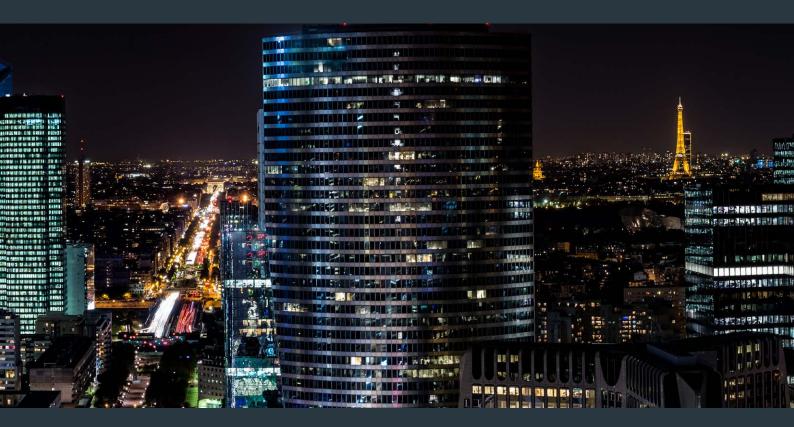
WHITEPAPER

Paris offices: How the knowledge economy illuminates the City of Lights

Souad Cherfouh and Chris Urwin

April 2021







Souad Cherfouh Head of Real Estate Investment Strategy Research



Chris UrwinDirector of Research, Real Assets

Contents

- 3 Introduction and summary
- 4 Rise of the knowledge economy heavily favours certain cities
- 5 Paris among the most successful knowledge centres
- 12 Office market exhibits diverse demand, tight supply and good liquidity
- 17 Many sub-markets with demand and supply drivers
- 23 Sub-market deep dives
- 29 Key conclusions

Introduction and summary

- Paris is a major beneficiary of the rise of the knowledge economy, boasting one of the most knowledge-intensive economies in the world.
- This is fueled by from its global leadership in the factors that drive success in this era, notably:
 - Deep pools of talent in the form of highly-skilled labour, as well as world-class educational facilities to develop this talent.
 - A diverse range of significant business clusters.
 - The scale and international connectedness that facilitate the development of deep and extensive knowledge networks.
- A key additional strength is its transport infrastructure, with public
 and private transport networks ranking among the best in the world.
 These credentials are being bolstered further by the largest and most
 ambitious infrastructure project in Europe, dubbed "Grand Paris".
 The project is also potentially transformative for real estate markets
 in the Greater Paris region, with the office sector well positioned to
 benefit.
- Reflecting its knowledge-economy credentials and the heavy concentration of economic activity in the capital region, Paris is one of the world's largest and most sophisticated office markets.
 The market exhibits diverse demand, tight supply and good liquidity.
- Through its scale and diversity, the Paris office market has a broad range of sub-markets. Reflecting the market's sophistication, there is a wealth of data available at the sub-market level to allow detailed analysis of local demand and supply conditions. We identify and analyse 33 sub-markets. Given their varied characteristics, investors need differentiated strategies for different sub-markets.

Paris's credentials are being bolstered further by the largest and most ambitious infrastructure project in Europe, dubbed "Grand Paris".



Populations and economic activity are increasingly concentrated in larger and more

successful cities.

Rise of the knowledge economy heavily favours certain cities

The technology inspired rise of the knowledge economy has significantly impacted economic activity over the past couple of decades. At a macro level, it has facilitated the development of global supply chains, integrating many emerging economies. At a micro level, it has allowed much greater possibilities for remote working and the development of the sharing economy.

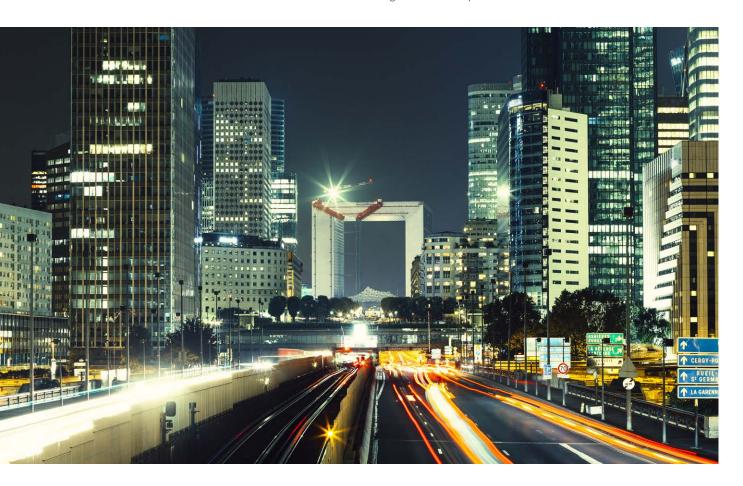
In developed nations particularly, however, these trends have not brought the dispersion of people and more even distribution of economic growth that many expected. In fact, populations and economic activity are increasingly concentrated in larger and more successful cities.

An explanation for this apparent paradox is that, in this era of increasing innovation and specialisation, successful companies recognise they can no longer compete through their own innovation alone. Instead, they must collaborate with other entities to stay competitive. This has ushered in the "network economy", in which success depends upon the strength of relationships forged between companies and their customers, partners, academia and suppliers. While the rise of IT allows the long-distance sharing of vast amounts of information, the most valuable information is often tacit and most profitably shared face-to-face.

