



**Housing affordability in the major Russian metropolitan areas  
3<sup>rd</sup> quarter 2019<sup>1</sup>**

Table 1 contains estimates of the housing price to income ratio in the 17 major (population over 1 million) Russian metropolitan areas (Figure 1 displays the 17 major (population over 1 million) Russian metropolitan areas on the national map).

**Figure 1. The 17 major (population over 1 million) Russian metropolitan areas on the map of Russia**



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Contact details: Tatiana D. Polidi, Executive Director, Head of the Real Estate Market Department at the Institute for Urban Economics (Russia, Moscow). E-mail: [polidi@urbanomics.ru](mailto:polidi@urbanomics.ru)

In order to classify housing markets based on housing affordability, we used the generally accepted international classification by the level of Median Multiple (median housing price to median household income ratio). Such or similar methodology is used by the OECD, the United Nations, the World Bank, the Demographia.

Median housing prices were estimated by The Institute for Urban Economics (IUE)<sup>2</sup> using the data on residential real estate offerings for sale located in municipalities of each metropolitan area published on the open real estate web-portals.

Median household incomes were estimated by IUE using official data published by the Federal State Statistics Service (Russtat) on average wages in municipalities of each metropolitan area corrected by the gap between average and median per capita income in the corresponding federal region reported by Russtat (median per capita income multiplied by 3 household members<sup>3</sup>). Of course, such method still does not provide fully consistent estimates in terms of the Median Multiple methodology, however, it allows to reach the most efficient results in current statistical restrictions.

As shown in Table 1, by the 3 quarter of 2019 12 out of 17 housing markets in selected metropolitan areas can be classified as affordable housing markets, which enable housing to be purchased while saving all household income during less than 3 years.

In 3 other metropolitan areas the housing markets could be classified as markets with moderate housing affordability.

Only 2 out of 17 metropolitan areas are characterized as seriously unaffordable. Quite predictably, the strongest areas demonstrated the lowest housing affordability: Saint Petersburg – 4.2 years and Moscow – 4.2 years.

**Table 1. Housing price to income ratio in the 17 major Russian metropolitan areas, 3<sup>rd</sup> quarter 2019**

No.	Metropolitan area	Median price, RUB, 2019 Q3	Gross annual median household income (monthly median income per capita multiplied by 3 members), RUB, 2019 Q3	Housing price to income ratio, years, 2019 Q3	Population, million people, 2018	Housing affordability rating
1	Moscow	6 848 570	1 640 766	4.2	17.7	Seriously unaffordable
2	Saint Petersburg	5 012 939	1 183 604	4.2	6.4	
3	Kazan	3 549 341	1 068 836	3.3	1.7	Moderately unaffordable
4	Krasnoyarsk	2 570 000	775 834	3.3	1.4	
5	Vladivostok	4 133 342	1 274 924	3.2	1.0	
6	Perm	2 500 000	845 915	3.0	1.4	Affordable
7	Volgograd	2 172 967	806 165	2.7	1.5	
8	Ufa	3 035 067	1 137 122	2.7	1.5	
9	Novosibirsk	2 840 000	1 079 807	2.6	2.3	
10	Chelyabinsk	1 850 000	730 790	2.5	1.6	
11	Samara (Togliatti)	2 300 000	909 339	2.5	2.7	

<sup>2</sup> The Institute for Urban Economics (IUE) is a Russian think-tank performing researches on urban economics, housing and urban planning policies and suggesting new economic and regulatory approaches for improving urban management. <http://urbaneconomics.ru/en>

<sup>3</sup> The average household size according to the Russian Census 2010. Data on the median household incomes are not published by the Russtat on a regular basis.

12	Rostov-on-Don	2 450 000	1 012 399	2.4	2.1
13	Saratov	1 854 987	811 327	2.3	1.2
14	Yekaterinburg	2 738 333	1 244 962	2.2	2.3
15	Nizhny Novgorod	2 606 667	1 203 512	2.2	2.1
16	Voronezh	2 240 000	1 050 660	2.1	1.5
17	Krasnodar	2 448 333	1 249 621	2.0	1.6

Source: IUE estimates based on the Russtat data and the data of the open real estate web-portals.

Despite the fact that affordability in Russian metropolitan areas is higher than in foreign metropolitan areas, it is important to note that median housing units are very small (Table 2).

