CUSHMAN & WAKEFIELD

WINNING IN GROWTH CITIES

2018/2019

What Now, Where Next?

A Cushman & Wakefield Global Capital Markets Report

EXECUTIVE SUMMARY

MARKET OVERVIEW

Geopolitical uncertainty and a slowing in the economic cycle have done nothing to dent enthusiasm for real estate. Global investment rose 18% in the 12 months to June, led by Asia - both as a source of capital and an investment destination – and investment volumes hit a fresh record high of $1.8trn.

While the macro environment may not be as supportive as expected at the beginning of the year, many investors are still increasing their allocations to what is seen as a defensive asset class. As a result, the real estate market is set to remain in demand, with supply and risk tolerance the key factors determining whether volumes rise further still in 2019.

New York remains out in front as the largest real estate market in the world, followed by LA and London, with Paris up strongly to snatch 4th place from San Francisco. Among international buyers, London is again the market to beat, with New York slipping from 2nd to 6th place due to high pricing and the strong dollar.

The hegemony of Europe at the top of the city rankings for cross border players was only dented by Hong Kong, buoyed by several massive deals in the office sector. Alongside Hong Kong, the biggest winners among gateway cities for cross border buyers were Paris and Tokyo; but a number of smaller European cities also rose strongly in the rankings, such as Helsinki, Vienna and Madrid.

Cross border investors took 22% of the market over the year, with global rather than regional investment the faster growing segment at 23% y/y. Interestingly, growth in each region was dominated by a different capital source, with domestic investment up most in Asia at 35%, global investment intensifying in Europe by 56% and regional investment growth top in the Americas at 15%. In all cases however, domestic buyers were the main source of capital, taking 49% of the European market, but 85% in Asia and 86% in the Americas.

Investors in many cases are in two minds on how to approach the market: moving to lower risk strategies in fund-raising, but at the same time often demanding higher income levels that necessitate an acceptance of more risk via the markets targeted, property standard accepted or lease terms agreed. As a result, while there is high demand for core assets, investors have pushed the envelope into new sectors and geographies to access stock, though typically remaining intolerant of assets with too many weaknesses.

By sector, investors have been unsettled by the travails of retailers but, regardless, will still invest in the best space. There is a widespread preference for logistics, whether in mature or emerging markets including Brazil, India and of course China, with the Belt and Road Initiative influencing demand at home as well as abroad. Residential is another sector attracting global attention, both in terms of targets and sources of investment. In many cases however, investors have a problem finding the scale of product they want, and as a result, platform building remains a strong focus.

The winning cities in these 'alternative' market segments are often driven by different factors to more traditional sectors, particularly in healthcare and senior housing. At the top of the rankings overall however, are a number of old favourites led by London, New York and Singapore, as well as Washington, Berlin and Tokyo.

THE YEAR AHEAD

While there are clear risks in the macro environment, there is as yet little to suggest that the cycle is set to end or that recession is looming. However, while inflation may be less of a threat than feared, alongside steady economic growth, price signals will still be enough to keep central banks in a tightening mood, and the slow but sure rise in interest rates and easing in QE-driven liquidity will therefore continue.

Although this suggests that strategies will need to evolve, there continues to be no shortage of capital targeting real estate across myriad geographies and risk profiles. What may be new in the year ahead, however, is the potential for supply to increase as some investors switch strategy and take profits, while others get caught by rising borrowing costs and a need to raise capital, or seek out partners to jointly invest and develop.

Contrary to many expectations therefore, unless debt markets freeze, we may well see a rise in investment activity over the coming year, albeit only by a modest 1-2%.

This is likely to be led by global buying, but capital flows will remain dynamic as buyers adjust their risk or return profiles. Indeed, yields globally are likely to stabilise but also start to polarise as the most advanced in the cycle go ex-growth and start to see a yield increase, but others, such as select emerging markets, logistics and some alternatives such as data centres, see compression where rental growth is under way.

Hence, while investors need to guard against the end of the cycle, they also need to be aligned with the structural shifts impacting occupiers, recognising these as both an opportunity and a threat to the level of demand and affordability of space, as well as the hierarchy of cities themselves.

Strategy options focus on three main approaches:

LOW

RISK

HIGH

DEFENSIVE

- Seeking liquid, sustainable long-term returns based on income and new sources of diversification to boost overall portfolio returns.
- Super gateways plus new markets and sectors with a focus on lower risk countries.

DARING

- Taking risks ahead of the pack.
- Emerging markets (largely in Asia), "challenger cities" rising in the regional and global hierarchy and finding the right format and manager to take on the challenge of retail.

DISRUPTIVE

- Experimenting with the new and the unproven that will disrupt the locations we choose and the way property is built, managed and used.
- New submarkets in gateway cities, new ways of building or managing space, and new platforms that add value for users and owners and create new revenue streams.

STRATEGY POINTERS FOR 2018 / 2019:

ECONOMY – DOWN BUT NOT OUT

Economic growth may be slowing and the expansion becoming more fragmented geographically, but growth does continue in most areas, typically in line with or above the 10-year average, and in some markets is forecast to pick up in 2019.

AMPLE BUT CHANGING LIQUIDITY

To say there is ample liquidity remains an understatement but that does not extend to all assets and will be subject to change as QE reverses. It is also not reflected in a widespread availability of debt outside low risk areas of the market.

THE HUNT FOR PRODUCTIVITY

As labour markets tighten and wages increase, developing and integrating new technology will be an increasing focus for businesses and changing real estate needs will be next in line for many.

QUALITY OF LIFE

Sustainable growth relies on attracting talent and customers and as a result, quality of life issues are coming increasingly to the fore in developed and emerging markets. In all cases however, the affordability of that quality of life is a growing issue.

MARKET DIVERSITY AND LOCALIZATION

The apparently synchronised nature of the global economic cycle in late 2017 proved short-lived and patterns of growth and risk are now highly varied by country, city and industry. Strategy and tactics as to when and where to invest need to respond.

