



РЕПУБЛИЧКИ ГЕОДЕТСКИ ЗАВОД



RGA APARTMENT PRICE INDEX

Third Quarter 2023

157,03

October 2023



Foreword

According to the United Nations, good land administration connects people with real estate and provides information on the "how", "what", "who", "when" and "where" of possession, use, value and development possibilities on real estate. The multiannual process of reform, modernization and digitization of the Republic Geodetic Authority of Serbia (RGA) is carried out in cooperation with the World Bank under the "Serbia Real Estate Management Project". This reform facilitated the implementation of modern technical and methodological solutions for credible monitoring of the property market trends in accordance with the best world practice.

Since the third quarter of 2022, the RGA publishes the apartment price index for the Republic of Serbia, which is developed in accordance with international methodological guidelines. The index was created based on the model for apartment mass valuation, which takes into account the prices from the sales contracts as well as different characteristics of a property from authoritative sources - Property Price Register, Real Estate Cadastre, Condominium Register, Geoserbia and Tax Administration. Value of apartments was assessed based on a comprehensive analysis where each apartment is viewed as a set of its own characteristics that affect the market value (area of the apartment, year of construction, quality of infrastructure, distance from public and business facilities, etc.). In the mass valuation model, a time component that reflects the effect of market changes (supply and demand) on the level sales prices from one period to another, is the basis for calculating the index.

The reference or base period is the first quarter of 2019, when the value of the index is 100. The index, due to the predominant representation of apartments in the total turnover of properties in Serbia, has relevance for monitoring of the entire real estate market. The apartment price index will be calculated quarterly, first as a preliminary index, immediately after the end of the quarter, and then as a final index.

Monitoring the property prices trend and turnover is very important for successful handling of economic policies and the development of society. From an economic point of view, the construction industry that is most directly related to property market, represents one of the key levers of economic development, which consequently also involves the activities of a large number of related business branches.

From the point of view of citizens, successfully meeting the housing needs is one of the most important issues in life and the biggest financial decisions for most households. Also, in the countries of Southeast Europe, including Serbia, investment in real estate is traditionally one of the most common forms long-term savings. The property market is an essential support for any successful banking system, not only because of citizens who take housing loans, but also because of businesspersons and entrepreneurs who use property as collateral to secure loans necessary for growing their business. Hence, credible monitoring of trends in the property market is necessary so all of the above social and economic segments could function as effectively as possible, as well as for the creators of economic policies to be able monitor and respond in a timely manner to the emergence of potential risks. In fact, the lack of timely monitoring and identification of risks in the property market in the United States had preceded the global financial crisis of 2008, so the production of the housing property price index is therefore recommended and included in the set of monitoring indicators and financial stability by the International Monetary Fund.

**Borko Draskovic, M.Sc.,
Director
Republic Geodetic Authority**



Apartment Prices and Related Market Trends

The RGA Apartment Price Index in the third quarter (Q3) of 2023 is 157.03, representing an increase of 1.11% compared to Q2 2023 when the index was 155.31 (Figure 1). It's important to note that this is a base index with a value of 100 in the first quarter of 2019.

In Q3 2023, the increase of housing prices in Serbia continued to slow down for the fourth consecutive quarter (Figure 2). The annual price growth rate remains high at 8.20% for the entire Republic of Serbia (10.76% in Q2 2023, 13.32% in Q1 2023, and 15.02% in Q4 2022, Figure 2). Looking at quarterly growth rates, some segments show significant slowdowns with minimal increases (e.g., 0.6% in the "first sale" segment in the regions of Southern and Eastern Serbia, as well as in the Šumadija and Western Serbia regions, Table 3).

In the "resale" segment, the year-on-year price growth is 9.26% (12.16% in Q2 2023), while in the "first sale" segment, or purchases from investors, the price growth is 6.26% annually (compared to 8.26% in Q2 2023, Figure 2). Quarterly price growth rates also indicate a slowdown: 0.80% in "first sale" (compared to 1.06% in Q2 2023, Figure 3), and 1.28% in "resale" (compared to 1.70% in Q2 2023). Prices in the "first sale" segment remain relatively higher compared to "resale" (Table 5).

The level of the price index in Q3 2023, as in the previous quarter, is highest in the Vojvodina region (index value 164.71) and the city of Belgrade (index value 158.98, Figure 4). Price growth slowdowns in Q3 2023 were noted in Vojvodina and Belgrade (from 10.67% to 7.53% annually in Vojvodina and from 10.89% to 8.21% annually in Belgrade). More dynamic growth rates, as in the second quarter, were observed in the Southern and Eastern Serbia region, where the annual growth rate in Q3 2023 was 11.54% (compared to 13.39% in Q2 2023, Figure 5).

Looking at the number of apartment transactions, the trend of declining transactions continues from the beginning of the year into the third quarter (-18.4% annually, following -21.3% in Q2 2023, Figure 7). After the market value of apartments increased in Q4 2022, the last three quarters have seen declines: -16.2% annually in Q3 2023 (similar to -14.6% in Q2 2023 and -3.5% in Q1 2023). Specifically, the total value of traded apartments in Q3 2023 was 777 million euros compared to 927 million euros in the same period in 2022. The largest decrease in the number of apartment transactions was observed in Belgrade, with a decline of -26.18% annually (-24.61% in Q2 2023). The Šumadija and Western Serbia region recorded the smallest decline (-6.23% annually in Q3 2023, after a decline of -9.62% in Q2 2023, Figure 6).

The number of apartments purchased with mortgage financing decreased by -47.3% in Q3 2023, following a decrease of -53.7% annually in Q2 2023 (Figure 8). The share of apartments purchased with a mortgage saw a slight increase of 16.6% in this quarter, compared to 16.3% in Q2 2023 (Figure 9).

In international comparisons, a trend of slowing price growth in apartments was observed in Serbia, as well as in Croatia (13.73% annually in Q2 2023, 14.00% in Q1 2023), Bulgaria (10.69% annually in Q2 2023, 9.48% in Q1 2023), and Slovenia (7.37% annually in Q2 2023, 8.82% in Q1 2023). The Apartment Price Index for the European Union, comprising of 27 countries, showed a slight decline of -1.12% annually in Q2 2023 (0.79% annually in Q1 2023, Figure 11). Some European countries experienced more significant declines in residential property prices in the second quarter of 2023 (-7.63% annually in Denmark and -4.30% in the Netherlands, according to the latest official data, Figure 11).