**Table 2. Main characteristics of median housing units in the market, September 2019<sup>4</sup>**

No.	Metropolitan area	Price, RUB	Price, \$ PPP <sup>5</sup>	Price per sq. m. of floor space, RUB	Price per sq. m. of floor space, \$ PPP	Floor space, sq. m.	Number of rooms	Type of housing unit
1	Moscow	6 820 000	271 930	116 781	4 656	58	1	Apartment
2	Saint Petersburg	4 938 816	196 922	93 185	3 716	53	2	Apartment
3	Vladivostok	4 200 000	167 464	93 333	3 721	45	2	Apartment
4	Kazan	3 550 000	141 547	76 077	3 033	47	2	Apartment
5	Ufa	3 050 000	121 611	65 689	2 619	46	2	Apartment
6	Novosibirsk	2 850 000	113 636	61 442	2 450	46	2	Apartment
7	Yekaterinburg	2 790 000	111 244	66 660	2 658	42	2	Apartment
8	Nizhny Novgorod	2 620 000	104 466	52 789	2 105	50	2	Apartment
9	Krasnoyarsk	2 590 000	103 270	55 073	2 196	47	2	Apartment
10	Perm	2 500 000	99 681	49 874	1 989	50	2	Apartment
11	Krasnodar	2 450 000	97 687	48 819	1 947	50	2	Apartment
12	Rostov-on-Don	2 450 000	97 687	53 332	2 126	46	2	Apartment
13	Samara (Togliatti)	2 300 000	91 707	46 762	1 865	49	2	Apartment
14	Voronezh	2 250 000	89 713	46 514	1 855	48	2	Apartment
15	Volgograd	2 170 000	86 523	45 295	1 806	48	2	Apartment
16	Saratov	1 864 960	74 360	28 977	1 155	64	2	Apartment
17	Chelyabinsk	1 850 000	73 764	36 567	1 458	51	2	Apartment

Source: IUE estimates based on the data of the open real estate web-portals.

For purposes of international comparisons, we propose considering the most renowned Demographia database<sup>6</sup>.

As shown in Table 3, in New York and Singapore median multiple equals to 5.5 and 4.6 accordingly which corresponds with the least affordable Russian markets of Saint-Petersburg and

<sup>4</sup> If several apartments have the same price equaled to the median one there was used the average floor space and number of rooms.

<sup>5</sup> Based on IMF PPP conversion rate as of October, 2019: 1 \$ PPP = 25.08 RUB. Available at the following link: <https://www.imf.org/external/datamapper/PPPEX@WEO/OEMDC/ADVEC/WEOWORLD/RUS>

<sup>6</sup> <http://www.demographia.com/>

Moscow. According to the Demographia surveys from 2011 through 2019, a slight increase in housing affordability was observed in New York and Singapore, whereas housing affordability declined in London and Hong Kong. Anyway the Russian indicators look much «better» in terms of affordability.

**Table 3. Housing price to income ratio and its trend in foreign metropolitan areas from 2010 through 2018**

No.	Metropolitan area	2010	2011	2012	2013	2014	2015	2016	2017	2018	Housing affordability rating 2018
1	Hong Kong	11.4	12.6	13.5	14.9	17	19.0	18.1	19.4	20.9	Seriously unaffordable
2	Greater London	7.2	6.9	7.8	7.3	8.5	8.5	8.5	8.5	8.3	Seriously unaffordable
3	New York-Newark-Jersey City	6.1	6.2	6.2	6.2	6.1	5.9	5.7	5.7	5.5	Seriously unaffordable
4	Singapore	-	-	5.9	5.1	5.0	5.0	4.8	4.8	4.6	Moderately unaffordable

Source: Demographia International Housing Affordability Survey, 2011-2019. Available by the following link: <http://www.demographia.com/dhi.pdf>

The comparatively high housing affordability in Russian MAs points to the relatively better fundamental ratio between household income and housing prices.

Thus the major impact on the increase in housing affordability in Russia can be attributed to reduced housing prices, which declined faster than per capita income. In turn, the market pricing in Russia was influenced by other various factors of housing supply. Presumably, the different trends of the housing affordability in Russian and foreign metropolitan areas can be associated both with differences in certain characteristics of urban planning policy and urban development models, and with the characteristics of housing construction markets.

