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REAL ESTATE MARKET GERMANY 2019 | 2020

Top locations benefit from population growth and a positive labour market situation

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PREFACE

Dear readers,

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

As a whole, the upswing is ongoing. So far, the subdued economic outlook has had no real impact on the German real estate market – in fact, the segments examined are being influenced by other factors. Sustained positive labour market data is driving demand for space in the office market, which is faced with increasingly scarce supply. As a consequence, all the major locations have posted notable growth in top rents over the past few years. This trend is expected to prevail – at a moderate level – in the coming year. The residential investment market in metropolitan areas is increasingly coming under the influence of regulatory intervention in the rental market. In conjunction with the growing number of completed newly-built flats, this may lead to abating rental dynamics over the next few months. Looking at the retail sector, online trading represents a real challenge, now generating 11 per cent of total sales. Nevertheless, thanks to continuing population growth and thriving tourism, the top locations remain attractive shopping destinations.

This study includes an excursus examining the niche segment of data centres. Whilst these special properties play an important role in the context of progressing digitalisation, they represent a challenge for the markets, due to their complex technical infrastructure. At the same time, data centres offer investors the possibility of participating in the ongoing digitalisation trend.

The German real estate market report 2019/2020 is of course also available in German. All current reports can be downloaded from our website (on www.dzhyp.de/en/about-us/market-research/).

Yours sincerely,

DZ HYP

October 2019

SUMMARY

» Without climate change, the real estate market would probably be the hot topic in Germany. Nearly every week brings more reports of high purchase prices and unaffordable residential rents, and measures taken to combat them. However, the real estate market has also become an ongoing issue for financial regulators given the risk of the overvaluation of residential and commercial properties due to high buyer demand. Nor is there any sign of the high level of interest in the property market abating against a backdrop of a continuing housing shortage and negative bond yields.

» However, conditions in the **commercial real estate markets** in the top seven German locations of **Berlin, Cologne, Düsseldorf, Frankfurt, Hamburg, Munich and Stuttgart** have generally deteriorated. International crises are depressing exports. The economy is on the brink of recession. However, the effects have been less visible in the property market so far. Other factors have had a greater impact on the **retail, office and residential segments** analysed in this market report.

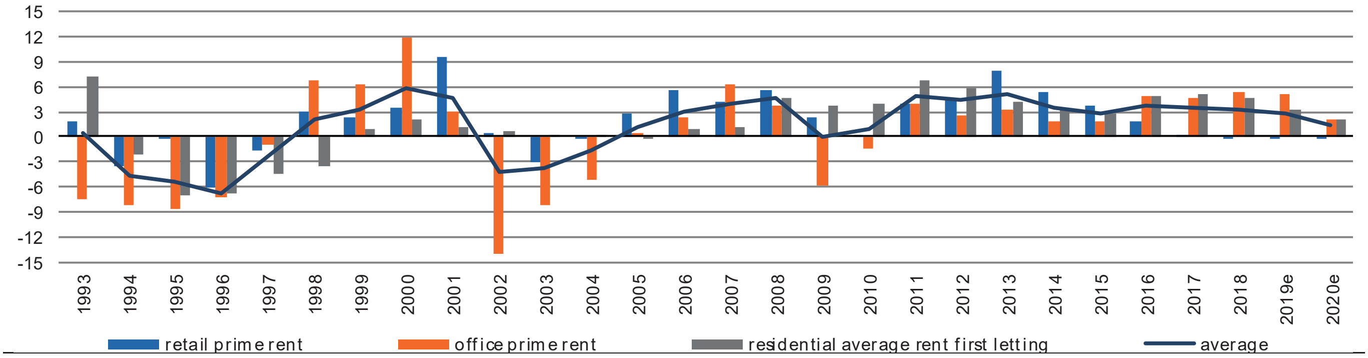
» E-commerce is a cause of concern for the **retail** sector. However, the top locations remain relatively unscathed by the decline in footfall evident in the main shopping streets of many cities. In the seven largest German cities the retail sector is holding its own thanks to growing buyer potential due to population growth and flourishing tourism. Rents have not fallen sharply so far. Weaker demand from fashion retailers for space is being taken up by bars and restaurants, drugstores, and supermarkets.

» In the **office market**, rents are being driven up by high demand for space and a growing supply shortage. However, rent growth is likely to decelerate. While the economic slowdown could dampen demand, supply is gradually increasing as office construction picks up.

» In the **housing market**, an increasing number of completions is braking growth in initial rents. Population growth is also being impeded by high rents and a housing shortage. Market regulation is also therefore functioning without any extensive regulatory intervention. Uncertainty about further regulatory measures and the slowing pace of rent growth are likely to impact on the future trend in the housing market.

This twelfth issue of our market report shows a growing shortage of office space, a visible increase in housing completions, and continuing weak retail demand

TOP LOCATIONS: PHASE OF RISING RENTS IN PROPERTY MARKET GRADUALLY WEAKENING
RENTS COMPARED TO PREVIOUS YEAR IN PER CENT (TOP LOCATIONS)



Source: bulwiengesa, DZ BANK forecast

Retail – space demand shifts towards bars and restaurants

Top locations still attractive – and can defy downward rent trend

» Thanks to excellent labour market conditions, things have been going well for the Germans. Employment is at a record high, and incomes and related pensions are growing strongly. However, the economic slowdown is also having an impact on private households. While the propensity to save is increasing despite low interest rates, growth in retail sales has slowed. Given that shopping volume has increased by EUR 100 billion in just under ten years, the retail sector would have little cause for complaint were it not for the fact that online shopping is now absorbing a growing proportion of retail sales (currently 11 per cent).

» The consequences are clearly visible. Vacant properties, the presence of discounters, and a decline in footfall paint a dismal picture and are driving down retail rents in many pedestrian zones. The top locations are still very unaffected by this trend. However, customers are no longer buying so much on a city centre stroll. Growth in the population and the number of tourists can nevertheless offset the sales lost to online shopping.

» Growth in prime rents in top locations in the seven largest German cities is nonetheless a thing of the past. It has also become more difficult to market sales space, because fashion retailers – previously the main customers – need fewer and smaller shops. However, this trend is not leading to an increase in the number of vacant properties because bars and restaurants, drugstores and supermarkets are increasingly occupying city centre sites.

» The strong growth in prime retail rents which started in 2005 came to an end in 2016 after average growth of around 55 per cent to nearly EUR 300 per m² in top locations. Since then, rents have largely remained stable. In mid-2019 they ranged from EUR 245 in Stuttgart to EUR 345 in Munich. Up-and-coming Berlin is the second most expensive German retail location ahead of Frankfurt and Hamburg, at EUR 310.

» So long as top locations continue to attract high footfall, the level of interest from retailers, bars and restaurants and other customers seeking premises is likely to be maintained. Retail rents should accordingly show above-average growth. However, this means they will at best remain stable, rather than grow.

FORECASTS FOR RETAIL PROPERTIES

	Prime rents in EUR per m²			Change in prime rents in % vs. prev. yr.		
	2018	**2019e**	**2020e**	**2018**	**2019e**	**2020e**
Berlin	310	310	310	0,0	0,0	0,0
Cologne	255	250	248	0,0	-2,0	-0,8
Düsseldorf	282	280	280	0,7	-0,7	0,0
Frankfurt	300	300	300	0,0	0,0	0,0
Hamburg	285	285	285	0,0	0,0	0,0
Munich	345	345	345	0,0	0,0	0,0
Stuttgart	245	245	243	-2,0	0,0	-1,0
Average for top locations	**298.3**	**297.8**	**297.6**	**0.0**	**-0.2**	**-0.1**

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

Office – economic slowdown not yet reflected in office market

Shortage of space extends to top locations

- The sharp contraction in export business mainly triggered by various international crises has caused macroeconomic growth in Germany to slow significantly. However, while sentiment indicators such as the ifo business climate index are losing ground from month to month and employment growth is stagnating, the office market remains unscathed by the economic slowdown. Instead of slowing, take-up reached a record level of more than 1.7 m² in the first half of 2019.
- However, the lively rental business is not only surprising because of the deterioration in the macroeconomic climate. The volume of vacant office property has been falling for some years which means that virtually no more existing properties at least are now available for rent. The average vacancy rate in top locations has fallen from around 10 per cent to 3 per cent since 2010. The volume of unoccupied properties is even smaller in Berlin, Munich and Stuttgart. The number of vacant properties available to prospective tenants is currently slightly higher only in Düsseldorf and Frankfurt.
- Given the shortage of space, it is not surprising that a large proportion of rental contracts concluded are for large areas to be used for project development. However, it is not unusual for tenants to have to wait two years before moving in. Virtually no more new large-scale space is now available.
- As a consequence of the strong demand for, and low availability of space, average prime rents in top locations are rising sharply. A large proportion of the rent growth is being driven by the up-and-coming office location of Berlin. Strained market conditions are also good news for co-working providers. The segment of flexibly let office space continues to grow strongly at a still low level.
- We expect rent growth to slow in the forecasting period up to 2020. This is attributable, on the one hand, to the deterioration in the economic environment, and on the other hand, to an increase in the supply of space due to growth in new office construction. For this reason, vacancy rates are likely to largely remain stable.

FORECASTS FOR OFFICE PROPERTIES

	Prime rents in EUR per m²			Change in prime rents in % vs. prev. yr.		
	2018	**2019e**	**2020e**	**2018**	**2019e**	**2020e**
Berlin	33.5	37.0	38.1	11.7	10.4	3.0
Cologne	22.0	23.5	24.0	4.8	6.8	2.1
Düsseldorf	25.5	26.3	26.7	4.1	3.0	1.5
Frankfurt	39.5	40.5	41.0	2.6	2.5	1.2
Hamburg	27.5	28.3	28.8	3.8	3.0	1.8
Munich	37.0	38.0	38.8	2.8	2.7	2.0
Stuttgart	22.0	22.7	23.1	2.8	3.2	1.8
Average for top locations	**30.8**	**32.4**	**33.1**	**5.3**	**5.1**	**2.1**

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

Residential – housebuilding picks up strongly and brakes rent growth

Sharp rent rise leads increasingly to regulatory intervention in market

» The German housing market has become a political issue as a result of the steep rise in rents. Increasing protests from tenants and calls for measures including the nationalisation of housing associations have had an impact. Intervention in rental markets by regulators, such as the repeated tightening of constraints on rents and the rent cap recently agreed for Berlin are restricting the profit outlook for landlords and causing considerable uncertainty among investors about further restrictions and conditions.

» Rent growth has in any case already slowed as housebuilding in top locations has accelerated sharply in recent years. Completion figures have regained the level of the post-reunification boom. Population growth in top locations has also slowed visibly – as apartments have become ever more unaffordable.

» The demand gap in the housing market which has widened over several years cannot be closed quickly, and the strained conditions in housing markets of top locations are therefore persisting. However, rent growth is likely to continue to slow as a result of the large number of – comparatively expensive – new home completions. We also expect the density of regulation in the housing market to increase further.

FORECASTS FOR RESIDENTIAL PROPERTIES

	Prime rents in EUR per m²			Change in prime rents in % vs. prev. yr.		
	2018	**2019e**	**2020e**	**2018**	**2019e**	**2020e**
Berlin	13.5	14.2	14.5	8.0	5.0	2.5
Cologne	13.0	13.3	13.5	4.0	2.1	1.9
Düsseldorf	12.9	13.2	13.4	0.8	2.0	1.5
Frankfurt	15.5	15.9	16.3	2.6	2.6	2.5
Hamburg	14.2	14.4	14.6	2.2	1.5	1.5
Munich	19.0	19.6	20.0	2.7	2.9	2.3
Stuttgart	15.5	16.0	16.5	6.9	3.2	3.1
Average for top locations	**14.6**	**15.1**	**15.4**	**4.5**	**3.2**	**2.2**

Source: bulwiengesa, Scope, DZ BANK Research forecast

CURRENT ECONOMIC CONDITIONS IN GERMANY

German economic output fell slightly in Q2 2019

The various international crises are having an increasing impact on the German economy. While economic output was still increasing by 0.4 per cent in the first quarter of 2019, it contracted slightly by 0.1 per cent in the second quarter. Industry is being particularly hard hit by falling exports. Conversely, the decline in construction investment is attributable to extraordinary statistical factors. Given low interest rates and high demand for newly built residential and commercial properties, the construction sector is fundamentally performing well and is supporting macroeconomic growth.

Declining exports cushioned by private consumption and growth in public spending

Private consumption continues to provide strong impetus. High levels of employment and rising incomes are creating a favourable climate for growth in consumer spending. Increasing public spending has also helped to prevent an even steeper decline in economic output. The German domestic economy remains stable and is thus counteracting a sharper economic downturn.

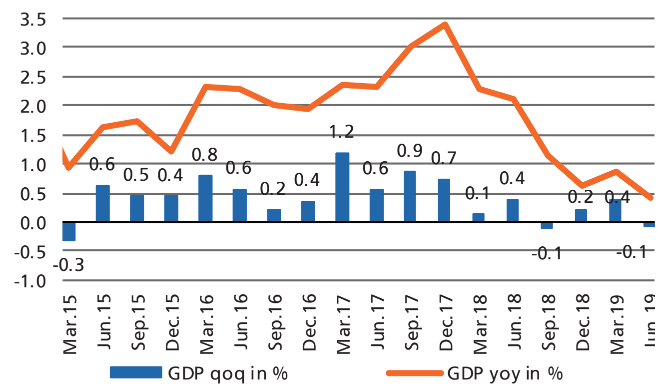
Labour market stable in weakened economic climate

There are no signs yet of a more positive outlook for the economic climate. Exports in particular are likely to remain weak. Risk factors are the US/China trade dispute, a potential no-deal Brexit, and the government crisis in Italy. Qualified workers are still needed in the labour market. Levels of employment and unemployment should remain largely stable without improving any further.

ECONOMIC FORECAST GERMANY

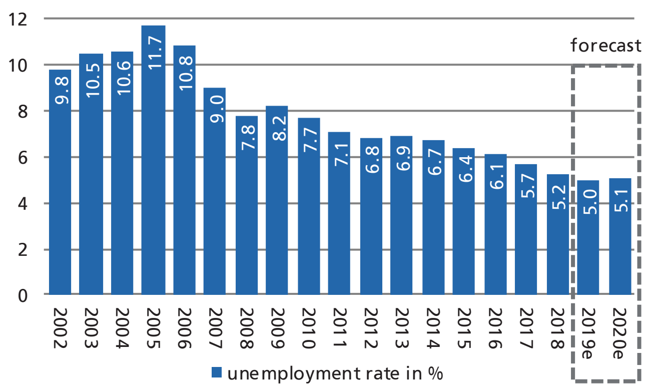
Year-on-year (%)	2017	2018	2019e	2020e
GDP	**2.5**	**1.5**	**0.6**	**1.0**
Private consumption	1.4	1.3	1.4	1.2
Public consumption	2.2	1.5	2.2	2.5
Investment	2.4	3.3	3.1	3.1
Exports	4.9	2.1	1.0	1.8
Imports	5.2	3.6	2.9	3.9
Unemployment rate (in %)	**5.7**	**5.2**	**5.0**	**5.1**
Inflation rate (HICP)	1.7	1.9	1.5	1.5
Budget balance (as % of GDP	1.0	1.7	0.8	0.4

MACROECONOMIC GROWTH HAS SLOWED CONSIDERABLY



Source: German Federal Statistical Office

TREND IN, AND FORECAST FOR UNEMPLOYMENT



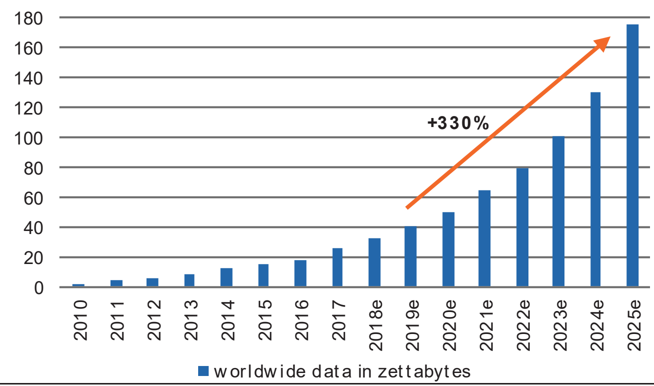
Source: German Federal Employment Agency, DZ BANK forecast

DATA CENTRES – AN ASSET CLASS FOR THE DIGITAL FUTURE

Digitalisation has already visibly altered many areas of life

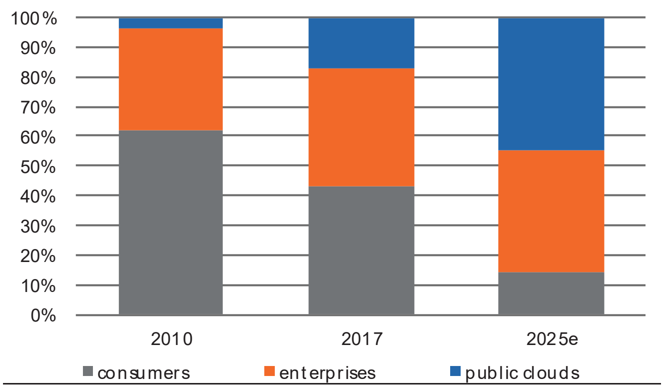
Digitalisation is advancing at a fast pace. Smartphones are now universal. Much has fundamentally altered in the workplace, communications, shopping and media usage. This has also led to a shift in the type of properties required. Shopping centres are losing ground as a marketplace to online shopping. Conversely, demand is increasing for logistics properties to facilitate complex supply chains. Office buildings are also changing. Office work is becoming increasingly mobile. The automation of routine tasks is also increasing exponentially. Instead of offices used by two people to process administrative tasks, an innovation-enhancing environment is needed for development teams.

GLOBAL DATA VOLUME EXPECTED TO CONTINUE TO GROW RAPIDLY



Source: Statistica

OWN HARD DRIVES BECOMING LESS IMPORTANT – DATA INCREASINGLY STORED IN THE CLOUD



Source: IDC

Potential IT applications rapidly exceeding our powers of imagination

There is no sign of an end to the digital transformation, for example with a view to artificial intelligence. Broad coverage from high performance mobile phone networks should provide impetus for digital applications. The new mobile phone standard 5G – virtual fibre optic – will facilitate consistently high data transmission rates, significantly higher capacity for mobile phone cells, and much shorter response times. This will make the Internet of Things (IoT) feasible, in other words the networking of machines and devices or people and robots. This will boost the potential of Industry 4.0. Networked automated vehicles will increase road safety. Digitally networked energy producers and consumers will be more efficient. Doctors will then be able to examine and treat patients remotely at home or while travelling much more successfully than by telephone. “Smart farming” will make it possible to achieve optimum levels of fertilisation and irrigation for individual plants.

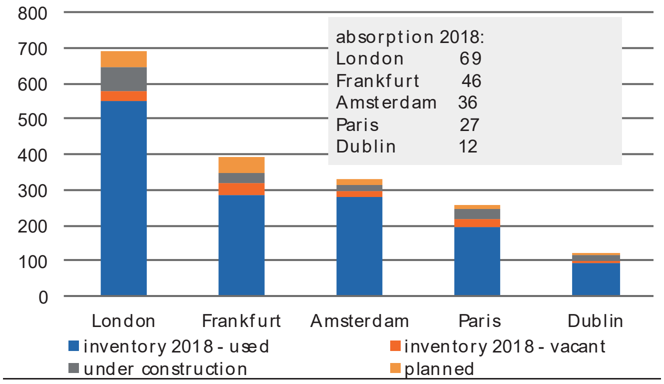
Data centres form the basis of digitalisation

Current and future digital applications have one thing in common. They need efficient IT systems to manage rapidly increasing data volumes. However, IT equipment which requires large amounts of energy cannot be located in ordinary office space. Special buildings are needed for operational purposes. Despite their major importance for digitalisation and high levels of investment, data centres have been a niche asset class so far. The number of mostly inconspicuous buildings is manageable. However, demand for special premises to be used as data centres is likely to grow significantly in future to facilitate the likely rapid further growth in data volumes and the potential for new IT applications.

High performance power supply, 24-hour operations and data security must be guaranteed

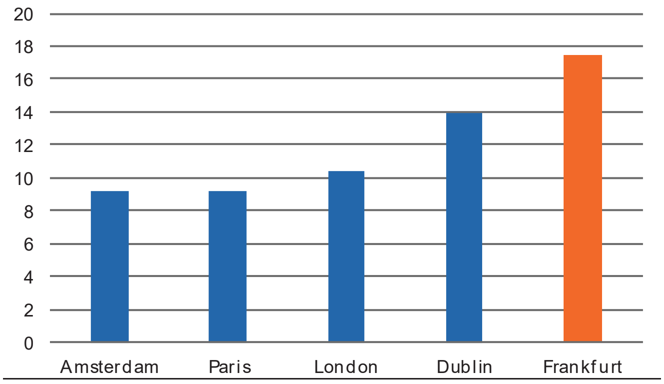
But what does the term “data centre” actually mean? High performance IT systems and data storage facilities need complex infrastructure to guarantee reliable operations. A key factor here is massive power consumption on a similar scale to industrial complexes. This then emits large quantities of waste heat, and powerful cooling systems are therefore needed. An uninterrupted power supply and cooling systems must also be guaranteed, and back-up systems and emergency power supplies maintained to manage technical problems or power outages. Data cables are also needed to connect with other computing centres. Elaborate security and access systems, and security guards also play a very important role in protecting sensitive data. Operations will also have to be guaranteed around the clock throughout the year.

DATA CENTRES CONCENTRATED ON A SMALL NUMBER OF LOCATIONS IN EUROPE
IN MEGAWATTS



Source: JLL

GERMAN COMPUTING CENTRES HIT BY HIGH ENERGY PRICES
ELECTRICITY PRICE IN CENT/KWH



Source: JLL

Colocation data centres with diverse users/tenants growing strongly

The infrastructure needed to ensure operational and data security makes operating computing centres expensive. Cost-efficient, shared usage of infrastructure therefore makes sense. This is the reason for the strong global growth in so-called colocation data centres where different users can operate their IT systems independently. Instead of maintaining their own IT infrastructure, they sign a utilisation contract with the data centre operator and pay rent. From the perspective of the property market, this is the equivalent of a multi-tenant arrangement. However, wholesale data centres also exist which are leased to only one individual user, similar to a single-tenant building.

Services provided for both small and very large IT systems

Operators of colocation data centres offer customers a customised infrastructure. This starts with individual “racks” for smaller IT systems and extends to larger partitioned cages containing several racks, and several hundred m^2 of large separate halls. IT plant is separated from the systems of other users. Only authorised personnel have access, for example the IT employees of the particular user. In addition to the individual company computing centres etc., public Cloud services such as Amazon or Microsoft can also be housed in data centres. This arrangement guarantees a particularly rapid and secure connection between the individual IT structure and providers of Cloud services, who are increasingly gaining in importance.