Figure 1: Apartment price index Serbia: total for the entire property market, "first sale" and "resale", 2019=100

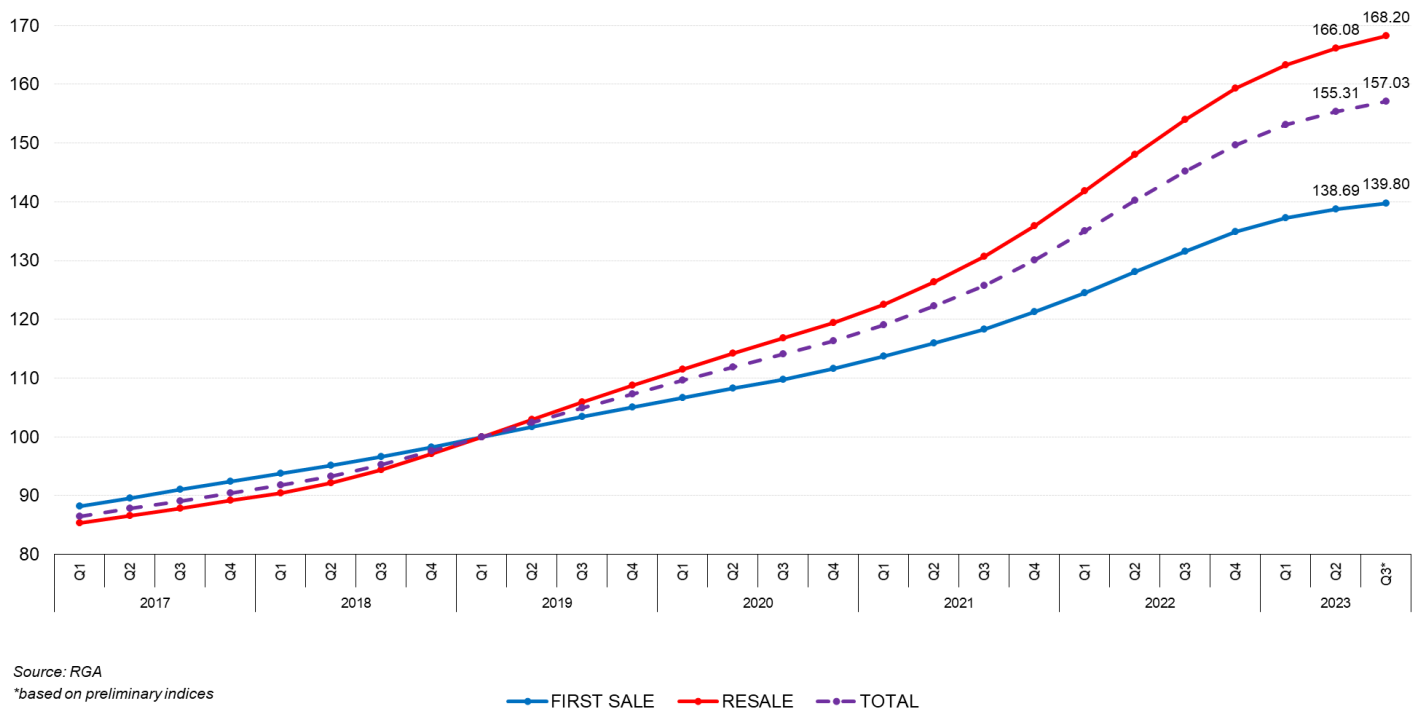


Figure 2: Annual apartment price growth rates: total for the entire property market, segments "first sale" and "resale", %

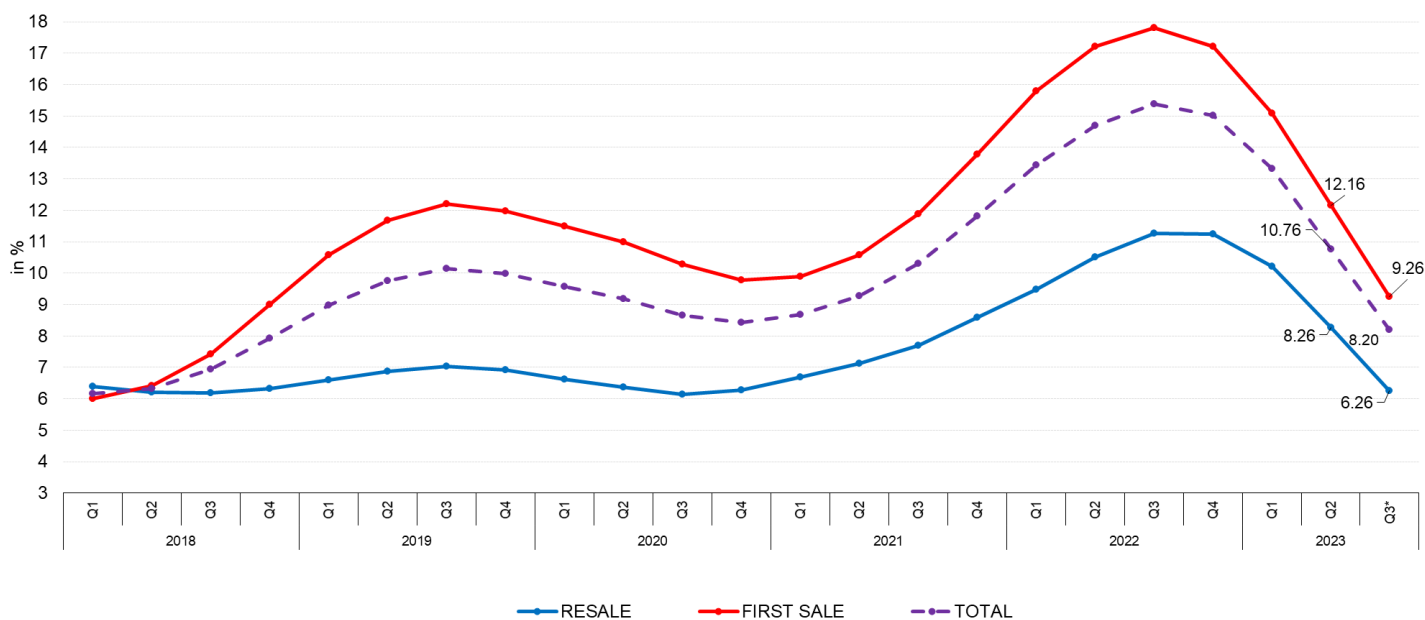
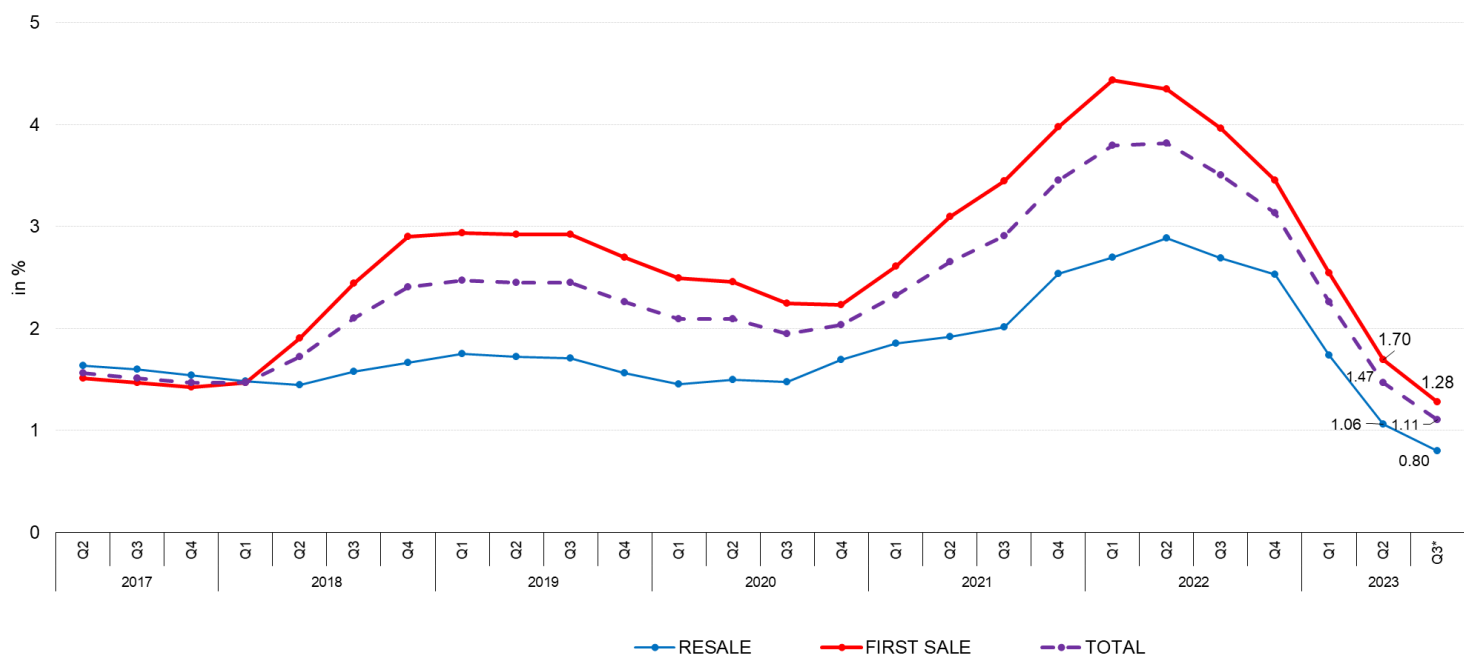


