

Adam Banai PhD, Executive Director
Magyar Nemzeti Bank



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Oesterreichische Nationalbank

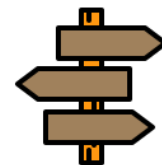
CHANGING TRENDS IN THE HOUSING MARKETS OF HUNGARY AND EUROPE

AGENDA

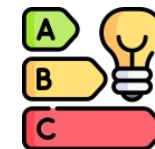
I. HOW DID WE GET HERE?



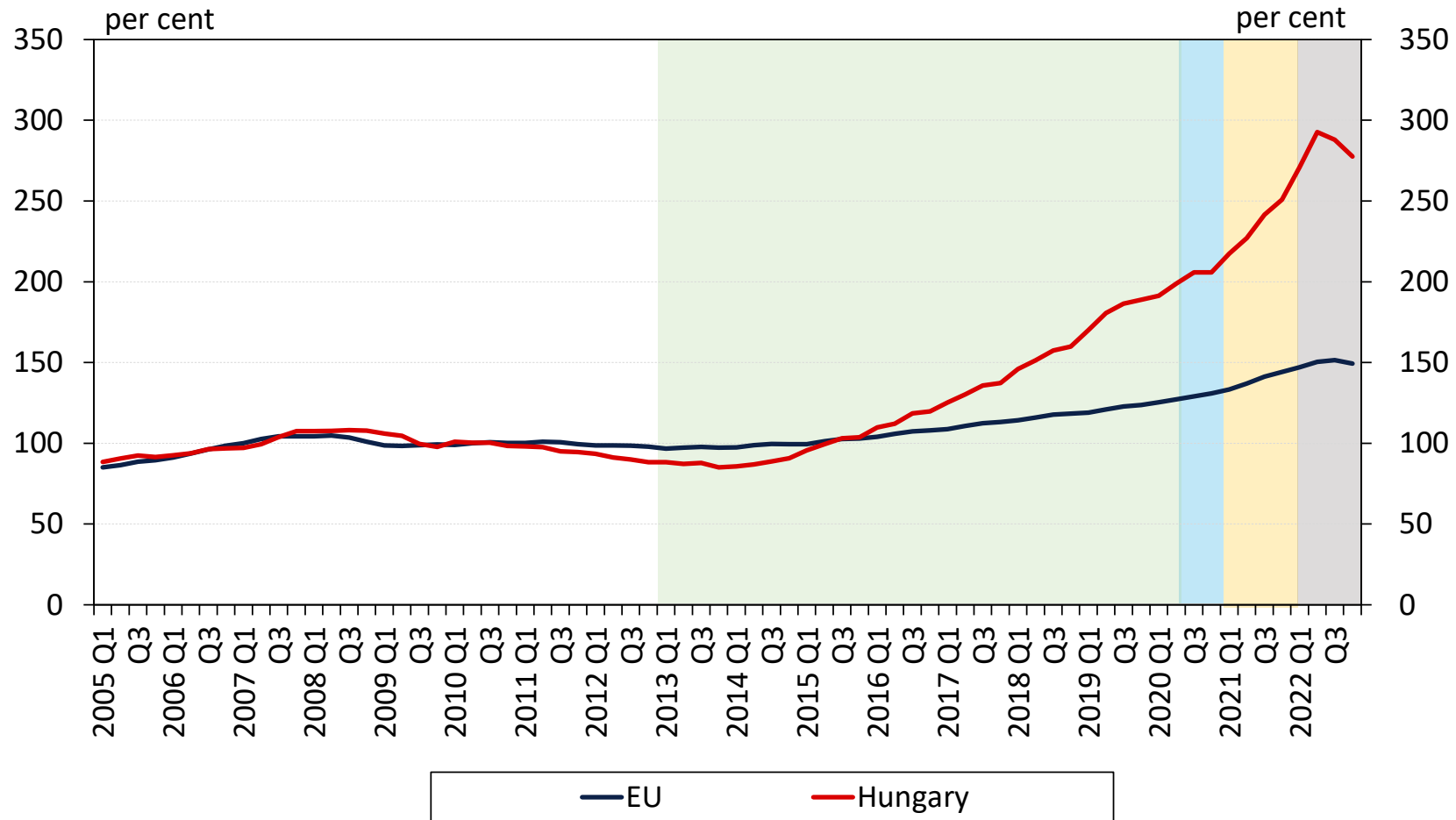
II. WHERE ARE WE?



III. A NEW ASPECT: ENERGY EFFICIENCY



THE MAIN FACTORS DRIVING HOUSING PRICES HAVE CHANGED SEVERAL TIMES IN RECENT YEARS

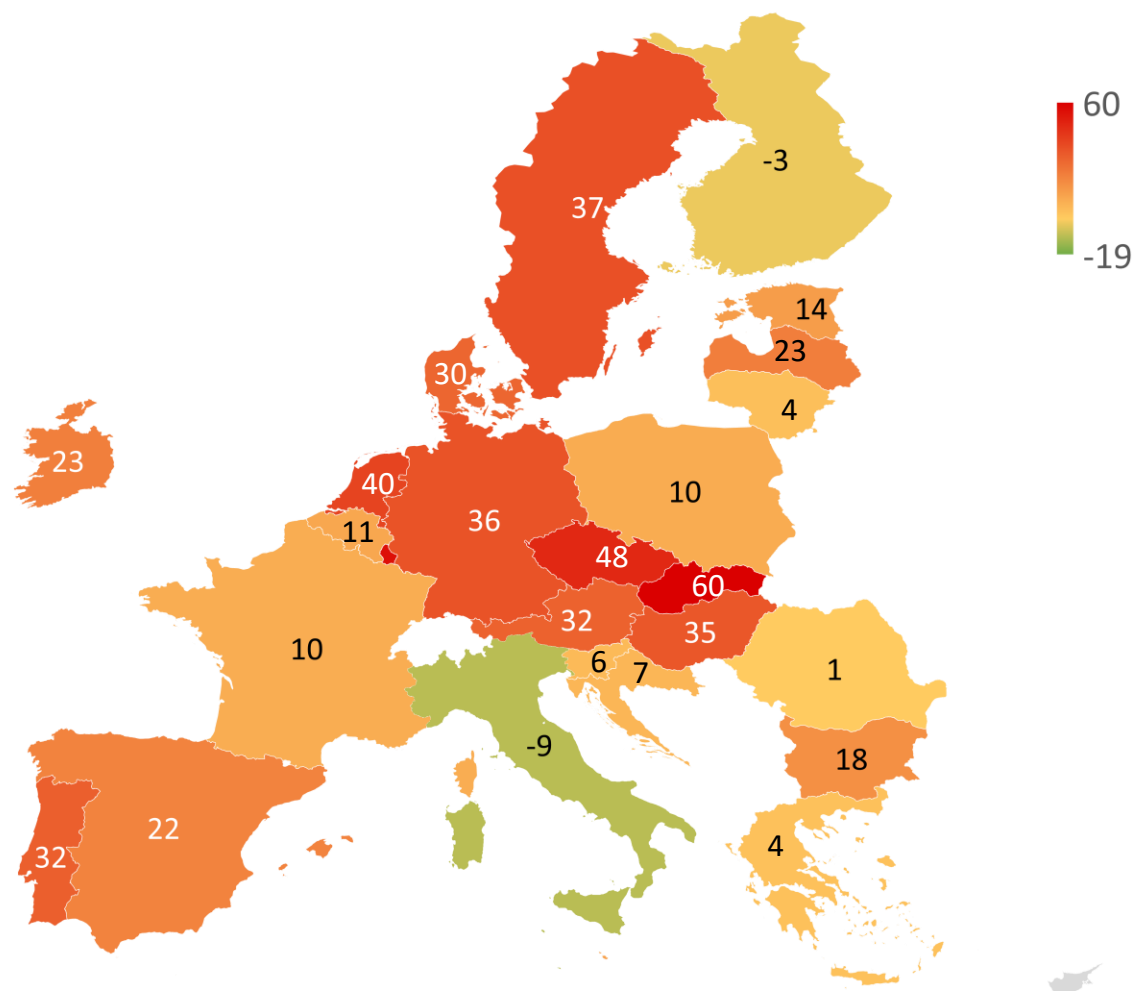


The development of nominal house price indices in Hungary and in the European Union

Note: 2010 = 100%.

