bulwiengesa

THE 5% STUDY 2022

WHERE IT STILL PAYS OFF TO INVEST

Contents

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WHERE IT STILL PAYS OFF TO INVEST

A Study by bulwiengesa AG

With the friendly support of

ADVANT Beiten

Forewords

A „turning point“ – since the German chancellor’s speech in February, this term has been used to describe the current economic and geopolitical situation, and rightly so in many cases. The Russian war of aggression against Ukraine has turned our understanding and awareness of security in Europe completely upside down. Our naivety, particularly in Germany, with regard to the alignment of the energy supply is currently becoming painfully clear to us and is reflected in supply fears and sharply rising prices.

In addition to the prevailing material shortages and supply bottlenecks since the coronavirus crisis, this is causing inflation to rise to record levels. In response, the ECB raised its key interest rates by 50 bp for the first time in July. Further interest rate hikes will follow. The capital market was already increasingly nervous prior to this, with swap rates rising to over 2.5 % by July but then decreasing again somewhat.

What does this mean for the property market? The times of virtually unlimited availability of capital are over; the main value drivers will increasingly be the location and property quality in line with the use, rather than the momentum of yield compression. In addition, there are growing sustainability requirements both from a social and especially from an environmental perspective. ESG is and will remain a key topic.

Whether we can now speak of a turning point in the property sector, too, is a matter of much debate. Perhaps in a few years and with a little distance, we will recognise that the market made necessary corrections to balance out exaggerations that arose in times of cheap money.

One thing is for sure: there are many new influences on the performance of existing properties. This 5 % study for 2022 translates these into attainable IRR ranges. And this means, for example, that inflation may also become a yield trigger again – in the case of corresponding indexed leases and low capex requirements due to ESG requirements.

I hope you find it an informative read.

Sven Carstensen, Member of the board of bulwiengesa AG

After the challenges of the coronavirus pandemic, raw material shortages, rising construction costs and uncertainty with regard to the German federal government’s subsidy policy are leading to growing restraint among property investors. Construction projects are being postponed or even halted due to the massively disrupted supply chains, and the profitability of an investment has to be completely revalued due to the spiralling construction costs and steadily rising interest rates. This development essentially affects all property categories and can already be seen on the residential property market in particular. It remains to be seen how politicians and businesses will handle this challenge.

Among commercial properties, there is a clear trend toward office buildings, while retail space is continuing to become less important for investors. Due to the huge changes arising particularly from the coronavirus pandemic, property investment is following very different trends: working from home instead of in full offices, e-commerce instead of bricks-and-mortar retail.

The „new work“ culture plays a key role for office properties. Properties in which office space can be rearranged to increase innovation and collaboration are becoming more and more attractive. Fewer fixed workstations, more flexible space for meetings and collaboration and the office as a „experience“ make an office property increasingly interesting for investors.

In retail properties, vacancies rates are likely to keep rising, causing market rents and consequently also valuations to decline. This trend can be seen particularly in rural regions and small towns, but will not stop at the major cities in the short and medium term.

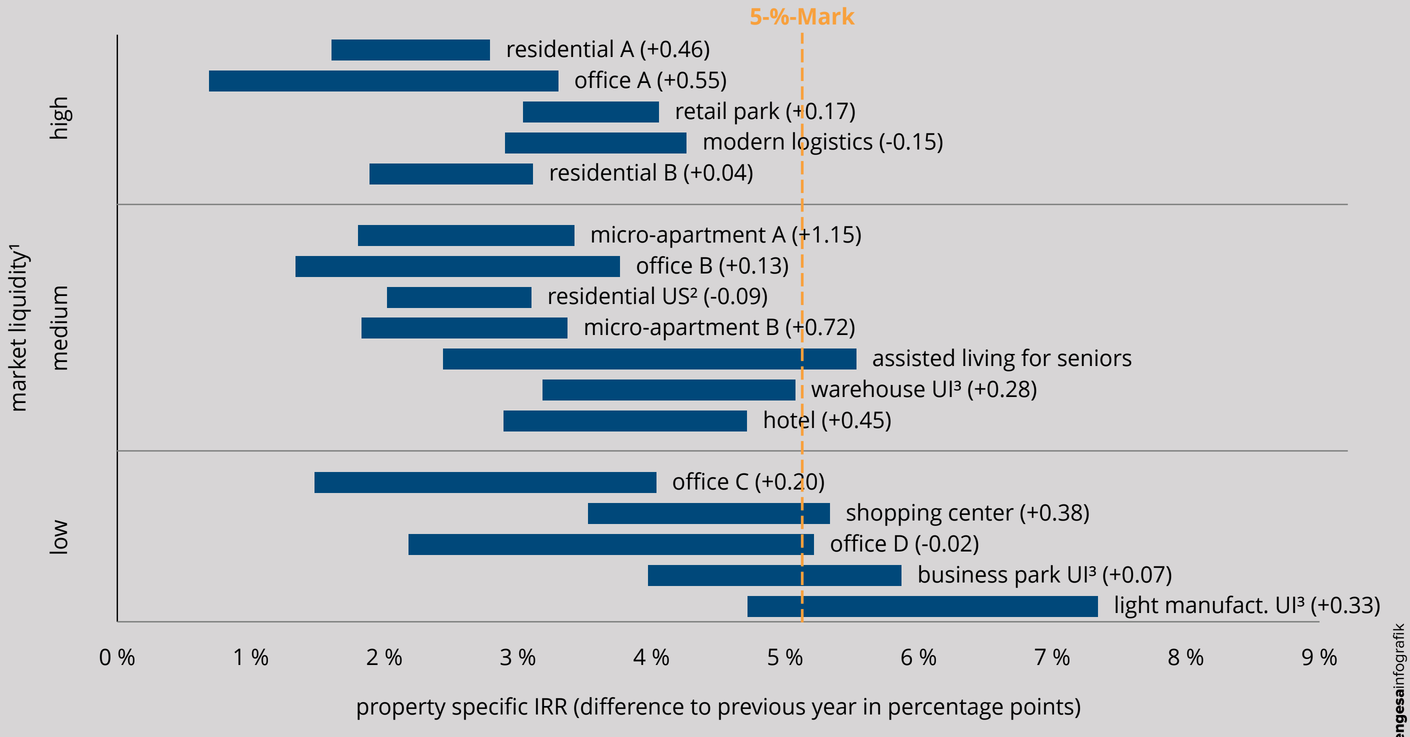
There is one thing that all property categories have in common, however: The principle of sustainability is becoming established as a dominant criterion for investment decisions. Regardless of whether residential, office or retail properties are involved, in most cases only projects that build on ESG criteria will prevail in the future.

Dr. Detlef Koch, ADVANT Beiten

With its many years of experience, ADVANT Beiten provides advice on all phases of property management: from financing to the land purchase and project development through to letting or selling the property. We implement innovative forms of property sales and trading, as well designing German and foreign real estate funds.

Summary

Core-Matrix[1]



1 Liquidity of asset classes regardless of investment cycles. Within the categories of low, medium and high market liquidity shown in the diagram, there is no further assessment of the liquidity of the individual types of use. 2 US = University Cities. 3 UI = Unternehmensimmobilien.
Source: bulwiengesa AG

» Yields are rising – including in the office sector

Rising initial yields, combined with inflation that will remain at a higher level in the medium term compared to the past years, are leading to rising rates of return on most office markets. This is countered by higher capex measures due to increasing sustainability requirements for existing properties. Particularly in less profitable markets, the increase in the IRR is therefore not as pronounced as might be expected.

The increase therefore has the biggest impact in the A markets. Here, the base value has risen by 50 bp to 2.68 %, while the core range extends from 0.7 % to 3.3 %. B markets have a range of 1.3 % to 3.8 %.
Although no year-on-year increase has been recorded due to the assumed capex requirements, the D markets are the only office market segment with an attainable IRR of more than 5 %.
The current investment environment is characterised by significant restraint, so it cannot be ruled out that the increase in yields may continue.

» Yield compression in logistics slowed

The turnaround in interest rates has also had an impact on logistics properties. After the last study (data as at 30 June 2021), initial yields initially fell significantly again. They have been rising again since spring 2022. Due to the low transaction volume, the level of the increase can only be estimated.
On the other hand, rent expectations remain high due to consistently strong demand from users.

The decrease in the attainable IRR is therefore continuing at a slower pace, with the base value currently at 3.57 % and a range of 2.9 % to 4.3 % in the core segment. Logistics properties also have to meet sustainability criteria, and portfolios must price in corresponding capex costs.

» Residential properties in A markets above 2 % again

Despite well-meant political demands, the volume of project developments in the major cities is decreasing, meaning that the shortage of housing will continue to shape the market in the coming years. Residential property investors still have to adapt to increasingly extensive regulation that may also be relevant to their cash flow. On top of this, there are calls for energy-efficiency renovations of existing buildings that have an impact on performance. Depending on the conditions of the rental agreement, the rising inflation can be passed on to the tenants in some cases. The rising interest rates are also reflected in falling initial yields. In the core segment, a base value of 2.30 % is therefore attainable at present, while the range has widened considerably to between 1.6 % and 2.8 %.

In less profitable markets, energy-efficiency measures in existing buildings have a greater impact on cash flow, so the increase in yield expectations is much smaller here. Positive expectations for the development of rents support the yield level

» Question marks remain in large-scale retail

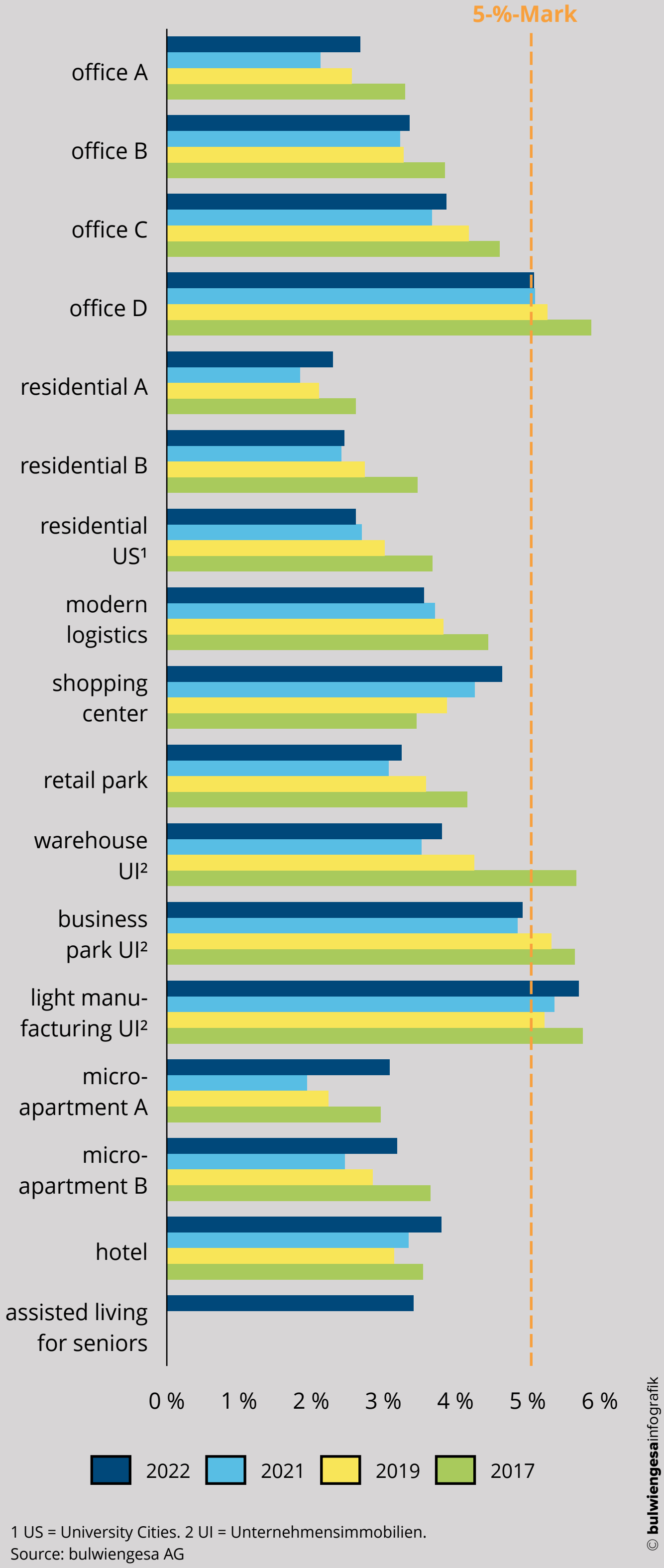
With purchase yields stable, the IRRs for retail space have increased. This reflects the fact that the contracts are generally index-linked. Particularly for many shopping centres, there are still question marks as regards the sustainability of the attainable revenue. In many properties, the rent adjustment round have not been completed yet. Changes in use also play a relevant role for these properties (at least in parts). As the 5 % study assumes that the respective use will remain the same (so no project developments are included), such properties are not taken into account. The yield range for shopping centres is currently between 3.5 % and 5.3 %.

Specialist stores and specialist retail centres are still regarded positively by investors, although there are uncertainties in relation to price adjustments due to the turnaround in interest rates for this product, too.

» Stronger focus on assisted living for seniors

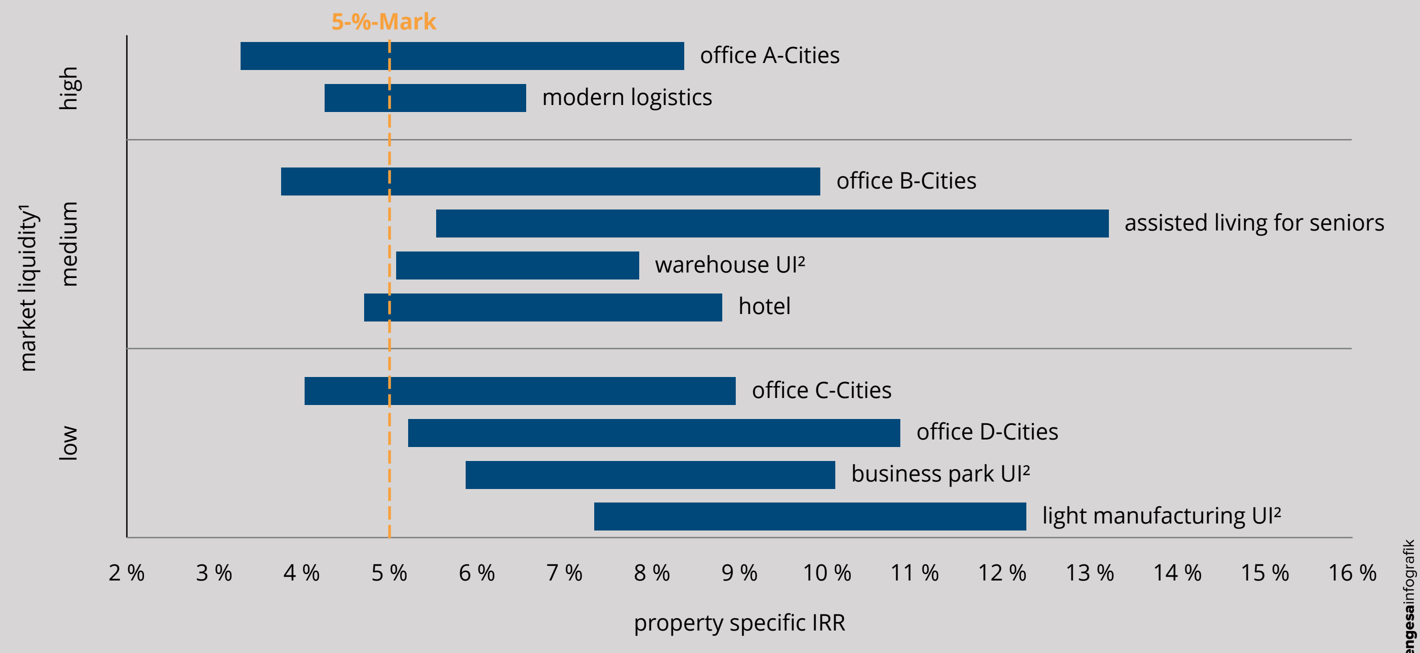
Assisted living for seniors have been newly incorporated in the 5 % study. As owner-managed properties, the performance of this type of use depends to a large extent on the contractual configuration. As a result of demographic change, investor demand has increased substantially here too over the past years and initial yields have therefore also fallen significantly. The attainable IRR comes to around 3.42 % and is thus roughly at the level of hotel properties.

Overview Core Properties
IRR, 2017 to 2022



1 US = University Cities. 2 UI = Unternehmensimmobilien.
Source: bulwiengesa AG

Summary
Non-Core-Matrix[1]



1 Liquidity of asset classes regardless of investment cycles. Within the categories of low, medium and high market liquidity shown in the diagram, there is no further assessment of the liquidity of the individual types of use. 2 UI = Unternehmensimmobilien.
Source: bulwiengesa AG

In this study, non-core properties are defined as properties with an increased risk profile and thus higher performance opportunities. They have management deficiencies such as vacancies, are usually situated outside the central locations and have unstable letting structures. In terms of energy, too, these buildings meet only minimum requirements. The matrix above shows their market potential only; restructuring or renovations are not taken into account here. No outliers are included either.

In some individual cases, the yields and the risks may therefore be considerably higher than in the model calculation. Residential property investments are not currently included in the non-core analysis, as they do not offer high enough yield potential for non-core investors in established markets. Modern shopping centres, specialist retail centres and assisted living apartments also are not included.

» Non-core still modest

There is still a discrepancy between the purchase price expectations on the buyer and the seller side for non-core products, and this has increased significantly again as a result of the turnaround in interest rates.

Buyers with low intentions for energy-efficiency building measures who acquire properties in secondary locations of the major office markets can calculate IRR potential of up to 8.4 %. On the other hand, the risks regarding the economic success of such real estate investments are not insignificant. Underperformance of up to -3.3 % is possible in our model. In this context, the risk of stranded assets is the subject of much discussion on the market.

