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MAIN REGIONAL REAL ESTATE MARKETS IN GERMANY 2019

Office rents have yet to reach their peak – retail sector faces challenges

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PREFACE

Dear readers,

As a leading commercial real estate bank in Germany, we regularly analyse the markets we actively cover. Demand for commercial property is high, and its availability at German top locations, i.e. in the seven largest cities by population, is limited. This makes regional real estate markets all the more attractive for investors. To better assess opportunities and risks in these markets, we regularly publish a study analysing the main regional real estate markets for office and retail properties in twelve regional centres of Germany: Augsburg, Bremen, Darmstadt, Dresden, Essen, Hanover, Karlsruhe, Leipzig, Mannheim, Mainz, Münster and Nuremberg. The developments there are compared with the seven top locations.

As a whole, the two largest market segments – office and retail – continue to benefit from the positive economic environment in Germany. Still, growth prospects have diminished, which in turn should lead to the commercial real estate market slowing down somewhat, albeit remaining at an elevated level, in 2019. As to office space, buoyant demand combined with scarcity once more resulted in top rents rising at almost all regional locations analysed for this study during the past year. In retail, however, top rents at regional centres were slightly down, not least due to the rising importance of e-commerce. While the regional centres analysed for this study offer lower top rents than the metropolises, they also offer economic potential, providing real estate investors with manifold opportunities. This becomes evident, for instance, when looking at the initial yield from rents: yields decreased at all regional centres in 2018, but still did not fall below the average of the seven metropolises.

This tenth market report on „Regional Real Estate Markets“ supplements „The German Real Estate Market“ – our series of specialist publications published in the autumn of each year. In addition, we analyse the commercial real estate markets in individual German federal states: the regional report for North Rhine-Westphalia is scheduled for May 2019, with the report for North Germany set to follow in July. An overview of DZ HYP's real estate market reports to date is available on our website <https://www.dzhyp.de/en/about-us/market-research/>

Yours sincerely,

DZ HYP

March 2019

OFFICE SPACE IN SHORT SUPPLY, RETAIL RENTS FALLING

Commercial properties are very popular with investors, and investment volume reached a new record of just over EUR 60bn last year. Although initial rental yields have continued to fall, they are still significantly higher than the yields of solid bonds. The two largest market segments are office and retail. However, a shift has taken place in recent years. High demand for office space has increased the proportion of office properties relative to investment volume to around 45 per cent. Conversely, strong growth in online shopping is braking demand for retail space and properties, which now account for only one fifth of investment volume.

Momentum in the German economy slowed visibly over the course of last year. Growth prospects have also deteriorated. Elements of uncertainty, often of a political nature, have also intensified. Below the line, the commercial property market is also therefore likely to gradually cool. However, this should happen at a high level in the absence of any sign of recession. And the labour market is likely to remain robust given the shortage of skilled workers. These conditions are not making it any easier for investors to decide which option to take. Commercial property prices are often extremely high, and are very unlikely to rise any further. Initial rental yields seem to have bottomed out. There is also little potential to boost low rental yields for retail properties by raising rents. The picture is more positive for office properties thanks to employment growth and a sharp reduction in the number of vacant properties. However, the high rent growth of recent years is very unlikely to be matched.

The major cities, with their high economic power and large and liquid property markets, are still the main focus of the commercial property market. In Germany, the **top locations** include the seven most densely populated cities. However, **regional centres**, or secondary locations, also have potential. For example, they have the advantage of significantly higher initial rental yields. Market information available on them is nevertheless sparse. Our market report on **regional property centres** - now in its tenth edition - aims to address this by assessing the risks and opportunities relative to the top locations. As on previous occasions, in addition to **12 regional centres throughout Germany**, the **7 top locations** are also included for purposes of comparison.

OVERVIEW OF LOCATIONS

12 regional centres (Index: Regional 12)				7 top locations (Index: Top 7)	
City	Federal state	City	Federal State	City	Federal State
Augsburg	Bavaria	Leipzig	Saxony	Berlin	Berlin
Bremen	Bremen	Dresden	Saxony	Düsseldorf	North Rhine-Westphalia
Darmstadt	Hesse	Mainz	Rhineland-Palatinate	Frankfurt	Hesse
Essen	North Rhine-Westphalia	Mannheim	Baden-Württemb.	Hamburg	Hamburg
Hannover	Lower Saxony	Münster	North Rhine-Westphalia	Cologne	North Rhine-Westphalia
Karlsruhe	Baden-Württemb.	Nuremberg	Bavaria	Munich	Bavaria
				Stuttgart	Baden-Württemb.

The following chapter analyses the office markets of the 19 locations included. We then provide a market overview of the retail sector from page 12. Starting on page 21 the individual locations are discussed in alphabetical order. The tables on pages 71 to 73 summarise the most important market data.

Investor interest in commercial properties led to record investment volume in 2018

More difficult climate for commercial property

10th edition of "Regional property centres" provides up-to-date analysis of office and retail market segments in 12 regional centres and 7 top locations

Office properties: supply shortage has increased dramatically

The shortage of available office space in large German office locations intensified further last year. As in the housing market, the volume of new office space has been lagging behind demand for some considerable time. The situation is being aggravated by the conversion into housing of many office properties which were often vacant until a few years ago. The picture looks very different today. Demand for office space remains high. As a result of the positive economic trend to date, many companies have expanded their workforces or opened new offices. However, start ups, for example in e-commerce, and fintechs, also need office space.

Below the line, lively demand for space and at best a moderate expansion of existing space, has led to a continuing reduction in vacant office space. Vacancy rates of less than 3 per cent are now no longer unusual, particularly since a large proportion of the vacant property stock is no longer contemporary. As expected, this is leading to a visible increase in office rents. The supply of flexible, rentable office properties – coworking space – is also growing rapidly. Suppliers of this space, such as Design Offices or WeWork, are benefiting because companies are finding it increasingly difficult to rent attractive office space in the short term. The shortage of available space means that large rental contracts increasingly relate to project development.

The supply shortage will continue to impact on the office market this year. Nor will the accelerated pace of construction of new office space alleviate the supply shortage in the short term. However, previous market conditions will not persist in 2019. The many political crises, a deceleration of economic growth, and greater uncertainty about the future economic trend are likely to make companies more cautious. This could make companies more reluctant to hire new staff, thus dampening demand for office space. The extent to which this happens remains to be seen.

Market conditions for the office market

In the previous issue of this market report, assessments of the German economy were still much more positive. A year ago we predicted macroeconomic growth of 2.2 per cent in 2018. The forecast for 2019 was only slightly lower at 2.0 per cent. However, the economic climate deteriorated visibly over the year and GDP is likely to have grown by only 1.4 per cent in 2018. The growth outlook for this year has more than halved compared to the previous year's forecast to 1.0 per cent. Contributory factors are weaker exports which have been hit by the trade dispute between China and the United States, diesel scandals in the automotive industry, and weaker private consumption.

This slowdown has not yet been reflected in the labour market. The unemployment rate of 5 per cent is at its lowest level for decades. In the southern German federal states, there is virtually full employment. Unemployment is particularly low in Bavaria (2.7 per cent) and Baden-Württemberg (3.0 per cent) (December 2018). Levels are also very low in Hesse and Rheinland-Palatinate at just over 4 per cent. The slightly lower growth in the number of people in work in 2018 is probably attributable to the increasing shortage of skilled workers, since the number of job vacancies has climbed to a new record of around 800,000.

Space supply now too scarce in many office locations

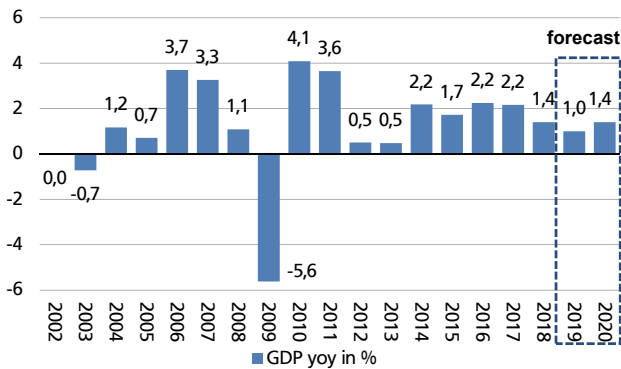
Providers of coworking space benefit from strained market conditions

Economy cooling – office demand likely to weaken in 2019

Economic climate deteriorated over 2018

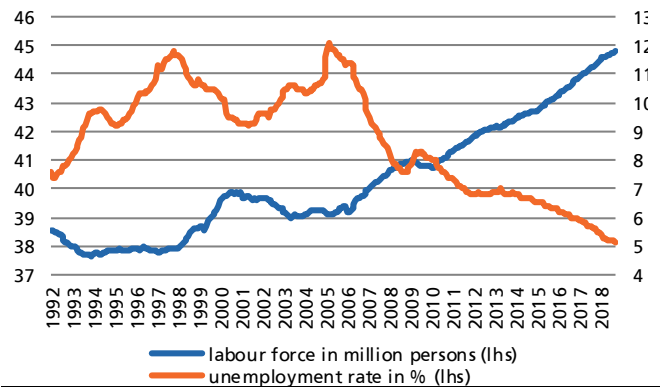
No sign of labour market slowing as yet

ECONOMIC GROWTH IN GERMANY SLOWING



Source: DZ BANK Research

LABOUR MARKET STILL BUOYANT IN 2018

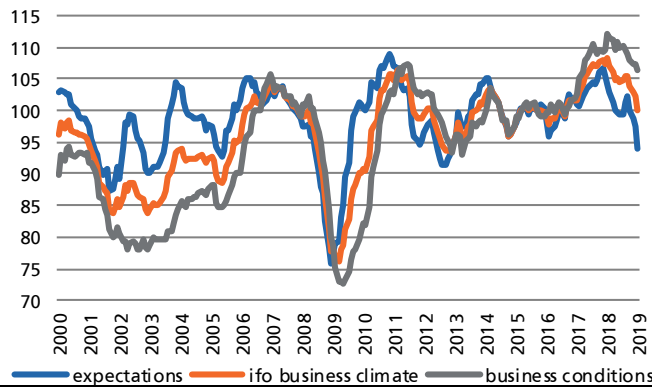


Source: German Federal Employment Agency, Bundesbank

The deterioration in sentiment at companies and among economic experts is clearly reflected in the Ifo Institute's business climate index and the ZEW's economic barometer. Monthly survey readings have fallen sharply from their still optimistic levels of the beginning of last year. While expectations in particular declined significantly in the first half of 2018, assessments of current business and economic conditions also weakened considerably in the second half. The weaker assessment of business conditions and expectations will probably also leave its mark on demand for office space. Companies will think seriously before signing expensive, long-term rental agreements.

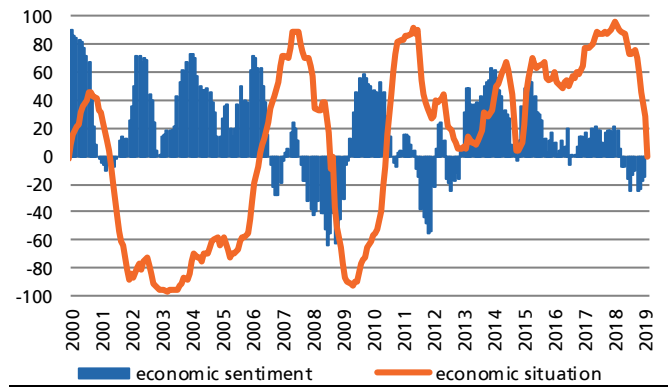
Ifo Institute and ZEW surveys reflect growing pessimism

IFO INSTITUTE BUSINESS CLIMATE SURVEY HAS FALLEN SHARPLY SINCE 2018



Source: Ifo Institut

ASSESSMENTS OF ECONOMIC CONDITIONS AND PROSPECTS HAVE DETERIORATED



Source: ZEW

Demand for office space is likely to weaken irrespective of the economic prospects. Baby boomers born in the 1950s and 1960s when birth rates were high, with well above 1 million births in some years, will start to retire from around 2020. However, the age groups entering the labour market at that time will be much smaller with birth rates of around 700,000 births per year. Even a higher retirement age and a higher employment rate will not prevent more people from leaving the labour market than joining it over a long period. The gap is fairly unlikely to be closed by immigration.

Demand for office space likely to fall when baby boomers retire

Demand for office space could also fall if capacity utilisation of existing space improves. Today, many desks in offices are unoccupied because staff are on business trips, working from home, on annual leave, ill, or working part-time. Some companies are already therefore using organisa-

Demand for office space could fall if existing space is used more efficiently

tional models where employees no longer have their own designated workspace, but are allocated an available desk when they start work. Flexible, rented coworking space, with various providers crowding into the office market, represents a move in this direction. However, companies could also improve capacity utilisation by renting out unused office space temporarily to external users or freelancers.

Office: market trend in the locations reviewed

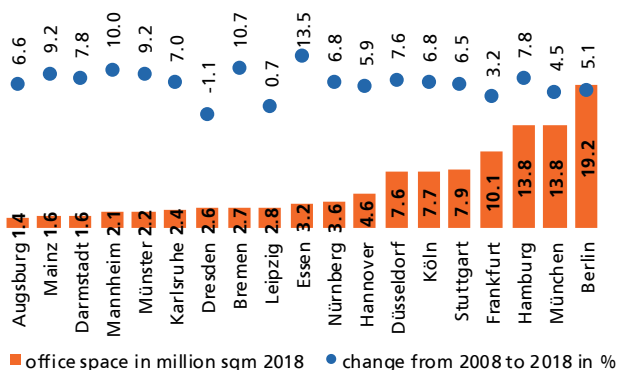
The 19 locations analysed in this market report have joint office space of nearly 111 million sqm. This represents about 30 per cent of approximately 350 million sqm of rentable office space in Germany. On average, the individual locations covered have available office space of almost 6 million sqm. However, no location actually has this amount of free space. The figure is lower for the regional centres, ranging from 1.4 million sqm in Augsburg to 4.6 million sqm in Hannover. Conversely, the seven top locations invariably have more office space. Levels range from 7.6 million sqm in Düsseldorf to 19.2 million sqm in Berlin.

Growth in office space has been moderate in the last ten years despite high demand and a decline in vacant properties. Cumulative office space in the 12 regional centres has increased by 7 per cent to 31 million sqm in this period. The top locations have grown slightly more slowly recently, by nearly 6 per cent to 80 million sqm. The highest growth has been in Mannheim (10 per cent), Bremen (11 per cent) and Essen (more than 13 per cent). Conversely, the volume of office space in Dresden has contracted slightly and remains largely unchanged in Leipzig. Among the top locations, office space in Düsseldorf grew at the highest rate of nearly 8 per cent between 2008 and 2018. The weakest growth rate was in Frankfurt (3 per cent).

Market report covers around 30 per cent of German office space

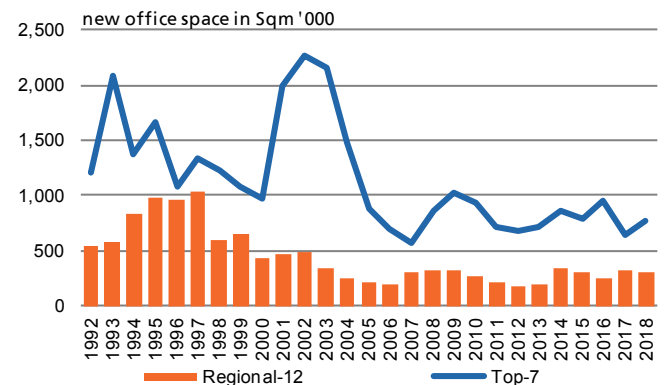
From 2008 to 2018, office space in regional centres grew slightly more strongly in regional centres than in top locations

REGIONAL OFFICE MARKETS AND TOP LOCATIONS, SORTED BY AVAILABLE SPACE



Source: bulwiengesa

DESPITE AN INCREASING SHORTAGE OF OFFICE SPACE, NO SIGN OF VISIBLE GROWTH IN NEW SPACE



Source: bulwiengesa

For a period of about 20 years since the beginning of the 1990s, growth in available office space has been contracting slightly. In the regional centres, office space grew strongly as a result of the post-reunification construction boom. This mainly affected east German locations such as Dresden and Leipzig. Conversely, construction boomed in the top locations after the millennium as a result of dot-com hype. While office space in the 19 locations increased by at least 1 per cent annually up to the beginning of the 2000s, since 2010 it has grown by an average of only half a per cent each year. The growth rate is currently slightly stronger again. Growth in office space is likely to pick up again slightly from 2019 due to a larger number of project developments.

Since 2010, office space in the 19 locations has grown by only half a per cent each year

New build activity has mainly picked up in response to high demand for space as the number of office jobs has increased sharply. This is leading to a sharp decline in the volume of vacant office

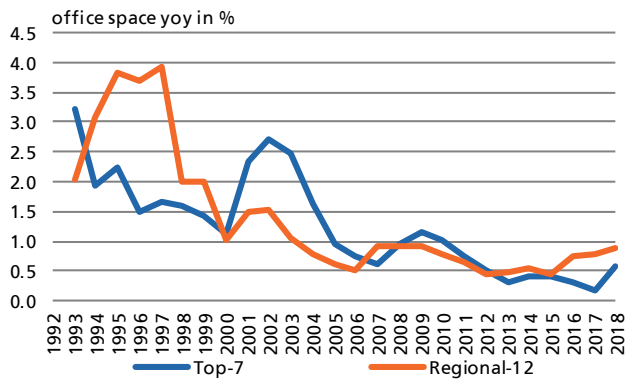
Despite growth in new build activity, no sign of excess space

space and growth in office rents, with a positive impact on the profitability of construction projects. In future years, slightly stronger growth in the supply of space will thus coincide with the abovementioned economic slowdown. However, there are no signs of excess supply in the office market for three reasons.

Firstly, the supply of space is too sparse in many places, and increasing space reserves would therefore be desirable. Secondly, the population is still growing. And thirdly, previously high growth rates cannot be expected to be replicated due to restrictions on new construction. Thanks to redevelopment, sites for commercial construction are admittedly not in short supply everywhere. However, even where this is the case, the high level of capacity utilisation in the construction industry means that the available supply is not excessive.

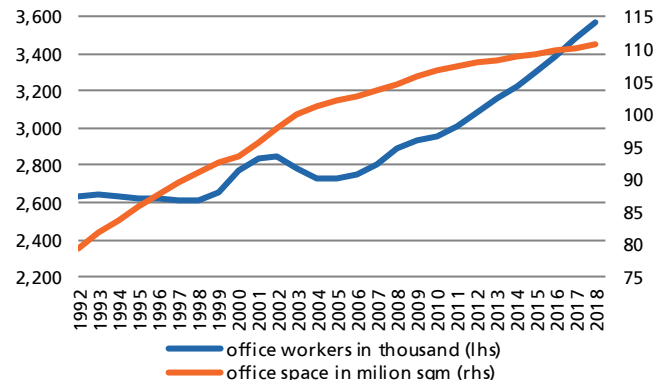
High construction volume unlikely to be achieved given the high level of capacity utilisation in the construction sector

OFFICE SPACE IN THE LOCATIONS HAS ONLY GROWN BY ABOUT HALF A PER CENT P.A. SINCE 2010



Source: bulwiengesa

TOP LOCATIONS AND REGIONAL CENTRES: OFFICE EMPLOYMENT GROWING MUCH FASTER THAN OFFICE SPACE



Source: bulwiengesa, Scope

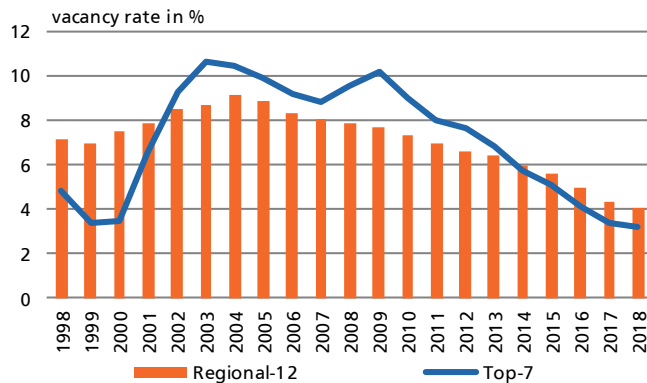
Diverging trends in employment growth and new office construction have led to a steady decline in the number of vacant properties in the last ten years or so. During this period, the number of office jobs in the 19 locations has increased by around 680,000. With an average space requirement of 25 sqm per employee, this corresponds to total demand for office space of around 17 million sqm. In fact, cumulative office space has only increased by just over 6 million sqm.

Demand for space due to job creation clearly exceeds expansion of existing space

For quite a while it was possible to meet growing demand for space from the still large volume of vacant properties; as a result, the vacancy rate then fell to an average of 3.4 per cent in the top locations and on average 4.3 per cent in the regional centres in 2018. The corresponding figures in 2008 were 8.9 and 8.0 per cent. In three locations – Berlin, Munich and Münster – the vacancy rate even fell to below 2 per cent. Eight more locations also have virtually no space reserves, with vacancy rates of between 2 and 4 per cent. Because a large proportion of the vacant properties are also out-of-date and no longer marketable, and are spread over all the locations, it is becoming increasingly difficult to rent large interconnected space.

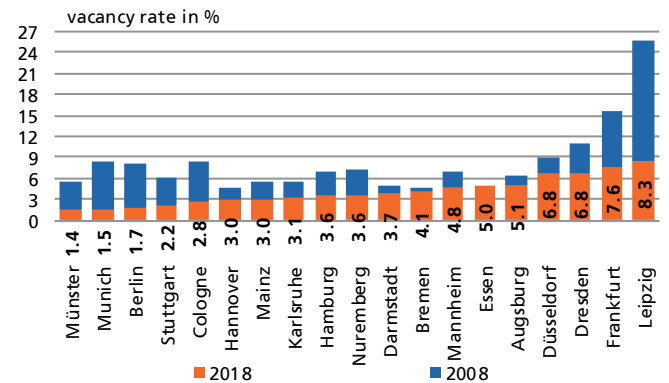
For some time, vacant properties covered growing demand for office space

LARGE VOLUME OF VACANT OFFICE SPACE ONLY A FEW YEARS AGO HAS CONTRACTED SHARPLY



Source: bulwiengesa

SOME LOCATIONS NOW HAVE ONLY MINIMAL SPACE RESERVES



Source: bulwiengesa NB: figures correspond to vacancy rate in 2018

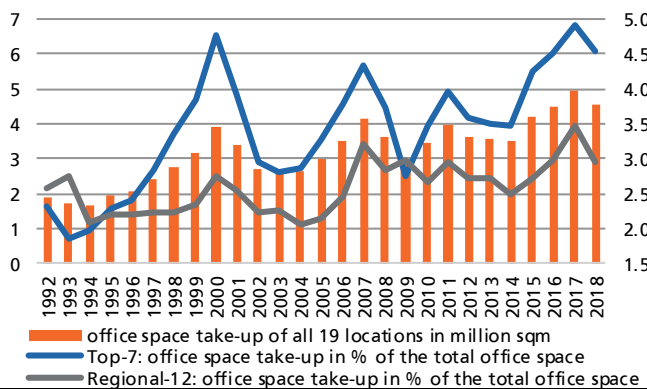
The trend in office take-up - which fell to 4.5 million sqm in 2018 from nearly 5 million sqm in the previous year - also reflects the shortage of available office space. However, this was still undoubtedly a high volume, highlighting the robust demand for space. This was second highest take-up achieved so far in the locations reviewed after the record level of the previous year. The fact that volume was so high despite the space shortage is attributable to the large proportion of rental agreements in project developments. In many places, most large-volume rental agreements therefore relate to newly built properties.

Despite space shortage, high office take-up achieved

The large, liquid office markets in the top locations generally show higher levels of office market activity than the regional centres which are mainly driven by local demand. This was also the case in 2018. Take-up of 4.5 per cent in the top locations was significantly higher relative to available office space than in the regional centres (2.9 per cent). The wide divergence between the regional centres is striking. While in Augsburg and Münster less than 2 per cent of office space was taken up by users, the figure was nearly 5 per cent in Leipzig. In most of the top locations, between around 4 per cent (Cologne) and almost 6 per cent (Frankfurt) was transferred to new tenants or owner-occupiers. Only Stuttgart shows a much lower figure (2.7 per cent).

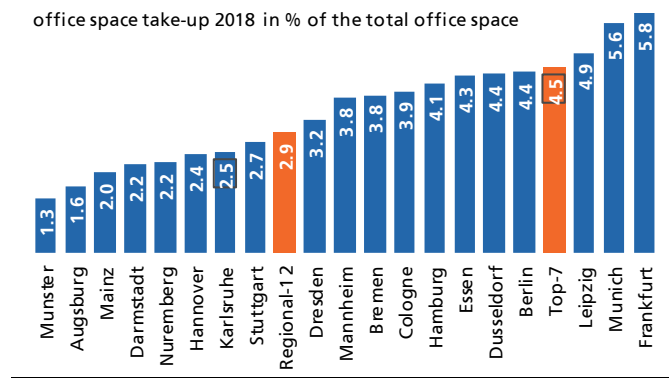
Office market activity in regional centres diverges sharply

DESPITE SUPPLY SHORTAGE, TAKE-UP STILL HIGH IN 2018



Source: bulwiengesa

SOME REGIONAL CENTRES ALSO SHOW LIVELY SPACE TAKE-UP

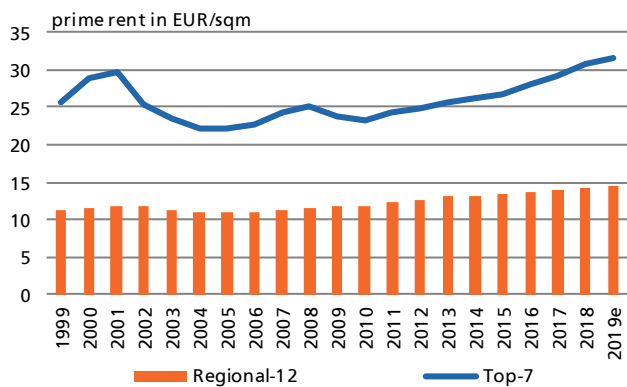


Source: bulwiengesa

High office demand as a result of the prolonged upturn combined with a major shortage of office space has driven prime office rents up sharply in recent years, a trend which persisted in 2018. Prime rents in regional centres thus increased by an average of 2.7 per cent to EUR 14.3 per sqm. The ten-year growth rate of 23 per cent was the same as in the top locations. However, compared to the previous year, rent growth there was twice as high in 2018 at 5.4 per cent. Average prime rents in the seven top locations thus increased to nearly EUR 31 per sqm last year.

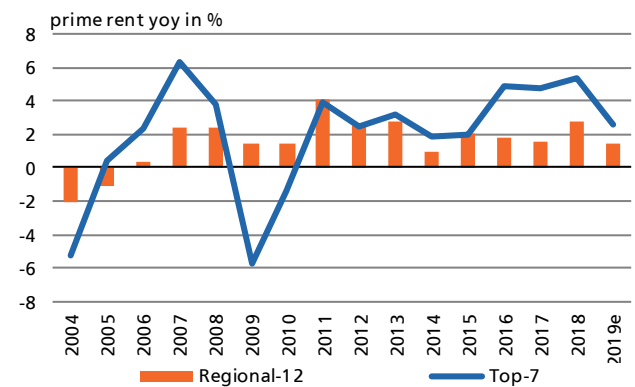
Prime rents in top locations twice as high in 2018 as in regional centres

PRIME RENTS IN TOP LOCATIONS NOW CLOSE TO PEAK LEVELS OF 2001



Source: bulwiengesa

PRIME OFFICE RENTS IN REGIONAL CENTRES MAY RECORD TWELFTH SUCCESSIVE YEAR OF GROWTH

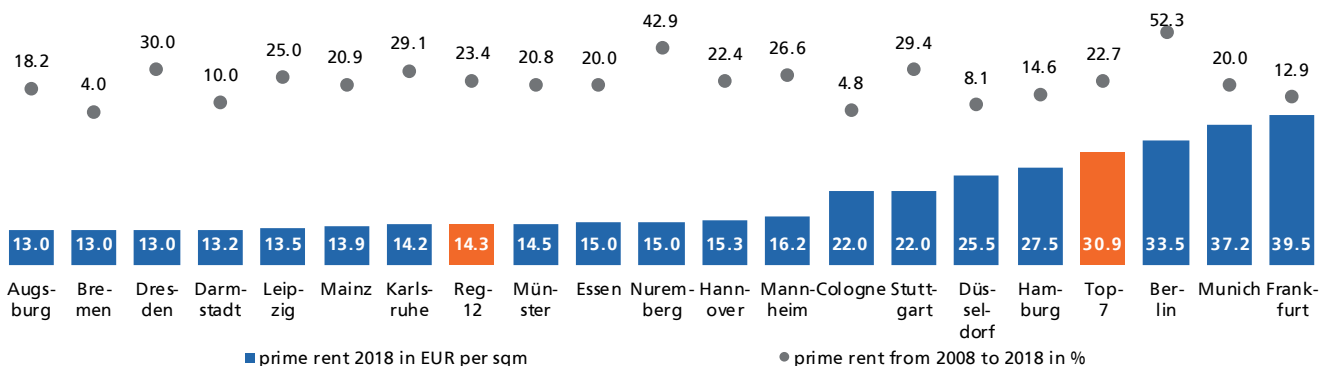


Source: bulwiengesa

Berlin rents rose particularly steeply by around 12 per cent last year. Within ten years the figure has increased by more than 50 per cent to recently EUR 33.50 per sqm. The capital city has thus become the third most expensive office location after Frankfurt (EUR 39.50 per sqm) and Munich (EUR 37.20 per sqm). Among the regional centres, Nuremberg reported the strongest rent growth of more than 40 per cent over ten years to EUR 15 per sqm. This trend continued last year with rent growth of 5.6 per cent. Karlsruhe was the only regional centre which reported higher rent growth of 6 per cent. Nuremberg now equals Essen in terms of rent levels. Hannover is slightly more expensive at EUR 15.30 per sqm, as is Mannheim with EUR 16.20 per sqm.

Berlin and Nuremberg impressive with high ten-year growth in prime rents

PRIME OFFICE RENTS: BERLIN NOW THE THIRD MOST EXPENSIVE OFFICE LOCATION WITH THE STRONGEST RENT GROWTH IN 10 YEARS



Source: bulwiengesa

However, below the line, prime rents in the regional centres show no major divergence. The gap between Mannheim, and Augsburg, Bremen and Dresden – the three cheapest office locations – is only slightly more than EUR 3 per sqm. Conversely, the divergence between the top locations is much wider. Frankfurt is nearly twice as expensive as Cologne and Stuttgart - the

Prime rents in regional centres more homogenous than in top locations

cheapest of the top locations with prime rents of EUR 22 per sqm. However, the divergence from Mannheim as the most expensive regional centre remains fairly wide.

Continuing low capital market yields have made commercial properties an attractive alternative for investors for some years. Demand for office properties is particularly strong. Around 45 per cent of total investment in commercial property flowed into this asset class in 2018, taking it to a new record volume of just over EUR 60bn. As a result of high demand and a shortage of attractive properties, initial rental yields fell again slightly last year.

In both the top locations and the regional centres, the initial rental yield declined by around 20 basis points respectively in 2018. An average figure of 4.3 per cent was still achieved in the 12 regional centres. The initial rental yield in the top locations was much lower at 3.0 per cent. The yield divergence of around 130 basis points since 2016 is therefore stable. Previously – from 2008 to 2015 – the yield divergence was slightly smaller at an average of 110 basis points.

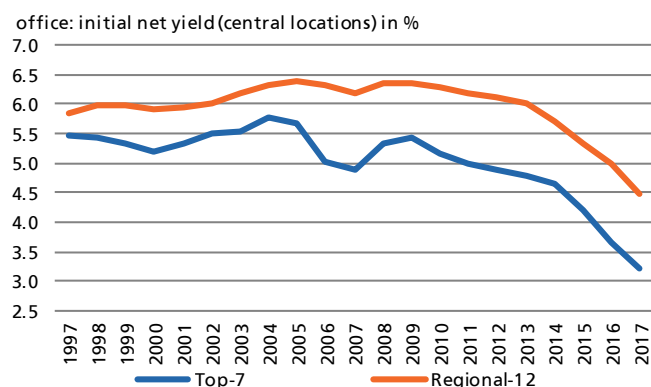
The slight widening of the yield divergence shows that the advantages of a higher yield only go so far for the regional centres. Otherwise, the spread would have fallen. Continuing high demand for properties in top locations highlights the fact that investors are not only focusing on yield. Other factors are market size and liquidity. Where large investment sums are involved - for example in the triple digit Euro millions – top locations are virtually the only option. One disadvantage of the regional centres is low office take-up in some instances. If the anchor tenant in a large office property is lost, it can take years for the vacant space to be fully re-let.

Office properties very popular with investors in 2018

Initial rental yield fell by around 20 basis points in 2018

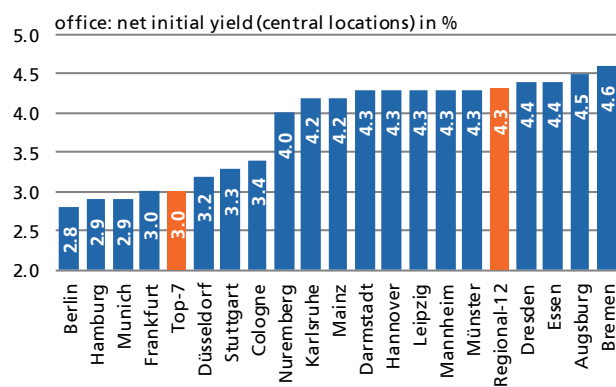
Regional centres benefit from higher yields, top locations from market size and liquidity

ALREADY LOW INITIAL RENTAL YIELD FOR OFFICE PROPERTIES FALLS SHARPLY AGAIN



Source: bulwiengesa

YIELD RANGE AROUND 2 PERCENTAGE POINTS, SIMILAR TO RETAIL



Source: bulwiengesa

Summary of office market and forecast

Office markets in many locations are increasingly strained as a result of the growing supply shortage. Companies and other organisations found it virtually impossible to rent office space for their employees last year, particularly if the space was needed quickly. There is virtually no more large interconnecting space with contemporary features available in good locations. The supply shortage is particularly acute in Berlin, Munich, Münster and Stuttgart where vacancy rates are 2 per cent or less. The growth in the number of project developments is therefore particularly positive. However, the disadvantage of rentals in new-build projects is that it takes several years before the space is ready for occupancy.

Conversely, landlords and project developers have little cause for complaint. Potential tenants and investors are queuing up despite rising prices and rents. While initial rental yields have fallen further from their already low levels, prime rents have increased sharply. Rent growth of nearly 3 per cent compared to 2017 in the regional centres, and more than 5 per cent in top locations

Office markets in many locations increasingly strained due to lack of space

Landlords benefited from strong rent growth in 2018

has reached levels rarely exceeded in the past. Cumulative office take-up of 4.5 million sqm or around 4 per cent of available space in the 19 locations is impressive.

Conversely, future prospects look fairly mixed. Although there is no sign of a recession so far, conditions are becoming more difficult due to the deterioration in the economic climate and various political uncertainties. Companies are likely to act more cautiously, potentially driving down demand in the office market. However, there is no reason for gloom in the property market as yet. Because space is in such short supply, prime rents can be expected to rise despite moderate growth in space. However, levels are likely to slow significantly from the rapid pace of the previous year. We expect prime rents in the top locations to increase by 2.5 per cent this year. The corresponding figure in the regional centres is likely to be one percentage point lower. The vacancy level could decline slightly overall.

Prime rents will rise further in 2019, but probably more slowly

OFFICE – FORECASTS FOR PRIME RENTS AND VACANCIES

	2017	2018	2019e
12 regional centres			
Prime rents in EUR/m ² (vs. previous year in %)	13.9 (+1.6)	14.3 (+2.7)	14.5 (+1.5)
Vacancy rate in % (vs. previous year in % points)	4.9 (-0.6)	4.3 (-0.6)	4.1 (-0.2)
7 top locations			
Prime rents in EUR/m ² (vs. previous year in %)	29.3 (+4.7)	30.9 (+5.4)	31.7 (+2.5)
Vacancy rate in % (vs. previous year in % points)	4.1 (-1.0)	3.4 (-0.7)	3.2 (-0.2)

Source: bulwiengesa, DZ BANK Research forecast all averages are space-weighted

Prime rents represent 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.

Retail properties: prime rents fell in some locations in 2018

Conditions in the retail sector are difficult despite the robust economic climate to date. The completion last year of the merger of the two department store chains Karstadt and Kaufhof is proof of this. The cumulative sales of the new "retail behemoth" amount to just under EUR 5bn, or only about 1 per cent of retail sales, highlighting the diminishing importance of the department store as a business model. Further proof is provided by prime high street rents, which fell in quite a few shopping locations in 2018. The main reason for both trends is the strengthening headwind from e-commerce for "bricks and mortar" store sales.

