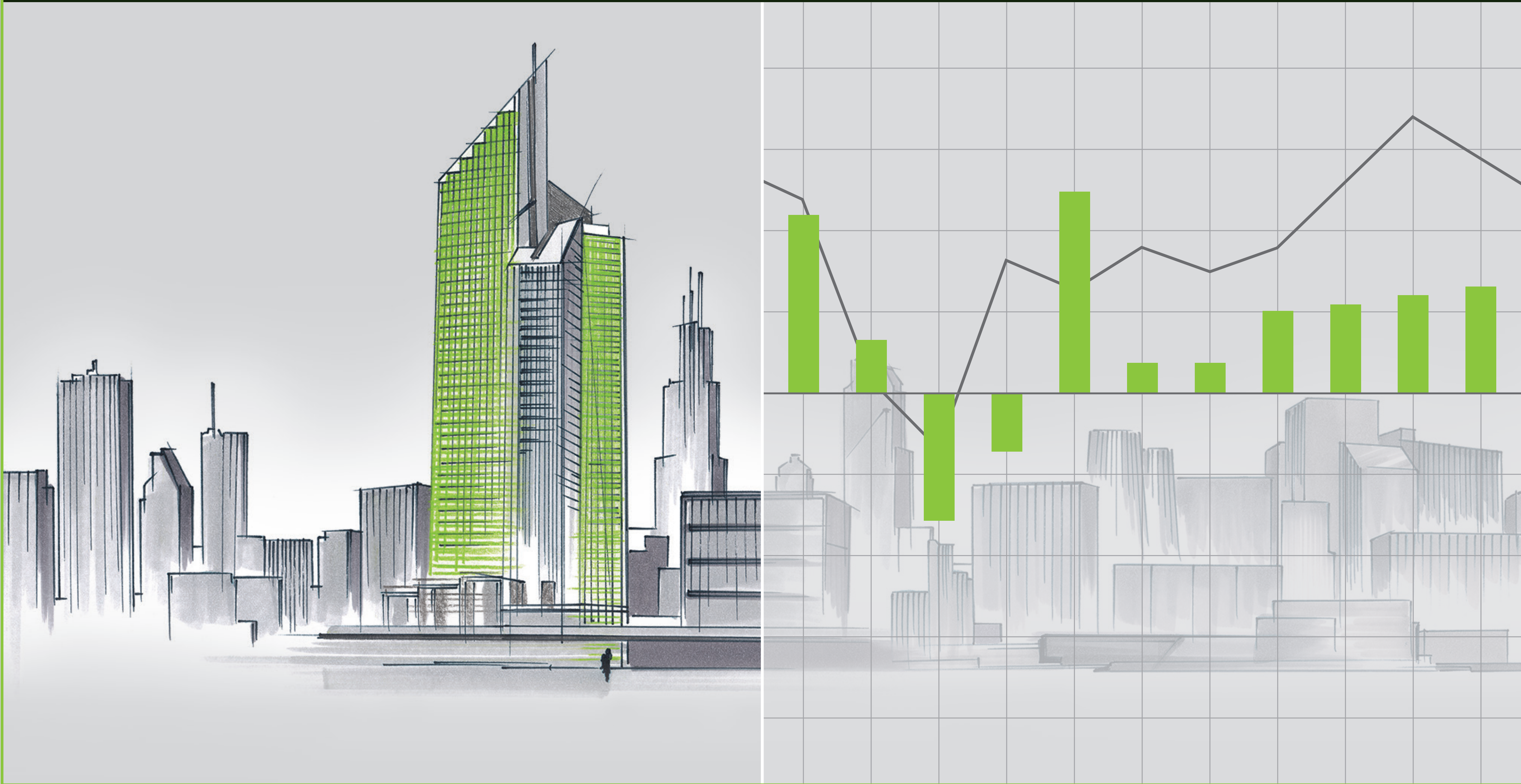
pbbIX
Office Property Market Germany
2020 | Q 4

DEUTSCHE
PFANDBRIEFBANK



Disclaimer

Deutsche Pfandbriefbank AG (pbb) is the sponsor of this document. vdpResearch GmbH, Berlin, is responsible for the content.

pbb does not verify the figures and other information used and does not accept any liability for the content. It shall not be obliged to correct or point out any inaccuracies or incompleteness. pbb may stop publication at any time.

Any liability for negligence on the part of pbb arising from or in connection with this document shall be excluded unless it is a matter of injury to life, limb or health, and unless such exclusion of liability is excluded for other legally compelling reasons.

