Allianz Real Estate

CITIES THAT WORK 2019

EXECUTIVE SUMMARY

Welcome to our second Cities That Work study, our analysis of Europe's top cities in terms of office sector investment opportunities.

Once again, we have looked at a large range of indicators to draw up a definitive ranking of key cities in Europe with a focus on the office sector. The methodology that underpins our research is unique to Allianz Real Estate and incorporates factors such office stock, population growth, GDP per capita, total start-up funding, vacancy rates, prime rent dynamics and yield spread.

While there have been some interesting changes since the first report – congratulations to Paris for taking the top spot this year in terms of core and for Dublin in terms of value-add – it should be expected that any differences year-on-year will unlikely be extreme. Allianz Real Estate takes a long-term view of the sectors we invest in, typically with a 10-15 year minimum horizon, and look for cities and assets with strong, consistent long-term prospects.

Paris is certainly undergoing a significant amount of activity, which is feeding into a strong office market. The office stock in Central Paris, which comprises the Central Business District (CBD), La Défense and the Western Business District, is the second largest in Europe. The vacancy rate in Central Paris has almost halved since late 2013 from around 10% to 6%. Availability is much tighter in the CBD where the vacancy rate amounts to a low of 2%, the lowest level since late 2001.

One of the notable changes since our first report has been a rise in macroeconomic concerns. Brexit, for instance, has escalated as an issue in the UK and Continental Europe. Economic strength in Germany and the wider EU has become more of a focus. And other geo-political tensions, such as the US-China trade 'war', are resonating in Europe.

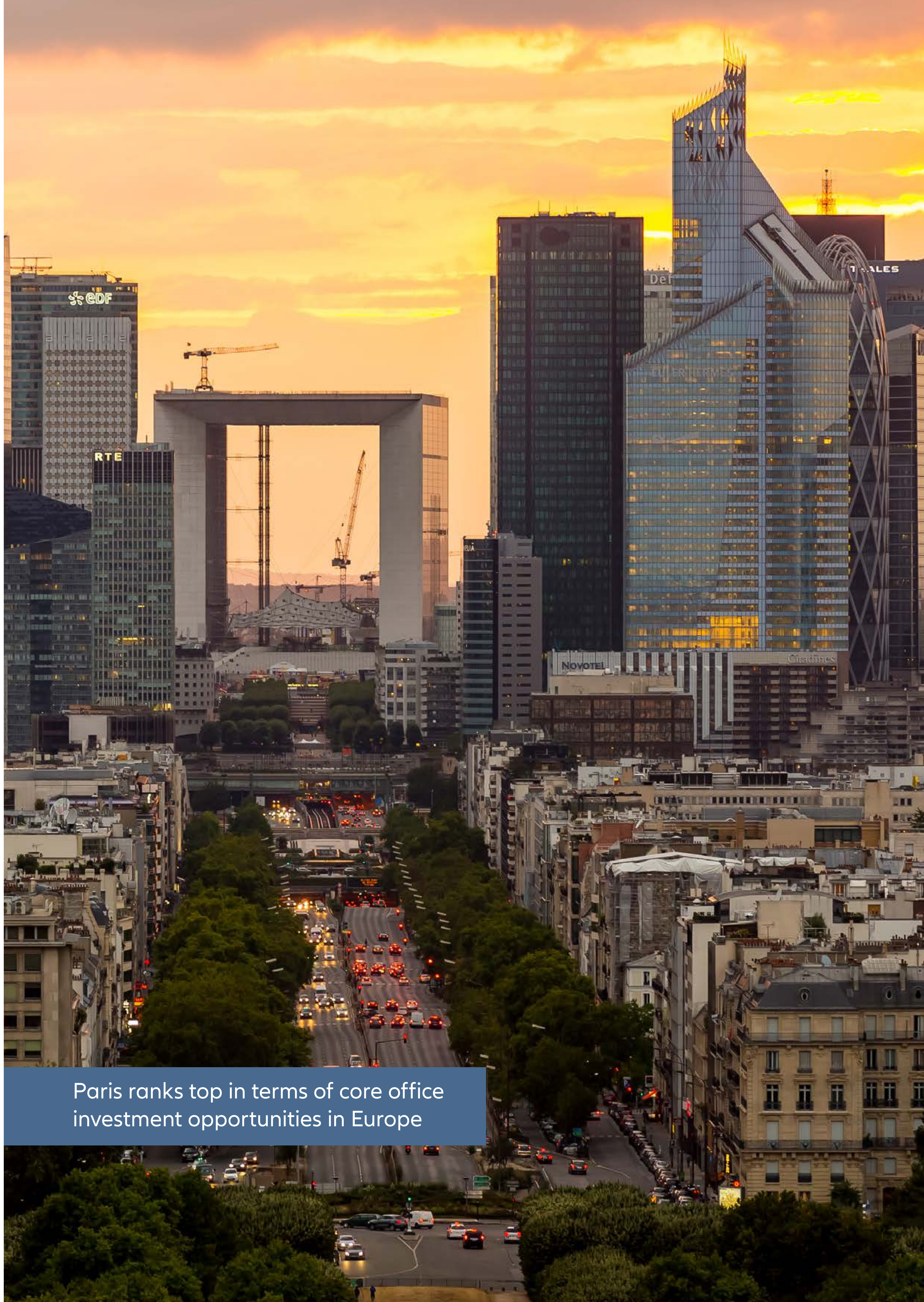
It has become important for real estate investors to be mindful of these developments. In terms of Europe's real estate industry, our view is that we are late-cycle but not end-cycle yet. Our experience and research tells us that the market in Europe remains active, with the office sector continuing to offer positive growth dynamics for investors taking a long-term, disciplined view. Diversification, across countries, asset allocation and vintages, will also play an increasingly important role.