However, not everything is rosy for online retail either. Fashion business in particular is unsatisfactory. Traditional fashion chains such as Adler, Esprit, H&M, and Gerry Weber – which filed for insolvency at the end of January – have been feeling the pinch for some time. However, Zalando – the internet retailer long accustomed to success – also now faces the spectre of significantly weakened sales growth. The weaker figures caused its share price to halve between August and December. For, despite strong income growth, figures from GfK show that Germans spent about 2 per cent less on fashion in 2018 than in the previous year.

Business is unlikely to be any better this year for high street retailers and shopping centres. True, labour market conditions remain very good. However, the engine of economic growth has stalled. And many employees in heavily export-driven companies are likely to be worried about job security. The city centre ban on diesel vehicles is not very helpful either since it prevents some customers from driving into city centres.

Market conditions for retail sector

The upturn in Germany is slowing visibly. After four years when macroeconomic output grew by around 2 per cent, the pace slowed to 1.4 per cent last year. The figure is likely to weaken further in 2019 to around 1 per cent. Conditions are being aggravated by the many political crises. However, consumer confidence remains high despite falling slightly from its peak level of 2017/18. The increasing tendency for private households to save is also a contributory factor in weaker consumer demand. Despite continuing low interest rates, the savings ratio has increased again to above 10 per cent for the first time since 2010.

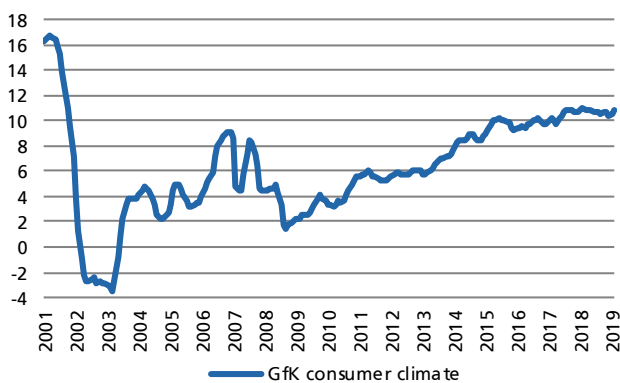
Stronger headwind for retail sector

Online retail also hit by weak fashion business

Gloomier economic prospects likely to have an impact this year

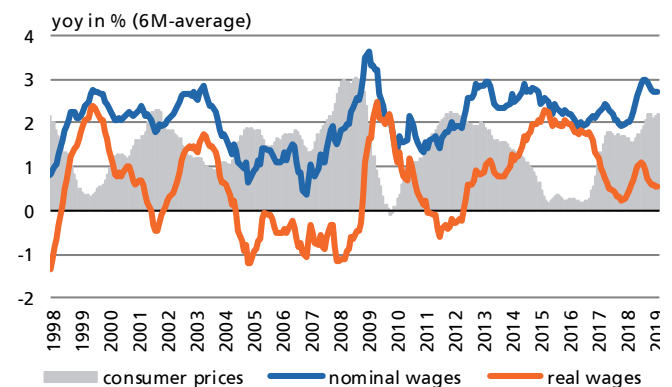
Upturn slowing, economic uncertainty growing

THE CONSUMER CLIMATE REMAINS AT A HIGH LEVEL



Source: GfK

STRONG GROWTH IN NOMINAL WAGES BRAKED IN REAL TERMS BY HIGHER INFLATION



Source: Federal Statistical Office of Germany, Thomson Reuters

Conditions are favourable for high levels of consumer spending by households. The number of people in work has been growing by more than half a million per year for a long time. Some 45 million people were active recently in the German labour market. On the other hand, unemployment has fallen to 5 per cent, its lowest level for decades. In this climate, the unions have

Conditions favour consumption: incomes and pensions increased again sharply in 2018

been able to push through strong wage growth. Pensions also increased visibly by more than 3 per cent in 2018. However, relatively high nominal income growth is being hampered by a higher inflation rate which has reduced real wage growth to less than 1 per cent compared to the previous year.

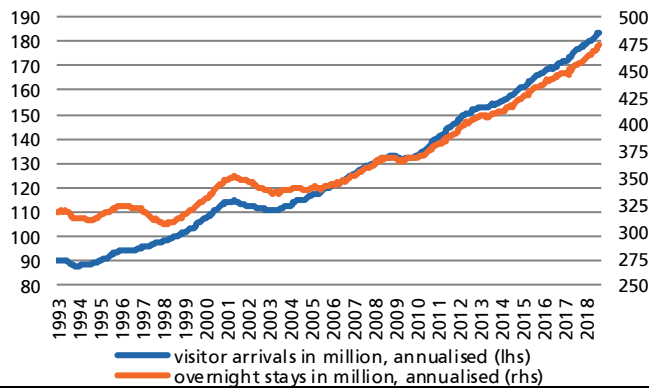
Based on figures from the retail body HDE, retail sales in Germany increased by only 2 per cent to around EUR 524bn in 2018 despite positive wage growth. Growth is therefore visibly lower than in the three previous years, when an annual rate of increase of nearly 4 per cent was reported. In addition to the gloomier economic outlook, a certain level of saturation could also be contributing to a slowing of household spending given the prolonged upturn in consumption. Retail sales are thus currently nearly EUR 100bn higher than in the period from 2000 to 2010 when they stagnated.

The uptick in inflation has highlighted the weakness in the retail sector even more. This is particularly true for in-store retail, since a significant proportion of sales growth is attributable to the annual growth of around 10 per cent in online shopping. Just over EUR 53bn – more than 10 per cent of retail sales – now relates to e-commerce. This means that nominal annual growth in bricks and mortar retail sales has fallen to just over 1 per cent to EUR 470bn. After inflation, which increased to nearly 2 per cent in 2018, real in-store retail sales fell slightly last year.

Retail growth slows to 2 per cent

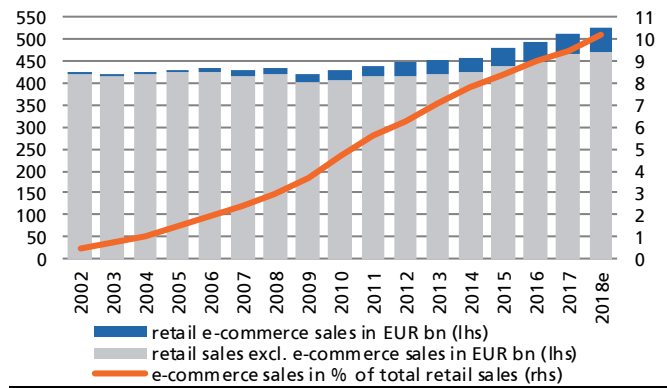
In real terms, in-store retail sales fell slightly in 2018

TOURISM STILL GROWING STRONGLY – AND SUPPORTING CITY CENTRE RETAIL SALES



Source: Federal Statistical Office of Germany

VIRTUALLY NO GROWTH FROM IN-STORE RETAIL SALES



Source: HDE

The results are likely to be even worse for city centre retail. For, in addition to online shopping, city centres are having to share customers with popular outlet centres and increasingly successful out-of-town agglomerations of specialist retailers. Weak textile business is also impacting on one of the most important products in city centre retailing. The situation is comparatively better for cities where declining sales can be offset by growth in the population and the number of tourists.

City centre retail sales shared with outlet centres and specialist stores

Although people are shopping less there, a stroll in the city centre remains a popular leisure activity. Customers like to visit shopping streets and shopping centres, many of which have been, or are in the process of being updated by project development and urban initiatives. The wider range of bars and restaurants is also enhancing the quality of the shopping experience. Retailers are reacting to weaker sales consistently with lower demand for sales space.

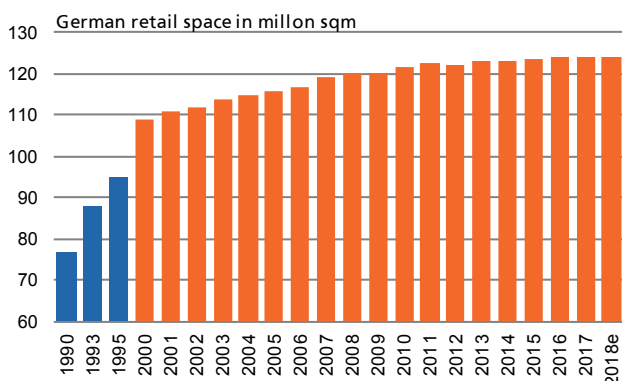
Browsing not buying: a stroll in the city centre is still popular

However, will not necessarily lead to a steep decline in demand for city centre space. The best locations are not after all attractive only to classic retailers. While demand from them for space is weakening, other potential tenants are being increasingly drawn to high street locations. These include supermarkets and drugstores, restaurants - particularly chains, and fitness studios. Online

City centre space likely to remain in demand

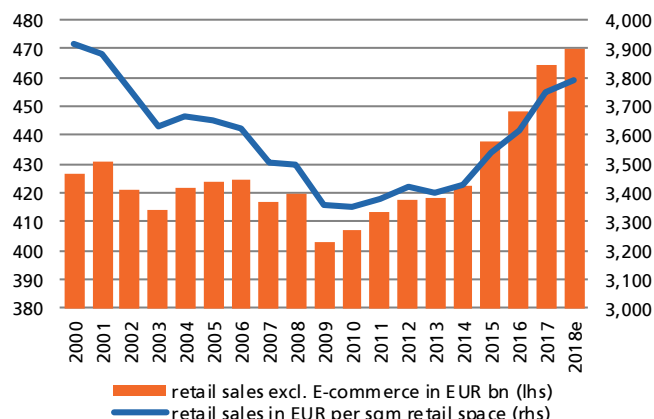
concepts such as “internet opticians” Mister Spex and Zalando are also creating demand for sales space to enable them to also reach customers via sales channels other than their online shops. However, city centre shopping space can also be used for offices, for example by providers of coworking space. Plus points are easy accessibility and attractive surroundings.

GROWTH IN SALES SPACE IN GERMANY HAS COME TO A HALT



Source: HDE, DZ BANK Research

SPACE PRODUCTIVITY INCREASING FURTHER, BUT STILL LAGS BEHIND MILLENNIUM LEVEL



Source: HDE, DZ BANK Research

Online shopping and slackening economic growth are not the only challenges facing bricks and mortar retailers. As property prices increase rapidly and residential rents pick up sharply, a larger proportion of income is used to cover higher housing costs. The proportion of income available for other types of consumer spending is correspondingly falling. In the years ahead, demographics could also have a negative impact. When baby boomers reach retirement age the number of pensioners will increase, while the working population will decrease. Since incomes are lower in retirement, financial scope for shopping is likely to be reduced. We also live in an increasingly ageing society. This could lead to altered shopping patterns as a result of declining mobility or less interest in shopping trips.

Rising housing costs and ageing population could hamper retail

Given the generally fairly minimal growth prospects for bricks and mortar retail, the fact that sales space in Germany is not increasing any further is good news. Growth has already been slowing visibly for some time, with space stagnating at around 124 million sqm since 2015. Because in-store sales have also increased, theoretical sales per sqm have increased to about EUR 3,800. In 2010 the figure was less than EUR 3,400 per sqm. However, even after this increase, take-up still lags behind the level at the millennium. Since these are nominal figures, the real divergence is much larger. For consumer prices have increased by about 30 per cent since then, and in real terms, current sales productivity is not even 70 per cent of its level at that time.

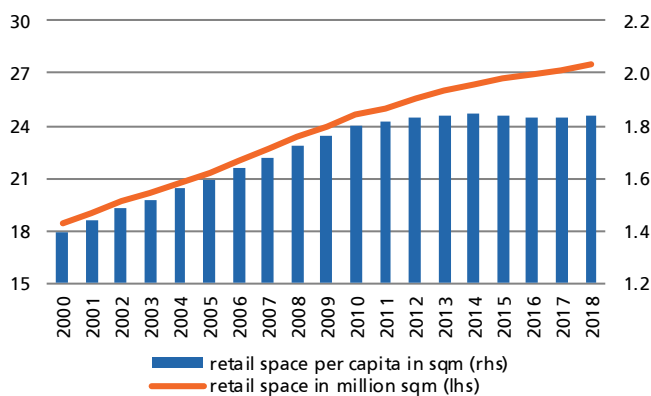
Sales productivity has recovered considerably

Retail: market trend in the locations analysed

While retail sales space has stopped growing in Germany as a whole, in the 19 locations analysed it has until recently continued to increase to more than 27 million sqm – albeit at a slackening pace. This corresponds to roughly a fifth of total sales space in Germany. However, thanks to population growth in the major cities, sales space per capita has not increased any further since 2012. The figure has on average stagnated at just over 1.8 sqm in the interim in the locations analysed. Since the millennium, cumulative sales space has grown by 50 per cent. Conversely, sales space per capita has increased by “only” slightly more than 30 per cent. However, at that time, online retail was still not a factor, which makes the growth in space more critical.

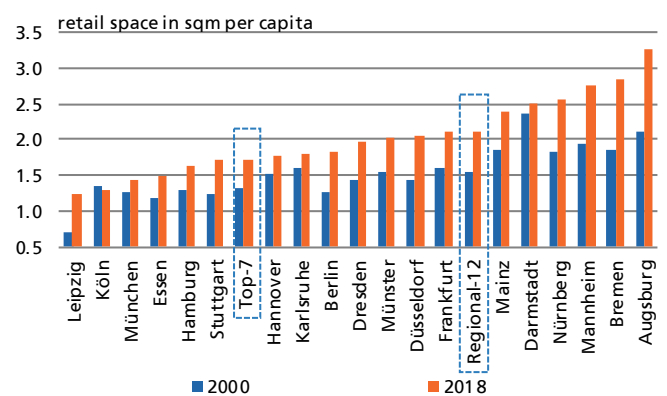
Sales space per capita up by 30 per cent since millennium

19 LOCATIONS: THANKS TO DEMOGRAPHIC GROWTH, SALES SPACE PER CAPITA HAS STOPPED RISING



Source: Scope

SALES SPACE PER CAPITA HAS PICKED UP VISIBLY IN MANY LOCATIONS SINCE THE MILLENNIUM

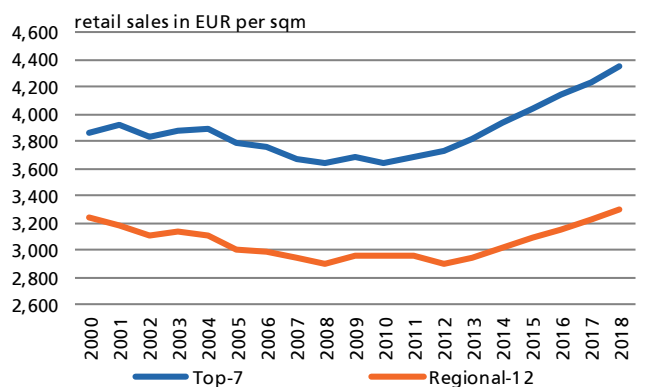


Source: Scope

In three cities – Berlin, Hannover and Karlsruhe – sales space per capita represents the average of 1.8 sqm. The corresponding average per capita figure in the top locations is slightly lower, and slightly higher in the regional centres. Overall, the relative range of available space is however very heterogeneous. Cologne and Leipzig have only slightly more than 1 sqm of sales space per capita. For frontrunner Augsburg

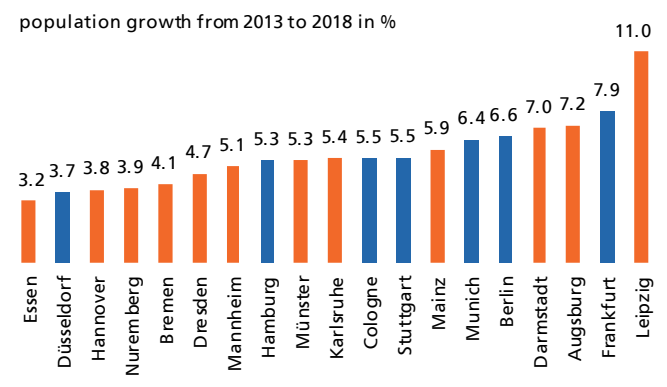
Locations show major differences in sales space per capita

PARTICULARLY POSITIVE TREND IN SALES PRODUCTIVITY IN TOP LOCATIONS



Source: Scope

DEMOGRAPHIC GROWTH LEADS TO GROWING SHOPPING POTENTIAL IN ALL LOCATIONS.



Source: Scope

the figure is just over 3 sqm, closely followed by Bremen and Mannheim, at less than 3 sqm per capita. There are also major differences in relative space growth since 2000. On average, sales space per capita has grown by about half a sqm since then. However, while

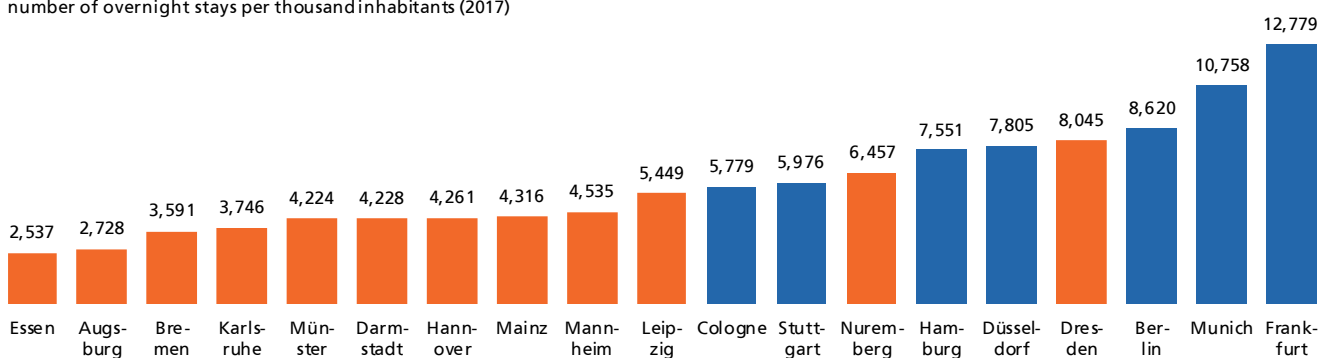
levels in Darmstadt and Cologne have remained virtually unchanged, sales space per capita in Bremen and Augsburg has increased by respectively 1 and 1.2 sqm.

Retail sales growth, combined with on average stagnating sales space per capita, have led to a visible improvement in sales productivity. Growth in average sales revenue per sqm has thus been visibly stronger in top locations. This is likely to be attributable to slightly stronger demographic growth here, but also to high growth rates in tourism. While overnight stays in the regional centres increased by nearly 30 per cent to a total of 23 million between 2010 and 2017, the growth was somewhat higher in the top locations at nearly 50 per cent. A total of 85 million overnight stays were therefore recorded in 2017 in the seven major cities.

Growth in demographics and tourism boost shopping potential

TOP LOCATIONS BENEFIT PARTICULARLY FROM TOURISM

number of overnight stays per thousand inhabitants (2017)



Source: bulwiengesa, Scope

The sharp increase in the number of overnight stays in the top locations is all the more significant because it started from a higher level. The retail sector is therefore benefiting to a particular extent here from tourists and business travellers. On average, there are around 8,500 overnight stays per 1,000 inhabitants in these seven cities. Conversely, the average figure of 4,600 overnight stays in the regional centres is only just over half this level. However, two regional centres – Dresden and Nuremberg – have kept pace with the top locations in terms of the number of overnight stays. Overall, the importance of tourism to the retail sector cannot be underestimated. If, at a rough estimate, each overnight stay generates approximately EUR 100 of retail sales, for a total of 108 million overnight stays this translates into retail sales of nearly EUR 11bn, around 10 per cent of total retail sales.

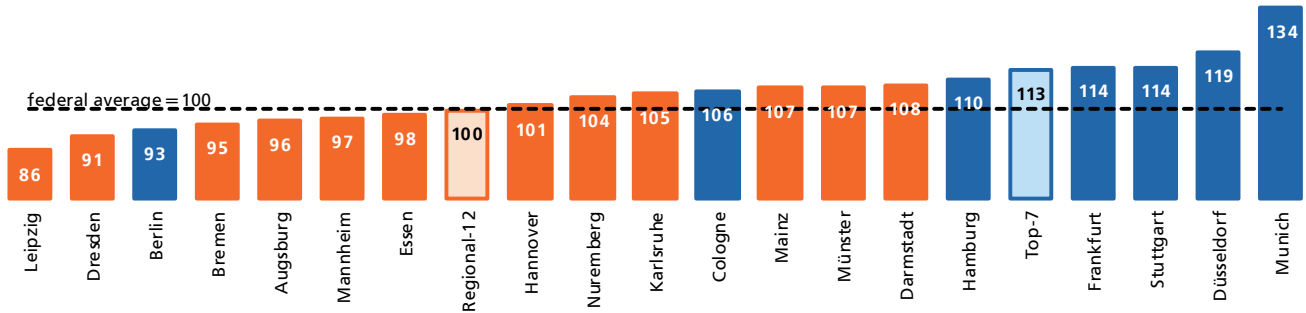
Top locations benefit to a high degree from tourism

With the exception of Berlin, another strength of the top locations is their high level of retail purchasing power. Purchasing power figures are particularly high in Frankfurt (114 points), Stuttgart (114), Düsseldorf (119) and, by a clear lead, in Munich (134). Darmstadt, the regional centre with the highest purchasing power, still lags some way behind these levels. Six regional centres – Augsburg, Bremen, Dresden, Essen, Leipzig and Mannheim – do not even reach the benchmark purchasing power figure of 100 points for the whole of Germany.

Top locations benefit from high retail purchasing power

PURCHASING POWER IN REGIONAL CENTRES NOWHERE NEAR THE HIGH LEVELS IN THE TOP LOCATIONS

purchasing power index in points (2018)

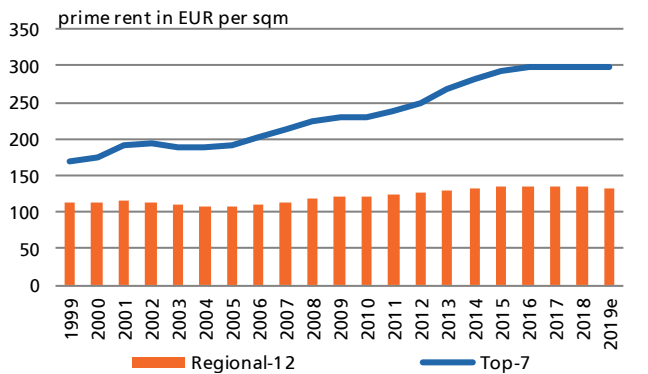


Source: bulwiengesa

Prime rents in top city centre locations have increased sharply over many years. Rent growth in the top locations has been significantly stronger here, resulting in the current wide divergence in rents. The average prime rent of EUR 298 per sqm in the top locations is more than twice as high as the figure of EUR 134 per sqm for the regional centres. The range of rents in the regional centres extends from EUR 97 per sqm in Darmstadt to EUR 203 per sqm in Hannover. Stuttgart is the cheapest top location in the retail sector with a prime rent of EUR 245 per sqm. However, prime rents in most of the top locations are around EUR 300 per sqm. By far the highest rents are still in Munich, at EUR 345 per sqm.

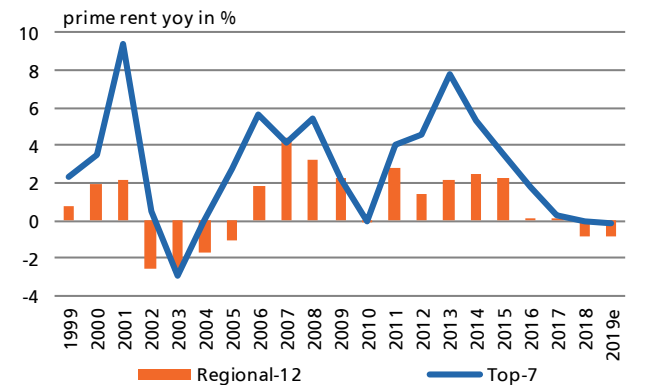
Prime rents in top locations more than twice as high as in regional centres

PRIME RENTS STAGNATING IN TOP LOCATIONS, ...



Source: bulwiengesa

... AND FALLING SLIGHTLY IN PRIME LOCATIONS OF REGIONAL CENTRES

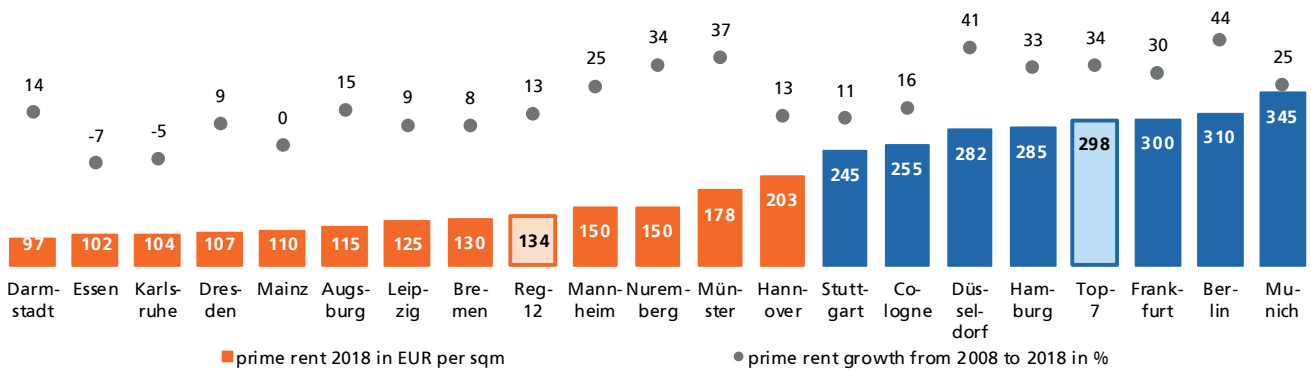


Source: bulwiengesa

The wide divergence in rent growth is attributable to several factors. These include the higher space productivity and purchasing power in the top locations already mentioned, but also a significantly larger number of tourists with many visitors from abroad. Due to their market size and internationality they are also used as test markets for new retail concepts to be rolled out in the German market. Accordingly, demand for sales space in the high streets of the top locations is higher. Conversely, regional centres lend themselves more to space expansion. However, the locations are more interchangeable. For only seven out of about 80 major cities with populations of more than 100,000 achieve top location status.

Greater exchangeability of regional centres limits potential for rent growth

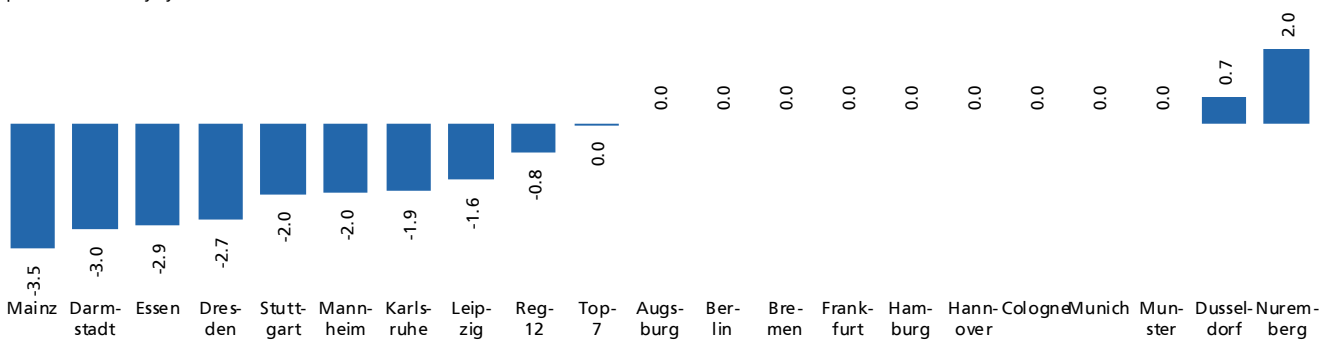
PRIME RENTS HAVE FALLEN IN 2 OUT OF 19 LOCATIONS IN THE LAST 10 YEARS



Source: bulwiengesa

PRIME RETAIL RENTS IN 8 OUT OF 19 LOCATIONS FELL IN 2018

prime rent 2018 yoy in %



Source: bulwiengesa

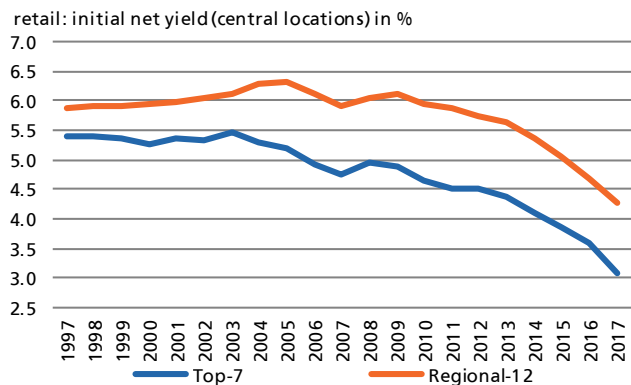
The headwind in the retail sector caused prime rents to fall in many city centre locations in 2018. Among the 19 locations covered in this market report, prime rents fell in eight cities. In some locations, rents had also already fallen in the previous year. However, the top locations also benefited from their locational advantages in what is now a tougher retail climate. For, apart from Stuttgart, all the top locations maintained their rent levels. Slight growth was even recorded in Düsseldorf.

Weaker demand from retailers for space and the pressure on prime rents have made investors more sceptical about retail properties. True, this has not yet brought the upward trend in retail property prices to an end. However, investment volume in this asset class declined in 2018. Below the line, initial rental yields for retail properties fell again. The decline of around 20 basis points last year was nevertheless much weaker than in previous years. The visible braking of the downward yield trend, combined with a more difficult retail climate, signals that retail yields have probably now bottomed out.

Prime rents fell in 8 of 19 locations in 2018

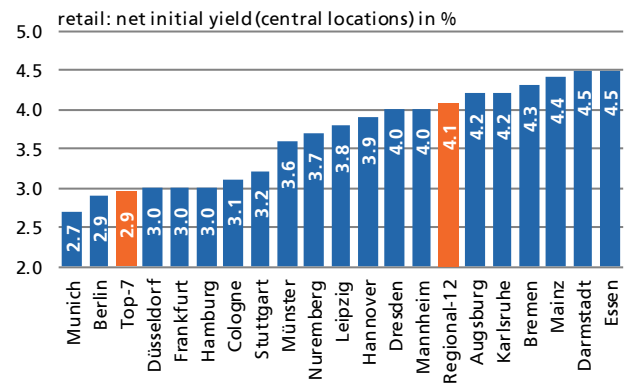
Despite headwind, initial rental yields fell again in the retail sector in 2018

RETAIL YIELDS CONTINUED TO FALL IN 2018



Source: bulwiengesa

FROM AN INVESTOR'S PERSPECTIVE, MUNICH IS THE MOST EXPENSIVE AND MAINZ THE CHEAPEST



Source: bulwiengesa

Having fallen further, the initial rental yield for attractive retail properties in top locations is now less than 3 per cent. For corresponding retail properties in the regional centres the average rental yield was around 110 basis points higher. The highest rental yields of 4.5 per cent were achieved in Darmstadt and Essen. Munich represents the most expensive investment location at 2.7 per cent. However, similar to the office market, the yield advantage enjoyed by the regional centres has not led to a narrowing of the yield gap. Similar to office properties, the yield trend here does not therefore signal a shift by investors towards regional centres.

Yield gap between top locations and regional centres largely unchanged

Summary retail properties and forecast

While rents for apartments, offices and logistics properties continue to rise, prime retail rents have reached the end of the line. About half of the regional centres already reported a slight fall in rents last year. Conversely, the top locations with their locational advantages largely maintained their high rent levels. The headwind in the retail sector as a result of a weaker economic climate and continuously strong growth in e-commerce retail sales is affecting all locations equally. However, the top locations are better able to offset this factor given their generally stronger demographic growth and the boom in tourism.

Top locations more resilient to retail headwind so far

However, retail properties in city centres should be able to absorb the weaker demand from classic retailers comparatively well. After all, city centres are popular destinations, even if people are buying fewer classic "city centre products" such as clothing. It is not therefore surprising that other customers are seeking premises. Bars and restaurants, supermarkets, drugstores, online retailers and fitness centres – city centre locations are of interest for a broad range of concepts. Office jobs - which are in short supply in many cities – could also be created here. Easily accessible city centre locations are therefore likely to attract users of coworking space, particularly since this environment - which also includes other businesses, bars and restaurants - can have benefits compared to pure office locations.

High vacancy levels not expected in city centres

Below the line, landlords are having to adapt to shorter rental agreements with sales-based rather than fixed rents, tenants who are not associated with classic retail concepts, and overall to slightly lower rents. Properties are also more likely to become vacant temporarily. In order to mitigate this risk, sustained investment in shopping properties will be needed. However, cities can also do more. A recent consumer survey awarded only average scores to city centres. However, attractive city centres which can provide a high quality experience and a broad offer will ultimately be at an advantage when competing for customers. Good use should therefore be made of a phase when the economy and the labour market are still buoyant – albeit at a slower pace. Prime rents will not move in the same direction this year. We expect a largely stable trend in the top locations. Prime rents in the regional centres are likely to weaken slightly.

We expect some prime rents to remain stable in 2019, and some to fall slightly

RETAIL – FORECAST FOR PRIME RENTS

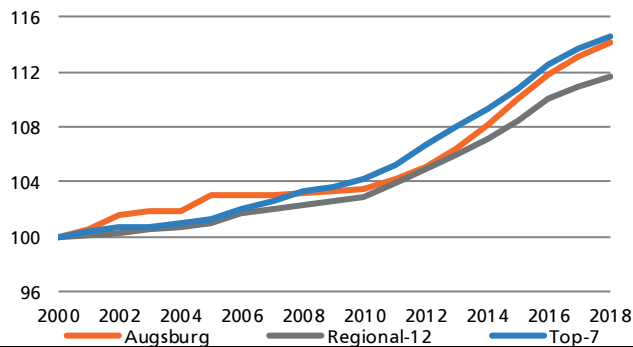
	2017	2018	2019e
12 regional centres			
Prime rents in EUR/m ² (vs. previous year in %)	134.7 (0,0)	133.6 (-0.8)	132.5 (-0.8)
7 top locations			
Prime rents in EUR/m ² (vs. previous year in %)	298.4 (+0.3)	298.3 (0.0)	297.9 (-0.2)

Source: bulwiengesa, DZ BANK Research forecast all averages are space-weighted

Prime rents represent 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.

AUGSBURG

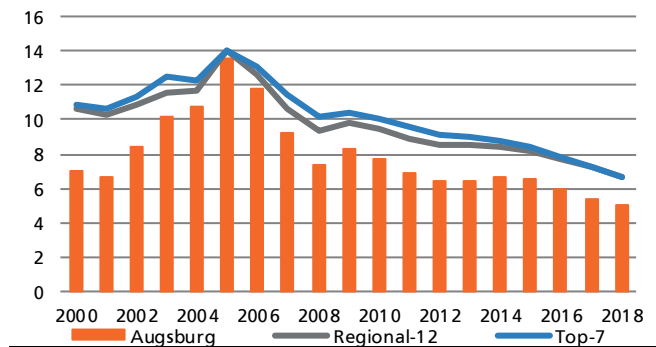
POPULATION GROWTH



Source: Scope

Index 2000 = 100

UNEMPLOYMENT RATE (%)



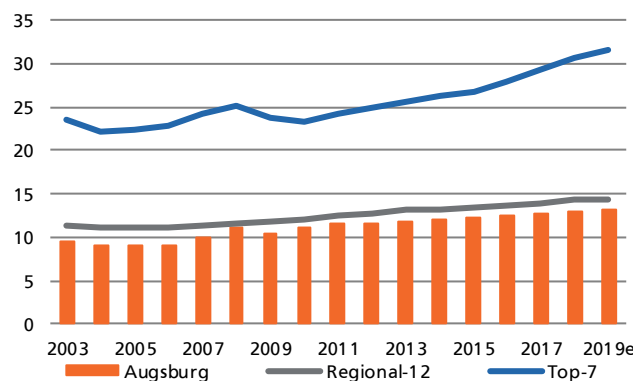
Source: bulwiengesa, BA, DZ BANK Research forecast

Built by the Romans, Augsburg is famous for its City Hall, the Goldener Saal, and the Fuggerei alms houses. The third most densely populated city in Bavaria has grown by more than 10 per cent since 2008 and now has more than 290,000 inhabitants. One important aspect is the city's good transport links with Greater Munich 60 kilometres away. The earlier stagnation of the population and the economic weakness, which was a concern for Augsburg until several years ago, have been overcome. However, the structural change which followed the decline of the textile industry, the withdrawal of the American forces, and several major insolvencies, are still having an impact today. Despite many positive developments, the unemployment rate of 4.6 per cent (November 2018) remains about two percentage points above average for Bavaria. Setbacks were the closure in 2018 of the Ledvance factory – formerly Osram – with a workforce of around 600, and the announced shutdown of the Fujitsu works with the loss of 1,800 jobs. One positive factor is the guarantee from the Chinese parent Midea that existing staff levels at robot manufacturer Kuka will be maintained until 2023. Important sectors of the economy are fibre composite technology, environmental technology, IT, mechatronics, and the cultural and creative industries. The university, which was founded in 1970 and now has more than 20,000 students, has had a beneficial impact. Augsburg's good transport infrastructure, with the Autobahn A8, the ICE route, and proximity to Munich airport are advantageous. The process of upgrading the infrastructure has been under way for some years, with the "Project Augsburg City". The redevelopment of brownfield and converted military sites will also provide space for housing and businesses in future.