All legal relationships arising from, or in connection with, this document in relation to pbb shall be governed solely by the substantive law of the Federal Republic of Germany. Exclusive legal venue shall be Munich, as far as this can be permissibly agreed upon.

Data and information contained in this publication are based on sources and methodical approaches which **vdpResearch GmbH** considers to be reliable. However, vdpResearch GmbH cannot guarantee the accuracy or completeness of the information provided. Any opinions expressed reflect the current views of vdpResearch GmbH. However, no assurance can be given with regard to the content of such opinions or forecasts.

Imprint

Deutsche Pfandbriefbank AG
Parkring 28
85748 Garching, Germany

Germany

Management Board:
Andreas Arndt (CEO), Thomas Köntgen (Deputy CEO),
Andreas Schenk, Marcus Schulte
Chairman of the Supervisory Board: Dr Günther Bräunig
Registered office: Munich
Legal form: Aktiengesellschaft
Companies Register No: Munich District Court, record HRB 41054
International VAT ID code: DE811223976

Supervisory authorities:
Federal Financial Supervisory Authority, Graurheindorfer Str. 108, 53117 Bonn
and Marie-Curie-Straße 24-28, 60439 Frankfurt am Main
European Central Bank, Sonnemannstraße 20, 60314 Frankfurt am Main

Overview

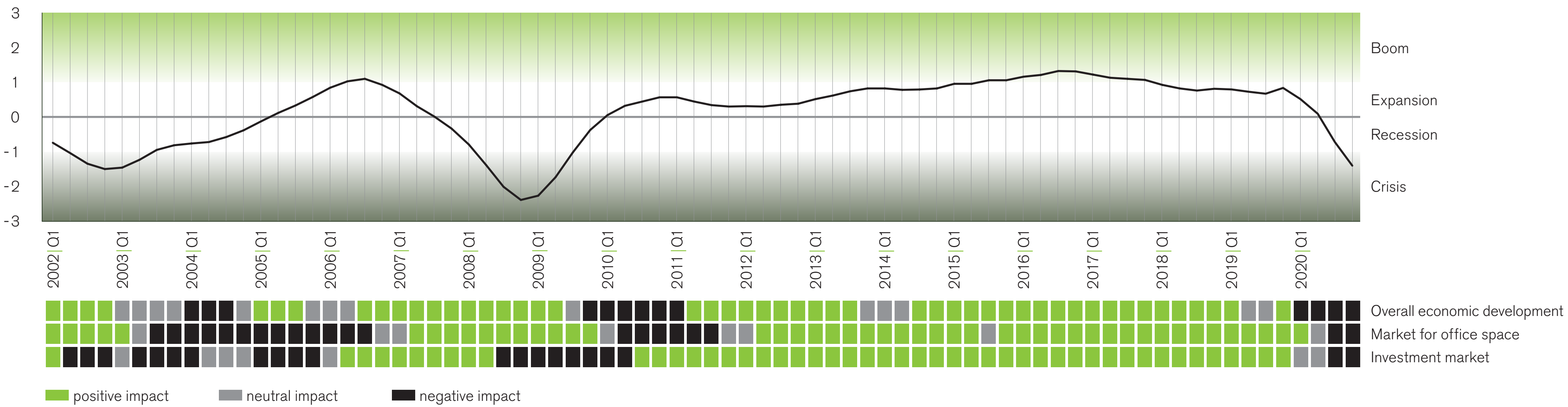
During the fourth quarter of 2020 **pbbIX index which describes the cyclical fluction of the 7 largest German office markets index saw a further significant fall**: it is now at -1.38 index points – the lowest level since the second quarter of 2009. Already in the third quarter 2020 the index had turned to negative numbers. The main reason for this slump continues to be the COVID-19 pandemic which is impacting both the economy in general and the office market in particular.

Whilst optimism rose in the summer for an economic recovery by the end of the year, the second wave of infections towards the end of 2020 dashed these hopes. In the fourth quarter, employment fell compared to the previous year, and real GDP growth came to a **complete standstill**.

As a result, demand for office space stagnated further and was significantly below the previous year's level. New space was still absorbed well, due to a high level of pre-letting. Vacancy rates rose once again, but remained mostly on a low level, as a result of which **rents are largely stable** to date. **Inflows stabilised** in the fourth quarter – on a below-average level. Initial yields for first-class properties experienced a slight loss due to the decline in capital market rates and investors seeking quality and safety.