THE REMAKING OF SPACE AND CITIES

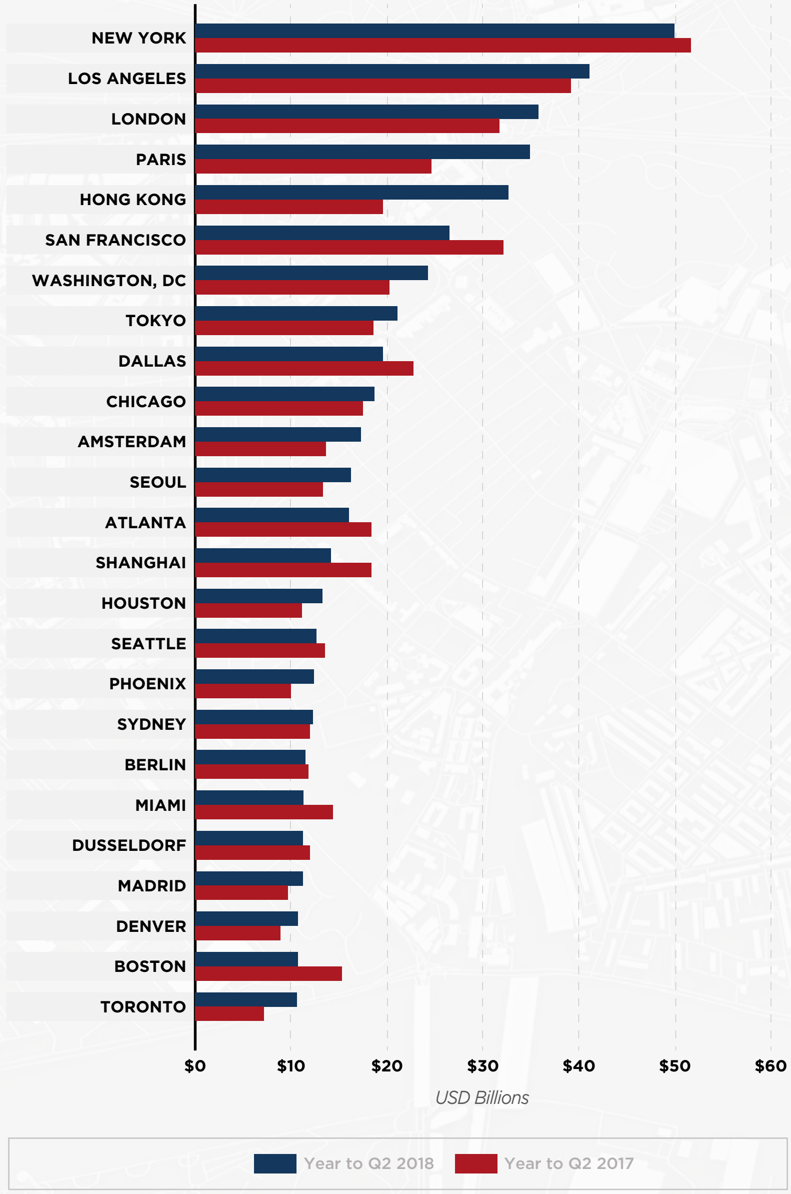
The need to adapt how cities operate flows directly from social and business changes, and while the challenges differ city by city, in all cases there is a need to experiment, to embrace sustainability and to better curate the offer a city makes.

ALTERNATIVES

One investor's 'alternative' may be mainstream for another, but new sectors in general are clearly in fashion and hence carry some risk of becoming overpriced given the shortage of opportunity that frequently exists. Nonetheless, the fundamentals are strong in terms of the upside for creating a platform of scale, the positive gains to portfolio performance, and the imperative to embrace a wider mix of uses to make property work. At the same time however, investors need to be armed with good market knowledge of how each sector is regulated in each local market.

THE YEAR IN REVIEW

Fig 1: Top Cities for Investment (excl. Development Sites)
Source: Cushman & Wakefield, RCA



Total investment in the 12 months to June 2018 increased by 18.4% compared to the same period in 2017. Whilst transaction growth in North America was lacklustre, increasing by just 0.6% y/y, elsewhere volumes improved at their strongest pace in three years, with volumes in Asia Pacific up 32.0% and European transaction growth of 16.4% on the year.

By city, New York topped the list as the most sought after destination for capital in the year to Q2 2018, although investment into the city declined -3.4% compared to the same period last year. Indeed, US cities were the only markets within the global top 10 to experience volume declines over the year. Nevertheless, as with last year, 6 of the top 10 cities were in the US, whilst Europe and Asia each accounted for 2 of the remainder, with London having retained its spot as the primary European market owing to a number of high-profile office sales at the beginning of 2018.

The strongest Asian market was Hong Kong, up 67.9% compared to the previous twelve months, moving up three places as the first city in the region to rank within the top five for three years. Investment into Asian cities was predominantly the reserve of domestic capital, although continental investors increased their market share over the year.

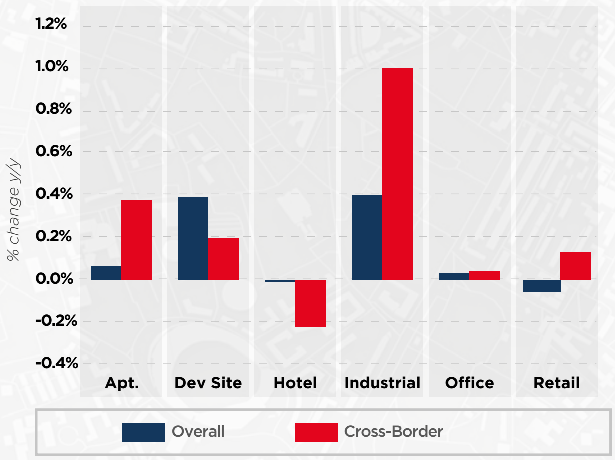
Toronto was the first Canadian city to enter the top 25 in five years, as heightened interest increased volumes by 50.3% y/y. Outside of this however, the make-up of the top 25 changed very little, with their market share representing 49% of total volumes, down from 50% at the same point last year.

Across all global segments, investment volume remained above the 10-year average, although sector nuances were more pronounced compared to previous years. The industrial sector saw the strongest increase in investment from all sources of capital over the year to Q2 2018, with cross-border investors increasing their exposure to the sector by close to 100%, primarily driven by Chinese investment in European logistics assets as part of the Belt and Road Initiative.

Cross-border investment in the apartment segment increased strongly, helping to push volumes to the highest on record. Growth in the European apartment sector was the most pronounced, although at 72% of global apartment transactions, North America remained the most established market for residential investment.

Fig 2: Change in Investment Activity

Source: Cushman & Wakefield, RCA



Aside from development sites, which improved 38.5% y/y, offices were the most favoured by both domestic and cross-border investors, with investment in the sector returning to positive growth following a decline in the 12 months to Q2 2017. The European office market overtook North America as the most active over the 12 month period, as investment in the region was responsible for 40% of global office activity.