Augsburg benefits from proximity to Munich

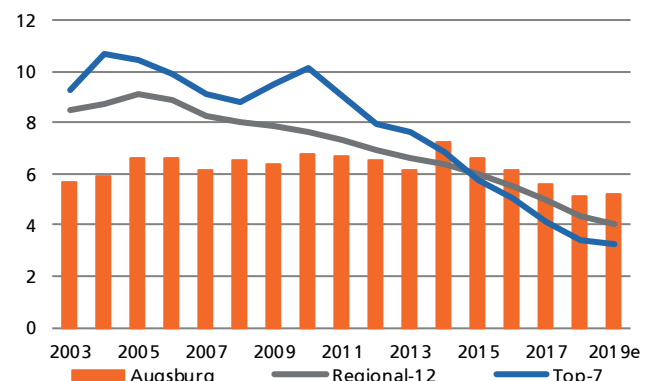
Office space in Augsburg

PRIME RENTS FOR OFFICE SPACE IN EUR PER SQM



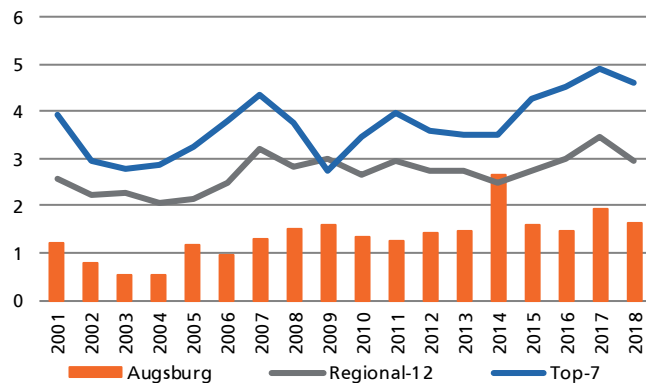
Source: bulwiengesa, DZ BANK Research forecast

VACANCY RATE (%)



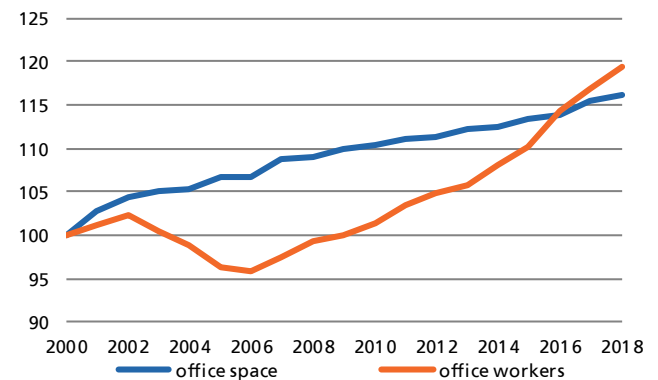
Source: bulwiengesa, DZ BANK Research forecast

TAKE-UP AS % OF OFFICE SPACE



Source: bulwiengesa

TREND IN OFFICE SPACE AND NO. OF OFFICE WORKERS



Source: Scope, bulwiengesa

Index 2000 = 100

Augsburg has a fairly small office market with around 1.4 million sqm of office space. On the one hand, this is attributable to the greater importance of the manufacturing industry. On the other hand, structural change has made it difficult to rent office space. The prime rent per sqm was still in single-digit Euros in 2006. Last year's prime rent of EUR 13 per sqm was at the lower end of the range for the regional centres in our survey. The ten-year growth rate of 18 per cent is also slightly below-average. The vacancy rate of around 5 per cent is slightly higher than average, which is also attributable to an increase of more than 7 per cent caused by the bankruptcy of Weltbild. Comparatively good space availability and potential for new construction in large-scale commercial locations such as the Innovation Park and the Sheridan Park are a locational advantage close to Munich which is bursting at the seams. This could have a positive impact on demand for office space, which previously had a strong regional focus. Annual take-up generally ranges from 20,000 to 25,000 sqm. In 2018 the figure was 23,000 sqm. Particularly high levels are being achieved for owner-occupied new developments. These include the largest contract concluded last year - nearly 7,000 sqm for the new headquarters of baramundi software AG in the Innovation Park. Another new-build project is the Weitblick 1.7 office complex, equipped with state-of-the-art technology such as hand scanners at entry points. We expect the upward trend in prime rents to continue in 2019 at 1.5 to 2.5 per cent.

Office: relatively small office market with potential and space reserves for project development

OFFICE FORECASTS

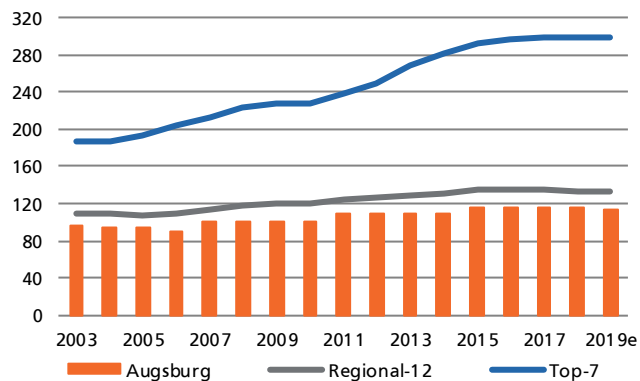
		2016	2017	2018	2019e
Demand					
GDP	% yoy	2,7	3,0	3,3	3,3
Per capita GDP	in EUR	48,195	49,011	50,185	51,497
No. of office workers	in '000	53.9	55.0	56.2	-
No. of office workers	% yoy	3.7	2.1	2.2	-
Supply					
Total office space	in m ² '000	1,375	1,394	1,404	1,413
Total office space	% yoy	0.3	1.4	0.7	0.7
Vacancy rate	%	6.1	5.6	5.1	5.2
Office rents					
Prime/secondary location	EUR/m ²	12.5 / 5.1	12.8 / 5.5	13.0 / 6.0	13.2 / 6.0
Prime/secondary location	% yoy	2.5 / 0.0	2.4 / 7.8	1.6 / 9.1	1.5 / 0.0

Source: Scope, bulwiengesa, DZ BANK Research forecast

yoy = year-on-year

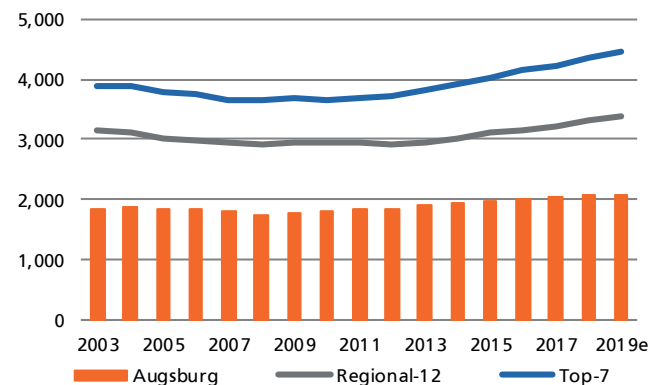
Retail space in Augsburg

PRIME RETAIL RENTS IN EUR PER SQM



Source: bulwiengesa, DZ BANK Research forecast

RETAIL SALES IN EUR PER SQM



Source: Scope

Augsburg has a large supply of retail space with sales space per capita of more than 3 sqm. This is mainly attributable to the city's supply function for a catchment area of more than 600,000 people. There are also no other shopping locations of similar importance close to the city which is situated halfway between Munich and Ulm. This gives Augsburg a very good centrality value of 123 points. Conversely, purchasing power is below-average at 96 points. Tourism, with a fairly moderate volume of visitors, cannot offset the weak purchasing power. Retail activity in the attractive city centre which has recently been extensively renovated is not quite running at full speed. This is borne out by the vacant properties in the high street location of Annastraße. No solution has been found yet for the Woolworth building which has been empty for years: the planned relocation of Peek & Cloppenburg has not yet materialised. The merger of Karstadt and Kaufhof is fairly unlikely to have a negative impact, since the Kaufhof branch has already been closed for several years and the building is currently occupied by Schuh-Schmid. Since 2015 the prime rent in the high street locations of Annastraße and Bürgermeister-Fischer-Straße has been EUR 115 per sqm. The City-Galerie with around 34,000 sqm of shopping space in the east of the city represents competition for city centre retailers. The former Fuggerstadt Centre close to the station reopened last year as "Helio" after renovations lasting several years. We expect prime rents to at best remain stable in 2019.

Retail: newly renovated city centre is an attractive shopping destination, but there are still vacant properties

RETAIL FORECASTS

		2016	2017	2018	2019e
Demand					
Per cap. disposable income	EUR/month	1,859	1,896	1,942	1,992
Unemployment rate	%	6.0	5.4	5.0	4.9
Retail sales	EUR m/% yoy	1,883 / 2.7	1,928 / 2.4	1,977 / 2.5	2,026 / 2.5
Retail sales	EUR/m ² sales space	2,007	2,037	2,064	2,093
Supply					
Retail space	in m ² '000	938	946	958	968
Retail space	per capita in m ²	3.26	3.25	3.26	3.28
Retail rent					
Prime/secondary location	EUR/m ²	115 / 8.0	115 / 9.0	115 / 9.5	114 / 9.5
Prime/secondary location	% yoy	0.0 / 0.0	0.0 / 12.5	0.0 / 5.6	-0.9 / 0.0

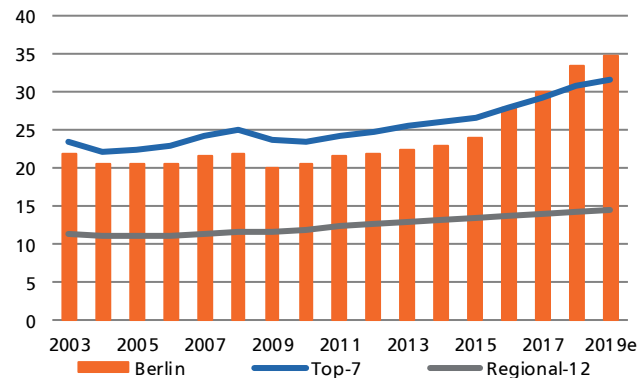
Source: Scope, bulwiengesa, DZ BANK Research forecast

yoy = year-on-year

BERLIN

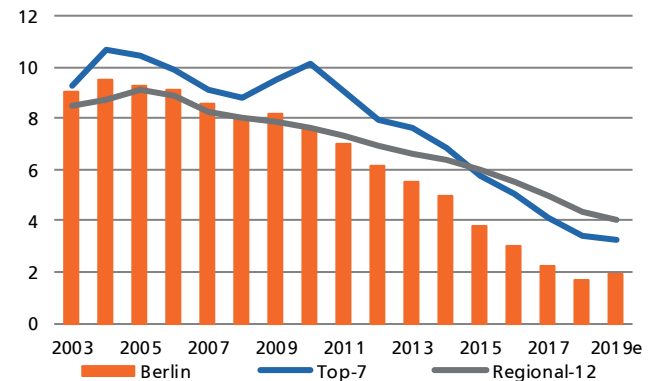
Office space in Berlin

PRIME RENTS FOR OFFICE SPACE IN EUR PER SQM



Source: bulwiengesa, DZ BANK Research forecast

VACANCY RATE (%)



Source: bulwiengesa, DZ BANK Research forecast

Economic conditions in Berlin have shown a sustained improvement. This is reflected in a more than halving of the unemployment rate since 2005, which fell to 7.6 per cent in December 2018. Today the federal capital is a sought after location for e-commerce providers and fintechs, as well as established companies. The decision by Siemens to invest EUR 600m in "Siemensstadt 2.0" has also played a part. Within ten years more than 150,000 office jobs have been created, while office space has not even increased by 1 million sqm. However, many times this amount would be needed to satisfy demand for office space. Vacancies have therefore fallen by more than 1 million sqm in the same period, and the vacancy rate has consequently fallen by 8 per cent to less than 2 per cent. With remaining vacant space of around 300,000 sqm, large-scale rentals would be virtually impossible in the short term: in 2018, eight of the ten largest rental agreements related to project developments. Prime rents increased faster than in any of the other locations analysed – by nearly 50 per cent within only five years to EUR 33.50 per sqm. Due to the increasing shortage of space, take-up in 2018 fell short of the record level of 1 million sqm in the previous year. However, the figure achieved was a substantial 845,000 sqm. Although the visible increase in available new office space since 2018 will not relieve conditions in the office market for the foreseeable future, it will at least ease them somewhat. Prime rents are therefore likely to continue to increase at a slower pace.

Office: Berlin office market running out of space as upturn continues

OFFICE FORECASTS

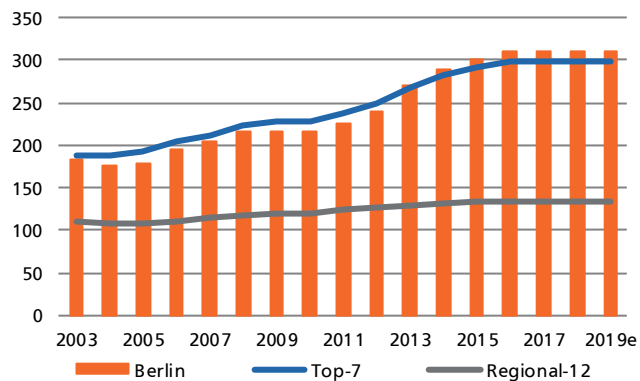
		2016	2017	2018	2019e
Demand					
GDP	% yoy	4.1	4.0	3.9	3.9
Per capita GDP	in EUR	35,728	36,721	37,867	39,113
No. of office workers	in '000	568.8	599.0	622.4	-
No. of office workers	% yoy	4.9	5.3	3.9	-
Supply					
Total office space	in m ² '000	18,932	18,949	19,151	19,460
Total office space	% yoy	0.0	0.1	1.1	1.6
Vacancy rate	%	3.0	2.2	1.7	1.9
Office rents					
Prime/secondary location	EUR/m ²	28.0 / 11.0	30.0 / 12.0	33.5 / 13.5	34.7 / 14.0
Prime/secondary location	% yoy	16.7 / 15.8	7.1 / 9.1	11.7 / 12.5	3.5 / 3.7

Source: Scope, bulwiengesa, DZ BANK Research forecast

yoy = year-on-year

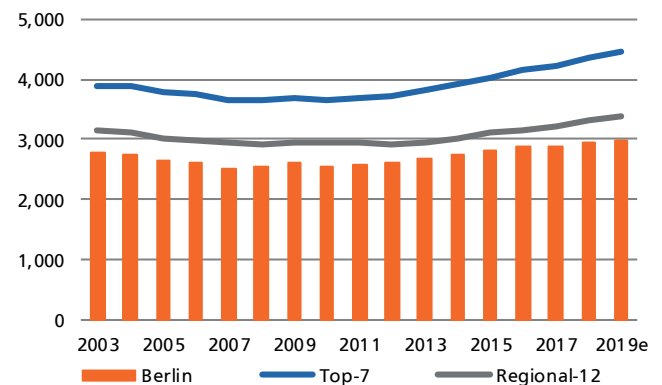
Retail space in Berlin

PRIME RETAIL RENTS IN EUR PER SQM



Source: bulwiengesa, DZ BANK Research forecast

RETAIL SALES IN EUR PER SQM



Source: Scope

Berlin has developed extremely successfully as a shopping destination. For some time the city has been popular with investors and retailers due to its large catchment area of more than 5 million people, strong demographic growth, its trendsetter function, and its status as a peak tourist destination with 31 million overnight stays each year. Foreign retail concepts in particular are often introduced in Berlin before being rolled out in the German market. Economic conditions have also improved visibly. Within ten years, the number of people in work has increased by nearly 300,000. However, the phase of economic weakness has not been overcome yet and purchasing power figures are still well below the national average of 100 points at 93. The Berlin retail sector differs from other top locations by virtue of its size and its various prime locations in distinct geographical areas with different characteristics. These include Ku'damm and Tauentzienstraße which have the highest prime rents, Alexanderplatz with its high footfall, and Friedrichstraße. The trendy Hackescher Markt is also well positioned. The shopping streets are enhanced by a number of shopping centres such as the huge Mall of Berlin. Two other centres were also added in the second half of 2013: in August the Schultheiss Quartier became the first shopping centre to open its doors to customers in the Moabit district. The East Side Mall, the 69th shopping centre in Berlin, followed in November. The competitive pressure among the centers thus continues to increase. Space expansion and the headwind from online shopping have halted growth in prime rents in Berlin, which have remained stable at EUR 310 per sqm since 2016. This is likely to remain unchanged this year.

Retail: Berlin has also become a top European retail location

RETAIL FORECASTS

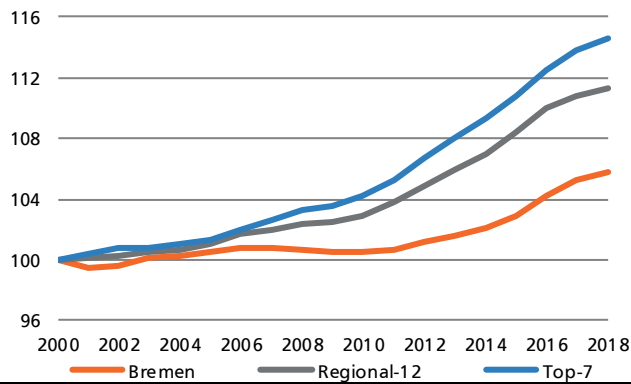
		2016	2017	2018	2019e
Demand					
Per cap. disposable income	EUR/month	1,836	1,875	1,921	1,970
Unemployment rate	%	9.8	9.0	8.2	7.9
Retail sales	EUR m/% yoy	18,211 / 2.5	18,750 / 3.0	19,373 / 3.3	20,003 / 3.3
Retail sales	EUR/m ² sales space	2,873	2,889	2,939	2,977
Supply					
Retail space	in m ² '000	6,339	6,490	6,591	6,720
Retail space	per capita in m ²	1.79	1.81	1.82	1.85
Retail rent					
Prime/secondary location	EUR/m ²	310 / 14.5	310 / 15.5	310 / 16.0	310 / 16.0
Prime/secondary location	% yoy	3.3 / 0.0	0.0 / 6.9	0.0 / 3.2	0.0 / 0.0

Source: Scope, bulwiengesa, DZ BANK Research forecast

yoy = year-on-year

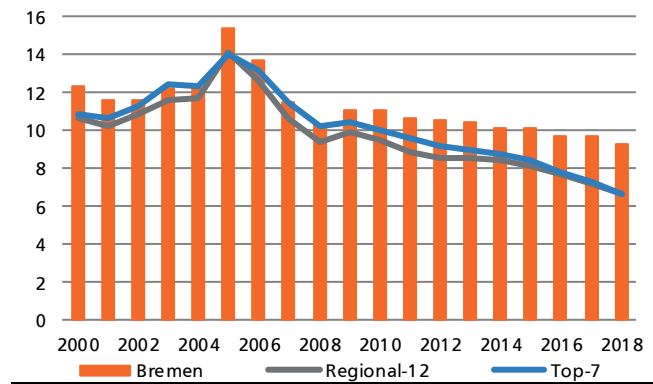
BREMEN

POPULATION GROWTH



Source: Scope Index 2000 = 100

UNEMPLOYMENT RATE (%)



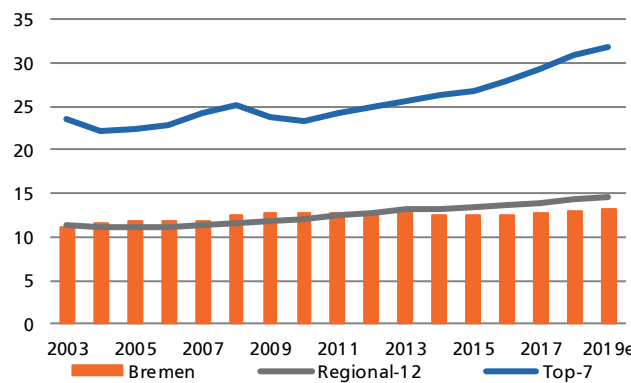
Source: bulwiengesa, BA, DZ BANK Research forecast

Bremen, the capital city of the smallest federal state, ranks eleventh among the most densely populated cities in Germany with around 570,000 inhabitants. Unlike many growing regional centres, Bremen's population stagnated for a long time. This is probably due to weaker labour market conditions. Stronger demographic growth has only been evident since 2012. Unemployment is above-average and is only falling slowly. In December 2018 the unemployment rate was still 8.9 per cent. Of the locations analysed, only the Ruhr city of Essen shows a higher level. Despite many successes, the structural transformation following the crisis in shipbuilding and heavy industry is still evident. The evolution to a services and technology location has been supported by the university founded in 1971 which has around 20,000 students. However, manufacturing industry still plays a comparatively large part today. Particularly important sectors are vehicle construction, aerospace technology, food and beverages, and biotechnology. The port is a crucial economic factor, and logistics are correspondingly very important. Good transport links by road and rail, and the seaport and the airport have a positive impact. Tourism also plays a major role with 2 million overnight stays per year. Extensive development is planned for the property location in the years ahead: around EUR 1bn is to be invested in various projects in the downtown Bremen. And the 15 hectare area in the "Überseestadt" (the "City Beyond the Seas") occupied by Kellogg until 2017 is set to be redeveloped as a residential and business quarter.

Important economic centre in North West Germany

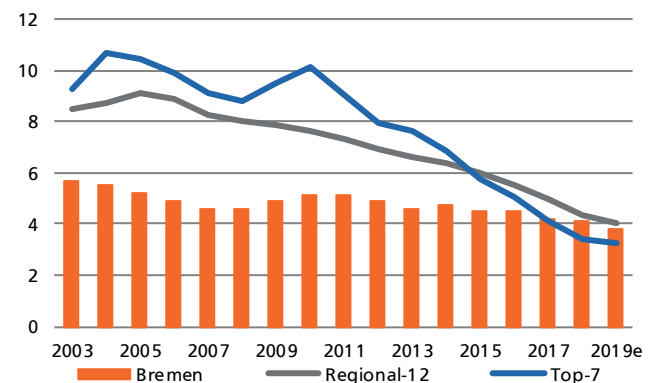
Office space in Bremen

PRIME RENTS FOR OFFICE SPACE IN EUR PER SQM



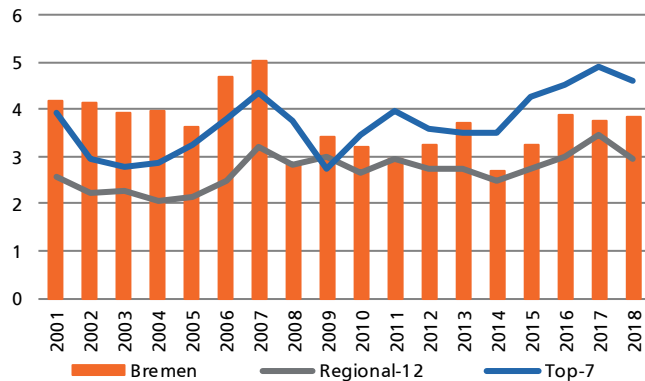
Source: bulwiengesa, DZ BANK Research forecast

VACANCY RATE (%)



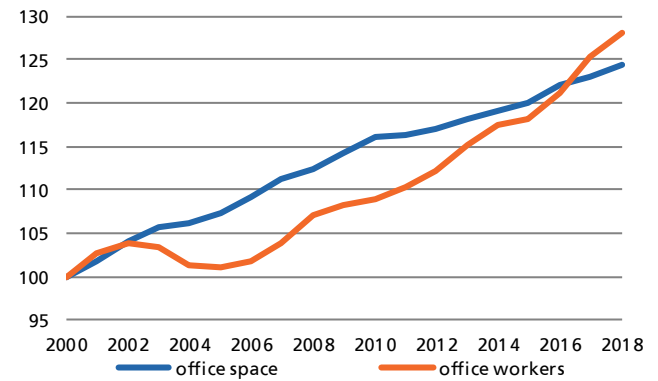
Source: bulwiengesa, DZ BANK Research forecast

TAKE-UP AS % OF OFFICE SPACE



Source: bulwiengesa

TREND IN OFFICE SPACE AND NO. OF OFFICE WORKERS



Source: Scope, bulwiengesa

Index 2000 = 100

With 2.6 million sqm, Bremen has average office space for the regional centres in our analysis. While a large proportion of city centre office buildings are now outdated, contemporary office properties such as Airport City, the Technology Park and in the Überseestadt have been created mainly on the periphery. The highest office rents in Bremen are achieved in the Überseestadt. The volume of office space has grown by 11 per cent in the last ten years, which is 4 percentage points faster than average for the top locations. However, office employment has also shown slightly above-average growth of 20 per cent. Unlike many other regional centres, office vacancies have nevertheless remained virtually unchanged in recent years. The vacancy rate, which was still low until several years ago, is now slightly above-average for the regional centres we cover at just over 4 per cent. Conversely prime rents are below-average at EUR 13 per sqm, although they were still slightly above the benchmark 10 years ago. The upward trend in rents in the German office market as a whole has largely failed to materialise in Bremen. Conversely, there has been a positive trend in office take-up with an annual figure of around 100,000 sqm since 2016. The largest rental contract last year was 12,500 sqm for a new savings bank headquarters in the Technology Park. Above-average new space of around 35,000 sqm already available in 2018 is likely to increase to more than 50,000 sqm this year, and prime rents can therefore be expected to increase slightly at best, and the vacancy rate to remain stable.

Office: Bremen office market ended 2017 with high take-up

OFFICE FORECASTS

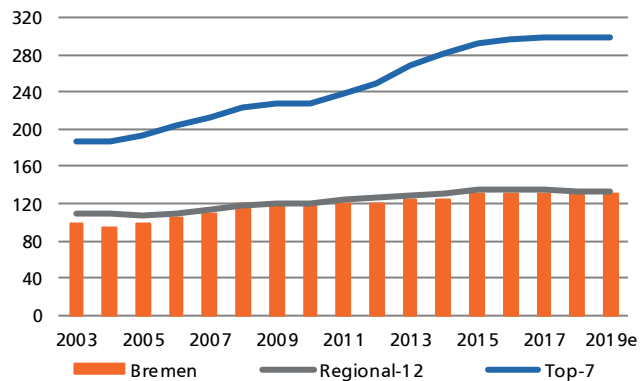
		2016	2017	2018	2019e
Demand					
GDP	% yoy	3.2	3.5	3.8	3.8
Per capita GDP	in EUR	49,958	51,213	52,872	54,484
No. of office workers	in '000	104.0	107.6	110.0	-
No. of office workers	% yoy	2.4	3.5	2.2	-
Supply					
Total office space	in m ² '000	2,621	2,638	2,668	2,710
Total office space	% yoy	1.8	0.7	1.1	1.6
Vacancy rate	%	4.5	4.2	4.1	3.8
Office rents					
Prime/secondary location	EUR/m ²	12.5 / 6.7	12.8 / 7.0	13.0 / 7.1	13.2 / 7.0
Prime/secondary location	% yoy	0.0 / 0.0	2.4 / 4.5	1.6 / 1.4	1.5 / -1.4

Source: Scope, bulwiengesa, DZ BANK Research forecast

yoy = year-on-year

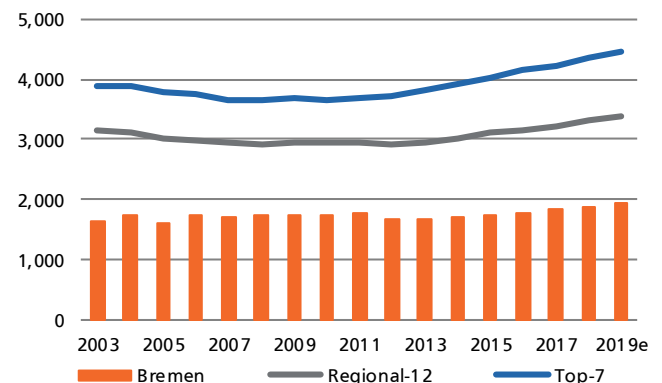
Retail space in Bremen

PRIME RETAIL RENTS IN EUR PER SQM



Source: bulwiengesa, DZ BANK Research forecast

RETAIL SALES IN EUR PER SQM



Source: Scope

Based on its attractive city centre, and dominant position in the North West of Germany, the Bremen retail sector has developed only moderately. The shopping location benefits from a large catchment area of more than 1 million people. Conversely, purchasing power is below average at 95 points. Tourism is developing positively, although the number of overnight stays is fairly modest at around 3,400 per 1,000 inhabitants. Below the line, prime rents have not even increased by 10 per cent within ten years, recently reaching EUR 130 per sqm. The main obstacles are essentially “homegrown” and relate specifically to competition from large peripheral shopping centres such as the Waterfront, the Roland-Center and the Weserpark. On the other hand, the volume of city centre sales space - where attractive, large shop floors are in short supply - is fairly small. After previously planned projects to improve retail conditions failed to materialise, major efforts are now under way to renovate the city centre, with its prime locations in Hutfilterstraße, Obernstraße and Sögestraße. Key projects are the renovation of the Lloydhof, the modernisation of the “Bremer Carrée”, the reconstruction of the Johann Jacob House, and a shopping arcade on the site of the Parkhaus Mitte, where neighbouring branches of Karstadt and Kaufhof will be integrated. The merger of the two stores could have advantages in terms of the flagship plans of businessman Kurt Zech for the city centre. Zech already owns the Karstadt building. However, before the city centre emerges in all its new glory, the retail sector will have to live with a large building site. We expect prime rents to remain stable in 2019.

Retail: city centre about to undergo extensive renovation

RETAIL FORECASTS

		2016	2017	2018	2019e
Demand					
Per cap. disposable income	EUR/month	2,065	2,114	2,169	2,226
Unemployment rate	%	9.7	9.7	9.3	9.1
Retail sales	EUR m/% yoy	2,770 / 3.6	2,872 / 3.7	2,986 / 4.0	3,104 / 3.9
Retail sales	EUR/m ² sales space	1,788	1,831	1,884	1,937
Supply					
Retail space	in m ² '000	1,549	1,568	1,585	1,603
Retail space	per capita in m ²	2.76	2.77	2.78	2.79
Retail rent					
Prime/secondary location	EUR/m ²	130 / 10.0	130 / 10.0	130 / 10.0	130 / 10.0
Prime/secondary location	% yoy	0.0 / 0.0	0.0 / 0.0	0.0 / 0.0	0.0 / 0.0

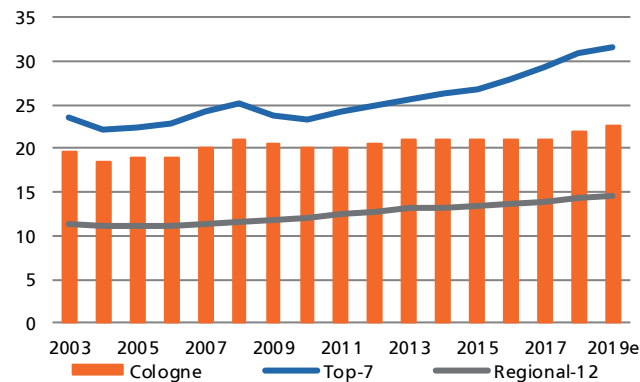
Source: Scope, bulwiengesa, DZ BANK Research forecast

yoy = year-on-year

COLOGNE

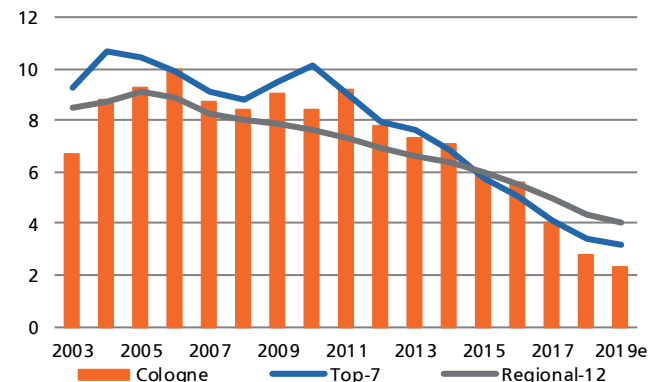
Office space in Cologne

PRIME RENT FOR OFFICE SPACE IN EUR PER SQM



Source: bulwiengesa, DZ BANK Research forecasts

VACANCY RATE (%)



Source: bulwiengesa, DZ BANK Research forecasts

At 300,000 sqm, take-up in the Cologne office market in 2018 kept up with the strong previous-year figure which was only 2 per cent higher. Like elsewhere, though, take-up was slowed down by a growing shortage of space. At the end of 2018, available office space in Cologne was down to little more than 200,000 sqm, bringing the vacancy rate down to under 3 per cent, whereas it was still 10 per cent in 2006. Even so, four of the ten biggest rental transactions were from existing space, not least because the amount of space involved in the individual deals was not all too high. Only two transactions were in five figures: Siemens leased 10,000 sqm and Design Offices 12,500. The provider of flexible office space for rent was involved in another project development in Cologne, leading to a total of almost 20,000 sqm of space. In addition, Design Offices already leased a fairly large space last year. In spite of solid demand for space and tight supply, Cologne's prime rent is relatively low. Nevertheless, it rose by EUR 1 per sqm to EUR 22 per sqm in 2018, which puts it on the same level as the prime rent in Stuttgart. Cologne and Stuttgart are the cheapest office locations among the top 7. On balance, the prime office rent rose much slower than the average for the top locations. It has only increased by just under 5 per cent within the space of ten years. Since only a moderate amount of new space is expected to come to market this year as well and the supply of attractive space is set to become even tighter, we are optimistic about a further increase in rent by the end of the year.

Office: Shortage of attractive office space slowing down the market

OFFICE FORECASTS

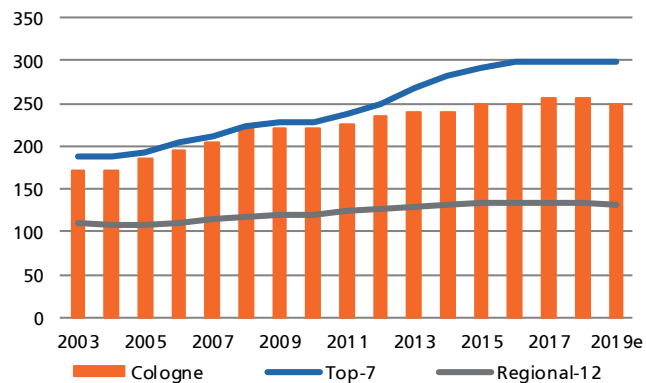
		2016	2017	2018	2019e
Demand					
GDP	% yoy	3.1	3.4	3.7	3.7
Per capita GDP	in EUR	59,626	61,211	63,112	65,086
No. of office workers	in '000	241.0	248.7	255.8	-
No. of office workers	% yoy	2.6	3.2	2.9	-
Supply					
Total office space	in m ² '000	7,599	7,656	7,683	7,710
Total office space	% yoy	1.0	0.7	0.4	0.3
Vacancy rate	%	5.6	4.0	2.8	2.3
Office rents					
Prime/secondary location	EUR/m ²	21.0 / 8.3	21.0 / 8.3	22.0 / 8.8	22.5 / 8.8
Prime/secondary location	% yoy	0.0 / 3.8	0.0 / 0.0	4.8 / 6.0	2.3 / 0.0

Source: Scope, bulwiengesa, DZ BANK Research forecasts

yoy = year-on-year

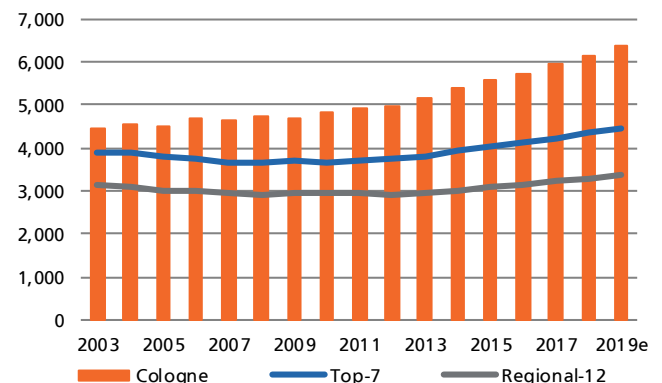
Retail space in Cologne

PRIME RETAIL RENT IN EUR PER SQM



Source: bulwiengesa, DZ BANK Research forecasts

RETAIL SALES IN EUR PER SQM



Source: Scope

The million-strong city of Cologne is the second top shopping location in western Germany along with Düsseldorf, as a result of which competition between the two cities is also felt in the retail sector. Cologne is attractive for retailers in view of a 3-million strong catchment area, of many shoppers from the Benelux countries and over 6 million overnight stays by visitors. However, purchasing power in Cologne is slightly weaker. The fact that Cologne is now lagging slightly behind the prime rent in the top segment is likely to reflect a relatively good supply of retail space. In the last few quarters, the number of retail spaces on offer has increased even further. Unlike in Düsseldorf, but also unlike in other bastions of German retail, Cologne's city centre is strongly focused on the mass market. Contributory factors include a three-kilometre long shopping circuit which invites shoppers to stroll through Cologne's prime shopping locations, and encourages the traditionally high footfall. This applies mainly to the Schildergasse which is 90 per cent high-street chains. The Hohe Straße has a high footfall – but, unlike the Schildergasse, it is struggling more with stores which stand empty for a while. Cologne also has more trendy shopping streets such as the Ehrenstraße. A smaller luxury segment has become established around the Domkloster/Wallraffplatz which could benefit from the rebuilding of the Dom Hotel. However, Cologne has not seen major developments of the kind which other major shopping locations have undergone. One larger project was the revamp of the store which housed the long-established Jacobi store on the Hohe Straße, where Saturn opened its flagship store across five storeys in 2018. The prime rent is set at best to remain stable this year; if anything, it is more likely to dip slightly.

