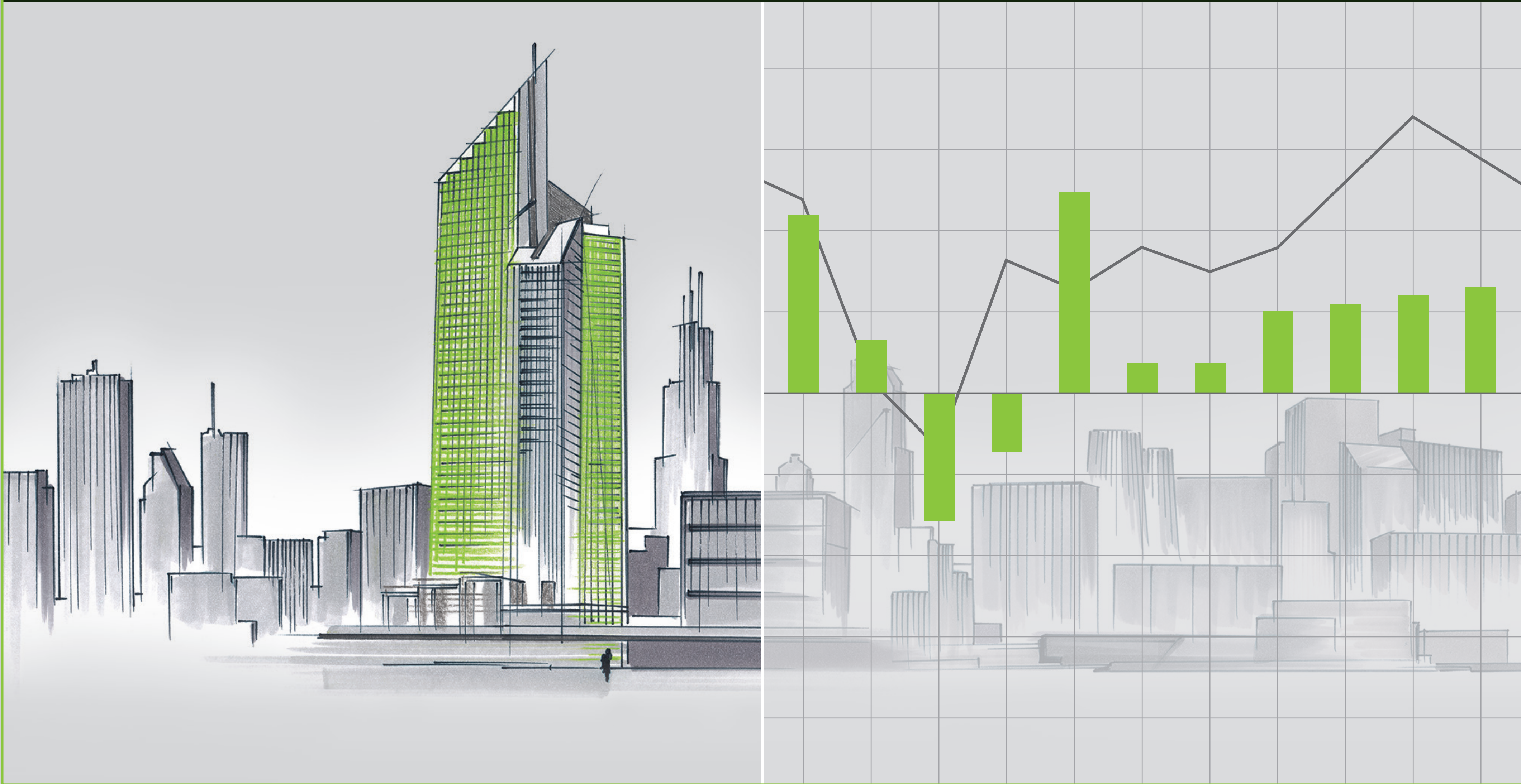
pbbIX
Office Property Market Germany
2018 | Q4

