

HIGHLIGHTS

Highlight 1. Comparative analysis of real estate price trends in Serbia and the world

Aleksandar Radivojević

The movement of prices in the real estate market generally follows the trend of economic growth and conditions in the bank loan market. The price of real estate and its changes also depend on many other factors, such as geographical location, level of development of the country and region, expectations of the country's accession to the European Union or other regional initiatives, and others. Although market movements vary from country to country, the real estate market is characterized by a general long-term growth trend.

Movement of real estate prices in the world

The global economic crisis of 2008 pointed out to one of, with an indisputably greater number of advantages, disadvantages of globalization. The interconnectedness of the world's economies has led to the global transmission of disturbances caused by the real estate market in the United States of America (USA), one of the world's strongest economies, and thus pointed out the importance of events in the US economy for the world. And although the crisis was not essentially a real estate market crisis, but a crisis of the banking system emitted through the real estate market, the movement of prices on the real estate market in the United States is still important for many countries and regions. For Serbia, the first most important market is the market of the European Union (EU), so in this paper we observe trends in the market of Serbia, the USA and the EU. Of course, the movement of prices on the real estate market in Serbia also depends on internal policies, which affect the movement of interest rates, exchange rates and average wages.

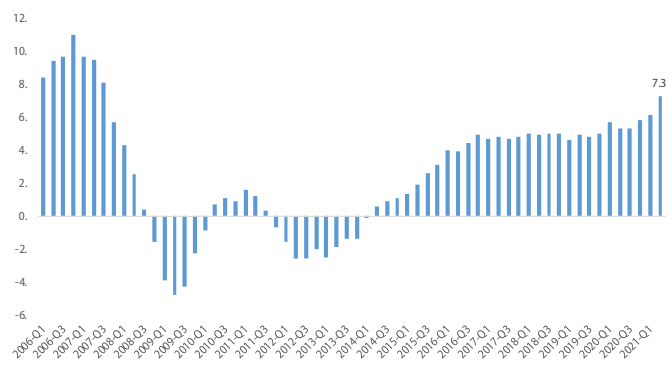
Real estate price movements in the EU

The last decade at the level of the European Union is characterized by two periods, the fall in real estate prices in 2012 and 2013 and the rise in prices from the beginning of 2014 until today. The previous five-year period can also be divided into two shorter periods. The period from 2016 to 2019, when the price growth rate ranged between 3.9% and 5%, and the period from the beginning of 2020 until today, when the price growth

rate ranged from 5% to 7.3%¹. The mentioned maximum growth rate of 7.3% on a year-on-year basis was recorded in the second quarter of the current year.

Growth rates above 7% were last recorded at EU level between 2006 and 2007. Just before the start of the global economic crisis caused by the “bubble” in the real estate market. In addition, growth rates over 5% year on year, which have been present since the beginning of the COVID-19 crisis, were last recorded in late 2007, so there is no doubt that real estate prices at the European Union level have significantly accelerated since the beginning of the COVID-19 crisis. The rise in property prices, despite the economic crisis, is probably a consequence of the enormous monetary and fiscal expansion that took place in 2020 and 2021 in most EU countries, which led to falling interest rates and rising wages.

Graph 1. Year-on-year quarterly real estate growth rates, EU, %



Source: Eurostat, House Price Index

The above-mentioned growth of real estate prices in the EU is widely dispersed by countries. Of the 27 EU countries observed, as many as 11 countries recorded year-on-year growth in real estate prices of more than 10% in Q2 2021. According to the mentioned growth rates, Estonia (+16.1%), Denmark (+15.6%) and the Czech Republic (+14.5%) recorded the biggest growth, while the only country with falling real estate prices is Cyprus (-4.9%). Of the EU member states in the region, Hungary recorded the highest growth of 11.9%, Bulgaria 9.1%, Croatia 6.5% and Romania 3%.

The European Commission observes the development of the real estate market as one of the indicators of macroeconomic imbalances at the level of the European Union. A deflated real estate price index is used in the procedure to identify potential imbalances². Based on

¹ The movement of prices on the real estate market in Europe is monitored using the Real Estate Price Index, which indicates changes in the prices of real estate purchased by households, regardless of whether they are apartments, houses, cottages, or some other residential buildings.

² The deflated real estate price index is the ratio between the real estate price index (HPI) and the deflator of national accounts for private final consumption. This indicator measures the growth of prices in the real estate market in relation to total inflation.

the historical periods of appearance of “bubbles” on the real estate market and the level of such an adjusted index that preceded them, the European Commission set the limit value of such an adjusted index, which indicates the possible occurrence of “bubbles” at 6% (year on year).