Cities facilitate the sharing of this tacit knowledge, with the most successful characterised by:

- Deep pools of talent in the form of highly-skilled labour.
- Well-established clusters of knowledge-intensive activity.
- The scale and connections that allow the development of more extensive knowledge networks

 it is no coincidence larger cities tend to perform best.¹



1. Souad Cherfouh, 'Real estate: the rise of the metropoles', Aviva Investors, June 22, 2018.

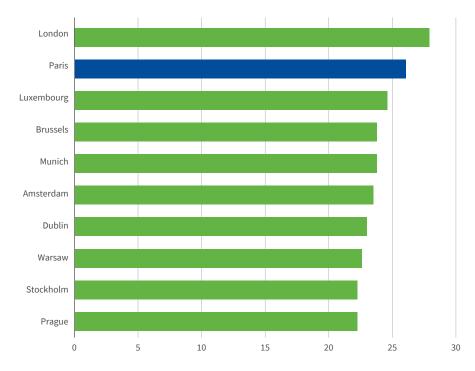
Paris among the most successful knowledge centres

Outstanding strength in these factors has seen Paris develop into a globally significant knowledge centre. In rankings of global prominence, it consistently scores towards the very top. For instance, in AT Kearney's *Global Cities Report*, Paris ranked number three, just behind New York and London.²

Paris boasts one of the most knowledge-intensive economies in the world. More than one-in-four workers in Paris are employed in knowledge-intensive sectors, ranking it second only to London among major global cities. In previous research, we identified Paris as the most important knowledge centre in continental Europe.³

Paris boasts one of the most knowledgeintensive economies in the world.

Figure 1. Knowledge-intensive employment as a percentage of total employment



Source: Oxford Economics, 2019.

^{2. &#}x27;A question of talent: how human capital will determine the next global leaders. 2019 Global Cities Report', AT Kearney, 2019.

^{3.} Chris Urwin and Vivienne Bolla, 'Talent, clusters and scale: Identifying European office markets in the era of knowledge capitalism', Aviva Investors, June 26, 2019.

A deep pool of talent and world-class educational facilities

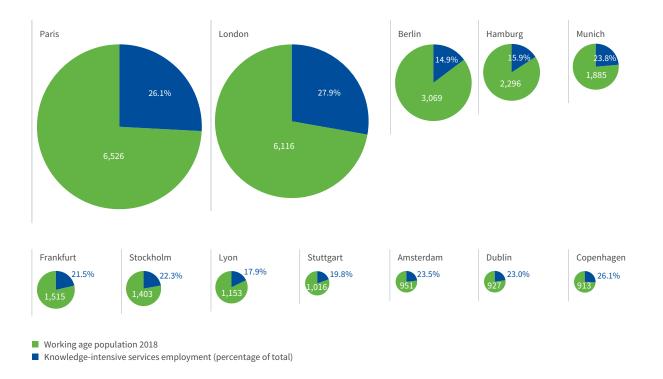
The region hosts Europe's largest pool of students and PhD candidates. This economic performance is driven by a large, well-educated, relatively young and cosmopolitan pool of labour. Greater Paris has a working-age population of over 6.5 million people, more than four times the average for Europe's major cities.⁴

Of particular importance for the development of knowledge-intensive activity is educational attainment. In this regard, Paris again ranks as a global leader. Almost 40 per cent of Paris's workers are university graduates and almost 15 per cent of the population are foreign born⁵, a feature that helps with connectedness to other parts of Europe and the world.

Paris is also home to a broad range of world-class educational and research institutions for the further development of this human capital. After London, it has the highest concentration of top universities in Europe, ten in the top 500 for instance.⁶

The region hosts Europe's largest pool of students and PhD candidates at almost 680,000. Over 110,000 of these are international students.⁷ It possesses several top-ranking business schools, notably INSEAD, HEC and ESSEC.

Figure 2. Working population ('000) and share of knowledge-intensive employment



Source: Oxford Economics, 2018.

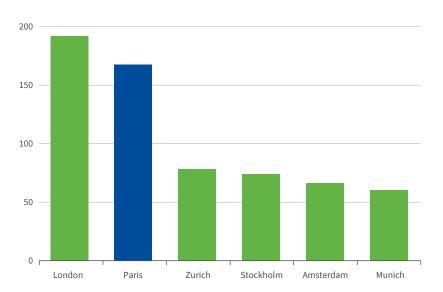
- 4. Oxford Economics data.
- 5. Paris Region Key Figures 2018, Paris Region.
- 6. Times Higher Education, World University Rankings 2018.
- 7. Paris Region Key Figures 2018, Paris Region.

A diverse range of business clusters

Although Paris doesn't play host to any clusters of the scale and global importance of some of London's, it arguably is home to a more diverse range of significant industry clusters. Many of these benefit from national and regional government initiatives that seek to strengthen the links between large companies, small and medium-sized enterprises, research and educational institutes, local authorities and investors. Significant clusters can be identified in areas as diverse as finance, business services, health and life sciences, digital industries, cosmetics, aerospace, fashion and luxury goods. Reflecting this breadth of industry strengths, Paris is the global headquarters of 29 of the 31 French companies listed in the Fortune Global 500. After London, Paris hosts the second-largest number of company headquarters in Europe.

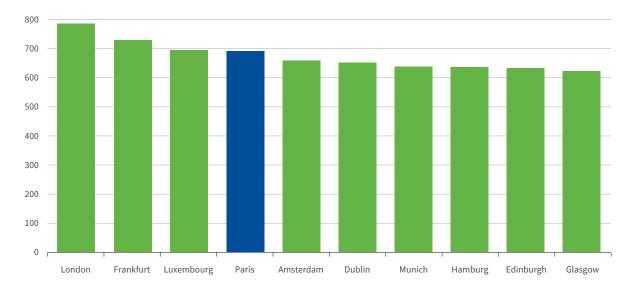
Paris is the global headquarters of 29 of the 31 French companies listed in the Fortune Global 500.

Figure 3. Number of headquarters by selected European cities



Source: Oxford Economics, 2019.

Figure 4. Global financial centre index rating in Europe, 2018



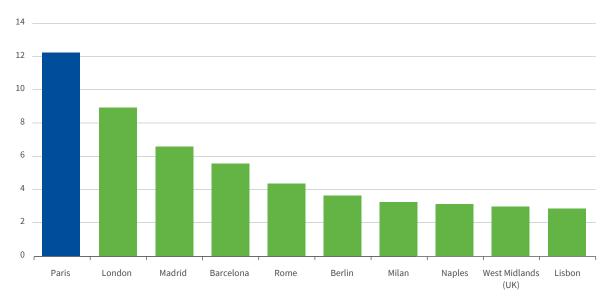
Source: The Global Financial Centres Index, 2018.

^{8.} European Cluster Collaboration; 'Île-de-France clusters', Wikipedia; 'Pôle de compétitivité en France', Wikipedia; Paris Region Key Figures 2018, Paris Region.