DEUTSCHE PFANDBRIEFBANK



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Overview

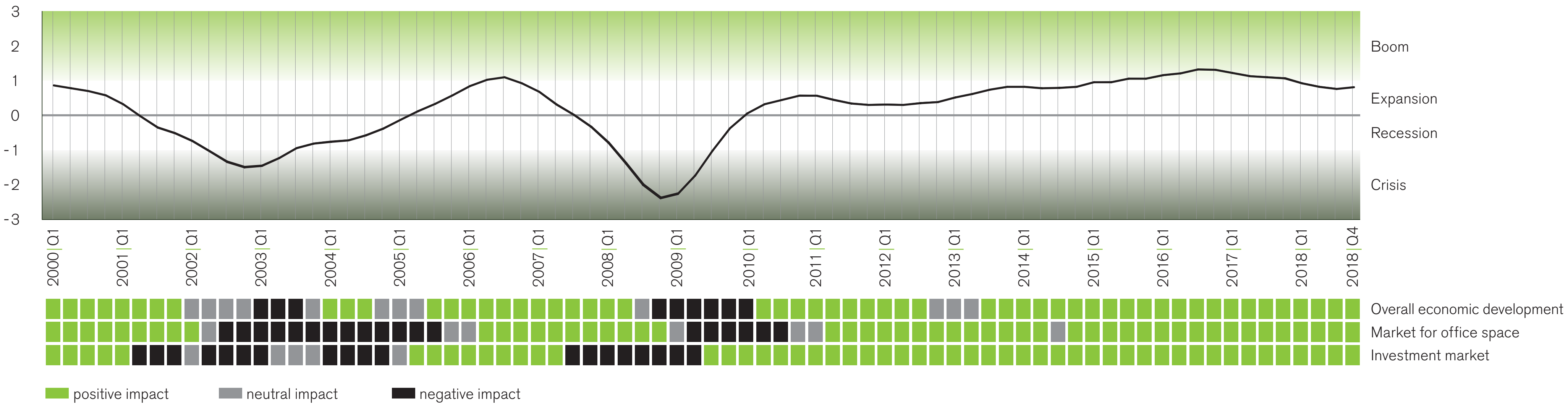
Development of the major German office property markets was set for further growth at the end of 2018. Despite recently weaker economic growth, the pbbIX rose and the **office market situation in Germany remained buoyant.**

The index was boosted in particular by **developments in the office space and investment markets.** There is a shortage of available office space in almost all real estate markets. The ongoing, although decelerating, increase in employment further reduced the vacant space available in the fourth quarter of 2018. As a result, vacancy rates overall have continued to fall at an already very low level. Until recently, new construction has failed to keep up with the demand for office space – or to even provide a modicum of relief. This supply/demand imbalance benefited landlords in particular, who were able to negotiate significantly higher rents on new agreements.

Cash inflows increased in the fourth quarter of 2018. Against the backdrop of persistently low interest rates and strong cash flows into the office markets, increased investments were indeed predicted, but nevertheless the volume of additional capital inflows was quite remarkable. Foreign investment stood out in particular while inflows from Germany declined from their previous high levels.

Notwithstanding the good situation at the end of 2018, uncertainty about future developments - also in the macroeconomic context – has grown.

pbbIX BIG 7 | Index



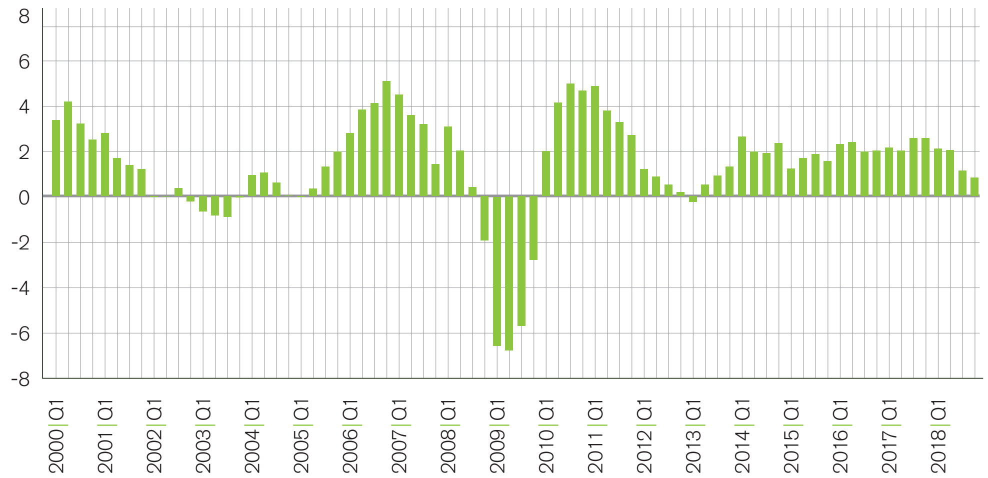
Overall economic outlook

In 2018, **the growth of the German economy fell short of expectations.** Over the year as a whole, real gross domestic product rose by 1.5 %, after an increase of more than 2 % in each of the two previous years. Overall production was rather sluggish in the second half of the year – in part due to slower economic growth, and also reflecting a number of one-off factors, e.g. low water levels on many waterways, as well as problems in the automotive industry due to the transition to the new exhaust-gas cycle test WLTP.

