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REAL ESTATE MARKET GERMANY 2021 | 2022

Residential real estate is en vogue; office market remains stable; increased structural change on the retail market

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PREFACE

Dear readers,

Maximum transparency on the real estate market is of great importance. DZ HYP contributes to this by regularly examining the locations where it is active. This year, the fourteenth edition of the present study focuses on real estate market developments concerning retail, office and commercial housing properties in Germany's top locations – namely, Hamburg, Berlin, Dusseldorf, Cologne, Frankfurt, Stuttgart and Munich.

In 2021, Germany's metropolitan areas are being impacted to different extents by the effects of the coronavirus pandemic and growing demographic change. In the residential asset class, rents are continuing their upwards trend, albeit at a slower pace than in the past years, as a result of increased new construction activity and a slowdown in population growth in the major cities studied. The imbalance between supply and demand is gradually waning – but failing to curb the price increase for residential real estate. The office market seems to be stable despite moderately higher vacancy rates and the uncertainty surrounding future demand for space; modern offices remain in demand even though many people are working from home. However, investors will have to brace themselves for stagnating rents compared to the previous years. Turning to the retail market, the pandemic has accelerated structural changes: the downward trend for rents caused by online shopping has intensified, and the amount of retail space has continued to decrease. Nevertheless, Germany's top seven city centres remain attractive shopping locations thanks to the economic recovery and alternative uses.

This study includes an excursus examining the topic of demographics. Germany's ageing population is changing the demand for real estate. When the baby boomers retire, demand for office space will fall away, whilst the retail and housing markets will need to increasingly prepare for the demands of senior citizens and a higher number of people in need of care.

The German real estate market report 2021/2022 is of course also available in German. All current reports can be downloaded from our website (on www.dzhyp.de/en/about-us/market-research/).

Yours sincerely,

DZ HYP

October 2021

SUMMARY

14th issue of our market report shows opposing dynamics in the real estate market

» There are obvious reasons for a degree of scepticism in relation to the letting of residential and commercial space. They include the ongoing pandemic and – as a direct consequence – the trend for working from home and accelerated growth in e-commerce. In addition, regulations in the residential market are being tightened; population growth has come to a standstill and the baby boomer generation is coming up to retirement age.

» However, investors are not being put off by this and there is still lively demand for commercial real estate and rental housing. This does not only reflect the fact that bond yields are still in negative territory. Even though prospects for commercial lettings are no longer quite as rosy as in previous years, there is still a need for living and commercial space at a time when supply is fairly tight in many places. However, initial rental yields which are down to historical lows in some cases do not reflect growing risks in the letting business.

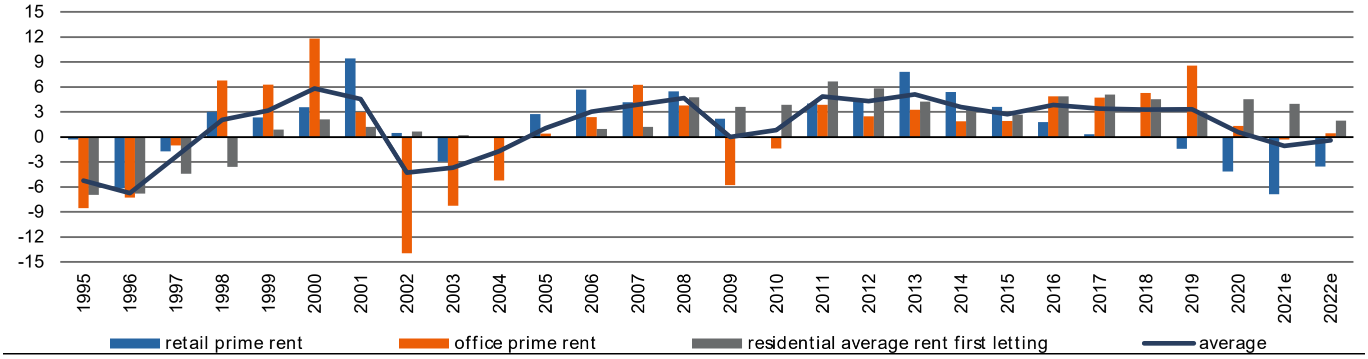
» In the present **14th issue of this market report**, we once again look at the commercial real estate markets in Germany's seven biggest cities, namely **top locations Berlin, Düsseldorf, Frankfurt, Hamburg, Cologne, Munich and Stuttgart.** As in previous issues, the focus is on the office, retail and housing market segments.

» There is a gulf in the dynamics between the various markets segments. Of the sub-markets under consideration, only the **residential market** is still showing rental growth. However, the momentum is easing off. Firstly, more is being built, and secondly, population growth in large cities has slowed down noticeably. In some cases, the number of inhabitants has even fallen by moving to the surrounding area.

» In contrast, **office rents** are stagnating after rising sharply over many years because of a lack of supply. That being said, the fact that rents are not falling, in spite of uncertainty about future demand for office space and a moderate rise in vacancies suggests that the office market should remain stable. Attractive office space with a high degree of ESG compliance is attracting most interest.

» On the **retail side**, the pandemic has accelerated the decline in rents brought about by online shopping. Demand for inner-city sales space from retail chains is likely to remain lower than prior to Covid for good. However, prospects for city centres in the top locations are relatively good.

TOP LOCATIONS: ONLY RESIDENTIAL RENTS STILL RISING
RENTS VS. PREVIOUS YEAR IN PER CENT (TOP LOCATIONS)



Source: bulwiengesa, DZ BANK forecast

Overview of prospects by segment

Retail:
Widespread branch closures bring about falling rents and growing number of empty stores

- Digitalisation in the retail sector became established early on, leading to strong grown in online sales for more than 20 years now. Consumers mostly buy the same products online that are on offer in high street stores and shopping centres. In spite of that, retailers continued to expand their branch network for a long time. In many places, ongoing demand for space led to the construction of new inner-city shopping centres and pushed up the prime rent in the best retail space in top locations to almost EUR 300 per m^2 by 2017.
- The high cost of operating online stores in tandem with a close knit branch network has reversed the trend and retailers have gradually been reducing their physical presence. In addition, the coronavirus pandemic has forced bricks-and-mortar retailers already hit by cost pressure and growing e-commerce to close a large number of stores, accelerating the downturn in rents. On an aggregate basis, prime rents in top locations have fallen by over 10 per cent.
- The accelerated structural change in the retail sector is likely to lead to a permanent reduction in demand for city centre sales space. This means that rents could continue to fall in the next few years. However, top locations should still be spared the risk of the "death of the high street" which faces many city centres. Moreover, inner-city space lends itself to alternative uses.

FORECASTS FOR RETAIL PROPERTIES

	Prime rents EUR per m^2			Change in prime rents % vs. prev. yr		
	2020	2021e	2022e	2020	2021e	2022e
Berlin	285	265	250-260	-5.0	-7.0	↘
Cologne	240	225	215-225	-5.9	-6.3	→↘
Düsseldorf	280	275	260-270	-1.8	-1.8	↘
Frankfurt	295	275	260-270	-1.7	-6.8	↘
Hamburg	275	250	235-245	-3.5	-9.1	↘
Munich	335	315	300-310	-2.9	-6.0	↘
Stuttgart	215	195	185-195	-8.5	-9.3	→↘
Average for top locations	**282**	**262**	**248-258**	**-4.2**	**-6.9**	**↘**

Source: bulwiengesa, Scope, DZ BANK Research forecast
Prime rents are based on the average of the top 3 to 5 per cent of market rentals, and the stated figure does not therefore represent the absolute top rent.

Office:
Prime rents remain stable in spite of slight rise in vacancies

- Up until the beginning of the pandemic, the main factor in the office market was a pronounced supply shortage. There were practically no more larger office premises to be found in the market and consequently, larger rental contracts tended to focus on project developments of that nature. The reduction in vacant office space which carried on until 2020 was accompanied by a marked rise in prime rents to an average of around EUR 34 per m^2 in top locations.
- As a consequence of the pandemic, a large part of the office stock has stood empty since March 2020 with most office staff working from home. Although employees are gradually returning to the office with a growing vaccination rate, mobile working is nevertheless likely to remain an established aspect of office employment. Moreover, offices are set to remain important as "communication hubs", even if demand for office space overall could ease up slightly. Looking ahead, this trend is likely to be compounded as baby boomers reach retirement.
- Uncertainty about future demand for office space could continue to dampen activity in the office market for the time being. We therefore expect a slight rise in vacancy rates. All in all, though, bearing in mind a generally tight supply, we expect prime office rents to remain stable. Attractive office space with a high level

of ESG compliance offers the best prospects, while weaker locations could be hit disproportionately by a decline in demand.

FORECAST FOR OFFICE PROPERTIES

	Prime rent EUR per m²			Change in prime rent % vs. prev. yr		
	2020	2021e	2022e	2020	2021e	2022e
Berlin	39.0	38.5	38.5	1.8	2.9	3.5
Cologne	24.5	24.5	25.0	2.8	3.3	3.5
Düsseldorf	26.5	26.5	26.5	6.5	7.3	7.6
Frankfurt	41.0	41.0	41.0	6.8	7.5	7.8
Hamburg	31.0	31.0	31.0	3.5	4.0	4.4
Munich	39.5	39.5	40.0	2.3	3.6	3.5
Stuttgart	24.0	24.0	24.0	3.0	3.3	3.5
Average for top locations	**33.9**	**33.8**	**34.0**	**3.5**	**4.3**	**4.6**

Source: bulwiengesa, Scope, DZ BANK Research forecast
Prime rents are based on the average of the top 3 to 5 per cent of market rentals, and the stated figure does not therefore represent the absolute top rent.

Residential:
Rents still rising, but slightly slower

» Demand in the residential market has been bolstered but also altered by the desire for a nice, spacious home with enough room for a home office. This has mainly benefited single family houses and spacious flats further out of town. However, there is still demand for flats in an urban environment. Overall, purchase prices have continued to rise, driven by low interest rates, while the increase in rents has slowed down. Apart from the change in housing preferences, rental growth is being slowed down by high rents in top locations along with a growing number of new builds and weaker migration to cities. In contrast, there have been no seriously negative consequences for the residential market from the pandemic.

» The average initial rent in top locations has climbed to over EUR 16 per m². The heavy financial burden on households living in large cities from a further increase in living costs has heightened pressure on politicians to ensure access to affordable housing. It is therefore quite probable that rental regulation which has been increased in the last few years will be tightened further after the Bundestag election.

» Rents are likely to continue to rise in 2022, but, the pace could ease in view of a gradually dwindling demand overhang. In the longer term, we are likely to see above all a shortage of flats suitable for senior living.

FORECAST FOR RESIDENTIAL PROPERTIES

	Average initial rent EUR per m²			Average initial rent % vs. prev. yr		
	2020	2021e	2022e	2020	2021e	2022e
Berlin	14.9	16.0	16.4	7.2	7.4	2.5
Cologne	13.6	13.9	14.1	2.3	2.2	1.5
Düsseldorf	13.3	13.5	13.7	1.5	1.5	1.5
Frankfurt	16.6	17.3	17.6	3.1	4.2	2.0
Hamburg	14.9	15.4	15.7	3.5	3.0	2.3
Munich	20.5	20.7	20.9	3.5	1.0	1.0
Stuttgart	16.5	16.8	17.0	3.8	1.5	1.5
Average for top locations	**15.7**	**16.3**	**16.7**	4.5	4.0	**1.9**

Source: bulwiengesa, Scope, DZ BANK Research forecast

ECONOMIC CONDITIONS IN GERMANY

Further rise in GDP in the second quarter of 2021

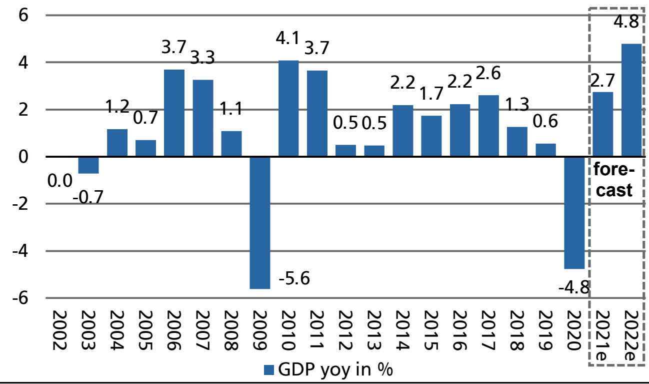
The German economy has recovered significantly in the second quarter with 1.5 per cent GDP growth against the previous quarter. The main contributory factor apart from government spending has been household consumer spending in the wake of Covid restrictions easing. Consumers have taken advantage of their newfound freedom to spend more money on hospitality services (eating and drinking out and accommodation), and on leisure activities. In principle, nothing should stand in the way of a further economic recovery. We are therefore sticking to our growth forecast of 2.7 per cent for 2021. However, the Delta Variant is still a major uncertainty factor, as are supplier problems affecting feedstocks such as semiconductors. The economy is in recovery, but could be slowed down by various imponderables.

Inflation rate set to rise further by the end of 2021

Inflation rose to 3.1 per cent in July − its highest rate since 2008. Crude oil is currently trading at around 70 per cent above last year's level. This has led to a sharp year-on-year rise in prices on forecourts and for heating oil. Another factor now affecting inflation has been the scrapping of the temporary cut in VAT between July and December last year. The cut dampened prices in the second half of 2020 and they are now being pushed up correspondingly. Prices have also risen in the wake of the easing of restrictions in service areas such as the hospitality industry which has been buffeted by the pandemic. Recently, it is likely that heightened price pressure on key industrial commodities has been partly passed on to consumers. The trend towards higher prices is expected to continue in the next few months, but then inflation should normalise around the turn of the year as the impact of baseline effects eases off and the VAT effect runs out. We therefore anticipate an annual average inflation rate of around 1.6 per cent next year, against 3.0per cent in 2021.

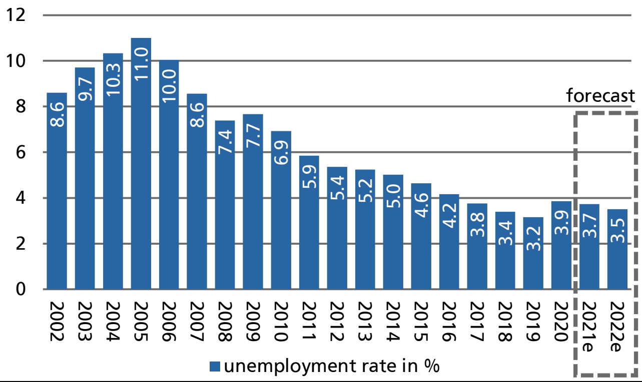
Dr. Christoph Swonke, Economist

GERMANY'S ECONOMY IS RECOVERING, BUT COULD BE SLOWED DOWN BY COVID VARIANTS AND BOTTLENECKS



Source: Eurostat, DZ BANK forecast

UNEMPLOYMENT IN GERMANY REMAINED RELATIVELY LOW DURING THE PANDEMIC, NOT LEAST THROUGH SHORT-TIME WORKING



Source: Eurostat, DZ BANK forecast

Note: The above figures for inflation (HICP) in the text and the unemployment rate in the graph are based on Eurostat data, which are lower than the increase in consumer prices calculated by the Federal Statistical Office and the unemployment rate of the Federal Employment Agency.

as of August 2021

DEMOGRAPHICS: AGEING POPULATION IN GERMANY

Ageing population changing property demand and slowing down new building

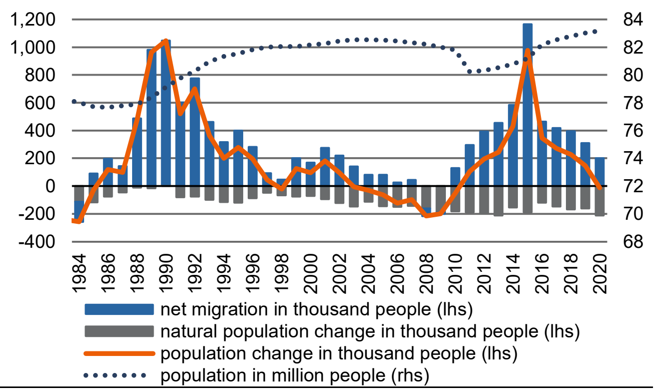
Tail wind from demographics in Germany in the last few years

The demographic trend in Germany is often seen as a social and economic risk factor − and for good reason, since an ageing population is expected to exert huge pressure on the social system in future, for example. However, in the last few years, the demographic trend has boosted the economy. Immigration has led to an increase in the population and at the same time to a rise in the potential labour force. Moreover, baby boomers have had a favourable impact. Until now, this often well educated cohort has supplied the labour market with many highly qualified, experienced workers.

Population growth to over 83 million through immigration

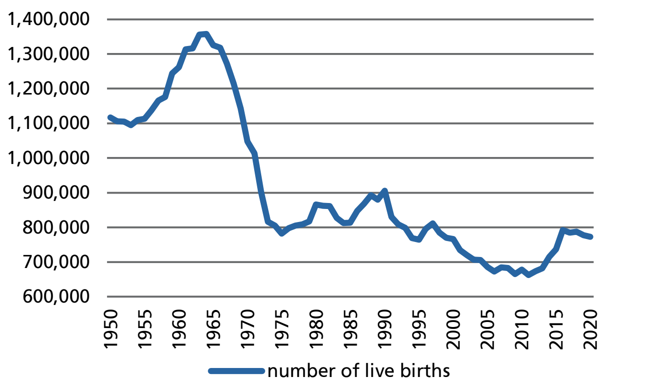
Germany's population stagnated from the mid-1990s until 2010. However, immigration started to pick up from 2011 onwards. In 2015, it was driven by a large number of refugees. Above all, though, the labour market has benefited from the immigration of well qualified people from Eastern Europe and European periphery countries. This influx was driven by economic crises in the country of origin of those people or by the prospect of higher pay in Germany. Net migration from Poland alone in the period from 2011 to 2019 was 410,000. This is roughly as many immigrants as from GR, IT, PT and Spain together. Total net migration between 2011 and 2019 amounted to 4.5 million. However, because of a negative balance of births and deaths, Germany's population only rose by 2.9 million. On balance, the number of inhabitants in Germany grew to its highest ever level at just over 83 million in 2020.

POPULATION GROWTH HAS FALLEN BACK TO ZERO



Source: Federal Statistical Office

BABY BOOMERS COMING UP TO RETIREMENT



Source: Federal Statistical Office

Real estate market benefiting: immigration driving demand for housing, retail sales and office employment

The demographic trend has significantly benefited the real estate market. A population increase of almost 3 million means demand for 1.5 million flats, assuming two persons per household. On the retail front, immigration among other factors led to sales growth of around EUR 20bn p.a. and at the same time bolstered demand for retail space. There has also been a sharp increase in office jobs since 2010. The number of office workers rose by 2 million to a total of 15 million − a trend in which immigration is also likely to have played a noticeable part.

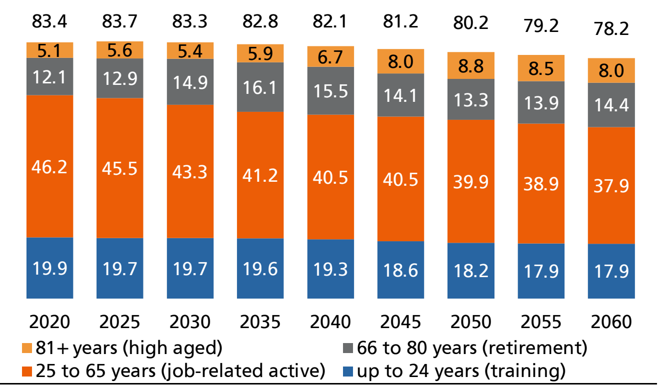
Demographic tail wind likely to turn into head wind

However, the tail wind from demographics is weakening. In the next few years, moreover, the wind direction is likely to turn around and hence slow down the economic trend along with the real estate market. One aspect is weaker immigration. The fact that Germany's population stagnated in 2020 can probably be ascribed largely to the pandemic. However, there was a clear downtrend in immigration even in the years leading up to it.

Immigration potential from other European countries dwindling

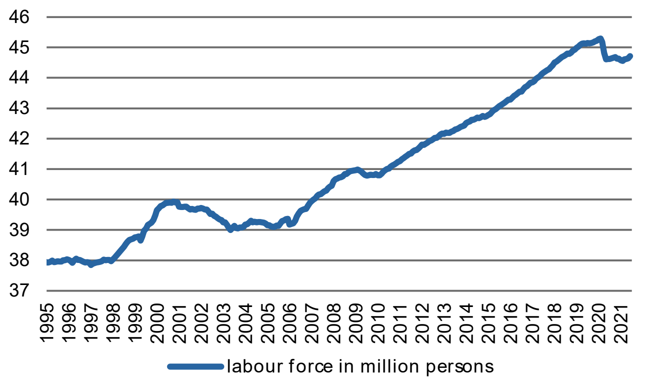
Immigration could obviously pick up again, although the potential for an influx from many European countries is limited. The birth rate in Eastern and Southern Europe is often even lower than in Germany, leading to similar consequences in respect of an ageing population. The shortage of qualified workers in Poland for example is at least as bad as it is in Germany. For this reason, we cannot expect immigration to remain high, at least not from European countries. Unlike in the past, it will probably no longer be possible to mitigate the shortage of qualified manpower through immigration.

POPULATION SET TO REMAIN STABLE FOR THE MOMENT, BUT MIDDLE COHORT (25-65 YEAR OLDS) SHRINKING (IN MILLIONS)



Source: Federal Statistical Office ("moderates" scenario G"L2W2)

IMPACT OF AGEING ON LABOUR FORCE AFTER STRONG GROWTH IN PREVIOUS YEARS



Source: Federal Employment Agency

Population set to remain stable for the moment, but ageing increasingly

Based on the Federal Statistical Office's "moderate" migration scenario involving annual net migration of 221,000, the population in Germany would hardly grow any further; if anything, it would more likely remain largely stable over many years. There will only be a gradual population decline after 2035. What is more serious on the other hand is the ageing effect. The fact that the baby boomers of the 1950s and 1960s are reaching retirement age is leading to a significant shift in the relative size of age cohorts. Once the youngest baby boom cohort comes to pensionable age around 2035, the 25-65 year-old age cohort, which is the economically active group, will shrink by 5 million to 41 million. This will lead to a corresponding reduction in the potential labour force. In contrast, the over-65s group will grow by 5 million to 22 million. The number of under-25s is set to remain largely stable. The median age of the population is set to increase by two years to around 46.5 years by 2024. Irrespective of this, the demographic trend will continue to show major regional disparities.

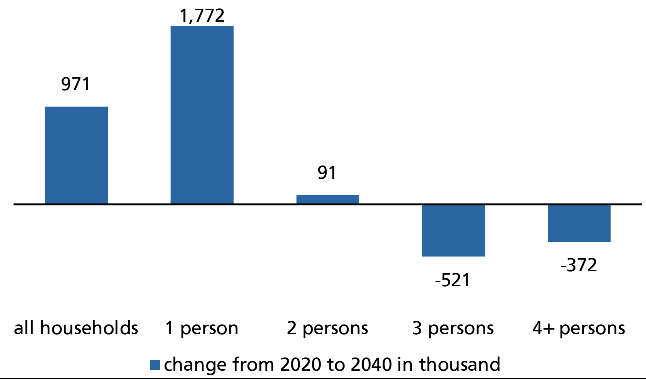
Falling incomes for the elderly: pension providers will no longer be able to maintain level of benefits

The changing population age structure will have major consequences, as illustrated by calculations according to which the German government's tax subsidy to the pension scheme would have to increase to half of the federal budget within a few decades since there will be fewer people in work against growing numbers of pensioners. An increase of around 4 million people in work since 2010 has so far driven economic growth. However, the economy could slow down once this number starts to fall as a result of more people taking retirement. Retirement age, the level of pension contributions and the level of pension benefits are the key stabilisation tools available to the pension funds. Older people will hardly be able to make up for this through private pension provision, which could lead to falling incomes for pensioner households.