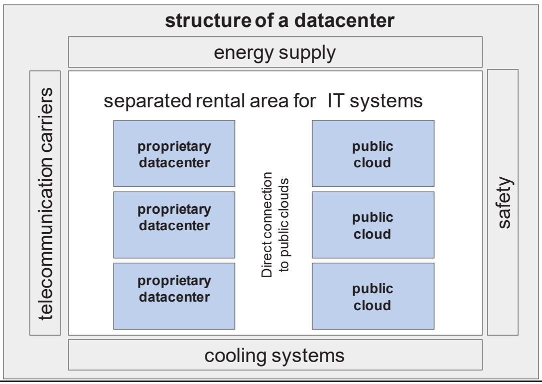
Frankfurt the most important data centre location on the European mainland

The European market for data centres is concentrated on four locations, designated the “FLAP markets” – **F**rankfurt, **L**ondon, **A**msterdam and **P**aris. However, Dublin is also a fairly important IT centre. The market size of these locations is described in terms of their energy capacity in megawatts rather than by the amount of space as otherwise usual in the property market. In 2018, Frankfurt – the largest location on the European mainland – had data centres with capacity of 320 megawatts, around 10 per cent of which was available. Capacity under construction or at the planning stage is likely to increase the volume to around 400 megawatts in the near future. Usage of Frankfurt data centres increased by 46 megawatts net in 2018. Total net absorption at the five major European locations was 190 megawatts with total installed capacity of around 1,500 megawatts. The largest individual computing centre in Europe, with space of 60,000 m² is the Frankfurt Data Centre Campus, operated by e-shelter.

More decentralised data centres probably needed in future

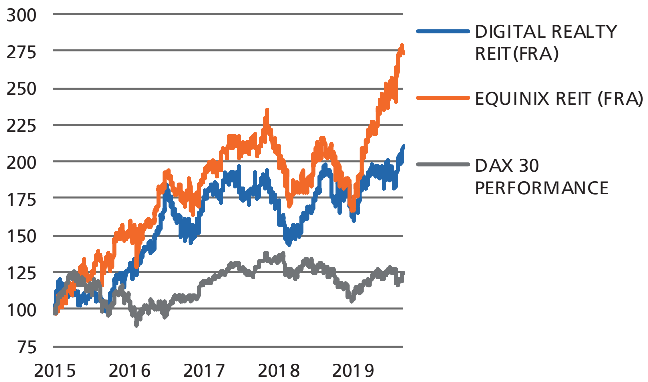
In future, the data centre market is likely to grow mainly in terms of its regional spread as well as volume. New applications based on 5G mobile technology will lead to large data volumes "across the board". Large data centres concentrated on a few locations will be insufficient to process this data quickly, solely because of their geographic distance. The need for smaller, decentralised data centres is therefore likely to grow correspondingly.

STRUCTURAL SET-UP FOR A "COLOCATION" DATA CENTRE



Source: DZ BANK

STOCK MARKET PRICES OF DATA CENTRE REITS WHICH ALSO HAVE A PRESENCE IN GERMANY HAVE PERFORMED WELL
STOCK MARKET PRICE 2015 = 100



Source: Thomson Reuters

data from September 6th 2019

Data centres pose a challenge for the property market

Data centres pose a challenge for the property market. Because of their complex technical infrastructure, properties are very expensive. The value of the actual building relative to the technical equipment is inverse compared to "normal" commercial real estate such as office properties. An alternative use of the data centre would also be difficult, partly because the rental income generated would not be proportionate to the high investment costs. Finally, the intrinsic value of the property is based on a combination of the technical capability and quality of the operator.

Data centres enable investors to participate in the development of digitalisation

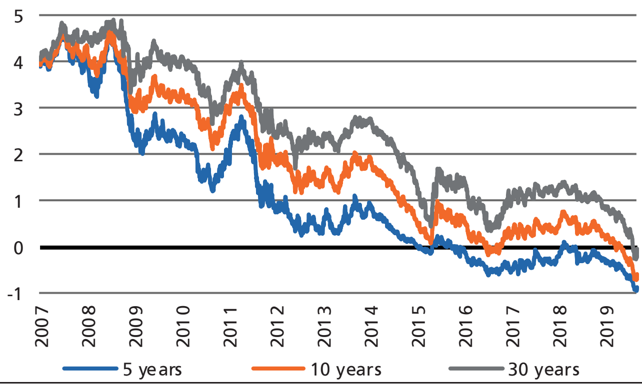
For property market investors, data centres and their operators represent an alternative means of participating in the growth potential of advancing digitalisation. However, the only country where a transparent investment market for data centres has developed so far is the USA in the form of REITs (Real Estate Investment Trusts). Investors participate in the REIT as owners of the data centre. The operator leases the property and concludes contracts with individual users. The share prices of two suppliers which are also active in Germany, the Digital Realty and Equinix REITs, have performed well in the past. One of the challenges facing data centre operators in Europe, and particularly in Germany - apart from competition from rival providers - is the impact of the "energy transition" due to high electricity costs in Germany and the declining stability of the power supply.

INVESTMENT MARKET – NO REVERSAL OF INTEREST RATES

No reversal of interest rates – in fact yields have fallen even lower

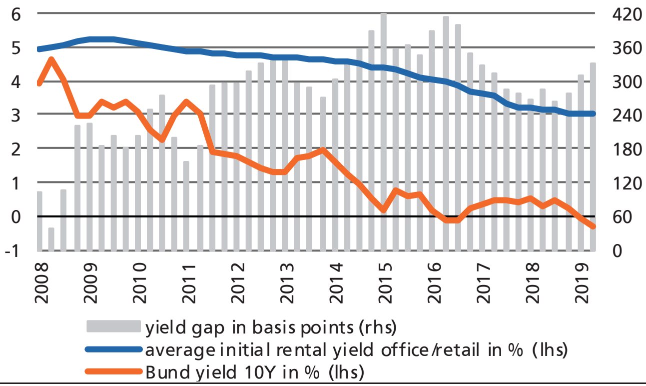
More than a year ago, debate centred on the consequences of the expected “reversal of interest rates” for the German property market. What impact would rising bond yields have on rental yields and property prices? However, the deterioration in the economic climate in Europe and persistently low inflation have led to precisely the opposite scenario being realised. Instead of rising, ten-year Bund yields have fallen by around 100 basis points to minus 0.7 per cent within a year. The likely further extension of expansionary ECB monetary policy could push interest rates down further.

BUND YIELDS FALL TO HISTORIC LOWS



Source: Datastream data from September 6th .2019

YIELD DIVERGENCE BETWEEN INITIAL RENTAL YIELD AND BUNDS WIDENS FURTHER

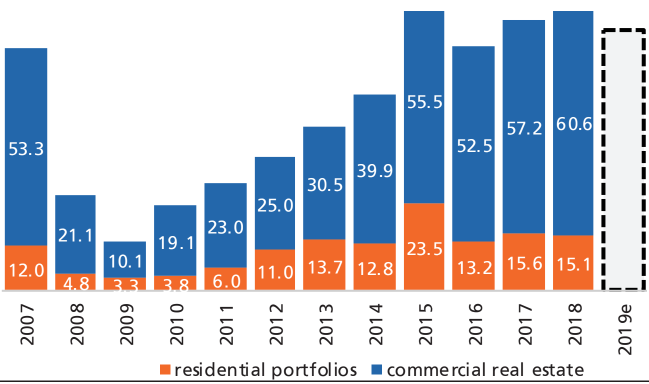


Source: bulwiengesa, Bloomberg, DZ BANK

Falling interest rates widen the gap from initial rental yield

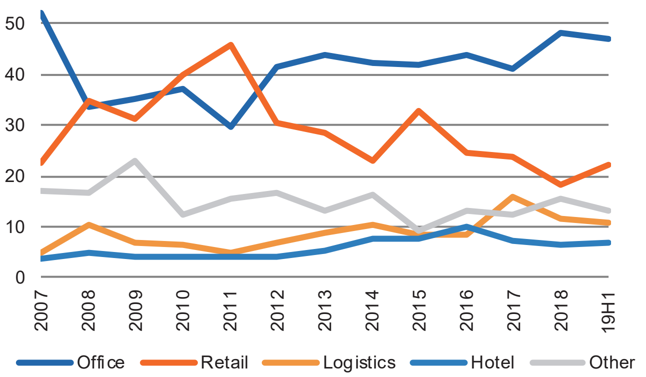
This further decline in interest rates has taken yields of 30-year sovereign bonds into negative territory for the first time. For bond investors such as pension funds, who need regular returns on capital to meet their payment obligations, it has therefore become even more difficult to invest funds in the bond market. Conversely, commercial property has become more attractive. Although initial rental yields have also fallen again slightly, the yield divergence compared to Bunds has widened further. Commercial property should therefore remain in demand, and already high property valuations could increase further.

INVESTMENT VOLUME IN PROPERTY MARKET COULD ALSO REACH A HIGH LEVEL IN 2019



Source: Ernst & Young, DZ BANK forecast

MARKET SHARE OF RETAIL PROPERTIES MORE THAN HALVES WITHIN ONLY A FEW YEARS

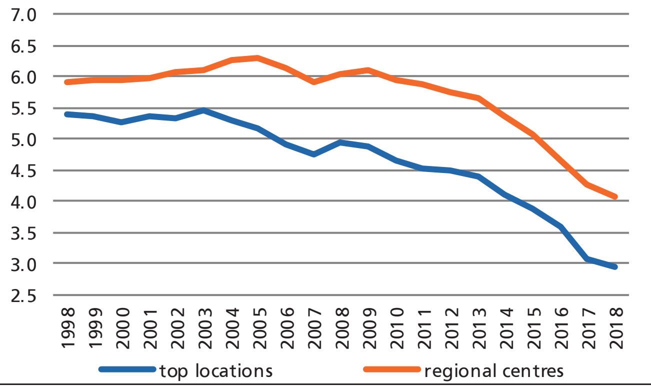


Source: BNP Paribas Real Estate, CBRE

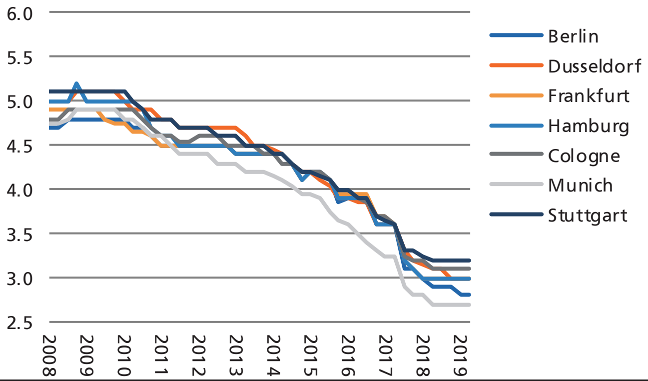
Property investments could therefore reach a high volume again. However, given the shortage of available properties, particularly in top locations, and a possible reluctance to top up residential property portfolios as a result of stricter rent regulation, levels could be down on the previous year. Investment volume of around EUR 24bn for commercial, and EUR 7bn for residential properties in the first half of 2019 does at least indicate that the previous year's figure of EUR 75bn will not be matched. Demand for office and logistics properties is particularly high. Conversely, the market share of retail properties has fallen sharply in recent years.

Investment volume could fall slightly short of previous year's high level

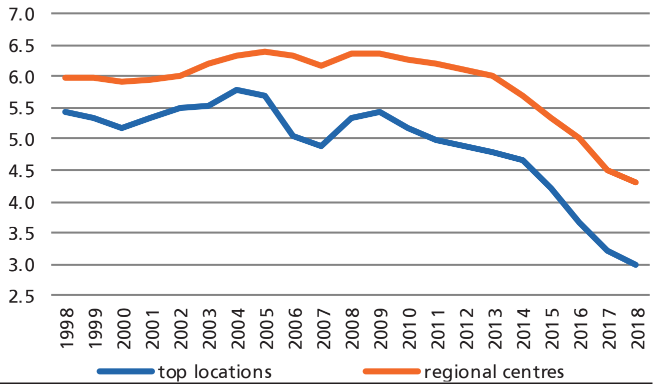
RETAIL: TREND IN INITIAL RENTAL YIELD
NET INITIAL YIELD IN CENTRAL RETAIL LOCATIONS IN %



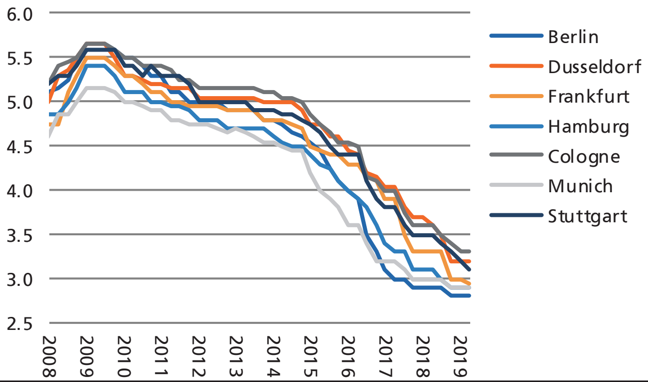
YIELD TREND IN INDIVIDUAL TOP LOCATIONS
NET INITIAL YIELD IN CENTRAL RETAIL LOCATIONS IN %



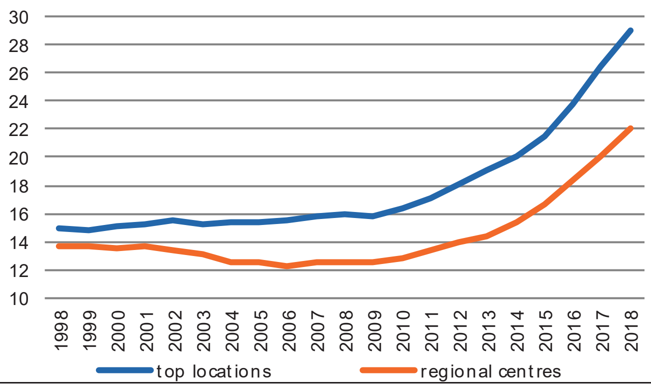
OFFICE: TREND IN INITIAL RENTAL YIELD
NET INITIAL YIELD IN CENTRAL OFFICE LOCATIONS IN %



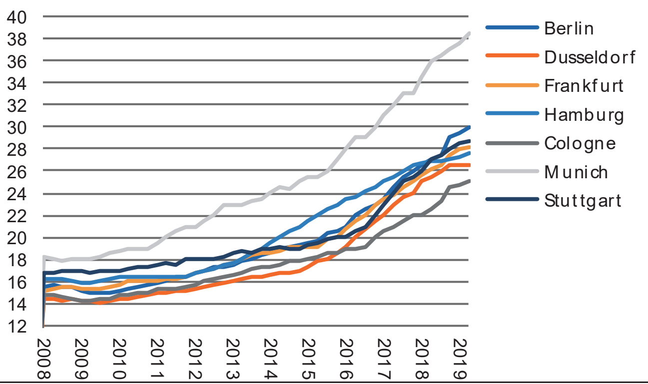
YIELD TREND IN INDIVIDUAL TOP LOCATIONS
NET INITIAL YIELD IN CENTRAL OFFICE LOCATIONS IN %



RESIDENTIAL: RENT MULTIPLIER FOR MULTI-FAMILY HOMES
AVERAGE RENT MULTIPLIER



RENT MULTIPLIER IN INDIVIDUAL TOP LOCATIONS
AVERAGE RENT MULTIPLIER



Source: bulwiengesa

Source: bulwiengesa

Explanation: the office/retail net initial yield is calculated from the annual net rental and the total purchase price including ancillary costs. For the multi-family multiplier, the purchase price is divided by the "cold" rent in the first year and thus corresponds to the inverse of the gross initial yield.
Top 7: Index of top locations in Berlin, Düsseldorf, Frankfurt, Hamburg, Cologne, Munich and Stuttgart
Regional 12: Index of regional centres Augsburg, Bremen, Darmstadt, Dresden, Essen, Hannover, Karlsruhe, Leipzig, Mainz, Mannheim, Münster and Nuremberg

RETAIL PROPERTIES

Sharp rise in prime retail rents came to an end in 2016

Only a few years ago, the main obstacle for take-up in prime locations was a shortage of suitable retail premises. National and international fashion brands were seeking space for expansion, particularly in prime locations. The market rapidly absorbed project developments and new city centre shopping centres. Landlords were able to arrange long rental contracts and – up to 2016 – achieve strong rent growth.

Full impact of positive economic climate not felt in high street retail

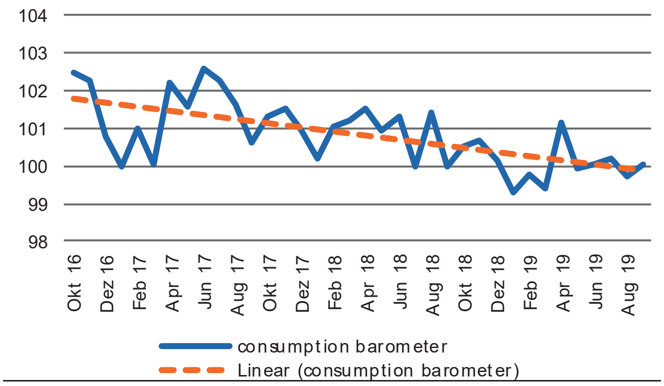
Market conditions are considerably more difficult for landlords today as a result of the rapid growth in online shopping. Consumer spending is also increasing slightly more slowly in Germany after several years of high growth, although private households are well placed financially thanks to rising wages and low unemployment. Retailers are reacting to the altered conditions by renting less space. They are also tending to look for smaller shops. It now takes longer to re-let retail space. Contracts are often for shorter periods – usually five years with an extension option – with rents at best remaining unchanged.

Market conditions in the retail sector

Upturn slowing, economic uncertainty growing

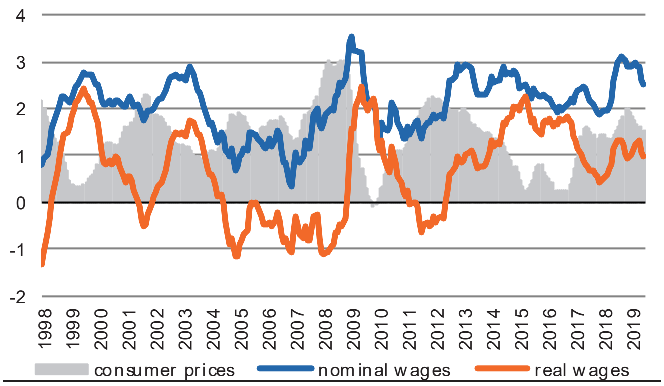
The monthly HDE consumption barometer shows a falling trend. However, positive labour market conditions give little cause for concern. Employment is at a record level of more than 45 million. Bavaria and Baden-Württemberg have virtually full employment with unemployment rates of 3 per cent. As a result of the shortage of skilled workers, it often takes a long time for one of the total of 1.4 million vacant positions to be filled. The unions are correspondingly able to secure high growth in wages and salaries, which is continuing to benefit the 21 million pensioners in 2019, as was the case in previous years, by boosting their payments by 3.2 per cent in west Germany and 3.9 per cent in east Germany.

CONSUMER SENTIMENT RECORDED IN THE HDE CONSUMPTION BAROMETER HAS FALLEN
INDICES JANUARY 2017 = 100



Source: HDE

CONTINUING GOOD CONDITIONS IN LABOUR MARKET LEAD TO SOLID INCOME GROWTH
VS. PREV. YR. IN PER CENT (6-MONTH AVERAGE)



Source: German Federal Statistical Office, Thomson Reuters

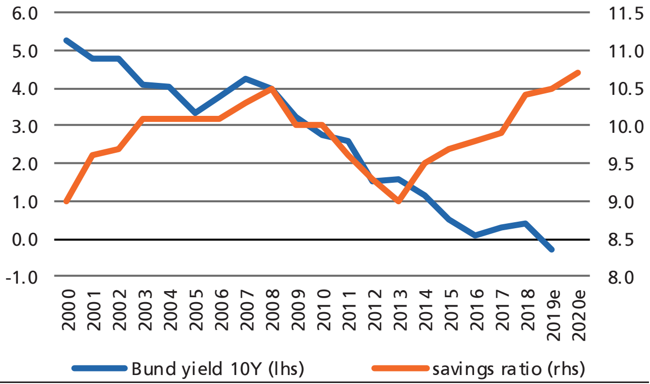
German economy hit by negative effects of various international crises

Sentiment has been suffering for some time as a result of the continuing “barrage” of bad news. However, until a few months ago, reports about Brexit, the US/China trade dispute, and the Iran crisis were “in the distance”, and had virtually no perceptible impact here in Germany. This has now changed. Reports of declining exports, falling orders in the manufacturing sector, and downward revisions to company results are the order of the day. The dominant German sectors - the automobile and mechanical engineering industries - are under particular pressure. The flagships of the German economy are also cutting more jobs again. The slight decline of 0.1 per cent in economic output in the second quarter of 2019 also highlights the fact that the export-driven German economy cannot escape the effects of the international crises.

Fear of the future? Savings grow despite low interest rates

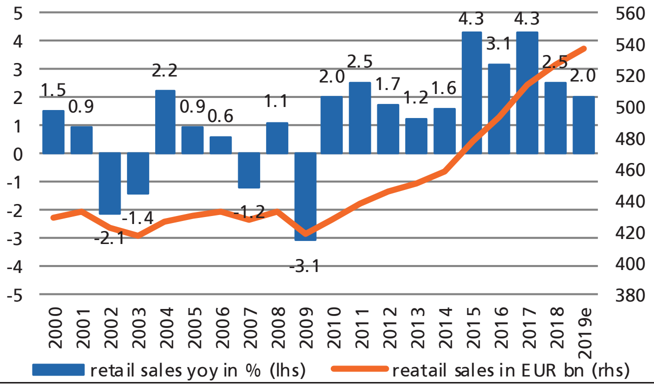
However, economic experts stress that the German economy is unlikely to be heading for recession, but is merely experiencing a dip in growth. Despite such assurances, private households are clearly becoming more concerned about their future finances. This view is supported by the growing savings ratio, which could climb to a comparatively high level of 10.5 per cent this year. Although returns on savings deposits are virtually non-existent, households are setting more money aside. The intermittently parallel trends in investment returns and the propensity to save have been diverging increasingly since 2014.

SAVINGS RATIO INCREASING AGAIN SINCE 2014
IN PER CENT



Source: Eurostat, Feri, DZ BANK

RETAIL SALES GROWING MORE SLOWLY AGAIN
RETAIL EXCL. VEHICLES, PETROL STATIONS, FUELS, PHARMACIES



Source: HDE

Retail growth has slowed

After a long period of stagnation, retail sales have been increasing again since 2010. Growth was particularly strong between 2015 and 2018, with average annual growth of around 3.5 per cent. Because inflation was low between 2014 and 2016, at less than 1 per cent, retail sales also increased strongly in real terms. However, those days are over. The HDE forecast of April 2019 anticipated nominal sales growth of 2.0 per cent, which is only slightly higher than the expected inflation rate of 1.5 per cent forecast for 2019. However, given the gloomier economic climate, the sales growth figure could still be set too high based on current information. Adjusted for inflation, retail could certainly therefore stagnate this year.

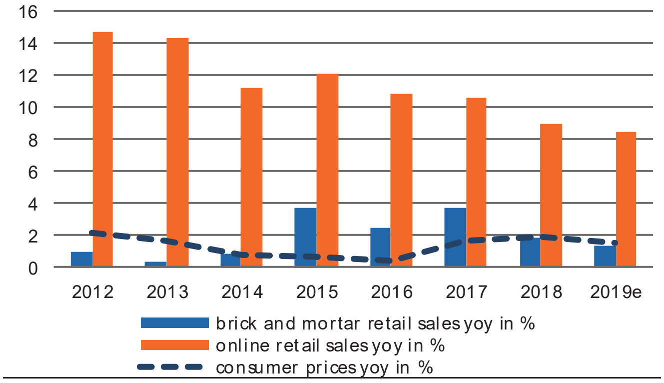
High street sales likely to decline slightly in real terms in 2019

The slower pace of retail activity is having an even greater impact on the high street. As a result of disproportionate growth in online shopping of probably 8 per cent this year, high street retail sales growth will fall to 1.3 per cent, provided the expected growth of 2 per cent in the retail sector is actually realised. However, inflation will be slightly lower than projected this year, at 1.3 per cent, which represents a minimal decline in real sales below the line.