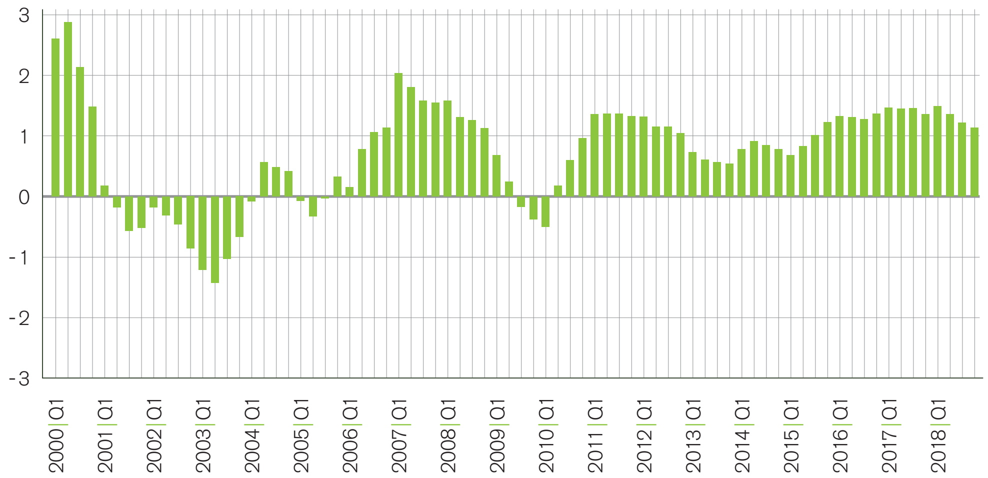
The slower pace over the last two quarters does not however give cause for concern. In previous years, economic growth has generally been above its projected path of 1.5 %, which the German Council of Economic Experts believes is the best way to assess macroeconomic growth. This means that any spare capacity has virtually been used up, and there is a lack of available resources. In this sense, more modest economic growth is likely to help **prevent macroeconomic imbalances.**

Looking at current macroeconomic developments from the office market perspective, the most positive aspect is the **sustained increase in employment**. Although this increase eased off to some extent over the course of the year, employment levels continue to rise strongly. At the end of the fourth quarter of 2018, a total of around 45 million people were employed in Germany, around 0.5 million more than the previous year. According to current forecasts, employment levels are set to rise further over the coming quarters. As the tertiary sector in thriving cities is benefiting disproportionately from this increase, demand for office space is expected to remain high.

Real gross domestic product | year-on-year change in %



Working population | year-on-year change in %



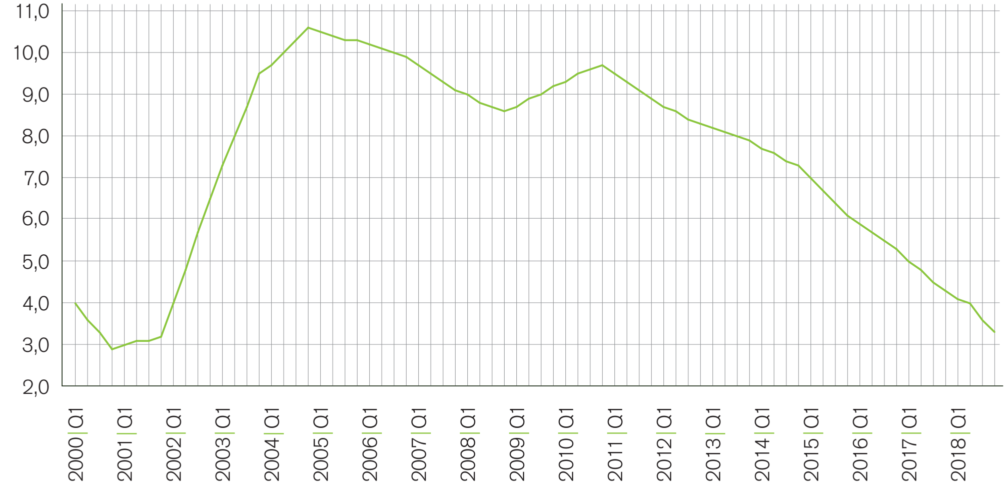
Market for office space

A key factor in determining the demand for office space is the **employment growth in the service sector**, which is clearly on an upward trend. Consequently, the office market indicators – vacant office space and rental performance – represent an excellent situation from a landlord's perspective. In the fourth quarter of 2018, vacancies in the BIG 7 markets continued to decline. At the end of 2018, just over 3 % of the office space portfolio was vacant. At around 3.7 million m^2 of rentable space in 2018, rental performance was slightly below the previous year's figure.

