#MARKETBEAT FULL^{Q3 2021}





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	Moscow Q1-3 2021
	20.12
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p.57 Key market indicators



p.59 The Best Research Team in Russia according to Euromoney Real Estate Awards in 2012, 2014, 2016 and 2017.

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p.60 About the company



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#MARKETBEAT NEXT RESOURCES FOR SUBSCRIBERS

#MARKETBEAT Data Portal

- Moscow office market indicators' dynamics (by classes, metrocommunes, subagglomerations)
- YTD office indicators (by classes, metrocommunes, subagglomerations)
- Capital markets indicators (Russia and CEE)

Open

(PowerBI):

Key annual market indicators:

- · Office
- Retail
- W&I
- Capital Markets

Download (Excel)

Private Telegram Channel,

where you will find market news and will have opportunity to ask questions to C&W market experts (if you paid for subscription but are not invited to the Channel, please contact us)



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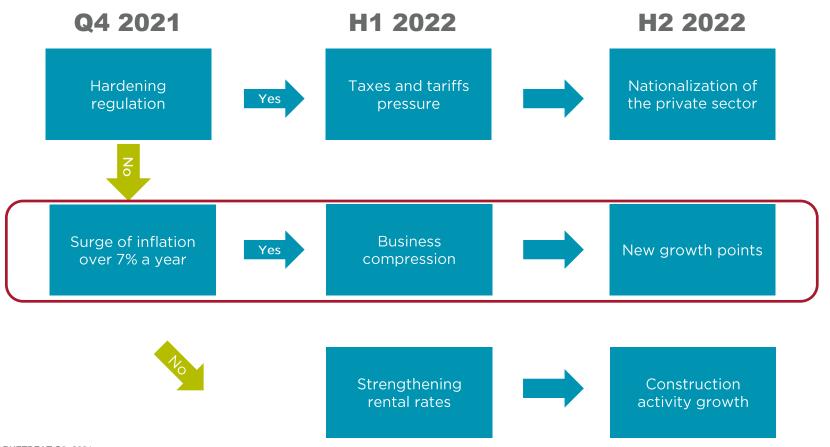
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Context FORECAST SCENARIOS

Positive scenario is based on status-quo in 2022 meaning the regulator's activity growth will slow down in the economy but will continue growing in social life and public area which will increase number of jobs.



Context

COSTS ARE RISING. TIME TO INCREASE RENTS?

During the previous cycle, the ability to cut costs was the most important factor for successful competition.

In 2022, all companies face a need to increase prices which means marketing strategy repositioning and adjustment of sales targets and KPIs.

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Context

CONFLICTING SHORT AND LONG - TERM TRENDS

Due to the pandemic, business and local authorities are concentrated on reactive strategy – to meet today's challenges while neglecting future trends and strategies. However, short-term and long-term trends often get in conflict.

Context Q4 TARGETS

The real estate sector now faces the challenge to find new investment ideas and growth points. Business has been contracting for the last 5 years while commercial assets unexpectedly show resilience during the pandemic. The sector is adapted to external shocks, but current economic strategy offers new challenges.

"NATIONAL PROJECTS"

The project-management approach as an economic strategy has completely formed during the last years. Up to now the commercial real estate sector was out of the state programs' interest which implicitly shows the segment's health and stability. However, the commercial potential for development is almost exhausted. The industry will have to embed in the national programs and development strategies.

As an example, an idea to build large industrial cities in Siberia can potentially give an impulse for commercial development.

INFLATION

In Russia, this indicator is even more important than the pandemic influence. Depending on the preliminary results in September the following strategy will be adjusted. The government priority is inflation targeting, which means that it will use all possible tools for this.

Obviously, excessive control raise doubts even about those moderate growth expectations that the current forecast suggests.

In case, measures from the Central Bank and the Ministry of the Economic Development will be sufficient to slow the inflation down, we will see a stable last quarter and predictable perspectives of 2022.

SUSTAINABILITY AGENDA

Long term economic stagnation amplifies negative impact of downturn. So Russian business and state look at sustainability agenda in the broader sense: social stability, low inflation, minimization of climate risks are considered to be a part of national security strategy.

Sustainability agenda becomes a key development factor on the real estate market in terms of evolving global risks and low-yielding assets.

We see a growing interest to ESG agenda as it allows to increase profitability of real estate assets and as a result to stimulate interest to the sector.

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Russia MACROREVIEW

- The basic forecast scenario suggests a backlog of Russia.
- The Central Bank expects the consumer market stagnation in 2022 and further.
- The mortgage loan dynamics is supposed to slow down.
- There is no consensus on the Ruble exchange rate forecast.

MACRO INDICATORS

	2020	2021	2022	2023	2024
GDP growth, %	-3.0	4.0-4.5	2.0-3.0	2.0-3.0	2.0-3.0
CPI, %	4.9	5.7-6.2	4.0-4.5	4.0	4.0
Key rate, annual average, %	5.1	5.5-5.8	6.0-7.0	5.0-6.0	5.0-6.0
Private consumption, %	-8.6	10.1-11.1	1.2-2.2	1.9-2.9	2.1-3.1
Mortgage loan growth, %	21.6	20-24	14-18	14-18	12-16
BRENT crude oil price	43.21	65	60	55	50

Source: the Central Bank of the Russian Federation, August 2021

Russia. Fundamentals

Despite lower rate of GDP growth in Russia, capitalization rate in real terms is noticeably higher than European indicators.

Basic Scenario

1	9%			
Global Economy Growth				
2021-2	2024			

12% Russia's Economy Growth 2021-2024

Source: The Central Bank Forecast

	2021	2022	2023	2024
Global economy growth, %	6.1	4.7	3.2	3.3
CPI in USA, %	3.4	2.4	2.3	2.2
CPI in EU zone,%	1.7	1.2	1.4	1.6
Fed Rate, %	0.25	0.32	0.77	1.26
ECB policy rate, %	-0.5	-0.5	-0.5	-0.5

Source: The Central Bank Forecast, August 2021

The global economy is active recovery in 2021 and this will continue through 2022. International market players are focused on the native markets which means no growing interest to the Russian market.

However, on the background of low yields and notable US CPI in 2022 European companies may turn to external markets.

Central Europe will get benefit from the situation, but Russia may also have new opportunities.

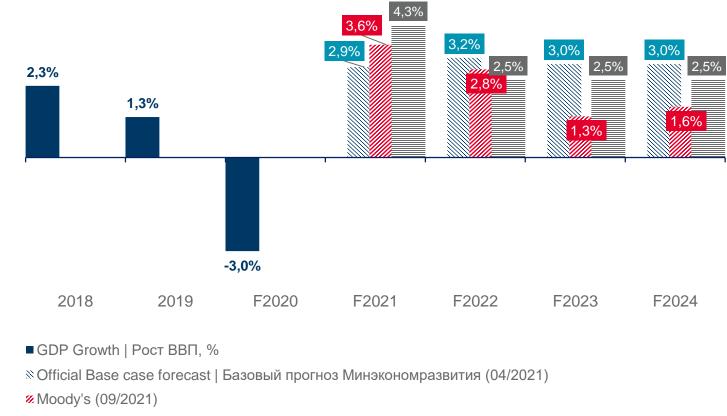
Russia. Fundamentals **DESCENDING ECONOMIC GROWTH UNDER THE PANDEMIC**



4%

Forecasted GDP Growth In 2021

Source: The Ministry of Economic development, Moody's Analytics



■ Central Bank of Russia (08/2021)

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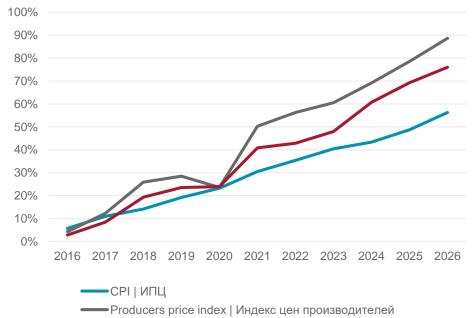
Russia. Fundamentals **MULTI-DIMENSIONAL INFLATION**

Growing gap between PPI and CPI shows increase of overheads in the Russian economy.

Moody's

ANALYTICS

Cumulative Inflation Since 2015



GDP Deflator | Дефлятор ВВП

GDP Deflator reflects change in value of all products and services that form GDP and used to discount GDP when real growth of the economy is calculated.

In 2020, we saw deflation of producers' prices and negative GDP deflator. It was a result of cost-cutting and an effort to minimize procurement prices in private sector.

In 2021, producers' prices are closing the gap with consumer prices. As the result, B2B inflation is at least twice higher than consumer inflation.