The scale to facilitate deep and extensive knowledge networks

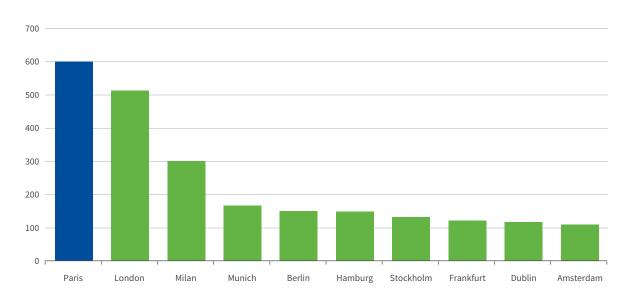
Scale is one of Paris's outstanding attributes. With a population of c.12 million in the Greater Paris region, it is one of Western Europe's two megacities, alongside London. It is the largest regional economy in Europe, accounting for 4.5 per cent of GDP for the EU289. Reflecting the centralised nature of economic activity, it accounts for 30.3 per cent of French GDP, despite representing 18.2 per cent of the population.¹⁰

Figure 5. Total population by selected European cities, 2018 (mn)



Source: Oxford Economics, 2018

Figure 6. Largest European cities' GDP in Europe, 2018 (\$ bn)



Source: Oxford Economics, 2019.

^{9.} As at the time of data calculation. Now EU27.

^{10.} Paris Region Key Figures 2018, Paris Region.

Geography, connectedness and good governance

Paris also enjoys other major advantages, notably:

- **Geography.** Easy access to some of Europe's other major regional economies and business centres, for example: London, Randstad, Brussels, Rhine-Ruhr and Rhine-Main.
- International connections. Trade, history and a large and diversified international population provide strong links to many parts of the world.
- Good governance. Paris benefits from strong and transparent local governance. Regional
 government is provided by the Ile de France Regional Council. In turn, each of the Ile de France's
 eight departments has a departmental council, of which Paris is the most populous and
 prominent.^{11,12} Local politicians enjoy considerable powers, allowing forward-looking
 policymakers scope for ambitious projects to enhance conditions for growth.

Trade, history and a large and diversified international population provide strong links to many parts of the world.

World-class transport infrastructure

Infrastructure is a vital area in which forward-looking policymakers can use their influence. In recent years, there has been an effort to shift from cars to pedestrian and bicycle-friendly roads. Several districts and streets have turned car free. Notably, 2.4 km of River Seine quayside was turned car free in 2016 and the plan is to further expand car-free zones and restrictions.

The fact Paris enjoys arguably the best public transport credentials of any major European city helps in this effort to reduce car usage. In McKinsey's analysis of the urban transportation systems of 24 global cities, Greater Paris ranks third overall for public transport, making it the highest-ranked European city.

Notwithstanding policy initiatives to reduce car dependence, Paris also scores well for private transport. McKinsey places it fourth in the world, with only Madrid, the first-ranked centre, bettering it in Europe. Together, these scores help Paris to second place globally for "overarching urban mobility", with only Singapore scoring higher. 13

Meanwhile, as befits a city with such prominent business, cultural and historic links, its international connectivity is also among the most extensive in the world. Passenger numbers from the region's airports are second in Europe only to London's.



- $11. \ \ The others are Essonne, Hauts de Seine, Seine-Saint Denis, Seine-et-Marne, Val-de-Marne, Val-d'Oise and Yvelines.$
- 12. Departments in turn are further sub-divided into arrondissements, cantons and communes.
- 13. 'Elements of success: Urban transportation systems of 24 global cities', McKinsey & Company, June 2018.

"Grand Paris" project to bolster infrastructure credentials further

The "Grand Paris" project is intended as the centrepiece for the further development of the region.

Notwithstanding its high-ranking current infrastructure credentials, the region has embarked on the largest and most ambitious infrastructure project in Europe, dubbed "Grand Paris".

The key objective of the project is to create a ring network in peripheral Paris to enable suburb-to-suburb connections without having to travel through central Paris. Improved links to the region's airports are also prominent.

With these objectives in mind, the project envisages four new metro lines encompassing 200 kilometres of new track and 68 new stations. Passenger volumes of two million per day are expected.

Figure 7. The Grand Paris project

Source: Aviva Investors, March 2021.

The project is not just about transport, however. Rather, it is intended as the centrepiece for the further development of the Greater Paris region. To that end, more than one million new housing units are envisaged at a rate of about 70,000 per year over the project's lifetime (2015-30). The project also identifies economic clusters as an enabler of success and seeks to use these to drive the development of new economic centres.

The project could be transformative for real estate markets in the Greater Paris region, with the office sector well positioned to benefit.

Two broad categories of location can be identified as likely to get a boost from the project:

- The first are locations in the inner rim of Paris; centres providing large floorplate office space at competitive rents that will significantly benefit from improved transport linkages.
 For example:
 - La Défense, a likely beneficiary of the RER E extension and line 15, which will unclog RER A and reduce commuting times;
 - St Denis sub-markets, notably Pleyel, which will become a major transport hub with four new metro lines and a 20-minute connection to Charles de Gaulle airport.
- The second are more peripheral locations, which look ripe for significant new development once connections have been improved. For example:
 - Plateau de Saclay, with the ambition it could become a research and innovation cluster thanks to the concentration of higher education institutions and R&D centres.

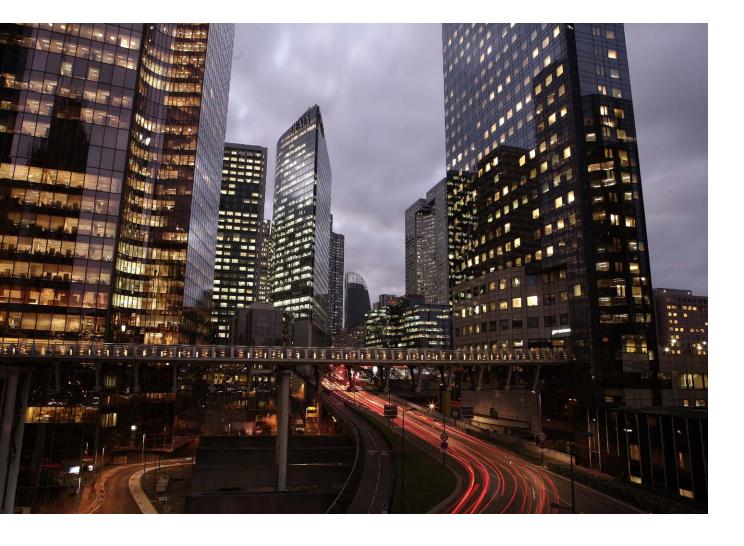


Office market exhibits diverse demand, tight supply and good liquidity

Paris is one of the world's largest and most sophisticated office markets.