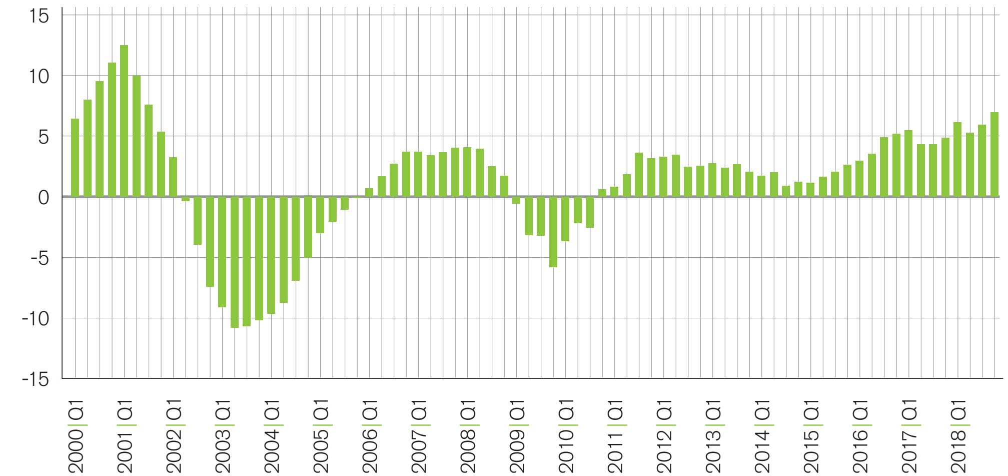
In view of falling vacancy rates and the high demand for space, **office rents** in the BIG 7 markets increased more sharply in 2018 than in 2017. In the fourth quarter, prime rents were around 7% above the figure for the same period last year. Both prime rents and average rents rose by an annual average rate of around 6%.

Declining vacancy rates prove that additional office construction in 2018 was insufficient to take the pressure off the market as far as supply was concerned. According to a survey conducted by the German Real Estate Research Association, a total of 854,000 m^2 of office space (1% of the portfolio) was newly constructed. Although these figures are likely to be exceeded in 2019, this will not fundamentally change the situation on the market for office space. A negative cycle in the office space market, which might be triggered by high levels of new construction and weak demand for office space, is not foreseeable. As has recently been the case, **competition for rental space** is likely to continue to outweigh competition for tenants.

Office space vacancies (BIG 7) | in % of the portfolio



Top rents (BIG 7) | year-on-year change in %



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Investment market

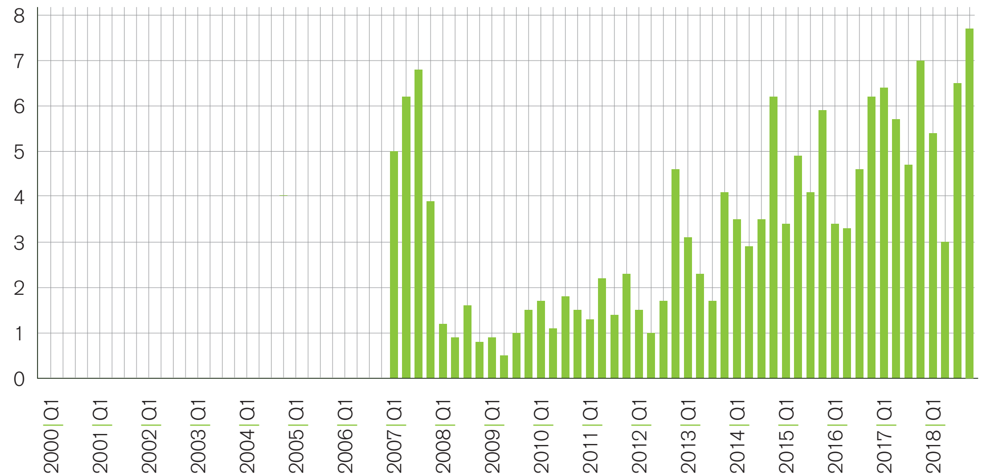
The last quarter of 2018 was marked by an exceptionally high inflows of funds onto the investment market. According to Real Capital Analytics, **office properties in the BIG 7 markets worth € 7.7 billion** changed hands. There has not been a single quarter since the beginning of 2007 in which such large amounts have been spent. For the year as a whole, cash inflows remained only slightly below the record level achieved in 2017.

Initial yields continued to fall, driven by the competition to buy property. However, the decline was less pronounced than in previous quarters, which is not surprising given their already very low levels. Can this trend continue? It is important to consider the following: firstly, vacancy rates on office space markets are, and will remain, low. Secondly, rents will continue to rise. And thirdly, it follows that the cash flow generated by office properties in the coming quarters will be higher than in previous quarters. Fourthly, there are no signs of an increase in interest rates.

All in all, this suggests **stable demand** for investment properties within the office sector, despite purchase prices already being so high. This may in turn mean that initial yields will continue to fall slightly. However, the very low level of returns severely limits the potential for further declines, especially as macro-economic uncertainty has recently intensified. It is therefore to be expected that the yield compression will come to an end in 2019. Since growth in capital values is calculated on the basis of increases in initial yields and rents, capital appreciation will thus be limited to rent increases.

