October 2019

M&G UK City Vitality Index

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For Investment Professionals only

The value of investments will fluctuate which will cause prices to fall as well as rise and you may not get back the original amount you invested.

Executive summary

- London retains the top position, scoring higher in 2019 thanks to stronger innovation
- "Big 6" regional cities: Both Leeds and Glasgow moved up by two positions. Glasgow, in particular, has benefitted from improved connectivity thanks to the introduction of NextBike, the first bike-sharing scheme in Scotland
- "Mid 6" regional cities: Nottingham has dropped four places, given the city's population growth is expected to slow from 1.1% (2014-2018) to 0.3% (2019-2023)[1]. Along with Nottingham, Sheffield has also fallen as a result of the city's comparatively weaker connectivity and a heavier focus on the public sector

[1] Source: Experian, June 2019.

Introduction

The release of our second City Vitality Index (CVI) coincides with heightened investor scrutiny of market fundamentals in order to justify pricing levels, at a time of extended political uncertainty and 'lower for longer' bond yields.

By assessing eight 'vital signs' that shape urban economics and influence occupier demand, the CVI seeks to quantify the fundamental attractiveness of 13 major UK cities to property investors.

Since our inaugural CVI in 2016, London has continued to demonstrate 'vital' strength, having long established itself as one of the world's top real estate investment destinations for both domestic and international capital. Equally, many regional cities have proven their ability to attract and retain tenant demand.

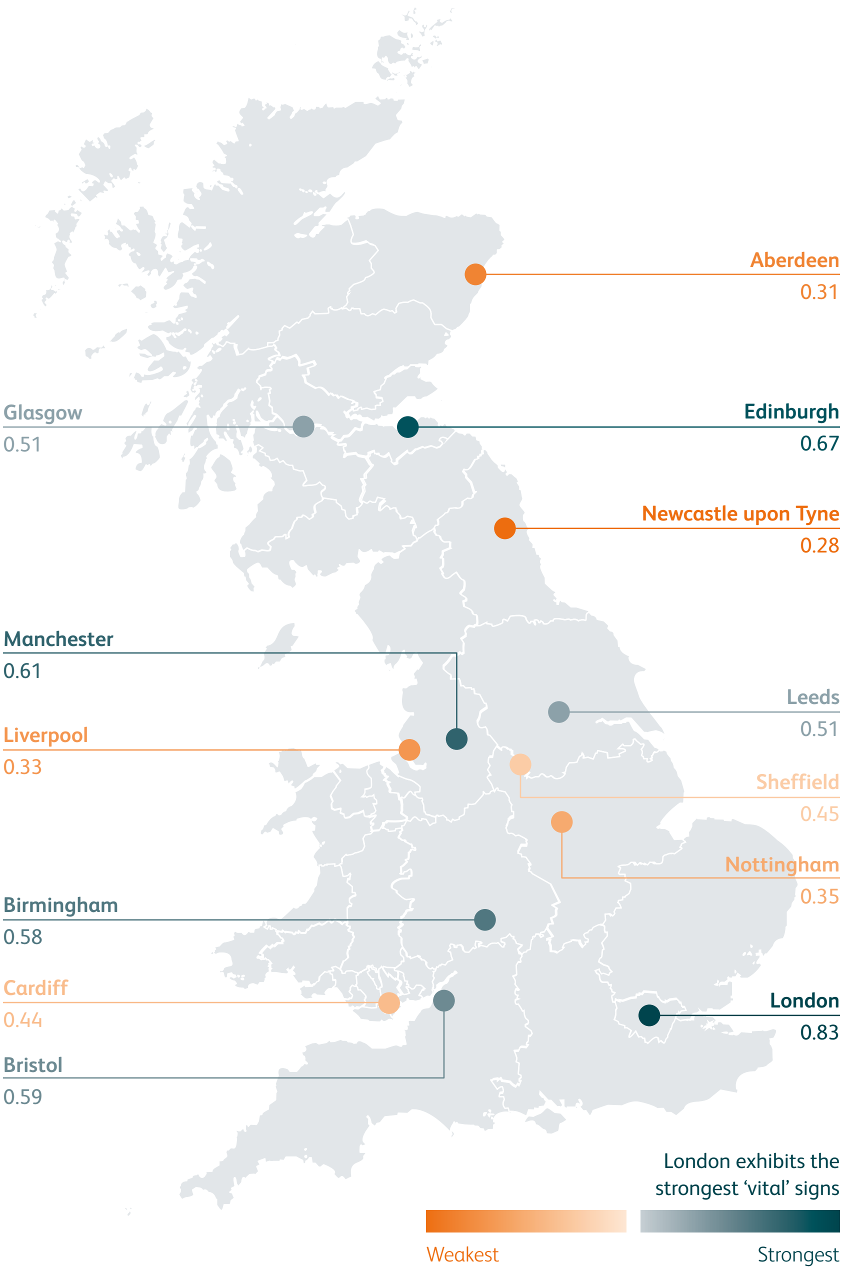
The 2019 CVI is devised to be used by investors as a tool to identify long-term strategic investment propositions across the country's key office markets.