It is interesting to note that in this year's Cities That Work study, the Nordics have become more visible due to strong rankings for Copenhagen, Stockholm and Helsinki. Copenhagen is forecast to experience one of the highest economic, population and service employment growth rates in Europe over the coming years. The city offers great opportunities for tech start-ups focused on smart city solutions, and it has become one of the world's leading cities in terms of sustainability and green initiatives.

Indeed, sustainability is likely to be a differentiating factor for Europe's leading cities, particularly in terms of the office sector, as we look ahead over the years to come. It is top of the agenda and increasingly reflected in the assets being built and redeveloped and the firms taking a lead in the market. This is not just common sense, it is a compelling business decision and a factor that will increasingly drive long-term value.

We very much hope you enjoy this report.

Allianz Real Estate



Paris ranks top in terms of core office investment opportunities in Europe

TOP 8 RANKINGS

EUROPEAN OFFICE MARKETS SCORING: CORE AND VALUE-ADD

CORE	
Paris	1
Munich	2
Copenhagen	3
London	4
Berlin	5
Dublin	6
Stockholm	7
Amsterdam	8

VALUE-ADD	
Dublin	1
Paris	2
Munich	3
Berlin	4
Copenhagen	5
Helsinki	6
Cologne	7
Madrid	8

RESULTS ANALYSIS

Europe's office sector has enjoyed a strong 12 months, with excellent opportunities for long-term, disciplined real estate investors in both established and fast-growth European economies.

This year's study uses the same criteria as last year's. From a proprietary ranking of European cities with a population greater than 500,000, a shortlist of 34 cities has been created with each measured across nine dimensions and 36 indicators. Findings are used to generate overall structural and tactical scores for each city: core rankings are based on a balanced, 50-50 weighting between structural and tactical scores, while value-add rankings have a tactical bias.

We believe our Cities That Work study provides an unparalleled picture of the European office landscape from a core and value-add perspective. It is based on the same methodology we use when considering new acquisitions and when reviewing our existing portfolio, and showcases the robust, research-led approach that has underpinned the ongoing success and growth of Allianz Real Estate.

As with last year, the cities that rank highly in our 2019 study do so due to strong scores in a number of key areas such as infrastructure developments, connectivity and urbanisation.
A significant driving force has been technological change: while the top cities boast very diversified economies, leading cities have become major hubs for digital technologies and innovation, with a high degree of office take-up driven by tech firms.

London, for example, is no longer just a banking and finance powerhouse: fast-growth sectors such as digital media, fintech, communications and life sciences are driving employment, tenant demand and the city's economy. In turn, London continues to benefit from a very young, well-educated workforce and growing population. It scores the best in terms of universities in Europe, with many graduates choosing to work in London throughout its expanding submarkets and business districts.

PARIS TOPS THE 2019 LIST

Based on our methodology, Paris tops our 2019 report in terms of core investments, moving up from second place in 2018. The city is also second again in terms of value-add opportunities. Paris has continued to benefit from major investments and demand for high-quality office assets. While the vacancy rate in Central Paris has almost halved since late 2013, availability has become even tighter in the CBD where the vacancy rate has fallen to a record low of just 2%. Paris is turning from a CBD-focused capital into a much broader BD (business district) city, with demand for office space expanding throughout the city and strong rental growth in many of Paris' submarkets.

Dublin and Helsinki are new entries in our list of core markets, mainly due to their high tactical scores (this is reflected in Dublin topping the list for value-add investments). Dublin's upgrade is underpinned by a buoyant lettings market and more attractive pricing relative to other European markets. Helsinki's outlook for prime rental growth has improved considerably compared to a year ago, as the vacancy rate has been trending down and net absorption is expected to pick-up as new supply is limited.

THE RISE OF SUSTAINABILITY

While Munich has dropped into second place in terms of core and third in terms of value-add, Allianz Real Estate remains very positive on the city. Although Munich is further ahead in terms of the cycle compared to Paris – rents have been growing more and for longer in Munich, as have capital values – it retains its long-term attractiveness for strategic investments based on a number of factors such as innovation, entrepreneurialism and sustainability.

In terms of sustainability, for instance, which has become a highly significant focus for all major cities and a factor likely to increase in importance in future Cities That Work studies, Munich has set itself an ambitious goal of achieving 100 per cent of renewable energy supply by 2025 backed by a EUR9 billion budget.

Munich is far from unique, however. Copenhagen, which has yet again ranked very highly in terms of both core and value-add, is one of the world's leading cities in terms of sustainability and green initiatives, such as a carbon-neutral public bus system, mandatory green roofs for new buildings, and planting 100,000 new trees over the 2015-2025 period. It aims to become the world's first carbon-neutral capital city by 2025.

A LONG-TERM APPROACH

It is important to emphasise that Allianz Real Estate is focused on long-term, prime assets that are selected through a highly disciplined investment process. While there have been some notable differences to this year's tactical scores compared to the last study as office markets move through the cycle, there have not been many profound changes in the core rankings. This should be seen as a positive and, largely, expected. We are targeting markets and assets that we believe are 'future-proofed': ones that we would like to be invested in for at least the next 10-15 years.