Initial net yield (BIG 7) | in %

Investment volume (BIG 7) | in € billion

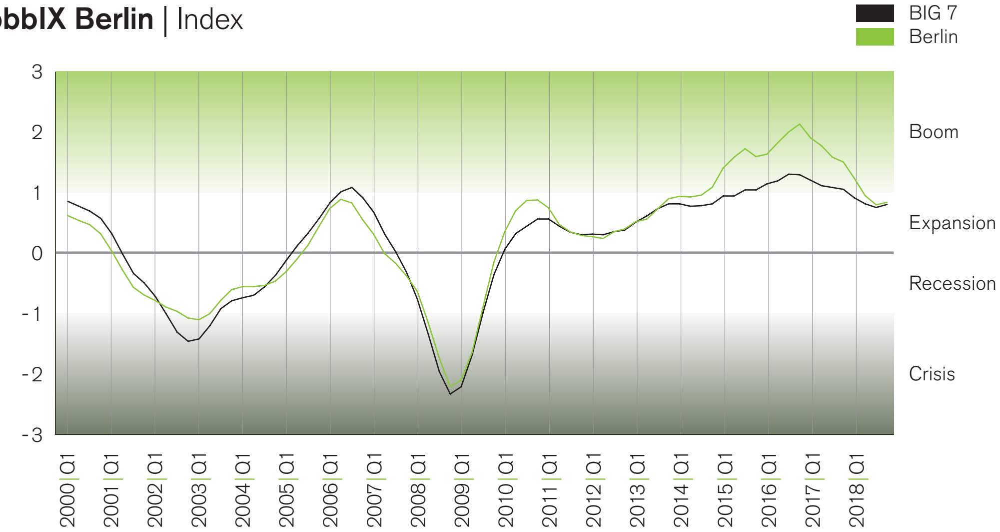


BIG 7

BERLIN

The fourth quarter of 2018 provided the investment market in Berlin with an above-average inflow of funds, which meant that the last three months accounted for around 55 % of overall transaction volume in 2018. At around € 1.6 billion, investors focused primarily on office properties, whose initial net yields remained at a stable low level over the course of the year. On the other hand, rents rose again, reaching a peak of € 34/m² and an average of almost € 21/m² by the end of the year. After a weak third quarter, sales of floorspace also increased significantly. At almost 270,000 m², almost one-third of the total annual turnover was generated in the 4th quarter. As a result, the vacancy rate fell to around 1.5 %. In view of the high pre-letting rate, the upturn in new construction activity is unlikely to lead to any relief for the market.

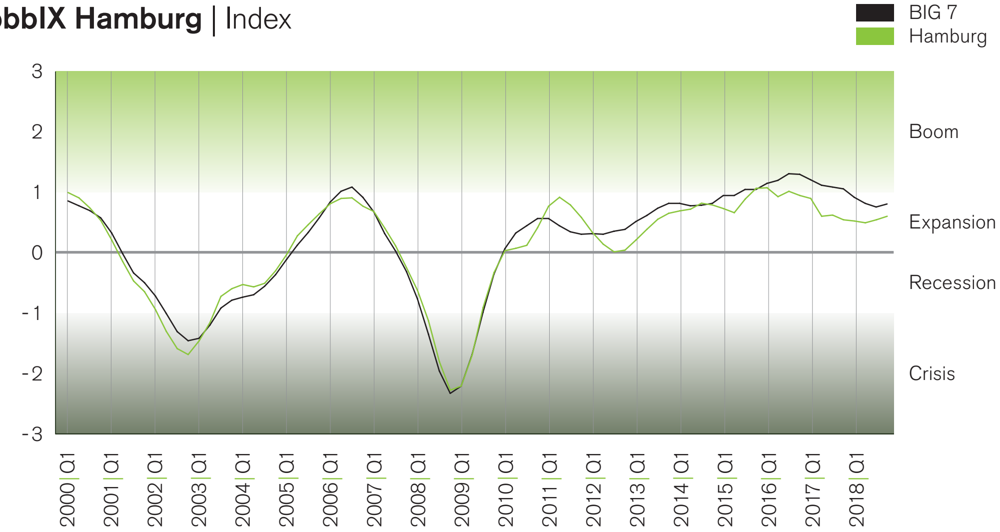
pbbIX Berlin | Index



HAMBURG

The investment market in Hamburg was also marked by record fourth-quarter results. Interest in investment properties is likely to be driven primarily by the expectation that rents will continue to rise. Office rents continued to rise in the last quarter of 2018, rising by more than 4 % year-on-year to € 28 per m². The absolute top rent was achieved by a new office development on Alter Wall, where around 18,000 m² of high-quality office space is being built. The decisive factor behind rising rents is the continued severe shortage of rental space, which is reflected not least in a pre-letting rate for new construction projects of currently over 80 %. As a result, due to a lack of assets, take-up fell by around 10 % compared with the previous year and vacancy rates reached their lowest levels since 2002.