Trade restrictions, increasing taxes also contribute to the B2B inflation that in the next round will be pushing consumer prices even despite the stagnating household income.

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Russia. Fundamentals THE GOVERNMENT REGULATES INFLATIONARY PRESSURE

Production Price Index is growing three time faster than CPI. In 2020, successful strategy was to cut costs, this year cascading of increasing cost down is the most important factor.

Regulation

- On the background of growing inflation, the Central Bank continues to increase the key rate. According to the Central Bank forecast the key rate may grow beyond 8% in 2021.
- In 2022, the key rate is expected to decrease as well as the mortgage loans can potentially go down by 30-40%.
- The government gets more involved in housing policy and urban development.

Cost Inflation

- In 2020, producer's inflation diverged with CPI. Producers had to cut costs and prices in order to maintain B2B sales.
- In 2021, accumulated inflationary pressure in the production sector was translated in almost 20% growth of PPI.
- In Q4 2021 the government will face a serious task to regulate prices on the local market.

7.5%	Key rate
9%	Mortgage rate
7%	CPI (Forecast)
20%	PPI (Forecast)

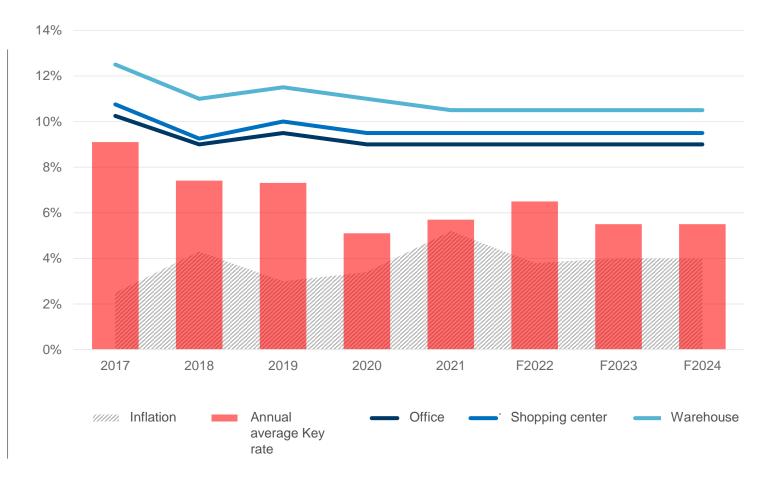
FORECAST Q4 2021

- A new political cycle after the parliament election will lead to increase of lawmaking – all initiatives, especially unpopular ones, will be activated.
- Inflation will be escalating due to seasonal factors.
- Lockdown will lead to slowdown of business activities. We expect end of the year to be slower than expected.
- Rents may grow in the last months due to market inertia and growing inflation, but in 2022 they will stabilize.

Capital Markets CAPITALIZATION RATE, INFLATION AND AVERAGE ANNUAL KEY RATE

7.5% Key Rate October 2021

9% Cap Rate Office

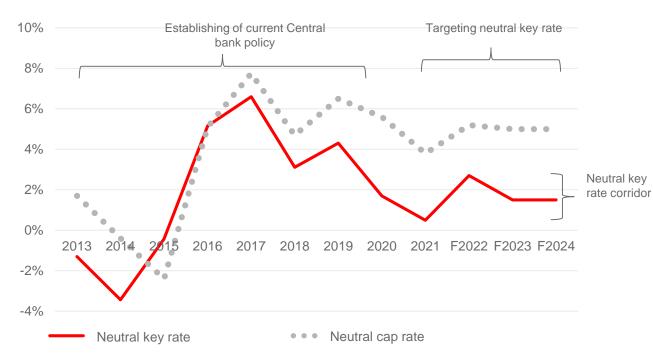


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Capital Markets TARGETING NEUTRAL RATE

Neutral key rate is a difference between nominal rate and inflation. The Central Bank announced targeting of a neutral key rate at the level of 0.5 - 2.5%.

Neutral Rates



Capitalization rate on the commercial real estate sectors factor expectations of the key rate evolution and inflation forecast. That's why cap rates do not immediately react to policy rate change.

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Cap rates also experience sort of "tolerance range" within +/- 2 p.p. fluctuation of the neutral key rate.

In the longer term, we see a correlation between cap rates and key rate.

Cap rates will likely keep stable during the current economic cycle.

Capital Markets 2021 – INVESTMENT MARKET CONTRACTION

Russia

In Q3 2021 investment volumes decreased not only in Russia. CEE investment market registered 24%-contraction. Such a decrease is a result of business activity slowdown in 2020 and a reflection of uncertainty in commercial real estate pricing.

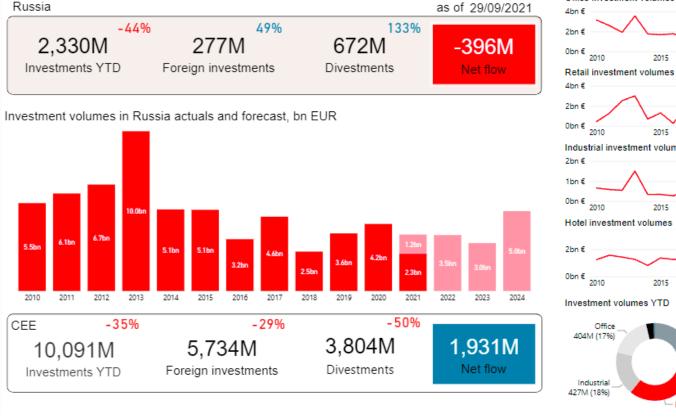
3.5 bn EUR Investment in Russia, 2021F

2.33bn EUR

Investment in Russia, Q1-3 2021



Источник: Real Capital Analytics





Office investment volumes

URBAN DEVELOPMENT

Property is basic structural unit of a city that affects city development. Nonetheless, large-scale urban processes can in turn have a great impact on real estate markets. Thus, deep understanding of the city is important for comprehensive decision-making in the real estate sector.

STREET RETAIL

Unlike shopping malls, street retail needs streets to be public spaces. What should streets look like and what else can impact development of street retail in Moscow – you will find in "Urban development" chapter.

The key location factor for street retail properties is traffic. Traffic generation and delivery transform in line with the city urban policy and public demand for retail environment. Further reading will reveal the current state of street retail in Moscow and possible spatial changes in future.

Please note that all cartographic street retail materials include shops, public catering and other services (e.g., hairdressers, medical clinics, etc.), since all these options cover consumer activity on the streets.

Urban Development STREET RETAIL IN THE CENTER OF MOSCOW

Street retail finds itself where citizens feel comfortable to spend time and make impulse purchases. Street retail shifts from primary streets to more compact and cozy ones as urban environment transforms.



Properties per sq. km

The highest street retail density in Moscow. The rate is achieved in the area around Lubyanka and Chistiye Prudy metro stations.

Source: geodata – OpenStreetMap, calculations – Cushman & Wakefield

Street-Retail Density Map



The centers of big cities are multifunctional, accessible and dense which suggests a large number of street retail options will emerge there despite the presence of shopping malls.

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Spatial distribution of street retail in the center of Moscow is a result of evolutionary competition for traffic. Contemporary street retail is pedestrianoriented. That is a result of urban planning policy which declares: the city center should be accessible for pedestrians – the broadest category of citizens.

Emergence of comfortable and accessible environment on many streets in the city center, including changes from the governmental "My Street" program, stimulated evolvement of new street retail locations. Former narrow sidewalks and chaotic parking have transformed to a welcoming environment which encourages people to spend more time there and make impulse purchases. As a result, commerce has moved from busy primary streets to more cozy ones in Zamoskvorechye, Kitay-Gorod vicinities and some other areas.

Urban Development NOT BY CBD ALONE – LAWS OF THE PERIPHERY

Commerce in the city-center focuses mainly on transit visitors and urban commuters, whilst street retail on the periphery plays the major role in shaping 15-minute city for residents. Due to long distances activity centers form clusters in places that generate the highest traffic (transport hubs, etc.).

Examples of clusters on the periphery:

Akademicheskaya -Profsoyuznaya (Along Profsoyuznaya Street): The main street in the neighbourhood is enhanced with high density of the adjacent blocks built in 1950s. Cumulative effect leads to merging of two clusters around metro stations into one elongated areal along the street.

Belyaevo & Konkovo: clusters emerged due to location of each metro station on the intersection of main streets and microdistrict urban planning type in the surrounding area.