Table 1. Deflated real estate price index, EU, in %

Year	2005	2006	2007	2018	2019	2020
Belgium	9.5	6.8	5.0	0.8	2.6	3.6
Bulgaria	27.7	12.2	18.5	4.1	3.9	5.2
Czech Republic	0.4	5.8	15.9	5.9	6.2	5.5
Denmark	15.6	21.4	0.9	3.7	1.6	4.6
Germany	0.1	-1.6	-4.0	5.1	4.4	7.1
Estonia		41.7	11.9	2.2	4.4	6.9
Ireland	8.0	12.1	4.3	8.1	0.3	-0.2
Greece	7.7	9.7	2.2	1.7	7.2	5.5
Spain	9.9	9.5	6.2	5.2	4.1	2.2
France	12.9	9.2	4.2	1.2	2.5	4.4
Croatia	7.8	13.7	8.9	4.6	7.8	7.3
Italy	5.5	3.0	2.7	-1.5	-0.7	2.2
Scyptor	3.1	7.9	7.7	0.5	2.6	0.7
Latvia	13.0	40.9	22.0	6.3	5.8	2.7
Lithuania	22.8	22.7	19.4	4.5	4.6	6.4
Luxembourg	7.9	8.5	4.8	5.1	8.3	13.8
Hungary				10.7	11.8	1.9
Malta	4.7	16.9	19.5	5.0	4.2	2.2
Netherlands	2.8	1.5	2.8	7.1	4.6	6.0
Austria	2.5	2.0	2.1	2.6	4.0	6.2
Poland	:	34.6	45.5	4.8	6.1	7.1
Portugal	-1.5	-1.5	-1.9	8.6	8.7	7.7
Romania				1.7	-1.9	2.3
Slovenia	12.0	14.1	18.8	6.6	5.3	5.2
Slovakia	:	:	25.7	4.9	6.2	7.2
Finland	7.0	5.5	3.9	-0.2	0.0	1.3
Sweden	9.0	11.5	11.0	-3.3	0.4	3.0

Source: Eurostat

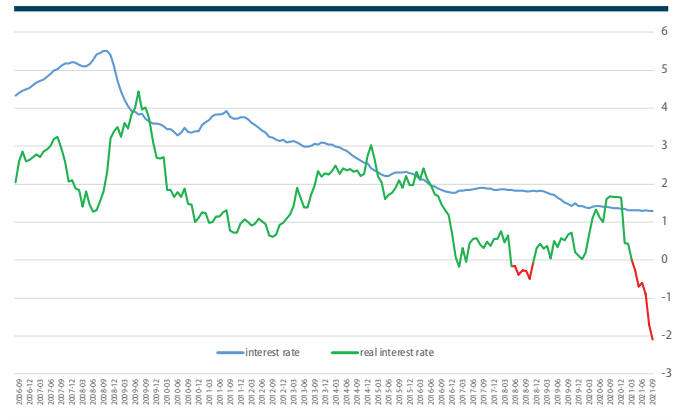
The table shows the values of the deflated real estate price index in the countries of the European Union in the years preceding the global economic crisis in 2008 and in the last three years. Values above the set limit of 6% are shaded in the table. The countries of the European Union that had the highest growth rates before the crisis in 2008 are the countries that joined the European Union in 2004 - Estonia (41.7%), Latvia (40.9%), Poland (45.5%), Slovakia (25.7%) and Lithuania (22.7%). In 2009, the indices fell the most in these countries, by more than 33% in Estonia, Lithuania and Latvia, 12.8% in Slovakia, and 5.4% in Poland.

According to this indicator, the extreme decline in real estate prices at the wider level of the European Union, which can be defined as the bursting of the “bubble” should not be expected in the next few years. However, if we look at the existence of a “bubble”, several other factors should be taken into account, such as interest rates on the housing loan market as well as the quality of housing loans. Real estate prices can essentially have a significant increase on a real basis, if, for example, it is a consequence of a significant increase in real wages. For a “bubble” to exist, high prices must be based on unrealistic expectations of high wage growth, low

interest rates in the long run, high future real estate prices or rental prices, and more.

The movement of interest rates on housing loans in Eurozone countries³ is shown in Graph 2. The graph shows that interest rates on housing loans declined until 2006, when they began to rise, until the global economic crisis that forced the European Union to pursue an expansionary monetary policy that directly reduced interest rates.

Graph 2. Movement of interest rates on housing loans in Euro zone countries



Source: Euro-areastatistics.org <https://www.euro-area-statistics.org/bank-interest-rates-loans?cr=eur+est&lg=en&page=0&charts=c1457522609150+M..B.A2C.P.R.A.2250.EUR.N+M..B.A2Z.A.R.A.2250.EUR.N&template=1>

BOX 1. Trends in the real estate market in Estonia in the period 2002-2009.