Many imperfections of urban planning regulation and eventually of urban spatial development could bring about the housing affordability decrease as well as increase. But the housing affordability is also tightly connected with demographic dynamic and economic growth. As noted Alain Bertaud in his new book *“Order without Design: How Markets shape Cities”* (2018) the housing affordability should be the object of precise analysis in every city because the same level of price-to-income ratio could be the evidence of different spatial, demographic or economic processes.

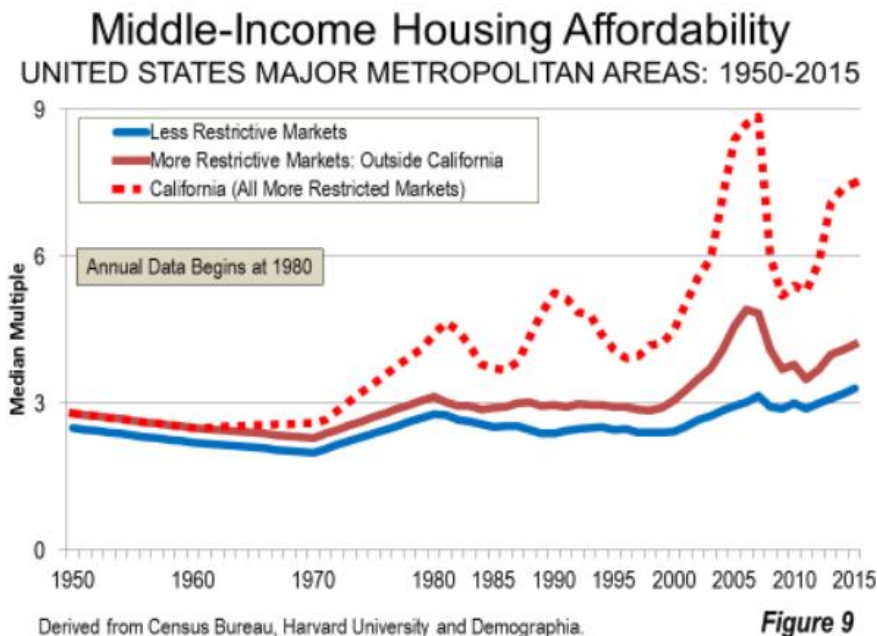
The market pricing trends depend not only on the demand for housing, but also on various factors limiting housing supply. The stringency of urban planning policy is usually regarded as the most important factor in international studies (Knaap & Nelson, 1992; Fischel, 2015; Mildner, 2009; White & Allmendinger, 2003; Whitehead, 2007).

An urban containment policy is usually oriented towards the compact metropolitan area development, containing the “sprawl” of the territory, ensuring a high-quality urban environment by imposing regulatory requirements to the construction process (in terms of infrastructure, public spaces, project design etc.). All of these lead to higher housing prices due to limited space for new developments and need for considerable investment to meet all the regulatory requirements. The liberal urban planning policies on the contrary induce more new developments enabling the area extension and imposing only the basic regulatory requirement to the construction process which make the new construction relatively cheaper.

The Demographia housing affordability survey divides all metropolitan areas into two groups: areas with urban containment policies and areas with liberal urban planning policies. As

seen in Figure 2, on the whole from 1950 to 2015, i.e. within 65 years, housing affordability has decreased in major U.S. metropolitan areas, and most dramatically in areas with urban containment policies.

**Figure 2. Housing price to income ratio (years) in U.S. metropolitan areas, 1950-2015, on average in metropolitan areas with urban containment (solid red line) and liberal (solid blue line) urban planning policies**



