

PROPERTY MARKET REVIEW

Housing markets in Austria and CESEE



This publication analyzes developments on property markets given their importance for both price and financial stability. Two issues per year focus exclusively on housing markets in Austria; two issues additionally include analyses of international housing market trends, primarily in Central, Eastern and Southeastern Europe.

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Overview

Austria: steep upward trend in residential property prices continues

- The steep upward trend in residential property prices in Austria observed since the second half of 2020 has continued. Price growth remained above 10% year on year in the fourth quarter of 2021 – both in Vienna and in the rest of Austria. In Vienna, prices increased by 11.3%, and prices in the other provinces rose by 13.9% year on year. For Austria as a whole, house price growth reached a new peak at 12.6% in the fourth quarter, following 10.6% in the third quarter.
- Given the steep increase in prices, the OeNB's fundamentals indicator for residential property prices in Austria went up significantly in the fourth quarter of 2021. At 29.8%, the indicator was up 7.6 percentage points on the previous quarter – the sharpest increase since the start of the series in 1989. The indicator for Vienna amounted to 35.6% in the fourth quarter of 2021, representing a rise of 5.1 percentage points against the third quarter.
- In December 2021, the annual growth rate of housing loans to households amounted to 6.9%. Long-term loans (with a maturity of more than 5 years) continued to be the main driver of housing loan growth, accounting for more than 95% of outstanding loans at the end of December 2021, although short-term loans recorded a stronger increase over the past few months as well.

CESEE: housing market dynamics are raising concerns

- In Central, Eastern and Southeastern Europe (CESEE) house prices rose steeply in the second and third quarter of 2021. House price growth in the CESEE countries remained above the EU average although house price dynamics in the EU were lively as well.
- CESEE house prices were driven by several factors. On the demand side, the overall recovery can be seen as one of the key reasons explaining the house price dynamics observed in the second and third quarter of 2021. Moreover, partly generous government measures to support the purchase of residential property in several CESEE countries pushed up demand for housing. In terms of financing conditions, housing loan growth was supported by low interest rates.
- The COVID-19 pandemic has also produced some peculiarities that have affected the supply side of housing markets. Rising construction costs and an overall shortage of input material have constrained the supply of new housing, eventually translating into additional pressure on house prices.
- House price overvaluation and the potential risk of price corrections and housing-related household debt are currently a matter of concern in several CESEE countries. In view of accelerating house prices and housing loan growth, some CESEE central banks have introduced policy measures to address financial stability risks stemming from current housing market developments.

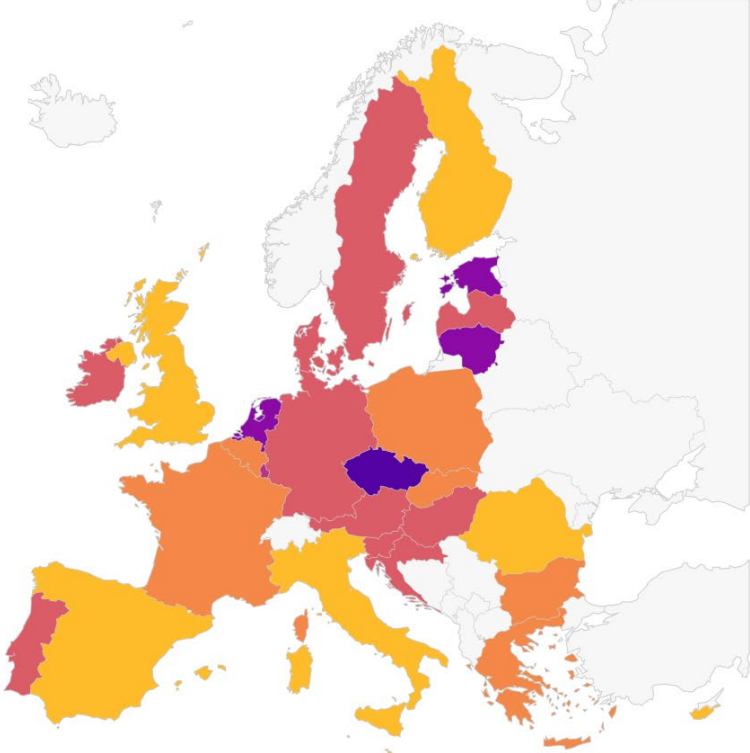
Special topic: China's growth at risk

- Forecasts suggest that the impact of a slowdown in China's real estate sector may significantly reduce aggregate economic growth. Economic spillovers to the euro area will most likely be moderate but visible.

House price growth map

Residential property prices – 3Q21

Annual change in %, at current prices



Source: Eurostat, ECB. Note: UK data reflect 3Q2020; the annual 2020 and 2021 figures include data up to 3Q2020

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Cutoff date: February 10, 2022

The analyses conducted in this issue reflect the views of the Oesterreichische Nationalbank. The results presented here do not relate to the appraisal of individual properties and should not be interpreted as recommendations for either property purchase or sale.

Housing markets in Austria

1 Upward trend in residential property prices continued in the fourth quarter of 2021

The steep upward trend in residential property prices in Austria observed since the second half of 2020 has continued. Price growth remained above 10% year on year in the fourth quarter of 2021 – both in Vienna and in the rest of Austria. In Vienna, prices increased by 11.3%, and prices in the other provinces rose by 13.9% year on year. For Austria as a whole, house price growth reached a new peak at 12.6% in the fourth quarter, following 10.6% in the third quarter.

Clear uptrend continued for the fifth quarter in a row

When compared against the previous quarter, house price growth increased within all segments. Having picked up by 3.9% in the first quarter of 2021, residential property prices in Austria increased by 2.4% each in the second and in the third quarter. In the fourth quarter of 2021, quarter-on-quarter growth accelerated again, reaching 3.2% (see table 1). For Austria's provinces excluding Vienna, growth accelerated even more markedly to 4.4% in the fourth quarter (after 1.5% in the third quarter).

Table I

Residential property prices in Austria

	Q4 21	Q3 21	Q2 21	Q1 21	Q4 20	Q3 20	Q2 20	Q1 20	Q4 19	2021	2020	2019
Annual change in %												
Austria	+12.6	+10.4	+11.7	+12.3	+10.0	+9.5	+5.2	+3.4	+3.0	+11.8	+7.0	+3.9
Austria excluding Vienna	+13.9	+10.6	+12.8	+14.0	+10.7	+9.7	+6.8	+2.8	+1.2	+12.8	+7.5	+2.6
Vienna	+11.3	+10.2	+10.7	+10.9	+9.4	+9.4	+4.1	+3.9	+4.3	+10.8	+6.7	+4.9
Quarterly change in %												
Austria	+3.2	+2.4	+2.4	+3.9	+1.3	+3.6	+3.0	+1.7	+0.8	x	x	x
Austria excluding Vienna	+4.4	+1.5	+2.7	+4.6	+1.5	+3.5	+3.8	+1.5	+0.6	x	x	x
Vienna	+2.1	+3.3	+2.2	+3.3	+1.1	+3.7	+2.4	+1.9	+1.0	x	x	x
Index (2000=100)												
Austria	259.3	251.2	245.3	239.4	230.4	227.5	219.5	213.1	209.5	248.8	222.6	208.0
Austria excluding Vienna	247.4	236.9	233.3	227.3	217.2	214.1	206.9	199.3	196.3	236.2	209.4	194.8
Vienna	298.4	292.2	283.0	276.8	268.0	265.1	255.6	249.5	244.9	287.6	259.6	243.2

Source: DataScience Service GmbH (DSS), Vienna University of Technology, Prof. Feilmayr, OeNB.

Note: x = no data available.

Vienna: some deceleration but single-family house prices spiked again

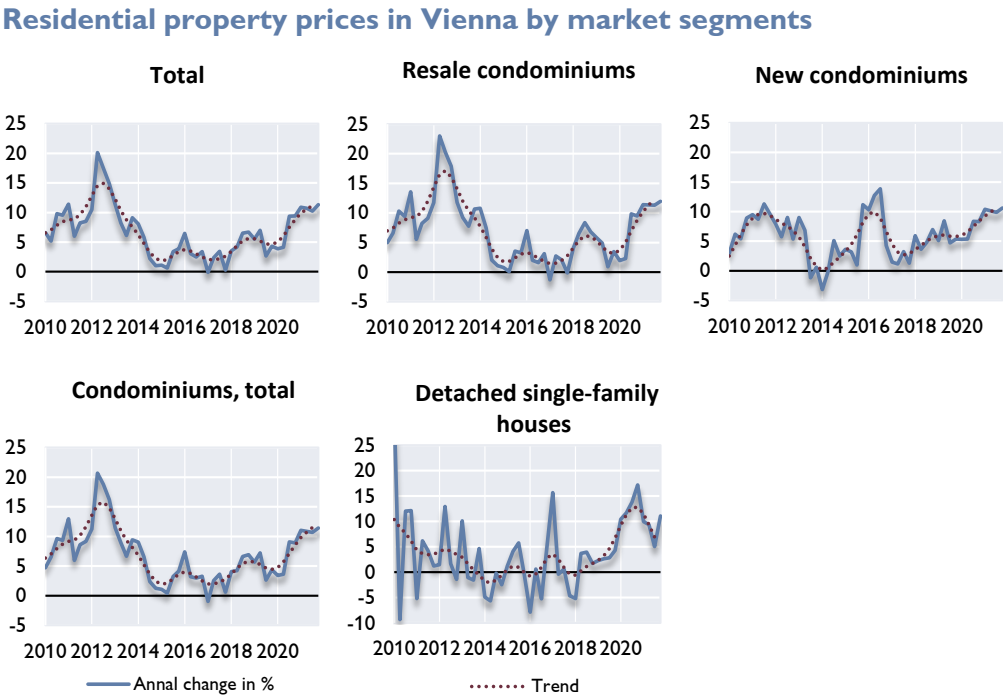
In Vienna quarter-on-quarter price increases slowed down a bit for all property categories except single-family homes. In comparison with the previous quarter, the prices for single-family homes increased by 8.5% (after -1.4% in the third quarter). Year on year, prices for new and resale condominiums in Vienna rose by 10.6% and 12.0%, respectively, in the fourth quarter of 2021,

thus moving broadly in sync with the overall market. The growth in prices for detached single-family homes¹ accelerated to 11% year on year (after 5% in the third quarter).

Austria excluding Vienna: new peak in prices for single-family homes

In the other provinces, quarter-on-quarter single-family house price growth accelerated markedly in the fourth quarter of 2021, rising to 5.6%, after 3.6% in early 2021 and 0.2% in the summer of 2021. Resale condominiums saw a drop in price growth to 1.2% in the third quarter of 2021, down from 5.5% in the first quarter. In the fourth quarter of 2021, the quarter-on-quarter increase was 3.7%. Year on year, prices for new and resale condominiums in Vienna rose by 10.8% and 14.5%, respectively, in the fourth quarter of 2021 (after 9.5% and 11.8% in Q3 2021). Year-on-year growth of single-family house prices was even higher – at 15.5% it reached a new peak (after 10.4% in the third quarter).

