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REAL ESTATE MARKET GERMANY 2022 | 2023

Sustained demand for modern office
space and residential property – Retail
property remains under pressure

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PREFACE

Dear readers,

Sentiment on the German real estate markets has cooled significantly since the second quarter of 2022. The war in Ukraine and high levels of inflation, together with the interest rate turnaround and the economic slowdown, have created enormous challenges for the German real estate sector. Maximum market transparency has therefore become all the more important, and we have been contributing to this for years with our reports. This year, the fifteenth 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 all of the cities, rental activity has picked up again in 2022, putting an end to the trend of continuously falling retail rents over the last few years. However, the repercussions of the war in Ukraine on private households – mostly felt through rising energy costs – and the resulting decline in purchasing power are having a negative impact. Against this background, another decrease in rents can be expected for 2023. During the first half of 2022, the office market gained noticeable momentum, with top rents increasing in all surveyed locations. In view of the weakening economic outlook however, this momentum is likely to slow next year, although rents in the German metropolitan areas are still probably going to rise. The residential market is also facing challenges in the top locations, which are already expensive. Private households are suffering from high inflation and higher energy prices, so the scope for rent increases is markedly lower than in the previous years.

This study includes an excursus examining the booming niche market of life sciences property, where the megatrends of health and ageing offer growth potential. In this respect, we expect lab offices – which combine laboratory and office spaces under one roof – to become an increasingly important sector for the European transaction market in the next five years.

The German real estate market report 2022/2023 is 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

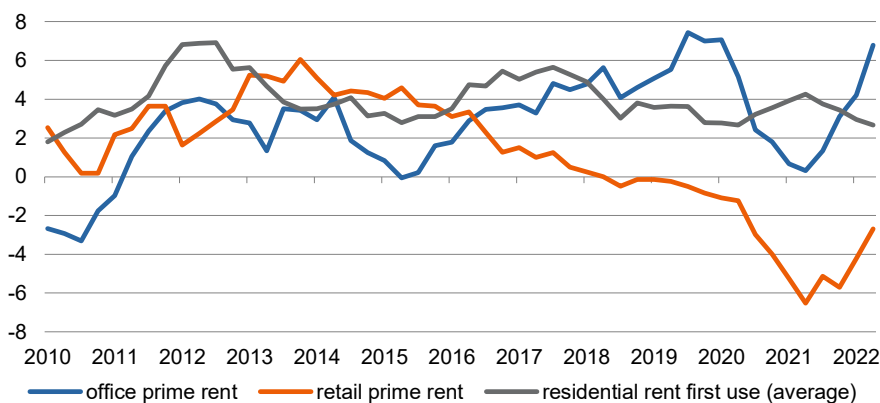
October 2022

SUMMARY

- » Where is the German real estate market heading? This is a difficult question to answer given the many risk factors. Trends triggered by the Covid pandemic, such as working from home (WFH), and the boom in online shopping, continue to have an impact. Added to these are the economic impact and uncertainty following Russia's invasion of Ukraine. The real estate sector is facing a skills shortage, supply chain problems and rapidly rising costs for new construction and renovation. Rising capital market yields are driving up property financing costs and the returns expected by real estate investors. The ECB also contributed to this with two strong key interest rate increases in July and September 2022.
- » This is not making decisions to invest in the real estate market any easier, although with initial rental yields clearly outperforming bond yields, property remains an interesting class. This **15th issue of our market report** provides information on how to assess the property market. We once again review the commercial real estate markets of the seven largest German cities – the **top locations of Berlin, Cologne, Düsseldorf, Frankfurt, Hamburg, Munich and Stuttgart**. As in previous issues, we focus on the office, retail and residential market segments.
- » Trends in the various market segments diverge widely. The **Office** market has clearly gained momentum after the Covid-related downturn. Up to the second quarter of 2022, pent-up demand and the contemporary space needed for new office concepts drove up office rents by a good 7 per cent compared to the same quarter last year. The now gloomier economic outlook and the risk of recession are likely to slow the pace of rents despite the supply shortage.
- » The downward trend in **Retail** rents has come to an end. However, the prospects are fairly gloomy as household spending is hit by high inflation, and particularly by the hike in energy costs. In addition, the numbers of passers-by and tourists have risen again to gratifyingly high levels.
- » **Residential** rents increased recently by around 3.5 per cent, continuing their longstanding trend of lagging behind consumer prices. Stagnating demographic growth and an increased supply of newly built properties are slowing the pace of rent growth. Prospects are caught between households which are bearing a heavy burden of high inflation and multiplied heating costs, and a contraction in the housing supply as new construction slows.

15th issue of our market report shows mid-year recovery, but clear deterioration in outlook

TOP 7: RESIDENTIAL SOLID – OFFICE RENTS PICKING UP – RETAIL STABILISING
RENTS COMPARED TO PREVIOUS YEAR IN %



Source: bulwiengesa

Overview of segment-specific outlook

- » There is no end to the pain being inflicted on city centre retail. Online shopping – boosted by the pandemic – now accounts for more than 40 per cent of sales in core segments such as fashion. Although footfall has returned to its 2019 level after a Covid-related decline, many people now have little money to spend. Inflation has reached a level not seen for decades. In addition to high food, petrol and diesel prices, heating costs are imposing a particularly heavy financial burden on many households. And the pandemic is not over yet and could flare up again with an autumn wave and new variants.
- » Solid demand for retail space in the first half of 2022 halted the downward rent trend of several years. Prime rents, which had fallen by just over 10 per cent overall, stabilised on average at EUR 265 per m². However, a deterioration in household spending power and the downturn in consumer sentiment could inflict more damage on space rental in city centres. Many households are well supplied with clothing, footwear and electronic goods and can defer new purchases. The sales outlook for city centre retail is correspondingly poor.
- » The repurposing of obsolete retail space is already in full swing. Retailers looking for space are in a strong negotiating position given the large supply of property. The strong recovery in footfall and the number of tourists is indicative of the potentially good prospects for city centre retail.

Retail:
City centre retail squeezed by E-commerce, Covid and inflation

OVERVIEW OF RETAIL PROPERTY

	Prime rents in EUR per m ²			Prime rents % vs. prev. yr.
	Q2/2021	Q2/2022	2023e	Q2/2021 to Q2/2022
Berlin	280	270	255-265	-3.6
Cologne	230	225	210-220	-2.2
Düsseldorf	280	275	260-270	-1.8
Frankfurt	280	275	260-270	-1.8
Hamburg	255	250	235-245	-2.0
Munich	325	315	300-310	-3.1
Stuttgart	215	205	190-200	-4.7
Average for top locations	273	265		-2.9

Source: bulwiengesa, Scope, DZ BANK Research forecast

The prime rent represents the average of the top 3 to 5 per cent of market rentals, and the stated figure does not therefore correspond to the absolute top rent.

- » Before the pandemic, office markets were characterised by a marked supply shortage. Virtually no large interconnected office space was available from the existing stock and most rental contracts were therefore for project developments. However, the pandemic - which made working from home acceptable in Germany - led to a weakening of rental business. Rents stopped rising, and the number of vacant properties increased.
- » Rental activity has gained pace again since the end of 2021. Office space is also in demand again. Appropriate office space is needed for the new “hot desking” office concepts now being adopted by many companies. Because contemporary office space is still in short supply, rents are correspondingly high, and prime rents for high-end and sustainable office space are therefore increasing again. Interest in office properties with low energy efficiency, on the other hand, is likely to wane among tenants and investors alike.
- » However, with the German economy at risk of recession, the headwind for office rentals is clearly intensifying. The upward rent trend could therefore flatten once again. In addition to net rents, additional costs for heating and air conditioning

Office:
Market gains pace in 2022, but could be hampered by risk of recession

have also risen sharply, and the cost of office space is therefore increasing in any case. Since most space under construction has already been pre-let, the deferral of office projects could however intensify the shortage of contemporary office space.

OVERVIEW OF OFFICE PROPERTY

	Prime rents in EUR per m ²			Vacancy rate %		
	Q2/2021	Q2/2022	2023e	Q2/2021	Q2/2022	2023e
Berlin	38.7	42.0	42.5-43.5	2.6	3.5	4-4.5
Cologne	24.5	26.0	26-27	3.2	2.8	3.2-3.5
Düsseldorf	26.5	27.5	28-29	7.1	7.7	8-8.5
Frankfurt	41.0	44.0	44-45	7.4	8.1	8.5-8.9
Hamburg	31.0	32.5	33-34	3.8	3.8	4.2-4.5
Munich	39.5	42.5	43-44	3.5	3.9	4.2-4.7
Stuttgart	24.0	26.0	26-27	3.1	3.8	4.2-4.7
Average for top locations	33.9	36.3		4.1	4.5	

Source: bulwiengesa, Scope, DZ BANK Research forecast

The prime rent represents the average of the top 3 to 5 per cent of market rentals, and the stated figure does not therefore correspond to the absolute top rent.

- » Rapidly rising heating costs have eclipsed high rents as the key issue in the residential market. Initial rents in already expensive top locations continued to increase in the first half of 2022, albeit no longer quite so rapidly. The halt in demographic growth, together with stronger housebuilding activity, have dampened growth in already high rents.
- » However, the supply and demand ratio could now deteriorate further. Massive price increases for new construction and significantly higher financing costs are applying the brakes to housebuilding. Conversely, based on population numbers, cities are growing again. The main contributory factor here in 2022 has been the large number of refugees fleeing the war in Ukraine.
- » This suggests that rents will increase. However, it is doubtful whether this will actually happen. Households are suffering from high inflation and in particular from the hike in energy prices. Energy prices are also putting pressure on the economy which is at risk of recession, and this could then squeeze the labour market and consequently household incomes. Rent control is also having a braking effect. Below the line initial rents are likely to rise fairly moderately up to 2023.

Residential:
Rents could continue to rise moderately despite “gas crisis“

OVERVIEW OF RESIDENTIAL PROPERTY

	Average initial rent in EUR per m ²			Initial rent % vs. prev. yr.
	Q2/2021	Q2/2022	2023e	Q2/2021 to Q2/2022
Berlin	15.8	16.7	16.9-17.2	5.7
Cologne	13.8	14.3	14.5-14.7	3.6
Düsseldorf	13.4	13.8	14-14.3	3.0
Frankfurt	17.2	17.3	17.4-17.7	0.6
Hamburg	15.2	15.7	15.9-16.2	3.3
Munich	20.5	20.8	20.9-21.2	1.5
Stuttgart	16.6	16.9	17.1-17.3	1.8
Average for top locations	16.2	16.7		3.5

Source: bulwiengesa, Scope, DZ BANK Research forecast

ECONOMIC CONDITIONS IN GERMANY

The German economy is stagnating. The second quarter was anything but good in terms of economic growth and compared to the rest of the Eurozone. Seasonally adjusted GDP merely stagnated in the spring, after growing by a revised rate of 0.8 per cent in the first quarter compared to the previous quarter. The German Federal Statistical Office referred to the difficult global economic conditions in the second quarter, the ongoing Covid pandemic, the disruption to supply chains and the war in Ukraine.

Various key indicators (the Ifo Business Climate Index, ZEW economic expectations, the GfK consumer climate) show a marked deterioration in outlook. We believe the German economy is likely to slip into a recessionary phase in the summer quarter (Q3/22). Even without a gas shortage, continuing high gas and electricity prices could lead to “self-rationing” for companies and consumers, which would be likely to slow economic growth notably, particularly in the coming quarters. The German economy is therefore expected to shrink by around 2 percent in 2023.

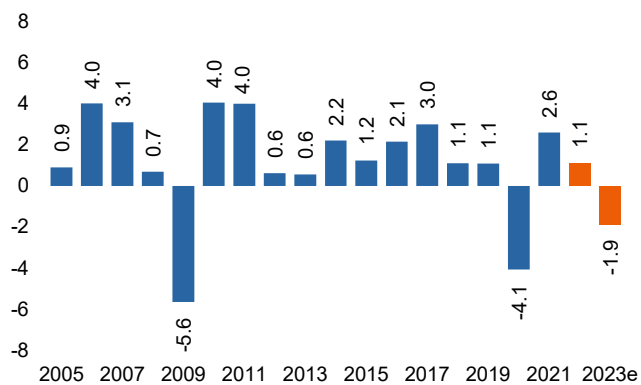
There is still no sign of inflation easing (HICP). Relief measures, such as the fuel discount and the 9 Euro ticket, expired at the end of August. To make matters worse, consumers are facing an expensive gas levy from October. Gas and electricity prices have also increased again sharply, particularly in July. Against this background, we now expect consumer price inflation to increase to more than 8 per cent in 2022. The figure should continue to diverge sharply from the ECB target in 2023 with around 6 per cent.

Germany economy stagnates in Q2/22

Recession from Q3/22: Businesses and consumers decidedly sceptical

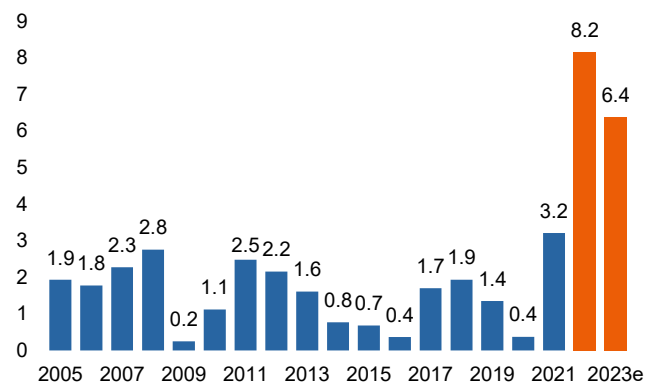
Inflation forecast raised: Relief measures ending, gas levy, higher energy prices

GERMAN ECONOMIC ENGINE DECELERATING
GDP IN % VS. PREV. YR.



Source: Eurostat, DZ BANK forecast

INFLATION WILL REMAIN HIGH IN 2023
CONSUMER PRICES (HICP) IN % VS. PREV. YR.



Source: Eurostat, DZ BANK forecast

Per September 2022

LIFE SCIENCES: FOCUS ON HEALTH

Research offices are a niche segment, but also a growth market

Staying healthy as you age – who wouldn't want that? In simplified terms, this is the motivation driving the booming Life Sciences sector of the economy, which is researching corresponding solutions. However, classic office premises are not appropriate for companies in this segment. Although office space is required for administrative and management functions, the main focus is on laboratory space used by the biologists, chemists and medical staff who are carrying out the research. This combination - the young "lab offices" segment - is of increasing interest to investors. What lies behind the lab office trend and what potential does it have?

The Covid pandemic is a starting point for a review of this segment. It has not only shifted vaccine development into the public focus, but has also brought into the mainstream concepts such as "vulnerable" and "pre-existing conditions" to refer to people at risk of serious cases of Covid 19. Because people are living longer thanks to medical progress, these concepts apply to large sections of the population and not just to a small number of people. In 2021 in Germany more than one fifth of the population – around 18 million people – had reached the age of 65. However, increased life expectancy has not so far been accompanied by improved fitness levels. In fact the opposite is true. A sedentary lifestyle, high-calorie food, ready meals containing a lot of sugar, and the consumption of alcohol and tobacco have consequences, and considerably increase the risk of obesity, high blood pressure, diabetes, dementia, heart attacks, cancer and strokes.

The growing number of older people suffering ill health is also a significant economic factor. In 2020 for example, German spending on healthcare reached a new record of EUR 440bn – 13 per cent of economic output. Lifestyle and ageing will be major contributory factors to the continuing growth in healthcare spending in Germany and in many other countries. Figures from the European Union provide an indication of the growth potential in the healthcare market; the number of people in the EU aged 65 and over is set to rise from 92 million (2020) to more than 130 million by 2050. Another factor is the health risk posed by being overweight since the already high proportion of people in this category tends to increase further with advancing age.

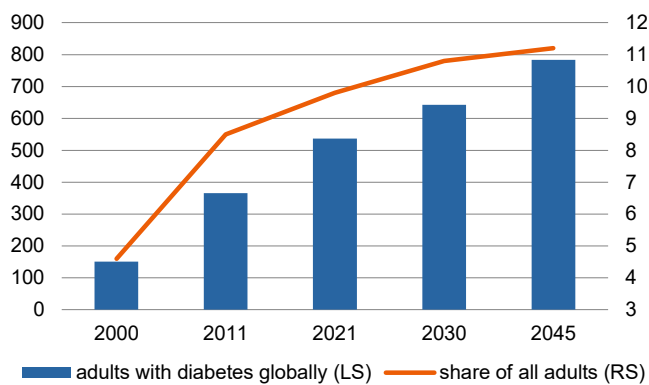
Life Sciences can help to keep older people healthy

Number of older people increasing sharply

Western lifestyle associated with many "diseases of civilisation"

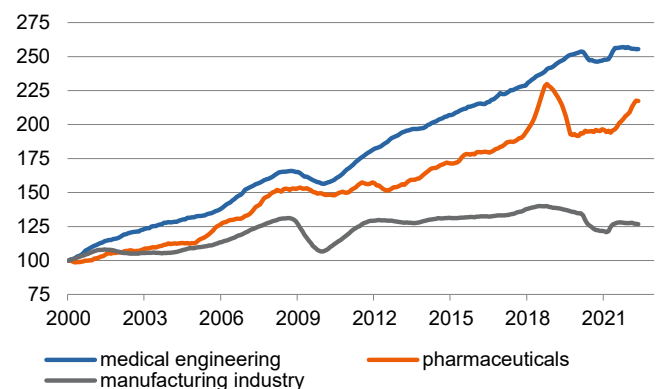
Health a rapidly growing economic factor

NEARLY ONE IN TEN ADULTS IN THE WORLD IS DIABETIC
L: IN MILLION PEOPLE; R: IN PER CENT



Source: IDF Diabetes Atlas

GERMANY: HEALTHCARE GENERATES STRONG GROWTH
PRODUCTION INDICES 2000 = 100



Source: Feri

The dynamic growth in economic sectors such as biotechnology, medical technology and the pharmaceutical industry - which is much higher than in the manufacturing industry - is therefore unsurprising. Medication which protects against typical diseases of old age and civilisation or which is used to treat these illnesses has particularly high economic potential. After all, large and growing sections of the populations of the affluent countries of Asia, Europe and North America suffer from these diseases. The willingness and ability to invest large amounts of money in maintaining health is therefore correspondingly strong. An ever increasing number of people worldwide also have access to medical care.

Life Sciences essentially consist of a combination of various scientific disciplines such as biology, chemistry, medicine and pharmaceuticals. In turn, the main activity of the biotechnology, pharmaceuticals and medical technology segments in focus here is research into living organisms. Life Sciences are associated with the development of economically successful products for human health rather than with fundamental research. In Germany, biotechnology moved centre stage and gained additional momentum with the approval of the first Covid vaccine.

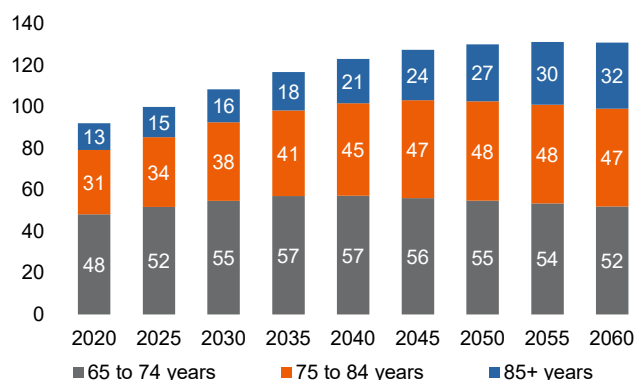
However, the path to producing a market-ready substance is long and fraught with obstacles. Only a fraction of the substances researched are actually successful. To achieve rapid progress, sufficiently large teams are needed. Growth in the number of jobs in Life Sciences is leading to correspondingly higher demand for properties and investment. According to estimates, more than 300,000 people in more than 2,000 companies are employed in the Life Sciences sector in Germany. Biotechnology is the smallest segment, while pharmaceuticals and medical technology employ significantly more people. The functions of the properties required range from pure offices via laboratories and pharmaceutical logistics to production plants. From our perspective, this combination of office and laboratory – the lab office – is of particular interest to investors.

Successful methods to combat diseases of old age and civilisation will generate high revenues

Life Sciences comprise biotechnology, pharmaceuticals and medical technology

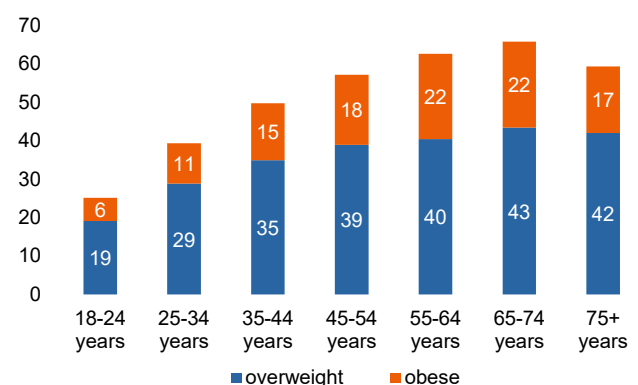
More jobs in lab offices needed as number of employees grows

NUMBER OF OLDER PEOPLE IN THE EU WILL INCREASE SHARPLY BY ABOUT 2050
OLDER PEOPLE IN MILLIONS



Source: Eurostat

OLDER EUROPEANS OFTEN SUFFER FROM OBESITY
PROPORTION OF EU POPULATION (%)



Source: Eurostat

Property investors have long steered clear of laboratories with their specific requirements and limited third party usage. However, the potential of Life Sciences, together with high demand for investment properties, is bringing the two sides closer together. Available information on this property segment is nevertheless sparse. This is true of the properties, the rental market and also the companies, apart from a small number of big players such as BioNTech. Companies often emerge from university research – as was also the case with BioNTech.

Lab offices are still a young asset class

Life Science companies in Germany have been established in a small number of clusters. They are particularly prevalent in the seven top locations and in the Rhine-Main, Rhine-Neckar and Rhine-Ruhr regions. These locations benefit from their proximity to universities, very good access to the skilled workers who are in short supply, good transport links, and a comparatively plentiful supply of suitable space. The cluster formation helps to mitigate the risks associated with real estate developments, because it is easier to find a new tenant for a property. The reuse of a property is potentially more difficult outside the Life Science clusters.

Life Sciences focused on a few clusters in Germany

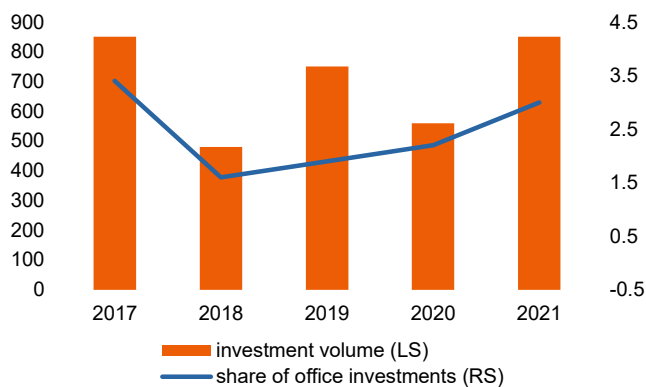
Requirements for property, labs and space vary. Start-ups need only a few hundred square metres of space, consisting essentially of labs for research and development. More space is generally required for further growth and the necessary clinical testing phases, with an increasing proportion of office usage. Given favourable economic prospects and associated expansion, management functions will become more important, and demand for office space in particular will increase.

From start-up to mature company, space demand grows and usage alters

Lab requirements also differ. Analysis by JLL differentiates between wet and dry labs, and biological and chemical wet labs. The requirements for a dry lab are fairly moderate, for example similar to utility rooms. The costs are therefore only slightly higher than for office space. The requirements for wet labs are considerably higher because they involve the use of chemicals and special analytical equipment. These include, for example, higher ceilings, special surfaces, and powerful extraction and ventilation systems for gases and liquids. The costs of construction, interior fittings and ongoing operations can be significantly higher than for classic office space here.