The pandemic has continued to dampen office market development at the beginning of the new year. For the office markets to recover, it is **imperative that the pandemic be overcome**. On a positive note, vaccines have been rolled out; on a negative note, the pace of vaccination is slow and will take a lot of time.

pbbIX BIG 7 | Index



Overall economic outlook

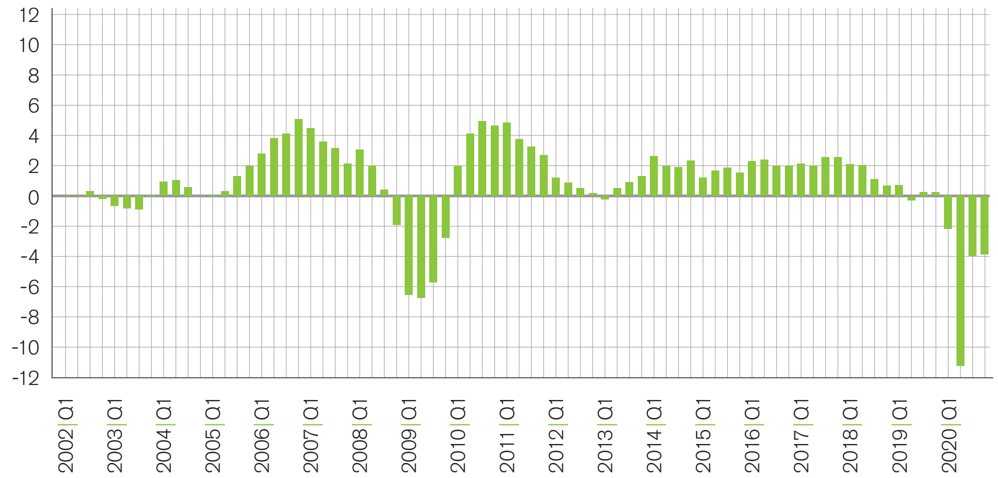
The pandemic threw a dark shadow on the development of the German economy between March and December 2020, resulting in a sharp real GDP decline in the first half of the year. This was followed by a strong counter-movement during the summer which in turn was brought to a complete standstill in the autumn amid an increase in infections and measures taken to combat the pandemic. In the fourth quarter of 2020, **real GDP** edged up by a mere 0.1 % quarter-on-quarter and fell by 3.9 % year-on-year.

Exports and the construction industry showed a positive impact during the fourth quarter of 2020 – contrasted by **cautious private consumption**. The development of this key component of overall economic demand suffered heavily under the renewed lockdown, which especially hit retail and other contact-intensive service sectors.

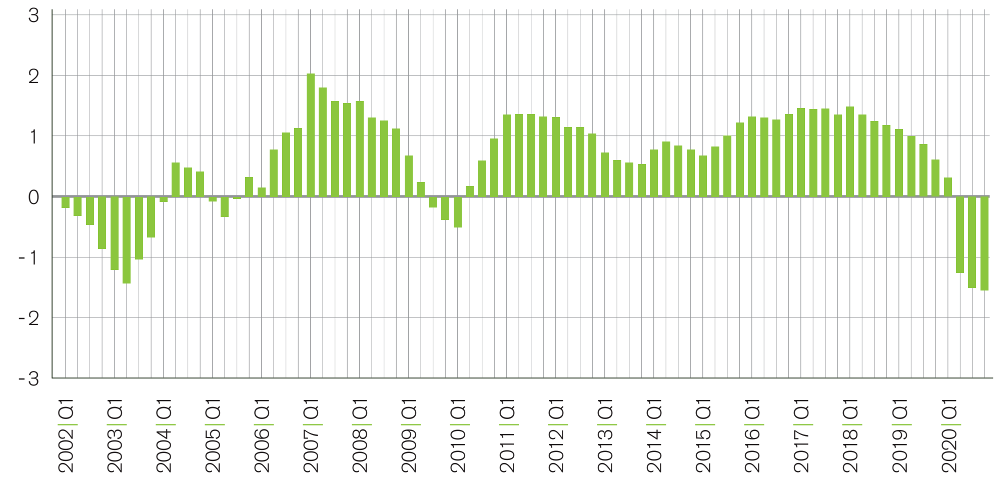
At the beginning of 2021 many **entrepreneurs** are taking a more **pessimistic** view concerning the next months. According to data collected for the ifo Business Climate Index in January, entrepreneurs' expectations were less favourable in all areas than in December. Even the manufacturing industry experienced a setback for the first time after a long period of increasing optimism.

Therefore, overcoming the pandemic is obviously **key to an economic recovery**. Looking beyond this pandemic, opportunities for a strong recovery appear to be good. The catch-up in the third quarter of 2020 – which was comparatively light in terms of coronavirus effect – is a testament to that.