Smaller office markets offer even higher yield potential – for example, D markets have a maximum of 10.8 %.

Investments in business properties in the non-core segment still offer high yield opportunities. Production properties have the highest levels in the core segment at 7.3 % and up to 12.3 % is possible in the non-core segment, while warehouse properties and industrial parks can generate a maximum of 7.9 % and 10.1 % respectively.

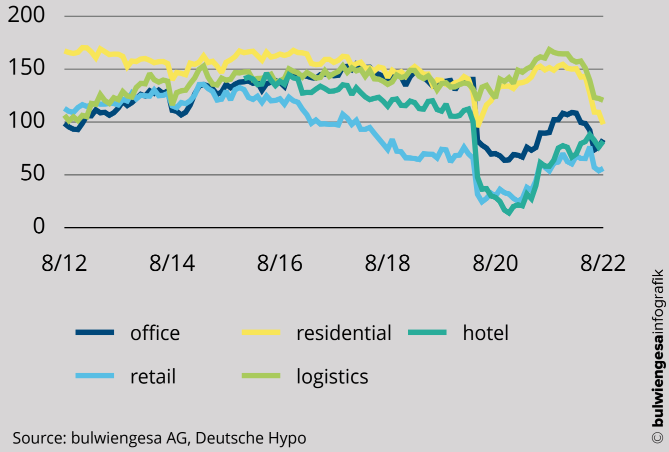
The Market Environment

The market environment is characterised by crises. The Ukraine war and the resulting sharp rise in energy prices and global supply bottlenecks are putting pressure on Germany's economic performance. In addition, we are in the third year of the coronavirus pandemic and there are growing uncertainties regarding a new wave in the autumn with possible lockdown scenarios. Hanging over everything is the climate crisis, with another extremely hot summer bringing it home to Europe how directly it is affected.

One particularly relevant factor for the property market is interest rate policy, which is undergoing a paradigm change. This was reflected in the 50 bp hike in the key interest rate, for example. After a dynamic start in the first quarter of 2022, the property investment market cooled off considerably. Due to the many uncertainties, transaction decisions are being postponed or completely discarded; new investments in Europe in particular are being reconsidered while war is continuing here. The volume of project developments, which were the drivers of the investment market in the past, is decreasing significantly. Due to the development of construction costs and increased financing costs on the one hand and the lower yield expectations on the other, many projects here are coming up against the limits of their economic viability.

This gloomier market sentiment is also reflected in the Deutsche Hypo Real Estate Economic Index. Although the residential and logistics segments are still well above the level of 100 here, they have nonetheless fallen by 29 % and 25 % respectively compared to their highs at the beginning of 2022.

Deutsche Hypo Real Estate Economic Index
by Segments, August 2012 to August 2022

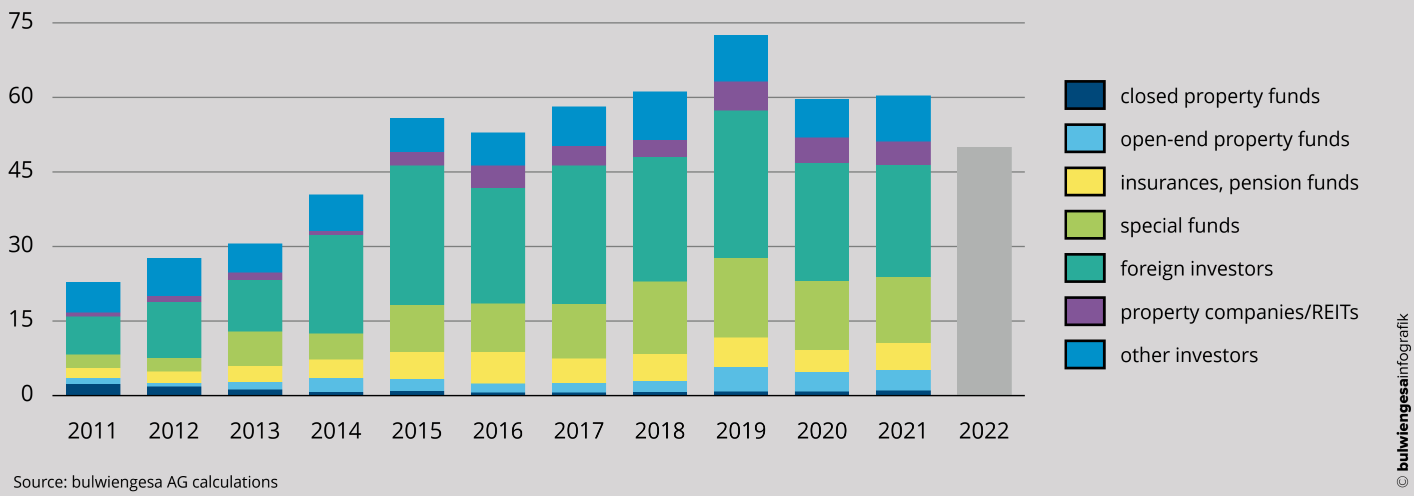


Source: bulwiengesa AG, Deutsche Hypo

The situation is even gloomier in the office sector, where a new low of 73.6 index points was reached in June 2022. Uncertainty over the future of the office is not ending, despite stable user demand.

However, the hotel climate improved significantly again as a result of the lifting of coronavirus restrictions. In retail, the players remain sceptical, while types of operation such as specialist stores are still performing very positively.

New Investments by Institutional Investors in Commercial Real Estate
in Germany, billion euros, 2011 to 2022, 2022 estimation



Source: bulwiengesa AG calculations

The Market for Residential Properties

The fundamental data on the German housing market remain positive. In many cities, there has been excess demand for years, which has recently increased even more due to insufficient construction activity. Nonetheless, affordability has decreased further. Whereas in 2013 net rent excluding heating for a standard rental apartment in Berlin cost the equivalent of 22.5 % of monthly household income, the figure is now 33.7 %. The current sharply rising energy prices are leading to a further increase in housing costs. The shortage of supply will continue to dominate market developments in the medium term.

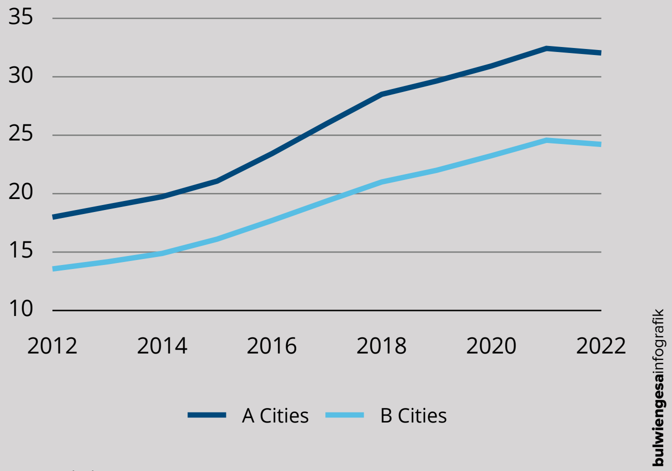
The market is characterised by supply bottlenecks, rising construction costs and a shortage of skilled workers, meaning that the German federal government's target of building 400,000 apartments per year will not be achieved (yet). In addition, the current interest rate development is impacting both the supply and the demand side.

Although there is currently still demand for residential property in many places, increasing uncertainty can be seen with regard to purchasing decisions here, too. Slight increases in prices for new apartments can nonetheless be expected still, as developers will pass on cost increases to the end customers. However, the speed and volume of sales are decreasing significantly. Uncertainty regarding KfW subsidies is still affecting the current development of prices.

A decline in demand on the buyer side in turn indicates an increase in rental demand, which may also result in rent increases in a continued problematic environment for building new housing. An increase in the attractiveness of the rental market can therefore generally be expected, which consequently suggests higher demand. However, major regulatory obstacles and strong political pressure on rent indices significantly limit the potential for rent increases in many places.

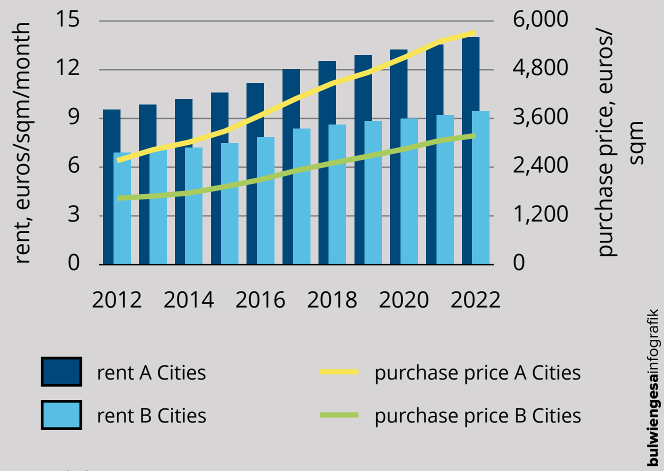
Meanwhile, the fundamental market opportunities vary considerably: whereas thriving locations have theoretical potential for rent increases above the inflation rate, other regions are increasingly impacted by demographic change, meaning that existing apartments here are likely to grow more slowly than inflation and income.
The current interest rate environment will continue to influence the investment market in the medium term. The long-lasting phase of constantly increasing yield compression is thus likely to be over.

Multipliers in A and B Cities
multifamily housing stock, Ø, 2012 to 2022, 2022 forecast



Source: bulwiengesa AG, RIWIS

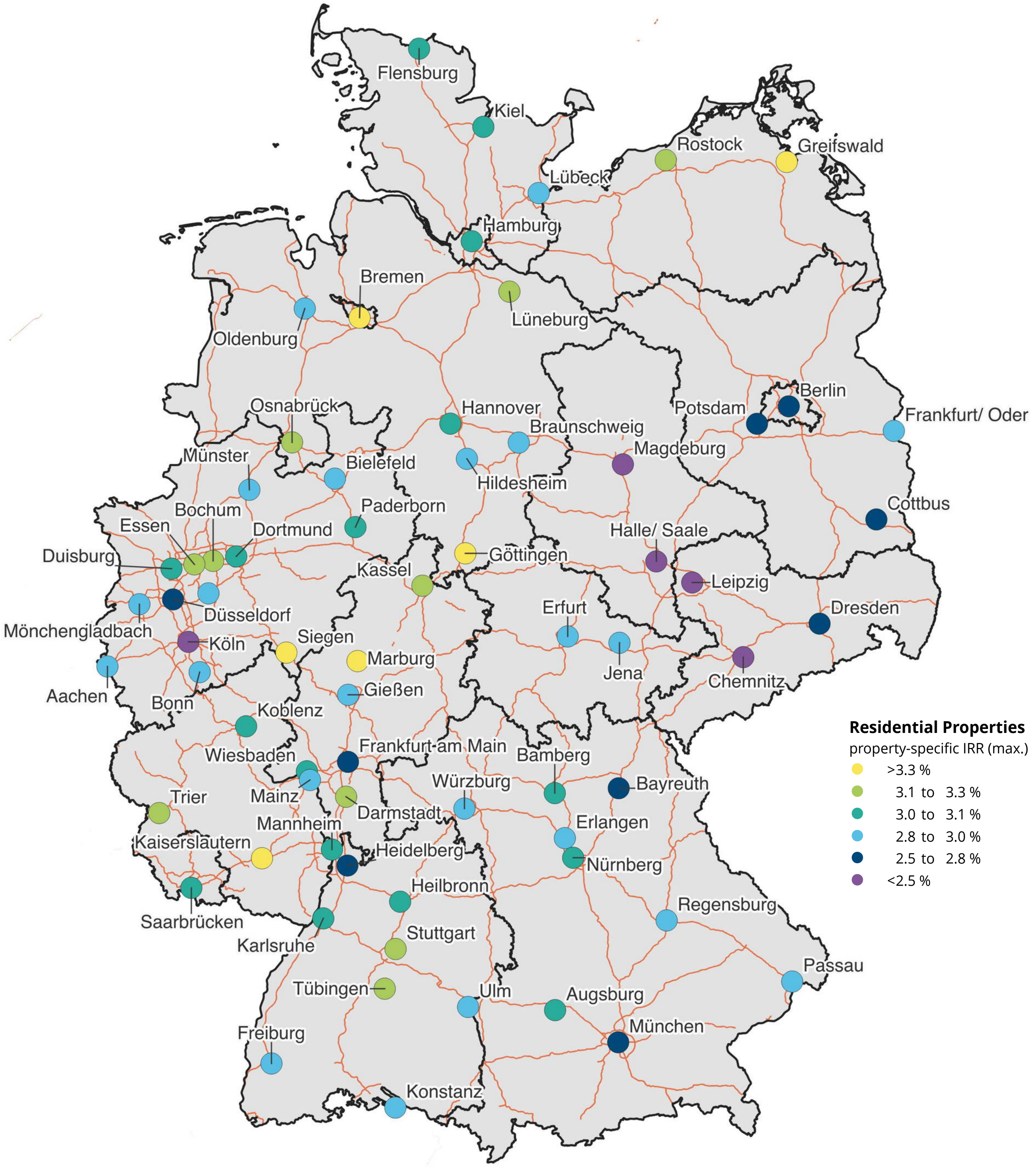
Residential Market in A and B Cities
stock, Ø, 2012 to 2022, 2022 forecast



Source: bulwiengesa AG, RIWIS

The Residential Market – Overview

Maximal Obtainable Property-Specific IRR for Core-Investors



Excursus: A Deal with Nature is Demanded

The topics of construction, housing and land development form the basis for the prosperous development of Germany as an economic location. The designation of building land should therefore make sense economically while also supporting sustainability goals, firstly by way of resource-efficient development and secondly through compensation areas with a high environmental value.

For many years already, we have been facing a housing shortage. The current government wants 1.6 million apartments to be built during its term in office. How is this to be done, when every other topic – nature conservation, climate protection, neighbourhood preservation, tenant protection, public participation and protection of neighbours, as well as excessive construction law provisions – take priority over construction itself?

All of these topics are important, but an appropriate weighing up of interests needs to take place if apartments with affordable rents are really to be built. This is why it is so important for politicians, scientists and the parties involved in construction to engage in dialogue in order to find a fast, pragmatic way of bringing about the urgently needed affordable apartments, particularly in major cities.

Tens of thousands of new apartments will be needed in every major German city in the coming years. The coalition has therefore set a target of 400,000 units per year throughout Germany. A figure that already was not achieved for 2021. Now further obstacles such as inflation, disrupted supply chains and staff shortages, changes in the promotion of new construction and fears of a recession all stand in the way of achieving this ambitious target.

It is an enormous challenge, as the development of new housing also has to contend with competing uses and the interests of neighbours. And not least, environmental aspects need to be taken into account. This is another reason why construction sites often do not progress quickly.

Let's look more closely at one question: how can environmental protection and construction be reconciled? Extreme examples with delays lasting decades are unfortunately easy to find, such as in north-eastern Frankfurt am Main. The first ideas for a new housing development there came about in the late 1970s. The development plan was adopted in 2005. Now, 45 years after it was first envisaged, the development of a site covering around 16 hectares in the north-west of the Main metropolis has begun. No fewer than around 500 apartments are to be built.

In addition to other obstacles, the needs of wildlife conservation also had to be taken into account in this case. Around 1,000 sand lizards had to be relocated at great expense. Elsewhere, it is field hamsters or redstarts that have to make way for residential buildings. But it is difficult to imagine that they could not also feel comfortable in the neighbourhood.

However, it is not always nature conservation that is responsible for delays on a construction site. We have excessive regulations in construction law. If every individual aspect is seen as a „sacred cow", we will never get to building. Politicians often are not willing to make necessary compromises and to enforce decisions even when there is resistance. If housing is to be built, then a deal also needs to be made with nature. Construction and nature conservation need to be looked at together. This can be done! Initial „ecological" housing estates demonstrate this.

So what are the characteristics of ecologically valuable housing estates? They particularly include compact forms of housing, energy efficiency, wildlife conservation and water management.

And given that time is of the essence, the planning processes take too long, sometimes (too) many years. The processes need to be sped up, digitally and in people's heads. And for this reason, the most important thing is for all parties to be open to compromises..

Klaus Beine
ADVANT Beiten

ADVANT Beiten is the German member law firm of ADVANT, a European alliance of independent corporate law firms. Founded in 1990, the independent law firm provides advice with around 250 professionals at six German locations and in Belgium, Russia and China.

The Market for Micro-Apartments

The microliving initiative, launched by bulwiengesa AG in 2020, stands for a new innovative association of companies that act as owners, operators and/or administrators in the property segment of apartments.

Its goal is to improve market transparency on the basis on a reporting system in which the participants' property and letting data are analysed. Investors and market observers are thus regularly informed about the latest market trends. Members of the initiative also receive a benchmark report analysing their respective portfolio in relation to all other members. In addition to general information on the location of the property and the number of apartments, fixtures and fittings and letting data such as target rents, occupancy rates and operating costs are also requested.

In the fifth market report, operating data on around 23,998 residential units in 117 apartment buildings were analysed. The latest survey showed that despite all the crises and turning points, the participants are generally optimistic for the future of residential apartment buildings. Nonetheless, most members do not expect business to return to pre-COVID levels until 2023 at the earliest. With regard to possibilities for rent increases, the participants in the microliving initiative mostly anticipate growth rates somewhat below the current very high inflation rate.

The occupancy rate has stabilised compared to autumn last year at an average of 85 %. It can also be seen that the range of the occupancy rate for each apartment building has become somewhat smaller but still remains fairly high, indicating that not every apartment concept performs well in every location. However, this occupancy rate generally requires increased marketing efforts and property management that is geared even more strongly toward the target group's needs.

For providers of apartments that usually charge flat-rate ancillary costs so that they can offer their tenants a defined all-in rent, sharp increases in energy costs and high inflation pose a challenge. To avoid being impacted by the rising energy costs themselves, a clear majority of the participants in the microliving initiative intend to allocate rising energy costs to their tenants in full. Partial allocation is also targeted by some participants.