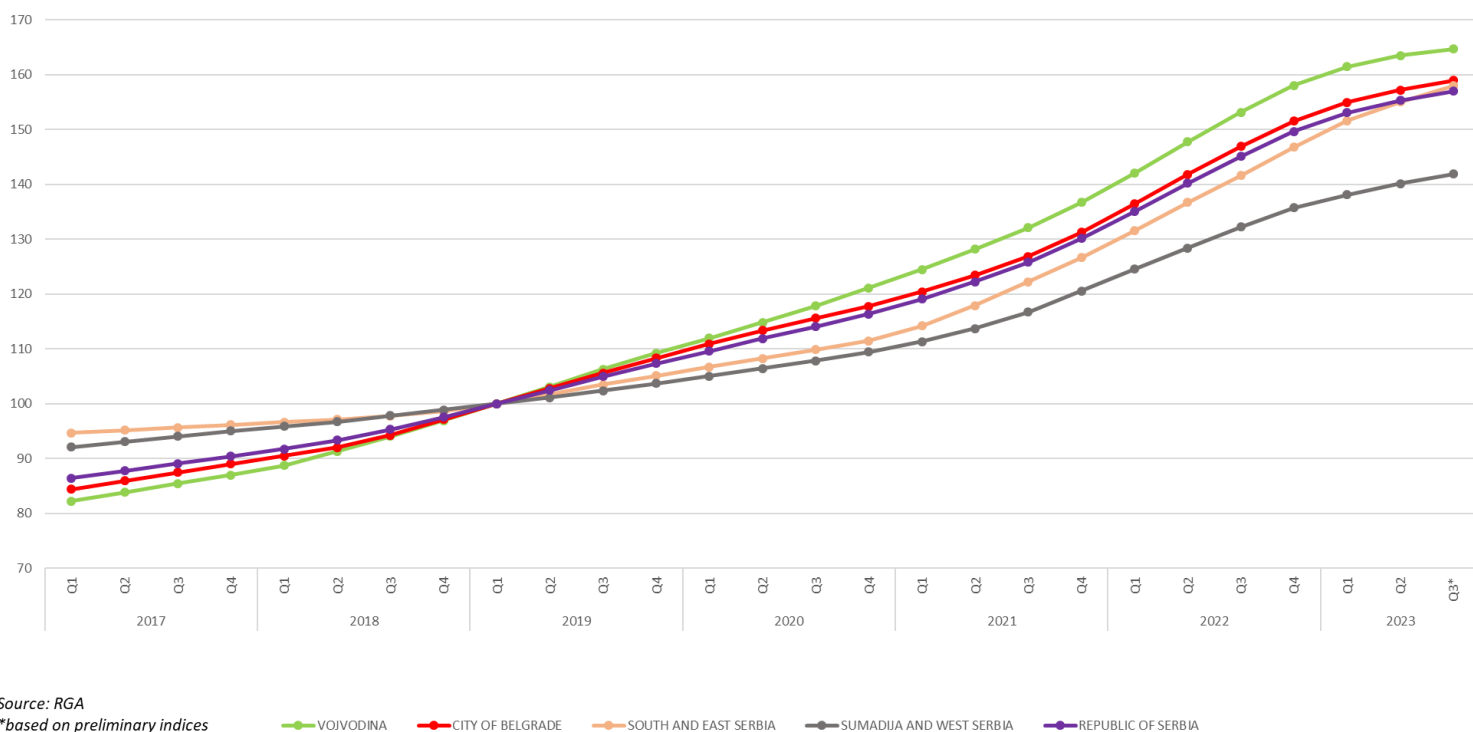


Figure 3: Quarter-on-quarter price growth rates: total for the entire apartment market, and segments "first sale" and "resale", in %