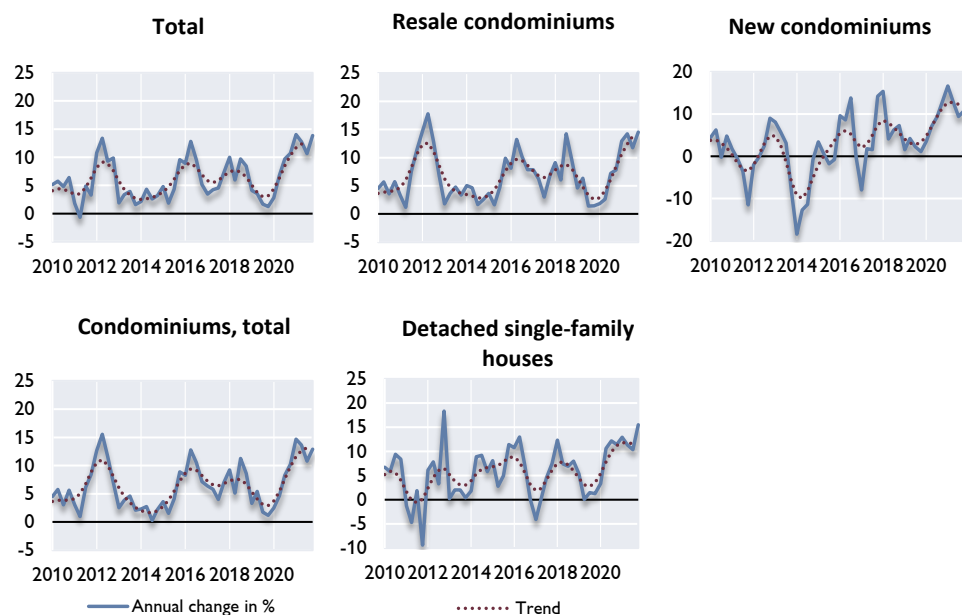
Chart I



Source: Data Science Service GmbH (DSS), TU Wien, Prof. Feilmayr, OeNB.

¹ The marked decline in single-family house prices needs to be viewed against the fact that, in Vienna, this segment is small and marked by volatile price developments.

Residential property prices in Austria excl. Vienna by market segments



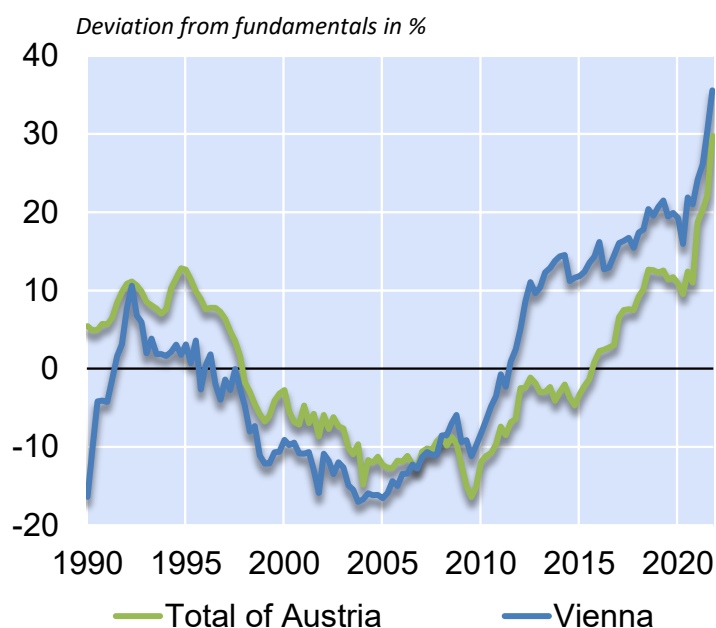
Source: Data Science Service GmbH (DSS), TU Wien, Prof. Feilmayr, OeNB.

2 OeNB fundamentals indicator² for residential property prices: Deviation of prices from fundamentals continues to widen

Given the steep increase in prices, the OeNB's fundamentals indicator for residential property prices in Austria went up significantly in the fourth quarter of 2021. At 29.8%, the indicator was up 7.6 percentage points on the previous quarter – the sharpest increase since the start of the series in 1989. The indicator for Vienna even reached 35.6% in the fourth quarter of 2021, representing a rise of 5.1 percentage points against the third quarter (see chart 3). These indicator readings signal that the gap between residential property price growth and the factors captured by the OeNB's fundamentals indicator has been widening substantially in recent quarters, pointing to increasing signs of overheating in Austria's residential property market. Besides the sharp increase in prices, interest rate risk is also driving the indicator. The subindicator for interest rate risk compares the three-month interest rate for the euro area with an interest rate estimated from the current development of GDP and inflation according to a Taylor rule. Since the current interest rate is considerably below the Taylor interest rate, this signals a risk of rising interest rates in the OeNB's fundamentals indicator.

² Schneider, M. 2013. Are Recent Increases of Residential Property Prices in Vienna and Austria Justified by Fundamentals? In: Monetary Policy & the Economy Q4/13. OeNB. 29–46.

OeNB fundamentals indicator for residential property prices



Source: OeNB.

3 Growth of housing loans to Austrian households remained buoyant

In December 2021, the annual growth rate of housing loans granted to households by monetary financial institutions (MFIs) amounted to 6.9% (adjusted for reclassifications, valuation changes and exchange rate effects). Long-term loans (with a maturity of more than 5 years) continued to be the main driver of housing loan growth, accounting for more than 95% of outstanding loans at the end of December 2021, although short-term loans recorded a stronger increase over the past few months as well.

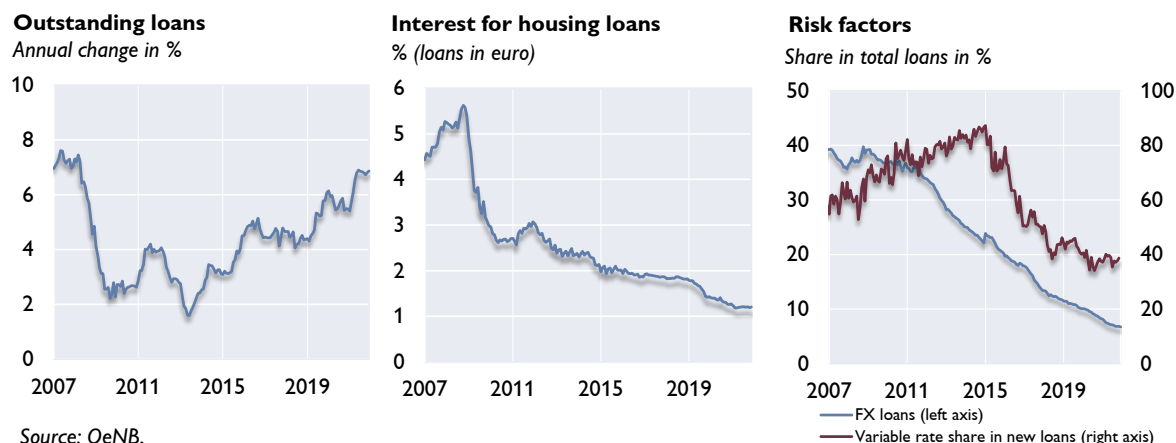
Conditions for housing loans remained favorable

In November 2021, interest rates on new housing loans stood at 1.20%, unchanged against 6 months earlier, but 19 basis points lower than in February 2020 (before the onset of the pandemic). The annual percentage rate of charge for housing loans, which reflects total borrowing costs (interest and related charges), dropped by 22 basis points over the same period.

Role of foreign currency lending declined further

The share of foreign currency loans decreased further over the second half of 2021, to stand at 6.8% of all outstanding housing loans in November 2021, 1.6 percentage points lower than one year earlier. In the same period, the share of variable rate loans (with an initial rate fixation period of up to one year) in new housing loans remained more or less unchanged, amounting to 38.7% in November 2021.

Housing loans to households in Austria



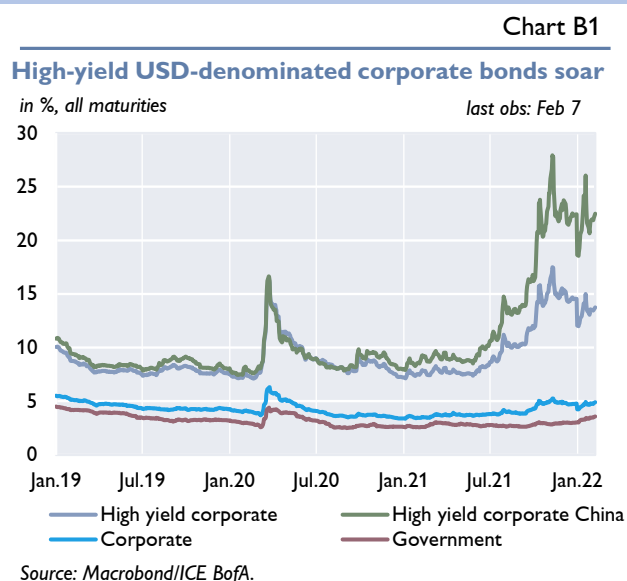
Source: OeNB.

Box I

China's growth at risk³

Will a substantial slowdown in the Chinese real estate sector affect China's aggregate growth rate? And can we expect spillovers to other countries or regions? This box presents estimates from an ongoing larger study which explores the effects of slower growth in sectoral gross value added (GVA) and potential spillovers to the global economy.

In August 2020, the Chinese authorities introduced new macroprudential regulations commonly known as the “three red lines.” These measures aim at reducing leverage and debt growth in the real estate sector by making future access to financing dependent on compliance with the new rules.⁴ Some real estate developers have since been facing a significant liquidity crunch. An example is the Evergrande Group, which has missed a few payment deadlines on its offshore USD-denominated corporate bonds since late summer 2021. Others have faced significant liquidity problems as well, which has caused turmoil in some financial market segments in China and Asia (e.g. high-yield USD-denominated corporate bonds in China reached yields of almost 28% in November; see chart B1). So far, the policy response suggests that a slowdown of real estate-related activities will not be counteracted with the full force of economic policies at the disposal of Chinese authorities.



³ This box is based on joint work with Thomas Theobald, Macroeconomic Policy Institute (IMK, Düsseldorf).

⁴ The “three red lines”: (1) liability-to-asset ratio (excluding advance receipts) of less than 70%; (2) net gearing ratio of less than 100%; (3) cash-to-short-term debt ratio of more than 1. Permitted annual debt growth is 15% if no red line is breached, 10% if one is breached, 5% if two are breached and 0% in case of noncompliance with all three rules.