Online sales increase to EUR 58bn

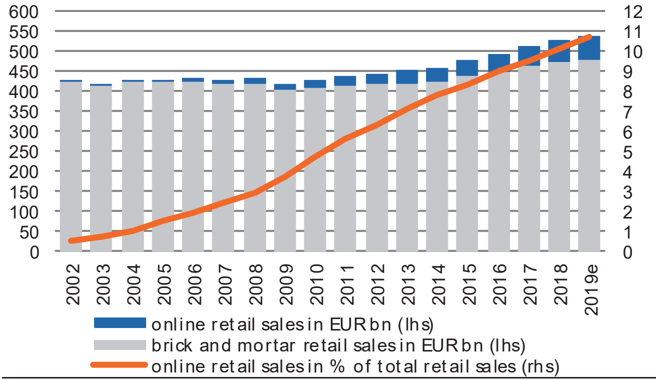
Online shopping continues to gain ground, achieving a high growth rate for the retail sector. Online sales are likely to account for around EUR 58bn, or about 11 per cent of sales in 2019, although this will not be evenly spread over all product groups. Households are mainly ordering products from the fashion and footwear, home electronics, toys and hobbies, and homeware segments, which are also very important for city centre retail. Conversely, food does not yet play a significant role in e-commerce.

HIGH STREET RETAIL LIKELY TO GROW MORE SLOWLY THAN CONSUMER PRICES IN 2019



Source: German Federal Statistical Office

ONLINE SHOPPING ACHIEVES A DOUBLE-DIGIT MARKET SHARE THANKS TO RAPID GROWTH



Source: HDE

City high streets face competition from outlet centres and specialist stores as well as online shopping

However, high street retailers are not only having to share sales with online shoppers, but also with outlet centres and out-of-town retail parks. Retail sales in product groups such as textiles, shoes, watches and jewellery, which have a strong high street presence, are also declining overall, while food sales are picking up as a result of population growth. The retail climate is fairly positive in cities where customer potential is increasing thanks to growth in the population and the number of tourists, enabling them to absorb declining sales.

“Just looking”: city centre stroll still popular

Although consumers are buying less in city centres, the city centre stroll remains a popular leisure activity. Customers like to visit shopping streets and shopping centres which have often been revamped by project development and urban planning measures. The range of bars and restaurants on offer has also increased, and is also enhancing the quality of the experience. Falling demand from retailers for sales space as a result of weaker sales revenue is not however leading to any sharp decline in demand for city centre space.

City centre space likely to remain in demand

Finally, the best locations are also of interest to space users other than classic retailers. These include supermarkets and drugstores, bars and restaurants, and fitness studios. In future, retail concepts which have not previously featured in city centres may also play a part. One example is IKEA, whose large stores are usually situated on the edge of towns and cities, making it difficult for young city dwellers without cars to access them. The Swedish furniture behemoth therefore plans to set up smaller city centre “touchpoint” stores. One probable location is Berlin. The Hamburg-based DIY market concept “Horst” is also moving in the same direction. For, just like IKEA, many DIY stores are geared to customers who travel there by car.

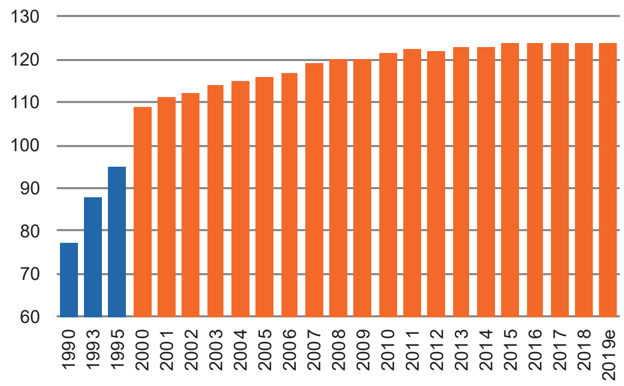
Originally pure online concepts use shops to boost customer potential

What were initially purely online concepts, such as the internet optician Mister Spex and the muesli mail order company mymuesli, are also opening more branches in city centres and shopping centres. The boundaries between classic and online retail are becoming increasingly blurred. Multichannel retailing, where customer potential is boosted by using an offline store concept to provide a product “experience”, and an online presence for convenient shopping, has prevailed.

City centre retail space can also potentially be used as office space

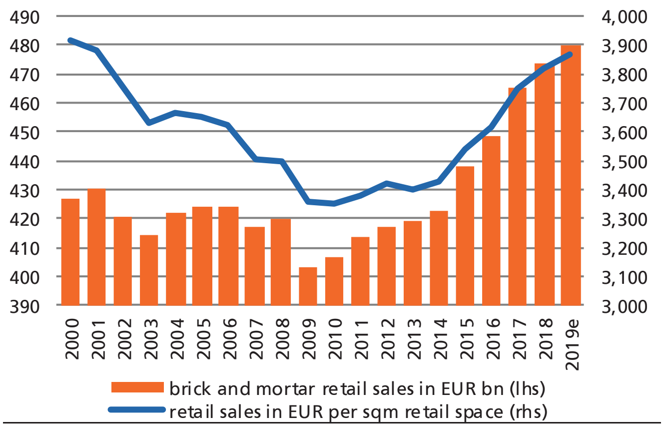
However, city centre shopping space can also potentially be used for offices, for example as coworking space. City centre locations benefit because they are easily accessible by various forms of transport, their environment is more attractive than a commercial location, and they usually have good infrastructure with restaurants, shops and bank branches.

GROWTH IN SALES SPACE HAS COME TO A HALT
RETAIL SPACE IN GERMANY IN MILLION M²



Source: HDE, DZ BANK

SALES PRODUCTIVITY CONTINUES TO RISE, BUT STILL FALLS SHORT OF MILLENNIUM LEVEL



Source: HDE, DZ BANK

Rising housing costs and ageing population could depress retail

Online shopping and the economic slowdown are not the only challenges for high street retail. As property prices and residential rents increase rapidly, the proportion of income which has to be spent on housing costs is growing, particularly in large cities. The scope for consumer spending is correspondingly declining. In the years ahead, demographics could also have a negative impact. As baby boomers retire, the number of pensioners will increase, while the working population will contract. Given falling incomes in retirement, the ageing society could also have a dampening effect on consumption. This could also lead to a shift in shopping patterns, if declining mobility makes it more difficult for older people to visit city centres.

Sales space productivity has recovered considerably

Given the generally fairly limited growth prospects for high street retail, the fact that sales space is not continuing to increase is positive. Since 2015 it has stagnated in Germany at around 124 million m^2. Thanks to growth in high street sales, average sales per m^2 have in theory increased to more than EUR 3,800 throughout Germany. The figure was less than EUR 3,400 per m^2 in 2010. However, even after this growth, take-up has still been below the millennium level. Adjusted for inflation, the divergence is even greater. For consumer prices have since increased by around 30 per cent, and in real terms, current sales productivity is not even 70 per cent of the level achieved at that time.

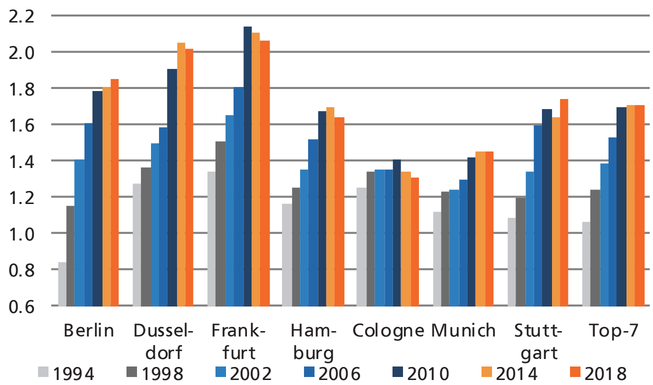
Retail: comparison of top locations

Compared to the rapid growth of only a few years ago for prime sites in top locations, which was associated with many project developments, new high street shopping centres and strong growth in rents, the current trend can be regarded as almost static. Growth in sales space has slowed to the point where per capita sales space is no longer growing in response to population growth. In some cities the figure is even declining. Average per capita sales space in top locations is currently 1.7 m^2. The lowest figure of 1.3 m^2 is in Cologne. By comparison, sales space in Düsseldorf and Frankfurt is half as high again at just over 2 m^2.

Growth at an end: rents and sales space stagnate in top locations

SALES SPACE PER CAPITA COMES TO A HALF AFTER MANY YEARS OF GROWTH

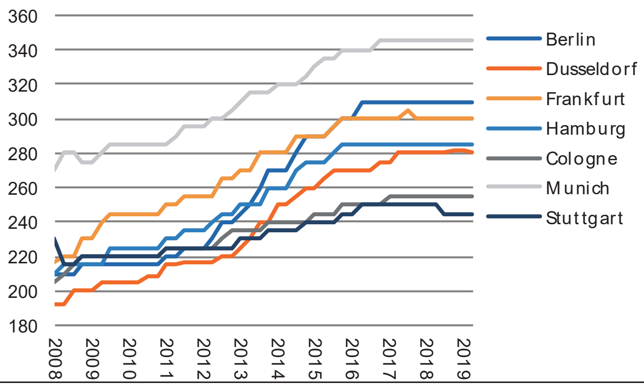
SALES SPACE PER INHABITANT IN M²



Source: Scope

AFTER RISING SHARPLY, RETAIL RENTS ARE BROADLY STAGNATING

PRIME RENTS PER M²



Source: bulwiengesa

In 2005, momentum for retail rents in top locations drove average prime rents up to just over EUR 190 per m^2. They subsequently rose sharply by around 55 per cent to reach nearly EUR 300 per m^2 by 2016. As the proportion of online shopping grew, the upward trend in rents came to an end, and current prime rents therefore diverge very little from the levels of previous years. In mid-2019 they ranged from EUR 245 in Stuttgart to EUR 345 in Munich. Up-and-coming Berlin is currently the second most expensive German retail location, at EUR 310, ahead of Frankfurt and Hamburg. Berlin also shows the highest level of ten-year rent growth of 44 per cent. However, prime rents in Düsseldorf are not far behind. Between 2008 and 2018, average rent growth in the top 7 locations reached 34 per cent on an accumulative basis.

Prime rents in top locations around EUR 100 per m^2

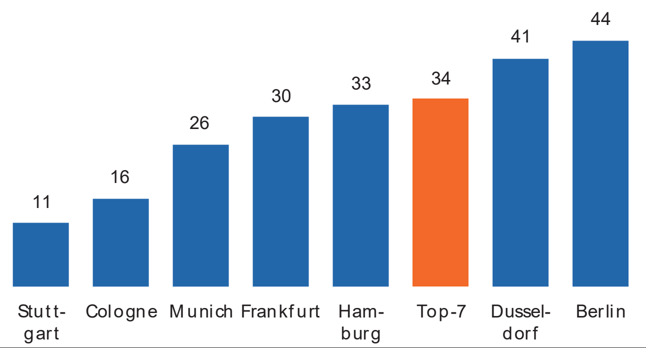
The fact that prime rents have largely remained stable after previously increasing sharply, is partly attributable to the slower growth in retail sales space we have described. Planned large-scale future project developments are now rare. However, a few major developments are currently being implemented, such as the Kö-Bogen II in Düsseldorf and the shopping centres in the Hamburg HafenCity .

Some large project developments still at the implementation phase

However, attractive location-specific factors in particular have protected top locations from falling rents. Population growth and flourishing tourism play an important role because they enhance buyer potential and help to offset sales lost to online shopping. When prime rents started to increase in 2005, a total of 8.9 million people lived in the seven cities. This number has now increased by 1.1 million. Based on retail-relevant purchasing power of around EUR 7,000 per capita, this population growth has boosted the purchasing power of the top locations by nearly EUR 8bn. Additional purchasing power due to population growth in the hinterland of cities is boosting this trend further. Although high residential rents are slowing migration to the top locations, the populations of conurbations should generally continue to grow.

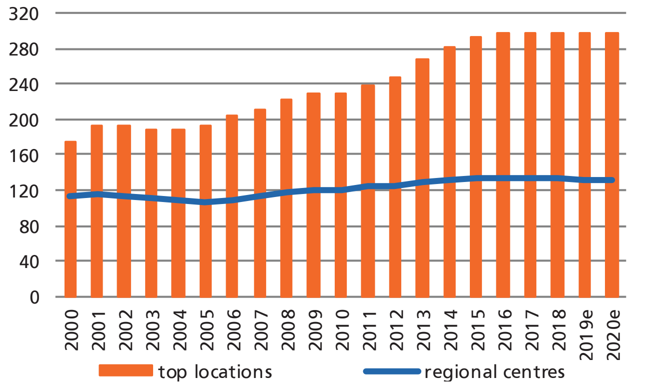
Location-related attractions have protected top locations from falling rents so far

WIDE DIVERGENCE IN UPWARD TREND IN RETAIL RENTS IN PRIME RETAIL SPACE IN TOP LOCATIONS
FROM 2008 TO 2018 IN PER CENT



Source: bulwiengesa

GROWTH IN PRIME RENTS PARTICULARLY EVIDENT IN TOP LOCATIONS
PRIME RENTS IN EUR PER M²

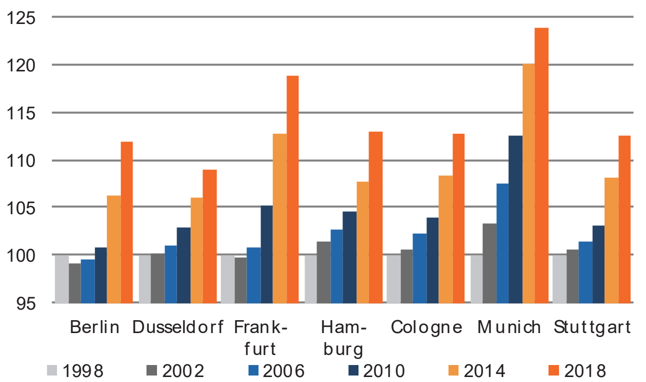


Source: bulwiengesa, DZ BANK

Tourism is now playing a more important role for city centre retail. Top locations reported nearly 90 million overnight stays in 2018. This was more than twice the 2005 level. In both absolute and relative terms, Berlin showed the strongest growth of currently around 33 million overnight stays per year. However, Frankfurt is in the lead in terms of its population size, with 13,500 overnight stays per 1,000 inhabitants. Munich is second with a figure of 11,700, and Berlin is third at 9,100. If a tourist spends on average EUR 100 in the retail sector per overnight stay, the increase of more than 45 million in the number of overnight stays would generate additional purchasing power of around EUR 4.5bn in the seven cities. Shopping tourists from abroad, for example from the Gulf states or China, often spend larger amounts. Growth in hotel capacity in the major cities means that they are prepared for further growth in the number of guests.

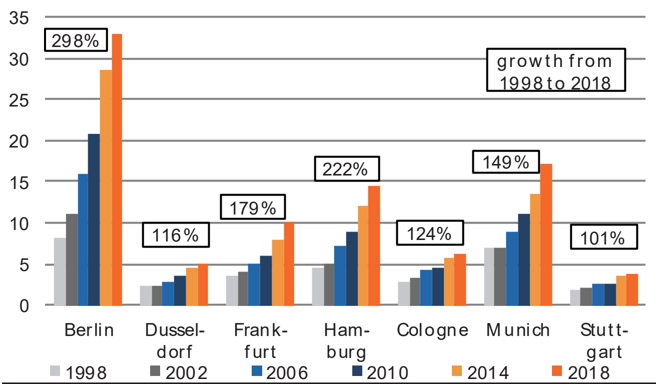
Sharp rise in visitor numbers supports regional purchasing power

STRONG POPULATION GROWTH LEADS TO VISIBLE INCREASE IN BUYER POTENTIAL IN TOP LOCATIONS
POPULATION 1998 = 100



Source: Scope

TOURISTS BECOMING AN INCREASINGLY IMPORTANT CUSTOMER GROUP FOR CITY CENTRE RETAIL
OVERNIGHT STAYS IN MILLIONS



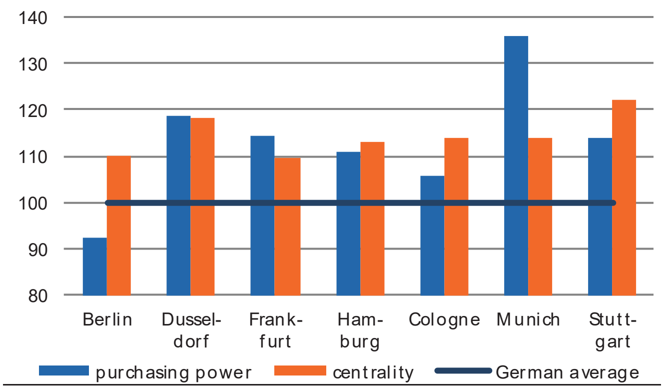
Source: bulwiengesa, German Tourism Association (2017)

High levels of purchasing power are also enhancing the attractions of the top locations. Berlin is the exception, as the only one of the top 7 with below-average purchasing power. This reflects lower income levels in eastern Germany. However, Cologne's purchasing power is also not overly high for a west German city, at 106 points. Figures are significantly higher in the other five top locations, ranging

Five out of seven top locations stand out due to high levels of purchasing power

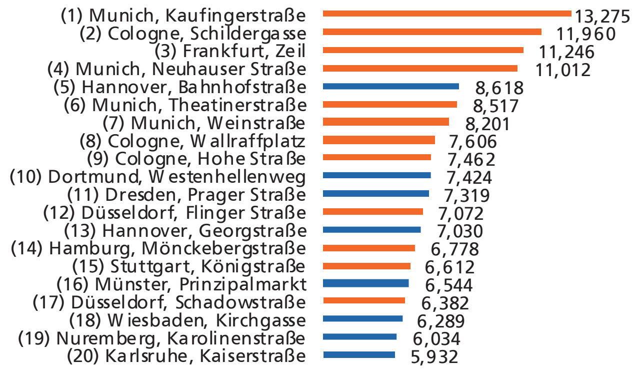
from 111 in Hamburg to 136 in Munich. Because shoppers from surrounding areas prefer to purchase daily items where they live, the centrality figures for the top locations are comparatively low.

PURCHASING POWER IN TOP WEST GERMAN LOCATIONS CONSISTENTLY ABOVE-AVERAGE
PURCHASING POWER AND CENTRALITY FIGURES IN POINTS



Source: bulwiengesa

SHOPPING STREETS IN TOP LOCATIONS RANK HIGHLY AMONG THE TOP 20 BASED ON FOOTFALL
FOOTFALL PER HOUR

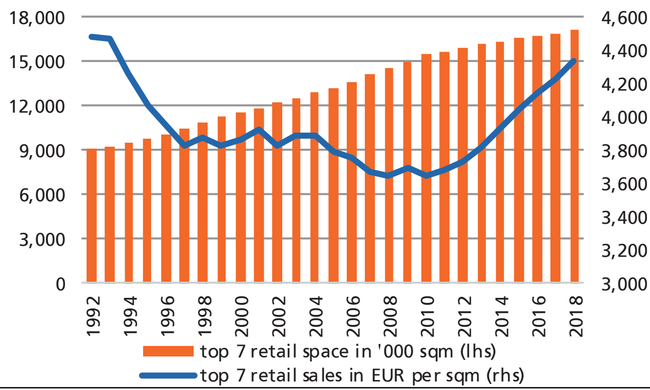


Source: BNP Paribas Real Estate

Sales space productivity recovering, but still well below previous levels in real terms

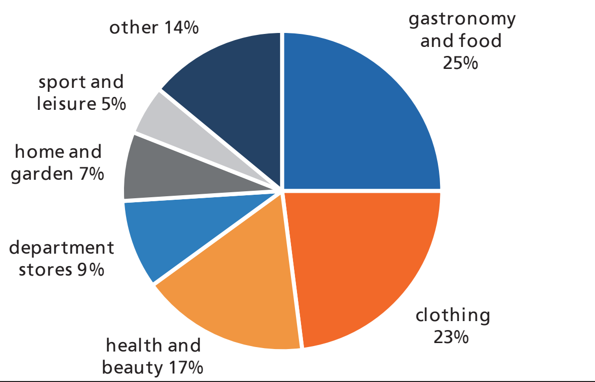
Supported by slower growth in sales space and an increasing group of buyers, sales per m² which had long been in decline, have now recovered well. The top locations are also performing well here. The highest level of around EUR 4,500 per m² was however already achieved in 1992 as shown in the diagram below. Sales space productivity is currently slightly lower than this in nominal terms. Given the growth in consumer prices, current sales space productivity nevertheless lags well behind its previous level in real terms.

SALES SPACE PRODUCTIVITY POSITIVE AGAIN IN TOP LOCATIONS FOR SOME YEARS
TOP 7: RETAIL SPACE AND RETAIL SALES PER M² IN EUR)



Source: Scope

BARS AND RESTAURANTS REPLACE FASHION RETAIL AS A PROPORTION OF NEWLY LET SPACE
PROPORTION OF TAKE-UP IN PER CENT (FIRST HALF 2019)



Source: JLL Based on "Big 10": Top 7 plus Hannover, Leipzig and Nuremberg

Demand for city centre space dominated by bars and restaurants, and food stores, rather than fashion

Demand for retail space reflects the reorientation of sales channels by retailers in response to the shift in shopping patterns caused by digitalisation. A stronger online presence means that less actual sales space is required. Conversely, bars and restaurants are occupying more city centre space, overtaking fashion retailers - who had dominated until recently - as the largest customers for city centre premises in the first half of 2019 (see diagram above right). This group also includes rental contracts for food discounters such as Rewe, which are also expanding their city centre presence. The same applies to drugstores, which have strengthened the health/beauty segment, the product area with the third largest take-up.

Thanks to their attractions, top locations should remain popular for retail, and bars and restaurants

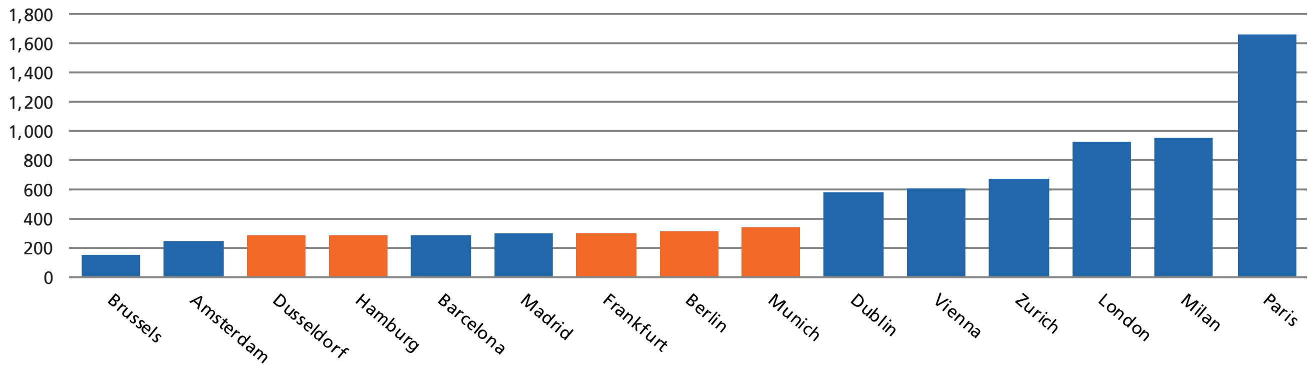
In many cities, city centre retail now consists of a gloomy landscape of unoccupied shops, and discount stores. The situation is very different in the top locations where demand remains buoyant for prime high street locations and shopping centres. So long as top locations demonstrate positive figures for population growth, tourism and purchasing power, city centres will remain very attractive for retailers, bars and restaurants. Retail rents should accordingly show above-average growth. However, this means that levels will at best remain stable, rather than grow.