Movement in the real estate market in Estonia, before and after the great financial crisis is one of the indicators of the combined influence of various factors on the real estate market, which may have consequences for real estate buyers, primarily credit buyers, in other countries. We have seen from the table that before the world economic crisis, Estonia recorded the highest deflationary growth rate of real estate prices of as much as 41.7% in 2007, and then recorded the largest negative adjustment of -36.5 in 2009. It is interesting to observe what happened on the real estate market in Estonia in the years before the economic crisis. Interest rates on loans in 2002 were 6.65%, in 2003 5.34%, in 2004 3.38, in 2005 3.18%. In just 4 years, interest rates on housing loans have been halved. During the mentioned period, the mass of housing loans in 2003 increased by 51%, in 2004 by as much as 93%, in 2005 by 64%, in 2006 by another 30% annually. Borrowing under favorable conditions very quickly proved to be short-lived, as interest rates rose to 4.90 in 2006, while in 2007 they rose to 5.85%. With a high share of variable rate housing loans in total housing loans in Estonia, such a sharp decline in loan rates accompanied by significant growth after only a few years had a significant negative

3 Austria, Belgium, Cyprus, Estonia, France, Finland, Greece, the Netherlands, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Germany, Portugal, Slovakia. Slovenia, Spain

impact on credit buyers. When we take into account the fact that prices fell by more than a third in 2009 alone, the negative impact is even greater.

Low interest rates in response to the crisis were supposed to boost private sector investment, but they more significantly boosted demand for housing loans. High rents in the last few years and the development of daily renting have made the purchase of real estate a profitable investment activity, but the question is whether this investment will be profitable in the future at current real estate prices. Namely, the level of rent in the EU grew faster than real estate prices until 2018. From 2018, real estate price growth rates are significantly higher than real estate rental growth rates.

According to the data from the Euro area bank lending survey for Q3 2021 (The euro area bank lending survey) banks in the European Union reported setting stricter standards for granting loans for the purchase of real estate, while further tightening is expected in Q4 2021⁴. According to the same survey, most banks reported an increase in demand for housing loans (55% of banks), but this percentage was significantly lower than in the previous quarter (Q2 2021 - 68% of banks). The estimates of banks expressed in this survey are that in Q4 this percentage will be approximately the same as in Q3.

Even before the start of the COVID 19 crisis, the European Union’s Systemic Risk Board, which is part of the European Central Bank, called on 11 EU countries to consider introducing tax and other regulations to curb rising real estate prices and promote real estate affordability (financial availability and the number of units)⁵. Measures to limit the risk on the real estate credit market in 14 EU countries were already in force even before the beginning of the COVID19 crisis as one of the responses to the 2008 crisis. Despite the ECB’s recommendation to substantially supplement these measures and further limit the market, some of these countries have eased restrictions to encourage borrowing and the effects of expansionary monetary policy⁶. This development, i.e. the relaxation of certain restrictions set in order to avoid a crisis in a certain market, in order to resolve another crisis, i.e. exit from the recession caused by the COVID19 crisis, is one of the indicators that a crisis in the real estate market (primarily credit) could happen, because this crisis is seen as secondary in importance.

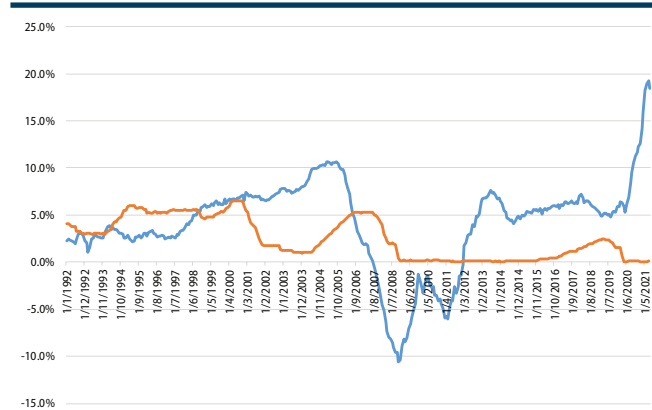
4 https://www.ecb.europa.eu/stats/ecb_surveys/bank_lending_survey/html/ecb.blssurvey2021q3~57cc722cfb.en.html#toc10
 5 <https://www.esrb.europa.eu/news/pr/date/2019/html/esrb.pr190923~75f4b1856d.en.html>
 6 Malta, Portugal, Slovenia, Finland, The Netherlands

Real estate price movements in the USA

Real estate prices in the United States rose by as much as 19.5% in July 2021 compared to the same month last year⁷. Not only is this the highest year-on-year rate since January 1991 (since the FHFA has been monitoring this data), but the highest rate between 1991 and 2020 was recorded in September 2005 and was “only” 10, 7%.

In Graph 3 we can see that until September 2005, the growth trend of real estate prices in the US was moderate and positive, until the previous high reached, followed by a decline in growth rates in the next two years, and the transition to negative growth rates in the next 4 and a half year (until February 2012).

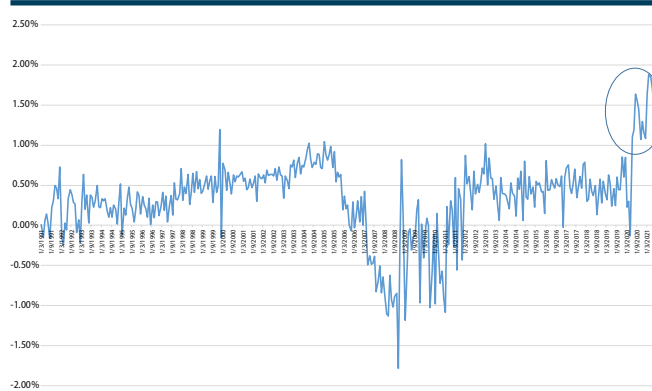
Graph 3. Growth of real estate prices in the USA



Source: Federal Housing Finance Agency (FHFA)

After recovering from the crisis, the year-on-year growth rate ranged from 4% to 6.5% for most of the period up to 2020. Significant changes occur in June 2020, three months after the WHO declared the COVID-19 pandemic. Growth rates on a monthly basis from June 2020 exceed 1% until July 2021 (14 consecutive months), which has so far occurred in only 4 months in the last 30 years (Graph 4).