It is also important to emphasise that lots of opportunities, both core and value-add, remain in cities that fall outside our top eight cities. Allianz Real Estate continues to evaluate and successfully invest in office assets in a comprehensive number of established and emerging European cities. We see value on a case-by-case basis, and will continue to select assets that we feel will deliver the best long-term value for Allianz group insurance companies and third-party clients.

Five mega-trends driving the European office sector

Urbanisation

Urbanisation remains a major theme in Europe and a core characteristic of a buoyant office sector. For many locations in our Cities That Work study, populations are growing more than the national average because of the city's focus on – and success in – areas such as innovation, connectivity and infrastructure spending. They act like magnets, attracting people from within the country itself and also foreigners. Amsterdam, for instance, continues to attract foreign talent: more than 25% of the population is foreign-born.

Sustainability

Sustainability has become a competitive differentiator for cities at a time when issues such as climate change, recycling and cutting carbon emissions have risen up the social and political agenda. Many of the cities in our study have some sustainability mandate. Copenhagen is one such place, though others that stand out include Stockholm and Munich.

Human capital

Human capital constitutes a significant driver of economic growth. Having a dynamic, youthful, educated and energised workforce – and an economy that attracts a domestic but also international audience – is a strong, positive indicator of success of the city and a liquid mature office market. Many cities covered in this study have a young workforce as a percentage of the total population, and also a very educated workforce. This drives the city further and its real estate sectors, not least office. Human capital overlaps with other major trends such as innovation and sustainability: younger generations such as millennials are favouring cities that are smart and sustainable, embracing the future by constantly reinventing themselves.

Innovation

Innovation, in the form of technology, is playing a fundamental role in how cities are changing and growing. For many, technology and related sectors are driving their economies: consequently, tenant demand and take-up is coming mainly from technology, media, telecommunications and fintech companies. Some of the cities that place highly in our Cities That Work ranking have a very high number of start-ups, strong levels of venture capital and a positive and expanding tech ecosystem.

Infrastructure / connectivity

Cities that work need to have infrastructure that works. Major investment programmes, from cycle schemes to new airports, reflect a city's aspiration and desire to grow and outcompete. The 'Grand Paris' project involves the creation of four new Metro lines. The project will gradually come into service by 2030 and benefit office submarkets in the north-west of the CBD, the south of the Western Business District and Saint-Denis. Equally as compelling is Amsterdam: it occupies top spot in terms of the world's most bicycle-friendly cities, boasting 400km of dedicated bike tracks.

PARIS

#1 core rank

#2 value-add rank

Paris has moved into first place in this year's Cities That Work study. It has become one of the most liquid European office investment markets, featuring the second highest average office investment volume over the last 10 years, after London. Cross-border investment, for which Paris had always been a popular target, has seen a surge recently, with the city being the largest recipient of foreign capital globally in H1 2019, in particular due to investment from South Korean groups.

The office stock in Central Paris, which comprises the Central Business District (CBD), La Défense and the Western Business District, amounts to 17.8m sqm – the second largest in Europe. Together with the remaining parts of the Greater Paris urban area, Paris office stock represents around half of the entire office stock in France.

The vacancy rate in Central Paris has almost halved since late 2013 from around 10% to 6% (as at Q2 2019). Availability is much tighter in the CBD where the vacancy rate amounts to a record low of 2%, the lowest level since late 2001 and less than half of the long-term average of 5%. Average real rental growth over the next five years in Central Paris is forecast to be among the most attractive in Europe based on further healthy growth in the CBD (reflecting scarce supply) and the Western Business District: The latter expected to benefit from its more affordable rent levels.

Paris' start-up ecosystem has strongly evolved over the past few years. It is home to Station F, the world's largest start-up campus, which houses more than 1,000 start-ups across 34,000 sqm. The city ranks fourth in Startup Heatmap Europe's 2018 benchmark report and two Paris-based start-ups, Doctolib and Meero, achieved 'Unicorn' status in H1 2019 by receiving a valuation of more than USD1 billion.

The city's ambitious 'Grand Paris' urban, social and economic project entails a massive extension and upgrade of Paris' public transport infrastructure. The plan involves the creation of an additional 200 km of Metro lines – the equivalent of the entire current Metro system – and will fundamentally improve connectivity and mobility between suburbs as well as Paris and the outskirts. The project will gradually come into service by 2030 and will benefit office submarkets in the north-west of the CBD, the south of the Western Business District and Saint-Denis. Taking advantage, Allianz Real Estate has executed its first transactions in Saint-Ouen in northern Paris which will greatly benefit from future Metro connections as part of the Grand Paris project.

The Olympic Games, due to be hosted by Paris in 2024, will not only provide a short-term economic benefit for the city, but has the potential for longer-term urban regeneration of specific parts of the metro area, e.g. northern Paris, which will also benefit from the extension of public transport services as part of the 'Grand Paris' project.

Munich's economy continues to be very dynamic, underpinned by a diverse mix of industries and a well-balanced tenant profile. The office sector offers excellent opportunities for core and value-add investors with a long-term view, with Munich fully expected to remain one of Europe's most dynamic and attractive cities – even if it has slipped from last year's top position in this study.

The manufacturing sector is well represented by high-profile companies such as BMW, Infineon, Linde and Siemens, as well as a wide range of medium-sized firms. In addition, the information, communication and biotechnology sectors have a strong base in the Bavarian capital, complemented by large insurance firms such as Allianz and Munich Re. It is also home to the headquarters of many domestic and international companies, including seven out of the thirty largest companies listed on the German DAX 30 index – more than any other German city.