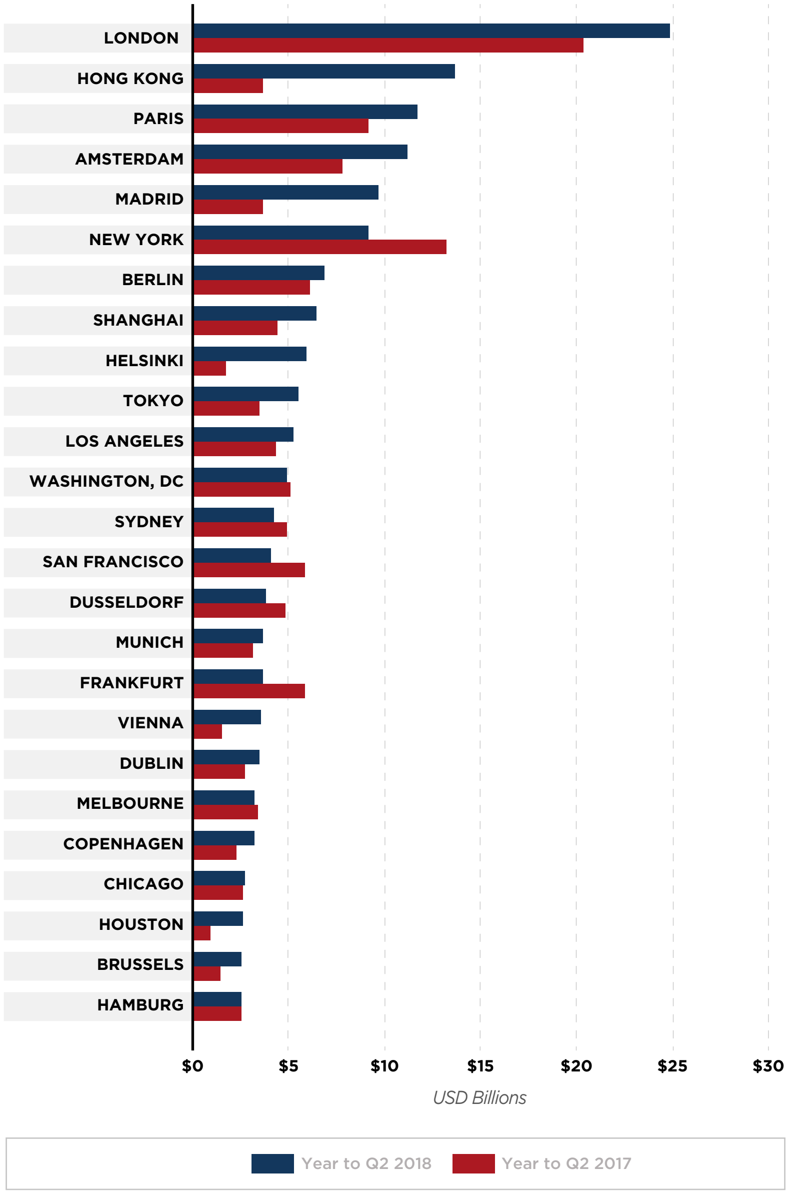
Retail polarized investors, with domestic investment into the sector declining whilst cross-border players increased their retail exposure. Indeed, both North American and European capital increased their retail investment internationally despite concerns surrounding domestic retail.

Despite an increase in investment from domestic sources, the hotel sector underwent an overall decline in transactions but remained 26.8% above the long-term average, the North American hotel sector having benefited the most from domestic flows.

For the ninth time in 10 years, London was the top city for international real estate investment. Having increased their investment into London by 46.9% over the year, Asian investors were the largest source of cross-border capital into the city, with offices the overwhelming target for these deals, as the sector achieved a 94% market share of APac flows into London.

European cities filled 4 of the top 5 spots globally, with Paris and Amsterdam retaining 3rd and 4th place for the second year, whilst Madrid rounded out the top 5 for the first time since 2009. The only German city in the top 10 was Berlin, marking a change from the country's dominance in 2017, although German cities maintained a healthy representation in the top 25 city targets for cross-border investors.

Fig 3: Top Cities for Cross-Border Investors (excl. Development Sites)
Source: Cushman & Wakefield, RCA



Hong Kong moved up 14 places compared to the previous 12 months to second place, buoyed by several large scale transactions by Chinese investors, with continental investment in the city rising by 259.4% y/y. Asian cities made three appearances in the top 10 in 2018 compared to none the year before, as Shanghai and Tokyo improved their appeal for cross-border capital. By comparison, whilst 8 APac cities had made it into the top 25 during 2017, this declined to just 5 this year, with Singapore, Seoul, and Beijing falling out of favour for international investors over this period.

For the first time on record, New York was relegated from the top 5 cross-border metro targets, with geopolitical tensions partly to blame for a pull-back in investment from the Middle East and Asia, resulting in no North American cities appearing among the top 5 targets. However the region's cities maintained the same presence as last year in the top 25 overall, with a total of 6 making the list.

APac investors continued to dominate cross-border investment into real estate assets, with a 45% market share over the 12 months to Q2 2018. Among investors from this region, those from Hong Kong were the most prolific as volumes from this source increased by 20% y/y to represent 49% of all Asian international investment.

Fig 4: Sources of International Capital

Source: Cushman & Wakefield, RCA

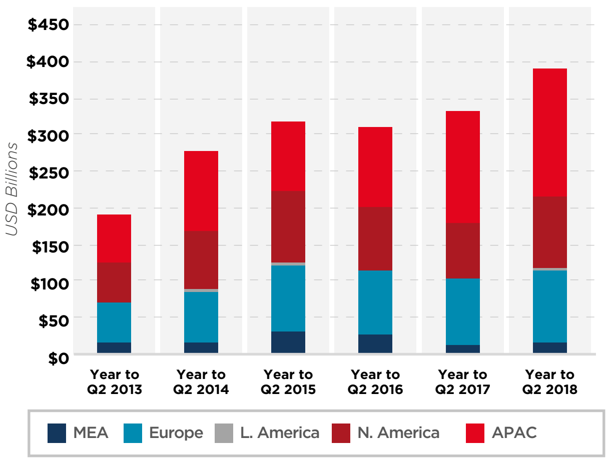
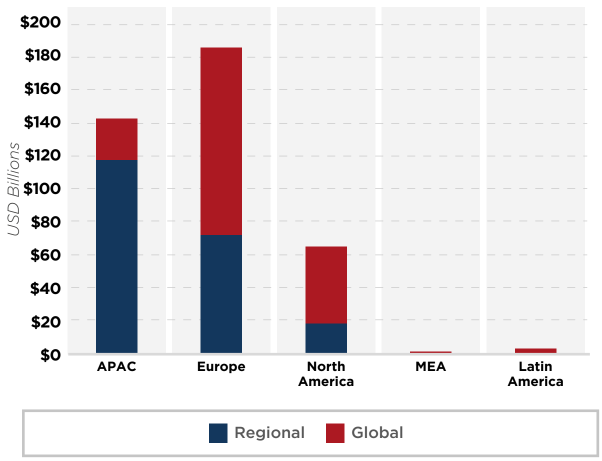


Fig 5: Targets of International Capital

Source: Cushman & Wakefield, RCA



Europeans were the second most prominent source of cross-border capital for the second year running, as continental investment continued to take the biggest share of European flows abroad. However, transaction volumes outside of Europe saw an increase for the first time since 2015, with North America the primary beneficiary as European investors were attracted to the continued growth story of the US.

Flows out of North America represented a quarter of total cross-border transaction volumes; despite a decrease in capital moving out of Canada, growth in international investments from the US more than compensated, with growth of 52.4% y/y. Europe was the biggest beneficiary of these improving currents, as a recipient of 62% of North American outward investment in the 12 months to Q2 2018, whilst Asian countries softened as a target over the year.

Middle Eastern capital pulled back on investing in international markets for the second consecutive year, with outward investment declining by -6.1%. Whilst Israel, Bahrain and the UAE increased flows out of their domestic countries, Qatar and Lebanon withdrew. Likewise, many African sources of international investment cooled on the year; however, South African appetite for European assets improved, leading total African cross-border investment to increase by 36.6% y/y.

Hong Kong was the largest source of cross-border investment globally for the second year running, with transactions within Asia Pacific accounting for 90% of outward capital flows. Whilst Chinese investors were responsible for the third highest volumes of international real estate investment, cross-border flows only made up 7% of total Chinese investment, with investors instead choosing to spend domestically.