Graph 4. Monthly growth rates of real estate prices in the USA

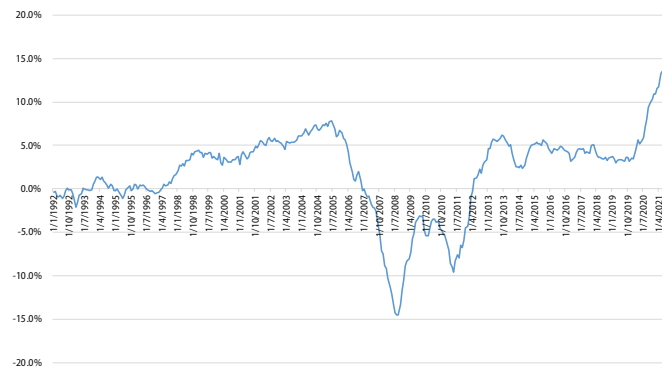


Source: Federal Housing Finance Agency (FHFA)

7 <https://www.fhfa.gov/DataTools/Downloads/Pages/House-Price-Index-Datasets.aspx#mpo>

An additional indicator of overheating in the US real estate market is the difference in real estate price and inflation growth rates, shown in Graph 5. As with other indicators, differences in real estate price growth and other CPI price growth over the past 30 years have not been greater than they have been since mid-2020.

Graph 5. Deflation growth rate of real estate prices in the USA



Source: U.S. Bureau of Labor Statistics and the Federal Housing Finance Agency (FHFA)

The rise in real estate prices above the average is usually preceded by a reduction in interest rates on housing loans, which was the case, and the cause, of the creation of bubbles in the real estate market in the United States in 2008. And now, the conditions have been favorable for a long time, which is certainly one of the main causes of rising real estate prices. The problem may be the change in interest rates upwards, which is certainly expected in order to curb inflation, which has also been at historically high rates in the last year.

Summary

Real estate prices in the European Union in Q2 2021 recorded a growth rate of 7.3% year on year. This is by far the highest growth rate in the last 10 years, while such significant growth rates were last seen at EU level just before the 2008 global economic crisis.

Although individual indicators of the real estate market, such as the deflated real estate price index, indicate a low probability of "bubbles" in the market, the European Central Bank has warned members about the existence of "bubbles" several times in the last two years¹. The reason behind this is the fact that the existence of "bubbles" in the real estate market is linked to the level of real estate prices (and not just the rate of price growth), but that the bursting of the "bubble" is due to changes in the bank loan market and interest rates, which are possible in the future.

Although the previous world economic crisis is related to the existence of "bubbles" in the real estate market in the United States, the price level was not the cause of the crisis, but irrational borrowing conditions in the housing loan market. The high level of prices was only a consequence of low interest rates, loose conditions for granting housing loans and unrealistic expectations that such a situation will continue for the foreseeable future.

The European Central Bank is aware of the fact that in the next few years it will have to raise interest rates in order to curb rising inflation, which will certainly slow down economic growth and increase the number of people who will not be able to finance repayment of housing loans. Eventually, the bursting of the "bubble" will depend on several factors, but first of all the movement of interest rates in order to curb inflation, the level of economic slowdown and the increase in the percentage of unpaid loans.

In mid-December, the ECB decided to keep interest rates at current levels, but also decided to reduce the issue of money through the purchase of securities in 2022, which indicates the beginning of a more restrictive monetary policy than before². Despite the formal announcements of the President of the ECB that there will be no increase in interest rates in 2022, it is very likely that this will happen. If not at the end of 2022, then at the beginning of 2023 at the latest.

The situation in the United States is characterized by similar trends. The year-on-year growth rate of real estate prices in July 2021 was 19.5%, which is the highest growth rate in the last 30 years. Low interest rates on the housing loan market are certainly one of the reasons for the rise in real estate prices. Like the ECB, the Federal Reserve (FED) kept interest rates at the same level in mid-December 2021, but unlike the ECB, the Fed's Board of Governors in December projections already predicts its growth from 0.1% from the end of 2021 to 0.9% at the end of 2022, with a long-term forecast of 2.5%³.