Reflecting its knowledge-economy credentials and the heavy concentration of French economic activity in the capital, Paris is one of the world's largest and most sophisticated office markets. In floorspace terms, only Tokyo and New York are larger. 14

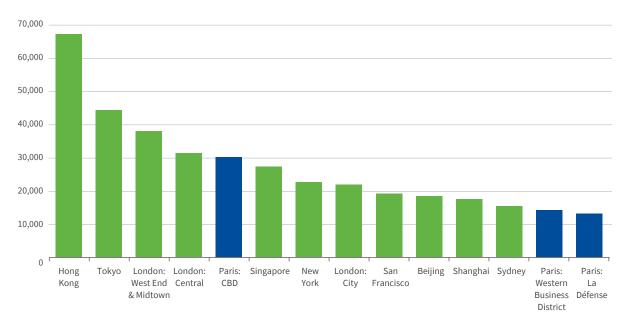
After London, it is judged the second-most transparent major office market in Europe. ¹⁵ It is also among the most liquid investment markets in Europe, making it relatively easy to enter and exit, even in difficult times.



Market enjoys a diverse occupier base, bolstered by good affordability

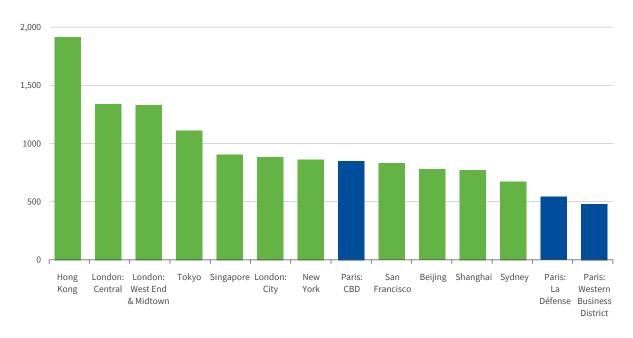
Reflecting its broad economy, Paris boasts a diverse office occupier base, with decent affordability strengthening occupier demand. In fact, given its talent and scale credentials, the Greater Paris market appears noticeably cheap in a global context, from both an occupier and investor's perspective.

Figure 8. Prime capital values by selected global office markets, EUR (psm)



Source: PMA, 2020.

Figure 9. Prime rental values by selected global office markets, EUR (psm)



Source: PMA, 2020.

Height restrictions, conservation areas and high building densities serve to mitigate supply risks.

Central Paris supply side is heavily restricted

Of course, occupier demand is just one side of the equation when looking at the outlook for real estate markets. Though often under appreciated by investors, the extent and nature of restrictions on new supply are at least as important.

Cities vary markedly in terms of the ease of bringing new space to completion, with barriers to development far more significant in some markets than others. ¹⁶ Significant supply restrictions are supportive of rents.

The supply-side in Paris is characterised by serious constraints on development, mainly in the form of:

- Natural constraints, notably building density. This is particularly important in central Paris, although less of an issue in peripheral areas.
- Regulatory constraints, including:
 - Conservation areas that are especially extensive in historic central Paris and some peripheral
 areas to the south-west.

Figure 10. Map of conservation and listed sites in Paris

Source: BâtiSIG, Aviva Investors, March 2021.

Height restrictions. Although these were loosened in 2010, particularly for the 13th arrondissement, they remain strict – especially for most of central Paris. As a result, tower developments are relatively scarce in central Paris. The Tour Triangle development in the 15th arrondissement is a rare example. Narrowly approved by the authorities, it will be the third-tallest building in the city.

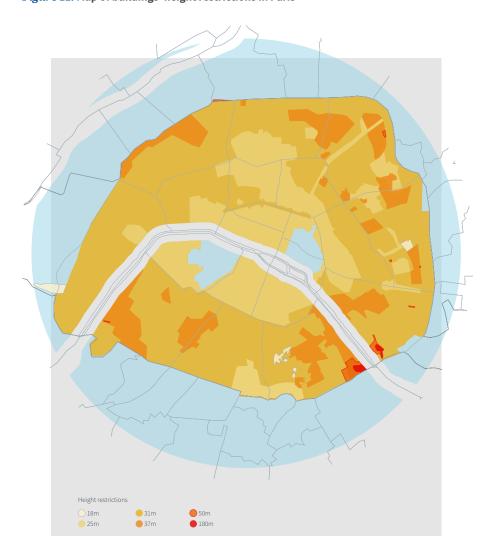


Figure 11. Map of buildings' height restrictions in Paris

Source: Capgeo, 2020. Aviva Investors, March 2021.

The local **planning and policy regime** also weighs heavily on the prospects for commercial development, with local authorities having considerable powers to drive development initiatives of their own.

An important means of doing so is via the designation of a ZAC (Zone d'Aménagement Concerté or Concerted/Focused Development Zone). These can be initiated by a local authority or certain other public bodies, such as those charged with delivering the Grand Paris project. The aim of a ZAC is to drive the development of the designated area and ensure the necessary public infrastructure. ZACs tend to be more prevalent in peripheral parts of Paris.