European retail

German cities mid-range based on prime European rents

London, Milan and Paris are the frontrunners in terms of European retail rents. Prime rents in German top locations are at maximum mid-range by European standards. The positive economic climate in Germany and years of strong growth in retail rents have done little to alter this. However, retail centres in other European countries are often dominated by one pre-eminent and correspondingly expensive location, on which retailers focus. This is often the capital city. Examples are Dublin, London, Paris or Vienna. Conversely, there are no alternative locations with comparable market conditions in terms of market size, tourism and internationality. The situation is different in Germany. Seven top locations and some other excellent retail locations such as Dortmund, Hannover or Nuremberg offer retailers in Germany more choice.

PRIME EUROPEAN RETAIL RENTS: NO GERMAN LOCATION MAKES IT INTO THE TOP LEAGUE
PRIME RETAIL RENTS IN EUR PER M² (MONTHLY)

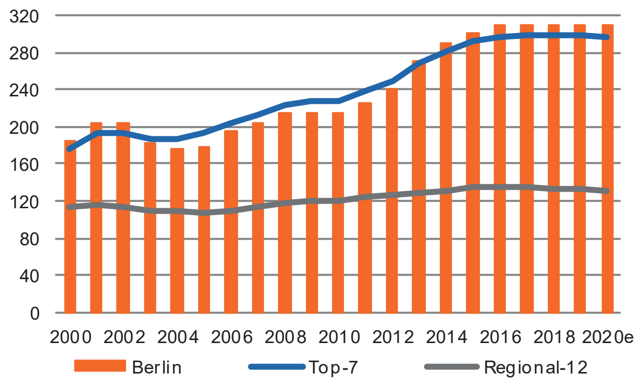


Source: BNP Real Estate

per: Q1/2019

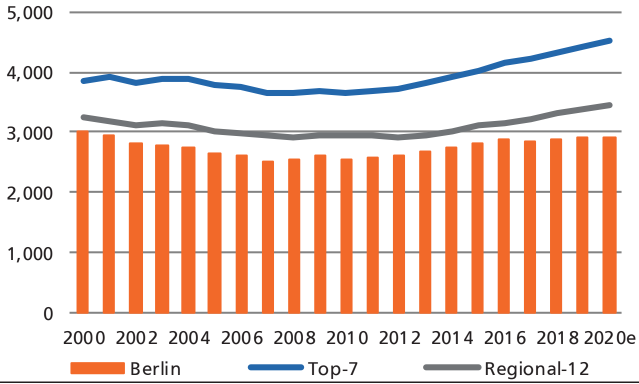
Berlin: Retail space

PRIME RETAIL RENTS IN EUR PER M²



Source: bulwiengesa, Scope, DZ BANK forecast

RETAIL SALES PER M² IN EUR



Source: Scope

With nearly 70 shopping centres, offer is saturated

Berlin has developed extremely successfully as a shopping location. The city benefits from a large catchment area of more than 5 million people, strong population growth, its function as a trendsetter, and its role as an important centre of tourism, with 33 million overnight stays per year. Economic conditions have also improved. The number of people in work has grown by 300,000 to nearly 2 million within ten years. However, purchasing power of only 92 points is below the average figure of 100 points for Germany. Berlin has some special features as a retail location. These include a combination of trendsetting, market size and internationality, which foreign retail concepts often exploit to establish a presence in the German market. Not least because the city was formerly divided, Berlin also has a number of geographically separate prime locations of different character. These include Ku'damm and Tauentzienstraße where prime rents are highest, and the heavily frequented Alexanderplatz, and Friedrichstraße. The trendy Hackescher Markt district is also well placed. In addition to shopping streets, there are nearly 70 shopping centres within the metropolitan area, with the massive Mall of Berlin playing a particularly prominent role as a city centre shopping centre. Recent additions in 2018 were the Schultheiss-Quartier – the first shopping centre in the Moabit district – and the East Side Mall. However, competition between the various centres and shopping locations is increasing as online shopping gains ground. So far, growth in the city has prevented any decline in prime rents which reached EUR 310 per m² in 2016. This situation could persist for the time being, provided the growth continues.

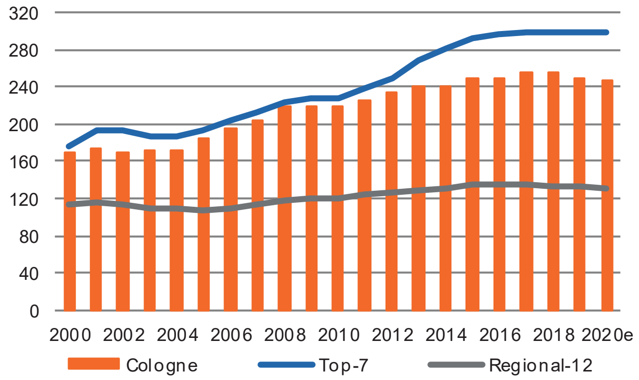
RETAIL SPACE IN BERLIN

		2017			2018			2019e			2020e		
Demand													
Per cap. disposable income	EUR/month	1,876			1,924			1,974			2,015		
Unemployment rate	%	9.0			8.1			7.9			8.0		
Retail sales	EUR m/% yoy	18,750	/	3.0	19,367	/	3.3	19,990	/	3.2	20,530	/	2.7
Retail sales	EUR/m²	2,862			2,892			2,913			2,930		
Supply													
Retail space	in m² million	6,551			6,696			6,862			7,006		
Retail space	in % yoy	1.82			1.85			1.88			1.91		
Retail rent													
Prime/secondary location	EUR/m²	310	/	15.5	310	/	16.0	310	/	16.0	310	/	16.0
Prime/secondary location	% yoy	0.0	/	6.9	0.0	/	3.2	0.0	/	0.0	0.0	/	0.0

Source: Scope, bulwiengesa, DZ BANK forecast

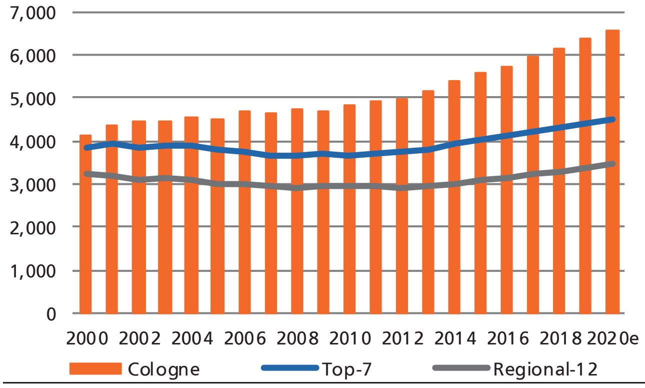
Cologne: Retail space

PRIME RETAIL RENTS IN EUR PER M²



Source: bulwiengesa, Scope, DZ BANK forecast

RETAIL SALES PER M² IN EUR



Source: Scope

Shopping location has high consumption and very high footfall for Germany

Cologne, with its population of one million, is the second top shopping location in the West of Germany alongside Düsseldorf, and this leads to a certain amount of competition between the two cities. Attractions for retailers are the large number of potential customers from a catchment area of 2.4 million people, as well as many customers from the Benelux countries, and solid tourism business with more than 6 million overnight stays each year. However, purchasing power – of 106 points – is slightly weaker than in other top locations. Unlike Düsseldorf, as well as other popular German shopping destinations, the Cologne city centre is also focused on the consumer sector. Another contributory factor here is the three-kilometre shopping route which encourages people to stroll through prime retail locations in Cologne and is therefore conducive to high footfall. This has a particular impact on Schildergasse with its chain store ratio of 90 per cent. Hohe Strasse also has very high footfall. Cologne can also offer trendy locations such as Ehrenstrasse. A smaller luxury segment has become established in the Domkloster/Wallraffplatz area, which could benefit from the renovation of the Dom Hotel. However, virtually no large project developments have been realised. A more recent example is the rebuilding of the traditional Jacobi store in Hohe Strasse. Although not a new development, DuMont-Carré has recently been repositioned and is now trading as Quincy, and is aiming to attract younger customers. Online and in-store retail are also to be integrated. Given the very good space availability, prime rents in Cologne have lagged behind slightly in recent years. The number of vacant properties has also increased recently. Prime rents are likely to at best stabilise, although a modest decline is more likely.

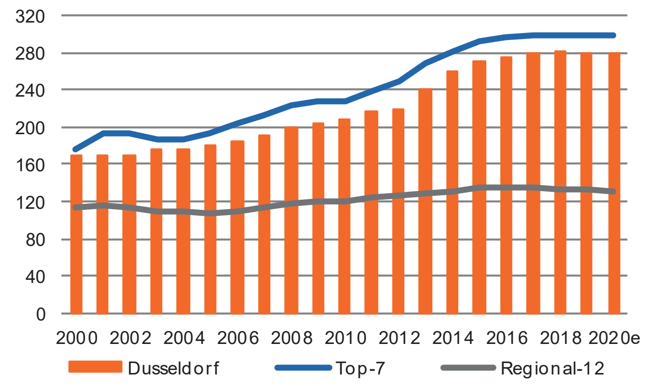
RETAIL SPACE IN COLOGNE

		2017	2018	2019e	2020e
Demand					
Per cap. disposable income	EUR/month	2,089	2,138	2,187	2,227
Unemployment rate	%	8.4	7.9	7.9	8.0
Retail sales	EUR m/% yoy	8,361 / 3.3	8,670 / 3.7	9,000 / 3.8	9,295 / 3.3
Retail sales	EUR/m²	5,945	6,136	6,358	6,548
Supply					
Retail space	in m² million	1,406	1,413	1,415	1,420
Retail space	in % yoy	1.31	1.31	1.30	1.30
Retail rent					
Prime/secondary location	EUR/m²	255 / 15.0	255 / 15.0	250 / 15.0	248 / 15.0
Prime/secondary location	% yoy	2.0 / 0.0	0.0 / 0.0	-2.0 / 0.0	-0.8 / 0.0

Source: Scope, bulwiengesa, DZ BANK forecast

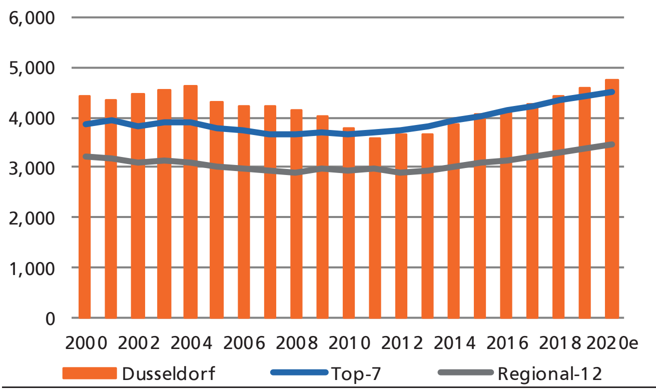
Düsseldorf: Retail space

PRIME RETAIL RENTS IN EUR PER M²



Source: bulwiengesa, Scope, DZ BANK forecast

RETAIL SALES PER M² IN EUR



Source: Scope

Major "Dusseldorfer City" construction project close to completion

The strengths of Düsseldorf, a shopping location which epitomises fashion and luxury, are based on a large catchment area of 2 million people, and high purchasing power of 119 points, exceeded only by Munich among the top 7. City centre retail in Düsseldorf, which accounts for about a third of all sales space in the city, also has a high status. Only Stuttgart has a similarly high concentration. The city centres of other top locations represent a maximum of a quarter of total sales space. The luxury "Kö" centre, with its wide range of bars and restaurants, also provides a high quality experience. The previous split between the "banking side" and the "shopping side" is disappearing. However, building sites have been a major feature of Düsseldorf city centre for about ten years. The re-siting of a former flyover underground and the new Wehrhahn U-Bahn line, which provides a better connection to prime locations than the local transport network, are obvious improvements. The renovation of Carsch-Haus, Kaufhof, Sevens and the Kö Shopping Mall, as well as retail developments such as the Kö-Bogen, are also having a positive impact. However, before the city centre finally emerges in all its new finery, work still has to be completed – in 2020 according to plans - on the spectacular Kö-Bogen II and the new pedestrian zone in the previously fairly unattractive prime retail location of Schadowstraße. Prime rents, which increased marginally in 2018 despite the longstanding construction work, declined again to their 2017 level of EUR 280 per m² in mid-2019. This figure could be maintained if the positive effects of the completion of the construction work balance out the growth in space from Kö-Bogen II and the headwind from online shopping.

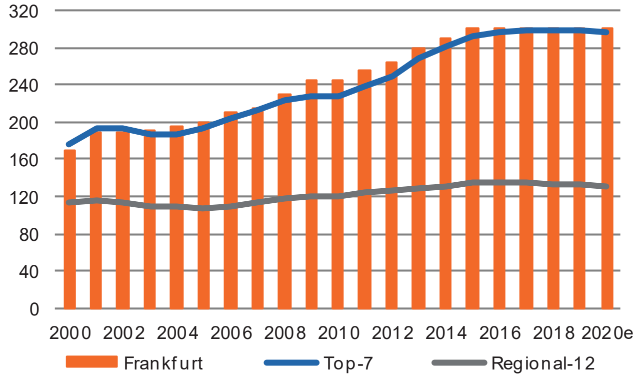
RETAIL SPACE IN DÜSSELDORF

		2017			2018			2019e			2020e		
Demand													
Per cap. disposable income	EUR/month	2,441			2,503			2,567			2,621		
Unemployment rate	%	7.4			6.7			6.5			6.6		
Retail sales	EUR m/% yoy	5,327	/	3.4	5,534	/	3.9	5,753	/	4.0	5,950	/	3.4
Retail sales	EUR/m²	4,280			4,437			4,600			4,748		
Supply													
Retail space	in m² million	1,245			1,247			1,251			1,253		
Retail space	in % yoy	2.02			2.02			2.02			2.01		
Retail rent													
Prime/secondary location	EUR/m²	280	/	16.0	282	/	17.0	280	/	17.0	280	/	17.0
Prime/secondary location	% yoy	1.8	/	0.0	0.7	/	6.3	-0.7	/	0.0	0.0	/	0.0

Source: Scope, bulwiengesa, DZ BANK forecast

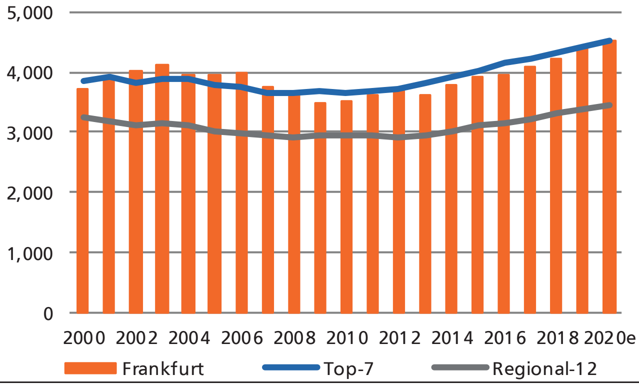
Frankfurt: Retail space

PRIME RETAIL RENTS IN EUR PER M²



Source: bulwiengesa, Scope, DZ BANK forecast

RETAIL SALES PER M² IN EUR



Source: Scope

Era of large retail projects in Frankfurt now over

With its population of 2.4 million people and a catchment area with strong purchasing power, Frankfurt is one of the strongest German retail locations. The steady growth in its population, employment and tourism are also making the city centre more attractive to retailers and restaurateurs. Within ten years the number of overnight stays each year has nearly doubled to more than 10 million. Only a few years ago, growth in potential footfall led to large project developments such as the MyZeil and Skyline Plaza shopping centres, which opened in 2009 and 2013 respectively. Today population growth and tourism are slowing the shift in sales towards online shopping. These factors have also helped to keep prime rents in the prime “Zeil” shopping street stable since 2015 at EUR 300 per m² . Prime rents in the luxury Goethestraße are only marginally lower. The negative effects of construction sites on the Zeil have now come to an end. The now demolished Zeilgalerie has now been replaced by Kaufhof and the newly constructed UpperZeil. A few metres away, the still new MyZeil shopping centre has been radically renovated. The new Foodtopia restaurant area reflects the increasing importance of bars and restaurants. Before the end of this year, the “experience” will be further enhanced with an exclusive art house cinema. Outside the city centre, the Nordwestcenter has recently been extended. Overall, however, we see no need for any more large retail projects at the moment. If general conditions remain positive, prime rents should remain stable. The prospects are fairly good. The reconstruction of the Altstadt has thus had a positive impact on the quality of stay in the city centre.

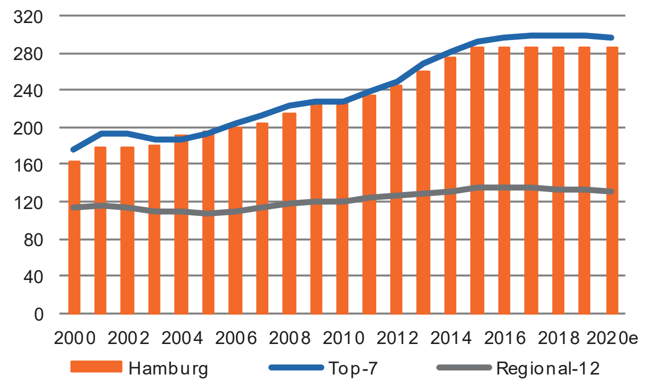
RETAIL SPACE IN FRANKFURT

		2017			2018			2019e			2020e		
Demand													
Per cap. disposable income	EUR/month	2,107			2,157			2,206			2,248		
Unemployment rate	%	5.9			5.4			5.2			5.1		
Retail sales	EUR m/% yoy	6,292	/	3.5	6,517	/	3.6	6,749	/	3.6	6,953	/	3.0
Retail sales	EUR/m²	4.089			4.230			4.376			4,507		
Supply													
Retail space	in m² million	1,539			1,541			1,542			1,543		
Retail space	in % yoy	2.07			2.06			2.04			2.03		
Retail rent													
Prime/secondary location	EUR/m²	300	/	17.5	300	/	18.0	300	/	18.0	300	/	18.0
Prime/secondary location	% yoy	0.0	/	0.0	0.0	/	2.9	0.0	/	0.0	0.0	/	0.0

Source: Scope, bulwiengesa, DZ BANK forecast

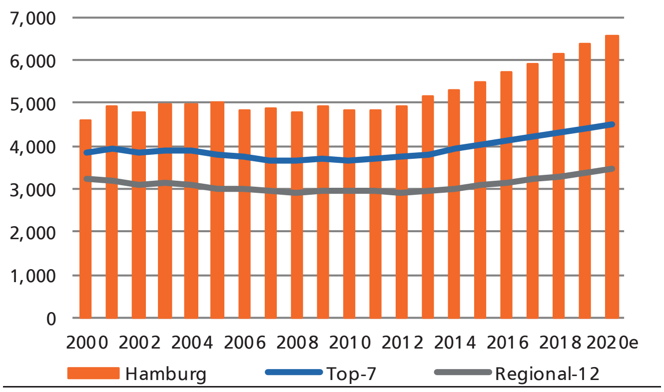
Hamburg: Retail space

PRIME RETAIL RENTS IN EUR PER M²



Source: bulwiengesa, Scope, DZ BANK forecast

RETAIL SALES PER M² IN EUR



Source: Scope

Hamburger City made more attractive by many retail developments

Hamburg's role as the leading shopping location in the North of Germany is attributable to its catchment area of 3.5 million people, population growth, and high purchasing power. Added to this are its flourishing tourism business, with 14.5 million overnight stays per year, which is boosted by 900,000 cruise passengers. Positive factors are the broad range of shopping on offer, from classic consumer locations such as Spitalerstraße and Mönckebergstraße in the East of the city to luxury locations such as the Neuer Wall in the West. The only large city centre shopping centre which lies between the two is the Europa Passage. However, the sales space on offer of only 350,000 m² - roughly the same as the much smaller Düsseldorf - is meagre for the location. However, as a result of many small and medium-sized project developments, sales space is gradually increasing. Conversely, prime rents have been stagnating at EUR 285 per m² since the end of 2015. Despite the attractive conditions, rents are not expected to increase any further as e-commerce continues to gain ground. The number of vacant properties shows that it is also becoming more difficult to let space in the attractive Hamburger City. Two large projects are likely to impact on the retail sector in future. The first is the expansion in the distant future of the main railway station, which should benefit the link to Spitalerstraße. The shopping centre of the developer Unibail-Rodamco-Westfield already under construction in the southern Überseequartier of the HafenCity will probably open in 2022. However, the "island solution", with a planned 200 shops and nearly 70,000 m² of sales space could provide significant competition for the city centre.

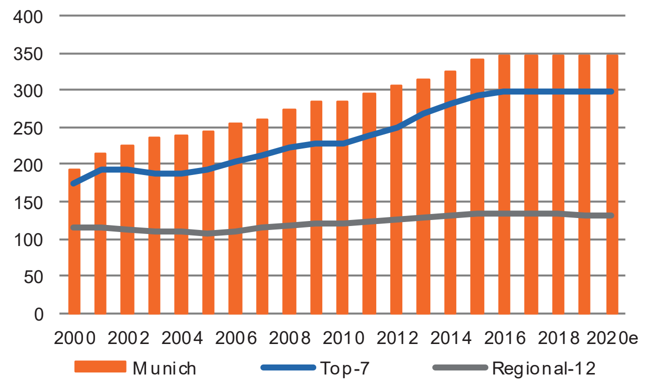
RETAIL SPACE IN HAMBURG

		2017			2018			2019e			2020e		
Demand													
Per cap. disposable income	EUR/month	2,315			2,357			2,403			2,438		
Unemployment rate	%	6.8			6.3			6.1			6.2		
Retail sales	EUR m/% yoy	17,717	/	4.1	18,471	/	4.3	19,244	/	4.2	19,949	/	3.7
Retail sales	EUR/m²	5,920			6,145			6,376			6,577		
Supply													
Retail space	in m² million	2,993			3,006			3,018			3,033		
Retail space	in % yoy	1.64			1.64			1.64			1.64		
Retail rent													
Prime/secondary location	EUR/m²	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 forecast

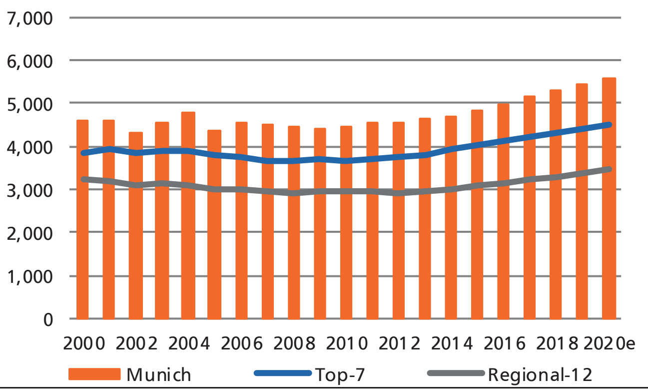
Munich: Retail space

PRIME RETAIL RENTS IN EUR PER M²



Source: bulwiengesa, Scope, DZ BANK forecast

RETAIL SALES PER M² IN EUR



Source: Scope

Munich more attractive due to various project developments

Based on prime rents, sales space productivity and purchasing power, Munich is the leading German retail location. The basis for this is excellent general conditions due to an economically strong and rapidly growing catchment area of more than 3 million people. The city also has a large number of visitors from within Germany and abroad, resulting in 17 million overnight stays per year. Munich is therefore the second most popular tourist destination in Germany after Berlin. The high quality of a visit there is also important thanks to the attractive city centre with its Bavarian flavour and a diverse range of bars and restaurants. The third element of its success is the broad shopping offer combining consumer-oriented retail concepts, very traditional specialist shops, and luxury outlets. The available sales space in the city centre may be fairly high at around half a million m², but it cannot keep pace with demand, partly because it showed very little growth for a long period. However, attractive space has been updated recently with city centre project developments such as the Palais an der Oper and the Hofstatt. Added to this are current developments such as Hettlage/Alte Akademie, the redesign of Sattlerplatz and the Forum Schwanthalerhöhe in the former XXXLutz which recently opened just outside the city centre. The most ambitious project is the reconstruction of the central railway station, which will not be completed until the end of the next decade. The location-related advantages boosted prime rents to EUR 345 per m² by 2016. This level has since been maintained, and we expect it to prevail for the time being.