Factors of commercial clusters emergence on the periphery:

- high population dense,
- proximity to metro stations (< 5 minutes walk),
- dense and continuous residential and commercial environment,
- optimal width and profile of a street (e.g., buildings standing not too far apart, no highways),
- street grid concentrating the flows from residential streets in one place.

Neighborhoods adjacent to main streets in the periphery are likely to become commercial activity hotspots and to gain features of the city center. Only main streets in the periphery are comparable with the city center in terms of density and transit traffic.

Recommendation: due to the construction of new Kommunarskaya metro line (2024), promising locations along Sevastopolsky Avenue are worth being considered.

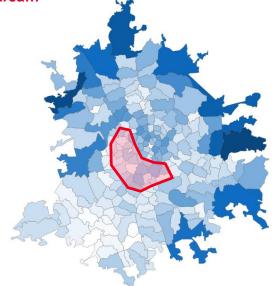
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NOT BY CBD ALONE – EXPANSION OF THE CITY CENTER

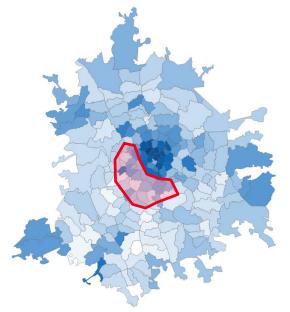
Street retail on the periphery serves local transit flows and remains secondary to the city center. Nonetheless, some areas gain central features and thus contribute to expansion of the city center.

The number of street retail properties increases with the growth of the serviced area...



Number of street retail properties in each metrocommune*

...but the number of properties per sq. km is still lower on the periphery



Number of street retail properties per sq. km of utilized territories** in each metrocommune*



Zone With The Prospect of Gaining Central Features The center of commercial activity expectedly expands to the South-West.

This stems from the vector of Moscow infrastructural development towards new territories.

 * Metrocommune – servicing area of one metro station;
 ** Utilized territory – residential and commercial neighborhoods (see more in <u>Marketbeat O2 2021</u>, chapter "Urban Development")

OFFICES

- The market forecast was revised towards higher annual take-up and new construction and more restrained vacancy rate due to the market recovery. We expect the impetus to be offset by 2023.
- The office market in Russia is developing in a synergy with global trends – the US and European markets also show positive dynamics, employees are gradually returning to offices, tour activity is exploding.

Moscow Q1-3 2021

Classes A, B+ & B-

18.86 mn sq. m

Total stock of office buildings

498 '000 sq. m

New construction

1.7 mn sq. m (9%)

Vacancy

1.5 mn sq. m

Take-up

9%

Capitalization rate, prime office segment

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Offices

ACCUMULATED POTENTIAL IS TRANSLATED INTO THE MARKET GROWTH IN 2021-2022

The market will continue to develop according to the impulse scenario in the coming year.

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Offices FORECAST: LET'S BE OPTIMISTIC

2500

Key Market Indicators (Classes A & B)

9.1%

Vacancy Rate October 2021 Classes A & B

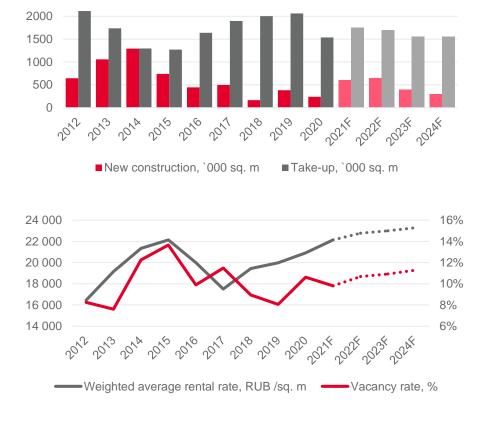
22,632 RUB / sq. m annum

Weighted Average Rental Rate*

Jan – Oct 2021 Classes A & B

*Rental rates are exclusive of VAT and operational expenses

Source: Cushman & Wakefield



We expect new construction to be at the level of **600,000-650,000 sq. m** in 2021-2022. A noticeable share of new deliveries are BTS (built-to-suit) properties and speculative buildings with signed pre-lease agreements. Thus, the impressive volume of space announced for delivery will not have a significant impact on vacancy rate.

The annual take-up will be at the level of **1.7-1.8 mn sq. m** in 2021-2022. The most active market players are still companies from banking and IT sectors, as well as companies with the state participation.

High producer price index and tenants' activity will be the key drivers of rental rates' growth in 2021-2022.

Offices **U.S. AND EUROPEAN OFFICE MARKETS**

The Russian market is recovering in synergy with global trends.

Key Trends

Companies' Plans Regarding Return-to-Office

75%

Of surveyed companies in the United States have already restored office work/are planning to return to office by the end of the year

80%

Touring growth in 2021 compared to 2020 (USA)

Source: Global Recovery Journey 2021 U.S. Market Back To The Office



Economics and real estate market are recovering at a faster pace. Full recovery of the office segment is expected.



- Employees are gradually returning to offices. 25% of companies in the United States announced flexible schedule.



U.S. office occupancy bottomed in February 2021 -15%. By the end of June, the figure doubled and amounted to 32%. Further indicator's growth is expected as the amount of vaccinated people is increasing.



In the United States tour activity is surging along with economic recovery.



Key office market indicators are showing positive dynamics.

Goldman Sachs

-Expect full staff to be back by year-end 2021 -Less than 10% of staff physically present in 2020



-Postponed the return of employees to offices from September 2021 to January 2022 -Investing ~\$1.4 billion in offices for nearly

3,500 new jobs across the USA

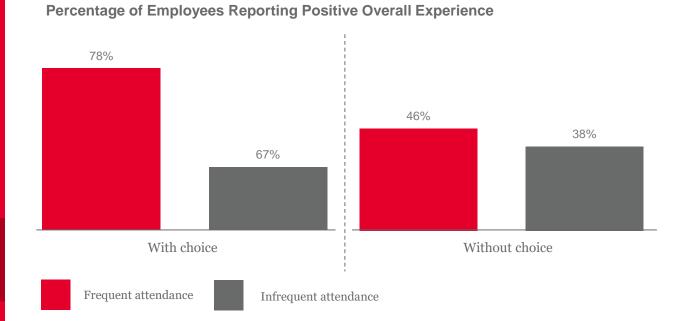
-White-collars can choose to WFH (work from home) indefinitely if flexible hours approved by manager -Will redesign corporate office to be versatile and adaptable, and add technology to enhance connectivity



-Offers employees 3 options: flex, fullyremote, office-based -Will redesign its offices into community hubs to accommodate hybrid work styles

Offices WHY IS RETURN-TO-OFFICE WORTH IT ?

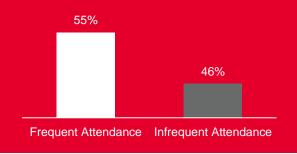
Experience per Square Foot (XSF)[™] research shows that frequent office attendance leads to better work-life balance, high levels of inspiration and the ability to get enough time away from work.



While choice matters most, people have the best experience if it's the office they frequent!

XSF measures how energized employees feel throughout the day. The findings indicate that employees who come into the office more frequently report higher energy levels than their peers.

Percentage of Employees Reporting High Energy Throughout the Day



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Offices DEMAND: TOP 3 LARGEST DEALS

3 largest deals of the year were executed in Q3 2021. Year-to-date take-up has already exceeded the indicator of the previous year (1.54 mn sq. m).



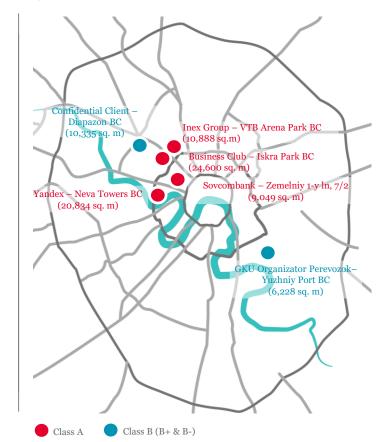
Take-up (lease and sales deals) Jan – Oct 2021



Take-up (lease and sales deals) 2021F

Source: Cushman & Wakefield

Major New Lease Deals, Q1-3 2021



Q1-3 take-up amounted to 1.5 mn sq. m. By the end of October, the indicator ran close to 1.6 mn sq. m. For comparison – Q1-3 2020 take-up was 33% lower.

There were several major deals executed in Q3 2021. IT-company Yandex leased 20,834 sq. m in Neva Towers BC. As a result, vacancy rate in Moscow-City decreased by 2 times.

Business Club (flexible workspace operator) leased 24,600 sq. m for further opening of Ozon's office in Iskra-Park BC located within Leningradskiy Corridor.