US investors increased their international transaction volumes by 52.4% on the year, retaining the second spot for cross-border real estate investment. By comparison, the UK's ranking as an international investor fell for the third consecutive year, with UK investment declining in both continental and global contexts. Germany and France both increased their exposure to the wider European market as continental investment from these sources increased by 5.6% and 11.2% y/y respectively.

ALTERNATIVE SECTORS

DATA CENTRES

TRENDS

Though still a small market overall, data centre investment grew 266.2% in the year to Q2 with increased investment volumes across all regions, including explosive growth of 3,348.7% in Asia Pacific. In fact, APac overtook EMEA to be the second biggest investment target at $1.4bn, though still far behind the more mature North American market, which saw investment of $8.3bn, and growth of 241.4%.

There has been consolidation by a few key players in the market who have been able to increase their portfolios, in some cases through the acquisition of platforms. Looking ahead, with corporate investment forecast to increase, demand for data centres will pick up resulting in operators seeking out whatever additional stock they can acquire, for example through residual space from existing underutilised enterprise facilities.

RISKS

As technological innovation and obsolescence both continue at a breakneck pace, an ongoing risk is outdated stock, such as legacy facilities that may need to be retrofit at significant cost. The inability of assets to receive or process the necessary power also remains a concern.

WHAT DRIVES CITY SUCCESS?

Dominant data centre markets will be those that both are able to serve large end-user bases within close geographical proximity, as well as those that can provide sufficient electrical power at a competitive price, secure access to sufficient water, and fibre connectivity.

OPPORTUNITIES FOR 2019

Acquiring and reworking existing space, through taking over parts of enterprise facilities or the sale and leasebacks of these assets, remains a key way to acquire new stock. Edge facilities supporting gateways will be a growing opportunity area, as well as further consolidation through mergers and acquisitions.

Regional share of trading

AMERICAS 76%	EMEA 11%	APAC 13%

Top Cities in the Year to Q2

AMERICAS ($mn)		EMEA ($mn)		APAC ($mn)	
Washington, DC	$ 2,633	London	$167	Singapore	$ 549
Dallas	$ 1,035	Istanbul	$ 93	Hong Kong	$ 259
San Jose	$ 897	Dublin	$ 79	Beijing	$ 161
Chicago	$ 867	Frankfurt	$ 58	Sydney	$ 128
Toronto	$ 752	Paris	$ 52	Melbourne	$ 70
Atlanta	$ 267	Slough	$ 49	Bangalore	$ 59
Phoenix	$ 227	Madrid	$ 45	Wollongong	$ 37
Sacramento	$ 173	Dresden	$ 41	Yokohama	$ 28
San Diego	$ 169	Amsterdam	$ 32	Kolkata	$ 21
New York	$ 138	Munich	$ 26	Hangzhou	$ 21
TOTAL	$ 8,247	TOTAL	$1,181	TOTAL	$1,377
ANNUAL GROWTH	241.4%	ANNUAL GROWTH	138.6%	ANNUAL GROWTH	3,348.7%

Sector Statistics

VOLUME:
$10.8BN

ANNUAL GROWTH:
266.2%

YIELDS:
5.0-6.0% (EMEA)
5.5-6.0% (US)
6.0-6.5% (APAC)

Source: Cushman & Wakefield, RCA

ALTERNATIVE SECTORS: **STUDENT HOUSING**

TRENDS

North America and Europe continue to be the preferred regions for student housing investment, with London by far the single largest city target. EMEA took the top position from North America in terms of overall volumes, as well as experiencing the largest annual growth at 26.4% y/y.

Investment into the Americas grew 2.5% on the year, while investment into Asia Pacific declined by -62.4%. However, as the Asia Pacific market is less mature than those of the Americas and EMEA, this fall was a reflection of the lack of available stock rather than a decrease in investor demand.

The trend towards higher-end, purpose-built student accommodation continues, with higher build standards and more amenities sought by students and their parents. However, market demand is strong for both new, purpose-built stock as well as older, redeveloped assets.

RISKS

Increased international student numbers are correlated with a strong domestic currency compared to that of the university's country, and is bolstered by relatively open visa and immigration policies, making demand potentially vulnerable to changes in the economic and political climates. In terms of domestic demand, local demographic trends should be considered when estimating the outlook for university places and therefore accommodation.

WHAT DRIVES CITY SUCCESS?

Cities that have a strong university offering, good public transport infrastructure, open student visa policies, and a strong cultural, food and entertainment offering have the most potential for increased demand for student housing. Universities that have strong programmes in subjects that will gain in popularity, such as technology and computing sciences, have longer-term potential.

OPPORTUNITIES FOR 2019

Student housing in Asia Pacific markets, especially those with universities predominantly teaching in English, are an as-yet untapped market - cities such as Sydney, Melbourne and Singapore are therefore an opportunity for the year ahead. Elsewhere, cities with well-ranked universities in the UK, as well as other gateway cities in Europe, will be a target due to the quality of education and international appeal.

Regional share of trading

AMERICAS 47%	EMEA 52%	APAC 1%

Top Cities in the Year to Q2

AMERICAS ($mn)		EMEA ($mn)		APAC ($mn)	
Austin	$487	London	$2,417	Melbourne	$76
Los Angeles	$286	Vienna	$521	Yokohama	$18
Ann Arbor	$258	Madrid	$437	Phutthamonthon	$16
Washington, DC	$256	Paris	$358	Fukuoka	$13
Philadelphia	$233	Barcelona	$278	Tokyo	$8
Tallahassee	$225	Berlin	$243	Wellington	$6
Chicago	$201	Sheffield	$219		
Seattle	$198	Coventry	$206		
Gainesville	$167	Swansea	$132		
Eugene	$167	Hamburg	$119		
TOTAL	$8,161	**TOTAL**	$8,876	**TOTAL**	$138
ANNUAL GROWTH	2.5%	**ANNUAL GROWTH**	26.4%	**ANNUAL GROWTH**	-62.4%

Source: Cushman & Wakefield, RCA
**transactions include assets with educational facilities on site.*

Sector Statistics

VOLUME:
$17.2BN

ANNUAL GROWTH:
11.9%

YIELDS:
3.5-5.5% (EMEA)
UP TO 6.0% (US)
5.5-7.5% (APAC)

ALTERNATIVE SECTORS: **MULTI FAMILY**

TRENDS

Having long been a traditional asset class in the Americas, multi-family residential assets have finally gained traction among investors in Europe, with growth of 14.2% y/y to a total of $45.8bn in the year to Q2.

While there is both interest and demand for increased investment into markets in Asia Pacific, investors are still coming to grips with how best to approach the sector, due to regulatory constraints as well as low yields limiting opportunities.

New sub-sectors, such as co-living, have caused a blurring of boundaries, resulting in some areas of the multi-family sector beginning to resemble hotels more than multi-let. In these cases, the business model and operator will be a key factor in success.

RISKS

The PRS portion of the sector is counter-cyclical, with fewer people purchasing new homes in economic downturns. However, investment into luxury multi-family, or schemes that focus more heavily on segmentation, specific demographic groups, or amenities may be more pro-cyclical and subject to higher vacancy rates in the case of an economic slowdown.

WHAT DRIVES CITY SUCCESS?

As demand is driven primarily by attractiveness to private individuals, strong transport links and infrastructure, and good job prospects are key for attracting tenants for multi-family accommodation. For more value-add or opportunistic opportunities, cities with a shortage of housing and lack of available land on which to build are key to promoting density and therefore multi-family schemes.