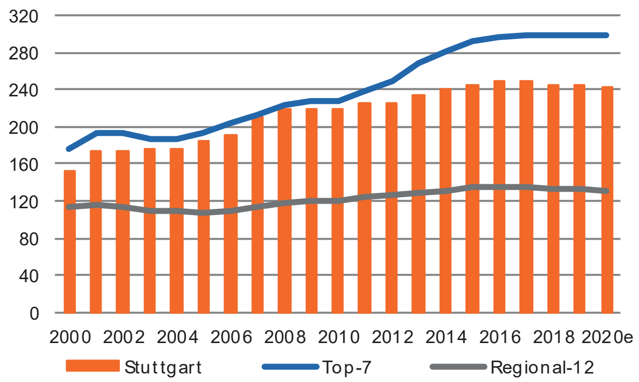
RETAIL SPACE IN MUNICH

		2017	2018	2019e	2020e
Demand					
Per cap. disposable income	EUR/month	2,685	2,750	2,818	2,876
Unemployment rate	%	4.2	3.8	3.6	3.7
Retail sales	EUR m/% yoy	10,793 / 4.0	11,240 / 4.1	11,695 / 4.1	12,110 / 3.5
Retail sales	EUR/m²	5,150	5,299	5,464	5,599
Supply					
Retail space	in m² million	2,096	2,121	2,140	2,163
Retail space	in % yoy	1.43	1.45	1.47	1.48
Retail rent					
Prime/secondary location	EUR/m²	345 / 39.0	345 / 40.0	345 / 40.0	345 / 40.0
Prime/secondary location	% yoy	0.0 / 2.6	0.0 / 2.6	0.0 / 0.0	0.0 / 0.0

Source: Scope, bulwiengesa, DZ BANK forecast

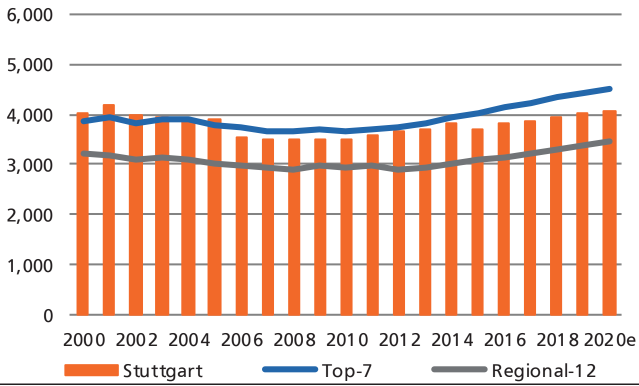
Stuttgart: Retail space

PRIME RETAIL RENTS IN EUR PER M²



Source: bulwiengesa, Scope, DZ BANK forecast

RETAIL SALES PER M² IN EUR



Source: Scope

Tenants change frequently in Stuttgart's prime retail locations

Retail activity in Stuttgart benefits from a large and economically strong catchment area of around 2.6 million people. Footfall is boosted by tourism, which makes a visible contribution of nearly 4 million overnight stays. The strength of the location and the shortage of space in the prime central area of Königstraße have supported the development of large city centre retail projects, which have led to the immediate expansion of sales space by a good 20 per cent. In 2014, the MILANEO and Gerber shopping centres opened at opposite ends of the city centre with 60,000 m² of sales space jointly. Prime rents have nevertheless increased to a maximum of EUR 250 per m². As well as increasing the available sales space, the new centres have also made the city centre more attractive. In 2017 sales space increased by another 10,000 m² as a result of the opening of the Dorotheen Quartier, the most recent major new development in the Stuttgart retail sector. Active rental business has led to a large number of tenants moving in Königstraße, and also in Stiftstraße. The letting of a relatively large number of large-scale sales floors is striking. The largest rental – and the last available space on the former Karstadt site was nearly 4,000 m² for Karstadt Sports. The impact of the expansion in space supply and the growing headwind from online shopping is being reflected in longer rental periods, rather than in the number of vacant properties. Prime rents also fell slightly last year to EUR 245 per m², a level which was maintained up to mid-2019. We believe the figure could decline again slightly by the end of next year.

RETAIL SPACE IN STUTTGART

		2017			2018			2019e			2020e		
Demand													
Per cap. disposable income	EUR/month	2,407			2,464			2,522			2,568		
Unemployment rate	%	4.7			4.7			4.5			4.6		
Retail sales	EUR m/% yoy	4,176	/	3.1	4,318	/	3.4	4,462	/	3.4	4,588	/	2.8
Retail sales	EUR/m²	3,852			3,932			4,002			4,056		
Supply													
Retail space	in m² million	1,084			1,098			1,115			1,131		
Retail space	in % yoy	1.72			1.73			1.75			1.77		
Retail rent													
Prime/secondary location	EUR/m²	250	/	16.0	245	/	16.0	245	/	16.0	243	/	16.0
Prime/secondary location	% yoy	0.0	/	6.7	-2.0	/	0.0	0.0	/	0.0	-1.0	/	0.0

Source: Scope, bulwiengesa, DZ BANK forecast

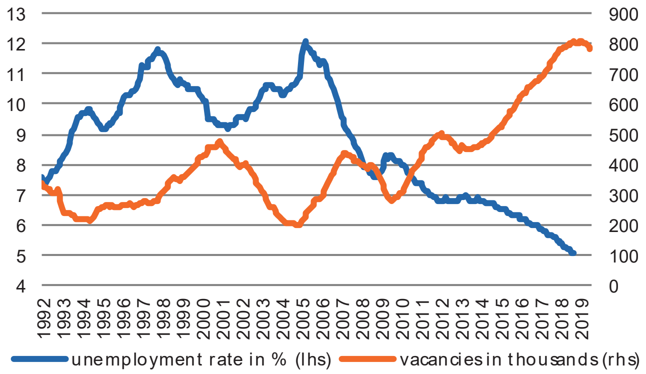
OFFICE PROPERTIES

Economic slowdown has virtually no impact on the labour market so far

Bad news on the economy becoming more frequent

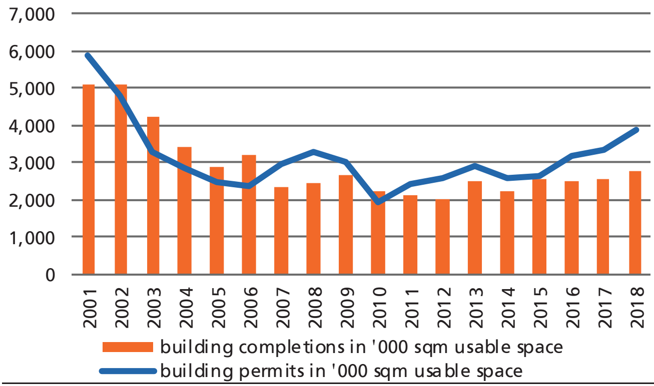
The economic climate has deteriorated for German companies. One negative element is the economic slowdown in Europe. This is being compounded by falling demand from China. Declining orders in the manufacturing sector and falling car sales are the result. Nor is there currently any sign of a fundamental improvement. The US/China trade dispute is continuing. Positions have become more entrenched in the Iran crisis. And the risk of a no-deal Brexit has increased with the appointment of Boris Johnson as the new British Prime Minister.

NUMBER OF REPORTED JOB VACANCIES AT A HIGH LEVEL SINCE THE END OF 2018



Source: Bundesbank

NO REAL MOMENTUM FOR CONSTRUCTION OF OFFICE AND ADMINISTRATIVE BUILDINGS



Source: German Federal Statistical Office

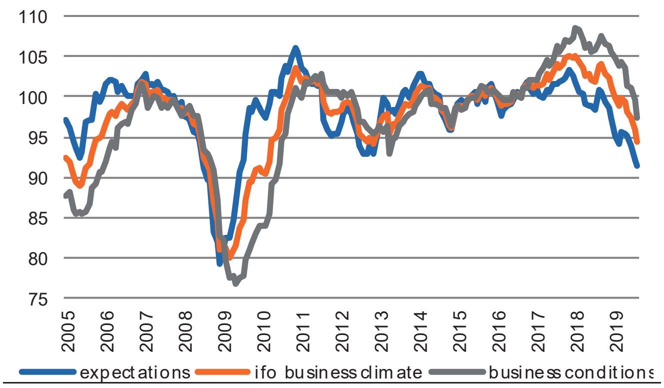
Employment growth has largely come to a halt

In this climate, many companies have reported weaker results and have revised down their annual forecasts. A whole series of well-known companies such as BASF, Bayer, Ford, Thyssen-Krupp and Volkswagen have reacted to the weaker outlook with cost-saving programmes and job cuts. Does this mean there is a risk of unemployment rising again, leading to more vacant properties in the office market? There are no signs of this at the moment. Although jobs are being shed by the heavyweights of German industry, below the line employment is not falling. But nor is it continuing to grow. Since the end of last year the number of people in work has remained at around 45 million. One positive factor is the continuing large number of job vacancies reported to the Federal Employment Agency, which has fallen only slightly below the previous maximum of 800,000.

Economic expectations of company bosses and economic experts decline again

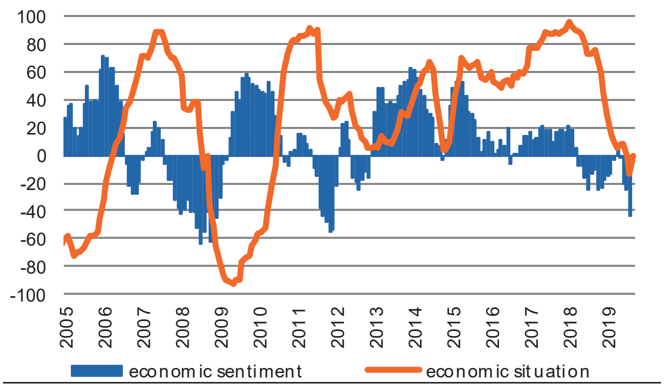
Job growth is unlikely to resume the pace of recent years. However, the shortage of skilled workers is not the only negative factor. The expectations of company bosses and economic experts have also clearly declined. This is borne out by the ifo Institute's business climate index and the ZEW economic barometer. Monthly survey readings have fallen sharply from their still optimistic levels at the beginning of last year. The last time survey readings were this low was in 2012. The expectation component of the ifo Index has even fallen to a ten-year low. Against this background, the office markets are also having to adjust to slowing demand for office space. Companies will at least think very carefully before signing expensive long-term rental contracts.

IFO INSTITUTE BUSINESS CLIMATE (2015 = 100) HAS FALLEN SHARPLY SINCE 2018



Source: ifo Institute

ECONOMIC BAROMETERS BELOW ZERO: LIKE EXPECTATIONS, ASSESSMENTS OF CONDITIONS HAVE ALSO TURNED NEGATIVE



Source: ZEW

Employment growth not reflected in visible growth in office space

However, there is no need as yet for any major concern about utilising existing office capacity. As a result of the strong employment growth of recent years accompanied by only a low level of new office construction, the still high levels of vacant office space evident only a few years ago have contracted to a mere fraction. In contrast to the housing market, the completed volume of office and administrative space throughout Germany has increased only marginally, although the volume of approved space has at least grown positively since 2016.

Coworking could benefit from economic slowdown – but could also suffer

Providers of flexible - coworking - office space could benefit from the current climate of high office employment with a simultaneous shortage of office space, as well as considerable uncertainty about the economic outlook. This means that companies can rent the office space they need, but without having to commit to a regular rental contract for a long period. However, if, contrary to expectations, the economic slowdown turns out to be more than a dip, coworking could also lose ground. If employment levels fall and demand for office space declines, companies will first of all use their long-term rented office space, and avoid relatively expensive, flexible space where possible.

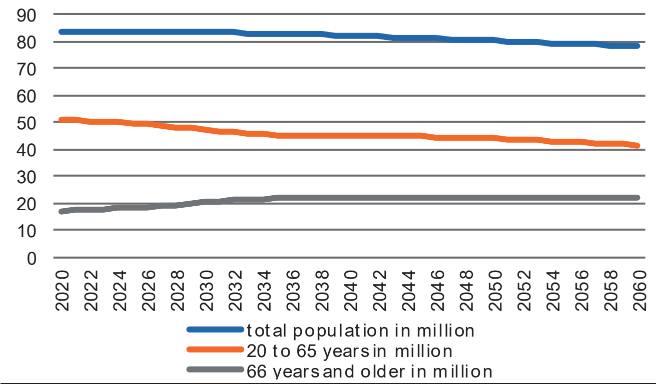
When baby boomers retire, the working population in Germany is likely to contract sharply

Demand for office space may weaken in any case in the years ahead irrespective of economic conditions. The economic upturn is also ultimately driven by baby boomers. People born in the high birth rates of the 1950s and 1960s, when the number of children born clearly exceeded 1 million in some years, account for a substantial proportion of the supply of skilled workers. However, many, often well-educated baby boomers will reach retirement age in the coming years, potentially leading to a visible decline in employment levels. Based on moderate “variant 2” of the recently published 14th coordinated population projection from the Federal Office of Statistics, the 20 to 65 age group – the “actively employed” – will contract from currently around 51 million to about 45 million people by 2035.

More immigration? Many countries of origin have their own problems

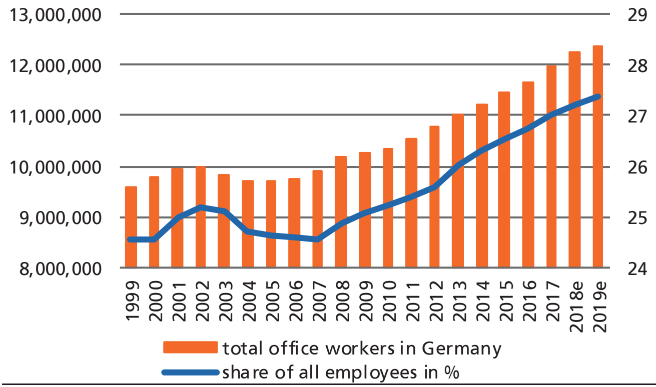
It is doubtful whether this gap can be closed by immigration. Most of the East European countries, such as the Balkan sates, whose migrant workers provided significant, urgently needed support in previous years for the German labour market, have low birth rates themselves. The populations of these countries are also ageing. They cannot therefore continue to provide the workers needed to pick up the slack in the German labour market.

PROPORTION OF POPULATION ACTIVELY EMPLOYED WILL CONTRACT BY MORE THAN 5 MILLION BY 2035



Source: Federal Office of Statistics, 14th coordinated population projection

OFFICE JOBS IN GERMANY HAVE GROWN DISPROPORTIONATELY



Source: bulwiengesa, DZ BANK forecast

Proportion of office work has visibly increased

However, the rate at which the workforce contracts due to demographic reasons could be more moderate in the office markets. In the first decade of this millennium office employees still accounted for 24 to 25 per cent of the working population. Since then, this proportion has shown an almost linear increase to 27 per cent. Strong employment growth and growth in this proportion have so far led to a disproportionate increase in office employment. If employment levels generally fall in future, a further increase in the proportion could mitigate the decline in the number of office jobs.

Potential of digitalisation could also transform office employment

However, a paradigm shift could also impact on the world of work in the years ahead. Providers of coworking space have demonstrated that office jobs need not involve long corridors of office cubicles. The catalyst is digitalisation: notebooks, smartphones, mobile communications and the WLAN networks available in many places are making it possible to separate office work from a fixed office workplace. This means that office floors where many desks are often empty due to business trips, part-time working, holiday, and illness, can be better utilised. The abovementioned coworking space, the café round the corner, or employees' homes can also be used as flexible workspace which, apart from coworking workspace, is also low-cost.

Will people work centrally or decentrally in future?

Digitalisation will enable companies to make savings on office space and the cost of premises. Making less use of office space also has other advantages. A smaller number of commuters will ease conditions on transport infrastructure. Residential premises outside conurbations can also be used if home working replaces the daily commute to the workplace. This could help to ease the pressure on urban housing markets. But it can only function within a certain framework. For example, IT companies such as Apple, Facebook and Google require their workers to be present in an office and they spend considerable amounts to provide attractive office space in headquarters which are similar to a campus.

Office buildings must meet future requirements of the world of work

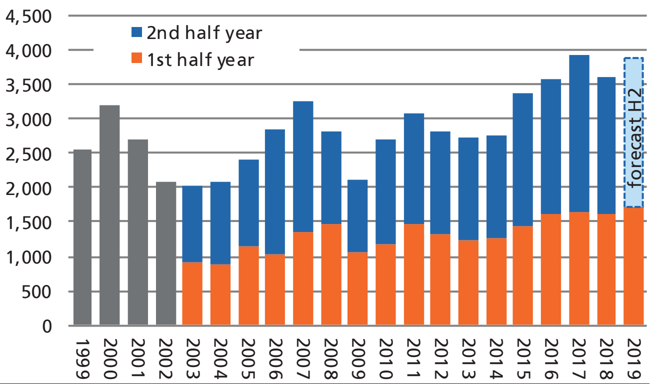
Office properties are not obsolete yet. However, the offices of the future could be very different from the current model with their long corridors and offices containing two people. While routine tasks are increasingly being carried out by machines, the importance of innovative and creative activity by teams of developers is increasing. New office buildings will have to take these aspects into account.

Office: comparison of top locations

Office rentals in top locations unaffected by economic slowdown

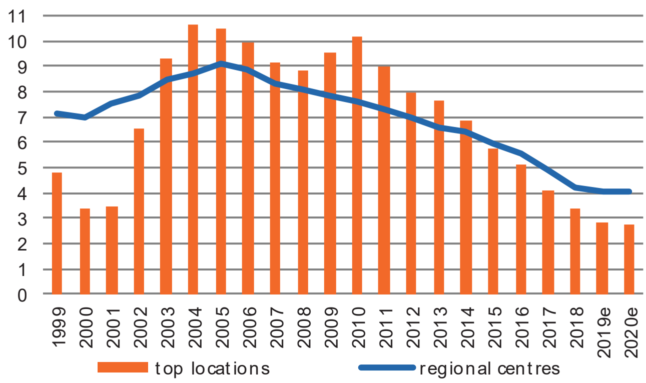
Is the German economy in crisis? There is no sign of this so far, at least in the office markets of the seven top locations; in fact quite the opposite. Although office space is in increasingly short supply and office rents have increased again, in the first half of 2019 take-up reached its highest level so far for the first six months of a year at more than 1.7 million m². Because the volume of available space is diminishing increasingly, a large proportion of new rental contracts were for project developments, most of which will only be ready for use in the next two years. Despite a visible slowing of the economic pace, companies therefore clearly expect demand for office space to remain high.

ECONOMIC SLOWDOWN FAILS TO IMPEDE OFFICE MARKETS IN TOP LOCATIONS
TAKE-UP IN THOUSAND M²



Source: bulwiengesa

VIRTUALLY NO VACANT OFFICE SPACE IN TOP LOCATIONS
VACANCY RATE IN PER CENT



Source: bulwiengesa, DZ BANK

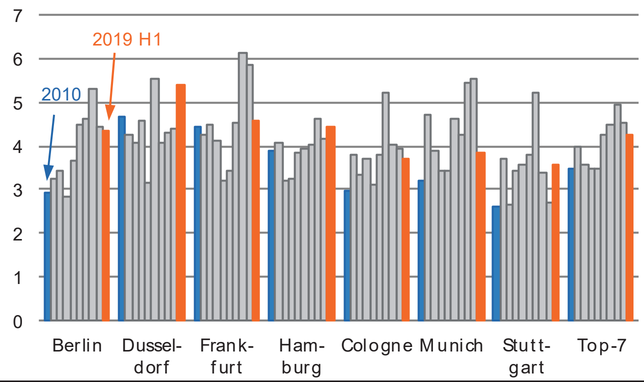
Vacancies still being reduced at a fast pace

Continuing high demand for office space on the back of only a moderate expansion of space has meant that the volume of vacant office space is continuing to contract. While in 2010, on average in the top locations more than 10 per cent of office space was still unlet, by mid-2019 the vacancy rate had fallen to around 3 per cent. The vacancy rate in top locations is therefore more than one percentage point lower now than in regional centres. In the past the opposite was true, because speculative project developments in the top locations significantly exceeded demand at times. Of nearly 2.5 million m² of currently unlet office space in the top locations, almost half is in Düsseldorf and Frankfurt. These are the only top locations which still have a comparatively good supply of existing space, with vacancy rates of just under 7 per cent.

Office markets in Berlin, Cologne, Munich and Stuttgart dipping into space reserves

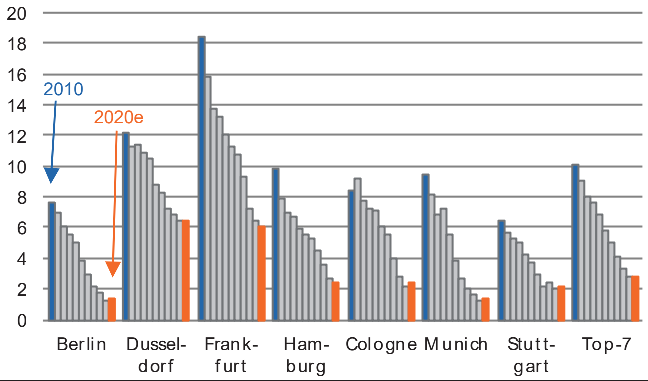
Market conditions in the other five top locations are correspondingly more strained. Cologne, Munich and Stuttgart respectively do not even have 200,000 m² of empty office space. The situation is certainly no better in Berlin, the largest German office market, with just under 300,000 m² of vacant office space. The vacant space is also spread over all office sites in the respective location. It is therefore virtually possible to rent large interconnecting office space here.