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



Working population | year-on-year change in %



Market for office space

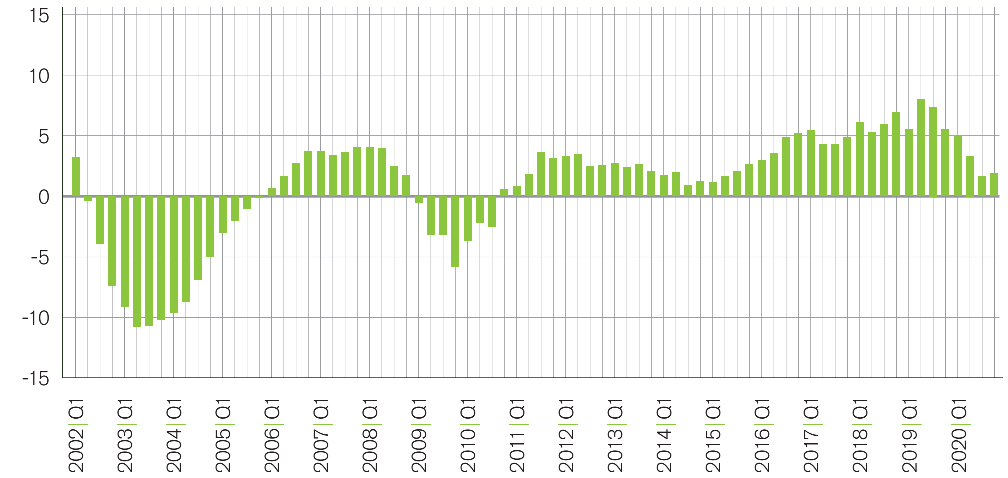
As regards the big 7 locations, the market for office space improved slightly in the fourth quarter of 2020. Overall, around 750,000 sqm was taken up in this period, following approximately 600,000 sqm in the third quarter. The improvement is encouraging; however it cannot detract from the fact that **lettings remain in the pandemic's iron fist**. Uncertainty surrounding the further economic development, and the open question as to the relevance of working from home for future office space demand, made a stronger activity impossible. Only around 2.7 million sqm was newly taken up in 2020 – despite an overall increase in office employment in the big 7 cities (excluding Stuttgart), thus contrasting the general negative employment development.

New construction activity was relatively expansive in 2020, despite projects being postponed. Due to high pre-letting rates, a lot of new space was not exposed to competition. Nonetheless, the combination of higher supply and weaker demand for space saw **a slight increase in vacancies**. As at year-end 2020, the vacancy rate was at 3.7 %, a moderate 70 basis points above the previous year's level. Given the well-known challenges it is fair to assume that vacancy rates will continue to rise in the months ahead.

Falling nominal rents have not been observed so far. Contrary to expectations, on a portfolio-weighted average top rents followed another upward trend in the fourth quarter – across all big 7 markets. However, real estate agents noted that incentives ranging from 5 to 10 % of nominal rents are currently being granted.

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

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



Investment market

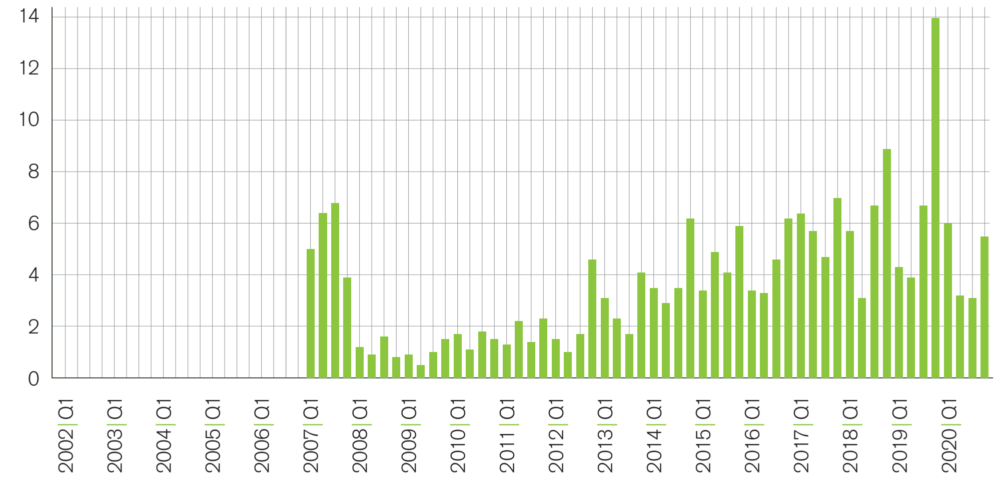
In the big 7 markets, a total of € 18 billion was spent on the acquisition of office properties in 2020; in 2019, the volume was € 29 billion. The sharp decline of approximately 39 % is mainly due to **cross-border cash inflows, which were cut in half**: as a direct consequence of the pandemic only € 7.1 billion of funds came from abroad, compared to € 15.1 billion in 2019.