¹ Financial Stability Review, November 2021, <https://www.ecb.europa.eu/pub/financial-stability/fsr/html/ecb.fsr202111~8b0aebc817.en.html>

² <https://www.ecb.europa.eu/press/pr/date/2021/html/ecb.mp211216~1b6d3a1fd8.en.html>

³ <https://www.federalreserve.gov/monetarypolicy/files/fomcprojtabl20211215.pdf>

Movement of real estate prices in the Republic of Serbia

The real estate market in Serbia has recorded significant growth rates in the last few years. The volume of turnover on the market is constantly increasing, so this amount in the first 6 months of 2021 is equal to the amount recorded in the whole of 2017 (2.9 billion euros)⁸. The most important form of real estate on the market is certainly apartments. Their share in the total turnover on the real estate market is around 50% (the share in the total turnover on the real estate market in the last 5 years has increased from 49% to 54%). The price of apartments is also the most important indicator of price movements on the real estate market, because it is the most frequently traded form of real estate and the most important for the citizens of Serbia. Therefore, the movement on the real estate market in Serbia is primarily observed through the apartments market.

Table. 2. Volume and structure of turnover on the real estate market in Serbia

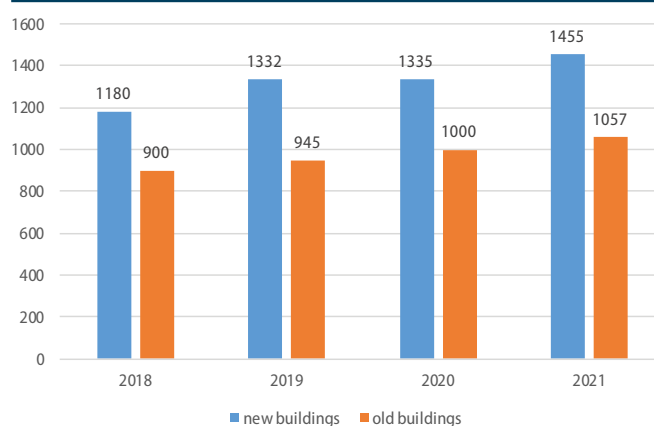
Year	2017	2018	2019	2020	I 2021
Total amount (billion euros)	2.9	3.6	4.1	4.2	2.9
Share of dwellings	49%	46%	58%	55%	54%
Share of residential buildings	9%	9%	8%	10%	9%
Share of construction land	5%	7%	5%	7%	8%
Share of agricultural land	6%	4%	5%	4%	3%
Share of business premises	5%	5%	5%	5%	5%

Source: Republic Geodetic Authority

Movement of apartment prices in Serbia

We observe the movement of apartment prices in Serbia separately for new and old apartments, since the official statistics monitor the movement of real estate prices in Serbia either separately for new and old⁹ apartments or only for new apartments¹⁰. Regarding old apartments, the average price in the first half of the current year was 1,057 euros (an increase of 5.7% compared to 2020). On the other hand, according to the data of the Republic Geodetic Authority, the average price of new buildings in Serbia in the first half of 2021 was 1455 euros, which is an increase of 9% compared to the average price of new construction in 2020. Observed in the last three years, the cumulative growth rate of prices of new buildings is 23%, while the percentage for old apartments is 17.4%.

Graph 6. Movement of the average price of new and old apartments in Serbia, 2018-2021



Source: Republic Geodetic Authority

Observing the coefficient representing the ratio of real estate prices and income, i.e. essentially showing the number of years that a citizen of a country must spend in order to buy a newly built housing unit¹¹, we can see that the growth of real estate prices is somewhat in line with average wage growth, i.e. that the coefficient either stagnates or declines in recent years. Average wages are constantly growing in the observed period, which affects the reduced values of this coefficient. Real wages increased by as much as 20.5% from 2018 to the third quarter of this year. Even more important is the movement of wages in euros, due to the fact that apartment prices are formed in euros and are usually paid that way. Their growth in the observed period was 30.1%. The growth of wages affects the reduction of the number of years needed to buy an average apartment, but on the other hand it also affects the growth of real estate prices.

The value of this coefficient for old apartments in 2021 was 9.7, while for new-built apartments it was 13.3. That is, a citizen of Serbia with an average salary would have to pay the entire salary for 9.7 years (13.3 years) in order to buy an average apartment of 60 square meters in Serbia.

Although generally accepted, this coefficient implies the absence of other costs in the earned income, i.e. the expense exclusively for real estate. The coefficient defined in this way is used to compare different countries and cities, as well as to compare the values achieved during the “bubble” in the real estate market, in order to indicate possible risks.