Retail: Strong mass-market shopping location with high footfall

RETAIL FORECASTS

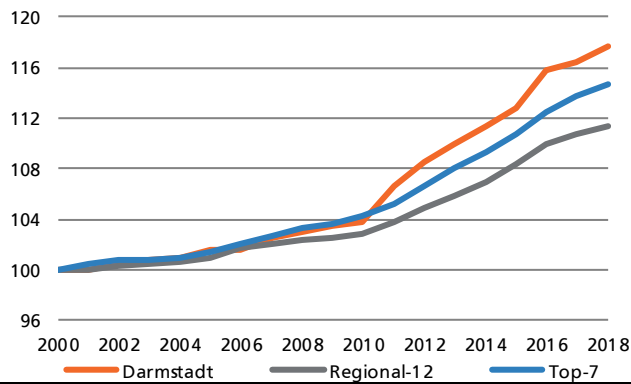
		2016	2017	2018	2019e
Demand					
Per cap. disposable income	EUR/month	2,046	2,073	2,114	2,159
Unemployment rate	%	8.7	8.4	7.9	7.7
Retail sales	EUR m/% yoy	8,090 / 2.8	8,361 / 3.3	8,673 / 3.7	9,006 / 3.8
Retail sales	EUR/m ² sales space	5,745	5,936	6,151	6,382
Supply					
Retail space	in m ² '000	1,408	1,409	1,410	1,411
Retail space	m ² /inhabitant	1.32	1.31	1.30	1.30
Retail rent					
Prime/secondary location	EUR/m ²	250 / 15.0	255 / 15.0	255 / 15.0	250 / 15.0
Prime/secondary location	% yoy	0.0 / 0.0	2.0 / 0.0	0.0 / 0.0	-2.0 / 0.0

Source: Scope, bulwiengesa, DZ BANK Research forecasts

yoy = year-on-year

DARMSTADT

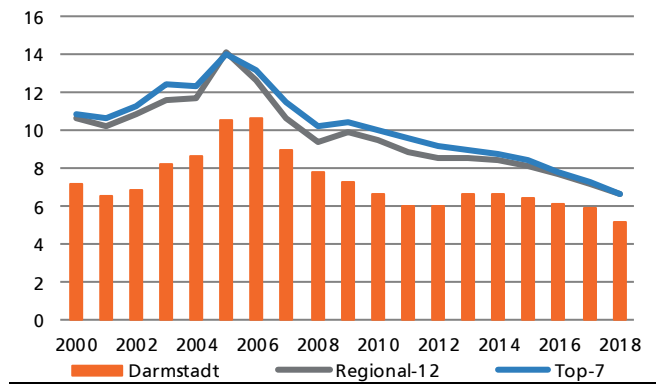
POPULATION GROWTH



Source: Scope

Index 2000 = 100

UNEMPLOYMENT RATE (%)



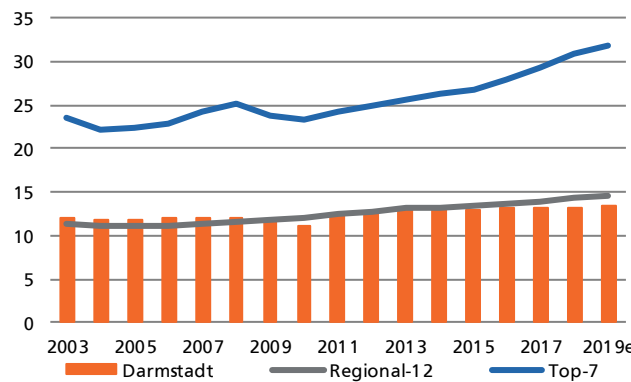
Source: bulwiengesa, BA, DZ BANK Research forecast

With a population of around 160,000, Darmstadt is the smallest city in this market report. Conversely, its demographic growth of 14 per cent within ten years is among the highest. With its favourable location at the southern edge of the Rhine-Main region, it is a sought after property location which shows continuing demand for housing and commercial space. Many public administration facilities are based in Darmstadt. The "City of Science" is also an important research and economic location. Core sectors are IT, chemicals / pharmaceuticals / biotech, mechanical engineering, space technology, and cosmetics which are represented by important companies. The largest is the chemical and pharmaceuticals group Merck. However, the mechanical engineering company Carl Schenck, the specialty chemicals company Evonik/Röhm, the cosmetics companies Goldwell/Kao and Wella/Coty, Software AG and Telekom are also important. Many startups are based in the technology and innovation centre of the Technical University (TU). Overall, more than 130,000 people are employed in Darmstadt. More than 41,000 students are registered at the TU and other higher education establishments. Particularly prominent among the research institutions are ESOC (the European Space Operations Centre) and the "FAIR" particle accelerator facility which is currently under construction. Unemployment was 4.7 per cent in December 2018. Darmstadt has applied for the art nouveau buildings of its Mathildenhöhe artists' colony to be listed as a UNESCO World Heritage Site.

"City of Science" a rapidly growing economic and research location

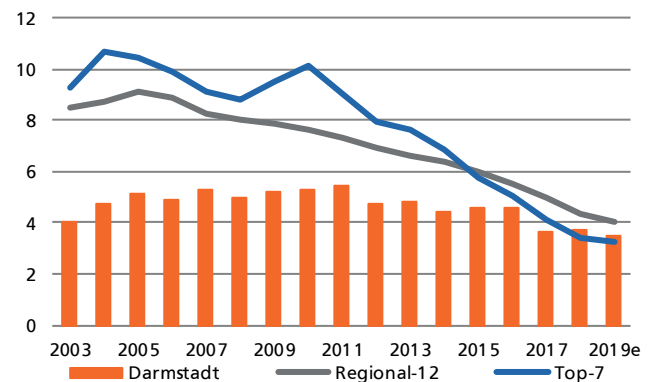
Office space in Darmstadt

PRIME RENTS FOR OFFICE SPACE IN EUR PER SQM



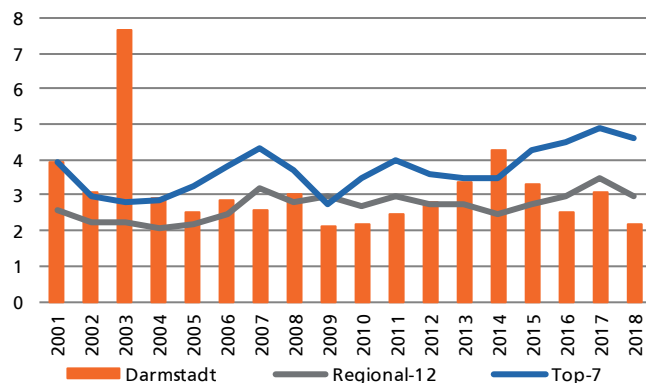
Source: bulwiengesa, DZ BANK Research forecast

VACANCY RATE (%)



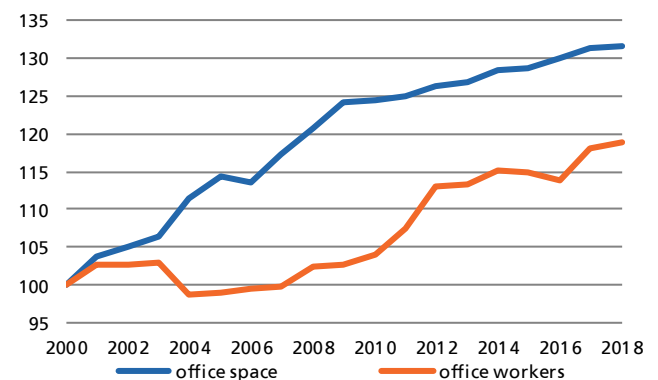
Source: bulwiengesa, DZ BANK Research forecast

TAKE-UP AS % OF OFFICE SPACE



Source: bulwiengesa

TREND IN OFFICE SPACE AND NO. OF OFFICE WORKERS



Source: Scope, bulwiengesa

Index 2000 = 100

Large office space of 1.6 million sqm is justified by the city's economic importance and large number of scientific facilities. Augsburg and Mainz have office markets of a similar size, but in relation to much larger populations. The large supply of space has not led to an oversupply, as borne out by a vacancy rate of just below 4 per cent. In the last ten years, office space and the number of office jobs have both increased by around 9 per cent. The proportion of vacant office space has nevertheless declined slightly in this period. Prime rents of EUR 13.20 per sqm are admittedly below-average for a regional centre in our market report. However, the size of the location has to be taken into account, and Darmstadt has to hold its own compared to office market heavyweights such as Essen, Hannover, Mannheim and Nuremberg. Office take-up was relatively low last year at 35,000 sqm. In the five previous years the average figure was more than 50,000 sqm. However, this is not a cause of concern, but is essentially due to the absence of the large contracts which boosted take-up in previous years, such as the regional council (2017), the Alnatura headquarters (2016), and Wella and Merck (both 2015). Despite the positive prospects for the location, the potential for rent growth is limited. On the one hand, rent levels in the city with a population of 160,000 are already very high, and on the other hand, the conversion of large, former military sites will make it possible to react flexibly to future demand for space.

Office: stable office market with high location potential and space reserves from converted areas

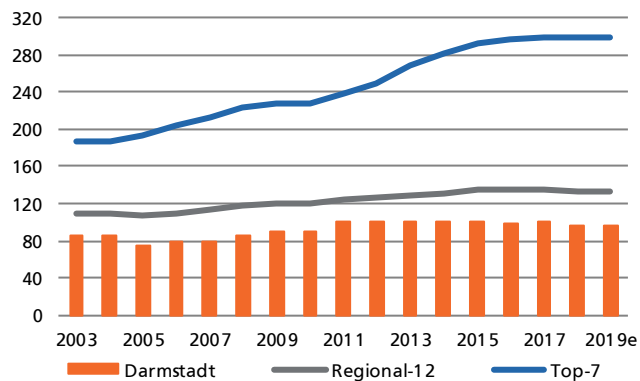
OFFICE FORECASTS

		2016	2017	2018	2019e
Demand					
GDP	% yoy	3.1	3.4	3.8	3.7
Per capita GDP	in EUR	68,014	69,958	71,807	74,032
No. of office workers	in '000	49.6	51.4	51.9	-
No. of office workers	% yoy	-1.0	3.7	0.9	-
Supply					
Total office space	in m ² '000	1,595	1,611	1,617	1,630
Total office space	% yoy	1.0	1.0	0.4	0.8
Vacancy rate	%	4.6	3.6	3.7	3.5
Office rents					
Prime/secondary location	EUR/m ²	13.1 / 7.5	13.1 / 7.6	13.2 / 7.6	13.3 / 7.6
Prime/secondary location	% yoy	0.8 / 0.0	0.0 / 1.3	0.8 / 0.0	1.0 / 0.0

Source: Scope, bulwiengesa, DZ BANK Research forecast

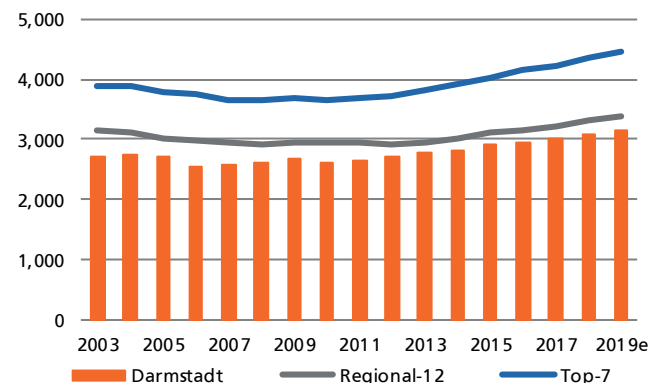
Retail space in Darmstadt

PRIME RETAIL RENTS IN EUR PER SQM



Source: bulwiengesa, DZ BANK Research forecast

RETAIL SALES IN EUR PER SQM



Source: Scope

Retail conditions in Darmstadt are generally good and include strong demographic growth, a positive job market, and high purchasing power of 108 points for a university city. There is also a large catchment area, extending from the South of the city and consisting of nearly 650,000 people. The city centre is also an attractive shopping location with a broad offer, a good supply of bars and restaurants, and short distances. The two prime locations of Schuchardstraße and Ernst-Ludwig-Straße are enhanced by two city centre shopping centres, the Luisen-Center and the Carree, and the Markthalle which reopened at the end of 2015 after renovation. The renovation of the Wilhelminenpassage is also adding value. Despite the positive conditions, prime rents have not managed to increase above EUR 100 per sqm, a level they first reached in 2011. They also fell below this level in 2016, and again in 2018. Last year prime rents fell by EUR 3 to EUR 97 per sqm and we also expect a downward tendency this year. Negative factors such as the Loop 5 shopping centre only a few kilometres away which opened in 2009, large specialist retail agglomerations in the vicinity, and the proximity of the top location of Frankfurt are not however new. Nor is online shopping a new development. It is nevertheless becoming more important and even shopping locations with high purchasing power such as Darmstadt with its strong demographic growth and attractive city centre shopping offer are losing ground.

Retail: Darmstadt well positioned as a shopping location in the South of the Rhine-Main region

RETAIL FORECASTS

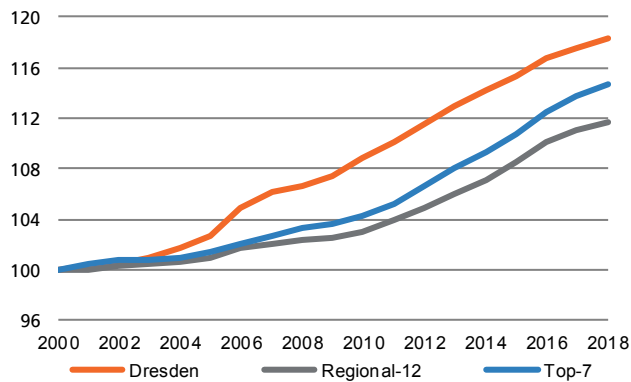
		2016	2017	2018	2019e
Demand					
Per cap. disposable income	EUR/month	2,088	2,126	2,163	2,206
Unemployment rate	%	6.1	5.9	5.2	5.1
Retail sales	EUR m/% yoy	1,150 / 3.1	1,183 / 2.9	1,218 / 2.9	1,252 / 2.8
Retail sales	EUR/m ² sales space	2,934	3,007	3,075	3,150
Supply					
Retail space	in m ² '000	392	393	396	398
Retail space	per capita in m ²	2.51	2.50	2.49	2.49
Retail rent					
Prime/secondary location	EUR/m ²	98 / 10.5	100 / 11.0	97 / 11.0	96 / 11.0
Prime/secondary location	% yoy	-2.0 / -4.5	2.0 / 4.8	-3.0 / 0.0	-1.0 / 0.0

Source: Scope, bulwiengesa, DZ BANK Research forecast

yoy = year-on-year

DRESDEN

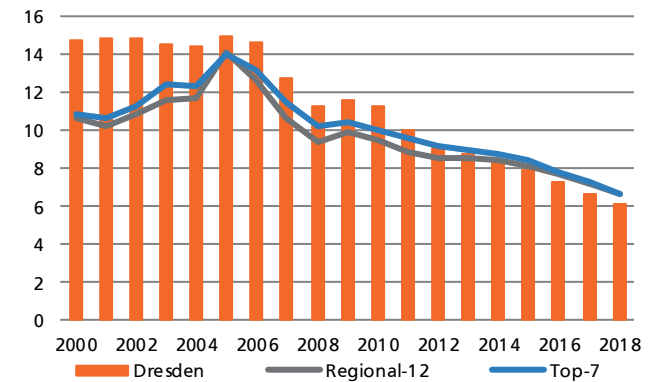
POPULATION GROWTH



Source: Scope

Index 2000 = 100

UNEMPLOYMENT RATE (%)



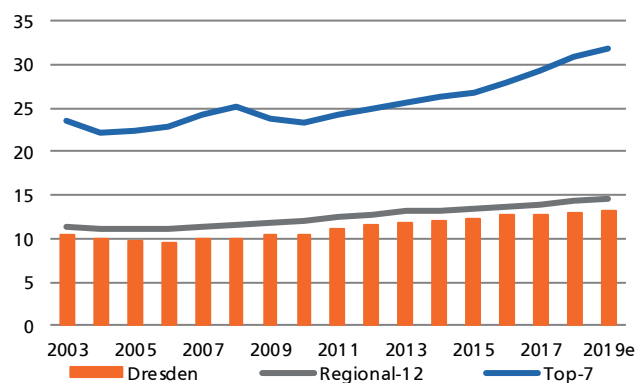
Source: bulwiengesa, BA, DZ BANK Research forecasts

Dresden is the third largest city in eastern Germany with 550,000 inhabitants. The capital of the state of Saxony ranks 12th in Germany as a whole. The city has seen strong population growth of around 11 per cent in ten years. Ongoing migration to the city is going hand-in-hand with sustained economic success. However, the advantage of relatively cheap living costs from comparatively low rents for housing compared with large western German cities has largely vanished. The strong economic performance is reflected in a marked reduction in unemployment. The rate had fallen to 5.6 per cent by December 2018; in 2005, the level was almost three times as high. In view of the city's many administrative functions, the public sector is a major employer. In addition, the presence of the Technical University with 34,000 students and many research institutions means that there are many jobs in the science and technology sector. All in all, over 40,000 students are enrolled at Dresden's higher education institutions. The city's high-tech sector has led to the term "Silicon Saxony". A total of around 60,000 people work in micro-electronics and IT in and around Dresden. In addition, automotive, aviation, life science, nano-technology/new materials and plant and machinery firms are also contributing to the city's strong economy. The city's cultural and creative industry also employs 18,500 people. In addition, the Baroque city with its many art treasures has become a tourist hotspot with over 4 million overnight stays p.a.

Successful economy has led to sharp fall in unemployment in Baroque city

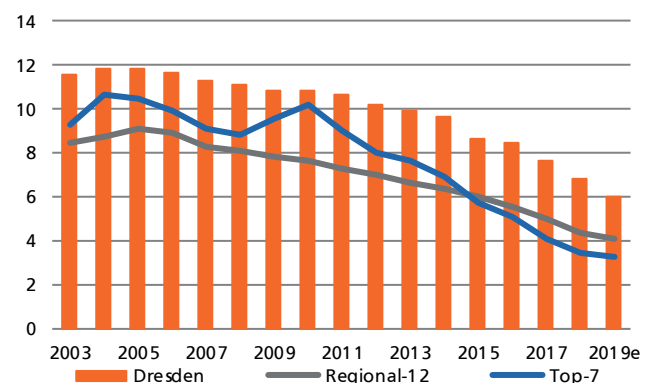
Office space in Dresden

PRIME RENT FOR OFFICE SPACE IN EUR PER SQM



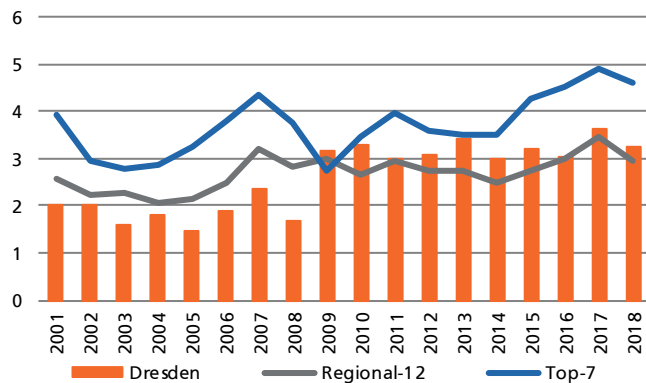
Source: bulwiengesa, DZ BANK Research forecasts

VACANCY RATE (%)



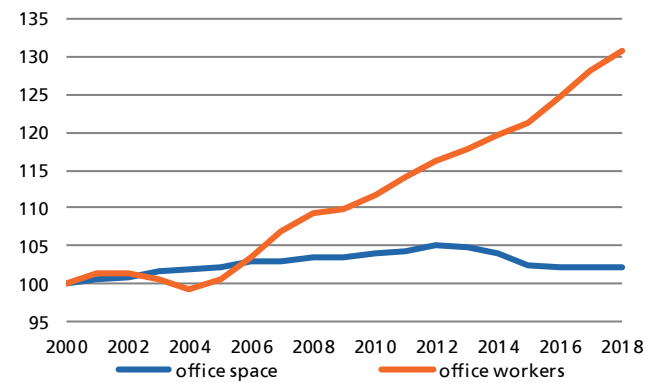
Source: bulwiengesa, DZ BANK Research forecasts

TAKE-UP AS % OF OFFICE SPACE



Source: bulwiengesa

TREND IN OFFICE SPACE AND NO. OF OFFICE WORKERS



Source: Scope, bulwiengesa

Index 2000 = 100

Dresden is the third largest office market in eastern Germany with 2.6 million sqm of space. After the surplus generated by the post-reunification construction boom of the 1990s, there was no further increase in the stock of office space after the turn of the millennium. In the wake of a solid increase in employment, the vacancy rate has fallen from almost 20 per cent (1998) to just 7 per cent most recently. Although the figure is still above the regional centre average for Germany as a whole, nevertheless there has been a noticeable tightening in the supply of contemporary office space. This is also reflected in the fact that the prime rent has risen by 30 per cent to EUR 13 per sqm lately within the space of ten years. Whereas housing construction has been the main focus of attention in the last few years, the rise in office rents means that building offices has now become more attractive again. A larger development is expected to take shape on the east side of the Wiener Platz. In addition, the Slovak developer HB Reavis is planning an office complex in the south-west of Dresden which will be its first project in Germany. Moreover, the city intends to build an administration centre for 1,600 employees by 2025 on the Ferdinandplatz. For the moment, though, office space remains scarce. As in 2018, only a small amount of new space is expected to come to market this year. The situation looks similar for office take-up. Unlike in the case of the major projects mentioned, take-up – which is stable at around 80,000 to 90,000 sqm p.a. – is mainly being driven by smaller rental transactions. There was no deal bigger than 3,000 sqm in 2018. We expect the positive market trend to continue and anticipate a further reduction in the vacancy rate along with a slight increase in the prime rent.

Office: Positive economic trend leads to further reduction in high vacancy rate which followed post-reunification construction boom

OFFICE FORECASTS

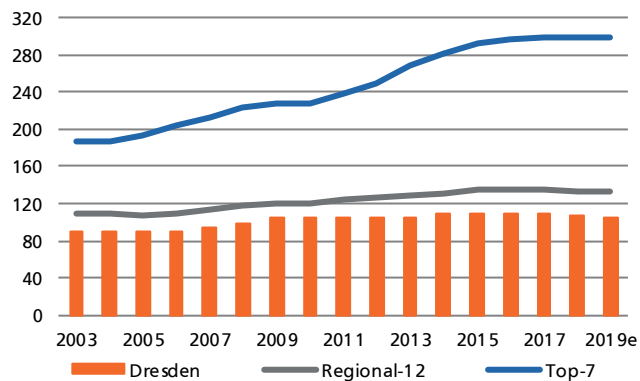
		2016	2017	2018	2019e
Demand					
GDP	% yoy	3.3	3.6	3.9	3.9
Per capita GDP	in EUR	37,883	38,964	40,254	41,597
No. of office workers	in '000	103.9	106.9	109.0	-
No. of office workers	% yoy	2.8	2.8	2.0	-
Supply					
Total office space	in m ² '000	2,632	2,631	2,636	2,650
Total office space	% yoy	-0.3	0.0	0.2	0.5
Vacancy rate	%	8.4	7.6	6.8	6.0
Office rents					
Prime/secondary location	EUR/m ²	12.6 / 5.5	12.8 / 5.5	13.0 / 5.7	13.2 / 5.8
Prime/secondary location	% yoy	2.4 / 1.9	1.6 / 0.0	1.6 / 3.6	1.7 / 1.8

Source: Scope, bulwiengesa, DZ BANK Research forecasts

yoy = year-on-year

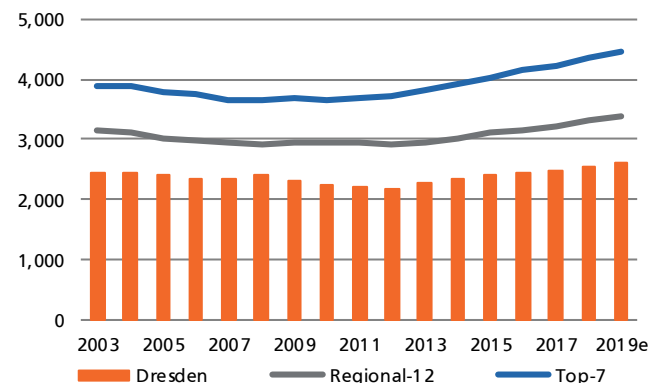
Retail space in Dresden

PRIME RETAIL RENT IN EUR PER SQM



Source: bulwiengesa, DZ BANK Research forecasts

RETAIL SALES IN EUR PER SQM



Source: Scope

Dresden together with Berlin and Leipzig are the three top shopping locations in eastern Germany. Conditions for the retail sector in Dresden are favourable. The city has a large catchment area of 1.3 million people. Other plus points are the economic upturn, fall in unemployment, population growth and a high number of visitors to the city. Measured in relation to this, the prime rent which fell from EUR 110 to EUR 107 per sqm last year is rather moderate. In previous years, moreover, the prime rent in Dresden rose slower than in other booming cities. There are a number of reasons for this: Saxony has another top shopping location with Leipzig, which means a certain amount of competition. This could explain a rather low centrality score of 110 points in spite of the location's attraction. In addition, at 91 points, purchasing power is well below average. In spite of the city's economic successes, its relative purchasing power has not improved in the last few years. In contrast, Dresden offers a generous amount of retail space with three shopping miles – the Prager Straße, Seestraße/Altmarkt and Neumarkt – and two big shopping centres. Retail space was extended further through project developments such as the PRAGER CARRÉE which opened at the end of 2016, but which also went hand-in-hand with a general improvement for the city. There is also competition from many shopping options on the outskirts of Dresden – often centres for specialist stores. In contrast, the opening of a Decathlon branch in the Kugelhaus in the autumn of 2018 is providing a new magnet for shoppers. On balance, Dresden is an attractive location for shoppers and retailers. Nevertheless, the prime rent is likely at best to remain stable this year.

Retail: Attractive shopping location in eastern Germany with relatively low rent level

RETAIL FORECASTS

		2016	2017	2018	2019e
Demand					
Per cap. disposable income	EUR/month	1,792	1,836	1,887	1,941
Unemployment rate	%	7.3	6.6	6.1	5.9
Retail sales	EUR m/% yoy	2,579 / 2.9	2,659 / 3.1	2,749 / 3.4	2,843 / 3.4
Retail sales	EUR/m ² sales space	2,440	2,490	2,547	2,613
Supply					
Retail space	in m ² '000	1,057	1,068	1,079	1,088
Retail space	m ² /inhabitant	1.95	1.95	1.96	1.97
Retail rent					
Prime/secondary location	EUR/m ²	110 / 9.0	110 / 9.0	107 / 9.0	106 / 9.0
Prime/secondary location	% yoy	0.0 / 0.0	0.0 / 0.0	-2.7 / 0.0	-0.9 / 0.0

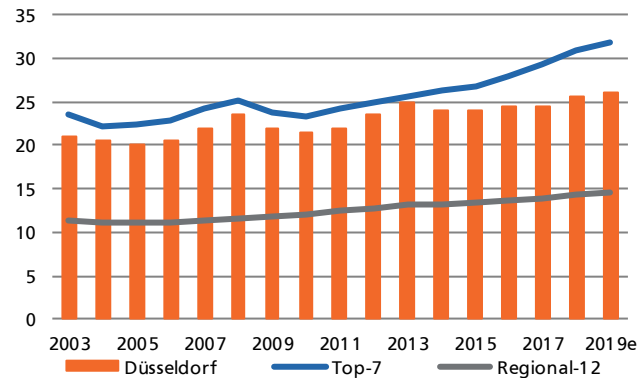
Source: Scope, bulwiengesa, DZ BANK Research forecasts

yoy = year-on-year

DÜSSELDORF

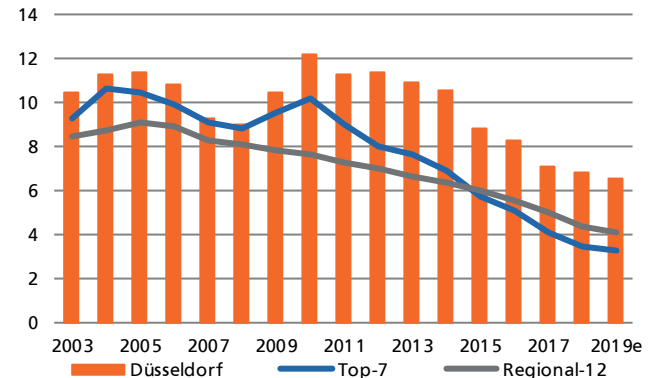
Office space in Düsseldorf

PRIME RENT FOR OFFICE SPACE IN EUR PER SQM



Source: bulwiengesa, DZ BANK Research forecasts

VACANCY RATE (%)



Source: bulwiengesa, DZ BANK Research forecasts

Düsseldorf's strong economy and its function as the state capital have led to the emergence of a heavyweight among German office locations which, at 7.7 million sqm, is roughly on a par with Cologne and Stuttgart. However, Düsseldorf is in the lead when it comes to take-up and the prime rent for office space, although it has been stagnating for some time, a fact which is likely to reflect an above-average vacancy level. Whereas the prime rent in top locations has increased by a total of 20 per cent in the last five years, it has been moving sideways from EUR 24 to EUR 25 per sqm in Düsseldorf since 2012. The prime rent in the city has only been pointing upward since 2015. This most probably reflects steady demand for office space and a gradual tightening in supply. Last year, the vacancy rate fell to just under 7 per cent. This represents a decline of over 5 percentage points since 2010. Take-up reached a solid level of 331,000 sqm in 2018, only beaten by the level in the record year 2015. This only included one five-figure deal, although at over 35,000 sqm, it was substantial. The tenant is the accountancy firm Deloitte, which is likely to move into the new Heinrich Campus in 2021. Next in terms of size are nine transactions, including co-working offices leased by Regus and rent24, which are between 3,000 and 7,000 sqm. Düsseldorf is an attractive office location, and, in view of a growing shortage of space, it is still able to do well with a fairly good supply. The prime rent could increase slightly this year.

Office: Prime rent for office space in Düsseldorf could pick up again as vacancy rate continues to dwindle

OFFICE FORECASTS

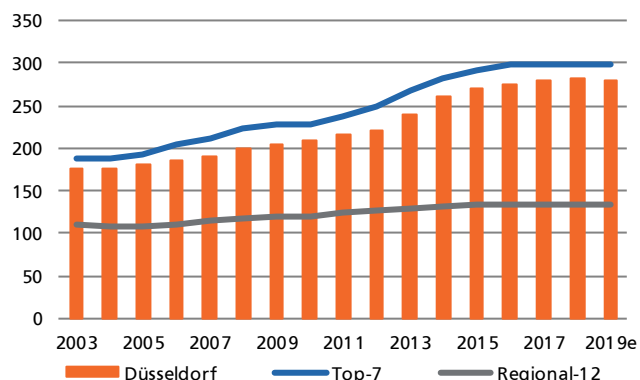
		2016	2017	2018	2019e
Demand					
GDP	% yoy	3.6	3.9	4.2	4.2
Per capita GDP	in EUR	80,754	83,428	86,626	89,992
No. of office workers	in '000	206.7	210.9	215.5	-
No. of office workers	% yoy	2.0	2.0	2.2	-
Supply					
Total office space	in m ² '000	7,554	7,560	7,650	7,700
Total office space	% yoy	0.1	0.1	1.2	0.7
Vacancy rate	%	8.3	7.1	6.8	6.5
Office rents					
Prime/secondary location	EUR/m ²	24.5 / 10.3	24.5 / 10.3	25.5 / 11.0	26.0 / 11.0
Prime/secondary location	% yoy	2.1 / 3.0	0.0 / 0.0	4.1 / 6.8	2.0 / 0.0

Source: Scope, bulwiengesa, DZ BANK Research forecasts

yoy = year-on-year

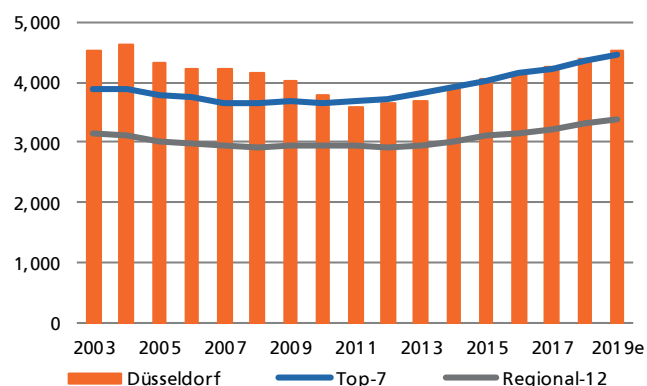
Retail space in Düsseldorf

PRIME RETAIL RENT IN EUR PER SQM



Source: bulwiengesa, DZ BANK Research forecasts

RETAIL SALES IN EUR PER SQM



Source: Scope

For the last ten years or so, Düsseldorf's city centre has been one huge building site. The elevated road has been replaced by a tunnel, while the new Wehrhahn underground line now provides a better link to the suburban transport network. The project has also included modernising department stores – Carsch-Haus, Kaufhof, Sevens and Kö-Galerie – and building new stores and shopping centres such as the Kö-Bogen I. However, before the city can benefit in full from all this work, building has to be completed on the spectacular Kö-Bogen II and the new pedestrian precinct in the hitherto less attractive Schadowstraße – scheduled by 2020. Düsseldorf's reputation as a shopping destination for fashion and luxury goods is backed up by the city's all-round strength as a location. It has a large catchment area of 2 million inhabitants and high purchasing power of 119 points, beaten only by Munich among the top 7 German cities. In addition, Düsseldorf's inner-city retail is of high importance because it accounts for around one third of total sales space in the city. Only Stuttgart has a similarly high concentration; in the remaining top locations, the city centre accounts for a maximum of one quarter of retail space. In addition, the high-end "Kö" location offers a high-quality space in which to spend time with a large choice of places to eat and drink. The former separation between a "bank" and a "shopping" side is now disappearing. In the past year, the prime rent has increased slightly to EUR 282 per sqm, in spite of the city being a permanent building site. This year, it will probably remain at around EUR 280; a further increase is unlikely. This also applies in future when the increase in space from the Kö-Bogen II will coincide with growing headwind from online retailing.

