand exceeds housing supply. This not only concerns the number of housing units but also their size and, moreover, the quality of the housing stock. Data show<sup>15</sup> that all CESEE countries except for Czechia, Estonia and Slovenia have an overcrowding rate higher than the EU average, with Romania at the top. Moreover, a large share of the CESEE population lives with severe housing deprivation (only Czechia, Slovakia and Slovenia perform better than the EU average). This rough overview of key structural features of the CESEE housing market illustrates that housing supply – and more specifically its quality – largely lags behind demand for (good) housing in most CESEE

<sup>15</sup> For data and definitions regarding the overcrowding rate and severe deprivation, see: [Living conditions in Europe - housing - Statistics Explained \(europa.eu\)](https://ec.europa.eu/eurostat/tgm/table.do?tab=table&init=1&language=en&plugin=1).



countries. In addition to this shortage of adequate housing supply, energy efficiency of buildings is high on the agenda – at the national as well as on the EU level – and the Energy Performance of Buildings Directive<sup>16</sup> as part of the “Fit for 55” package<sup>17</sup> envisages stricter energy efficiency standards for existing and new buildings in the EU member states to achieve the overarching goal of zero-emission buildings throughout the EU by 2050. On average, CESEE per capita emission levels in the residential sector are comparable to the EU average; only in Czechia, Hungary and Poland, per capita emissions are somewhat higher (Breitenfellner, Lahnsteiner and Reininger, 2023). Still, the need to upgrade the building stock remains large. Moreover, differences in the energy efficiency of residential property might gain importance and possibly will also be reflected in house prices for existing versus newly constructed dwellings, as older buildings will potentially need some upgrading in the future.

Turning to more short-term aspects of housing supply, there was some moderation of prices for raw materials in the first half of 2023 after they had accelerated further following the Russian invasion in Ukraine.<sup>18</sup> Survey data<sup>19</sup> also suggest that shortage of material and equipment has become less of a hindering factor for the construction sector. In Czechia, Hungary and Slovakia, for example, material and equipment shortage seems to be much less relevant for the building sector compared to the first half of 2022. The same is true for the Baltics, Croatia and Romania. In Slovenia as well as in Slovakia, a large share of respondents still consider material and equipment shortage as a major problem, although this share has declined lately. Data also show some modest relief regarding shortage of labor, mainly in Czechia, Hungary and the Baltics. After a long period of elevated demand for housing, one of the most pressing (and increasing) problems of the construction sector now seems to concern weakening demand.

Regarding construction sector sentiment, there has been a visible slump in confidence since the outbreak of the war in Ukraine. In Czechia and Hungary, construction sentiment even deteriorated further in 2023 compared to the low point reached during the COVID-19 pandemic. In Estonia, sentiment in the construction sector continued its downward trend seen since early 2022. In some CESEE countries, for instance in Bulgaria, Croatia and Poland, there was some recovery of sentiment in the second and third quarter of 2023. Possible reasons for the recovery might be related to prospective stimulating policy measures targeting the housing sector, as expected in Poland (see above), or still robust lending growth in Bulgaria and Croatia that may have boosted the overall mood in the construction sector.

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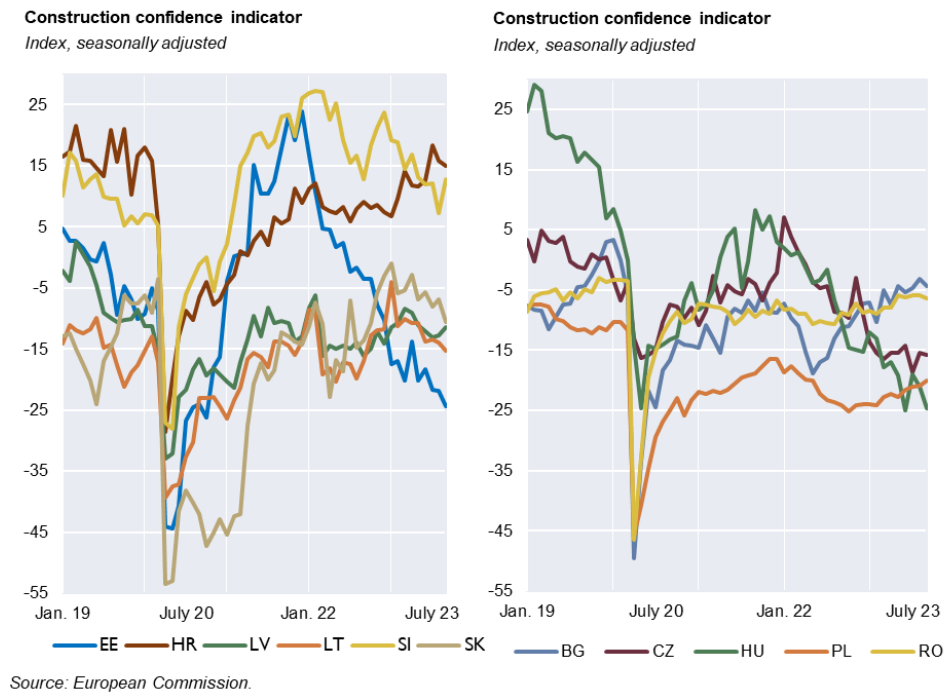
<sup>16</sup> [Directive 2010/31/EU on the energy performance of buildings](#).

<sup>17</sup> [Fit for 55: Delivering on the proposals \(europa.eu\)](#).

<sup>18</sup> For up-to-date price information on raw material and material costs that are crucial for construction costs, see [OeNB Housing Dashboard](#).

<sup>19</sup> Survey data on factors hampering construction activity are provided by the [European Commission](#).

**Sentiment in the CESEE construction sector**



Low demand combined with still high construction and financing costs as well as other factors negatively affecting construction activity in the current environment are reflected in the number of building permits for residential buildings. Data show that annual growth of building permits turned negative in the first half of 2023 in all CESEE countries.