pbbIX Hamburg | Index

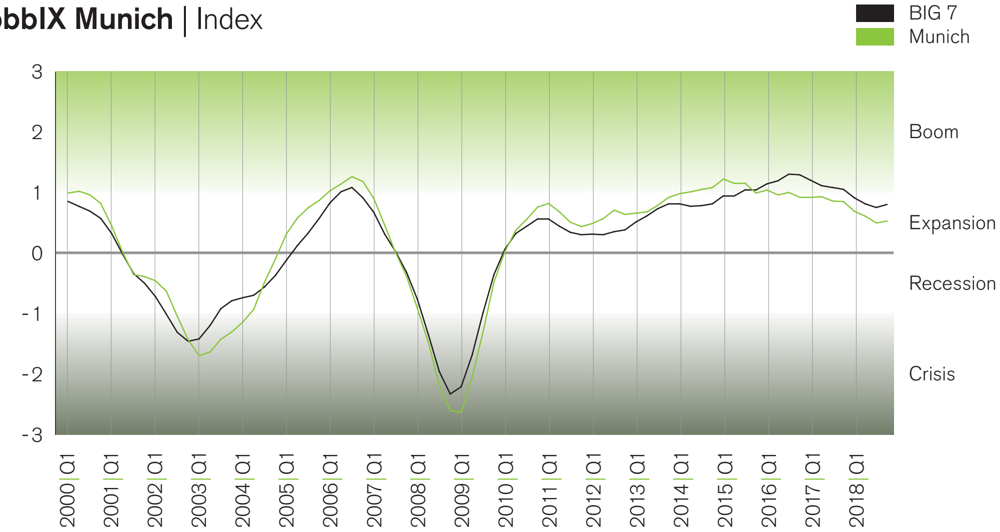


BIG 7

MUNICH

Momentum picked up once again on the Munich investment and office space markets in the fourth quarter. In the last three months of the year, office properties worth almost €1 billion changed hands. Yields declined again slightly, compared to the same quarter of the previous year. With a take-up of 285,000 m², the property market recorded high volumes falling only just short of the previous year's level. A number of large lettings contributed to this result, which, in view of the scarcity of directly available space, was mainly the result of development initiatives. Meanwhile the vacancy rate in the urban area is below 2 %, with the top rent at over € 40/m² and the average rent at around € 24/m². The lack of office space in particular led to a sharp increase in average rents.

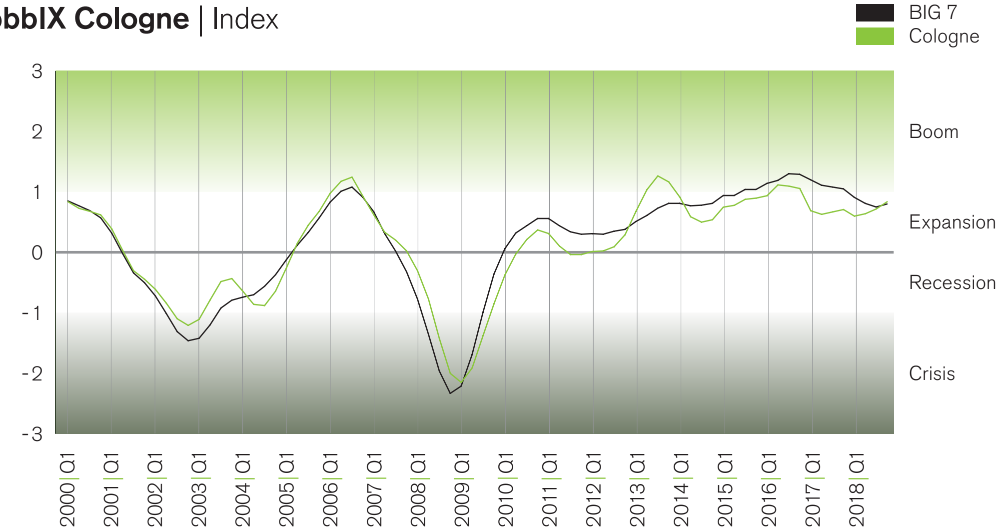
pbbIX Munich | Index



COLOGNE

Despite above-average transaction volumes in the fourth quarter, Cologne was unable to top the previous year's results. The reason for this is solely a lack of properties, which is reflected in the yield compression. The prime yield, for example, fell noticeably in the last quarter of the year, having moved sideways for quite some time. At the same time, top office rents rose by almost 7 % year-on-year. In this region, strong demand for space coincides with a supply side featuring restrained new construction activity and low vacancy rates – with the latter also still declining. Project developments are playing an increasingly important role in this context, as large lettings in new construction projects, such as the I/D Cologne development in Cologne-Mülheim, are proving. With a total of around 305,000 m² of space turnover, it was only just short of the previous year's result.