Fewer families and far more elderly people living on their own

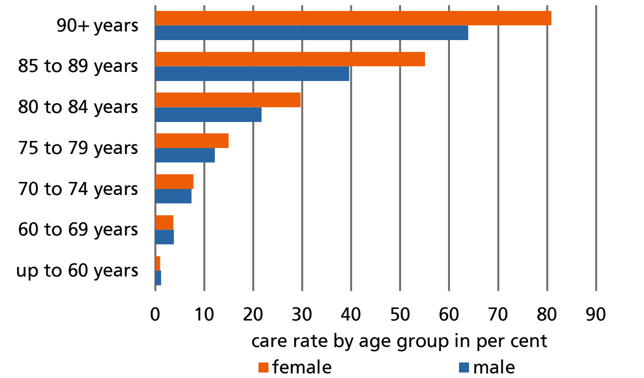
An ageing population is moreover affecting the structure of households. Based on calculations by the Federal Statistics Office, the number of households is set to rise to around 43 million by 2040, in spite of a largely stable population. This will reflect a sharp rise in the number of one-person households through more older people living alone. In contrast, the number of two-person households is expected to stagnate, while the number of larger households of three or more people would fall by around 900,000. The breakdown is as follows: 17.5 million single-person households in 2020 are projected to increase to 19.3 million by 2040, 14.0 million two-person households to 14.1, and 10.1 million households of three or more people to dip to 9.2 million.

NUMBER OF HOUSEHOLDS STILL GROWING, BUT ONLY THROUGH SHARP RISE IN SINGLE-PERSON HOUSEHOLDS



Source: Federal Statistical Office

RAPID GROWTH IN NUMBER OF ELDERLY ALSO DRIVING NUMBER OF PEOPLE REQUIRING CARE



Source: Federal Statistical Office

Ageing population also leading to an increase in need for care

Another effect of an ageing population is likely to be a marked rise in the number of people needing care. The likelihood of needing care rises rapidly in old age, hence a rising number of very elderly people is leading to a disproportionate rise in the need for care. The number of people affected has already doubled from 2 to just over 4 million between 1999 and 2019. How this rising need for carers is to be met with a smaller workforce is just as big an issue as that of making available suitable housing for the very elderly.

Impact on the residential market

Rising demand for housing catering for the needs of older people

A growing number of households is fuelling demand for housing even further. However, the current housing trend towards single family houses in out-of-town areas will only be compatible to a limited extent with the future population structure. Older people will require many more small, barrier-free flats in an urban environment with access to good services in the immediate vicinity. If we assume that there will be roughly an additional 1.8 million single-person households by 2040, this would mean that an average of 90,000 such small flats would have to be built p.a.

Many hurdles in the way of growing demand for retirement living

Apart from the challenges of new building, there is the question of financing. Will elderly people be able to afford the rents for new build apartments, given the likelihood of falling incomes? Another hurdle is that of space. There is already of shortage of building land for housing in conurbations. One possibility is that offices and shops which are no longer needed could be repurposed. In addition, we can expect to see a noticeable rise in demand for care home beds. There are currently around 900,000 such beds; by 2030, the figure is likely to rise by around 200,000. We anticipate a similar increase in the assisted living segment.

High demand for large flats and houses at present, but could there be a surplus in future?

In contrast, demand for larger flats and single-family houses is likely to lessen gradually if the number of households of three or more persons declines by almost 10 per cent by 2040. At present, this segment accounts for a substantial part of what is being built. On average, new build flats have around 100 m^2 of living space. In addition, one or two-family houses account for over one third of completed housing. The current high demand for houses and spacious flats could lead to a surplus, with the preference then shifting towards smaller flats which moreover will score points for lower costs and a better energy footprint.

Overall, an increase in new building and reduction in immigration are likely to ease the tight situation in the housing market. In contrast, the shortage of accommodation could then be concentrated on older people. This would be unfortunate since the limited mobility of this demographic group means fewer options to look for accommodation elsewhere, e.g. further out.

A generally tight housing market could be replaced be a shortage of retirement apartments

Impact on retail real estate

The sales growth which has been driven by a growing number of inhabitants could dry up if the population does not continue to grow at the same rate as in the past. On the other hand, it is more difficult to predict how shopping habits will change as a result of an ageing population. The incomes of more numerous elderly households could decline over time and moreover, older people could face higher bills for their housing and healthcare. Overall, retail sales could rise slower in view of the growing importance of the older demographic.

Budget available to the elderly for traditional consumption could shrink

Limited mobility through old age could lead to a decline in footfall in city centres and shopping malls, while suburbs would be more likely to benefit. There could also be a shift in the type of product in demand towards healthcare and necessities of daily life to the detriment of fashion and electronics. The focus of retailers on the younger demographic is now likely to have peaked and they are likely to have to focus more on the needs of older consumers as they become a larger group.

Retail sector will have to adapt to older people as a growing customer group

Impact on office real estate

Companies and the public sector face a wave of retirements in the coming years, and it is likely to become increasingly difficult for many companies to fill vacancies as they arise because subsequent demographic groups are much smaller. This could lead to an overall decline in the number of employees. If the "active population" as per our definition declines by 5 million by 2035, then the number of people in employment could decline by 4 million, given an employment rate of around four fifths. Around one third of the labour force currently works in an office which means that the number of office workers could decline from around 15 million to some 14 million. This means that fewer workspaces will be required.

Demand for office space set to fall as people retire

An exacerbated shortage of skilled workers will probably lead to algorithms being used to carry out a growing number of routine tasks, while employees concentrate on innovative, creative activities or customer care. A growing proportion of tasks involving communication and creativity could benefit office real estate as offices become specialist hubs for communication. In light of that, it is quite possible that demand for office space will stagnate or decline slower than employment overall.

Demand for office space should benefit from growing proportion of creative and communicative jobs

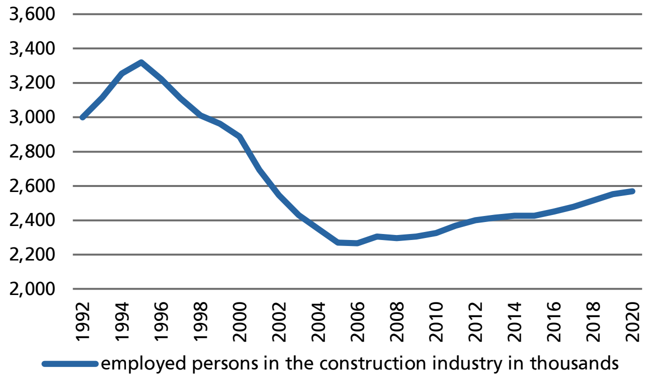
Impact on the construction sector

Construction is a labour-intensive sector employing just under 2.6 million workers. New building and renovation are to a high degree the work of tradesmen. After the crisis in the construction sector of the 1990s which was accompanied by a marked reduction in the number of people it employed, the industry has picked up again in the last few years. However, in view of an improved situation in the labour market a-

Constructions firms hit by shortage of manpower

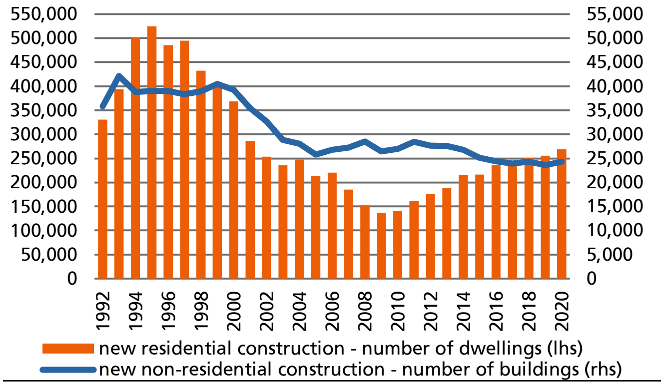
long with more school leavers with higher qualifications and graduates, the construction sector is finding it increasingly difficult to attract workers to do the manual work on building sites.

CONSTRUCTION SECTOR LARGELY OPERATING AT FULL CAPACITY, NOT LEAST BECAUSE RECRUITMENT LAGS DEMAND



Source: Federal Statistical Office

NEW BUILDING ALSO BEING SLOWED DOWN BY BOTTLENECKS IN CONSTRUCTION INDUSTRY



Source: bulwiengesa, Federal Statistical Office (2020)

The result of this is that new development and renovation projects regularly come to a standstill on the back of a shortage of skilled workers facing construction companies and the various trades. Companies often no longer tender for new projects because they are already fully stretched with their order books.

Demand for construction services likely to remain high in future

However, demand for construction services is unlikely to ease off; quite the contrary. Apart from demand for residential and commercial new builds, signs suggest that there will be a requirement for extensive renovation measures for the existing building stock in the years to come. In view of climate change, a large part of the existing stock of residential and commercial buildings will have to be retrofitted to conform to energy-efficiency norms. A good 80 per cent of the 43 million flats in Germany alone are more than 30 years old. However, even the infrastructure which often dates back to the 1960s, including roads and bridges, is showing its age and hence in need of a major overhaul.

Can productivity improvements make up for bottlenecks on building sites?

An ageing population could make it even more difficult in future for the construction industry to recruit the necessary skilled workers. Bottlenecks are likely to persist in new building and building refurbishments. The extent of such bottlenecks is likely to depend on the extent to which the construction industry can make productivity gains through new technologies.

Outlook: little time to adjust in the real estate market

Investors in the real estate market should focus on the serious impact of demographics

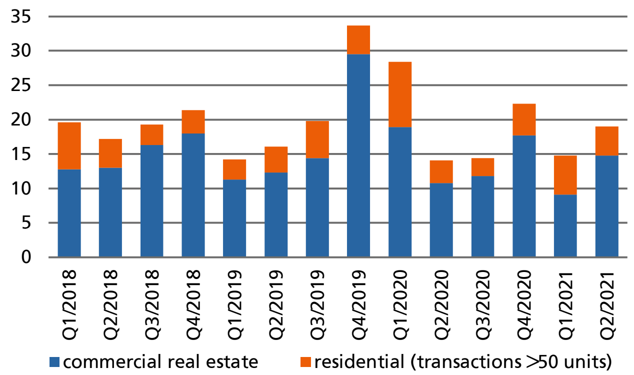
An ageing population is set to alter demand for property. There will be a need for age-appropriate flats for older people, while demand for commercial real estate such as offices is set to decline gradually on the back of fewer people in the workforce. In addition, the construction industry could suffer from an ongoing shortage of manpower. This will lead to a permanent shortage of construction services which will therefore continue to be expensive. Time is also short for adjustments to be made to real estate supply which tends to be slow to change. It will take less than two decades for the bulk of the ageing effect and shift in demand to take full effect.

INVESTMENT MARKET

Commercial real estate still in demand in spite of Covid, with higher risks and falling rental yields

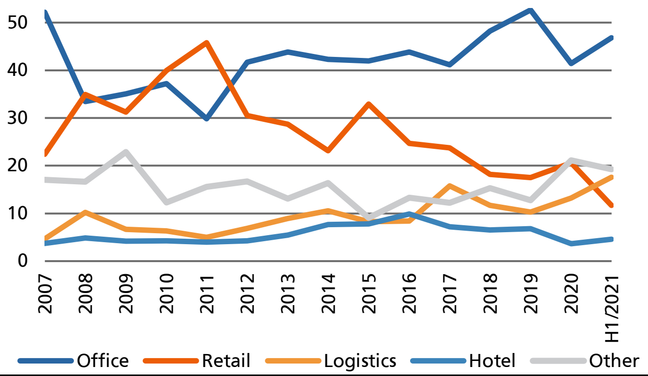
The coronavirus pandemic has had a serious impact on the commercial real estate market although it does not seem to have dampened keen investor interest in the sector. There has been no let-up in demand for property since the capital market continues to be characterised by negative bond yields. At the same time, initial rental yields have fallen to historical lows in some cases, while risks have generally increased. This persistent interest in real estate is illustrated by the insurance industry which has invested a larger proportion in property for the past ten years. The figure is expected to rise further in 2021 to reach 11.5 per cent. This is more than double the percentage in 2009. Another example is the sale of the T1 office tower in Frankfurt which is still under construction. It is being acquired by Allianz and Bayerische Versorgungskammer who are taking the plunge in spite of the trend towards mobile working patterns, a growing office vacancy rate and purchase price tag of around EUR 1.4bn – making the office tower the most expensive building in Germany.

NO SLUMP IN INVESTMENT IN REAL ESTATE DESPITE PANDEMIC (INVESTMENT VOLUME PER QUARTER IN EUR BN)



Source: CBRE

OFFICE AND LOGISTICS REAL ESTATE STILL IN DEMAND (BREAKDOWN OF INVESTMENT VOLUME BY TYPE AS PERCENTAGE)

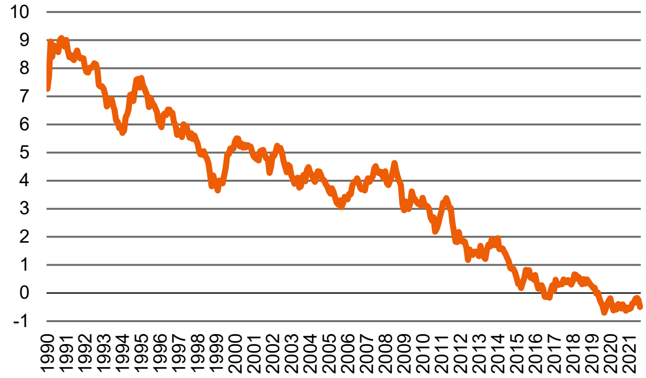


Source: BNP Paribas Real Estate

Demand mainly for flats, prestigious office space, logistics properties and supermarkets

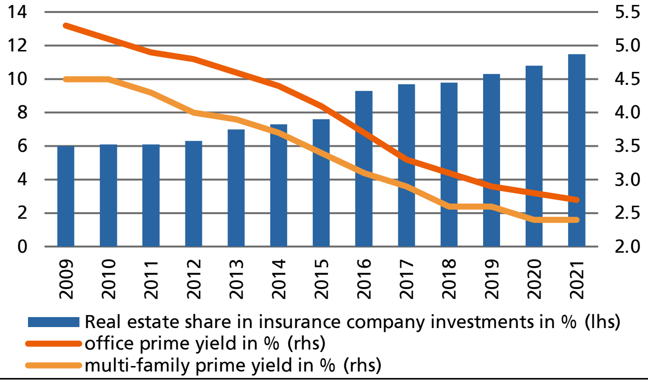
Around EUR 53bn has been invested in commercial real estate in the past four quarters, and some EUR 17bn in residential property portfolios. In light of the restrictions imposed by the pandemic, an investment volume of around EUR 70bn is impressive. Only the record year 2019 brought a much higher figure at EUR 90bn. However, there has been a shift in demand for the various assets classes and the way in which they are regarded. Apart from flats, demand is mainly for prestigious office developments and it should remain lively from tenants in spite of mobile working.

DOWNTREND IN 10-YEAR BUND YIELD SEEMS TO HAVE STOPPED



Source: Refinitiv As per August 2021

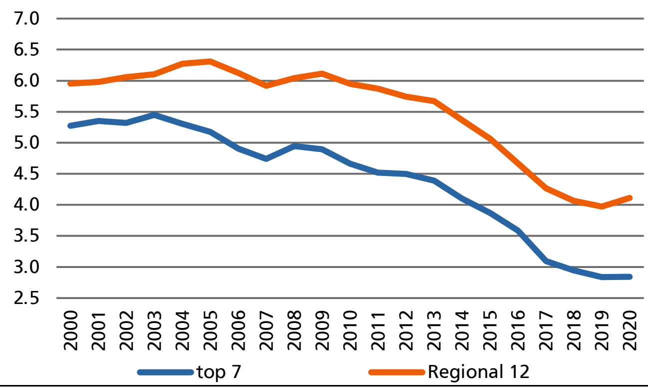
INCREASE IN REAL ESTATE INVESTMENT IN SPITE OF YIELD LOW



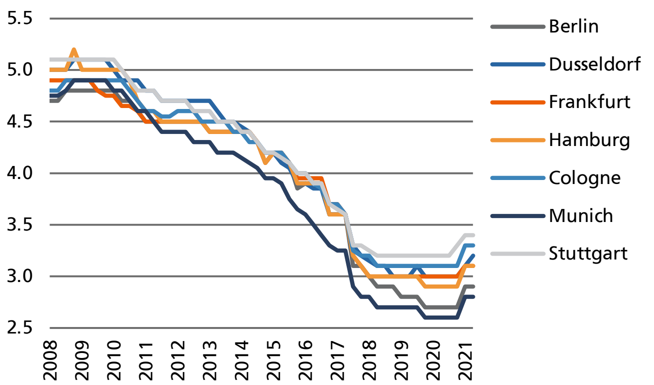
Source: EY, Savills

There is also strong demand in logistics, reflecting the boom in e-commerce. This trend is hitting the retail side though – with the exception of the convenience store sub-segment where there has been a rise in rental yields, bucking the general market trend towards a slight decline which is affecting shopping centres above all. The price-to-rent ratio for apartment blocks also continued to rise in spite of the debate about stiffer rent regulations. Real estate remains attractive in view of the yield advantage against bonds. However, a further decline in rental yields in some cases is increasingly failing to cover the general rise in letting risks.

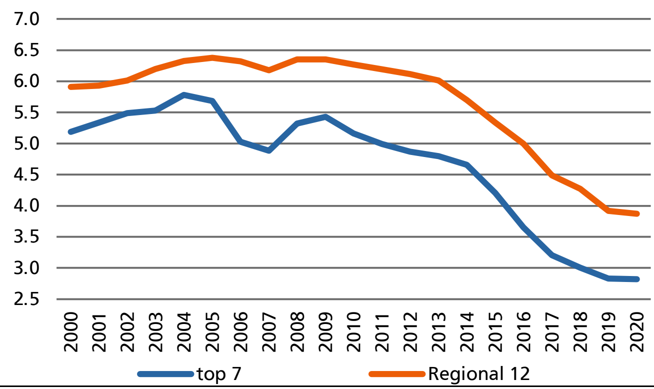
RETAIL: INITIAL RENTAL YIELD OVER TIME
NET INITIAL RENTAL YIELD IN CENTRAL RETAIL LOCATIONS (%)



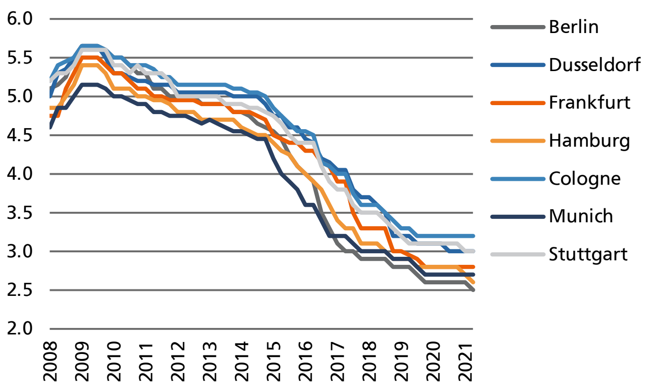
YIELD OVER TIME IN INDIVIDUAL TOP LOCATIONS
NET INITIAL YIELD IN INDIVIDUAL CENTRAL RETAIL LOCATIONS (%)



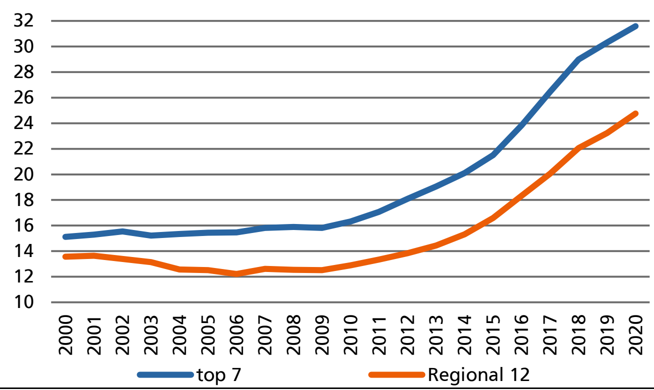
OFFICE: INITIAL RENTAL YIELD OVER TIME
NET INITIAL RENTAL YIELD IN CENTRAL OFFICE LOCATIONS (%)



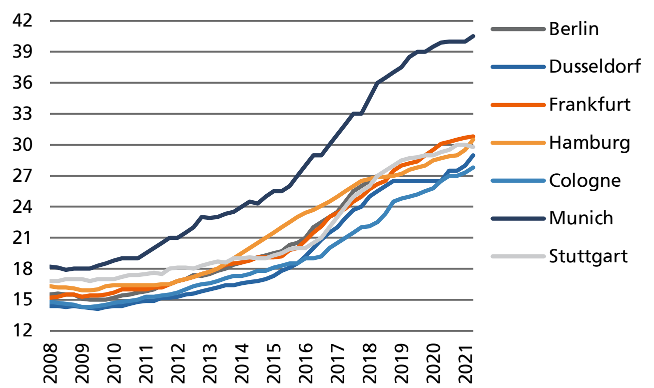
YIELD OVER TIME IN INDIVIDUAL TOP LOCATIONS
NET INITIAL YIELD IN CENTRAL OFFICE LOCATIONS (%)



HOUSING: PRICE-TO-RENT RATIO FOR APARTMENT BLOCKS
AVERAGE PRICE-TO-RENT RATIO



PRICE-TO-RENT RATIO IN INDIVIDUAL TOP LOCATIONS
AVERAGE PRICE-TO-RENT RATIO



Source: bulwiengesa

Note: The net initial yield in the office/retail segments is calculated using the net annual rent and total purchase price, taking into account additional charges. In the case of the price-to-rent ratio for apartment blocks, the purchase price is divided by the basic rent (excluding extra costs) in the first year and is therefore the inverse of the gross initial rental yield.

Top-7: Index of the top locations, namely Berlin, Cologne, Düsseldorf, Frankfurt, Hamburg, Munich and Stuttgart

Regional-12: Index of the regional property centres, namely Augsburg, Bremen, Darmstadt, Dresden, Essen, Hannover, Karlsruhe, Leipzig, Mainz, Mannheim, Münster and Nuremberg

RETAIL

Situation remains difficult, but recovery underway

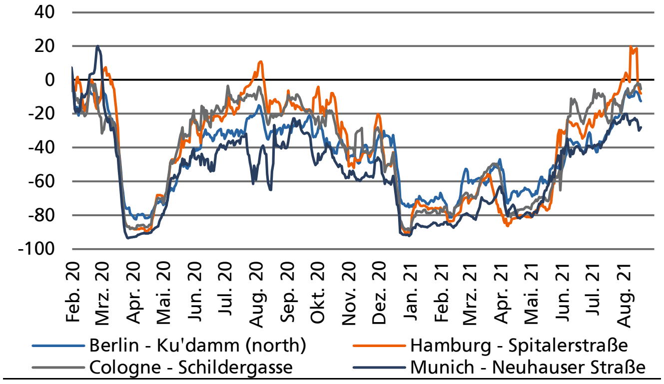
Retail stalemate continues in 2021 after loss of Christmas business

The coronavirus pandemic has had a major impact on city centre retailing. This mainly reflected the lockdown last spring, the long period of closures from November 2020 and the fact that Christmas trading was cancelled. Although concepts such as Click & Collect and Click & Meet allowed some business to continue on a much reduced scale, overall, the hit suffered in the first half of 2021 has been enormous. According to the German Retail Federation (HDE), retailers affected by lockdown measures lost around EUR 40bn in the period from January to May 2021. This is the equivalent of a 60 per cent downturn against 2019. Government measures have at least mitigated the loss to a certain extent.