Felix Embacher
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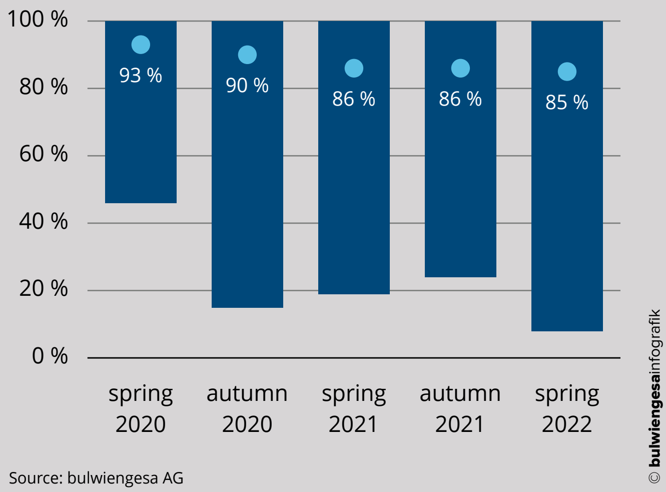
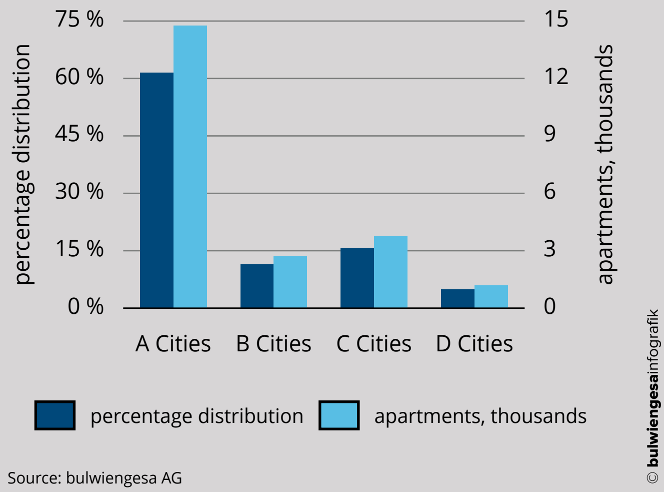
Occupancy rate Micro-Apartments
Germany, spring 2020 to spring 2022, min./avg./max.



Source: bulwiengesa AG

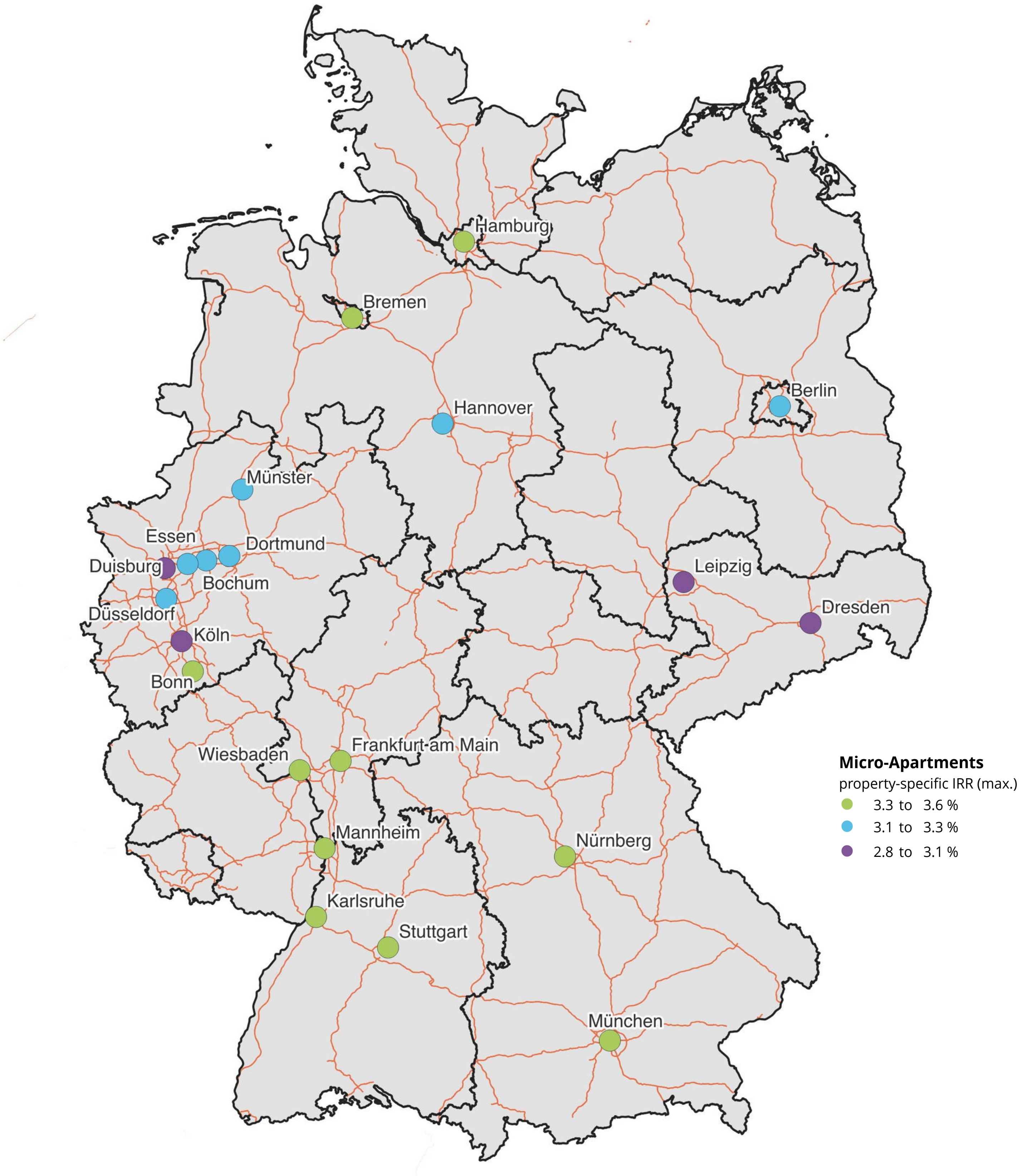
Regional Distribution of Micro-Apartments
by city categories



Source: bulwiengesa AG

The Market for Micro-Apartments – Overview

Maximal Obtainable Property-Specific IRR for Core-Investors



The Market for Office Properties

The slowing momentum in yield compression in A cities was indicated last year already, as the price level was already extremely high and thus only slight increases were possible. Across all A cities, the weighted average initial net yield therefore came to 2.7 % again, demonstrating the anticipated bottoming out.

The start to the 2022 investment year was characterised by considerable restraint. The uncertainty caused by the outbreak of war in Ukraine, the changing interest rate environment and rising inflation is holding back many market participants and has had a significant impact on the investment market. In the changed financing environment, investors are acting much more cautiously and major transactions are being postponed for the time being or undergoing more thorough examination. In the current market environment, buyers are no longer willing to pay the high purchase prices from last year and the beginning of this year. Under these conditions, yields will move upwards again for the first time in years. Cautious forecasts anticipate around 30 basis points by the end of the year.

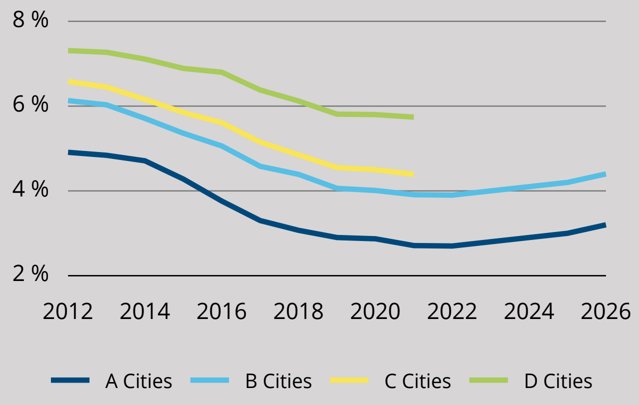
Properties in the core sector that are let to solvent users on a long-term basis are still in demand, with a particular focus on public-sector tenants. It should be noted that the classification of a „core property“ has changed over time: tenant structures, contract terms and location quality are analysed much more critically. The assessment of a property investment’s sustainability aspects has also joined these as an additional factor and will become increasingly important in the coming years.

By contrast, a large number of new construction projects being planned and implemented will lead to further easing on the supply side despite growing demand. Due to the discussion regarding material shortages and rising construction costs, projects may be delayed or critically scrutinised. However, the vacancy rate will remain at a healthy level on average.

Higher construction costs and increasing ESG requirements are also leading to further rises in rents. Corrections are only likely in secondary locations that gained importance in the past due to a lack of suitable space. Here, the specific location qualities will play a decisive role for demand and thus also for the rent level again in individual cases.

Net Initial Yield

central locations, 2012 to 2026, forecast from 2022



Source: bulwiengesa AG, RIWIS

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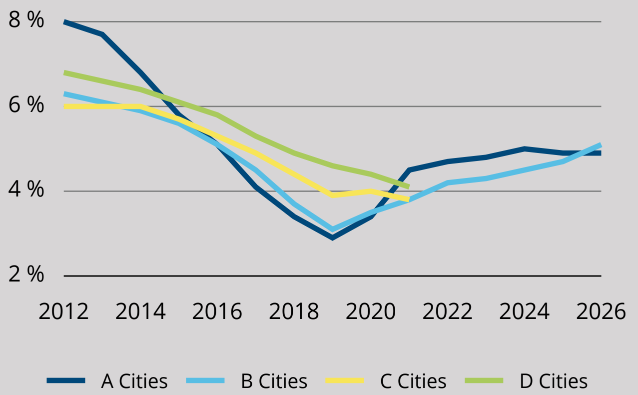
Office Space Vacancy

rate, 2012 to 2026, forecast from 2022



Source: bulwiengesa AG, RIWIS

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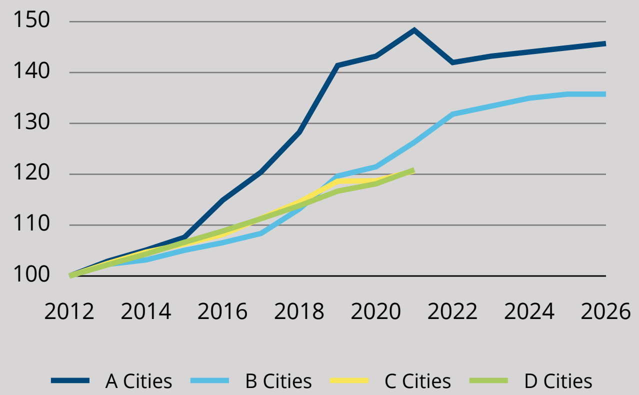
Prime Office Rents

index 2012 = 100, 2012 to 2026, forecast from 2022



Source: bulwiengesa AG, RIWIS

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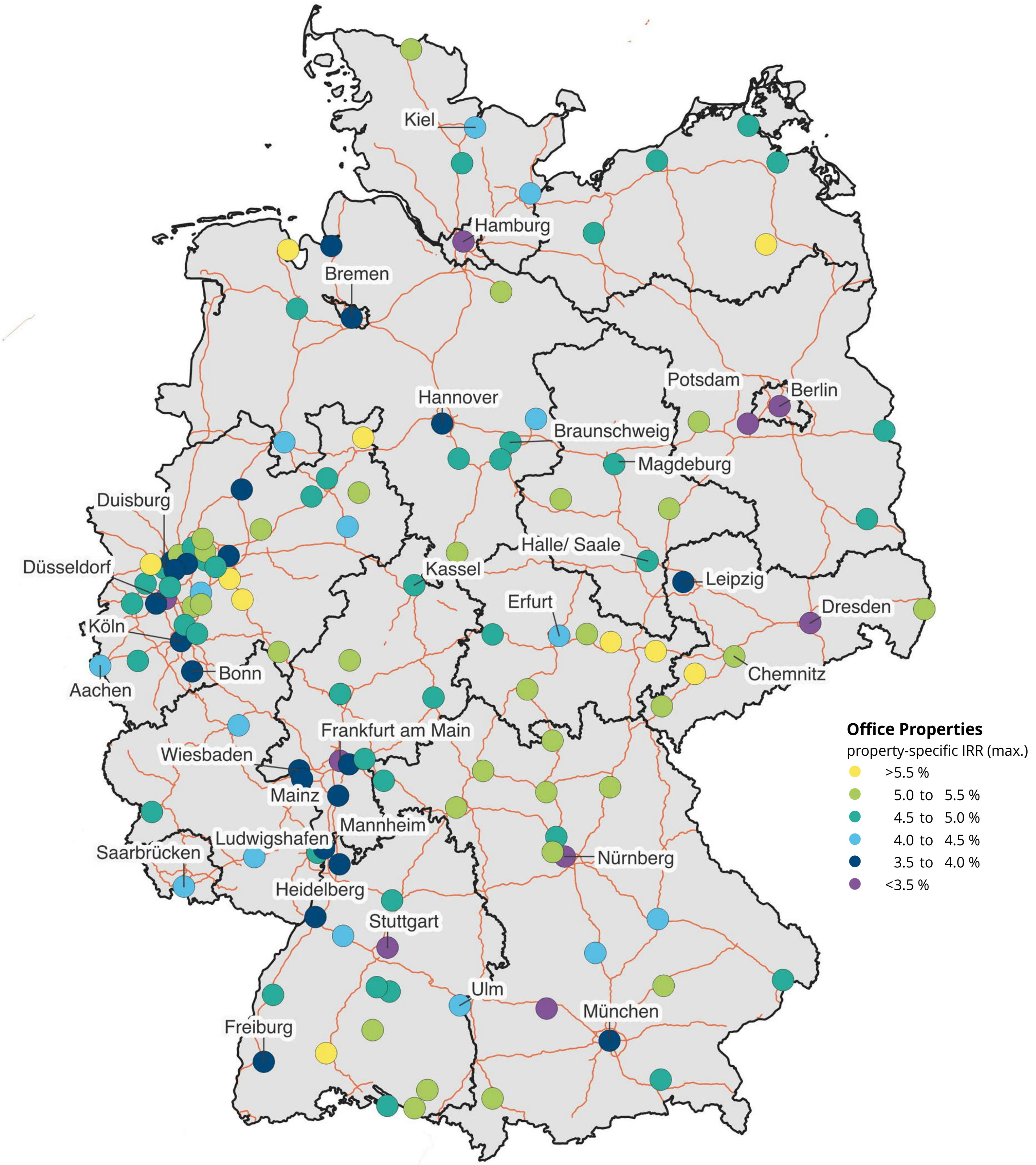
The Market for Office Properties – Overview

Maximal Obtainable Property-Specific IRR for Core-Investors



The Market for Logistics Properties

Logistics properties remain very popular on the investment market. The first half of 2022 confirmed the excellent previous year, with around EUR 2.7 billion of the investment volume attributable to logistics properties.

It is notable that the majority of transactions in the first half of the year were focussed on western Germany. In addition to Düsseldorf, the Rhine-Main/Frankfurt and Rhine-Neckar logistics regions were in high demand in the first half of 2022. These regions, characterised by a central location and proximity to many manufacturing companies and to the pharmaceutical industry, recorded investment volumes of EUR 257 million and EUR 210 million respectively. In the regions further east, there were only a few smaller deals due to the shortage of suitable investment products.

It is currently difficult to predict what effects the upheavals of the spring will have on this asset class. Growing restraint could already be observed on the transaction market in the second quarter as a result of increased financing costs and economic uncertainties. In the top logistics regions, prime rents have already risen by around 20 to 30 basis points, heralding the end of the yield compression. The effects can currently be felt particularly clearly in the absolute core segment, where the factors have regularly been more than 30 times the annual rent in the recent past. This is hardly economically viable any longer under the current financing conditions. Now it depends on how quickly buyers and sellers can find a shared basis for purchase prices in line with the market after reassessing the situation.

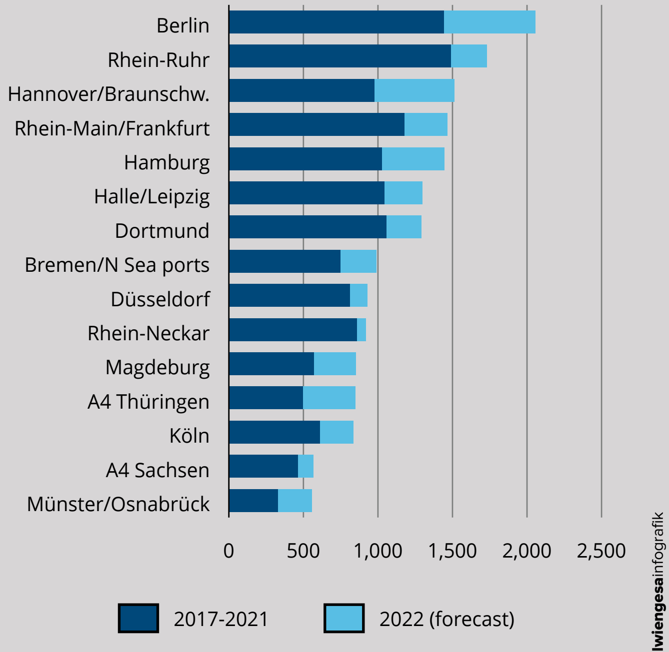
After a small dip in 2020 due to the coronavirus, the completion volume passed the 5 million square metre mark for the first time last year at around 5.3 million square metres. Based on the actual pipeline, an even higher level of 5.8 million square metres is indicated for 2023, although this only represents a snapshot in an uncertain market environment. Increased financing and construction costs, a probable growing shortage of energy in the autumn and winter and a possible decline in demand (e.g. from the manufacturing industry) as a result of worsening general economic conditions may have a significant impact on the completion statistics.

For the second year in a row, Berlin ranked first among Germany's 28 logistics regions. The old and new frontrunner posted a new construction volume of around 2 million square metres in the period under review.

Despite brisk demand from users, the interest rate environment is also affecting purchase yields for logistics properties, which are increasing again slightly.