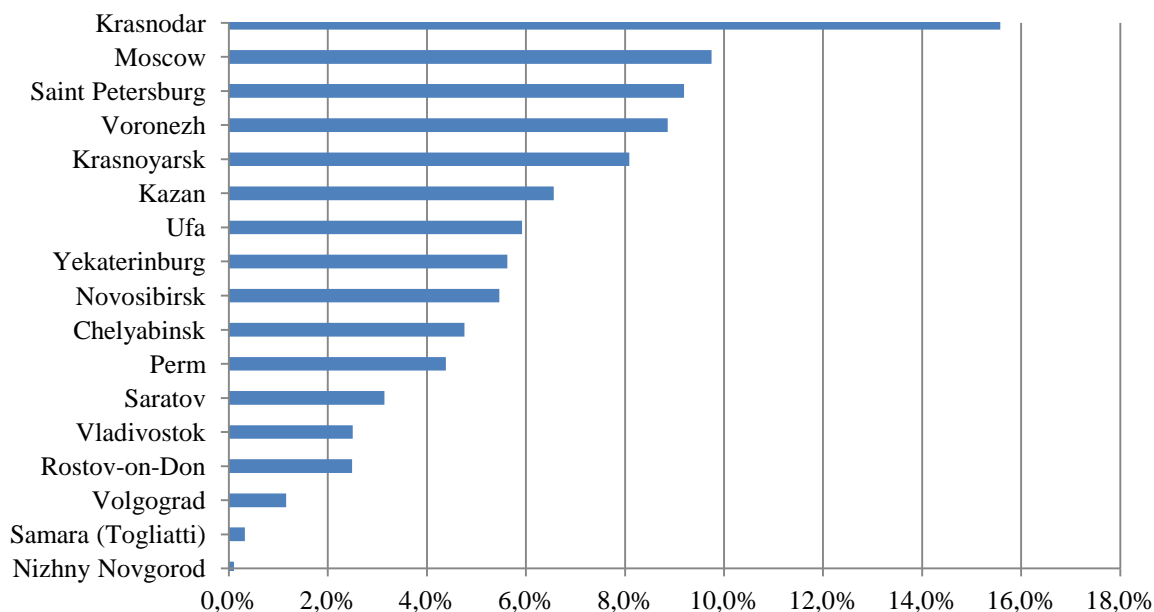
Source: Source: Demographia International Housing Affordability Survey, 2016. Available by the following link: <http://demographia.com/dhi2016.pdf>.

In Russia from 2010 to 2016 the reverse trend was observed comparatively higher housing affordability due to liberal urban planning and land use policy in the Russian metropolitan areas which induced high levels of housing construction (see figure 4).

For example, Greater London had comparable population growth rates in 2010-2016 with such Russian metropolitan areas as Moscow, Saint-Petersburg, Voronezh while much fewer numbers of housing construction – about 3 - 4 housing units per 1000 inhabitants comparing with 10-15 housing units per 1000 inhabitants in the mentioned Russian metros (see figures 4 and 4, table 4). Comparable rate of population growth and numbers of housing construction are observed in Sydney, but housing affordability is very low, which can indicate the influence of other factors than in Russian metropolitan areas. Two another examples are New York and Montreal which grew slowly (2.2% and 4.2% correspondingly) as well as such Russian metros as Perm and Saratov and had low build rates but once again mentioned foreign metropolitan areas displays much lower build rates than Russian metros. The interesting case is Singapore which has the closest to Russian metros indicators – fast population growth and high build rates and as a consequence better housing affordability level. Considering the physical limits for the spatial expansion it could be explained by the specific national housing policy – more than 50% of housing construction relates to the governmental program and 81% of people live in the public housing.

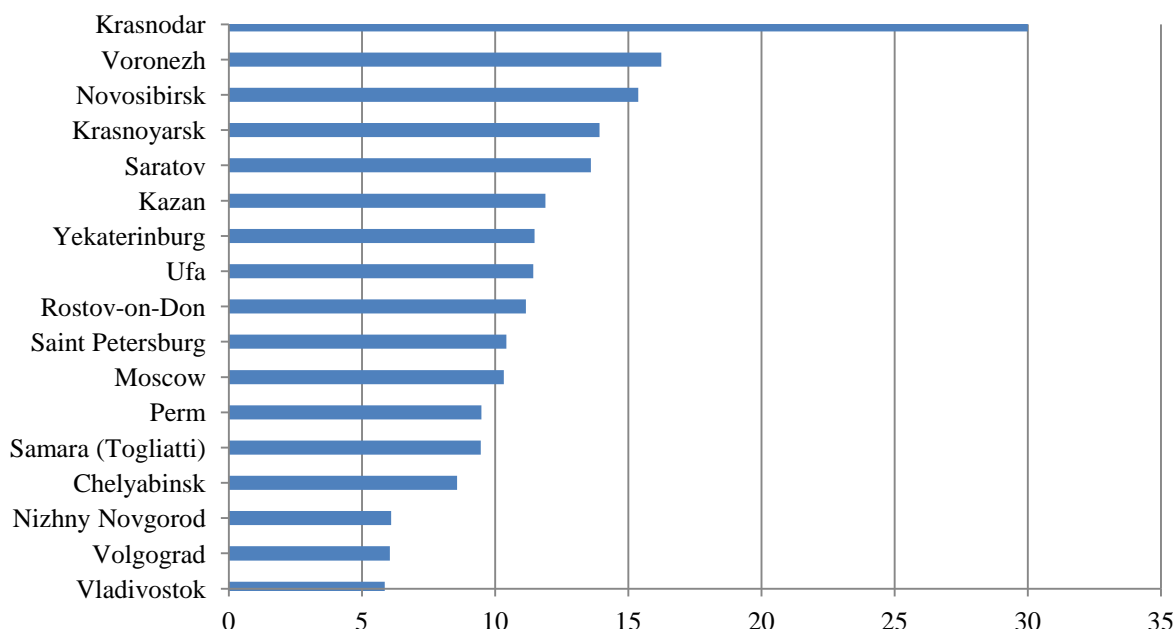
The relatively high housing affordability rate in Russia is accompanied with the set of urban development problems such as excessive high-rise residential construction and population density at the metropolitan fringe, traffic congestion, lack of public infrastructure, and substantial part of deteriorating housing. As it was mentioned above it is also important to take into account the relatively low standards of housing (still very small floor space of units).