- Growing economy
- Low interest rate environment
- Consumer confidence
- Short standstill due to pandemic
- Boom after pandemic
- Changing housing needs
- High inflation
- Tightening monetary policy
- High cost, lack of materials
- Uncertain economic outlook

A SIGNIFICANT OVERVALUATION IN MANY EU MEMBERS, WORSENING AFFORDABILITY



House price-to-income in the capital cities (years)

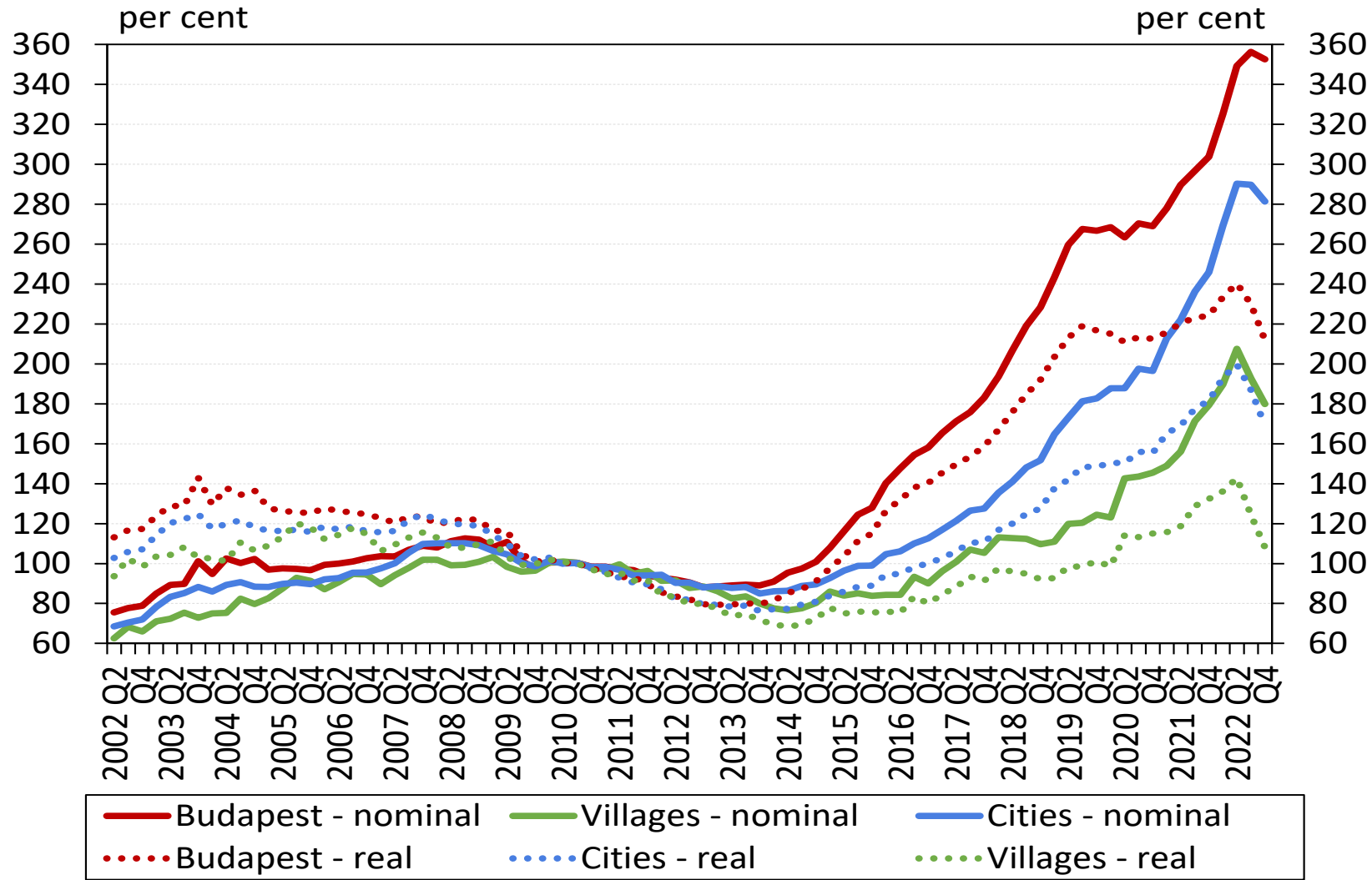
Prague	25.5
Bratislava	22.0
Paris	22.0
Zagreb	18.7
Warsaw	16.7
Ljubljana	16.6
Budapest	16.2
Sofia	14.9
Lisbon	14.8
Vilnius	14.5
Stockholm	13.8
Luxembourg	13.2
Athens	12.2
Berlin	12.2
Bucharest	12.1
Tallinn	12.1
Madrid	11.5
Rome	10.5
Vienna	10.1
Oslo	10.0
Amsterdam	9.7
Copenhagen	9.3
Dublin	9.2
Helsinki	8.9
Riga	8.7
Brussels	7.5
Reykjavik	5.8
Nicosia	5.8

Change in average estimated overvaluation of EU's housing markets between 2014 Q1 and 2022 Q1 in EU-countries (percentage point)

4 | Note: MNB calculations for Hungary, ECB calculations for other countries.