MAINLY LOWER TAKE-UP IN FIRST HALF ALREADY REACHING HIGH LEVELS IN 2019
TAKE-UP IN PER CENT OF THE OFFICE SPACE INVENTORY



Source: bulwiengesa

PROPORTION OF VACANT OFFICE SPACE FALLS SHARPLY IN ALL TOP LOCATIONS
VACANCY RATE IN PER CENT

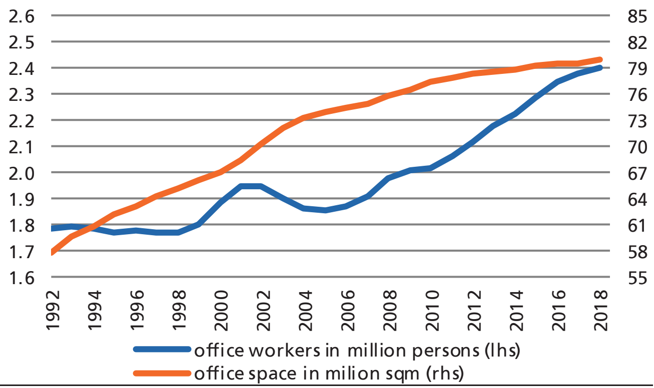


Source: bulwiengesa, DZ BANK AG

Opposing trends in office employment and office stock for many years

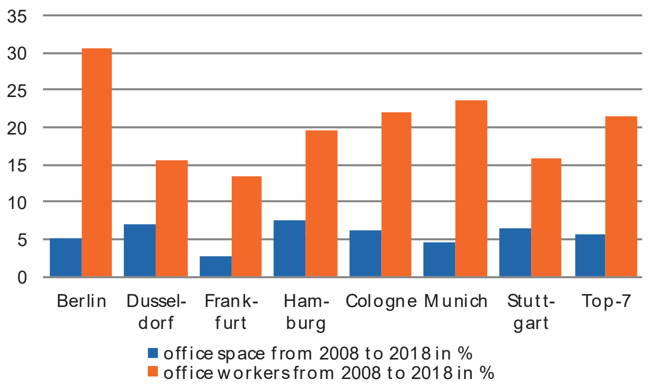
The strong growth in office employment in all the top locations is responsible for the high demand for office space and the associated rapid reduction in vacant office space. Compared to the acceleration in employment, growth in office space has levelled off. However, subdued demand for new office buildings is not the only factor here. Some space has been withdrawn from the office market because it has been converted – usually into housing.

AFTER MANY YEARS, OFFICE EMPLOYMENT UNLIKELY TO GROW FASTER THAN OFFICE SPACE IN 2019



Source: bulwiengesa, Scope, DZ BANK AG

SPACE GROWTH FAILS TO KEEP PACE WITH GROWTH IN OFFICE JOBS IN ANY LOCATION

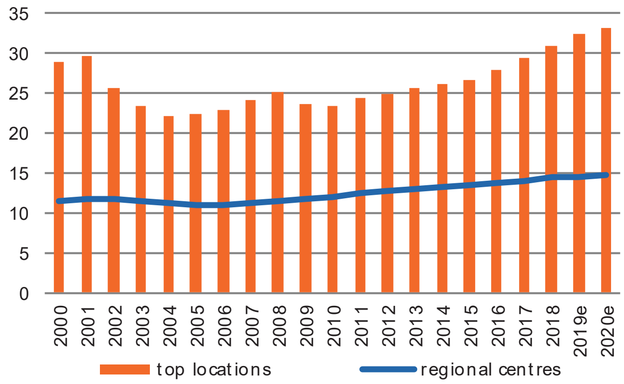


Source: bulwiengesa, Scope

High demand and shortage of space drive prime rents up sharply

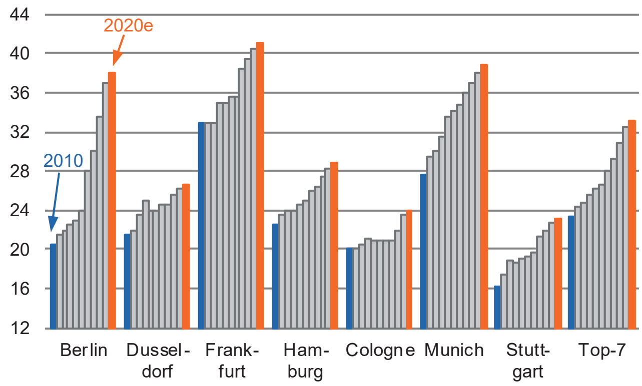
Continuing high demand for office space and an ever diminishing supply have led to a steady increase in prime rents in the top locations since 2010. Average prime rents in top locations had previously fallen to EUR 23.40 per m² as a result of the international financial market crisis. At year-end 2019, prime rents are likely to be around EUR 9 per m² higher, a rent increase of nearly 40 per cent. However, the strong rent growth is largely attributable to the booming Berlin office market, where prime rents have risen by 80 per cent since 2010. The lowest growth rate of less than 20 per cent is in Cologne. Düsseldorf, Frankfurt and Hamburg have managed around 25 per cent. Rents in the two top locations in southern Germany - Munich and Stuttgart – have increased much faster, but still at only half of the pace in Berlin.

OFFICE RENT GROWTH RATES MAINTAINED THANKS TO HIGH DEMAND AND SUPPLY SHORTAGE
PRIME RENTS IN EUR M²



Source: bulwiengesa, DZ BANK AG

BOOM IN BERLIN: OFFICE RENTS INCREASE TO THE HIGH LEVELS OF FRANKFURT AND MUNICH IN A SHORT PERIOD
PRIME RENTS IN EUR PER M²



Source: bulwiengesa, DZ BANK AG

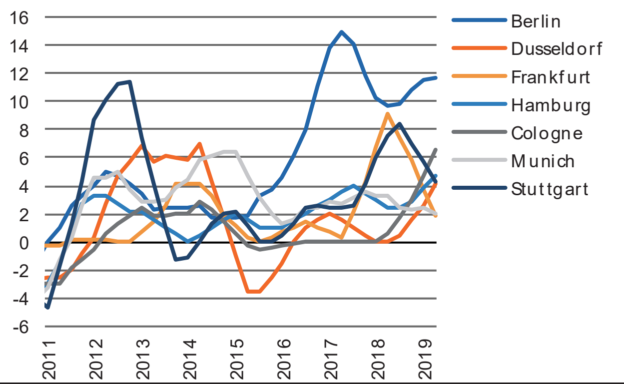
Double-digit growth in Berlin prime rents since 2016

However, rent growth in the German capital had been comparatively weak up to 2015. Rents only started to pick up significantly thereafter. Since the end of 2016 prime rents have shown double-digit annual growth rates. Berlin is thus the clear leader among the top locations. In the other top locations, rates of rent growth in the first half of 2019 ranged from around 2 per cent to just over 6 per cent.

Peripheral and secondary locations also benefit from supply shortage

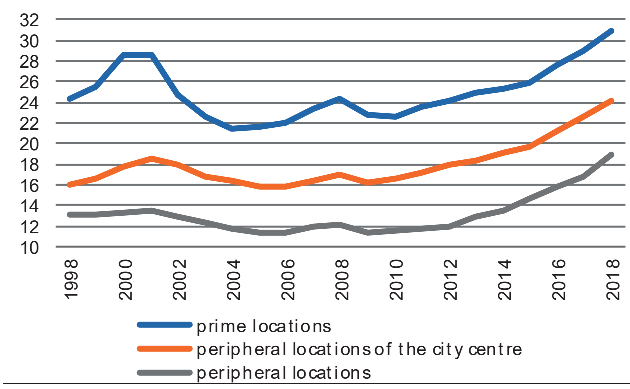
However, the accelerating pace of office rents has not only benefited prime city centre premises in the top locations. Thanks to the supply shortage and high city centre rents, office rents have also picked up visibly on the periphery of city centres and in secondary locations. In this respect, the office market clearly differs from the trend in the retail sector. There, prime city centre locations benefited almost exclusively from the rent growth which continued up to 2016, while rents only increased in secondary locations in their immediate vicinity.

DOUBLE-DIGIT GROWTH IN PRIME RENTS IN BERLIN – WIDE RANGE IN OVERALL RENT GROWTH
PRIME RENTS YOY IN PER CENT



Source: bulwiengesa

SECONDARY LOCATIONS HAVE ALSO BENEFITED SIGNIFICANTLY FROM SPACE SHORTAGE
PRIME RENTS IN EUR PER M² BASED ON TYPE OF LOCATION

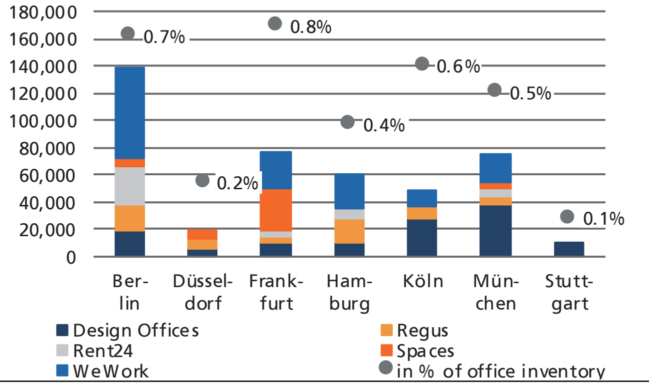


Source: bulwiengesa

Coworking still a niche activity

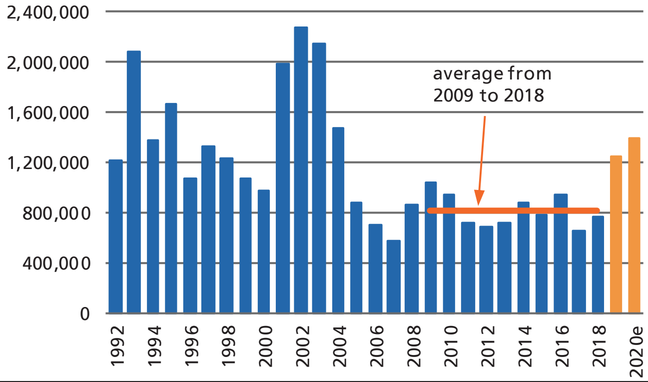
Providers of coworking space are often referred as having benefited from the shortage of space. Companies use flexibly rented office space to meet their needs, when space is no longer available for rent in the regular office market, at least in the short term. However, despite the fact that coworking is attracting considerable attention, flexible office rentals have tended to be a niche product so far. Cumulative rental agreements since 2015 for five large coworking providers do not account for more than 1 per cent of office stock in any of the top locations. A “major surge” which would have a sustained impact on office rentals in the seven top locations therefore seem fairly unlikely. For this to happen, the volume of space available for coworking would have to increase significantly.

SPACE RENTED BY LARGE COWORKING PROVIDERS ACCOUNTS FOR ONLY A FRACTION OF AVAILABLE SPACE
CUMULATIVE RENT AGREEMENTS SINCE 2015 IN M²



Source: bulwiengesa, DZ BANK

OFFICE SPACE COULD GROW SLIGHTLY MORE STRONGLY AGAIN IN 2019 AND 2020 AFTER A GAP OF MANY YEARS
NEW OFFICE SPACE IN TOP LOCATIONS IN M²



Source: bulwiengesa

Outlook: weaker economic growth dampens demand, while office space grows slightly more strongly

The shortage of space in the office markets will persist in future quarters. However, there are signs of a shift in market activity. On the one hand, the economic slowdown mentioned above, in conjunction with the many international crises, could also depress demand for office space. On the other hand, the supply of office space in top locations will probably pick up again slightly more strongly this year for the first time in a long period. Growth in office space should accelerate further slightly next year. This will not admittedly lead to any excess supply in the short term, given low levels of new office construction in recent years. However, the vacancy rate is likely to stop declining and rent growth will slow.

Office: top locations in a European context

Office rents increasing in Europe, but pace slowing in most markets

Thanks to the economic recovery in Europe, European office markets have consistently performed well in the recent past. This is borne out by the widespread contraction in the number of vacant properties, and the fact that office rents are generally rising in Europe. A similar picture is reflected in the “Office Property Clock” produced by Jones Lang Lasalle, which shows that office rents increased almost across the board in the second quarter of 2019. However, considerably more office markets are in the upper left quadrant, indicating a slowing of rent growth and thus a mature market. The brokerage company reports accelerated rent growth in only a handful of office markets, as shown in the lower quadrant on the left. German office markets are largely on the boundary between the two quadrants. This shows that the rate at which rents increased in the second quarter of 2019 was correspondingly more or less unchanged.

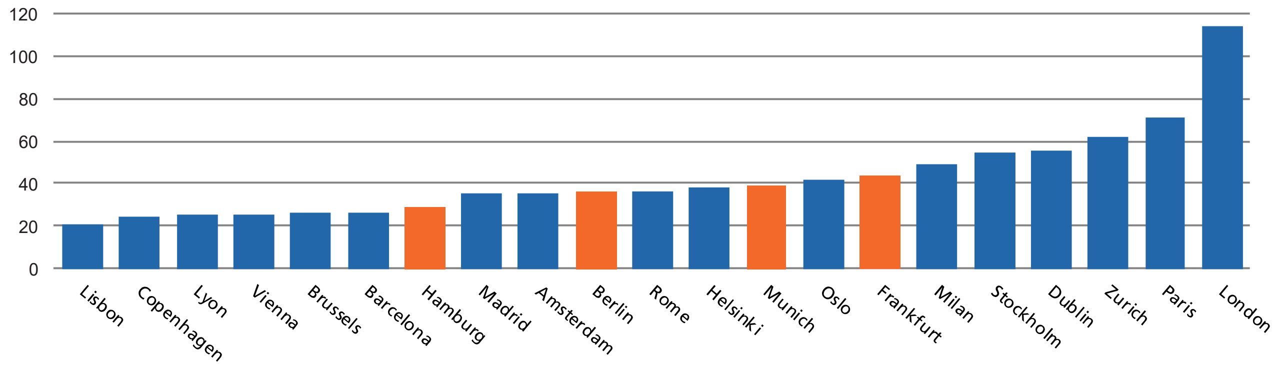
European economic slowdown likely to slow the pace further

However, the positive market trend is likely to weaken as a result of the slower pace of the European economy and the many international crises.

Prime office rents in Germany lie in mid-range by European standards. Even Frankfurt, the most expensive German office location with prime rents of around EUR 40 per m^2, does not make it into the top group of European office locations with prime rents in excess of EUR 50 per m^2. However, nor is the German office market concentrated on only one or a few central locations, as is the case for areas around the capital cities of many European countries. Rental yields for prime office properties in Europe range from 2.5 to 3.5 per cent, and German office locations are also therefore in the middle in this respect.

German prime office rents mid-range for Europe

PRIME OFFICE RENTS IN EUROPE – GERMAN OFFICE LOCATIONS ARE MID-RANGE
IN EUR PER M^2 PER MONTH

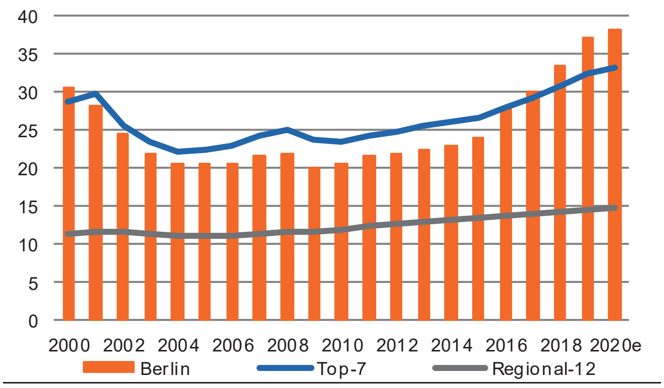


Source: BNP Real Estate

per: Q4/2018

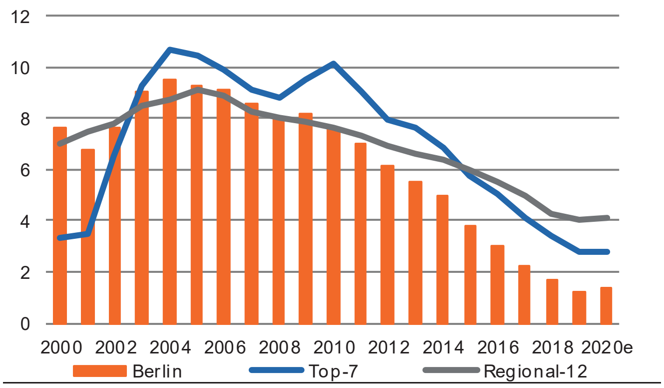
Office space in Berlin

PRIME OFFICE RENT IN EUR PER M²



Source: bulwiengesa, DZ BANK forecast

VACANCY RATE (%)



Source: Scope, DZ BANK forecast

Berlin the third most expensive office market in Germany after Frankfurt and Munich

The office market in Berlin has been undergoing a real boom in the wake of the city's economic upturn. After languishing for many years, Germany's capital has become a sought-after location for e-commerce providers and fintech companies, but also for established firms. One such example is the Siemens group which is planning to invest EUR 600m in the "Siemensstadt 2.0". Unemployment has more than halved since 2005 to a figure of 8 per cent in July 2019 on the back of the sharp rise in employment. In spite of high demand for office space for some 150,000 additional office jobs created since 2008, the amount of office space has hardly grown. This has more or less wiped out the high level of vacant office space which still existed ten years ago. The vacancy rate is now well below 2 per cent. This progressive shortage of available office space has led to a surge in the prime office rent which was still low a few years ago. At EUR 36.50 per m^2 at the half-way stage in 2019, Berlin is almost level with Munich. In spite of tight supply, office take-up has reached a very high level once again. In the first half of this year, it reached the highest level ever for a first half at 420,000 m^2. Providers of co-working space are still well represented. Project developments accounted for around half of take-up since large scale lettings are now virtually impossible from the existing stock. However, momentum in the market is likely to ease, reflecting firstly a noticeable rise in the volume of completions and secondly the slowdown from a weaker German economy. We expect slower rent rises up to 2020 and a stable vacancy trend.

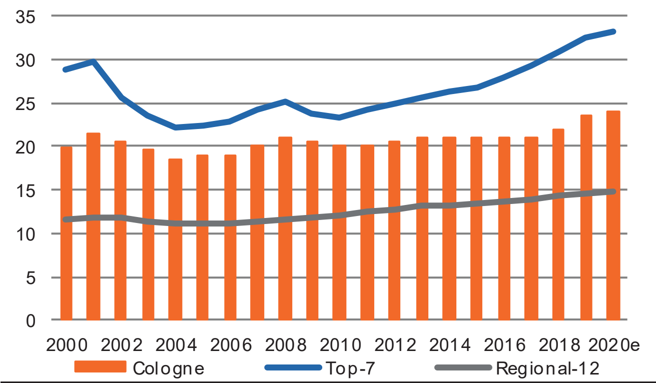
OFFICE SPACE IN BERLIN

		2017	2018	2019e	2020e
Demand					
GDP	% yoy	3.1	3.4	3.4	2.8
Per capita GDP	in EUR	34,606	35,461	36,450	37,288
Per capita GDP	% yoy	576.5	584.7	592.8	601.0
No. of office workers	% yoy	1.4	1.4	1.4	1.4
Supply					
Total office space	in '000 m^2	18,949	19,132	19,420	19,700
Total office space	% yoy	0.1	1.0	1.5	1.4
Vacancy rate	%	2.2	1.7	1.2	1.4
Office rents					
Prime/secondary location	EUR/m^2	30.0 / 12.0	33.5 / 14.0	37.0 / 15.0	38.1 / 15.4
Prime/secondary location	% yoy	7.1 / 9.1	11.7 / 16.7	10.4 / 7.1	3.0 / 2.7

Source: Scope, bulwiengesa, DZ BANK forecast

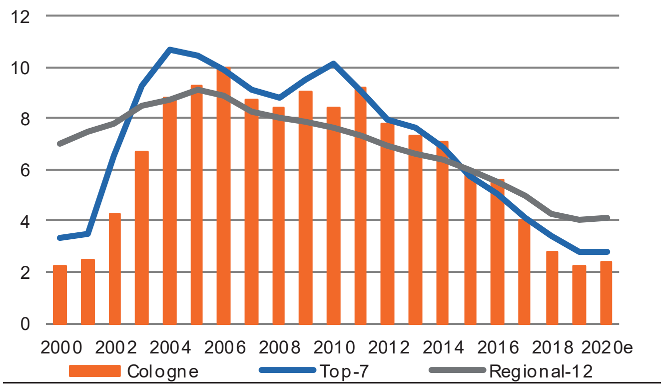
Office space in Cologne

PRIME OFFICE RENT IN EUR PER M²



Source: bulwiengesa, DZ BANK forecast

VACANCY RATE (%)



Source: Scope, DZ BANK forecast

Lack of supply slowing down Cologne market

At 300,000 m2 in 2018, take-up in the Cologne office market fell minimally against the previous year. However, the market was slowed down not by any lack of demand but by scarce supply. The vacancy rate has lately dipped to 2.5 per cent which means that the Cologne office market does not even have as much as 200,000 m2 of vacant space. In addition, the inner-city locations which are in demand have virtually no larger spaces left. Nevertheless, take-up was still quite high in the first half of 2019 at around 140,000 m2. The volume was boosted by a rental agreement for just under 16,000 m2 involving Sparkasse Köln-Bonn, although this was in a secondary location (Köln-Ossendorf). There was another deal of just under five figures for the headquarters of the German Aerospace Centre (DLR). Both large transactions involved new build projects. The co-working growth segment was also active in the first half of 2019 with three of the largest rental agreements this year. The prime rent has surged by almost 10 per cent within the space of 12 months to EUR 23.50 per m^2 on the back of tight supply. In light of this, the trend is likely to continue over the rest of the year with a further rise in the rent and fall in the vacancy level. New space coming onto the market is likely to be noticeably higher in 2020, and therefore the vacancy level should not decline any further. The prime rent is likely to remain stable for the rest of the year, but could pick up again in 2020 since there will hardly be any change in the tight supply situation.

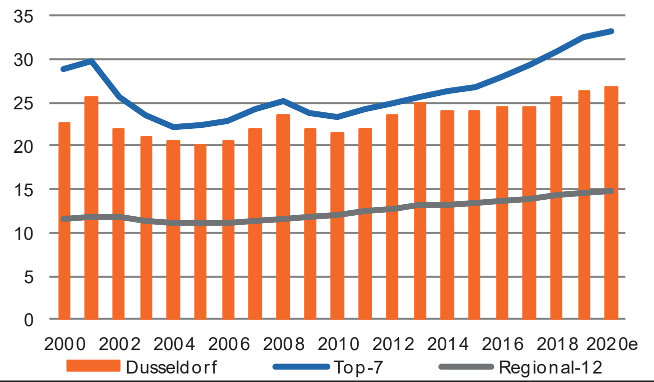
OFFICE SPACE IN COLOGNE

		2017	2018	2019e	2020e
Demand					
GDP	% yoy	2.9	3.3	3.5	2.9
Per capita GDP	in EUR	56,164	57,798	59,547	61,022
Per capita GDP	% yoy	243.8	246.6	249.6	252.6
No. of office workers	% yoy	1.2	1.2	1.2	1.2
Supply					
Total office space	in '000 m^2	7,638	7,647	7,680	7,800
Total office space	% yoy	0.5	0.1	0.4	1.6
Vacancy rate	%	4.0	2.8	2.2	2.4
Office rents					
Prime/secondary location	EUR/m^2	21.0 / 8.3	22.0 / 8.8	23.5 / 9.0	24.0 / 9.2
Prime/secondary location	% yoy	0.0 / 0.0	4.8 / 6.0	6.8 / 2.6	2.1 / 1.5

Source: Scope, bulwiengesa, DZ BANK forecast

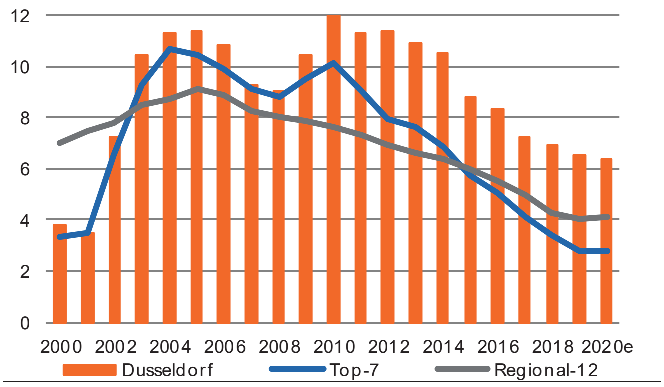
Office space in Düsseldorf

PRIME OFFICE RENT IN EUR PER M²



Source: bulwiengesa, DZ BANK forecast

VACANCY RATE (%)



Source: Scope, DZ BANK forecast

Prime rent in Düsseldorf also picking up again as vacant space continues to dwindle

Düsseldorf is the smallest office market among the top locations with 7.6 million m^2 of space, just behind Cologne and Stuttgart. As a rule, however, given its economic strength and function as the state capital, Düsseldorf posts a higher office space take-up. In addition, the prime rent is quite a bit higher at EUR 26 per m^2 most recently. Prior to that, however, it stagnated at EUR 24 to 25 per m^2 from 2012 to 2017, whereas the average prime rent in top locations rose by almost 20 per cent during the same period. The reason for this is likely to have been a high vacancy level. However, rents have also been edging up in Düsseldorf since 2018 on the back of high demand for space and a tighter supply of office space. After remaining in two digits for a long time, the vacancy rate fell to under 7 per cent. Lively letting activity in the first half is reflected in a high office space take-up of just over 200,000 m^2, only just short of the record of 210,000 m^2 in the same period in 2010. It is worth noting that this substantial volume was hardly driven by large-scale deals since it only included one five-figure transaction – Barmer Ersatzkasse signed a contract for around 13,000 m^2. Sustained high demand for space during the rest of the year could make 2019 into a record year for the Düsseldorf office market and lead to a further rise in the prime rent. A further decline in the vacancy rate is likely. However, we expect a largely stable market trend next year, reflecting a slightly higher rate of new space coming onto the market in 2019 and 2020 of around 100,000 m^2 respectively in relation to previous years and a slightly slower economy.