OPPORTUNITIES FOR 2019

With demand growing in Europe, opportunities will be found, particularly in those areas where over-heated residential markets have priced out first-time buyers from larger single-family homes. In many circumstances, this will favour those able to take on some development risk. In Asia, co-living style facilities are on the rise in the Philippines, and there is a push for multi-family development in Bangkok, as well as Ho Chi Minh City.

Regional share of trading

AMERICAS 69%	EMEA 21%	APAC 10%

Top Cities in the Year to Q2

AMERICAS ($mn)		EMEA ($mn)		APAC ($mn)	
New York	$13.78	Berlin	$3.72	Singapore	$10.86
Los Angeles	$10.36	Copenhagen	$1.87	Hong Kong	$3.05
Dallas	$8.87	London	$1.59	Tokyo	$2.21
Washington, DC	$7.98	Amsterdam	$1.43	Shenzhen	$0.43
Atlanta	$7.27	Stockholm	$1.36	Osaka	$0.38
Denver	$5.81	Vienna	$1.28	Tianjin	$0.30
Houston	$5.52	Hamburg	$1.12	Nantong	$0.22
Phoenix	$5.32	Dublin	$1.01	Chongqing	$0.22
Chicago	$5.02	Frankfurt	$0.79	Guangzhou	$0.19
San Francisco	$4.96	Iserlohn	$0.73	Chengdu	$0.18
TOTAL	$149.13	**TOTAL**	$45.75	**TOTAL**	$20.17
ANNUAL GROWTH	9.5%	**ANNUAL GROWTH**	14.2%	**ANNUAL GROWTH**	6.2%

Sector Statistics

VOLUME:
$215BN

ANNUAL GROWTH:
10.2%

YIELDS:
2.5-4.5% (EMEA),
4.5-6.5% (N. AMERICA),
2-4% (APAC)

Source: Cushman & Wakefield, RCA

ALTERNATIVE SECTORS:
HOSPITALITY

TRENDS

Overall investment into hotels fell by -3.2% y/y, due to a -20.8% cooling in investment in the Americas. This was driven by a decrease in investment from Hong Kong and mainland China following a number of strong years of capital flows into the region. By comparison, American and Canadian investors increased their exposure. In Asia Pacific, volumes were up 28.2% y/y, driven in large by strong investment growth across Japan and China.

The number of international tourists globally rose by 7% in 2017 and is set to continue to rise, bolstered by such factors as the rise in the silver economy, the millennial hunt for experiences, and the rise of tourism originating from a more prosperous China. As the driving forces contributing to the increase in each of these tourist groups looks unlikely to wane in the near future, tourist numbers are expected to continue to increase globally.

RISKS

Access to labour is a potential constraint facing the sector – with low unemployment rates in many places, combined with rising populism and the threat of immigration restrictions, finding labour that is both skilled but also willing to work in what can be a demanding industry may prove to be a challenge in some markets going forward.

Security risks and other shocks, such as geopolitical unrest or outbreaks of serious illnesses such as Zika or Ebola, remain an issue in some markets, though customers appear to have adapted somewhat and the pace of recovery after such incidents has increased.

Online booking sites, which have consolidated themselves in recent years, are driving increasingly large proportions of hotel bookings, and as such are able to wield ever greater negotiating power in charging hoteliers high commissions. This has been one of the drivers of M&A activity in the sector, as large hotel chains are in a better position to push back against these rising distribution costs, and make the necessary investments into fast-evolving technology. Hotels are also turning to campaigns promoting direct booking through their websites, to help mitigate the market power of these large intermediaries.

Sector Statistics

VOLUME:
$75.9BN

ANNUAL GROWTH:
-3.2%

YIELDS:
3.5-5.5% (EMEA)
4.5-6.0% (N. AMERICA)
3.5-5.5% (APAC)

WHAT DRIVES CITY SUCCESS?

Cities that have a diverse demand base for hotel beds across geographical origin and visitor type will be better able to maintain demand even during potential downturns. Strong regional and international transport links are also important, as well as the ability to appeal to key growth markets such as millennials, tourists from emerging regions, and senior citizens.

Another driver is the extent to which local governments or industry bodies are embracing integration and digitisation in order to make in-destination logistics and activities easier to access, thereby making a stay in the city easier and potentially more rewarding. The cities moving towards this are typically ones that appreciate the value of building a strong city brand, and are working with the tourism industry, including hoteliers and restaurateurs, to better manage visitor satisfaction, and therefore their online reputation, through reviews, blog posts, and other content. For those cities finding themselves on the top of popularity list, it will be increasingly important to balance growing visitor numbers with over-tourism concerns among local residents.

OPPORTUNITIES FOR 2019

Despite being in the 9th year of growth since the global financial crisis, there are still markets with fairly limited pipelines on the horizon, where tourism demand continues to outpace the local economies. Paris, Amsterdam, Athens, Prague, Madrid and Lisbon will be attractive European locations for hotel investment, as well as Tel Aviv, Tokyo, Osaka, Kyoto, Singapore, and localised opportunities in Thailand and India.

Regional share of trading

AMERICAS 46%	EMEA 34%	APAC 20%

Top Cities in the Year to Q2

AMERICAS ($mn)		EMEA ($mn)		APAC ($mn)	
New York	$3,115	London	$3,265	Tokyo	$2,002
Washington, DC	$1,923	Paris	$1,359	Beijing	$1,325
San Francisco	$1,648	Berlin	$1,331	Macau	$815
Phoenix	$1,473	Amsterdam	$1,312	Seoul	$588
Las Vegas	$1,439	Munich	$851	Hong Kong	$450
Los Angeles	$1,426	Frankfurt	$789	Singapore	$349
Dallas	$1,348	Hamburg	$654	Shanghai	$343
Miami	$1,061	Vienna	$506	Taipei	$340
Honolulu	$940	Dublin	$458	Bangkok	$321
Boston	$905	Birmingham	$427	Maldives	$307
TOTAL	$35,127	TOTAL	$25,912	TOTAL	$14,891
ANNUAL GROWTH	-20.0%	ANNUAL GROWTH	15.4%	ANNUAL GROWTH	28.2%

Source: Cushman & Wakefield, RCA

ALTERNATIVE SECTORS: **HEALTHCARE**

Sector Statistics

VOLUME:
$37.5BN

ANNUAL GROWTH:
0.01%

YIELDS:
6.5-7% (Americas medical),
4.75-5.75% (EMEA senior living),
6-7% (APac healthcare)

TRENDS

With 69.5% of overall investment into the sector in the year to Q2, North America is by far the most mature market for healthcare investment globally, though investment was down -6.4% y/y. Most of this decrease was in medical buildings, which saw a softening of -13.1%, while senior housing investment was relatively stable year on year, decreasing only slightly by -1.4%. In EMEA, which has a relatively developed senior housing sector, though significantly less medical facility investment than North America, overall investment increased 17.7% y/y. In Asia Pacific, a much smaller market though one seen to have significant potential, investment into medical centres increased 154.2% y/y, albeit still making up only 6% of global medical centre investment globally.