pbbIX Cologne | Index

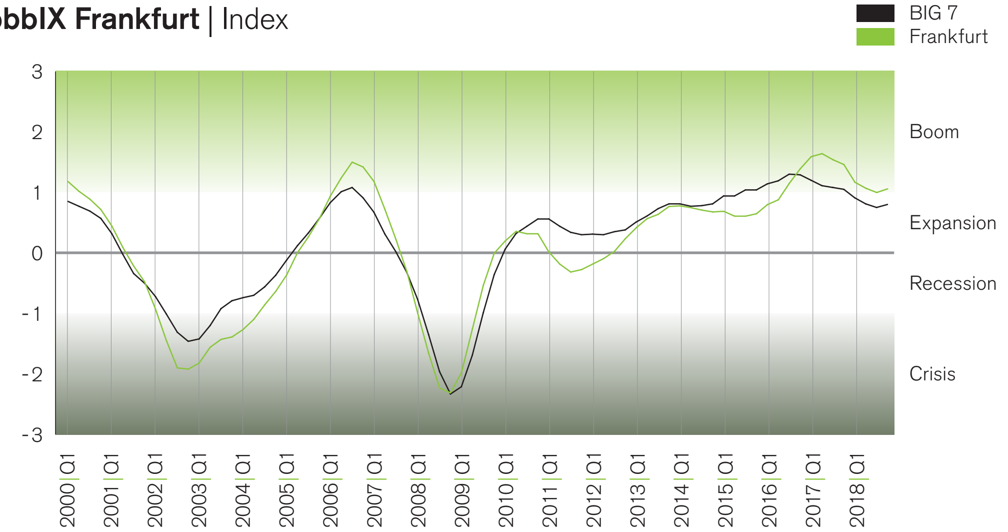


BIG 7

FRANKFURT

The Frankfurt office market ended 2018 extremely well: a new record result was set on the investment market with a transaction volume of € 8.5 billion, of which around 36 % was attributable to the last quarter of the year. In a comparison of the top 7 markets, Frankfurt is once again ranked number one. While prime yields for office properties fell again slightly, following a prolonged period of stagnation, prime rents climbed above the € 40 mark by the end of the year. With take-up of about 630,000 m² this was the third-best result ever. Several large-volume contracts, which together accounted for around 15 % of total sales, contributed significantly to this. The vacancy rate fell to around 7 % at the end of the year, due not only to very strong demand for space, but also to the demolition or conversion of vacant buildings.

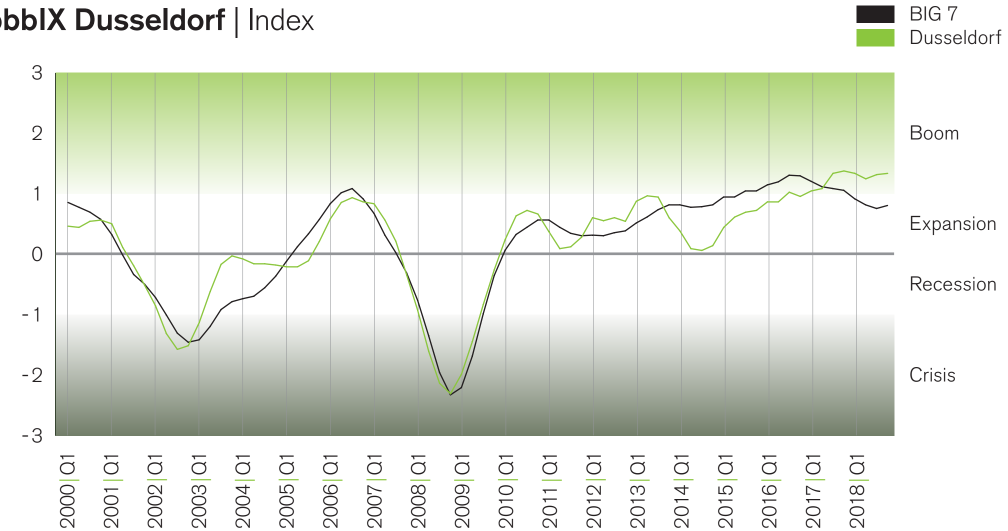
pbbIX Frankfurt | Index



DUSSELDORF

Although the fourth quarter was comparatively weak, the Dusseldorf market saw a record figure in 2018. In the investment market, the second-highest transaction volume of all times was recorded. The compression on yields continued, resulting in a slight decline for the third consecutive quarter. Due to the fact that some major leases were postponed until 2019, less space was taken up in the fourth quarter – still, an annual space turnover of around 350,000 m² meant that another record level was achieved. Quite a sizeable portion of the turnover was accounted for by planned developments, resulting in only around one-third of the completions planned for 2019 remaining vacant. Vacancy rates fell to just under 7 %. Top rents have also reached record levels of € 28/m², an increase of 4 % compared to the end of 2017.