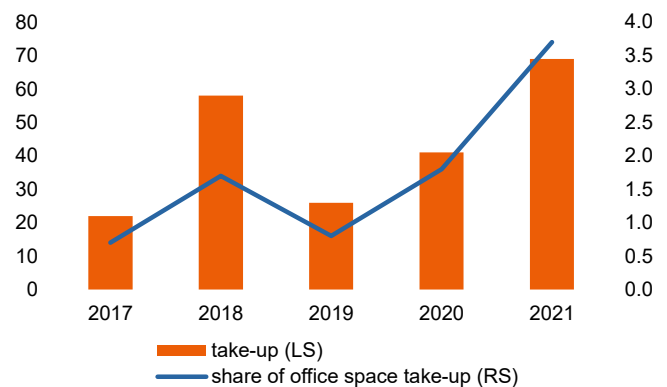
Many different types of labs

LIFE SCIENCE REAL ESTATE IN GERMANY: INVESTMENTS
L: IN EUR M, R: IN %



Source: Cushman & Wakefield
Transactions from Berlin, Düsseldorf, Frankfurt, Hamburg and Munich

LIFE SCIENCE REAL ESTATE IN GERMANY: RENTALS
L: IN TSD. M², R: IN %



Source: Cushman & Wakefield
Rental agreements from Berlin, Düsseldorf, Frankfurt, Hamburg and Munich

The often very specific requirements of laboratories suggest that the users are more often also the owners of the property. Accordingly, the rental activity only affects part of the laboratory building stock. This probably explains - in contrast to the office market - why the proportion of owner-occupiers in the leases for rented laboratory properties considered by JLL is in the low single-digit percentage range. The rental agreements are usually for periods of ten years plus an extension option. Companies in the early phases prefer shorter terms because their prospects are uncertain. This flexibility is mainly evident in science and technology parks. Expansion and renovation costs are much higher than for offices. Depending on the agreement, these costs may be borne by the tenant or may be reflected in a correspondingly higher rent.

Ten-year rental agreements dominate

Rental income for lab offices is still low relative to the office market, but the proportion has recently increased to nearly 4 per cent. While pure office buildings are still preferred in city centre locations or office centres, lab offices are concentrated on remote and peripheral sites. Because city centre locations play a lesser role, the average rents are slightly below the office market as a whole, but in relation to the respective location, the rents are sometimes significantly higher than comparable office rents. This applies to both laboratory space and the associated office space. With annual rental take-up of a few tens of thousands of square metres – corresponding to total office rental in an individual B location – it is not possible to make any definitive statements about the market trend. Rents may also include costs allocated for space expansion and renovation.

As a result of the high owner-occupancy rate of properties used for lab offices and the major importance of the public sector, the supply available to investors is manageable. This is reflected in an evaluation by Cushman & Wakefield of the five top locations Berlin, Düsseldorf, Frankfurt, Hamburg and Munich, where a cumulative EUR 3.5bn was invested in lab offices from 2017 to 2021. This corresponds roughly to 2 to 3 per cent of office investment volume. Roughly a third of the investments – around EUR 1.3bn – related to Munich. Next in line were Berlin (around EUR 630m) and Düsseldorf (around EUR 250m). According to C&W, the net prime yield for properties with a large proportion of office space is 4 to 4.5%.

Lab offices are less appropriate for first-time investors in commercial real estate. Conversely, they can represent an interesting portfolio addition. High investment volume in this young asset class is in any case virtually impossible given the limited size of the market. However, growing demand is also likely to lead to higher investment, for example as science and innovation centres are extended. The higher yield compared to top-tier office properties in the cities reviewed by C&W is a positive aspect, but not, in our view, the crucial factor. The higher yield is being achieved in a niche market with comparatively expensive speciality properties, most of which are also located outside city centres. Lab offices are interesting because of the high potential of life sciences and the consequently good rental prospects.

Life science companies need labs urgently, and do not have the option of using classic office properties or home working. The many adjustments needed to individual facilities speak for long-term tenancies. Moving to other premises would be very costly for the tenant. Research is also relatively unaffected by economic trends. It is the basis of the future economic success of a life science company, and is therefore likely to be the last area where savings are made. Companies might even be more willing to pay higher rents for the labs and office space they need. Although the skills shortage is impacting on every sector, the gulf between supply and demand is likely to be particularly wide for graduates in the MINT subjects. As well as offering an interesting area of activity, an attractive workplace is undoubtedly another plus point for an employer when hiring staff.

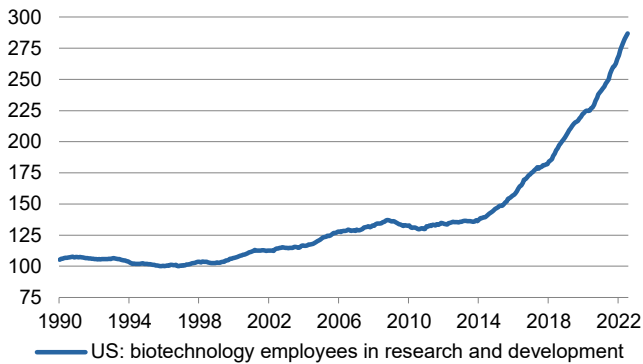
Small but growing rental market

Investments account for almost 3 per cent of office investment

Lab offices an interesting portfolio addition

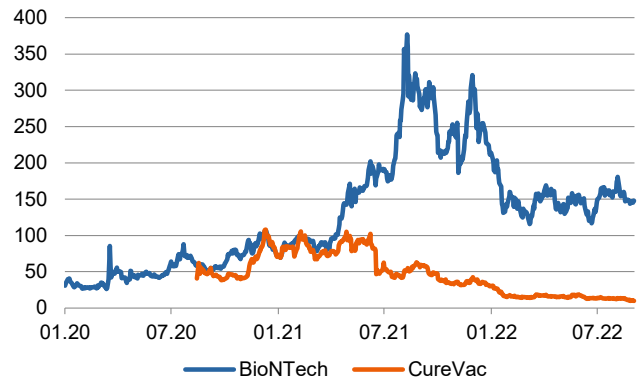
Life science companies geared to laboratories and have virtually no other alternatives

BIOTECHNOLOGY BOOMING IN THE USA: DEMAND FOR LAB OFFICES INCREASES AS THE NUMBER OF JOBS GROWS
NO. OF EMPLOYEES IN THOUSANDS



Source: Bureau of Labor Statistics

BIOTECHNOLOGY: DESPITE KNOWHOW AND HIGH RESEARCH INVESTMENT, SUCCESS IS NOT GUARANTEED
SHARE PRICE IN EUR



Source: Deutsche Börse AG

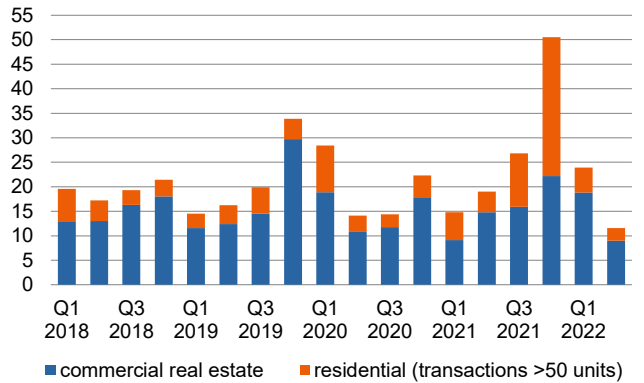
per 2 September 2022

In addition to low market transparency, investors have to be prepared for the low degree of standardisation of tenancy arrangements because space and facilities are geared to a specific type of tenant. The connection between the property and the user is much closer than in the case of residential, office and retail real estate where rental agreements are generally standardised and tenants can be changed without any problem. Despite the growth potential in this segment, the risk is therefore heightened - particularly for properties outside the life science cluster - if there is a change of tenant or the tenant experiences difficulties. As the Covid pandemic has demonstrated, even after the start-up phase and initial success there can certainly be setbacks here. In addition to BioNTech in Mainz, CureVac in Tübingen was also working at full speed to develop a mRNA-based Covid 19 vaccine. However, BioNTech had the edge, which has benefited its shareholders and also in particular the city of Mainz. The Rhineland-Palatinate state capital generated billions in revenue from trade tax and is planning a biotechnology location with 5,000 jobs for which various lab office properties will be required.

Despite all the growth speculation, the risks should not be ignored

TURMOIL IN REAL ESTATE INVESTMENT MARKET

INVESTORS CLEARLY RELUCTANT TO INVEST IN GERMAN REAL ESTATE IN SECOND QUARTER OF 2022
INVESTMENT VOLUME PER QUARTER IN EUR BILLIONS



Source: CBRE

INVESTMENT CONDITIONS ALTERED ON A LASTING BASIS BY YIELD RISE
10-YEAR BUND YIELD IN %



Source: Refinitiv

Per 2 September 2022

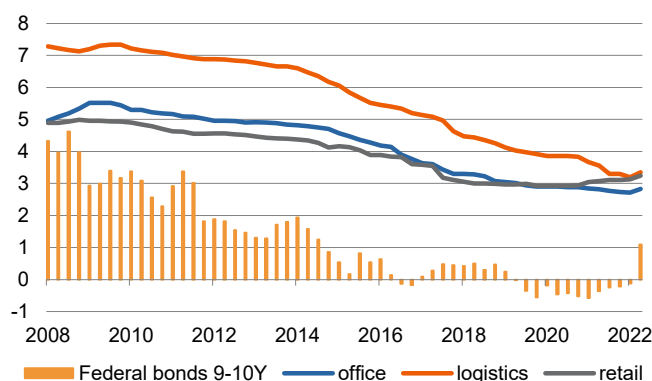
Capital market conditions have altered fundamentally for investors within a short period. Bond yields, which had descended into negative territory over decades, have risen sharply as inflation has climbed. Ten-year Bund yields increased from minus 0.4 per cent last December to nearly 1.8 per cent in June 2022, before slipping back to just over 1.5 per cent by the beginning of September. This has eroded the yield advantage of real estate investment. Although initial rental yields for commercial real estate and residential portfolios have fallen in a similar way to bond yields in recent years, their high yield advantage largely continued until 2021. Furthermore, financing costs for prime properties in the top locations are in some cases higher than the initial rental yield, and borrowed capital can no longer therefore be used to raise the total return.

Bond yield hike has significantly altered climate for real estate investment

Initial rental yields of well below 3 per cent have become less attractive to investors. True, there are signs of an increase in rental yields. However, the willingness of sellers to accept lower purchase prices is limited. This means that there is often a wide divergence between the purchase price expectations of buyers and sellers, as reflected in a visible reduction in transaction volume in the second quarter

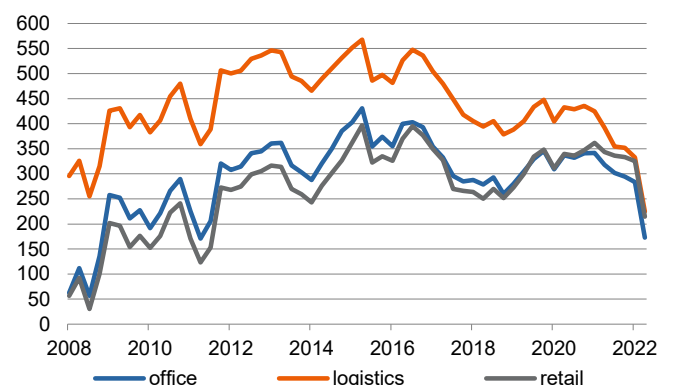
Expectations of buyers and sellers diverge widely

RENTAL YIELDS PICK UP SLIGHTLY FROM A LOW LEVEL, BUT MUCH LESS STRONGLY THAN BONDS
INITIAL RENTAL YIELD, BOND YIELD, RESPECTIVELY IN %



Source: bulwiengesa, Refinitiv

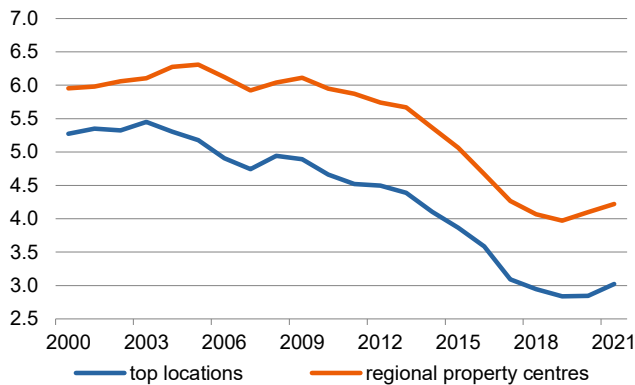
REAL ESTATE YIELD ADVANTAGE HAS DIMINISHED VISIBLY
YIELD DIVERGENCE FROM 10-YEAR BONDS IN BASIS POINTS



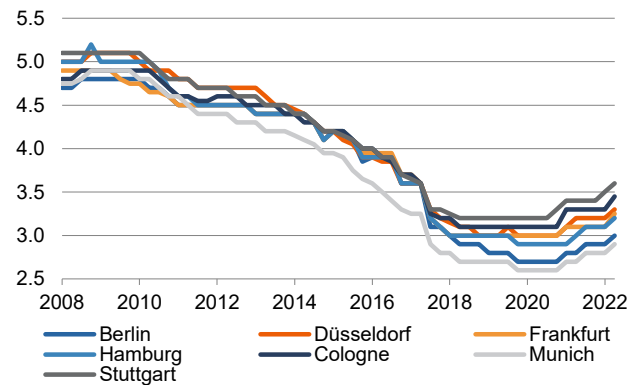
Source: bulwiengesa, Refinitiv, DZ BANK

of 2022. This is understandable from the seller's perspective, since the modest increase in rental yields from their previously low levels has led to visibly low purchase prices. We expect the buyers' and sellers' sides to converge in the months ahead, causing investment volume to pick up again. Given that bond yields remain low, real estate remains an alternative worth considering, especially as the inflation-indexed commercial leases lead to rising rental income, which has a positive impact on achievable yields and thus also on purchase prices. The higher financing costs give equity-rich investors an advantage.

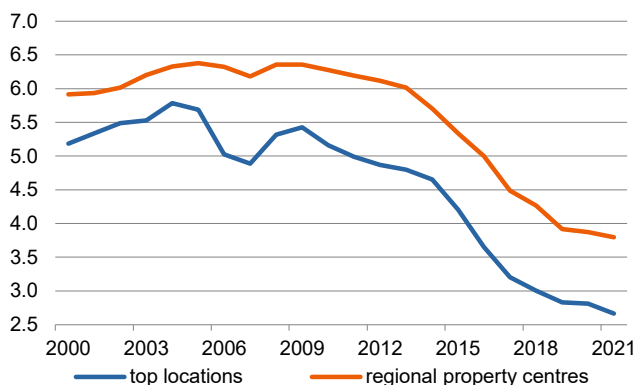
RETAIL: TREND IN INITIAL RENTAL YIELDS
NET INITIAL YIELD IN CENTRAL RETAIL LOCATIONS IN %



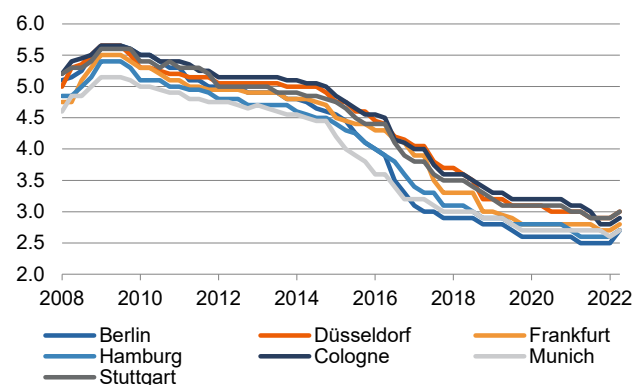
YIELD TREND IN INDIVIDUAL TOP LOCATIONS
NET INITIAL YIELD IN CENTRAL RETAIL LOCATIONS IN %



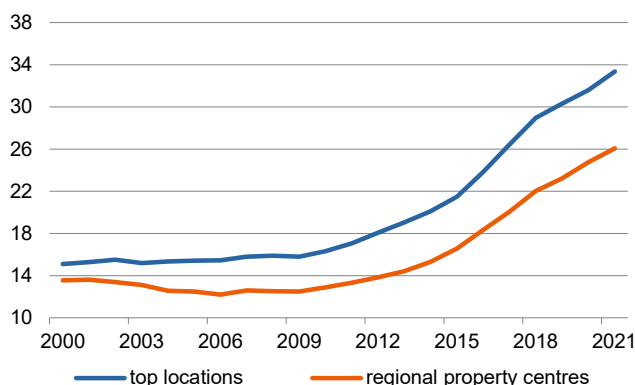
OFFICE: TREND IN INITIAL RENTAL YIELD
NET INITIAL YIELD IN CENTRAL OFFICE LOCATIONS IN %



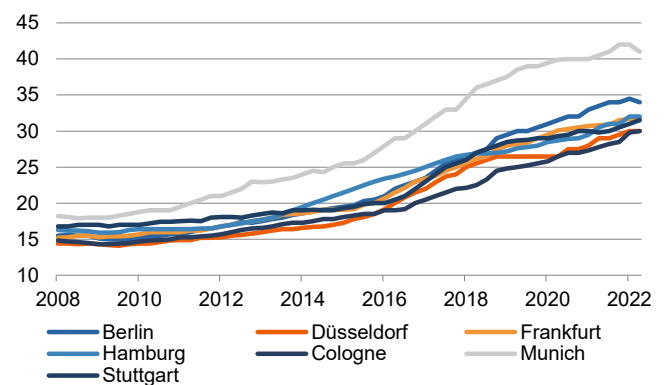
YIELD TREND IN INDIVIDUAL TOP LOCATIONS
NET INITIAL YIELD IN CENTRAL OFFICE LOCATIONS IN %



RESIDENTIAL: RENT MULTIPLIER FOR APARTMENT BUILDINGS
AVERAGE RENT MULTIPLIER



RENT MULTIPLIER IN INDIVIDUAL TOP LOCATIONS
AVERAGE RENT MULTIPLIER



Source: bulwiengesa

Explanation: the net initial yield for office/retail is calculated from the annual net rent and the total purchase price taking account of additional costs. For the apartment building multiplier, the purchase price is divided by the cold rent in the first year and thus corresponds to the reciprocal value of the gross initial yield.

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

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

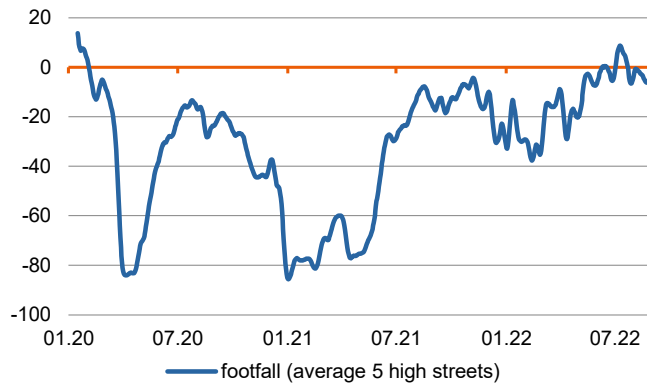
RETAIL

Ongoing retail crisis: E-commerce, Covid, inflation

There is no sign of an end to the problems which are afflicting city centre retail. For some years there has been a growing shift in the proportion of sales generated from E-commerce – a trend accelerated by the pandemic. In core segments such as fashion or electronics, online retail accounts for more than 40 per cent of the total. Although customers are now returning to the high street in greater numbers as Covid measures are relaxed, many no longer have as much money to spend. Inflation has reached levels not seen for decades. In addition to significantly higher food, petrol and diesel prices, heating costs are imposing a particularly heavy financial burden on many households. Nor is the pandemic over yet. It could flare up again with an autumn wave and new variants.

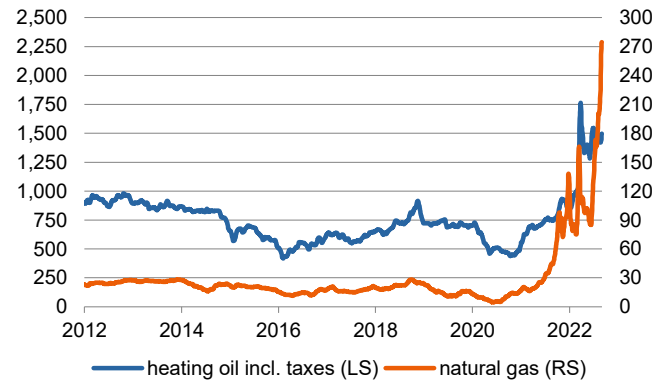
No end to crisis in city centre retail

SHOPPING STREETS NOW AS BUSY AGAIN AS BEFORE COVID
DIVERGENCE FROM 2019 IN %, 10-DAY AVERAGE



Source: hystreet.com / Destatis
Per 31 August 2022
Berlin (Kurfürstendamm North side), Frankfurt (Große Bockenheimer Str.), Hamburg (Spitalerstr.), Cologne (Schildergasse), Munich (Neuhauser Str.)

HIGH ENERGY PRICES CURB SPENDING
L: IN EUR/1000L, R: IN EUR/MWH



Source: EU Commission, European Energy Exchange
Per 1 Sep. 2022

Market conditions for retail

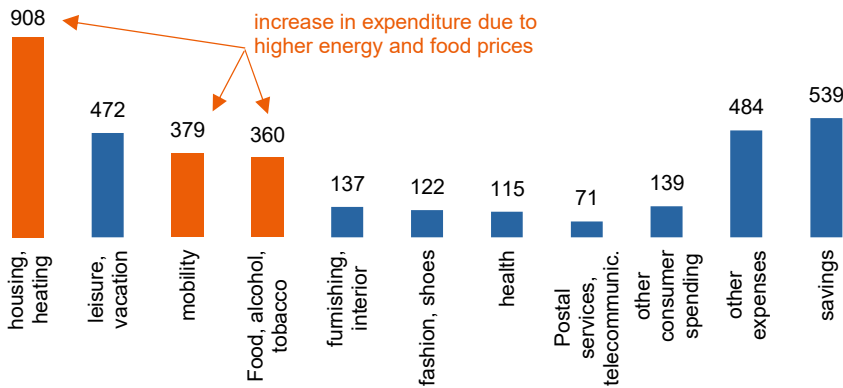
The war in Ukraine has shown how heavily dependent Germany is on Russian energy supplies. This applies mainly to gas which, unlike oil, is not readily available in the world market. Gas prices have “exploded” because only a fraction of the supply volume is now being delivered, with an adverse impact on consumers and the economy. There is also the risk of a complete suspension of the supply. Households and businesses are consequently being urged to conserve energy. Consumers – half of households use gas for heating – are will also have to adjust to high advance payments and additional bills. From October a gas levy of an additional 2.4 cents per kWh will have to be paid. However, other heat sources such as oil, wood and electricity have also become more expensive.

Heating costs exploding – not only for gas

Below the line, higher costs for food and particularly energy are imposing a burden on virtually every household. Nor is there any sign of the situation changing any time soon. Many households fear that they will be unable to afford the high additional bills. Even the clear increase in pensions in 2022 (western Germany +5.35 per cent, eastern Germany +6.12 per cent) and relief measures such as the fuel discount, the lump sum energy price allowance of EUR 300, and the “9 Euro ticket” are merely a drop in the ocean and also apply for only a limited period. It remains to be seen whether, given the high risk of recession, the hitherto robust labour market and the shortage of skilled workers will lead to significant wage settlements.