With an aging population across all continents, investment into healthcare is expected to grow due to the vast current undersupply, in both the breadth and availability of senior accommodation, as well as the professionalisation of the sector

Regional share of trading

AMERICAS 62%	EMEA 34%	APAC 4%

Top Cities in the Year to Q2 - Senior Housing

AMERICAS ($mn)		EMEA ($mn)		APAC ($mn)	
Coffeyville	$877	Northampton	$205	Sydney	$106
New York	$719	Paris	$202	Melbourne	$102
Dallas	$719	Milan	$90	Sunshine Coast	$85
Los Angeles	$557	Gothenburg	$79	Tokyo	$77
Houston	$424	Malmö	$73	Perth	$65
Boston	$379	Amsterdam	$71	Otsu-shi	$58
Denver	$378	Manchester	$68	Central Coast	$52
Miami	$368	Brussels	$66	Te Mata	$46
Washington, DC	$364	Dublin	$65	Sapporo	$31
Atlanta	$342	Jyvaskyla	$65	Hong Kong	$25
TOTAL	$15,658.5	**TOTAL**	$8,518.4	**TOTAL**	$1,036.7
ANNUAL GROWTH	-1.4%	**ANNUAL GROWTH**	14.5%	**ANNUAL GROWTH**	-10.1%

Source: Cushman & Wakefield, RCA

from an investment standpoint. In certain regions such as Asia Pacific, as the age dependency ratio increases and lifestyles shift for both the young and seniors, traditional family arrangements in old age will change, though the pace at which this will happen is up for some debate.

RISKS

The sector is heavily regulated, with differing regulation not only country to country but often regionally within countries as well. This can make entering new markets challenging, and can pose risks if regulation changes. As such, either acquiring platforms or proven operators can help mitigate this. The sector is also influenced heavily by the healthcare spending model, and as such exposed to changes to government policy.

WHAT DRIVES CITY SUCCESS?

In many instances, the current winners in this sector are in out-of-town or secondary locations, with quality of life taking on a different meaning in later stages of life, as well as facilities looking for cheaper land where competition does not include residential developers. In markets where private medical insurance covers a larger proportion of costs, such as the United States, rates of insuredness may provide an indication of a location's potential for success. As the proportion of elderly people increases, demand will grow for healthcare facilities of all kinds within traditional gateway cities, including within mixed-use developments, and perhaps playing a more prominent role on high streets.

OPPORTUNITIES FOR 2019

While in the longer term Asia Pacific has significant potential, for the year ahead European cities will be favoured for growth as economic and demographic trends support the sector. By volume, US healthcare will continue to dominate the league tables, with facilities in proximity to well-connected cities the most likely to gain attention.

Regional share of trading

AMERICAS 85%	EMEA 9%	APAC 6%

Top Cities in the Year to Q2 - Medical

AMERICAS ($mn)		EMEA ($mn)		APAC ($mn)	
Atlanta	$1,191	Dublin	$205	Seoul	$260
New York	$648	Aldershot	$202	Brisbane	$245
Chicago	$624	London	$90	Melbourne	$75
Minneapolis	$484	Rotterdam	$79	Sydney	$31
Boston	$423	Cologne	$73	Singapore	$30
Los Angeles	$415	Cork	$71	Gold Coast	$21
Houston	$405	Utrecht	$68	Adelaide	$16
San Diego	$295	Helsinki	$66	Noosa	$16
Seattle	$223	Munich	$65	Perth	$12
San Antonio	$214	Hamburg	$65	Albany	$11
TOTAL	$10,392	**TOTAL**	$1,121	**TOTAL**	$755.5
ANNUAL GROWTH	-13.1%	**ANNUAL GROWTH**	50.5%	**ANNUAL GROWTH**	154.2%

Source: Cushman & Wakefield, RCA

CHANGING DRIVERS OF CITY SUCCESS

01. GLOBAL ECONOMIC OUTLOOK

The macro environment is proving less supportive for real estate than had been expected at the beginning of the year, with trade disputes and other tensions helping to deliver a relatively disappointing outturn so far in 2018. However, while the trend is slowing and expansion more fragmented geographically than hoped, growth does continue in most areas, typically above or in-line with the 10-year average, particularly in more developed economies, and is forecast to pick up in some markets into 2019.

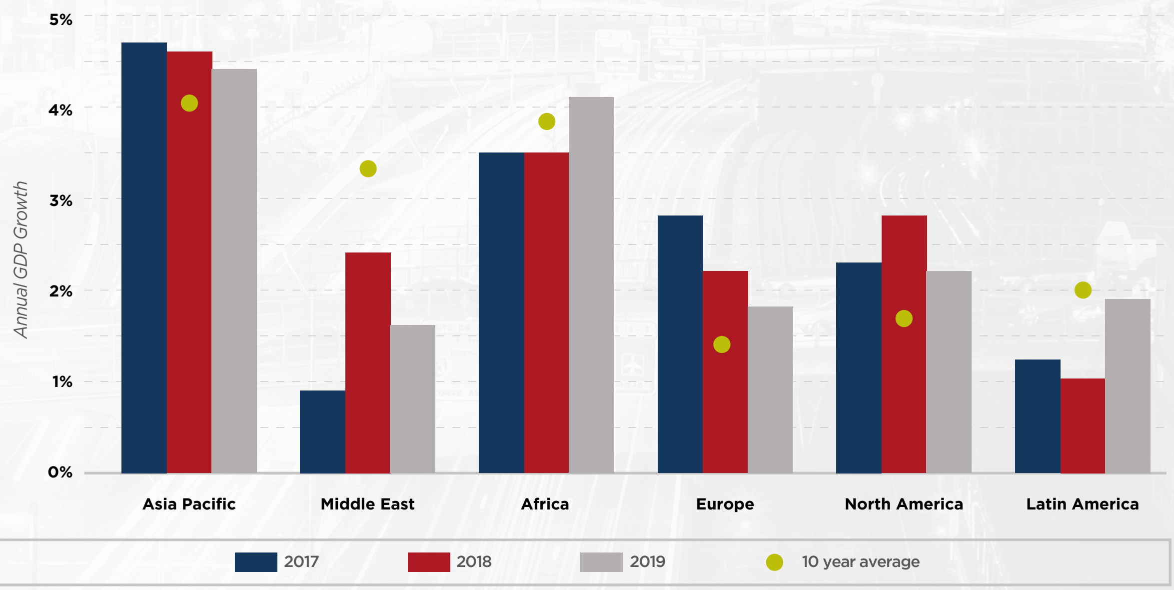
A range of factors are driving growth and demand in global cities and promising to change the pattern of winners that we should be expecting in the years ahead. The following review is just a selection of those which investors should consider.

Global GDP growth is forecast to average 3.1% this year, up slightly on 2017 but easing in 2019, albeit to a still above-average rate of 2.8%. At the same time, inflation is edging up, from 3.0% in the past year to 3.3% in 2018 and 3.5% in 2019. While a concern, this increase is largely focussed on Asia and emerging markets generally, with North America and Europe forecast to see the rate of price growth dip lower despite tightening labour markets.

However, while inflation may not be as much a threat as some fear, alongside steady growth, price signals will be enough to keep central banks in a tightening mood in most areas. The slow but sure rise in short and long-term interest rates, in addition to softening in QE driven liquidity, will continue.