Source | ECB, MNB, Numbeo, Eurostat

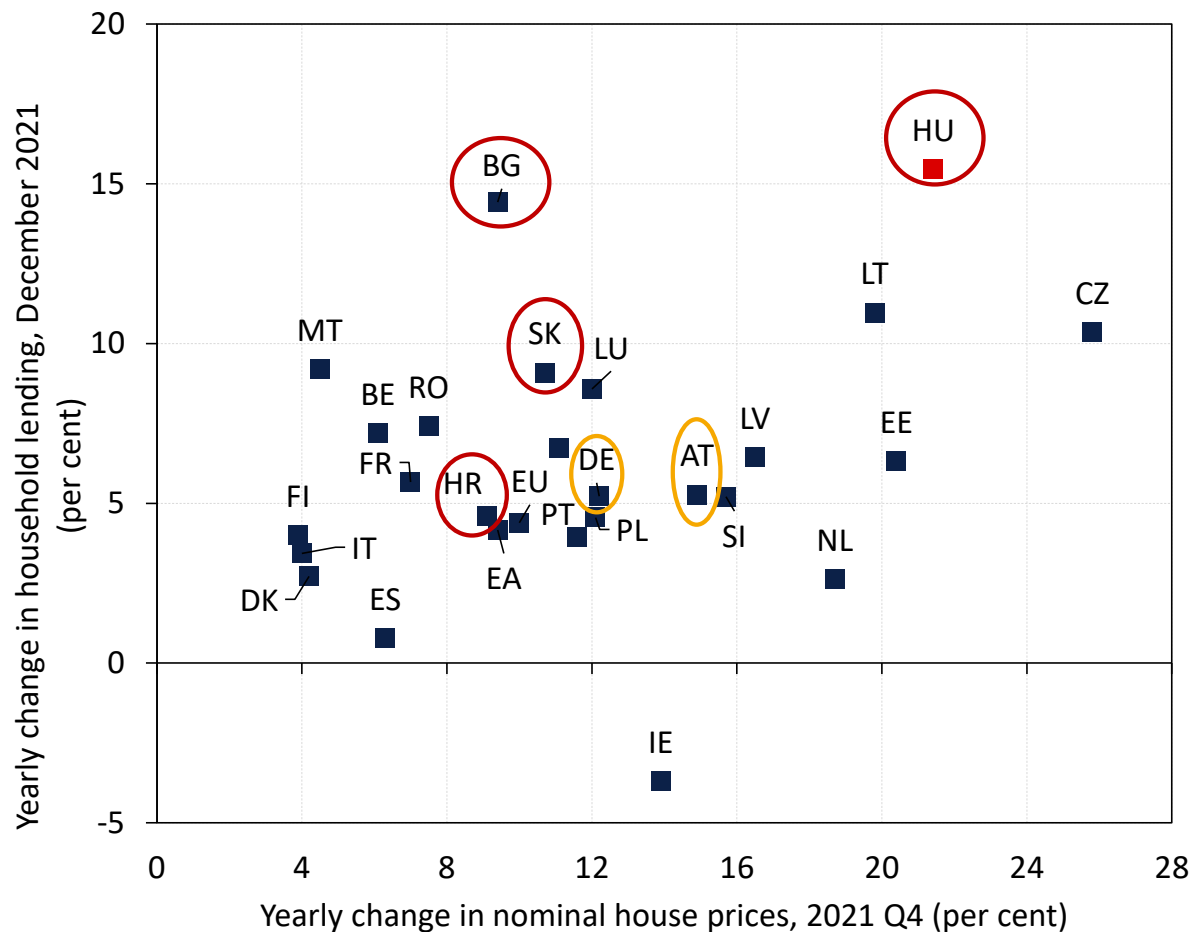
MUCH HIGHER HOUSE PRICE INCREASE IN BIGGER SETTLEMENTS



Nominal and real MNB house price index by settlement type (2010 = 100 per cent)

Source: MNB

IN EARLY 2022, THE ESRB WARNED ABOUT THE RISKS OF OVERVALUATION AND INCREASING INDEBTEDNESS OF THE HOUSING MARKET



According to the ESRB's assessment (February 2022):

If the risks increase in the medium term, **tightening the DSTI limits** and supplementing them with a maturity limit, as well as applying **capital buffer requirements**, may be justified.

Due to insufficient supply, government subsidies and preferential loans contribute to the increase of risks.

Creating the environment necessary for sufficient supply and the **rental market supported by appropriate legal regulations could ease the pressure on housing prices and credit market demand.**

Changes in nominal house prices and household lending in European comparison, 2021 Q4

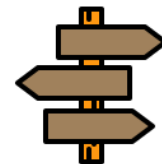
Note | Yellow ellipses indicate a recommendation on medium-term vulnerabilities in the housing market, and red ellipses indicate countries that have received a warning from the ESRB in February 2022. Liechtenstein is not shown on the chart but has also received a warning. Yearly change in nominal house prices: GR: 9.1%; CY: -5.3%. Yearly change in household lending: GR: -11.9%; CY: 0.8%.

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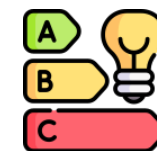
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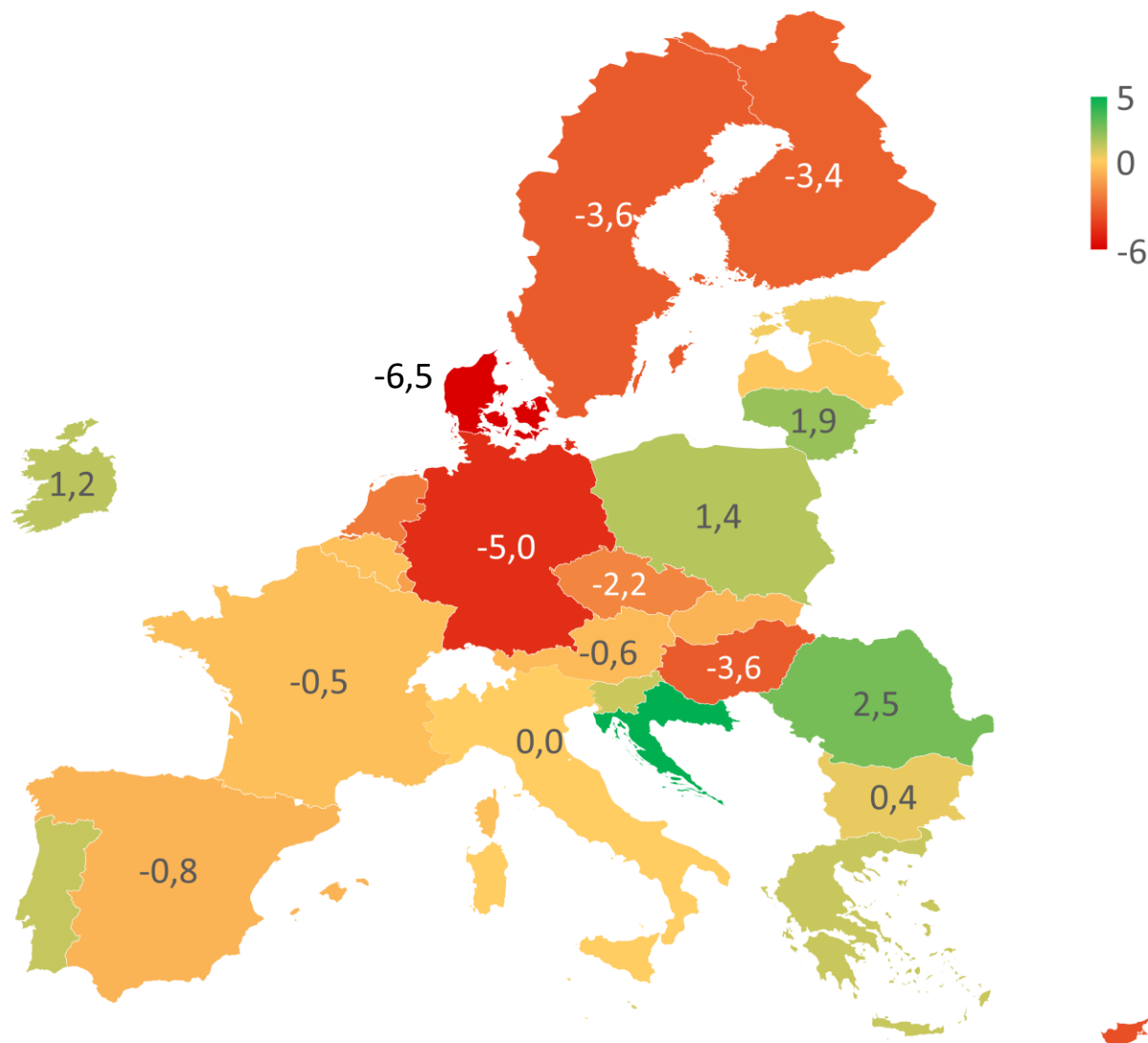
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ALONG WEAKENING MARKET ACTIVITY, HOUSING PRICES STARTED TO DECREASE IN MANY EUROPEAN COUNTRIES IN THE SECOND HALF OF 2022