Retail: Major work on Düsseldorf's city centre which turned it into a building site now on the home straight

RETAIL FORECASTS

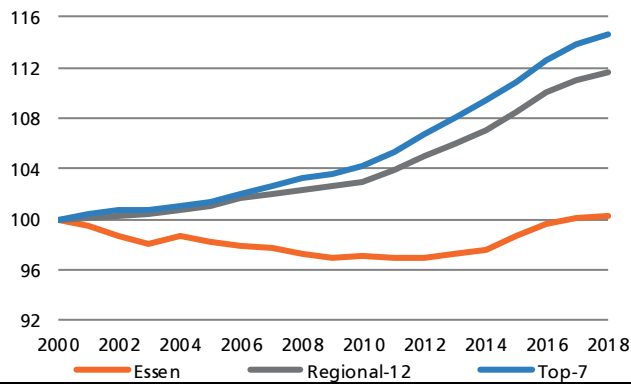
		2016	2017	2018	2019e
Demand					
Per cap. disposable income	EUR/month	2,389	2,441	2,502	2,566
Unemployment rate	%	7.8	7.4	6.7	6.4
Retail sales	EUR m/% yoy	5,151 / 3.4	5,327 / 3.4	5,535 / 3.9	5,757 / 4.0
Retail sales	EUR/m ² sales space	4,153	4,244	4,375	4,512
Supply					
Retail space	in m ² '000	1,240	1,255	1,265	1,276
Retail space	m ² /inhabitant	2.03	2.04	2.05	2.06
Retail rent					
Prime/secondary location	EUR/m ²	275 / 16.0	280 / 16.0	282 / 17.0	280 / 17.0
Prime/secondary location	% yoy	1.9 / 0.0	1.8 / 0.0	0.7 / 6.3	-0.7 / 0.0

Source: Scope, bulwiengesa, DZ BANK Research forecasts

yoy = year-on-year

ESSEN

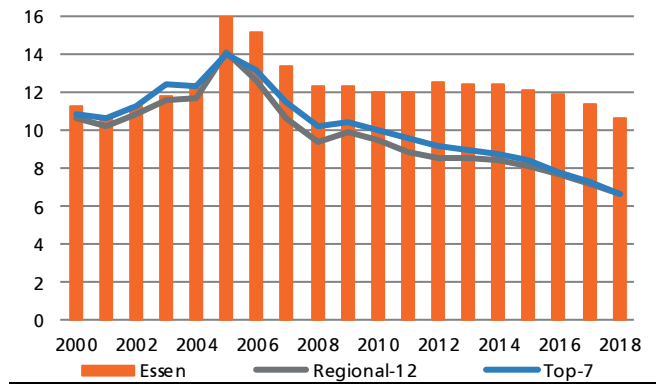
POPULATION GROWTH



Source: Scope

Index 2000 = 100

UNEMPLOYMENT RATE (%)



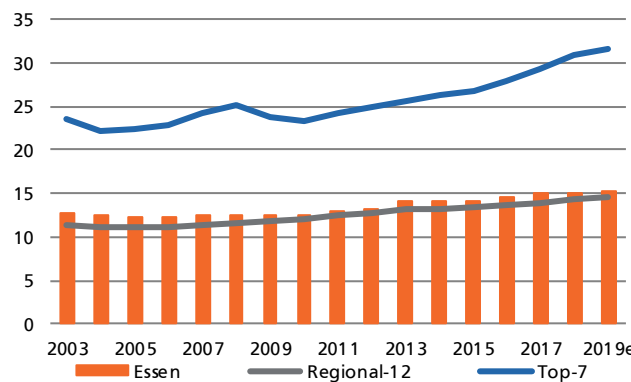
Source: bulwiengesa, BA, DZ BANK Research forecasts

The outlook for Essen is improving. After declining for a long period, Essen's population has been growing again since 2014. At not quite 600,000 inhabitants, the Ruhr city is roughly in line with Dortmund and Dresden and now among the ten largest cities in Germany. At the time of Germany's economic miracle, Essen had a population of up to 730,000. The city lost 150,000 inhabitants in the wake of the mining and steel crisis. The positive trend, reflected not least in a growing population, can be ascribed to the city's transformation into a service location. The economic focus has shifted towards administration with an impressive list of company head offices including three groups listed in the DAX (E.ON, RWE, ThyssenKrupp) and four MDAX companies (Brenntag, Evonik, Hochtief and Innogy). Other major companies based in Essen are Aldi-Nord, Deichmann, E.ON-Ruhrgas, Funke Mediengruppe, Karstadt, Medion, Schenker and STEAG. Trade fairs are another important earner for the local economy. The city's still relatively new Duisburg-Essen University – replacing the Gesamthochschule which was founded in 1972 – also has a positive impact on the city's performance. A total of almost 30,000 students are enrolled at Essen's various higher education institutions. There are good transport links through the city's central position in the Ruhr region. Düsseldorf airport is only 30 kilometres away. One downside is the fact that unemployment is only falling slowly. In December 2018, it stood at 10.1 per cent, the highest level of all the cities covered in this study.

Upturn in Essen: after a sharp fall, Essen's population is also growing once again

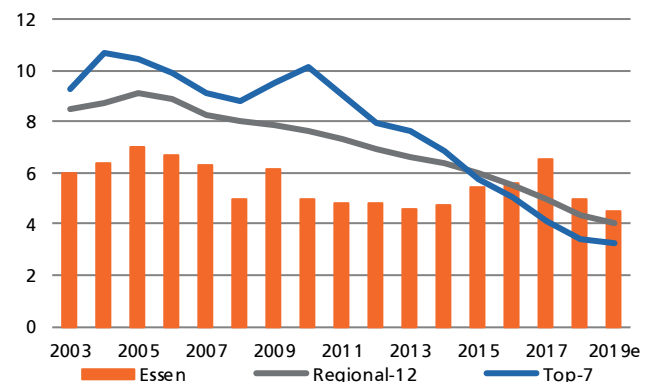
Office space in Essen

PRIME RENT FOR OFFICE SPACE IN EUR PER SQM



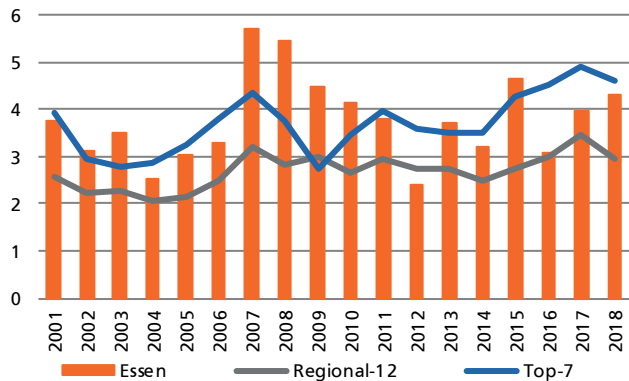
Source: bulwiengesa, DZ BANK Research forecasts

VACANCY RATE (%)



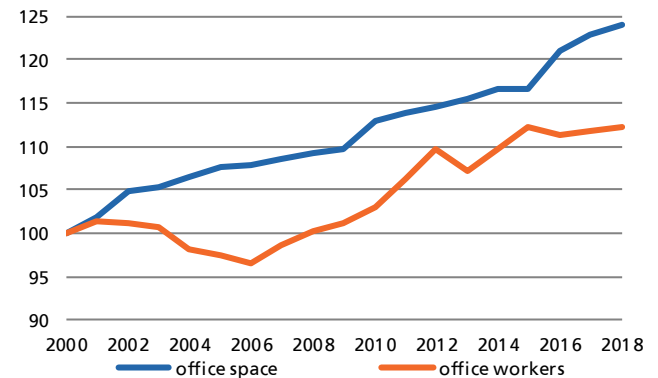
Source: bulwiengesa, DZ BANK Research forecasts

TAKE-UP AS % OF OFFICE SPACE



Source: bulwiengesa

TREND IN OFFICE SPACE AND NO. OF OFFICE WORKERS



Source: Scope, bulwiengesa

Index 2000 = 100

Essen is an important office location since it is home to so many head offices. At 3.1 million sqm, the city's office market ranks below the top 7, in 11th place after Hannover, Nuremberg and Bonn. The market did well last year even though the prime rent remained at EUR 15 per sqm. However, it is already above average in relation to the regional centres covered. Nuremberg is on the same level; only Hannover and Mannheim are slightly more expensive. In addition, a substantial amount of new space came to market in 2017 at over 70,000 sqm; in 2018, the figure was only half that and was more in line with the ten-year average. The amount of new space in 2019 is likely to be limited, and therefore supply is again set to tighten. The increase in 2017 reflected a reduction in space used by the Karstadt head office by two thirds. Compounded by the marketing of completely refurbished offices, the vacancy rate, which had generally stood at 5 per cent, rose to 6.5 per cent. Last year, however, the figure fell back down to 5 per cent. The decline in the vacancy rate will probably continue towards a figure of 4.5 per cent in 2019. At 137,000 sqm, take-up in 2018 was very good. Contributory factors included two big transactions in Q1. The Police has taken over around 27,000 sqm of the space freed up by the Karstadt head office. Aldi Nord has leased 20,000 sqm. The prime rent could increase again slightly this year in view of a tighter supply.

Office: High level of office space take-up in 2018 while prime rent remained stable

OFFICE FORECASTS

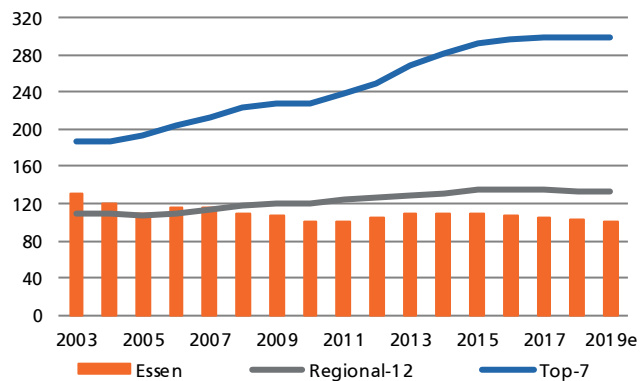
		2016	2017	2018	2019e
Demand					
GDP	% yoy	2.6	2.9	3.2	3.2
Per capita GDP	in EUR	42,147	43,163	44,484	45,823
No. of office workers	in '000	99.2	99.6	100.1	-
No. of office workers	% yoy	-0.7	0.4	0.4	-
Supply					
Total office space	in m ² '000	3,096	3,142	3,171	3,190
Total office space	% yoy	3.8	1.5	0.9	0.6
Vacancy rate	%	5.6	6.5	5.0	4.5
Office rents					
Prime/secondary location	EUR/m ²	14.5 / 6.1	15.0 / 6.1	15.0 / 6.5	15.3 / 6.5
Prime/secondary location	% yoy	3.6 / -1.6	3.4 / 0.0	0.0 / 6.6	1.8 / 0.0

Source: Scope, bulwiengesa, DZ BANK Research forecasts

yoy = year-on-year

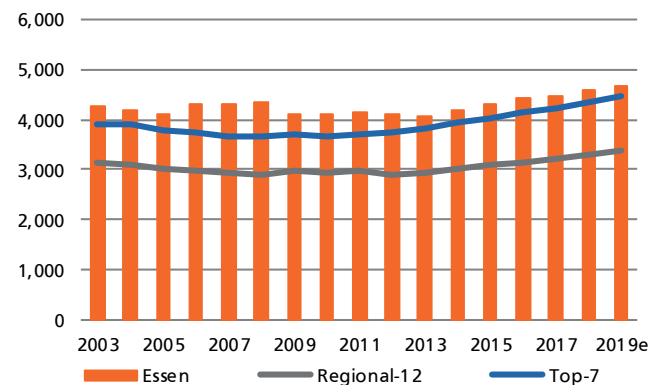
Retail space in Essen

PRIME RETAIL RENT IN EUR PER SQM



Source: bulwiengesa, DZ BANK Research forecasts

RETAIL SALES IN EUR PER SQM



Source: Scope

Although Essen is still a heavyweight among retail locations in western Germany, it is no longer the number one shopping destination in Germany's industrial heartland that it once was. This reflects not only the structural change and unemployment, but above all growing competition from neighbouring cities, i.e. Düsseldorf, Dortmund and Oberhausen with its CentrO. This loss of importance has hit the prime rent, which has been moving countercurrent to the rising trend in retail rents since the beginning of the last decade. The prime rent currently stands at a quarter below the level at the turn of the millennium. By 2013, it had recovered slightly to EUR 110 per sqm, but has now fallen three years in a row to EUR 102 per sqm since 2016. Although Essen's city centre has become more attractive again in the last few years, above all through the opening in 2009 of the big inner-city shopping centre on the Limbecker Platz, it is being hit by regional competition, a fall in demand for space from retailers and a marked increase in space through the new shopping centre. In addition, there was the revitalisation of the RATHAUS GALERIE in 2010 and a remodelling of the Haus am Kettwiger Tor in 2013. Consequently, Essen now has not only its shopping miles, the Limbecker and Kettwiger Straße, but also three modern shopping malls. There was a reduction in vacant space in the inner city in 2018 with the arrival of the Scandinavian design concept Granit and loud-speaker manufacturer Teufel. However, the marketing of space is not being made any easier through e-commerce and strong competition. The prime rent could therefore fall towards the EUR 100 mark this year.

Retail: Essen becoming more attractive once again as a shopping destination, but further fall in prime rent in 2018

RETAIL FORECASTS

		2016	2017	2018	2019e
Demand					
Per cap. disposable income	EUR/month	1,905	1,934	1,971	2,010
Unemployment rate	%	11.9	11.4	10.6	10.3
Retail sales	EUR m/% yoy	3,768 / 2.6	3,872 / 2.8	3,991 / 3.1	4,113 / 3.1
Retail sales	EUR/m ² sales space	4,409	4,467	4,568	4,656
Supply					
Retail space	in m ² '000	855	867	874	883
Retail space	m ² /inhabitant	1.46	1.47	1.48	1.49
Retail rent					
Prime/secondary location	EUR/m ²	108 / 12.0	105 / 12.0	102 / 11.5	100 / 12.0
Prime/secondary location	% yoy	-1.8 / 4.3	-2.8 / 0.0	-2.9 / -4.2	-2.0 / 4.3

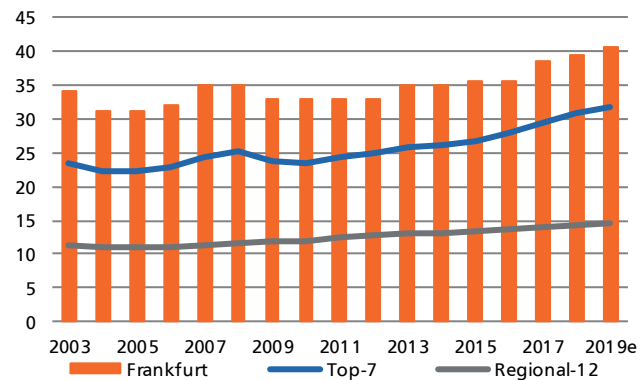
Source: Scope, bulwiengesa, DZ BANK Research forecasts

yoy = year-on-year

FRANKFURT

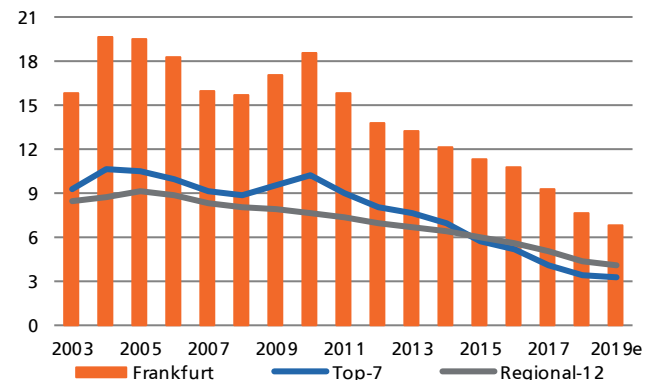
Office space in Frankfurt

PRIME RENT FOR OFFICE SPACE IN EUR PER SQM



Source: bulwiengesa, DZ BANK Research forecasts

VACANCY RATE (%)



Source: bulwiengesa, DZ BANK Research forecasts

Frankfurt's office market has the highest rents and the highest vacancy rate among the top 7. After a weak patch for office lettings in Frankfurt following the banking crisis, the outlook is positive once again – and not just because of Brexit. The number of office workers is now picking up noticeably again. Frankfurt's potential as a location is underscored by the fact that a record EUR 10bn was invested in the city in 2018 – around one sixth of the total investment in German commercial real estate. The positive trend is also illustrated by an increase in the prime rent which climbed to EUR 39.50 per sqm in 2018 after stagnating at around EUR 35 per sqm from 2013 to 2016. The recovery in the office market is also leading to a rapid reduction in the amount of vacant office space. Although the vacancy rate was still well above 7 per cent in 2018, that was nevertheless down by over half since a figure of over 18 per cent in 2010. The positive trend is being driven by a flourishing lettings business. Almost 600,000 sqm have been let – the third highest figure since the record year 2000. Even the previous-year figure which was boosted by two major transactions was only marginally higher. Commerzbank and FAZ were behind the two biggest deals in 2018 of 36,000 and 24,000 sqm respectively. Moreover, the ten biggest deals involve co-working providers. We assume that the prime rent will jump above the EUR 40 per sqm mark this year. However, the uptrend is likely to ease since a large number of developments have been coming onto the market since 2018.

Office: Frankfurt office market picks up significantly after weak patch

OFFICE FORECASTS

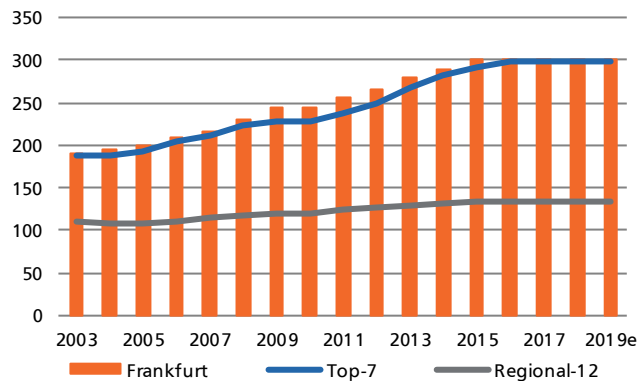
		2016	2017	2018	2019e
Demand					
GDP	% yoy	3.2	3.5	3.8	3.8
Per capita GDP	in EUR	93,377	95,195	98,013	100,875
No. of office workers	in '000	289.0	295.4	301.0	-
No. of office workers	% yoy	1.7	2.2	1.9	-
Supply					
Total office space	in m ² '000	10,250	10,164	10,198	10,300
Total office space	% yoy	-0.4	-0.8	0.3	1.0
Vacancy rate	%	10.7	9.3	7.6	6.8
Office rents					
Prime/secondary location	EUR/m ²	35.5 / 9.5	38.5 / 9.6	39.5 / 9.8	40.5 / 10
Prime/secondary location	% yoy	0.0 / 0.0	8.5 / 1.1	2.6 / 2.1	2.5 / 2.0

Source: Scope, bulwiengesa, DZ BANK Research forecasts

yoy = year-on-year

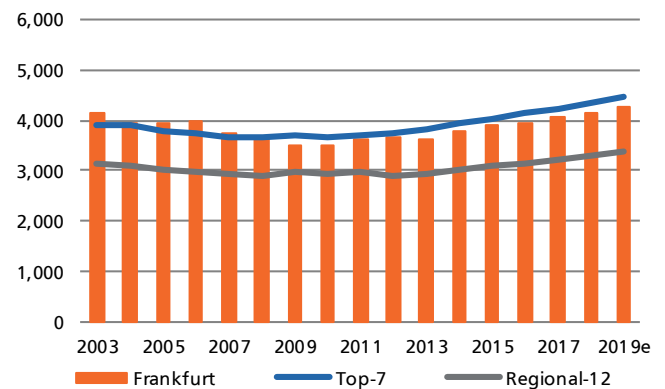
Retail space in Frankfurt

PRIME RETAIL RENT IN EUR PER SQM



Source: bulwiengesa, DZ BANK Research forecasts

RETAIL SALES IN EUR PER SQM



Source: Scope

Frankfurt is one of the strongest locations in the German retail sector with a catchment area of 2.3 million people with high purchasing power. A steady increase in the population, employment and tourism underpin the attraction of Frankfurt's city centre for retailers and food and drink outlets. The market has responded to demand for space with a series of developments such as the Skyline Plaza shopping centre which opened near the trade fair ground in 2013, and which has scored highly with visitors for food court. Other examples are developments around the Goethestraße (for luxury shopping) such as One Goetheplaza or the maro. Most of the building at present is on Frankfurt's "high street", the Zeil. The Zeilgalerie which has been pulled down has been replaced by the new UpperZeil next to Kaufhof. Just a little further on, the MyZeil shopping centre with its new Foodtopia restaurant area and exclusive art house cinema are undergoing a comprehensive modernisation programme to be completed by the spring after less than ten years in business. Outside the city, the Nordwestcenter has recently been extended to coincide with its 50th birthday. Whereas the Kaufhof store on the Zeil is growing, its branch in the Nordwestcenter is set to close in the autumn of 2019. The planned extension of the Hessen-Center on the eastern edge of the city has now been scrapped. It seems that the increase in sales space is reaching the limits of what is viable. However, the Center, which is also almost 50 year old, will be modernised. The prime rent in Frankfurt has been stagnating at EUR 300 per sqm since the end of 2015. In spite of the strength of the location, there is no sign of any upside potential at present.

Retail: Frankfurt's shopping centres being brought up to scratch

RETAIL FORECASTS

		2016	2017	2018	2019e
Demand					
Per cap. disposable income	EUR/month	2,073	2,117	2,170	2,223
Unemployment rate	%	6.3	5.9	5.4	5.2
Retail sales	EUR m/% yoy	6,081 / 3.4	6,292 / 3.5	6,519 / 3.6	6,753 / 3.6
Retail sales	EUR/m ² sales space	3,960	4,044	4,151	4,274
Supply					
Retail space	in m ² '000	1,536	1,556	1,570	1,580
Retail space	m ² /inhabitant	2.10	2.10	2.10	2.09
Retail rent					
Prime/secondary location	EUR/m ²	300 / 17.5	300 / 17.5	300 / 18.0	300 / 18.0
Prime/secondary location	% yoy	0.0 / -2.8	0.0 / 0.0	0.0 / 2.9	0.0 / 0.0

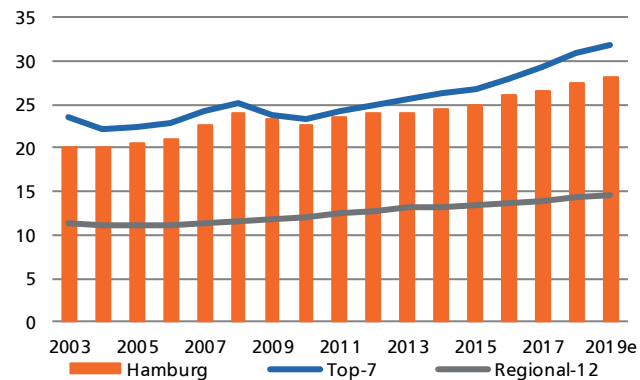
Source: Scope, bulwiengesa, DZ BANK Research forecasts

yoy = year-on-year

HAMBURG

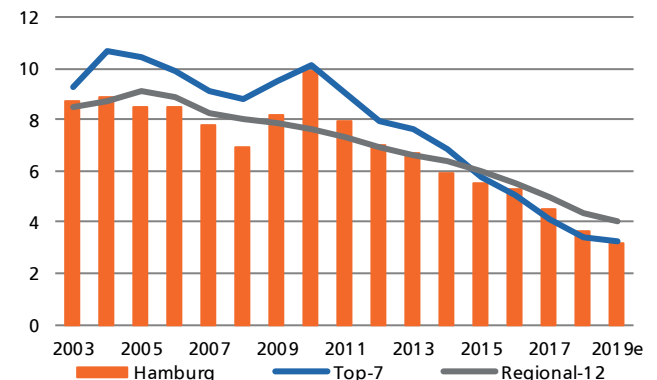
Office space in Hamburg

PRIME RENT FOR OFFICE SPACE IN EUR PER SQM



Source: bulwiengesa, DZ BANK Research forecasts

VACANCY RATE (%)



Source: bulwiengesa, DZ BANK Research forecasts

The upward trend in the Hamburg office market is continuing. However, in spite of high demand for office space, take-up last year (570,000 sqm) could not match the figure of 635,000 in 2017 – the highest ever take-up in the Hanseatic city – although there was an absence of especially large transactions of the kind seen the previous year. The four largest rental transactions combined in 2017 amounted to over 100,000 sqm. In 2018, the corresponding transactions did not even come up to half that figure. The three biggest spaces of between 10,000 and 15,000 sqm were leased by Postbank, Akquinet and Signal Iduna. Take-up was slowed down not least by a growing shortage of space in the most northerly city among the top German locations. Whereas around 1.3 million sqm of office space still stood empty in 2010 – almost 10 per cent of the entire stock – last year the figure was down to under 500,000 sqm, i.e. less than 4 per cent. However, only a fraction of this space is the kind of contemporary office space for which there is high demand. A breakdown of the top ten rental transactions reflects the shortage. Eight leases involve new-build projects which are likely to become available between 2019 and 2023. Tenants include two co-working providers, Design Offices and WeWork, which generally offer their users attractive working space in convenient locations. The prime rent has been rising faster since 2014 on the back of a positive market trend and tight supply. It has increased by EUR 5 to EUR 27.50 per sqm compared with 2010. Space is likely to continue to dwindle in 2019 and rents to rise.

Office: Upturn in Hamburg office market likely to carry on in 2019

OFFICE FORECASTS

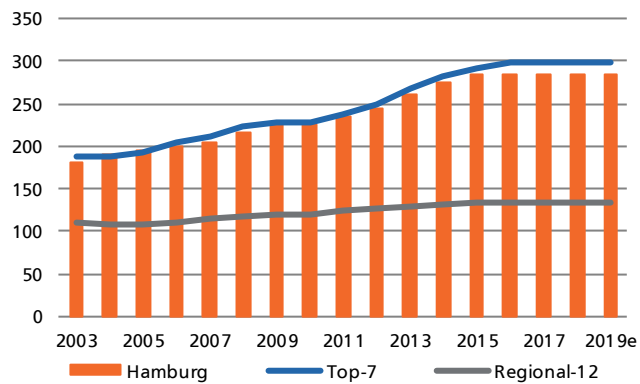
		2016	2017	2018	2019e
Demand					
GDP	% yoy	2.6	4.2	3.9	3.9
Per capita GDP	in EUR	62,431	64,243	66,198	68,339
No. of office workers	in '000	426.2	435.5	445.0	-
No. of office workers	% yoy	1.8	2.2	2.2	-
Supply					
Total office space	in m ² '000	13,718	13,706	13,796	13,905
Total office space	% yoy	1.1	-0.1	0.7	0.8
Vacancy rate	%	5.3	4.5	3.6	3.2
Office rents					
Prime/secondary location	EUR/m ²	26.0 / 10.8	26.5 / 11.0	27.5 / 12.0	28.0 / 12.0
Prime/secondary location	% yoy	4.0 / 2.9	1.9 / 1.9	3.8 / 9.1	1.8 / 0.0

Source: Scope, bulwiengesa, DZ BANK Research forecasts

yoy = year-on-year

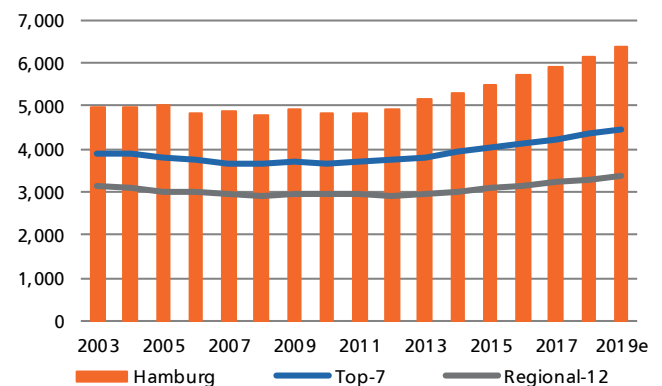
Retail space in Hamburg

PRIME RETAIL RENT IN EUR PER SQM



Source: bulwiengesa, DZ BANK Research forecasts

RETAIL SALES IN EUR PER SQM



Source: Scope

As the leading shopping location in N. Germany, Hamburg is backed by a solid economy, population growth, high purchasing power and a 3.5 million-strong catchment area. In addition, the city hosts around 14 million overnight visitors p.a. with its flourishing tourist trade and close to 900,000 cruise-ship visitors. On the plus side, the city offers a broad range of shopping options from conventional high-street locations such as the Spitalerstraße and the Mönckebergstraße in the east end of the city, all the way to the luxury end of the market such as the Neuer Wall in the west end of the city. Between the two is the Europa Passage, the only large shopping centre in the city centre with its new food court. Overall, though, retail space is tight at only 350,000 sqm – roughly the same as in Düsseldorf which is much smaller – even though progress has been made through a series of smaller and medium-sized project developments. In contrast, the prime rent has been stagnating at EUR 285 per sqm since the end of 2015. In spite of attractive conditions, an increase in rent is unlikely in view of the rise of online shopping. Increasing vacancy rates show that it is becoming more difficult to let space. Two major projects are likely to have an impact on the retail sector in future. They are firstly the extension of Hamburg's main train station (although completion is a long way off) – a development which should ease access to the Spitalerstraße. The new shopping centre being built by developer Unibail Rodamco in the Hafencity's southern Overseas quarter should open a few years before that – probably in 2022. This island solution with 200 shops over almost 70,000 sqm is likely to generate significant competition for the city centre.

Retail: Many retail developments bolstering Hamburg's attraction as a shopping destination

RETAIL FORECASTS

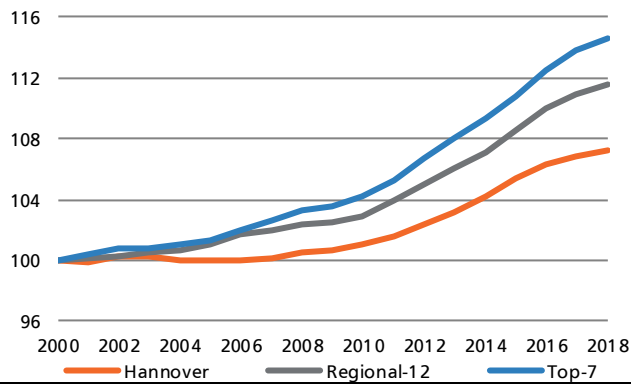
		2016	2017	2018	2019e
Demand					
Per cap. disposable income	EUR/month	2,286	2,322	2,368	2,417
Unemployment rate	%	7.1	6.8	6.4	6.2
Retail sales	EUR m/% yoy	17,021 / 3.9	17,717 / 4.1	18,477 / 4.3	19,257 / 4.2
Retail sales	EUR/m ² sales space	5,702	5,917	6,146	6,378
Supply					
Retail space	in m ² '000	2,985	2,994	3,006	3,019
Retail space	m ² /inhabitant	1.66	1.64	1.64	1.63
Retail rent					
Prime/secondary location	EUR/m ²	285 / 40.0	285 / 40.0	285 / 40.0	285 / 40.0
Prime/secondary location	% yoy	0.0 / 0.0	0.0 / 0.0	0.0 / 0.0	0.0 / 0.0

Source: Scope, bulwiengesa, DZ BANK Research forecasts

yoy = year-on-year

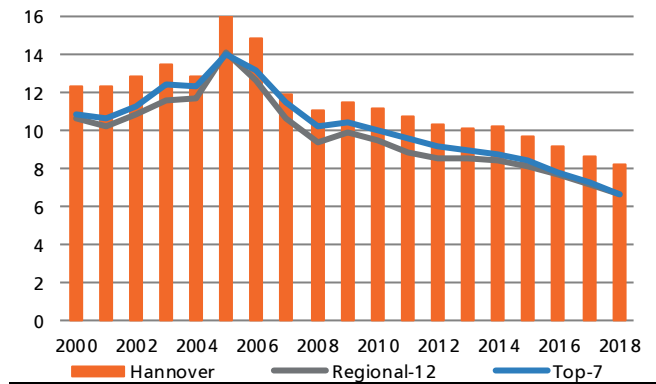
HANNOVER

POPULATION GROWTH



Source: Scope Index 2000 = 100

UNEMPLOYMENT RATE (%)



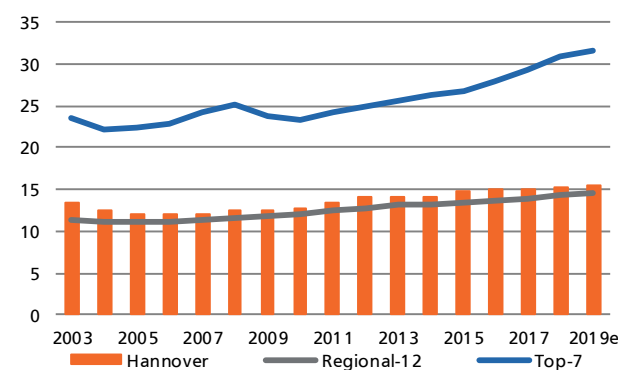
Source: bulwiengesa, DZ BANK Research forecasts

Hannover is the largest city in Lower Saxony with a population of around 535,000; it is the 13th largest city in Germany. The city's population has grown by around 7 per cent in the last ten years, which is fairly average. Hannover is the regional capital, an administrative centre and pre-eminent business centre in the state. At the same time, the city is at the heart of the metropolitan Hannover-Braunschweig-Göttingen-Wolfsburg region. Hannover is also a major trade fair centre; it hosted the World Expo in 2000. The city's economy benefits from its function as a major hub in an east-west and north-south direction which has helped the development of a strong logistics sector. Industry is represented by mechanical engineering and automobile manufacturing along with related suppliers. The city is also an important centre for financial services, above all for the insurance sector: Hannover Re and Talanx which are listed in the MDAX and SDAX respectively, both have their headquarters in the city. Hannover also has a DAX company, the automotive supplier Continental. The city is also an important academic centre with various research and higher education institutions with around 46,000 students. The Leibniz University is the largest of these with over 29,000 students. Unemployment is relatively high at around 8 per cent, in spite of a broad labour market, although it has fallen steadily in the last few years. Hannover is among the most important locations in Germany after the top 7 for the commercial real estate market with a high level of office and retail rents for a regional centre.

Major property market outside the top 7

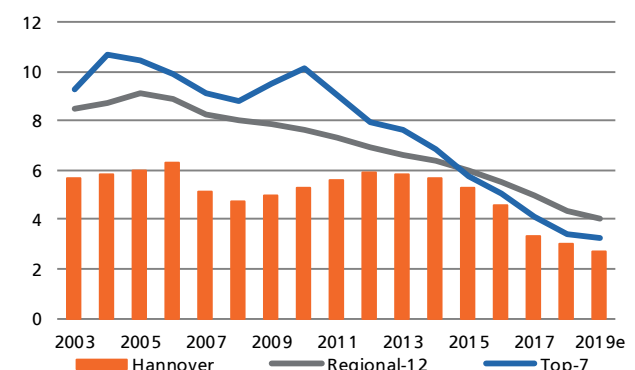
Office space in Hannover

PRIME RENT FOR OFFICE SPACE IN EUR PER SQM



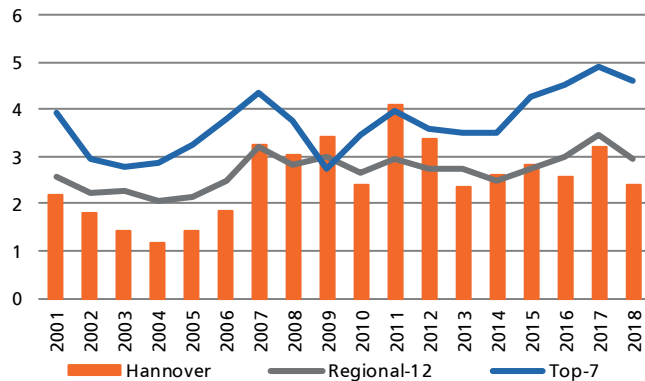
Source: bulwiengesa, DZ BANK Research forecasts

VACANCY RATE (%)



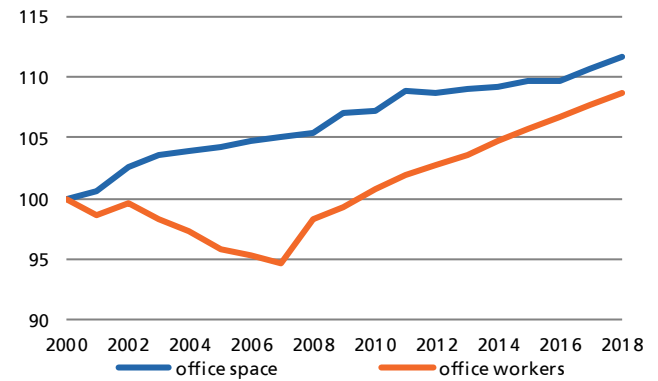
Source: bulwiengesa, DZ BANK Research forecasts

TAKE-UP AS % OF OFFICE SPACE



Source: bulwiengesa

TREND IN OFFICE SPACE AND NO. OF OFFICE WORKERS



Source: Scope, bulwiengesa

Index 2000 = 100

Hannover is the biggest office location after the top 7 with 4.6 million sqm of space. It is followed some way behind by Nuremberg with 3.6 million sqm ahead of Bonn and Essen which each have slightly over 3 million sqm. However, a large pool of office space does not in any way mean that the city has surplus supply. In fact, the vacancy rate has halved since 2012 and is now a very low 3 per cent. Whereas office space has only increased by 6 per cent in the last ten years, the number of office workers has grown by over 10 per cent. However, there has recently been an increase in office space with around 110,000 sqm in total coming to market 2017 and 2018. The stock of office space should also increase slightly faster in the next few years in view of further large new development projects. The biggest project (44,000 sqm) involves the new Continental head office. German railways is also building around 25,000 sqm of new office space. In spite of a strong first half, at 110,000 sqm, take-up in 2018 could not quite match the high previous-year level of 145,000 sqm. There were major transactions with the state of Lower Saxony (10,000 sqm) and FinanzIT, the Sparkassen-Group's IT service provider (14,000 sqm). In spite of lower office space take-up, the prime rent has increased to EUR 15.30 per sqm. In view of lively demand for space and relatively tight supply, the figure could increase slightly further this year.