Income growth can at best only partly offset higher food prices

SAVINGS ACCOUNT, HOLIDAY OR CONSUMPTION – HOW ARE HOUSEHOLDS REACTING TO GROWING ENERGY AND FOOD COSTS?
USE OF DISPOSABLE INCOME EURO PER HOUSEHOLD AND MONTH



Source: Destatis (EVS 2018) *) Interest, gifts, insurance etc
Average monthly disposable income per household: EUR 3,726 Euro

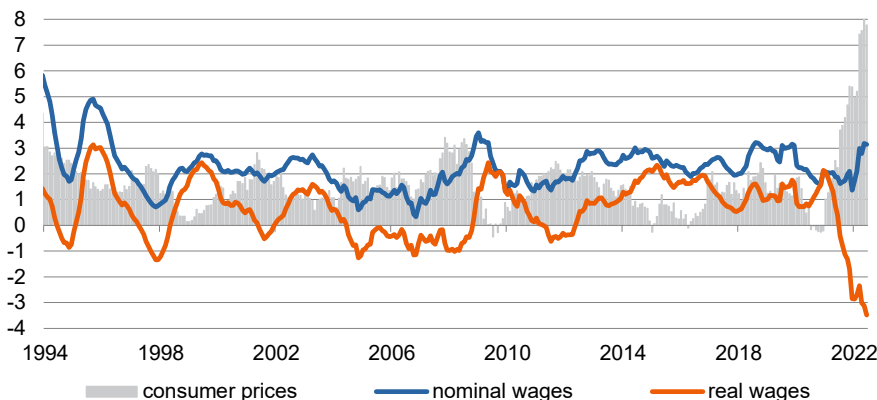
The war in Ukraine, inflation and the gas crisis are key concerns for people. This is reflected in consumer sentiment which has fallen to a historic low. The GfK survey shows that income expectations have slumped to an even greater degree than the propensity to buy. This is bad news for city centre retail in two respects, with the need to make savings driving consumer spending down further. Nominal wages are rising comparatively strongly in 2022, however the growth is being more than offset by high inflation, probably of an annual average rate close to 8 per cent. Below the line, spending power is falling significantly, much more steeply than in the last three decades. While low inflation has supported retail activity since 2012 in the form of real wage growth, the opposite is now the case.

Consumer climate and spending power declining sharply

Busy shopping centres and restaurants convey a different picture. However, households are reluctant to spend. The German Federal Statistical Office reported an inflation-adjusted decline of 9 per cent in retail sales in June 2022 compared to the same month last year. Consequently, nominal and real retail sales diverged sharply at mid-year. The music sector is another example. Tickets for some concerts are selling so slowly that tours have already been cancelled.

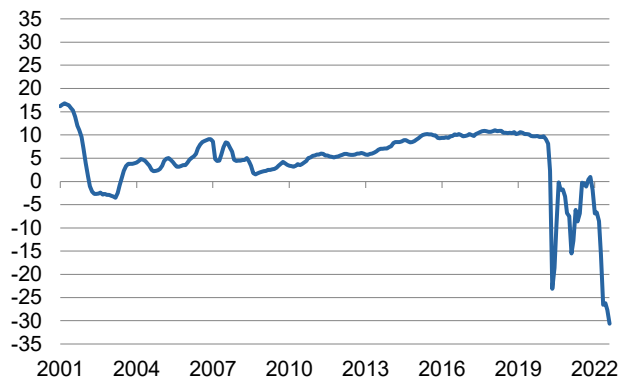
Despite busy shopping centres: Retail sales have slumped since mid-2022

INFLATION TRIGGERS CONTRACTION IN REAL SPENDING POWER DESPITE GOOD NOMINAL WAGE GROWTH
IN % VS. PREVIOUS YEAR



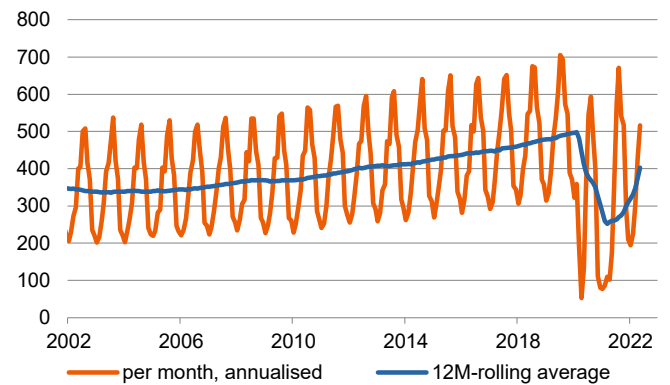
Source: Destatis, Refinitiv

CONSUMER SENTIMENT FALLS TO HISTORIC LOW
CONSUMER CLIMATE IN POINTS



Source: GfK per September 2022

TOURISM PICKING UP MOMENTUM AGAIN
OVERNIGHT STAYS IN GERMANY IN MILLIONS



Source: Destatis per June 2022

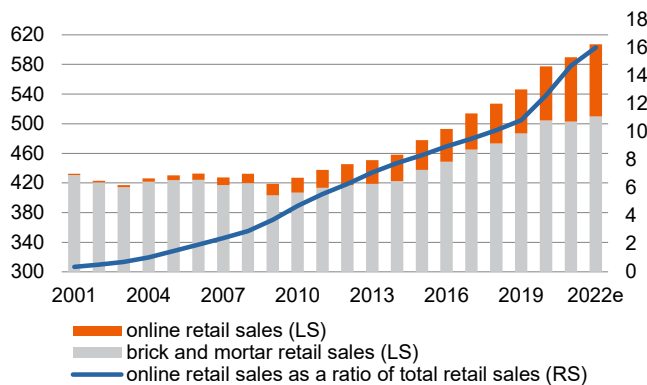
City centres in particular are feeling the squeeze as private households rein in spending. Unlike food for example, the range of products sold in shopping streets includes many items which consumers can either be delaying purchasing or can do without. Many private households have sufficient clothing, footwear and consumer electronics and can defer buying new items for a certain period of time. Nor is it certain that items not purchased now will be bought in future. This is likely to have a very negative impact on sales in this product sector both in-store and online. However, local sales will probably also weaken if customers opt for cheaper products or buy more from discounters.

Weaker sales could impact E-commerce and local shops as well as city centre retail

However, there are also some positive developments. People definitely enjoy going on a shopping trip. Footfall has returned to pre-Covid levels, a sign that city centres have not lost their powers of attraction. Tourism is also picking up again. Although the number of overnight stays has not yet returned to 2019 levels, it is clearly gaining momentum. However, retailers are likely to be feeling the pain in the absence of high-spending Chinese customers. Because demographic growth came to a halt in 2020, the support which it provided for the retail sector in previous years is also lacking.

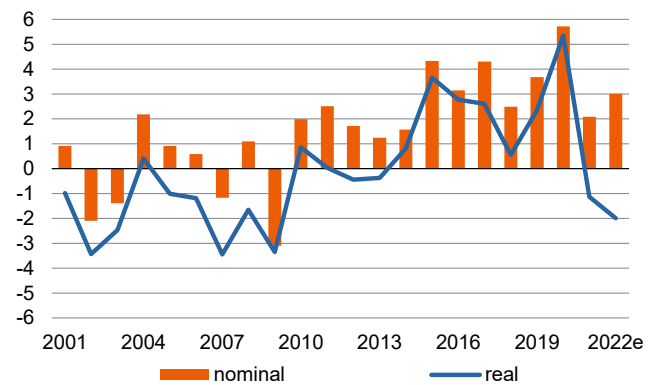
Local people and tourists enjoy coming to city centres

RETAIL SALES CAN ONLY CONTINUE TO INCREASE AS A RESULT OF GROWING ONLINE RETAIL
L: IN EUR BN, R: IN %



Source: HDE Sales excl. VAT

GROWTH DRIVEN BY INFLATION: RETAIL SALES SHOW ONLY NOMINAL GROWTH SINCE 2021, BUT DECLINE IN REAL TERMS
TOTAL RETAIL SALES VS. PREVIOUS YEAR IN %



Source: HDE, Oxford Economics

The gloomy retail outlook is also reflected in the subdued forecast from the German Retail Federation (HDE). Although total retail sales are set to increase by 3 per cent to just over EUR 600bn in 2022, the growth will be solely attributable to rising consumer prices. Adjusted for inflation, the HDE expects sales to fall by 2 per cent in real terms. Real sales are thus already falling for the second year in succession. The situation is even worse for city centre retail, since sales figures also include purchases of everyday items.

Inflation-adjusted retail sales continue to decline as in previous year

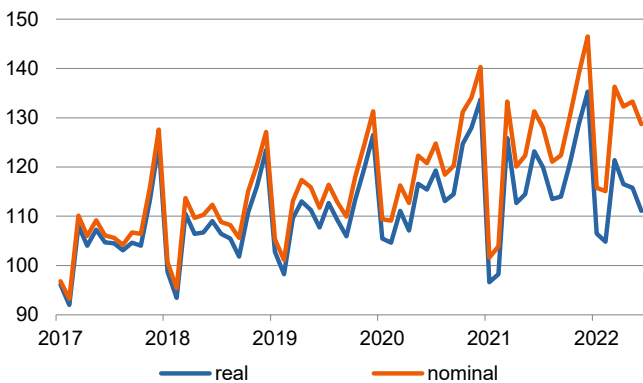
The recovery in city centre sales space rentals which started last year has not suffered so far, and remained stable in the first half of 2022. Rents in prime retail locations also remained largely stable after a previous decline. Two thirds of city centre retail space was let to fashion, food and drink, grocery and healthcare and personal care businesses. Previously weak space demand in the textile sector picked up sharply, once again occupying peak position ahead of food and drink outlets. Conversely, the initial boom in the new “quick commerce” segment – grocery delivery services with very short delivery times – has lost momentum. In contrast, e-mobility providers more often have a presence in city centres. A whole series of foreign chains has also secured shops at the now lower rents.

City centre retail rentals stable in first quarter of 2022

Retailers, food outlets and other service providers who are undeterred by the difficult market conditions have the potential to rent attractive space at better terms than before the pandemic. However, rental activity may well weaken again in the second half, because the risk factors for retail have generally intensified.

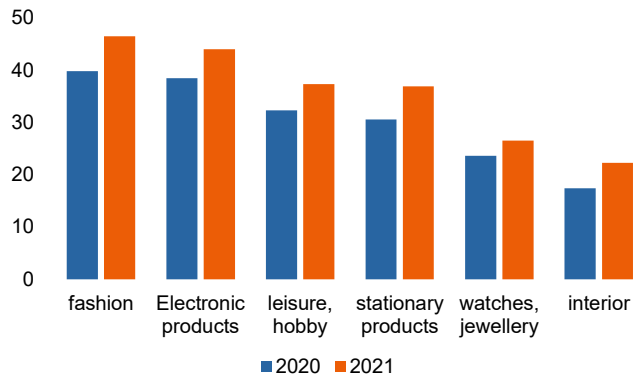
Rental demand could however weaken in the second half

RETAIL SUFFERING: INFLATION-ADJUSTED SALES DOWN SHARPLY IN MID-2022
RETAIL SALES 2017 = 100



Source: Destatis

SHIFT TO ONLINE SALES CONTINUED STEADILY IN 2021
ONLINE PROPORTION BY PRODUCT GROUP IN %



Source: HDE

Regardless of the stabilisation in rentals, the conversion of retail space is continuing. Space no longer needed for retail – for example on the upper floors of buildings – is increasingly being converted to alternative types of usage such as offices, apartments and hotels. Examples of former retail space which has been repurposed are gradually becoming more numerous. Consequently, demand for local suppliers in city centres is also increasing.

Conversion of obsolete retail space continues

Cities are therefore being required to reorient their city centre concepts. However, the preconditions for this have not improved. Companies and the public sector are dealing with crisis management and challenges such as climate change. Property values may also come under pressure because yields are higher. In addition, the cost of borrowing to finance real estate investment has increased visibly compared to 2021. There is only a small window of time to ensure that city centres do not also lo-

But repurposing of city centres is not easy

se their powers of attraction. Too low a quality of stay could lead to a downward spiral. If customers stay away, retailers and bars and restaurants will withdraw, causing the offer to deteriorate further.

Retail: comparison of top locations

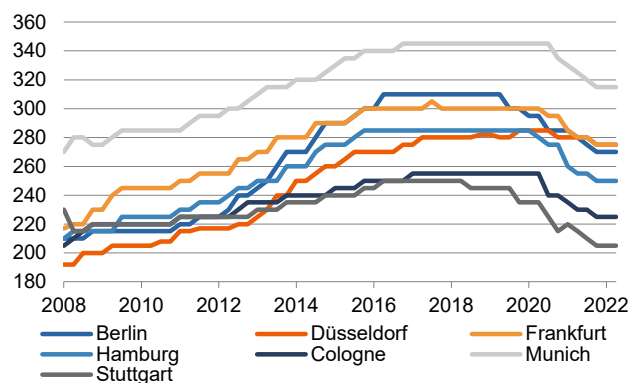
The retail headwind has also had an impact on flagship stores accustomed to success, particularly since the time was undoubtedly right for a painful adjustment here. On the one hand, previous years saw the emergence of a large volume of new retail space, for example in the form of city centre shopping centres. On the other hand, prime rents are not only highest here, they are also much stronger than in other large German cities. However, no major crisis has materialised, and below the line seven top locations have even performed comparatively well.

Prime rents have fallen on average by a fairly moderate 10 per cent or so from their 2017 peak, although since 2010 they had previously increased by more than a quarter. Conversely, prime rents in other large cities declined more sharply, but without the previous strong increase. In the group of top locations, prime rents in Stuttgart showed the steepest decline of nearly 20 per cent. In contrast, rent levels in Düsseldorf city centre remained largely constant. The fact that the downward rent trend has not continued in 2022 and that all seven top locations have managed to maintain their peak rents since the end of 2021 is positive.

Top locations prove robust in the retail crisis

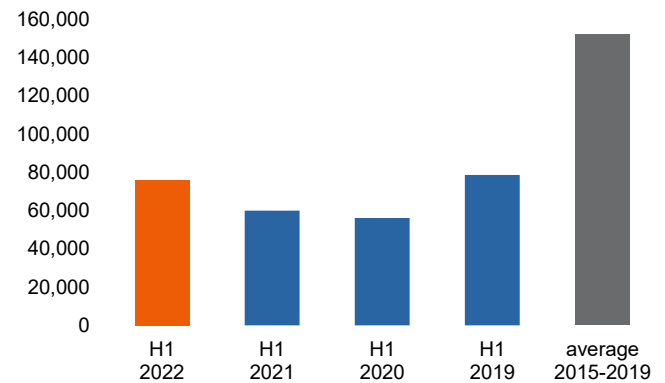
Prime rents have stopped falling

DOWNWARD RENT TREND COMES TO A HALT IN 2022
PRIME RETAIL RENTS IN EUR PER M²



Source: bulwiengesa

VOLUME OF LET RETAIL SPACE INCREASES IN 2022
RENTED RETAIL SPACE IN TOP LOCATIONS IN M²



Source: JLL

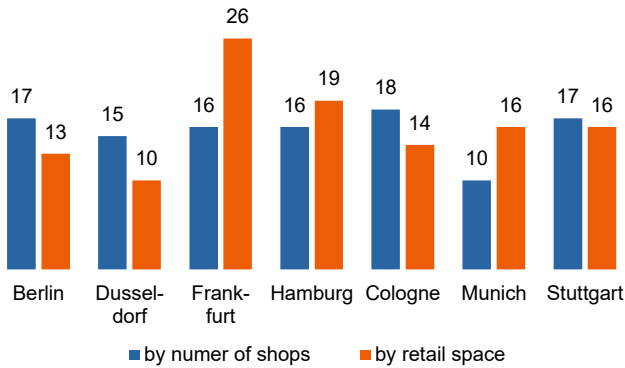
The stabilisation in the rent trend is due to a further uptick in rental activity. According to data from JLL, around 76,000 m² was let in the first half of 2022, about a quarter more than in the first half of 2021. About a third of the sales space newly let in the top locations is in Berlin. However, the current volume of retail space let is nowhere near the levels of previous years. On average, from 2015 to 2019 letting performance was more than twice as high in the same period.

Rental activity increases, but remains much lower than previously

Retailers looking for sales space in the top locations still have fairly good prospects of success. The space availability ratio calculated by JLL remains at a similarly high level as in 2021. Despite the uptick in rental business it has not declined. Previous and forthcoming closures of department stores and sports stores are contributory factors here since subsequent usage is not a done deal everywhere.

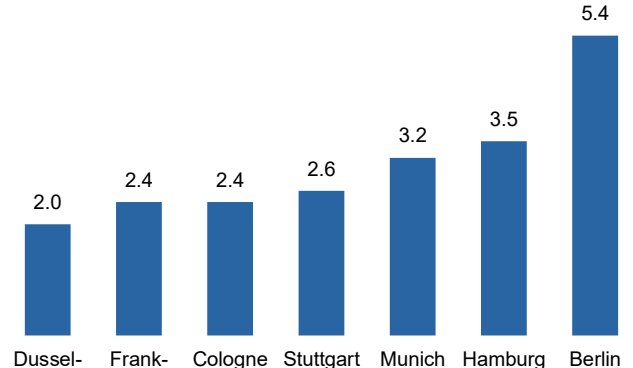
Space supply still good

AVAILABILITY OF SALES SPACE STILL GOOD IN ALL TOP LOCATIONS
AVAILABILITY RATIO IN %



Source: JLL

BASED ON CATCHMENT AREAS, ALL TOP LOCATIONS ARE CITIES OF MILLIONS
SIZE OF CATCHMENT AREA IN MILLION PEOPLE (2020)

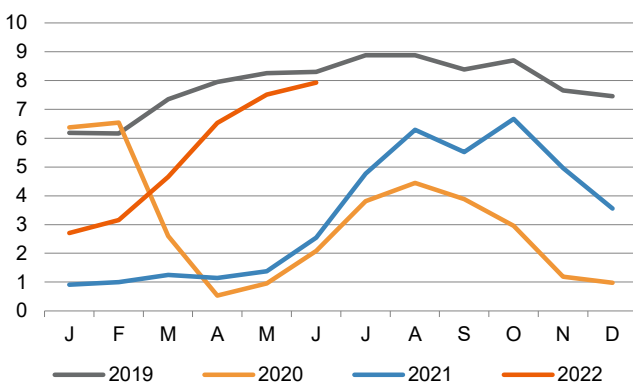


Source: Comfort

The positive trend in retail space rental and the halt to the downward rent trend are based on the generally attractive package which the seven largest cities offer to retailers. These include large catchment areas of several million people each, high visitor numbers from Germany and abroad, high footfall, and – with the exception of Berlin and Cologne – high spending power. In addition to this is a broad shopping offer, both in city centre shopping streets and in shopping centres which are often still new. Many years of strong demographic growth has also played a part so far, boosting customer potential from year to year. However, the populations of the top locations contracted slightly overall in 2020 and 2021. An ongoing decline is nevertheless fairly unlikely. Population numbers will presumably continue to grow.

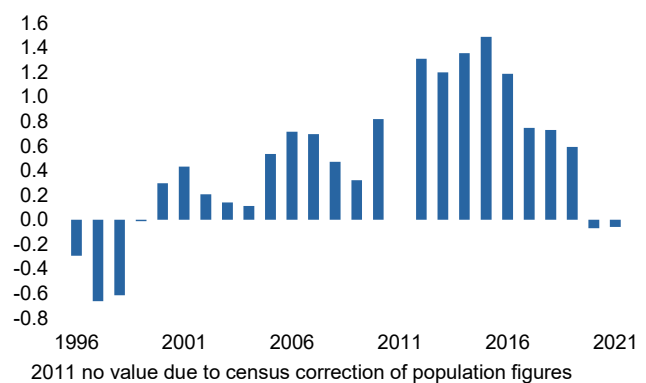
“Complete package” of top locations still convincing

TOURISM IN TOP LOCATIONS SHOWS CLEAR RECOVERY
NO. OF MONTHLY OVERNIGHT STAYS IN MILLIONS (TOTAL TOP 7)



Source: Statistical offices of the seven largest German cities

POPULATIONS OF TOP LOCATIONS CONTRACT SLIGHTLY
POPULATION IN % COMPARED TO PREV. YR. (TOTAL TOP 7)



Source: Destatis, DZ BANK

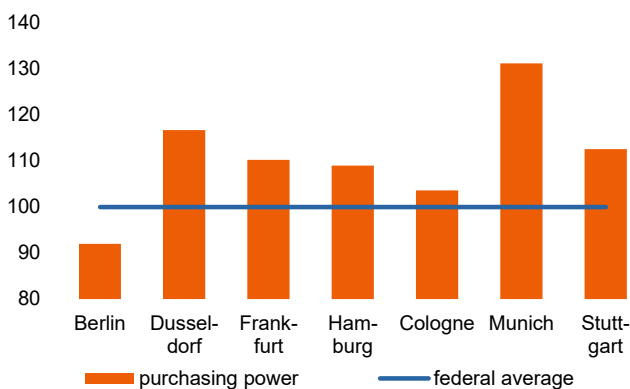
Below the line, the decision to opt for a particular top location carries a comparatively manageable risk from the retailer’s point of view, despite the correspondingly high rents. City centre footfall will remain high in future, with a good choice of attractive retail formats already available. In contrast to many other city centres, there is no risk here of depopulation or a downward spiral. If retailers are unsuccessful in these locations, the concept used will be more to blame than the location.

Top 7 are comparatively low-risk locations

City centre retail in the top locations benefited for a long time from a large – and, before Covid, rapidly growing – number of visitors from within Germany and abroad, who contributed significant proportions of sales. The growth in visitor numbers has made it possible to offset at least some of the sales losses caused by E-commerce. The absence of business travellers and tourists was all the more painful in 2020 and 2021. However, a positive trend is emerging this year, with visitor numbers almost back at their 2019 levels. This could provide welcome support for retailers, if customers from their own catchment area are forced to cut spending as a result of high energy costs.

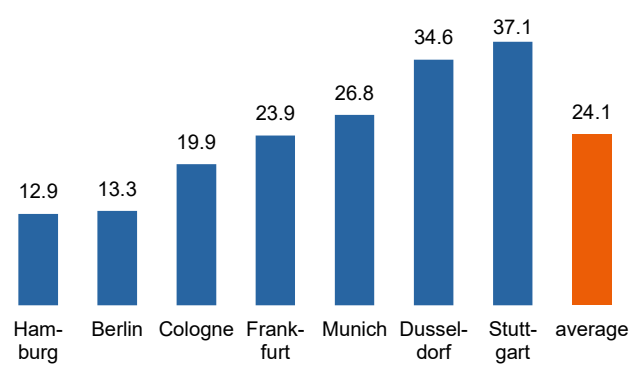
Tourist numbers almost back to 2019 levels

HIGH SPENDING POWER IN TOP LOCATIONS – WITH THE EXCEPTION OF BERLIN AND COLOGNE
SPENDING POWER FIGURES IN POINTS



Source: bulwiengesa

BASED ON RETAIL SPACE, CITY CENTRES ACCOUNT FOR ONE QUARTER ON AVERAGE
PROPORTION OF SALES SPACE IN CITY CENTRES IN % (2020)



Source: Comfort

Summary: Retail market

City centre retail is struggling against massive headwinds, which will not be easily overcome. Space rental should therefore become more difficult again towards year-end, and rents could fall again both this year and next year. Retailers looking for space should therefore retain their strong negotiating position.