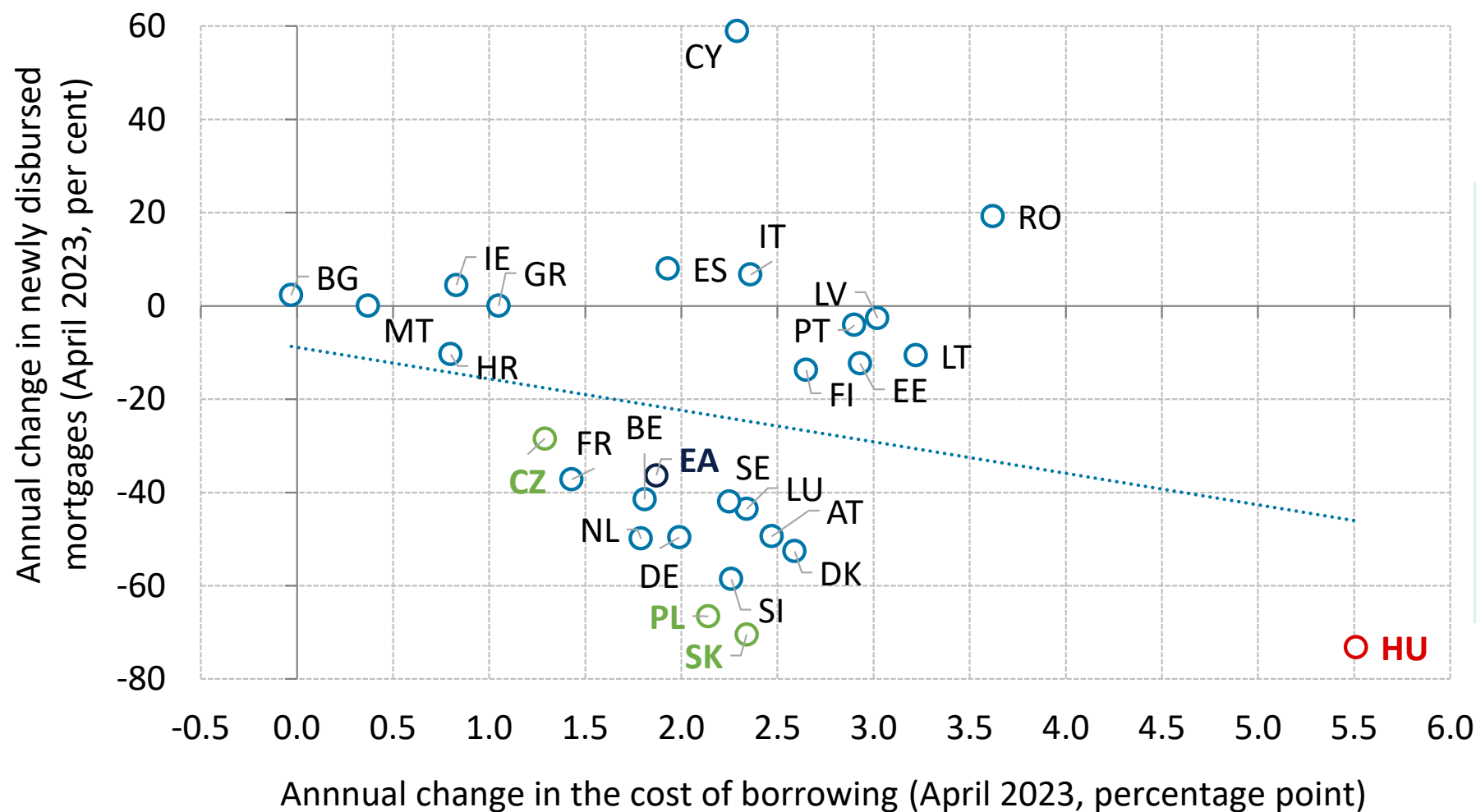
In the twelve countries that provide Eurostat with the number of sales and purchases in the housing market, **the year-on-year median change in the number of transactions was -12 per cent in 2022 Q3 and -18 per cent in 2022 Q4.**

The long upward trend in house prices remained in place in all Member States in 2022 Q2, but **house prices declined in nominal terms** in six countries in the third quarter and **in fifteen countries in the fourth quarter.**

Quarterly change in nominal house prices in the European Union, 2022 Q4

Source: Eurostat, MNB, BIS

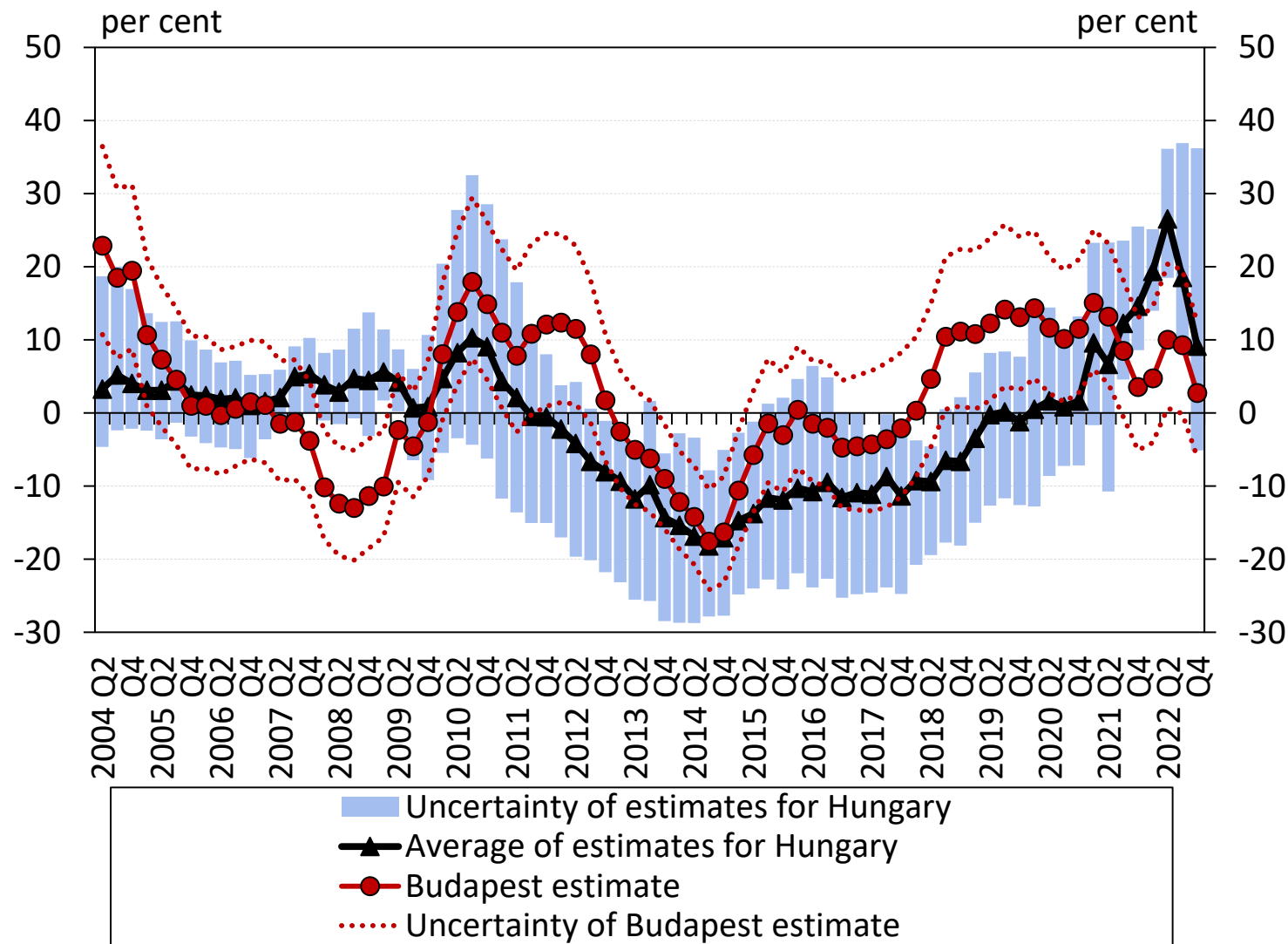
SLOWER LENDING ACTIVITY DUE TO UNCERTAINTY AND HIGHER RATES