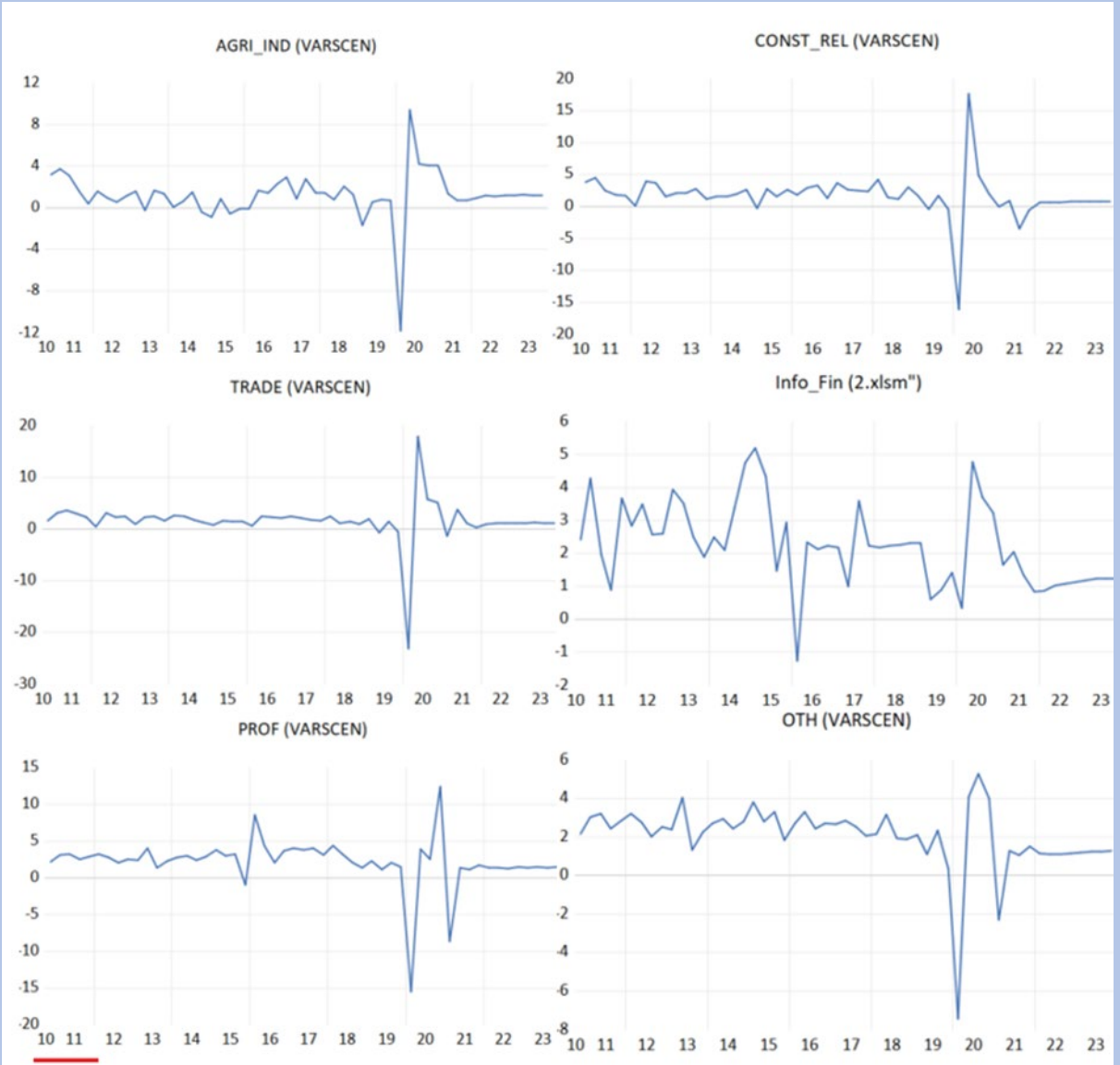
Economic growth in China will likely decline but by how much?

To answer this question, we first conduct a simple econometric exercise based on a sectoral vector autoregression (VAR) forecasting model similar to Battistini and Stoevsky, 2021 (see [ECB, Economic Bulletin 2/2021, Box 4](#)). Our most important finding: The construction and real estate sector (chart B2, upper right panel) experiences significantly lower quarter-on-quarter growth rates throughout the forecast horizon 2021–2023 than during previous periods. Our results are also clear-cut with respect to aggregate GVA growth from 2022 on. According to our model, the Chinese economy will see a quite significant reduction of aggregate GVA growth to 3.7% in 2022, followed by a rebound to 4.7% in 2023. The share of the construction sector’s GVA is assumed to decline from around 14% of total GVA in the third quarter of 2021 to 13.2% over the forecast horizon.

Chart B2

Simulation suggests growth slump in construction and real estate

Quarter-on-quarter growth rates of clustered sectors



Source: OECD Quarterly National Accounts and OeNB and IMK simulations based on NiGEM model.

Note: Variable description: aggregated GVA of AGRI_IND (= agriculture and industry), CONST_REL (= construction and real estate activities), TRADE (= trade, transport and accommodation), INFO_FIN (= information and finance), PROF (= professional, scientific and support services) and OTH (= all other services). Aggregation was used to reduce the number of coefficients to be estimated against the background of limited quarterly observations since 1995.

In a second step, we assess the spillovers from lower economic growth in China to other countries and regions, employing the global macroeconomic NiGEM model provided by the National Institute of Economic and Social Research (NIESR). To keep the model as simple as possible, we have clustered some sectors into larger groups (e.g. agriculture and industry, information and finance, etc.). We now feed the model with results from sectoral growth forecasts and design two scenarios.

Our scenarios: domestic demand shock v. domestic demand shock with house price decline

The first scenario consists of a domestic demand shock reflecting the earlier VAR forecast results. The second scenario adds a negative shock to house prices, materializing via a negative wealth effect on household consumption⁵ starting in mid-2022 and reversing around half of the increase seen since 2015 by 2023. The results presented in table B1 suggest that the spillovers are moderate but not insignificant.

In scenario 1 (domestic demand shock), China's GDP declines by 1.8% in 2022 and 3.1% in 2023 relative to the baseline. GDP in the euro area is 0.2% lower than in the baseline in 2022 and 0.3% lower in 2023. In scenario 2 (domestic demand shock plus house price decline), GDP in China, relative to the baseline, is 2.7% and 4.6% lower in 2022 and 2023, respectively. Euro area GDP will be reduced by 0.3% in 2022 and 0.4% in 2023. Reduced GDP levels are almost entirely due to trade channels as can be expected given the relatively limited fallout on financial markets outside of Asia so far.

The actual impact on growth in China and elsewhere still needs to reveal itself and depends on a number of factors: the number and size of future defaults, the economic policy reaction, a broad tightening of financing conditions, changes in household behavior (e.g. increasing saving efforts to counteract rising uncertainty) and global sentiment.

Table B1

Potential GDP spillovers from China to selected economies

%

	Scenario 1		Scenario 2	
	2022	2023	2022	2023
China	-1.8	-3.1	-2.7	-4.6
US	-0.1	-0.1	-0.2	-0.1
Japan	-0.3	-0.4	-0.5	-0.7
Euro area	-0.2	-0.3	-0.3	-0.4
Germany	-0.2	-0.3	-0.3	-0.4
Austria	-0.2	-0.3	-0.2	-0.4

Source: OeNB and IMK simulations based on NiGEM model.

Note: Values denote percentage differences from base levels. The effects can be attributed almost entirely to reduced Chinese imports and trade linkages as incorporated in NiGEM.

⁵ This channel is particularly important since net housing wealth constitutes close to 73% of national net wealth and is by far the most important asset of households in China.

Housing markets in CESEE

1 Housing market dynamics are raising concerns about financial stability risks in several CESEE countries

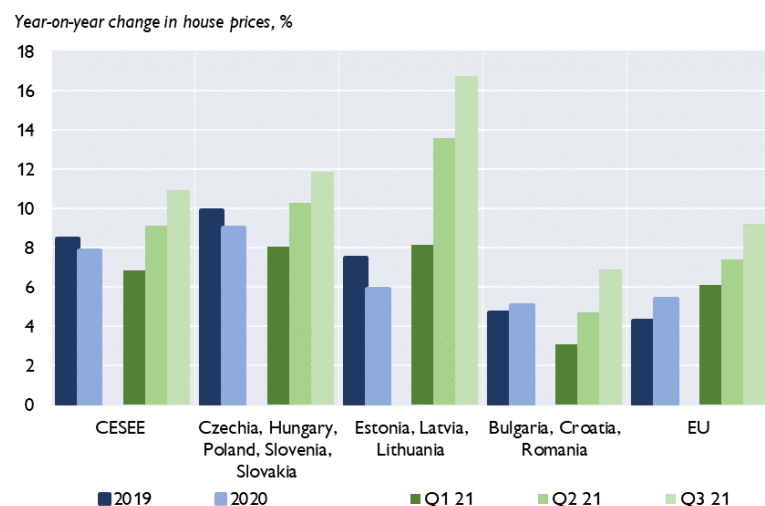
The impact of the COVID-19 pandemic on residential property markets is very different from what was largely expected almost two years ago. Initially, it was generally assumed that housing markets would be negatively affected by the turbulences caused by the pandemic and that this would translate into moderating price growth and an overall slowdown of housing market activity. Meanwhile, some unexpected developments have come to the fore. For instance, people’s preferences regarding housing have changed: The demand for better housing with more living space and the desire to live outside the city have increased as people are spending more time working from home (Duca, Muehlbauer and Murphy, 2021).⁶ Next to changing preferences, many other factors are at play that have boosted housing demand and constrained housing supply – a fact evidenced by steeply rising house prices (chart 5) in Central, Eastern and Southeastern Europe (CESEE).

House prices in CESEE again rose steeply in the second and third quarter of 2021

In annual terms, house prices in the CESEE region (GDP-weighted average) grew by around 9% and 10%, respectively, in the second and third quarter of 2021. Thus, there was a significant acceleration in price dynamics compared to 2020 and the first quarter of 2021. Moreover, house price growth in the CESEE countries remained above the EU average although house price dynamics in the EU were lively as well.⁷

Chart 5

Rising house prices in CESEE, stronger growth than in the EU



Source: Eurostat, IMF.

Note: House prices based on nominal, GDP-weighted averages.

Recent developments in the Baltic countries (Estonia, Latvia, Lithuania) are eye-catching, with average house price growth of almost 17% year on year in the third quarter of 2021. All Baltic countries registered double-digit growth rates, with growth being highest in Lithuania. Price growth also accelerated in the Visegrád countries and Slovenia. Within this group, prices grew fastest in Czechia, Hungary and Slovenia. In the Southeastern European countries (Bulgaria, Croatia,

⁶ A shift in housing demand away from capital cities toward the suburbs or more rural areas was also observable in several CESEE countries.

⁷ House price growth rates (in nominal and real terms) are provided in the annex for each country.

Romania), house price growth remained below the EU average but clearly accelerated in the third quarter of 2021, driven by strong house price dynamics in Bulgaria and Croatia.

Increase is being driven by demand and cost

House prices in the CESEE countries were driven by several factors. On the demand side, the overall recovery can be seen as one of the key reasons explaining the house price dynamics observed in the second and third quarter of 2021. Consumer confidence in CESEE bounced back, and the situation on the labor markets was favorable in terms of unemployment and wage growth.⁸ Against the background of low unemployment rates and the (re-)emergence of labor shortages, wages grew quite dynamically. Moreover, households had accumulated savings during earlier lockdowns and had been limited in their consumption opportunities.⁹ Moreover, partly generous government support measures in several CESEE countries pushed up demand for housing. In terms of financing conditions, housing loan growth was further driven by low interest rates, overall favorable lending standards as well as expectations of rising house prices (European Investment Bank, 2021). The COVID-19 pandemic has also produced some peculiarities that have affected the supply side of housing markets. Rising construction costs and an overall shortage of input material have constrained the supply of new housing, eventually translating into additional pressure on house prices.