Source: RGA
*based on preliminary indices

Figure 4: Apartment price index by region, 2019=100

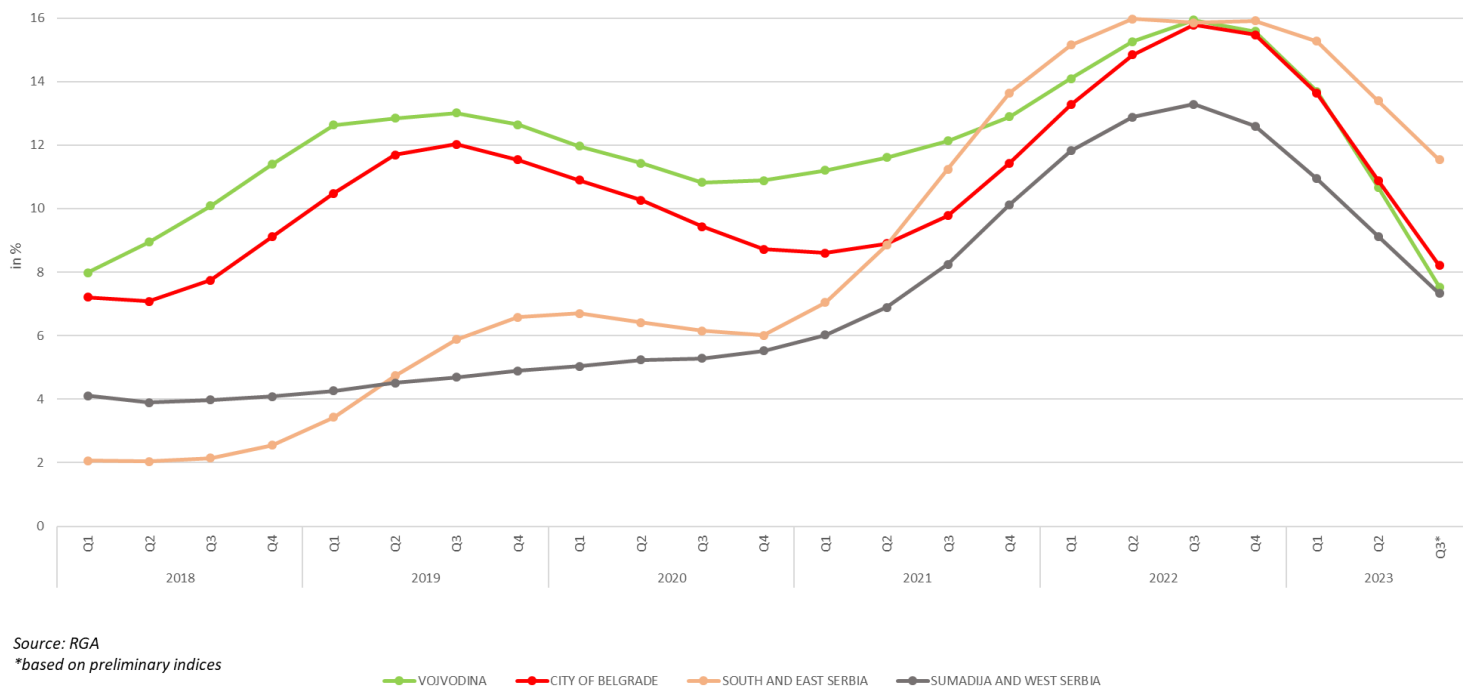


Source: RGA
*based on preliminary indices

VOJVODINA CITY OF BELGRADE SOUTH AND EAST SERBIA SUMADIJA AND WEST SERBIA REPUBLIC OF SERBIA



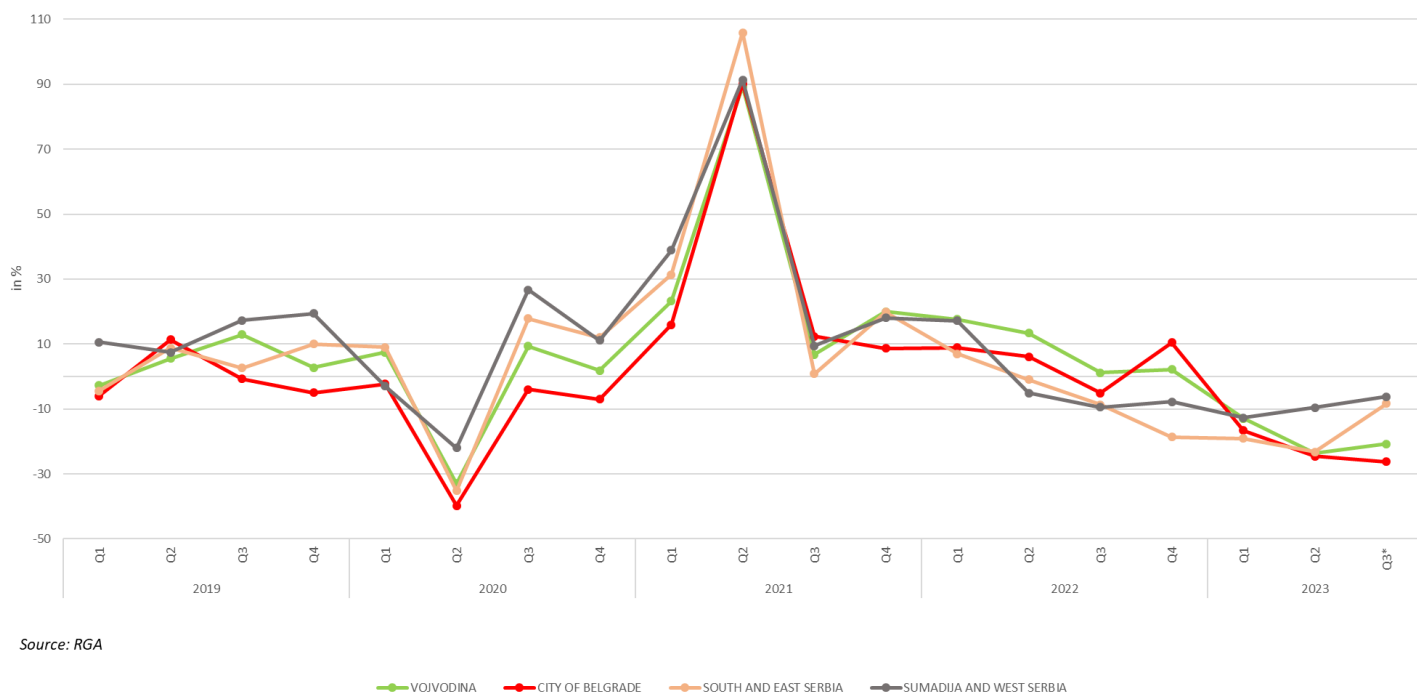
Figure 5: Annual apartment price growth rate by region, in %