The housing loan market and the housing market downturn are both linked to economic uncertainty, the high inflation environment, tight monetary conditions and (in some countries) the overvaluation of the housing market.

Annual changes in newly disbursed mortgages and the cost of borrowing

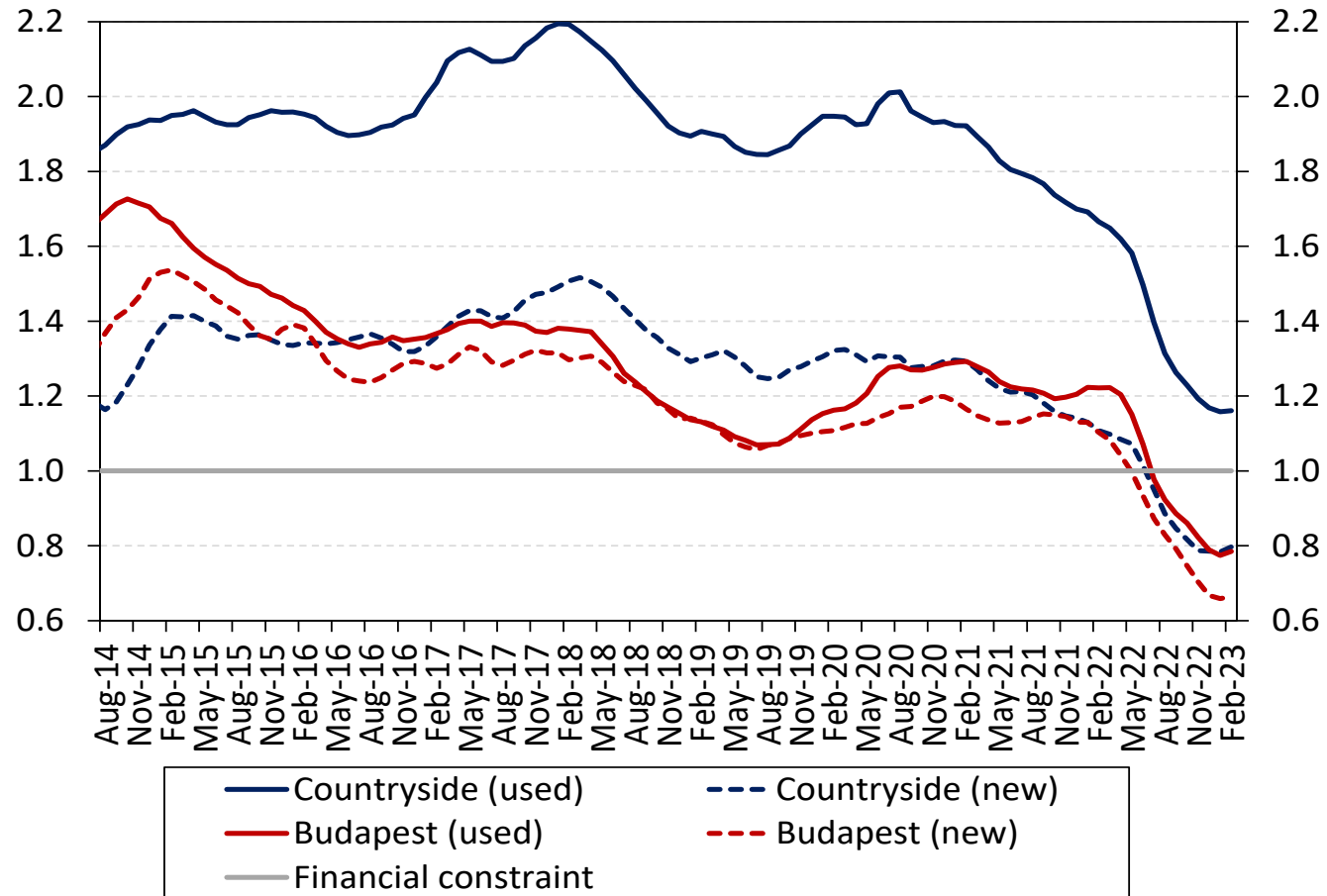
STRONG ADJUSTMENT OF OVERVALUATION COMPARED TO REAL ECONOMIC FUNDAMENTALS AFTER HISTORICAL PEAK



Deviation of house prices from the estimated level justified by fundamentals, nationwide and in Budapest

Source: MNB

...AND CREDIT BECAME MUCH LESS AVAILABLE – FURTHER ADJUSTMENTS ARE COMING?



House purchases on credit for childless households with average income in Budapest is not possible without an extremely stretched financial situation.