Selected Completions

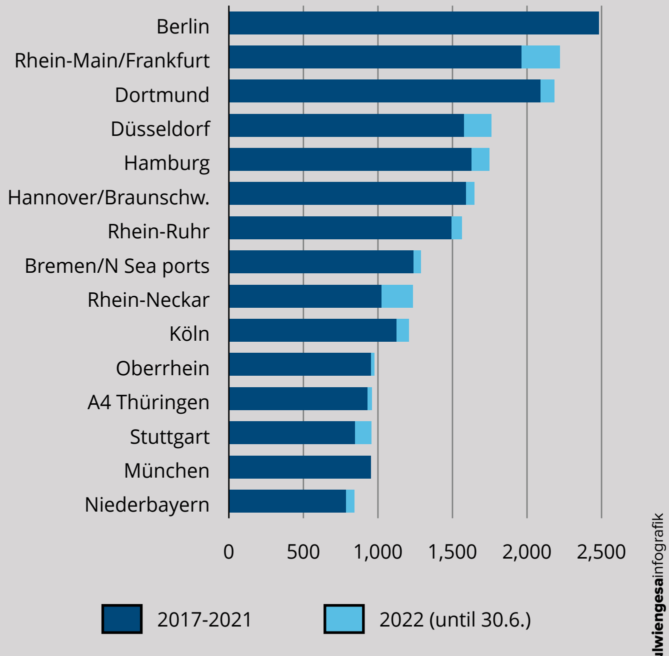
top 15 logistics regions, thousands sqm, 2017 to 2022, 2022 forecast



Source: bulwiengesa AG, Study „Logistik und Immobilien 2022“

Selected Investment Volumes

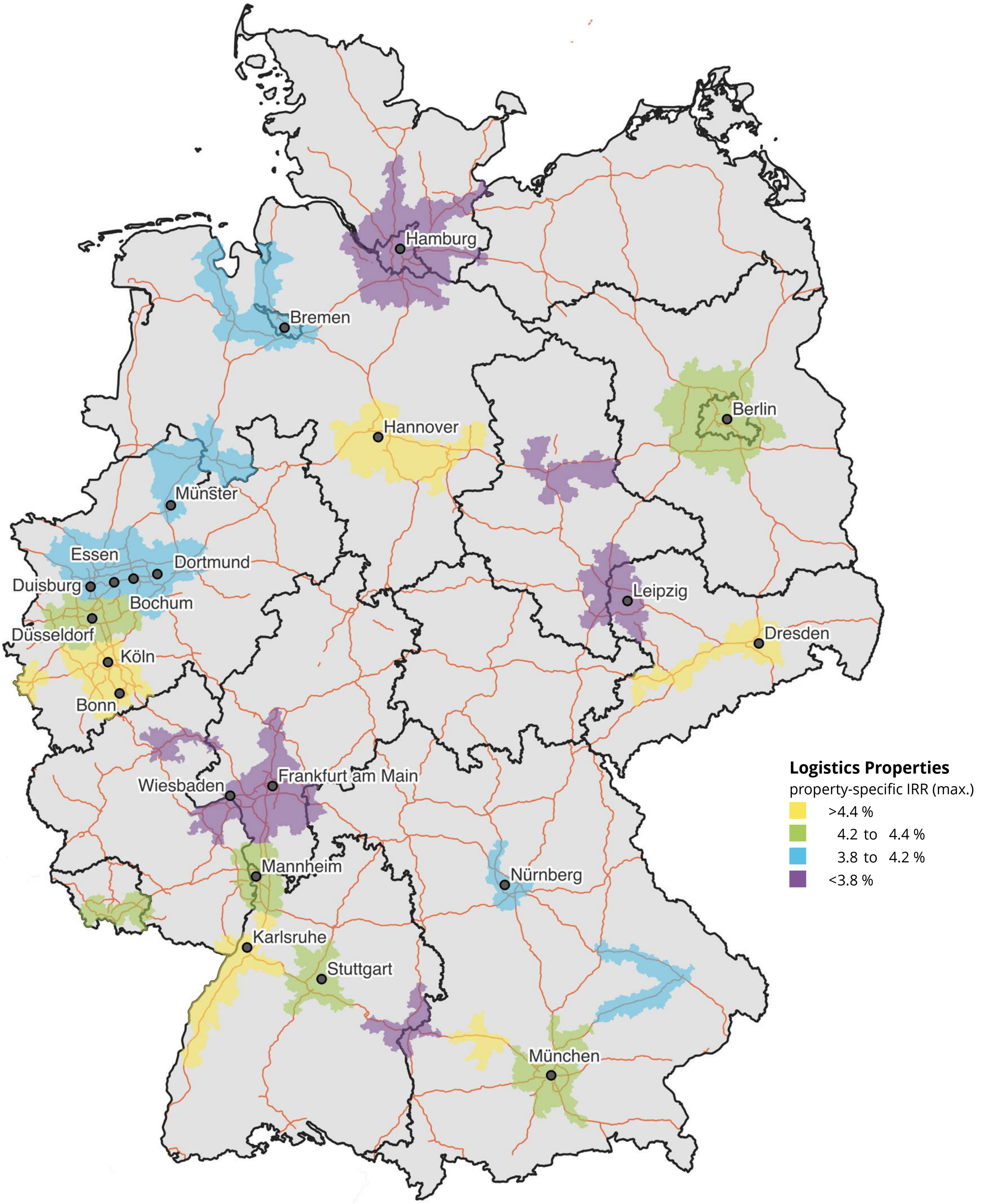
top 15 logistics regions, million euros, 2017 to 2022, 2022 until 30.6.



Source: bulwiengesa AG, Study „Logistik und Immobilien 2022“

The Market for Logistics Properties – Overview

Maximal Obtainable Property-Specific IRR for Core-Investors



The Market for Large-Scale Retail Properties

The retail sector was negatively impacted by the COVID-19 pandemic again in 2021, and after a weak retail performance in the first three quarters of 2021 the introduction of „2G" (vaccinated/recovered) rules in many shops in December during the high-sales Christmas business represented a worst-case scenario for high-street retailers and service providers. As of the end of the year, a sales increase of 0.7 % in real terms was achieved compared to the weak year 2020. The segment of textiles, clothing, shoes and leather goods recorded a 5.9 % decline in sales for the year, while the segment of furnishings, household appliances and building materials fell by 8.3 % after adjustment for price changes. Online retail again benefited from the lockdowns, generating sales growth of 12.4 %.

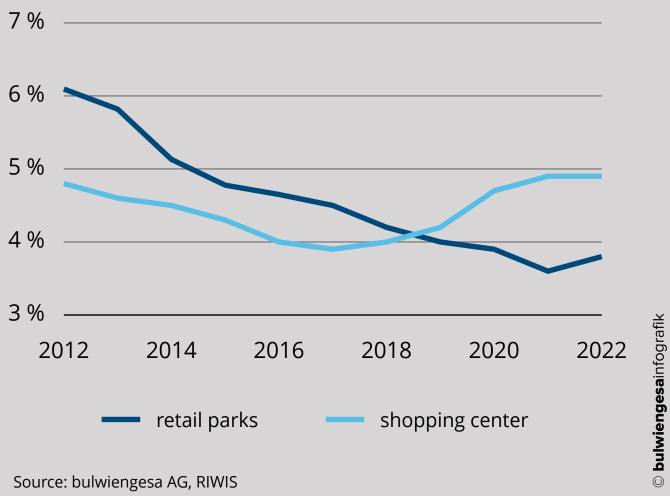
In the first quarter of 2022, the situation in the retail sector improved considerably. Sales were up 3.0 % year-on-year, and the segment of textiles, clothing, shoes and leather goods, which is important for the high street, more than doubled its sales compared to the same quarter of the previous year with real growth of 118.4 %. Footfall in city centres and shopping centres was just recovering and gradually approaching its pre-coronavirus level, when the retail sector increasingly started to feel the effects of high inflation in Germany. In June, retail sales declined by 8.8 % month-on-month in real terms, i.e. adjusted for inflation. This was the biggest decrease in 28 years. In nominal terms, they fell by 0.8 %.

Uncertainty as to how much further energy prices will rise is not only causing consumers to hold back from major purchases. Providers of everyday goods such as food or health and beauty products are also complaining of customer restraint. While expensive holidays are (still) being taken and restaurants are also reporting good sales figures and capacity utilisation, it seems that Germans are currently saving on shopping in particular.

Although the traditional high street will be slimmed down, top locations still have strong appeal. For prime rents in top locations, moderate nominal growth in rents is therefore still expected in the A cities. Outside the A cities, we anticipate a considerably more varied development in the coming years. A large number of cities will record not only price-adjusted but also nominal decreases in prime rents.

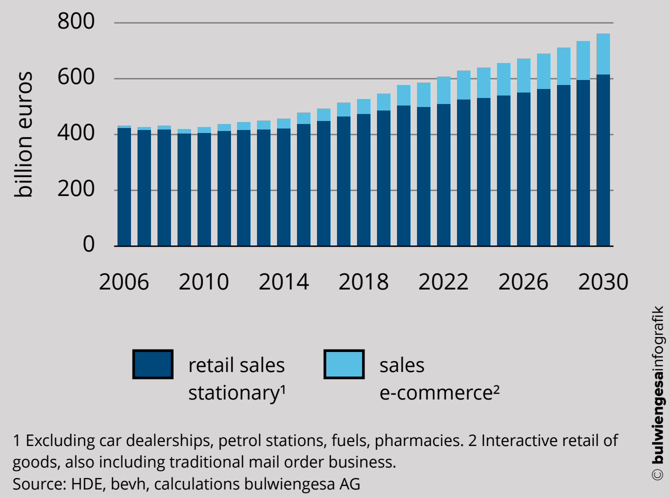
The yield level for large-scale retail properties has recently remained stable, although the changed interest rate market is having an impact here, too. While investors are still focussing on specialist retail centres, demand for shopping centers remains at a very low level.

Prime Yields
2012 to 2022



Source: bulwiengesa AG, RIWIS

Retail Sales
dynamic scenario, billion euros, 2006 to 2030, from 2022 forecast



1 Excluding car dealerships, petrol stations, fuels, pharmacies. 2 Interactive retail of goods, also including traditional mail order business.
Source: HDE, bevh, calculations bulwiengesa AG

The Market for Hotel Properties

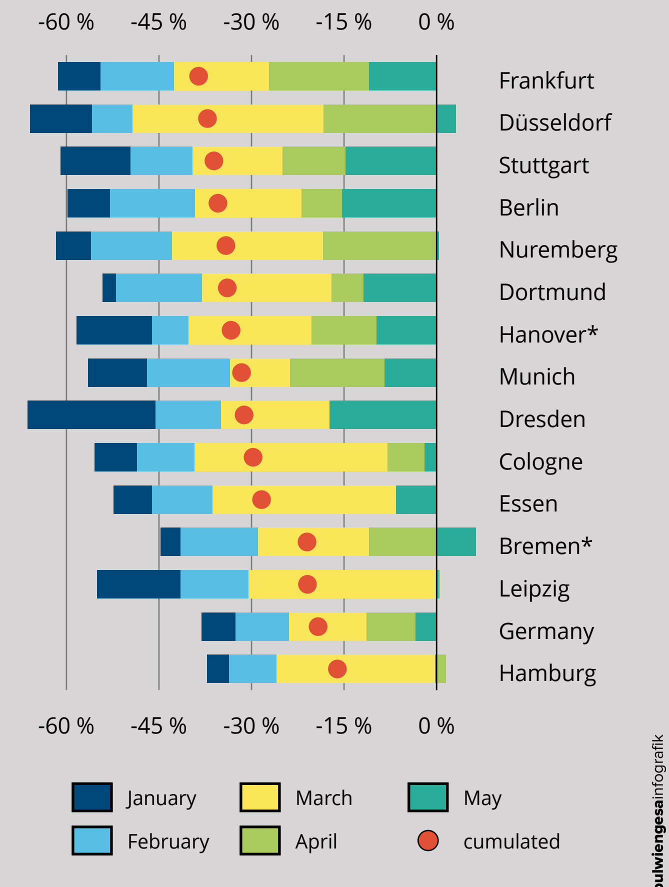
After two years of exceptional circumstances, the hotel market is still far from its pre-crisis levels. After the lockdown was lifted at the beginning of the year, bringing an increase in tourist demand, sentiment in the asset class of hotels seemed to be improving, as shown by the surveys on the real estate climate at the end of 2021/start of 2022.

However, these hopes soon faded among many players when the Ukraine war began. Although the mass insolvencies feared at the beginning of the crisis did not materialise and some holiday regions therefore recorded higher tourist figures in the summer months of 2020 and 2021 than before coronavirus, the pandemic has hit large parts of the hotel market hard. This particularly applies to hotels in Germany's large and medium-sized cities, which drove a large part of tourist demand in Germany before coronavirus and were therefore very popular with investors for years. While cities with more than 500,000 residents saw decreases in overnight stays of up to 56 % in some cases in 2021 as compared to 2019, the situation in smaller towns and cities was much more relaxed. This is increasingly leading operators and investors to pay more attention to C and D cities.

However, the latest figures from the German Federal Statistical Office show a significant increase in tourist demand in Germany. In May 2022, accommodation providers fell only slightly short of the number of overnight stays in 2019 (down 3.4 %). However, there are still major differences between regions. In most German cities, the figures are still significantly below the pre-coronavirus level. Bringing up the rear among the major German cities is Frankfurt, with a cumulative decline of 38.6 % as against 2019, followed by Düsseldorf with -37.1 %. Only Hamburg is above the German average, with hotels here even generating a slightly higher number of overnight stays in April compared to 2019.

On the revenue side, the modest demand has recently been cushioned by increasing rates. In cities such as Hamburg, Berlin, Dresden, Munich, Düsseldorf and Hanover, room prices in May 2022 were much higher than in 2019 in some cases. As this has only been achieved for the last month or two, however, RevPAR (revenue per available room) in city hotels is still below its 2019 level at between 30 % and 40 %. On the other hand, hotel operators are facing rising costs. In addition to wages, there are also rises in energy costs, goods and procurement costs and construction costs, which are being fuelled further by the current high inflation rates. This also applies to leases for leased businesses, which are generally index-linked. In addition, many businesses need to invest in digitalisation and sustainability in order to remain fit for the future. Neither of these factors come as a surprise, but they are hitting the sector at a very bad time.

Levels City Tourism
overnight stays January to May 2022 compared to 2019



Source: Federal/Regional Statistical Offices; * Extrapolation of May values

The hotel industry also cannot avoid the topic of ESG if it wants to be considered suitable for investment. The pandemic was not foreseeable, but what could be predicted was the need to make businesses less staff-intensive, more digital and more sustainable and to design portfolios with greater diversity so as to be equipped for the future. Some operators, investors and developers recognised this at an early stage and have got through the crisis comparatively well so far. Accordingly, investors are currently particularly interested in innovative hotel concepts, serviced apartments and operator-free properties with restructuring potential. However, many businesses do not have the resources to invest now, which is why the path that the hotel market will take over the coming months remains unclear.
Investors are still showing a high degree of scepticism with regard to hotel investments and very often look into options for subsequent use. Neither of these factors come as a surprise, but they are hitting the sector at a very bad time.

The Market for Assisted Living for Seniors

The number of senior citizens will grow enormously in the coming years, with a particularly significant increase in very elderly people. Around 18 million people, or roughly 22 % of the total population of Germany, are aged 65 or over and have differentiated requirements as regards the housing they want in their old age, depending not least on their personal income situation, their current living environment, their social status and their state of health.

While nursing homes bear full operator responsibility for the organisation of housing, care and everyday operations, and their building conditions are subject to regionally varying quality requirements based on the respective state-specific legislation for nursing homes, there is no legally binding product definition for assisted living residences. DIN 18040-2 and DIN 77800 only have the nature of recommendations and provide a recommendation framework. Only the latter are examined in the study.

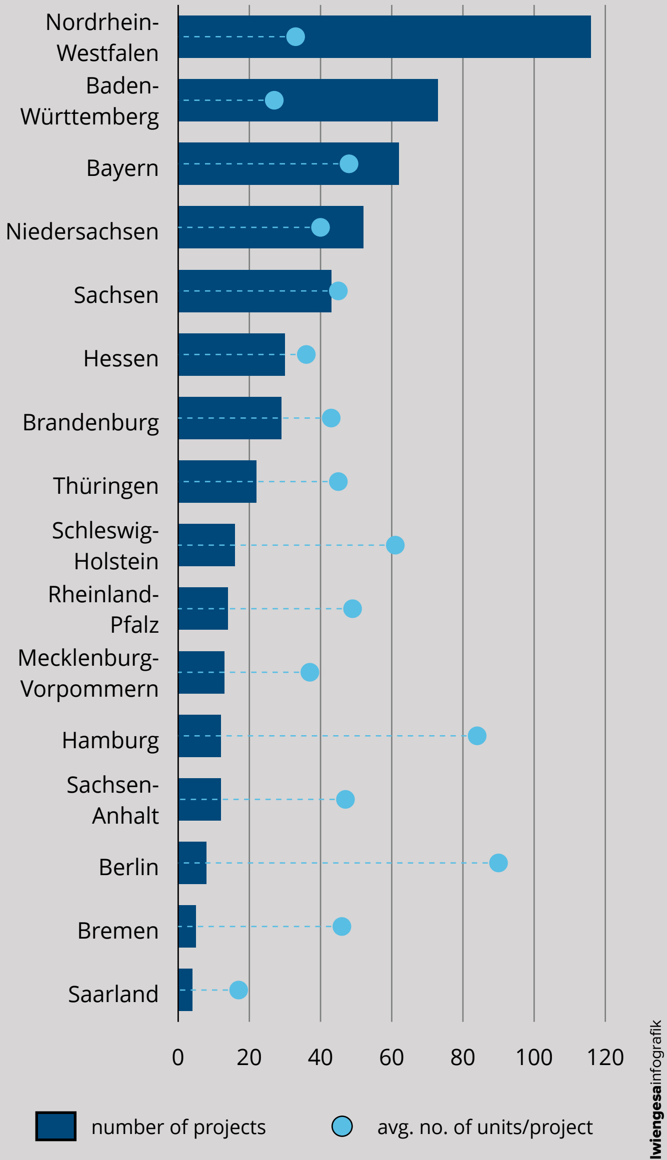
Assisted living residences for senior citizens can be classified between fully independent living in an apartment suitable for senior citizens without the provision of support and services on the one hand and forms of housing where the provider has responsibility, such as outpatient care communities or inpatient care facilities, on the other hand.