Source: RGA
*based on preliminary indices

VOJVODINA CITY OF BELGRADE SOUTH AND EAST SERBIA SUMADIJA AND WEST SERBIA

Figure 6: Number of apartment sales annual growth rate by region, in %

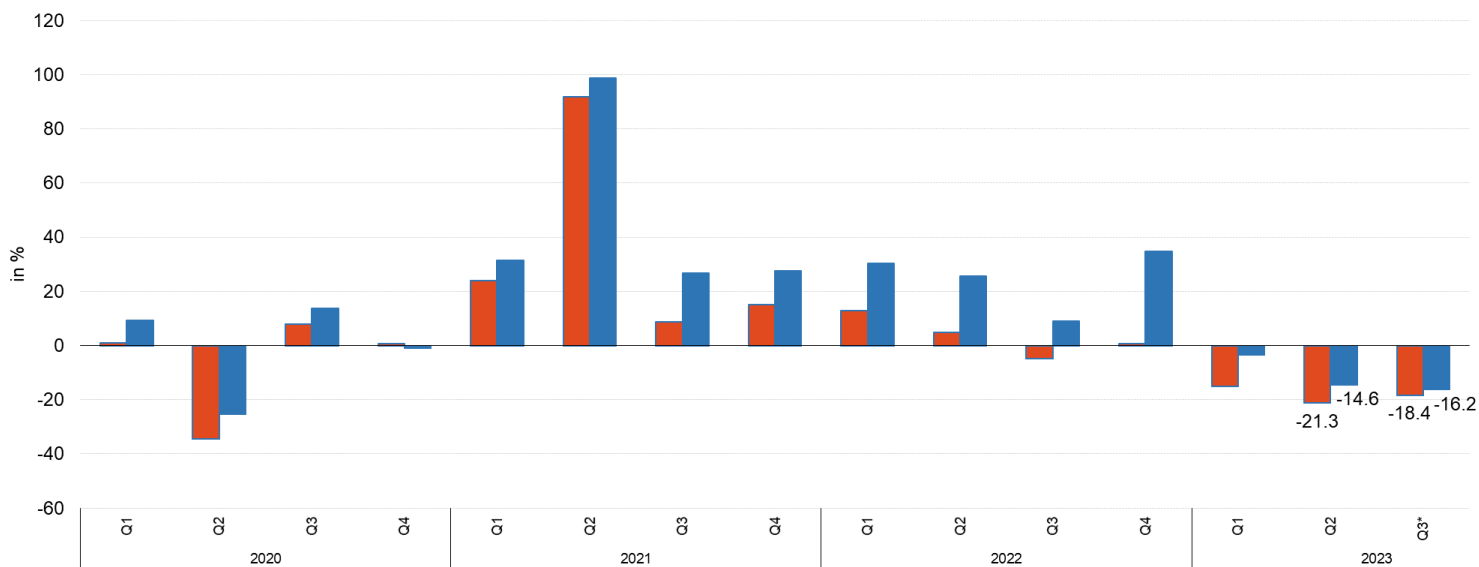


Source: RGA

VOJVODINA CITY OF BELGRADE SOUTH AND EAST SERBIA SUMADIJA AND WEST SERBIA



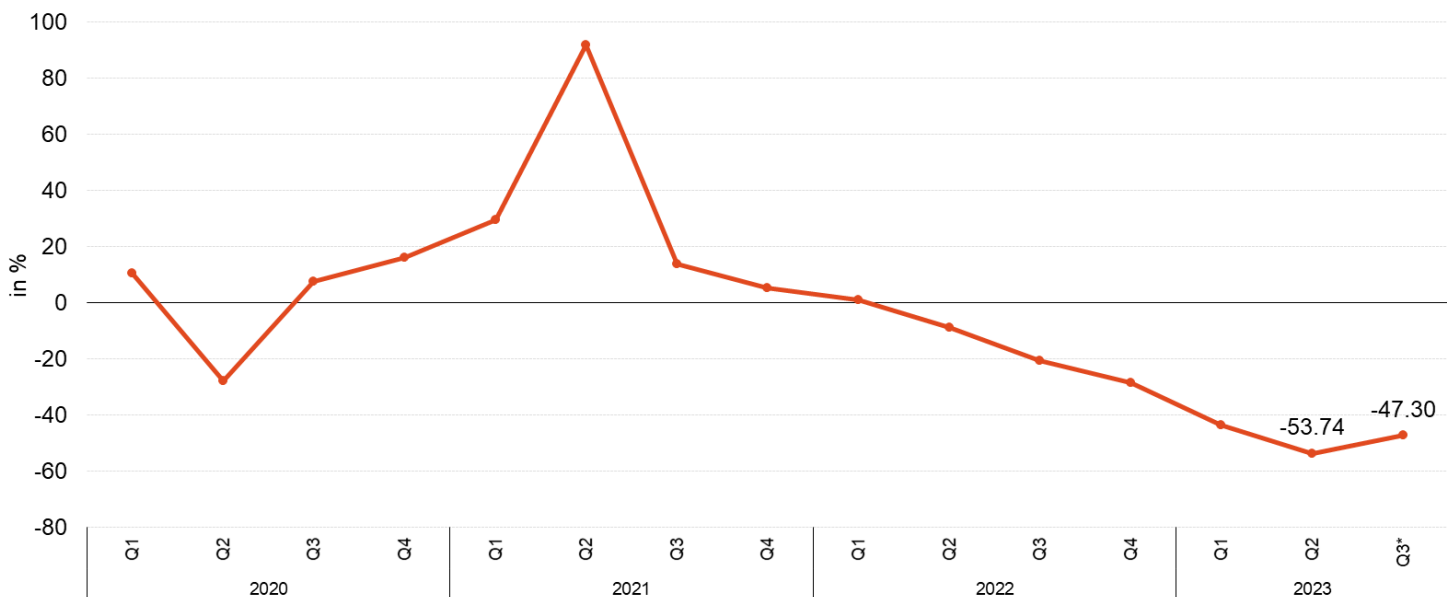
Figure 7: Apartment market number of sales and sales volume: annual growth rates for Republic of Serbia, in %



Source: RGA

■ Number of sales ■ Sales volume

Figure 8: Number of sales financed from housing loans: annual growth rates for apartments and all properties, in %



Source: RGA

Figure 9: Share of apartment sales financed from housing loan in total number of sales in the Republic of Serbia, in %