Housing loan growth is quickly accelerating

Housing market dynamics were also reflected in quickly accelerating housing loan growth. In all CESEE countries, housing loans showed higher growth rates in the third and fourth quarter of 2021 compared to end-2020 figures, and six out of eleven CESEE countries registered double-digit growth rates in the fourth quarter of 2021 (chart 6). Growth of new loans for housing purposes¹⁰ increased quite strongly in most CESEE countries in the third and fourth quarter of 2021 after more modest growth in the same period of 2020, partly due to a base effect but also because of greater financing needs for the purchase of new residential property.

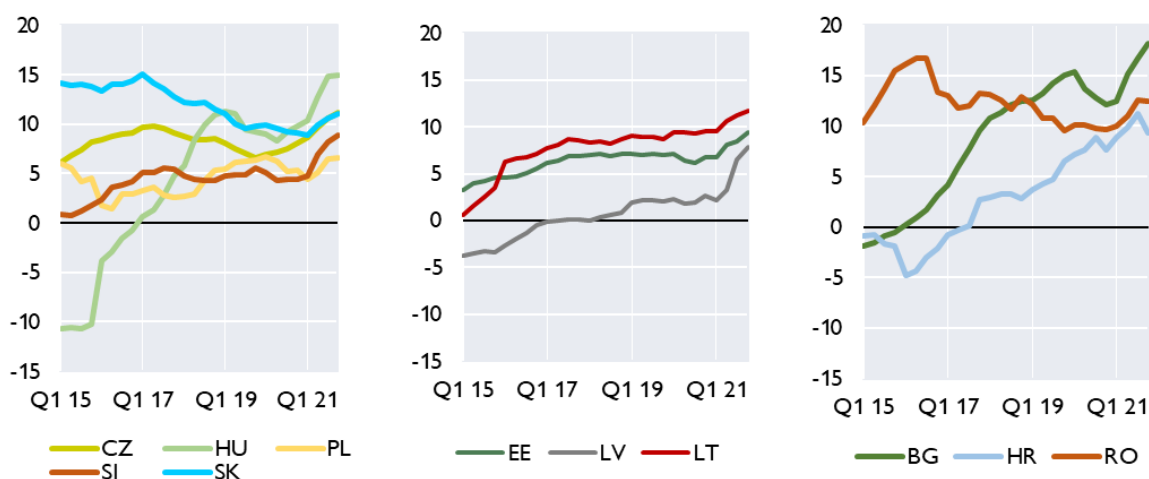
⁸ According to Eurostat, unemployment rates in CESEE were (slightly) above pre-pandemic levels in the third quarter of 2021 but considerably lower than in the same period of 2020. Moreover, unemployment rates were below EU average in most CESEE countries.

⁹ See: OeNB. 2021. [Developments in selected CESEE countries](#). In: Focus on European Economic Integration Q4/21. OeNB. 7–43.

¹⁰ Growth rates for housing loans (new business) are provided in the annex.

Housing loans in CESEE are increasing steeply

Year-on-year change in notional stock of housing loans, %



Source: ECB.

Housing loan demand is being fueled by several factors

Record-low interest rates improved funding capacities for households and fueled demand for housing loans. Interest rates for housing loans were particularly low in Slovakia in the fourth quarter of 2021 and even declined further compared to end-2020. Low interest rates in Slovakia are also the result of strong competition among banks (Národná banka Slovenska, 2021). In some countries (notably in Czechia, Hungary, and Poland), interest rates for housing loans increased slightly in the fourth quarter of 2021 compared to the same period of 2020, which should be seen against the background of recent key interest rate hikes in several CESEE countries (Czechia, Hungary, Poland, Romania) in the wake of rising inflation evident since early 2021. In this context, interest rate risks stemming from potentially tighter financing conditions for housing loans with variable interest rates are emerging in some CESEE countries. Households are exposed to interest rate risks to a different degree. The share of housing loans with variable interest rates is comparatively high in Bulgaria and Poland, whereas housing loans with variable rates only play a minor role in Czechia.¹¹ In autumn 2021, the Hungarian government decided to protect households from interest rate risks by freezing the interest rate for housing loans (at end-October 2021 levels), effective from the beginning of 2022 until end-June 2022.¹²

¹¹ Share of variable rate housing loans in new business are provided in the annex.

¹² This measure largely applies to older housing loans. According to data provided by Magyar Nemzeti Bank (2021b), 70% of new housing loans taken out in the second quarter of 2021 had an interest rate fixation period of 10 years or longer and 99.5% of 5 years or longer. In the second quarter of 2016, about 33% of new housing loans had a fixation period of 10 years or longer and less than 60% of 5 years or longer.

Apart from low interest rates, favorable housing market prospects detectable in CESEE over the last six months (according to the CESEE Bank Lending Survey of the European Investment Bank released in autumn 2021) also drove household loan demand.

Also, volumes of individual housing loans increased along with rising house prices. Higher financing needs additionally lifted housing loan growth in several CESEE countries. In Czechia, for example, the average size of a housing loan increased by 21% year on year in the first half of 2021 (Czech National Bank, 2021).

Besides the overall favorable housing market environment, housing loan growth was supported by policy measures in several CESEE countries. In Hungary, new housing subsidies¹³ in place since 2021 were strongly used in the first half of 2021, which boosted household lending even further. The Hungarian central bank highlighted that, despite strong growth of housing loans, lending has not become riskier: There have been no significant recent changes in the share of loans close to LTV (loan-to-value) and/or PTI (payment-to-income) limits compared to previous years (Magyar Nemzeti Bank, 2021a). In Poland, the act on guaranteed housing loans (as part of the Polish New Deal in place since 2022) has prompted the Polish central bank to warn about additional pressure on Polish housing markets because households without sufficient own financial resources will be able to buy a house (Narodowy Bank Polski, 2021). Partly generous subsidy programs are also in place in other CESEE countries, such as Croatia, Romania and the Baltic countries, fueling the growth of housing loans extensively.

Supply side: construction sector burdened by rising input prices and material shortages

Generally, house price dynamics in most CESEE countries have also been fueled by structural shortages of housing supply. Moreover, the COVID-19 pandemic has weighed on the construction sector (for instance, there was a forced temporary construction pause at time of strict lockdowns). According to Eurostat, production in construction is only slowly gaining speed in most CESEE countries¹⁴. Similarly, confidence in the construction sector is still below pre-pandemic levels in most CESEE countries despite a visible recovery over the last months (chart 7) that is largely related to supply-side factors. In particular, the shortage of material and labor and, eventually, the steep increase in construction costs (chart 8) are burdening the construction sector while currently demand-side considerations are less of a concern.¹⁵

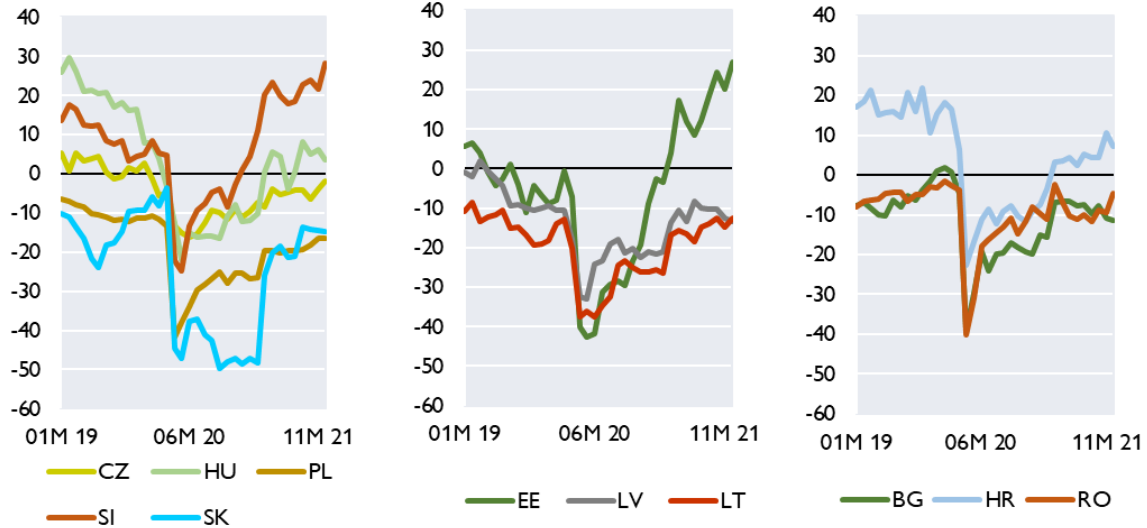
¹³ In Hungary, new benefits were introduced starting from January 2021 onward. For instance, a preferential VAT rate of 5% (instead of 27%) was introduced for new housing built until end-2026 (building permit has to be registered by end-2022). Households are completely exempt from VAT when using the Hungarian home purchase subsidy scheme for families or the home improvement subsidy.

¹⁴ No data available for Estonia, Latvia, and Lithuania. Data on residential construction investment are provided in the annex.

¹⁵ For more information, see [survey data](#) published by the European Commission on factors that are currently affecting building activities in the EU countries.

Mood in the construction sector still partly subdued

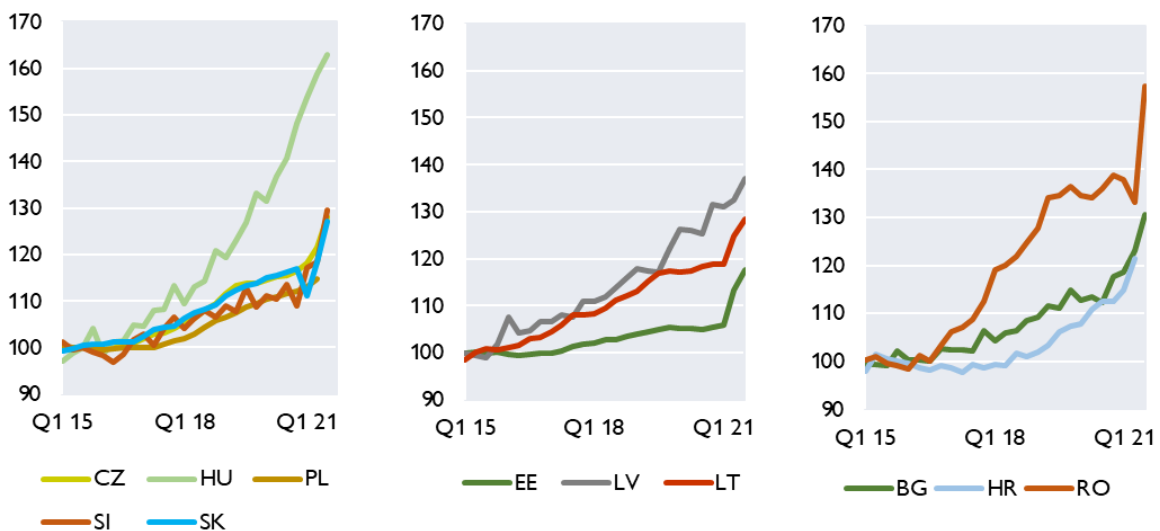
Construction confidence index, seasonally adjusted



Source: Eurostat.

Construction costs for residential property on the rise

Index, 2015 = 100



Source: Eurostat.