Clear recovery in city centre retail started towards the end of the first half of 2021

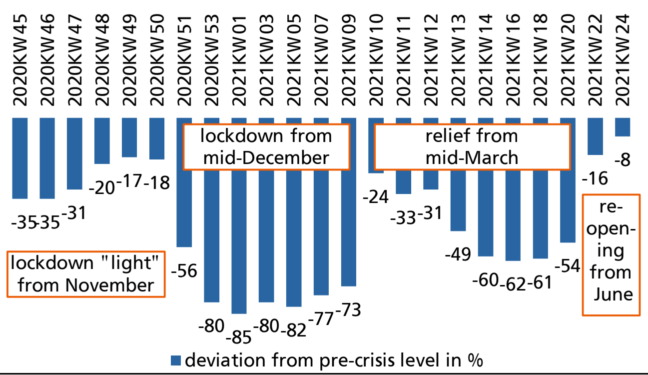
However, things are picking up: restrictions applying to the retail sector have been largely lifted thanks to falling infection figures from May onwards and progress with the vaccination rate. High streets and shopping centres are now much livelier. Although footfall is still not quite up to the level of 2019, it has risen sharply since May. A higher number of customers is also having a marked positive impact on sales revenues. Sales in mid-June 2021 were only slightly below pre-crisis level. Although there has been an uptick in Covid cases since August – the "fourth wave" – and this could lead to fresh restrictions, they would probably be milder than hitherto in view of the rate of vaccination achieved so far (62 per cent fully vaccinated as per 9 September 2021).

CUSTOMERS HAVE COME BACK TO THE HIGH STREET (FOOTFALL AS % VS. 2019)



Source: hystreet.com/Federal Statistical Office

CITY CENTRE RETAIL SALES ALMOST BACK TO PRE-COVID LEVEL



Source: HDE

Pent-up consumer demand focusing on a shrunken city centre shopping landscape

This year could therefore end on a positive note since it seems that people have not lost their enjoyment of going round the shops. Pent-up consumer demand is focusing on a now shrunken city centre retail sector, where a large number of chain store branches have shut down in the past few months. In addition, Germans have saved much more than they would normally, and many households are likely to have money left over after the summer holidays to indulge in some serious shopping. During the pandemic, households spent far less on holidays, leisure and eating out. Instead of the usual annual growth in savings of around EUR 80bn, there was a much higher year-on-year increase of up to EUR 180bn during the pandemic. This means that retail sales in the second half and from Christmas trading could very well show a very gratifying trend.

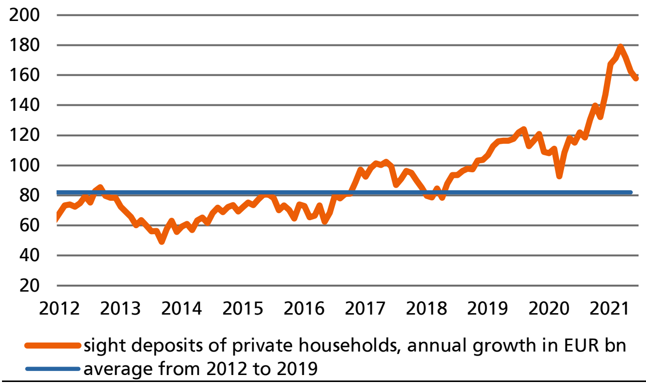
However, city centres have not just lost some of the businesses which were still there prior to the pandemic; the structure of retail is also changing. Many well-known chains have shut down a large number of branches. The list is long, including names such as Dekohaus Depot, shoe shop chain Dielmann, perfume and cosmetics retailer Douglas, fashion retailer Esprit, H&M, Pimkie and Zara, the running expert Runners Point or Galeria department stores. New tenants in city centres also include fashion chains, but to a lesser extent than in the past. Pure online retailers are also keen to have a physical presence in city centres. In contrast, some of the new tenants have little in common with conventional high street retailers. Apart from hospitality outlets, there is an increase in the number of discounters, drugstores along with supermarket delivery services (quick commerce) such as Gorillas or Flink. Space in city centres is especially attractive to this type of business since it allows firms to fulfil their promise of delivery within just a few minutes.

Whether or not city centres can be made more attractive with new tenants is questionable

BIG LOSSES FOR CLOTHES AND DEPARTMENT STORES IN 2020 (NOMINAL RETAIL SALES IN 2020 VS. PREV. YR AS %)

Source: Federal Statistical Office

SHARP INCREASE IN HOUSEHOLD BANK BALANCES DURING PANDEMIC



Source: Bundesbank

Data up to June 2021

There are structural reasons for the retreat of conventional city centre retailing; at most, the pandemic has merely accelerated the trend. Apart from excessive branch networks, retail sales have been increasingly depressed by growing e-commerce. In addition, running a physical branch network in tandem with an online shop is extremely costly. This mainly applies to products such as fashion items, shoes and electronics which make up the core product range on offer in city centres. This is likely to lead to a lasting reduction in demand for space from inner-city retailers, in spite of growing interest for such space from companies from outside the traditional retail sector.

City centre retail landscape changing and will require less space for good

Market conditions for the retail sector

In spite of the recession and a rise in unemployment, there was a record-breaking increase in retail sales in 2020. According to figures by the Federal Statistical Office, retail sales were up by 5.1 per cent against 2019. The average figure in the five years prior to that was only 3.5 per cent in spite of more favourable conditions. This reflects the fact that families ate at home during lockdown instead of eating out; households stocked up on items for leisure and working from home and invested in their homes and gardens instead of paying for a beach holiday.

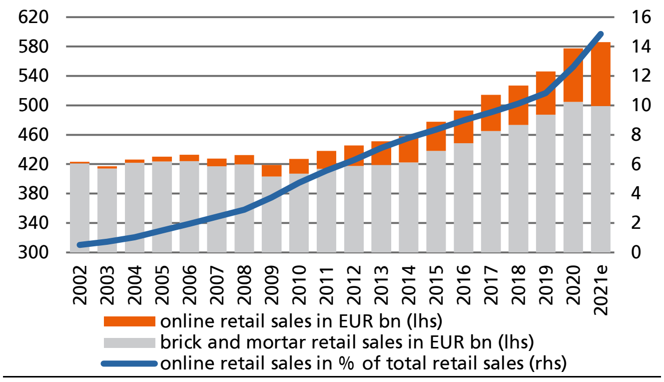
Supermarkets enjoyed record grocery sales in 2020 as people were forced to eat more meals at home

The HDE has calculated total retail sales of EUR 577bn in 2020 − EUR 31bn more than in 2019. Supermarkets were the main winners on the bricks-and-mortar front, while high streets suffered painful losses in the two-digit percentage bracket. If they

Market share of e-commerce in non-food segment rises to over 18 per cent

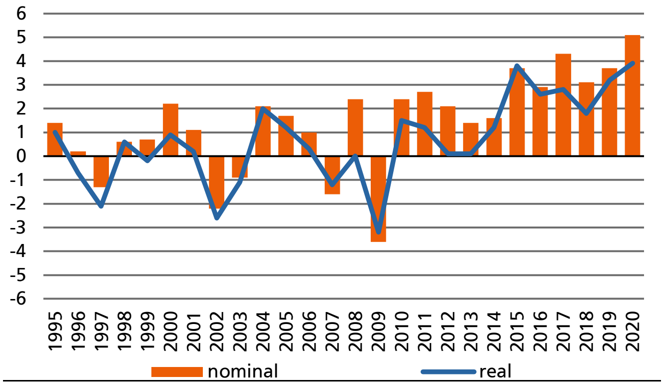
bought any clothes or electrical/electronic goods, consumers mostly did so at the click of a mouse, increasing online retail sales from EUR 59bn to EUR 73bn.

E-COMMERCE MARKET SHARE SIGNIFICANTLY BOOSTED BY COVID



Source: HDE, DZ BANK

RECORD SURGE IN RETAIL SALES IN 2020 THROUGH COVID (VS. PREVIOUS YEAR IN PER CENT)



Source: Federal Statistical Office

The market share of online trading climbed from 11 to 13 per cent against 2019. In the non-food segment, the proportion rose to over 18 per cent. However, e-commerce is also progressing on the groceries front. Although the proportion of groceries purchased online only stands at 2 per cent, it is nonetheless showing strong growth, for example through supermarket delivery services.

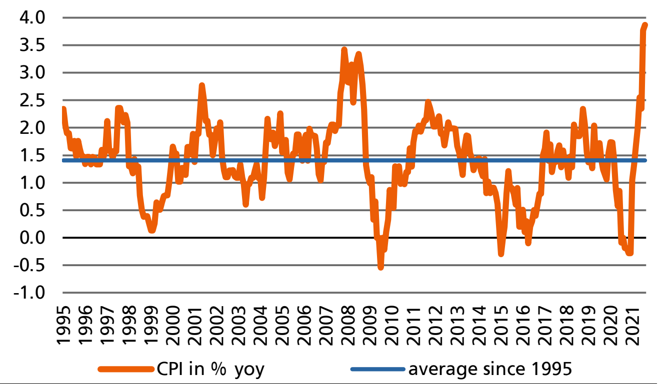
E-commerce set to continue to show strong growth in 2021

E-commerce is expected to experience further growth this year, while retail sales as a whole will only show slight growth. Covid restrictions in the first half of 2021 again boosted online retail. Growth in this segment will continue after the pandemic since shoppers have come to appreciate the comfort of shopping from home. In addition, Covid has increased the customer base of online retailers. The share of e-commerce is likely to come close to 15 per cent in 2021. If it carries on this way, the segment could reach sales of EUR 100bn next year.

Labour market recovering, but current inflation dampening real incomes

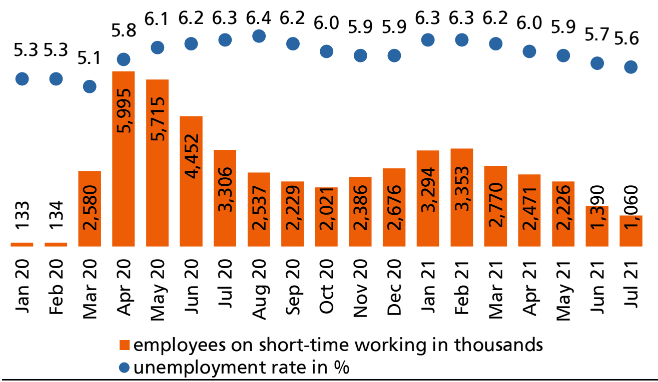
After more than a year of the pandemic, economic prospects for the retail sector are picking up again. Unemployment and short working time are coming down in the wake of GDP growth. However, the now slower pace of vaccination take-up and rampant Delta Variant could slow down economic recovery. A sharp rise in consumer prices – plus 3.9 per cent in August – could also dampen the upturn. In the past few

IS INFLATION MAKING A COMEBACK? PRICES RISING FAST



Source: Federal Statistical Office

SITUATION IN THE LABOUR MARKET IMPROVING

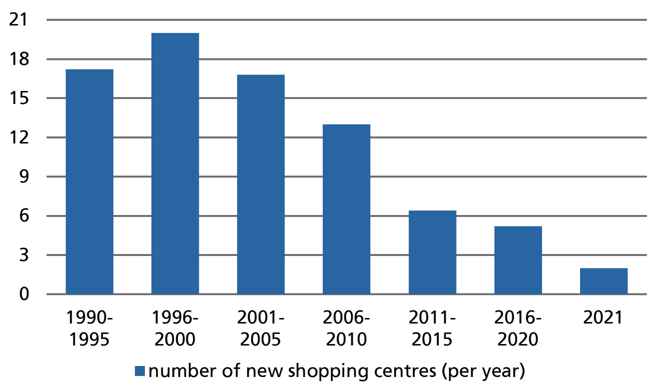


Source: Federal Employment Agency, ifo Institute years, low inflation rates led to a sharp rise in real incomes. This year, however, the rise in consumer prices is likely to exceed the nominal increase in pay.

Retail trade has relied on close network of branches so that sales space was expanded in many places

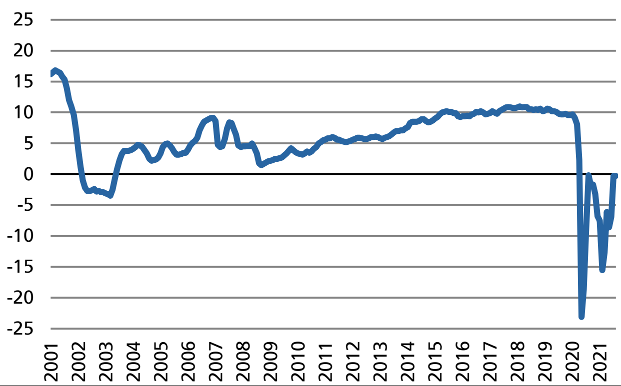
Even though e-commerce started to grow many years ago, retailers continued to expand sales space, e.g. with a growing number of shopping centres. However, this expansion has slowed down significantly in relation to the 1990s. There are now almost 500 large shopping malls in operation in Germany today. New openings in the last few years have been concentrated mainly in city centres. Alongside this, in many places, sales space was extended with smaller developments. This increase in floor space came in response to the strategy of many fashion chains to boost their presences in city centres along with their online offer. Economic growth, population growth and flourishing tourism promised strong sales. Initially, the concept worked and prime rents in attractive shopping locations rose for a long time.

NUMBER OF SHOPPING CENTRES ROSE UNTIL VERY RECENTLY



Source: EHI Retail Institute

CONSUMER CONFIDENCE (IN POINTS) STILL WEAK



Source: GfK

As per July 2021

Hybrid distribution strategy has foundered on high costs

The high cost of running parallel distribution channels has forced retail chains to take counter measures. Streamlining had begun even prior to Covid, as illustrated by a decline in prime rents. This was only mitigated by the fact that vacant fashion stores were often taken over by fast food outlets or drugstore chains. However, the shrinking process in city locations would probably have continued even without Covid. The sameness of the retail offer as a result of extensive high-street "cloning" has also dampened prime city centre retail space.

Retail chains on the retreat; on the other hand, many independent businesses have held up well

Whereas chains have closed down many branches, independent shops have often managed to keep their head above water, and therefore the quality of the offer has hardly suffered. However, good concepts will be needed to make city centres generally more attractive. The HDE has already worked out a ten-point plan and the German Property Federation (ZIA) has also presented a position paper on city centre development. Cooperation between landlords, retailers and the city authorities is likely to be crucial. One plus point is that city centre space is suitable for a variety of purposes, e.g. for hospitality outlets, housing, culture, leisure and even logistics.

An attractive city centre retail offer means a lively city centre

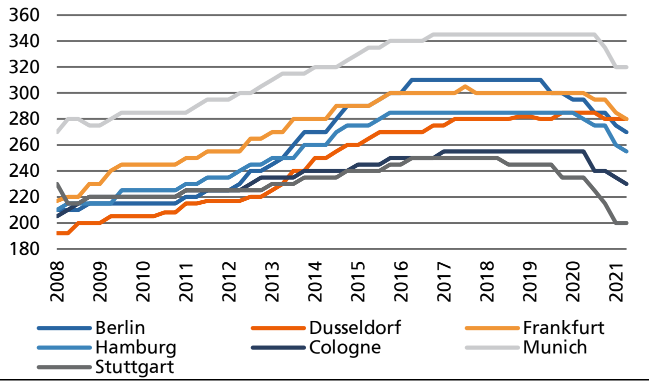
Retail will play in important part in this. An attractive city centre acts as a magnet for a large number of visitors, thus laying the foundations for other forms of use. The absence of customers can only compound what are already poorer rental prospects in cities.

Retail: comparison of top locations

The crisis in the retail sector has not left top locations unscathed. Although prime rents remained largely stable in that segment prior to the outbreak of the pandemic whereas they had already fallen in other places on the back of online competition, Covid has led to a fall in prime rents even among the top-7. According to estate agent reports, city centre retail rents have fallen by up to 20 to 30 per cent from the previous level. The fall has not been quite so dramatic in the case of prime rents in top locations which have fallen by around 8 per cent during the pandemic. They have fallen by a total of around 10 per cent in relation to the peak in mid-2018.

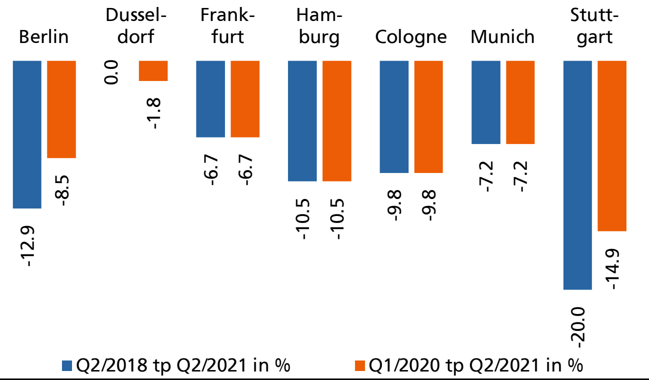
Prime rents for inner-city retail space down by around 8 per cent during the pandemic

PRIME RENTS IN RETAIL ON A DOWNWARD SLIDE (EURO PER M²)



Source: bulwiengesa

FALL IN RETAIL RENTS STRONGLY DEPENDENT ON LOCATION



Source: bulwiengesa

The extent has varied: the sharpest fall in prime rents has been in Berlin and Stuttgart where rents had already started to fall before the pandemic. In Berlin, they fell by a total of around 13 per cent and in Stuttgart by as much as 20 per cent. In contrast, the prime rent has mostly held up in Düsseldorf. It has fallen by around seven to 10 per cent in the other four top locations.

Prime rent in Düsseldorf hardly touched by Covid, versus slump of 15 per cent in Stuttgart

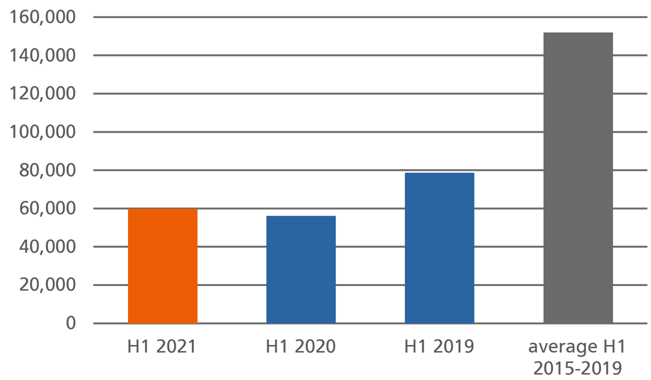
In other words, most of the fall in rents is likely to be behind us. The upturn already mentioned in city centre retail has also involved the lettings business in the top locations. More space was let in Berlin, Frankfurt, Munich and Stuttgart in the first half of 2021 than in the same period last year. Overall, lettings in the first six months of 2021 were slightly in positive territory.

City centre space still in demand

Apart from e-commerce and the consequences of recession and lockdown, the retail sector is also being hit by a slump in tourism and business travel. The pandemic has brought to an end the multi-year uptrend in visitor numbers − visitors who were able partly to offset some of the sales lost to retailers from e-commerce. The aggregate number of overnight stays rose by around 60 million from the turn of the millennium to 94 million in 2019. In contrast, the number of overnight stays had fallen to just 36 million in 2020 – without Covid, the figure might have reached 100 million. The visitor business will undoubtedly recover, but is unlikely to return to the level of 2019 in a hurry, not least because business meetings are now being conducted online more often. Climate change could compound the trend if companies also give up business travel and especially flights in order to be greener.

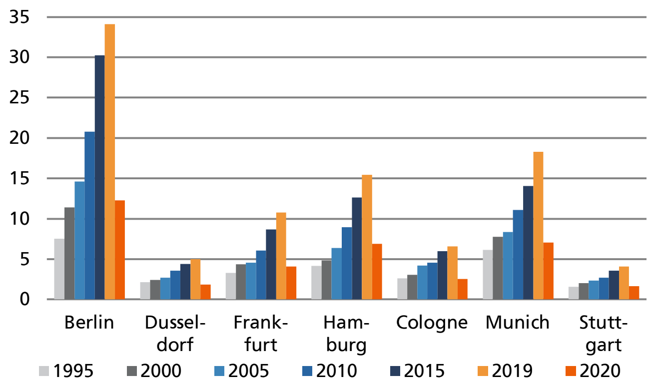
Tourism likely to provide less support for retail in future

RETAIL: TAKE-UP IN CITY LOCATIONS (SPACE LET IN M²)



Source: JLL

TOURISM DECIMATED BY COVID (OVERNIGHT STAYS IN MILLION)



Source: bulwiengesa, City Statistical Offices

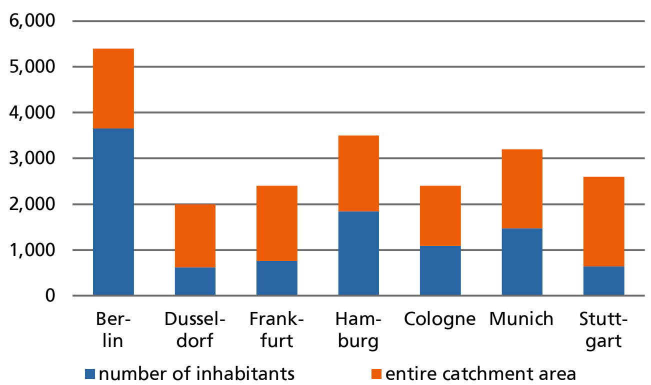
Strong growth in customer potential from migration to cities probably a thing of the past

Apart from tourism, strong population growth in the past few years has cushioned the impact of e-commerce on the retail sector. The number of inhabitants in the top locations has grown by around 1 million to just under 10 million since the turn of the millennium, thus boosting potential customer numbers. However, population growth stagnated in 2020. Indeed, a slowdown in the growth trend in cities has been in evidence for some years now respectively. If that remains the case, then it will become more difficult for e-commerce to make up for the loss of sales.

Top-7 set to remain attractive shopping locations

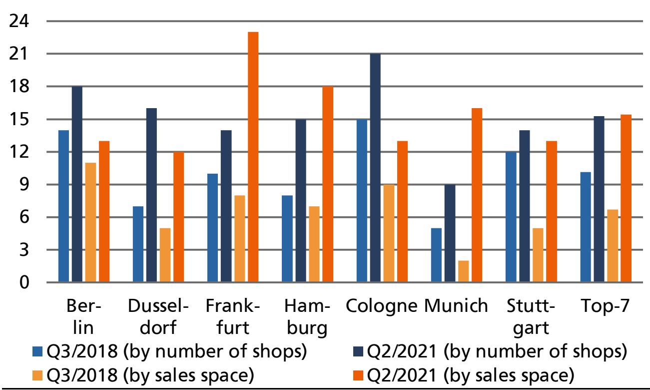
Although the outlook for the retail sector in city centres is no longer quite as rosy as it was even just a few years ago, top locations in particular still remain attractive shopping locations not least in view of a catchment area of several million in each case. Berlin has a catchment area of over 5 million people; Hamburg and Munich over 3 million respectively. Another important factor is a high purchasing power, which is only below the German average in Berlin and just above in Cologne. Even a number of overnight stays well below the record number in 2019 would suggest high demand. Low demand for space after the pandemic is unlikely to lead to any lasting vacancies in top locations. After all, inner-city space is attractive for other forms of use.

TOP LOCATIONS HAVE LARGE CATCHMENT AREA (MILLION INHABITANTS)



Source: bulwiengesa

INCREASE IN SUPPLY OF SALES SPACE (AVAILABILITY AS PERCENTAGE)



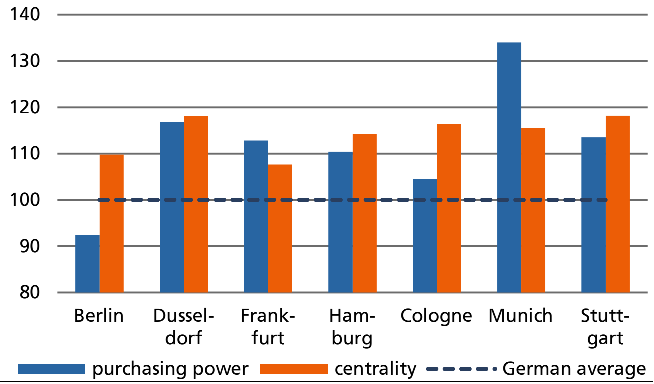
Source: JLL

Retail: summary

Germany's leading shopping miles still a big attraction for the public

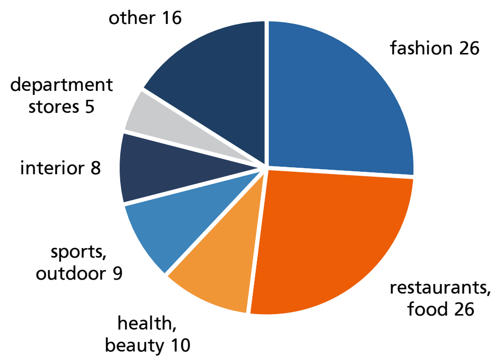
The structural change in the retail sector continues, illustrated if nothing else by a change in the profile of tenants of city centre space. In view of their strength as locations with a large catchment area, though, top locations are likely to avoid the threat of a dying city centre which hangs over many towns. The leading shopping miles will continue to attract a high footfall in future, even if there are no longer quite so many tourists, business travellers or commuters from the surrounding areas (now working from home) coming into town to shop. On balance, prime retail space in top locations is likely to remain attractive for many retailers. However, whereas it used to be a landlord's market, it is now a tenant's market.