**Building permits**



**Affordability of housing: some easing due to moderating house price growth, but rising financing costs may keep many from buying a house**

In most CESEE countries, house prices accelerated much faster than income until the third quarter of 2022, before affordability started to improve across the region (chart 8). Bulgaria and Romania saw improving affordability over the displayed period due to moderate house price dynamics and robust income growth. This rather simple measure of affordability just considers income and house prices for assessing housing affordability whereas more comprehensive measures consider other important factors. For example, the Baltic Housing Affordability Index (Swedbank, 2023) also includes interest rates on housing loans for evaluating housing affordability in the three Baltic capitals. Accordingly, housing affordability deteriorated strongly from mid-2022 on the back of rising financing costs despite some moderation of house price growth. For Hungary, Magyar Nemzeti Bank (2023) calculates various measures of affordability for the Hungarian housing markets, dependent on the region, subsidy used or financing costs. Another measure for assessing house price developments is the price-to-rent ratio.<sup>20</sup> Here, some moderation was observable in several CESEE countries in the first quarter of 2023 compared to the same period of 2022 after house prices had galloped ahead of rents for many years.

Chart 8



<sup>20</sup> Data can be found in the annex of the pdf version of this report.

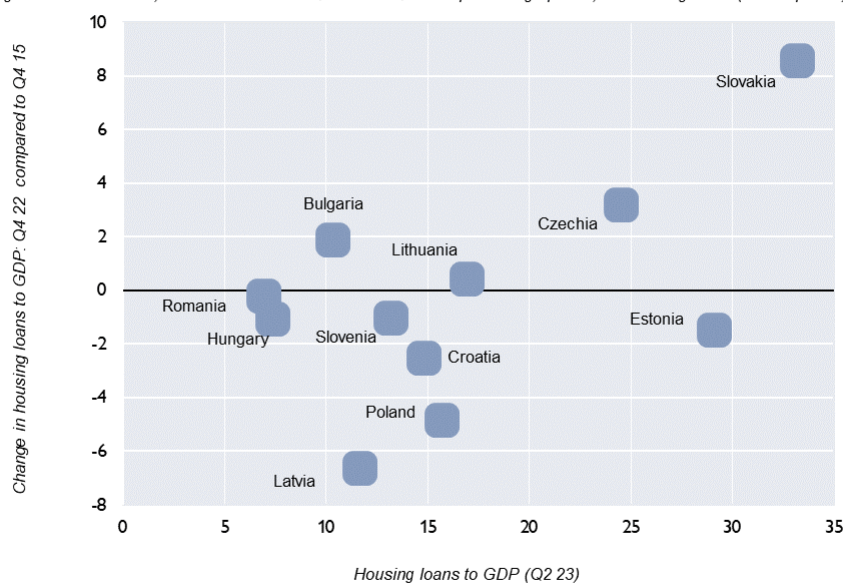
## Financial stability risks have potentially increased

Against the background of cooling housing markets in CESEE, potential financial stability risks associated with households' housing-related debt have recently attracted increased interest.<sup>21</sup> The Bank for International Settlements (2022) classifies direct debt vulnerabilities into three categories (debt level, debt allocation and debt characteristics), and we use this framework for offering a glimpse into potential financial stability risks related to CESEE housing markets. The first category, the level of debt, is based on the assumption that borrowers with high debt levels are more vulnerable in the event of economic shocks. Households' housing debt and debt dynamics differ largely across CESEE (chart 9). The share of housing loans to GDP was highest in Slovakia, Estonia and Czechia and lowest in Romania and Hungary in the second quarter of 2023. If we look at the data showing how this share has evolved over time, we see that, in all CESEE countries (with the exception of Bulgaria), the share of housing loans to GDP declined in the second quarter of 2023 compared to the same period of 2022. The drop was strongest in Slovakia (-5 percentage points). However, this was also the country that recorded the strongest acceleration between 2015 and 2023 while, in many other CESEE countries, deleveraging took place over this period.

Chart 9

### Housing loan debt differs broadly across CESEE

Housing loans in % of GDP; difference between Q4 15 and Q4 22 in percentage points; outstanding stock (end-of-period)



Source: ECB, national statistical offices.

The second vulnerability category is related to the allocation of debt, i.e. vulnerabilities in the event of a shock are more likely to occur in case of lending to borrowers that carry higher risks. For detecting risks associated with the allocation of debt, in-depth analyses of households' capacity to cope with adverse shocks are necessary. Debt service-to-income (DSTI), debt-to-income (DTI)

<sup>21</sup> In February 2022, the ESRB (European Systemic Risk Board, 2022) already concluded that financial stability risks related to residential property markets have increased and issued warnings to five countries – four of them in CESEE, namely Bulgaria, Croatia, Hungary and Slovakia. This meant that policies in these countries were not considered appropriate to address vulnerabilities that had been building up and that financial stability risks related to residential property markets were increasing. In September 2022, the ESRB issued a [general warning](#) that vulnerabilities in the residential real estate sector have increased further in many EU member states.

and loan-to-value (LTV) ratios are helpful indicators for assessing the debt service capacity of households. In Slovakia, for instance, households with higher DSTI, DTI and LTV ratios face more repayment difficulties and a higher share of nonperforming loans (IMF, 2022). CESEE countries implemented borrower-based macroprudential measures – with differences in timing and scope<sup>22</sup> – after the GFC and there is ample evidence of their mitigating impact on borrowers’ vulnerabilities. In Estonia, for instance, the introduction of a DSTI limit was effective in moderating loan growth from 2016 to 2021 (Kukk, Levenko and Reigl, 2023). In Romania, a DSTI ratio was put in place in 2019, leading to a reduction of the median DSTI ratio for new loans from 45% prior its implementation to 35% (National Bank of Romania, 2023). For Slovakia, it can be shown that borrower-based measures have a positive impact on the resilience of households and banks (Jurca et al., 2020). However, the share of housing loans with higher risks (i.e. higher DSTI ratio) increased in the first quarter of 2023 compared to the same period of 2022 (Národná banka Slovenska, 2023), which calls for further monitoring.

In addition to debt level and debt allocation, debt characteristics are key for detecting potential financial stability risks connected to housing markets. As already discussed in our last report, housing loans with variable interest rates are the most common arrangement in some CESEE countries (particularly in the Baltic countries, Bulgaria and Poland). In the event of rising interest rates, households could encounter difficulties given higher loan installments in addition to higher living costs. The share of housing loans with variable interest rates (up to one year) in new business<sup>23</sup> increased noticeably in some CESEE countries in the first half of 2023 compared to the same period of last year but mostly from a very low level (e.g. in Czechia and Slovakia). In other countries, the share of fixed interest rates increased (e.g. in Bulgaria and Poland). In some CESEE countries, for example Hungary, a large share of households are being shielded from interest rate increases given subsidized loan programs. Moreover, several CESEE countries implemented measures to help households coping with higher debt servicing costs (for Hungary and Poland, see our last report). In Croatia, legal restrictions on variable interest rate loans are in place, i.e. the variable interest rates are linked to the national reference rate or the EURIBOR (IMF, 2023) to help protect households from increasing debt repayments.