Munich's population is relatively young, with the number of 20-39-year olds larger than the German and European average. More than 110,000 students are enrolled in Munich's universities, representing around 8% of the city's population. The population is forecast to grow by close to 1% p.a. over the next 10 years, one of the highest rates in Europe, due to Munich's economic strength and high quality of life. The city has introduced several green initiatives in order to reduce waste and the carbon footprint – it is aiming to be carbon-neutral by 2050.

Munich's average vacancy rate over the past 15 years amounted to 7%, one of the lowest within the European office market peer group. Its current vacancy rate stands at 2%, among the lowest in Europe, along with Berlin and Paris' CBD.

Given general supply constraints stemming from high urban density and regulatory limitations, Munich features the highest forecast real rental growth rate over the next five years with regards to the European markets covered. Beyond current submarkets, new office areas are emerging in the east of Munich, e.g. the Berg am Laim borough. Several development projects, which are quickly reaching advanced pre-letting levels, are progressing in these areas.

Being the second largest office market in Germany, with an office stock of around 13.8m sqm as of year-end 2018, annual average investment volumes in Munich's office market amounted to around EUR2.36 billion over the last 10 years – approximately on par with Berlin and exceeded in Europe only by Frankfurt, Paris and London.

#2 core rank

#3 value-add rank

MUNICH

DUBLIN

#6 core rank

#1 value-add rank

The Republic of Ireland's capital is one of the big movers in this year's study. Dublin features the fourth highest GDP per capita across European cities and its forecast service employment growth over the next decade ranks within the top quartile. The city scores very well from a tactical perspective and ranks highest for value-add investments. Based on a strong outlook for service employment growth, net absorption is forecast to be among the strongest in Europe over the coming years.

The office vacancy rate has gradually decreased from levels of 20-25% seen during the global financial and eurozone crises, to current levels of around 7%, approximately half of its historical average. Current high levels of construction activity, however, need to be monitored. Dublin's prime rent recovered between 2013-2016 and is now in line again with prior peak levels over 2007-2008. This, however, is not excessive compared to the European city average, which is 9% ahead of prior peak rent.

Many international companies have a presence or their European headquarters in Dublin, most notably from the technology, media and telecommunications sector (including Google, Microsoft, Amazon and Facebook). In addition, a significant number of corporations from the medical technology and pharmaceutical industries, as well as international financial institutions, are located in the city. Dublin is well-suited for these companies, not only due to its skilled workforce but also because of Ireland's low corporate tax rate of 12.5%. In addition, a 25% tax credit on the full amount of research and development expenditure incurred by a company as well as other tax benefits for these activities can be applied.

One of Dublin's key advantages is its young and well-educated labour force. The population under the age of 40 is well above the European city average. Around 60% of people aged 30-34 have obtained tertiary education and both Dublin's University College and Trinity College are two of Europe's top universities. With English being the universal language, Dublin is highly appealing for international corporations looking for qualified talent.

There are also more than 1,000 start-ups in Dublin, which are part of a strong technology ecosystem that includes large, international corporations, universities and renowned accelerators and incubators.

The office yield premium over government bonds is one of the most attractive in Europe on an absolute basis and is significantly above its long-term average. Dublin is also one of three markets in Europe where capital values do not exceed prior peak values. Its capital value stands around 6% below its prior high point whereas the European average is 46% above its previous peak.

Home to more than 40% of the European headquarters of Fortune 500 companies as at the end of 2018, London is consistently placed in the top ranks of independent surveys measuring the importance and potential of international cities. On a long-term basis, the UK's strained withdrawal from the European Union is unlikely to affect London's role both in Europe and globally. Despite current economic weakness, London is forecast to achieve higher economic and service employment growth than the national and European city average.

Due to its significant concentration of international talent and abundance of capital, accelerators, industry events and government support, London has become Europe's global tech hub. Defying Brexit uncertainties, London was the number one recipient of venture capital investments in 2018. London-based companies raised around USD2.3 billion in venture capital last year, more than twice the amount raised by any other European city.

London's office market is immense: around 14m sqm of stock in Central London and around 38m sqm of stock including all outlying London boroughs and the M25 West market. Although investment volumes have dropped recently due to uncertainties surrounding Brexit, London remains one of the most liquid global investment markets. Its average office investment volumes over the last decade topped EUR12 billion p.a. with a large share of foreign investors. In H1 2019, London was Europe's most active commercial property market and ranked fourth on a global scale.

Occupier market conditions in London have softened and prime rents have corrected by around 5% since mid-2016 and are now 9% below pre-crisis peak levels. Net absorption is forecast to be rather subdued over the next few years. At the same time, the vacancy rate has gradually decreased over the last two years and, at around 7%, is not excessive and stands below its long-term average. As such, pricing for Central London is gradually becoming more appealing on a relative basis compared to other European cities.

#4 core rank

#10 value-add rank

LONDON

COPENHAGEN

#3 core rank

#5 value-add rank

Regularly placed within the top smartest cities in the world, Copenhagen offers opportunities for tech start-ups focused on smart city solutions in particular. It is one of the world's leading cities in terms of sustainability and green initiatives. Boasting a service and export-oriented economy, Copenhagen is forecast to experience one of the highest economic, population and service employment growth rates in Europe over the coming years.

Copenhagen has a strong base in banking and finance as well as in trade and industry. Both sectors had a combined share of around 40% in office take-up over the last five years. Overall, the city's occupier base is well diversified and its very low rent volatility underscores its profile as a stable office market. The office vacancy rate has come down to below 8% recently, following peak levels of around 11% in early 2014, and is below its 15-year average.