TOP LOCATIONS - RETAIL KEY FIGURES
(PURCHASING POWER/CENTRALITY IN POINTS, 2021)



Source: bulwiengesa

MARKET SHARE OF TEXTILES DOWN TO ONE QUARTER
(PERCENTAGE SHARE OF SALES BY TYPE OF STORE, H1 2021)



Source: JLL

City centre lettings across Germany

From landlord's to tenant's market: rules of the game in rental business have changed

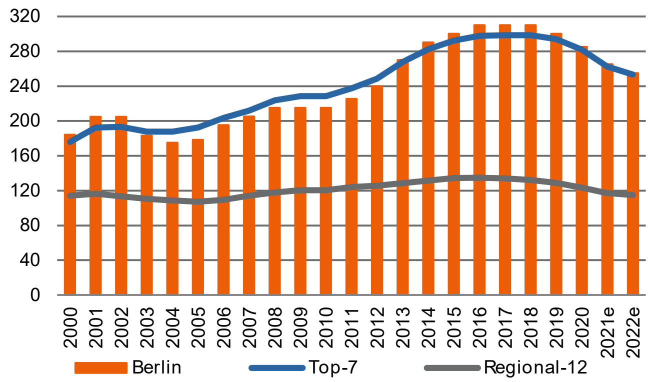
The rules of the game in the rental business have now changed. This would probably have happened in any case − after all, e-commerce, less migration to cities or avoiding business trips which damage the environment are developments which are separate from the pandemic. For tenants, the acceleration in the trend triggered by Covid means not only lower rents in certain locations, but also sales-based rental agreements, shorter contract periods and cancellation options. There could also be incentives such as contributions towards building measures or rent-free months. Concessions are likely to be necessary especially in the case of large, four-figure sales spaces and retail space over several floors. Differentiation between locations could also increase.

High pent-up demand: 2021 likely to end on a pleasing note for city centre retailers

Pent-up demand is likely to lead to high sales in city centre shops until beyond the turn of the year. In our view, the trend towards falling rents should ease off. Future prospects will also depend on concepts to reshape inner cities. The question for landlords will be which way forward they want to go in light of changes in the retail sector. There are many alternatives to retail, but rents in such cases are likely to be much lower, especially since any change in the use of the space could require an initial investment.

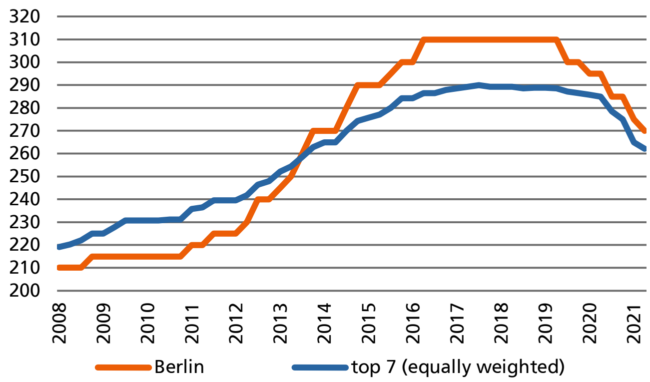
Berlin: Retail space

PRIME RETAIL RENTS IN EURO PER M²



Source: bulwiengesa, DZ BANK forecast

PRIME RETAIL RENTS, QUARTERLY DATA IN EURO PER M²

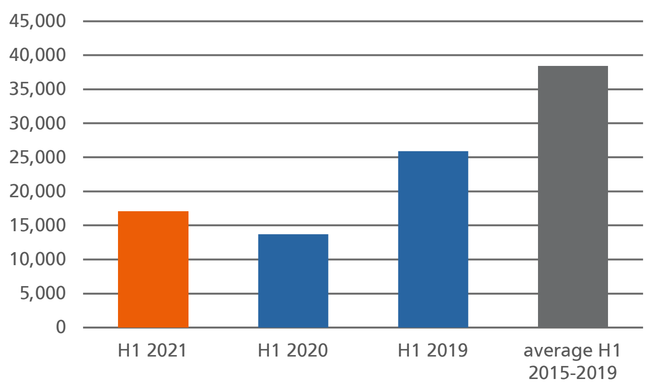


Source: bulwiengesa

Berlin a magnet for visitors: tourism likely to get retail sector going again

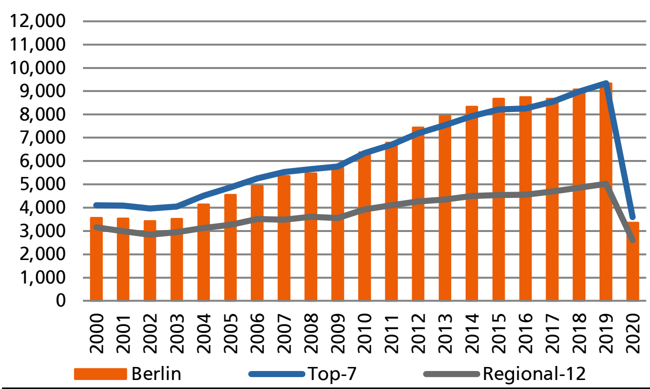
The retail sector has benefited considerably from the upturn in Berlin, reflecting firstly a sharp fall in unemployment and secondly a huge increase in the number of potential customers. The capital's population has increased by over 350,000 since 2011. Together with equally strong population growth in surrounding areas, the retail sector has the biggest catchment area in the whole of Germany at almost 5.5 million people. Tourism was also flourishing prior to the pandemic. There were 34 million overnight stays in 2019; in 2020, the number fell to 12 million. Visitors play an even more important role here because Berlin's inhabitants have a relatively low purchasing power in relation to other top locations. Apart from its size, Berlin's retail sector is notable for geographically quite separate prime shopping areas. These include the Tauentzienstraße which has the highest prime rent, the Ku'damm and Alexanderplatz with its high footfall along with the Friedrichstraße and the trendy Hackescher Markt. The city also boasts around 70 shopping centres, foremost amount which is the large Mall of Berlin. From 2016 to 2019, prime rents in Berlin stagnated at EUR 310 per m^2 and then slumped 13 per cent to EUR 270 per m^2 by mid-2021. Lettings of inner-city retail space picked up slightly during the first half of 2021 in spite of the lengthy lockdown. The future trend is likely to depend not least on the speed of recovery in tourism. The outlook though is quite upbeat; after all, Berlin is becoming even more attractive as a destination through the ongoing revamping of the Museum Island or the newly opened Humboldt Forum in the rebuilt Berlin Castle. The prime retail rent could continue to fall, but not at the high rate seen recently.

RETAIL SPACE TAKE-UP CITY LOCATIONS IN M²



Source: JLL

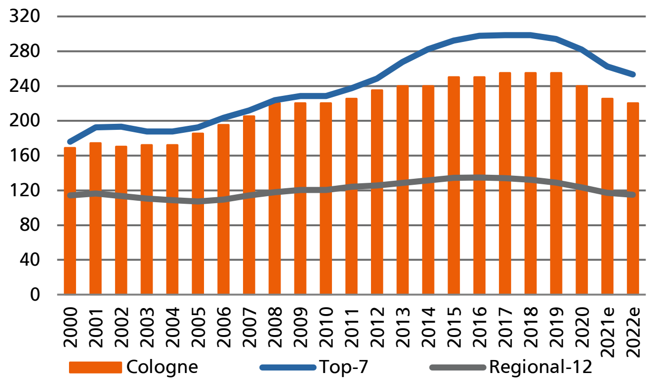
GUEST OVERNIGHT STAYS PER '000 INHABITANTS



Source: bulwiengesa, Scope

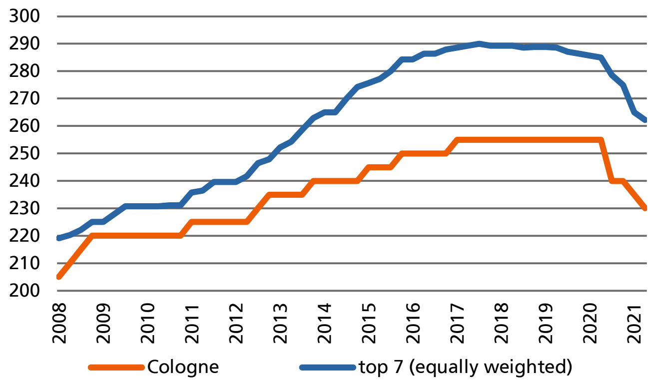
Cologne: Retail space

PRIME RETAIL RENTS IN EURO PER M²



Source: bulwiengesa, Scope, DZ BANK forecast

PRIME RETAIL RENTS, QUARTERLY DATA IN EURO PER M²

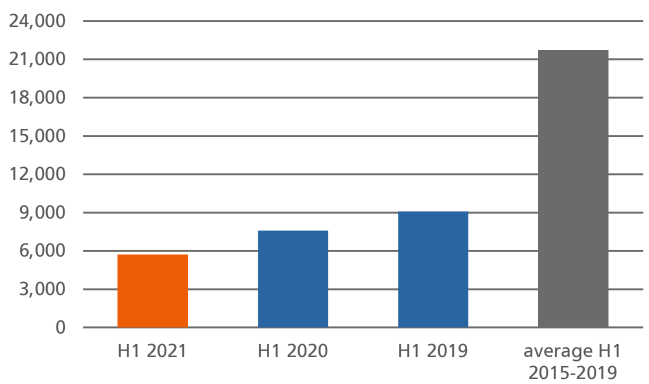


Source: bulwiengesa

No sustained recovery yet in city centre's mass market retail scene

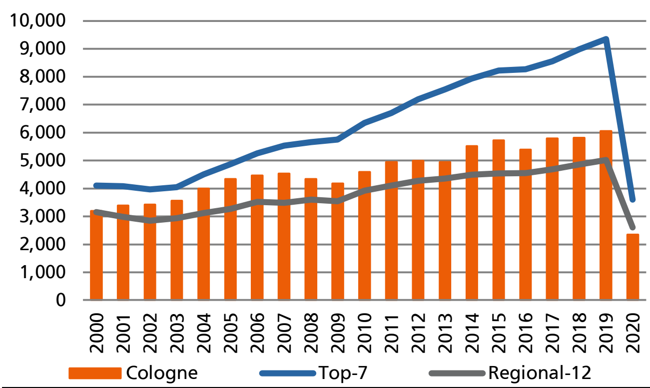
The million-strong city of Cologne is one of two shopping destinations in western Germany along with Düsseldorf, hence a certain competition between the two cities. Cologne is attractive for retailers in view of potential from a 2.4 million-strong catchment area along with many day-trippers from the Benelux countries. Prior to Covid, tourism was not quite as important as it is in the other top locations. Purchasing power is also slightly lower for a top location at 105 points. Unlike Düsseldorf which has an important luxury segment, Cologne's city centre focuses on the mass market. It has a three-kilometre long shopping circuit which invites shoppers to stroll through its prime locations and supports a high footfall. This applies above all to the Schildergasse where are large proportion of stores are high-street chains. The Hohe Straße also has a high footfall, although not quite up to the Schildergasse level. In contrast, the Ehrenstraße is trendier. The Domkloster/Wallraffplatz area has a smaller luxury segment. Cologne also differs from Düsseldorf is so far as the recovery in the retail sector which is already visible in the latter has yet to happen in the former. This is evident from relatively low lettings of inner-city retail space. In contrast, at 13 per cent, the ratio of available retail space calculated by JLL is slightly below average. It therefore seems that an already relatively high supply of space in Cologne's city centre prior to Covid has not had a negative impact. The prime rent has fallen by around 10 per cent to EUR 230 per m^2 during the pandemic. We assume that the trend will continue, albeit at a slower pace.

RETAIL SPACE TAKE-UP CITY LOCATIONS IN M²



Source: JLL

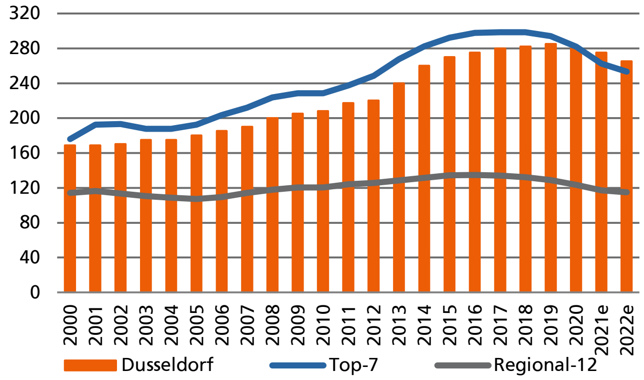
GUEST OVERNIGHT STAYS PER '000 INHABITANTS



Source: bulwiengesa, Scope

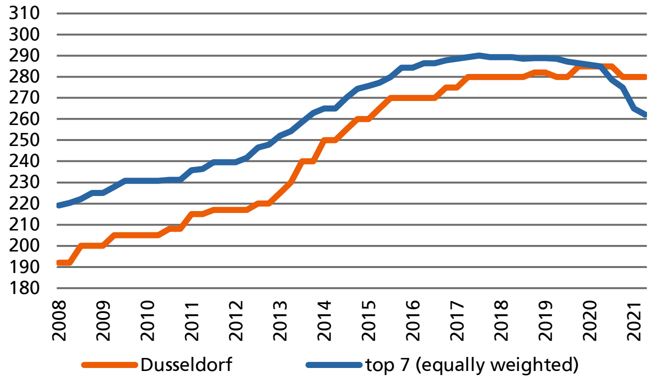
Düsseldorf: Retail space

PRIME RETAIL RENTS IN EURO PER M²



Source: bulwiengesa, Scope, DZ BANK forecast

PRIME RETAIL RENTS, QUARTERLY DATA IN EURO PER M²

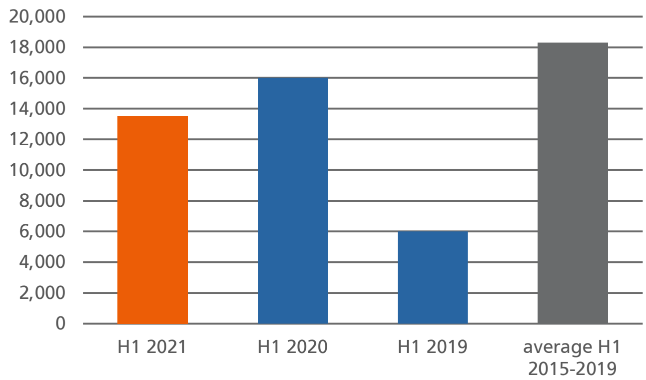


Source: bulwiengesa

Düsseldorf's city centre has proved resilient in the pandemic

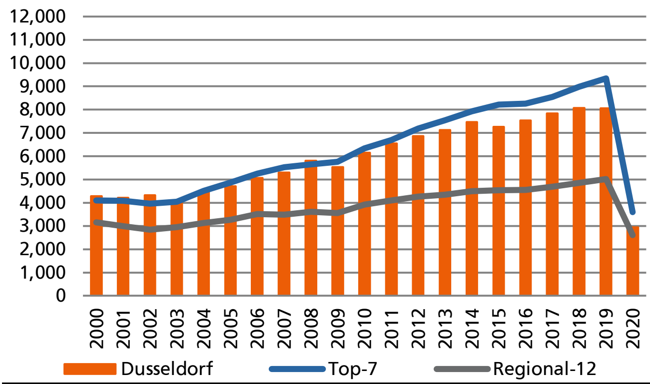
Düsseldorf has clearly done well as a shopping location. The city centre has become much more attractive through a number of urban development measures, large infrastructure projects and a huge investment in existing and new retail real estate. Even though not all the building work has been completed, it seems that efforts have paid off. Although Düsseldorf's retail sector has been hit like everywhere else by Covid restrictions, the impact on letting activity has been noticeably less than in other top locations. As was already the case in 2020, space let in the first half of 2021 was almost in line with the five-year average prior to the pandemic. Moreover, the prime rent largely held up and there was no sign of the sharp fall witnessed in other top locations. The basis for this success remains a 2 million-strong catchment area with a high purchasing power which is almost 20 per cent above the German average. Düsseldorf is well-known beyond the confines of North Rhine-Westphalia for its famous Kö shopping boulevard which is synonymous with fashion and luxury. The prime, central retail locations include not only the Königsallee, but also the Flingerstraße and the more mass market Schadowstraße. To these were added iconic retail developments such as the Kö-Bogen and KII in the last few years. The Kö-Galerie has also been refurbished from top to bottom. Another highlight in 2023 is likely to be the opening of a branch of Berlin's KaDeWe in the Carschhaus. However, the economic impact of the pandemic could still dampen even Düsseldorf's prime rent if, for example, there is a lasting reduction in the number of trade-fair and congress visitors compared with the "Before Times".

RETAIL SPACE TAKE-UP CITY LOCATIONS IN M²



Source: JLL

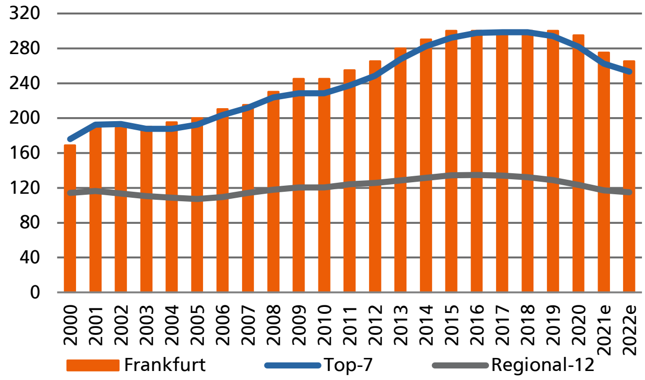
GUEST OVERNIGHT STAYS PER '000 INHABITANTS



Source: bulwiengesa, Scope

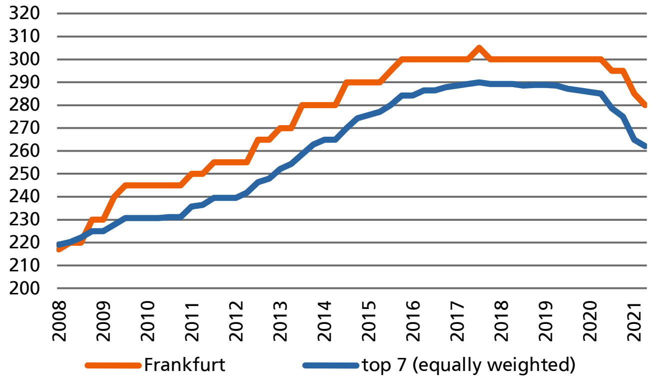
Frankfurt: Retail space

PRIME RETAIL RENTS IN EURO PER M²



Source: bulwiengesa, Scope, DZ BANK forecast

PRIME RETAIL RENTS, QUARTERLY DATA IN EURO PER M²

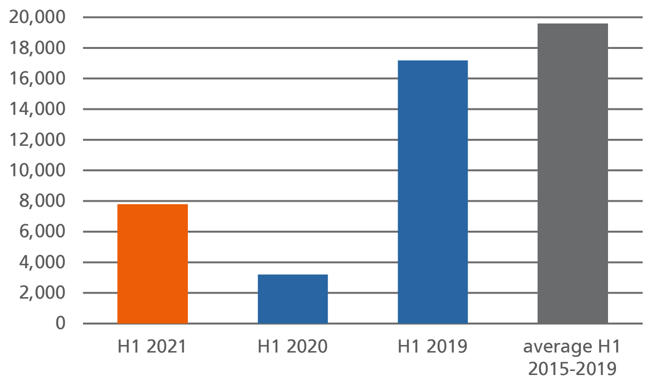


Source: bulwiengesa

Sharp fall in high visitor numbers significantly dampening retail sector

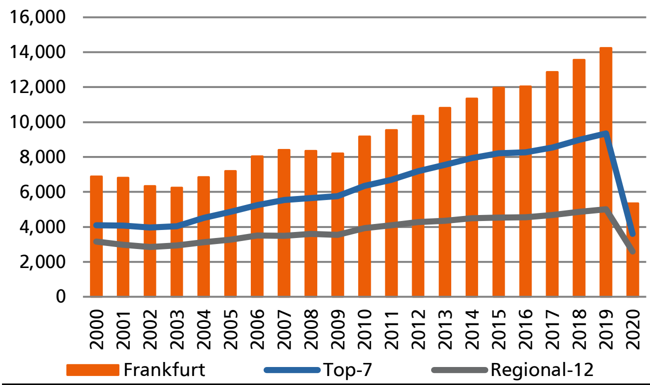
The conurbation around Frankfurt has undergone strong growth in the last few years. The city has a total catchment area of around 2.5 million people. The region moreover has a high purchasing power. Another factor underpinning the city as a retail location was the very high number of visitors it attracted prior to the pandemic. There were over 14,000 overnight stays per 1,000 inhabitants in 2019 − 50 per cent more than the top location average. Apart from a large number of trade fair visitors and congress delegates, Frankfurt's retail sector benefits from many customers from Asia thanks to the city's airport, a customer group for which the city caters, but which is currently almost totally absent. To that extent, the future of tourism in the city is hugely important for its retail sector. The trade fair business above all could remain weaker for good, not least because of the loss of the IAA trade fair to Munich. Hotels have already reacted to this with the closure of the Hessischer Hof which is now being followed by the closure of three Fleming Group hotels. The ratio of available retail space calculated by JLL for Frankfurt shows the highest figure of the top locations at 23 per cent. A relatively low level of letting activity points to difficulties in the city centre retail sector. However, activity has picked up slightly in 2021. In spite of everything, Frankfurt remains a strong retail location with its prime Zeil and Goethestraße locations and several large shopping centres. This strength is illustrated by a fairly moderate decline in the prime rent of just over 7 per cent to currently EUR 280 per m^2. The Kaufhof store at the entrance of the Zeil which is currently undergoing a revamp to turn it into a world-class store is likely to become a highlight of Frankfurt's shopping scene. The prime rent could fall slightly further.