The maturity of housing loans might also be a matter of concern for financial stability, and macroprudential measures targeting housing loan maturities are in place in many CESEE countries. For instance, Estonia already implemented a maximum loan maturity of 30 years for housing loans in 2015. Slovakia introduced stricter DTI limits for loans maturing after borrowers have reached their retirement age because the average age of people holding a housing loan has increased.

### **Some key challenges for CESEE housing markets in the future**

Recent data show that nominal house price growth significantly moderated in most CESEE countries in the first half of 2023 compared to the same period of 2022. In Czechia and Slovakia, growth even turned negative in the second quarter of 2023. In real terms, annual house price growth was negative in all CESEE countries except for Croatia. On a positive note, less dynamic or even negative house price growth can narrow the gap between actual house prices and house

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<sup>22</sup> For details, see [ESRB \(europa.eu\)](https://www.esrb.europa.eu/).

<sup>23</sup> Data can be found in the annex of the pdf version of this report.

prices justified by long-term fundamentals, as noticed for example by Banka Slovenije (2023) for Slovenia, where overvaluation was reduced due to moderating house price growth in the last quarter of 2022 compared to the first quarter of 2022. Moreover, housing affordability could also show some improvement if lower prices are not offset by rising financing costs. However, a major downturn of housing markets could cause negative spillovers on the economy and on financial stability, but there are several counteracting factors, such as a shortage of housing, still high demand for housing and a (still) favorable overall employment situation with comparatively low unemployment rates and robust nominal wage growth in CESEE.<sup>24</sup>

In terms of the economy as a whole, housing market developments are strongly connected to the real economy (for a comprehensive discussion see for example Cuestas et al., 2022). House price developments can have repercussions on residential investment (see for example Kohlscheen et al., 2020) and on private consumption via the wealth effect (see Ciarlone, 2011, for evidence for emerging economies). In Slovakia, for example, the increase of household wealth between 2017 and 2021 was predominately the result of rising house prices, and by 2021, the residential property assets of households contributed to almost 80% of households' total assets (Cupak et al., 2023). In Romania, residential property accounts for 75% of households' wealth (National Bank of Romania, 2023). These figures illustrate that moderating or even declining house prices would weigh on the wealth position of CESEE households (and eventually on private consumption).

Regarding macroprudential policy, CESEE central banks have to find the balance between safeguarding financial stability related to housing market dynamics and providing access to credit for households (for an in-depth discussion see Valderrama, 2023). To our knowledge, no major changes to borrower-based measures have been implemented in CESEE since our last report. Changes to capital-based measures were undertaken in several CESEE countries. The Czech National Bank lowered the countercyclical capital buffer by 0.25 percentage points to 2% (with effect from October 1, 2023) because cyclical systemic risks in the banking sector had moderated<sup>25</sup>. Several CESEE countries decided to increase the countercyclical capital buffer in 2023<sup>26</sup> given strong lending and house price dynamics, e.g. in Croatia (Croatian National Bank, 2023).

Key pockets of risks related to CESEE housing markets currently concern vulnerable households that are not able to repay their housing loans due to the erosion of purchasing power and/or higher loan installments for housing loans with variable interest. As argued above, particularly households with high DSTI ratios are likely to be strained to repay their debt. For the banking sector, the asset quality can be negatively affected by households that default on payments<sup>27</sup>. Moreover, a significant slump in house prices would also reduce the value of collateral for the banking sector. The impact of such a price slump on the banking sector depends, for example, on the exposure of the banking sector to the real estate sector and on the extent to which house prices deviate from fundamentals. However, as noted by some CESEE central banks (Eesti Pank, 2023; Czech

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<sup>24</sup> According to the latest Eurostat data, unemployment rates are low in most CESEE countries, ranging between 2.5% in Czechia and 7.6% in Estonia (August 2023). Only Estonia registered a noticeable increase in its unemployment rate compared to the same period of 2022 (5.6%).

<sup>25</sup> For more details, see [Minutes of the CNB Bank Board meeting on financial stability issues on 14 September 2023](#).

<sup>26</sup> For a complete overview of macroprudential measures and capital-based measures in CESEE, see [ESRB: National macroprudential policy](#).

<sup>27</sup> Credit risks can also originate in the corporate sector, particularly in the construction sector.

National Bank, 2023) vulnerabilities have decreased to some extent given less dynamic housing loan growth.

Besides these short-term issues, CESEE housing markets are also facing medium- to long-term challenges, like aligning housing supply with housing demand, providing affordable housing and improving the energy efficiency of the building stock – to name just some examples of other “construction sites” the CESEE housing markets will have to deal with in the future.