Office: Biggest office market after the top 7

OFFICE FORECASTS

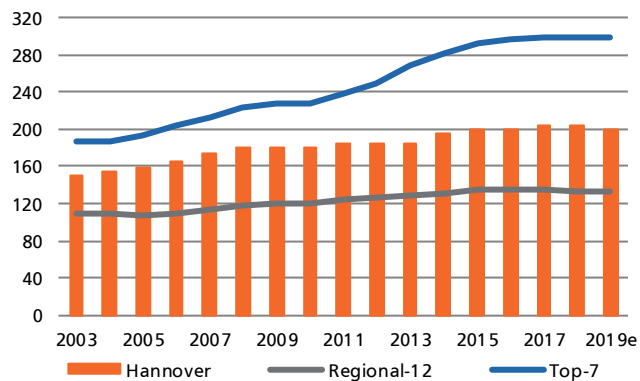
		2016	2017	2018	2019e
Demand					
GDP	% yoy	3.5	3.7	4.0	4.0
Per capita GDP	in EUR	64,955	67,052	69,477	72,000
No. of office workers	in '000	128.5	129.7	130.8	DS5J
No. of office workers	% yoy	0.9	0.9	0.9	-
Supply					
Total office space	in m ² '000	4,486	4,527	4,567	4,600
Total office space	% yoy	-0.1	0.9	0.9	0.7
Vacancy rate	%	4.6	3.3	3.0	2.7
Office rents					
Prime/secondary location	EUR/m ²	15.0 / 7.6	15.0 / 7.6	15.3 / 7.6	15.6 / 7.7
Prime/secondary location	% yoy	1.4 / 2.7	0.0 / 0.0	2.0 / 0.0	1.8 / 1.3

Source: Scope, bulwiengesa, DZ BANK Research forecasts

yoy = year-on-year

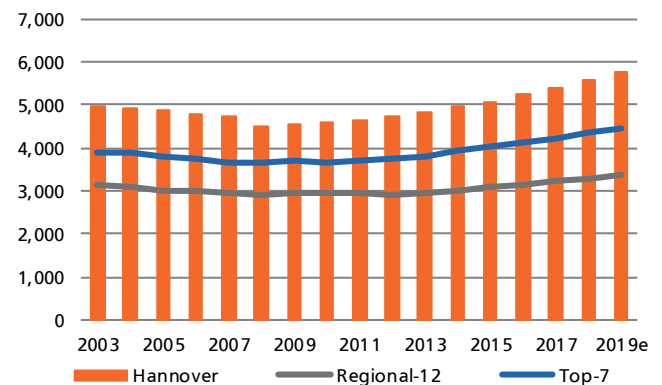
Retail space in Hannover

PRIME RETAIL RENT IN EUR PER SQM



Source: bulwiengesa, DZ BANK Research forecasts

RETAIL SALES IN EUR PER SQM



Source: Scope

Hannover is not just well placed with its office market; it is also well placed in terms of retail space. The prime rent had risen to just over EUR 200 per sqm by 2017. Apart from the top 7 locations, only Dortmund's rent is slightly more expensive still by roughly EUR 10 per sqm. However, compared with the rest of the regional centres under consideration, the prime rent is around 50 per cent higher than the average of EUR 134 per sqm. One key success factor is a catchment area of almost 2 million people. In addition, Hannover has practically no competition from neighbouring cities on the retail front and, with a fairly large amount of sales space, the city centre is able to hold up well against green-field retail parks. At 122 points, the centrality score is good. However, purchasing power is only average at 101 points. Although Hannover is not among Germany's tourist hotspots, it still scores a respectable 4,300 overnight stays per 1,000 inhabitants. The city's attraction as a shopping location is based on a good range of shops in the city with several central high streets, namely the Bahnhofstraße/Niki-de-Saint-Phalle-Promenade, Georgstraße and Karmarschstraße. The latter was given a major lift a few years ago with the opening of the Kröpcke-Center. These shopping miles are enhanced by the inner-city Ernst-August-Galerie (35,000 sqm). On balance, however, the city centre has around a third of the total retail space in Hannover. Even so, it is virtually impossible for retailers to access any of the sought-after city-centre space. In spite of lively demand from retailers, the already high prime rent is likely to struggle this year: we expect a slight dip to EUR 200 per sqm.

Retail: Hannover a sought-after and quite expensive retail location

RETAIL FORECASTS

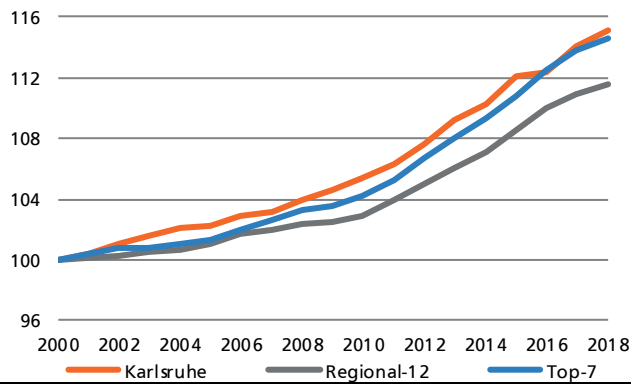
		2016	2017	2018	2019e
Demand					
Per cap. disposable income	EUR/month	2,166	2,214	2,267	2,320
Unemployment rate	%	9.2	8.6	8.2	8.0
Retail sales	EUR m/% yoy	4,980 / 3.2	5,137 / 3.1	5,305 / 3.3	5,473 / 3.2
Retail sales	EUR/m ² sales space	5,246	5,409	5,587	5,758
Supply					
Retail space	in m ² '000	949	950	950	950
Retail space	m ² /inhabitant	1.79	1.78	1.77	1.77
Retail rent					
Prime/secondary location	EUR/m ²	200 / 13.5	203 / 14.0	203 / 14.0	200 / 14.0
Prime/secondary location	% yoy	0.0 / 0.0	1.5 / 3.7	0.0 / 0.0	-1.5 / 0.0

Source: Scope, bulwiengesa, DZ BANK Research forecasts

yoy = year-on-year

KARLSRUHE

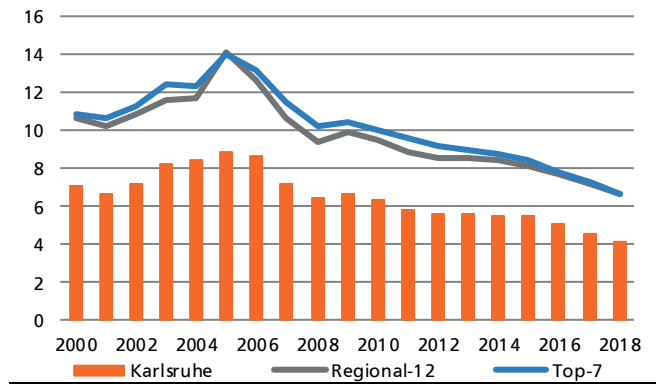
POPULATION GROWTH



Source: Scope

Index 2000 = 100

UNEMPLOYMENT RATE (%)



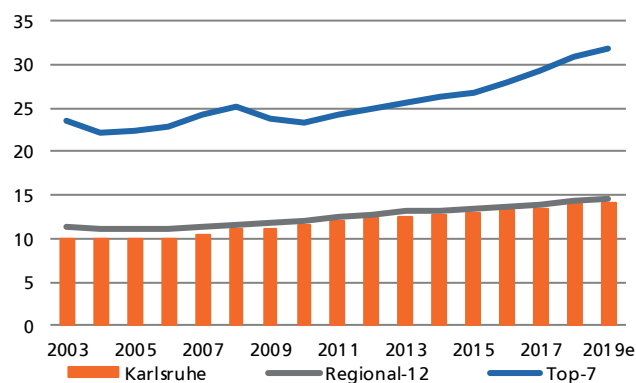
Source: bulwiengesa, BA, DZ BANK Research forecasts

Karlsruhe is the second largest city in Baden-Württemberg with slightly over 310,000 inhabitants, but only marginally bigger than Mannheim. After slowing down for a while, population growth has now picked up again. Overall, the city has gained around 30,000 new inhabitants within the space of just ten years. Whereas the two cities are more or less the same size and have a strong economy and fast-growing population, they differ in terms of focus. Unlike the more industrial Mannheim, Karlsruhe is primarily a centre of administration, learning and services. The city is located on the Upper Rhine and is also home to important institutions such as the Federal Constitutional Court, the Federal Supreme Court, the regional government administration and the Federal and State Government Employee Retirement Fund. As a centre of learning, Karlsruhe stands out with various higher education institutions with around 42,000 students enrolled. The most prominent institution is the Karlsruhe Institute of Technology (KIT). As an academic centre, Karlsruhe benefits not only from various universities, but also from many research institutions. The city has good transport links via the A5, A6 and A65 motorways, an ICE high-speed train connection, along with an airport and river port. Apart from the public administration sector, academic and research institutions, Karlsruhe is mainly home to IT, chemical and mechanical engineering firms. Well-known employers include the dm pharmacy chain, EnBW, the co-operative IT service provider FIDUCIA and pharmaceutical group Schwabe. Unemployment is low at 4 per cent (December 2018).

Important research and administration centre in the South West

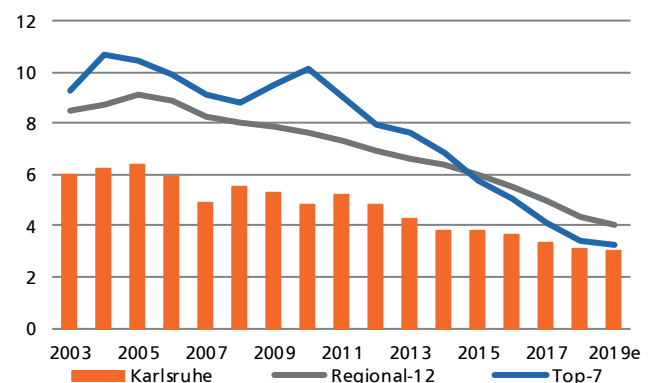
Office space in Karlsruhe

PRIME RENT FOR OFFICE SPACE IN EUR PER SQM



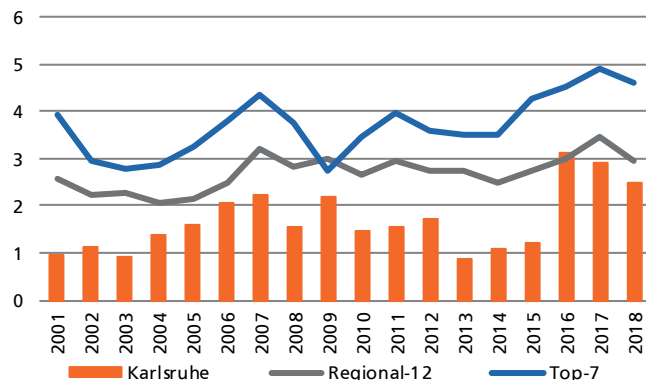
Source: bulwiengesa, DZ BANK Research forecasts

VACANCY RATE (%)



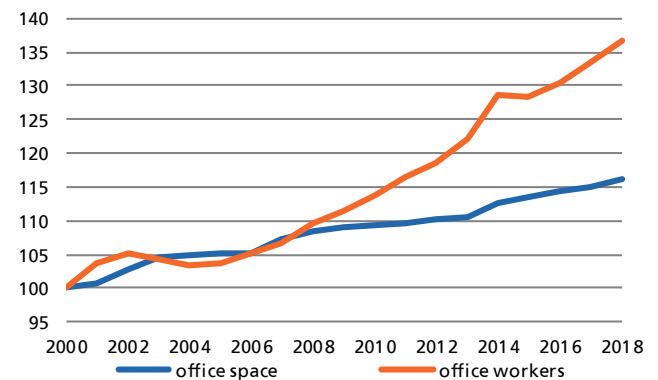
Source: bulwiengesa, DZ BANK Research forecasts

TAKE-UP AS % OF OFFICE SPACE



Source: bulwiengesa

TREND IN OFFICE SPACE AND NO. OF OFFICE WORKERS



Source: Scope, bulwiengesa

Index 2000 = 100

Karlsruhe has a relatively large office market of 2.4 million sqm through its function as an administrative hub and a centre for the services sector and for science and technology. This is clear from a comparison with cities such as Bremen, Dresden or Leipzig, which hardly have any more office space but are all three much bigger with well over 500,000 inhabitants each. Even so, the supply of office space in Karlsruhe is fairly tight. The number of office workers has grown much faster than office space in the last few years. This has led the vacancy rate to more than halve since the middle of the last decade to 3.1 per cent most recently. In response to an increasingly tight supply, the prime rent continued on its uptrend last year to EUR 14.20 per sqm. The figure has increased by almost 30 per cent since 2008 and is therefore now above the regional centre average. Office take-up was mostly between 20,000 and 40,000 sqm in the past – in line with quiet market activity. In the last three years, however, it reached as high as 74,000 sqm. This was helped in 2016 and 2017 by very big transactions involving dm and 1&1 which reached 60,000 sqm. Although the same figure was reached in 2018, it reflected more medium-sized transactions. The biggest deal last year (12,000 sqm) was with FIDUCIA. The vacancy rate is expected to remain unchanged this year in spite of an above-average amount of new space coming to market – as in 2018. We expect the same for the prime rent after a sharp rise last year.

Office: Quiet city with a large office market

OFFICE FORECASTS

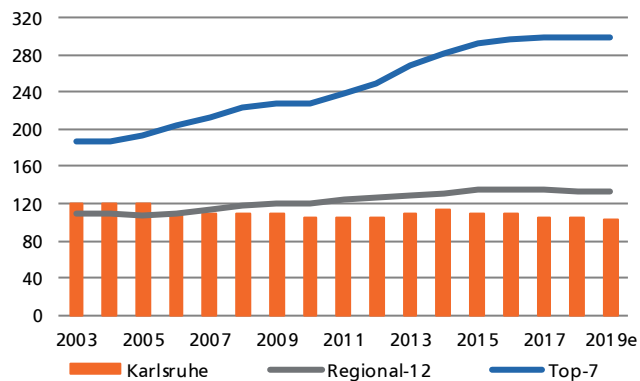
		2016	2017	2018	2019e
Demand					
GDP	% yoy	3.1	3.4	3.8	3.8
Per capita GDP	in EUR	63,477	64,698	66,523	68,608
No. of office workers	in '000	84.5	86.3	88.4	-
No. of office workers	% yoy	1.7	2.2	2.4	-
Supply					
Total office space	in m ² '000	2,381	2,394	2,420	2,450
Total office space	% yoy	0.6	0.5	1.1	1.2
Vacancy rate	%	3.6	3.3	3.1	3.0
Office rents					
Prime/secondary location	EUR/m ²	13.3 / 6.2	13.4 / 6.3	14.2 / 6.5	14.2 / 6.5
Prime/secondary location	% yoy	2.3 / 0.0	0.8 / 1.6	6.0 / 3.2	0.0 / 0.0

Source: Scope, bulwiengesa, DZ BANK Research forecasts

yoy = year-on-year

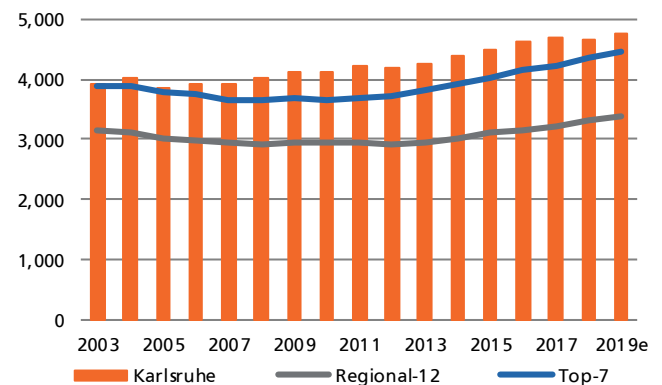
Retail space in Karlsruhe

PRIME RETAIL RENT IN EUR PER SQM



Source: bulwiengesa, DZ BANK Research forecasts

RETAIL SALES IN EUR PER SQM



Source: Scope

Karlsruhe is one of the most attractive shopping locations in Baden-Württemberg. Plus points include strong population growth for a number of years, a 1.1 million-strong catchment area and a solid economic base with low unemployment. Purchasing power is at 105 points. However, centrality has fallen to just under 120 points. The city's strength as a shopping location is bolstered by two well integrated inner-city shopping centres: the Postgalerie and Ettlinger Tor. After a temporary rise to EUR 113, the prime rent fell back to EUR 104 per sqm last year, primarily on the back of extensive and lengthy building works on the inner-city "combination" project, a key element of which involves moving road and rail traffic below ground for the length of Karlsruhe's main shopping mile, the Kaiserstraße. Completion is projected for 2021. However, that will not be the end of construction work. The Kaiserstraße itself is then expected to get a complete revamp. Once all the work has been completed, the city centre and hence also the shopping location will be given a major boost through an attractive pedestrian area without tram traffic. Even though the end of the works is on the horizon, we believe a further slight fall in the prime rent is likely, although this also reflects a general decline in demand for retail space. Beyond infrastructure measures, the city is currently working on concepts to future-proof the city-centre's high streets. The opening of IKEA which has been postponed several times is unlikely to take place until 2020.

Retail: Major building works in the city centre have depressed the prime rent

RETAIL FORECASTS

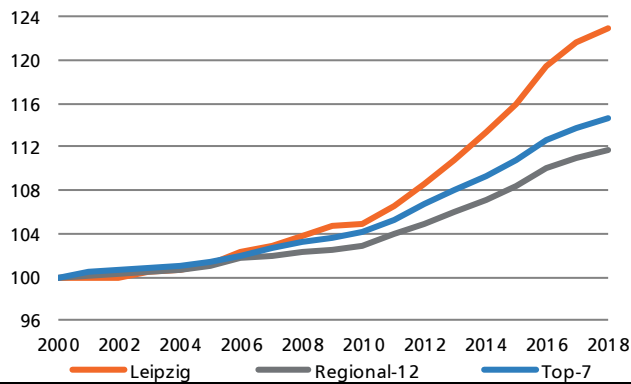
		2016	2017	2018	2019e
Demand					
Per cap. disposable income	EUR/month	2,141	2,200	2,261	2,321
Unemployment rate	%	5.1	4.5	4.1	3.9
Retail sales	EUR m/% yoy	2,462 / 2.6	2,532 / 2.9	2,611 / 3.1	2,690 / 3.0
Retail sales	EUR/m ² sales space	4,608	4,685	4,642	4,747
Supply					
Retail space	in m ² '000	534	540	562	567
Retail space	m ² /inhabitant	1.75	1.74	1.79	1.80
Retail rent					
Prime/secondary location	EUR/m ²	110 / 8.5	106 / 8.5	104 / 8.5	102 / 8.5
Prime/secondary location	% yoy	0.0 / 0.0	-3.6 / 0.0	-1.9 / 0.0	-1.9 / 0.0

Source: Scope, bulwiengesa, DZ BANK Research forecasts

yoy = year-on-year

LEIPZIG

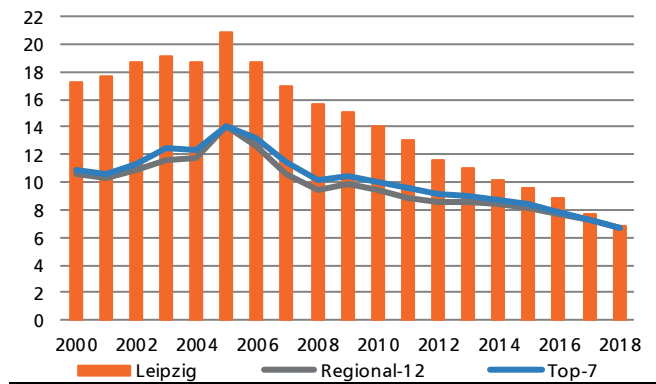
POPULATION GROWTH



Source: Scope

Index 2000 = 100

UNEMPLOYMENT RATE (%)



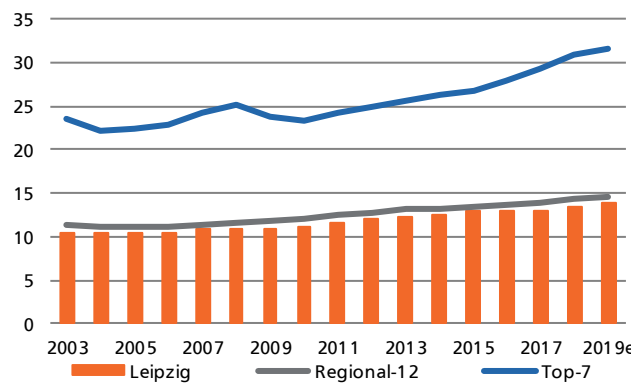
Source: bulwiengesa, BA, DZ BANK Research forecasts

Leipzig is the second largest city in eastern Germany after Berlin with almost 600,000 inhabitants. The city's population has grown by around 19 per cent in the last ten years, which is faster than that of all the other cities in this market report. This reflects a high quality of life in an attractive city with many historic buildings and a strong economic performance. However, after a sharp rise in rents for housing, the city no longer has the advantage of cheap living costs. A sharp fall in unemployment in spite of strong population growth is indicative of the strength of the labour market. In 2005, unemployment was still at over 20 per cent. Since then, it has fallen to 6.1 per cent (December 2018). However, Leipzig is not only an important centre of commerce; it is an important seat of learning with a dozen academic institutions at which almost 40,000 students are enrolled. The university is the biggest of these with 30,000 undergraduates. Today's economic successes have been built on the city's longstanding position as an important centre for trade fairs, commerce and industry. After reunification, many well-known companies built plants in Leipzig such as BMW, Porsche und Siemens. The latter is now planning to sell its plant instead of shutting it down. Even so, from a long-term perspective, as Energy Metropolis, Leipzig is likely to have bet on the right horse by focusing on energy and environmental technology. Other clusters of activity are in automotive, healthcare/biotechnology and in the media/creative industry. A large logistics hub has also grown up around the Leipzig/Halle airport. Tourism is another major activity for the city with 3.2 million overnight stays.

Ongoing growth: Leipzig population growing at near-record pace

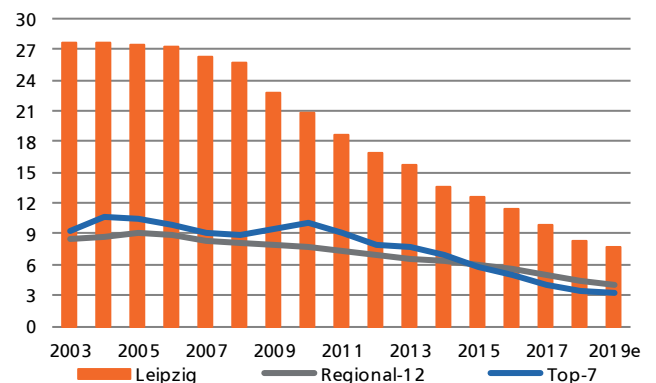
Office space in Leipzig

PRIME RENT FOR OFFICE SPACE IN EUR PER SQM



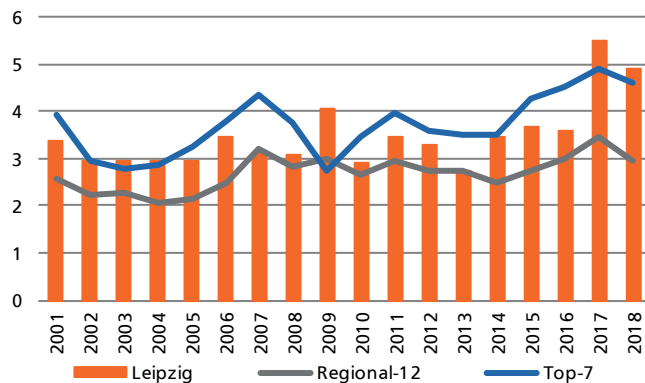
Source: bulwiengesa, DZ BANK Research forecasts

VACANCY RATE (%)



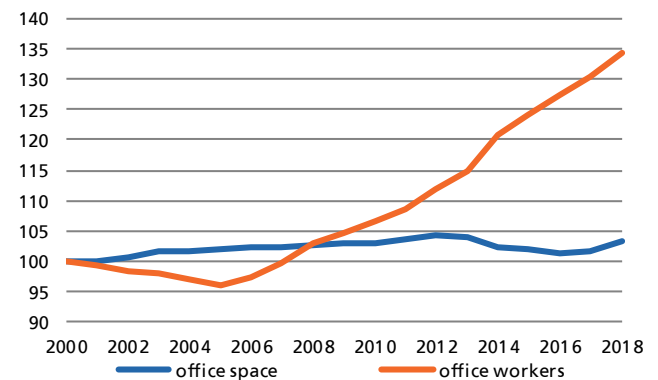
Source: bulwiengesa, DZ BANK Research forecasts

TAKE-UP AS % OF OFFICE SPACE



Source: bulwiengesa

TREND IN OFFICE SPACE AND NO. OF OFFICE WORKERS



Source: Scope, bulwiengesa

Index 2000 = 100

The ongoing economic upturn in Leipzig is clearly illustrated by the evolution of the vacancy rate. Since the end of the 1990s, the rate has fallen from over 30 per cent to around 8 per cent most recently. The trend has been helped by the fact that hardly any new space has been developed since the construction boom immediately after the post-reunification period, allowing the surplus which had been generated to be largely absorbed, not least as a result of a sharp rise in employment. In spite of what is at first glance still a fairly high vacancy level in an office market of 2.7 million sqm, the amount of space which is still usable is now very scarce. The bulk of the vacant space is no longer marketable. This reflects the fact that hardly any new office developments were tackled for many years because of the earlier surplus. The office market in Leipzig is practically on a par with that of Dresden in terms of space and rent rises. After a 25 per cent increase over ten years, last year, the prime rent reached EUR 13.50 per sqm – 50 cents more than in Dresden. Unlike in the latter, though, office space take-up has been much higher in the recent past. After a record take-up of 150,000 sqm in 2017, there was another strong performance last year with take-up of 135,000 sqm. This was a major achievement, especially in light of the absence of five-digit transactions, unlike in 2017. The biggest deals were slightly over 4,000 sqm and the bulk of the take-up was in the form of small spaces. The market is now responding to the growing shortage of space with an increase in new building. In view of a strong market performance, we regard an increase in the prime rent to just under EUR 14 per sqm as realistic.

Office: Hardly any attractive office space left in view of ongoing economic upturn

OFFICE FORECASTS

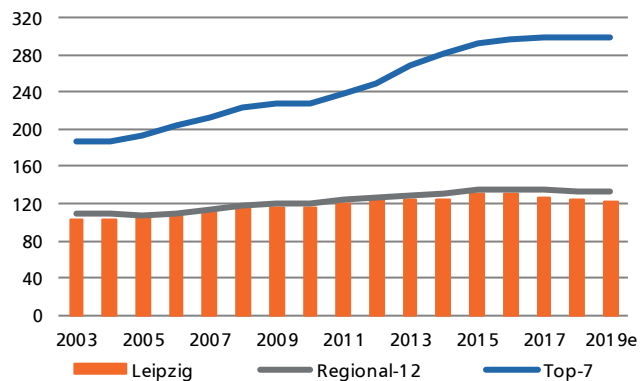
		2016	2017	2018	2019e
Demand					
GDP	% yoy	3.6	4.0	4.3	4.3
Per capita GDP	in EUR	34,927	35,618	36,763	38,099
No. of office workers	in '000	96.2	98.4	101.4	-
No. of office workers	% yoy	2.6	2.3	3.1	-
Supply					
Total office space	in m ² '000	2,714	2,724	2,768	2,790
Total office space	% yoy	-0.7	0.4	1.6	0.8
Vacancy rate	%	11.4	9.9	8.3	7.8
Office rents					
Prime/secondary location	EUR/m ²	13.0 / 5.8	13.0 / 6.0	13.5 / 6.4	13.8 / 6.5
Prime/secondary location	% yoy	0.8 / 1.8	0.0 / 3.4	3.8 / 6.7	2.0 / 1.6

Source: Scope, bulwiengesa, DZ BANK Research forecasts

yoy = year-on-year

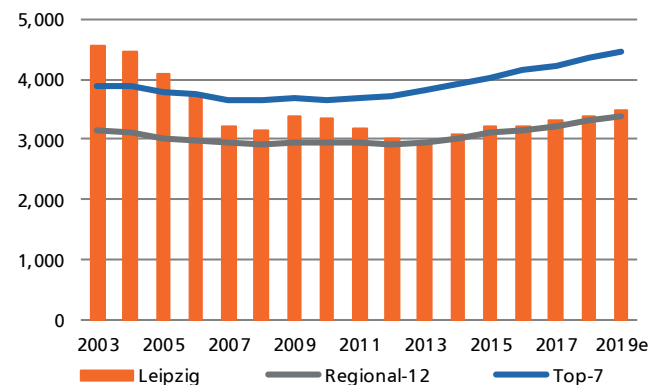
Retail space in Leipzig

PRIME RETAIL RENT IN EUR PER SQM



Source: bulwiengesa, DZ BANK Research forecasts

RETAIL SALES IN EUR PER SQM



Source: Scope

Leipzig is one of the top shopping destinations in eastern Germany, along with Berlin and Dresden. The cities share in common the fact that they are very attractive for retailers, reflecting the economic upturn, sharp fall in unemployment, flourishing tourist trade and population growth. In addition, Leipzig benefits from a catchment area of around 1.2 million people and an attractive city centre with many historical buildings. However, centrality and purchasing power scores are slightly weaker still than in Dresden at 107 and only 86 points respectively – the lowest figures in this market report. The city has a broad range of shops on offer with several top shopping miles such as the Petersstraße or Grimmaische Straße and the Höfe am Brühl shopping centre which opened in 2012. It also has the Hainspitze with its Primark branch which opened in 2016. The completion of the City tunnel at the end of 2013 which provides a rail link to the surrounding area and makes it possible to reach the Petersstraße by Overground (S-Bahn) is also having a positive impact. Although the city is now better able to hold its own against the out-of-town shopping centres which sprang up in the 1990s, the increase in retail space and weaker demand for space have had an impact in the form of empty stores in the city centre. In addition, the prime rent already dipped to EUR 127 per sqm at the end of 2017. In 2018, it fell by a further EUR 2 per sqm. The Decathlon branch which opened in the Petersbogen in the autumn of 2018 is likely to prove a new magnet for shoppers. The location is also being improved by the facelift of the shopping mile at the mainline station which is due to carry on into 2019. In spite of the positive trend at this location, the prime rent could dip again slightly this year.

Retail: Economic upturn and strong population growth reflected in signs of saturation

RETAIL FORECASTS

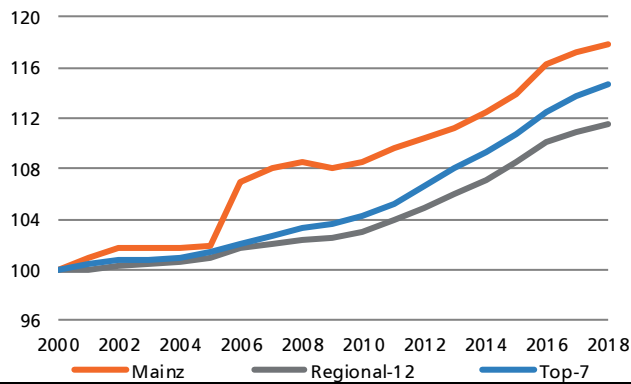
		2016	2017	2018	2019e
Demand					
Per cap. disposable income	EUR/month	1,663	1,693	1,738	1,790
Unemployment rate	%	8.8	7.7	6.8	6.6
Retail sales	EUR m/% yoy	2,273 / 1.0	2,346 / 3.2	2,437 / 3.9	2,535 / 4.0
Retail sales	EUR/m ² sales space	3,230	3,307	3,401	3,502
Supply					
Retail space	in m ² '000	704	709	716	724
Retail space	m ² /inhabitant	1.25	1.23	1.23	1.24
Retail rent					
Prime/secondary location	EUR/m ²	130 / 9.5	127 / 9.5	125 / 9.5	123 / 9.5
Prime/secondary location	% yoy	0.0 / 0.0	-2.3 / 0.0	-1.6 / 0.0	-1.6 / 0.0

Source: Scope, bulwiengesa, DZ BANK Research forecasts

yoy = year-on-year

MAINZ

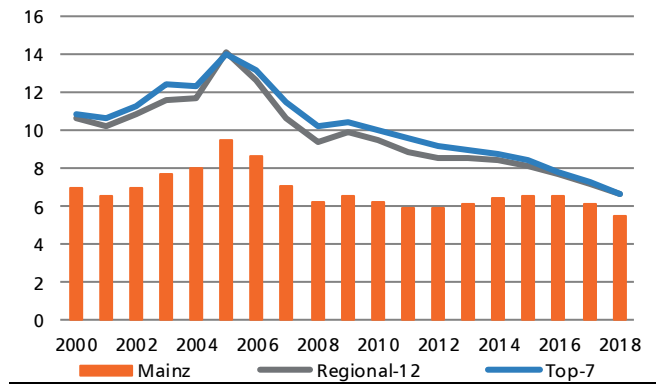
POPULATION GROWTH



Source: Scope

Index 2000 = 100

UNEMPLOYMENT RATE (%)



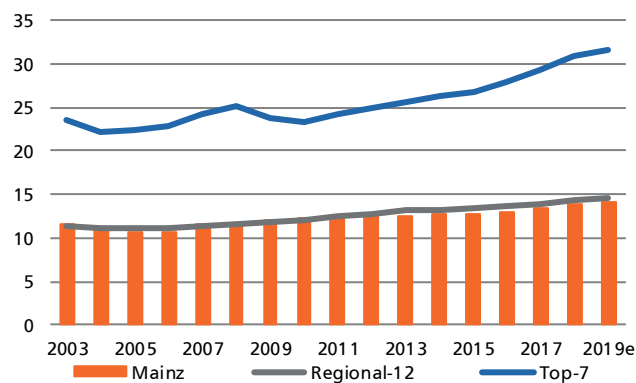
Source: bulwiengesa, BA, DZ BANK Research forecasts

Mainz's advantageous location on the Rhine and Main was already prized in Roman times. Today, the capital of the Rhineland-Palatinate also benefits from its location in the economically strong Rhine-Main area. The financial hub of Frankfurt is only 40 kilometres away and can be reached by train in half an hour. The drive to Frankfurt Airport is even shorter. Wiesbaden is immediately opposite on the other bank of the Rhine, but unlike Mainz, it does not have a big university. Mainz is a major academic centre with almost 40,000 students, most of whom study at the Johannes Gutenberg University. As a university town with a high quality of life and cheaper rents for housing than in Frankfurt, Mainz is seeing relatively strong population growth. The number of inhabitants has increased by around 9 per cent to 215,000 in the last ten years. Public administration along with radio and TV, prominently represented by ZDF, SWR and 3sat play a key role for the local economy. The service sector, which focuses mainly on health and social services, is also a major employer. In contrast, the manufacturing sector is of more marginal importance. Mainz is home to a number of prominent companies such as the glass manufacturer Schott, the credit insurer Coface and the chemical firm Werner & Mertz. Unemployment had fallen to 5.1 per cent in November 2018. The key project in the Mainz property market is the Zollhafen development which will include 1,400 flats and office space for 4,000 employees by 2025.