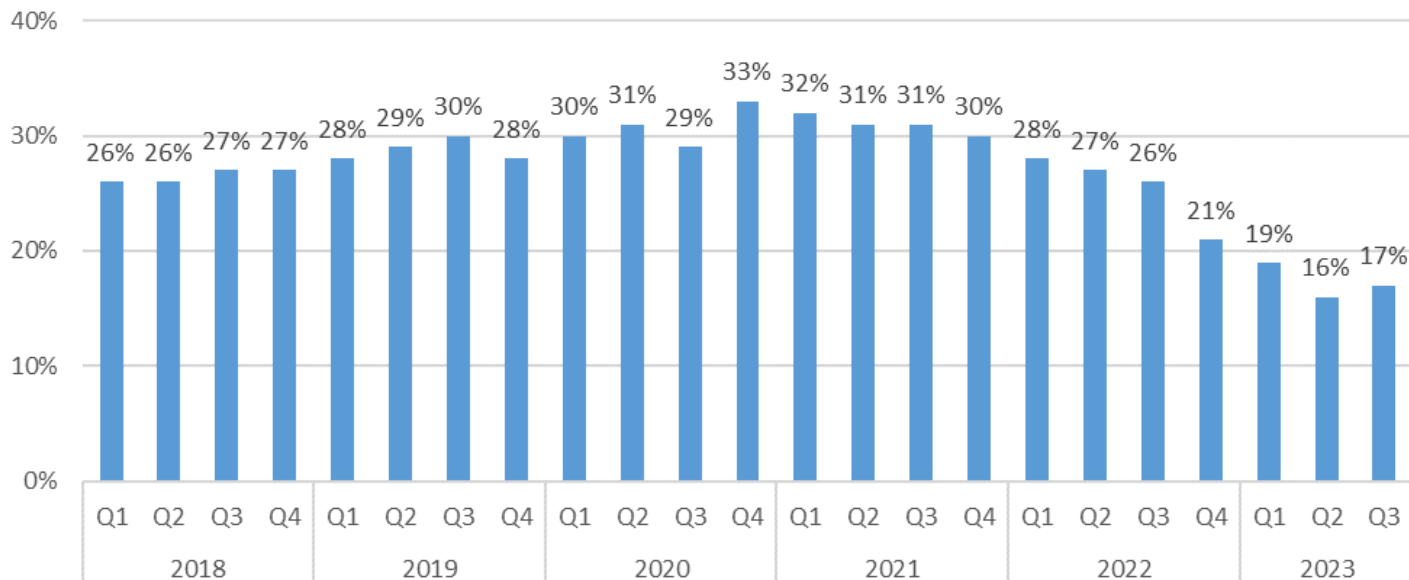
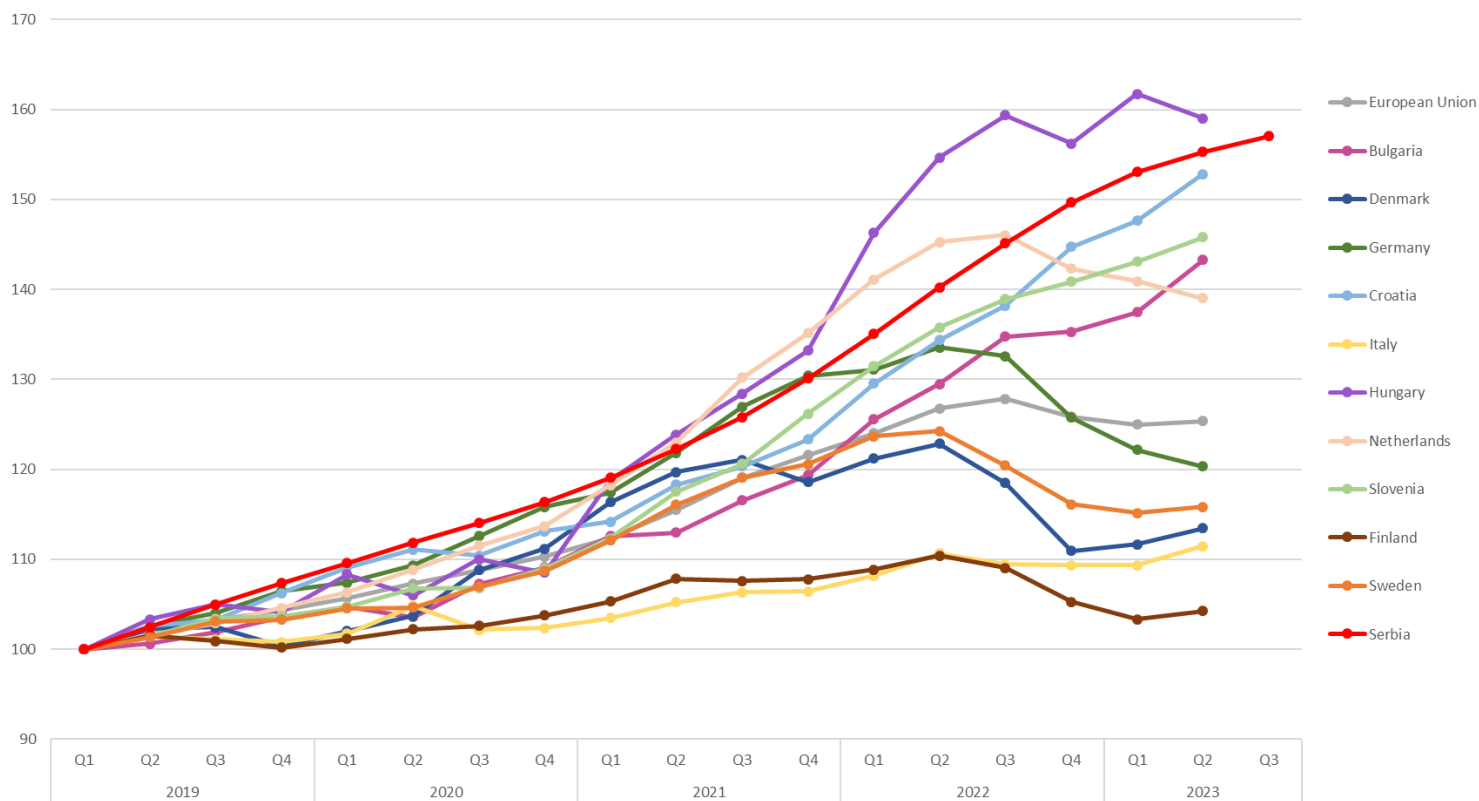
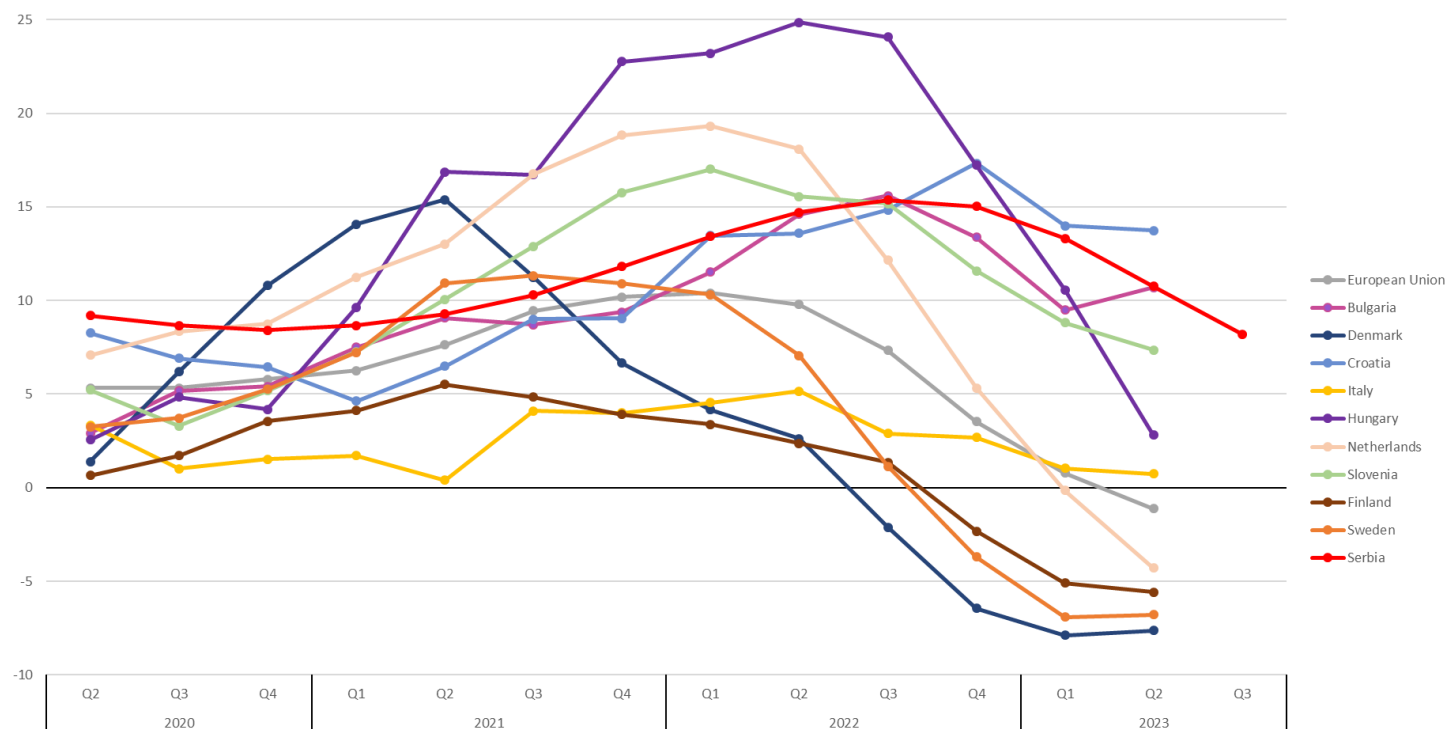