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# Annex

## Property market data

Table A1

### Residential property prices

Annual change in %, at current prices

	2Q23	1Q23	2022	2021	2020	2019	2018
EU	-1.1	0.8	7.7	8.4	5.5	4.8	5.0
BE	1.8	4.4	5.6	7.1	4.2	4.0	2.9
BG	10.7	9.5	13.8	8.7	4.6	6.0	6.6
CZ	-2.9	0.9	16.9	19.7	8.4	9.2	8.6
DK	-7.6	-7.9	-0.5	11.7	5.1	2.3	4.4
DE	-9.9	-6.8	5.3	11.6	7.8	5.8	6.6
EE	5.0	9.2	22.2	15.0	6.0	7.0	5.9
IE	2.8	5.1	12.3	8.3	0.3	2.3	10.2
GR	14.0	15.0	11.1	7.6	4.5	7.2	1.8
ES	3.7	3.5	7.4	3.7	2.2	5.2	6.7
FR	0.7	2.9	6.3	6.3	5.2	3.3	2.9
HR	13.7	14.0	14.8	7.3	7.7	9.0	6.1
IT	0.7	1.0	3.8	2.5	1.9	-0.1	-0.6
CY	3.2	6.0	3.2	-3.4	-0.2	3.7	1.8
LV	5.6	5.9	13.8	10.9	3.5	9.0	9.6
LT	9.4	13.1	19.0	16.1	7.3	6.8	7.3
LU	-6.4	-1.7	9.6	13.9	14.5	10.1	7.1
HU	2.8	10.6	22.3	16.5	4.9	17.0	14.3
MT	4.5	6.6	6.7	5.1	3.4	6.1	5.8
NL	-4.3	-0.1	13.4	15.0	7.6	7.3	9.5
AT	0.3	1.8	11.4	12.4	7.7	5.8	4.7
PL	7.0	5.8	11.8	9.2	10.5	8.7	6.6
PT	8.7	8.7	12.6	9.4	8.8	10.0	10.3
RO	0.1	4.6	7.2	4.4	4.7	3.4	5.6
SI	7.4	8.8	14.8	11.5	4.6	6.7	8.7
SK	-1.9	7.6	13.7	6.4	9.6	9.1	7.4
FI	-5.6	-5.1	1.2	4.6	1.8	0.4	0.9
SE	-6.8	-6.9	3.6	10.1	4.2	2.5	-0.9
UK	.	.	.	.	.	1.0	3.3

Annual change in %, at constant prices, deflated with the personal consumption expenditure deflator

	2Q23	1Q23	2022	2021	2020	2019	2018
EU	-4.2	-2.7	-2.8	4.5	3.3	2.5	0.8
BE	-2.8	-3.1	-2.4	2.5	5.2	3.9	4.1
BG	-11.9	-11.7	1.6	16.4	5.4	6.2	5.9
CZ	-11.2	-14.0	-7.4	9.5	4.7	1.4	3.7
DK	-15.8	-13.8	-1.3	8.3	7.2	4.4	5.1
DE	-5.5	-5.4	4.5	10.4	7.0	4.2	2.3
EE	-4.6	-2.0	5.0	4.2	-0.4	0.5	8.2
GR	.	.	3.3	6.6	5.7	7.2	1.7
ES	-0.7	-0.8	0.8	1.4	2.1	4.1	5.2
FR	-5.8	-4.1	1.3	4.7	4.1	2.5	1.2
HR	5.3	2.1	3.6	4.8	7.1	7.8	4.6
IT	-4.3	-5.8	-3.2	1.0	1.8	-0.7	-1.5
CY	0.4	-0.3	-4.4	-4.3	0.7	3.4	0.5
LV	-4.0	-8.7	-0.3	7.2	2.7	5.8	6.4
LT	-1.3	-3.7	0.2	11.0	6.1	4.5	4.5
LU	-9.8	-5.7	4.0	12.5	12.7	8.7	5.1
HU	-14.1	-11.6	4.4	9.5	1.5	11.8	10.7
MT	-1.7	0.0	1.2	3.8	2.2	4.2	4.8
NL	-13.1	-11.6	6.1	11.6	6.2	4.6	7.1
AT	-7.5	-6.5	3.9	9.9	6.1	4.0	2.6
PL	-4.5	-9.9	-2.3	3.5	6.7	6.4	5.0
PT	3.5	0.7	5.9	7.9	8.1	9.0	8.6
RO	-10.3	-6.3	-6.2	-0.8	2.3	-1.9	1.7
SI	-0.1	-2.8	4.3	7.9	5.2	5.3	6.6
SK	-12.5	-6.7	1.3	3.0	7.2	6.2	4.9
FI	-10.6	-11.3	-4.6	2.8	1.4	-0.6	-0.4
SE	-13.5	-14.5	-3.1	8.1	3.3	0.4	-3.3
UK	.	.	.	.	.	0.4	0.9

### Residential construction investment

Annual change in %, at constant prices

	2Q23	1Q23	2022	2021	2020	2019	2018
EU	-4.2	-2.7	0.9	7.4	-3.0	2.2	3.6
BE	.	.	0.6	6.8	-6.8	4.7	2.6
BG	9.1	3.8	-9.2	0.6	0.7	6.6	-2.2
CZ	-10.8	-13.2	-13.1	-0.9	3.8	2.0	5.2
DK	-13.7	-13.3	-8.5	10.0	9.1	6.3	4.8
DE	-1.1	-4.0	-2.2	-2.3	4.6	1.4	3.0
EE	15.2	81.0	4.8	-3.5	14.0	14.4	2.3
IE	-4.1	12.7	2.18	4.5	-7.6	0.3	20.1
GR	45.8	48.0	36.1	27.3	19.0	12.6	22.5
ES	0.1	0.4	1.4	0.9	-9.7	5.2	13.0
FR	-4.6	-2.0	-1.8	16.7	-11.9	2.5	2.2
HR	3.8	-1.3	0.4	2.9	-4.6	6.4	4.1
IT	-8.2	-2.5	10.5	51.9	-7.7	-0.8	1.1
CY	2.2	8.8	7.8	11.8	-3.2	26.3	37.5
LV	13.5	11.4	-11.4	10.4	-3.7	-2.4	26.3
LT	0.2	6.7	1.93	0.8	5.8	14.7	5.9
LU	-13.7	-18.5	-14.3	8.4	-0.7	2.6	6.5
HU	-14.8	22.7	12.3	-4.3	21.5	7.0	11.3
MT	-13.5	-9.2	-1.9	13.4	-7.0	14.6	20.1
NL	-2.5	4.1	1.0	5.7	-0.6	3.4	9.3
AT	-9.9	-7.6	2.4	7.6	-1.2	4.5	1.9
PL	1.1	-2.0	-0.6	15.3	5.7	4.9	-3.3
PT	-1.8	-3.2	3.1	14.8	-6.9	1.4	6.6
RO	7.5	12.3	10.5	4.0	3.8	22.6	-22.3
SI	12.0	7.1	8.1	9.1	-0.2	8.4	1.9
SK	-1.0	2.2	4.1	7.6	9.9	2.9	9.4
FI	-8.8	-11.7	1.7	2.8	-3.2	-4.2	4.7
SE	-22.7	-15.9	5.3	11.5	1.6	-6.5	-6.4
UK	.	.	.	.	.	0.1	5.1

Source: ECB, Eurostat.