Figure 1: City Vitality Index ranking 2019

Rank	City	Score (0-1)	Rank movement	
1	London	0.83	=	0
2	Edinburgh	0.67	▲	+2
3	Manchester	0.61	▼	-1
4	Bristol	0.59	▼	-1
5	Birmingham	0.58	▲	0
6	Leeds	0.51	▲	+2
7	Glasgow	0.51	▲	+2
8	Sheffield	0.45	▼	-1
9	Cardiff	0.44	▲	+1
10	Nottingham	0.35	▼	-4
11	Liverpool	0.33	▲	+1
12	Aberdeen	0.31	▼	-1
13	Newcastle upon Tyne	0.28	=	0

* 1= highest vitality score.

Figure 2: Highest scoring cities by geography



Source: M&G Real Estate.

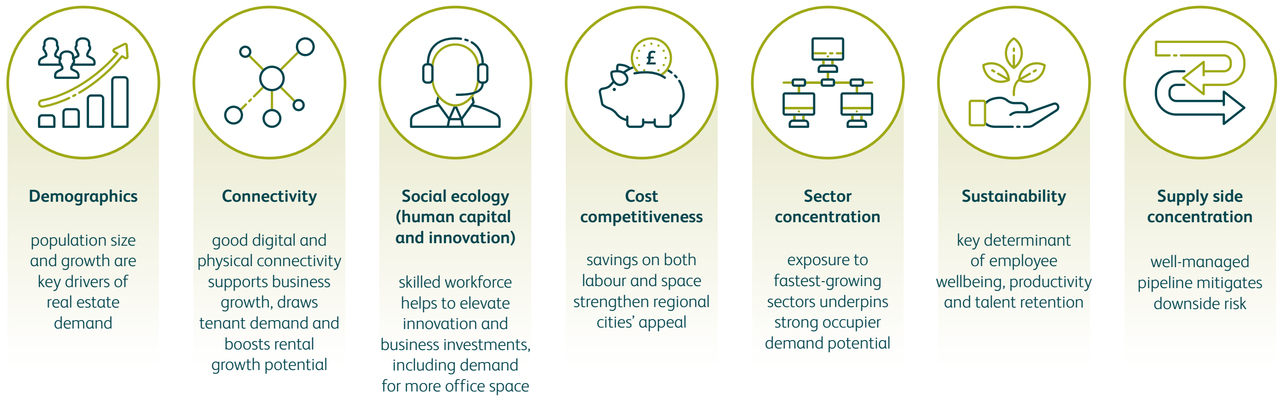
Key changes: The 2019 M&G CVI

Concerns over climate change, and consequently its impact on employee wellbeing, productivity and talent retention, is becoming an increasingly crucial element of enterprise talent strategy for many organisations. As such we have introduced sustainability, measured in terms of level of per capita CO2 emissions and mean level of pollutants, as an additional 'vital' factor that shapes urban economies and subsequently the office occupier market.