Robust demand in connection with limited supply and conversion of outdated office stock have helped to reduce vacancy levels in the city. In contrast to the European city average, Copenhagen's prime rent is still below past peak levels and is also well below rent levels in Stockholm and Helsinki. After a two to three-year period of stagnation, prime rents have been on the rise again since late 2017. A potential resurgence of new supply, however, as a consequence of recent rent increases, will need to be monitored. Non-city centre submarkets are likely destinations for new supply as their attractiveness for tenants is increasing due to improving transport connectivity.

STOCKHOLM

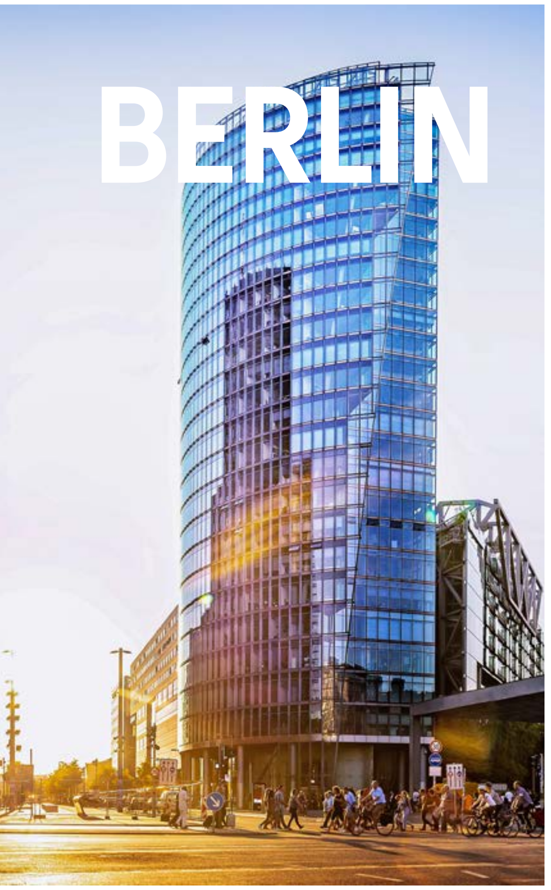
#7 core rank

#2 value-add rank

Stockholm is one of Allianz Real Estate's top markets in terms of its structural score, driven by its diverse economy and occupier base, highly educated and growing labour force, and its liquid investment market. However, significant rental growth over the last few years has driven prime rent to a level of more than 50% beyond last peak, which is the highest in Europe, resulting in an only average ranking on the tactical score.

With prime rent of around EUR650 per sqm p.a., Stockholm is by far the most expensive office market in the Nordics. Rental growth has been driven by relatively low levels of development, with developer capacity partly lured into the residential sector due to the booming housing market.

Office market conditions have tightened, with vacancies dropping to the lowest level since 2001 for the market as a whole, and to just above 1% in the city centre. High rent levels in the CBD, however, have pushed occupiers to look for more affordable premises in alternative submarkets where rents are approximately half of CBD. In contrast to the CBD, where rental growth is forecast to flatten out, non-CBD submarket rents still have growth potential by narrowing the gap to CBD levels. Increasing tenant demand in these submarkets has, however, spurred office development there such that net additions as a percentage of stock for Stockholm overall are among the highest in Europe.



BERLIN

#5 core rank

#4 value-add rank

Berlin's economy has a diversified occupier base: no individual sector represented more than 26% of take-up over the last five years, on average. While the largest sectors are business services (accounting for 27% of local GDP), the public sector as well as trade and transportation, the city is strongly characterised by its start-up scene and its ability to attract young talent. This is reflected in the development of the information and communication sector which currently accounts for 10% of the economy but has shown the fastest growth rate over the past decade.

Following years of below-average completions and demolitions or conversion of office space, Berlin's vacancy rate has dropped to a record level of 2% as per Q2 2019 which is the second lowest in Europe and significantly below its historical average of around 7%. Due to scarcity of space in traditional core markets (Mitte, Potsdamer Platz, Kurfürstendamm), the Berlin market is evolving towards additional locations within the S-Bahn ring.

Against the background of ultra-low vacancy and robust net absorption, Berlin is forecast to experience one of the highest growth rates in real rents over the next five years, second in Europe only to Munich.

AMSTERDAM

#8 core rank

#18 value-add rank

Amsterdam's economy has a strong base in trade and transport (owing to its port, which is the fourth busiest in Europe), finance and insurance as well as business services sectors. The European Medicine Agency relocated to Amsterdam from London in early 2019 over Brexit concerns.

Amsterdam's GDP per capita is around 47% higher than the European city average, underscoring the high levels of productivity of its economy. The city's population is young and well educated: its dependency ratio is below the national and European average and more than half of the population in their early thirties have a tertiary degree. It continues to attract foreign talent, reflected in the fact that more than 25% of the population is foreign-born, due to its high quality of life and residents' strong command of the English language. Boasting a total of 400km of dedicated bike tracks, Amsterdam occupies a top spot in terms of the world's most bicycle-friendly cities.

The Amsterdam Internet Exchange (AMS-IX) is the largest and one of the fastest data transport hubs in the world, making the city an attractive location for data-heavy tech companies.

FRANKFURT

#10 core rank

#9 value-add rank

On the fringes of both rankings, Frankfurt is nevertheless a key office market. Its GDP per capita and working age population are some of the highest in Europe. The city is home to a wide range of high value-added financial and business services, a large part of which are located in the city centre. The reliance on the banking sector has, however, reduced over the last years, with Frankfurt additionally featuring a meaningful industrial presence through chemical, pharmaceutical and biotech industries.