### Number of residential building permits

Annual change in %

	2Q23	1Q23	2022	2021	2020	2019	2018
EU	-19.2	-18.1	2.0	16.1	-8.6	-0.7	5.7
BE	-9.3	-14.3	-10.6	4.2	-1.1	-10.8	24.7
BG	-12.6	-9.2	20.5	35.9	-10.2	-7.7	42.3
CZ	-29.9	-12.7	-7.1	27.6	-8.5	19.8	3.4
DK	-33.5	-54.7	-5.1	-1.0	0.4	-10.5	34.5
DE	-35.0	-29.6	-7.1	3.8	2.4	3.2	2.0
EE	-40.9	-28.9	-22.9	-0.7	10.1	14.8	-11.3
IE	-23.3	37.8	-20.5	1.5	10.2	32.9	39.3
GR	25.6	40.2	4.2	48.6	18.6	33.3	42.0
ES	17.3	24.6	66.8	42.7	-42.0	0.7	34.2
FR	-28.0	-34.3	2.3	20.3	-14.4	-3.4	-5.9
HR	-11.7	-4.3	12.9	19.1	-8.2	30.9	-6.0
IT	.	-12.2	0.1	21.9	-11.2	-0.6	6.8
CY	8.1	-3.3	-6.3	13.1	-3.5	55.3	25.6
LV	35.8	-51.7	-4.8	16.8	13.0	0.8	20.8
LT	-43.2	-28.6	-18.0	28.6	1.1	-5.5	-0.2
LU	17.8	35.9	-22.9	17.8	-5.8	0.1	11.2
HU	-40.0	-37.1	20.0	36.0	-38.1	-3.7	-3.2
MT	9.5	-20.7	2.67	-3.3	-37.2	-3.1	43.1
NL	-3.8	-24.3	-14.9	13.0	15.6	-17.1	0.4
AT	-19.5	-43.2	-22.0	-5.4	-8.7	16.6	-16.8
PL	-36.4	-33.8	-12.7	24.0	3.1	4.6	3.3
PT	-1.0	10.7	9.0	8.8	3.5	15.5	41.1
RO	-25.4	-8.7	-7.4	12.5	-2.0	4.3	11.4
SI	-2.5	6.9	20.7	15.9	10.5	-10.3	16.6
SK	-26.1	-14.2	-16.2	20.3	-6.6	-0.9	11.3
FI	-61.6	-40.6	-18.5	10.4	6.7	-11.4	-9.9
SE	-57.1	-58.2	-23.8	25.5	20.1	-10.9	-16.0
UK	.	.	.	.	-36.1	-4.0	0.4

Note: Residential property prices: EU in changing composition. Residential construction investment and number of residential building permits: EU-27 excluding the UK. Sources of international organizations are used in this table to facilitate comparison. This is why the data for Austria may deviate from the data provided in the section on Austria's property market. "." indicates missing values.

Table A2

**Population growth**

Annual change in %

	2022	2021	2020	2019	2018
EU	-0.1	-0.1	0.2	0.1	0.2
BE	0.5	0.3	0.6	0.5	0.4
BG	-1.1	-0.5	-0.7	-0.7	-0.7
CZ	0.2	-1.9	0.4	0.4	0.3
DK	0.6	0.3	0.3	0.4	0.6
DE	0.1	-0.0	0.2	0.3	0.3
EE	0.1	0.1	0.3	0.4	0.3
IE	1.1	0.8	1.2	1.5	1.0
GR	-2.0	-0.4	-0.1	-0.2	-0.3
ES	0.1	0.1	0.8	0.6	0.3
FR	0.3	0.5	0.2	0.2	0.3
HR	-4.3	-0.5	-0.4	-0.7	-1.2
IT	-0.3	-0.7	-0.3	-1.1	-0.2
CY	1.0	0.9	1.4	1.3	1.1
LV	-0.9	-0.8	-0.6	-0.7	-0.8
LT	0.4	0.1	-0.0	-0.5	-1.4
LU	1.7	1.4	2.0	2.0	1.9
HU	-0.4	-0.4	-0.0	-0.1	-0.2
MT	0.9	0.3	4.3	3.8	3.3
NL	0.7	0.4	0.7	0.6	0.6
AT	0.5	0.4	0.5	0.4	0.6
PL	-0.5	-0.3	-0.0	-0.0	0.0
PT	0.5	0.0	0.2	-0.1	-0.2
RO	-0.8	-0.7	-0.4	-0.6	-0.6
SI	-0.1	0.6	0.7	0.7	0.0
SK	-0.5	0.0	0.1	0.1	0.1
FI	0.3	0.2	0.1	0.1	0.2
SE	0.7	0.5	1.0	1.1	1.3
UK	.	.	0.6	0.6	0.7

**Homeownership ratio**

Share of ownership in %

	2022	2021	2020	2019	2018
EU	69.1	69.9	70.0	69.8	69.9
BE	72.5	71.3	71.1	71.3	72.3
BG	85.0	84.9	84.3	84.1	83.6
CZ	77.1	78.3	78.9	78.6	78.7
DK	59.6	59.2	59.3	60.8	60.5
DE	46.7	49.1	50.5	51.1	51.5
EE	82.0	81.6	81.4	81.7	82.4
IE	70.4	70.0	69.3	68.7	70.3
GR	72.8	73.3	73.9	75.4	73.5
ES	76.0	75.8	75.1	76.2	76.3
FR	63.4	64.7	63.6	64.1	65.1
HR	91.1	90.5	91.3	89.7	90.1
IT	74.3	73.7	75.1	72.4	72.4
CY	69.6	69.8	68.6	67.9	70.1
LV	83.1	83.2	81.2	80.2	81.6
LT	88.6	89.0	88.6	90.3	89.9
LU	72.4	71.1	68.4	70.9	71.2
HU	90.1	91.7	91.3	91.7	86.0
MT	82.6	81.9	81.9	79.8	81.6
NL	70.6	70.1	69.1	68.9	68.9
AT	51.4	54.2	55.3	55.2	55.4
PL	87.2	86.8	85.6	84.2	84.0
PT	77.8	78.3	77.3	73.9	74.5
RO	94.8	95.3	96.1	95.8	96.4
SI	75.4	76.1	74.6	74.8	75.1
SK	93.0	92.9	92.3	90.9	91.3
FI	69.5	70.3	70.7	71.1	71.6
SE	64.2	64.9	64.5	63.6	64.1
UK	.	.	.	.	65.2