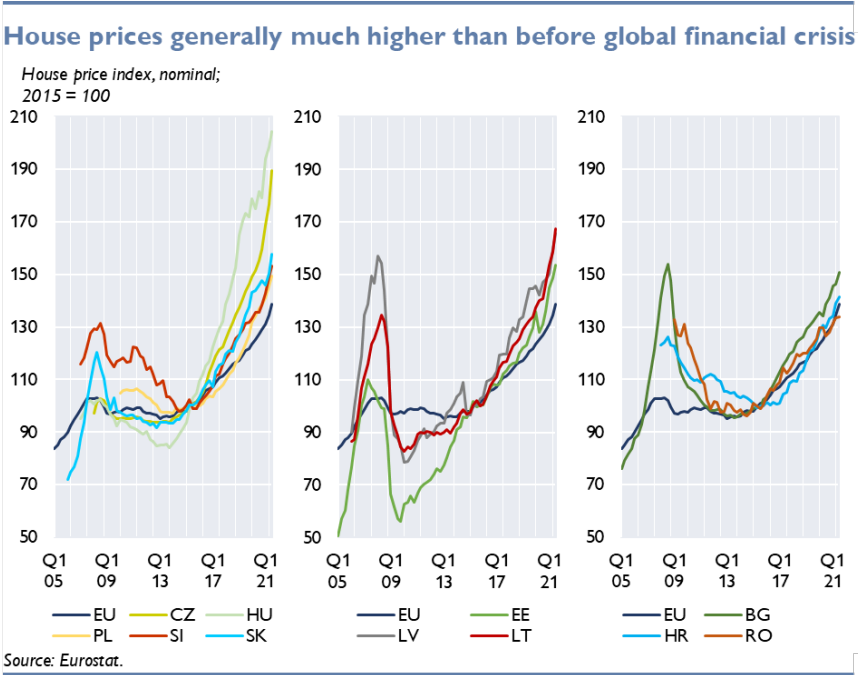
In Hungary, construction costs already increased visibly over the last years, which is largely due to capacity constraints and weak competition in the construction sector (Magyar Nemzeti Bank, 2021b). In CESEE as a whole, the surge in construction costs over the last quarters is mainly due to strong global demand for building material, supply chain bottlenecks and globally rising

inflation that is feeding through to the construction sector. Shortages of input material and rising costs are directly exerting upward pressure on house prices. Furthermore, they may have delayed the start or finalization of housing construction to some extent, thus also delaying a narrowing of the gap between housing demand and housing supply. This is putting additional pressure on house prices. On a positive note, building permits (number of dwellings) increased significantly in the second and third quarter of 2021 in almost all CESEE countries after slumping in 2020. This will eventually result in higher housing supply in the future. The issuing of new building permits grew most strongly in Hungary in the second and third quarter of 2021 (annual growth of more than 50% in the second and third quarter of 2021 on average), which was largely the result of the reintroduction of the preferential VAT rate on housing. By contrast, growth of building permits was negative in Estonia and Latvia.¹⁶

2 Overvalued house prices and strongly indebted households are a matter of concern in several CESEE countries

In nominal terms, house prices in most CESEE countries are currently above the levels seen prior to the great financial crisis of 2008–2009 (GFC). House prices have accelerated particularly strongly in Hungary and Czechia. It is worth noting that both countries went through a more moderate boom-bust period during the GFC compared for instance to the Baltic countries (chart 9).

Chart 9



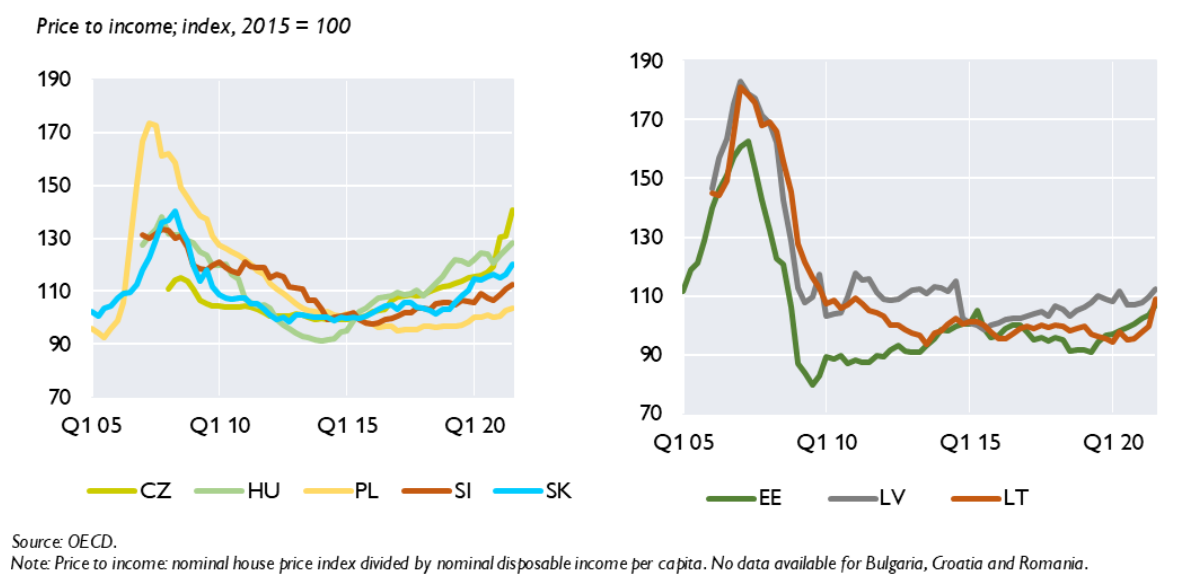
The European Systemic Risk Board (ESRB, 2022) provides estimates of the over- or undervaluation of residential property prices in EU countries. According to their demand model (last observation: Q2 2021), residential property prices in CESEE countries are (strongly) overvalued in Czechia, Slovakia, Estonia, Lithuania, Slovenia and Hungary. This picture is partly confirmed when price-to-income ratios are used to evaluate house prices: Housing has become

¹⁶ Data on building permits are provided in the annex.

less affordable, particularly in Czechia, Slovakia but also in Hungary since 2015¹⁷. Moreover, in these countries, price-to-income ratios diverged most strongly from their long-term average (chart 10). Regarding the price-to-rent ratio, owning property has become more expensive than renting in all CESEE countries, and the price-to-rent ratio was clearly above its long-term average in all CESEE countries (chart 11).¹⁸

Chart 10

Housing affordability: Czechia, Hungary and Slovakia see strongest deterioration since 2015



¹⁷ This measure does not take into consideration housing subsidies. Magyar Nemzeti Bank (2021b) shows that housing affordability has been improved due to subsidies, in particular for families with children. Other measures of housing affordability can also be used. For instance, Národná banka Slovenska (2021) defines housing affordability as the share of monthly income needed to make installment payments on a housing loan taken out to buy residential property.

¹⁸ According to the European Systemic Risk Board (ESRB, 2022) most CESEE countries recorded overvalued house prices or signs of overvaluation if more factors (such as the development of price-to-income ratios) are taken into consideration.

Owning property in CESEE has become more expensive than renting since 2015



Source: OECD.

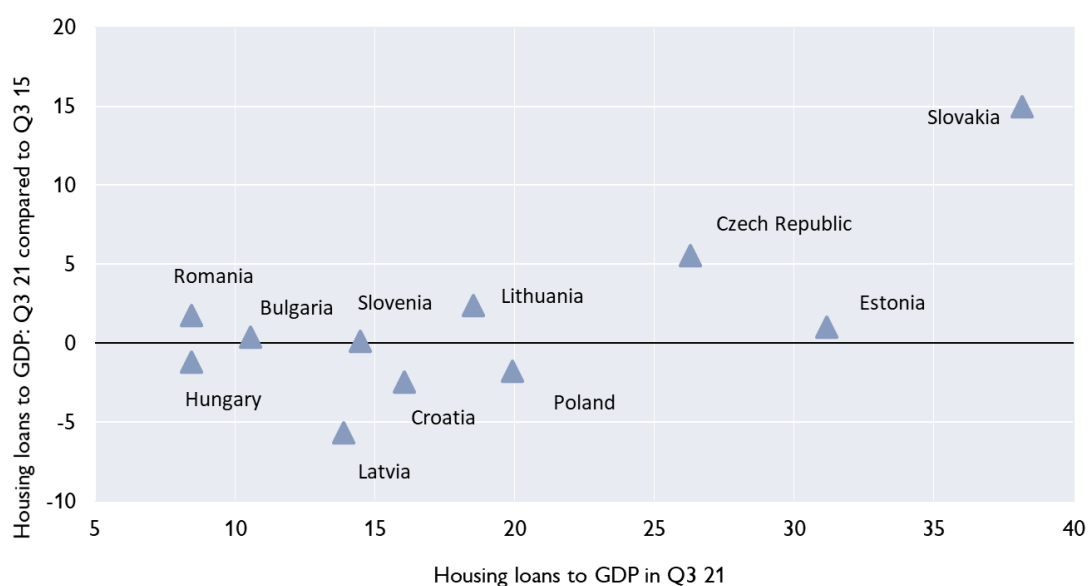
Note: Price to rent: nominal house price index divided by the housing rent price index. No data available for Bulgaria, Croatia and Romania.

In their latest assessments, several central banks in CESEE also concluded that house prices are overvalued or that house price misalignments are building up: The Czech National Bank (2021) estimated that house prices were significantly overvalued – by almost 25% – for a median household in the second quarter of 2021. In the same period, house prices in Hungary were strongly overvalued in Budapest (by almost 15%) and to a lesser extent nation-wide (by 8.4%); however, the latter value was the result of a strong increase from below 3% in the fourth quarter of 2020 (Magyar Nemzeti Bank, 2021b). According to Narodowy Bank Polski (2021), house price divergence from economic fundamentals is not evident. Národná banka Slovenska (2021) concluded that house prices are currently still in line with fundamentals, but overvaluation could emerge in case of further price acceleration. Banka Slovenije (2021) stated that house prices are relatively high against economic fundamentals. The Croatian National Bank (2021) assessed that house prices are diverging further from economic fundamentals. The Baltic countries, overall, assessed that house prices are currently not, or only to some extent, overvalued (Eesti Pank, 2021; Latvijas Banka, 2021; Lietuvos bankas, 2021).

Apart from house price overvaluation and the potential risk of price corrections, housing-related household debt and credit-fueled housing market booms may be a source of vulnerability for the financial sector. Across CESEE, household indebtedness differs strongly in terms of size and dynamics (chart 12). Obviously, debt incurred for housing purposes was highest and accelerated most strongly in Slovakia compared to other CESEE countries. Similar developments were observable in Czechia and Estonia. By contrast, the level of indebtedness was comparatively low in Hungary and Romania.

Housing loans: Slovakia with strongest increase and highest level of related household debt

% of GDP (x-axis); percentage points (y-axis)



Source: National central banks, national statistical offices.