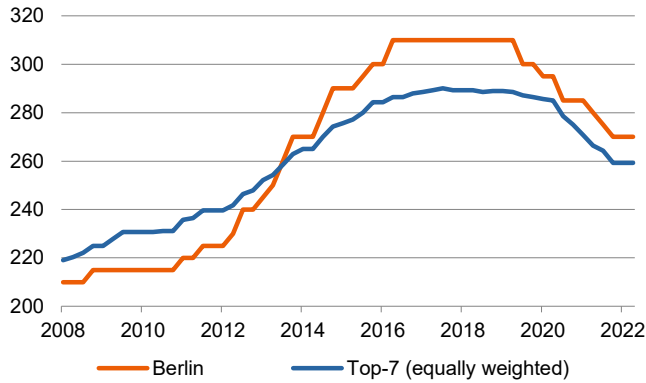
However, some positive factors are also likely to persist beyond the current crisis conditions. E-commerce benefited from the pandemic; however, despite all the enthusiasm for online shopping, people still enjoy going on a shopping trip – and making purchases – in the city centre. The boost which the pandemic provided for E-commerce could be less sustained than anticipated. This is borne out by the recent experience of online providers such as Amazon and Shopify, with the former planning to sublet logistics space, and job shedding at the latter. Online shopping will undoubtedly continue to grow, but probably at a slightly slower pace. However, city centre retail also has further potential as the volume of pedestrians and tourists picks up again. It is up to retailers, property owners and cities to exploit this potential.

Despite strong headwinds, city centre retail ...

... has a solid basis thanks to loyal customers

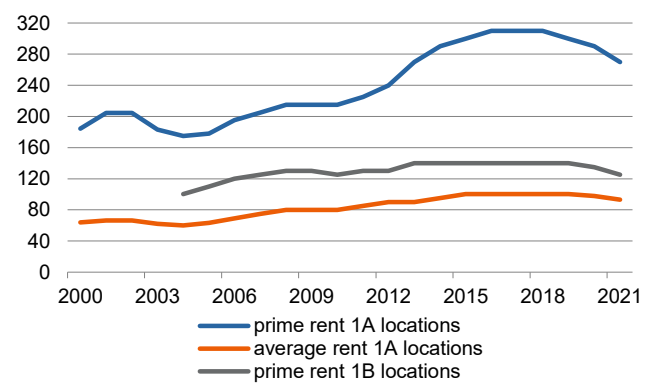
Berlin: Retail space

PRIME RETAIL RENTS (QUARTER)
IN EUR PER M²



Source: bulwiengesa

BERLIN: PRIME RETAIL RENTS BASED ON LOCATION
IN EUR PER M²

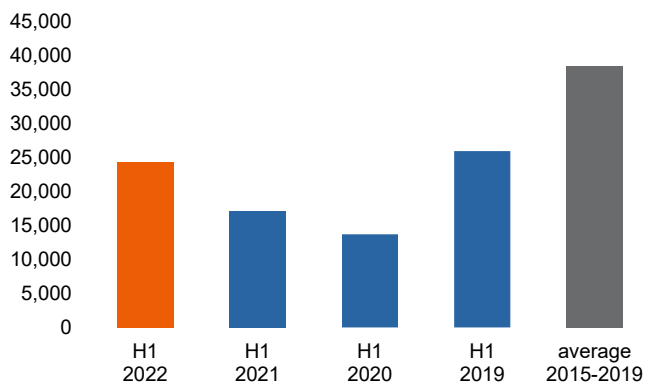


Source: bulwiengesa

The retail sector benefited strongly from the upturn in Berlin. On the one hand, unemployment fell sharply, and on the other hand customer potential grew significantly. Since 2011 the population has grown by a good 350,000. Combined with a hinterland which has also expanded, the retail sector has the largest catchment area in Germany with around 5.4 million people. Tourism was also flourishing before Covid, with 34 million overnight stays recorded in 2019. Although tourism then collapsed in 2020, it has recovered visibly this year. Visitors play a more important role in Berlin than in other top locations because spending power in the capital city is fairly low. Apart from its size, the Berlin retail sector is characterised by several geographically separate prime locations. These include Tauentzienstraße which has the highest prime rents, Ku’damm, Alexanderplatz with its high footfall, Friedrichstraße, and the on-trend Hackescher Markt. Added to this are around 70 shopping centres, the most prominent of which is the large Mall of Berlin. Prime rents stagnated at EUR 310 per m² from 2016 to 2019 before falling by 13 per cent to EUR 270 per m² by 2021. Since then they have stagnated at this level. The retail outlook in the attractive German capital is generally solid. However, there will be a lean period initially, since Berliners are likely to suffer more from high energy prices because their spending power is weak. The large supply of sales space in Berlin’s many shopping centres poses a challenge.

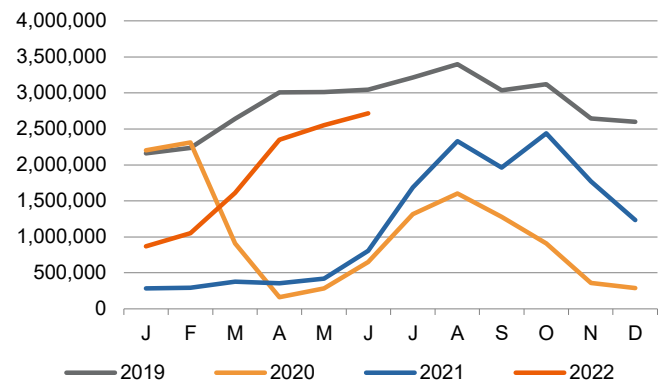
Retail: Tourism should provide further impetus for retail, but will not solve all the problems

BERLIN: SPACE RENTAL IN CITY CENTRE LOCATIONS
IN M²



Source: bulwiengesa

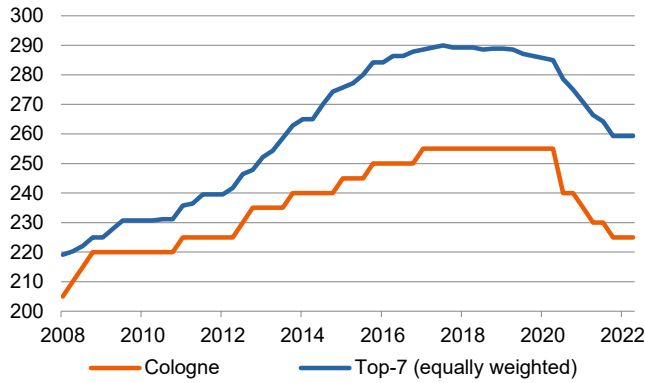
BERLIN: MONTHLY TOURISM STATISTICS
NO. OF OVERNIGHT STAYS



Source: Stadt Berlin

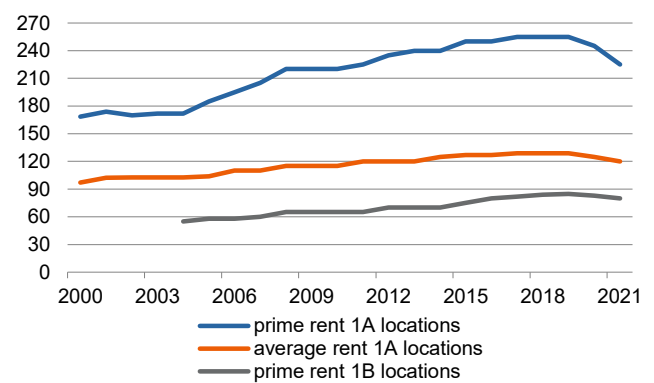
Cologne: Retail space

PRIME RETAIL RENTS (QUARTER)
IN EUR PER M²



Source: bulwiengesa

COLOGNE: PRIME RETAIL RENTS BASED ON LOCATION
IN EUR PER M²

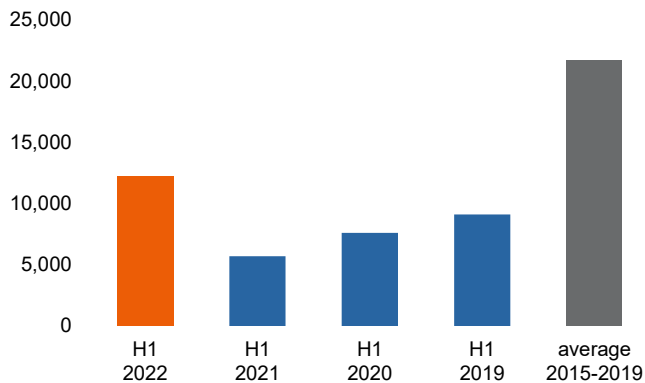


Source: bulwiengesa

The city of Cologne with its population of more than a million is the second top location in western Germany after Düsseldorf. A catchment area of 2.4 million potential customers and a large volume of day-trippers from the Benelux countries are an attractive prospect for retailers. However, tourism was not quite as important before Covid as in other top locations. Spending power is also moderate for a top location at 104 points. Unlike Düsseldorf with its distinctive luxury segment, Cologne city centre is focused on lower-end retail. A three kilometre shopping circuit encourages a stroll through prime locations and boosts footfall. One particular example is Schildergasse, the location for many chain store branches. Footfall is also high in Hohe Straße, but below the high levels of Schildergasse. Conversely, Ehrenstraße is a trendy location. A smaller luxury segment has become established in the Domkloster/Wallrafplatz area. The consequences of the pandemic have clearly had an impact on Cologne city centre. Between 2019 and the end of 2021 prime rents fell by 12 per cent to EUR 225 per m², a level which has since been maintained. The rate of decline is on a par with the trend in the top locations, and the relatively large supply of sales space in Cologne city centre has not therefore had any further negative impact on the rent trend. No new information is available on plans announced in spring 2022 to demolish the building where the Galeria branch is located in Breiten Straße.

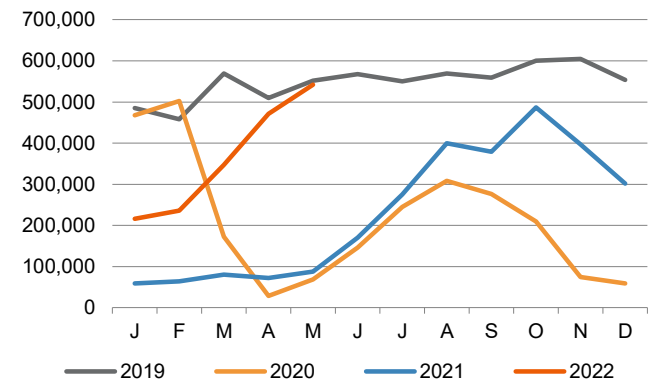
Retail: Large supply of city centre sales space has not depressed rents

COLOGNE: SPACE RENTAL IN CITY CENTRE LOCATIONS
IN M²



Source: bulwiengesa

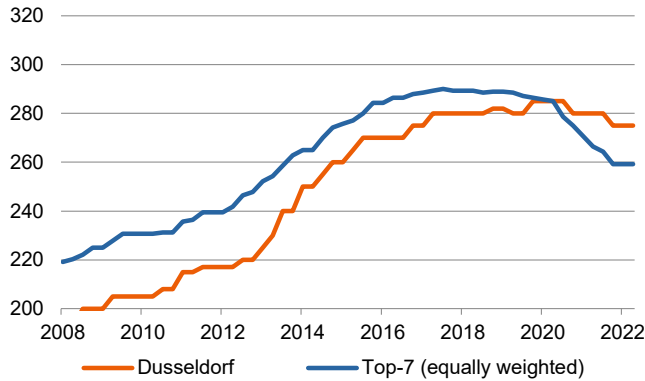
COLOGNE: MONTHLY TOURISM STATISTICS
NO. OF OVERNIGHT STAYS



Source: City of Cologne

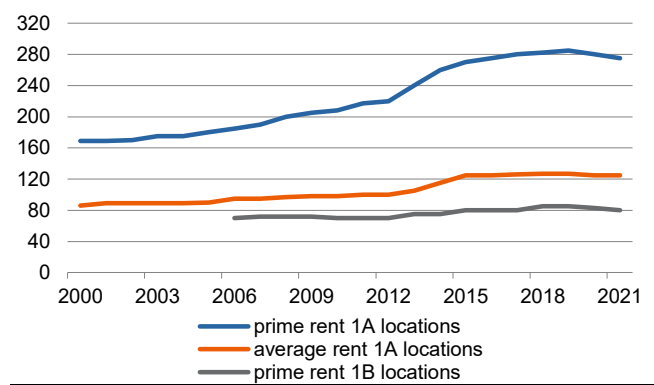
Düsseldorf: Retail space

PRIME RETAIL RENTS (QUARTER)
IN EUR PER M²



Source: bulwiengesa

DÜSSELDORF: PRIME RETAIL RENTS BASED ON LOCATION
IN EUR PER M²

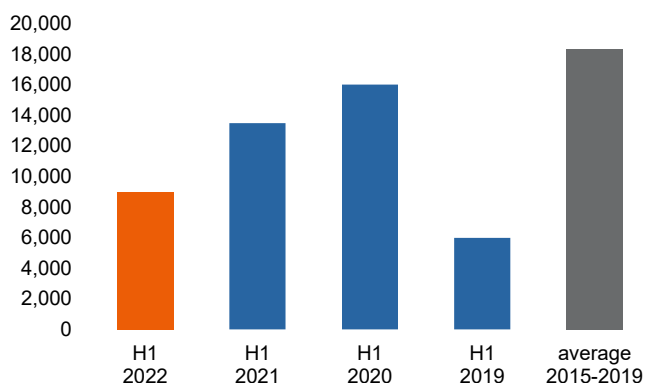


Source: bulwiengesa

Düsseldorf has clearly developed successfully as a shopping location. Various urban planning measures, large infrastructure projects and major investment in new and existing retail properties have significantly enhanced the attractions of the city centre. Although some construction projects have not yet been completed, efforts have obviously paid off. As elsewhere, retail activity in Düsseldorf has also suffered as a result of the Covid restrictions, however the impact on the rental business has been less severe than in other top locations. Prime rents have remained largely unchanged, declining only marginally. The retail location is supported by a catchment area of 2 million people and high spending power, which is nearly 20 per cent higher than the German average. Düsseldorf city centre is well known far beyond the borders of the federal state of North Rhine-Westphalia for its famous “Kö” shopping boulevard, which is synonymous with fashion and luxury. Other prime locations in the city centre in addition to the Königsallee are Flingerstraße and the Schadowstraße shopping street. Further additions in recent years have been iconic retail developments such as Kö-Bogen, the KII and the renovated Kö-Galerie shopping mall. Another highlight planned for 2023 will be the opening of a branch of the Berlin-based KaDeWe in the Carsch-Haus. A whole series of planning applications for the years ahead relates to the area around the Kö, for example new buildings to replace the former Kaufhof together with a multi-storey car park, and the former Commerzbank building.

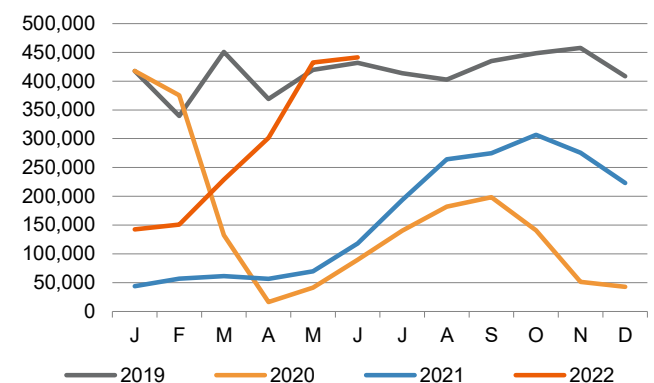
Retail: Düsseldorf city centre resilient in the pandemic

DÜSSELDORF: SPACE RENTAL IN CITY CENTRE LOCATIONS
IN M²



Source: bulwiengesa

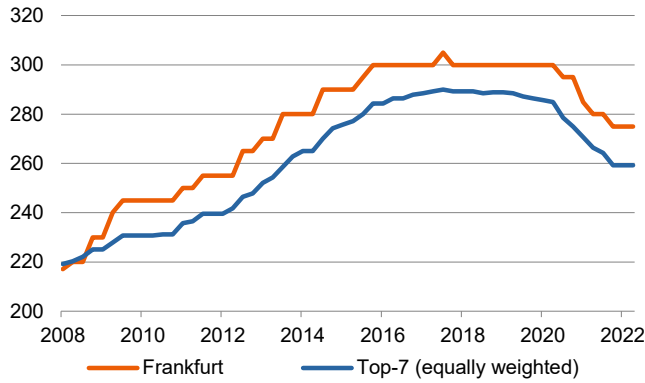
DÜSSELDORF: MONTHLY TOURISM STATISTICS
NO. OF OVERNIGHT STAYS



Source: City of Düsseldorf

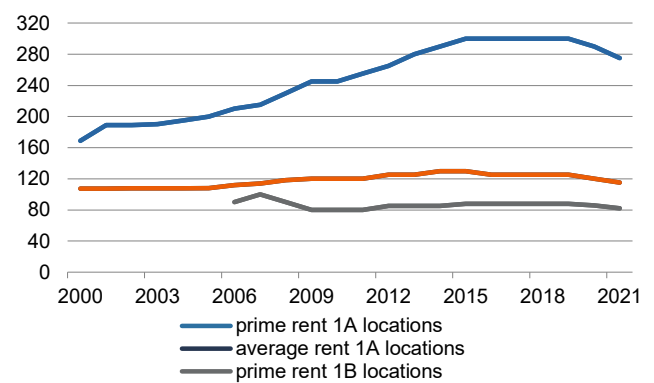
Frankfurt: Retail space

PRIME RETAIL RENTS (QUARTER)
IN EUR PER M²



Source: bulwiengesa

FRANKFURT: PRIME RETAIL RENTS BASED ON LOCATION
IN EUR PER M²

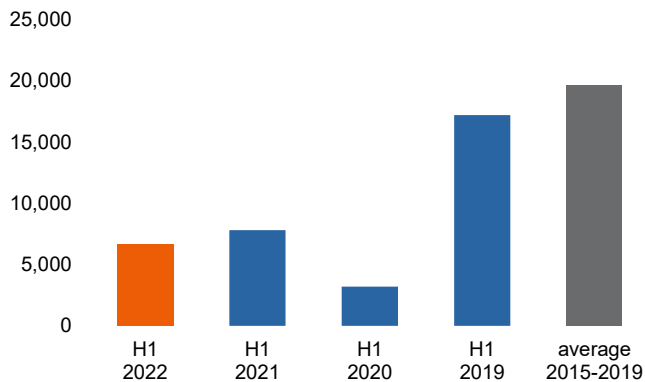


Source: bulwiengesa

The Frankfurt conurbation has grown dynamically in recent years, and its catchment area with high spending power contains around 2.4 million people. Another plus point for the retail location is a very large volume of visitors before the pandemic. In 2019, Frankfurt recorded more than 14,000 overnight stays per 1,000 inhabitants, 50 per cent more than average for the top 7 locations. As well as trade fair attendees, thanks to its airport the retail sector benefited from many travellers from Asia, now largely absent. The sharp increase in overnight stays in 2022 is therefore a positive development. However, trade fair business could remain weak for a more prolonged period, partly due to the loss of the IAA auto show to the Munich trade fair. Frankfurt is a strong retail location with its two prime locations Zeil and Goethestraße as well as several large shopping centres. Another plus point is the fairly moderate decline in prime rents given the negative conditions; by the end of 2021 they had fallen by around 8 per cent to EUR 275 per m² and have since remained unchanged. Plans for the City of Frankfurt to play an active role in the development of the city centre - some of which is not very attractive - are also positive. A total of EUR 30m is to be invested in city centre projects, with the aim of upgrading the quality of stay. However, retail is also playing a role here. For example, the Galeria store at the entrance to the Zeil has been remodelled into the “Weltstadthaus” (global city building) and has been visibly upgraded while remaining open. The former sports arena building which is also close to the Hauptwache is being demolished and will be replaced by 2024 by a modern commercial building with offices.

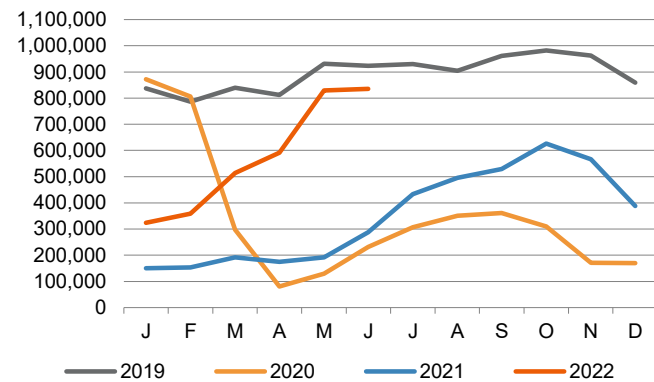
Retail: Tourism in Frankfurt has clearly gained pace

FRANKFURT: SPACE RENTAL IN CITY CENTRE LOCATIONS
IN M²



Source: bulwiengesa

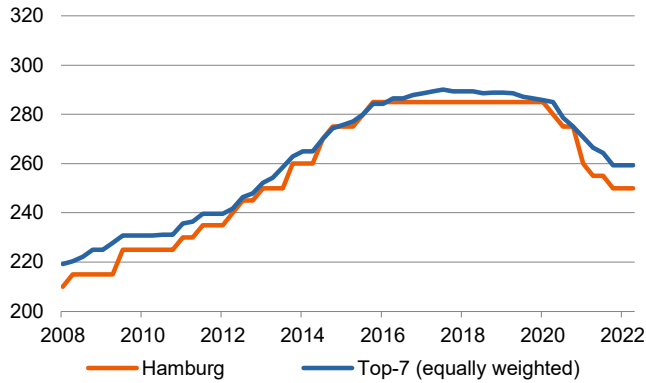
FRANKFURT: MONTHLY TOURISM STATISTICS
NO. OF OVERNIGHT STAYS



Source: Stadt Frankfurt

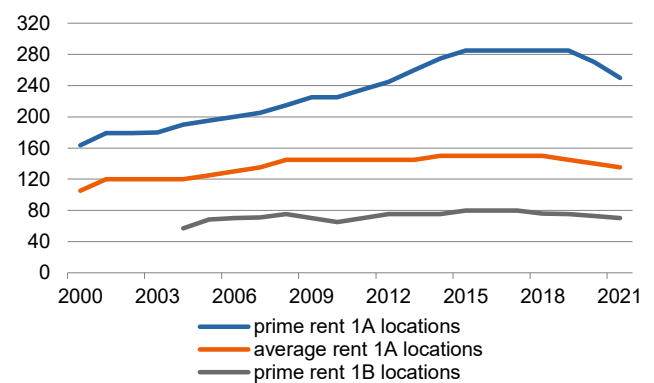
Hamburg: Retail space

PRIME RETAIL RENTS (QUARTER)
IN EUR PER M²



Source: bulwiengesa

HAMBURG: PRIME RETAIL RENTS BASED ON LOCATION
IN EUR PER M²

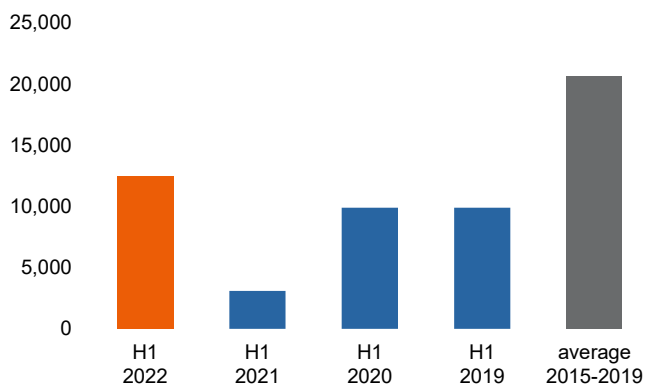


Source: bulwiengesa

Hamburg scores as the leading shopping location in the North of Germany with a catchment area of 3.5 million people and high spending power. Tourists and cruise passengers are generally an important customer group which, although absent from the retail sector recently, have returned to the city on the Elbe in greater numbers again this year. The broad retail offer ranging from classic consumer locations such as Spitalerstraße and Mönckebergstraße to luxury locations such as the Neuer Wall shopping street is attractive to customers. The only large city centre shopping centre between them is the Europa Passage mall. The pandemic has clearly had a negative impact on city centre retail in Hamburg, resulting in a large number of vacant properties. By the end of 2021 prime rents were down by 12 per cent on 2019 to EUR 250 per m², and have since been stagnating. To reduce the number of visible vacant properties, the Hamburg Senate has established a funding programme to enable creative businesses and start-ups to temporarily rent unused retail space. By the end of 2022 Karstadt Sport will accordingly become an “Artstadt”. In summer and autumn 2022, the former Kaufhof store is also being used for an exhibition by the street artist Banksy. However, the long-term use of the two department stores remains undecided. A new building with bars and restaurants, a hotel and offices and trade on the ground floor and first floor is also being constructed in Mönckebergstraße to replace the C&A store. A shopping centre with sales space of around 80,000 m² in the HafenCity due for completion in 2024 could represent a headwind for the city centre with its sales space of around 350,000 m².