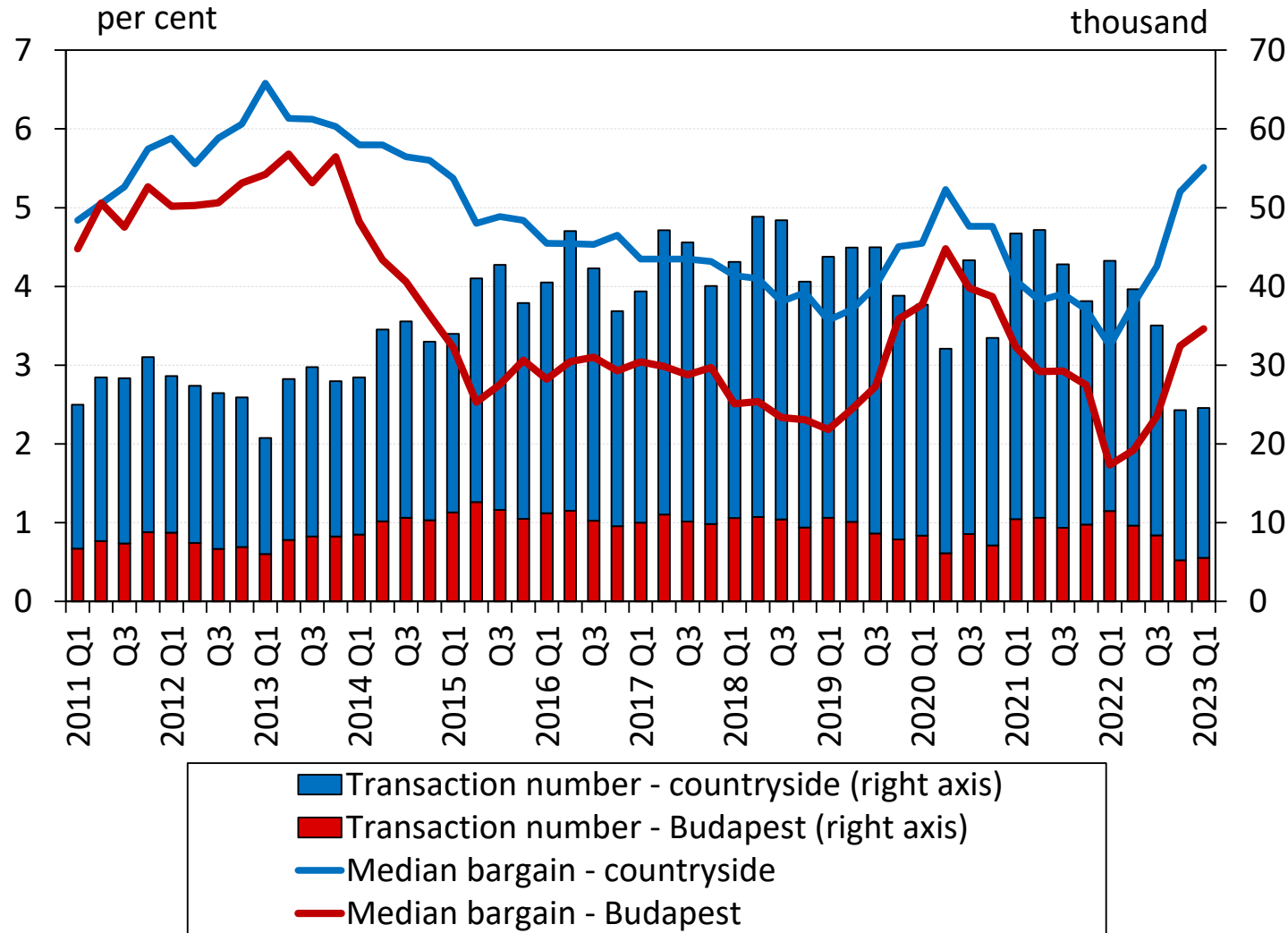
Easing overvaluation does not mean easier home buying for everyone, as monetary conditions are still tight → The proportion of people purchasing without external financing (e.g. „cash”-buyers with investment purposes) may increase.

Housing affordability index (HAI) with no subsidies

Note: The HAI shows the number of times the income of a household with two average wage incomes covers the income required for the financed purchase of an average home. If the value of the indicator is over 1, the family is able to buy a home on credit without overstretching its liquidity. However, if it is below 1, the purchase represents excessive risk and financial burden.

The calculations were based on 45 square meter homes. Source: MNB

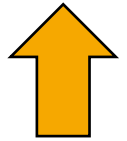
THE LOW ACTIVITY CONTRIBUTED TO THE RISE IN MARKET BARGAIN



Median bargain, 2023 Q1 (2022 Q1):

Countryside: 5.5% (3.2%)

Budapest: 3.4% (1.7%)



Annual change in the number of housing market transactions, 2023 Q1:

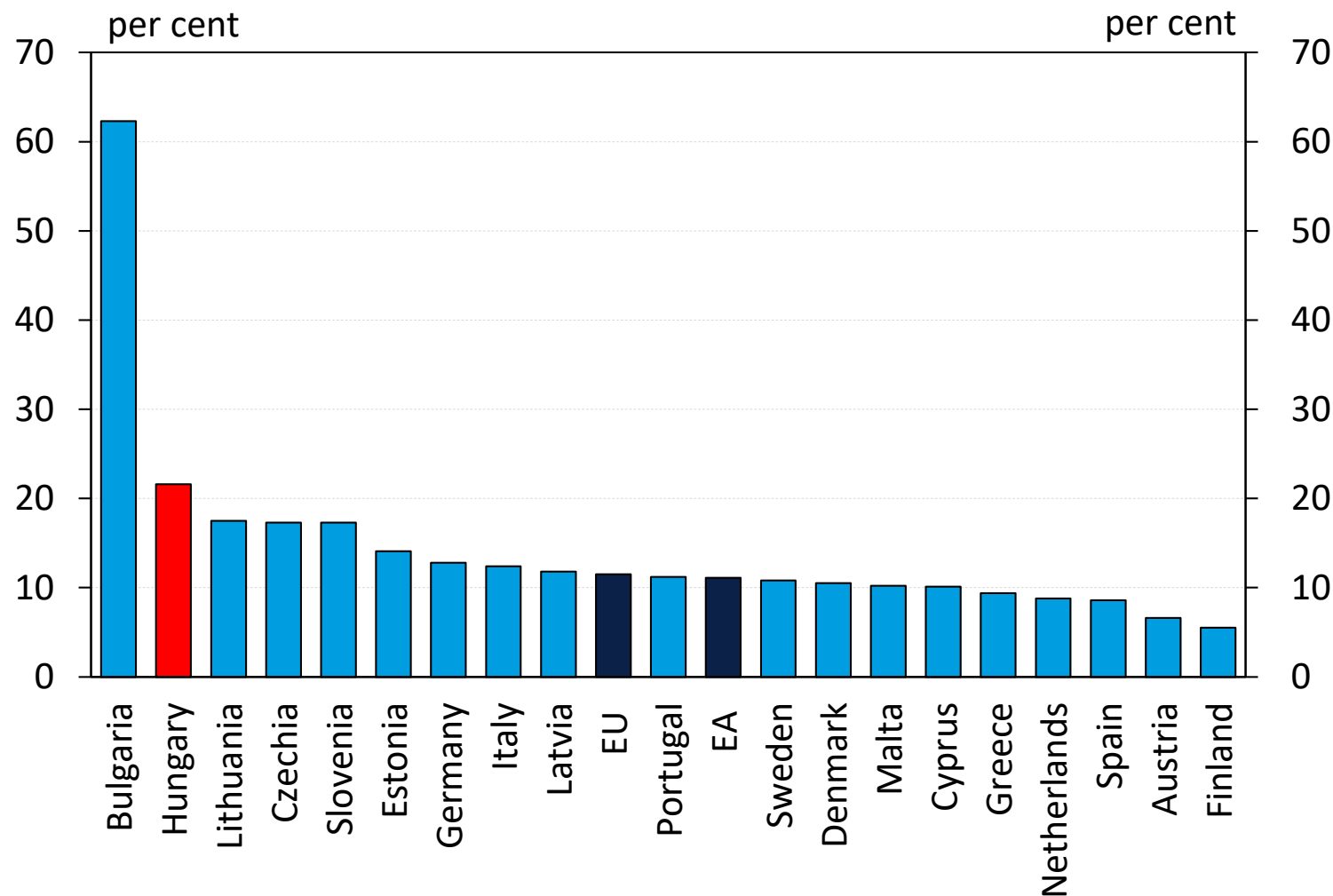
Countryside: -40%

Budapest: -52%

Number of housing market transactions and median bargain in the Budapest and rural housing markets

Source: NTCA, MNB, housing agents' database

THE GROWTH RATE OF HOME CONSTRUCTION COSTS MODERATED SLIGHTLY IN 2022 Q4, BUT REMAINED HIGH IN AN EU COMPARISON



Annual change in home construction costs in EU countries in 2022 Q4

The growth rate of housing construction costs moderated slightly in the fourth quarter:

2022 Q3: +22.8%

2022 Q4: **+21.6%**



- Material costs: +25.2%
- Labour costs: +16.2%

Possible reasons for the significant rise in construction costs:

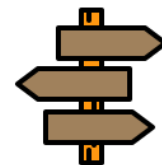
- a high (~50%) import ratio in the construction industry
- low efficiency of the sector
- significant construction demand in recent years.