In terms of acquisitions, however, the year ended with a comparatively good figure for the fourth quarter (€ 5.5 billion); the result was driven mainly by domestic investors. Despite recently adverse economic data and persistently high infection rates, investors are beginning to anticipate a recovery of the big 7 investment markets during the course of 2021.

As in the previous two quarters, initial yields for first-class properties in prime locations remained below the 3 % level in the fourth quarter. This **historically low initial yield level** is largely a result of negative interest rates on safe-haven investments: over the past few months, the current yield for 10-year government bonds posted another slight decline, with yields of - 0.61 % realised in the fourth quarter, following - 0.53 % in the third quarter. In light of the available data, it is not yet safe to say to what extent further reasons, such as investor preferences for attractive central locations, played a role. However, anecdotal evidence provided by large real estate brokers suggests that this is a factor, referring to very intense competition for prime properties in central locations resulting in slightly lower prime yields.

Net initial yield (BIG 7) | in %

Investment volume (BIG 7) | in € billion

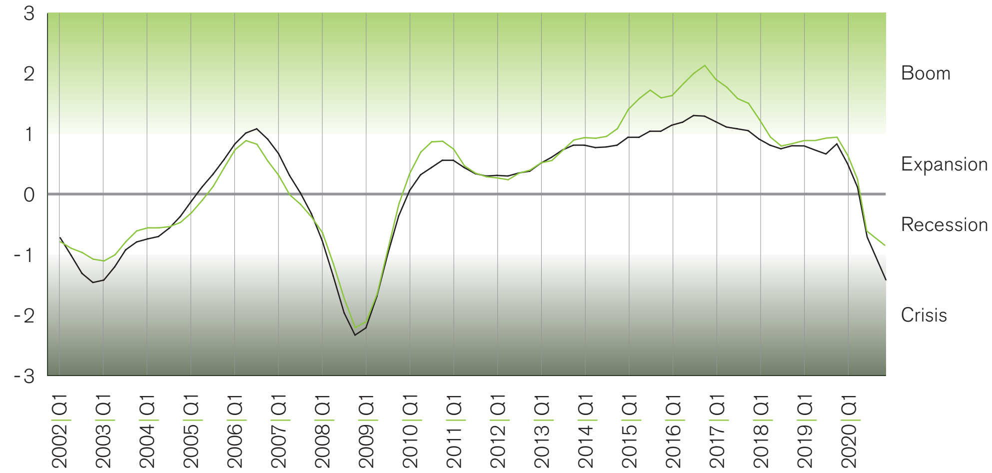


BIG 7

BERLIN

During 2020, 740,000 sqm of office space was newly let. Therefore, the result generated in the fourth quarter was slightly better than in previous quarters, albeit remaining below the corresponding previous year figures; the same applied to the full-year results. Towards the end of the year, most tenants were private sector companies, whereas – seen over the entire year – it was public administration that dominated. The vacancy rate was at a low 2.8 % at the end of 2020, +30 basis points quarter-on-quarter. Top rents increased slightly, ending the year only just below the € 40 level. Compared to the third quarter, inflows on the investment market recovered at the end of the year, albeit failing to reach the levels seen in the fourth quarter of 2019. Initial yields remained unchanged.