There are focus areas in the regional distribution of construction activity for assisted living residences, too. The frontrunner here is North Rhine-Westphalia, where a total of 116 properties with almost 3,800 residential units were built between 2019 and 2022. By contrast, federal states with low population density, such as Saarland, Saxony-Anhalt and Mecklenburg-West Pomerania, have the lowest completion levels. A geographical concentration can also be observed when it comes to project developments. Agglomerations such as the Ruhr region and the major German metropolises, including Hamburg, Berlin, Frankfurt, Stuttgart and Munich, are popular focus areas for the construction of new facilities.

As expected, it is not only the quantifiable demand potential that guides the choice of location for new assisted living residences, but also to a large extent the regional purchasing power potential. In the former East German states, and particularly in Saxony-Anhalt and Mecklenburg-West Pomerania, only a few new construction projects can therefore be identified. The supply structure gap between the city and the country and between high-income and low-income regions will widen further in the near future.

Realised Residences in Assisted Living

construction year 2019 to 2022 or new buildings under construction



Source: bulwiengesa AG, as of May 2022

In view of the growing importance of a needs-based living environment and precisely tailored care for senior citizens, there is a great need for action when it comes to planning and implementing nursing places and assisted living residences in line with demand. Considerable efforts and investment volumes are required to move towards the goal of a comprehensive and adequate supply structure for housing for the elderly.

The Market for Unternehmensimmobilien (UI)

Unternehmensimmobilien are regularly analysed by the Initiative Unternehmensimmobilien. They can be broken down into: business parks, warehouse properties, light manufacturing properties and transformation properties. Because no project developments are analysed in this study, there is no separate focus on transformation properties.

In 2021 as a whole, a new record investment volume of 4.3 billion euros was achieved, characterised in particular by a strong first half of the year. The second half of the year was somewhat weaker with an investment volume of around 1.5 billion euros.

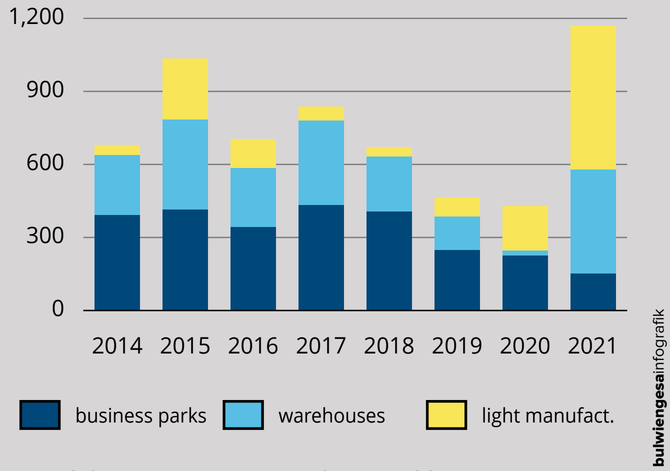
Due to its crisis resilience during the coronavirus pandemic and its associated growing importance, the asset class of Unternehmensimmobilien became increasingly interesting to a larger group of investors. As a result of the increase in purchase prices, a trend of falling yields could be observed across all categories of Unternehmensimmobilien in the past year. For business parks, the yield in the absolute prime segment decreased by 20 basis points compared to the previous half-year period, while the average yield fell by as much as 50 basis points.

Boosted by the positive development of industrial locations, particularly in southern and south-western Germany, demand from the manufacturing industry accounts for more than half of take-up in Unternehmensimmobilien. With an 18 % share of take-up, the logistics and transportation sector represents the second-biggest demand group on the market. The current changes in the global economy will also influence demand in the Unternehmensimmobilien segment. Firstly, consolidation trends are discernible in the e-commerce sector. Initial reshoring developments can also be observed in an international context.

At the same time, rising construction costs and the growing importance of ESG criteria are leading to further increases in rents for all types of space. The second half of 2021 saw a higher than average completion volume of just under 1.25 million square metres. The biggest driving factor for the high level of completed space were light manufacturing properties. At around 824,000 square metres, these contributed more than 65 % of the overall result. Project developments for light manufacturing properties are mostly dominated by owner-occupiers. Overall, the addition of new space can currently be observed, which may reduce pressure on the market for space somewhat in the future.

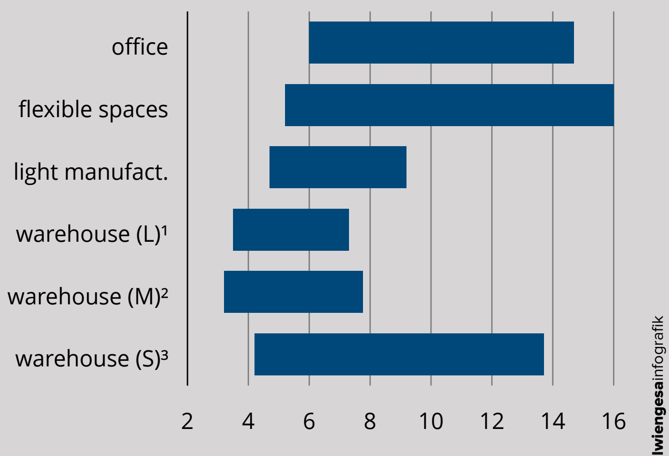
However, rising construction costs, a shortage of construction capacity and more restrictive financing conditions on the part of banks are posing increasing challenges for project developers at present. Shifts in the project pipeline can therefore be expected, and some planned projects may not be implemented for the time being. The effects of the increases in interest rates on the Unternehmensimmobilien investment market can only be estimated at present due to the small number of transactions. However, as with other asset classes, yields here can also be expected to rise again.

Take-up of Unternehmensimmobilien
thousand sqm, 2014 to 2021



Source: bulwiengesa AG, Initiative Unternehmensimmobilien

Rent level of Unternehmensimmobilien
rent euros/sqm/month, second half year 2021



warehouses: 1 large: ≥500 sqm, 2 medium: <500 sqm, 3 small: <100 sqm
Source: bulwiengesa AG, Initiative Unternehmensimmobilien

The 6-Percenters

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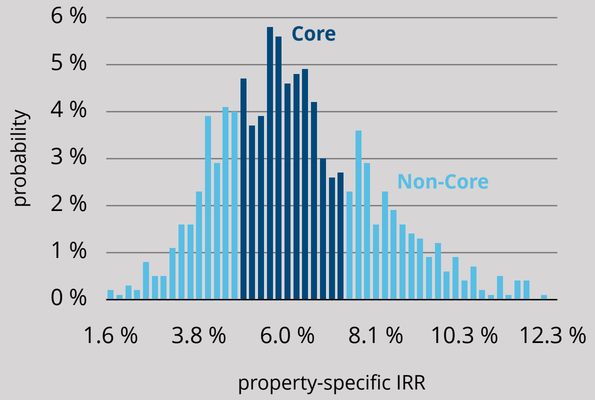
The 5.50- to 6.49-Percenters

Property-Specific IRR

The Market for Light Manufacturing (UI)

IRR Range UI Light Manufacturing



Results Range

IRR base value	**5.71 %**
performace expectation	**Who should invest?**
4.7 - 7.3 %	**Core-Investors**
4.2 - 6.9 %	previous year
up to 12.3 %	**Non-Core-Investors**
up to 13.4 %	previous year

Conclusion

The supply of properties for light manufacturing is very limited, and their quality varies considerably. Particularly in phases of low economic prosperity, it is very important to examine the performance of companies for light manufacturing.

Market Environment

investment demand	national to international
demand for space	regional to national
liquidity	low
volatility	medium
marketable size	from 5 million euros upwards

6

The 5-Percenters

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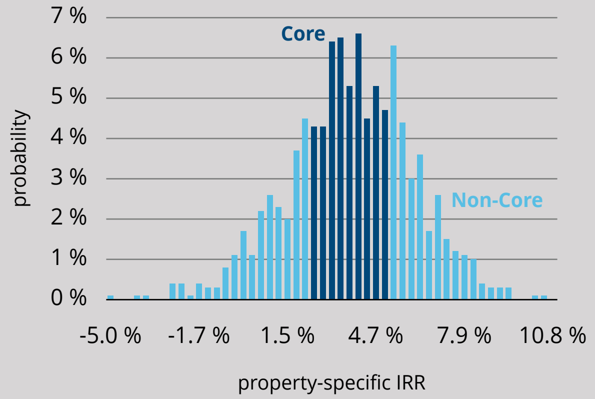
The 4.50- to 5.49-Percenters

Property-Specific IRR

The Market for Office Properties in D Cities

IRR Range Office D Cities



Results Range

IRR base value	5.09 %
performace expectation	**Who should invest?**
2.2 - 5.2 %	**Core-Investors**
2.7 - 5.7 %	previous year
up to 10.8 %	**Non-Core-Investors**
up to 11.9 %	previous year

Conclusion

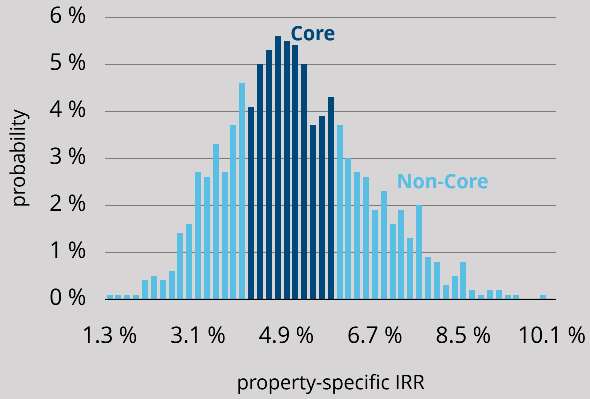
Office investments in smaller markets should be made taking account of a sufficient market size. An in-depth examination of the economic structural conditions and the associated demand for offices is recommended.

Market Environment

investment demand	regional to international
demand for space	regional to national
liquidity	low
volatility	low
marketable size	approx. 3 to 18 million euros

The Market for Business Parks (UI)

IRR Range UI Business Park



Results Range

IRR base value	4.93 %
performace expectation	**Who should invest?**
4.0 - 5.9 %	**Core-Investors**
4.0 - 6.0 %	previous year
up to 10.1 %	**Non-Core-Investors**
up to 9.4 %	previous year

Conclusion

The supply of business parks remains very limited. Due to the wide range of supply, business parks have proven resilient against crises.

Market Environment

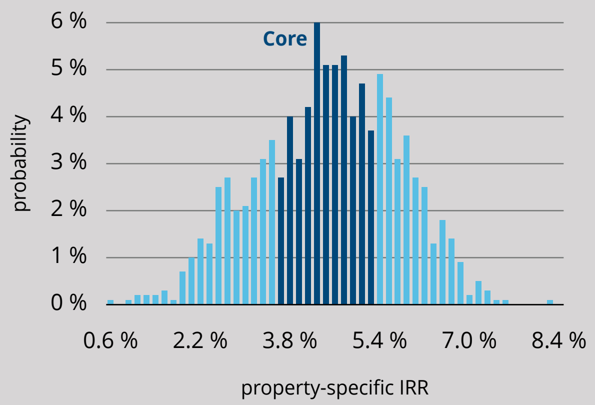
investment demand	regional to international
demand for space	local to national
liquidity	low
volatility	medium
marketable size	approx. 2 to 70 million euros

The 4.50- to 5.49-Percenters

Property-Specific IRR

The Market for Shopping Centers

IRR Range Shopping Center



Results Range

IRR base value	**4.64 %**
performace expectation	**Who should invest?**
3.5 - 5.3 %	**Core-Investors**
2.9 - 4.6 %	previous year

up to 8.4 %	
up to 6.3 %	previous year

Conclusion

Investment demand for shopping centers is still restrained. Repurposing scenarios often have to be priced in.

Market Environment

investment demand	national to international
demand for space	national to international
liquidity	low
volatility	high
marketable size	approx. 80 to 500 mill. euros

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The 4-Percenters

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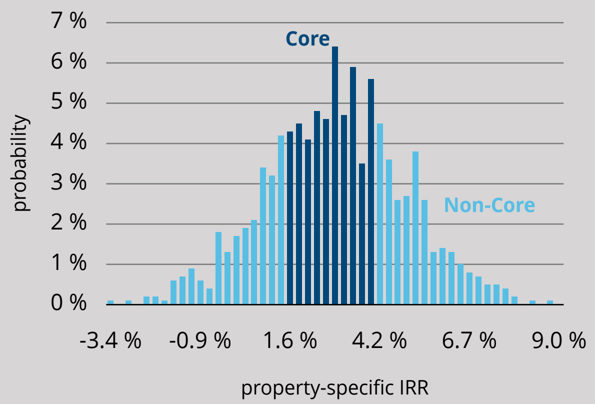
The 3.50- to 4.49-Percenters

Property-Specific IRR

The Market for Office Properties in C Cities

IRR Range Office C Cities



Results Range

IRR base value	3.88 %
performace expectation	Who should invest?
1.5 - 4.0 %	**Core-Investors**
1.5 - 4.3 %	previous year
up to 9.0 %	**Non-Core-Investors**
up to 8.6 %	previous year

Conclusion

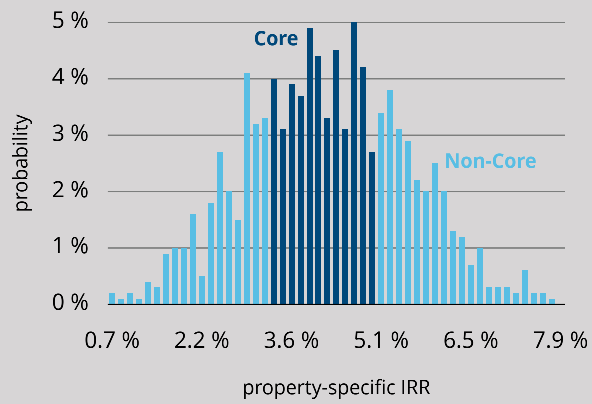
On the one hand, C markets are benefiting from recent increases in yields and the rising inflation, which leads to more dynamic cash flow. This is countered by the need for energy-efficiency measures in many existing buildings.

Market Environment

investment demand	regional to international
demand for space	regional to national
liquidity	low to medium
volatility	low
marketable size	approx. 10 to 40 million euros

The Market for Warehouse Properties (UI)

IRR Range UI Warehouse



Results Range

IRR base value	3.81 %
performace expectation	Who should invest?
3.2 - 5.1 %	**Core-Investors**
2.8 - 4.5 %	previous year
up to 7.9 %	**Non-Core-Investors**
up to 7.2 %	previous year

Conclusion

Small-scale warehouse space remains highly sought-after, particularly on the user market. Further rent increases are likely.

Market Environment

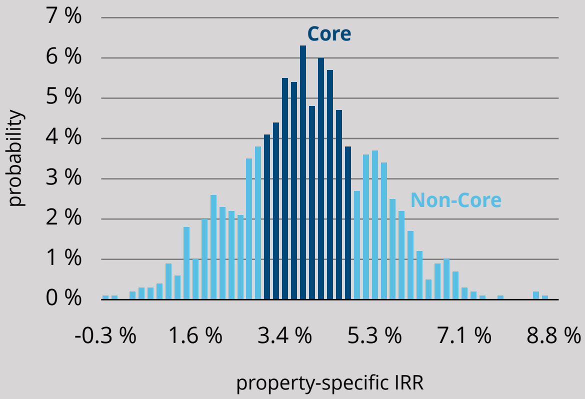
investment demand	regional to international
demand for space	local to national
liquidity	medium
volatility	medium
marketable size	approx. 1 to 10 million euros

The 3.50- to 4.49-Percenters

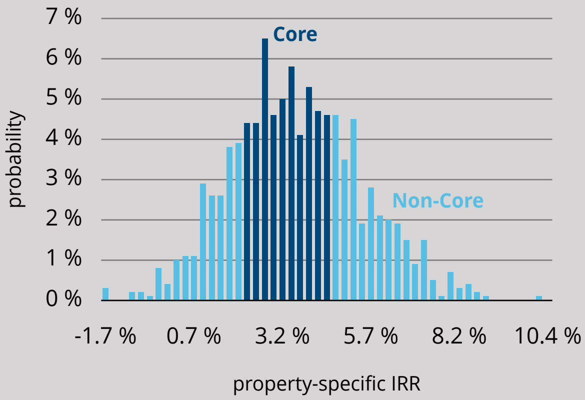
Property-Specific IRR

The Market for Hotel Properties

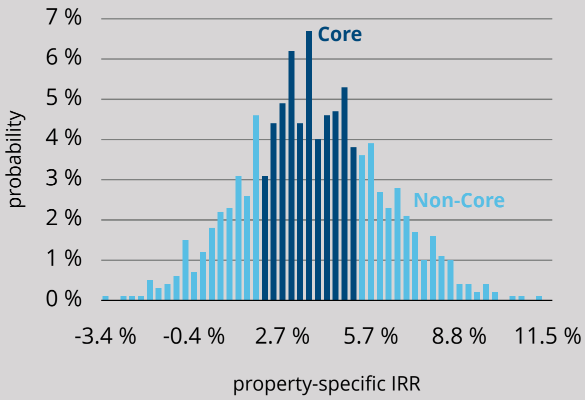
IRR Range Economy Hotel



IRR Range Midscale Hotel



IRR Range Upscale Hotel



Results Range

IRR base value	3.51 - 3.80 %
performace expectation	Who should invest?
2.0 - 5.2 %	**Core-Investors**
1.7 - 4.7 %	previous year
up to 11.5 %	**Non-Core-Investors**
up to 10.8 %	previous year

Conclusion

Investors are still cautious when it comes to hotel properties, especially since scenarios involving further lockdowns in the context of a potential renewed escalation of the coronavirus pandemic cannot be ruled out. Nonetheless, hotel may represent a high-yield alternative.