Capital of the Rhineland-Palatinate benefiting from its position west of the Rhine-Main area

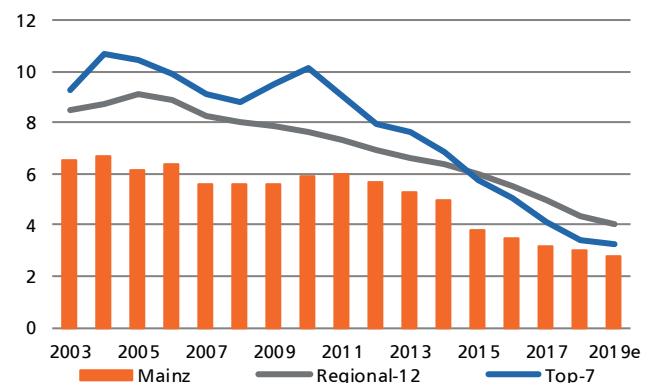
Office space in Mainz

PRIME RENT FOR OFFICE SPACE IN EUR PER SQM



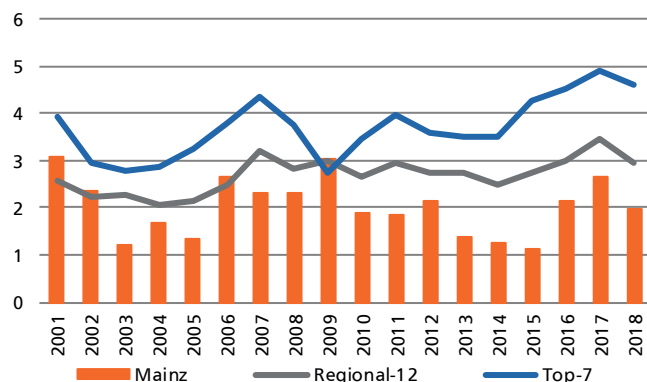
Source: bulwiengesa, DZ BANK Research forecasts

VACANCY RATE (%)



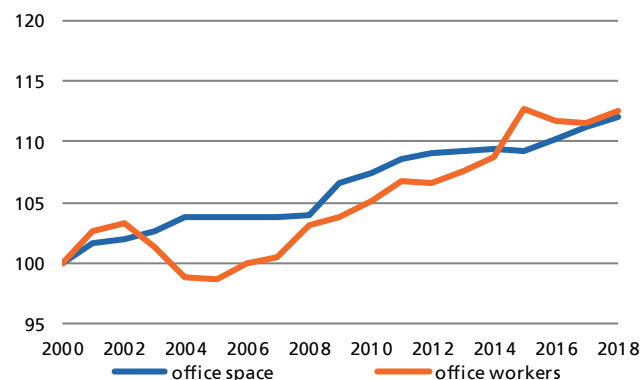
Source: bulwiengesa, DZ BANK Research forecasts

TAKE-UP AS % OF OFFICE SPACE



Source: bulwiengesa

TREND IN OFFICE SPACE AND NO. OF OFFICE WORKERS



Source: Scope, bulwiengesa

Index 2000 = 100

Mainz has a fairly small office market of 1.6 million sqm. The city's links to the Rhine-Main region hardly have any impact on demand for office space which is mainly local and so far, is hardly influenced by the surrounding towns and cities. In the last ten years, office space has increased by around 8 per cent – roughly the same as the growth in the number of office workers (plus 9 per cent). Nevertheless, there has been a significant reduction in vacant space. The vacancy rate fell to a low 3 per cent in 2018, which is half the level of 2011. The public sector is a major factor behind demand which also means that it is largely non-cyclical; at the same time, it only has a limited impact on growth. The relatively quiet market activity is evident from the average annual take-up of only marginally above 30,000 sqm for the last ten years. This amounts to not quite 2 per cent of the stock of office space, whereas the average take-up in the regional centres covered in this report is almost 3 per cent. After a high take-up of 43,000 in 2017, the figure of 32,000 sqm last year was largely back in line with the multi-year average. The client behind the biggest single transaction involving 7,000 sqm was the university. The second biggest deal was already much smaller at 2,500 sqm. The tenant is the electronics company PHYTEC, which has laid the foundations for a campus with two new buildings in the Mainz-Hechtsheim business park. The prime rent rose to EUR 13.90 per sqm in 2018 as a result of tighter supply and project developments. This year, it could lift even further, above all in view of the shortage of space.

Office: Smaller and mostly local office market – modern space currently being built in Zollhafen

OFFICE FORECASTS

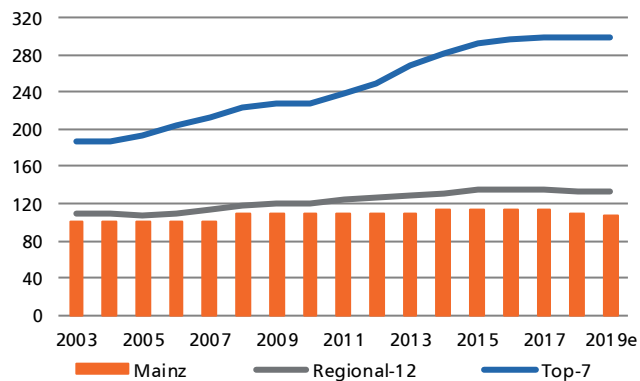
		2016	2017	2018	2019e
Demand					
GDP	% yoy	2.7	2.9	3.3	3.3
Per capita GDP	in EUR	55,211	56,367	57,952	59,682
No. of office workers	in '000	52.0	52.0	52.5	-
No. of office workers	% yoy	-1.0	-0.1	0.9	-
Supply					
Total office space	in m ² '000	1,594	1,609	1,621	1,632
Total office space	% yoy	0.8	1.0	0.7	0.7
Vacancy rate	%	3.5	3.2	3.0	2.8
Office rents					
Prime/secondary location	EUR/m ²	13.0 / 7.5	13.5 / 7.7	13.9 / 8.0	14.1 / 7.7
Prime/secondary location	% yoy	3.2 / 0.0	3.8 / 2.7	3.0 / 3.9	1.7 / -3.8

Source: Scope, bulwiengesa, DZ BANK Research forecasts

yoy = year-on-year

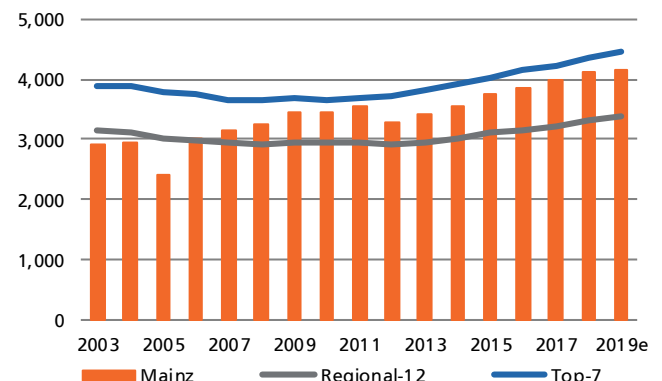
Retail space in Mainz

PRIME RETAIL RENT IN EUR PER SQM



Source: bulwiengesa, DZ BANK Research forecasts

RETAIL SALES IN EUR PER SQM



Source: Scope

As a shopping location, Mainz benefits from a catchment area of just under 1 million people which mainly extends south-west of Mainz. North and eastwards, the catchment area is curtailed by the Rhine and shopping locations in the Rhine-Main area. There is strong competition from Wiesbaden and top location Frankfurt which is not that far away. A study carried out by IHK also came to this conclusion. Mainz's inhabitants have a high purchasing power of 107 points, but are increasingly spending their money in the two cities mentioned above and also shopping online. In addition, unlike Wiesbaden, Mainz has no inner-city shopping centre to attract shoppers. It also lacks larger retail space. Although Mainz's city centre offers a good range of shops in its three high streets – Am Brand, Schusterstraße and Stadthausstraße – a trip to the city is currently time-consuming, at least by car. The traffic jams are being caused by extensive works aimed at future-proofing Mainz's infrastructure. All this is reflected in the prime rent. Whereas it remained stable at EUR 114 per sqm from 2014 to 2017, it fell to EUR 110 per sqm last year. This year, we foresee the prospect of a further slight decline as realistic. The city's upgrade through a project in the Ludwigstraße still hangs in the balance after the long-planned construction of an ECE shopping centre on the Karstadt site fell through. Where things go from now is also likely to depend on the decision of the merged department store group about whether it wishes to remain present in the city with both Kaufhof and Karstadt.

Retail: City centre struggling with stiff competition and building sites

RETAIL FORECASTS

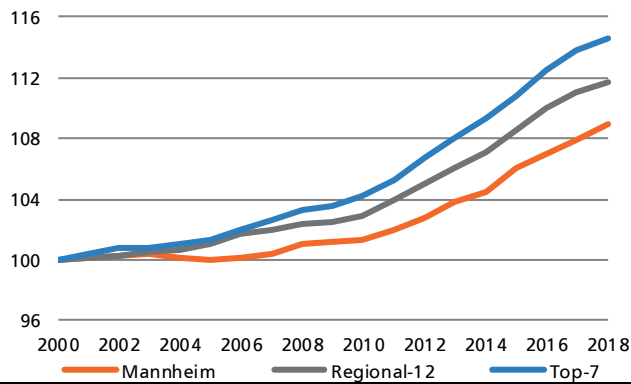
		2016	2017	2018	2019e
Demand					
Per cap. disposable income	EUR/month	2,047	2,086	2,138	2,194
Unemployment rate	%	6.5	6.1	5.5	5.2
Retail sales	EUR m/% yoy	1,953 / 5.0	2,030 / 3.9	2,114 / 4.1	2,198 / 4.0
Retail sales	EUR/m ² sales space	3,870	3,997	4,126	4,140
Supply					
Retail space	in m ² '000	505	508	512	531
Retail space	m ² /inhabitant	2.38	2.37	2.38	2.46
Retail rent					
Prime/secondary location	EUR/m ²	114 / 9.5	114 / 9.5	110 / 9.5	108 / 9.5
Prime/secondary location	% yoy	0.0 / 0.0	0.0 / 0.0	-3.5 / 0.0	-2.0 / 0.0

Source: Scope, bulwiengesa, DZ BANK Research forecasts

yoy = year-on-year

MANNHEIM

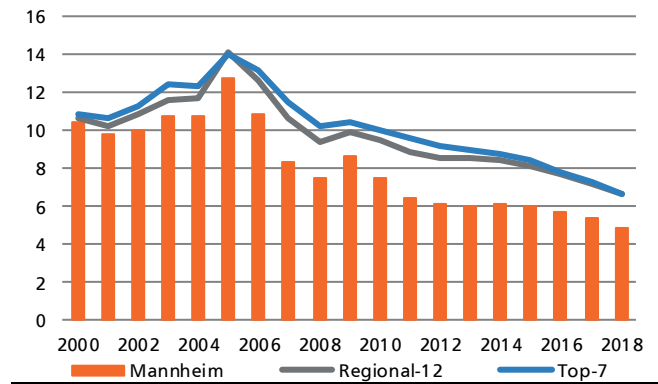
POPULATION GROWTH



Source: Scope

Index 2000 = 100

UNEMPLOYMENT RATE (%)



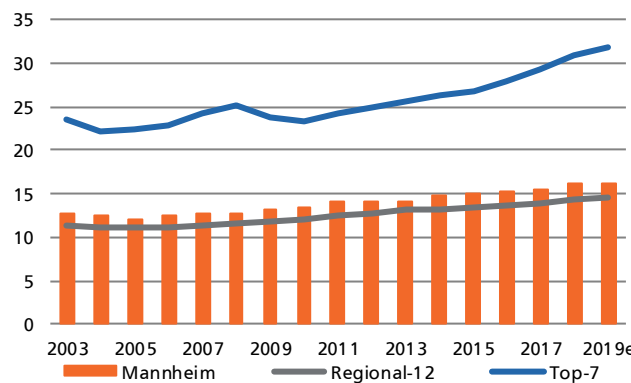
Source: bulwiengesa, BA, DZ BANK Research forecasts

Mannheim is the third largest city in Baden-Württemberg with not quite 310,000 inhabitants. Unlike Karlsruhe, which is slightly larger, however, the population in Mannheim stagnated for a long time as the industrial city struggled with high unemployment and image problems. For the last ten years or so, however, the city has been on the upturn both in terms of its population which has increased by over 20,000 and economically. Unemployment was down to 4.6 per cent in December 2018 from double digits up to 2006. Whereas the structural change in many industrially-biased cities continues to dampen the labour market significantly to this date, Mannheim has done well. The city is not only a commercial centre but also a prominent seat of learning with a large university and several higher education institutions. It benefits from its location on the Rhine and Neckar and from good transport links via the A5 and A6 motorways. It is also served by the high-speed ICE train and a large river port. It has an industrial base with chemical and metal processing companies. As the birth place of the motor car, Mannheim is an important production location for Daimler. Along with insurance and financial companies, the logistical sector has also done well. Apart from Daimler, Bilfinger, MVV Energie, Phoenix Pharmahandel, Südzucker and MDAX group Fuchs Petrolub are also present in Mannheim. The city is well equipped for further growth with disused military, railway and industrial sites as the new Glückstein Quarter illustrates. The 2023 Federal Garden Show will take place on this reclaimed land which will then become green space to improve quality of life in Mannheim.

The industrial city of Mannheim has become an important centre for commerce and learning

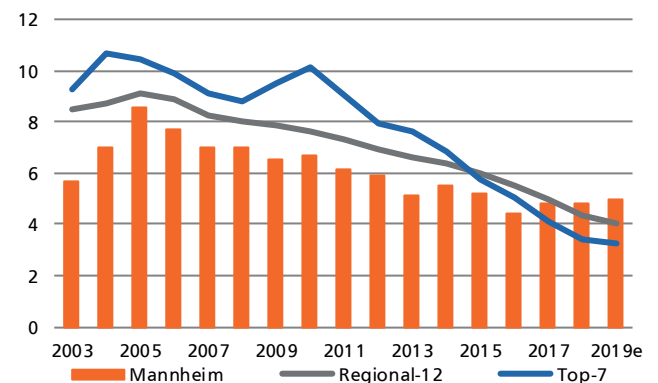
Office space in Mannheim

PRIME RENT FOR OFFICE SPACE IN EUR PER SQM



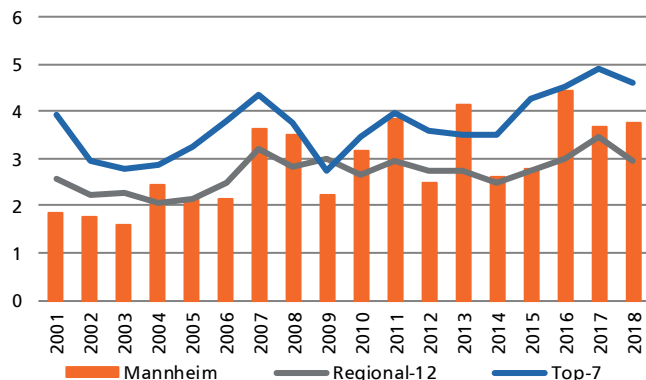
Source: bulwiengesa, DZ BANK Research forecasts

VACANCY RATE (%)



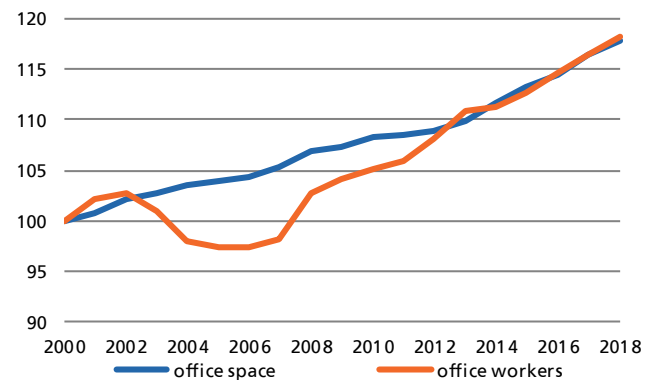
Source: bulwiengesa, DZ BANK Research forecasts

TAKE-UP AS % OF OFFICE SPACE



Source: bulwiengesa

TREND IN OFFICE SPACE AND NO. OF OFFICE WORKERS



Source: Scope, bulwiengesa

Index 2000 = 100

Mannheim is a major office location in the economically strong Rhine-Neckar region with 2.1 million sqm. One contributory factor has been an increased focus by the former industrial city on services which has gone hand-in-hand with a strong growth in office work. This has led to a marked reduction in the vacancy rate from quite a high level a few years ago. However, since 2013, the reduction in the vacancy rate has been slowed down by an increase in new building. New developments are mostly started by their future occupiers. There has also been speculative development in the last few years which has improved the supply of attractive offices. Offices have mainly been built in the Eastsite office city and in the Glückstein Quarter. A relatively high completion volume is also expected in 2019 and especially in 2020. Increased supply together with lively demand for office space – in spite of a relatively high vacancy rate of around 5 per cent – has led to a sharp rise in rents. Within the space of ten years, the prime rent has increased by over 27 per cent to EUR 16.20 per sqm most recently. Of the regional centres covered in this report, Mannheim therefore has the highest rent level. The strong trend in the office market is evident from a relatively high take-up of round 80,000 to 90,000 sqm p.a. in the last three years. In the last ten years, take-up was on average around 60,000 sqm. The biggest single transaction last year (22,000 sqm) involved Mannheim's Technical City Hall. In view of a high rent level and new development plans, we expect Mannheim's prime office rent to remain stable this year.

Office: Mannheim one of the most expensive office markets in the whole of Germany apart from the top 7

OFFICE FORECASTS

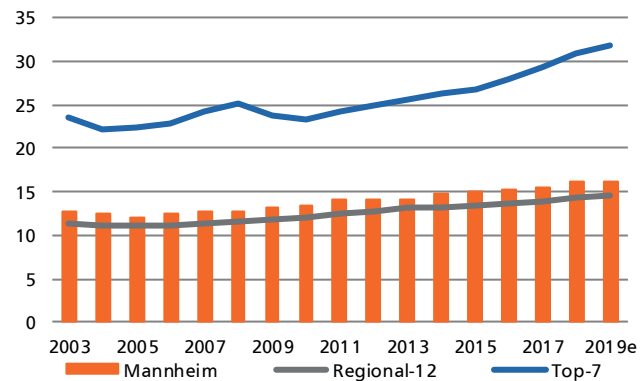
		2016	2017	2018	2019e
Demand					
GDP	% yoy	3.1	3.3	3.7	3.7
Per capita GDP	in EUR	63,609	65,174	66,925	68,710
No. of office workers	in '000	73.0	74.1	75.2	-
No. of office workers	% yoy	1.7	1.6	1.5	-
Supply					
Total office space	in m ² '000	2,044	2,080	2,102	2,135
Total office space	% yoy	1.0	1.7	1.1	1.6
Vacancy rate	%	4.4	4.8	4.8	5.0
Office rents					
Prime/secondary location	EUR/m ²	15.2 / 8.1	15.4 / 8.1	16.2 / 8.2	16.2 / 8.2
Prime/secondary location	% yoy	1.3 / 1.3	1.3 / 0.0	5.2 / 1.2	0.0 / 0.0

Source: Scope, bulwiengesa, DZ BANK Research forecasts

yoy = year-on-year

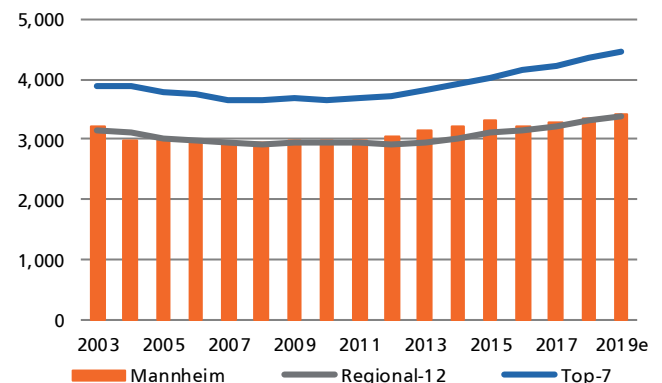
Retail space in Mannheim

PRIME RETAIL RENT IN EUR PER SQM



Source: bulwiengesa, DZ BANK Research forecasts

RETAIL SALES IN EUR PER SQM



Source: Scope

Mannheim is the prime shopping location in the Rhine-Neckar region. It has a catchment area of around 1.3 million people and a very high centrality score of almost 150 points. A slightly below-average purchasing power (97 points) is offset by a stream of visitors from surrounding areas. Mannheim's attraction as a location led to an increase in the prime rent to EUR 153 per sqm in 2016, making the city one of the most expensive shopping locations outside the top 7. The increased offer from the opening of the Rhein-Galerie on the other bank of the Rhine in 2010 has not had any noticeable negative impact. The same is true of the increase in space from the Q6Q7 shopping centre which opened in 2016 and which has upgraded the city centre's Planken shopping mile. Last year, however, the prime rent fell by EUR 3 per sqm and is therefore back in line with its 2015 level of EUR 150 per sqm. The reasons for this decline, in addition to growing headwind for bricks-and-mortar retailing from online shopping, include building work in the city to remodel the Planken; the work should be completed this spring. Work is also progressing in the Breite Straße. The former Mömax building – and Karstadt before that – is undergoing a complete refurbishment, and will reopen as K1 Karree with a mix of shops, places to eat and drink, fitness facilities and offices. The first businesses are expected to open their doors from April. Mannheim is still a sought-after shopping location for retailers. Nevertheless, we expect the prime rent to remain stable this year given current conditions, not to mention the fact that it is already very high.

Retail: Attractive shopping location should shine in 2019 with remodelled Planken shopping street

RETAIL FORECASTS

		2016	2017	2018	2019e
Demand					
Per cap. disposable income	EUR/month	1,949	1,991	2,038	2,086
Unemployment rate	%	5.7	5.4	4.9	4.7
Retail sales	EUR m/% yoy	2,638 / 3.3	2,723 / 3.2	2,813 / 3.3	2,903 / 3.2
Retail sales	EUR/m ² sales space	3,219	3,296	3,360	3,426
Supply					
Retail space	in m ² '000	820	826	837	847
Retail space	m ² /inhabitant	2.69	2.69	2.70	2.71
Retail rent					
Prime/secondary location	EUR/m ²	153 / 12.5	153 / 12.5	150 / 12.5	150 / 12.5
Prime/secondary location	% yoy	2.0 / 0.0	0.0 / 0.0	-2.0 / 0.0	0.0 / 0.0

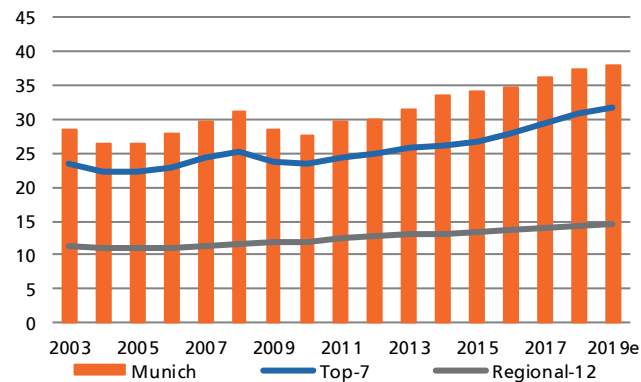
Source: Scope, bulwiengesa, DZ BANK Research forecasts

yoy = year-on-year

MUNICH

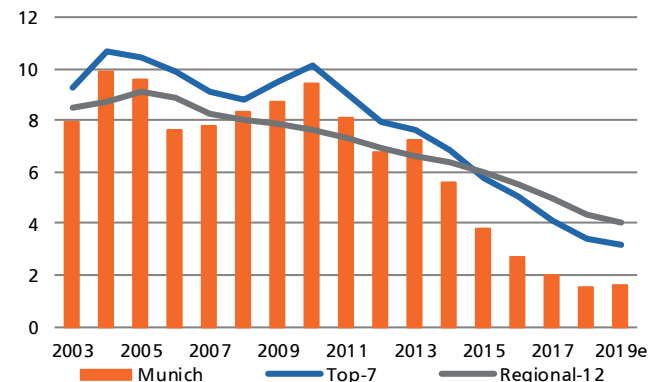
Office space in Munich

PRIME RENT FOR OFFICE SPACE IN EUR PER SQM



Source: bulwiengesa, DZ BANK Research forecasts

VACANCY RATE (%)



Source: bulwiengesa, DZ BANK Research forecasts

Munich's varied economy – the city is home to six DAX groups alone – is flourishing and generating a large number of new jobs, with which hitherto muted new office building has failed to keep pace. This has led the vacancy rate to fall to under 2 per cent. Across the whole of Munich, there is now only around 200,000 sqm of vacant office space left, which is making larger transactions from existing space increasingly difficult. Consequently, the majority of large-scale rental deals involve new-build projects. In spite of the growing shortage of space, there have nevertheless been sharp increases in take-up. There was an all-time high of 775,000 sqm in 2018, just beating the previous-year record. However, whereas BMW alone accounted for 150,000 sqm in 2017, the office market reached new heights last year without megadeals. The biggest transactions at almost 40,000 sqm involved advertising agency Serviceplan ahead of four deals signed by the city administration of between 17,000 and 25,000 sqm. As in 2017, the co-working sector was also represented last year among the top 10 deals in Munich with Design Offices. The prime rent increased by over 3 per cent to EUR 37.20 in 2018. As such, Munich is still at number two behind Frankfurt and Berlin. A sharp increase in new building means that more new space will be coming to the Munich office market this year and in the next few years. However, in view of the shortage of space, the prime rent is likely to rise further this year.

Office: Second record year in a row for office space

OFFICE FORECASTS

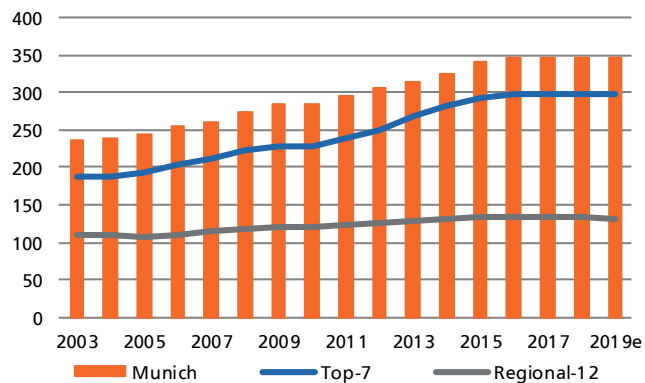
		2016	2017	2018	2019e
Demand					
GDP	% yoy	3.6	3.9	4.2	4.2
Per capita GDP	in EUR	75,079	77,075	79,530	82,135
No. of office workers	in '000	419.0	433.7	446.9	-
No. of office workers	% yoy	3.2	3.5	3.0	-
Supply					
Total office space	in m ² '000	13,705	13,747	13,814	14,000
Total office space	% yoy	0.0	0.3	0.5	1.3
Vacancy rate	%	2.7	2.0	1.5	1.6
Office rents					
Prime/secondary location	EUR/m ²	34.7 / 13.5	36.0 / 14.5	37.2 / 15.5	38.0 / 15.8
Prime/secondary location	% yoy	1.8 / 8.0	3.7 / 7.4	3.3 / 6.9	2.2 / 1.9

Source: Scope, bulwiengesa, DZ BANK Research forecasts

yoy = year-on-year

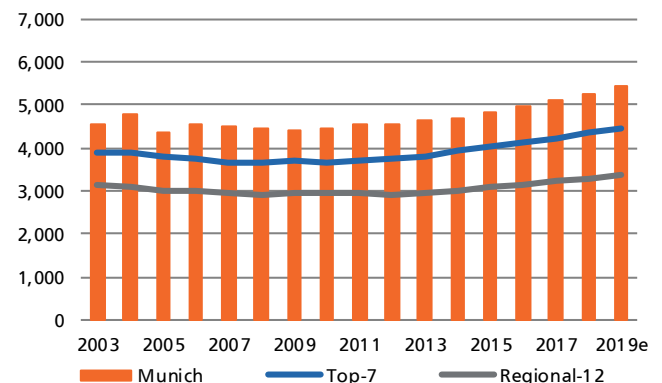
Retail space in Munich

PRIME RETAIL RENT IN EUR PER SQM



Source: bulwiengesa, DZ BANK Research forecasts

RETAIL SALES IN EUR PER SQM



Source: Scope

Munich comes out in top place in the German retail sector for prime rent, retail-space productivity and purchasing power. A major factor behind this is the city's strong economy and a fast-growing catchment area of over 3 million people with above-average purchasing power. In addition, the city attracts many visitors from home and abroad, which account for around 16 million overnight stays p.a. Munich's attraction as a shopping destination is a very pleasant environment with a wide choice of places to eat and drink, a broad range of shops ranging from mass-retail concepts, family-run specialist shops and luxury goods shops. Overall, this leads to the highest prime rent in the German retail sector at EUR 345 per sqm. In addition, although the space on offer in the city is fairly substantial at around half a million sqm, it has failed to keep up with the high demand because it hardly grew for a long time. However, this has changed with city-centre developments such as the Palais an der Oper or the Hofstatt. In addition, there are current developments which will boost the amount of available space in the near future. These include the old Hettlage/Alte Akademie, the remodelling of the Sattlerplatz and – slightly outside the city centre – the Forum Schwanthalershöhe in the former XXXLutz. The first shops in the new shopping centre already opened in 2018; completion is scheduled for March. The biggest project is the rebuilding of the main railway station, which is likely to drag on until the end of the next decade. We expect the prime rent in Munich, as the strong retail location in the South, to remain stable this year.

Retail: Various developments making Munich even more attractive as a shopping destination

RETAIL FORECASTS

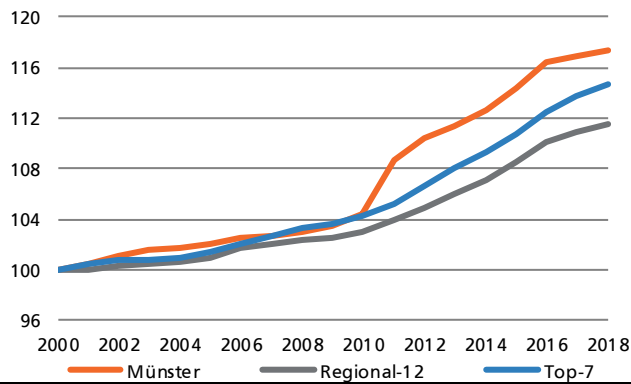
		2016	2017	2018	2019e
Demand					
Per cap. disposable income	EUR/month	2,631	2,692	2,762	2,834
Unemployment rate	%	4.6	4.2	3.8	3.6
Retail sales	EUR m/% yoy	10,379 / 3.9	10,793 / 4.0	11,243 / 4.2	11,703 / 4.1
Retail sales	EUR/m ² sales space	4,980	5,118	5,274	5,427
Supply					
Retail space	in m ² '000	2,084	2,109	2,132	2,157
Retail space	m ² /inhabitant	1.43	1.43	1.44	1.44
Retail rent					
Prime/secondary location	EUR/m ²	345 / 38.0	345 / 39.0	345 / 40.0	345 / 40.0
Prime/secondary location	% yoy	1.5 / 2.7	0.0 / 2.6	0.0 / 2.6	0.0 / 0.0

Source: Scope, bulwiengesa, DZ BANK Research forecasts

yoy = year-on-year

MÜNSTER

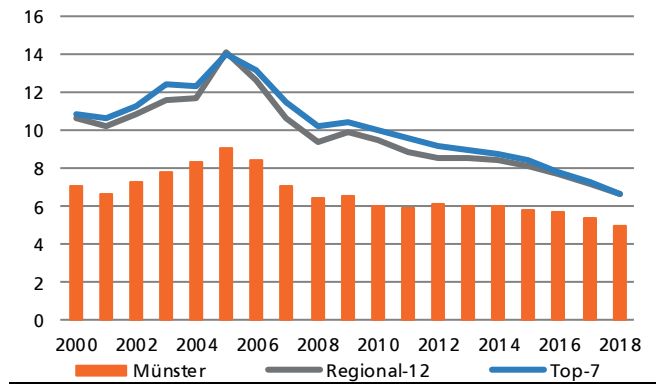
POPULATION GROWTH



Source: Scope

Index 2000 = 100

UNEMPLOYMENT RATE (%)



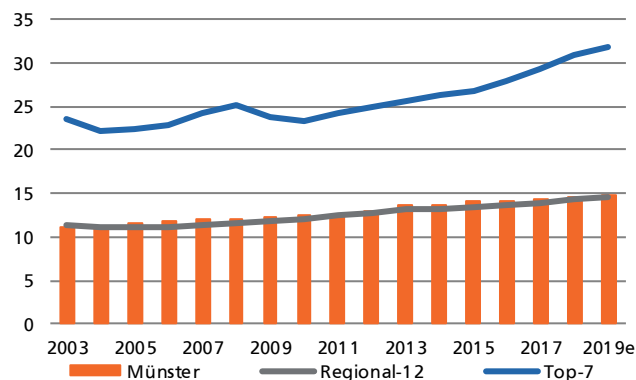
Source: bulwiengesa, BA, DZ BANK Research forecasts

Whereas many large towns in North Rhine-Westphalia, above all in the Ruhrgebiet are faced with a dwindling population and high unemployment, Westphalian Münster remains firmly on an upward trend. The population has grown by almost 50,000 since the beginning of the 1990s to around 310,000 at present. The number of inhabitants has increased by 14 per cent in the last ten years alone. During this period, employment has risen by 16 per cent, i.e. more than in any of the other regional centres covered. The fact that the unemployment rate – which has been low for many years – has not fallen below the figure of 4.5% (December 2018), is likely to reflect strong population growth. Münster is a major academic centre with a large number of research and higher education institutions at which a total of over 60,000 students are enrolled. Three quarters of these are at the Westfälische Wilhelms University. Unlike in the Ruhr cities, industry and big companies hardly play a role in Münster; the local economy is mostly driven by SMEs. The biggest employers are the University Hospital, the University itself and the city administration. Well-known companies are the paint manufacturer Brillux, the insurance company LVM and filter manufacturer Hengst. Tourism is an important contributor to the local economy. The city attracts many visitors to its old town and famous Prinzipalmarkt. Moreover, Münster is the administrative centre for Westphalia, an area with over 8 million inhabitants, more than in most German states.

Ongoing upturn: strong population and economic growth

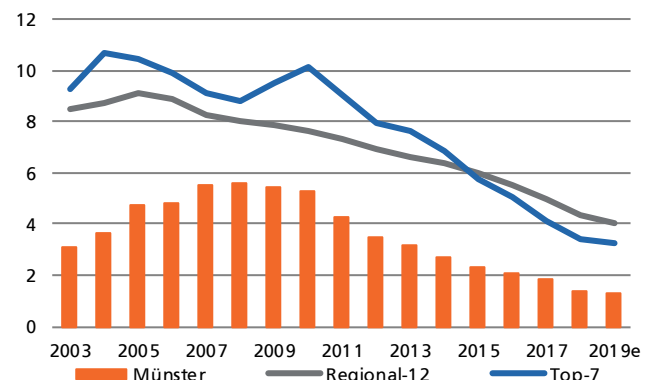
Office space in Münster

PRIME RENT FOR OFFICE SPACE IN EUR PER SQM



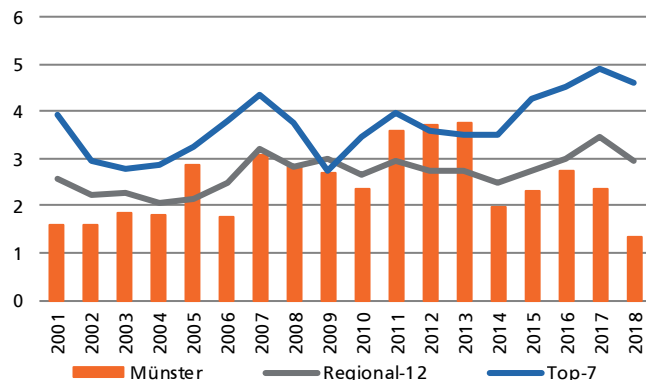
Source: bulwiengesa, DZ BANK Research forecasts

VACANCY RATE (%)



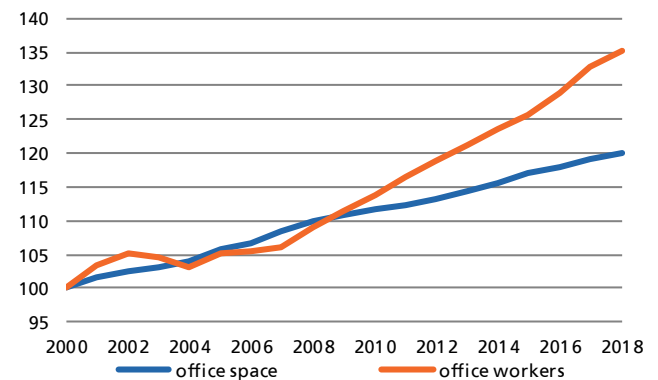
Source: bulwiengesa, DZ BANK Research forecasts

TAKE-UP AS % OF OFFICE SPACE



Source: bulwiengesa

TREND IN OFFICE SPACE AND NO. OF OFFICE WORKERS



Source: Scope, bulwiengesa

Index 2000 = 100

Münster is the most important regional office market with 2.2 million sqm. Office developments are mainly built for owner occupiers and speculative developments tend to be the exception at a time when the city could definitely do with more office space. While office space has increased by 9 per cent during the space of ten years, the number of office workers has risen almost three times as fast. Consequently, the vacancy rate which was still almost 6 per cent in 2008, has fallen to well under 2 per cent. This means that it has become virtually impossible to lease space in the city. The growing shortage of space may also explain the decline in take-up to 30,000 sqm in 2018. This is only around half the ten-year average. The biggest single transaction was only 1,200 sqm. There is no prospect of any improvement in the situation this year since the already relatively low level of new space coming to market in the last two years is set to decline even further. Although the amount of new space is set to pick up in 2020, it is likely at best to be an average amount. New office projects could emerge in the technology park on the Steinfurter Straße or in the Stadthafen 2 in order to tackle the shortage of space. One larger project is the office campus on Münster's Dreieckshafen with a 17-storey office tower which is due to be completed in 2022. In view of the shortage of available space, the prime rent which rose to EUR 14.50 last year is likely to increase even further.