3 Risks to financial stability are emerging in several CESEE housing markets

In light of recent growth dynamics affecting house prices, housing loans and household indebtedness, CESEE central banks and international institutions have highlighted increasing risks in several CESEE countries. Most recently, the European Systemic Risk Board (2022) concluded in its assessment of residential real estate sectors that all CESEE countries (except for Latvia and Romania) face medium vulnerabilities in residential real estate markets. Moreover, the ESRB issued warnings for Bulgaria, Croatia, Hungary and Slovakia because it assessed that policy measures have not been sufficient to address the vulnerabilities arising from housing market developments. Some central banks (and other national authorities) have already reacted to the potential buildup of financial stability risks stemming from housing markets. Most CESEE countries introduced some form of borrower-based measures¹⁹ to address housing imbalances after the GFC. Generally, these measures are strongly linked to housing markets and can be implemented to address risky lending behavior by households. Yet, borrower-based measures can also be applied to support lending activity, as was the case in the Czech Republic and Slovenia at the onset of the COVID-19 pandemic.²⁰

¹⁹ Such as limits on the loan-to-value (LTV), debt-to-income (DTI) and debt service-to-income (DSTI) ratio or limits on loan maturities. For an overview of measures implemented in CESEE countries, see: [ESRB: National Policy](#).

²⁰ The Czech National Bank relaxed its recommendations for the LTV limit (from 80% to 90%) and abolished its recommendation for DSTI and DTI limits. Banka Slovenija also relaxed the DSTI limit and allowed banks to exclude months with decreased earnings. The measure has been in place since June 2020.

What are CESEE central banks saying?

In view of the strong rebound of housing market activity and the risk of a vicious circle of house prices and housing loan growth²¹, the Czech National Bank backedpedaled and, in November 2021, decided to implement binding upper limits for LTV, DTI und DSTI ratios²² that will become effective on April 1, 2022 (Czech National Bank, 2021).²³

Národná banka Slovenska (2021) sees risks for financial stability associated with household debt incurred for housing purposes. According to its analysis, risks are highest for households with already existing debt that is reinforced through loan refinancing and the extension of maturities. Moreover, a large share of loans only matures after the creditors reach retirement age, which increases the risk of repayment difficulties. In early 2020, the Slovak central bank tightened the DSTI from 80% to 60%²⁴, and the use of other borrower-based measures has mitigated the risks stemming from household lending.²⁵

Magyar Nemzeti Bank (2021) acknowledges strongly rising house prices but argues that the exposure of the banking sector to the residential property sector is low and that risky lending still appears limited. Narodowy Bank Polski (2021) concludes that imbalances on housing markets are currently insignificant despite strong growth in house prices and housing loans but warned about the effects of the act on guaranteed housing loans (see above), which could lead to more risky lending. Due to rising house prices, Banka Slovenije (2021) tightened its risk assessment for housing markets as of the third quarter of 2021 – from moderate to elevated. As for the Baltic countries, Eesti Pank (2021) sees various imbalances in the Estonian housing markets: strong growth of house prices and housing loans in the domestic markets as well as in neighboring countries (Sweden, Lithuania) that could negatively impact banks operating in Estonia. In Lithuania, there is no mention of imbalances in the real estate market so far, but house prices and housing loans are developing quite dynamically according to Lietuvos bankas (2021). Against this background, the central bank decided to introduce a 2% sectoral systemic risk buffer for the housing loan portfolio of banks in November 2021.²⁶

The Croatian National Bank (2021) concluded that strong house price and housing loan growth (fueled by the government subsidy program) has increased vulnerabilities in the housing market that could materialize in the case of an unexpected house price decline. The Bulgarian National Bank (2021) and National Bank of Romania (2021) highlighted dynamic house price growth that

²¹ The IMF (2022) recently also warned about macrofinancial vulnerabilities due to record-high house price growth and risky lending for housing purposes.

²² The LTV limit was lowered to 80%, the DTI limit set at 8.5 times the net annual income of the borrower and the DSTI limit at 45% of the net monthly income of the borrower. For borrowers under 36 years of age, lower limits apply. With effect from mid-2021, the Czech National Bank can set binding macroprudential policy measures; before, there were only non-binding recommendations for banks (Czech National Bank, 2021).

²³ Moreover, the maximum amount of [tax deductibility was reduced from CZK 300,000 to CZK 150,000](#) from 2021 onward.

²⁴ The Slovak central bank uses a set of borrower-based measures to contain the risks to financial stability stemming from strong housing lending (DSTI-, DTI- and LTV-limits were already introduced in 2014 and subsequently tightened).

²⁵ See also IMF (2021) where it is shown that macroprudential policy used by the Slovak central bank have contained risks related to lending for housing.

²⁶ Not relevant for banks with housing loan portfolio of less than EUR 50 million.

is accompanied by strong housing loan growth. For Romania, the central bank states that vulnerabilities are rising for housing loans that are used for investment purposes, namely housing that is not used for own residential purposes. To limit this trend, the central bank plans to tighten the LTV ratio for housing loans used to purchase property other than owner-occupied housing.

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International property market data

Residential property prices

Annual change in %, at current prices

	3Q21	2Q21	2020	2019	2018	2017	2016
EU	9.2	7.4	5.5	4.8	5.0	4.7	4.3
BE	8.2	7.4	4.2	4.0	2.9	3.6	2.6
BG	8.7	9.1	4.6	6.0	6.6	8.7	7.0
CZ	22.0	16.6	8.4	9.2	8.6	11.7	7.2
DK	10.3	15.4	5.1	2.3	4.4	4.5	5.2
DE	12.0	10.8	7.8	5.8	6.6	6.1	7.5
EE	17.3	16.1	6.0	7.0	5.9	5.5	4.7
IE	10.6	5.6	0.3	2.3	10.2	10.9	7.5
GR	7.9	6.2	4.5	7.2	1.8	-1.0	-2.4
ES	4.2	3.3	2.2	5.2	6.7	6.2	4.6
FR	7.1	5.7	5.2	3.3	2.9	3.2	1.0
HR	9.0	6.5	7.7	9.0	6.1	3.8	0.9
IT	4.2	0.4	1.9	-0.1	-0.6	-1.1	0.3
CY	2.2	-4.9	-0.2	3.7	1.8	2.2	0.3
LV	12.7	12.1	3.5	9.0	9.6	8.8	8.5
LT	18.9	13.3	7.3	6.8	7.3	8.9	5.4
LU	13.4	13.4	14.5	10.1	7.1	5.6	6.0
HU	12.6	13.6	4.9	17.0	14.3	12.2	13.4
MT	5.9	5.4	3.4	6.1	5.8	5.3	5.4
NL	16.8	13.0	7.6	7.3	9.5	7.5	5.0
AT	12.9	11.8	7.7	5.8	4.7	5.3	8.5
PL	8.9	8.3	10.5	8.7	6.6	3.9	1.9
PT	9.9	6.6	8.4	9.6	10.3	9.2	7.1
RO	5.9	3.0	4.7	3.4	5.6	6.0	6.0
SI	12.9	9.9	4.6	6.7	8.7	8.3	3.3
SK	8.0	4.7	9.6	9.1	7.4	5.9	6.7
FI	5.0	5.3	1.8	1.0	1.0	1.6	0.8
SE	11.3	10.9	4.2	2.5	-0.9	6.6	8.2
UK	.	.	.	1.0	3.3	4.6	7.0

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

	3Q21	2Q21	2020	2019	2018	2017	2016
EU	.	.	.	.	.	.	.
BE	5.8	6.1	3.6	2.6	0.8	1.7	1.1
BG	11.3	4.6	5.2	3.9	4.1	3.9	5.3
CZ	17.8	14.0	5.5	6.2	5.9	9.1	6.8
DK	7.7	13.3	4.6	1.6	3.7	3.5	5.1
DE	7.9	8.9	7.1	4.4	5.1	4.6	6.7
EE	12.2	12.9	6.9	4.4	2.2	1.1	3.7
IE	5.3	0.2	-0.2	0.3	8.1	9.8	7.2
GR	.	.	5.5	7.2	1.7	-1.4	-1.5
ES	2.3	1.9	2.2	4.1	5.2	4.6	4.5
FR	5.3	4.7	4.4	2.5	1.2	2.3	0.8
HR	5.8	4.1	7.3	7.8	4.6	2.9	2.0
IT	2.3	-0.5	2.2	-0.7	-1.5	-2.1	0.2
CY	-1.4	-6.6	0.7	2.6	0.5	1.2	2.2
LV	8.9	9.8	2.7	5.8	6.3	5.3	7.2
LT	13.0	9.8	6.4	4.6	4.5	5.2	4.4
LU	10.9	10.5	13.8	8.3	5.1	3.3	5.2
HU	7.5	7.8	1.9	11.8	10.7	8.6	12.3
MT	4.2	4.9	2.2	4.1	5.0	4.3	4.4
NL	13.6	9.9	6.0	4.6	7.1	6.1	4.4
AT	10.3	9.2	6.2	4.0	2.6	3.4	7.0
PL	3.4	3.6	7.1	6.1	4.8	1.8	2.3
PT	9.0	5.8	7.7	8.7	8.6	7.6	6.1
RO	0.5	-1.5	2.2	-1.9	1.7	3.3	5.2
SI	8.4	7.4	5.2	5.3	6.6	6.6	3.6
SK	3.9	2.1	7.2	6.2	4.9	4.4	7.0
FI	2.9	3.4	1.3	0.0	-0.2	0.5	0.6
SE	9.7	9.1	3.0	0.4	-3.3	4.8	7.3
UK	.	.	.	-0.4	0.9	2.5	5.5

Residential construction investment

Annual change in %, at constant prices

	4Q21	3Q21	2021	2020	2019	2018	2017
EU	.	3.9	.	-3.4	2.3	3.6	4.7
BE	.	.	.	-7.2	4.7	2.6	0.8
BG	.	-14.5	.	0.7	6.6	-2.2	19.2
CZ	.	7.1	.	7.2	2.0	5.2	10.6
DK	.	4.3	.	10.1	4.7	4.8	11.1
DE	.	3.5	1.2	3.4	1.5	3.0	0.9
EE	.	-11.2	.	14.0	11.7	-1.5	11.1
IE	.	-4.3	.	-7.2	-1.4	19.5	22.5
GR	.	72.0	.	14.6	16.9	22.5	-7.0
ES	-9.0	-12.1	-5.3	-11.2	6.6	13.0	13.4
FR	2.4	7.5	.	-12.2	2.5	3.2	6.1
HR	.	-2.1	.	-5.0	13.0	-0.3	-7.2
IT	.	9.3	.	-7.7	-0.6	1.1	1.1
CY	.	3.5	.	-5.9	21.3	37.5	16.0
LV	.	-19.5	.	-1.9	3.8	26.3	-0.2
LT	.	9.4	.	4.1	14.7	5.9	-4.6
LU	.	-9.9	.	-7.0	8.3	3.3	-8.8
HU	.	-6.9	.	21.5	7.0	11.3	16.0
MT	.	21.4	.	-21.3	0.1	20.3	36.4
NL	.	2.6	.	-2.6	3.4	9.3	12.3
AT	.	-0.9	.	1.6	3.9	2.0	6.3
PL	.	11.9	.	1.1	4.3	-10.1	-2.6
PT	.	-0.5	.	-6.6	1.4	6.6	8.7
RO	.	7.3	.	6.6	23.7	-24.9	10.0
SI	.	1.2	.	-0.2	8.4	1.9	5.3
SK	.	-6.0	.	9.7	2.9	9.4	0.0
FI	.	10.6	.	-2.4	-4.2	4.7	4.1
SE	.	10.7	.	3.3	-6.5	-6.4	7.1
UK	.	.	.	0.1	5.1	9.2	.