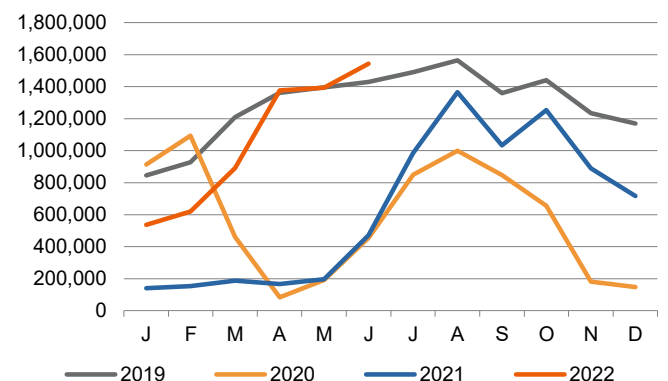
Retail: Central shopping location of Mönckebergstraße will have to reinvent itself

HAMBURG: SPACE RENTAL IN CITY CENTRE LOCATIONS
IN M²



Source: bulwiengesa

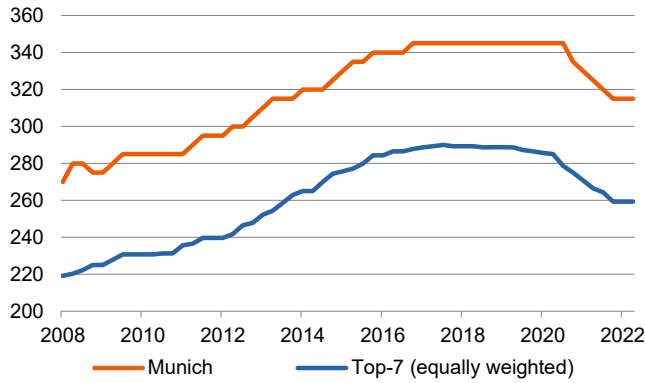
HAMBURG: MONTHLY TOURISM STATISTICS
NO. OF OVERNIGHT STAYS



Source: City of Hamburg

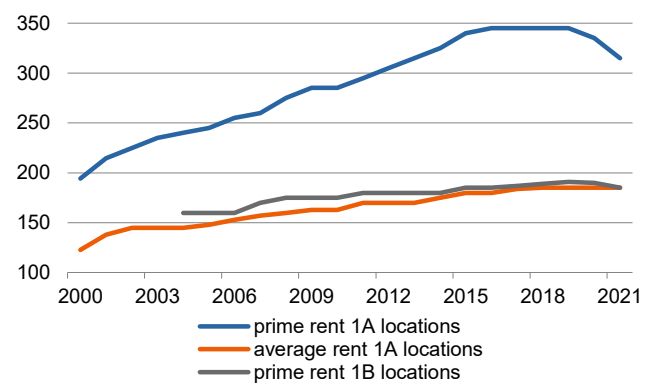
Munich: Retail space

PRIME RETAIL RENTS (QUARTER)
IN EUR PER M²



Source: bulwiengesa

MUNICH: PRIME RETAIL RENTS BASED ON LOCATION
IN EUR PER M²

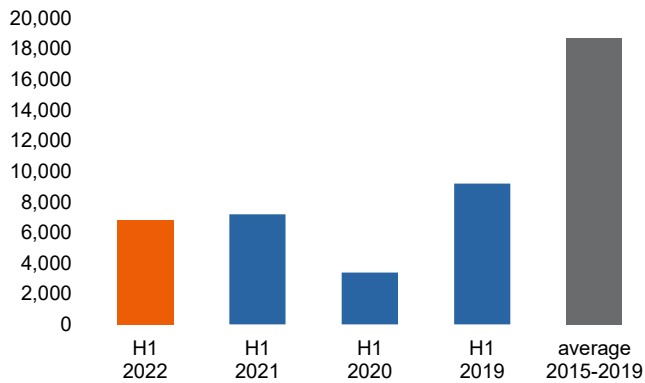


Source: bulwiengesa

Munich tops the retail league in Germany based on prime rents, spending power and sales space productivity. Contributory factors here are the economically strong catchment area which has grown significantly to around 3.2 million people. Another positive factor is the high quality of stay in the attractive city centre with a Bavarian flair and a wide-ranging shopping offer of “consumer-oriented” retail concepts, traditional specialist shops and luxury locations. Munich also benefits from flourishing tourism thanks to its world-renowned Oktoberfest. Prime rents have risen to the highest level in Germany, although the city centre has a relatively large volume of sales space of half a million m². The highest rents are paid in Kaufingerstraße, Neuhauser Straße and Maximilianstraße. Despite the fact that shop rents are the highest in Germany, by the end of 2021 prime rents had fallen by 9 per cent – no higher than in the other top locations - to EUR 315 per m². Munich thus remains the only German retail location with a prime rent of more than EUR 300 per m². One major project is the conversion of the Karstadt building between Stachus and the central station. Its new construction is a much larger-scale project again. Efforts are also under way to extend the pedestrian zone to include the 350 metre long Tal (valley) street between Marienplatz and the Isartor. Prime rents in the Tal of currently around EUR 100 per m² could increase sharply as a result, with a corresponding impact on the tenant mix.

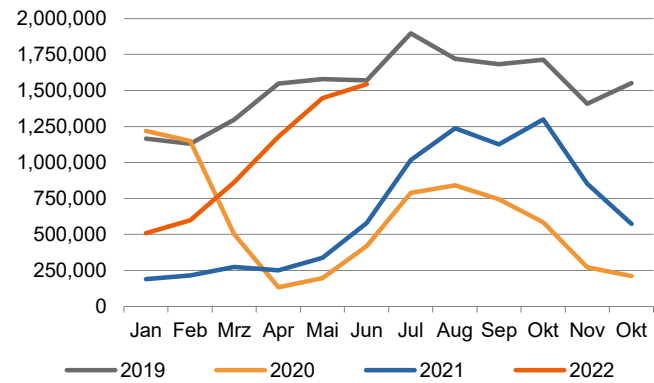
Retail: Only Munich achieves a prime rent of more than EUR 300 per m²

MUNICH: SPACE RENTAL IN CITY CENTRE LOCATIONS
IN M²



Source: bulwiengesa

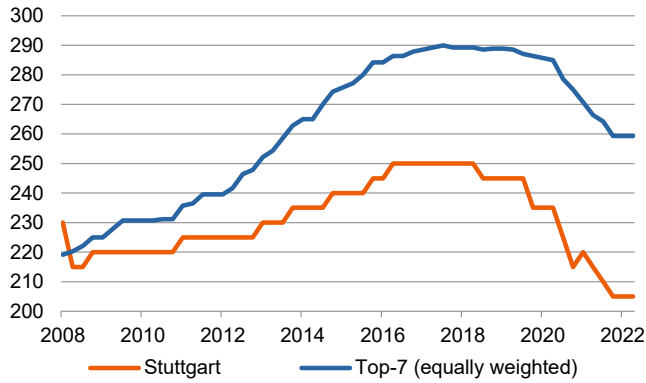
MUNICH: MONTHLY TOURISM STATISTICS
NO. OF OVERNIGHT STAYS



Source: City of Munich

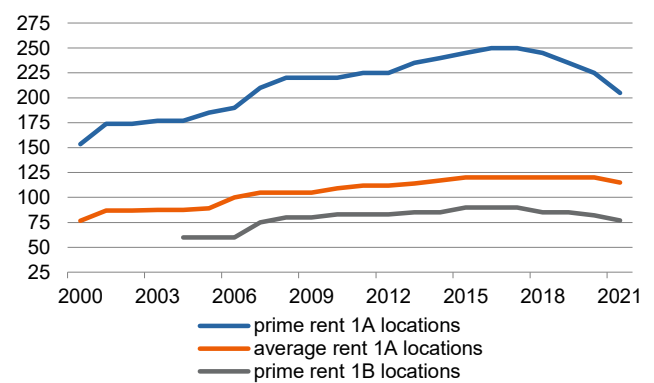
Stuttgart: Retail space

PRIME RETAIL RENTS (QUARTER)
IN EUR PER M²



Source: bulwiengesa

STUTTART: PRIME RETAIL RENTS BASED ON LOCATION
IN EUR PER M²

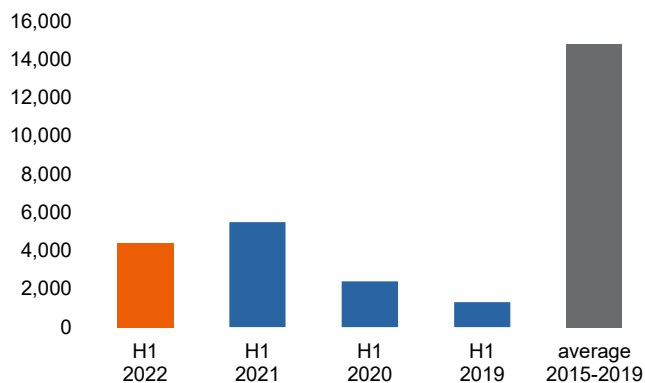


Source: bulwiengesa

Stuttgart benefits from a catchment area of 2.6 million people with strong spending power. However, tourism is less important than in other top locations. Prime rents in Stuttgart fell comparatively sharply between 2019 and the end of 2021 by around 13 per cent to EUR 205 m², representing an overall decline of 18 per cent from their peak of 2016/17. There are various reasons for this. One negative factor is the presence of large building sites such as the millennium project Stuttgart 21 and the now completed remodelling of the market square. Less than ten years ago, the supply of sales space was also extended with the development of large city centre retail projects such as the MILANEO and Gerber shopping centres. City centre sales space increased accordingly by more than 20 per cent in 2014. In response to the now lower demand for sales space, Gerber will be converted to a mixed use quarter by 2023. Further building plans in the city centre relate to the new construction of office and retail space to replace the former sports arena (König-/Schulstraße) and the new Bundesbank building on the former Kaufhof site (Eberhardstraße). The converted Sport-Scheck will open at the beginning of the autumn as a pilot branch with a completely new concept over four floors. The “Schlossgartenquartier” group of buildings at the entrance to the Königstraße will also be revitalised by 2025.

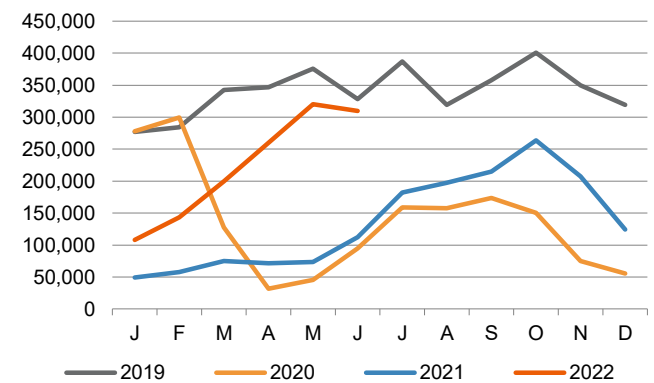
Retail: Prime rents stop falling

STUTTART: SPACE RENTAL IN CITY CENTRE LOCATIONS
IN M²



Source: bulwiengesa

STUTTART: MONTHLY TOURISM STATISTICS
NO. OF OVERNIGHT STAYS



Source: City of Cologne

OFFICE SPACE

Office market picks up strongly after Covid dip despite difficult conditions

Companies are struggling in current economic conditions, with many negative factors hitting at once, such as the war in Ukraine, Covid and Covid-led production losses in China or the drought of the summer of 2022 in Europe. This is leading to an explosion in purchase prices for intermediate products and energy, on top of supply bottlenecks and a shortage of skilled workers which is being compounded by heightened levels of sick leave at present. In addition, the unions are demanding much higher pay rises because of high inflation, at a time when industry is having to reduce production in view of the energy crisis and moreover, when it faces the threat of a significant recession. One consolation is that many companies still have well-filled order books.

The many stress factors have not had a dampening effect on the office market – at least not in the first half of 2022. The lettings business has got over the Covid slump with rising rents and a halt to the rise in vacancies, and there might possibly have been an even stronger bounce-back in the office market without those dampening factors. What exactly is driving demand for office space?

One aspect is likely to be a low take-up of leased office space in 2020 and 2021 because of Covid in light of uncertainty surrounding the future trend and the consequences of working from home. This has now led to some catching up. In addition, there is a need to bring existing offices into line with the New Work concepts which have been drawn up in many companies and institutions. This means that some offices are being merged; space that is no longer required or unsuitable is being given up, and new, suitable offices leased.

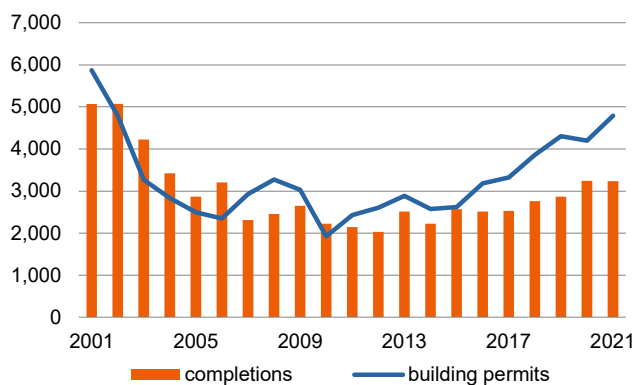
Another reason behind the leasing of contemporary office space is the shortage of skilled workers, as we have already mentioned. If prospective employees are able to choose between several job offers, then they are likely to opt for the company offering the most attractive work environment in a good location. In addition, employees, like companies, are paying more attention to sustainability. In light of climate change, it is important for companies to achieve a smaller carbon footprint – not least for the sake of their image. On top of that, there is the growing importance of green finance. Investors and likewise banks are increasingly focusing on sustainability – also from

Companies under huge strain with problems as far as the eye can see

Office market picked up strongly in H1 2022 in spite of many problems

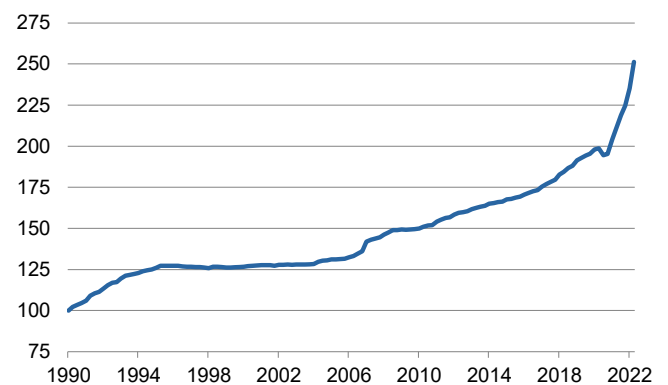
Companies in the public eye scoring points with employees and the capital market if they have sustainable buildings

IN SPITE OF HIGH DEMAND, MODERN OFFICE SPACE STILL RARE
NEW BUILD OFFICE BUILDINGS, FLOOR SPACE IN '000 M²



Source: Destatis

NEW BUILD PROJECTS INCREASINGLY FALLING THROUGH BECAUSE OF EXPLOSION IN CONSTRUCTION COSTS
CONSTRUCTION COST INDEX 1990 = 100



Source: Destatis

an EU taxonomy point of view; the greener the company, the easier it is to get access to capital. Offices in buildings with a good sustainability rating - ideally zero-emissions buildings are an important element in this respect. However, such buildings are rare with a yawning gap between supply and demand.

The shortage of modern office buildings is hardly likely to be remedied any time soon, and therefore office tenants will have to make do with often outdated existing buildings. In spite of high demand, office construction is just not getting off the ground. Although office completions across Germany have increased from a low of just 2 million m² of floor space around ten years ago to around 3.2 million m², this is not enough to fill the gap in supply which that has opened up. This is illustrated by the huge gap in relation to the number of construction permits issued which amounted to almost 5 million m² in 2021. In addition, new building could ease off further as construction projects are delayed as they are on the housing front because of a shortage of building materials. New construction projects are also being shelved because of higher financing costs and a sharp rise in the price of materials. Construction costs in the office segment have increased by almost 30 per cent since the end of 2019.

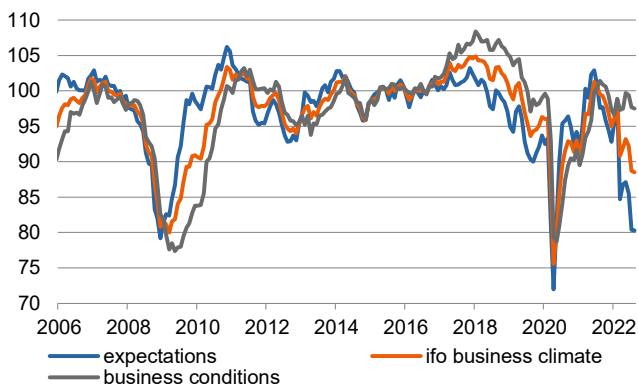
Construction of much-needed modern office buildings failing to get off the ground

Market conditions for the office market

The various challenges weighing on the economy have had a major impact on the monthly surveys of economists and companies regarding the current situation and expectations. The financial market experts questioned as part of the ZEW Financial Market Survey see both the current situation and economic expectations deep in negative territory. In contrast, among companies, there is a yawning gap between the current situation and expectations: Whereas companies are still relatively upbeat about the current situation, expectations in the ifo Business Climate Index have virtually slumped, pulling the index down overall and leading to an unusually large gap between the current situation and expectations.

Economic situation and business outlook noticeably cloudy

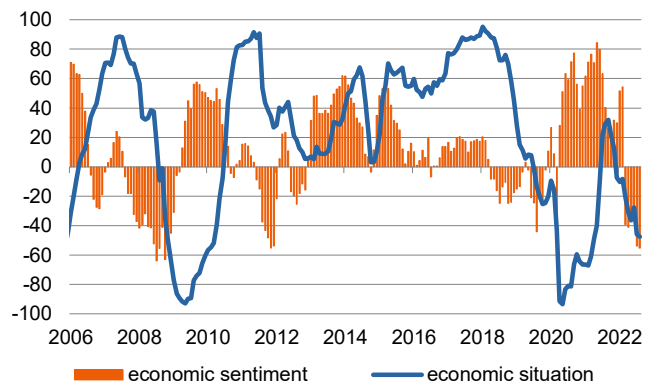
RISING ENERGY PRICES AND WORRIES ABOUT GAS SUPPLIES DAMPENING SENTIMENT AMONG COMPANIES
IFO BUSINESS CLIMATE INDEX IN POINTS



Source: ifo Institute

As per August 2022

AFTER EXPECTATIONS, MARKET PARTICIPANTS NOW ALSO MUCH MORE DOWNBEAT ABOUT THE CURRENT SITUATION
ZEW FINANCIAL MARKET SURVEY IN POINTS



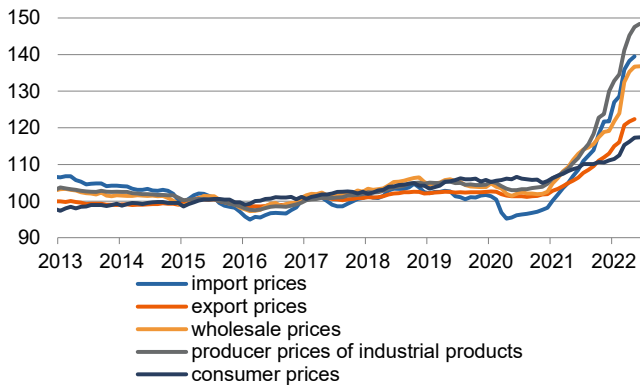
Source: ZEW

As per August 2022

Solid demand for office space is related to a hitherto robust trend in the labour market. In spite of the energy crisis and supply bottlenecks, both the number of people in employment and the number of job vacancies are now up on pre-Covid levels. This is likely to reflect further demand for skilled workers in view of well-filled order books. Moreover, there are many unfilled posts in the public sector. However, the labour market could be dampened if companies are forced to scale back production be-

Robust labour market contributing to solid demand for office space

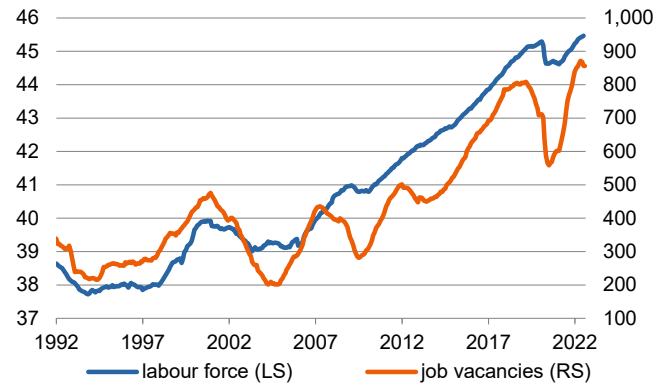
COMPANIES FACING MUCH BIGGER PRICE RISES THAN CONSUMERS
PRICE INDICES 2015 = 100



Source: Federal Statistical Office

Data to June 2022

NUMBER OF PEOPLE IN WORK AND VACANT POSTS NOW UP ON PRE-COVID LEVEL
L.S.: IN MILLION PEOPLE, R.S.: IN '000 PEOPLE



Source: Federal Labour Agency

Data to August 2022

cause of gas supply outages, high energy prices or shortages of materials. If this were to happen, then a rise in short working hours would be likely. Since these problems are affecting mainly employers in the manufacturing sector, the impact on office employment and hence demand for office space should remain manageable for the time being.

However gratifying the current record number of people in employment in Germany, this figure is likely to decline in future, as illustrated by the skills shortage which is already in evidence everywhere and now affects every single sector. The situation is set to get even worse as baby boomers of the 1950s and 1960s retire from the workforce. Around 13 million workers will reach retirement age in the next 15 years. Even with a rising employment rate, longer working life and relatively high immigration, the consequences of an ageing population on employment are unlikely to be offset completely, even though they might be mitigated to some extent.

For this reason, the number of office workers in Germany could decline in the next few years after a steady rise until now. However, the trend in the seven biggest cities could be more favourable in view of their function as major economic centres. It might be possible to combine management and development functions in those cities in view of a better availability of skilled workers there.

In addition, in the next few years, demand for office space could be influenced by New Work concepts. Employees in many companies and institutions are allowed to work remotely – mostly from home. Many are taking advantage of this option with great enthusiasm, which means that workers are now spending only roughly half their working hours in the office. Accordingly, the number of desks can be reduced substantially in relation to the past when workers spent five days in the office. The impact on the amount of office space required, however, is less than the reduction in office presence. Companies are having to factor in peak presence times so that nobody wishing to work in the office has to go back home to work because of a lack of desks. After all, a high presence rate is desirable for good communication. Additional space is also needed for meetings and for concentration.

The home working effect will impact the office market after a time lag since leases were often signed for a ten-year period. In addition, it will take time for new office concepts to be implemented. For the time being, office space will have to be reorganised. It may be that the space used until now is also unsuitable for New Work,

Ageing population likely to reduce labour pool in the coming years

Impact of ageing population could be less pronounced in top locations

New Work effect: Working from home leading to a reduction in demand for office space, but...