That business district attracted one more flexible workspace operator - Inex (Multispace) that leased more than 10,000 sq. m in VTB Arena Park BC.

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Offices RENTAL RATES ARE STILL GROWING

Rental rates are increasing YoY. We expect the indicator's growth to slow down by the end of the year. However, the dynamics will still be positive.

22,632

RUB / sq. m annum

Jan – Oct 2021 Ruble equivalent (all deals in classes A & B)

22,143

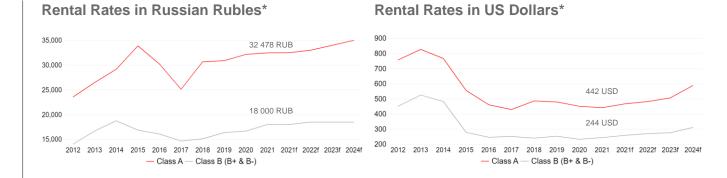
RUB / sq. m annum

2021F

Ruble equivalent (all deals in classes A & B)

*Rental rates are exclusive of VAT and operational expenses

Source: Cushman & Wakefield



In January-October average rental rate increased by 8% YoY. This is mainly a result of indicator's growth in Class B (+8.3% compared to 2020). In Class A average rental rate increased by only 1% compared to the previous year.

Last year companies were forced to optimize costs. As a result, potential tenants were mostly interested in cost-effective options. The demand became more active with gradual economic recovery, longer planning horizons and adaptation to epidemiological situation.

The risk of epidemiological situation deterioration in Q4 2021 may lead to restrained growth of the indicator, but not to its decrease due to high Producer Price Index and active demand.

 $*Data for \ 2021: \ 2021 - year-to-date \ indicator \ (January-October \ 2021); \ 2021 F-for ecast \ for \ 2021 - for \$

New construction of January-October 2021 exceeded the previous year indicator by 124%. Built-to-suit properties formed up to 74% of new inventory.

536

'000 sq. m New Construction (Classes A & B) Jan – Oct 2021

610

'000 sq. m

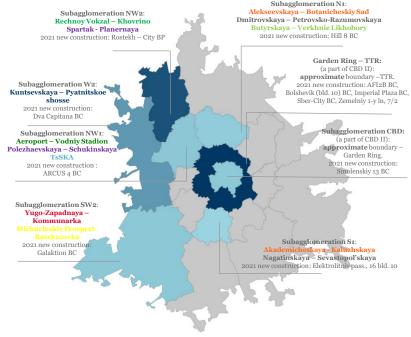
New Construction (Classes A & B) 2021F

Source: Cushman & Wakefield

2021 New Construction in Figures:

- 80% of new construction is represented by Class A properties.
- The indicator of 2021 has already exceeded 500,000 sq. m and broke a 5-year record.
- New construction in CBD subagglomeration (approximate boundary – the Garden Ring) is represented by Smolenskiy 13 BC (15,742 sq. m). Last year the same indicator was also represented by only one property, located on the same boulevard with similar office rentable area – Smolenskiy Passage II (15,699 sq. m).
- 81% of new properties were delivered with 100% occupancy. Meanwhile, average vacancy rate in the rest of new completions amounted to 81%.
- The share of built-to-suit in the total commissioning was 34%-94% in Q1-3 2021.





Color intensity indicates new construction activity

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Offices VACANCY RATE IS DECREASING

Active demand and new deliveries with 100% occupancy are constraining the vacancy rate growth.

9.1% Vacancy Rate

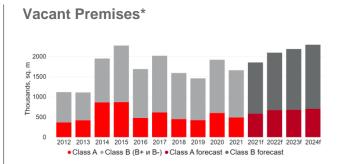
October 2021 Classes A & B



Vacancy Rate 2021F Classes A & B

29

Source: Cushman & Wakefield



Vacancy Rates*



By the end of October vacancy rate amounted to 9.1% (-1.5 p.p. compared to 2020). The indicator's noticeable decrease in Class A (-3.5 p.p. compared to 2020) is a result of active demand and execution of large deals. The best options are washed out from the market as soon as they appear. Vacancy rate decreased by 1.1 p.p. in Class B compared to the previous year.

We expect the indicator to reach the level of 9.8% by the end of 2021. Such growth (+0.7 p.p. compared to October) will be a result of new speculative properties delivery in Q4 2021.

*Data for 2021: 2021 – year-to-date indicator (January-October 2021); 2021F – forecast for 2021

Offices ABSORPTION* IS STILL IN THE GREEN ZONE

Absorption remains positive due to the large share of built-to-suit properties in the total commissioning and strong demand for office space. There are no prerequisites for negative absorption in the mid-term.

751 '000 sq. m

Absorption October 2021

707

'000 sq. m Absorption

2021F

30

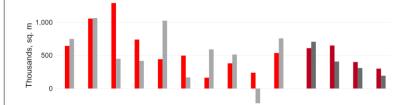
Source: Cushman & Wakefield

Absorption by Classes, '000 sq. m



2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 2021f 2022f 2023f 2024f • Class A • Class B (B+ и B-) • Class A forecast • Class B (B+ и B-) forecast

New Construction and Absorption, '000 sq. m



2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 2021f 2022f 2023f 2024f • New supply • Absorption • Forecast, new supply • Forecast, absorption 68% of absorption is represented by Class A. 434,000 sq. m of Class A premises were delivered to the market with 0% vacancy rate.

*Absorption is an indicator that reflects the difference between the area occupied at the beginning and at the end of the period. *Positive absorption* means that additional vacant office premises are "absorbed" from the market. *Negative absorption* reflects the opposite - release of additional office space, which together with new construction leads to vacancy. Ξ.

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Offices FLEXIBLE WORKSPACE

The segment is still in demand – the largest lease deal of the year was executed with the participation of flexible workspace operator Business Club.



Flexible Workspace Stock October 2021

1.5% Flexible Workspace As A Proportion Of The Moscow Office Stock

October 2021

Source: Cushman & Wakefield

For comparison – flexible workspace as a proportion of the office stock in some European capitals

6.7%

Amsterdam

5.3%









London



Warsaw

2.8%

In Q1-3 2021 supply of flexible workspace increased by 26% YoY.

Several major deals were executed in Q3 2021.

Ozon leased 24,600 sq. m in Business Club (Iskra-Park), that workspace will be opened in 2022. It is the largest deal in the market history.

Sbermarket leased 7,802 sq. m (1,153 w.s.) and is now an anchor tenant of Space 1 Balchug – the largest existing flexible workspace (12,000 sq.m).

In 2021 operators are planning to open 21 flexible workspaces in addition. However, more than a half of these locations are built-to-suit options.

Operators began to expand their geography. For example, Praktik announced intention to take over the management of Profit Rooms in Samara and to open new locations in 6 cities. The regional expansion plans were also announced by St. Petersburg operator Page.



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RETAIL

- In 2021, the consumer market will not only win back the fall of 2020 (-3.2%), but also will show noticeable growth (+6,9%) due to the pent-up demand. However, in 2022-2024, the average annual growth rate of the retail turnover will slow down to 2.9%.
- In 2021, the largest share of new properties is opening in the regional cities - several large-scale projects with GLA of more than 40,000 sq. m have been already opened. In 2022-2023 construction activity will decrease both in Moscow and the regions.
- The footfall in shopping centers in Moscow is recovering the gap from the pre-crisis indicators is currently about 5%. New wave of infections will likely lead to increase of the gap.

5.7 mn sq. m

Total quality stock in Moscow

In quality shopping centers, mixed-use buildings, outlets, and retail parks

66 '000 sq. m

New construction, Moscow, Q1-3 2021

Retail properties with GLA of more than 15,000 sq. m

250 '000 sq. m

New construction, Moscow, 2021F

Retail properties with GLA of more than 15,000 sq. m

9.5%

Capitalization rate Prime shopping centers, Moscow Ξ.

Retail

CONSUMERS ARE BACK TO OFFLINE

The growing footfall in the shopping centers indicates that offline trade formats are still in demand among consumers. However, active penetration of online services to the life of people affected their preferences when visiting shopping centers. New values of consumers are high level of service, individual approach, seamless omnichannel experience and emotions that are not available online.

#MARKETBEAT

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Retail **CONSUMER MARKET**

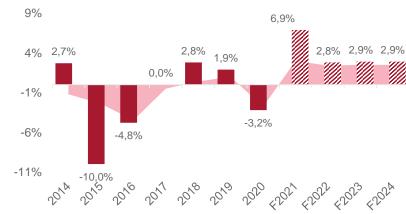
The consumer market is expected to show a noticeable rebound in 2021. However, starting from 2022 the growth rate of retail turnover will slow down.