**Figure 3. Population growth in Russian metropolitan areas with over 1 million population, 2010-2016**



Source: Report of the IUE research «A Study on the Housing and Urban Planning Sectors Performance Indicators in Major Russian Metropolitan Areas». Available by the following link: <http://urbaneconomics.ru/en/research/analytics/study-housing-and-urban-planning-sectors-performance-indicators-major-russian>.

**Figure 4. Number of newly built housing units per 1000 inhabitants in Russian metropolitan areas, 2016**



Source: Report of the IUE research «A Study on the Housing and Urban Planning Sectors Performance Indicators in Major Russian Metropolitan Areas». Available by the following link: <http://urbaneconomics.ru/en/research/analytics/study-housing-and-urban-planning-sectors-performance-indicators-major-russian>.

**Table 4. Population growth in 2010-2016 and the number of newly built housing units per 1000 inhabitants in 2016 in some foreign metropolitan areas**

No.	Metropolitan area	Population growth, 2010-2016	Newly built housing units per 1000 inhabitants, 2016	Housing price to income ratio, 2016
1	Greater London	8.9%	3.5	8.5
2	Singapore	10.5%	8.4	4.8
3	New York-Newark-Jersey City	2.2%	2.2	5.7
4	Greater Sydney	10.8%	7.3	12.9
5	Greater Montreal	4.2%	4.6	4.5

Sources:

Greater London:

population data: Housing in London 2017 tables. Table 1.1 Historic pop. URL: <https://data.london.gov.uk/download/housing-london/6431edfc-4263-49a0-af47-b1269d9a2cd7/Housing-in-London-tables-2017.xls>;

construction data: London Plan Annual Monitoring Report 14 2016/17, p. 103. URL: [https://www.london.gov.uk/sites/default/files/amr\\_14\\_final\\_20180927.pdf](https://www.london.gov.uk/sites/default/files/amr_14_final_20180927.pdf);

Singapore:

population data: <https://www.singstat.gov.sg/find-data/search-by-theme/population/population-and-population-structure/latest-data>;

construction data: <https://www.singstat.gov.sg/find-data/search-by-theme/industry/building-real-estate-construction-and-housing/latest-data>;

New York-Newark-Jersey City: [U.S. Bureau Census](https://www.census.gov);

Greater Sydney: Metropolitan Housing Monitor. URL: <https://www.planning.nsw.gov.au/Research-and-Demography/Metropolitan-Housing-Monitors/Metropolitan-Housing-Monitor>;

Greater Montreal:

population data: Statistics Canada. URL: <https://www12.statcan.gc.ca/census-recensement/2016/as-sa/fogs-spg/Facts-cma-fra.cfm?LANG=Fra&GK=CMA&GC=462&TOPIC=1>;

construction data: Housing Market Data. Housing Starts, Completions and Units Under Construction (Cumulative). URL: <https://www.cmhc-schl.gc.ca/en/data-and-research/data-tables/housing-starts-completions-units-under-construction-cumulative>.

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