With around 10m sqm of stock, Frankfurt's office market is one of the largest in Europe and, with average annual investment volumes of EUR3.16 billion over the last decade, is the third most liquid European market after London and Paris.
Frankfurt's vacancy rate has been steadily declining for almost 10 years. Coupled with solid net absorption, prime rents are trending up and Frankfurt's real rental growth forecast over the next few years is one of the highest in Europe.

MADRID

#12 core rank

#8 value-add rank

Madrid's occupier market shows favourable dynamics against the background of solid growth in office-based employment and low completion levels following the Euro crisis. The office vacancy rate has entered a downward trend, albeit from rather high levels.

Prime rents are still well below previous peak levels and forecast real rent growth until 2023 is among the highest. The service sector is the main pillar of Madrid's economy, which features a large share of business services, consumer-related businesses and a significant public sector (catering to Madrid's status as capital of Spain).

Furthermore, the information and communication sector has expanded rapidly over the last few years, reflected in Amazon's and Google's decision to open major presences in the city and the increasing take-up from flexible office providers.

CITIES TO WATCH...

HELSINKI

#9 core rank

#6 value-add rank

Helsinki features a highly qualified workforce which has acquired high standards of IT expertise. It has an IT infrastructure which is one of the best in Europe.

Due to continued demolitions and conversions, net additions to office stock over the last five years have been slightly negative on a cumulative basis. Helsinki's vacancy rate, albeit still relatively high in a European context, has started to gradually decrease since late 2017, in particular in the city centre where vacancy is well below the city average. Forecast net additions over the next few years are among the lowest in Europe as conversions continue and more than half of new supply is pre-let.

Net absorption is forecast to improve over the next few years and rental growth prospects are thus bright for the city centre, but also for the suburbs which are set to benefit from occupiers' preference for modern efficient space. Forecast real rental growth in Helsinki over the five years to 2023 is significant.

COLOGNE

#13 core rank

#7 value-add rank

Cologne's office tenant base is very diverse, with most important sectors – including media, trade, insurance and manufacturing, as well as the public sector – represented. The serviced office sector is expanding and accounted for 15% of take-up in 2018.

Cologne is a stable market and its rent volatility over the last 15 years has been low. The vacancy rate has gradually declined over the last years to less than 3%, the lowest level since mid-2002 and significantly below its 15-year average. As available space in traditional submarkets is limited, occupiers (and investors) are increasingly turning their attention to new submarkets such as Deutz, where greenfield sites are available.

New supply is limited. Space under construction as a proportion of stock is very low in a European comparison and around 80% has already been pre-let. Coupled with solid net absorption levels, forecast real rental growth over the next five years is relatively high.

MILAN

#15 core rank

#13 value-add rank

Milan is one of the 10 most liquid office markets in Europe with an average investment volume of EUR1.36 billion p.a. over the last 10 years.

The vacancy rate of around 14% is at a high level in a European comparison. Modern stock, however, is underrepresented in the historic CBD and city centre. Grade A premises are strongly sought-after by multinational companies as dated buildings do not meet their requirements. Although Italy's economic prospects are relatively modest, Milan's economy is forecast to outperform the national one. As a result, we expect healthy take-up levels to continue going forward.

We are very positive on the prime part of Milan's office market represented by modern and well-located buildings in the historic CBD, city centre and Puorta Nuova districts. This is reflected in Milan's growth forecast for real prime rents, which is one of the highest in Europe.

WHERE WE ARE IN THE CYCLE

Allianz Real Estate positions itself as a long-term investor that looks to invest through cycles. We buy assets and position our portfolio with the full knowledge that economic activity rises and falls over time – one reason, for instance, why we place so much emphasis on investing in prime assets and working with prime partners and stakeholders.

In terms of the current market, many stakeholders have increasingly asked, 'where are we in the cycle'.
It is expected, not unreasonably, that such analysis and questions will continue, particularly in a wider context of slowing economic growth, geo-political tensions, and nervous capital markets.

Our view, in short, is that we are late-cycle but not yet end-cycle.
Our experience and market analysis tells us that the wider real estate sector in Europe remains active with the office sector continuing to offer strong opportunities and positive growth dynamics. To illustrate the positive aspects of the office sector, the charts included address several fundamental indicators: for instance, net additions remain low on a relative historical basis (see Fig. 1) and yields versus 10-year bonds are attractive (see Fig. 3).

We adhere to a number of established strategies for late-cycle investing. Diversification across regions is of increasing importance: while most regional markets are in late-cycle stage, some markets, like the US and UK, are already more advanced in the cycle. Regional diversification helps to reduce portfolio volatility for an institutional buy-and-hold investor. Similarly, continued diversification across vintage years and investment styles is key.

In addition, while the office sector will remain absolutely central to our investment strategy, we will look to further broaden our investment preferences towards sectors and assets that offer a secure income yield and/ or a growing income stream. Sectors able to deliver this are defensive in nature and/or benefit from secular trends.

Finally, maintaining dry powder for value-add and opportunistic investments is vital with regard to an eventual turn in the cycle: investment opportunities arising from market dislocations during a downturn can be quickly capitalised on (but always with a long-term, highly disciplined focus).