Figure 10: Housing property indices: international comparison *



Source: RGA for Serbia and Eurostat for other countries

Figure 11: Residential property prices annual growth rates: international comparison *



Source: RGA for Serbia and Eurostat for other countries

* there is a possibility of difference in methodologies when calculating housing property indices in different countries, considering different methods available for evaluating and calculating the market price changes (methodological guidelines and advantages and disadvantages of different approaches are presented in the Eurostat Manual).

The methodological approach of creating the RGA index is in accordance with [international standards and recommendations](#) based on the hedonic regression analysis of data from transactions from the [Property Price Register](#).

Price index calibration is performed in accordance with EUROSTAT standards. In the analysis for the property price indices in the first quarter of 2023, transactions from the period of January 1st, 2017 until September 30th, 2023 were considered. The change compared to the previous reports is that the analysis did not use transactions from 2016, which contributed to providing even better and more accurate price indices.

More detailed methodological explanations of the creation of the RGA index are published on the website of the Republic Geodetic Authority in the document [Methodology of the Creation of the RGA Apartment Index](#).



STATISTICAL ANNEX

Table 1: Apartment price indices for Serbia and statistical regions by market segment "first sale" and "resale", 2019=100

YEAR	QUARTER	REPUBLIC OF SERBIA			VOJVODINA			CITY OF BELGRADE			SOUTH AND EAST SERBIA			SUMADIJA AND WEST SERBIA		
		FIRST SALE %	RESALE %	TOTAL %	FIRST SALE %	RESALE %	TOTAL %	FIRST SALE %	RESALE %	TOTAL %	FIRST SALE %	RESALE %	TOTAL %	FIRST SALE %	RESALE %	TOTAL %
2017	Q1	88,17	85,32	86,44	88,11	78,66	82,23	85,58	83,67	84,42	96,03	94,05	94,72	89,99	93,83	92,13
	Q2	89,61	86,61	87,79	89,51	80,43	83,86	87,27	85,14	85,98	96,53	94,54	95,22	91,43	94,47	93,12
	Q3	91,04	87,88	89,12	90,88	82,17	85,46	88,92	86,60	87,51	97,03	95,03	95,71	92,85	95,08	94,09
	Q4	92,44	89,13	90,43	92,23	83,90	87,04	90,55	88,03	89,02	97,52	95,52	96,20	94,23	95,66	95,03
2018	Q1	93,81	90,44	91,76	93,56	85,89	88,79	92,14	89,45	90,51	98,01	96,00	96,68	95,60	96,16	95,91
	Q2	95,17	92,16	93,34	94,88	89,23	91,36	93,72	91,01	92,07	98,50	96,47	97,16	96,94	96,61	96,75
	Q3	96,67	94,41	95,30	96,17	92,82	94,08	95,66	93,40	94,29	98,99	97,13	97,76	98,25	97,48	97,83
	Q4	98,28	97,15	97,59	97,87	96,41	96,96	97,81	96,68	97,13	99,47	98,22	98,65	99,20	98,69	98,91
2019	Q1	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00
	Q2	101,72	102,92	102,45	102,21	103,62	103,09	102,15	103,27	102,83	100,87	102,21	101,76	100,67	101,48	101,12
	Q3	103,46	105,93	104,96	104,50	107,43	106,32	104,32	106,48	105,63	101,78	104,39	103,51	101,28	103,34	102,42
	Q4	105,08	108,79	107,33	106,76	110,72	109,22	106,28	109,67	108,34	102,68	106,40	105,14	101,81	105,30	103,75
2020	Q1	106,61	111,50	109,58	109,06	113,72	111,96	107,93	112,81	110,89	103,57	108,30	106,70	102,50	107,06	105,03
	Q2	108,21	114,24	111,87	111,56	116,88	114,87	109,54	115,86	113,38	104,50	110,23	108,29	103,31	108,91	106,42
	Q3	109,81	116,81	114,05	113,94	120,19	117,83	111,10	118,49	115,59	105,77	111,98	109,88	104,19	110,74	107,83
	Q4	111,67	119,42	116,37	116,83	123,71	121,11	112,85	120,98	117,79	107,06	113,71	111,46	105,34	112,80	109,48
2021	Q1	113,74	122,54	119,08	119,86	127,33	124,51	114,85	124,05	120,43	108,34	117,23	114,22	106,76	115,04	111,36
	Q2	115,92	126,33	122,24	122,76	131,52	128,21	116,82	127,78	123,47	109,88	121,98	117,88	108,74	117,77	113,75
	Q3	118,25	130,68	125,79	125,52	136,13	132,12	119,14	131,91	126,89	111,92	127,50	122,23	110,74	121,51	116,72
	Q4	121,25	135,88	130,13	128,38	141,80	136,73	122,60	136,86	131,26	114,03	133,13	126,66	113,37	126,31	120,56
2022	Q1	124,52	141,90	135,07	131,46	148,50	142,06	126,29	142,96	136,41	117,05	138,93	131,52	116,15	131,24	124,53
	Q2	128,11	148,07	140,22	135,28	155,36	147,77	130,05	149,41	141,80	120,68	144,91	136,71	119,13	135,81	128,40
	Q3	131,56	153,94	145,13	138,95	161,81	153,17	133,56	155,57	146,92	124,19	150,53	141,61	122,17	140,25	132,22
	Q4	134,89	159,26	149,68	142,48	167,47	158,03	136,63	161,25	151,57	129,68	155,58	146,81	124,91	144,41	135,75
2023	Q1	137,23	163,31	153,06	144,88	171,59	161,50	138,61	165,61	155,00	134,84	160,20	151,61	126,73	147,28	138,15
	Q2	138,69	166,08	155,31	146,72	173,73	163,53	139,98	168,42	157,24	136,60	164,44	155,01	127,81	149,96	140,12
	Q3*	139,80	168,20	157,03	148,07	174,80	164,71	141,22	170,48	158,98	137,41	168,46	157,95	128,52	152,62	141,91
	Q4															