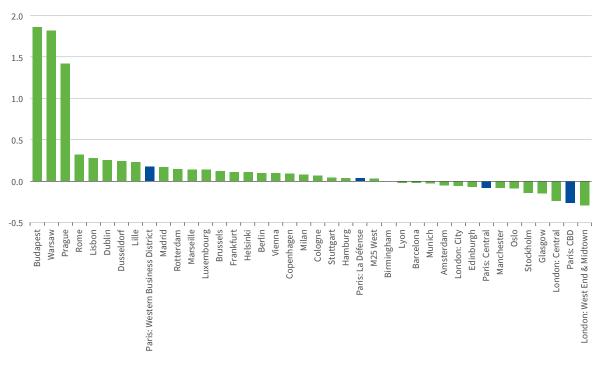
ZACs can enable very large developments. While residential development usually forms the lion's share of floorspace, some provide significant amounts of office space. For example, the "Paris Rive Gauche" zone has brought almost 2.5 million square metres (sqm) of total developments to fruition, including c.750,000 sqm of office space.

Local authorities have considerable powers to drive development initiatives.

Among most difficult European markets in which to develop new office space Nonetheless, despite measures such as these, Paris, and especially central Paris, counts among the most difficult markets in Europe in which to develop new office space. We estimate the central business district has the second-lowest supply responsiveness in Europe, with only London's West End tighter. La Défense and Paris's western business districts (WBDs) provide more opportunities for development. Structural vacancy is relatively low in Paris, especially central Paris. La Défense and Paris WBDs record higher levels of vacancy on average.

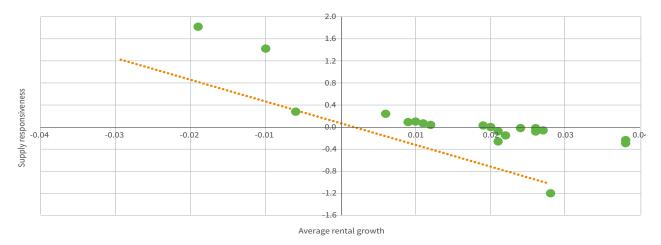
Low supply responsiveness is supportive of rental growth. Across Europe, a high correlation can be observed between rental growth and supply responsiveness (see Figure 13).

Figure 12. Supply responsiveness by city (1994-2019 average) calculated by net additions as a percentage of stock (net supply) minus net absorption as a percentage of stock (net demand)



Source: PMA, Aviva Investors, 2020.

Figure 13. Correlation between average rental growth and supply responsiveness (1994-2019)



Source: PMA, Aviva Investors, 2020.

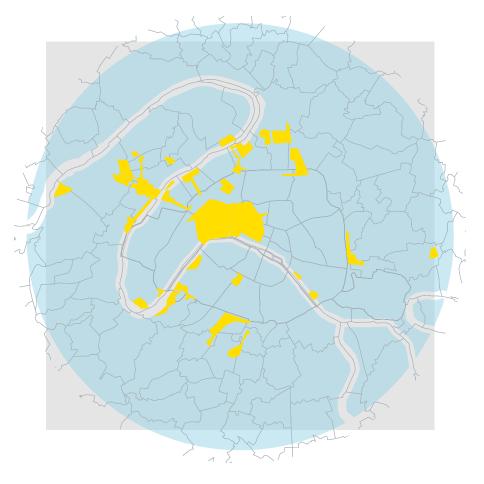
Many sub-markets with various demand and supply drivers

Given its scale and diversity, the Paris office market is made up of a broad range of sub-markets. Reflecting the market's sophistication, there is a wealth of data available at the sub-market level to allow detailed analysis of local demand and supply conditions.

We identify and analyse 33 sub-markets. Given their varied characteristics, investors need differentiated strategies for different sub-markets.

Figure 14. Our key central Paris office sub-markets

Investors need differentiated strategies for different sub-markets.



Source: Aviva Investors, March 2021.

In the age of the knowledge economy, a business's most important resource is talent.

Demand analysis: Looking at sub-markets from an occupier perspective

In the age of the knowledge economy, a business's most important resource is talent; locations that provide greatest access to talent will benefit from stronger occupier demand. These will be sub-market locations that boast the best:

- Connectivity: Allowing talent to easily access a location.
- Amenities: Incentising talented people to spend time there.
- Business clusters: Allowing talent to be more productive.

Figure 15. Demand analysis ranking

Weights	55%	35%	10%	100%
Location	Connectivity	Amenities	Clusters	Weighted Score
QCA Opera				
QCA Etoile				
17eme Batignolles				
12ème Gare de Lyon				
13ème SEMAPA				
15ème Montparnasse				
12ème Bercy				
La Défense				
Neuilly-sur-Seine				
Nanterre Les Terrasses				
Saint-Denis Landy				
Nanterre Coeur de quartier université				
15ème Front de Seine				
Issy-les-Moulineaux				
Saint-Denis Pleyel				
Bois-Colombes				
Levallois-Perret				
Colombes/La Garenne-Colombes				
Val-de-Fontenay				
Nanterre Groues				
Mac Donald/Aubervilliers/Front Populaire				
Rueil-Malmaison				
Saint-Ouen Les Docks				
15ème Balard				
Gare de Saint-Ouen Péripherique				
Suresnes/Puteaux				
Asnieres-sur-Seine				
Montrouge/Chatillon				
Bas-Montreuil/Saint-Mandé/Vincennes				
Boulogne le Trapeze				
Arcueil Vache Noire				
Boulogne Point du Jour				
Bagneux				

Source: Aviva Investors, 2020.

Of these attributes, **connectivity** is given the biggest weighting in our demand analysis. We rank the sub-markets' *current* transport credentials by looking at the catchment population within a certain commuting time. Both public and private transport are analysed. We also look at the potential for *future* transport improvements by virtue of the effects of the Grand Paris project.

The most noteworthy results in terms of connectivity are:

- The top-ranking sub-markets are all in inner Paris, with CBD Etoile, CBD Opéra and Gare de Lyon the top three.
- Markets with good current connectivity that are likely to benefit significantly from the Grand
 Paris project also feature prominently. These include Saint Denis Landy, Nanterre Les Terrasses
 and La Défense.
- Another interesting category is those markets that currently show mediocre or poor current
 connectivity, but where Grand Paris will bring a big improvement, potentially transforming
 their prospects. These include Saint Denis Pleyel, Saint Ouen sub-markets, Nanterre Université,
 Batignolles, Suresnes-Puteaux and Asnières-sur-Seine.
- The weakest markets in terms of connectivity are all in the south east of Paris.