European real estate markets overview: late-cycle, but not yet end-cycle	
Demand	Service employment growth forecast 2019-20 approximately in line with 15-year trend growth in both the Eurozone and UK
Supply	Increase over the last few years, but still at lower levels than prior peaks. UK ahead of Continental Europe
Sentiment	Slightly above average
Investment volumes	Stabilised below cyclical peak in 2018. Slightly up year-on-year in H1 2019 in Continental Europe, down in UK (see Fig. 2)
Equity & debt capital raising	Closed-ended real estate funds' dry powder and REITs' debt capital raised well exceeding previous cycle
Real yield spreads versus long-term average	Fairly priced, Continental Europe starts looking cheap (Continental Europe: 1.0 standard deviation, UK: 0.6 standard deviation above)
Prime-secondary office yield spreads	Yield spreads remain high in main eurozone markets, but have compressed in London
Commercial real estate lending	Bank loan exposure to commercial real estate in the UK and to the construction sector in the eurozone lower than previous cycle. LTVs in Europe more conservative compared to pre-crisis levels

Figure 1

Europe: Office net additions (% of stock)[1]

SOURCE: ALLIANZ REAL ESTATE RESEARCH, PMA

1) Continental Europe: Paris, Berlin/Frankfurt/Munich, Milan/Rome and Madrid/Barcelona; UK: London, Birmingham, Glasgow, Edinburgh and Manchester

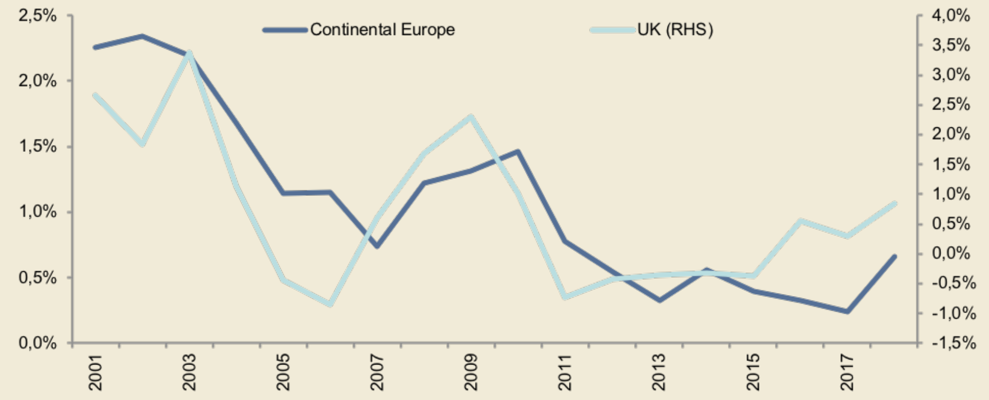


Figure 2

Europe: Office investment volumes (EUR bn)