RETAIL SPACE TAKE-UP CITY LOCATIONS IN M²



Source: JLL

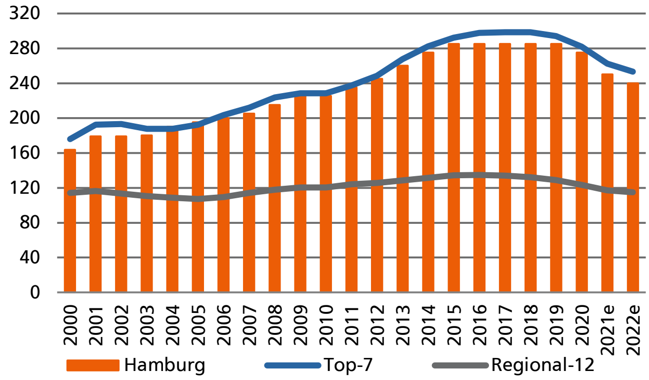
GUEST OVERNIGHT STAYS PER '000 INHABITANTS



Source: bulwiengesa, Scope

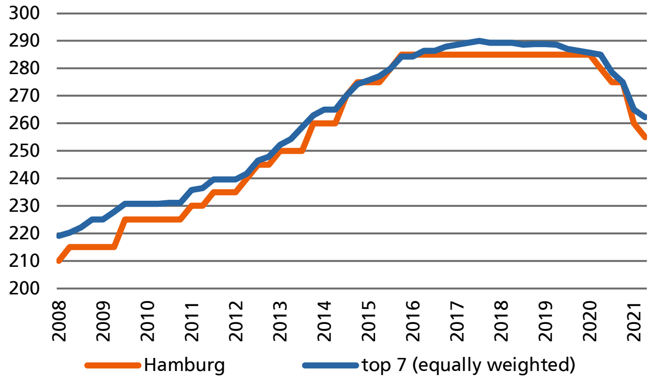
Hamburg: Retail space

PRIME RETAIL RENTS IN EURO PER M²



Source: bulwiengesa, Scope, DZ BANK forecast

PRIME RETAIL RENTS, QUARTERLY DATA IN EURO PER M²

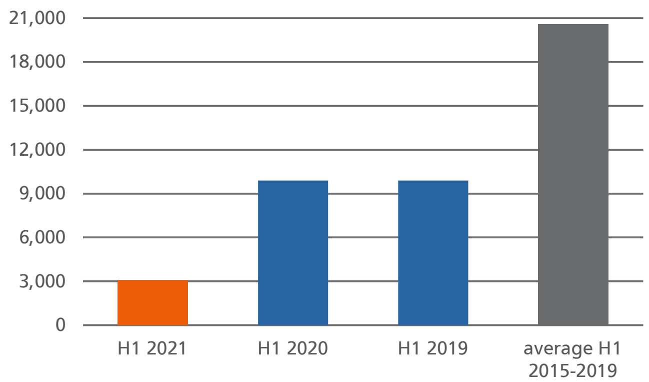


Source: bulwiengesa

Still little sign of any sustained upturn in the retail sector

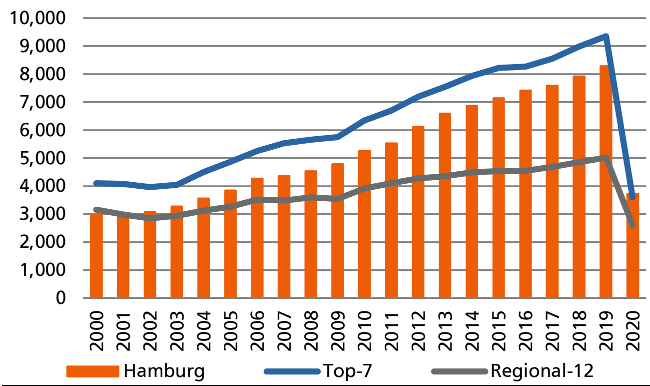
Hamburg scores as the leading shopping destination in northern Germany with a catchment area of 3.5 million people, population growth and high purchasing power. Tourists and cruise ship passengers, which are normally an important consumer group for the retail sector are currently absent. What makes Hamburg attractive from the point of view of customers is a broad range of shops, ranging from traditional high-street locations such as the Spitalerstraße and Mönckebergstraße all the way to the luxury end of the market such as the Neuer Wall. In between the two, there is Hamburg's only large city centre shopping mall, the Europa Passage. However, the situation in the city centre retail sector is currently relatively poor. At 18 per cent, the ratio of available retail space calculated by JLL is the second highest among the top locations after Frankfurt. Letting vacant retail space is also proving hard work. Only 3,100 m^2 of space was let in the first half of 2021, above all because of limited interest in large spaces. Hamburg's Senate has launched a support programme to let visible vacant stores in order for creative people to be able to rent empty business premises temporarily. Unfortunately, there are still no concrete repurposing plans for the two department stores in the Mönckebergstraße – the former Kaufhof and Karstadt Sports buildings. In the former Kaufhof, however, the ground floor could be temporarily let to an outlet shop. The prime rent is down by around 10 per cent to EUR 255 per m^2. We estimate that the downtrend could continue. The city centre faces another problem once the new 80,000 m^2 shopping centre in the HafenCity opens – probably in 2023.

RETAIL SPACE TAKE-UP CITY LOCATIONS IN M²



Source: JLL

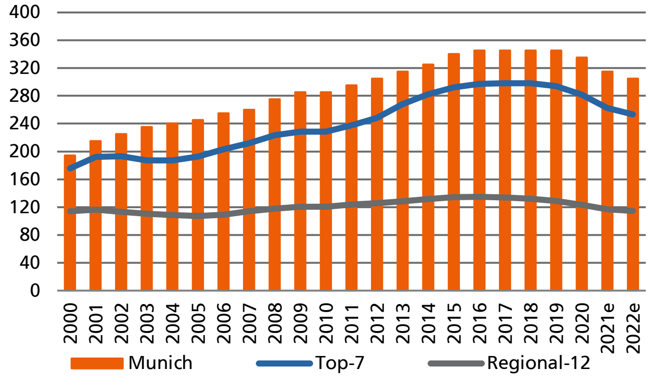
GUEST OVERNIGHT STAYS PER '000 INHABITANTS



Source: bulwiengesa, Scope

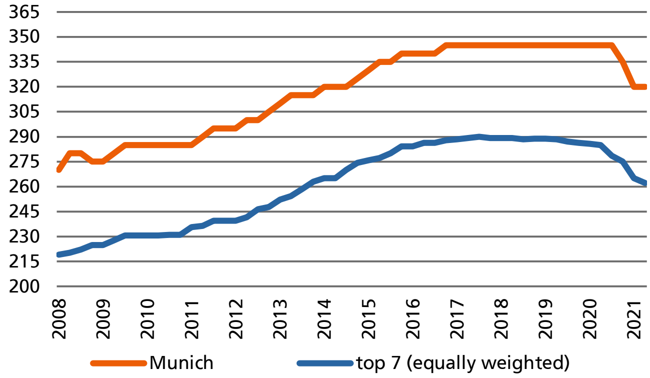
Munich: Retail space

PRIME RETAIL RENTS IN EURO PER M²



Source: bulwiengesa, Scope, DZ BANK forecast

PRIME RETAIL RENTS, QUARTERLY DATA IN EURO PER M²

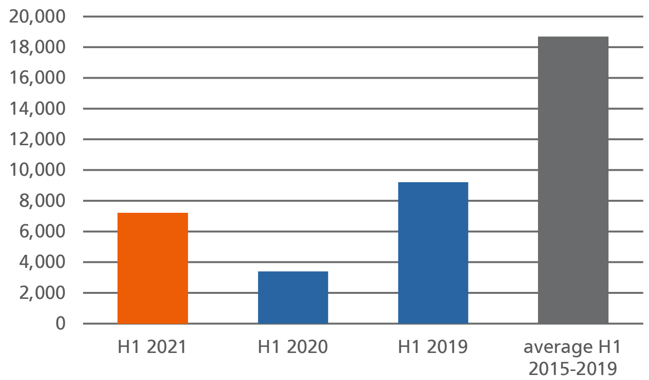


Source: bulwiengesa

Prime retail rent in Munich still well above EUR 300 per m²

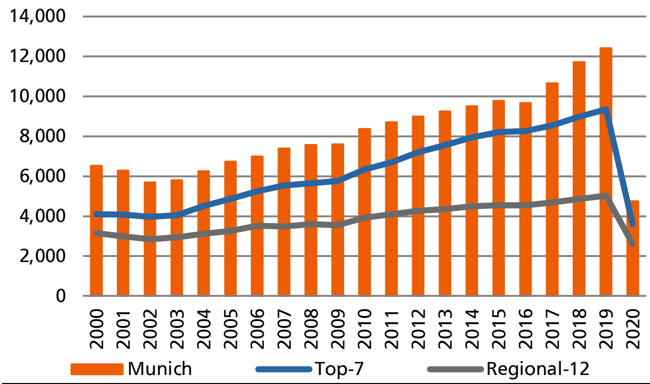
Munich leads the field in the German retail sector for prime rent, purchasing power and space productivity. This is based on conditions such as an economically strong and fast-growing catchment area of around 3.2 million people. Another plus point is the fact that Munich offers a high quality experience in its attractive city centre with its very Bavarian atmosphere and a comprehensive range of shops, including more mass-market retail concepts, old independent stores and luxury shops. Munich also benefits from a flourishing tourism business thanks to the world-renowned Oktoberfest. The prime rent in Munich is higher than in any other German city in spite of a relatively high level of sales space of half a million m². The highest rents are in the Kaufingerstraße, Neuhauser Straße and Maximilianstraße. In spite of already high shop rents, the prime rent only fell by a modest 7 per cent to EUR 320 per m² during the pandemic. At 16 per cent, the ratio of available retail space calculated by JLL is slightly above average. One gratifying factor is that letting activity has already picked up again in 2021. Although the prime rent could dip further, it is still likely to stay above EUR 300 per m². As such, Munich would be the only retail location in Germany with a prime rent above that mark. A major project involves the Karstadt building between the main railway station and Stachus, which is expected to retain its original facade, while sales space will be reduced. An even bigger construction project is the forthcoming rebuilding of the main railway station.

RETAIL SPACE TAKE-UP CITY LOCATIONS IN M²



Source: bulwiengesa

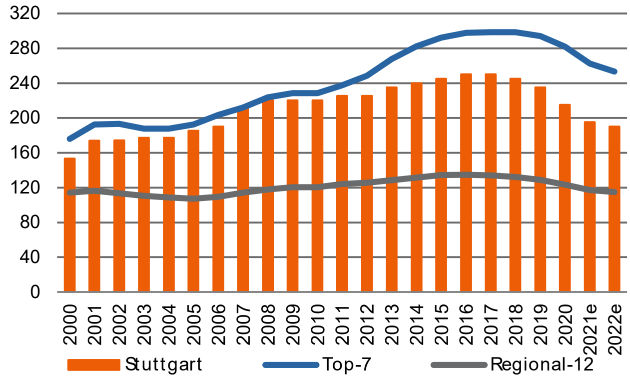
GUEST OVERNIGHT STAYS PER '000 INHABITANTS



Source: bulwiengesa, Scope

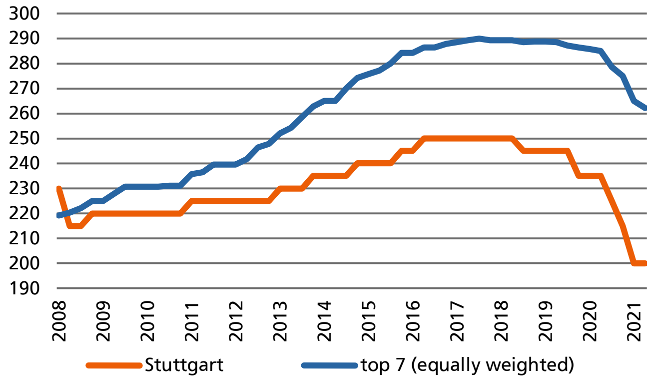
Stuttgart: Retail space

PRIME RETAIL RENTS IN EURO PER M²



Source: bulwiengesa, Scope, DZ BANK forecast

PRIME RETAIL RENTS, QUARTERLY DATA IN EURO PER M²

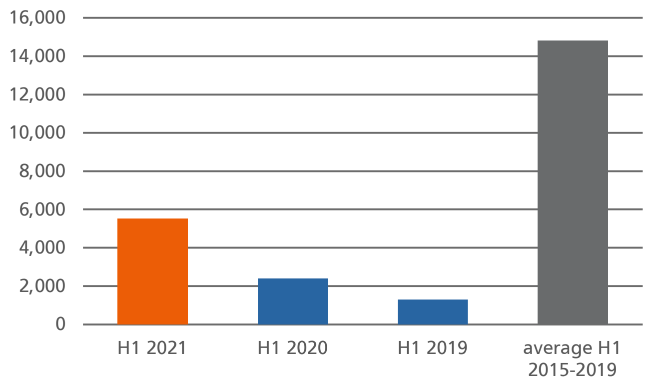


Source: bulwiengesa

Sharp fall in rents in Stuttgart's top retail locations

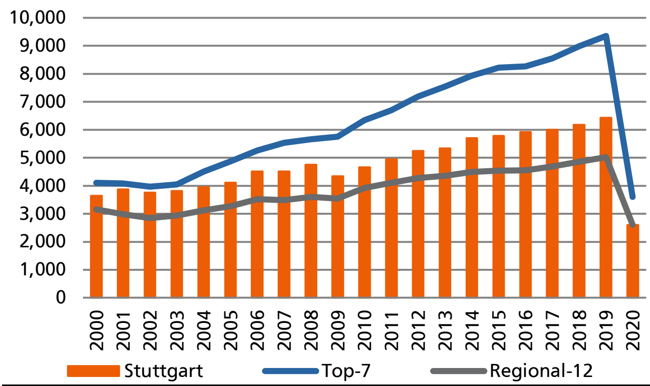
Stuttgart benefits from a large catchment area of 2.8 million people with a high purchasing power. In contrast, tourists are a less important shopper group than in the other top locations so that the consequences of the slump in visitor numbers in 2020 have been less serious. The prime rent in Stuttgart's prime shopping locations has nevertheless fallen relatively sharply to EUR 200 m^2 in the first quarter of 2021, although it did not slide any further in the second quarter. It is now back to the level of 2006/2007. Moreover, the downtrend in rents already began in 2018. There are a number of reasons for this. One dampening factor has been major building works along with the once-in-a-lifetime Stuttgart 21 project or the Marktplatz building site. A more serious problem is the increase in sales space on offer. A high footfall and tight space in the Königstraße, Stuttgart's prime central retail location , have spurred on the development of large, city centre retail projects and this in turn has led to an increase in sales space in the city of over 20 per cent. In 2014, the MILANEO and Gerber centres opened simultaneously at opposite ends of town, offering a total of 60,000 m^2. Whereas the MILANEO was able to establish itself, the Gerber has been beset by problems, above all involving its top floor. This led to the decision taken in 2019 to remodel the centre. The plan is to repurpose the top floor for use as office space and a hotel. The fall in rent has continued to just under EUR 200 per m^2. However, retail space lettings should pick up again.

RETAIL SPACE TAKE-UP CITY LOCATIONS IN M²



Source: JLL

GUEST OVERNIGHT STAYS PER '000 INHABITANTS



Source: bulwiengesa, Scope

OFFICE SPACE

Office property: Is there a danger of an oversupply of office space due to working from home?

Offices are the communication centres of the working world

Office buildings that had been deserted for months are gradually being occupied again since the summer. And with the increasing likelihood of meeting colleagues and canteens reopening, everyday office life has returned to some extent. However, the presence-oriented office life that existed before the pandemic is probably a thing of the past. Many more people will work remotely in the future - mainly in a home office - than before the outbreak of the coronavirus pandemic. By contrast, having one's own desk in the office will become rarer. This could give the impression that offices are becoming less important. But this is wrong, their function as "communication centres" of the working world is now even more important than ever. Offices will continue to be very important for people to work productively. Many investors also see it this way in view of the continued high valuations for top-class office properties.

Hybrid working world as the “new normal”: the office and working from home will complement each other in the future

We assume that remote working will become firmly established in the working world. In recent months, many companies have developed concepts that give employees more freedom in terms of where they work. The distribution could look something like this: concentrated work is done at home, the office is frequented for meetings or for project and team work as well as for "networking". Many office floors are already being redesigned to meet the associated requirements. The classic clerk's office has had its day; instead, communication and retreat zones are being created alongside areas with workstations for flexible use.

Some employers limit the use of remote working

Companies can save on related costs by having less office space. On the other hand, communication can suffer if employees see each other less often and exchange less overall. That is why the regulations for remote working partly stipulate upper limits - such as a maximum of 40 or 50 per cent of one's working hours - for working from home. There is obviously a fear that some employees will only come to the office very rarely. Reasons for this could be long commutes, pets, childcare, caring for relatives or a flexible work schedule. On the other hand, some people will continue to work mainly in the office, for example because they do not have an optimal workplace at home, they appreciate the interaction with their colleagues or they do not want to do without air conditioning in the summer.

Fewer desks, more communication areas - how big is the net effect?

In our opinion, it is difficult to predict the extent to which mobile working will curb the demand for space on the office market. We can only gain clarity on this once we have experience with the hybrid working world in everyday life. On balance, however, the demand for space is likely to decline moderately because part of the space saved by fewer desks will be taken up by the additional meeting and communication areas needed, or by quiet areas and concentration zones.

Demographics, generational change, algorithms: The working world is not only changing because of home offices

However, the office environment is not only changing as a result of working from home. The labour supply is likely to decrease noticeably in the coming years due to the retirement of the baby boomers. At the same time, this is accompanied by a generational change, with the proportion of "digital natives" in the workforce becoming noticeably larger. In addition, the range of tasks is changing. Algorithms are taking over more and more routine work, so that employees can focus more on innovative, creative activities or on customer service. Therefore, the need for office space and the requirements for offices are changing anyway.

However, the effects on rented office space will only become gradually apparent, as many rental contracts still run for a longer period of time. So far, office vacancy rates have increased only moderately and thus remain low. The slight increase in vacancy rates is also likely to be due to the recession last year and not only to the "home-office effect". Sublet office space, which is now being offered more frequently, could provide an indication of the change in demand for space. The fact that companies and other institutions continue to value attractive office space is shown by the stable prime office rents since the beginning of the pandemic.

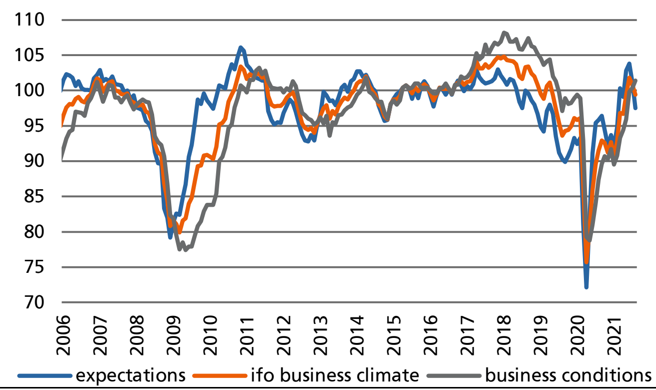
Despite the upheavals in the office market, prime office rents remained stable during the pandemic

Conditions for the office market

The economic environment already deteriorated in 2019 due to a slowdown in the economy. Instead of the moderate overall economic growth expected for 2020, there was a severe recession as a result of the COVID-19 pandemic. The 5 per cent decline in the gross domestic product in the full year 2020 was mainly caused by the economy largely coming to a standstill in the second quarter of 2020. This also weighed on the labour market. Compared to January 2020, the number of people in employment fell moderately by around 700,000 to 44.5 million. The unemployment rate rose from 5.3 per cent to as high as 6.4 per cent, but is already showing clear signs of decline again. It is encouraging that the number of job vacancies increased again significantly.

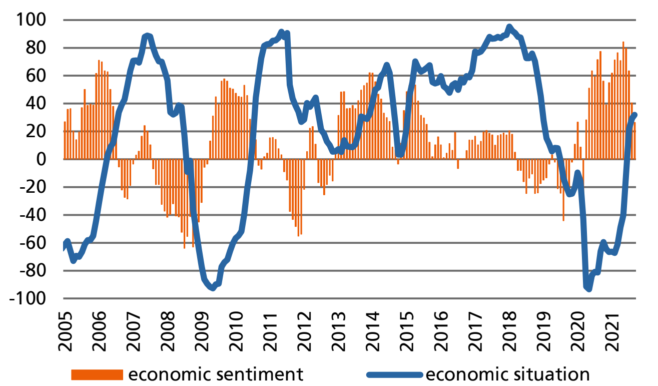
Short-time work prevented unemployment from rising more sharply as a result of the coronavirus-induced recession

THE IFO BUSINESS CLIMATE HAS RECOVERED SIGNIFICANTLY, BUT IS BURDENED BY GLOOMY EXPECTATIONS



Source: ifo Institute As at August 2021

ECONOMIC EXPERTS SURVEYED BY ZEW RECENTLY ASSESSED THE ECONOMIC OUTLOOK MORE SCEPTICALLY



Source: ZEW As at August 2021

Economic optimism has recently waned again somewhat in view of rising Covid-19 infection figures caused by the highly contagious "delta variant". This is indicated by the business climate measured by the ifo Institute and the ZEW Economic Sentiment Index (as at August 2021). However, we do not expect a renewed lockdown given the progress made with vaccinations. This means that the recovery of the service sector (trade, gastronomy/hotels, leisure and culture), which was heavily affected by the consequences of the pandemic, could continue. All in all, we expect overall economic growth of not quite 3 per cent in 2021. This should be followed by an increase of just under 5 per cent in 2022.

The economy is not expected to take off again strongly until 2022

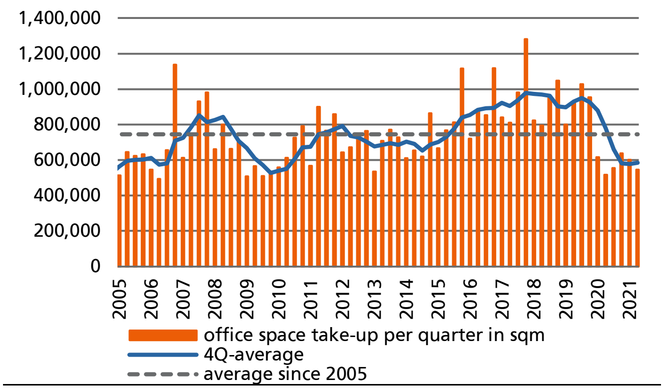
Comparison of office market in top locations

Although prime office rents remained largely stable during the pandemic, the office markets in the top locations were not left unscathed by Covid-19. On the contrary, the letting business that had previously flourished - at best hampered by a lack of supply - suffered a severe setback. This is shown by the cumulative office space take-up of the seven cities, which also does not give any indication of a sustainable

Office market activity has barely recovered so far

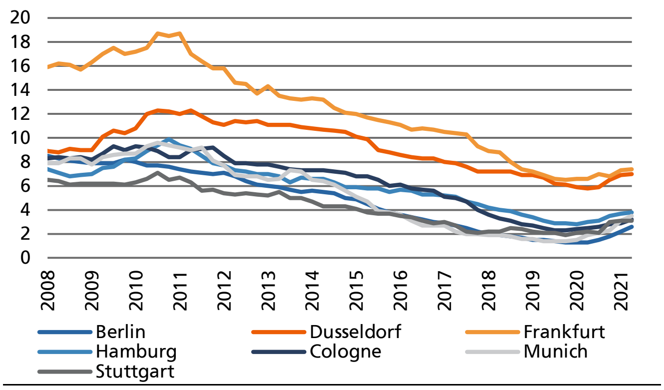
market recovery in the second quarter of 2021. Instead of around 3.7 million m^2 as was the case before the pandemic, the office space take-up projected for one year is currently only 2.3 million m^2, representing a drop of more than one third. Uncertainties such as the future economic development or the effects of remote working have caused those looking for office space to exercise caution.

‘OFFICE SPACE TAKE-UP HAS NOT YET RECOVERED



Source: bulwiengesa

PANDEMIC CAUSES VACANCY RATE (%) TO RISE AGAIN



Source: bulwiengesa

Office markets developed very differently in the first half of the year

However, the office market development shows clear differences. While Frankfurt (+31 per cent), Hamburg (+32 per cent) and Cologne (+60 per cent) recorded significant increases in the first half of 2021 compared to the same period of the previous year, office space take-up in Düsseldorf (-30 per cent), Munich (-29 per cent) and Stuttgart (-35 per cent) declined. In Berlin, the volume for the first half of 2021 was about the same as in 2020, with an increase of 6 per cent.

The vacancy level for the top 7 increased by slightly more than one percentage point during the pandemic

In addition to the reduced market activity, the consequences of the pandemic are visible in the rising vacancy rate. Compared to the first quarter of 2020, the vacancy rate rose by slightly more than one percentage point by the middle of 2021. No location was able to maintain the low vacancy level seen in spring 2020. Frankfurt and Cologne recorded the smallest increases, each with a gain of 0.8 percentage points. By contrast, the increase in Munich was much higher at two percentage points. Overall, however, the vacancy rate in the top locations is still low at around 4.5 per cent. The range extends from 2.6 per cent in Berlin to 7.4 per cent in Frankfurt. One positive aspect of the slightly higher vacancy rates is that office space is now more readily available after the pronounced shortage of space.