Market Environment

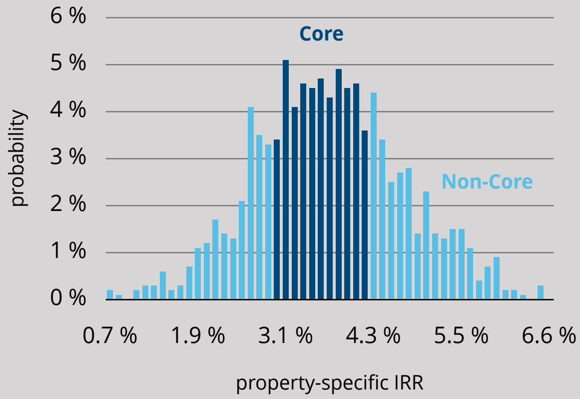
type of market	hotels in former „magic cities“
investment demand	national to international
demand for space	national to international
liquidity	currently low
volatility	high
marketable size	approx. 5 to 100 million euros

The 3.50- to 4.49-Percenters

Property-Specific IRR

The Market for Modern Logistics Properties

IRR Range Modern Logistics



Results Range

IRR base value	3.57 %
performace expectation	Who should invest?
2.9 - 4.3 % (3.2 - 4.6 %)	**Core-Investors** (previous year)
up to 6.6 % (up to 7.1 %)	**Non-Core-Investors** (previous year)

Conclusion

After steep price increases, the phase of repricing in a changed interest rate environment is not complete yet. User demand is still brisk and rent expectations are accordingly positive.

Market Environment

investment demand	national to international
demand for space	regional to international
liquidity	medium to high
volatility	low
marketable size	from approx. 10 million euros

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The 3-Percenters

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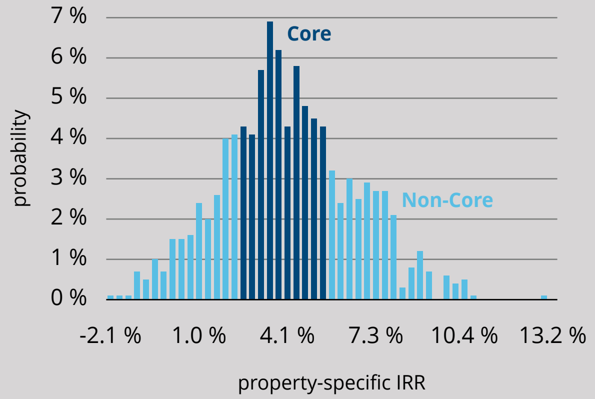
The 2.50- to 3.49-Percenters

Property-Specific IRR

The Market for Assisted Living for Seniors

IRR Range Assisted Living for Seniors



Results Range

IRR base value	3.42 %
performace expectation	**Who should invest?**
2.4 - 5.5 %	**Core-Investors**
	previous year
up to 13.2 %	**Non-Core-Investors**
	previous year

Conclusion

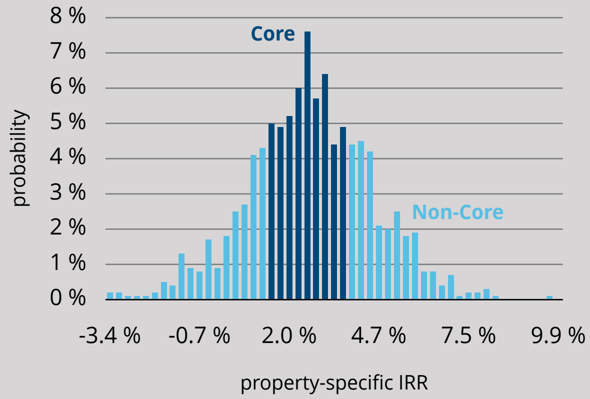
Assisted living for seniors is a growing segment that picks up on the megatrend of an ageing society. The risk relate to the operator's economic performance and pricing in a lease in line with the market. Investors should have relevant exper-tise.

Market Environment

investment demand	national
demand for space	regional to national
liquidity	medium
volatility	medium to low
marketable size	from 10 million euros

The Market for Office Properties in B Cities

IRR Range Office B Cities



Results Range

IRR base value	3.36 %
performace expectation	**Who should invest?**
1.3 - 3.8 %	**Core-Investors**
1.0 - 3.8 %	previous year
up to 9.9 %	**Non-Core-Investors**
up to 10.1 %	previous year

Conclusion

Due to their lower market volatility, B cities are regarded as stable alternatives to the A markets. They are particularly also suitable for yield-focussed investors with an investment volume of 50 million euros.

Market Environment

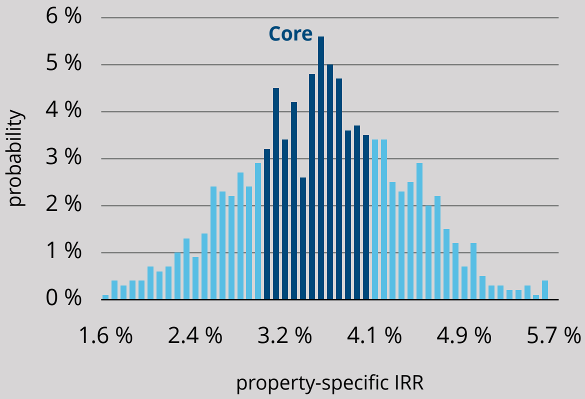
investment demand	national to international
demand for space	national to international
liquidity	medium
volatility	medium
marketable size	up to approx. 70 million euros

The 2.50- to 3.49-Percenters

Property-Specific IRR

The Market for Specialist Retail Parks

IRR Range Specialist Retail Parks



Results Range

IRR base value	3.25 %
performace expectation	Who should invest?
3.0 - 4.1 %	**Core-Investors**
2.3 - 3.2 %	previous year
up to 5.7 %	
up to 4.7 %	previous year

Conclusion

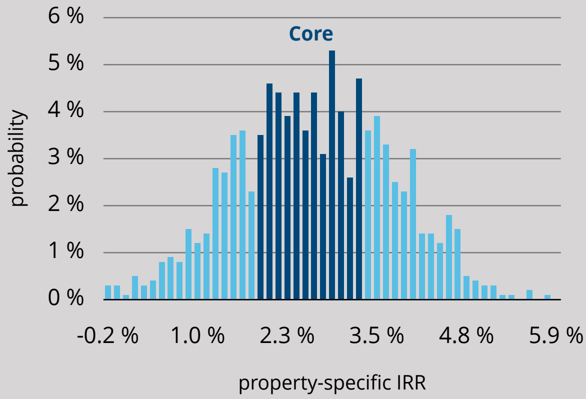
The yield compression for specialist retail parks has come to a halt due to the turnaround in interest rates. User demand remains high, and in the case of long-term rental agreements the respective indexation clause is a key factor for performance.

Market Environment

investment demand	international
demand for space	regional to national
liquidity	medium to high
volatility	medium
marketable size	approx. 5 to 50 million euros

The Market for Micro-Apartments in B Cities

IRR Range Micro-Apartments B Cities



Results Range

IRR base value	3.19 %
performace expectation	Who should invest?
1.8 - 3.4 %	**Core-Investors**
1.8 - 2.9 %	previous year
up to 5.9 %	
up to 4.8 %	previous year

Conclusion

Furnished (residential) apartments have a different risk profile from commercial operator solutions. User demand has increased again, and the repricing following the turnaround in interest rates is not yet complete.

Market Environment

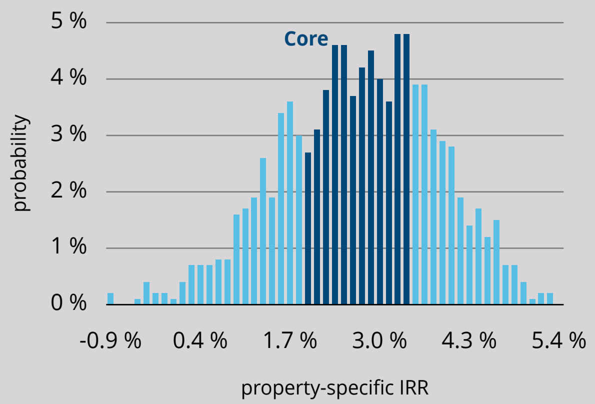
investment demand	regional to international
demand for space	national
liquidity	medium
volatility	medium
marketable size	up to approx. 20 million euros

The 2.50- to 3.49-Percenters

Property-Specific IRR

The Market for Micro-Apartments in A Cities

IRR Range Micro-Apartments A Cities



Results Range

IRR base value	3.09 %
performace expectation	Who should invest?
1.8 - 3.4 %	Core-Investors
1.0 - 2.3 %	previous year
up to 5.4 %	
up to 4.4 %	previous year

Conclusion

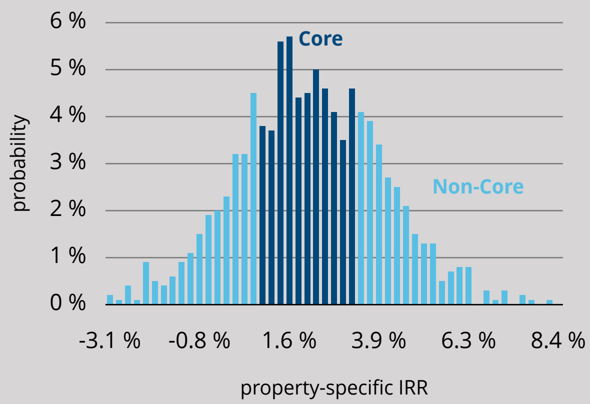
Demand for furnished alternatives to standard apartments is particularly driven by students, young professionals and commuters. High administrative and maintenance requirements should be taken into account when making an investment.

Market Environment

investment demand	national to international
demand for space	national to international
liquidity	medium to high
volatility	medium
marketable size	up to approx. 60 million euros

The Market for Office Properties in A Cities

IRR Range Office A Cities



Results Range

IRR base value	2.68 %
performace expectation	Who should invest?
0.7 - 3.3 %	Core-Investors
0.2 - 2.9 %	previous year
up to 8.4 %	Non-Core-Investors
up to 8.3 %	previous year

Conclusion

Recently rising prices and inflation are causing the attainable IRRs for offices in the A markets to increase. Their performance is weakened by higher energy-efficiency requirements for existing buildings.

Market Environment

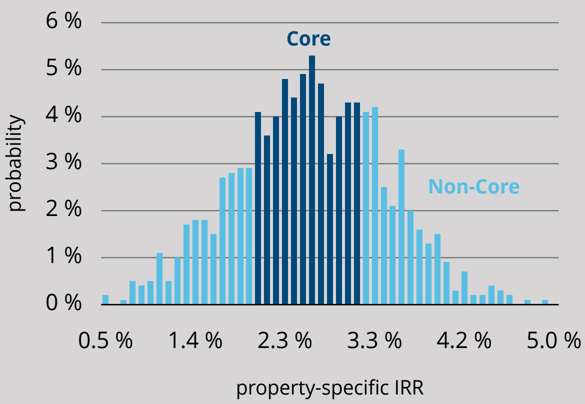
investment demand	national to international
demand for space	regional to international
liquidity	high
volatility	high
marketable size	approx. 3 to 500 million euros

The 2.50- to 3.49-Percenters

Property-Specific IRR

The Market for Residential Properties (US) in University Cities

IRR Range Residential University Cities



Results Range

IRR base value	2.62 %
performace expectation	**Who should invest?**
2.0 - 3.1 %	**Core-Investors**
2.2 - 3.0 %	previous year
up to 5.0 %	
up to 4.1 %	previous year

Conclusion

Many university cities are still characterised by a shortage of housing. Demand therefore remains brisk. For investments in existing buildings, it may be necessary to price in energy-efficiency measures in the medium term.

Market Environment

investment demand	regional to international
demand for space	regional to national
liquidity	medium to high
volatility	low
marketable size	up to approx. 50 million euros

6

5

4

3

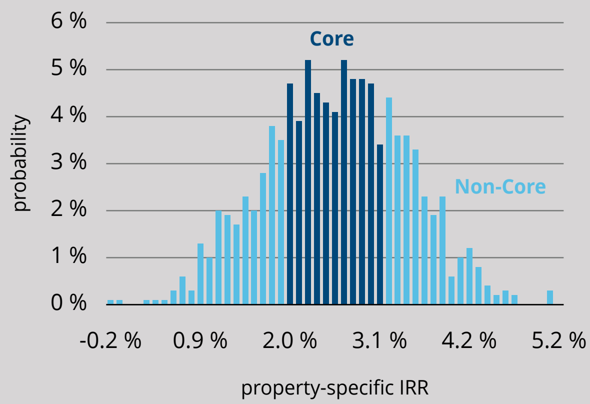
The 2-Percenters

The 1.50- to 2.49-Percenters

Property-Specific IRR

The Market for Residential Properties in B Cities

IRR Range Residential B Cities



Results Range

IRR base value	2.46 %
performace expectation	**Who should invest?**
1.9 - 3.1 %	**Core-Investors**
1.9 - 2.8 %	previous year

up to 5.2 %

up to 4.1 %	previous year

Conclusion

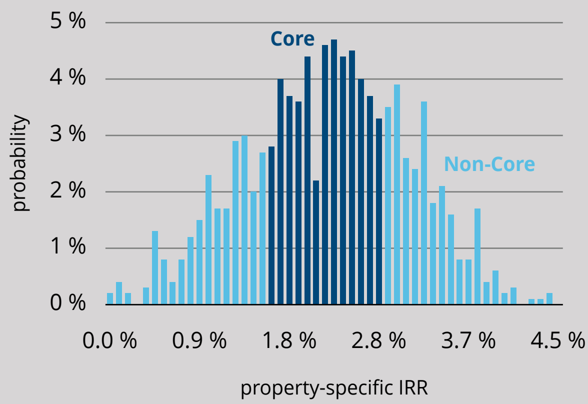
B markets have a somewhat more favourable yield profile than the A markets in the residential segment. Investors should take account of the respective regulatory restrictions and price in additional capex measures for energy-efficiency upgrades in the case of existing buildings.

Market Environment

investment demand	national to international
demand for space	regional
liquidity	medium
volatility	medium
marketable size	approx. 3 to 50 million euros

The Market for Residential Properties in A Cities

IRR Range Residential A Cities



Results Range

IRR base value	2.30 %
performace expectation	**Who should invest?**
1.6 - 2.8 %	**Core-Investors**
1.9 - 2.5 %	previous year

up to 4.5 %

up to 3.3 %	previous year

Conclusion

Repricing in the residential sector seems to be ongoing still. In the current interest rate environment, investments are often economically viable only in the case of a high equity share. User demand remains high, but growing regulatory restrictions should be borne in mind.

Market Environment

investment demand	regional to international
demand for space	regional to international
liquidity	high
volatility	low
marketable size	up to approx. 150 mill. euros