The impact of structural change in the UK labour market since our last CVI analysis has also played into cities' rankings. Industries such as Media, Real Estate and Technology are expected to replace Professional Services and Finance sectors as the main driver of office-based employment growth over the next five years. This has worked in favour of cities such as Nottingham and Bristol, for example; Bristol has raised its profile as a technology hub, with demand from the TMT sector accounting for 29% of total city centre take-up in 2018[2]. In contrast, cities such as Birmingham and Manchester were comparatively disadvantaged given Professional Services firms continue to form the largest source of labour and office space demand, albeit demand from TMT businesses is also growing.

In this year's assessment of transport connectivity, we have also taken into account the introduction of various smart travel apps as well as the proliferation of different bike sharing schemes. Apps such as Citymapper enable cities to develop transport networks more cheaply and efficiently by providing more accurate real time information, while bike sharing schemes encourage the use of green and sustainable transport, thereby improving a cities' rating.

Figure 3: Strategy overview



Source: M&G Real Estate.

[2] Source: Savills Research, Feb 2019.

Key findings by component

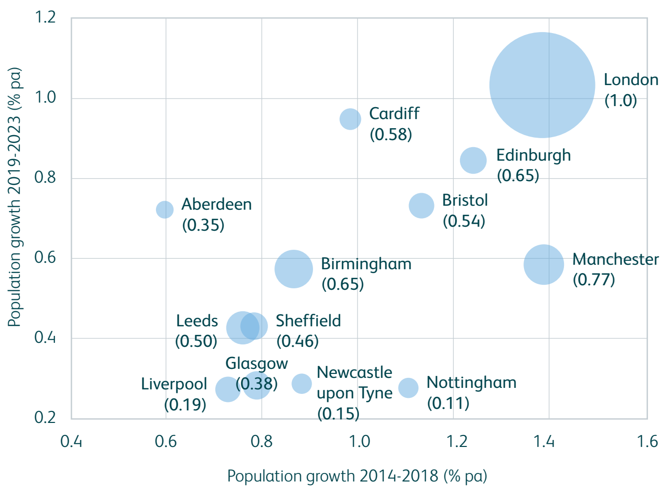
Demographics

Population growth is a key driver of real estate demand as businesses benefit from being located in cities with a growing workforce. While all 13 cities have enjoyed a healthy level of population growth since 2014, supportive of the office-based employment market, those that are likely to sustain such growth rates, such as London and Edinburgh, are expected to retain higher tenant demand over the coming years and have therefore scored higher.

However, growth rates only tell half the story. Cities with a larger population size, such as Manchester and Birmingham, start from a higher base and therefore score highly in terms of demographics.

With a population of 1.3m, Manchester is expected to add over 7,000 new residents per annum over 2019-2023 (growth of 0.6% pa), double the number of new residents that Cardiff is expected to add over the same period even at a higher growth rate of over 1% pa[3].

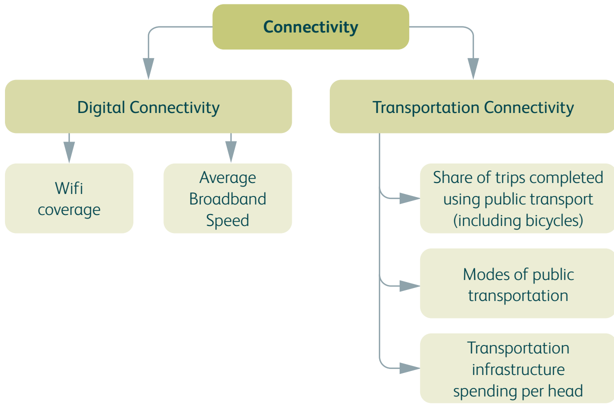
Figure 4: Cities' demographic strength



Source: M&G Real Estate, Experian, June 2019.
Size of bubble represents total population; number in brackets indicates combined score on demographics, ie population size and population growth.