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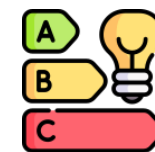
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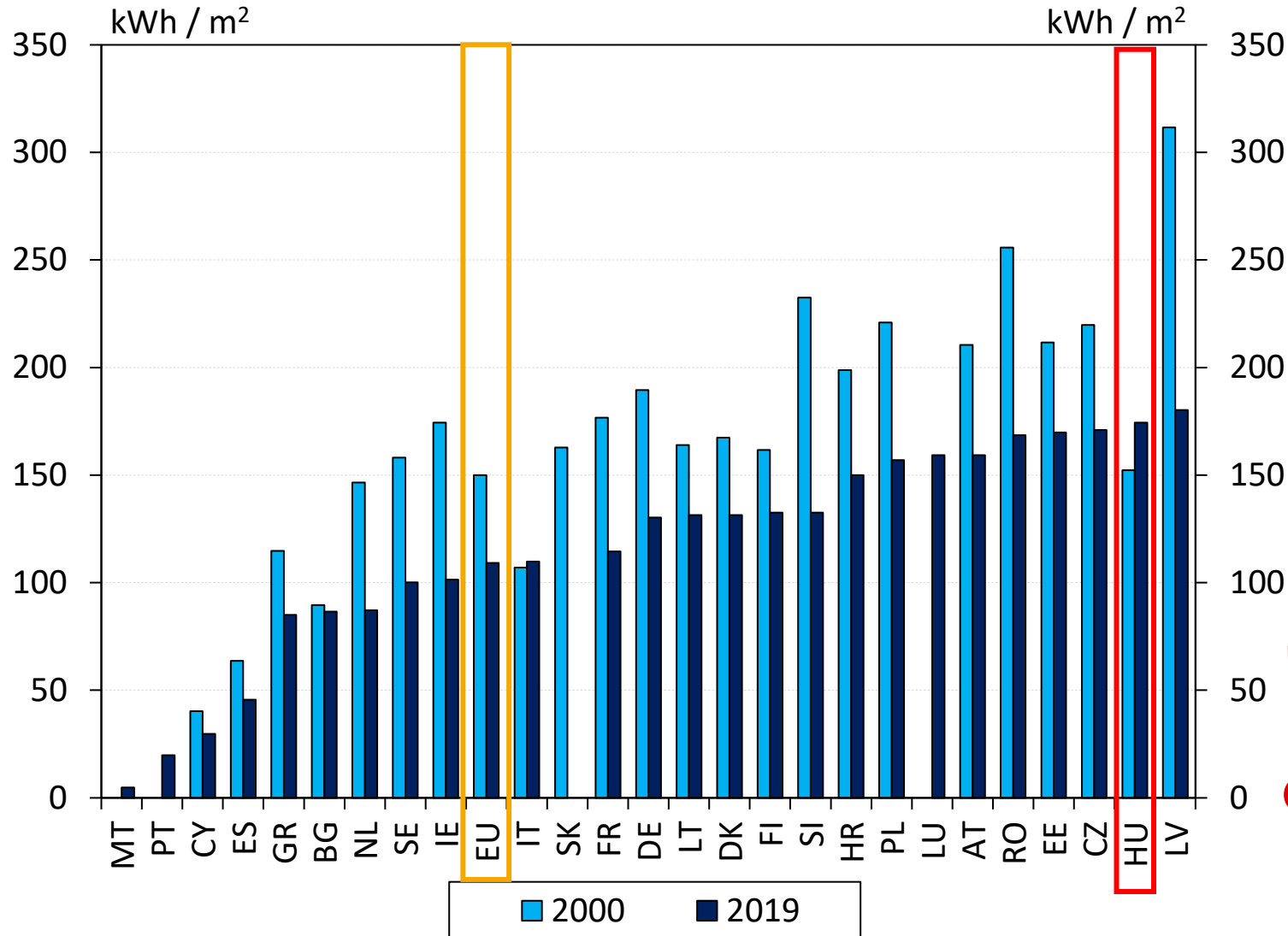
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UNLIKE IN MOST OF THE EU MEMBER STATES, THE ENERGY CONSUMPTION OF THE HUNGARIAN HOUSING STOCK HAS NOT DECREASED IN THE LONG TERM



The heating energy consumption of the housing stock in proportion to the floor area **in Hungary** (174 kWh/m²) **exceeds the EU average** (109 kWh/ m²) **by 60 percent.**

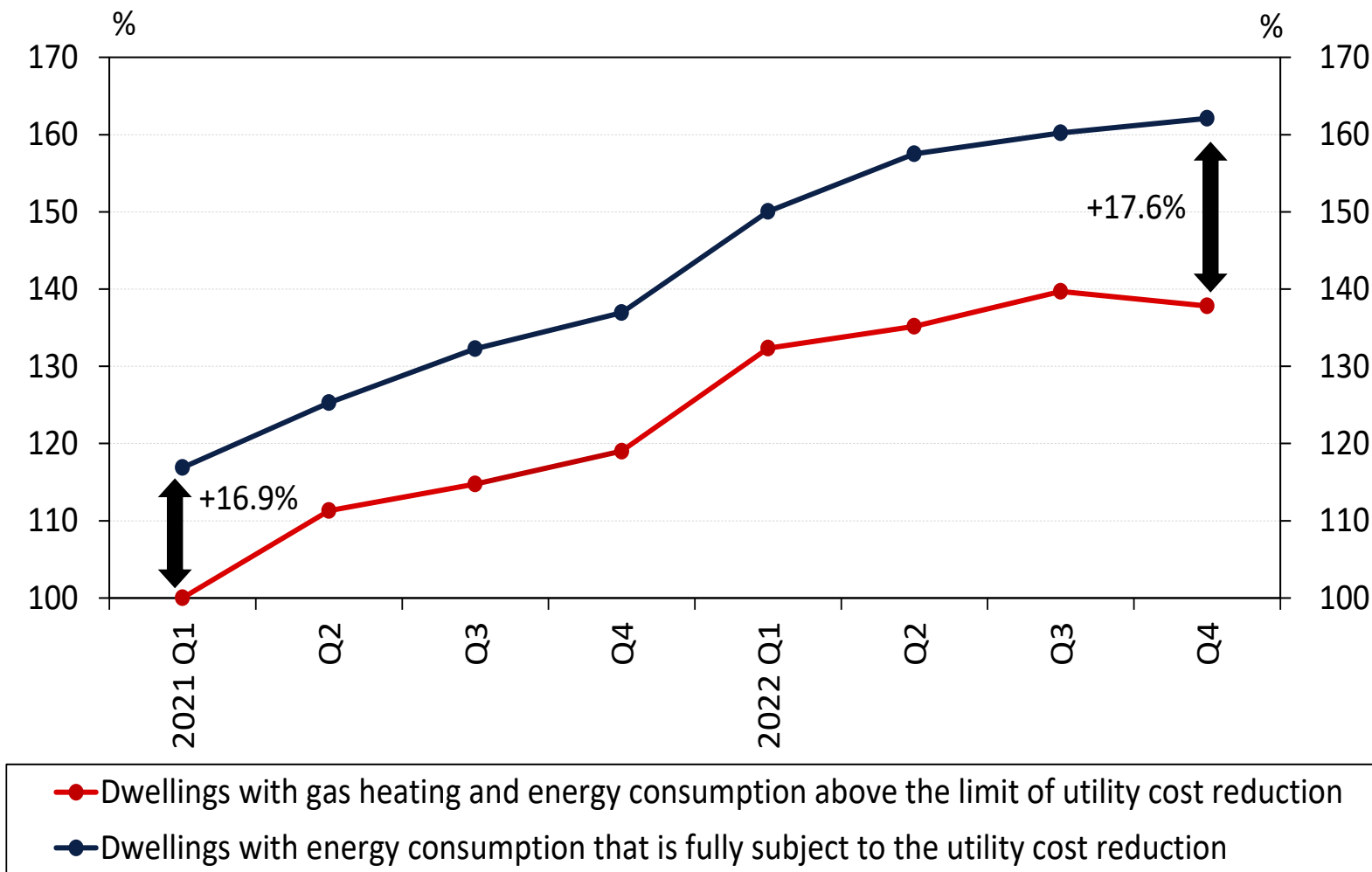
Subsidized, low energy prices may have contributed to the fact that there was no decrease in the energy consumption of the housing stock.