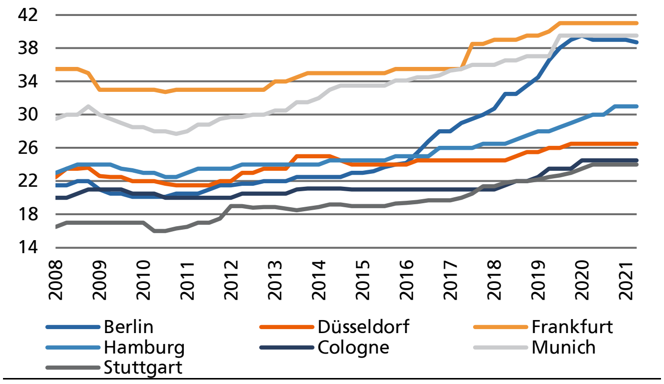
Office rents were affected neither by working from home nor by the recession.

With lower office market activity and higher vacancy rates, it stands to reason that office rents will fall. But this is not the case. Berlin was the only city where prime rents fell slightly during the pandemic to just under EUR 39 per m^2. In Hamburg, on the other hand, rents increased to EUR 31 per m^2. Rents stagnated in the other locations. The range thus remains unchanged, from EUR 24 per m^2 in Stuttgart to EUR 41 per m^2 in Frankfurt. This clearly shows that great importance is attached to attractive office space.

Prime office rents have risen by 40 per cent compared to 2010

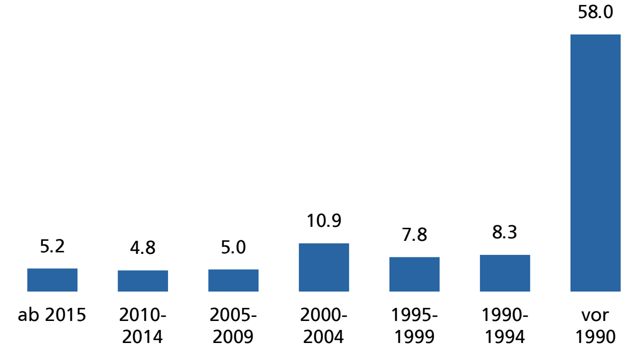
Compared to 2010, office rents have risen significantly in the top locations. On average, prime office rents increased by around 40 per cent by the middle of 2021. Berlin stands out with an increase of around 90 per cent. In contrast, the two Rhine metropolises Düsseldorf and Cologne saw modest growth of 20 per cent. Frankfurt's

PRIME OFFICE RENTS ARE STABLE DESPITE COVID (EUR PER M²)



Source: bulwiengesa

OFFICE BUILDINGS IN THE TOP LOCATIONS ARE GETTING ON IN YEARS (SHARE IN %)



Source: bulwiengesa

prime rent barely grew faster at around 25 per cent. The Munich office market is roughly on a par with the market as a whole. And in Stuttgart, office prices rose by 50 per cent.

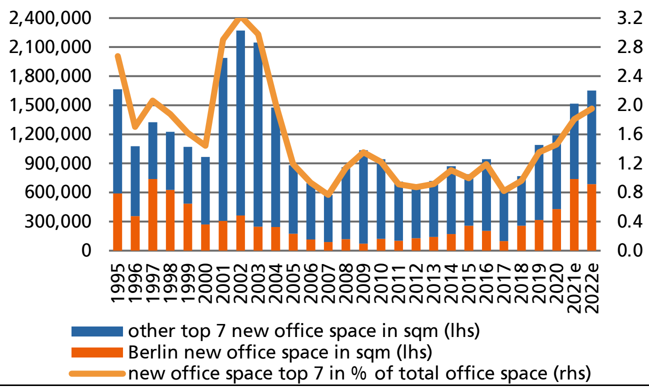
Office market continues to be characterised by the scarcity of contemporary office space

The rise in office rents is due to scarcity in two respects. Firstly, this is clear from the very low office vacancy rates seen up until a year ago. Secondly, modern office space is even scarcer, and little has changed despite the slight increase in vacancies. In recent years, there has been only a modest increase in new office space, so that the office market is mainly dominated by older office buildings. Only 15 per cent of the office space has been built since 2005. In contrast, almost 60 per cent was built before German reunification. This makes it correspondingly difficult to provide attractive space concepts for the hybrid working world.

New office projects are mainly concentrated in Berlin

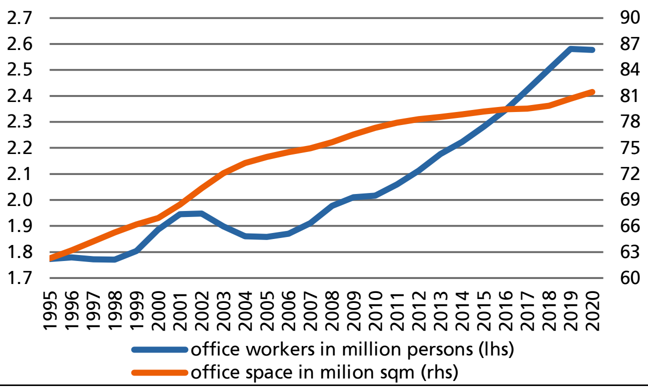
Looking at the market as a whole, new office space development has picked up momentum. Between 2011 and 2018, annual completions amounted to approximately 1 per cent of the total office space portfolio. In 2020, this figure was already 1.5 per cent, and is expected to rise to 2 per cent by 2022. However, the locations do not benefit equally from the rising supply of modern office space.

TOP LOCATIONS: THE DEVELOPMENT OF OFFICE PROJECTS HAS PICKED UP MOMENTUM, ESPECIALLY IN BERLIN



Source: bulwiengesa

TOP LOCATIONS: THERE HAS BEEN A GAP BETWEEN THE DEVELOPMENT OF OFFICE SPACE AND OFFICE EMPLOYMENT FOR A LONG TIME



Source: bulwiengesa, Scope

New space is mainly being developed in Berlin. More than 40 per cent of completions will be in the German capital in the current and coming years, with a share of just under a quarter in the top office market locations. In contrast, the supply of office space is expanding at the slowest pace in Frankfurt and Munich.

Summary office market

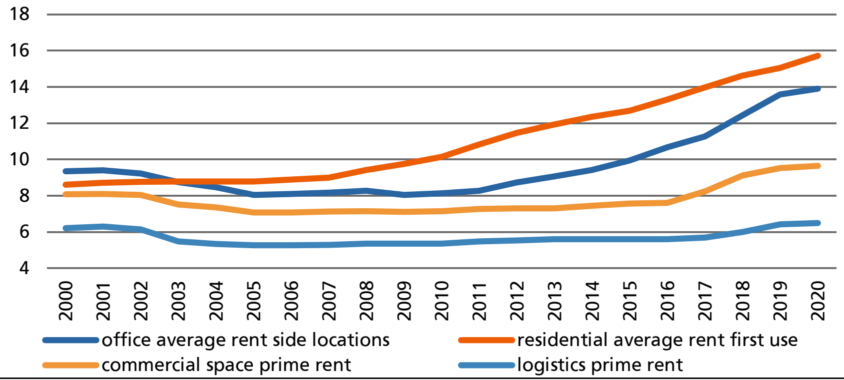
Oversupply in the office market is rather unlikely

It is unlikely that there will be an oversupply in the office markets in the top locations in the coming years - even if the demand for space could gradually fall due to mobile working and demographic change. The demand for modern space in office buildings with high ESG standards is likely to remain strong. Prime rents in this segment could therefore continue to rise in the future, even if vacancy rates are somewhat higher overall than before the pandemic. It is therefore not a cause for concern if the upturn in new office construction, which had previously been rather weak for a long time, is still continuing.

High demand for space in the top 7 cities facilitates alternative uses for unattractive office buildings

Overall weaker demand for office space, on the other hand, is likely to affect outdated and less conveniently located office buildings in particular. These properties are most likely to be able to attract favourable office rents. However, permanent vacancies are not envisaged here either. Following the continued growth in population and employment, the real estate markets in the top locations need both housing and commercial space, for example for logistics. In suitable locations, residential use would have the advantage of strongly increased rents. Rents for new flats in the top locations are mostly higher than office rents in peripheral locations.

HOUSING COULD BE AN ALTERNATIVE USE FOR OFFICE BUILDINGS (RENT IN EUR PER M²)



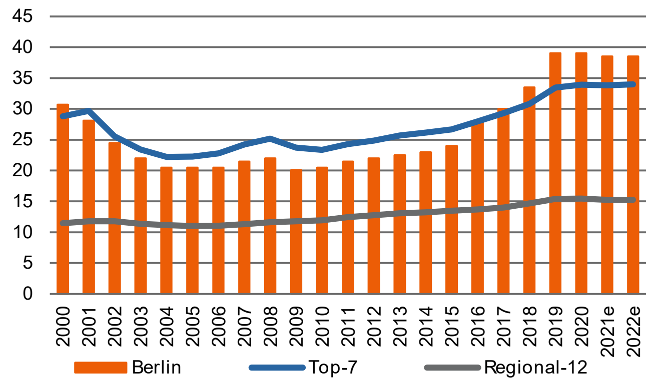
Source: bulwiengesa

Forecast up to 2022: slight rise in vacancy rates, but largely stable prime rents

However, what are the prospects for the office markets in the current and coming year? The pandemic is not over yet, although a large share of the population has already been vaccinated. New, contagious virus variants could emerge and slow down the economic recovery. In addition, there is uncertainty as to how office workers will behave when it comes to the way they use remote working. On balance, we expect office market activity to pick up gradually, but not to reach pre-pandemic levels as quickly. Office vacancies are likely to increase somewhat, while prime rents are likely to remain largely stable.

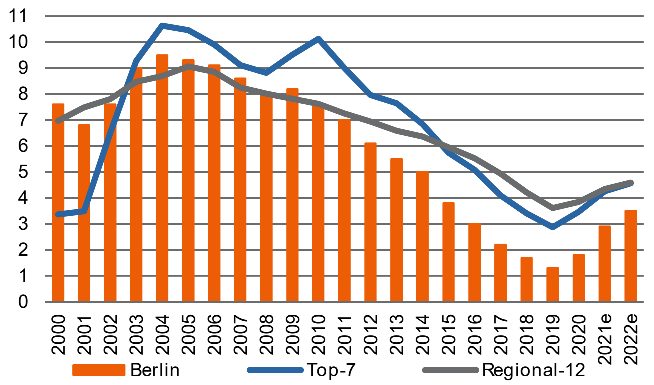
Berlin: Office space

PRIME OFFICE RENT (IN EUR PER M²)



Source: bulwiengesa, DZ BANK forecast

VACANCY RATE (%)

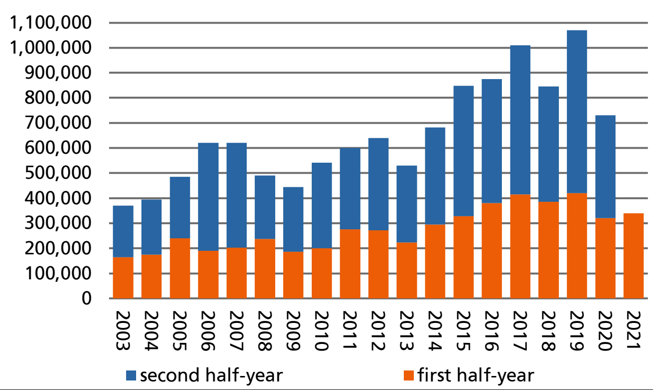


Source: bulwiengesa, DZ BANK forecast

Berlin's upturn has given the office market a strong boost, with office rents rising faster in no other top location. Successful IT and E-commerce start-ups helped. Up until 2016, Berlin's prime rent was average among the top locations. It then rose to the previous high of EUR 39.50 per m² by the beginning of 2020, putting it in the top league of office markets together with Frankfurt and Munich. In terms of office space take-up, Berlin's office market is at the forefront, with values of more than 1 million m² achieved in 2017 and 2019. In 2020, office space take-up fell by around a third due to Covid-19. However, despite the pandemic, the office market was already able to recover somewhat in the first half of 2021. Take-up of 340,000 m² was slightly higher than in the first half of the previous year. Nine deals in the five-digit area accounted for almost 140,000 m² of this. The largest single transaction of 33,500 m² was for Deutsche Kreditbank. However, the public administration showed the greatest overall leasing activity with a share of almost a quarter. Compared to the first quarter of 2020, the vacancy rate has expanded from 1.3 per cent to a still low 2.6 per cent by the middle of 2021. Due to the high level of new office space completions this year and next year totalling 1.4 million m², we expect the vacancy rate to rise to over 3 per cent in 2022. The very tight supply of office space in Berlin in recent years is thus improving again, making it easier to rent existing space without a long lead time. The improved supply of office space should keep prime rents largely stable at the current level.

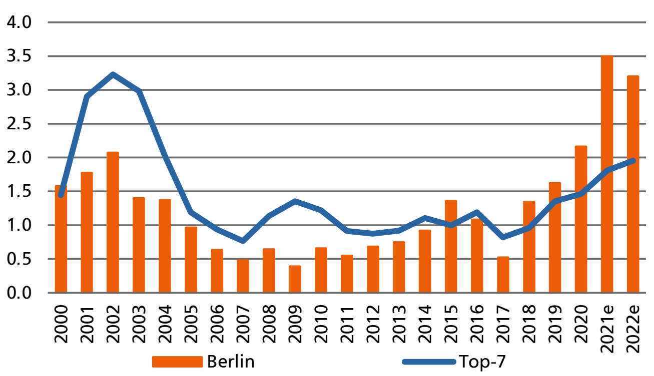
Due to increased new construction activities, the supply of space, which has been scarce for a long time, is improving again

TAKE-UP (IN M²)



Source: bulwiengesa

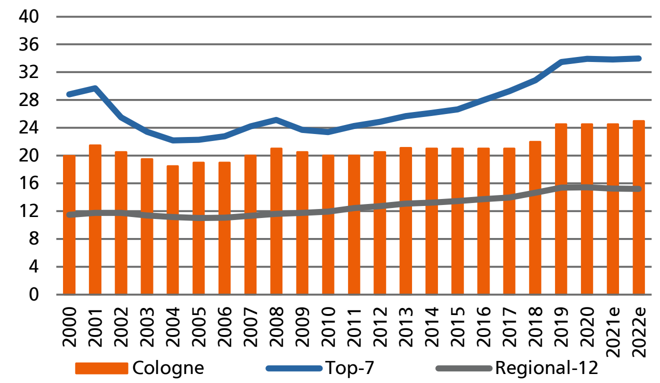
OFFICE SPACE COMPLETIONS (AS % OF OFFICE STOCK)



Source: bulwiengesa

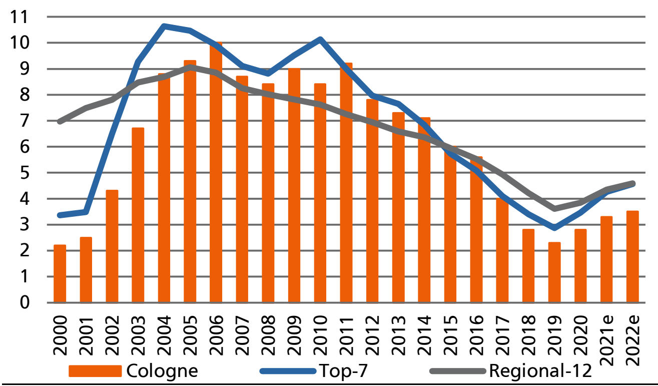
Cologne: Office space

PRIME OFFICE RENT (IN EUR PER M²)



Source: bulwiengesa, DZ BANK forecast

VACANCY RATE (%)

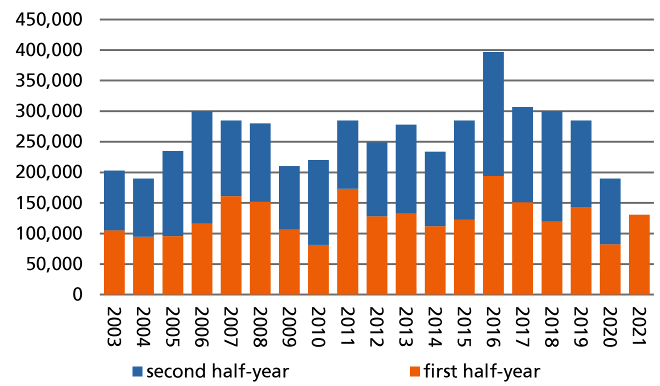


Source: bulwiengesa, DZ BANK forecast

The Covid-related new start on the Cologne office market has gone well

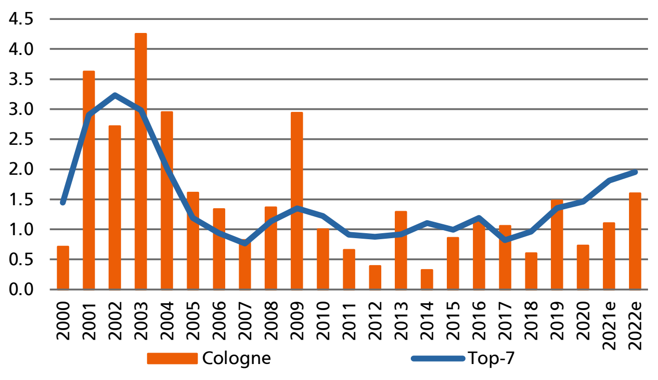
In terms of the number of inhabitants, Cologne ranks fourth among Germany's major cities. However, with a good 8 million m^2, the office market is only in sixth place. This also applies to prime rents for office space, which have risen moderately to the current level of EUR 24.50 per m^2 but have moved away from the average for the top locations due to "sideways phases". Letting activities are proving to be quite stable, with an annual take-up of around 300,000 m^2. A noticeably higher level was only achieved in 2016 by the headquarters of Zurich Insurance. However, the new start in the office market after the Covid-related slump was successful. With office space take-up of around 130,000 m^2 in the first half of 2021, a solid result was achieved compared to the previous years in spite of the pandemic. Demand was spread across all size categories, but was particularly strong in the five-digit square meter range with three major deals for around 45,000 m^2. In addition to NetCologne, the Institute for Federal Real Estate (BIMA) also rented two offices. Overall, the market share of the public authorities in the past 6 months amounted to 40 per cent. Compared to the first quarter of 2020, the vacancy rate rose to 3.2 per cent, meaning that it increased only slightly by less than one percentage point. Modern office space in particular is in short supply in the cathedral city due to moderate new construction activity in general. This situation is unlikely to change much in the near future, suggesting that the Cologne office market may see a slight increase in prime rents in the coming year.

TAKE-UP (IN M²)



Source: bulwiengesa

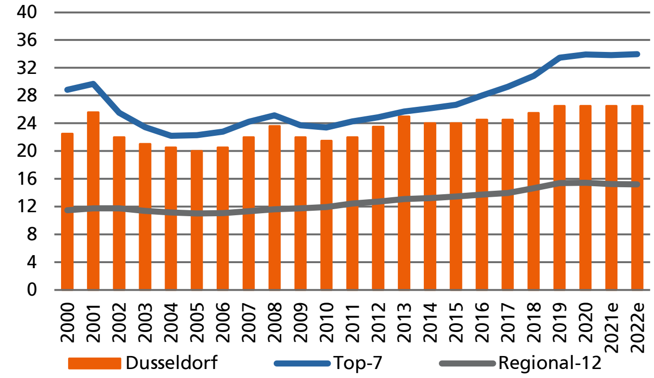
OFFICE SPACE COMPLETIONS (AS % OF OFFICE STOCK)



Source: bulwiengesa

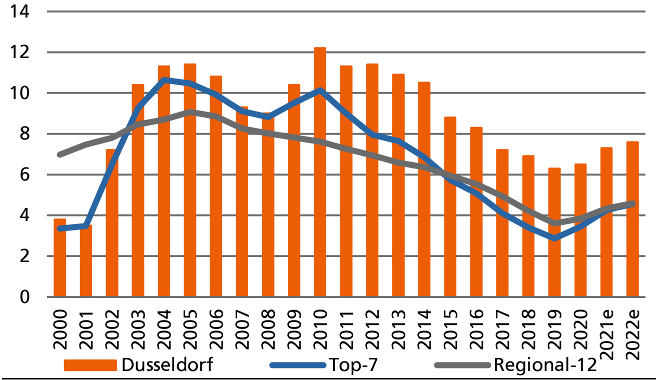
Düsseldorf: Office space

PRIME OFFICE RENT (IN EUR PER M²)



Source: bulwiengesa, DZ BANK forecast

VACANCY RATE (%)

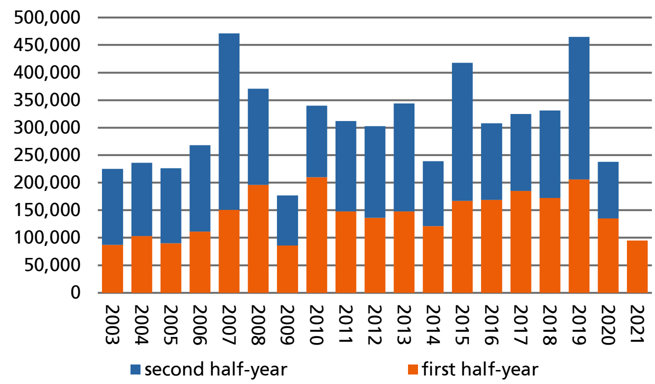


Source: bulwiengesa, DZ BANK forecast

The pandemic has only resulted in a marginal increase in vacancy rates on the Düsseldorf office market

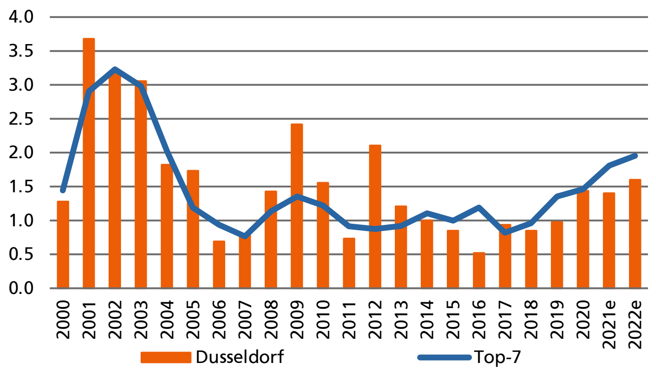
Düsseldorf occupies 7.8 million m² of office space, making it the smallest office market among the top locations. However, the gap between it and Cologne and Stuttgart is minimal. Yet the prime rent of EUR 26.50 per m² is considerably higher. As in Cologne and Stuttgart, the pandemic has not affected rents in the prime segment of the Düsseldorf office market. The rent level has been stable since the end of 2019, although the letting business has weakened. The office space take-up, which had already declined noticeably in the first half of 2020, fell further in the first two quarters of the current year to just under 100,000 m². This is less than half compared to the first half of 2019. There is a particular lack of large contracts in the current year. So far, all rental agreements have been below 5,000 m². The rental agreement with the highest volume was for Mitsubishi Chemical Europe with 4,400 m² on a project under development. However, industry did not account for the largest market share, but consulting companies with around a quarter. Overall, demand is apparently still muted in view of the uncertain economic development and remote working. As in all top locations, the vacancy level has also increased in Düsseldorf. However, the increase in the vacancy rate compared to the first quarter of 2020 was moderate at around one percentage point to 7.0 per cent by the middle of 2021. Due to a slightly higher level of new construction activity as well, the vacancy level could climb to around 7.5 per cent next year. The scarce supply of modern office space should ensure that prime rents remain stable.