8.8% **Retail Sales Growth** Jan-Aug 2021

Retail Sales Growth Forecast for 2021

Source: Rosstat, the Ministry of Economic Development Forecast as of 30/09/2021

Consumer Market in Russia

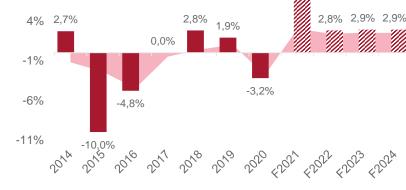


Disposable income | Располагаемые доходы ■ Total retail trade | Оборот розничной торговли Forecact | Прогноз (Минэкономразвитие)

The consumer segment is recovering from the effect of the last year's restrictions. According to Rosstat, in January-August 2021, retail turnover in Russia increased by 8.8% compared to the same period of the last year. Service sector and catering turnover also showed growth - by 19.9% and 29.7%, respectively.

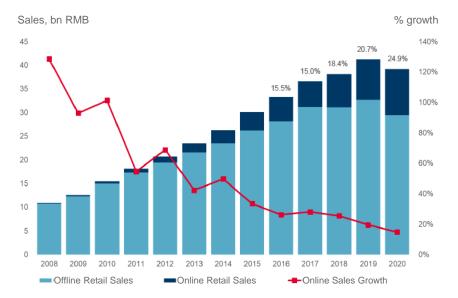
At the end of September 2021, the official forecast of the Ministry of Economic Development was revised upwards. In 2021, the retail turnover is expected to grow by 6.9% (the previous forecast was 5.1%).

However, new wave of COVID cases growth and limitation measures for retail may affect the annual results.

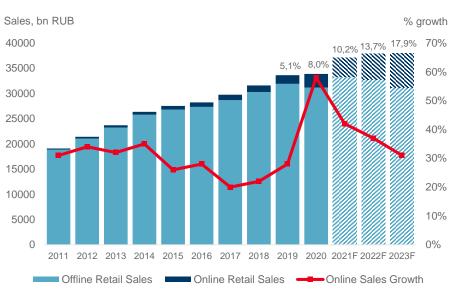


Retail #MARKETBEAT ONLINE VS OFFLINE: IS THERE A LIMIT OF ONLINE SALES GROWTH?

CHINA: ONLINE/OFFLINE RETAIL SALES



RUSSIA: ONLINE/OFFLINE RETAIL SALES



Source: Cushman & Wakefield, National Bureau of Statistics of China, 2021

Source: Cushman & Wakefield, Data Insight

Ecommerce market in China is one of the most developed in the world. Share of online in the total retail turnover is 3 times higher than in Russia and amounts to about 25%. The Russian market is expected to reach this level only in 5-7 years. The natural decline of growth rate is noted – in China, after several years of rapid development, the annual growth rate of online sales slowed down to 20% and continues to decline. In the pandemic year, the e-commerce in Russia showed an increase of 58%, while the growth rate of online sales in China was even lower than in 2019 (below 20%).

Surveys in the US and China show that despite the high expansion of e-commerce, offline shopping experience is important for 70-75% of consumers. In order to attract buyers, shopping centers and retailers need to constantly improve their competitiveness, including the introduction of new technologies and improvement of customer service.

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Retail STRUCTURE OF VACANCY RATE

All the types of retail schemes felt the negative effect of the pandemic – during the year we noted the rotation of tenants and vacancy rate increase in the shopping centers.

SHOPPING CENTER TYPE	VACANCY RATE		
NEW SHOPPING CENTERS OPENED IN 2020-2021	Q4 2020 29%	Q3 2021 43%	
PRIME SHOPPING CENTERS	4%	10%	
LARGE CORE SHOPPING CENTERS (OPENED BEFORE 2020)	4%	5%	
OTHER SHOPPING CENTERS	9%	10%	
AVERAGE VACANCY RATE	8.5%	9.8%	

Vacancy rate in quality shopping centers in Moscow increased from 8.5% in Q4 2020 to 9.8% in Q3 2021. We expect the indicator to remain at the level of 10% by the end of the year.

There are changes in the structure of the vacancy rate. Prime shopping centers that are usually the most sustainable in the crisis periods, showed a significant vacancy rate increase. One of the prime properties has influenced such noticeable growth: several tenants moved out and large blocks became empty. Also, retailers optimized the costs - high rental level turned out to be uncompetitive under the condition of total restrictions. We expect this trend to be temporary, and soon these areas will be occupied by new operators, which will maintain high consumer interest to this category of retail properties.

New shopping centers are also affected by the vacancy rate increase. Even though the vacancy level in the shopping centers opened in 2020 is gradually decreasing, the average vacancy rate is increasing due to new shopping centers launched this year. The properties are entering the market with low occupancy rate. In the current conditions new shopping centers need 2-3 years to stabilize.

Retail 2021 – PICK OF CONSTRUCTION ACTIVITY

In 2021, new construction in Russia will reach the highest level over the past 5 years. Starting from next year we expect the construction activity to slow down.



New Construction in Moscow 2021F





In Q1-Q3 2021, 14 quality shopping centers with total GLA of 457,000 sq. m were delivered to the market in Russia. 85% of construction volume was covered by the regional cities. Such a significant volume was due to the opening of several large properties with GLA of more than 40,000 sq. m. In 2022-2023, mostly small shopping centers will be entering the market, opening of large-scale properties will be rare.

New Construction in Moscow, '000 sq. m

#MARKETBEAT



In Q3 2021, no new quality shopping center was opened in Moscow. As usual, we will see the largest share of new deliveries in Q4. The key openings of the year will be: Gorod Kosino (GLA – 73,000 sq. m), Sofia (GLA – 37,000 sq. m) and Paveletskaya Plaza (GLA – 33,000 sq. m). The launch of large projects is not expected in Moscow next year.

Retail **DEVELOPERS REMAIN ACTIVE**

Despite the negative effects of the pandemic (vacancy rate increase, volatility of footfall in shopping centers), we still see development activity. Not only properties that started construction before the pandemic are entering the market, but also new projects are announced.

Among the new projects there are large retail schemes with GLA of more than 40,000 sq. m, and small neighborhood shopping centers. Residential developers participate in the significant number of new retail projects: they announced retail schemes within residential complexes (Ispanskie Kvartaly, Samolet project in Lyubertsy) and stand-alone shopping centers (PIK projects in Kuzminki and Butovo).

New projects are planned not only in Moscow, but also in the regional cities. Among the largest announcements are extension of Viva Land (GLA ~ 70,000 sq. m) in Samara and new phase of Planeta (GLA ~ 60,000 sq. m) in Krasnoyarsk.



Retail RETAILERS: NEW REGIONS, NEW FORMATS

Large federal and international operators are expanding their presence on the Russian market, they are opening new locations and launching new formats.

NEWCOMERS, Q1-3 2021

BERNADETTESHIKKOSAThe Frankie Shopele
yeityZARA Beauty)DIOR
(Dior Beauty)BYREDOCCCC
yeity

COMING SOON

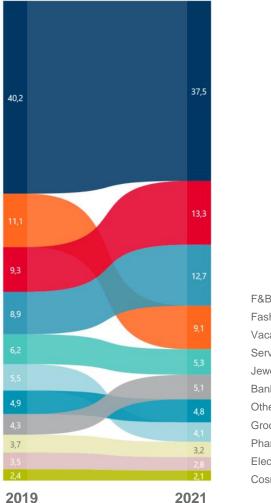


In Q1-3 2021, 11 new international retailers entered the Russian market, which is similar to the same period of the last year – 13 new operators. Retailers that are already present on the market are more often entering with new formats – Zara Beauty, Dior Beauty, Ecco Kids.

Russian retailers are also experimenting with new brands and formats. Due to the low purchasing power of the population, lowprice segment is becoming more popular. Magnit plans to triple the number of Moya Tsena shops by the end of 2021, X5 Retail Group decided to scale Chizhik chain, Avoska started to develop Prodsklad hard discounter, Svetofor outstripped Magnit and X5 Retail Group by growth rate of new shops opened in H1 2021.

Large international retailers are entering new regions of Russia – H&M is opening the first store in Nizhnekamsk, JYSK launched the first location outside of the Moscow region – in Tula, UNIQLO opened a store in Perm, Leroy Merlin plans to build the first hypermarket in Buryatia, IKEA is opening new mini-stores in Saratov and Izhevsk.

Street Retail Tenants by Categories, %





Retail STREET RETAIL IN MOSCOW

Despite the unstable situation caused by the pandemic, the vacancy rate on the key retail streets of Moscow has not grown radically.