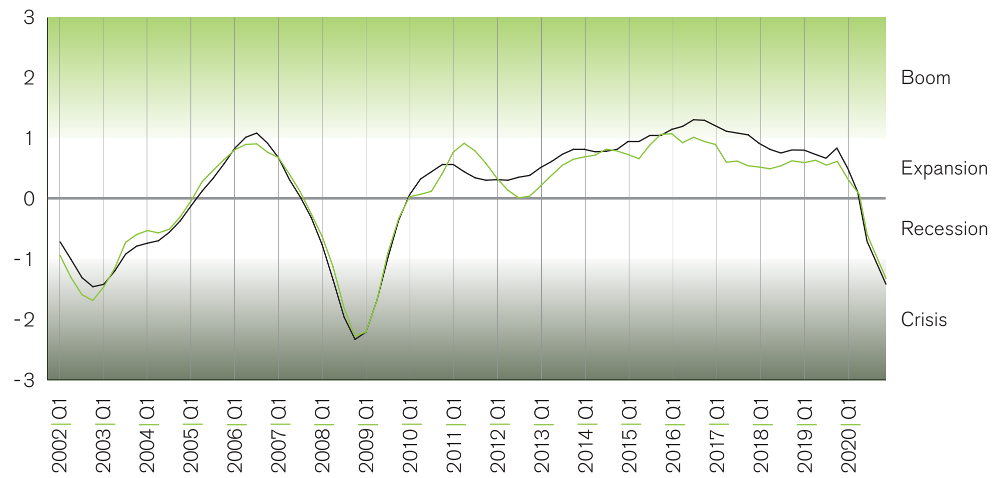
pbbIX Berlin | Index



HAMBURG

In Hamburg, annual space turnover amounted to just under 365,000 sqm, equating to a year-on-year decline of approximately 30%. Only 3% of office space was unlet at the end of the year. Nominal average rents stagnated, whilst prime rents climbed from € 30 to € 31 as at year-end, despite subdued demand for space. According to data provided by Real Capital Analytics (RCA), € 2.4 billion was spent on the acquisition of office properties in 2020, the figure thereby falling short of the previous year's result by only 9 %. In contrast to the other markets, inflows in the last quarter and throughout the whole year were divided almost equally between domestic and international investors. Yields for first-class properties in prime locations fell slightly compared to the previous quarter, ending the year at 2.7 %.