**Property price-to-income ratio**

Index

	2Q23	1Q23	2022	2021	2020	2019	2018
EU	.	.	.	.	103.5	100.9	100.4
BE	.	102.4	106.4	107.4	103.5	100.9	100.4
BG	.	80.3	84.2	90.5	94.4	96.2	98.9
CZ	.	133.3	142.0	134.4	120.5	113.5	110.4
DK	.	104.6	110.7	121.4	109.6	104.4	104.8
DE	116.3	119.3	132.6	133.8	122.4	115.2	110.9
EE	136.6	137.3	136.2	104.7	98.9	93.2	92.9
IE	116.1	118.8	119.8	112.1	108.0	114.2	116.7
GR	118.9	119.0	113.8	105.2	107.0	98.0	97.2
ES	.	120.3	124.4	122.0	120.2	110.7	109.6
FR	104.5	106.8	111.3	109.4	106.4	101.4	101.0
HR	.	105.2	103.8	99.2	104.9	98.0	95.0
IT	89.2	89.2	92.1	94.5	95.8	92.1	93.1
CY	.	.	.	.	.	.	.
LV	103.0	102.9	109.8	106.2	108.0	107.7	104.9
LT	104.0	106.3	112.0	106.8	95.9	97.0	99.3
LU	.	135.1	151.4	146.6	129.8	118.9	111.9
HU	.	119.8	128.3	124.1	121.6	119.2	111.6
MT	.	.	.	.	.	.	.
NL	.	132.8	140.8	133.9	122.1	117.0	113.9
AT	129.9	131.7	138.2	136.0	125.3	114.0	110.0
PL	.	92.7	100.3	105.6	100.0	97.7	96.1
PT	.	146.5	147.8	141.4	135.7	122.1	115.9
RO	.	65.1	71.0	74.6	75.4	77.3	85.4
SI	.	116.1	119.0	111.0	107.2	105.7	104.5
SK	.	118.3	121.7	116.8	114.9	107.3	102.8
FI	.	87.4	94.8	97.0	95.7	94.7	97.0
SE	.	101.5	110.8	113.5	108.5	103.9	104.7
UK	117.4	116.9	120.4	116.0	110.0	106.0	108.3

**Property price-to-rent ratio**

Index

	2Q23	1Q23	2022	2021	2020	2019	2018
EU	.	.	.	.	110.8	109.2	106.1
BE	.	117.8	118.8	116.4	110.8	109.2	106.1
BG	.	140.3	143.4	134.0	125.4	122.9	119.7
CZ	.	166.7	176.1	158.0	135.2	128.5	122.1
DK	.	118.2	125.2	128.4	116.4	111.8	109.9
DE	133.4	137.4	147.7	142.6	129.6	121.9	116.9
EE	123.4	117.9	117.9	117.6	106.2	95.8	96.0
IE	110.8	115.5	124.4	121.1	114.9	115.5	118.1
GR	152.9	150.0	141.9	128.5	119.6	114.5	106.7
ES	.	134.0	133.5	125.9	122.2	120.9	116.7
FR	126.9	128.6	129.1	122.3	115.6	109.9	106.9
HR	.	149.0	143.0	128.5	120.3	114.1	109.9
IT	103.0	103.1	104.2	101.5	99.0	97.4	97.8
CY	.	.	.	.	.	.	.
LV	172.7	174.1	168.0	151.8	139.2	131.5	126.3
LT	125.3	124.4	127.1	123.9	108.7	104.0	104.8
LU	.	164.4	172.8	160.4	142.8	126.0	116.0
HU	.	163.6	173.4	157.1	137.5	136.6	127.7
MT	.	.	.	.	.	.	.
NL	.	155.5	161.1	144.6	128.0	122.2	116.7
AT	129.4	132.7	139.2	126.0	114.2	110.4	107.5
PL	.	109.0	116.1	118.6	112.9	107.8	104.0
PT	.	166.9	164.2	149.7	139.3	131.4	123.3
RO	.	116.7	121.3	118.7	116.6	113.9	113.0
SI	.	119.4	121.8	126.2	117.3	109.5	107.0
SK	.	161.0	162.2	148.5	140.9	130.5	120.3
FI	.	94.2	99.8	99.6	96.0	95.6	97.2
SE	.	118.6	127.9	125.5	115.4	112.4	111.4
UK	125.1	127.5	129.3	121.8	113.8	112.2	112.0

Source: Eurostat, OECD.

Note: EU-27 excluding the UK. Sources of international organizations are used in this table to facilitate comparison. This is why the data for Austria may deviate from the data provided in the section on Austria's property market. "." indicates missing values.

Table A3

**Housing loans<sup>1,2</sup>**

Annual change in %

	Q2 23	Q1 23	2022	2021	2020	2019	2018
EU	.	.	.	.	.	.	.
BE	3.6	6.6	8.3	7.9	10.7	7.6	9.0
BG	18.2	18.0	18.1	18.3	12.1	15.1	12.5
CZ	4.9	5.1	6.5	11.2	8.1	6.6	8.6
DK	-1.7	-1.4	-0.1	3.2	2.0	2.4	1.7
DE	2.8	4.3	5.4	7.1	6.5	5.4	4.6
EE	8.6	10.0	11.4	9.5	6.7	7.0	7.1
IE	-1.2	-2.3	-3.0	-4.1	-2.6	2.0	4.0
GR	-4.1	-3.8	-3.7	-16.3	-2.8	-5.5	-2.9
ES	-2.5	-1.5	-0.1	0.9	-1.1	-1.3	-1.4
FR	0.4	4.1	4.6	6.6	7.1	6.1	6.3
HR	9.2	9.6	10.4	9.0	8.3	6.7	2.6
IT	1.5	3.1	4.6	4.7	2.2	1.1	1.7
CY	0.5	1.5	2.6	2.7	4.4	0.1	-0.7
LV	2.5	3.3	4.7	7.9	2.6	2.1	0.9
LT	9.3	10.5	12.1	11.7	9.5	8.7	8.7
LU	1.3	3.3	5.5	9.2	9.8	8.4	8.4
HU	2.6	5.4	7.8	15.0	9.8	9.3	10.9
MT	7.8	8.6	9.6	10.9	7.0	10.1	8.7
NL	1.8	4.0	4.5	4.0	1.1	2.3	-1.7
AT	0.0	2.6	5.0	6.9	5.5	6.1	4.4
PL	-4.9	-5.5	-3.9	6.6	5.3	6.4	5.3
PT	0.4	1.9	3.7	4.4	2.3	1.0	0.4
RO	3.0	5.7	9.0	12.5	9.7	9.6	12.9
SI	3.3	6.9	9.8	9.0	4.4	5.5	4.3
SK	4.2	6.7	10.3	11.1	9.1	9.8	11.5
FI	-1.2	0.1	1.4	4.1	3.3	2.7	1.6
SE	1.6	2.7	4.0	6.9	5.9	5.2	5.6
UK	.	.	4.7	3.0	3.5	3.4	.