Source: ECB, Eurostat.

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 area 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.

Number of residential building permits

Annual change in %

	4Q21	3Q21	2021	2020	2019	2018	2017
EU	.	14.2	.	-8.2	0.6	4.2	10.0
BE	.	2.7	.	-1.1	-10.8	24.7	-2.0
BG	26.7	19.7	35.9	-10.2	-7.7	42.3	37.5
CZ	.	41.4	.	-8.5	19.8	3.4	18.0
DK	.	9.2	.	-19.3	-12.9	31.7	0.2
DE	.	1.5	.	2.4	3.2	2.0	-2.1
EE	.	-24.4	.	10.1	14.8	-11.3	30.8
IE	.	-16.0	.	13.5	34.8	40.1	30.2
GR	.	33.4	.	18.6	33.3	42.0	19.8
ES	.	77.1	.	-37.0	12.7	24.3	24.8
FR	1.9	25.2	19.9	-13.8	-3.4	-6.3	6.4
HR	.	7.6	.	-8.2	30.9	-6.0	34.9
IT	.	17.7	.	-10.9	0.8	5.4	16.3
CY	.	-11.4	.	-3.5	55.3	25.6	35.4
LV	.	-4.0	.	13.0	0.8	20.8	16.1
LT	.	53.5	.	-0.7	-6.1	1.6	-2.8
LU	.	17.8	.	-5.5	-1.8	11.1	2.4
HU	.	43.4	.	-38.1	-3.7	-3.2	21.5
MT	.	22.9	.	-37.2	-3.1	31.2	30.8
NL	.	-6.1	.	12.7	-19.1	2.7	28.9
AT	.	-22.1	.	-8.0	13.8	-14.3	13.6
PL	.	19.2	.	3.1	4.6	3.3	19.1
PT	-7.7	13.7	8.3	3.5	15.5	41.1	26.4
RO	13.8	15.2	24.2	-2.9	-0.3	2.6	7.7
SI	9.5	33.0	17.9	10.5	-10.3	16.6	7.0
SK	.	0.1	.	-2.8	-5.4	6.7	8.0
FI	.	-0.5	.	6.2	-10.9	-10.3	20.3
SE	.	-7.6	.	13.2	-10.0	-16.5	8.7
UK	.	.	.	-4.0	0.4	4.8	.

Note: "." indicates missing values.

International property market data

Population growth

Annual change in %

	2021	2020	2019	2018	2017
EU	-0.1	0.2	0.1	0.2	0.2
BE	0.4	0.6	0.5	0.4	0.4
BG	-0.5	-0.7	-0.7	-0.7	-0.7
CZ	0.1	0.4	0.4	0.3	0.2
DK	0.3	0.3	0.4	0.6	0.7
DE	-0.0	0.2	0.3	0.3	0.4
EE	0.1	0.3	0.4	0.3	-0.0
IE	0.9	1.2	1.5	1.0	1.2
GR	-0.3	-0.1	-0.2	-0.3	-0.1
ES	0.1	0.8	0.6	0.3	0.2
FR	0.2	0.2	0.2	0.3	0.3
HR	-0.5	-0.4	-0.7	-1.2	-0.9
IT	-0.6	-0.3	-1.1	-0.2	-0.1
CY	0.9	1.4	1.3	1.1	0.8
LV	-0.8	-0.6	-0.7	-0.8	-1.0
LT	0.1	-0.0	-0.5	-1.4	-1.4
LU	1.4	2.0	2.0	1.9	2.5
HU	-0.4	-0.0	-0.1	-0.2	-0.3
MT	0.3	4.3	3.8	3.3	2.2
NL	0.4	0.7	0.6	0.6	0.6
AT	0.4	0.5	0.4	0.6	0.8
PL	-0.3	-0.0	-0.0	0.0	0.0
PT	0.0	0.2	-0.1	-0.2	-0.3
RO	-0.7	-0.4	-0.6	-0.6	-0.6
SI	0.6	0.7	0.7	0.0	0.1
SK	0.0	0.1	0.1	0.1	0.2
FI	0.2	0.1	0.1	0.2	0.3
SE	0.5	1.0	1.1	1.3	1.5
UK	.	0.6	0.6	0.7	0.7

Homeownership ratio

Share of ownership in %

	2020	2019	2018	2017	2016
EU	69.7	69.8	69.9	70.0	70.1
BE	71.1	71.3	72.3	72.4	70.9
BG	84.3	84.1	83.6	82.9	82.3
CZ	78.9	78.6	78.7	78.5	78.2
DK	59.3	60.8	60.5	62.2	61.7
DE	50.4	51.1	51.5	51.4	51.7
EE	81.4	81.7	82.4	81.8	81.4
IE	70.3	68.7	70.3	69.5	69.5
GR	74.6	75.4	73.5	73.3	73.9
ES	75.1	76.2	76.3	77.1	77.8
FR	64.0	64.1	65.1	64.4	64.9
HR	91.3	89.7	90.1	90.5	90.0
IT	.	72.4	72.4	72.4	72.3
CY	68.6	67.9	70.1	70.7	72.5
LV	81.2	80.2	81.6	81.5	80.9
LT	88.6	90.3	89.9	89.7	90.3
LU	68.4	70.9	71.2	74.7	73.9
HU	91.3	91.7	86.0	85.2	86.3
MT	81.9	79.8	81.6	81.3	81.4
NL	69.1	68.9	68.9	69.4	69.0
AT	55.3	55.2	55.4	55.0	55.0
PL	85.6	84.2	84.0	84.2	83.4
PT	77.3	73.9	74.5	74.7	75.2
RO	96.1	95.8	96.4	96.8	96.0
SI	74.6	74.8	75.1	75.6	75.1
SK	92.3	90.9	91.3	90.1	89.5
FI	70.7	71.1	71.6	71.4	71.6
SE	64.5	63.6	64.1	65.2	65.2
UK	.	.	65.2	65.0	63.4

Property price-to-income ratio

Index

	3Q21	2Q21	2020	2019	2018	2017	2016
EU	.	.	.	.	.	.	.
BE	107.9	108.8	103.4	100.7	100.4	100.2	100.1
BG	.	.	.	.	.	.	.
CZ	140.9	131.0	117.1	113.5	110.4	108.2	103.7
DK	116.4	117.1	109.9	104.5	104.8	102.6	100.9
DE	.	132.5	122.8	114.6	111.4	107.9	104.7
EE	107.0	103.5	98.7	93.3	93.4	95.9	98.9
IE	117.1	109.8	107.2	114.4	116.3	108.6	103.8
GR	101.8	104.8	103.2	98.9	96.5	96.6	99.8
ES	121.2	124.9	120.2	110.7	109.6	105.2	102.0
FR	110.4	109.2	106.2	101.2	100.8	100.4	99.5
HR	.	.	.	.	.	.	.
IT	98.3	97.1	96.6	92.1	93.1	95.5	98.7
CY	.	.	.	.	.	.	.
LV	112.2	109.5	108.3	108.1	105.0	103.7	101.9
LT	109.0	99.8	95.7	97.0	99.3	99.4	96.7
LU	140.3	138.3	131.8	119.7	112.1	106.9	106.0
HU	128.2	125.5	122.8	120.7	111.8	109.5	107.3
MT	.	.	.	.	.	.	.
NL	148.3	140.3	124.0	118.0	113.9	108.5	102.7
AT	137.3	133.9	123.1	113.1	110.0	107.9	105.5
PL	103.7	102.9	100.5	97.3	96.6	95.3	96.8
PT	139.5	134.5	133.8	121.7	115.9	109.4	103.1
RO	.	.	.	.	.	.	.
SI	112.7	110.8	107.2	105.8	104.5	102.0	98.8
SK	120.4	116.5	115.1	107.0	102.7	104.7	103.6
FI	99.0	99.3	97.1	95.4	97.1	98.9	99.3
SE	115.5	114.6	108.6	103.7	104.7	109.3	104.9
UK	.	115.7	109.8	106.8	108.1	109.0	106.2

Property price-to-rent ratio

Index

	3Q21	2Q21	2020	2019	2018	2017	2016
EU	.	.	.	.	.	.	.
BE	117.1	116.4	110.8	109.2	106.1	104.3	101.7
BG	.	.	.	.	.	.	.
CZ	161.6	152.4	135.2	128.5	122.1	115.8	105.9
DK	128.4	128.0	116.4	111.8	109.9	106.2	103.3
DE	.	139.3	129.5	121.9	116.9	111.3	106.3
EE	116.2	118.9	106.2	95.8	96.0	96.7	98.3
IE	122.4	119.2	114.9	115.5	118.1	111.8	104.7
GR	129.6	126.2	119.6	114.5	106.7	101.5	100.2
ES	126.6	125.1	122.2	120.9	116.7	110.7	104.7
FR	123.3	121.1	115.6	109.9	106.9	103.4	100.6
HR	.	.	.	.	.	.	.
IT	102.3	100.7	99.0	97.4	97.8	98.7	99.9
CY	.	.	.	.	.	.	.
LV	154.6	148.9	139.2	131.5	126.3	120.1	110.0
LT	126.4	120.1	108.7	104.0	104.8	103.3	95.2
LU	161.3	156.8	142.8	126.0	116.0	109.7	105.1
HU	153.5	151.2	137.5	136.6	127.7	117.4	107.8
MT	.	.	.	.	.	.	.
NL	148.9	139.9	128.0	122.2	116.7	108.7	102.9
AT	129.1	122.5	114.2	110.4	107.5	106.5	105.3
PL	119.1	117.6	112.9	107.8	104.0	101.4	100.5
PT	149.2	143.8	138.5	131.0	123.3	113.9	105.3
RO	.	.	.	.	.	.	.
SI	125.9	128.7	117.3	109.5	107.0	104.5	101.6
SK	152.1	145.0	140.9	130.5	120.3	112.4	106.4
FI	100.7	100.0	96.7	96.3	97.3	98.1	98.5
SE	126.9	124.6	115.4	112.4	111.4	113.5	107.3
UK	.	122.0	113.9	112.2	112.0	108.9	105.2

Source: Eurostat, OECD.

Note: EU-27 excluding the UK. Sources of international organizations are used in this area 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.

Note: ".", " " indicates missing values.