Connectivity

Figure 5: Connectivity methodology



Source: M&G Real Estate.

Connectivity supports business growth and draws tenant demand. Cities with higher connectivity scores exhibit better quality transport infrastructure and stronger digital connectivity. Where there is consistent data, the analysis takes into account the availability and quality of existing infrastructure facilities as well as any potential future improvements.

Against this backdrop, London continues to lead, with the highest share of trips (57%) completed using public transport (including bicycles)[4], the greatest range of sustainable transport options and the highest transport infrastructure spending per head[5]. The capital also has more registered free Wi-Fi hotspots (over 10,000) than anywhere else in the country.

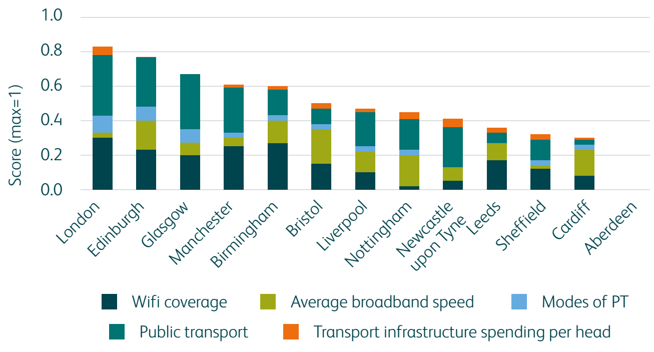
Beyond London, Birmingham offers the best digital connectivity with over 1,300 free hotspots and an average download speed of 59 Mbps, closely followed by Edinburgh with over 700 free hotspots and an average download speed of 63 Mbps[6].

Glasgow, Edinburgh, and Manchester scored highly in physical connectivity thanks to the availability of the Subway in Glasgow and trams in Edinburgh and Manchester. Both Scottish cities are also pioneers in bike-sharing schemes thanks to the introduction of NextBike in Glasgow, and Just Eat Cycles in Edinburgh.

[3] Source: Experian, Jun 2019.
[4] Source: ONS.

[5] Source: Infrastructure and Projects Authority and HM Treasury, Feb 2019. Spending refers to total capital expenditure of all known projects in the pipeline from all funding sources.
[6] Source: Ofcom, Jun 2019.

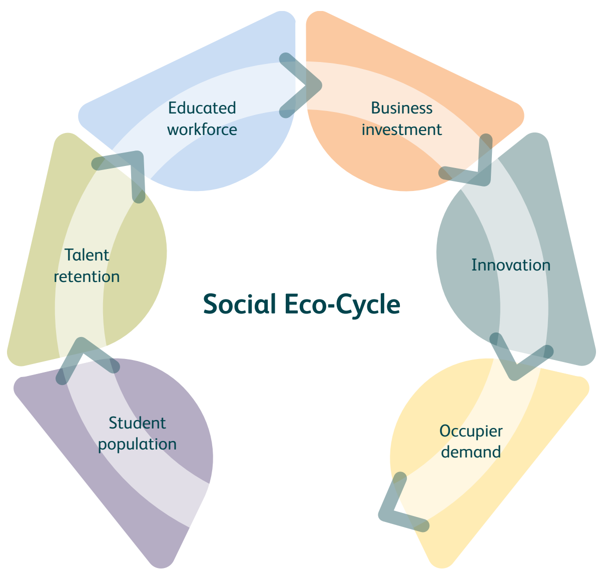
Figure 6: Connectivity rankings



Source: M&G Real Estate.

Social eco-cycle: human capital and innovation

Figure 7: Social eco-cycle



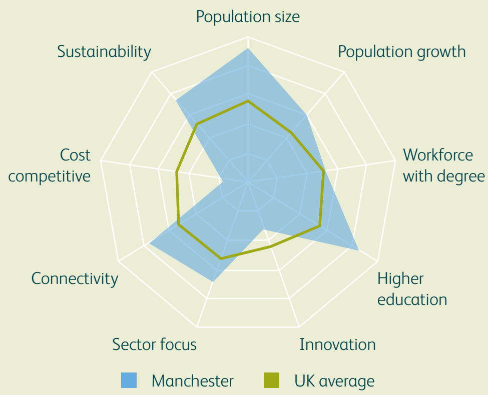
Source: M&G Real Estate.