Unsurprisingly, **amenity** scores are also extremely high in the CBD districts, given these nestle within the world-class cultural and leisure facilities of one of the world's most-visited cities. Inner west Paris locations also score favourably. By contrast, amenities are judged to be weaker in the north and south end of outer Paris.

Though **business clusters** are generally not as prominent in Paris as in some other major cities, those that can be identified also support the CBD markets. For instance, CBD Etoile plays host to luxury goods and global law clusters. CBD Opéra boasts an expanding IT cluster. Away from the CBD, a significant digital and media cluster is supportive of demand in Issy-les-Moulineaux and neighbouring Boulogne sub-markets.

Connectivity is given the biggest weighting in our demand analysis.



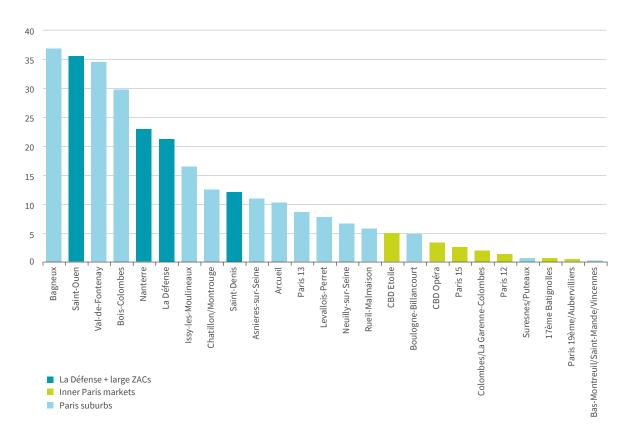
Supply analysis: Looking for sub-markets with significant constraints on development

The most promising sub-markets also have significant constraints on new supply.

In addition to robust demand credentials, the most promising sub-markets also have significant constraints on new supply. In our analysis, we looked at:

- Conservation areas, as classified and listed sites serve to limit development opportunities.
- Height restrictions, which translate into reduced potential for large office buildings.
- · Higher building density.
- Concerted Development Zones (ZACs), as these will weigh upon the risk of new office developments from regeneration projects.
- Future supply, the known extent of future office completions.

Figure 16. Future supply as a percentage of stock



Source: PMA, BNPPRE (include pipeline under construction and planned).

Figure 17 shows the results of our supply-side analysis. Our analysis found that:

- Supply constraints are most pronounced in the two CBD sub-markets, Opéra and Etoile;
- Severe constraints are also found in many other inner-Paris sub-markets, particularly to the north and west, for example Batignolles and Neuilly sur Seine.
- By contrast, supply constraints are much less prevalent in some more peripheral centres:
 - To the west, in La Défense and nearby markets such as Nanterre, where future supply pipelines are considerable.
 - To the north in Saint Ouen and Saint Denis Pleyel, where extensive new development is also planned.
 - To the south in Bagneux and Issy-les-Moulineaux.

Figure 17. Supply analysis ranking

Weights	30%	15%	15%	20%	20%	100%
Location	Extent of conservation area	Building density	Height constraints	Concerted planning zone (ZAC)	Future completions	Weighted score
QCA Opera						
QCA Etoile						
Neuilly-sur-Seine						
17eme Batignolles						
15ème Montparnasse						
Levallois-Perret						
12ème Gare de Lyon						
Montrouge/Chatillon						
15ème Front de Seine						
Boulogne Point du Jour						
15ème Balard						
Rueil-Malmaison						
Bas-Montreuil/Saint-Mandé/Vincennes						
Saint-Denis Landy						
Bois-Colombes						
Colombes/La Garenne-Colombes						
13ème SEMAPA						
Boulogne le Trapeze						
Mac Donald/Aubervilliers/Front Populaire						
Suresnes/Puteaux						
Nanterre Les Terrasses						
12ème Bercy						
Val-de-Fontenay						
Arcueil Vache Noire						
Issy-les-Moulineaux						
Asnieres-sur-Seine						
Nanterre Coeur de quartier université						
Bagneux						
Saint-Denis Pleyel						
Nanterre Groues						
Gare de Saint-Ouen Péripherique						
Saint-Ouen Les Docks						
La Défense						

Source: Aviva Investors, 2020.

The demand and supply analysis allow similar markets to be grouped and categorised.

Combining demand and supply analysis generates a categorisation of sub-markets

The demand and supply analysis allow similar markets to be grouped and categorised. We identify five categories:

- Category 1: Strong established locations with excellent demand credentials and low supply risks.
- Category 2: Established locations with strong demand credentials (except for clusters) and limited supply risks.
- Category 3: Established locations that display weaknesses in demand or supply risks.
- Category 4: Weaker or emerging locations likely to experience regeneration.
- Category 5: Markets with weak demand and supply credentials and a poor outlook.

Based on these definitions, central Paris sub-markets can be categorised shown in Figure 18.

Figure 18. Central Paris sub-markets by category

Category 1	Category 2	Category 3	Category 4	Category 5
CBD Opéra	17ème Batignolles	Nanterre Les Terrasses	Saint-Denis Pleyel	Asnières-sur-Sein
CBD Etoile	Neuilly-sur-Seine	15ème Front de Seine	Nanterre Groues	Arcueil Vache Noir
	12ème Gare de Lyon	Saint-Denis Landy	Gare de Saint-Ouen Péripherique	Bagneux
	15ème Montparnasse	Levallois-Perret	Saint-Ouen Les Docks	
	13ème SEMAPA	La Défense	Nanterre Université	
	12ème Bercy	Issy-les-Moulineaux	Bois-Colombes	
		15ème Balard	Rueil-Malmaison	
		Colombes/ La Garenne-Colombes	Mac Donald/ Aubervilliers/ Front Populaire	
		Montrouge/Chatillon	Val-de-Fontenay	
		Boulogne le Trapèze	Boulogne Point du Jour	
			Suresnes/Puteaux	
			Bas-Montreuil/ Saint-Mandé/ Vincennes	

This categorisation is particularly useful as it allows us to define a preferred investment strategy for each category:

- Category 1: At the right price, taking risk is generally acceptable at the micro-location and asset level.
- Category 2: Moderate appetite for selective risk-taking at the micro-location and asset level.
- Category 3: Asset must have a point of differentiation, be brand-enhancing, of high quality and strategically positioned near a station.
- Category 4: Weaker or emerging locations likely to experience regeneration.
- Category 5: Markets with weak demand and supply credentials and a poor outlook.