TAKE-UP (IN M²)



Source: bulwiengesa

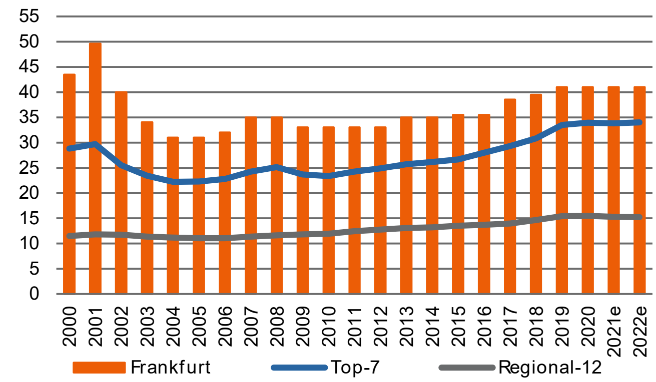
OFFICE SPACE COMPLETIONS (AS % OF OFFICE STOCK)



Source: bulwiengesa

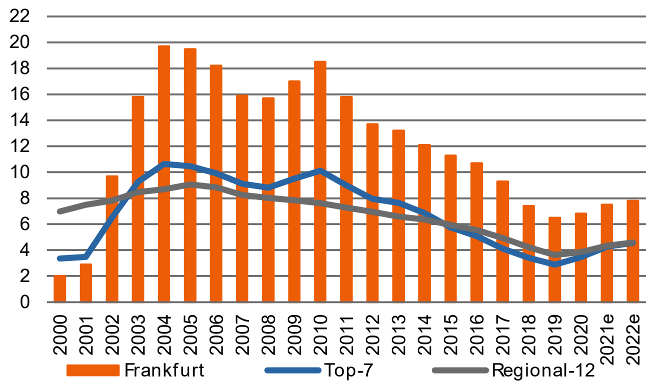
Frankfurt: Office space

PRIME OFFICE RENT (IN EUR PER M²)



Source: bulwiengesa, DZ BANK forecast

VACANCY RATE (%)

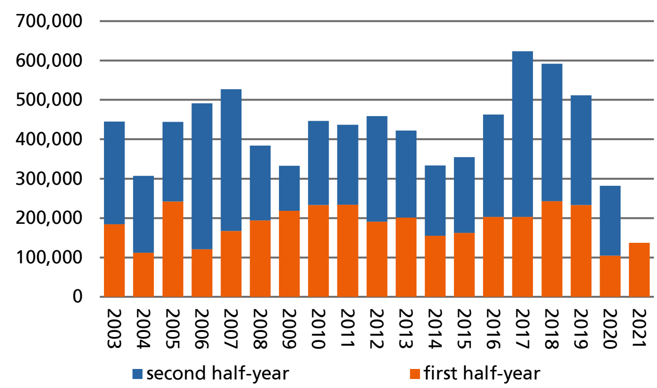


Source: bulwiengesa, DZ BANK forecast

Even during the Covid pandemic, Frankfurt was the only German office market to maintain prime rents of over EUR 40 per m^2. Since autumn 2019, the value has been stable at EUR 41 per m^2. At the same time, during the pandemic the letting business slowed down more than the average for the top locations. In 2020, office space take-up fell by 45 per cent compared to 2019. It is therefore even more gratifying that the Frankfurt office market was able to pick up in the first half of 2021. At almost 140,000 m^2, office space take-up was significantly higher than in the first six months of the previous year, although demand for office space in the financial sector was rather low. The most strongly represented sectors were industry and trade. It is advantageous for the office market that Frankfurt's economy is quite widely diversified. Two rental contracts reached a five-figure area space with 20,000 and 15,000 m^2 respectively. The tenants are Nestlé and Siemens, both of whom are in project development. Compared to the first quarter of 2020, the increase in the vacancy rate remained contained at less than one percentage point to 7.4 per cent by the middle of 2021, also thanks to the low level of new office space completions in the current year. In the coming year, office space supply will increase somewhat more strongly, meaning that the vacancy rate could rise slightly in 2022. Since contemporary office space only accounts for a part of the vacancies, prime rents are likely to remain at their current level. The Frankfurt skyline will be enhanced in the coming years by further skyscraper projects such as Tower ONE or Ensemble FOUR. The affiliated 233 m-high Tower T1 is currently Germany's most expensive property with a selling price of about EUR 1.4 billion.

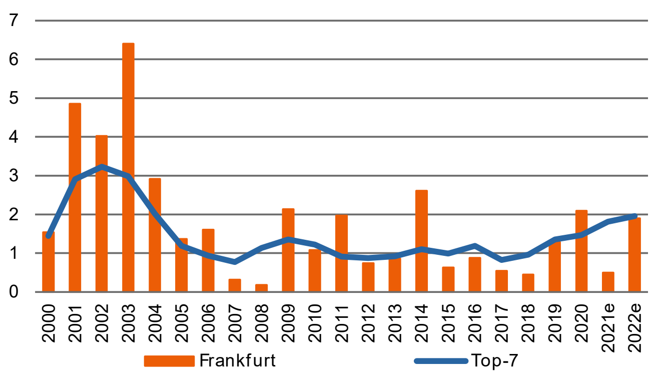
Frankfurt's skyline will be enhanced with new skyscrapers in the coming years

TAKE-UP (IN M²)



Source: bulwiengesa

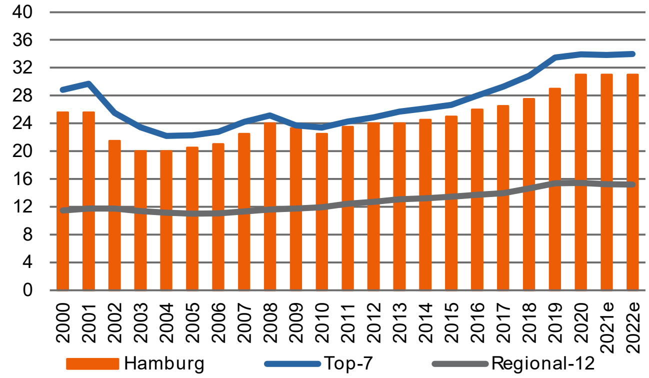
OFFICE SPACE COMPLETIONS (AS % OF OFFICE STOCK)



Source: bulwiengesa

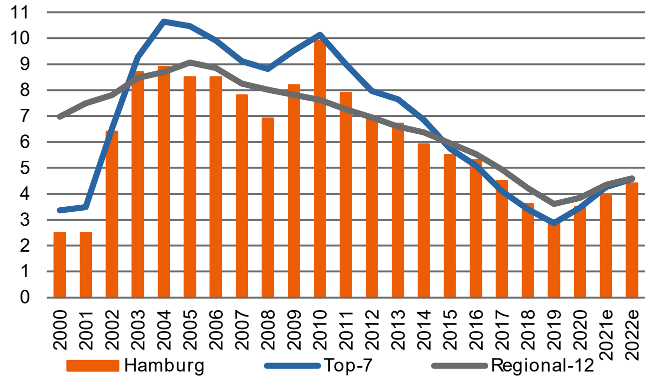
Hamburg: Office space

PRIME OFFICE RENT (IN EUR PER M²)



Source: bulwiengesa, DZ BANK forecast

VACANCY RATE (%)

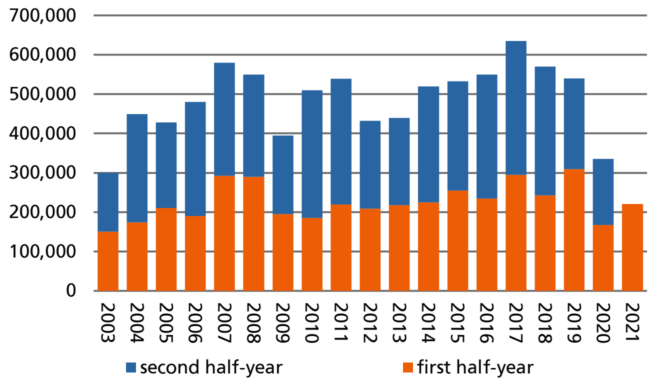


Source: bulwiengesa, DZ BANK forecast

Solid market: Letting activities were able to pick up again in Hamburg as early as 2021

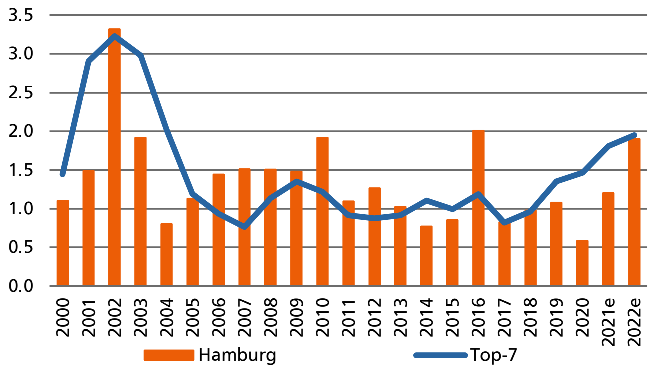
After Berlin, the Hamburg and Munich office markets are almost on a par with around 14 million m^2 of office space. However, even though Hamburg's prime rent is significantly lower than that of Berlin and Munich, the largest office market in northern Germany has developed positively with rising rental and declining vacancy rates. However, as a result of the pandemic, leasing activity fell by almost 40 per cent in 2020. Prime rents were unaffected, however, and even continued to rise to the current level of EUR 31 per m^2. Office space take-up in the first half of 2021 also points to a revival of the office market. Compared to the first half of 2021, office space take-up increased by more than 30 per cent to around 220,000 m^2. Demand is driven by a broad spectrum of industries. Three rental deals in the current year reached a five-digit volume, totalling almost 40,000 m^2. The tenants are the public prosecutor's office, Wintershall Dea and the health insurer Techniker Krankenkasse. Compared to the first quarter of 2020, the vacancy rate had risen by one percentage point to 3.8 per cent by the middle of 2021. In view of the relatively high completion volume of new office space expected in 2021 and 2022, the vacancy rate is likely to rise to over 4 per cent in the coming year. However, if this were to happen, the value would still only be around half of what it was ten years ago. We expect Hamburg's prime rents to maintain their current level for the time being, despite slightly higher vacancy rates. The Elbtower office and hotel tower will add a new landmark to Hamburg's skyline by 2025.

TAKE-UP (IN M²)



Source: bulwiengesa

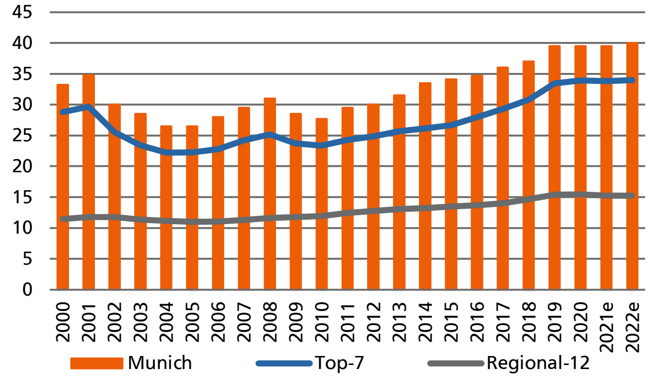
OFFICE SPACE COMPLETIONS (AS % OF OFFICE STOCK)



Source: bulwiengesa

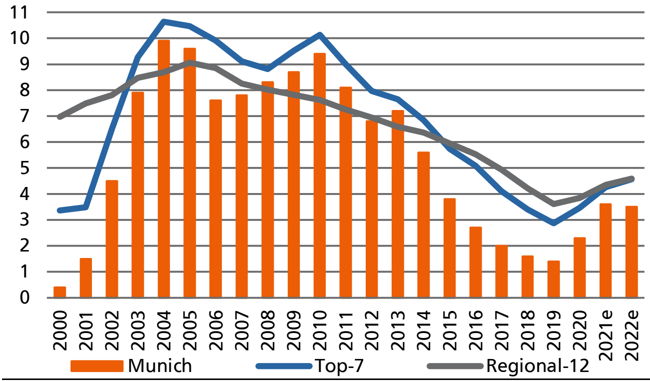
Munich: Office space

PRIME OFFICE RENT (IN EUR PER M²)



Source: bulwiengesa, DZ BANK forecast

VACANCY RATE (%)

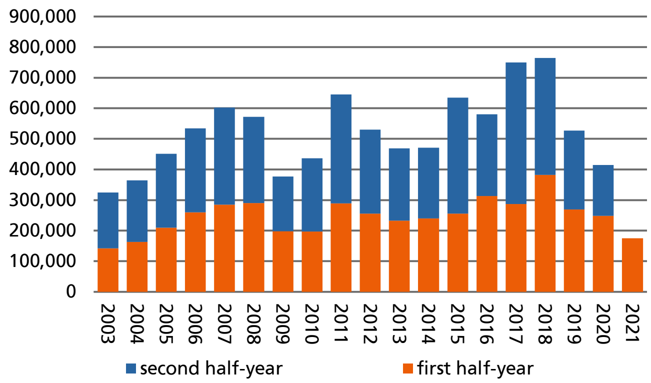


Source: bulwiengesa, DZ BANK forecast

The Munich office market, which had been used to success, was slow to get going in the first half of 2021

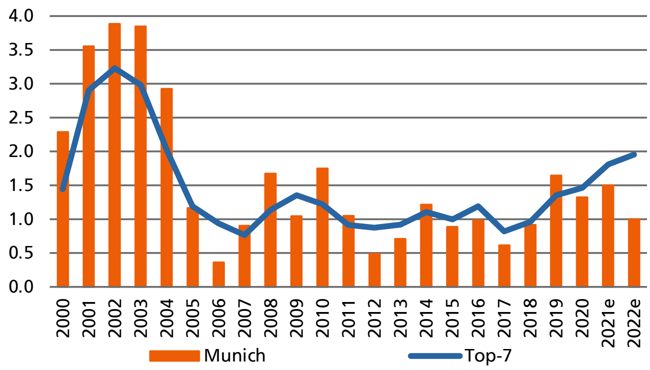
The Munich conurbation is one of the strongest economic regions in Germany. The fact that leading US IT giants - Amazon, Apple, Google and Microsoft - have established themselves here speaks for the potential of the location. However, the strong growth meant that the office market before Covid-19 was just as strained as the residential market. In 2019, the vacancy rate fell to 1.4 per cent, while prime rents reached almost EUR 40 per m^2. Despite the tight supply, office space take-up of around 750,000 m^2 was recorded at its peak. However, the office market fell a little out of step during the pandemic. Office space take-up continued to decline in the first half of 2021. At 175,000 m^2, the worst result was recorded in the first half of the year since 2005. Above all, large five-digit transactions were missing. Only Wacker Chemie rented 18,000 m^2 in a new building for its corporate headquarters. The vacancy rate increased more sharply than in the other top locations. Compared to the first quarter of 2020, it rose by two percentage points to 3.5 per cent. However, prime rents were able to maintain their level. By contrast, the second half of 2021 got off to a pleasing start with a 45,000 m^2 deal for the German Patent and Trademark Office. The current slight increase in the supply of office space could also stimulate the market, as attractive office space is now more readily available. However, in view of the expected moderate level of new office space coming onto the market in the current and coming year, the market is likely to be characterised by a shortage of space again sooner or later. Prime rents could rise slightly to EUR 40 per m^2 by 2022.

TAKE-UP (IN M²)



Source: bulwiengesa

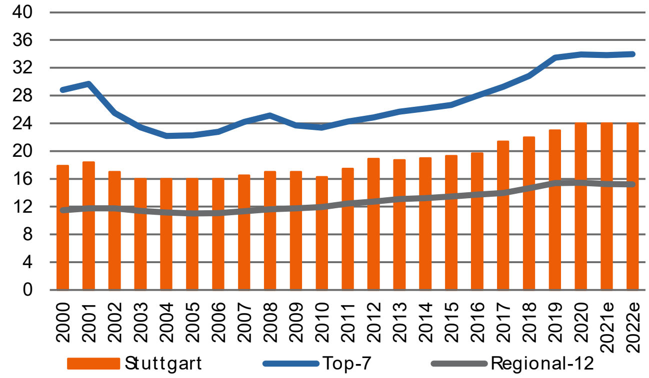
OFFICE SPACE COMPLETIONS (AS % OF OFFICE STOCK)



Source: bulwiengesa

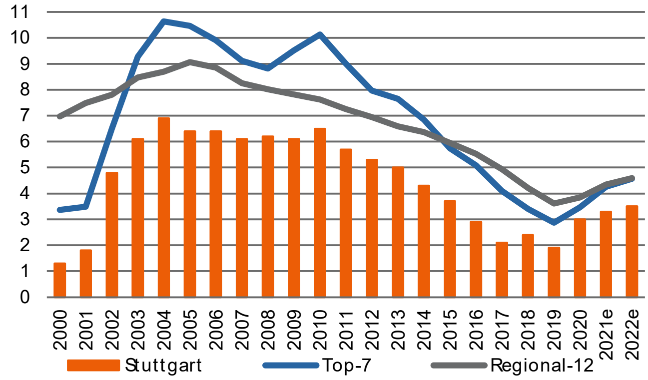
Stuttgart: Office space

PRIME OFFICE RENT (IN EUR PER M²)



Source: bulwiengesa, DZ BANK forecast

VACANCY RATE (%)

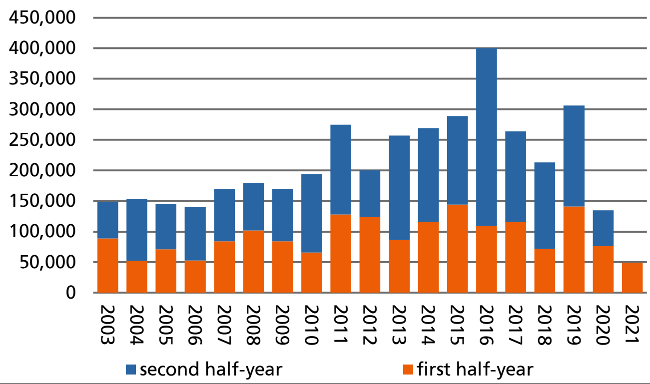


Source: bulwiengesa, DZ BANK forecast

The Stuttgart office market was operating with the handbrake on in the first half of 2021

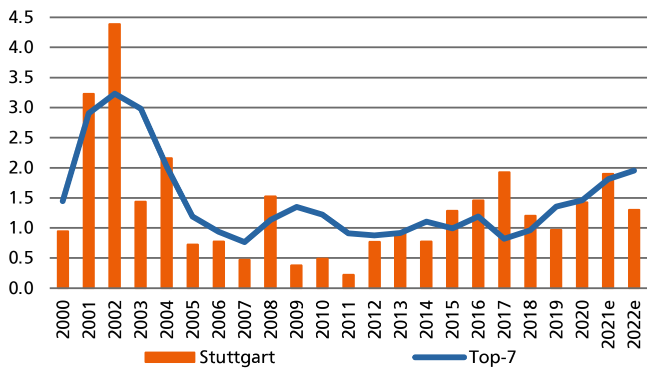
Stuttgart differs from the other top locations in that industry is much more important, even though the lion's share of the workforce in Baden-Württemberg's state capital also works in the service sector. In the office market, this background is likely to be responsible for the comparatively low office space take-up, which was often below 200,000 m^2 per year up until 2010. Market activity picked up thereafter, and from 2011 to 2019 the annual average rose to 275,000 m^2. Strong demand for office space in the economically strong Stuttgart conurbation whittled down an already rather low volume of vacant office space to just under 2 per cent. In 2020, prime rents exceeded the EUR 20 per m^2 mark for the first time. However, the pandemic caused the office space take-up to slump to 135,000 m^2 in 2020, which was more than in the other top locations. A lack of major transactions in particular had a negative impact on the market result in the previous year. However, even in the first half of 2021, the office market in the automotive location was operating with the handbrake on. Office space take-up did not even manage to reach 50,000 m^2, with half of this being accounted for by two five-figure rental agreements - tenants are Südwestbank and Züblin. Despite the low office space take-up, prime rents remained stable at EUR 24 per m^2 until the middle of 2021. The vacancy rate has risen by one percentage point since the first quarter of 2020 to 3.1 per cent. The rising number of applications for office space received by brokers indicates that the market could pick up in the second half of the year. We expect prime rents to remain stable.

TAKE-UP (IN M²)



Source: bulwiengesa

OFFICE SPACE COMPLETIONS (AS % OF OFFICE STOCK)



Source: bulwiengesa

RESIDENTIAL MARKET

Will the housing boom end due to migration to surroundings and regulation?

Hot topic: housing market. Rents in the big cities have become the subject of political debate

The tense situation on the housing markets and high rents are a persistent source of irritation. Hardly a day goes by without a report in the media. The Berlin rent cap, which was overturned on formal grounds by the Federal Constitutional Court at the beginning of this year, has fuelled the debate even more. The housing market has also played a significant role in the election campaign for the federal elections at the end of September. All major parties have presented concepts to make housing more affordable. The parties on the left of the spectrum are focusing increasingly on a noticeable tightening of rental control.

Example of Berlin: The pressure on housing companies …

Regardless of the plans of the new federal government, landlords and in particular larger private housing companies are at the focus of politics and interest groups. Two examples from Berlin demonstrate this. The initiative "Expropriate Deutsche Wohnen & Co." has the required signatures - 7 per cent of eligible voters - for a referendum, which Berliners will decide on at the same time as the federal elections. The Senate would not be bound by the result, which, like the outcome of the elections, was not yet available when this study was completed. However, the political pressure to act would increase.

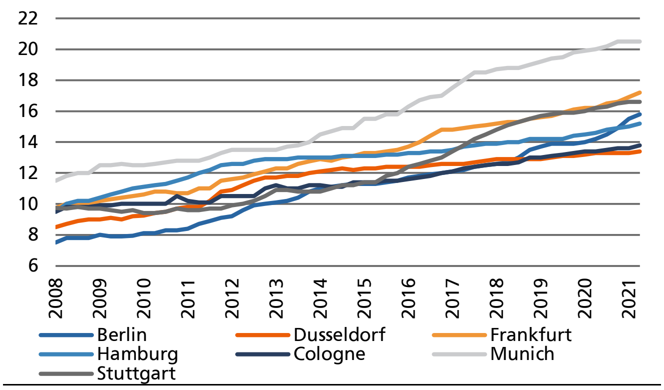
… has increased considerably and could also spill over to other cities

The second example concerns the "protection umbrella for tenants" presented by the Berlin Greens at the end of July, which landlords are supposed to agree on with the state of Berlin. The list of concessions - including a five-year rent moratorium - is long. Only landlords who consent to this agreement would be considered for the allocation of properties by the state of Berlin. Landlords who do not want to participate have been offered the prospect of possible socialisation as a means of exerting pressure.

Rent growth in the metropolises has already passed its zenith

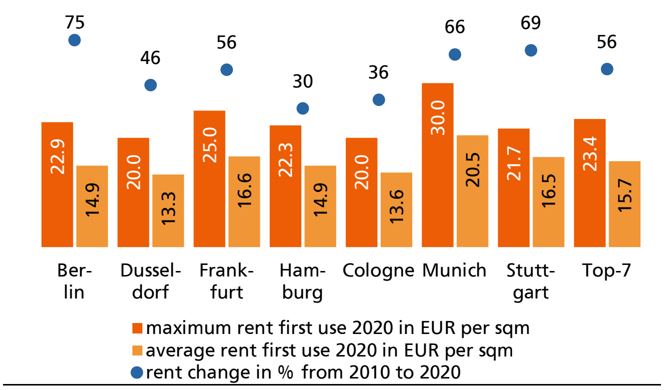
There is no doubt that housing in the seven largest cities has become significantly more expensive in recent years. On average, tenants paid EUR 12.70 per m^2 in 2020 when re-letting an existing flat. A newly built flat was still EUR 3 per m^2 more expensive. The rent for newly built flats in the prime segment is more than EUR 23 per m^2. Munich still has by far the highest level of residential rents. Overall, initial rents have risen by more than 50 per cent within ten years. The range extends from 30 per cent in Hamburg to 75 per cent in Berlin.