As of August 2022, the regulation of utility cost reduction has changed: **above the average consumption, the price of piped gas has increased by more than seven times.**

Heating energy consumption of the housing stock in proportion to the floor area in the EU member states

Source: Odyssee

BASED ON PRICE INDICES, THE RELATIVE VALUE OF GAS-HEATED PROPERTIES WITH HIGH ENERGY CONSUMPTION DECREASED SLIGHTLY

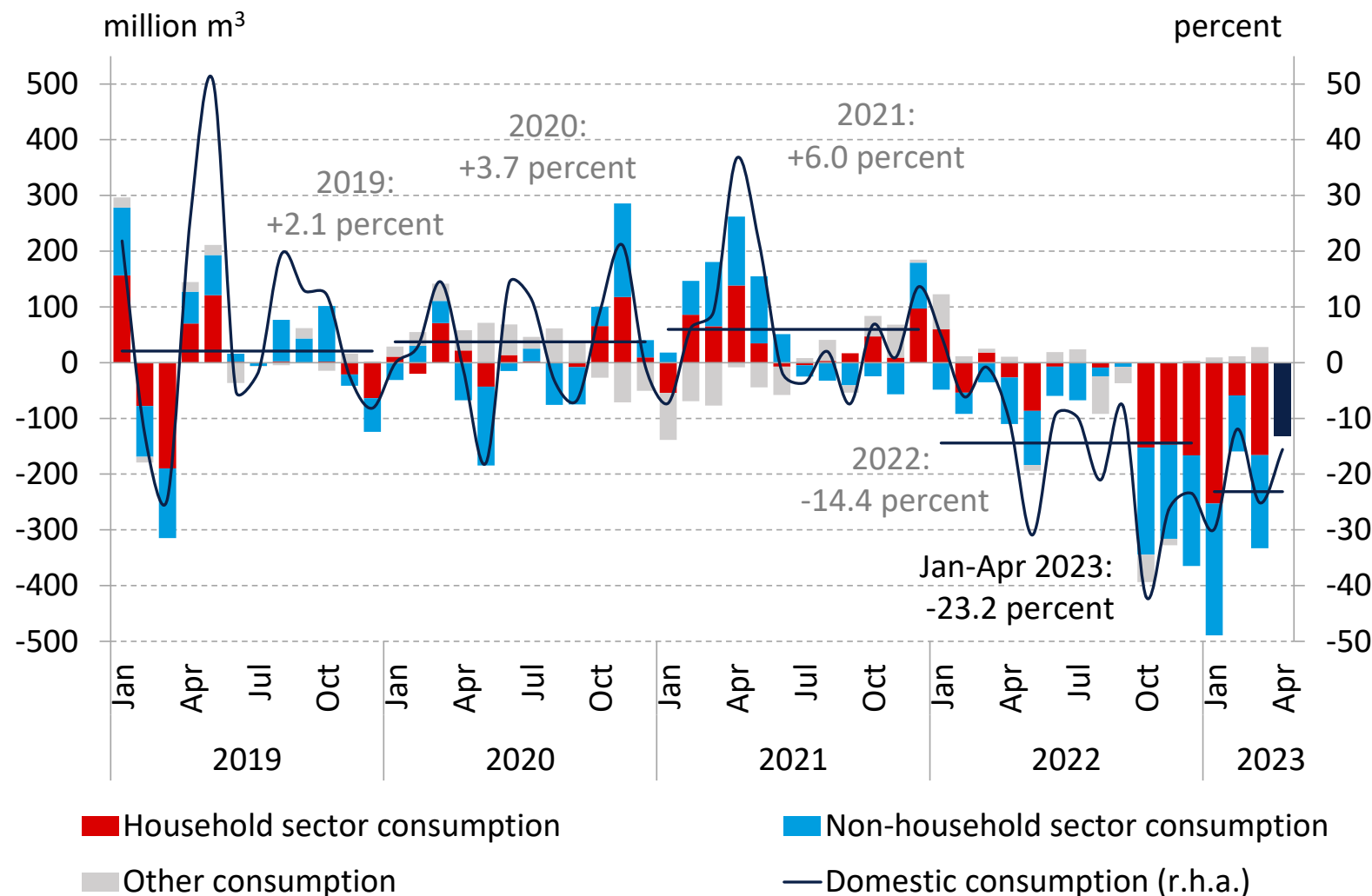


Dwellings fully subject to the utility cost reduction: +1,2%

Dwellings with gas heating and energy consumption above the limit of utility cost reduction: -1,3%

The development of the price index of residential properties purchased with a mortgage, broken down by energy consumption

HOUSEHOLDS HAVE SUBSTANTIALLY ADJUSTED THEIR ENERGY CONSUMPTION



Households' natural gas consumption in 2023 Q1 was **26 percent lower** than in the same period of the previous year.

The mild winter only partially explains the significant residential energy savings.

Increased energy awareness may encourage renovations in the long run

Changes in the structure of domestic natural gas consumption compared to the same period of the previous year

CONCLUSION

▶▶ Most member states have seen a prolonged increase in house prices, which accelerated after the pandemic, leading to a **significant overvaluation and deteriorating affordability**.

📉 Housing prices started to decrease in nominal terms in the second half of **2022**, but easing overvaluation did not lead to better affordability, as monetary conditions are much tighter.

❓ In the near future the question: **Lower activity for long or stronger and faster adjustment?**

🌱 Energy efficiency is becoming increasingly important, which may have a significant impact on the housing market in the future.



THANK YOU FOR YOUR ATTENTION!