The Results in Detail

Detailed overview

Property-Specific IRR

Office A, B, C and D Cities in Detail – Property Specific IRR

type	city	Core-I.		Non-Core-I.	type	city	Core-I.		Non-Core-I.	type	city	Core-I.		Non-Core-I.
		from	to	up to			from	to	up to			from	to	up to
A	Berlin	0.5 %	3.3 %	9.8 %	C	Wuppertal	1.6 %	4.4 %	9.7 %	D	Krefeld	1.8 %	4.7 %	9.1 %
A	Düsseldorf	0.9 %	3.1 %	7.5 %						D	Landshut	2.4 %	5.0 %	9.2 %
A	Frankfurt (Main)	0.9 %	3.2 %	7.1 %	D	Albstadt	1.6 %	5.3 %	11.4 %	D	Leverkusen	1.8 %	4.7 %	9.9 %
A	Hamburg	0.7 %	3.2 %	7.9 %	D	Aschaffenburg	2.0 %	4.7 %	9.0 %	D	Lüdenscheid	2.4 %	5.6 %	11.7 %
A	Köln	0.6 %	3.7 %	10.1 %	D	Bamberg	2.2 %	5.4 %	11.3 %	D	Ludwigshafen	2.0 %	4.9 %	10.6 %
A	München	0.9 %	3.7 %	8.3 %	D	Bayreuth	2.3 %	5.2 %	9.7 %	D	Lüneburg (Stadt)	2.4 %	5.2 %	10.8 %
A	Stuttgart	0.8 %	3.3 %	7.4 %	D	Bergisch Gladbach	1.9 %	4.6 %	8.6 %	D	Marburg	3.1 %	5.4 %	10.3 %
					D	Bottrop	2.2 %	5.3 %	12.2 %	D	Minden	2.5 %	5.5 %	11.9 %
B	Bochum	2.1 %	4.8 %	10.1 %	D	Brandenburg (Hav.)	0.8 %	5.1 %	13.4 %	D	Moers	2.5 %	5.5 %	11.3 %
B	Bonn	1.3 %	3.9 %	8.1 %	D	Bremerhaven	-0.4 %	3.8 %	11.1 %	D	Neubrandenburg	3.0 %	5.9 %	10.3 %
B	Bremen	1.1 %	3.9 %	9.6 %	D	Chemnitz	2.5 %	5.4 %	11.7 %	D	Neumünster	2.2 %	4.9 %	10.6 %
B	Dortmund	1.2 %	3.7 %	8.9 %	D	Coburg	1.8 %	5.0 %	11.6 %	D	Neuss (Stadt)	1.3 %	3.8 %	8.9 %
B	Dresden	0.8 %	3.5 %	8.0 %	D	Cottbus	1.6 %	4.9 %	10.2 %	D	Oberhausen	0.7 %	3.7 %	9.1 %
B	Duisburg	2.0 %	4.5 %	8.9 %	D	Dessau	1.0 %	5.0 %	11.6 %	D	Offenburg	2.1 %	5.0 %	10.4 %
B	Essen	1.1 %	3.9 %	8.1 %	D	Detmold	1.5 %	5.3 %	12.2 %	D	Oldenburg	2.2 %	4.9 %	9.7 %
B	Hannover	1.1 %	3.7 %	8.9 %	D	Düren (Stadt)	1.4 %	4.6 %	10.4 %	D	Paderborn (Stadt)	1.3 %	4.4 %	9.2 %
B	Karlsruhe	1.0 %	3.7 %	8.1 %	D	Eisenach	0.9 %	4.8 %	10.7 %	D	Passau	1.8 %	4.7 %	9.6 %
B	Leipzig	0.8 %	3.6 %	8.3 %	D	Flensburg	2.3 %	5.4 %	10.9 %	D	Pforzheim	1.0 %	4.2 %	9.7 %
B	Mannheim	1.2 %	3.6 %	7.5 %	D	Frankfurt (Oder)	1.6 %	4.9 %	9.8 %	D	Plauen	0.2 %	5.2 %	12.9 %
B	Münster	1.1 %	3.7 %	8.0 %	D	Friedrichshafen	2.8 %	5.1 %	9.6 %	D	Ratingen	2.2 %	4.5 %	9.7 %
B	Nürnberg	0.9 %	3.5 %	8.5 %	D	Fulda (Stadt)	2.0 %	4.9 %	10.2 %	D	Ravensburg (Stadt)	2.4 %	5.1 %	9.9 %
B	Wiesbaden	1.1 %	3.5 %	8.4 %	D	Fürth	2.0 %	5.3 %	11.2 %	D	Recklinghausen (S.)	2.3 %	5.3 %	10.9 %
					D	Gelsenkirchen	1.3 %	4.5 %	10.7 %	D	Remscheid	2.0 %	5.2 %	10.8 %
C	Aachen	1.4 %	4.0 %	9.2 %	D	Gera	1.9 %	5.6 %	13.3 %	D	Reutlingen (Stadt)	2.1 %	4.8 %	9.6 %
C	Augsburg	0.6 %	3.4 %	8.0 %	D	Gießen (Stadt)	2.4 %	5.0 %	9.7 %	D	Rosenheim	2.0 %	4.6 %	9.3 %
C	Bielefeld	1.5 %	4.6 %	10.0 %	D	Görlitz	0.9 %	5.1 %	13.7 %	D	Salzgitter	1.4 %	4.7 %	9.9 %
C	Braunschweig	1.5 %	4.5 %	11.0 %	D	Göttingen (Stadt)	2.6 %	5.4 %	9.7 %	D	Schweinfurt	2.1 %	5.4 %	10.1 %
C	Darmstadt	1.1 %	3.6 %	7.3 %	D	Greifswald	1.8 %	4.9 %	10.4 %	D	Schwerin	1.5 %	4.5 %	10.3 %
C	Erfurt	1.4 %	4.3 %	9.0 %	D	Gütersloh (Stadt)	1.7 %	4.9 %	10.3 %	D	Siegen (Stadt)	2.3 %	5.3 %	10.9 %
C	Erlangen	1.7 %	4.7 %	10.4 %	D	Hagen	2.7 %	5.6 %	10.1 %	D	Solingen	2.1 %	5.4 %	12.0 %
C	Freiburg (Breisgau)	1.2 %	3.5 %	8.1 %	D	Halberstadt (Stadt)	0.4 %	5.4 %	14.9 %	D	Stralsund	1.3 %	4.7 %	10.9 %
C	Heidelberg	1.3 %	3.7 %	7.7 %	D	Halle (Saale)	1.6 %	4.7 %	9.7 %	D	Suhl	0.4 %	5.4 %	14.8 %
C	Kiel	1.5 %	4.2 %	9.2 %	D	Hamm	2.3 %	5.3 %	9.7 %	D	Trier	1.9 %	4.7 %	10.1 %
C	Lübeck	1.5 %	4.4 %	9.3 %	D	Hanau	2.1 %	4.8 %	9.9 %	D	Tübingen (Stadt)	1.8 %	4.6 %	10.7 %
C	Magdeburg	2.2 %	5.0 %	9.3 %	D	Heilbronn	2.0 %	4.8 %	9.7 %	D	Ulm	1.9 %	4.3 %	9.2 %
C	Mainz	1.1 %	3.9 %	8.1 %	D	Herne	2.5 %	5.4 %	10.5 %	D	Villingen-Schwenn.	2.8 %	5.9 %	10.6 %
C	Mönchengladbach	2.2 %	4.7 %	10.0 %	D	Hildesheim (Stadt)	1.4 %	4.6 %	9.8 %	D	Weimar	2.1 %	5.5 %	11.4 %
C	Mülheim (Ruhr)	1.4 %	4.0 %	8.7 %	D	Ingolstadt	1.8 %	4.3 %	9.4 %	D	Wilhelmshaven	2.1 %	5.6 %	11.6 %
C	Offenbach (Main)	1.0 %	3.7 %	7.7 %	D	Jena	3.0 %	6.1 %	11.0 %	D	Witten	1.7 %	4.9 %	11.9 %
C	Osnabrück	1.3 %	4.1 %	8.1 %	D	Kaiserslautern	1.2 %	4.4 %	9.8 %	D	Wolfsburg	1.9 %	4.5 %	8.8 %
C	Potsdam	1.2 %	3.5 %	7.6 %	D	Kassel	1.8 %	4.9 %	9.6 %	D	Würzburg	2.5 %	5.5 %	11.2 %
C	Regensburg	1.5 %	4.1 %	8.4 %	D	Kempten (Allgäu)	2.3 %	5.3 %	11.7 %	D	Zwickau	1.7 %	5.6 %	11.0 %
C	Rostock	1.8 %	4.5 %	9.1 %	D	Koblenz	1.7 %	4.4 %	9.4 %					
C	Saarbrücken (Stadt)	1.4 %	4.5 %	9.3 %	D	Konstanz (Stadt)	2.2 %	4.7 %	8.6 %					

Detailed overview

Property-Specific IRR

Residential A, B and University Cities (US) in Detail – Property-Specific IRR

type	city	Core-I. from	Core-I. to	Non-Core-I. up to	type	city	Core-I. from	Core-I. to	Non-Core-I. up to	type	city	Core-I. from	Core-I. to	Non-Core-I. up to
A	Berlin	1.3 %	2.6 %	4.9 %	US	Bamberg	2.1 %	3.0 %	4.4 %	US	Koblenz	2.1 %	3.1 %	4.7 %
A	Düsseldorf	1.5 %	2.7 %	4.5 %	US	Bayreuth	2.1 %	2.8 %	3.8 %	US	Konstanz (Stadt)	1.8 %	2.9 %	3.3 %
A	Frankfurt (Main)	1.9 %	2.8 %	4.3 %	US	Bielefeld	1.9 %	2.9 %	4.8 %	US	Lübeck	1.8 %	2.9 %	4.6 %
A	Hamburg	1.6 %	3.0 %	5.1 %	US	Braunschweig	1.8 %	2.9 %	4.7 %	US	Lüneburg (Stadt)	2.0 %	3.1 %	4.7 %
A	Köln	1.6 %	2.4 %	4.8 %	US	Chemnitz	1.0 %	2.3 %	4.1 %	US	Magdeburg	1.4 %	2.5 %	4.5 %
A	München	1.2 %	2.7 %	5.0 %	US	Cottbus	1.5 %	2.8 %	4.9 %	US	Mainz	2.1 %	3.0 %	4.4 %
A	Stuttgart	1.9 %	3.1 %	5.0 %	US	Darmstadt	2.0 %	3.2 %	5.1 %	US	Marburg	2.2 %	3.4 %	5.1 %
B	Bochum	2.0 %	3.2 %	5.2 %	US	Erfurt	1.8 %	2.9 %	4.5 %	US	Mönchengladbach	1.8 %	2.9 %	4.7 %
B	Bonn	1.8 %	3.0 %	5.0 %	US	Erlangen	2.0 %	2.9 %	4.2 %	US	Oldenburg	1.7 %	2.9 %	4.6 %
B	Bremen	2.1 %	3.4 %	5.3 %	US	Flensburg	1.9 %	3.1 %	4.9 %	US	Osnabrück	2.2 %	3.2 %	5.2 %
B	Dortmund	2.0 %	3.0 %	4.9 %	US	Frankfurt (Oder)	1.7 %	3.0 %	4.7 %	US	Paderborn (Stadt)	1.8 %	3.1 %	5.0 %
B	Dresden	1.5 %	2.7 %	4.6 %	US	Freiburg (Breisgau)	1.7 %	2.9 %	4.8 %	US	Passau	2.0 %	2.9 %	4.3 %
B	Duisburg	1.7 %	3.0 %	5.3 %	US	Gießen (Stadt)	1.9 %	2.9 %	4.7 %	US	Potsdam	1.3 %	2.8 %	5.0 %
B	Essen	2.0 %	3.2 %	5.0 %	US	Göttingen (Stadt)	2.4 %	3.4 %	4.9 %	US	Regensburg	1.9 %	2.9 %	4.9 %
B	Hannover	1.6 %	3.1 %	5.0 %	US	Greifswald	2.3 %	3.4 %	5.1 %	US	Rostock	2.0 %	3.1 %	4.8 %
B	Karlsruhe	1.8 %	3.1 %	5.2 %	US	Halle (Saale)	1.4 %	2.4 %	3.7 %	US	Saarbrücken (S.)	2.0 %	3.1 %	4.5 %
B	Leipzig	1.2 %	2.5 %	4.7 %	US	Heidelberg	1.8 %	2.8 %	4.2 %	US	Siegen (Stadt)	2.3 %	3.5 %	5.1 %
B	Mannheim	1.9 %	3.1 %	4.9 %	US	Heilbronn	2.1 %	3.1 %	4.8 %	US	Trier	2.3 %	3.2 %	4.7 %
B	Münster	1.6 %	2.9 %	4.5 %	US	Hildesheim (Stadt)	1.8 %	3.0 %	5.3 %	US	Tübingen (Stadt)	1.9 %	3.3 %	5.2 %
B	Nürnberg	1.9 %	3.0 %	4.7 %	US	Jena	2.0 %	2.9 %	4.4 %	US	Ulm	1.6 %	2.9 %	4.7 %
B	Wiesbaden	1.8 %	3.0 %	5.0 %	US	Kaiserslautern	2.3 %	3.4 %	4.9 %	US	Wuppertal	1.7 %	2.9 %	4.6 %
US	Aachen	1.8 %	3.0 %	4.6 %	US	Kassel	1.9 %	3.1 %	5.1 %	US	Würzburg	1.9 %	2.9 %	4.5 %
US	Augsburg	1.8 %	3.0 %	4.8 %	US	Kiel	1.9 %	3.1 %	5.3 %					

Micro-Apartments A and B Cities in Detail – Property-Specific IRR

type	city	Core-I. from	Core-I. to	Non-Core-I. up to	type	city	Core-I. from	Core-I. to	Non-Core-I. up to	type	city	Core-I. from	Core-I. to	Non-Core-I. up to
A	Berlin	1.6 %	3.2 %	5.5 %	B	Bochum	1.9 %	3.2 %	5.5 %	B	Hannover	1.7 %	3.3 %	5.4 %
A	Düsseldorf	1.8 %	3.3 %	5.6 %	B	Bonn	1.8 %	3.3 %	5.2 %	B	Karlsruhe	2.0 %	3.5 %	5.5 %
A	Frankfurt (Main)	2.0 %	3.3 %	5.4 %	B	Bremen	2.0 %	3.5 %	6.2 %	B	Leipzig	1.2 %	2.8 %	5.2 %
A	Hamburg	1.9 %	3.5 %	5.9 %	B	Dortmund	1.7 %	3.1 %	5.1 %	B	Mannheim	2.0 %	3.4 %	5.6 %
A	Köln	1.8 %	2.9 %	4.3 %	B	Dresden	1.4 %	2.9 %	5.1 %	B	Münster	1.7 %	3.1 %	5.3 %
A	München	1.6 %	3.4 %	5.9 %	B	Duisburg	1.4 %	2.8 %	5.7 %	B	Nürnberg	1.9 %	3.4 %	5.4 %
A	Stuttgart	2.1 %	3.6 %	6.1 %	B	Essen	1.9 %	3.3 %	5.8 %	B	Wiesbaden	1.9 %	3.3 %	6.1 %

Logistics Regions in Detail – Property-Specific IRR

logistics region	Core-I. from	Core-I. to	Non-Core-I. up to	logistics region	Core-I. from	Core-I. to	Non-Core-I. up to	logistics region	Core-I. from	Core-I. to	Non-Core-I. up to
A 4 Sachsen	3.2 %	4.7 %	7.3 %	Hamburg	2.4 %	3.7 %	6.2 %	Oberrhein	3.2 %	4.7 %	6.9 %
A 4 Thüringen	3.3 %	4.9 %	7.5 %	Hannover/Braunschweig	3.0 %	4.6 %	7.8 %	Ostwestfalen-Lippe	3.3 %	4.9 %	7.5 %
Aachen	3.4 %	4.8 %	7.5 %	Kassel/Göttingen	2.3 %	3.8 %	6.7 %	Rhein-Main/Frankfurt	2.4 %	3.7 %	6.4 %
Augsburg	3.0 %	4.4 %	7.0 %	Koblenz	2.3 %	3.8 %	6.6 %	Rhein-Neckar	2.9 %	4.3 %	6.9 %
Bad Hersfeld	2.1 %	3.4 %	5.8 %	Köln	3.1 %	4.6 %	7.4 %	Rhein-Ruhr	2.4 %	3.9 %	6.3 %
Berlin	2.9 %	4.4 %	7.2 %	Magdeburg	2.1 %	3.6 %	6.2 %	Saarbrücken	3.0 %	4.4 %	7.4 %
Bremen und Nordseehafen	2.6 %	4.0 %	6.6 %	München	2.8 %	4.3 %	6.4 %	Stuttgart	2.9 %	4.4 %	7.4 %
Dortmund	2.6 %	4.0 %	6.6 %	Münster/Osnabrück	2.4 %	3.9 %	6.3 %	Ulm	2.4 %	3.8 %	6.1 %
Düsseldorf	2.9 %	4.4 %	6.7 %	Niederbayern	2.7 %	4.2 %	7.0 %				
Halle/Leipzig	2.3 %	3.6 %	5.8 %	Nürnberg	2.8 %	4.2 %	6.6 %				

Content and Methodology

» Content of the Study

Using dynamic performance measurement, the 5 % study provides a new approach for describing property markets. The yield prospects of various asset classes are presented on the basis of an analysis of the internal rate of return on an investment. In light of the recognition that a single data point can reflect the complexity of a market only to a very limited extent, this study also highlights the range of investment profitability. Descriptions of property markets in market reports are usually based on top properties that generate prime rents and are accordingly traded at prime yields. However, this does not take account of the high diversification of the investor landscape, where extremely security-focussed investors increasingly find themselves alongside players seeking to identify and take advantage of market opportunities. This study also offers these players an overview of the market.

The subject matter analysed in this 5 % study is the performance expectations in the asset classes that currently dominate the German investment market. These include:
- office
- residential
- shopping centres and specialist retail centres
- hotels
- modern logistics properties

as well as the newer property types:
- micro-apartments and business properties (Unternehmensimmobilien UI)

» Basic Concept

The study uses a dynamic model to determine the probable internal rate of return (IRR) on an investment, assuming a holding period of ten years. It is assumed that the investment takes place at typical parameters for the market in question. A cash flow approach was applied, describing the anticipated future cash flows (purchase, rental income, property and operating costs, sale). The internal interest rate on these cash flows represents the IRR.

» No Financing Effects

In addition to the success of the properties themselves, successful real estate investments are also dependent on financing strategies (e.g. taking advantage of interest leverage through increased borrowing). There is typically a very wide range of variants on the market in this respect.

To allow for clear statements regarding the property performance, these effects and investor-specific adjustments were not included in the model.

» No Project Developments

This model assumes that the investment is made in buildings that do not require renovation or restructuring. Project developments as part of asset management strategies are therefore not included in the analysis.

» Procedure

It was assumed that the success of the investment may be influenced by various different determinants such as management performance and market fluctuations. Accordingly, a simulation (Monte Carlo) of possible results was performed on the basis of changing parameters. To this end, the relevant characteristics affecting the success of the investment were assigned fluctuation ranges that were derived in advance based on consideration and analysis of the respective market. Using Monte Carlo simulation, the probability of occurrence of the individual results was also calculated on the basis of 1,000 draws.

» Monte Carlo Simulation

Monte Carlo Simulation is a stochastic model for the projection of a forecast or base value. Put simply, this statistical method is a sort of limited random number generator that operates within framework conditions and values defined by the user. To map these parameters realistically and in line with market conditions as far as possible, a base value can also be defined in addition to a value range. After the simulation has been performed, the user receives a large number of results (depending on the number of draws) taking account of the predefined conditions. The modelling calculates probabilities of occurrence for the individual results within this range. The value range itself has a probability of occurrence of 100 %.

For the performance of the simulation, base values and ranges were defined – depending on the asset class under review – for groups of variables including the rent, vacancy rate, property costs and operating costs. The internal rate of return on the investment resulting from the cash flow calculation was set as the forecast value or IRR base value.

» Core Versus Non-Core

Core and Non-Core have become established as terms for investment strategies on the market, but there are no fixed definitions for them (at property level). Instead, there are a wide range of attempts at definitions, most of which are suggested by the respective investors themselves.

This study does not aim to add a further suggestion to these definitions. The division into core and non-core investors is therefore made at a purely statistical level. In the study, the corridor for core and non-core investors was delimited based on the assumption that core investors assume less risk and accept lower yields while non-core investors are less risk-averse but have higher yield targets.