That being said, the loss of momentum underway should be considered in the context of strong growth rates seen in many areas over the past year or so, and the longevity of the cycle overall.

Fig 6: Economic Growth Expectations by Region
Source: Cushman & Wakefield, Oxford Economics



Producers face challenging conditions, and need to innovate, raise productivity and boost growth. However, with capacity constraints emerging and labour markets already tight, we expect a steady increase in corporate investment despite the increased uncertainty, notably with respect to trade, that many businesses are feeling.

Emerging markets will remain under pressure thanks to the tightening of interest rates, the strong dollar and the slowing in global trade growth. However, the problems hitting markets such as Turkey and Argentina are localised in nature, and while confidence generally has been affected, emerging markets must be considered individually to better identify areas of opportunity and threat.

Similarly, more developed economies are also polarised between potential over and under performers, with exposure to trade a dividing issue for mature as well as developing economies. So too is geopolitics, whether recent elections in Mexico, Sweden or Brazil, upcoming elections in the US, Ireland or India, the ticking clock on the UK's negotiations to leave the EU, or the UN's COP 24 Climate Change Conference.

As a result, investors need to be assessing their targets carefully to understand risk, but also looking at occupiers, sectors and cities to identify those where the economic and macro drivers will deliver the most immediate, but also sustainable, growth.

CHANGING DRIVERS
OF CITY SUCCESS

02. WELL-BEING

The urban environment plays a huge role in the health of its residents, with successful urban design able to advocate social inclusion, health equality and cultural and environmental diversity. That being said, well-being is an element often overlooked by those looking to invest in real estate. And yet, with a market's economic productivity largely dependent upon the health of its citizens, it is paramount to the conversation on future-proofing cities.

Crucially, increasing urbanisation has put pressure on the ability of planners to ensure public well-being, whilst at the same time balancing the negative effects of higher density cities, including the loss of privacy, a heightened waste burden, increased incidence of disease and uncomfortable heat island effects.

Wealth concentration within cities combined with economies of scale amount to an 'urban health advantage' through the clustering of health infrastructure. Gateway cities lead the charge in this respect, with London, New York, Tokyo and Paris operating world-renowned hospitals which attract best-in-class physicians, whilst wide-reaching transport systems allow for good access to such amenities.

While important, health services are not the sole determinants of well-being, which is promoted and played out in the spaces that people occupy. For this reason, it is important for investors looking to determine resilient cities to consider the wider urban environment.

ENVIRONMENTAL SUSTAINABLITY
Finding a balance between urban expansion and environmental integrity. Meeting the needs of the present without compromising the future.

SOCIAL INCLUSION
Where justice is upheld inclusive of all citizens, and where all feel valued.

HUMAN HEALTH
Ease of access to healthcare infrastructure and professionals, where urban design and public policy promote good health.

ECONOMIC PROSPERITY
Thriving, dynamic place for business and services.

URBAN WELL-BEING

London and New York rank highly for the quantity and size of the green spaces they afford, encouraging exercise and placemaking. While Paris and Tokyo fall behind on this measure, they offer a wide range of cultural facilities and community locations which promote social cohesion and connectivity. However, the popularity of these dominant cities has added to capacity constraints, depressing affordability and making it difficult for lower income residents to find quality housing, thereby increasing social inequality and safety concerns.

Whilst the challenge for gateway cities is to find a sustainable way to deliver growth within their increasingly strained physical parameters, those cities which still have the space to develop have the benefit of hindsight, granting them the ability to look at established models and choose approaches that have worked best in promoting city well-being. Urban planners are at the forefront of these decisions, with policy makers such as those in Shenzen, Seattle, Barcelona and Rotterdam able to adopt sustainable urban transformation plans, keeping tight controls on air quality and heat island intensity for example.

New cities are going further, experimenting with smart technologies to integrate the concept of well-being from conception, with Al Widyan in Saudi Arabia, being designed with health woven into every element.

Ultimately, the need to prioritise well-being in the urban context is a key consideration that benefits both individuals and businesses alike, and those places incorporating well-being led design are more likely to show resilience to higher rates of population growth going forward.

To read more on well-being in the workplace, take a look at the ***C&W Well Workplace Report.***

CHANGING DRIVERS
OF CITY SUCCESS

03. THE ENVIRONMENT

Cities currently house more than half of the world's population, with this proportion expected to grow to two thirds by 2050. As a result, cities overwhelmingly consume the world's energy, contributing to c.70% of global carbon emissions, placing cities at the vanguard of the global warming debate.

In addition to being a primary contributor to global warming, cities are some of the areas most vulnerable to the effects of climate change, with 75% of the world's megacities at risk from rising sea levels. Many are entirely reliant on food imports, making them particularly exposed to supply-chain disruptions exacerbated by drought. Similarly, given the concentration of wealth and resources in cities, representing more than 80% of global GDP, the economic impacts of a warming climate will be felt more keenly in the urban context, thus making cities with a well-developed climate strategy more attractive places to safeguard investment.

Climate change is expected to emphasise rainfall patterns, making dry areas drier and wet areas even wetter. In the first instance, the imminent danger is to those fast-growing cities where urban infrastructure struggles to keep up with these changes. Tokyo and London, amongst others, have developed schemes to reduce the likelihood of flooding with success thus far; however, these will ultimately have to be updated if the current path of climate change continues.

IF CLIMATE CHANGE IS LEFT UNCHECKED, BY 2050:

600

OF THE WORLD'S CITIES WILL BE AT RISK OF FOOD SHORTAGES DUE TO LOW CROP YIELDS

500

CITIES WILL SUFFER FROM LOW WATER SUPPLIES

970

CITIES WILL BE FORCED TO FACE THE CHALLENGES BROUGHT ON BY EXCESSIVE HEAT

Source: C40 Cities

To that end, despite having won an award for its water conservation scheme in 2015, water supply in Cape Town almost failed to meet demand this year, with this near-miss of Day Zero, at which the taps in the city run dry, perhaps foreshadowing what urban areas can expect in the future.

Overall however, studies suggest that it is more economical to invest in reducing the human contribution to climate change in order to slow the course of warming. In consequence, a number of cities are already committing resources to reduce their emissions, offering tangible solutions for delivering sustainable growth. Seattle, one of the fastest growing cities in the US, has implemented a policy on existing commercial buildings to optimise energy and water efficiency, decreasing energy consumption by 10-15% per building.

While upgrading standing infrastructure to increase efficiency will be key to addressing emissions issues, new technologies built into city design will also play a significant role going forward. Such is the case in Masdar City in the UAE, where engineers are incorporating intelligent energy systems into the new city's construction to create the world's most sustainable city, which will consume 75% less energy than a conventional one.

The impetus for cities to adopt climate change prevention is clear: as extreme weather events become progressively more frequent, investors should increasingly view climate resilience as essential for safeguarding investment. Market opportunities can therefore be found in those areas which have a coordinated prevention, adaption and mitigation strategy.