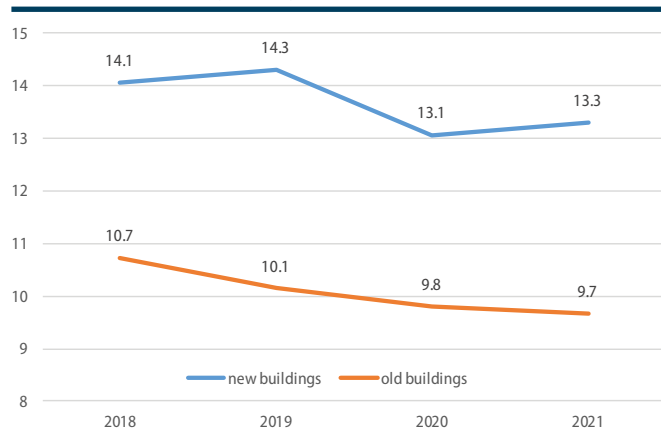
⁸ Republic Geodetic Authority

⁹ Republic Geodetic Authority

¹⁰ Statistical Office of the Republic of Serbia

¹¹ The values of the index vary most often as a result of the choice of the surface of the apartment analyst use. One of the best-known reports on the situation on the real estate market, the “Global Real Estate Market Balloon Index” produced by UBS Bank on an annual basis, defines the area of a housing unit at 60 m². In this analysis, we will also use this area when calculating the index. The index is therefore calculated as a ratio of the average value of a newly built housing unit of 60m² and the average annual net salary

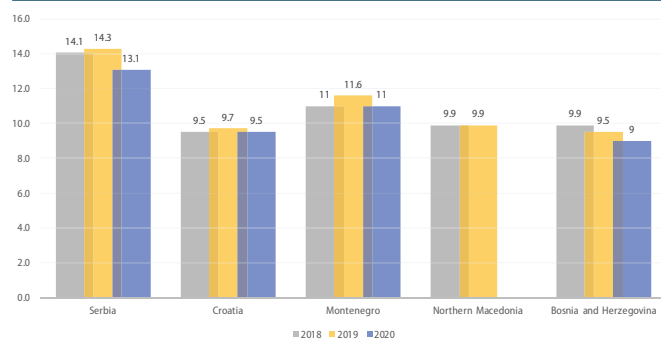
Graph 7. Coefficient of prices of new and old apartments and average wages



Source: Republic Geodetic Authority

The coefficient of the ratio of prices of newly built real estate and income can be compared for the countries of the region, which according to a large number of indicators are comparable countries for Serbia, and thus assess whether the value of newly built apartments in Serbia is overestimated. Graph 8 shows the values of the coefficient for 2017, 2018, 2019 and 2020 for Serbia, Croatia, Montenegro, Northern Macedonia and Bosnia and Herzegovina. In addition to the significant decline in 2019, the number of years required to buy apartment in Serbia is significantly higher than in other observed countries in the region. The lowest number of years is required in Bosnia and Herzegovina (9), then in Croatia (9.5) Northern Macedonia (9.9¹²), and finally in Montenegro (11). In Serbia, in 2020, the number of required years was as much as 33% higher than the average of the observed countries, or 19% higher than in Montenegro, a country where this ratio was the most unfavorable of the observed countries in the region.

Graph 8. Coefficient of prices of newly built real estate and average wages



Source: RGA, SORS for Serbia, Monstat, Central Bureau of Statistics of Northern Macedonia, Central Bureau of Statistics of Croatia, Agency for Statistics of Bosnia and Herzegovina

Observed by cities and municipalities, the growth of prices of newly built apartments in Serbia in 2021 varies significantly. The average price of new apartments in the first half of 2021 compared to the average in 2020 increased by as much as 26% in Arandjelovac, 16% in Negotin, 14% in Gornji Milanovac, 11% in Vrnjaska Banja, 9% in Pancevo and Leskovac, while in most other cities and municipalities a slight increase in prices was recorded. In Požarevac, Užice and Kruševac, in the observed period, prices fell in the range of 4-6%¹³.

In the general public, the movement of prices on the real estate market in Serbia is most often observed, justified or not, through the movement of prices on the market of the City of Belgrade. Over 50% of the value of money spent on real estate in Serbia refers to Belgrade, where the largest number of real estates sold during the year, so it is justified that in the analysis of real estate market in Serbia to dedicate a special part of the analysis to the City of Belgrade.

Real estate price movements in Belgrade

The movement on the real estate market in Belgrade can be observed exclusively on the basis of the movement of prices of newly built apartments, due to the fact that official statistics do not publish the average price of old apartments in Belgrade¹⁴.

According to the SSO data, in only 6 months of 2021, the average price of new apartments on the territory of the City of Belgrade increased by 9% compared to the 2020 average. If we look at the year-on-year growth rate in June 2021, this growth is even higher and amounts to 11.6%. These data indicate what is widely known to the public, the growth of prices of newly built apartments in Belgrade is growing unstoppably from year to year¹⁵.

It should be borne in mind that the total number of sold, new and old, apartments in Belgrade after several years of significant growth, recorded a slight decline of -2% in 2019, and in 2020 the decline was as much as 15%. It is very likely that the downward trend in the number of purchased real estate in Belgrade, which began in 2019 and was noticeable in 2020, would have continued had it not been for the COVID-19 pandemic, to which central banks responded by reducing reference interest rates and easing borrowing conditions on housing loan market. Namely, during 2020, the National Bank of Serbia reduced the reference interest rate from 2.25% to only 1%¹⁶.

¹³ Data from RGA and SORS

¹⁴ The SORS monitors exclusively the prices of newly built apartments, while the RGA does not publish data on the average price for the City of Belgrade, but only for city municipalities.