Cities with reputable universities attract greater talent and larger student populations. Those that are able to retain top graduates benefit from superior access to a better-educated workforce, which helps to elevate business investment and drive innovation. These factors combined create a positive social eco-cycle (as illustrated above), thus creating an appealing business environment that draws further investment including demand for more office space.

The CVI scores two key elements of a healthy social eco-cycle – human capital and innovation – to capture the positive impact on office real estate markets.

Manchester

Vitality score: 0.61



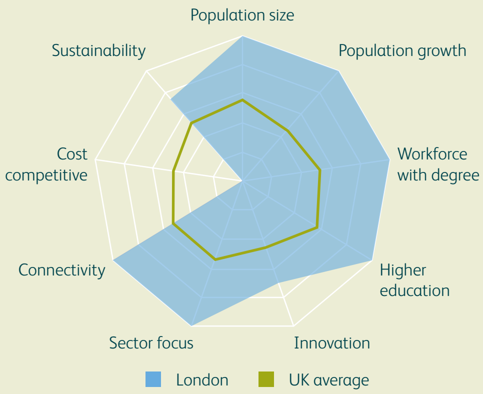
Source: M&G Real Estate.

101 Embankment, Manchester

- Unique Grade A office asset acquired in 2017
- Strong rental growth prospects given supportive 'vitality' fundamentals: strong demographics, advanced transport links and highly skilled workforce

London

Vitality score: 0.83



Source: M&G Real Estate.

Fruit and Wool Exchange, London

- New grade A office, retail and leisure space with a pedestrian route through the centre of the building
- Close proximity to Bishopsgate and Liverpool Street station
- Uniquely located to attract demand from creative industry as well as financial and professional services businesses

Social eco-cycle: Human capital

All 13 cities are home to world-class, high-performing universities with at least one from each city being featured in the top 200 2019 QS World University Rankings.

As a city with 39 higher education providers (comprising 24% of all UK higher education institutions), London is a magnet that draws talent from both home and abroad. The overall student population in London exceeded 375,000 in 2018, over four times that in Manchester – the city with the second-highest student population in the UK (93,500). Next to London and Manchester, the cities that have attracted the highest number of students are Birmingham (79,050), Nottingham (63,110) and Edinburgh (63,095)[7].

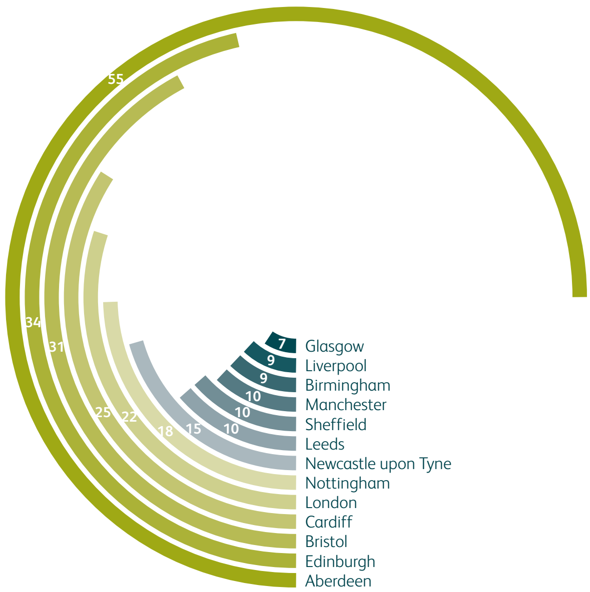
Edinburgh, in particular, stands out in its ability to not only attract but also retain talent post-graduation – 59% of the working-age population in Edinburgh holds a degree-level qualification. Cities that have experienced the most significant improvement in the education level of their workforce since our last update are Liverpool (+10.5%), Sheffield (+8.9%) and Manchester (+7.8%)[8].