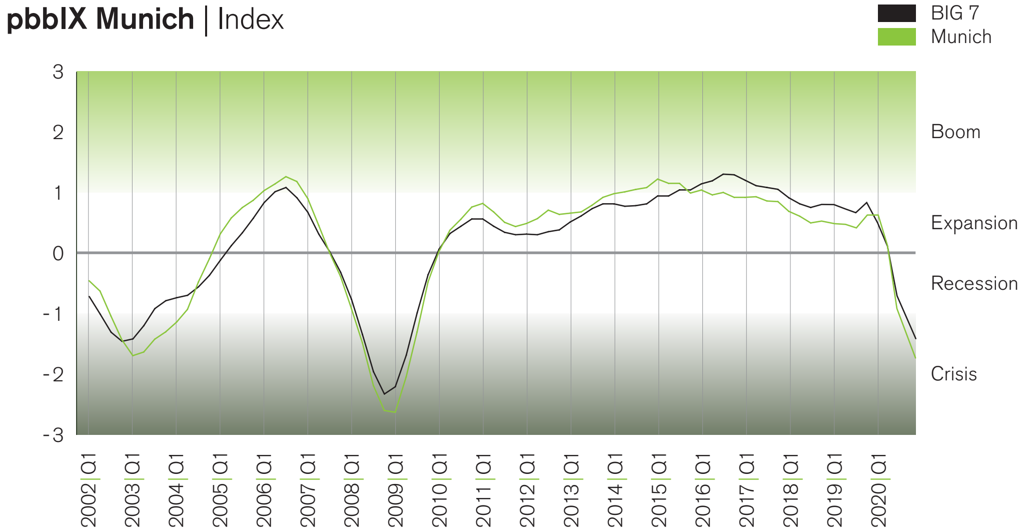
pbbIX Hamburg | Index



BIG 7

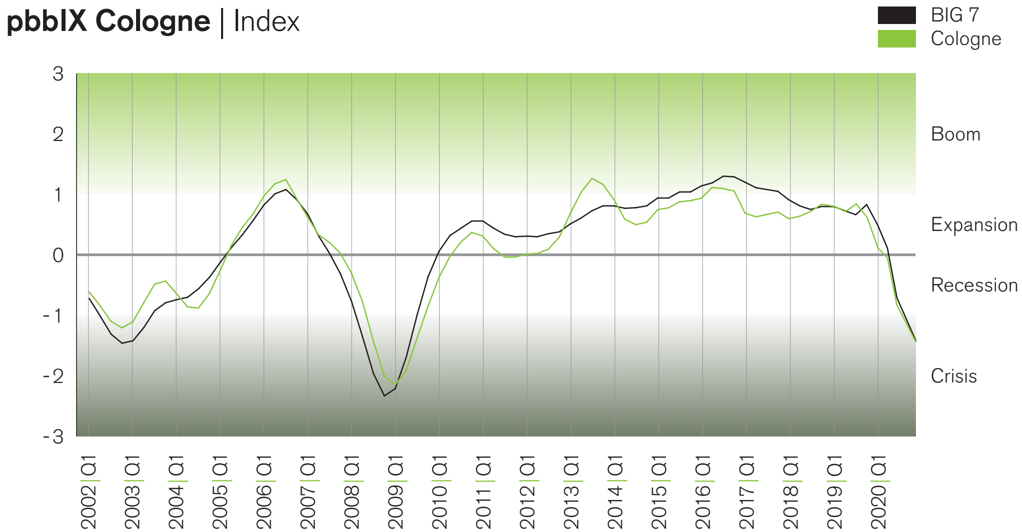
MUNICH

On the market for office space in Munich, a total of 570,000 sqm was let or occupied by owners in 2020, i.e. 25 % less than in 2019. Due to the lower take-up of space, the vacancy rate increased by approximately 100 basis points during the course of the year; as at year-end 2020, 3 % of space was unlet. The increase in vacancies did not materially impact rent development, with rents remaining at a high level until the end of the year – for average as well as for top rents. The transaction volume came to around € 2.9 billion, therefore falling significantly below the extraordinarily high result generated in 2019 (€ 8.1 billion); this was mainly down to strongly reduced inflows from abroad. As at year-end, net initial yields for first-class properties amounted to around 2.7 %.



COLOGNE

Around 210,000 sqm was taken up over the course of the entire year (2019: approx. 300,000 sqm). This cautious new letting activity, in combination with similarly cautious new construction activity, resulted in moderately increasing vacancies during the year; however, at the end of the year the vacancy rate was at only 3 % of the portfolio. Rents for newly-let space remained broadly unchanged throughout the year. According to RCA, only € 630 million was spent on office property acquisitions in 2020, thereby undercutting the previous year's result by nearly 70 %. Foreign investors retained a highly cautious stance as of the second quarter, and kept away from the market completely in the fourth quarter. Despite the lower turnover, the net initial yield for first-class properties fell at the end of the year, finishing 2020 at 3 %.

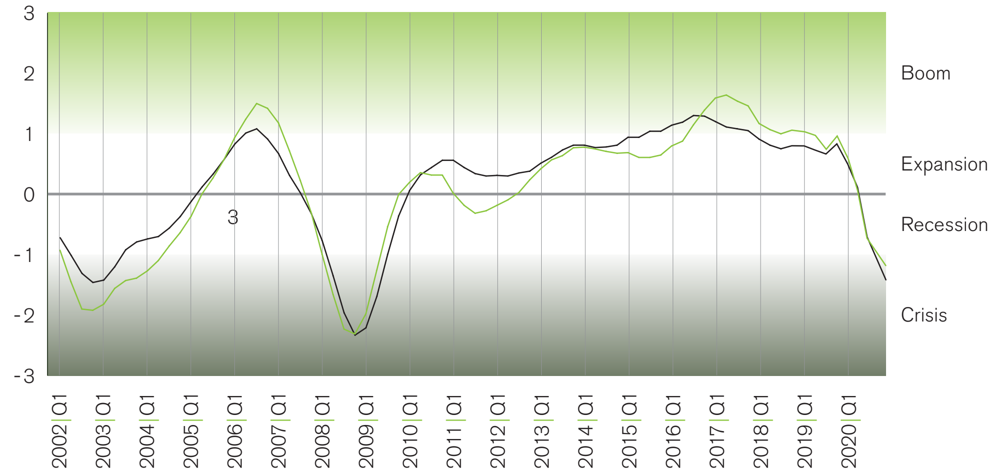


BIG 7

FRANKFURT

Demand for space in Frankfurt disappointed – not only as a result of the pandemic, but also because of the Brexit outcome, with final negotiations dragging on for too long to show the effect expected at the beginning of the year. At 340,000 sqm, take-up was 40% lower than in 2019. Weaker demand and increased new construction activity, led to a higher vacancy rate of more than 6%. Top rents, however, were stable throughout the year, one reason being the low vacancy rate (less than 5%) in Frankfurt's CBD. Transaction volumes were relatively high, with inflows of €4.7 billion during the course of the year. Although well below the very high inflows of €6.3 billion seen in 2019, the transaction volume was nevertheless higher than in any other big 7 market. Net initial yields for first-class office properties waned somewhat, reaching 2.8% at year end.