¹⁵ SORS

¹⁶ NBS, https://nbs.rs/sr/drugi-nivo-navigacije/statistika/ks_stat/

¹² Due to the lack of data for 2020, the shown value is the ratio for 2019.

Bank rates on housing loans have fallen and in 2021 are at an all-time low¹⁷. In addition to the fall in interest rates in mid-2020, the NBS issued a recommendation to reduce the minimum down payment for housing loans from 20% to 10%. The mass of housing loans in 2020 increased by 12%, while only a year earlier (2019) that growth was only 4%¹⁸.

The importance of the impact of low interest rates on the growth of demand for apartments is also indicated by the fact that the share of housing loans in the purchase of apartments at the end of 2019 in Serbia was 29%. In the first half of 2021, it amounts to 37%¹⁹, and in Belgrade as much as 39%.

Kao i u slučaju Srbije, i za Beograd možemo posmatrati vrednosti koeficijenta koji ukazuje na broj godina neophodnih za kupovinu prosečnog stana novogradnje od 60m², koristeći za to celokupnu prosečnu zaradu. Ovaj koeficijent posmatra se iz ugla dostupnosti stanovanja u Srbiji, a ujedno je i jedan od pokazatelja eventualnog postojanja balona na tržištu nekretnina.

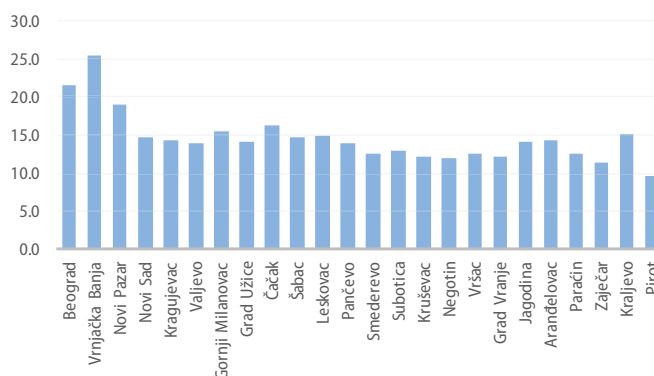
As in the case of Serbia, for Belgrade we can observe the values of the coefficient which indicates the number of years necessary for the purchase of an average new apartment of 60m², using the entire average salary. This coefficient is observed from the point of view of the availability of housing in Serbia, and it is also one of the indicators of the possible existence of a bubble in the real estate market.

The value of the coefficient in the first half of 2021 is 15.8, which is 19% more than the amount for the whole of Serbia.

If we want to observe this coefficient exclusively from the angle of the required number of years to buy an apartment, the average net salary must be reduced by the amount of the poverty risk threshold which in 2020 is 22,000 dinars, according to the SORS. The number of years needed to buy a new apartment of 60m² at an average price in Belgrade is 21.6. Provided you receive an average salary and spend 22,000 dinars a month. Of course, this is the minimum number of years, considering that it is unrealistic to spend 22,000 dinars a month on all other monthly expenses in Belgrade.

If we look at other cities in Serbia in relation to Belgrade, we can see that the largest increase in the coefficient was recorded in Vrnjačka Banja, where the citizens of Vrnjačka Banja need as much as 25.4 years for the same purchase.

Graph 9. Coefficient of the ratio of prices of newly built real estate and average wages, 2020



Source: SORS

The Global Real Estate Bubble Index produced by UBS Bank on an annual basis in 2021 listed 8 cities in which there is a “bubble” in the real estate market (Frankfurt, Toronto, Hong Kong, Munich, Zurich, Vancouver, Stockholm, Paris, Amsterdam). The index is calculated for an apartment of 60 m² and includes several sub-indexes, including the ratio of real estate price and disposable income, the ratio of rental value and real estate value and the movement of housing loans share in GDP.

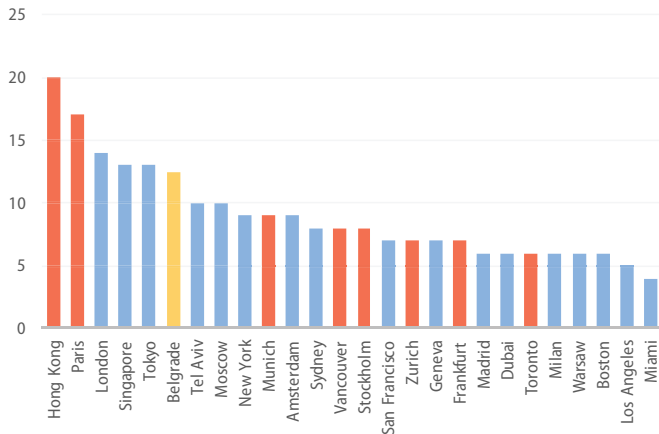
The real estate price-disposable income index used by UBS Bank differs from the standard index as it does not use the average disposable income, but the average disposable income of highly skilled workers. As UBS report does not include Belgrade, for the purposes of comparability, the index was calculated in this case as the ratio of the average value of a newly built apartment of 60m² and the average net income of an employee with a university degree in Belgrade. The number of years required for a worker with a university degree employed in Belgrade to purchase such defined housing is in this case 12.5. In Graph 10, we can see that this value is high on the scale of cities observed by UBS, and above the value of 6 out of 8 cities that UBS qualifies as cities at risk of “bubbles” in the real estate market (shaded in red). It should be borne in mind that this is one of the few indicators observed by UBS, but also that London, which also has a value higher than Belgrade, although not at risk of a bubble, is still ranked as a city with an overestimated value of real estate prices.