Social eco-cycle: Innovation

Businesses, under increasing pressure from digital disruption and higher costs, rely on adopting and applying innovative solutions to drive efficiency and productivity. As such, corporates are drawn to cities with greater innovation.

All 13 cities have achieved greater innovation since our last CVI, measured in terms of total number of patent applications per 100K population. The average number of patents per 100K population increased from 3 to 20 between 2014 and 2017.

Figure 8: Patent applications 2017 (per 100,000 of population)



Source: The Centre for Cities.

[7] Source: HESA, Jan 2019.
[8] Source: ONS, June 2019.

Aberdeen – home to many oil, gas and renewable energy companies – continues to top the ranking with 55 patent applications per 100K population followed by Edinburgh (34) and Bristol (31). Other notable improvers include Cardiff, achieving an additional 21 patents per 100K population since our last update, and London, achieving an additional 22 patents per 100K population[9].

Cost competitiveness

Not only has employing someone based in London become increasingly expensive, the cost of living in London and the South East has also kept rising since 2016. Thus a move to the regions offers appeal for both employers and employees.

However as locations outside London become more popular among employers looking to reduce property and labour costs, and employees seeking lifestyle benefits, cost savings offered by regional cities have somewhat eroded.

That said, relocation strategies still offer attractive savings to many employers given a move to the regions could still save an average of over £15,000 per employee per annum. Nottingham, in particular, offers the highest level of saving equating to c. £19,000 per employee per annum.

Figure 9: Cost competitiveness across major UK cities (£ pa)

Source: PMA, ONS Nomis.

Sector concentration

The UK's labour market landscape has evolved since the last edition of the CVI; the Creative industries, together with Technology and Real Estate, are now driving future employment growth, usurping growth in the traditional Finance and Professional Services industries. The Creative economy[10] accounts for 1 in 11 of all UK jobs, producing over £100bn of total GVA[11] in 2017.

Whilst these fast-growing sectors have not yet dominated labour markets in most cities – market uptake remains below 20% (except 21% in London) – cities with the highest exposures scored highest in the 2019 CVI ranking.

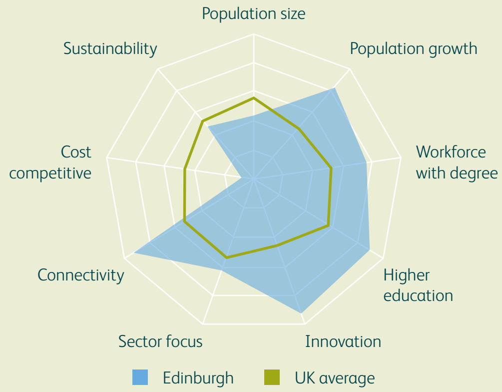
[9] Source: The Centre for Cities.

[10] Source: Includes all jobs in the creative industries and creative jobs in non-creative organisations.

[11] Source: Gross Value Added. Source: DCMS statistics, July 2018. https://www.thecreativeindustries.co.uk/resources/infographics