Accordingly, the Monte Carlo results/IRRs between the 25 % quantile and the 75 % quantile (corresponding to a 50 % probability) are defined as the range within which core investors operate. The rest of the range – starting from an attainable rate of return of 6.49 % as the IRR base value – is seen as being for non-core investors. Here, there is a probability of 25 % that internal rates of return beyond the core range will be achieved. However, non-core investors may also fall below the attainable rate of return for core investors and in some cases may even generate negative IRRs.

» Parameters and Fluctuation Ranges

bulwiengesa's data system (RIWIS) was generally used as the source for rental, vacancy and yield information. For business properties, information from the Business Properties Initiative was selected as the basis. The data for hotels and retail properties were also checked for plausibility using analyses of investment transactions and other secondary sources (e.g. data from HypZert).

The cost data were calculated using primary analyses (where possible) and on the basis of typical market assumptions.

The fluctuation ranges for costs and income were defined individually for each type of use and are based on typical market parameters. Extreme values were excluded in this context.

» The Internal Rate of Return Method

The internal rate of return method shows the rate of return for which the net cash flows/the net present value is exactly zero. It thus represents the average rate of return on an investment. The internal rate of return method is not to be recommended as the sole basis for an investment decision, since it has a number of methodological shortcomings – the reinvestment assumption is criticised, for example. However, calculating the internal rate of return offers the advantage that this represents the success of a certain investment period (in the case of this study, ten years). This differentiates it from the static yield assessments that are typical on the market. In addition, the internal rate of return method is used by many investors and thus enjoys widespread acceptance.

» The Performance Measurement – Reading Guide

In view of the complex subject matter, guidance for readers is provided below for better understanding of the results. This guidance relates to the sections on the 5-, 4-, 3- and 2-Percenters.
In general, all calculations in the study are based on property sizes and parameters in line with the market.
The „Selected Model Assumptions" table on page 37 shows the key parameters incorporated in the cash flow calculation and simulation.
The results columns present/summarise the results of the Monte Carlo simulation.
In the diagram, the x-axis shows the projected IRRs based on the Monte Carlo simulation, while the y-axis shows the probability of occurrence for each projected IRR.
The dark blue bars represent the IRR range relevant to core investors as defined by the study. This has a 50 % probability of occurrence and is delimited by the 25 % and 75 % quantiles. In line with this, the top results box shows the core range with values.
The rest of the range – relevant to non-core investors according to the study's definition – is marked in light blue. This is above the core range in 25 % of cases, but may also be below this range. The maximum attainable IRR according to the simulation is specified in the bottom results box below the core range.
The internal rate of return on the investment (IRR), calculated using the base values in line with the cash flow method, also corresponds to the base value of the simulation.

Definitions and Comments

Overview A, B, C, D and University-Cities (US)

city	category	city	category	city	category	city	category
Berlin	A	Lübeck	C/US	Gelsenkirchen	D	Neuss	D
Düsseldorf	A	Magdeburg	C/US	Gera	D	Oberhausen	D
Frankfurt (Main)	A	Mainz	C/US	Gießen	D/US	Offenburg	D
Hamburg	A	Mönchengladbach	C/US	Görlitz	D	Oldenburg	D/US
Köln	A	Mülheim (Ruhr)	C	Göttingen	D/US	Paderborn	D/US
München	A	Offenbach (Main)	C	Greifswald	D/US	Passau	D/US
Stuttgart	A	Osnabrück	C	Gütersloh	D	Pforzheim	D
		Potsdam	C/US	Hagen	D	Plauen	D
Bochum	B	Regensburg	C/US	Halberstadt	D	Ratingen	D
Bonn	B	Rostock	C/US	Halle (Saale)	D/US	Ravensburg	D
Bremen	B	Saarbrücken	C/US	Hamm	D	Recklinghausen	D
Dortmund	B	Wuppertal	C/US	Hanau	D	Remscheid	D
Dresden	B			Heilbronn	D/US	Reutlingen	D
Duisburg	B	Albstadt	D	Herne	D	Rosenheim	D
Essen	B	Aschaffenburg	D	Hildesheim	D/US	Salzgitter	D
Hannover	B	Bamberg	D/US	Ingolstadt	D	Schweinfurt	D
Karlsruhe	B	Bayreuth	D/US	Jena	D/US	Schwerin	D
Leipzig	B	Bergisch Gladbach	D	Kaiserslautern	D/US	Siegen	D/US
Mannheim	B	Bottrop	D	Kassel	D/US	Solingen	D
Münster	B	Brandenburg (Hl.)	D	Kempten (Allgäu)	D	Stralsund	D
Nürnberg	B	Bremerhaven	D	Koblenz	D/US	Suhl	D
Wiesbaden	B	Chemnitz	D/US	Konstanz	D/US	Trier	D/US
		Coburg	D/US	Krefeld	D	Tübingen	D/US
Aachen	C/US	Cottbus	D	Landshut	D	Ulm	D/US
Augsburg	C/US	Dessau	D	Leverkusen	D	Villingen-Schwenn.	D
Bielefeld	C/US	Detmold	D	Lüdenscheid	D	Weimar	D
Braunschweig	C/US	Düren	D	Ludwigshafen	D	Wilhelmshaven	D
Darmstadt	C/US	Eisenach	D	Lüneburg	D/US	Witten	D
Erfurt	C/US	Flensburg	D/US	Marburg	D/US	Wolfsburg	D
Erlangen	C/US	Frankfurt (Oder)	D/US	Minden	D	Würzburg	D/US
Freiburg	C/US	Friedrichshafen	D	Moers	D	Zwickau	D
Heidelberg	C/US	Fulda	D	Neubrandenburg	D		
Kiel	C/US	Fürth	D	Neumünster	D		

» General Classification of cities

Classification as A, B, C and D cities was used to categorise the German real estate market. This was based on the functional significance of the cities for the international, national and regional or local real estate market:

A Cities
The most important centres in Germany with national and sometimes international significance. Large, well-functioning markets in all segments.

B Cities
Large cities with national and regional significance.

C Cities
Major German cities with regional and limited national significance and an important impact on the surrounding region.

D Cities
Small, regionally focussed locations with a central role for their direct surroundings; lower market volume and sales.

University cities (US)
47 cities with at least 7,000 students are classified as university cities in this study, not including A- and B-cities since these are analysed separately.

» Yields/Multipliers

(source: gif e. V.)

Gross initial yield

The gross initial yield is a simple comparison of the contractual rent to the purchase price, not including incidental acquisition costs. The gross initial yield is equivalent to the reciprocal of the multiplier that is typically used in the market (e.g. 12.5 times the contractual rent = 8 % p.a. gross initial yield).

Gross initial yield = contractual rent / net purchase price

Net initial yield

The net initial yield represents net rental income in relation to the purchase price plus property-specific incidental acquisition costs. For the sake of clarification, please note that other non-recurring costs and revenue losses/risks are not deducted from the net rental income.

However, calculatory items (e.g. maintenance costs) are also taken into account in the operating costs or in the gross purchase price. The valuations used for this must be in line with the market standard and must be reported separately when stating the net initial yield. They can be disclosed either individually for each item or for the cost block as a whole, in which case they can be referred to „operating costs" and „incidental acquisition costs" as a simplification (e.g. „net initial yield x.x % p.a. including y % operating costs and z % incidental acquisition costs").

Net initial yield = net rental income / gross purchase price

» Short Glossary for Office Property

Vacancy

Vacancy refers to vacant office space at the end of the respective year. It takes account of marketable properties only; structural vacancy therefore is not included.

The vacancy rate shows the ratio of vacancy to total space.

Take-up

Take-up is defined as an annual amount. It describes mostly office space taken up for rent, but also includes project developments focussing on owner-occupiers. The take-up date is the conclusion of the contract in the case of letting and the start of construction in the case of owner-occupiers.

Rents

Office rents are reported in euros per sqm rentable area according to gif e.V. (RA-C) and apply to office space in a marketable (technical/spatial) condition with good fixtures and fittings and small to medium-sized rental units. The reported rents are nominal values. The nominal rent is the initial rent shown in the contract, not including incentives, ancillary costs or local taxes.

The prime rent relates the top price segment – in relation to the respective market area – with a market share of between 3 % and 5 % of rental revenues (not including owner-occupiers) in the past twelve months and represents a median value. At least three concluded contracts should be included. It does not correspond to the absolute top rent (defined as outliers). To calculate the average rent, the individual rents for all new rental agreements concluded in the defined period are weighted according to the space rented in each case and an average is calculated.

» Short Glossary for Residential Properties/ Micro-Apartments

Residential rents

Residential rents for re-letting are reported in euros per sqm of residential space and ideally apply to an apartment with three rooms, around 65 to 95 sqm of residential space and standard fixtures and fittings. Because the fixtures and fittings and the sizes are standardised, the degree of variation shown in the rent range is influenced mainly by the location and the micro-location. The reported rents are nominal values.

The rents are stated without including ancillary costs or taking account of other benefits. Average rents represent the average value across the whole of the defined market.

The stated rents are average values intended to map a typical or usual level. They do not represent the strict arithmetic mean, the mode (most frequent value) or the median (central value) in a mathematical sense

Micro-apartments

Micro-apartments or business apartments are generally found in larger complexes with 100 to 300 units. They are offered as partly or fully furnished one-room apartments measuring between 18 and around 35 sqm, with a small kitchen and a separate bathroom. Optional services often include a concierge service, fitness facilities and laundry service. In terms of tax law, micro-apartments represent private-sector letting rather than operator-managed properties, meaning that rental agreements are concluded directly between the investor and the tenant.

Short Glossary for Retail Property

Specialist retail parks
Specialist retail park are defined as follows: They have:
- gross lettable area (GLA) of 10,000 sqm or more
- locations on the city outskirts with good transport con nec-tions, they are generally easy to reach, including for the wider surroundings
- ground-level floor space and extensive parking space, usu-ally also at ground level
- simple functionality in terms of their appearance
- discount retailers with aggressive price strategies that have a crowd-pulling effect and are supplemented by retailers and service providers with small amounts of space.

Shopping centers
Shopping centers are large-scale facilities that are constructed on the basis central planning and cover short-, medium- and long-term requirements.
They are characterised by:
- a spatial focus on retail, catering and service businesses of different sizes
- a generous supply of parking spaces
- central management/administration
- joint performance of certain functions by all tenants (e.g. advertising)
- and generally have sales space of at least 10,000 sqm.

Short Glossary for Unternehmensimmobilien
(Source: Initiative Unternehmensimmobilien)

The statements on Unternehmensimmobilien (UI) in this study are based on the market data of the Initiative Unterneh-mensimmobilien published in its Market Reports No. 10. According to these data, UI are mixed-use commercial pro-perties, typically with a SME-dominated tenant structure. The mix includes office, warehouse, production, research, service and/or wholesale space as well as open space.
Unternehmensimmobilien comprise four different property categories:
- Converted properties (not included in the study due to their very high degree of variation)
- Business parks
- Light manufacturing properties
- Warehouse properties

All four categories are characterised by the features of capacity for alternative uses, use reversibility and fundamental suita-bility for multi-party structures. This means that the strengths of Unternehmensimmobilien lie in their flexibility with regard to not only the use but also the users.

Business parks
- Usually planned and constructed specifically to be let out to companies
- Consist of several individual buildings forming a complex
- Management and infrastructure are organised uniformly
- Have all types of space (share of office space generally bet-ween 20 % and 50 %)
- Usually located on the outskirts of cities and easily acces-sible

Light manufacturing properties
- Predominantly individual hall properties with a moderate office share
- Suitable for a variety of types of production
- In principle, hall space can also be used for other purposes such as storage, research, services, wholesale and retail
- Capacity for alternative uses depends primarily on the loca-tion

Warehouse properties
- Predominantly existing properties with mainly basic sto-rage facilities and in some cases service space
- Within Unternehmensimmobilien, distinguished from modern logistics halls by a maximum size of 10,000 sqm
- Varying fit-out and quality standards
- Flexible and inexpensive types of space
- Generally reversible and suitable for higher-value uses (e.g. through retrofitting of ramps and gates)

Short Glossary for Logistics Properties

The study relates to a modern logistics property with hall space of more than 10,000 sqm.
Rents for warehouse/logistics space are reported in euros per sqm of hall space and apply to a heatable hall with standard fixtures and fittings, not including high-bay warehouses or similar, that are located in a conventional industrial area with good connections. The reported rents are nominal values.

The rents are stated without including ancillary costs or taking account of other benefits. Maximum and average values are shown. The maximum rents represent an average value for the top 3 to 5 % of the market. They do not corre-spond to the absolute top rent (defined as outliers). Average rents represent the average value across the whole of the defi-ned market.

The stated rents are average values intended to map a typical or usual level. They do not represent the strict arithmetic mean, the mode (most frequent value) or the median (central value) in a mathematical sense

» Short Glossary for Hotels

„Magic Cities“
This term refers to the former city alliance Magic Cities e. V., which included the following cities as its members: Berlin, Cologne, Dresden, Düsseldorf, Frankfurt am Main, Hamburg, Hanover, Leipzig, Munich, Nuremberg and Stuttgart. These cities are characterised by above-average tourist demand and a corresponding diverse offering for tourists.

Classification
This study is based on the following breakdown:
Economy: 1 or 2 stars
(Upper) midscale: 3 stars (3+ stars)
(Upper) upscale: 4 stars (4+ stars)
Luxury: 5 stars
The breakdown is based on the hotel classification used by DEHOGA (German Hotel and Restaurant Association), while the number of stars is taken from the online portals expedia.de and booking.com.

» List of abbreviations

Overview of abbreviations used in the study

ECB	European Central Bank
GDP	Gross Domestic Product
gif e. V.	gif Gesellschaft für immobilienwirtschaftliche Forschung e. V.
IRR	Internal Rate of Return
(Non-)Core-I.	(Non-)Core-Investors
RA-C	Rentable Area according to gif e. V.
sqm	square metres
UI	Unternehmensimmobilien
US	University Cities

» Notes on the Model

In general, renovations and project developments are not included. All calculations in the study are based on data, forecasts and analyses by bulwiengesa AG and its knowledge of the market. In addition to rent loss risk, vacancy risk is also taken into account in the cash flow calculation.

Terminology
Market liquidity is defined as investment demand irrespective of economic cycles.
Fluctuation refers to changes in tenants assumed at predefined dates – depending on the asset class.

Office
The study presents 127 office markets, broken down into A, B, C and D cities. A notional existing office property with average-quality space is assumed. The property size varies depending on the volume of the office market and the average take-up over the past ten years. The model also assumes annual fluctuation of 10 % of the property size and a three-year term for newly concluded rental agreements. The office rents are index-linked. The market rent in the year of the respective contract conclusion corresponds to the company's own forecast, while the ageing process of the property is taken into account with a rent discount. The purchase yield (net initial yield) in the model corresponds to the exit yield, so as to avoid distortions.

Residential
The study presents 68 residential markets, broken down into A, B and (other) university cities. The calculation is based on the assumption of an existing apartment building with 4,000 sqm of residential space and 55 residential units and with average fixtures and fittings. Annual fluctuation of 200 sqm is assumed. The fluctuation corresponds to the respective newly let space and a one-month vacancy p.a. For existing rental agreement space, rent adjustments to the market level every three years are assumed. The purchase yield (gross initial yield) in the model corresponds to the exit yield, so as to avoid distortions.

Micro-Apartments
A, B and (other) university cities – a total of 68 cities – are analysed. The calculation is based on the assumption of a property with 4,000 sqm of residential space and 200 fully furnished residential units of 20 sqm each. The base scenario assumes annual fluctuation of two-thirds of the total residential space, but the simulation also includes fluctuation of 0 % and 100 %. The purchase yield (gross initial yield) in the model corresponds to the exit yield, so as to avoid distortions. An operator model is not assumed.

Specialist Retail Parks
The model is based on an ideal specialist retail centre with floor space of around 20,000 sqm. The user structure consists of several retail spaces. Two anchor tenants and a use mix in line with the market are assumed.

Shopping Centers
The model is based on a three-storey shopping center (including a basement level). It assumes one anchor tenant, a total of 78 retail spaces and sales space of 48,000 sqm.

Modern Logistics Properties
The model assumes an existing modern distribution/handling centre. Good divisibility and capacity for alternative uses are assumed. The hall space totals 20,000 sqm. Office space accounts for less than 10 % of the hall space, meaning that it can be assumed that the amount of space for administration of the logistics hall is in line with demand. For reasons of simplification, office space therefore is not taken into account separately in the model.

Business Parks (UI)
An existing business park with rental space of 12,000 sqm is assumed, with office use accounting for 30 % and warehouse use accounting for 70 %. All assumptions and data are based on information from the Initiative Unternehmensimmobilien and its Market Report No. 10.

Warehouses (UI)
A simple existing warehouse with 10,000 sqm of warehouse space is assumed. In contrast to modern logistics space, there is only limited divisibility and capacity for alternative uses and the property quality is lower (including with regard to hall height, floor load capacity etc.). All assumptions and data are based on information from the Initiative Unternehmensimmobilien and its Market Report No. 10.

Light manufacturing (UI)
A light manufacturing hall with 10,000 sqm of production space is assumed. In view of the high level of user specificity, longer lease terms (five years) are assumed than for the other types of described Unternehmensimmobilien. All assumptions and data are based on information from the Initiative Unternehmensimmobilien and its Market Report No. 10.

Hotels
The calculations in this study relate to chain hotel businesses, defined as businesses with four or more individual hotels.
In addition, the analysis is based on fundamental assumptions that reflect only part of the market. For example, it was assumed that a lease contract is concluded; operator contacts and hybrid forms were not included in the analysis. Another fundamental assumption is that the contract has a long term. The presentation of short-term contracts in the case of yield-focussed investments with additional capex requirements on expiry of the lease contract (generally two to three annual rents) was ensured by means of risk premiums and yield mark-ups. The model is based on city hotels with business customers and city tourists as their target groups. A high level of tourist demand is also assumed.

Assisted living for seniors
As with other operator-managed properties, long-term leasing is assumed. The model relates to leases with predominantly assisted living for seniors. Care services were not included.

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