After a ten-year anti-record of 2020, currently we see s a gradual recovery of street retail. During the year, the average market vacancy rate tend to decrease, in Q3 2021 the indicator reached 13.3% (-1.7 p.p. compared to Q3 2020 and +4 p.p. compared to 2019).

There was a noticeable rotation of tenants, however the structure of operators by categories hasn't changed a lot.

Even though the share of F&B operators decreased from 40.2% to 37.5%, this category still has the largest share in tenants' structure. The share of fashion continues to decline - 9.1% in 2021 compared to 11.1% in 2019.

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WAREHOUSE AND INDUSTRIAL

 Strong demand and the lack of warehouse schemes resulted in a downgrade of vacancy to 1.8% in Q3 2021 with further pick-down at 0.9% in October. In the mid-term, the indicator will return to 1.5-2% due to speculative commissioning and vacancy from the relocation of tenants who signed contracts for BTS projects in 2020-2021.

 We register a growing gap between rental rates for existing schemes and BTS properties due to the growth of construction costs.

Moscow Q1-3 2021

19.99 mn sq. m

Total stock of warehouses, classes A & B

760 '000 sq. m

New construction, classes A & B

1.8% Vacancy rate, class A



10.5% Capitalization rate, prime warehouse segment Warehouse & Industrial

IRREPRESSIBLE RENTAL RATE

Key drivers for rental rate growth are high demand, lack of supply, lack of land plots that meet demand requirements, growth of CPI and PPI. The rental rate will increase by 7% in 2021 and 14% in 2022. In the long-term, the indicator will stabilize at the level of CPI.

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Warehouse & Industrial FORECAST: SUSTAINABLE GROWTH

The market is starving for quality space. The vacancy fell from 3.5% in Q4 2020 to 1.8% by the end of Q3 2021. All large vacant blocks were leased. By the end of October, the indicator leaped lower 1%. In one-two years, the indicator will increase to 1.5-2%.



New Construction The Moscow Region, Classes A & B Q1-3 2021

Source: Cushman & Wakefield

* Average weighted asking rental rate in existing properties excluded OPEX, utility and VAT We expect high volume of new construction in 2022, both speculative and BTS, due to the peak demand in 2020-2021. In the long-term, demand for built-to-suit facilities will determinate the volume of new construction.

Demand will remain strong due to the increasing load on logistics operators and online retailers: the number of orders continues to grow, despite the decrease in the average check. Processing of smaller parcels and an increasing number of returns require additional warehouse area. This fact will support growth of the segment.

Warehouse & Industrial GLOBAL CONTEXT

Key trends that will affect the segment in the mid-term.

Labor issues and ESG through technology

Labor shortages and compliance with ESG goals drive the growth of wage costs. As a result, technology is increasingly being integrated into warehouses to create "smart" buildings for greater efficiency.

Supply chain transformation

Supply chain disruptions in 2020 reinforced the need to build resiliency. Companies are seeking to achieve greater resiliency through onshoring/near-shoring and holding greater inventories, which will drive space demand.

E-commerce expansion and growth

Two key challenges will need to be overcome through additional warehouse area: fast and efficient last mile delivery and managing the increasing amounts of product returns.

Shortage of supply

TRENDS

REGIONAL

The vacancy is declining across the region. In the short-term, the trend will continue, which will support the growth of rental rates.

Shortage of land plots for development

We observe an increase in the cost of land plots that meet the requirements of tenants and developers in terms of area, transport accessibility and permitted use. This will lead to an increase of development costs.

Low speculative new construction

Since 2009 in Europe, and since 2019 in Russia, BTS properties have dominated in the structure of new construction, which strengthened the problem of supply shortage.

Growth of inflation expectations in the consumer segment

In the mid-term, the trend is worth being considered.

Growth of Production Price Index

The costs rise in the production chain and construction sector. Due to supply shortage, the risks of volatile construction costs may be passed over to tenants in the future.

Poor consumer market

TRENDS

OCAL .

In 2021, the consumer market will show significant growth (+6,9%) due to the pent-up demand. However, in 2022-2024, the average annual growth rate of the retail turnover will slow down to 2.9%.

Decreasing population

The trend of population decrease is consistent. In the long-term, this may lead to consumer market compression and, as a result, a decrease of retailers' demand for new warehouses.

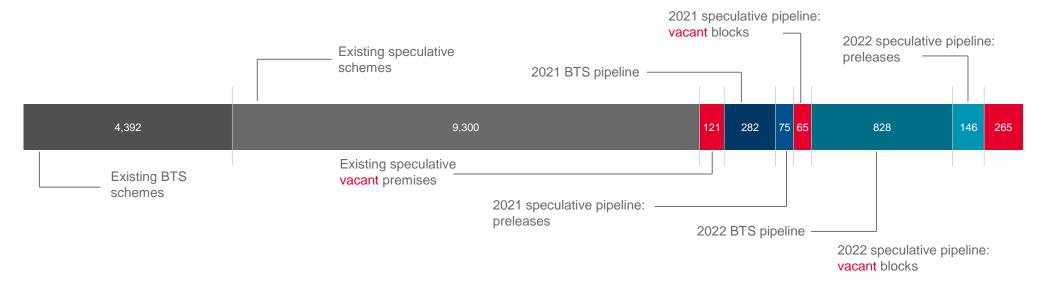
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Warehouse & Industrial 2022: WHAT'S LEFT?

The existing vacancy is at the lowest level. 80% of pipeline for 2022 is already preleased.

Composition Of Supply, '000 sq. m, Class A



By the end of October 2021, vacancy in existing class A properties dropped to 0.9%, which is the lowest indicator in the market history. The 2022 speculative pipeline is 80% preleased. However, portfolio developers are reluctant to build speculative warehouse properties: high demand for BTS fully covers developers' construction capacity. In 2022, the situation will not change dramatically, while we expect stabilization of the vacancy at the level of 1,5-2% due to additional vacancy from the relocation of tenants who signed contracts for BTS projects in 2020-2021.

Warehouse & Industrial REGARDLESS OF GROWING SPECULATIVE NEW CONSTRUCTION, BUILT-TO-SUIT DOMINATES

Since 2019, built-to-suit properties have exceeded the share of speculative construction due to the lack of large vacant blocks on the market.

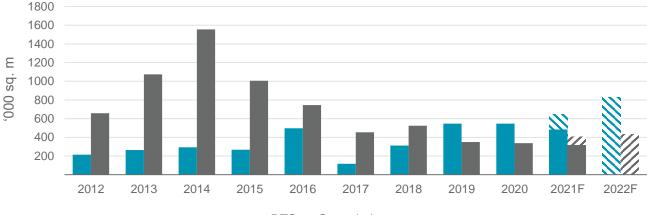


New Construction, The Moscow Region, Classes A & B 2021F

63%

Share Of BTS Properties in the Pipeline 2021F

Source: Cushman & Wakefield



New Construction, Classes A & B

■BTS ■Speculative

In 2020, due to record-high demand a lot of new speculative projects were announced to be delivered to the market in 1-2 years. However, the market continues to experience a shortage of supply and often BTS is the only available option. In the long-term, we expect BTS projects to become the main driver of new construction. The largest speculative schemes, which are expected to be commissioned in 2021-2022, are PNK Park MKAD M-4 (120,000 sq. m), PNK Park Medvedkovo (60,000 sq. m) and Building 34 in Atlant-Park (50,000 sq. m).

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Warehouse & Industrial IS HIGH DEMAND A NEW REALITY?

In Q1-3 2021, take-up in the Moscow region is 45% higher than YoY indicator.



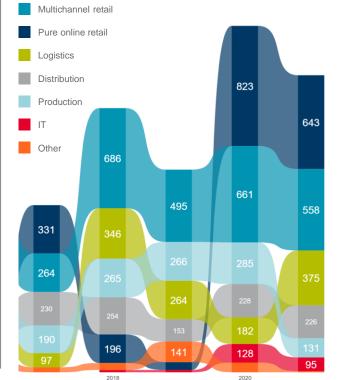
Take-up, Classes A & B Q1-3 2021

2.5 mn sq. m

Take-up, Classes A & B 2021F

Source: Cushman & Wakefield

Demand Structure, The Moscow Region, Classes A & B, '000 sq. m



The demand structure corresponds the previous year structure. Online retailers cover a third of take-up, multichannel retail leased a little less than a third (27%). The only type of tenants that showed significant growth in 2021 is logistics operators: their share grew by 10 p.p. YoY. This is a consequence of the growth in the number of online orders: e-commerce companies are the main clients of logistics operators.