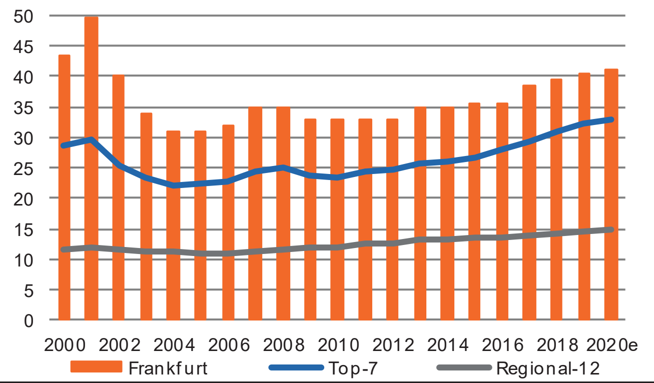
OFFICE SPACE IN DÜSSELDORF

		2017			2018			2019e			2020e		
Demand													
GDP	% yoy	3.1			3.6			3.7			3.2		
Per capita GDP	in EUR	78,636			81,051			83,754			86,169		
Per capita GDP	% yoy	209.2			211.8			214.6			217.3		
No. of office workers	% yoy	1.2			1.3			1.3			1.3		
Supply													
Total office space	in '000 m^2	7,547			7,554			7,610			7,700		
Total office space	% yoy	-0.1			0.1			0.7			1.2		
Vacancy rate	%	7.2			6.9			6.5			6.4		
Office rents													
Prime/secondary location	EUR/m^2	24.5	/	10.3	25.5	/	11.0	26.3	/	11.2	26.7	/	11.3
Prime/secondary location	% yoy	0.0	/	0.0	4.1	/	6.8	3.0	/	1.8	1.5	/	0.9

Source: Scope, bulwiengesa, DZ BANK forecast

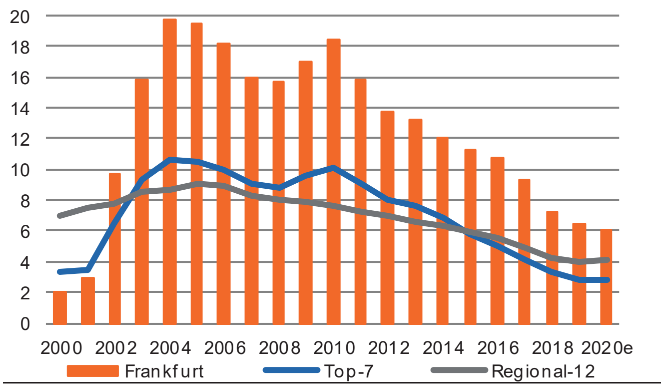
Office space in Frankfurt

PRIME OFFICE RENT IN EUR PER M²



Source: bulwiengesa, DZ BANK forecast

VACANCY RATE (%)



Source: Scope, DZ BANK forecast

Reduction in vacancy level of the last few years likely to be slowed down by substantial new building activity

Demand for office space triggered by the forthcoming Brexit and the relocations to continental Europe that it will bring are likely to have helped the reduction in vacant space and the increase in Frankfurt's prime rent to EUR 40 per m^2 at the half-way stage in 2019. As such, Frankfurt still stands out as the most expensive office market in Germany. However, demand for space, which led to a very high take-up of almost 260,000 m^2 in the first six months of this year, is also being driven by normal market activity. The Bundesbank was behind the biggest deal in the financial sector with a take-up of around 3,000 m^2. Only three transactions were larger. The only deal in the five-digit segment involved the Goethe University. The high office space take-up was therefore driven mainly by small and medium-sized rental agreements. A low level of new office space coming onto the market in the last few years and high demand led to a sharp fall in the vacancy level.

In June alone, the vacancy rate fell by 2 percentage points against the same period in 2018 to under 7 per cent. This means a fall by almost two thirds since 2010. However, the decline in the trend in the vacancy rate is unlikely to continue at the same pace since an aggregate amount of new space of well over 300,000 m^2 is expected in 2019 and 2020. In addition, demand for office space is likely to be affected by the current economic weakness. Nevertheless, there are signs of a slight increase in the prime rent given a high take-up. In contrast, the trend in 2020 is likely to be stable.

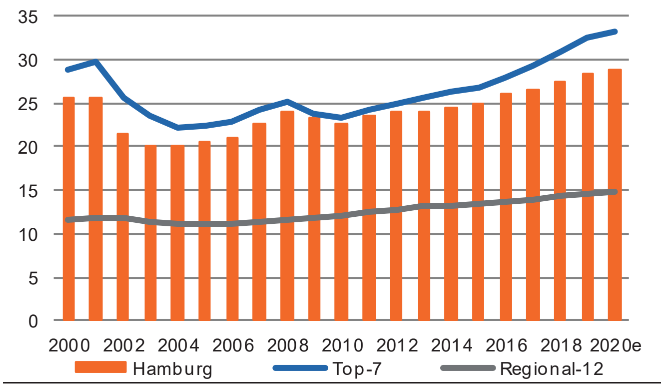
OFFICE SPACE IN FRANKFURT

		2017	2018	2019e	2020e
Demand					
GDP	% yoy	3.1	3.6	3.7	3.2
Per capita GDP	in EUR	94,428	97,004	99,754	102,279
Per capita GDP	% yoy	292.1	295.4	298.8	302.1
No. of office workers	% yoy	1.1	1.1	1.1	1.1
Supply					
Total office space	in '000 m^2	10,164	10,090	10,170	10,290
Total office space	% yoy	-0.8	-0.7	0.8	1.2
Vacancy rate	%	9.3	7.2	6.4	6.0
Office rents					
Prime/secondary location	EUR/m^2	38.5 / 9.6	39.5 / 9.8	40.5 / 10.0	41.0 / 10.1
Prime/secondary location	% yoy	8,5 / 1,1	2,6 / 2,1	2,5 / 2,0	1,2 / 1,0

Source: Scope, bulwiengesa, DZ BANK forecast

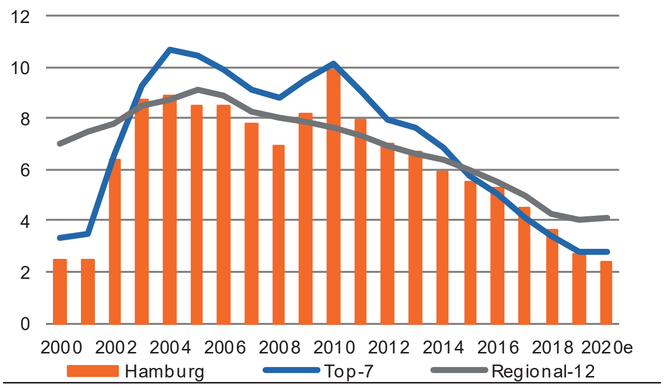
Office space in Hamburg

PRIME OFFICE RENT IN EUR PER M²



Source: bulwiengesa, DZ BANK forecast

VACANCY RATE (%)



Source: Scope, DZ BANK forecast

No let-up in the upturn in Hamburg office market in 2019

Driven by the city's broadly diversified economy, the uptrend in the Hamburg office market has continued in the first half of 2019. A high level of market activity was reflected in a take-up of over 300,000 m^2, which even beat the high previous-year figures for the first six months. Office space take-up of over 600,000 m^2 – only ever achieved once so far (in 2017) – is achievable, given mostly higher transaction volumes in the second half. The high office take-up was bolstered by three five-digit deals: the new tenants are the City of Hamburg, XING and Vattenfall with over 70,000 m^2 between them. The vacancy level continued to dwindle on high demand at a time of hardly rising supply. Compared with mid-2018, it had fallen by around 1 percentage point to just over 3 per cent. In key sub-markets such as the HafenCity, the vacancy level is even lower. The demand overhang has led to a sharp rise in prime rent which has increased by almost 6 per cent to EUR 28 per m^2 within the space of 12 months. This trend is likely to continue for the time being. Although there are signs of a slightly higher volume of new space coming onto the market after a generally moderate level in the last few years, it is unlikely to lead to any crucial improvement in the supply situation. To that extent, the future market trend will depend above all on the demand side which is likely to weaken in view of the economic cooling. Next year, we therefore expect to see a tailing off in the momentum behind the reduction in the vacancy level and in rent increases.

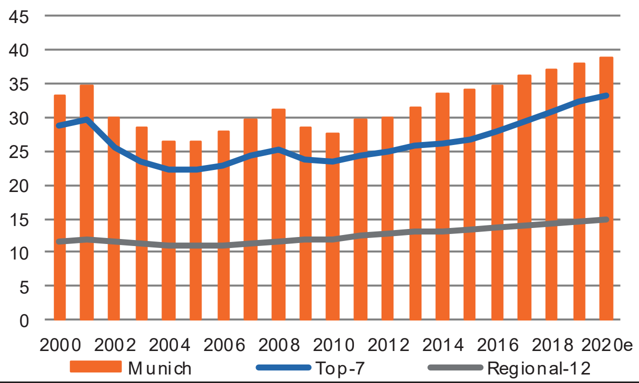
OFFICE SPACE IN HAMBURG

		2017	2018	2019e	2020e
Demand					
GDP	% yoy	3.6	3.9	4.0	3.3
Per capita GDP	in EUR	65,159	67,204	69,472	71,428
Per capita GDP	% yoy	431.7	437.4	443.2	449.0
No. of office workers	% yoy	1.3	1.3	1.3	1.3
Supply					
Total office space	in '000 m^2	13,706	13,750	13,850	13,940
Total office space	% yoy	-0.1	0.3	0.7	0.6
Vacancy rate	%	4.5	3.6	2.7	2.4
Office rents					
Prime/secondary location	EUR/m^2	26.5 / 11.0	27.5 / 12.0	28.3 / 12.2	28.8 / 12.4
Prime/secondary location	% yoy	1.9 / 1.9	3.8 / 9.1	3.0 / 1.7	1.8 / 1.6

Source: Scope, bulwiengesa, DZ BANK forecast

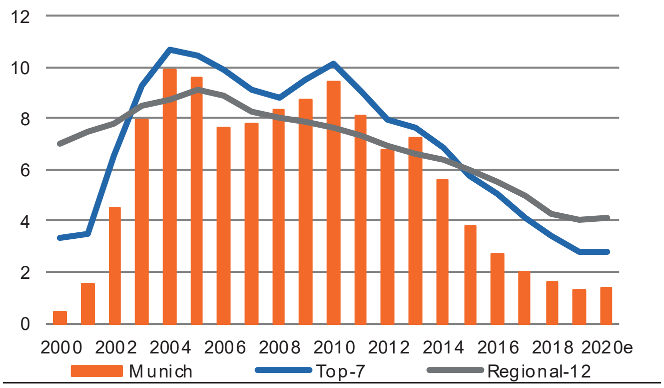
Office space in Munich

PRIME OFFICE RENT IN EUR PER M²



Source: bulwiengesa, DZ BANK forecast

VACANCY RATE (%)



Source: Scope, DZ BANK forecast

Germany's second most expensive office market swept just as clean as the housing market

Full employment in the Bavarian labour market has led to the Munich office market being swept clean. Out of a market of almost 14 million m^2, not even as much as 200,000 m^2 of office space was available lately. This equates to a vacancy rate of 1.4 per cent. The high demand for office space in the Bavarian capital is being driven by a highly diversified local economy. Five DAX groups alone are based in and around Munich. The ongoing shortage of supply has also had an impact on take-up. At not quite 270,000 m^2, the figure is the lowest since 2016. It is therefore hardly surprising that the four five-digit rental agreements which were signed in the first half, accounting for around 70,000 in total, involved new build projects . The tenants are the insurance group Versicherungskammer Bayern, the tax office, Bayerische Rundfunk (Bavarian Broadcasting) and the Edag Engineering Group. Secondary locations also benefited from the shortage of space in preferred areas. The prime rent has also increased in the last 12 months in view of tight supply; however, in view of an already high level, it was modest rise at just over 1 per cent to EUR 37 per m^2. As such, Munich is now only marginally more expensive than the Berlin office market. This year and next year, however, new office space coming onto the market will be higher than in previous years. However, this will hardly bring any tangible relief to the tight market situation. We therefore anticipate a further increase in the prime rent. The office vacancy level should stabilise at the current low level.

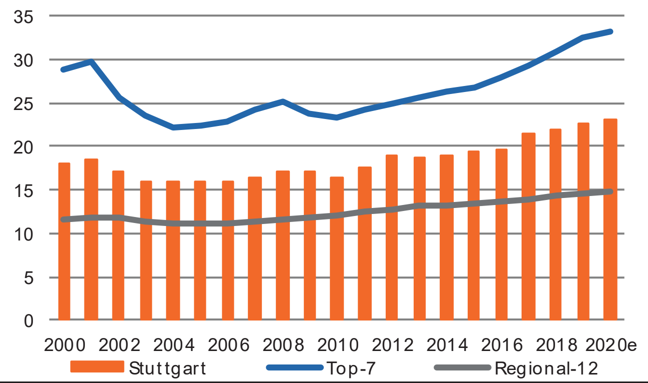
OFFICE SPACE IN MUNICH

		2017	2018	2019e	2020e
Demand					
GDP	% yoy	3.4	3.7	3.8	3.1
Per capita GDP	in EUR	69,145	72,115	74,949	77,211
Per capita GDP	% yoy	422.9	426.9	430.9	435.0
No. of office workers	% yoy	0.9	0.9	0.9	1.0
Supply					
Total office space	in '000 m^2	13,747	13,828	14,000	14,140
Total office space	% yoy	0.3	0.6	1.2	1.0
Vacancy rate	%	2.0	1.6	1.3	1.4
Office rents					
Prime/secondary location	EUR/m^2	36.0 / 14.5	37.0 / 15.5	38.0 / 15.8	38.6 / 16.0
Prime/secondary location	% yoy	3.7 / 7.4	2.8 / 6.9	2.7 / 1.9	2.0 / 1.3

Source: Scope, bulwiengesa, DZ BANK forecast

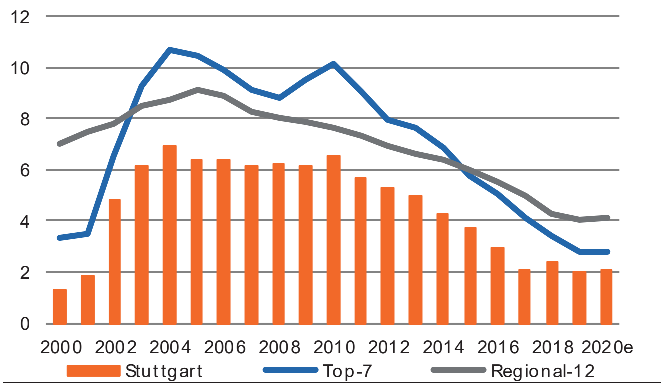
Office space in Stuttgart

PRIME OFFICE RENT IN EUR PER M²



Source: bulwiengesa, DZ BANK forecast

VACANCY RATE (%)



Source: Scope, DZ BANK forecast

Tight supply limiting office space take-up and leading to rise in rents

Stuttgart is the fifth largest office market in Germany with 7.9 million m^2 of office space. Just a few years ago, though, it was nowhere near the other locations in the group of top six locations, either in terms of take-up or prime rent, which was under EUR 20 per m^2 until 2016. This has since changed and the upturn has continued this year. Take-up had reached around 140,000 m^2 by the half-way stage. This is a good result compared with past figures which were only roughly half that level ten years ago. There was also a contribution from two five-figure transactions involving Vector Informatik and Siemens respectively for a total of 45,000 m^2. Market activity is being dampened by tight supply. The vacancy rate fell to around 2 per cent in 2017 and has since stayed at this level. As such, Stuttgart currently has less than 170,000 m^2 of available office space. In view of this tight supply and an increase in demand for office space, office rents in Stuttgart have risen continuously in the last few years. In the last 12 months, the prime rent has increased to EUR 22.50 per m^2, i.e. by a moderate 3 per cent. The positive trend is likely to continue for the rest of the year. We expect a further rise in the prime rent, but not any reduction in the vacancy level. The reason for this is a higher level of new space coming onto the market than in previous years. We expect another surge in office space take-up in 2019, assuming the addition of the lease for the planned new building for the Stuttgart Allianz headquarters with an estimated 85,000 m^2.

OFFICE SPACE IN STUTTGART

		2017	2018	2019e	2020e
Demand					
GDP	% yoy	3.0	3.4	3.5	2.9
Per capita GDP	in EUR	83,194	85,597	88,210	90,476
Per capita GDP	% yoy	197.9	200.1	202.4	204.7
No. of office workers	% yoy	1.1	1.1	1.2	1.1
Supply					
Total office space	in '000 m^2	7,787	7,853	7,910	8,000
Total office space	% yoy	1.4	0.8	0.7	1.1
Vacancy rate	%	2.1	2.4	2.0	2.1
Office rents					
Prime/secondary location	EUR/m^2	21.4 / 9.1	22.0 / 9.5	22.7 / 9.6	23.1 / 9.8
Prime/secondary location	% yoy	8.6 / 3.4	2.8 / 4.4	3.2 / 1.5	1.8 / 1.1

Source: Scope, bulwiengesa, DZ BANK forecast

HOUSING MARKET

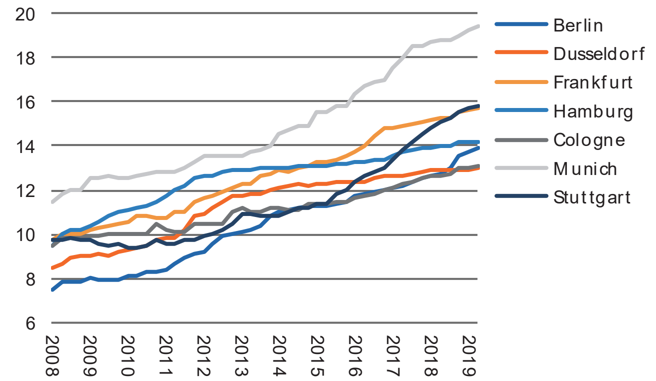
Rents in top locations beyond the financial means of many

Rents have been rising fast now in the top locations for over ten years, albeit with big differences in the pace. In Hamburg and Cologne, for example, average initial rents rose by slightly over 30 per cent within the ten years up to June 2019; in Düsseldorf they rose by around 40 per cent and in Frankfurt and Munich by a shade over 50 per cent. The increase in Stuttgart and Berlin was even more rapid at 65 per cent and around 75 per cent respectively. Consequently rents of EUR 13 per m² for new build flats in Düsseldorf and up to almost EUR 20 per m² in Munich are now hardly affordable, even for households with a good income. Rents for existing flats are slightly cheaper, but also expensive at around EUR 11 to 17 per m².

Rental market in conurbations has become a political issue

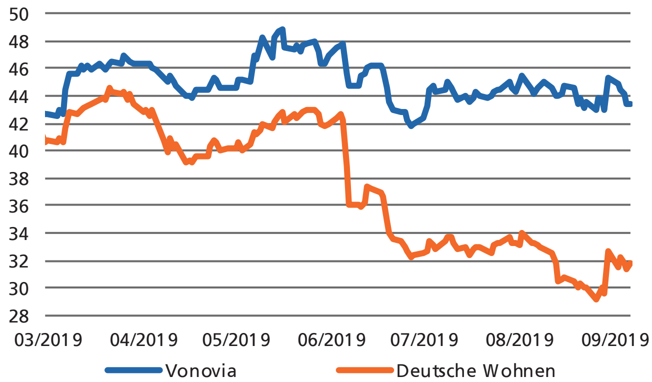
In view of this trend and the social tensions that it is creating, the housing market has now become the subject of a long-running debate. "Exploding" rents in conurbations are leading to recurrent protests and consequently, the situation in the housing markets – which has hardly attracted any attention for years – has become a hot political issue. This is leading to regulatory measures such as a brake on rents or environmental protection bylaws at local level. The debate escalated during the course of the electoral campaign for the Bundestag election in 2017. The various party manifestos included separate chapters with a raft of measures of which a few have now been introduced, such as an increase in the building of social housing, a tighter rent brake and introduction of "Baukindergeld", i.e. a grant from the Federal government to support families trying to buy their first home.

INEXORABLE RISE? RENTS FOR NEW BUILD HOMES HAVE BEEN RISING ACROSS THE BOARD FOR OVER 10 YEARS
AVERAGE INITIAL RENT IN EURO PER M²



Source: bulwiengesa

SLUMP IN SHARE PRICES FOR VONOVIA AND DEUTSCHE WOHNEN AS BERLIN RENT CAP IS APPROVED IN JUNE 2019
SHARE PRICE IN EURO



Source: Thomson Reuters data from September 6rd 2019

Housing industry as scapegoat to be curbed with regulatory market interventions

However, this has not eased the fundamental problem of a tight housing supply in conurbations and therefore there has been no noticeably improvement in the housing market. In the last few months, the debate has escalated with demands by a citizens' initiative in Berlin to expropriate large private housing companies such as Vonovia or Deutsche Wohnen – a move which has found a worrying level of support among some political parties. In June, Berlin's Senate approved a five-year freeze on rents which caused significant waves in the property sector and led to a sharp fall in the share price of listed housing companies. In addition, maximum rents for apartments are being considered in Berlin. There are also calls for a freeze on rents in Bavaria, and this is unlikely to be the last push to obtain lower rents.

The pressure on the housing markets and politicians is moreover showing results. Vonovia, the biggest German housing company, is not planning to increase rents in Berlin ahead of the freeze. In addition, tenants from the age of 70 upwards will have a guaranteed right of tenancy and will no longer be asked to move. The number two in the sector, Deutsche Wohnen, has also announced that it will not hike rents. Moreover, in Munich, the city council has banned the city's housing companies GEW and Gewofag from putting up rents for five years. Frankfurt with its ABG housing company can therefore be described as a pioneer in this respect, since a decision was made back in 2016 to cap rent rises at a maximum of 1 per cent p.a.