Edinburgh

Vitality score: 0.67



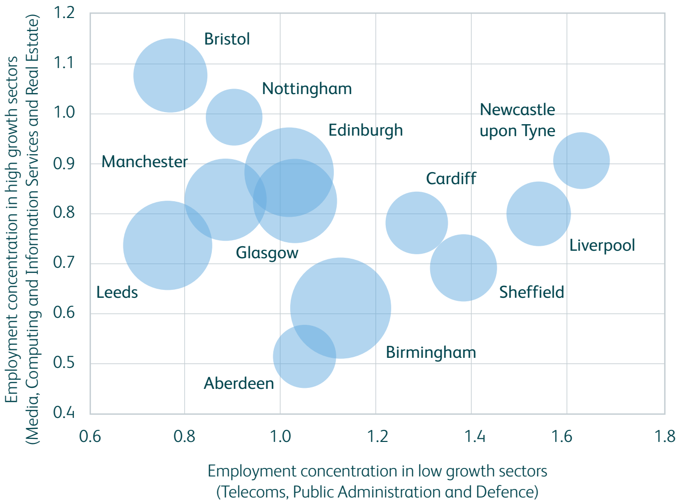
Source: M&G Real Estate

Haymarket, Edinburgh

- Our large scale, mixed-use development will create a new public realm
- Well connected location with supportive supply and demand dynamics

Bristol (17%) and Nottingham (16%) have benefitted from such shift, largely thanks to their supportive digital infrastructure. These cities offer the fastest average download speed (67Mbps and 66Mbps) compared to the other 11 cities (50Mbps on average)[12]. On the other hand, cities such as Birmingham, which remain favoured by the traditional Professional Services companies, ranked lower.

Figure 10: Cities' employment concentration (ex. London)



Source: Experian, M&G Real Estate.
Bubble size represents total GVA as at end 2018.
London is excluded from this chart as the scale of population (18.8m) skews the bubble size of other regional cities.

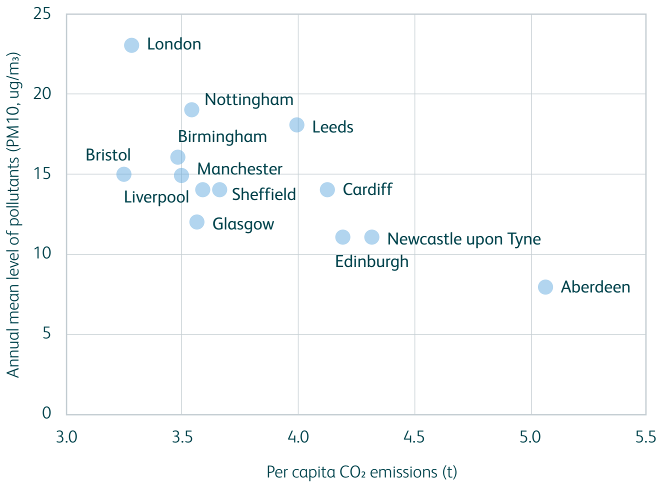
Sustainability

Employers are paying increasing attention to employee wellbeing and its impact on workplace productivity. As such, we expect cleaner cities, measured in terms of level of pollutants and carbon emissions per capita, to be favoured by businesses as their preferred office locations.

London, despite having low carbon emissions per capita, scored lower given higher levels of pollutants. Bristol, Glasgow and Manchester achieved the highest scores in sustainability given their lower levels of pollutants and carbon emissions.

While we are unable to obtain complete statistics on all 13 cities in terms of green space coverage as a percentage of the city's total urban area, it is worth noting that cities such as Edinburgh and Glasgow stood out in achieving an impressive 49% and 32% of green space coverage, respectively, according to the latest satellite images reported by Esri UK[13].

Figure 11: Level of pollutants per capita



Source: Mean level of pollutants (2016): WHO, 2018 database Per capita CO2 emissions (2017): UK Department for Business, Energy & Industrial Strategy, published in June 2019.
PM10 is particular matter which is 10 micrometers or less in diameter. Mean level of pollutants measures the level of air pollution resulting from the existence of a range of health damaging pollutants such as fine particles and carbon monoxide.

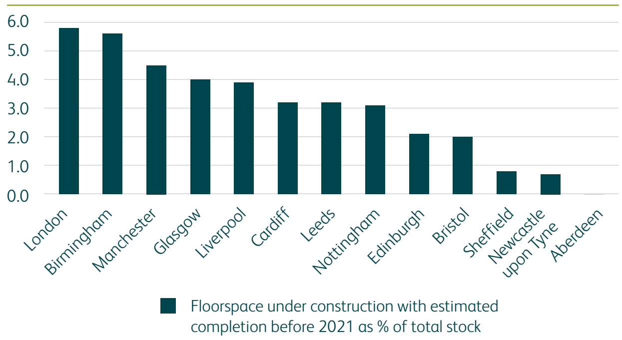
Supply side consideration

New Grade A supply remains limited across all markets, given wider political uncertainty, lack of finance for new development projects and competition for space from other rising sectors such as residential, hotel and student housing. Expected completions over the next three years as a percentage of current stock ranges between 0% (Aberdeen) and 6% (London and Birmingham)[14].