The largest deals of logistic operators in 2021: expansion of Cainiao in South Gate (44,000 sq. m), leases of PEK in Adidas Chekhov (41,000 sq. m), SDEK in PNK Park Medvedkovo (33,000 sq. m) and BTS for DPD in South Gate (28,000 sq. m).

Warehouse & Industrial SURVEY: LOGISTICS OF ONLINE RETAILERS

Logistics is one of the key factors for competitive performance of the company. 68% of companies note that changes in logistics help to increase the number of orders, 25% say it also makes an impact on the growth of the number of repeated orders.

60% of e-commerce companies prefer dropshipping model: storage and packaging is provided by the seller, and partners are responsible for delivery. The least popular option is fulfillment, when the seller completely shifts all logistics operations onto the logistics operator or marketplace (19% of responses). **80%** of companies cut the costs for warehousing and only 27% for delivery. Pick-up points and parcel automats became the most profitable delivery method, while courier delivery is the most expensive option.

"

Today is a **unique** time for the market: the **outstripping growth** of indicators and the transformation of **supply chains**.

#MARKETBEAT

The result is new market **opportunities** and **formats**.



Egor Dorofeev

Partner, Head of Department Warehouse & Industrial

Up to 100 RUB - the orderive to 45% survey compa

majority of respondents (60%) agreed that the delivery costs should be paid by buyer.

the optimal cost of delivery according to 45% of the surveyed companies. The
%) agreed that the **75%** of companies are satisfied with their logistics. Almost half (46%) would like to cut costs, and 18% would like to expand the geography of delivery.

Source: <u>"Ideal logistics for business": AliExpress Russia and</u> <u>Russian Association of Electronic Communications report</u>, 384 respondents, September 2021.

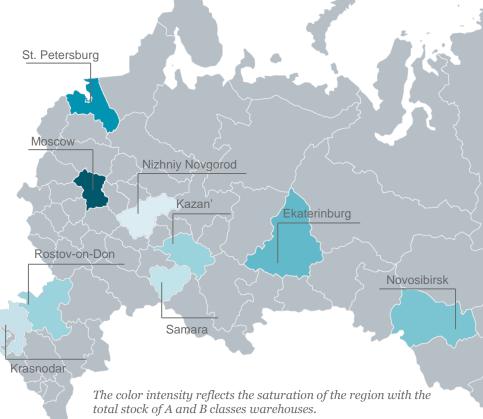
The sample included the owners and managers of ecommerce companies.

Warehouse & Industrial HIGH DEMAND IN THE RUSSIAN REGIONS

Supply And Demand Indicators - Key Logistics Markets In Russia

In Q1-3 2021, regional take-up formed 44% of the total Russian indicator. This is the highest level in history. For the last 3 years we observe the growth of regional share in the total take-up. The share of key regional markets in take-up is proportional to their share in the total warehouse stock. Deviation is coming from large BTS deals.

Share of the region Total stock of Share of the region Take-up, in the total in the total take-up warehouses Q1-3 2021 Region warehouses stock '000 sq. m '000 sq. m % % Classes & B Classes A & B 60 2,036 56 Moscow 19,993 St. Petersburg 12 622 17 4,059 Ekaterinburg 136 1,551 5 4 Novosibirsk 1.228 138 4 4 845 43 Kazan' 3 1 810 Rostov-on-Don 2 164 5 Samara 751 2 206 6 641 Krasnodar 2 43 1 Nizhniy Novgorod 2 33 520 1



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HOSPITALITY

- Due to returning 'COVID-19 waves', demand for hotel services remains volatile, even though after each new corona outbreak hotel occupancies recover to what can be perceived as a 'normal level' quite quickly. This signals of a certain equilibrium found between supply and demand – in the market driven by domestic business.
- Over the first 9 months of 2021 the Moscow modern quality hotels reached 59.8% in Occ (an improvement of 22.7 percentage points over the same period of 2020) and RUB 6177 in ADR (an increase of 13.2% over 2020).
- Between January and September 2021, the modern quality market grew by 229 new keys in 2 hotel projects. Opening of 546 hotel rooms in 3 hotel projects was postponed till later periods.



Marina Smirnova Partner Head of Hospitality and Tourism

~57.6к кеуз

Overall estimated classified quality room stock (net of hostels and serviced apts)

Cushman & Wakefield's estimates based upon data in the Federal roster of classified tourist objects, early 2020



Modern quality room stock

Cushman & Wakefield's estimates, Q3 2021

229 keys

In 2 new hotel projects Total new supply in 2021

NEW SUPPLY IN 2021

70% of new supply scheduled to open in 2021 got postponed till later periods.



Modern quality supply increase in 2021

In two new projects

New modern quality supply in Moscow* in 2021

PROJECT	KEYS	OPENING
Hampton by Hilton Moscow Rogozhskiy Val	147	Q3
Vertical Boutique (Best Western)	82	Q3
TOTAL	229	

* Excluding the New Moscow areas

Source: Cushman & Wakefield

Hospitality

MARKET SUPPLY – GROWTH RATE REMAINS LOW

Actual 2021 market growth in modern quality segment will remain below expected 3.5%.

stock

фонд / Room

Номерной

1.1%

Expected full-year growth 2021

Modern quality supply growth dynamics – 33 000 actual and projected 31 000 9,4% 9,1% 7.3% 7,7% 7,8% 29 000 4,3% 3,2% 0,6% 0.7% 27 000 -1,1% 25 000 23 000 21 000 778 128 229 19 000 471 17 000 15 000 13 000 11 000 0 05 9 273 17 611 17 140 9 000 7 000 5 000 3 000 1 000 -1 000 2013 2014 2015 2016 2017 2018 2019 2020 2021F 2022F 2023F 2024F 2025F Добавлено/изъято, номеров / Added/extracted rooms Доступно на начало года, номеров / Rooms available, year-beginning ——Прирост, % / Growth, %

Development activity in the hotel segment in 2021 remains slow. Numerous delays in hotel openings created a situation when 70% of projected new supply (546 hotel keys) got postponed till later periods. As a result, the actual market growth rate in 2021 is likely to be limited to 1.1%.

#MARKETBEAT

In 2022, on the other hand, market growth rate might jump to 9.1%, should 10 new properties of various grades (total room count - 1845 keys) get delivered on time.

Source: Cushman & Wakefield

MOSCOW HOTEL OCCUPANCIES STABILIZE

20% 10%

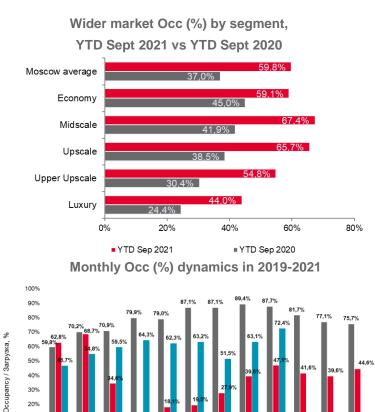
While booking window in Moscow hotels is still short, hoteliers hope that they can see 'light at the end of the tunnel'.



Wider market

53

Source: Cushman & Wakefield



Despite periodic disruptions of demand (still mostly driven by domestic market) due to recurring COVID-19 waves, the Moscow hotel market has seemingly found the point of equilibrium in monthly Occupancy rates which over the 9 months of the year stabilized at 60%. Predictably, Midscale (YTD Sept Occ of 67.4%) and Upscale (YTD Sept Occ of 65.7%) segments lead the way.

In September 2021, Wider market Occupancies reached a new height by overcoming a psychologically important threshold of 70% and stabilizing at 72.4%. Having said that, the Occupancy gap between various hotel segments remained wide and ranged from 54.1% in Luxury segment to 81.3% in Midscale hotels.

Hospitality

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ROOM RATE RECOVERY DEPENDS ON DEMAND TYPE

Luxury hotels lead the market in ADR recovery.



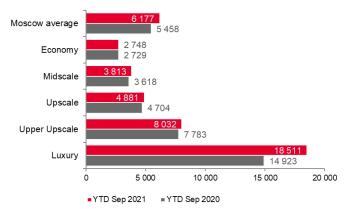


Year-on-Year change YTD Sept 2021

Wider market

Source: Cushman & Wakefield

Wider market ADR (RUB) by segment, YTD Sept 2021 vs YTD Sept 2020



Monthly ADR (RUB) dynamics in 2019-2021



Notwithstanding remaining volatility of demand and its heavy reliance on domestic clients, the average increase in ADR for the Wider market over the first 9 months of 2021 comprised 13.2%.

The main driver of this growth are Luxury hotels (an increase of 24.0%), with Midscale hotels being the runner-up (5.4%). The average ADR growth rate in the other price segments comprised a sober 2.6%.