Property companies holding back to some extent from rent hikes

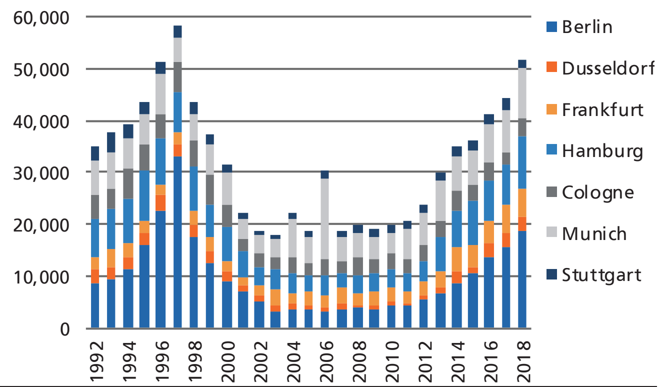
However, this does not improve the situation in the housing market – on the contrary – even though existing tenants are glad that rent rises have been scrapped. Self-imposed or government imposed rent caps in the housing market make it less attractive as an investment, which in turn hampers housing construction instead of promoting it. In addition, already low yields from investing in residential real estate will now be even more exposed to risks from regulatory intervention. Housing companies will also lack the means to make the necessary investment in their housing stock. After all, rising rents benefit not only owners through higher dividends; they are also needed to cover rising costs for refurbishments, increases in the price of construction materials and higher wages for those working in the construction industry.

Not a solution: cap on rents means lack of funds to maintain and increase housing supply

Apart from these protests – some of which were organised by grassroots activists – the housing market has shown that rent regulation can also work without political intervention. Rising rents have made the construction of apartment blocks more attractive once again. This is clear from a noticeable rise in completion figures in top locations which are back to the high level seen post reunification. Compared with around 20,000 homes completed between 2001 and 2011, the number of completions had increase by over 150 per cent last year to over 50,000 units.

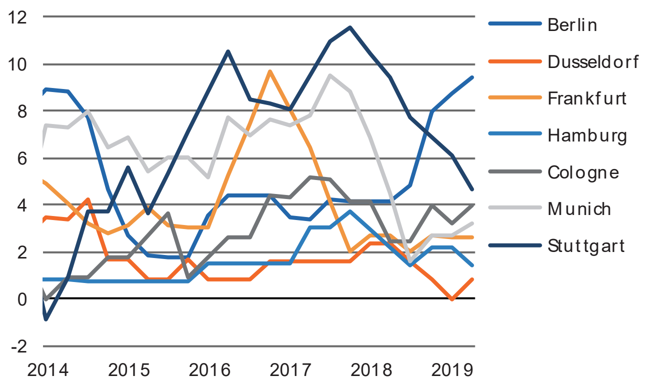
Improvement in sight even without regulation: housing construction has picked up considerably

HOUSING CONSTRUCTION BACK TO ITS POST-REUNIFICATION LEVEL
HOUSING COMPLETIONS



Source: Scope

RENT RISES TAILING OFF WITH MORE NEW BUILDS
AVERAGE INITIAL RENT VS. PREVIOUS YEAR (%)



Source: bulwiengesa

The high level of housing completion in the top 7 locations is all the more impressive since it is now virtually impossible to find any building land and also because the construction industry is working to the limit of its capacity. Each new build project reduces any further potential building land. In addition, it is becoming increasingly difficult to tender for new building sites because of protests from local inhabitants or the environmental lobby and restrictions under planning law. This is driving up the price of the little building land that is available and, together with fast-rising prices for con-

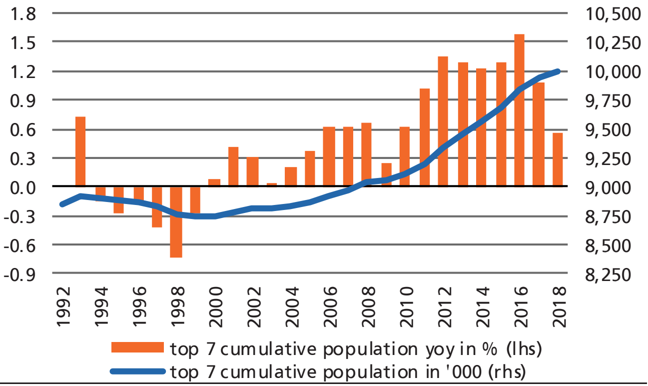
Lack of land, shortage of resources in construction industry and high prices could dampen housing construction

struction services, leading to a huge increase in the price of new builds. For this reason, the current high level of completions could definitely also go into reverse in spite of the ongoing high demand for housing. A noticeable increase in housing construction above the current level – as so often called for – is rather unlikely.

Rent rises easing off except in Berlin

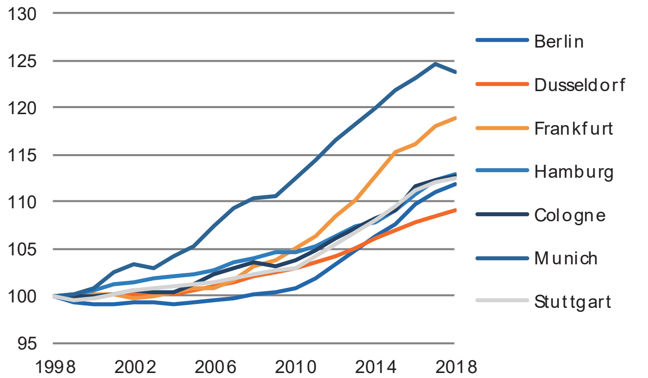
As a result of the increase in housing supply, rent rises for new builds in six out of the seven top locations have slowed down noticeably. In Berlin, however, the opposite has taken place in spite of a five-fold increase in the number of completions. There, the rise in rents has accelerated sharply from an annual rate of 4 per cent since the end of 2018 to around 9 per cent. This may be a reflection of strong protests against property companies, especially in Berlin, which could have led companies to increase rents while this was still possible.

TOP LOCATIONS: STRONGEST EVER RISE IN NO. OF…
POPULATION GROWTH TOP LOCATIONS



Source: Scope

… INHABITANTS HAS SLOWED DOWN VISIBLY
POPULATION GROWTH 1998 = 100

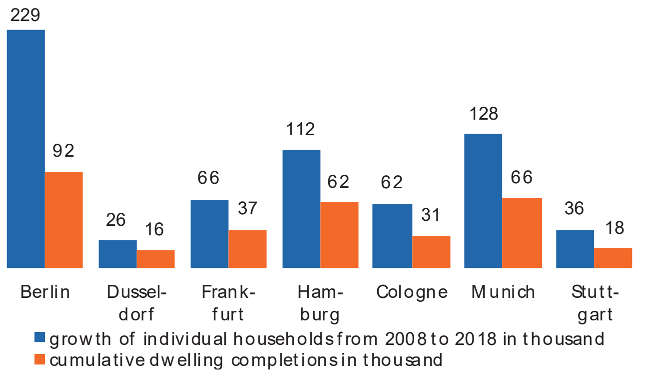


Source: Scope

High rents dampening population growth in top locations

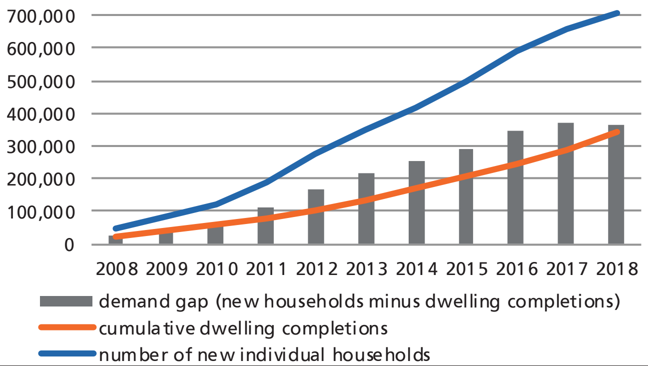
However, it is not just the increase in housing construction which is slowing down the pace of rent rises so far. It seems that strong population growth in the top locations as the main cause of the sharp rise in rents seen until now is now easing off. In 1999, the combined population in the seven cities after reunification was at its lowest at around 8.7 million inhabitants. Since then, the figure has risen to 10 million. Between 2008 and 2018 alone, the top locations saw total population growth of 1 million inhabitants, whose housing needs have totally absorbed any vacant homes along with new builds.

BIG GAP BETWEEN SUPPLY AND DEMAND HAS OPENED UP IN LAST TEN YEARS IN HOUSING MARKET;…



Source: Scope

… HOWEVER IT HAS HARDLY GOT ANY WORSE SINCE 2016

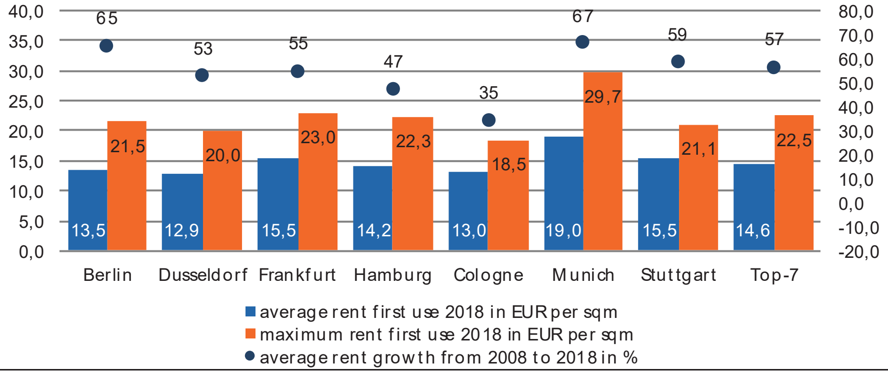


Source: Scope

Between 2011 and 2017 above all, there was strong population growth of 1.3 per cent p.a. on average in the top locations. However, the slowdown already in evidence in 2017 continued last year when the increase in the number of inhabitants was down to just half of one per cent against the previous year. Whereas the increase in the population in a number of top locations only flattened, there has even been a slight dip in the number of people living in Munich. One major reason for this is likely to have been the difficulty in finding somewhere to live in a market that has been swept clean together with the level of rents which is now enormously high, above all in Munich.

Population growth down to half of one per cent in 2018

TOP LOCATIONS: INITIAL RENTS HAVE WIDENED CONSIDERABLY IN LAST TEN YEARS

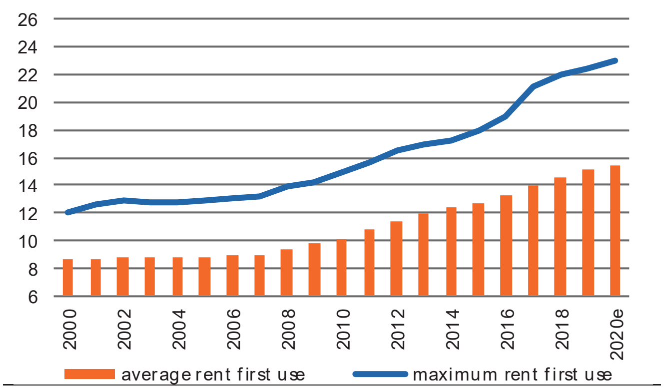


Source: bulwiengesa, DZ BANK

In spite of slower population growth, the situation in the housing markets remains tight. The reason for this is the discrepancy between the rise in the number of households in relation to the actual number of homes built. In the last ten years, there were only around 320,000 completed flats against around 660,000 new households. The shortfall of 340,000 homes calculated in this manner – of which almost 140,000 are in Berlin alone – is no longer increasing as in previous years because annual housing completions and the number of new households being formed have more or less offset each other.

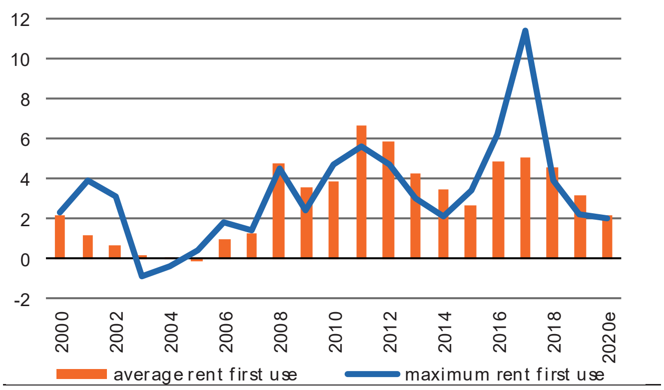
Housing market still tight

TOP LOCATIONS: RENTS FOR NEW BUILDS NOW HIGH
INITIAL RENT IN EURO PER SQM



Source: bulwiengesa, DZ BANK forecast

TOP LOCATIONS: BUT PACE OF RISE IN HOUSING RENTS EASING
INITIAL RENT AS PER CENT YOY



Source: bulwiengesa, DZ BANK forecast

Various influence factors likely to continue to slow down rise in rents

The pace of rent rises is likely to continue to slow down this year and next year in view of high completion figures and slower population growth. This will be helped by already high rents which will have a certain dampening effect on the rent rise. The population trend described suggests that those looking for housing in conurbations are increasingly looking further out where property is cheaper. In addition, a weaker economy could also hit the rent trend. Another potentially dampening factor could be a degree of reticence on the part of landlords in order to avoid any further escalation of the already heated mood in the housing market.

Is buying a property an attractive alternative to renting now thanks to rock-bottom interest rates?

The fact that interest rates in the eurozone have failed to start picking up again could have a noticeable impact on the rental housing market. In spite of high purchase prices, buying a property has become more attractive again in view of financing costs at an historical low and a further rise in rents. Buying a suitable property is now likely to be financially manageable especially for households able to afford high initial rents.

Housing market likely to be pressured further by regulatory measures

Whereas the hitherto big gap between housing supply and demand seems to be closing a little, the public debate about distortions in the housing market continues to escalate. Landlords must be prepared for further interventions from the authorities in the market to their detriment. Only this August, the German government's coalition committee approved an extension of the rent brake until 2025 which will go hand-in-hand with a further tightening of this instrument. Thereafter, tenants will be entitled to claim back any overpaid rent backdated for two-and-a-half years. In addition, the dampening effect will be compounded by the forthcoming reform of the Mietspiegelrecht (the act which determines the representative level of permissible rents in an area). In future, rental agreements over the past six years instead of the past four years will be factored in to calculate the representative rent in an area.

HOUSING FORECASTS FOR THE TOP SEVEN LOCATIONS UP TO 2020

	Year	Berlin	Cologne	Dusseldorf	Frankfurt	Hamburg	Munich	Stuttgart	Top-7
Demand									
Population in thoausand	2018	3.625	1.082	618	749	1.834	1.462	633	10.003
5-year change in %	2013-2018	6,8	5,3	3,8	8,0	5,3	4,8	5,5	5,9
Private households in thousand	2018	2.129	596	336	418	1.066	856	343	5.744
Unemployment rate in %	July 2018	8,0	8,0	6,8	5,4	6,3	3,4	4,0	6,5
Disposable income per capita in Euro	2018	22.518	25.063	29.294	25.286	27.785	32.218	28.879	26.220
Supply									
Dwelling units in thousand	2018	1.972	547	341	391	944	802	310	5.307
Completions p.a. (5-year average)	2013-2017	3,2	3,0	3,4	5,9	4,2	5,1	3,2	3,8
per 1000 inhabitants	2018	5,1	3,2	4,8	7,3	5,3	6,6	2,8	5,2
Rent									
First occupancy, average rent	2018	13,5	13,0	12,9	15,5	14,2	19,0	15,5	14,6
in Euro/sqm	2019e	14,2	13,3	13,2	15,9	14,4	19,6	16,0	15,1
	2020e	14,5	13,5	13,4	16,3	14,6	20,0	16,5	15,4
	2018	8,0	4,0	0,8	2,6	2,2	2,7	6,9	4,5
yoy change in %	2019e	5,0	2,1	2,0	2,6	1,5	2,9	3,2	3,2
	2020e	2,5	1,9	1,5	2,5	1,5	2,3	3,1	2,2
5-year change in %	2013-2018	25,0	16,1	7,5	21,6	9,2	35,7	43,5	22,4
First occupancy, maximum rent	2018	21,0	18,0	19,5	22,5	21,8	29,0	20,5	22,0
in Euro/sqm	2019e	21,5	18,3	20,0	23,0	22,3	29,6	21,1	22,5
	2020e	22,0	18,6	20,3	23,5	22,7	30,2	21,5	22,9
	2018	5,0	0,0	8,3	2,3	3,8	3,6	5,1	4,0
yoy change in %	2019e	2,4	1,5	2,6	2,2	2,3	2,1	2,9	2,2
	2020e	2,3	1,5	1,5	2,2	1,8	2,0	1,9	2,0
5-year change in %	2013-2018	36,4	24,1	25,8	21,6	16,0	38,1	40,4	29,8

Source: BA, bulwiengesa, Scope, DZ BANK forecast Research

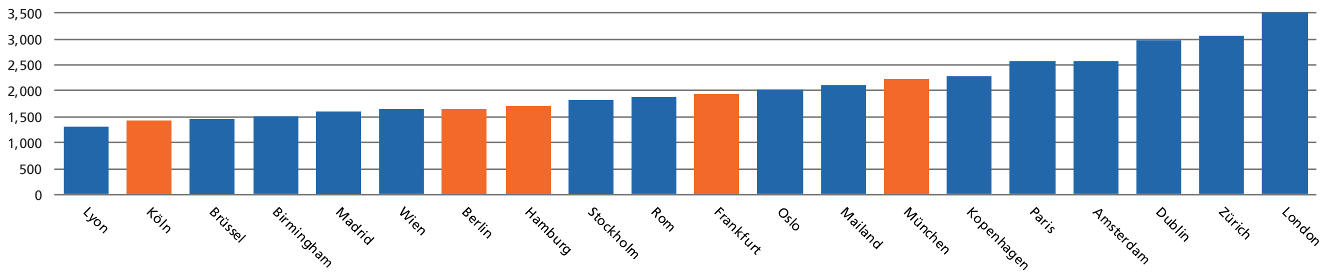
The rise in rents in the housing market is likely to continue in all seven top locations because of a tight supply. The pace of the increases, however, should ease even further for the reasons mentioned above. This year, average initial rents are likely to increase by 3 per cent and by slightly over 2 per cent next year. The pace is likely to be slightly slower still at the very top end of the market.

Forecast up to 2020: rising supply and slower population growth likely to dampen rise in rents

It is likely to be difficult for people living in many European cities outside Germany to understand the frequent complaint by Germans that rents for flats are unaffordable. Figures which can be downloaded from the Numbeo comparison website show that even rents in Munich, Germany's most expensive city, are not among the most expensive in Europe.

Rents often even higher in other European cities

IN SPITE OF SHARP RISE IN RENTS, RENTS IN GERMANY STILL NOT ABOVE AVERAGE IN RELATION TO OTHER EUROPEAN COUNTRIES
MONTHLY RENT, 4-ROOM FLAT, CITY LOCATION, IN EURO



Source: www.numbeo.com

Data from 19 August 2019

FORECASTS AT A GLANCE

Structural data 2018	Inhabitants in '000	Inhabitants 2008-2018 (%)	GDP EUR m	Per capita GDP EUR	Disposable income per capita in EUR p.a.	Unemployment rate (%; July 2019)
Berlin	3,625	11.7	129	35,461	23,086	8.0
Cologne	1,082	9.0	63	57,798	25,652	8.0
Düsseldorf	618	6.8	50	81,051	30,035	6.8
Frankfurt	749	15.4	73	97,004	25,881	5.4
Hamburg	1,834	8.6	123	67,204	28,287	6.3
Munich	1,462	12.2	105	72,115	32,996	3.4
Stuttgart	633	9.9	54	85,597	29,567	4.0
Top locations	**10,003**	**10.7**	**597**	**59,652**	**26,814**	**6.5**

Retail space	Retail space 2018			Prime rent EUR per m²			Prime rent yoy % change			Retail sales yoy % change		
	in '000 m²	2008-2018 (%)	per inhabitant in m²	2018	2019e	2020e	2018	2019e	2020e	2018	2019e	2020e
Berlin	6,696	20.6	1.8	310	310	310	0.0	0.0	0.0	3.3	3.2	2.7
Cologne	1,413	6.4	1.3	255	250	248	0.0	-2.0	-0.8	3.7	3.8	3.3
Düsseldorf	1,247	31.2	2.0	282	280	280	0.7	-0.7	0.0	3.9	4.0	3.4
Frankfurt	1,541	17.9	2.1	300	300	300	0.0	0.0	0.0	3.6	3.6	3.0
Hamburg	3,006	12.1	1.6	285	285	285	0.0	0.0	0.0	4.3	4.2	3.7
Munich	2,121	19.9	1.5	345	345	345	0.0	0.0	0.0	4.1	4.1	3.5
Stuttgart	1,098	15.5	1.7	245	245	243	-2.0	0.0	-1.0	3.4	3.4	2.8
Top locations	**17,122**	**17.8**	**1.7**	**298.3**	**297.8**	**297.6**	**0.0**	**-0.2**	**-0.1**	**3.8**	**3.7**	**3.2**

Office space	Stock of office space 2018			Prime rent EUR per m²			Prime rent yoy % change			Vacancy rate %		
	in '000 m²	per capita (m²)	per office worker (m²)	2018	2019e	2020e	2018	2019e	2020e	2018	2019e	2020e
Berlin	19,132	5.3	32.7	33.5	37.0	38.1	11.7	10.4	3.0	1.7	1.2	1.4
Cologne	7,647	7.1	31.0	22.0	23.5	24.0	4.8	6.8	2.1	2.8	2.2	2.4
Düsseldorf	7,554	12.2	35.7	25.5	26.3	26.7	4.1	3.0	1.5	6.9	6.5	6.4
Frankfurt	10,090	13.5	34.2	39.5	40.5	41.0	2.6	2.5	1.2	7.2	6.4	6.0
Hamburg	13,750	7.5	31.4	27.5	28.3	28.8	3.8	3.0	1.8	3.6	2.7	2.4
Munich	13,828	9.5	32.4	37.0	38.0	38.8	2.8	2.7	2.0	1.6	1.3	1.4
Stuttgart	7,853	12.4	39.2	22.0	22.7	23.1	2.8	3.2	1.8	2.4	2.0	2.1
Top locations	**79,854**	**8.0**	**33.2**	**30.8**	**32.4**	**33.1**	**5.3**	**5.1**	**2.1**	**3.4**	**2.8**	**2.8**

Housing market	Growth from 2013 to 2018 (%)			Average initial rent EUR per m²			Average initial rent yoy % change			Initial rent top location EUR per m²		
	Inhabitants	Households	Housing stock	2018	2019e	2020e	2018	2019e	2020e	2018	2019e	2020e
Berlin	6.8	7.0	3.3	13.5	14.2	14.5	8.0	5.0	2.5	21.0	21.5	22.0
Cologne	5.3	6.2	2.5	13.0	13.3	13.5	4.0	2.1	1.9	18.0	18.3	18.6
Düsseldorf	3.8	4.3	3.5	12.9	13.2	13.4	0.8	2.0	1.5	19.5	20.0	20.3
Frankfurt	8.0	8.3	6.0	15.5	15.9	16.3	2.6	2.6	2.5	22.5	23.0	23.5
Hamburg	5.3	6.8	4.3	14.2	14.4	14.6	2.2	1.5	1.5	21.8	22.3	22.7
Munich	4.8	6.5	4.3	19.0	19.6	20.0	2.7	2.9	2.3	29.0	29.6	30.2
Stuttgart	5.5	5.8	2.7	15.5	16.0	16.5	6.9	3.2	3.1	20.5	21.1	21.5
Top locations	**5.9**	**6.7**	**3.7**	**14.6**	**15.1**	**15.4**	**4.5**	**3.2**	**2.2**	**22.0**	**22.5**	**22.9**

Source: Scope, bulwiengesa, DZ BANK forecast

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

GLOSSARY

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

Source: bulwiengesa, DZ BANK

I. Imprint

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