**Housing loans<sup>1,3</sup>**

Share of GDP in %

	Q2 23	Q1 23	2022	2021	2020	2019	2018
EU	.	.	.	.	.	.	.
BE	39.8	40.2	40.8	41.1	41.6	36.1	34.8
BG	10.2	9.9	10.0	10.1	10.0	8.9	8.6
CZ	24.5	25.1	25.1	27.0	25.4	23.2	23.0
DK	82.3	81.9	83.3	92.8	99.2	97.4	97.7
DE	39.2	39.7	40.2	40.9	40.6	37.3	36.4
EE	29.1	28.9	29.2	30.3	31.5	29.0	29.3
IE	16.1	16.1	16.5	16.2	19.7	21.5	23.2
GR	13.3	13.7	14.1	16.8	27.7	28.5	31.4
ES	35.4	36.4	37.8	41.7	45.1	41.0	43.1
FR	47.4	49.2	49.8	50.2	50.8	45.2	43.9
HR	14.3	14.3	14.6	15.4	16.3	13.7	13.6
IT	21.7	21.9	21.9	22.5	23.6	21.3	21.4
CY	28.8	29.2	30.2	33.6	39.3	37.1	40.0
LV	11.7	11.8	12.1	13.5	13.9	13.7	14.1
LT	16.8	16.8	17.0	18.1	18.3	17.2	17.0
LU	52.4	53.1	53.7	54.8	56.3	52.9	50.7
HU	7.4	7.5	7.2	8.1	8.0	7.5	7.7
MT	40.7	40.8	41.2	42.2	43.6	38.2	37.9
NL	55.4	56.3	57.5	59.2	62.2	60.2	61.8
AT	28.6	29.1	30.3	32.0	31.8	29.5	28.6
PL	15.7	15.6	16.4	19.6	20.2	19.8	19.7
PT	39.1	40.1	41.4	44.9	47.4	43.3	45.3
RO	6.9	7.2	7.5	8.4	8.3	7.6	7.7
SI	13.2	13.5	14.4	14.3	14.6	13.6	13.6
SK	33.2	33.8	37.9	37.6	36.1	32.8	31.4
FI	39.0	39.6	40.6	42.9	43.5	41.8	41.8
SE	61.6	63.6	64.7	70.2	75.5	69.1	67.9
UK	.	.	.	.	60.1	57.6	.

**Housing loans<sup>1,4</sup> – new business (excluding renegotiated loans)**

Annual change in %

	Q2 23	Q1 23	2022	2021	2020	2019	2018
EU	.	.	.	.	.	.	.
BE	-36.6	-39.2	-3.4	22.3	-15.6	18.9	3.7
BG	15.2	15.1	22.2	48.2	.	.	.
CZ	-33.4	-66.2	-57.3	63.9	31.7	-18.3	7.0
DK	.	.	.	.	.	.	.
DE	-48.4	-54.2	-13.5	6.6	3.6	13.1	7.5
EE	-25.9	-30.9	-3.9	59.5	-6.2	7.7	3.3
IE	14.3	39.6	26.2	15.6	-15.3	10.1	19.9
GR	.	36.9	.	.	.	.	7.0
ES	-24.1	-19.9	9.8	39.4	-2.1	2.3	13.2
FR	-41.9	-31.7	-3.7	16.3	0.7	14.1	3.6
HR	16.5	-9.3	59.0	25.5	2.5	23.7	56.1
IT	-32.0	-26.3	-6.8	22.0	5.2	-3.8	0.3
CY	-2.7	-44.0	4.9	42.4	-9.6	0.6	19.9
LV	-13.9	-20.3	4.7	54.3	-3.2	-5.5	7.4
LT	-15.7	-12.6	8.9	43.0	4.4	2.5	9.7
LU	-44.0	-40.6	-11.5	7.2	16.9	5.6	7.9
HU	-62.1	-66.7	-9.0	41.6	1.4	5.2	33.9
MT	.	-32.8	-11.1	22.2	1.4	-16.3	.
NL	-42.2	-41.6	-6.6	23.8	18.7	4.2	-0.7
AT	-62.8	-63.3	-12.8	8.8	21.2	13.6	6.0
PL	-29.2	-58.7	-43.6	49.0	7.6	7.0	10.5
PT	-26.2	-23.1	2.5	34.0	8.1	10.3	19.6
RO	-53.1	-51.9	-9.7	44.7	9.0	4.5	-12.0
SI	-61.1	-58.7	10.2	38.4	33.4	4.8	-4.2
SK	-68.9	-66.6	-14.6	32.3	4.8	0.6	9.6
FI	-37.4	-41.9	-20.5	15.1	5.2	0.7	3.4
SE	.	.	.	.	.	.	.
UK	.	.	.	.	.	.	.