*based on preliminary indices

Table 2: Annual apartment price growth rates for Serbia and statistical regions by market segment "first sale" and "resale", in %

YEAR	QUARTER	REPUBLIC OF SERBIA			VOJVODINA			CITY OF BELGRADE			SOUTH AND EAST SERBIA			SUMADIJA AND WEST SERBIA		
		FIRST SALE %	RESALE %	TOTAL %	FIRST SALE %	RESALE %	TOTAL %	FIRST SALE %	RESALE %	TOTAL %	FIRST SALE %	RESALE %	TOTAL %	FIRST SALE %	RESALE %	TOTAL %
2017	Q1	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
	Q2	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
	Q3	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
	Q4	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
2018	Q1	6,40	6,00	6,15	6,19	9,19	7,98	7,67	6,91	7,21	2,06	2,07	2,07	6,23	2,48	4,10
	Q2	6,20	6,41	6,32	6,00	10,94	8,94	7,39	6,89	7,08	2,04	2,04	2,04	6,03	2,27	3,90
	Q3	6,18	7,43	6,93	5,82	12,96	10,09	7,58	7,85	7,75	2,02	2,21	2,14	5,82	2,52	3,97
	Q4	6,32	9,00	7,92	6,12	14,91	11,40	8,02	9,83	9,11	2,00	2,83	2,55	5,27	3,17	4,08
2019	Q1	6,60	10,57	8,98	6,88	16,43	12,63	8,53	11,79	10,49	2,03	4,17	3,43	4,60	3,99	4,26
	Q2	6,88	11,68	9,76	7,73	16,13	12,84	8,99	13,47	11,69	2,41	5,95	4,73	3,85	5,04	4,52
	Q3	7,02	12,20	10,14	8,66	15,74	13,01	9,05	14,00	12,03	2,82	7,47	5,88	3,08	6,01	4,69
	Q4	6,92	11,98	9,98	9,08	14,84	12,64	8,66	13,44	11,54	3,23	8,33	6,58	2,63	6,70	4,89
2020	Q1	6,61	11,50	9,58	9,06	13,72	11,96	7,93	12,81	10,89	3,57	8,30	6,70	2,50	7,06	5,03
	Q2	6,38	11,00	9,19	9,15	12,80	11,43	7,23	12,19	10,26	3,60	7,85	6,42	2,62	7,32	5,24
	Q3	6,14	10,27	8,66	9,03	11,88	10,83	6,50	11,28	9,43	3,92	7,27	6,15	2,87	7,16	5,28
	Q4	6,27	9,77	8,42	9,43	11,73	10,89	6,18	10,31	8,72	4,27	6,87	6,01	3,47	7,12	5,52
2021	Q1	6,69	9,90	8,67	9,90	11,97	11,21	6,41	9,96	8,60	4,61	8,25	7,05	4,16	7,45	6,03
	Q2	7,13	10,58	9,27	10,04	12,53	11,61	6,65	10,29	8,90	5,15	10,66	8,86	5,26	8,14	6,89
	Q3	7,69	11,87	10,29	10,16	13,26	12,13	7,24	11,33	9,78	5,81	13,86	11,24	6,29	9,73	8,24
	Q4	8,58	13,78	11,82	9,89	14,62	12,90	8,64	13,13	11,44	6,51	17,08	13,64	7,62	11,98	10,12
2022	Q1	9,48	15,80	13,43	9,68	16,63	14,10	9,96	15,24	13,27	8,04	18,51	15,15	8,80	14,08	11,83
	Q2	10,52	17,21	14,71	10,20	18,13	15,26	11,33	16,93	14,85	9,83	18,80	15,97	9,55	15,32	12,88
	Q3	11,26	17,80	15,37	10,70	18,86	15,93	12,10	17,94	15,79	10,96	18,06	15,86	10,32	15,42	13,28
	Q4	11,25	17,21	15,02	10,98	18,10	15,58	11,44	17,82	15,47	13,72	16,86	15,91	10,18	14,33	12,60
2023	Q1	10,21	15,09	13,32	10,21	15,55	13,68	9,76	15,84	13,63	15,20	15,31	15,28	9,11	12,22	10,94
	Q2	8,26	12,16	10,76	8,46	11,82	10,67	7,64	12,72	10,89	13,19	13,48	13,39	7,29	10,42	9,13
	Q3*	6,26	9,26	8,20	6,56	8,03	7,53	5,74	9,58	8,21	10,64	11,91	11,54	5,20	8,82	7,33
	Q4															

*based on preliminary indices

Table 5: Statistics of apartment prices in major cities

Period	„Resale“			„First Sale“		
	10 th percentile	Median price (50 th percentile)	90 th percentile	10 th percentile	Median price (50 th percentile)	90 th percentile
	[EUR/m ²]	[EUR/m ²]	[EUR/m ²]	[EUR/m ²]	[EUR/m ²]	[EUR/m ²]
Belgrade						
Q3 2021	830	1.480	2.240	1.190	1.970	3.130
Q3 2022	1.000	1.810	2.820	1.260	2.200	3.460
Q3 2023	960	2.040	3.200	1.250	2.200	4.000
Novi Sad						
Q3 2021	980	1.350	1.780	1.000	1.420	1.910
Q3 2022	1.150	1.720	2.460	1.160	1.550	2.090
Q3 2023	1.270	1.870	2.500	1.000	1.770	2.300
Nis						
Q3 2021	670	920	1.160	790	1060	1.300
Q3 2022	680	1.130	1.540	810	1.200	1.570
Q3 2023	660	1.280	1740	930	1.410	1.710
Kragujevac						
Q3 2021	590	800	1080	830	1.080	1.250
Q3 2022	650	860	1.220	900	1.170	1.480
Q3 2023	690	1.000	1.380	1.030	1.310	1.540



All reports and methodology for index are available at the website
of the Republic Geodetic Authority
www.rgz.gov.rs.

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