Office: Medium-sized office market with high demand for space, but tight supply

OFFICE FORECASTS

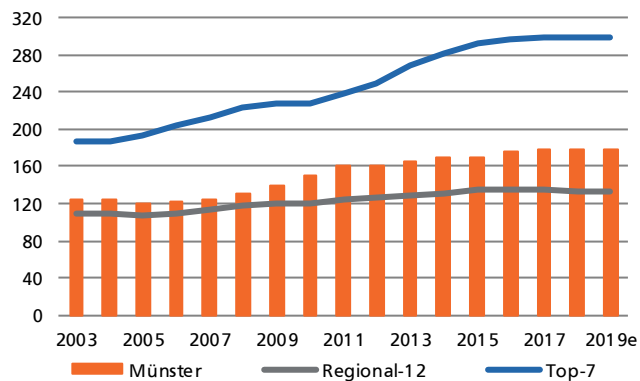
		2016	2017	2018	2019e
Demand					
GDP	% yoy	3.4	3.7	4.1	4.0
Per capita GDP	in EUR	55,428	57,276	59,336	61,426
No. of office workers	in '000	71.9	74.1	75.3	-
No. of office workers	% yoy	2.7	3.0	1.7	-
Supply					
Total office space	in m ² '000	2,187	2,210	2,227	2,245
Total office space	% yoy	0.8	1.0	0.8	0.8
Vacancy rate	%	2.1	1.8	1.4	1.3
Office rents					
Prime/secondary location	EUR/m ²	14.2 / 6.2	14.4 / 6.4	14.5 / 6.6	14.8 / 6.4
Prime/secondary location	% yoy	0.7 / 1.6	1.4 / 3.2	0.7 / 3.1	2.1 / -3.0

Source: Scope, bulwiengesa, DZ BANK Research forecasts

yoy = year-on-year

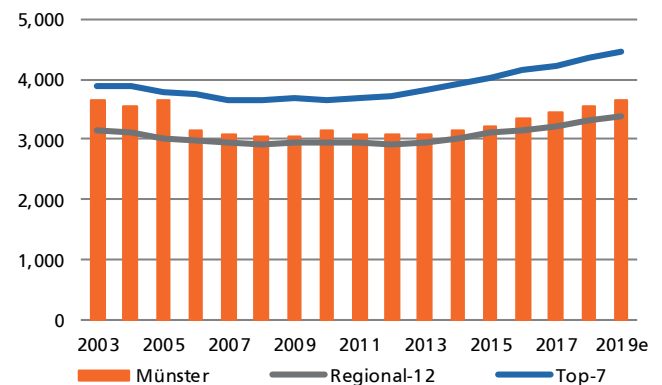
Retail space in Münster

PRIME RETAIL RENT IN EUR PER SQM



Source: bulwiengesa, DZ BANK Research forecasts

RETAIL SALES IN EUR PER SQM



Source: Scope

Conditions for the retail sector in Münster are outstanding, helped if nothing else by a central position in the Münsterland and the absence of rival shopping locations. There is a relatively large catchment area of over 800,000 inhabitants and moreover the population in the Westphalian city is growing much faster than average. At 107, purchasing power is also high in relation to other regional centres. The centrality score is also high at 128 points. Demand is also boosted by the many visitors to the city with around 1.3 million overnight stays p.a. The city centre offers shoppers an attractive range of stores with the usual mass-market, high-street chains in the Ludgerstraße, rounded off by more family-run stores and more exclusive shops on the Prinzipalmarkt. A Riani branch opened in 2018, and this year Zalando and Granit stores are expected to open, the latter being a Swedish shop which sells everything for the home. The city also has an attractive inner-city shopping centre with the Münster Arcaden which opened in 2006. It was followed by further developments such as the prizewinning Hanse-Carré/Stubengasse project. The city centre's strength is illustrated by the fact that one third of total retail sales are generated there. All the location's plus points make it highly attractive for retailers. A shortage of space means that the prime rent has risen to a level of almost EUR 180 per sqm, which is way above the average for a regional centre. We estimate that this fast-growing location could be spared the decline in prime rent which has affected other cities.

Retail: Outstanding conditions could help prime rent stabilise at high level

RETAIL FORECASTS

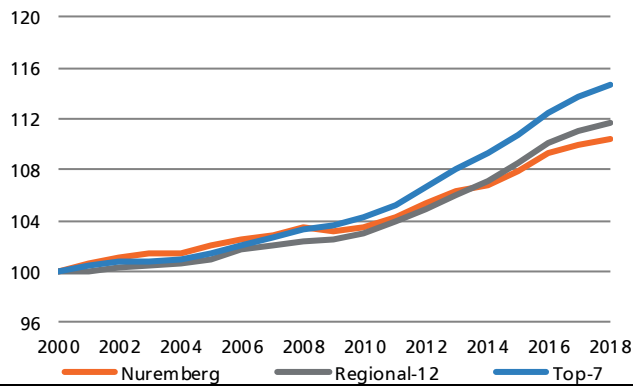
		2016	2017	2018	2019e
Demand					
Per cap. disposable income	EUR/month	2,118	2,159	2,213	2,269
Unemployment rate	%	5.7	5.4	5.0	4.8
Retail sales	EUR m/% yoy	2,094 / 4.1	2,169 / 3.6	2,251 / 3.8	2,336 / 3.8
Retail sales	EUR/m ² sales space	3,346	3,442	3,554	3,668
Supply					
Retail space	in m ² '000	626	630	633	637
Retail space	% yoy	2.02	2.02	2.03	2.03
Retail rent					
Prime/secondary location	EUR/m ²	175 / 10.0	178 / 10.5	178 / 10.5	178 / 10.5
Prime/secondary location	% yoy	2.9 / 0.0	1.7 / 5.0	0.0 / 0.0	0.0 / 0.0

Source: Scope, bulwiengesa, DZ BANK Research forecasts

yoy = year-on-year

NUREMBERG

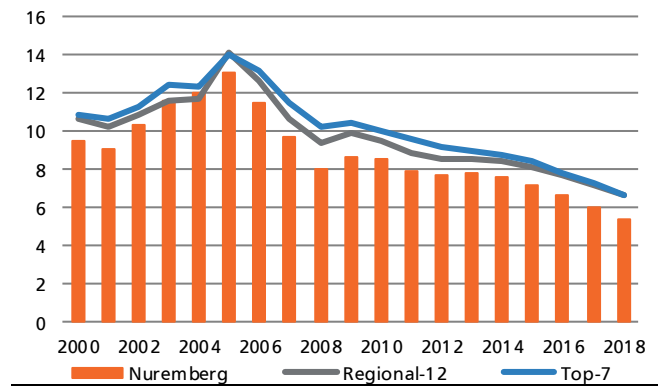
POPULATION GROWTH



Source: Scope

Index 2000 = 100

UNEMPLOYMENT RATE (%)



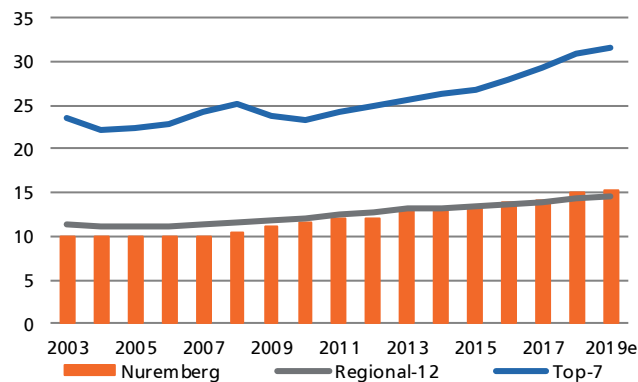
Source: bulwiengesa, BA, DZ BANK Research forecasts

Nuremberg forms an important economic region together with the neighbouring towns of Fürth and Erlangen. It is the second largest city in Bavaria with slightly over half a million inhabitants and the economic and cultural centre of Franconia. The city is known around the world for its old imperial palace, Christmas market and toy fair. Its economy was dampened by the structural change in industry which began in the 1970s and was then also followed by major insolvencies and plant closures. The city has now successfully managed the structural change, and, instead of a dwindling population and high unemployment, both are seeing a positive trend. Although unemployment has fallen sharply, at 5.1 per cent in December 2018, it is still twice the Bavarian level. The city's successful transformation into a services centre has been helped by the fact that the Friedrich-Alexander University Erlangen-Nürnberg has also been based in Nuremberg since 1961. Nuremberg is now home to over a dozen higher education institutions and around 25,000 students. The state of Bavaria aims to increase the importance of Nuremberg as a university town with the newly founded Technical University Nuremberg in the south of the city which is scheduled to open in 2025. Key sectors of the local economy are IT, logistics, high-tech plus energy and medical technology. Trade fairs and congresses are also a major earner along with tourism with over 6,000 overnight stays per 1,000 inhabitants p.a. The city is exceptionally well placed with transport links with the A3, A6 and A9 motorways, the ICE hub, along with an airport and river port on the Main-Danube Canal.

Bavaria's second largest city, still on successful track after many setbacks

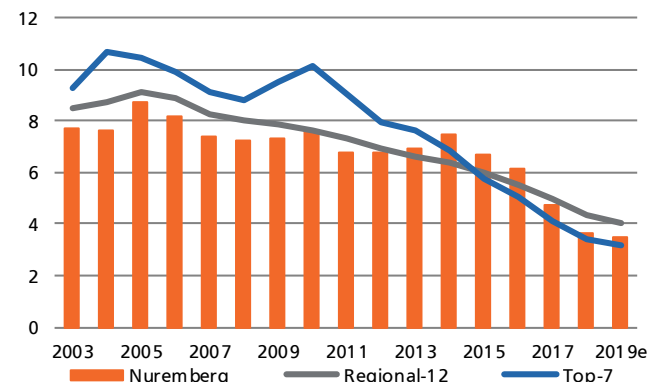
Office space in Nuremberg

PRIME RENT FOR OFFICE SPACE IN EUR PER SQM



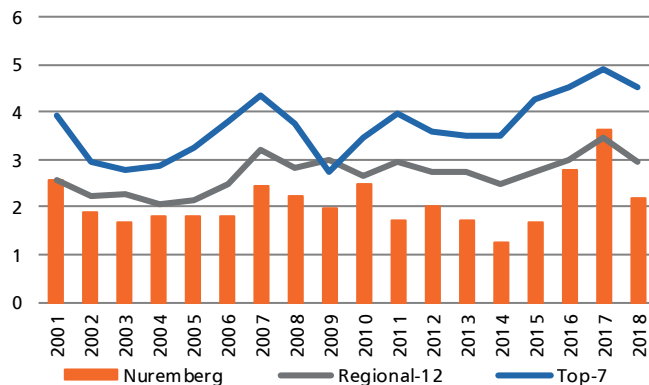
Source: bulwiengesa, DZ BANK Research forecasts

VACANCY RATE (%)



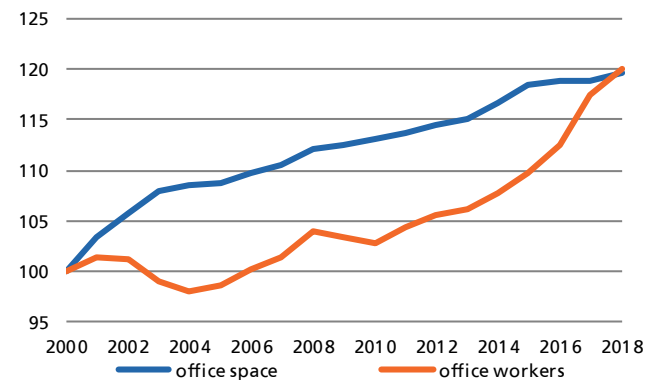
Source: bulwiengesa, DZ BANK Research forecasts

TAKE-UP AS % OF OFFICE SPACE



Source: bulwiengesa

TREND IN OFFICE SPACE AND NO. OF OFFICE WORKERS



Source: Scope, bulwiengesa

Index 2000 = 100

Below the top 7, Nuremberg is the second largest office market in Germany after Hannover with 3.6 million sqm of space. A sound economic performance has meant that the number of office workers is growing roughly in line with the average for the regional centres under consideration. In the past ten years, there has been an increase of around 15 per cent. However, office space has not even increased by half that amount, as illustrated by a noticeable fall in the vacancy rate which has more than halved to 3.6 per cent most recently in relation to 2010. The prime rent has risen to an above-average level of EUR 15 per sqm on the back of lively demand. Office rents have increased by over 40 per cent in the last ten years, beaten only by Berlin among the locations covered. After two strong years with a six-figure take-up, 2018 was back in line with the normal market level with a figure of 80,000 sqm. However, the record of 130,000 sqm in 2017 was helped by an exceptionally large number of big transactions – with seven of over 5,000 sqm each. In 2018, only the deal with Design Offices exceeded that mark at 12,400 sqm. Nuremberg's co-working company is planning to offer 500 flexible work spaces in the Tafelhof-Palais on the site of the administrative building of the former main post office; completion is scheduled for 2021. The bulk of the 47,000 sqm complex will house two hotels. The prime rent could rise slightly further in 2019. However, as in the case of the reduction in vacant space, there is not much scope left, not least because of relatively high new space of almost 70,000 sqm coming to market.

Office: Second largest office market after the top 7

OFFICE FORECASTS

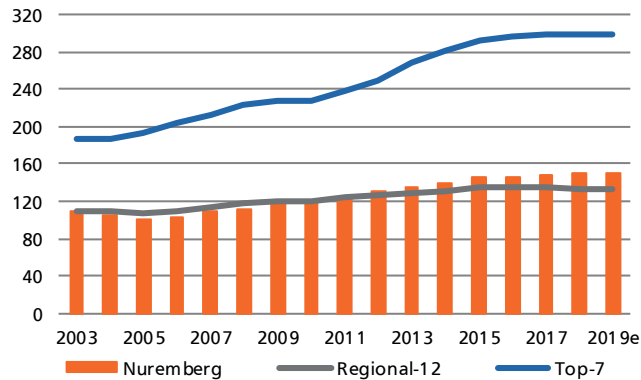
		2016	2017	2018	2019e
Demand					
GDP	% yoy	3.2	3.5	3.9	3.8
Per capita GDP	in EUR	55,118	56,728	58,649	60,663
No. of office workers	in '000	118.9	124.1	126.8	-
No. of office workers	% yoy	2.5	4.4	2.2	-
Supply					
Total office space	in m ² '000	3,604	3,603	3,628	3,660
Total office space	% yoy	0.3	0.0	0.7	0.9
Vacancy rate	%	6.1	4.7	3.6	3.5
Office rents					
Prime/secondary location	EUR/m ²	13.8 / 7.2	14.2 / 7.5	15.0 / 7.7	15.3 / 7.7
Prime/secondary location	% yoy	2.2 / 2.9	2.9 / 4.2	5.6 / 2.7	2.0 / 0.0

Source: Scope, bulwiengesa, DZ BANK Research forecasts

yoy = year-on-year

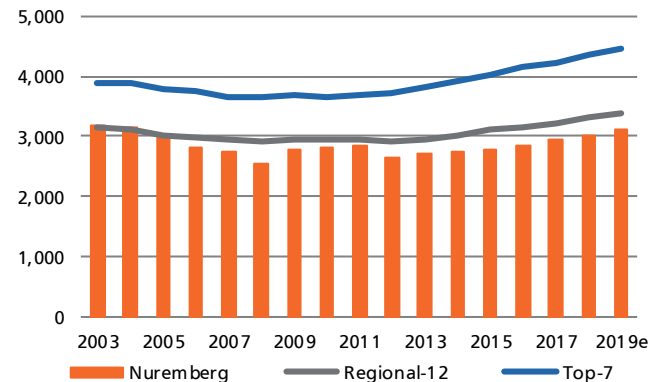
Retail space in Nuremberg

PRIME RETAIL RENT IN EUR PER SQM



Source: bulwiengesa, DZ BANK Research forecasts

RETAIL SALES IN EUR PER SQM



Source: Scope

Nuremberg is the leading shopping location in Northern Bavaria with a catchment area of around 2 million inhabitants. Competition from the surrounding towns is limited, leading to a high centrality figure of 135. At 104, the purchasing power score is slightly above the German average. Consumption is bolstered by a large number of visitors to this attractive city with over 3 million overnight stays p.a. The old town with its attractive shopping promenade makes an agreeable place in which to spend time. The Karolinenstraße scores highest in terms of footfall, number of chain stores and prime rents. One positive factor is the wide range of shops. Shopping options are boosted by the City-Point, Nuremberg's only inner-city shopping centre. However, the building dates back to the 1950s and its days are numbered; it is due for demolition before the end of the year. It will be replaced by a building which will fit in better with its surroundings scheduled to open in 2022. The new Altstadt-Karree will provide a mix of shops, places to eat and drink and a hotel. Two further shopping centres – the older Franken-Center and modernised Mercado – are located outside the city centre. In contrast, the big project on the former Quelle site has now been scrapped, which should help the location's stability. The site has been sold by Sonae Sierra to the Gerch group which is planning to build many flats along with retail space, space for start-ups and a hotel. The prime rent bucked the trend in 2018 with a slight increase to EUR 150 per sqm, underlining the location's strength. On this basis, we expect a stable prime rent this year.

Retail: Top shopping location with large catchment area and large visitor numbers

RETAIL FORECASTS

		2016	2017	2018	2019e
Demand					
Per cap. disposable income	EUR/month	2,078	2,110	2,150	2,193
Unemployment rate	%	6.6	6.0	5.4	5.2
Retail sales	EUR m/% yoy	3,760 / 2.7	3,866 / 2.8	3,988 / 3.2	4,113 / 3.1
Retail sales	EUR/m ² sales space	2,863	2,941	3,028	3,117
Supply					
Retail space	in m ² '000	1,313	1,314	1,317	1,319
Retail space	m ² /inhabitant	2.57	2.56	2.55	2.55
Retail rent					
Prime/secondary location	EUR/m ²	145 / 15.0	147 / 15.0	150 / 15.0	150 / 15.0
Prime/secondary location	% yoy	0.0 / 0.0	1.4 / 0.0	2.0 / 0.0	0.0 / 0.0

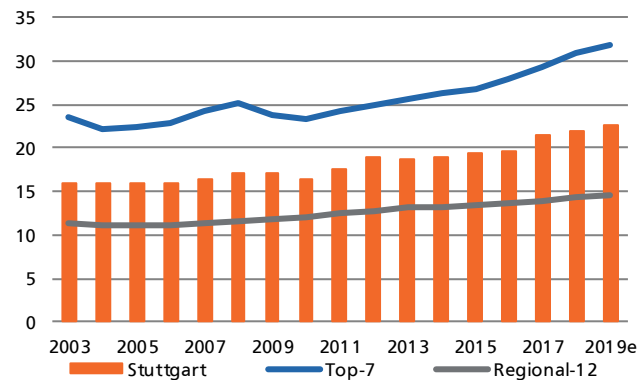
Source: Scope, bulwiengesa, DZ BANK Research forecasts

yoy = year-on-year

STUTT GART

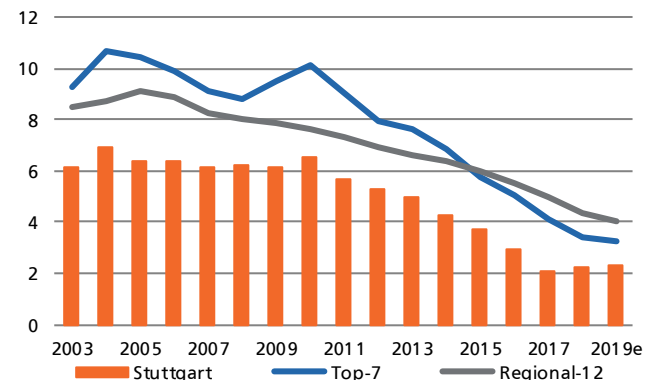
Office space

PRIME RENT FOR OFFICE SPACE IN EUR PER SQM



Source: bulwiengesa, DZ BANK Research forecasts

VACANCY RATE (%)



Source: bulwiengesa, DZ BANK Research forecasts

Stuttgart is the second largest office market in southern Germany with not quite 8 million sqm. However, in spite of the city's economic importance, the Stuttgart office market has long struggled to keep up with the other top locations. However, the gap has dwindled. In 2017, the prime rent topped the EUR 20 per sqm mark for the first time. Last year, it rose further to EUR 22 per sqm. Stuttgart's rent is now in line with that of Cologne. Take-up which was mostly below 200,000 sqm p.a. up to 2010 has also increased noticeably in the last few years. In 2018, however, office take-up fell back to 213,000 sqm, of which the Bosch Campus alone accounted for 50,000 sqm. In the second half of the year, however, there were no more large transactions. In addition, tight supply is slowing down the rental volume. As in the housing market, it is often difficult to realise office projects in Stuttgart because of the lack of building land. Even so, there has been an increase in new space coming to market since 2015, although this has not eased the shortage. At present, demand for office space can only be met from less than 200,000 sqm of vacant space, equating to a vacancy rate of just over 2 per cent. For this reason, the bulk of rental transactions in 2018 involved project developments. Tenants include the flexible office space provider Design Offices. This year, we are confident that the prime rent in the Stuttgart office market will increase further while the vacancy rate remains stable.

Office: Tight supply limiting take-up and pushing up prime rent

OFFICE FORECASTS

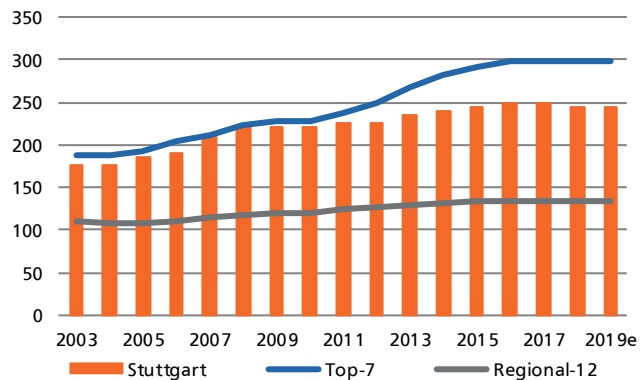
		2016	2017	2018	2019e
Demand					
GDP	% yoy	3.2	3.5	3.9	3.8
Per capita GDP	in EUR	84,674	87,093	90,000	93,053
No. of office workers	in '000	195.7	200.6	205.1	-
No. of office workers	% yoy	0.9	2.5	2.2	-
Supply					
Total office space	in m ² '000	7,682	7,787	7,863	7,970
Total office space	% yoy	1.0	1.4	1.0	1.4
Vacancy rate	%	2.9	2.1	2.2	2.3
Office rents					
Prime/secondary location	EUR/m ²	19.7 / 8.8	21.4 / 9.1	22.0 / 9.5	22.5 / 9.6
Prime/secondary location	% yoy	2.1 / 1.1	8.6 / 3.4	2.8 / 4.4	2.3 / 1.5

Source: Scope, bulwiengesa, DZ BANK Research forecasts

yoy = year-on-year

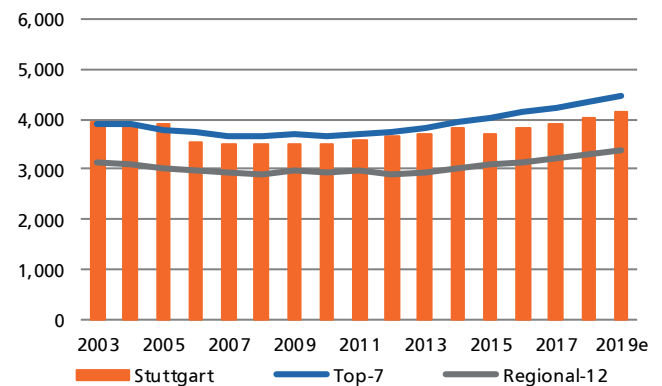
Retail space

PRIME RETAIL RENT IN EUR PER SQM



Source: bulwiengesa, DZ BANK Research forecasts

RETAIL SALES IN EUR PER SQM



Source: Scope

The retail sector in Stuttgart benefits from a catchment area of 2.8 million inhabitants with a strong economy. Although visitor numbers do not reach top figures, at just over 6,000 overnight stays per 1,000 inhabitants, tourism is also a major earner. The city's strength as a location and shortage of space in the main shopping street, the Königstraße, has also prompted the development of several large inner-city retail projects, leading to an increase in retail space in the city of over 20% at a stroke. The two inner-city shopping centres, MILANEO and GERBER, with a combined retail space of around 60,000 sqm opened almost simultaneously in 2014, at opposite ends of the inner city. In spite of this, the prime rent rose slightly further to EUR 250 by the spring of 2016. The new shopping centres have not only increased sales space but also made the city a greater draw for visitors. Since then, however, the prime rent has been stagnating. This is likely to reflect not only muted demand for space from retailers, but also the Dorotheen Quartier which opened in the spring of 2017 with a further 10,000 sqm, although it could have a positive impact on the Stiftstraße which is home to luxury shops. Concerns which were still being expressed a little while ago that the expansion of retail space would be too much for the city, have not materialised. The Königstraße has remained the dominant shopping street in Stuttgart, helped not least by new stores, such as the fashion outlet Saks Off 5th, the second Primark branch in Stuttgart and a Uniqlo store. The Dutch cult department store Hema then opened its doors in 2018. However, even Stuttgart's retail sector is feeling the headwind. The prime rent fell slightly in 2018, down EUR 5 to EUR 245 per sqm. This is likely to remain unchanged this year.

Retail: The city has easily absorbed the increase in retail space from three new shopping centres in a short space of time

RETAIL FORECASTS

		2016	2017	2018	2019e
Demand					
Per cap. disposable income	EUR/month	2,353	2,394	2,443	2,496
Unemployment rate	%	5.3	4.7	4.2	4.1
Retail sales	EUR m/% yoy	4,051 / 3.0	4,176 / 3.1	4,319 / 3.4	4,465 / 3.4
Retail sales	EUR/m ² sales space	3,807	3,907	4,013	4,122
Supply					
Retail space	in m ² '000	1,064	1,069	1,076	1,083
Retail space	m ² /inhabitant	1.70	1.70	1.70	1.70
Retail rent					
Prime/secondary location	EUR/m ²	250 / 15.0	250 / 16.0	245 / 16.0	245 / 16.0
Prime/secondary location	% yoy	2.0 / 3.4	0.0 / 6.7	-2.0 / 0.0	0.0 / 0.0

Source: Scope, bulwiengesa, DZ BANK Research forecasts

yoy = year

LOCATIONS AT A GLANCE

OFFICE SPACE

	Total Office Space 2018 Data			Rent in Prime location EUR/m ²			Change in Rent (% yoy)			Vacancy Rate (%)		
	in 1,000 m ²	2008 to 2018 (%)	Per Office Worker in m ²	2017	2018	2019e	2017	2018	2019e	2017	2018	2019e
Augsburg	1,404	6.6	25.0	12.8	13.0	13.2	2.4	1.6	1.5	5.6	5.1	5.2
Bremen	2,668	10.7	24.3	12.8	13.0	13.2	2.4	1.6	1.5	4.2	4.1	3.8
Darmstadt	1,617	9.2	31.2	13.1	13.2	13.3	0.0	0.8	1.0	3.6	3.7	3.5
Dresden	2,636	-1.1	24.2	12.8	13.0	13.2	1.6	1.6	1.7	7.6	6.8	6.0
Essen	3,171	13.5	31.7	15.0	15.0	15.3	3.4	0.0	1.8	6.5	5.0	4.5
Hannover	4,567	5.9	34.9	15.0	15.3	15.6	0.0	2.0	1.8	3.3	3.0	2.7
Karlsruhe	2,420	7.0	27.4	13.4	14.2	14.2	0.8	6.0	0.0	3.3	3.1	3.0
Leipzig	2,768	0.7	27.3	13.0	13.5	13.8	0.0	3.8	2.0	9.9	8.3	7.8
Mainz	1,622	7.8	30.9	13.5	13.9	14.1	3.8	3.0	1.7	3.2	3.0	2.8
Mannheim	2,102	10.0	28.0	15.4	16.2	16.2	1.3	5.2	0.0	4.8	4.8	5.0
Münster	2,227	9.2	29.6	14.4	14.5	14.8	1.4	0.7	2.1	1.8	1.4	1.3
Nuremberg	3,628	6.8	28.6	14.2	15.0	15.3	2.9	5.6	2.0	4.7	3.6	3.5
Regional centre mean	2,569	6.9	28.6	13.9	14.3	14.5	1.6	2.7	1.5	4.9	4.3	4.1
<i>Total</i>	30,829											
Berlin	19,151	5.1	30.8	30.0	33.5	34.7	7.1	11.7	3.5	2.2	1.7	1.9
Cologne	7,683	6.8	30.0	21.0	22.0	22.5	0.0	4.8	2.3	4.0	2.8	2.3
Düsseldorf	7,598	7.6	35.3	24.5	25.5	26.0	0.0	4.1	2.0	7.1	6.8	6.5
Frankfurt	10,126	3.2	33.6	38.5	39.5	40.5	8.5	2.6	2.5	9.3	7.6	6.8
Hamburg	13,796	7.8	31.0	26.5	27.5	28.0	1.9	3.8	1.8	4.5	3.6	3.2
Munich	13,803	4.5	30.9	36.0	37.2	38.0	3.7	3.3	2.2	2.0	1.5	1.6
Stuttgart	7,863	6.5	38.3	21.4	22.0	22.5	8.6	2.8	2.3	2.1	2.2	2.3
Top location mean	11,431	5.7	32.1	29.3	30.9	31.7	4.7	5.4	2.5	4.1	3.4	3.2
<i>Total</i>	80,019											

Source: bulwiengesa, Scope, DZ BANK Research forecasts

Means are space-weighted. The **prime rent** indicated by BulwienGesa represents the mean of the three top three to four percent of the rental market, which means that the prime rent given is not the same as the absolute top rent. For this reason, the higher rent figures for individual locations, some of which are quoted in alternative market reports, are fundamentally not contradictory.

RETAIL SPACE

	Total Retail Space 2018 Data			Rent in Prime location in EUR/m ²			Change in Rent (% yoy)			Retail Sales (% yoy)		
	in 1,000 m ²	2008 to 2018 (%)	Per capita in m ²	2017	2018	2019e	2017	2018	2019e	2017	2018	2019e
Augsburg	958	8.2	3.3	115	115	114	0.0	0.0	-0.9	2.4	2.5	2.5
Bremen	1,585	26.9	2.9	130	130	130	0.0	0.0	0.0	3.7	4.0	3.9
Darmstadt	396	9.2	2.5	100	97	96	2.0	-3.0	-1.0	2.9	2.9	2.8
Dresden	1,079	30.9	2.0	110	107	106	0.0	-2.7	-0.9	3.1	3.4	3.4
Essen	874	18.7	1.5	105	102	100	-2.8	-2.9	-2.0	2.8	3.1	3.1
Hannover	950	7.8	1.8	203	203	200	1.5	0.0	-1.5	3.1	3.3	3.2
Karlsruhe	562	14.4	1.8	106	104	102	-3.6	-1.9	-1.9	2.9	3.1	3.0
Leipzig	716	27.4	1.2	127	125	123	-2.3	-1.6	-1.6	3.2	3.9	4.0
Mainz	512	21.7	2.4	114	110	108	0.0	-3.5	-2.0	3.9	4.1	4.0
Mannheim	837	15.2	2.7	153	150	150	0.0	-2.0	0.0	3.2	3.3	3.2
Münster	633	21.6	2.0	178	178	178	1.7	0.0	0.0	3.6	3.8	3.8
Nuremberg	1,317	10.1	2.6	147	150	150	1.4	2.0	0.0	2.8	3.2	3.1
Regional centre mean	868	17.6	2.1	134.7	133.6	132.5	0.0	-0.8	-0.8	3.1	3.4	3.3
<i>Total</i>	10,420											
Berlin	6,591	18.7	1.8	310	310	310	0.0	0.0	0.0	3.0	3.3	3.3
Cologne	1,410	6.1	1.3	255	255	250	2.0	0.0	-2.0	3.3	3.7	3.8
Düsseldorf	1,265	33.1	2.0	280	282	280	1.8	0.7	-0.7	3.4	3.9	4.0
Frankfurt	1,570	20.2	2.1	300	300	300	0.0	0.0	0.0	3.5	3.6	3.6
Hamburg	3,006	12.1	1.6	285	285	285	0.0	0.0	0.0	4.1	4.3	4.2
Munich	2,132	20.5	1.4	345	345	345	0.0	0.0	0.0	4.0	4.2	4.1
Stuttgart	1,076	13.1	1.7	250	245	245	0.0	-2.0	0.0	3.1	3.4	3.4
Top location mean	2,436	17.3	1.7	298.4	298.3	297.9	0.3	0.0	-0.2	3.5	3.8	3.8
<i>Total</i>	17,051											

Source: bulwiengesa, Scope, DZ BANK Research forecasts

Means are space-weighted. The **prime rent** indicated by BulwienGesa represents the mean of the three top three to four per cent of the rental market, which means that the prime rent given is not the same as the absolute top rent. For this reason, the higher rent figures for individual locations, some of which are quoted in alternative market reports, are fundamentally not contradictory.

STRUCTURAL DATA 2018

	Inhabitants in 1,000	Inhabitants 2008-2018 (%)	GDP EUR m	Per Capita GDP (EUR)	Per Capita Disposable Income EUR/Month	Unemployment Rate (%)
Augsburg	294	10.5	14,731	50,185	1,942	5.0
Bremen	570	5.1	30,137	52,872	2,169	9.3
Darmstadt	159	14.3	11,413	71,807	2,163	5.2
Dresden	550	10.8	22,157	40,254	1,887	6.1
Essen	591	3.1	26,277	44,484	1,971	10.6
Hannover	535	6.7	37,170	69,477	2,267	8.2
Karlsruhe	313	10.7	20,854	66,523	2,261	4.1
Leipzig	581	18.6	21,376	36,763	1,738	6.8
Mainz	215	8.6	12,468	57,952	2,138	5.5
Mannheim	310	7.9	20,747	66,925	2,038	4.9
Münster	313	13.9	18,554	59,336	2,213	5.0
Nuremberg	516	6.7	30,247	58,649	2,150	5.4
Regional centre mean	412	9.1	22,178	53,795	2,057	6.7
<i>Total</i>	4,947		266,131			
Berlin	3,619	11.5	137,040	37,867	1,921	8.2
Cologne	1,084	9.2	68,395	63,112	2,114	7.9
Düsseldorf	617	6.6	53,471	86,626	2,502	6.7
Frankfurt	748	15.4	73,361	98,013	2,170	5.4
Hamburg	1,836	8.7	121,530	66,198	2,368	6.4
Munich	1,485	14.0	118,123	79,530	2,762	3.8
Stuttgart	633	10.0	57,005	90,000	2,443	4.2
Top location mean	1,432	10.9	89,846	62,748	2,236	6.7
<i>total</i>	10,023		628,925			

Source: Scope, BA, own calculations

Means are inhabitant and space-weighted

GLOSSARY

Office take-up	Office space in a specific location newly occupied through letting or owner-occupation. This does not include contract extensions. Office take-up is counted from the time of signing of the transaction rather than the time the new occupant actually moves in.
New space	Newly built office space being brought to market in the respective year.
Vacancy rate	Proportion of vacant office space in the respective location in relation to available space.
Purchasing power index	Purchasing power is relevant for the retail sector since it defines the disposable income of households, i.e. their ability to buy products and services. The purchasing power index measures the financial ability to buy goods and services in a specific location in relation to the German-wide average which is set at 100 points.
Net initial yield	The initial rental yield for office and retail space is the ratio of net rental income and total purchase price, taking into account expenses.
Reg 12/Regional 12	Space-weighted index made up of the 12 regional centres analysed in this report, namely Augsburg, Bremen, Darmstadt, Dresden, Essen, Hanover, Karlsruhe, Leipzig, Mainz, Mannheim, Münster and Nuremberg.
Prime rent	The prime rent represents an average of the top 3-5% of all lettings in a market, and the figure given is therefore not the absolute top rent realised.
Top 7	Space-weighted index made up of the top seven locations, namely Berlin, Düsseldorf, Frankfurt, Hamburg, Cologne, Munich and Stuttgart.
Centrality index	Centrality is calculated by dividing retail sales in a location by the purchasing power relevant to that location multiplied by 100. A figure of more than 100 points indicates that retail sales are higher than the relevant purchasing power and the location therefore attracts additional purchasing power.

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