... space which is no longer required only becoming available gradually

calling for alternative space. New space will also be needed if offices are to be merged. To that extent, surplus space will only gradually be made available in future. This space could remain available in the market, which might lead to a rise in vacancies, or, alternatively, office buildings which are no longer economically viable for letting could be pulled down or repurposed.

Comparison of office markets in top locations

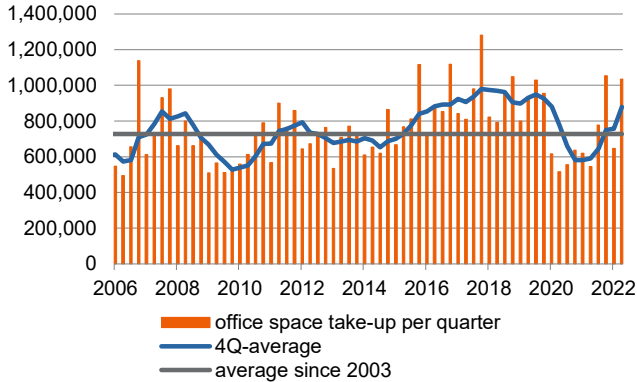
There was little sign of any crisis in the top locations' office markets in the first half. The Covid-led dip in take-up has been largely ironed out by a bounce-back in demand for office space since the end of 2021. Take-up in Q2 2022 rose to over 1 million m² – a figure only exceeded seven times in the 50 quarters since 2010. The earlier uptick in vacancies has been brought to a halt by an increase in letting activity. Overall, the vacancy rate rose by 1.5 percentage points to around 4.5 per cent on the back of the pandemic, but as such remains fairly low.

Whereas there was a more pronounced variation in the vacancy rate between the seven top locations in the past, two "camps" have now emerged. At 8 per cent, the vacancy rate in Düsseldorf and Frankfurt is roughly twice that of the five other locations which have figures of 3 to 4 per cent. Prior to Covid, Berlin, Munich and Stuttgart had the lowest vacancy rates; most recently, though, they have been beaten by Cologne with a figure of 2.8 per cent.

Lively demand for office space halting rise in vacancies

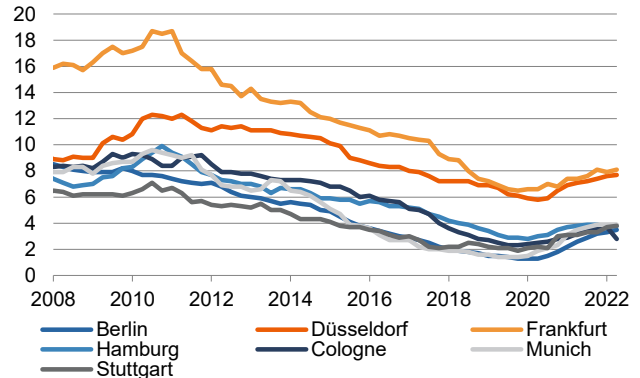
Düsseldorf and Frankfurt have by far the highest vacancy rate

'LETTING ACTIVITY ALMOST BACK TO PRE-COVID LEVEL'
TAKE-UP IN '000 M²



Source: bulwiengesa

INCREASE IN VACANCY RATE HAS COME TO A HALT
VACANCY RATE AS % OF EXISTING OFFICE STOCK



Source: bulwiengesa

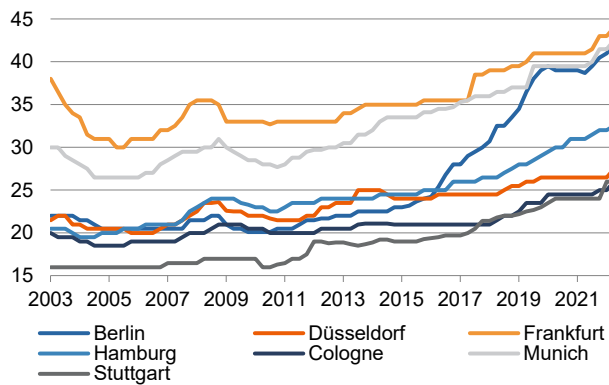
In spite of a slightly weaker first quarter, take-up in the first half of 2022 was even up slightly on the five-year average prior to the outbreak of the pandemic at just over 1.7 million m² (2015 to 2019). However, the trend has varied widely from one city to another among the top seven. Take-up in Düsseldorf and above all in Frankfurt was rather low. Whereas the level in Berlin and Munich was roughly back in line with former average figures, it was slightly above in Hamburg and well above in Cologne and Stuttgart.

Letting activity varies widely from one city to another

In 2022, after a Covid-led period of weakness, huge interest in new office concepts and modern space in buildings which are as sustainable as possible has led to a sharp rise in prime rents. Prime rents have risen by an average of between just over 4 per cent (in Düsseldorf) and over 8 per cent in Berlin and Stuttgart against mid-2021. At the half-way stage, prime rents ranged from EUR 26 per m² in Cologne and Stuttgart to EUR 44 per m² in Frankfurt. The figure in Berlin and Munich is only marginally lower.

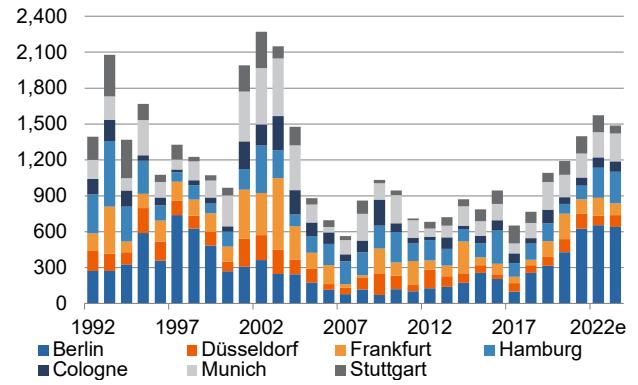
Prime rents rising in all top locations

PRIME RENTS RISING SHARPLY AGAIN AFTER COVID LULL
PRIME RENTS IN EUR PER M²



Source: bulwiengesa

OFFICE BUILDING TAKING PLACE MAINLY IN BERLIN
NEW SPACE IN '000 M²



Source: bulwiengesa

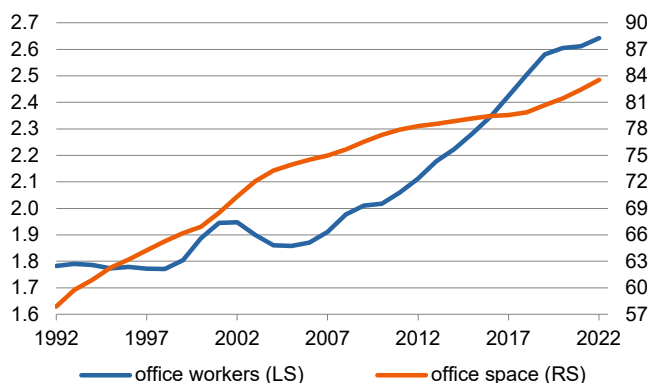
The sharp rise in rents is surprising – after all, higher vacancies have led to an improvement in supply. This factor alone has led to an increase in vacant space from around 2.5 to roughly 3.8 million m² in view of an aggregate office stock across all seven top locations of around 83 million m², making it easier now for potential tenants to find available office space within a short period of time. In addition, there is what appears to be at first glance a greater amount of new space coming onto the market through an upturn in new office projects. However, the rise in the amount of new space has taken place from a low level and has so far applied above all to Berlin. New offices are also expected to be built in 2022 and 2023 – especially in Berlin, but also in Hamburg.

Prime rents rising in spite of improved supply

Rising prime rents are mainly being driven by demand for modern space, which is still ultimately in far too short supply. In contrast, rising vacancies tend to involve outdated space or space that is only up-to-date to some extent and therefore hardly marketable any longer. This also reflects an earlier gradual fall in demand for office space. The trend in demand towards generally less space, but high-quality space instead is also likely to continue. However, the existing office stock is largely made up of ageing offices. Around three quarters of offices in the top locations pre-dates the turn of the millennium.

Office market still affected by shortage of contemporary space

TOP LOCATIONS: FURTHER RISE IN WHITE-COLLAR WORK, BUT PROBABLY NO LONGER QUITE SO FAST
L.S.: IN MILLION PEOPLE, R.S.: IN MILLIONS M²



Source: bulwiengesa, Scope

TOP LOCATIONS: SHARP DECLINE IN OFFICE SPACE PER EMPLOYEE, BUT NO LONGER FALLING
IN M²



Source: bulwiengesa, Scope

Office market summary

The solid trend in the office market in the first half of this year would probably carry on if only headwind had not picked up so sharply for companies. Record prices for energy, production losses in industry and consequently the likelihood of recession, are an likely scenario in the next few quarters. In this difficult situation, which could continue for some time, companies are likely to think twice about whether they can afford to take on the long-term commitment of expensive office space. Demand for offices is therefore likely to be much more muted towards the end of 2022/beginning of 2023 than it was in the first half of 2022.

Consequently, rents, which have so far been pointing upwards, are likely to flatten. Moreover, on top of the net rent, tenants now face also much higher additional costs for heating and air conditioning, which means that the cost of office space is set to rise in any case. At the same time, pressure to take action in this respect is being eased not least by successful home working; after all, employees can work well from home, even without new office space. In view of a persistently tight supply of modern office space, prime rents are unlikely to come down, in spite of the expected weakness in the market; instead, they should remain largely stable. Since office space under construction is mostly already pre-let, the postponement of planned office projects could even lead to a greater shortage still of contemporary office space on the back of the rise in construction in financing costs. In weaker market conditions, however, vacancies overall could increase, although this would probably affect primarily outdated offices. Overall, interest in office properties with low energy efficiency is likely to wane among tenants and investors alike.

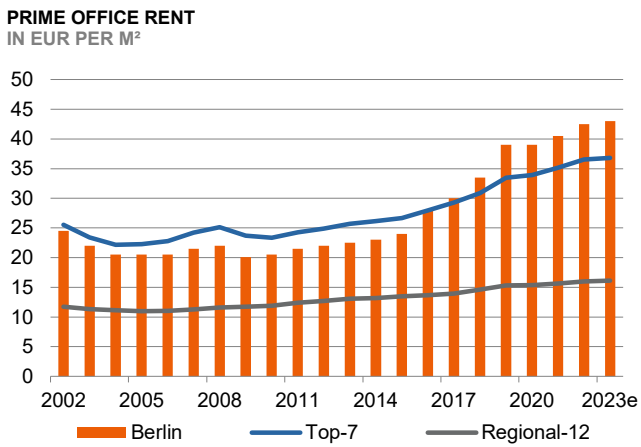
Demand for modern office space remains intact though and, as illustrated by the trend in the first half of 2022, should therefore pick up again once economic conditions improve and the crisis-led uncertainty recedes. Until then, we could see a rather unusual trend in rents where existing rents could rise faster than new leases through inflation-indexed leases.

**Marked increase in headwind
in the office market**

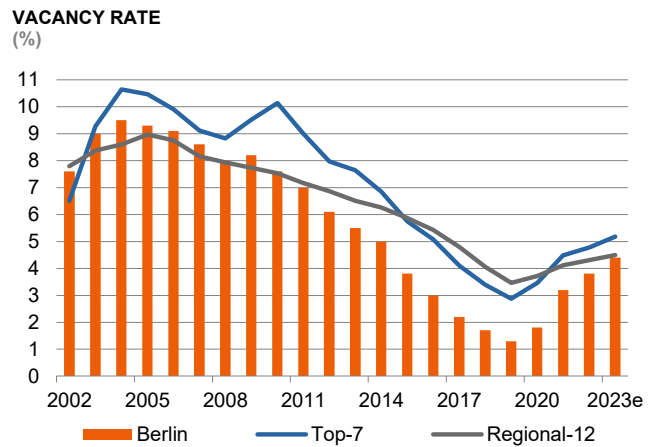
**Weaker momentum expected in the
market until 2023...**

**...even though little is set to change
in relation to the gap between supply
and demand**

Berlin: Office space



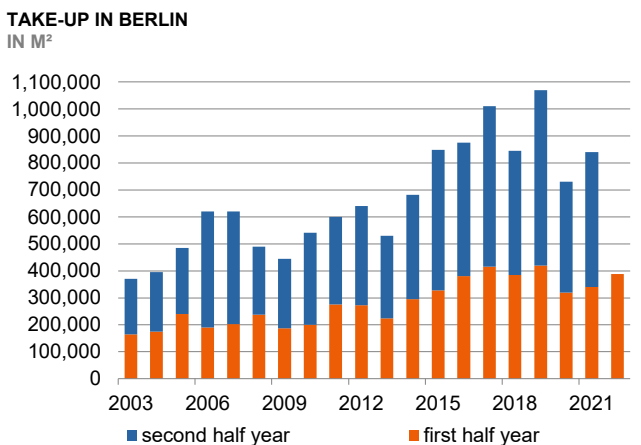
Source: bulwiengesa, DZ BANK forecast



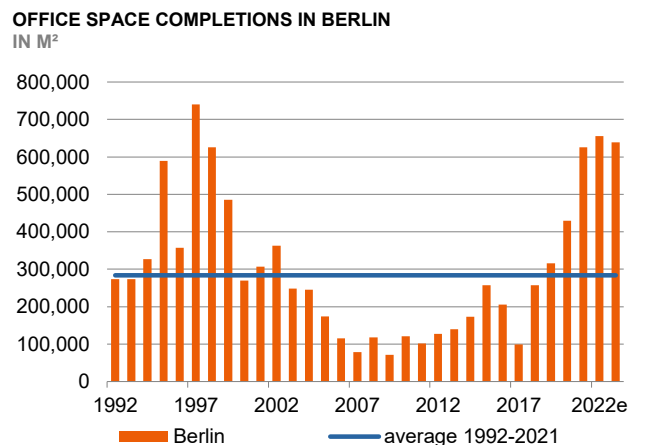
Source: bulwiengesa, DZ BANK forecast

The economic upturn in Berlin has injected strong momentum into the office market, not least on account of successful startups. Berlin was the only office market to achieve an annual take-up of over 1 million m² (2017 and 2019), driven by extensive demand for office space combined with the biggest stock of offices in Germany of over 20 million m². Whereas the prime rent was in the mid-field among the top locations up to 2016, the upturn led to a rapid rise to EUR 42 per m² most recently. In contrast, the vacancy rate had fallen to just over 1 per cent by the beginning of 2020, although it has since risen again to 3.5 per cent at the half-way stage in 2022. This marked increase reflects weaker demand for office space during the pandemic along with a huge surge in new building activity. However, years of little activity in the construction segment led to an inexorable widening in the gap between demand for modern office space and supply, so that even a high level of new space could not slow down the rise in prime rents. High demand for office space in the first half of 2022 led to take-up of 390,000 m². The only time this figure was beaten was in the first half of 2017 and 2020 respectively. From the second half of 2022, however, the combination of energy crisis and recession fears is likely to dampen the strength of the Berlin office market and lead to a flattening in the rise in rents. However, high demand combined with a persistently tight supply of contemporary office space means the prospect of a further rise in prime rents. A high level of new space could lead to a further rise in vacancies.

Further rise in prime rents in 2022, in spite of substantial new-build space



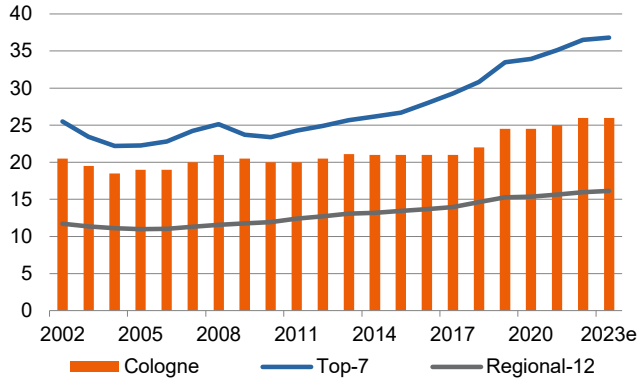
Source: bulwiengesa



Source: bulwiengesa

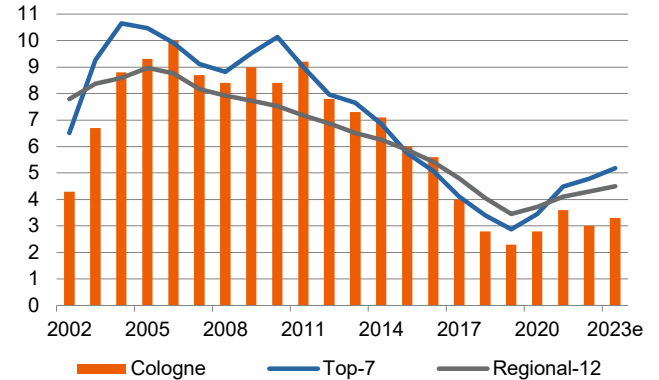
Cologne: Office space

PRIME OFFICE RENT
IN EUR PER M²



Source: bulwiengesa, DZ BANK forecast

VACANCY RATE
IN %

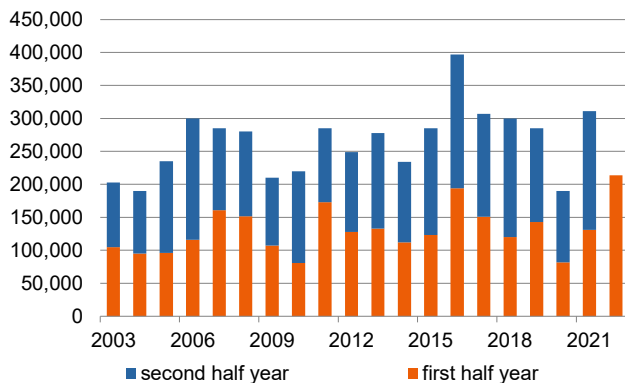


Source: bulwiengesa, DZ BANK forecast

Cologne is the fourth most populated of the big German cities; however, its office market only ranks in sixth place with just over 8 million m² of space. Cologne is also bottom of the league along with Stuttgart for prime rents with a figure of EUR 26 per m² respectively. In the case of Cologne, this is likely also to relate to the fact that the public sector accounts for a large part of the demand for office space. However, after a long period of stagnation, prime rents in Cologne put in a stronger rise from 2018 onwards. As in the other office markets, this reflected a very meagre supply. In spite of growing white-collar employment, the volume of new space remained moderate. The Covid-led decline in letting activity was mostly concentrated in 2020. There was already a strong rise in take-up last year to a high level of slightly over 300,000 m². This year's take-up could even exceed this figure since take-up in the first half had reached the previous high at around 210,000 m². Of this, the public sector accounted for almost half – BiMA and the Cologne City Council have leased over 80,000 m² in two transactions. Cologne is currently the only city among the top locations with a vacancy rate of under 3 per cent, i.e. only marginally above the pre-Covid level. The limited availability of space is likely to mitigate the dampening effect of weak economic conditions.

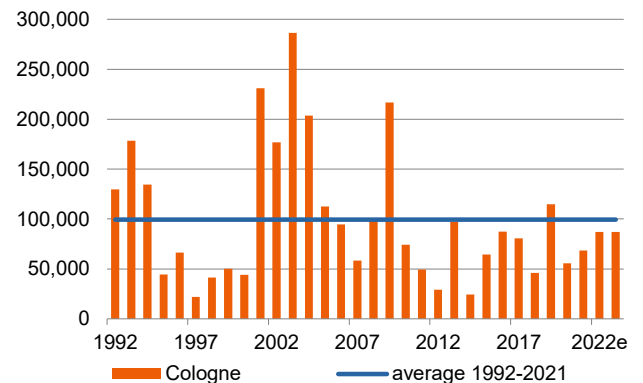
Cologne office market already bounced back in 2021 and has picked up further in 2022

TAKE-UP IN COLOGNE
IN M²



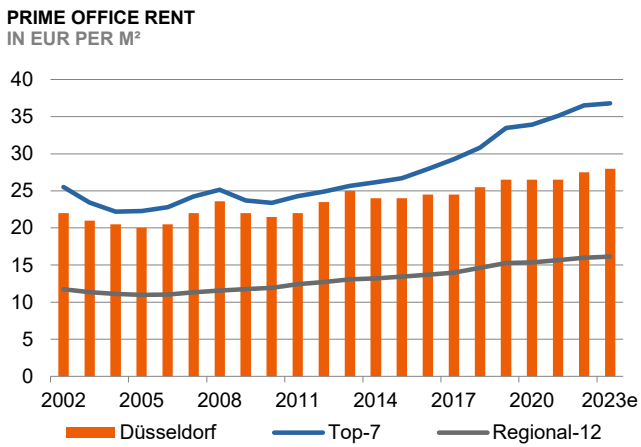
Source: bulwiengesa

OFFICE SPACE COMPLETIONS IN COLOGNE
IN M²

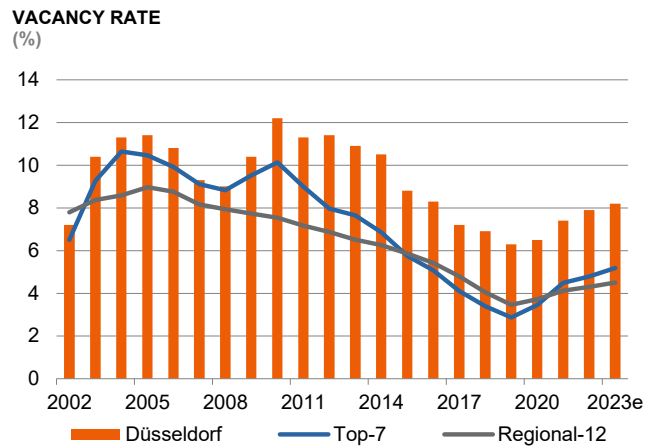


Source: bulwiengesa

Düsseldorf: Office space



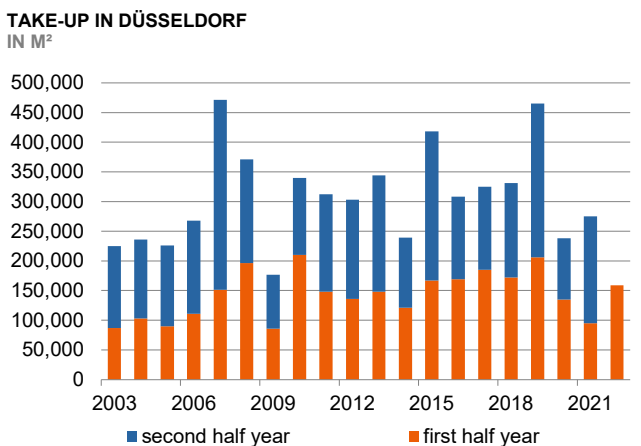
Source: bulwiengesa, DZ BANK forecast



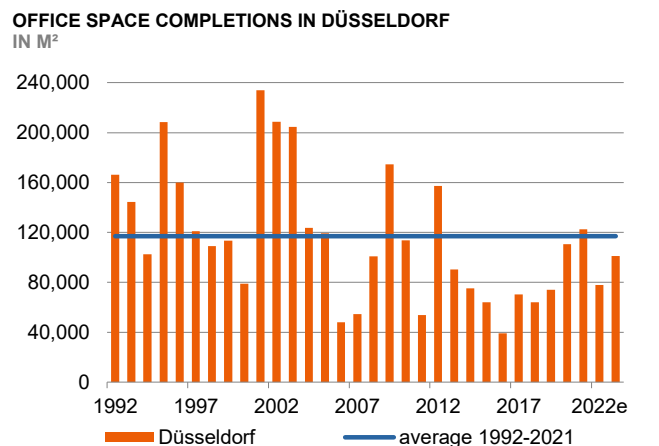
Source: bulwiengesa, DZ BANK forecast

Düsseldorf has the smallest office market among the top locations (7.8 million m²), although it only lags marginally behind Cologne and Stuttgart. As in the other top locations, prime office rents continued to rise even during the pandemic and reached EUR 27.50 per m² at the half-way stage in 2022. However, the momentum of rental rises clearly lagged behind the trend among the top locations. One of the main reasons for this is likely to have been a fairly high vacancy rate – as in Frankfurt – at just under 8 per cent. However, the vacancies mostly involve older office space which is often only marketable to a limited extent. Take-up in the first half of 2022 was around 160,000 m², slightly less than in previous years. This included two larger lettings – 17,500 m² for the Volkshochschule (further education college) and 15,000 m² for Ernst & Young. These transactions are also a reflection of the most important tenants in the first half, since public sector bodies and consultancies each accounted for roughly one quarter of total take-up. After a higher level of brand-new space coming onto the market in 2020 and 2021 than in previous years, less new space is expected this year and next year, which should slow down the rise in prime rents. The trend in prime rents could be slightly weaker in Düsseldorf than in the other top locations, reflecting not only headwind from the energy crisis and the threat of recession but also quite a high vacancy level.