pbbIX Dusseldorf | Index

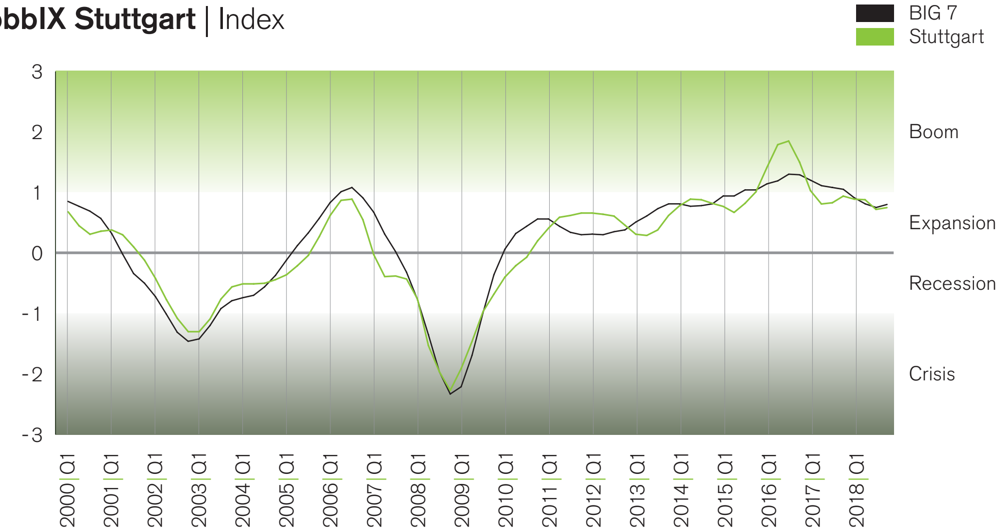


BIG 7

STUTTGART

Despite extremely high transaction volumes in the fourth quarter of 2018 – at around € 0.4 billion, the fourth-highest result to date – volumes fell short of the previous year's levels by more than 30 %. This decline is due to the lack of vacancies, as demonstrated by the yield development. By the end of 2018, vacancies fell for the second quarter in a row to a level of just under 3 %. The high level of investor interest is consistent with the extreme scarcity of office space, which is expected to lead to further increases in rents. By the end of the year, prime rents had reached a level of € 23.50/m², representing an increase of more than 4 % compared with the end of 2017. At the same time, the lack of vacant space prevented a high rental performance. At just under 216,000 m² of rentable space, this was the lowest volume since 2012.

pbbIX Stuttgart | Index



About the pbbIX real estate index

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SCOPE AND METHODOLOGY

As the last two decades have shown very clearly, the development of real estate markets is not a continuous trend that is free of disruption – instead, they are characterised by significant cyclical fluctuations. The pbbIX index family tracks these fluctuations on Germany's key office property markets. The index family comprises a total of eight indices: seven individual indices for the office property markets in Berlin, Cologne, Dusseldorf, Frankfurt, Hamburg, Munich and Stuttgart, plus a composite index which tracks overall economic development of the ‚BIG 7' markets.

The indices are based on the results of a dynamic factor model, which brings together eleven variables, using time series to extract the key driving forces for economic trends of office property markets. Specifically, these variables relate to macroeconomic developments, the rental market, and the investment market across the seven office property markets covered. As a preparatory step for the factor analysis, the various market-related indicators are aggregated to form a market indicator measuring a development overall (for example, vacancies or new construction activity). The data list shown below sets out the indicators which were used for the dynamic factor analysis.

In addition to the office property market indices, the presentation contains assessments regarding the components of ‚macroeconomic developments', ‚market for office space', and ‚market for office investments'. The directional impact of these components on the composite indicator is colour-coded: GREEN indicates a positive, BLACK a negative and GREY a neutral impact.

DATA LIST OF THE DYNAMIC FACTOR MODEL

Macro-economic developments

- Real gross domestic product, (YOY change, in %)
- Workforce in the BIG 7 markets (YOY change, in %)
- Consumer prices, (YOY change, in %)
- Current yield (Umlaufrendite) for public-sector bonds with a minimum remaining term of 10 years (in %)

Rental market

- Completed office and administrative buildings (m^2 of floor space in the BIG 7 markets)
- Marketing volume (m^2 of floor space, in the BIG 7 markets)
- Vacancies (% of gross available area, in the BIG 7 markets)
- Top rent (€ per m^2, for the BIG 7 markets
- Average rent (€ per m^2, for the BIG 7markets.

Investment market

- Net initial yield (in %, for the BIG 7 markets)
- Inflow of funds (€ mn)