RENT CAP BOOSTS NEW-BUILD RENTS IN BERLIN (AVERAGE INITIAL RENT IN EUR PER M²)



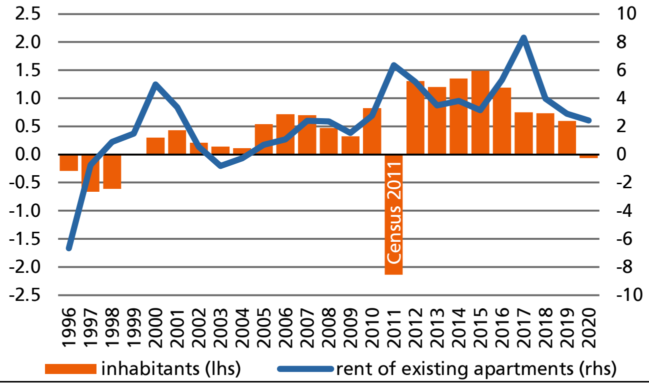
Source: bulwiengesa

THE PACE OF RENT GROWTH VARIES MORE THAN THE RENTAL LEVEL



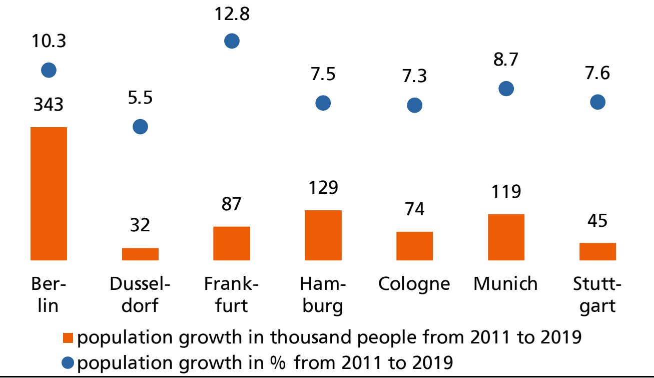
Source: bulwiengesa

TOP 7: MIGRATION TO CITIES DRIVES RENTS UP (NUMBER OF INHABITANTS AND RENTS COMPARED TO PREVIOUS YEAR IN %)



Source: bulwiengesa, Federal Statistical Office

THE POPULATION IN THE TOP LOCATIONS HAS INCREASED CONSIDERABLY IN RECENT YEARS



Source: Federal Statistical Office

Rent growth in the metropolises has already passed its zenith

However, rent growth has apparently already passed its zenith: the rent increase has clearly slowed down overall. This trend is particularly evident in rents on re-letting, which account for the largest share of newly-rented flats. In contrast, the average initial rent in the top locations rose faster again in 2020, following a previous slowdown in rental momentum. The main reason is the Berlin rent cap, which has thinned out the supply of existing flats and thus visibly accelerated the development of rents in the relatively small new-build segment.

Migration to cities and a shortage of supply are the causes of the strong rent growth

The reasons for the meanwhile pronounced increase in residential rents were a marked disproportion between supply and demand. Rising population figures due to strong migration from within Germany and abroad led to a noticeable increase in the demand for housing. In contrast, the supply of housing became increasingly scarce because housing completions fell to a low level. The vacancy reserves in the individual top locations, which were almost completely used up, could not cushion the excess demand, and rents rose correspondingly strongly. However, the driving forces on the housing market have weakened and thus decelerated the upward trend in rents.

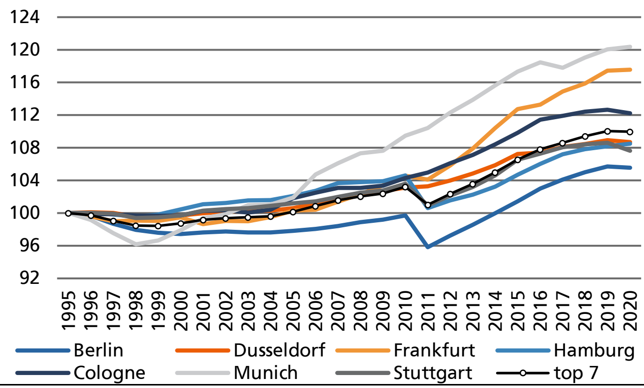
The number of inhabitants rose sharply within a few years

According to the figures from the Federal Statistical Office, the population of the seven cities increased by over 800,000 people (plus 9 per cent) between 2011 and 2019. In percentage terms, growth was highest in Frankfurt at around 13 per cent. Berlin ranked second with 10 per cent. This means that around 350,000 people new to Berlin were looking for a place to live during this period. In Frankfurt, almost 90,000 people needed a flat. Düsseldorf had the smallest increase in population at 5.5 per cent. However, even though the growth was weaker here, there was still a need for additional housing for 32,000 people. The housing market situation in Munich is particularly tense because the population growth here began much earlier than in the other top locations.

The population of the top 7 declined slightly in 2020

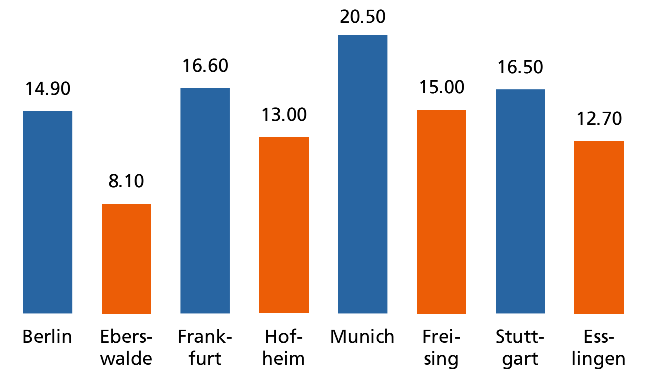
However, population growth has slowed down noticeably since 2017. In 2020, it came to a complete standstill. On balance, the population in the top locations even declined slightly. There were already some moderate declines in the number of inhabitants in previous years. The population losses, albeit small, are due to migration to outlying areas as a result of the lack of housing and the high rents, as well as the slowdown in the influx to Germany,.

POPULATION GROWTH DID NOT CONTINUE IN 2020 (POPULATION 1995 = 100)



Source: Federal Statistical Office

OUTLYING AREAS ARE MUCH CHEAPER IN TERMS OF HOUSING (INITIAL RENT 2020 IN EUR PER M²)



Source: Federal Statistical Office

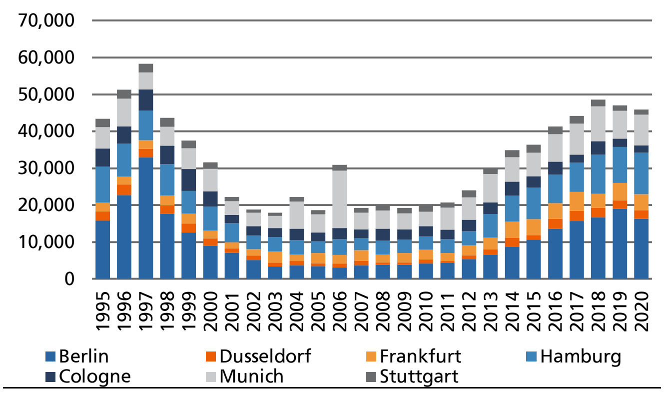
The outskirts score with significantly lower rents and purchase prices

A major advantage of living in the outskirts is the significantly lower rent level. Here, it is sometimes possible to save significantly more than EUR 3 per m² of living space. Working from home, which has increased significantly since the beginning of the pandemic, makes it more attractive to live further out of town. Until now, people had to put up with longer commuting times to get to work every day in order to get cheaper accommodation. However, those who only go to the office two or three days a week are more willing to take the longer journey. Furthermore, the outskirts offer spacious single-family homes, which can also easily accommodate one or two home offices.

Residential construction has expanded significantly since 2010

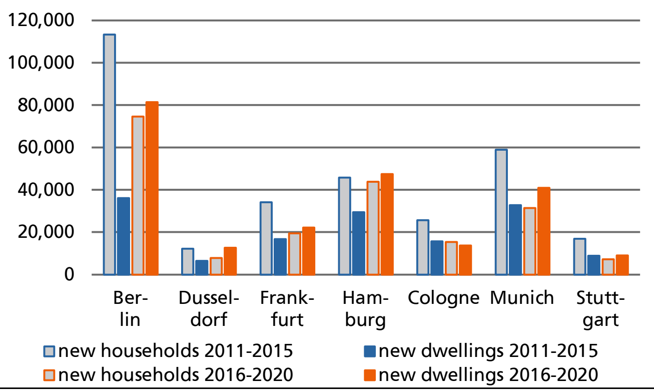
The second factor behind the slowdown in rent growth is the expansion of residential construction. In 2010, only 20,000 flats were completed in the top locations. However, since then new construction has picked up noticeable momentum. More than 40,000 flats have been built each year consistently since 2016. In 2018, there were almost 50,000 housing units, in 2020 the number declined slightly to 46,000 flats. In total, around 208,000 dwellings were built between 2001 and 2010. In the following decade, there were over 370,000, representing an increase of 80 per cent.

HOUSING CONSTRUCTION HAS REALLY GAINED MOMENTUM (NUMBER OF COMPLETIONS)



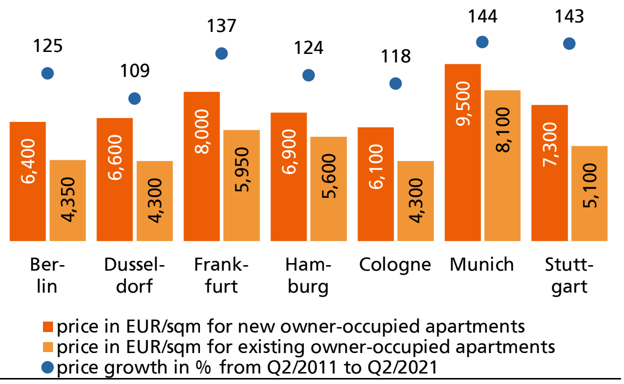
Source: bulwiengesa, Statistical offices of the cities and/or federal states (2020)

RATIO OF NEW CONSTRUCTION TO DEMAND HAS IMPROVED (CUMULATIVE COMPLETIONS AND NUMBER OF NEW HOUSEHOLDS)



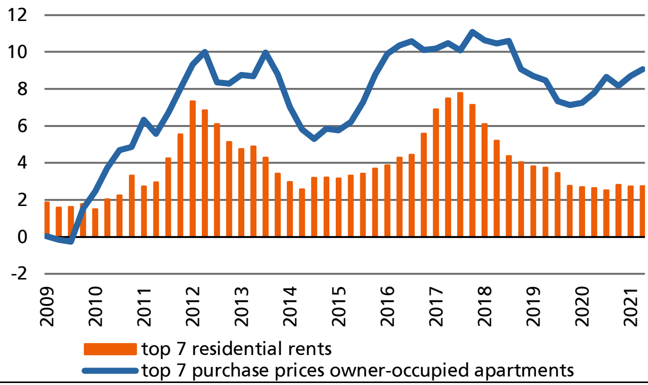
Source: bulwiengesa, Scope, Statistical offices of the cities and/or federal states

PRICES FOR OWNER-OCCUPIED FLATS HAVE RISEN SEVERAL TIMES FASTER THAN RENTS



Source: bulwiengesa

WIDE GAP AT PRESENT BETWEEN PRICE AND RENT INCREASES (PURCHASE PRICES AND RENTS VERSUS PREVIOUS YEAR IN %)



Source: bulwiengesa, DZ BANK Basis: Existing and newly-built flats

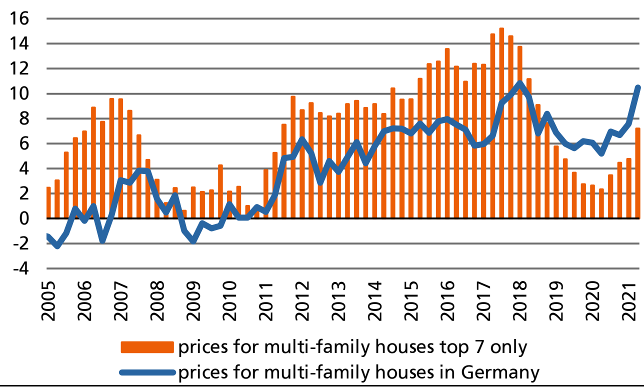
As a result, the imbalance between housing demand and supply is improving again. This is shown not only by the slowdown in rent growth, but also by a comparison of the growth of private households as a relevant measure of demand on the housing market and the number of newly-built flats. Between 2011 and 2015, the growth of private households exceeded the number of newly-built flats in all top locations. In Berlin, the ratio was three to one. Yet from 2016 to 2020, the ratio is balanced practically everywhere. The shortage that still exists is a consequence of the gap in demand that arose previously.

The ratio of housing construction and the growth of private households is now largely balanced

Neither the slower population growth nor the expanded residential construction had a dampening effect on the price development of owner-occupied flats, however. Even the prospect of obtaining a cheap rental flat through increasing rent regulation could not slow down the price increase. Nor is there any evidence of a "home-office effect" or a braking impact from the prices that had already risen sharply before. Rather, the price increase for owner-occupied flats accelerated in the course of the pandemic - as it did in Germany as a whole. As a result, the price per m^2 for a new flat is now just over EUR 6,000 in the most favourable case (Cologne). In Munich, by contrast, one has to pay 50 per cent more. Within ten years, purchase prices have risen by between 110 and 140 per cent, thus outpacing the increase in rents by far.

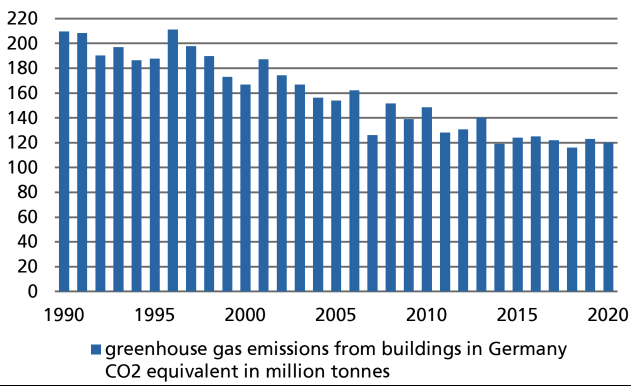
The factors that slow down rent growth could not impact the prices of owner-occupied flats

PRICES FOR MULTI-FAMILY HOUSES ARE ALSO RISING AGAIN (PRICES FOR MULTI-FAMILY HOUSES VERSUS PREVIOUS YEAR IN %)



Source: The Association of German Pfandbrief Banks (vdp)

BUILDINGS CONTRIBUTE SIGNIFICANTLY TO GREENHOUSE GAS EMISSIONS, BUT THE CO_2 VOLUME HAS BEEN STAGNATING FOR YEARS



Source: German Environment Agency

The price increase has also accelerated again for multi-family houses

Prices for multi-family houses, which are highly sought after by investors in view of the high demand for flats, have also picked up again. This also applies to the top locations. However, at around 5 per cent, the annual growth rate here is far below the high values - in some cases in double digits - that were observed from 2011 to 2018. The reasons for a slower pace are likely to be the already high price level and the less favourable letting prospects. Since 2018, prices for multi-family houses have risen faster across Germany than in the seven largest cities. The reason is the higher rental yields that can be achieved with often equally good letting prospects in areas other than the top locations.

Climate change is likely to lead to high renovation expenses for landlords

Climate change is a topic that will continue to be of great concern for the real estate market. The high importance of this topic has been demonstrated this year not only by the tightened Climate Change Act, but also by the flooding in the west of Germany. Buildings contribute worldwide, and thus also in Germany, to a large extent to the production of greenhouse gases. However, CO_2 emissions have not been falling for some time now, from their most recent level of 120 million tonnes (2020). Therefore, political and societal pressure is likely to increase, so that in the coming years landlords are likely to face high renovation expenditure. The extent to which these expenses can be passed on to tenants is questionable in view of the often already high housing costs and the regulatory rent interventions.

Summary residential market

Higher numbers of new builds and slower population growth are slowing down rental growth

The prospects for residential letting have become gloomier. This is due to the expansion of residential construction, which is gradually reducing the existing supply bottlenecks. This is compounded by the slowdown in population growth in the metropolises. It is questionable whether the high growth rates of the past will be achieved again. Lower rents in the outskirts and working from home also argue against this. For strong population growth, migration to Germany would have to increase noticeably again.

TOP 7: HOUSING MARKET DATA

		Berlin	Cologne	Düsseldorf	Frankfurt	Hamburg	Munich	Stuttgart	Top-7
Population growth									
Average from 2013 to 2016	% p.a.	1.4	1.2	0.8	1.7	1.1	1.3	1.2	1.3
Average from 2017 to 2020	% p.a.	0.6	0.2	0.3	0.9	0.6	0.4	0.1	0.5
Households									
Average from 2016 to 2020	% p.a.	1.1	1.0	0.6	1.1	1.2	1.0	0.8	1.0
Unemployment rate									
July 2021	%	9.9	9.4	8.0	6.7	7.6	4.8	5.1	8.1
Completions									
2011 to 2014	p.a.	5,900	3,100	1,250	3,000	4,900	6,000	1,700	25,800
2015 to 2018	p.a.	15,200	3,000	2,300	4,400	8,900	7,800	1,900	43,500
2020		16,400	2,000	2,300	4,300	11,300	8,300	1,400	45,900
Initial rent (average)									
Q2/2020	EUR/m²	15.80	13.80	13.40	17.20	15.20	20.50	16.60	16.1
Q2/2021 versus Q2/2020	%	11.3	3.0	0.8	6.2	4.1	2.5	2.5	4.3
2016-2020	%	4.8	3.3	1.5	4.2	2.3	5.2	6.9	4.0

Source: bulwiengesa, Scope, Federal Statistical Office, city statistical offices, DZ BANK forecast

Rent regulation and the costs of climate change could burden the economic viability

In addition, rent regulation might be tightened after the federal election. After all, affordable housing in the cities has become a highly explosive issue. The population's expectation that "something must finally be done" is high. According to surveys, the majority of Germans are in favour of a rent cap. Moreover, the problem of high housing costs is likely to increase despite slow further rent growth. The reason is the high investment requirements for energy-efficient building renovation with respect to climate change. On the one hand, politicians will exert pressure so that the successes in reducing greenhouse gas emissions will be visible. On the other hand, they will try to limit the surcharges imposed on tenants. The economic viability of multi-family houses could suffer just as much from this as from a general regulation of rents.

Rents are expected to increase by 2 to 3 per cent annually until 2022

The potential slowdown in economic recovery following the current post-Covid upturn could also reduce the scope for higher rents. The economic consequences of the pandemic for private households, such as lower incomes and short-time work, may also still be lingering. All in all, we expect rent increases in the top locations to be in the range of 2 to 3 per cent annually by the end of next year.

FORECASTS AT A GLANCE

Structural data 2020	Inhabitants in 1,000	Inhabitants 2011-2020 (%)	Households 2011-2020 (%)	per capita GDP EUR	Disposable per capita income EUR p.a.	Unemployment rate (% July 2021)
Berlin	3,664	10.3	12	35,000	24,600	9.9
Cologne	1,083	7.3	10	57,000	26,200	9.4
Düsseldorf	621	5.5	7	80,000	30,500	8.0
Frankfurt	764	12.8	15	94,000	27,200	6.7
Hamburg	1,852	7.5	11	66,000	29,100	7.6
Munich	1,488	8.7	13	70,000	38,400	4.8
Stuttgart	630	7.6	9	84,000	39,900	5.1
Top locations	**10,103**	**8.9**	**11**	**58,000**	**28,500**	**8.1**

Retail space	Retail space 2020			Prime rent EUR per m²			Prime rent % change			Prime rent 2020 EUR per m²	
	in 1,000 m²	2010-2020 (%)	Per inhabitant (m²)	2020	2021e	2022e	2011 to 2021e	2016 to 2021e	2020 to 2021e	B-1 locations	District locations
Berlin	7,100	21	1.9	285	265	250-260	18	-15	-7	135	47
Cologne	1,420	2	1.3	240	225	215-225	0	-10	-6	85	35
Düsseldorf	1,250	13	2.0	280	275	260-270	27	0	-2	85	47
Frankfurt	1,540	9	2.0	295	275	260-270	8	-8	-7	85	42
Hamburg	3,040	7	1.7	275	250	235-245	6	-12	-9	74	72
Munich	2,160	15	1.5	335	315	300-310	7	-9	-6	191	75
Stuttgart	1,130	16	1.8	215	195	185-195	-13	-22	-9	80	35
Top locations	**17,640**	**14**	**1.8**	**282**	**262**	**248-258**	**11**	**-12**	**-7**	**-**	**-**

Office space	Existing office space 2020			Prime rent EUR per m²			Prime rent % change			Vacancy rate in %		
	in 1,000 m²	2010-2020 in %	Per office worker (m²)	2020	2021e	2022e	2011 to 2021e	2016 to 2021e	2020 to 2021e	2020	2021e	2022e
Berlin	19,800	8	31	39.0	38.5	38.5	79	38	7,4	1.8	2.9	3.5
Cologne	7,800	5	30	24.5	24.5	25.0	23	17	2.2	2.8	3.3	3.5
Düsseldorf	7,700	5	35	26.5	26.5	26.5	20	8	1.5	6.5	7.3	7.6
Frankfurt	10,100	1	32	41.0	41.0	41.0	24	15	4.2	6.8	7.5	7.8
Hamburg	13,900	5	30	31.0	31.0	31.0	32	19	3.0	3.5	4.0	4.4
Munich	14,100	5	31	39.5	39.5	40.0	34	14	1.0	2.3	3.6	3.5
Stuttgart	8,000	7	38	24.0	24.0	24.0	37	22	1.5	3.0	3.3	3.5
Top locations	**81,400**	**5**	**32**	**33.9**	**33.8**	**34.0**	**39**	**21**	**4.0**	**3.5**	**4.3**	**4.6**

Housing stock	Growth from 2015 to 2020 (%)			Average initial rent EUR per m²			Change in initial rent (%)			Rent 2020 EUR per m²	
	Inhabitants	Households	Housing stock	2020	2021e	2022e	2011 to 2021e	2016 to 2021e	2020 to 2021e	Maximum initial rent	Re-lets
Berlin	4	6	4	14.9	16.0	16.4	76	33	7.4	22.9	10.7
Cologne	2	5	3	13.6	13.9	14.1	32	16	2.2	20.0	11.8
Düsseldorf	1	3	4	13.3	13.5	13.7	25	7	1.5	20.0	11.3
Frankfurt	4	6	6	16.6	17.3	17.6	50	17	4.2	25.0	14.3
Hamburg	4	6	4	14.9	15.4	15.7	23	15	3.0	22.3	12.3
Munich	3	5	5	20.5	20.7	20.9	56	22	1.0	30.0	17.7
Stuttgart	1	4	3	16.5	16.8	17.0	73	29	1.5	21.7	14.5
Top locations	**3**	**5**	**4**	**15.7**	**16.3**	**16.7**	**51**	**23**	**4.0**	**-**	**-**

Source: Scope, bulwiengesa, Federal Statistical Office, DZ BANK forecast

Note on the prime rents used for retail and office space: The figures adopted by bulwiengesa represent the mean of the three top three to five per cent of the rentals in the market, which means that the prime rents given are not the same as the absolute top rent. For this reason, the higher rent figures shown for individual locations, some of which are quoted in alternative market reports, are not fundamentally contradictory.

GLOSSARY

Office space take-up	Office space newly occupied during a one-year period in a location either through letting or owner occupation. The figure does not include contract extensions. The timing factored in is not the beginning of the actual use of the space, but when the contract was signed.
New space	Office space completed in a particular year from new building.
Vacancy rate	Proportion of vacant space in a location in relation to existing space.
Purchasing power score	Purchasing power relevant to the retail sector defines that part of the income of households in a region which is available for purchasing goods and services. The purchasing power figure describes a location's ability to purchase goods and services in relation to the German average which is set at 100 points.
Apartment blocks	The purchase price is divided by the basic rent (excl. bills) in the first year and therefore equates to the reciprocal value of the gross initial rent. Bills are not factored in.
Net initial yield	The initial rental yield for office and retail space is calculated dividing the annual net rent by the overall purchase price, taking into account additional charges.
Reg-12/Regional-12	Space and inhabitant-weighted index consisting of 12 regional centres, namely Augsburg, Bremen, Darmstadt, Dresden, Essen, Hanover, Karlsruhe, Leipzig, Mainz, Mannheim, Münster and Nuremberg.
Prime rent	The prime rent represents a mean of the top 3 to 5 per cent of lettings in the market and therefore the figure given does not correspond to the absolute top rent.
Top-7	Space and inhabitant-weighted index of the seven top locations under consideration in this report, namely Berlin, Cologne, Düsseldorf, Frankfurt, Hamburg, Munich and Stuttgart.
Centrality score	Retail centrality is calculated by dividing retail sales in a specific location by retail spending and then multiplying the result by 100. The figure will be above 100 points if retail sales are higher than retail spending and consequently that location in question has additional purchasing power.

Source: bulwiengesa, DZ BANK

I. Imprint

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