Table A3

International property market data

Housing loans^{1,2}

Annual change in %

	4Q21	3Q21	2021	2020	2019	2018	2017
EU	.	.	.	.	.	.	.
BE	7.9	8.5	7.9	10.7	7.6	9.0	5.6
BG	18.1	16.7	18.1	12.1	15.1	12.5	9.5
CZ	11.2	10.6	11.2	8.1	6.6	8.6	9.1
DK	3.2	3.0	3.2	2.0	2.4	1.7	1.2
DE	7.1	7.1	7.1	6.5	5.4	4.6	4.0
EE	9.5	8.5	9.5	6.7	7.0	7.1	6.9
IE	-4.1	-6.2	-4.1	-2.6	2.0	4.0	2.7
GR	-16.3	-7.3	-16.3	-2.8	-5.5	-2.9	-3.1
ES	0.8	0.9	0.8	-1.1	-1.3	-1.4	-2.3
FR	6.6	7.1	6.6	7.1	6.1	6.3	5.7
HR	9.3	11.2	9.3	7.7	6.5	2.9	2.7
IT	4.7	4.5	4.7	2.2	1.1	1.7	2.1
CY	2.7	3.0	2.7	4.4	0.1	-0.7	-0.7
LV	7.9	6.5	7.9	2.6	2.1	0.9	0.1
LT	11.7	11.3	11.7	9.5	8.7	8.7	8.6
LU	9.1	9.9	9.1	9.8	8.4	8.4	8.4
HU	15.0	14.9	15.0	9.8	9.3	10.9	4.8
MT	10.9	10.7	10.9	7.0	10.1	8.7	7.6
NL	4.0	3.6	4.0	1.1	2.3	-1.7	3.4
AT	6.9	6.8	6.9	5.5	6.1	4.4	4.7
PL	6.6	6.5	6.6	5.3	6.4	5.3	2.6
PT	4.4	4.3	4.4	2.3	1.0	0.4	-1.2
RO	12.5	12.6	12.5	9.7	9.6	12.9	13.2
SI	8.9	8.3	8.9	4.4	5.5	4.3	5.4
SK	11.1	10.6	11.1	9.1	9.8	11.5	12.8
FI	4.1	4.2	4.1	3.3	2.7	1.6	2.2
SE	6.9	6.9	6.9	5.9	5.2	5.6	7.3
UK	4.7	5.5	4.7	3.0	3.5	3.4	4.3

Housing loans^{1,3}

Share of GDP in %

	4Q21	3Q21	2021	2020	2019	2018	2017
EU	.	.	.	.	.	.	.
BE	41.2	.	.	41.9	36.1	34.8	33.0
BG	10.5	.	.	10.0	8.9	8.6	8.2
CZ	26.3	.	.	25.5	23.2	23.0	23.2
DK	96.7	.	.	98.9	97.1	97.7	99.0
DE	41.5	41.4	41.5	41.0	37.3	36.4	35.8
EE	31.2	.	.	32.2	29.2	29.4	29.8
IE	16.9	.	.	19.8	21.5	23.3	25.2
GR	20.7	.	.	27.7	28.6	31.4	33.0
ES	42.4	43.2	42.4	44.9	41.1	43.1	44.9
FR	50.6	50.6	.	51.2	45.2	43.9	42.5
HR	16.1	.	.	16.4	13.9	13.8	14.2
IT	23.3	.	.	23.7	21.4	21.4	21.6
CY	36.3	.	.	40.3	37.4	40.1	54.9
LV	13.9	.	.	14.2	13.6	14.1	16.2
LT	18.4	18.5	18.4	18.5	17.2	17.0	17.0
LU	54.7	.	.	56.6	52.7	50.5	48.3
HU	8.4	.	.	8.0	7.5	7.6	7.7
MT	45.1	.	.	44.5	38.8	38.2	38.1
NL	60.8	.	.	61.8	60.2	61.8	65.2
AT	32.1	.	.	32.0	29.5	28.6	28.4
PL	19.9	.	.	20.3	19.8	19.7	20.2
PT	46.2	.	.	47.5	43.3	45.3	47.6
RO	8.4	.	.	8.4	7.6	7.7	7.6
SI	14.5	.	.	14.6	13.6	13.6	13.9
SK	38.2	.	.	36.7	32.9	31.6	30.0
FI	43.4	.	.	43.8	41.8	41.8	42.5
SE	72.9	.	.	76.3	69.1	67.9	65.7
UK	.	.	.	60.1	57.6	57.6	57.6

Housing loans^{1,4} – new business (excluding renegotiated loans)

Annual change in %

	4Q21	3Q21	2021	2020	2019	2018	2017
EU	.	.	.	.	.	.	.
BE	-13.2	23.3	22.3	-15.6	18.9	3.7	-12.6
BG	46.2	51.4	48.5	.	.	.	.
CZ	42.1	60.5	63.6	31.7	-18.3	7.0	5.1
DK	.	.	.	.	.	.	.
DE	0.4	5.8	6.6	3.6	13.1	7.5	0.0
EE	48.7	42.2	59.5	-6.2	7.7	3.3	17.4
IE	2.2	31.3	15.6	-15.3	10.1	19.9	31.5
GR	.	.	.	.	.	7.0	.
ES	12.6	27.9	39.4	-2.1	2.3	13.2	17.4
FR	-2.1	20.6	16.3	0.7	14.1	3.6	15.9
HR	-66.2	-29.0	-28.0	0.6	27.6	-28.5	-13.7
IT	3.7	20.5	22.0	5.2	-3.8	0.3	-2.9
CY	22.8	28.2	42.4	-9.6	0.6	19.9	33.1
LV	39.6	36.6	54.3	-3.2	-5.5	7.4	8.4
LT	25.5	30.6	43.0	4.4	2.5	9.7	12.1
LU	-13.3	-2.9	7.2	16.9	5.6	7.9	17.9
HU	37.4	57.4	41.6	1.4	5.2	33.9	35.6
MT	.	.	.	.	.	.	.
NL	8.9	17.4	23.3	18.7	4.2	-0.7	16.3
AT	-0.0	-4.0	9.7	21.2	13.6	6.0	18.6
PL	42.6	70.3	49.0	7.6	7.0	10.5	11.1
PT	19.0	43.6	34.0	8.1	10.3	19.6	41.4
RO	27.9	60.6	44.7	9.0	4.5	-12.0	34.8
SI	33.1	68.0	38.4	33.4	4.8	-4.2	5.7
SK	41.6	44.5	32.3	4.8	0.6	9.6	-6.2
FI	-2.9	5.6	15.1	5.2	0.7	3.4	1.6
SE	.	.	.	.	.	.	.
UK	.	.	.	.	.	.	.

Share of variable rate housing loans¹ in new business⁵

%

	4Q21	3Q21	2021	2020	2019	2018	2017
EU	.	.	.	.	.	.	.
BE	6.3	5.3	5.1	5.0	5.8	11.2	6.4
BG	98.3	98.5	98.2	97.9	99.1	98.7	98.9
CZ	1.3	1.3	1.6	2.7	3.4	4.0	3.7
DK	27.4	25.9	23.8	23.5	19.4	33.2	35.4
DE	9.8	10.3	9.7	10.5	11.0	11.8	11.4
EE	89.9	91.0	90.7	86.8	90.1	88.7	89.2
IE	18.9	18.9	19.8	22.8	26.9	39.0	49.5
GR	54.1	53.9	54.2	66.4	81.8	95.3	92.1
ES	22.7	24.4	25.1	34.0	35.5	36.3	42.4
FR	2.8	2.6	2.6	2.3	2.4	2.5	1.5
HR	15.9	16.2	12.1	13.0	5.6	8.4	23.6
IT	17.2	16.5	16.8	18.1	27.8	33.2	33.0
CY	99.2	97.4	98.0	92.5	93.2	95.8	98.1
LV	97.4	93.7	96.4	94.1	95.9	95.6	93.8
LT	98.2	97.3	97.6	97.3	98.4	97.4	91.1
LU	35.2	35.4	34.9	33.9	38.6	46.9	42.3
HU	0.5	0.7	0.7	1.2	3.0	15.4	39.7
MT	63.2	66.3	65.9	83.4	40.1	62.7	69.1
NL	11.0	12.0	11.8	14.7	18.5	16.2	13.5
AT	39.1	36.7	38.5	37.6	43.4	43.5	51.9
PL	92.4	97.0	95.3	92.5	100.0	100.0	100.0
PT	67.0	68.7	68.9	67.8	70.7	65.1	60.2
RO	72.0	73.7	73.2	70.7	77.4	74.1	79.9
SI	13.1	17.1	21.5	51.7	52.9	47.9	45.3
SK	1.1	1.7	2.1	2.3	1.7	1.7	2.0
FI	96.8	97.1	97.1	97.9	98.0	98.0	97.4
SE	57.0	54.3	55.2	60.7	66.7	77.0	72.5
UK	5.1	5.3	5.6	8.5	7.1	7.1	11.3

Source: ECB.

¹Housing loans are defined as housing loans to the household sector.

²Annual change of the index of notional 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).

³Domestic 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.

⁴Denominated in the respective national currency (growth rates are based on the averages of the monthly data available for the relevant years or quarters).

⁵New 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 area 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.

Note: "." indicates missing values.

Table A4

International property market data

Housing loans¹ in % of disposable income²

%	2020	2019	2018	2017	2016
EU	.	.	.	.	.
BE	73.5	67.2	64.9	61.5	60.4
BG	.	.	.	14.2	14.0
CZ	47.0	46.0	45.4	46.2	44.3
DK	216.5	212.1	214.4	217.8	222.7
DE	69.9	66.1	63.9	63.4	62.8
EE	57.7	54.9	55.3	56.4	57.5
IE	62.8	70.5	74.1	75.9	79.8
GR	41.6	46.2	52.1	54.7	57.1
ES	71.2	68.3	72.8	75.4	79.8
FR	81.1	76.5	74.4	72.1	70.1
HR	26.1	23.9	23.7	24.5	25.2
IT	37.0	35.0	34.9	35.2	35.3
CY	62.7	59.9	65.5	89.7	98.7
LV	23.6	24.3	25.1	28.6	30.6
LT	29.0	29.0	29.2	28.7	27.5
LU	151.0	145.0	140.8	135.3	133.6
HU	14.5	13.7	13.9	14.2	15.2
MT	.	.	.	.	.
NL	129.2	131.7	134.2	141.5	140.1
AT	54.9	52.7	51.2	50.4	49.1
PL	33.5	34.5	34.2	34.6	35.4
PT	71.6	69.1	72.3	75.3	78.4
RO	.	12.8	12.9	12.6	12.8
SI	24.6	24.5	24.7	25.1	25.2
SK	60.6	56.7	54.2	53.3	49.6
FI	81.5	79.1	79.3	80.5	80.5
SE	156.7	142.8	140.2	136.0	133.5
UK	.	95.5	91.0	92.0	87.2

Number of housing³ transactions

Per 1,000 inhabitants	2020	2019	2018	2017	2016
EU	.	.	.	9.9	9.2
BE	.	.	.	11.1	10.4
BG
CZ
DK	12.9
DE
EE	19.4	20.3	19.6	19.7	18.2
IE
GR	5.6
ES
FR	.	.	.	14.5	12.7
HR	.	.	0.7	0.6	0.7
IT	9.4	10.1	9.6	9.0	8.8
CY
LV	9.7	10.7	10.3	10.3	10.5
LT	12.0	12.8	12.2	11.5	11.1
LU	.	17.6	18.8	18.1	16.7
HU
MT	.	.	13.6	14.2	14.3
NL
AT	.	8.9	8.9	8.4	8.2
PL	.	.	5.6	5.0	4.6
PT	.	.	17.4	14.9	12.3
RO
SI	.	6.8	6.7	7.4	6.8
SK
FI	13.6
SE	.	15.9	15.5	16.5	16.3
UK

Source: ECB, Eurostat.

¹ Housing loans are defined as housing loans to the household sector.

² 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 %.

³ Property acquired by households.

Note: EU-28 including the UK. Sources of international organizations are used in this area 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.

Note: "." indicates missing values.