Compared to 2016, the take-up of space from a broader occupier base has also helped to keep vacancy rates low in most cities (except Aberdeen as the city continues to absorb new completions from the previous development spike and 'grey space' being released back to the market).

Even taking into consideration any further possible additional supply (floorspace with full planning permission granted), no city appears to have a concerning supply risk.

Figure 12: Cities' supply pipeline



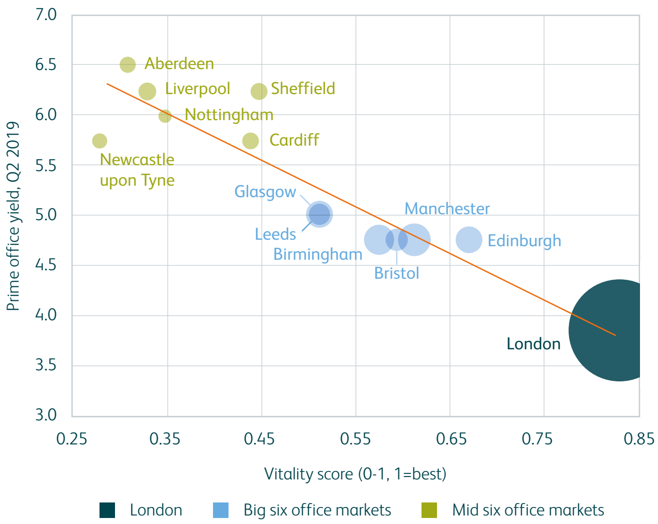
Source: PMA.

[12] Source: Ofcom, June 2019.
[13] Source: The Guardian/Esri UK, 2016.
[14] Source: PMA.

Where is value?

Broadly speaking, investors willing to accept lower yields in certain markets are being compensated by the fact that these markets typically offer stronger vitality fundamentals. Meanwhile, cities with higher vitality scores achieved higher investment volume and better liquidity. The chart below illustrates this inverse relationship between cities' vitality fundamentals and current pricing. A trendline is plotted to simplistically distinguish markets that present more attractive yields given their respective levels of vitality scores, ie those that sit on or above the trendline.

Figure 13: Vitality score vs. prime office yields



Source: M&G Real Estate, PMA, Property data.
Bubble size and colour represent market liquidity as measured in average investment volume between 2004 and 2018: teal=London, blue=Big six office markets, green=Mid six office markets.

Among the most liquid cities, London, Edinburgh and Manchester achieved the best vitality scores while offering attractive yields at 4.75% (Edinburgh and Manchester) and 3.8% (central London[15]), sitting on/above the trendline.

Cities that also appear to offer appealing relative-value opportunities sitting on/above the trendline and which may be worth considering include Cardiff, Sheffield, Liverpool and Aberdeen.

On the other hand, despite sitting just below the trendline, Birmingham, Bristol, Leeds, and Glasgow also achieved high vitality scores. This perhaps illustrates investors' willingness to pay a premium for a city's attractive 'vital' characteristics.

Conclusion

Aside from changing demographics, which continue to play a key role in determining occupier demand, the 2019 CVI reveals that connectivity, innovation and higher education are important differentiators in the City Vitality rankings. While the highest scoring cities reflect the strongest vitality fundamentals, our analysis reveals that certain cities may offer appealing value based on specific underlying market drivers; an opportunity that the CVI enables investors to explore.

[15] Source: PMA. Yield for London represents a blended level between City, Midtown and West End.

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