SOURCE: RCA

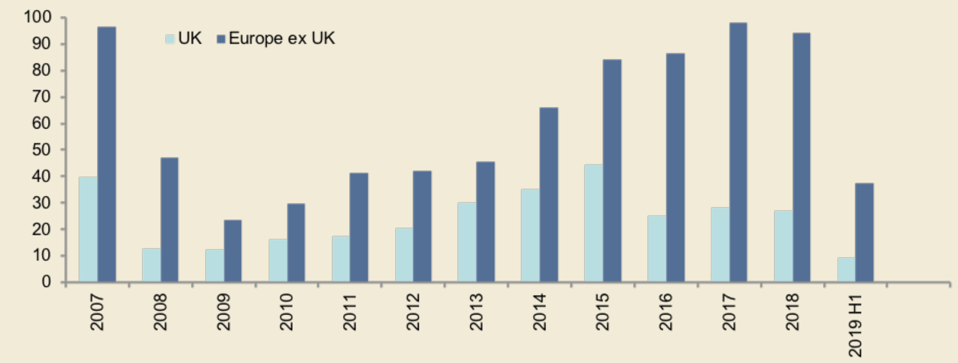


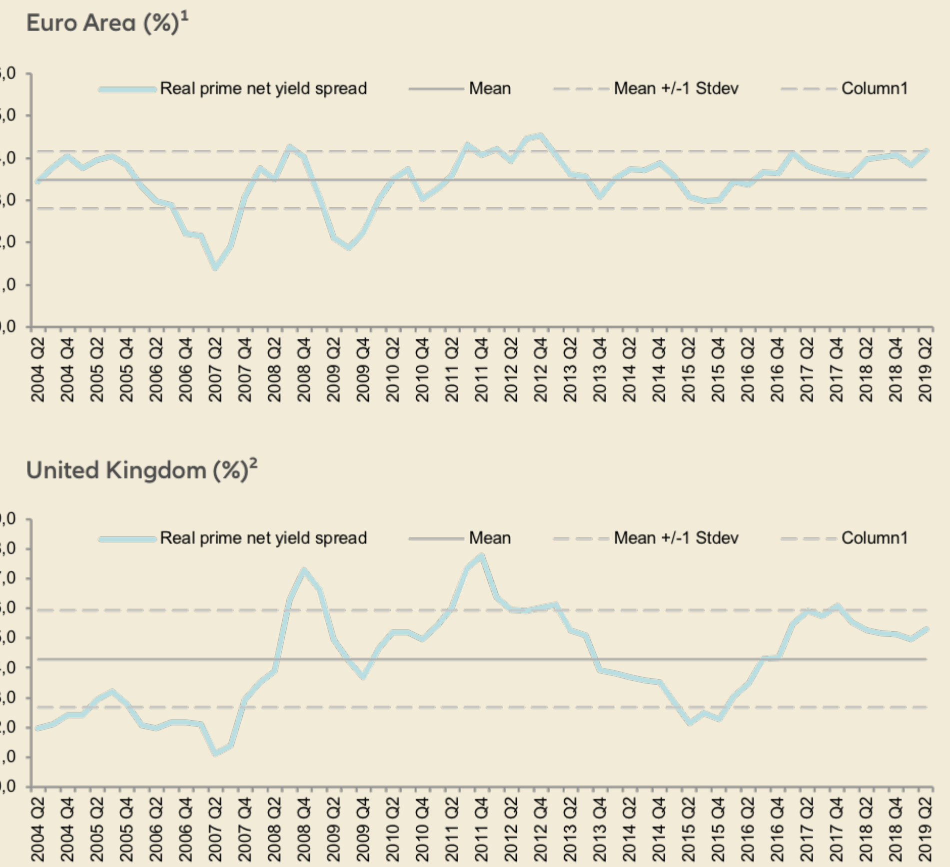
Figure 3

Office real yield spread vs. long-term average

SOURCE: ALLIANZ REAL ESTATE RESEARCH, PMA, OXFORD ECONOMICS

1) Based on stock-weighted average of prime net yields for Paris, Berlin/Frankfurt/Munich, Madrid/Barcelona and Milan/Rome and respective real 10-year government bond yields

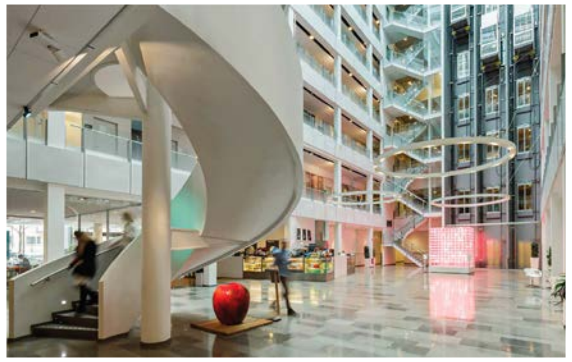
2) Based on stock-weighted average of prime net yields for London, Birmingham, Glasgow, Edinburgh and Manchester and real 10-year gilt yields



ALLIANZ REAL ESTATE OFFICE ASSETS IN EUROPE

Cities That Work is the optimal mix of high-level research and analysis combined with the local market knowledge of the Allianz Real Estate teams on the ground. Below are a few examples of office investments made by Allianz Real Estate in Europe – on both the equity and debt side – which underline our ability to identify and execute the transactions which deliver on our investors' demands.

The Atrium, Amsterdam, The Netherlands
Allianz took the majority participation alongside ABN AMRO in the facility to finance the acquisition of the 60,000 sqm office in Amsterdam's Zuidas business district, underlining its strategy to invest in prime assets and partners in tier 1 locations.



Gangaren 11, Stockholm, Sweden
This 30,000 sqm office complex stands in the fast-growing Kungsholmen inner city district, an area benefitting from a number of redevelopments and infrastructure projects.

EDGE East Side Berlin, Berlin, Germany
A joint venture with German pension fund BVK, this forward purchase of a development in Berlin's Mediaspree sub-market will, once complete, be one of the most hi-tech, sustainable office buildings in Europe.

Kap West, Munich, Germany
This forward purchase of an office development is set to complete in 2019 in a market characterized by high demand and low vacancy.

80 Fenchurch Street, London, UK
In partnership with TH Real Estate, Allianz provided financing towards the development of this prime office property in the heart of the City of London.

Torre Caleido, Madrid, Spain
Allianz provided a 10-year loan alongside Caixabank to fund the development of a mixed-use office and retail asset to stand alongside the four existing towers in Madrid's Cuatro Torres Business Area.

METHODOLOGY

ALLIANZ REAL ESTATE'S CITIES THAT WORK IS A PROPRIETARY RANKING OF EUROPEAN CITIES FOR OFFICE INVESTMENTS.

Cities That Work is a proprietary ranking of European cities with a population greater than 500,000. From this, a shortlist of 34 cities has been created based on a number of screening criteria.

The index was compiled using data across nine dimensions, incorporating 36 proprietary and external indicators, which were used to generate structural and tactical scores for each city.

To differentiate between core and value-add investment rankings, the weighting of these two scores was adjusted, adopting a balanced approach for the core ranking, and a tactical bias for the value-add ranking.

34
European cities

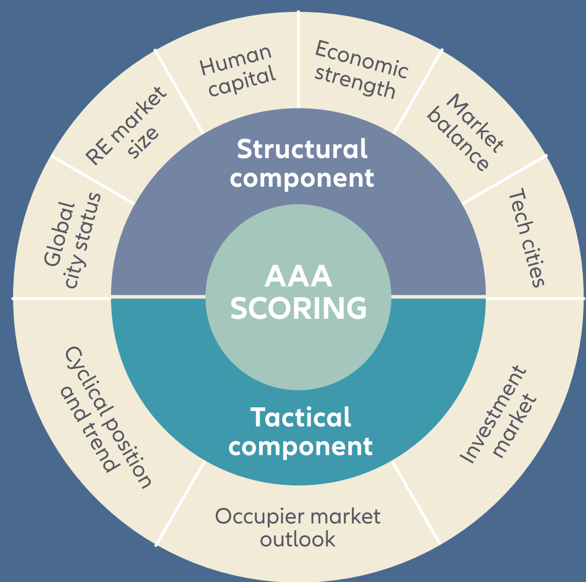
9
Dimensions

36
Proprietary and external indicators

Index dimensions

Structural
Global status
Office market size
Human capital
Economic strength
Market balance
Tech cities – connectivity and innovation

Tactical
Occupier market cyclical position
Occupier market outlook
Investment market pricing



Cities That Work

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