**Share of variable rate housing loans<sup>1</sup> in new business<sup>5</sup>**

%

	Q2 23	Q1 23	2022	2021	2020	2019	2018
EU	.	.	.	.	.	.	.
BE	7.3	8.8	7.6	5.1	5.0	5.8	11.2
BG	97.4	93.9	94.9	98.2	97.9	99.1	98.7
CZ	3.1	2.7	2.0	1.6	2.7	3.4	4.0
DK	45.4	46.6	39.3	23.8	23.5	19.4	33.2
DE	16.1	17.0	11.6	9.7	10.5	11.0	11.8
EE	92.9	93.5	93.1	90.7	86.8	90.1	88.7
IE	12.3	7.6	10.8	19.8	22.8	26.9	39.0
GR	34.4	34.0	44.6	54.2	66.4	81.8	95.3
ES	22.1	26.1	23.6	25.1	34.0	35.5	36.3
FR	3.7	3.8	3.2	2.6	2.3	2.4	2.5
HR	2.4	24.5	6.9	15.1	24.8	17.3	20.6
IT	37.4	46.1	39.8	16.8	18.1	27.8	33.2
CY	71.1	83.2	95.1	98.0	92.5	93.2	95.8
LV	91.3	88.8	91.4	96.4	94.1	95.9	95.6
LT	96.1	96.9	95.9	97.6	97.3	98.4	97.4
LU	43.3	43.1	45.6	34.9	33.9	38.6	46.9
HU	1.2	1.0	0.7	0.7	1.2	3.0	15.4
MT	.	64.7	65.3	65.9	83.4	40.1	62.7
NL	20.9	21.9	13.3	11.8	14.7	18.5	16.2
AT	52.5	57.5	38.3	38.1	37.6	43.4	43.5
PL	39.1	41.6	51.6	95.3	92.5	100.0	100.0
PT	69.5	70.9	68.7	68.9	67.8	70.7	65.1
RO	62.4	53.6	60.7	73.2	70.7	77.4	74.1
SI	4.8	6.6	7.8	21.5	51.7	52.9	47.9
SK	2.9	4.1	2.8	2.1	2.3	1.7	1.7
FI	98.2	98.0	97.3	97.1	97.9	98.0	98.0
SE	84.9	86.0	69.6	55.3	60.5	66.7	77.0
UK	.	.	.	5.6	8.5	7.1	7.1

Source: ECB.

<sup>1</sup> Housing loans are defined as housing loans to the household sector.<sup>2</sup> Annual change of the index of national stocks; annual and quarterly figures are based on the latest end-of-month data for the respective period. The data refer to domestic lending in all currencies (foreign currency loans have been converted into euro).<sup>3</sup> Domestic lending in all currencies, as converted into euro; amount of loans outstanding at end-period in % of GDP of the previous year or of the previous four quarters.<sup>4</sup> Denominated in the respective national currency (growth rates are based on the averages of the monthly data available for the relevant years or quarters).<sup>5</sup> New business is defined as actual new business and renegotiated loans; variable rate loans are defined as loans with an initial rate fixation period of up to one year; includes loans granted in the respective national currency; end-of-period figures are calculated from the monthly data available for the relevant periods.

Note: Sources of international organizations are used in this table to facilitate comparison. This is why the data for Austria may deviate from the data provided in the section on Austria's property market. "." indicates missing values.

Table A4

**Housing loans<sup>1</sup> in % of disposable income<sup>2</sup>**

%	2022   2021   2020   2019   2018				
	EU	.	.	.	.
BE	.	76.0	73.0	67.2	65.0
BG	.	.	.	.	.
CZ	47.9	51.2	48.4	46.0	45.4
DK	196.4	217.1	216.3	211.9	214.4
DE	71.7	72.8	69.4	66.1	63.8
EE	.	58.4	57.9	55.1	55.0
IE	.	56.4	63.2	70.3	74.4
GR	.	25.5	41.6	45.5	52.1
ES	.	67.8	69.0	68.3	72.8
FR	.	83.2	80.9	76.5	74.4
HR	.	25.7	26.2	23.8	23.6
IT	36.4	37.1	36.7	35.0	34.9
CY	.	56.6	60.8	59.7	65.2
LV	.	22.7	23.5	24.1	25.0
LT	.	30.9	29.0	29.0	29.2
LU	.	158.4	148.7	144.1	140.6
HU	.	14.6	14.4	13.7	13.9
MT	.	.	.	.	.
NL	123.3	125.8	127.6	130.6	134.2
AT	.	56.8	55.3	52.7	51.2
PL	.	35.0	32.5	33.7	33.2
PT	68.5	71.3	72.2	69.1	72.3
RO	.	.	.	.	.
SI	.	24.8	24.5	24.5	24.6
SK	64.6	64.6	60.4	56.8	54.2
FI	79.5	81.4	80.9	79.1	79.3
SE	138.6	148.2	155.1	143.0	140.2
UK	.	.	.	95.5	91.0

**Number of housing transactions<sup>3</sup>**

Per 1,000 inhabitants	2022   2021   2020   2019   2018				
	EU	.	11.7	10.1	10.6
BE	13.0	12.4	10.6	13.1	11.4
BG	.	.	.	.	.
CZ	.	.	.	.	.
DK	12.0	16.8	15.9	13.9	13.7
DE	.	6.7	6.8	6.9	6.5
EE	21.6	24.2	19.5	20.3	19.7
IE	.	.	.	.	.
GR	.	.	7.0	9.0	7.4
ES	.	.	.	.	.
FR	16.4	17.4	15.2	15.9	14.4
HR	.	1.2	0.8	0.8	0.7
IT	13.3	12.6	9.4	10.1	9.6
CY	.	.	.	.	.
LV	11.0	11.4	9.7	10.7	10.3
LT	11.5	14.2	12.0	12.8	12.2
LU	13.5	16.2	16.6	17.6	18.8
HU	.	16.5	13.7	16.1	16.8
MT	.	14.9	11.2	13.6	13.6
NL	.	.	.	.	.
AT	8.6	9.6	8.9	8.9	8.9
PL	.	6.6	5.4	5.6	5.6
PT	16.2	16.1	13.4	15.1	14.7
RO	.	.	.	.	.
SI	6.1	6.6	5.5	6.8	6.7
SK	.	.	.	.	.
FI	.	.	.	.	.
SE	19.5	18.1	16.8	16.0	15.5
UK	.	.	.	.	.

Source: ECB, Eurostat.

<sup>1</sup> Housing loans are defined as housing loans to the household sector.

<sup>2</sup> Domestic lending in all currencies; year-end loan stocks in % of net disposable income. The figures refer to the share of the household sector in %.

<sup>3</sup> Property acquired by households.

Note: EU-28 including the UK. Sources of international organizations are used in this table to facilitate comparison. This is why the data for Austria may deviate from the data provided in the section on Austria's property market. "." indicates missing values.

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