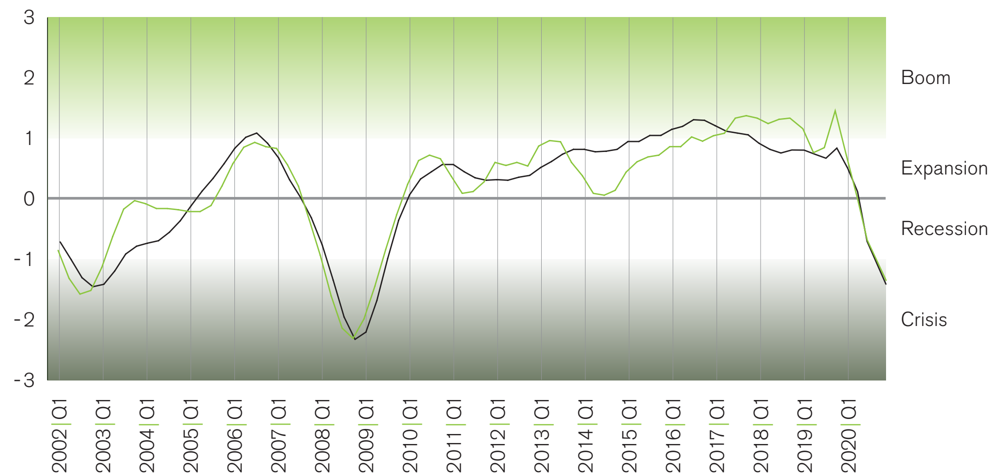
pbbIX Frankfurt | Index



DUSSELDORF

Demand for space on the office market in Dusseldorf has been subdued since the second quarter. Only around 300,000 sqm was taken up in 2020, 45% less than in 2019. Rising vacancy rates also point to weak demand for space, with the rate increasing to approximately 7% at the end of the year – despite low construction activity. Whilst average rents declined marginally over the course of the year, nominal top rents remained stable. Taking the circumstances into account, the investment market in Dusseldorf was in comparatively good shape; cash inflows were only slightly lower than in 2019. Net initial yields for first-class properties declined further during the year, reaching 2.95% as at year-end 2020, i.e. 15 basis points less than at the beginning of the year.

pbbIX Dusseldorf | Index

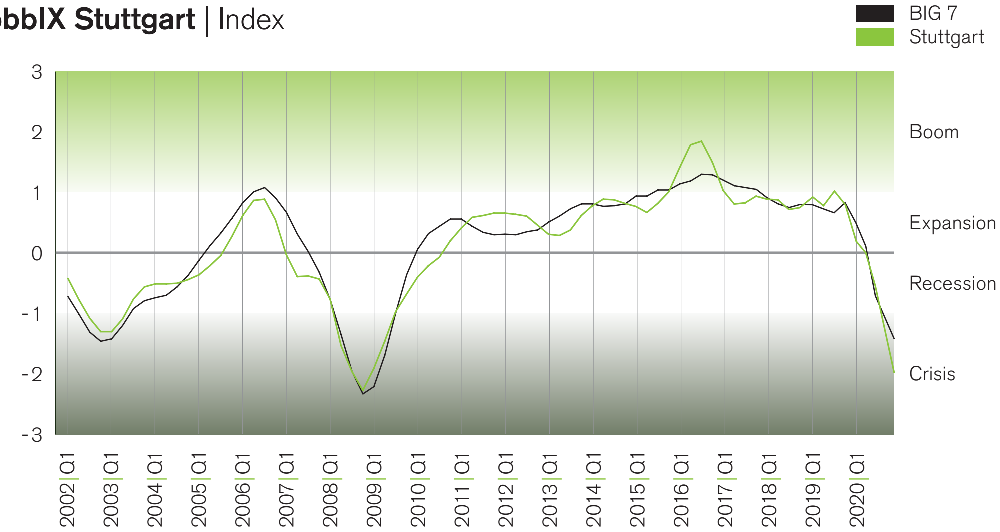


BIG 7

STUTTGART

Demand for space on Stuttgart's office property market was very weak during the past year, thus generally following the development seen in other big 7 markets. Only 140,000 sqm was taken up by new tenants or owner-occupiers. Despite weak demand, the vacancy rate remained on a low level. Only 2.1 % of office space was unlet at the end of the year, a development also down to very cautious new construction activity. Average and top rents remained stable during the final quarter. On the investment market, the results achieved in 2019 were clearly missed in 2020. The transaction volume for properties amounted to € 870 million in the past year, i.e. accounting for just under 5 % of total inflows seen in all big 7 markets. Prime yields fell by 10 basis points, to 2.85 %, during the year.

pbbIX Stuttgart | Index



About the pbbIX real estate index

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 (€ millions)