High level of vacancies slowing down rent rises



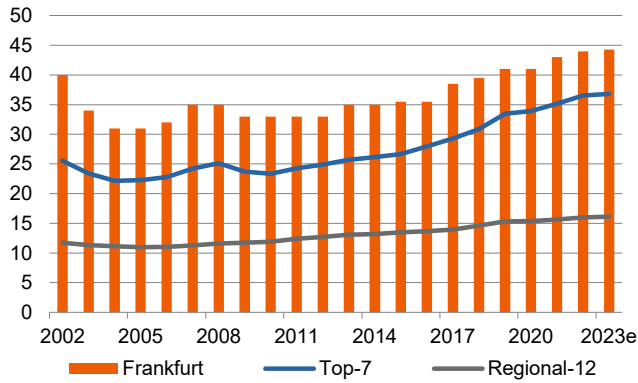
Source: bulwiengesa



Source: bulwiengesa

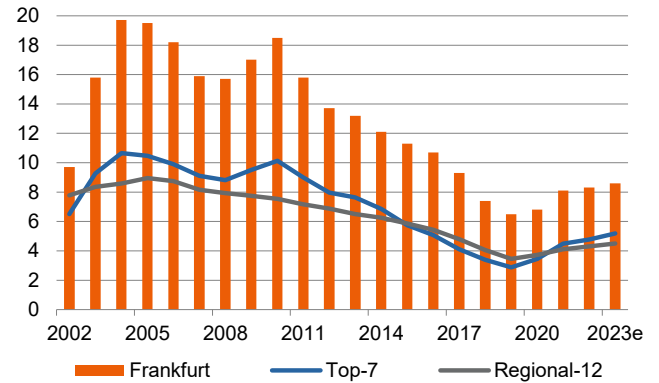
Frankfurt: Office space

PRIME OFFICE RENT
IN EUR PER M²



Source: bulwiengesa, DZ BANK forecast

VACANCY RATE
(%)

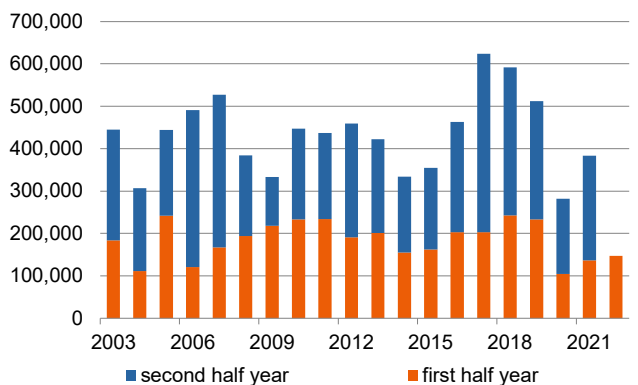


Source: bulwiengesa, DZ BANK forecast

Prior to the pandemic, Frankfurt's office market stood out for being the only one with a prime rent of over EUR 40 per m². Now however, both Berlin and Munich have broken past that barrier. Even so, Frankfurt remains the most expensive German office market with a figure of EUR 44 per m² since the prime rent has also risen further in the banking capital. In contrast to Berlin and Munich, however, take-up in the first half of 2022 was more muted at just over 150,000 m². With the exception of the two pandemic-hit years (2020 and 2021), a lower take-up figure had not been achieved since 2007. This reflects the absence of major transactions in the first half. Only one deal - involving Citibank - reached the 10,000 m² mark. However, there are still a number of large transactions in the pipeline which means that take-up could catch up in the second half. Frankfurt's office market does not just have the highest prime rents; it also has the highest vacancy rate at just over 8 per cent most recently. That being said, the Covid-led rise remained contained at 1.5 percentage points, reflecting not least a rather moderate level of new space. Apart from the vacancy rate, the dampening effect of the energy crisis and threat of recession along with a fairly large volume of space under construction of over 600,000 m² are likely to hamper a further sharp rise in prime rents. Frankfurt's skyline is currently in the process of gaining several new skyscrapers such as the Ensemble FOUR.

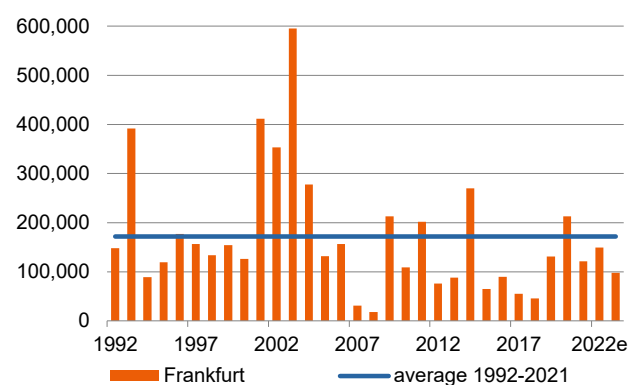
Frankfurt's skyline set to gain new skyscrapers in the next few years

TAKE-UP IN FRANKFURT
IN M²



Source: bulwiengesa

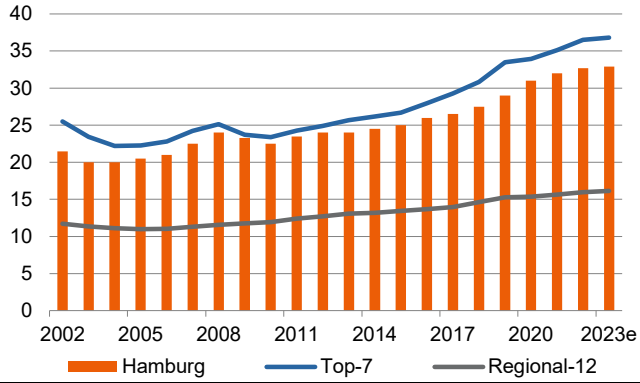
OFFICE SPACE COMPLETIONS IN FRANKFURT
IN M²



Source: bulwiengesa

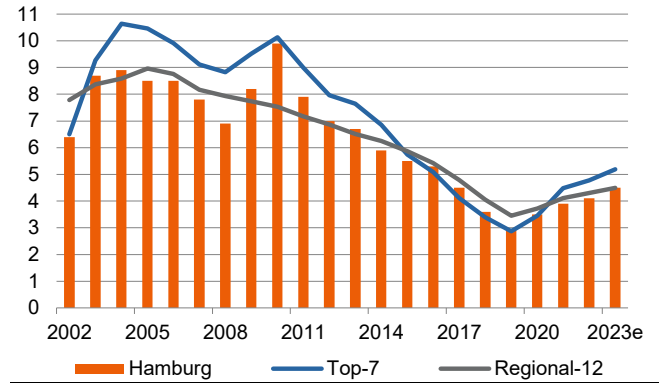
Hamburg: Office space

PRIME OFFICE RENT
IN EUR PER M²



Source: bulwiengesa, DZ BANK forecast

VACANCY RATE
(%)

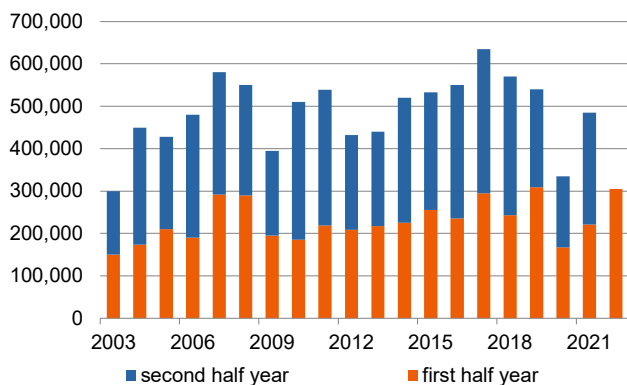


Source: bulwiengesa, DZ BANK forecast

Hamburg is the third largest office market in Germany after Hamburg and Berlin and almost on a level with Munich with a stock of 14 million m². Although prime rents for office space are much cheaper in Hamburg than in Berlin and Munich, being around EUR 10 less per m², the Hamburg office market has done well in the last few years, driven by a broadly-based economy. Prime rents have risen by a quarter over a five-year period to EUR 32.50 per m² most recently. Vacancies, which were once high, have been whittled down substantially in view of mostly only moderate volumes of new space. At the half-way stage in 2022, the vacancy rate stood at just under 4 per cent. After a take-up of almost half a million m² last year, the market continued to gather momentum in the first half of this year with take-up of just over 300,000 m² – the second-best half-year result ever. This only included two major transactions – Hamburger Sparkasse and VTG Logistik – for a total of 45,000 m², pointing towards lively letting activity in the small and middle market segments. There could be an uptick in vacancies through fairly high levels of new space in 2022 and 2023, although this is unlikely to have much effect on the shortage of modern office space in city-centre locations. However, for the time being, rental growth is likely to be dampened by macroeconomic headwinds.

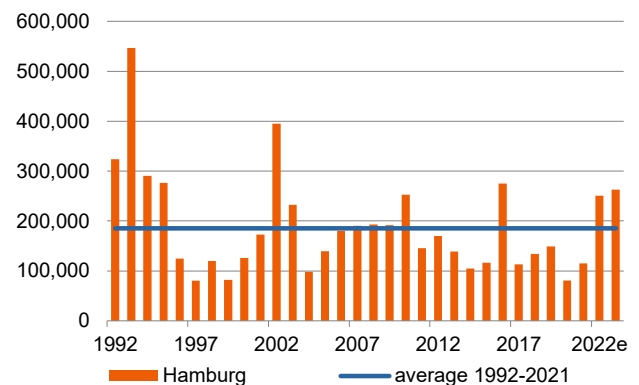
Upturn in the Hamburg office market

TAKE-UP IN HAMBURG
IN M²



Source: bulwiengesa

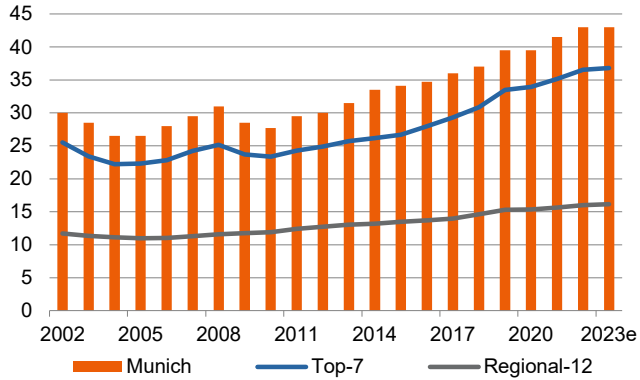
OFFICE SPACE COMPLETIONS IN HAMBURG
IN M²



Source: bulwiengesa

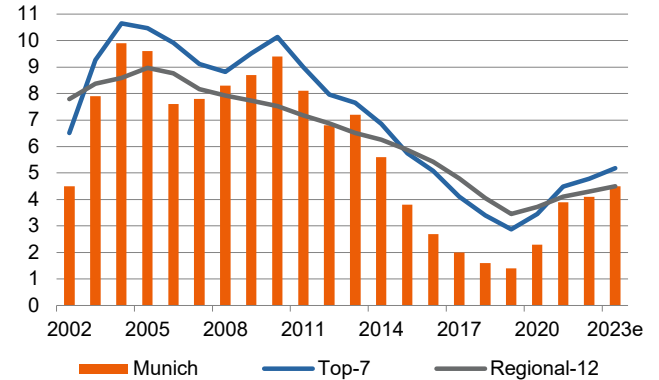
Munich: Office space

**PRIME OFFICE RENT
IN EUR PER M²**



Source: bulwiengesa, DZ BANK forecast

**VACANCY RATE
(%)**

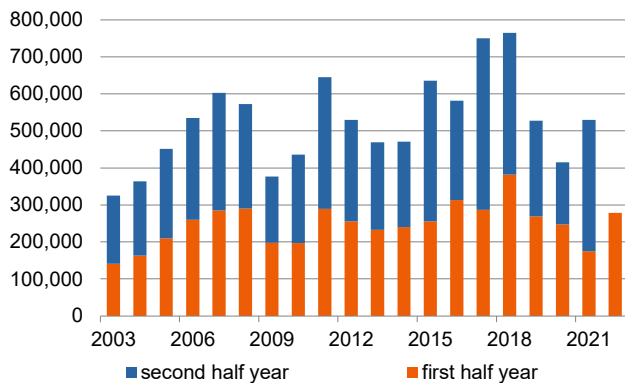


Source: bulwiengesa, DZ BANK forecast

Economically, the Munich conurbation is among the strongest regions in Germany. The location's potential is supported by the fact that Munich is home to leading US IT giants such as Amazon, Apple, Google and Microsoft. Strong growth in white-collar work had led to a very tight office market prior to Covid. In 2019, the vacancy rate fell to 1.4 per cent, while prime rents rose to EUR 39.50 per m². In spite of a tight supply, office take-up rose to a high of around 750,000 m² p.a. Take-up already fell in 2019 and then, there was a marked rise in vacancies during the pandemic. In mid-2022, the vacancy rate stood at not quite 4 per cent, reflecting not least a higher volume of new space since 2019. However, this has not been enough to meet the demand for modern office space: in spite of an improvement supply, prime rents have risen by EUR 3 per m² to EUR 42.50 since mid-2021. Lively interest in office space is also clear from a relatively high take-up of around 280,000 m² in the first half of 2022. This includes five major transactions of over 10,000 m² each. The rise in vacancies has slowed down noticeably of late. However, upbeat prospects for the Munich office market are being overshadowed by economic problems which are likely to slow down rental growth. The major construction site involving the Strafjustizzentrum could inject some movement into the office market, since it will mean that buildings hitherto in use will become available.

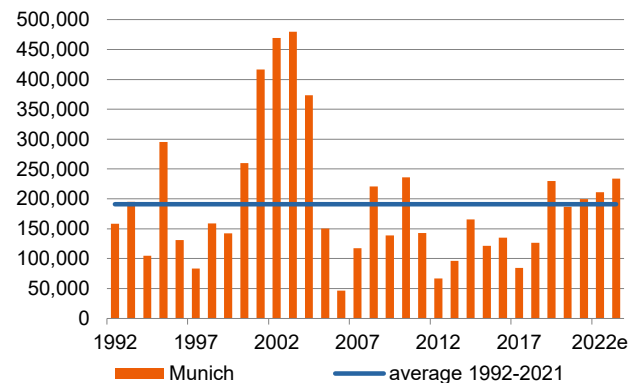
Sharp increase in prime rents in spite of higher vacancies

**TAKE-UP IN MUNICH
IN M²**



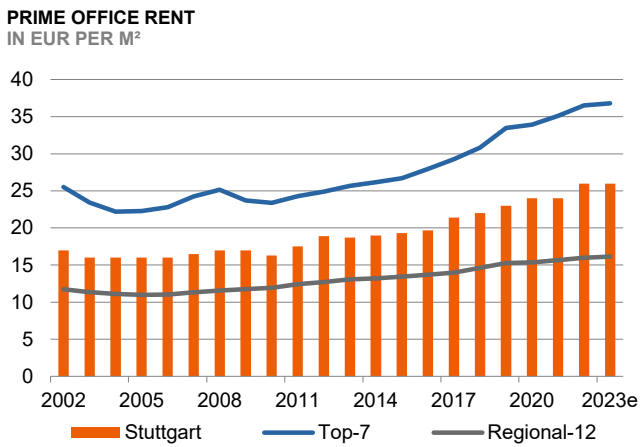
Source: bulwiengesa

**OFFICE SPACE COMPLETIONS IN MUNICH
IN M²**

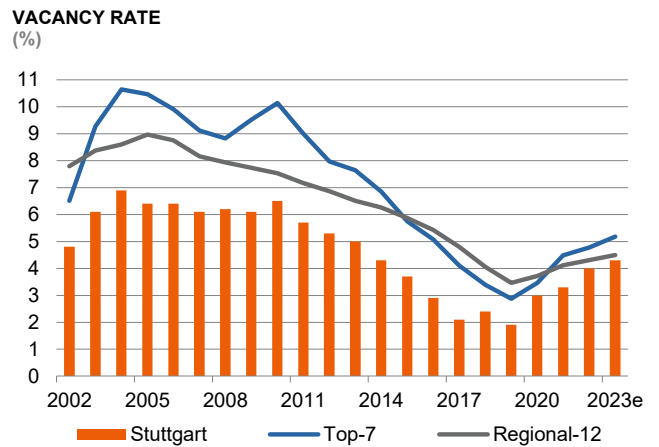


Source: bulwiengesa

Stuttgart: Office space



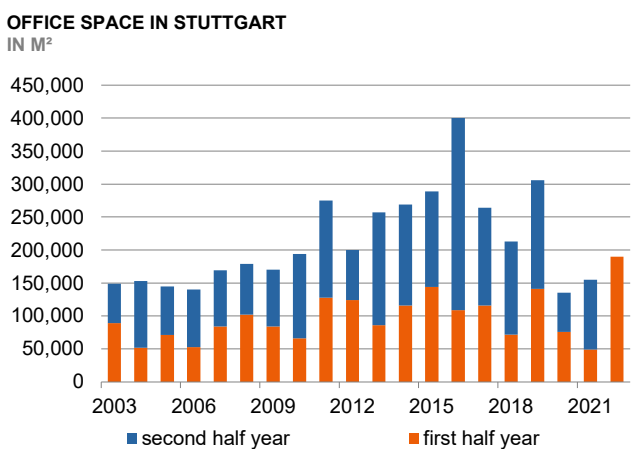
Source: bulwiengesa, DZ BANK forecast



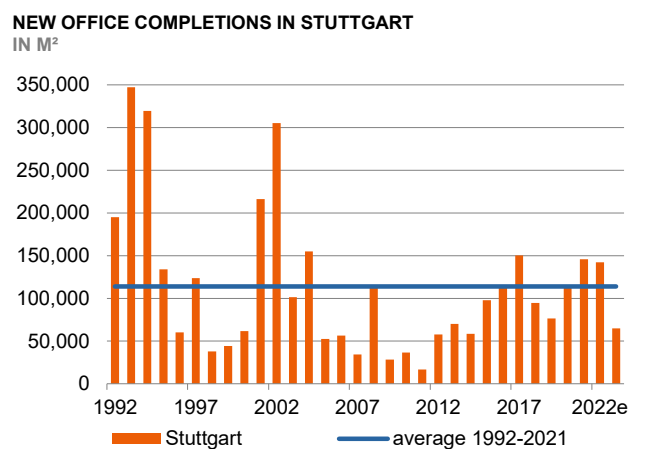
Source: bulwiengesa, DZ BANK forecast

Stuttgart differs from the other top locations in so far as industry is of greater importance in the city. This factor is likely to be behind a mostly fairly moderate take-up which, until 2010, was often below 200,000 m² in an office market of just over 8 million m². Market activity has since picked up. Take-up rose to an average of 275,000 m² p.a. from 2011 to 2019, but then slumped to only around 150,000 m² in 2020 and 2021. However, Stuttgart's office market has now bounced back with its strongest-ever half-year take-up of 190,000 m², exceeding past full-year take-up figures. The high take-up was driven by five large transactions totalling 130,000 m², of which the Allianz campus accounted for half. Overall, occupier transactions account for roughly half the strong market result. Prime rents which stagnated in 2020 and 2021 also surged at the beginning of 2022, rising to EUR 26 per m² by mid-2022. However, these large transactions will not continue in the second half. Nevertheless, a take-up of over 300,000 m² could be achieved. In spite of the vacancy rate being roughly twice as high as in 2019, and macroeconomic headwinds notwithstanding, demand for modern office space should help stabilise prime rents after their rise at the beginning of 2022.

Surge in uptake and rents in Stuttgart office market after two poor years



Source: bulwiengesa



Source: bulwiengesa

RESIDENTIAL MARKET

Continuous stress in the residential sector: high rents, high heating costs, less new construction

The perennial issue in the housing market, i.e. high, if not excessive rents, has receded into the background in 2022, even though rents continued to rise in the first half. Although the situation in the housing market remains tight, the greatest concern now is the "gas crisis". Households – unlike industry for example – are not immune to the sharp rise in energy prices, though they do enjoy special protection when it comes to their supply. In addition, households will be hit by a "gas levy" of 2.4 cents per kWh from October 2022 to April 2024. However, this additional burden is to be largely offset by a reduction in VAT on gas from 19 to 7 per cent during the same period.

The explosion in heating bill is not just affecting those homes which are heated with gas; the price of oil, wood pellets and electricity needed to run heat pumps has also risen sharply. Natural gas, though, is by far the most widely used source of heating since it is used in over half of homes in Germany. The advantages of a gas heating system are a lower initial outlay, small space requirement, reliability and, hitherto low energy costs. These advantages have meant that, until now, gas heating systems were so much in demand and that around four times more were installed (650,000) in 2021, than more environmentally friendly heat pumps (around 150,000). This meant that gas boilers had a market share of 70 per cent last year (based on number of units). Gas continued to dominate, even in the first half of 2022. As previously, gas boilers made up the lion's share of a total of 463,000 new heating installations at around 300,000 units, followed in second place by heat pumps at 96,000.

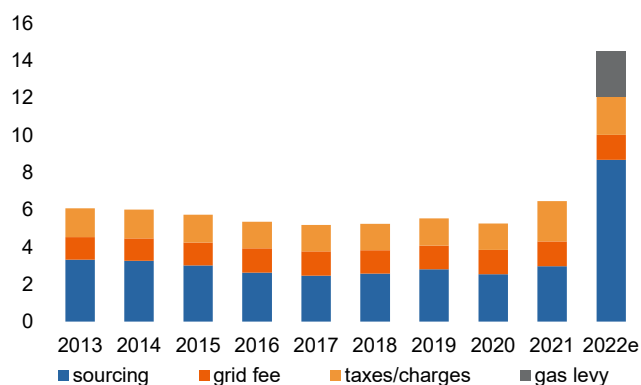
The rapid rise in gas, oil, wood and electricity prices means that bills for running a home are now of much greater concern for tenants, owner-occupiers and landlords alike. Based on data published by the GdW (Federal Association of German Housing and Real Estate), tenants paid average monthly bills of EUR 2.70 per m² in 2021. Heating accounted for the lion's share of these at EUR 1.06 per m². GdW companies charged an average net rent not including heating (i.e. "cold rent") of EUR 6.09 per m², which means that on average, tenants had to pay a total of EUR 9 per m², including the cost of heating. The lower the "cold rent", the higher the proportion of running costs in relation to total housing expenses. For this reason, the rise in heating costs

Gas crisis and heating costs the top issues in the housing market

Natural gas the number one source of heating in German homes

Sharp increase in the size of running costs for housing

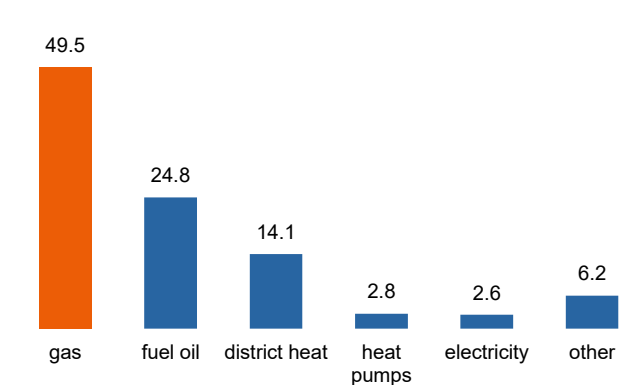
SHARP RISE IN PRICES FOR NATURAL GAS IN 2022
FIGURES IN CENT PER KWH



Source: BDEW (April 2022), DZ BANK

N.B.: 2022 7% VAT

GAS DOMINANT MODE OF HEATING FOR 43 MILLION DWELLINGS
SHARE OF HOUSING STOCK (%) (2021)



Source: BDEW

Gas incl. biogas and liquid gas

"Others" include wood/biomass, coke/coal and other fuels

has meant a disproportionate rise in "warm rents" (i.e. including heating) in the case of cheap housing. Another contributory factor is that low "cold rents" often apply in the case of older dwellings where poor insulation and less efficient heating often leads to higher fuel consumption. In contrast, high energy prices are having a more moderate impact in the case of new, well insulated homes with more efficient heating systems.