¹⁷ In Q3 2021, real interest rates on dinar and euro loans are even negative - See “Review”

¹⁸ NBS, Monetary Statistics, Structure of banks’ claims on households by purpose, https://nbs.rs/sr/drugi-nivo-navigacije/statistika/mon_stat/

¹⁹ RGA, Report on the situation on the real estate market for the first half of 2021, p. 11.

Graph 10. Coefficient of the ratio of prices of newly built real estate and average wages



Source: UBS Global Real Estate Bubble Index, author's calculation for Serbia

Summary

In the first six months of 2021, the price per square meter of newly built apartments in Serbia increased by as much as 9%.

It can be said that the situation in Belgrade follows the trend at the level of Serbia, but it is still more realistic to say that it dictates the trend, considering that about 50% of the value of money spent on real estate in Serbia refers to Belgrade. The decline in the number of purchased apartments recorded in 2019 and 2020 would probably continue, but with the reduction of the reference interest rate, the decline in bank interest rates and the loosening of credit conditions, the growth of housing loans was significant, significantly increasing the share of housing loans in total money spent to buy apartments in Belgrade. Based on a comparative analysis with similar cities in the world, it can be estimated that the price of apartments in Belgrade are overestimated, both in terms of living conditions (very poor air quality, infrastructure,...) and in terms of real estate prices and average wages in Belgrade.

In addition to these factors, the growth of real estate prices was also influenced by the growth of real wages and wages in euros (for more information on wage growth, see Section 3 "Labor Market"). It should be borne in mind that the growth of wages in conditions with low inflation was probably a significant factor in rising real estate prices, but that inflation growth, which is significant, is slowly reducing part of the available wages of citizens for planned savings to buy an apartment and / or credit. The rise in inflation will thus have a negative impact on the further rise in real estate prices, to what extent, it is not possible to estimate at the moment.

Conclusion

Low interest rates, backed by other factors such as high wage growth in euros and rising savings, have led to rising real estate prices in 2020 despite the recession. This growth continued and accelerated in 2021. In Serbia, the conditions for borrowing have been eased, and the necessary level of down payment for housing loan has been reduced. Real estate prices in Serbia are recording significant growth rates, and although we still cannot say with high probability that a bubble has been created on the real estate market, the conditions for the appearance of the bubble certainly exist and are becoming stronger over the past few years.

In 2021 real estate prices in the world are recording record growth rates. The biggest problems are in Europe. As many as 6 of the 8 cities that the Global Real Estate Bubble Index rates as cities with a “bubble” in the real estate market are located in Europe. The European Central Bank also recognized the risk of “bubbles” in the real estate market in Europe. However, despite warnings and recommendations to tighten housing loan conditions, member states continue to keep conditions relatively favorable. Of particular concern is the fact that, for the first time in many years, there is an increase in unpaid mortgage loans in conditions of low interest rates, while their growth is expected in the next few years in response to accelerated inflation. It is rational to expect that in the conditions of rising interest rates, there will be further growth of unpaid mortgage loans.

We can expect such a development in Serbia as well, considering that the number of housing loans has sharply increased, as well as their participation in the purchase of apartments.

The situation on the real estate market in Serbia calls for caution. The example of Estonia presented in the part of the paper on the EU is very likely, in a certain form and scope, waiting for Serbia in the next few years.

As at the global level, interest rates are expected to rise in Serbia in the next few years (monetary expansion is already putting strong pressure on inflation), so it is necessary to take into account the risk associated with the real estate market and housing loans in formulating government policies.

References

1. Agencija za statistiku Bosne i Hercegovine, <https://bhas.gov.ba/>
2. Državni zavod za statistiku Severne Makedonije, <https://www.stat.gov.mk/>
3. Državni zavod za statistiku Hrvatske, www.dzs.hr
4. Uprava za statistiku Crne Gore – MONSTAT, www.monstat.org
5. Eurostat - Housing price statistics - house price index, www.eurostat.eu
6. European central Bank, Euro Area Statistics, www.euro-area-statistics.org
7. European central Bank, The euro area bank lending survey Q3 2021
8. Narodna Banka Srbije, www.nbs.rs
9. Republički zavod za statistiku, www.stat.gov.rs
10. Republički geodetski zavod, www.rgz.gov.rs
11. UBS Global Real Estate Bubble Index
12. U.S. Bureau of Labor Statistics, www.bls.gov
13. Federalne agencije za finansiranje stanovanja (FHFA), www.fhfa.gov