Over the summer months of 2021, the Wider market ADR not just recovered to the 2019 levels but managed to exceed them. However, high sensitivity to accommodation rates characteristic of domestically-driven demand prevents city hotels from optimizing tariffs during traditional 'peak occupancy' months of the business season. As Sept 2021 results show, the Average Daily Rate for the Wider market was still below that of 2019.

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KEY WORD FOR 2021 – STABILIZATION

Will another COVID-19 wave in Q4 have a serious negative effect on overall 2021 results?

7 0 0 0 6 558 RevPAR, RUB / Доходность на номер, руб. 6 0 1 4 5842 6 0 0 0 5 510 5 527 5 3 1 4 5 201 5 1 3 8 5 0 2 6 5 0 0 0 4 665_{4 534} 4 4 2 2 3 869 3 895 4 000 3 66 3 000 227 2 0 0 0 775 1 0 0 0 Dec Feb Mar Apr May Jun Jul Aug Sep Oct Nov Jan

Monthly RevPAR (RUB) dynamics in 2019-2021

■2019 ■2020 ■2021

As the first 9 months of 2021 show, the hotel market has more or less adapted to living in the new 'COVID era' – demonstrated by swift recoveries of Occupancy levels following each new outbreak of COVID-19 cases. Having said that, despite some visible successes in ADR growth, the Room Yield (=Revenue per Available Room, RevPAR) monthly statistic continues lagging behind the 2019 levels by an average of 25%.

Operating results of Sept 2021, the first month of the 'autumn business season', gave hoteliers hope to expect a steady improvement of revenues in the remaining months of the year. Their enthusiasm, however, was curbed in October, with the new growth of COVID cases across Russia, giving rise to talks about possible shutdowns in various parts of the country.

Overall, absence of any meaningful improvements at the macro-level (minimal levels of foreign travel – due, in many ways, to still-low mass vaccination levels in Russia, - as well as lack of a political agreement on mutual vaccine recognition between Russia and the West) do not allow one to expect that demand for hotel services will move from the stable phase to the growth phase already in 2021.

#MARKETBEAT

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KEY MARKET INDICATORS C&W RESEARCH TEAM CONTACTS

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Market Indicators KEY MARKET INDICATORS BY SEGMENT

			ОФИ	СНАЯ НЕД	вижимос	ть / OFFIC	EMARKET						
ОСКОВСКАЯ АГЛОМЕРАЦИЯ (КЛ	АССЫ А, В	и в-) / мо	SCOW AG	GLOMERA	TION (CLAS	SSES A, B	AND B-)						
	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2
IEW CONSTRUCTION ,000 sq.m	2 210	1 194	976	805	644	1 056	1 291	740	443	497	163	381	
OTAL STOCK ,000 sq.m	9 938	11 132	12 108	12 913	13 557	14 614	15 905	16 645	17 088	17 585	17 748	18 129	18
RENTAL RATE, RUB per sq. m p.a.	37		12	24	13	57	938	22 053	19 999	17 508	19 306	20 015	20
ACANCY RATE	8,9%	13,5%	11,0%	9,4%	8,2%	7,6%	12,3%	13,6%	9,9%	11,5%	9,0%	8,0%	10
AKE UP ,000 sq.m	1 827	825	1 847	2 030	2 115	1 737	1 295	1 270	1 639	1 898	2 004	2 066	1
			ΓΟΡΓΟΒΑ	а недвиж	имость /	RETAIL MA	RKET						
РОССИЯ (ВКЛЮЧАЯ МОСКВУ) / RU	SSIA (INCL	UDING MO	SCOW)										
	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2
NEW CONSTRUCTION ,000 sq.m	1 589	1 387	1 514	1 361	1 914	1 456	2 346	1 877	1 699	636	558	586	
OTAL STOCK ,000 sq.m	6 955	8 342	9 855	11 216	13 130	14 587	16 932	18 810	20 509	21 145	21 704	22 289	22
ОСКОВСКАЯ АГЛОМЕРАЦИЯ / МО	OSCOW AG	GLOMERA	TION										
	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2
JEW CONSTRUCTION ,000 sg.m	431	497	362	2011	155	173	627	418	444	135	108	156	
OTAL STOCK ,000 sq.m	2 146	2 643	3 005	3 207	3 362	3 536	4 163	4 581	5 025	5 160	5 268	5 424	5
RENTAL RATE RUB per sq. m p.a.	99 480	87 368	88 102	105 804	114 959	121 258	127 380	162 032	145 000	150 000	165 000	175 000	175
	скл	АДСКАЯ НЕ	движим	ОСТЬ (КЛА	CC A) / WA	AREHOUSE	MARKET	(CLASS A)					
РОССИЯ (ВКЛЮЧАЯ МОСКВУ) / RU	SSIA (INCL		SCOW)										
	•		·										
	2008 1 761	2009 1 559	2010 692	2011 535	2012 1 293	2013 1 633	2014 2 432	2015 2 083	2016 1 831	2017 950	2018 1 210	2019 1 443	1
NEW CONSTRUCTION ,000 sq.m TOTAL STOCK .000 sq.m	5 791	7 350	692 8 042	535 8 577	9 870	1 633	2 432 13 934	2 083	1 831	950 18 797	20 007	1 443 21 450	22
RENTAL RATE RUB per sg. m p.a.	5791	7 330	0 042	0 377	9 670	11 302	13 934	10 017	17 040	10/9/	3 500	3 750	- 22
ACANCY RATE											4,9%	6,0%	5
ОСКОВСКАЯ АГЛОМЕРАЦИЯ / МО	OSCOW AG	GLOMERA	TION										
	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	
NEW CONSTRUCTION ,000 sq.m	2008 742	2009 760	390	2011	2012 656	1 009	2014 1 394	1 129	1 242	415	2018 722	2019 897	
OTAL STOCK ,000 sq.m	3 524	4 284	4 673	4 955	5 610	6 619	8 013	9 141	10 384	10 799	11 521	12 419	13
5 E 5 . O O K ,000 0 Q.III	3 480	3 330	3 340	3 800	4 200	4 300	4 500	4 150	3 650	3 300	3 600	3 900	4
RENTAL RATE RUB per sq. m p.a.													

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Tools SUPER AGGLOMERATIONS: THE RUSSIAN ARCHIPELAGO

The analysts at Cushman & Wakefield developed the "archipelago" model which is aimed on spatial analysis of Russia. The country is represented as a set of "islands", which are comparable by population density and economic functions. Each "island" is a super agglomeration, which consists of the cities with population of more than 50,000 inhabitants that are attracted to the single center.



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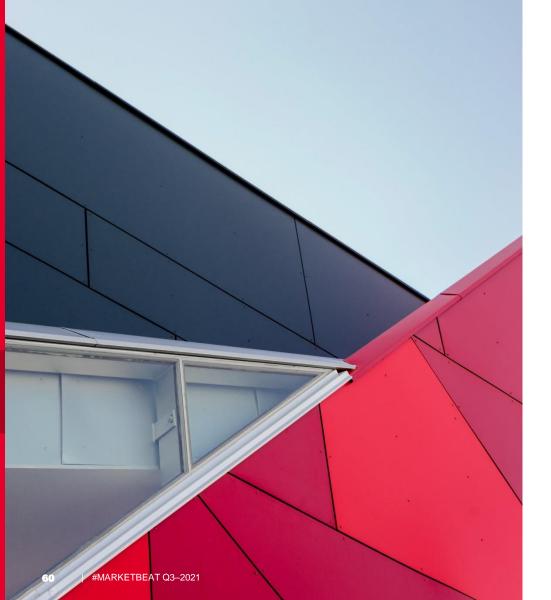
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About the company CUSHMAN & WAKEFIELD IN RUSSIA

Cushman & Wakefield has been successfully operating in Russia since 1995, with more than 250 experienced and highly qualified expert employees. The Moscow office implements projects in all major cities in Russia and the CIS, forming transnational teams for solving complex tasks when necessary. There are 11 key areas of company activity, covering all the sectors of commercial real estate: offices, retail, warehouses, hospitality and tourism, land. The range of services provided includes the leasing of spaces, asset management, investment consulting, real estate operation, services for corporate clients, project management, development consultancy, representing tenant's interests, valuation, hospitality and tourism. Cushman & Wakefield is one of the largest companies in the global commercial real estate market, with approximately 50,000 employees in 400 offices and 60 countries. In 2020, the firm had revenue of \$7.8 billion across core services. For more information, visit our websites - www.cwrussia.ru and www.cushmanwakefield.ru

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