Landlords now face the unfortunate task of passing on higher bills to their tenants. Since advance payments (for utility bills) were made based on existing heating costs, households can expect to receive as yet unquantified demands to make up the difference. These could be too much, especially for lower-income tenants without any cash reserves. It is likely that landlords will have to adapt to a much higher level of arrears than in the past. Some housing companies have already lowered the temperature of heating systems, at least reducing the risk of a shock from additional charges. It is as yet – as per August 2022 – impossible to say to what extent state aid packages will help cushion the increase in heating costs and whether a landlord's right to give notice in the case of arrears will be suspended.

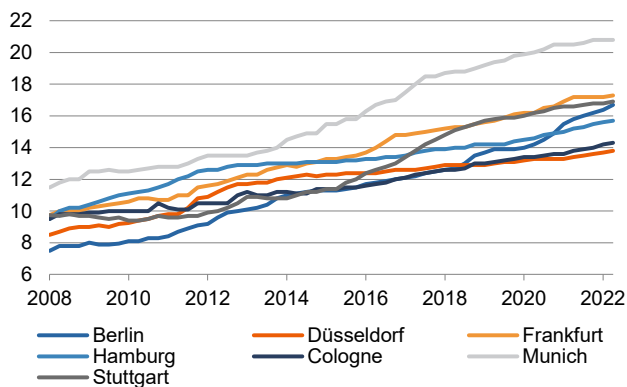
Demand for rental property is changing – and set to start rising again

Demand in the housing market could be influenced by rising heating costs. In addition to a rise in "cold rents", tenants now also face higher operating expenses, which means that housing costs overall are becoming more expensive. Those looking for a home are likely to focus more on smaller spaces in order to get better value-for-money per m². Homes with relatively moderate heating costs will be at an advantage. Interest in newer homes and those that have been retrofitted to be more energy-efficient is likely to be higher than in the past, in spite of higher "cold rents".

High supplements for running costs could lead to a sharp rise in payment arrears

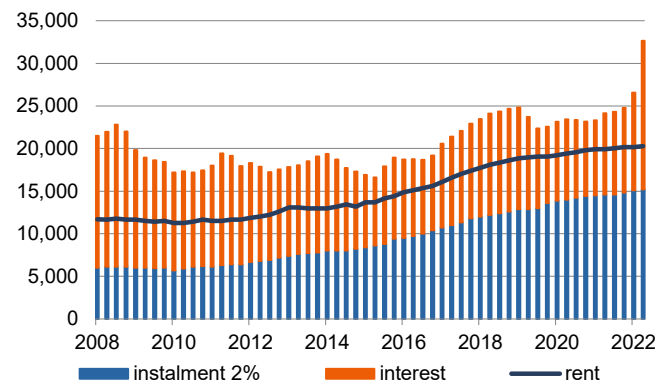
Demand could focus more on smaller, energy-efficient homes

SHARP RISE IN INTEREST RATES SINCE BEGINNING OF 2022 FAILS TO HALT RISE IN PRICE OF OWNER-OCCUPIED HOMES
AVERAGE PRICE OF OWNER-OCCUPIED HOMES EUR PER M²



Source: bulwiengesa

SIMPLIFIED COMPARISON: BUY OR RENT A NEW 100 M² HOME IN STUTTGART
INTEREST, REPAYMENT AND RENT EUR P.A.



Source: bulwiengesa, Bundesbank, DZ BANK

Apart from energy prices, higher financing costs for properties are also having an impact on demand for rentals. Up until the end of 2021, property buyers benefited from mortgage rates which were at times below 1 per cent. In spite of high purchase prices, it was largely possible to part finance a flat or home from the rent saved from a comparable property. Mortgage rates have since risen to over 3 per cent, which means that lending rates are much higher, and therefore the option to buy a home is mostly only affordable for households with a large capital. This is leading to rising demand for rental property, as is already clear from internet searches on property websites.

Higher financing costs making renting much more attractive

Prices for owner-occupied home in the seven largest cities had risen even further by mid-2022, even though they were already high and in spite of a rise in financing costs. Prior to that, prices had increased roughly twice as fast as rents since 2010 on the back of falling interest rates. Back then, a brand new occupier home cost on average between EUR 3,000 and EUR 4,000 per m². Now, prices range between EUR 7,000 and EUR 10,000, which equates to a rise of around 130 to 150 per cent since 2010.

Surge in property prices continued in Q2 2022

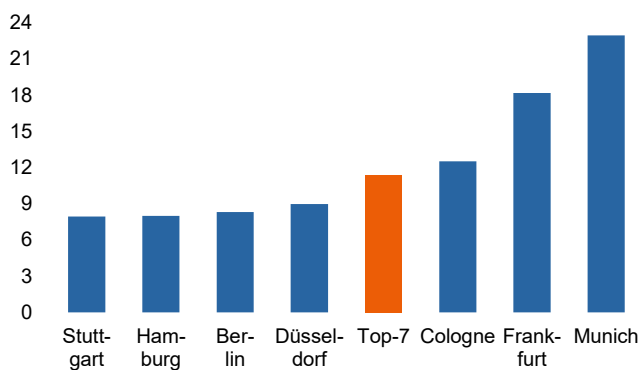
Moreover, demand for rental property could be boosted by immigration. There has been a sharp increase in population in the top locations in the last few years. Whereas a total of around 9 million inhabitants lived in the seven cities at the turn of the millennium, the figure is now 10.1 million. This has led to high demand in the housing market, an ever dwindling supply and hence, a sharp rise in rents. However, population growth in large cities has ground to a halt; the number of inhabitants has been stagnating or even falling since 2019. The reasons for this are a Covid-led decline in immigration into Germany up to 2021 and exodus of families to the surrounding countryside.

Population growth has fuelled demand for housing

The influx has increased significantly in 2022, though, above all through the war in Ukraine. However, the impact on housing is difficult to quantify and, in particular, it is virtually impossible to say how long these refugees will stay. In contrast to many other immigrants, Ukrainians do not seem interested in staying in Germany; it seems that most of them would prefer to return to their homeland quickly – if that were possible. On the other hand, for well educated Ukrainians, integration in Germany and filling the skills shortage is likely to be easy, which in turn suggests good prospect for a life in Germany.

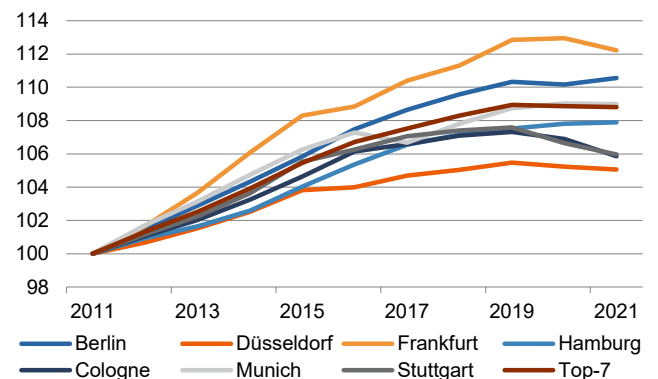
Demand for housing from war refugees difficult to quantify

HUGE RISE IN NUMBER OF INHABITANTS IN TOP LOCATIONS
POPULATION GROWTH FROM 2000 TO 2020 (%)



Source: Destatis

NUMBER OF INHABITANTS STAGNATING OR FALLING SINCE 2019
NUMBER OF INHABITANTS 2011 = 100



Source: Destatis

If a fairly large number of Ukrainians remain in Germany for a longer period of time, with demand concentrated on cities, then the population balance in top locations is likely to shift back into positive territory, at least in 2022. In addition, an ever more noticeable skills shortage suggests that immigration into Germany is likely to increase. This is also likely to benefit top locations. Consequently, demand for housing could pick up again sharply in the next few years, although this is difficult to quantify.

Ukrainian refugees and skilled workers likely to drive demand for housing

New building stalling in spite of rising demand for housing

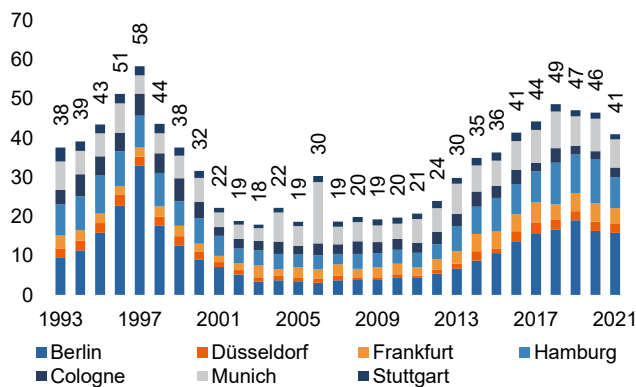
Housing markets became even tighter, not least because new building was very slow to react to rising numbers of immigrants. New building activity did not start to pick up until 2012 onwards, long after the surge in immigration after the turn of the century. On an aggregated basis across top locations, only around 20,000 homes p.a. were built from 2002 to 2011. Thereafter, completion figures rose to over 50,000 units up until 2018. Rising purchase prices, rental growth and higher investor demand made new builds lucrative. Between 2016 and 2019, building permits for 60,000 flats and more were issued every year, which means that even higher numbers of units could have been built.

Instead, however, housing construction has been slowing down again since 2019 – falling to around 40,000 units by 2021. Building in towns and cities was hampered by the fact that the construction industry was working more or less at capacity, by a shortage of skilled workers and of materials, along with the emergence of protests here and there. Now though, the construction industry faces much stronger headwind, and consequently, completion figures are likely to decline further. A shortage of materials is being compounded by a rapid rise in construction costs – above all a huge rise in the price of building materials – along with higher financing costs. A 30-year average shows that the cost of new build flats has increased by a good 3 per cent p.a. The increase in costs in 2018 and 2019 was considerably higher, but since 2021, it has been unprecedented: Construction costs rose by around 9 per cent in 2021 and, in the first half of 2022, they rose by almost 16 per cent! The cost of renovation has risen on a similar scale.

House building has lagged way behind immigration since the turn of the century

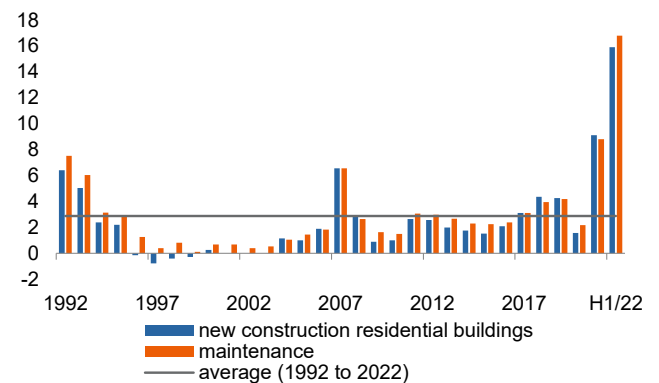
New building has failed to keep up a high pace

HOUSING CONSTRUCTION IN TOP LOCATIONS EASING OFF
COMPLETIONS IN '000 FLATS



Source: Scope, Cities (2021)

BUILDING AND REFURBISHING ALMOST PROHIBITIVE
CONSTRUCTION AND RENOVATION COSTS YOY % CHANGE



Source: Destatis

Under such conditions, building flats for rent is now hardly financially viable. This is clear from illustrative costs calculated by the GdW: In mid-2021, for a building project, a net rent of EUR 10.62 per m² would have allowed a rental yield of 3.5 per cent. By mid-2022, for the same rental yield, the increase in building costs and rise in interest rates would each call for a net rent of almost EUR 14.00 per m², in other words an increase of around 30 per cent. A hike in rent of this magnitude within the space of one year would already be impossible. However, the combination of both factors would in fact call for a net rent of close to EUR 17 per m², which would equate to a rent rise of around 60 per cent in just one year.

What is the outlook for building new rental flats? Rents would have to rise sharply to cover construction costs and higher interest rates

The impact on building projects is illustrated by a survey of members carried out by the GdW. Around two thirds of members are planning to shelve new build/ renovation projects for the time being. Around one quarter are planning to give up new building projects altogether. Around 13 per cent intend to abstain from renovation projects. Bearing in mind the time it takes to complete building projects, the number of flat completions could fall noticeably from 2024 onwards, thus compounding the shortage of available flats. Urgently needed work to retrofit the existing housing stock is also stalling.

Flat completions and refurbishments likely to decline sharply

Residential rents continued to rise in 2022 as well

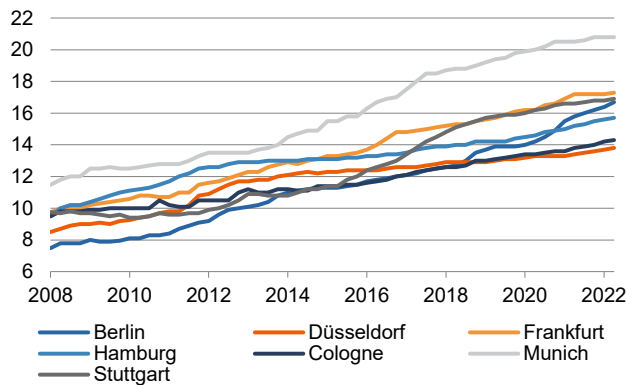
Residential rents in top locations continued to rise in 2022. On average, they rose by around 2.5 per cent yoy across the seven cities. This means a more moderate rate than the average annual rent rise of over 4 per cent in the last ten years. This slower rent rise is likely to be related to already high rents and moreover to the fact that the population growth has come to a halt. Moreover, the level of initial rents is also being dampened by an improvement in supply through a rise in the number of completions. Unlike in previous years from 2010 onwards, rents have risen slower than inflation since the end of 2021.

Strength of rent rises relatively moderate at the moment

At the half-way point in 2022, the average initial rent in top locations ranged from EUR 13.80 per m² in Düsseldorf to EUR 20.80 per m² in Munich. The average initial rent across the seven cities was around EUR 16.50 per m². It rose by over 50 per cent over ten years. By comparison, the average rent for re-lets is EUR 13.70 per m²; in this case, the ten-year percentage increase is in line with that of initial rents.

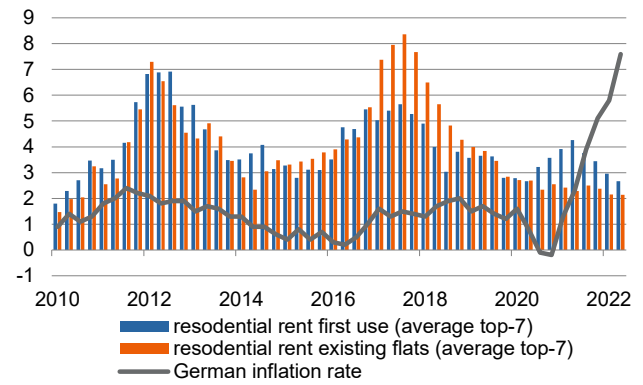
Top 7: initial rents ranging from EUR 14 to EUR 21 per sqm

RENTS CONTINUE TO RISE IN 2022
AVERAGE INITIAL RENT EUR/M²



Source: bulwiengesa

MOMENTUM IN RENT RISES HAD SLOWED DOWN BY MID-2022
RENTS, INFLATION YOY(%)



Source: bulwiengesa

Housing market - summary

Hopes that conditions in housing markets would ease through more new builds and stagnating population figures have been dashed. However, what is making living in already expensive top locations even more unaffordable is not a rapid rise in rents, but rather the explosion in heating costs. Even landlords, though, who had so far enjoyed rising rents, are experiencing difficulties as they face tenant arrears on utility bills, galloping price rises for property upgrades and new building along with much higher financing costs. These adverse conditions are conspiring to hold back new building and upgrading, which means that the hoped-for improvement in housing supply in cities has stalled

Many stress factors dampening the housing market

TOP 7: MARKET DATA RESIDENTIAL MARKET

		Berlin	Cologne	Düsseldorf	Frankfurt	Hamburg	Munich	Stuttgart	Top 7
Population growth									
2016 to 2021 (5 years)	%	2.9	-0.3	1.0	3.1	2.4	1.6	-0.3	2.0
Households									
Change 2016 to 2021 (5 years)	No.	70,000	6,900	5,300	14,700	46,100	34,300	1,000	178,000
Housing completions									
2017 to 2021 (5 years)	No.	83,600	12,650	12,400	22,100	47,500	40,700	8,300	227,300
Unemployment rate									
July 2022	%	9.0	8.7	6.9	5.9	7.1	4.5	4.6	6.7
Initial rent (average)									
Q2/2022	EUR/m ²	16.7	14.3	13.8	17.3	15.7	20.8	16.9	16.7
One-year change	%	5.7	3.6	3.0	0.6	3.3	1.5	1.8	3.5
Five-year change	%	36.9	16.3	9.5	16.1	14.6	15.6	22.5	23.3

Source: bulwiengesa, Destatis, Scope, cities

The supply of housing is expected to remain tight at the same time as demand is likely to pick up again. Large numbers of refugees fleeing the war in Ukraine have arrived in Germany and they could to be joined by many urgently needed skilled workers in future, pointing to a fresh acceleration in rents. However, it remains to be seen whether this actually happens. Households are being hit hard by high inflation and especially by the rise in energy prices. The latter is also affecting the economy which teeters on the brink of a recession, which in turn could dampen the labour market and hence household incomes.

No sharp rent rises likely in spite of tight market

Rent regulation also suggests that sharp rent increases are unlikely, at least in the case of flats covered by the rent cap. The reason for this is the that "Mietspiegel" (current rent index) review period – already extended from four to six years and which the government plans to extend to seven years – has dampened the normal local comparable rent as a basis for rent rises. Moreover, the issue of putting large housing companies into cooperative ownership is likely to be back on the agenda in the spring of 2023 when the Berlin Expropriation Commission expects to publish its findings. Housing companies are likely to hold back from rent hikes in order not to pour further oil onto the fire. All this is taking place at a time when rent rises are necessary, if nothing else because of higher maintenance costs.

Regulation also dampening rent rises

Rents in major German cities are only likely to rise moderately until 2023. On balance, we expect an increase in initial rents in the region of around three to four per cent until the end of 2023. This would mean rents rising slower than consumer prices. Livelier interest is on the cards from potential tenants for newly built, contemporary flats with good energy efficiency and correspondingly cheap heating costs. However, already high "cold" rents are having a dampening effect.

Rents set to rise further, but probably only moderately

FORECASTS AT A GLANCE

Structural data 2021	Inhabitants in 1,000	Inhabitants 2019-2021 (%)	Households	per capita GDP EUR	Disposable per capita income EUR p.a.	Unemployment rate (% July 2022)
Berlin	3,677.5	0.2	2,155	41,700	23,000	9.0
Cologne	1,073.1	-1.4	595	63,400	25,100	8.7
Düsseldorf	619.5	-0.4	335	86,200	29,300	6.9
Frankfurt	759.2	-0.5	425	99,000	25,400	5.9
Hamburg	1,853.9	0.4	1,080	68,800	27,600	7.1
Munich	1,487.7	0.2	870	81,300	34,600	4.5
Stuttgart	626.6	-1.5	340	96,800	28,700	4.6
Top locations	10,097.2	-0.1	5,800	65,300	26,700	6.7

Retail space	Retail space 2021			Prime rent EUR per m ²			Prime rent % change			Prime rent 2021 EUR per pro m ²	
	in 1,000 m ²	2011-2021 (%)	per inhabitant (m ²)	Q2 2021	Q2 2022	2023e	2011 to 2021	2016 to 2021	Q2/2021 to Q2/2022	B-1 locations	District locations
Berlin	7,300	24	2.0	280	270	255-265	20	-13	-3.6	125	47
Cologne	1,450	2	1.3	230	225	210-220	0	-10	-2.2	80	35
Düsseldorf	1,250	5	2.0	280	275	260-270	27	0	-1.8	80	46
Frankfurt	1,550	9	2.0	280	275	260-270	8	-8	-1.8	82	42
Hamburg	3,100	6	1.7	255	250	235-245	6	-12	-2.0	70	72
Munich	2,200	14	1.5	325	315	300-310	7	-9	-3.1	185	75
Stuttgart	1,150	18	1.8	215	205	190-200	-9	-18	-4.7	77	34
Top locations	18,000	14	1.8	273	265		12	-11	-2.9	109	52

Office space	Existing office space 2021			Prime rent EUR per m ²			Prime rent % change			Vacancy rate (%)		
	in 1,000 m ²	2011-2021 (%)	per office worker (m ²)	Q2 2021	Q2 2022	2023e	2011 to 2021	2016 to 2021	Q2/2021 to Q2/2022	Q2 2021	Q2 2022	2023e
Berlin	20,400	11	31	38.7	42.0	42.5-43.5	88	45	8.5	2.6	3.5	4-4.5
Cologne	7,840	5	29	24.5	26.0	26-27	25	19	6.1	3.2	2.8	3.2-3.5
Düsseldorf	7,730	5	35	26.5	27.5	28-29	21	8	3.8	7.1	7.7	8-8.5
Frankfurt	10,150	-1	32	41.0	44.0	44-45	30	21	7.3	7.4	8.1	8.5-8.9
Hamburg	13,940	5	30	31.0	32.5	33-34	36	23	4.8	3.8	3.8	4.2-4.5
Munich	14,260	5	30	39.5	42.5	43-44	41	20	7.6	3.5	3.9	4.2-4.7
Stuttgart	8,100	9	40	24.0	26.0	26-27	37	22	8.3	3.1	3.8	4.2-4.7
Top locations	82,400	6	32	33.9	36.3		45	26	7.1	4.1	4.5	

Housing stock	Growth from 2011 to 2021 (%)			Average initial rent EUR per m ²			Change in initial rent (%)			Rent 2021 EUR per m ²	
	Inhabitants	Households	Housing stock	Q2 2021	Q2 2022	2023e	2011 to 2021	2016 to 2021	Q2/2021 to Q2/2022	Maximum initial rent	Re-lets
Berlin	11	12	6	15.8	16.7	16.9-17.2	78	35	5.7	24.5	10.9
Cologne	6	9	5	13.8	14.3	14.5-14.7	33	17	3.6	20.5	12.1
Düsseldorf	5	6	6	13.4	13.8	14-14.3	26	8	3.0	21.0	11.6
Frankfurt	12	14	12	17.2	17.3	17.4-17.7	50	16	0.6	25.5	14.6
Hamburg	8	11	8	15.2	15.7	15.9-16.2	24	16	3.3	22.9	12.8
Munich	9	13	9	20.5	20.8	20.9-21.2	56	22	1.5	30.5	18.0
Stuttgart	6	7	5	16.6	16.9	17.1-17.3	73	29	1.8	22.0	14.8
Top locations	9	11	7	16.2	16.7		52	24	3.5	24.4	13.0

Source: bulwiengesa, Destatis, Scope, DZ BANK forecasts

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 rentals on 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.

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