We believe this framework could help investors form appropriate investment decisions in an objective manner when considering investments in the central Paris office market.

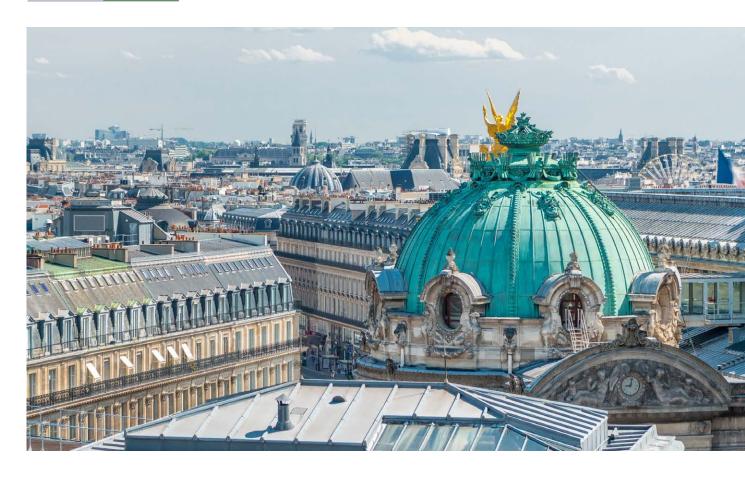
Sub-market deep dives

CBD Opéra

A stronghold of innovation, digital technology and high-value sectors. Well connected with strong amenities. High barriers to entry and low supply risks.

Connectivity	
Amenities	
Clusters	
Supply	

A stronghold of innovation, digital technology and high-value sectors.



Along with the Etoile sub-market, Opéra is one of Paris's two prime CBDs. It comprises c.2.5 million sqm of office stock, mostly in small and medium-sized units due to the physical constraints of the market. It achieves the highest rental values of any sub-market, is the best-connected centre in terms of public transport, and rates well for private transport too, despite its central location. Its transport credentials will be essentially unaffected by the Grand Paris project given its focus on improving connections in more peripheral locations.

Opéra's demand-side attractions are buoyed by world-class amenities, such as the Galeries Lafayette Haussmann and the Palais Garnier Opéra House. It is also close to the many other features central Paris has to offer.

Traditionally, its major occupier strengths have been in legal services, consulting and finance. Recent years, however, have also seen the growth of an important tech cluster with recent lettings to the likes of Facebook, Twitter and BlaBlaCar.



Figure 19. Location of take-up by tech companies since 2008 (non-exhaustive list)

Source: Aviva Investors, March 2021.

On the supply side, this is one of the most restricted markets in Europe. Its architectural heritage has bequeathed a wealth of listed and protected buildings. High building density and strict height limits further limit the potential for development. As a result, total stock levels are stable, and the market enjoys low levels of structural vacancies. With few developments in the pipeline, and no supply risks stemming from urban regeneration schemes, this looks set to remain the case.

In terms of investment strategy, given the strength of the market, investors can be comfortable with taking risks at the asset or micro-location level. However, they should be particularly mindful of mispricing risks when investing in CBD Opéra, especially in the current stage of the cycle.



La Défense

La Défense is Europe's largest business district with good amenities and connectivity. Its modern offices and central location make it stand out. Nevertheless, the area is seeing vast supply in the pipeline and suffers from market volatility.

Connectivity	
Amenities	
Clusters	
Supply	

La Défense is Europe's largest business district with good amenities and connectivity.



Europe's first and largest purpose-built business district, located across the Seine to the west of central Paris, this is by far the largest of Paris's peripheral sub-markets with over 3.6 million sqm of office space. Much of this is provided in tower developments, with 19 completed skyscrapers (buildings with over 40 floors).

These large floorplates make it an attractive choice for the headquarters of multinationals such as HSBC, American Express and Philip Morris, as well as major investment banks and large French groups such as EDF, GDF-Suez and Société Générale. This market is still relatively central and well connected by public transport. These credentials are set to get a big boost courtesy of the Grand Paris project, which will connect existing metro and RER lines and the newly developed 15, 16 and 18 lines.

This market's demand credentials are strong but its supply side is problematic. La Défense benefits from strong amenities, with its parks, street art and modern buildings providing a pleasant environment. It is well served by restaurants and bars and the massive Les Quatre Temps shopping centre, which boasts 220 stores and a 24-screen cinema. It is visited by an estimated eight million tourists each year.¹⁷

While this market's demand credentials are strong, its supply side is problematic. By its very nature, it is a supply-elastic centre intended to provide the large developments that central Paris generally cannot accommodate. Its planning regime is lenient, building densities are low and it has no conservation areas.

Large waves of new supply have contributed to much higher rental volatility compared to more constrained CBD markets. It is currently experiencing one of these development surges, with c.240,000 sqm due for completion in 2020 alone and net additions of 13 per cent of total office space expected in the next three years.

Given the structural and current cyclical supply risks in La Défense, our preferred strategy for this market is to focus on strong assets with a point of differentiation that offer income security.



Saint Denis Pleyel

A likely emerging sub-market due to its future connectivity and regeneration potential. The area is undergoing significant development, which also brings high supply risk.

Connectivity	
Amenities	
Clusters	
Supply	

A likely emerging sub-market due to its future connectivity and regeneration potential.



We class Saint Denis Pleyel as an emerging sub-market due to its major development potential. Key to this is the connectivity improvements planned as part of the Grand Paris project.

Its current public transport ranking is only average, but the scheduled opening of the Pleyel station will be transformative. A bridge connection to the more-established Landy sub-market, as well as it hosting an Olympic village for Paris 2024, will also help catalyse development in this centre.

As befits a relatively immature market, current amenities are weak across all measures; food and beverage provision, public realm, leisure facilities and perceived safety. This should improve, however, with the completion of the Les Lumières Pleyel scheme, which will bring 24,000 sqm of retail, services and hotel space.

Similarly, despite being an immature market without specific business clusters, it enjoys a relatively diverse occupier base.

This market exhibits low building density and does not benefit from conservation areas.

On the supply side, this market exhibits low building density and does not benefit from conservation areas, factors that help mark it out for major regeneration in coming years.

Of course, these factors also suggest significant potential for supply and demand imbalances.

Our recommended investment strategy for Saint-Denis Pleyel is to focus on strong assets in the best micro locations, strategically positioned near a station to mitigate the risks attached to emerging locations.

Emerging locations also provide opportunities for development and value creation and to acquire modern, differentiating and brand-enhancing buildings, our favoured strategy for emerging sub-markets. We expect such strategies to deliver relatively attractive risk-adjusted returns compared to investments in more established locations.



Key conclusions

In the era of knowledge capitalism, the Paris office market benefits from all the key features of a successful city. Paris is one of the largest cities in Europe with unparalleled talent credentials, and its office market benefits from significant constraints to new developments. At the same time, the market is large and has a range of diverse sub-markets, which therefore requires deeper analysis at the sub-market level.

By identifying and analysing sub-markets from both a demand and supply perspective, this gives us a deeper understanding of the different dynamics of the market, enabling us to make better and more objective investment decisions. More specifically, a sub-market framework allows us to categorise sub-markets in terms of their relative attractiveness and implement the appropriate investment strategy for each category.

The best sub-markets attract, retain and support talent via strong connectivity credentials, high-quality amenities and the presence of clusters. Equally importantly, those sub-markets are characterised by low supply risks. The results of our analysis show that the CBD markets stand out from both a demand and supply perspective. They are followed by the rest of inner Paris sub-markets, which all display strong demand characteristics with limited supply risks.

This analysis has also allowed us to identify potential emerging sub-markets in central Paris, such as Saint-Denis, Nanterre and Saint-Ouen, which will benefit from urban planning and infrastructure development projects. Investing in rapidly growing locations in a strong urban centre like central Paris may offer superior risk-adjusted returns compared to more established locations.

In the era of knowledge capitalism, the Paris office market benefits from all the key features of a successful city.

Important Information

Except where stated as otherwise, the source of all information is Aviva Investors Global Services Limited (AIGSL). Unless stated otherwise any views and opinions are those of Aviva Investors. They should not be viewed as indicating any guarantee of return from an investment managed by Aviva Investors nor as advice of any nature. Information contained herein has been obtained from sources believed to be reliable but has not been independently verified by Aviva Investors and is not guaranteed to be accurate. Past performance is not a guide to the future. The value of an investment and any income from it may go down as well as up and the investor may not get back the original amount invested. Nothing in this material, including any references to specific securities, assets classes and financial markets is intended to or should be construed as advice or recommendations of any nature. Some data shown are hypothetical or projected and may not come to pass as stated due to changes in market conditions and are not guarantees of future outcomes. This material is not a recommendation to sell or purchase any investment.

In Europe this document is issued by Aviva Investors Luxembourg S.A. Registered Office: 2 rue du Fort Bourbon, 1st Floor, 1249 Luxembourg. Supervised by Commission de Surveillance du Secteur Financier. An Aviva company. In the UK Issued by Aviva Investors Global Services Limited. Registered in England No. 1151805. Registered Office: St Helens, 1 Undershaft, London EC3P 3DQ. Authorised and regulated by the Financial Conduct Authority. Firm Reference No. 119178. In Switzerland, this document is issued by Aviva Investors Schweiz GmbH.

In Singapore, this material is being circulated by way of an $\,$ arrangement with Aviva Investors Asia Pte. Limited (AIAPL) for distribution to institutional investors only. Please note that AIAPL does not provide any independent research or analysis in the substance or preparation of this material. Recipients of this material are to contact AIAPL in respect of any matters arising from, or in connection with, this material. AIAPL, a company incorporated under the laws of Singapore with registration number 200813519W, holds a valid Capital Markets Services Licence to carry out fund management activities issued under the Securities and Futures Act (Singapore Statute Cap. 289) and Asian Exempt Financial Adviser for the purposes of the Financial Advisers Act (Singapore Statute Cap.110). Registered Office: 1 Raffles Quay, #27-13 South Tower, Singapore 048583. In Australia, this material is being circulated by way of an arrangement with Aviva Investors Pacific Pty Ltd (AIPPL) for distribution to wholesale investors only. Please note that AIPPL does not provide any independent research or analysis in the substance or preparation of this material. Recipients of this material are to contact AIPPL in respect of any matters arising from, or in connection with, this material. AIPPL, a company incorporated under the laws of Australia with Australian Business No. 87 153 200 278 and Australian Company No. 153 200 278, holds an Australian Financial Services License (AFSL 411458) issued by the Australian Securities and Investments Commission. Business Address: Level 27, 101 Collins Street, Melbourne, VIC 3000 Australia.

The name "Aviva Investors" as used in this material refers to the global organization of affiliated asset management businesses operating under the Aviva Investors name. Each Aviva investors' affiliate is a subsidiary of Aviva plc, a publicly-traded multinational financial services company headquartered in the United Kingdom. Aviva Investors Canada, Inc. ("AIC") is located in Toronto and is registered with the Ontario Securities Commission ("OSC") as a Portfolio Manager, an Exempt Market Dealer, and a Commodity Trading Manager. Aviva Investors Americas LLC is a federally registered investment advisor with the U.S. Securities and Exchange Commission. Aviva Investors Americas LLC ("AIA") is a federally registered investment advisor with the US Securities and Exchange Commission. AIA is also a commodity trading advisor ("CTA") registered with the Commodity Futures Trading Commission ("CFTC") and is a member of the National Futures Association ("NFA"). AIA's Form ADV Part 2A, which provides background information about the firm and its business practices, is available upon written request to: Compliance Department, 225 West Wacker Drive, Suite 2250, Chicago, IL 60606.

165119 - 30/04/2023

Contact us

Aviva Investors St Helen's, 1 Undershaft London EC3P 3DQ +44 (0)20 7809 6000

www.avivainvestors.com