CHANGING DRIVERS OF CITY SUCCESS

04. CULTURE & CREATIVITY

There are as many ways to try to quantify what makes a city ‘cool’, as there are definitions of cool itself – be it the party scene, museum scene, or start-up scene. However, what’s undeniable is that cities that have a more diverse cultural environment, and that have fostered an ecosystem that enables culture and the creative economy to thrive, are more appealing than ones that don’t.

Recent research indicates that having a larger and more diverse cultural offering is not only beneficial for a city’s social media clout, it’s also correlated with lower unemployment, a higher number of jobs per capita, and higher rates of GDP growth.

Luckily for smaller cities, this is one area in which bigger does not necessarily mean better. While capital cities do tend to have an advantage over regional cities in terms of organically building a creative scene, examples abound where the ‘cultural capital’ is not necessarily the biggest city, or the seat of government. Many of the world’s cultural capitals are not, in absolute terms, that big at all – though larger cities do tend to do slightly better at fostering a ‘creative economy’, i.e. the number of jobs in creative or knowledge economy sectors, intellectual property applications, and the like.

8 million

PEOPLE ARE EMPLOYED IN THE CULTURAL AND CREATIVE INDUSTRIES (CCI) IN EUROPE, MAKING UP 4.4% OF GDP

0.7%

GROWTH IN EMPLOYMENT IN CCI IN EUROPE DURING THE GFC

-1.4%

DECLINE IN EMPLOYMENT IN EUROPE OVERALL OVER THE SAME PERIOD

Source: European Commission

From a cultural appeal perspective, therefore, cities may fall into one of three different categories, each with their own opportunities and challenges:

ESTABLISHED HUBS:

Cities with a long-standing reputation for being hubs of cultural and creative activity have long been reaping the rewards of their enabling environment. In many instances, this has led to heightened popularity among not only those linked to the creative and cultural economies, but also other people drawn to all the amenities these cities offer, resident and visitor alike.

Such popularity, however, can threaten the very communities that created it, through rising costs of living and working, as well as potentially restrictive, NIMBY-led regulation. These cities should focus on safeguarding and preserving the qualities and communities that led to their success in the first place – and many, such as London, San Francisco, and Barcelona, already are.

RISING STARS:

A number of cities have a rich cultural scene that the outside world is only just waking up to, such as Lodz, Tel Aviv, or Beirut. These cities have the potential to capitalise on this heritage, should they wish, and further promote their cities as open places for both visiting, as well as engaging in, creative business. Their challenge will be to make sure that increases in growth and popularity are matched with adequate services and protection of local communities, especially given their typically smaller size and potentially more limited infrastructure.

CULTURAL NEWCOMERS:

These cities, such as Hong Kong, Abu Dhabi, and Shenzhen, have not historically had a strong cultural and creative presence internationally; however they recognise the value of these economies and their contribution to city success. In cases where newcomers have significant resources, entire districts may be built to support this new cultural offering.

The challenge for these cities will be ensuring that these new industries grow in a sustainable and authentic way, and are successful in appealing to both the international and domestic audiences they hope to attract.

CHANGING DRIVERS OF CITY SUCCESS

05. THE KNOWLEDGE ECONOMY

by Kat Hanna
Associate Director, Urban Change - Research & Insight

The phrase 'war for talent' is used frequently to highlight the extent to which companies should be prepared to compete with one another for high-skilled workers. Whether it's opting for popular downtown locations, or providing a wide range of office amenities and workplace benefits, attracting and retaining staff is key to success.

Perhaps the most important factor driving the war for talent is the growth of the knowledge economy, where competitive advantage is driven by the capacity to generate talent, knowledge, and innovation. In many locations, the increase in the relative importance of the knowledge economy, for example the digital or creative sectors, has been mirrored by a decline in traditional sectors such as large-scale manufacturing. The resulting economies are ones in which talent plays an increasingly important role in creating a competitive advantage.

More recently, the continued rise of the knowledge economy has resulted in four key trends:

1. **The concentration of knowledge activity in urban locations:** Innovation and knowledge-led activity is an increasingly urban activity, particularly in contrast to the suburban science parks of the 20th century. These dense, mixed-use locations allow for collaboration between different sectors, and respond to changing demographic preferences for lively, amenity-rich environments.

2. **The convergence of skills demands across industries and geographies:** The use of technology in the workplace is far from new. Digitisation has, however, permeated a range of sectors and locations, including those not typically considered reliant on technology. As a result, sectors ranging from banking to healthcare are joining the war for talent, hiring analysts, developers, and data scientists.
3. **Increased salaries and cost of living:** Growing demand for high-skilled labour means companies are willing to pay a premium for the talent they need. In leading global tech hubs, for example, average salaries for software developers have far outpaced market averages. This concentration of earning power can result in a distortionary effect on both labour and housing markets within a city market, as evidenced in cities such as San Francisco and Seattle.
4. **The commoditisation of talent and the emergence of new supply chains:** As demand for high-skilled talent grows, occupiers are looking to less familiar locations with sufficient labour pools. For tech-reliant companies, this means identifying areas with strong engineering and computer-science talent, and reconfiguring supply chains based on comparative labour costs.

Looking ahead, new types of talent-rich locations are likely to emerge. These include:

- Leading hubs like Berlin, Singapore and Tel Aviv, where high-skilled populations, both homegrown and international, and access to capital have led to the creation of successful tech ecosystems. Rapidly growing hubs in US cities, including Austin and Portland, and Scandinavian cities like Stockholm, also fit this profile, albeit it on a far smaller scale.
- Large, established hubs, including San Francisco, New York, London and Seattle, where the concentration of demand for talent risks a crisis of affordability, both in terms of housing, and in supporting emerging start-ups, who struggle to compete with the wages offered by major corporates.
- Emerging secondary tech hubs, particularly in Eastern Europe or India, where large talent pools allow businesses to access high-skilled labour at a relatively low cost. Demand for these locations is closely linked to the performance of established tech locations, and the performance of sectors with further scope for digitisation.

CHANGING DRIVERS
OF CITY SUCCESS

06. FINTECH & FINANCIAL SERVICES

Financial services are no longer forecast to be the engines for jobs growth they have been in the past as the sector is caught between the rock of cost pressures, such as increased regulation, and the hard place of service pressures from technology innovation and changing customer demand.

The real risk of job declines is most prevalent, for now, in administrative rather than creative functions. In technology, analysis and some areas of customer services, employment growth should remain the order of the day. Indeed, the challenge facing most organisations is how to reimagine the jobs they offer, not just coping with change but benefiting from it. A shift in skill requirements, with an increase in the number of digital roles, is also likely to continue.

Nonetheless, as the sector more fully embraces technology, this will undermine some existing companies and perhaps also the geographies in which they have chosen to locate. However, while the cloud and higher speed computing will also help increase locational flexibility, clustering will still be important. Proximity to fintech start-ups gives financial services institutions access to talent and potential partners. Proximity to regulators, such as the Financial Conduct Authority, helps ensure a supportive regulatory environment. The ability to offer such proximity, whether to existing players, new entrants, or the tech giants, will be key for cities to be successful.

1	**LONDON,** United Kingdom
2	**SINGAPORE,** Singapore
3	**NEW YORK,** United States
4	**SILICON VALLEY,** United States
5	**CHICAGO,** United States
6	**HONG KONG,** Hong Kong
7	**ZURICH,** Switzerland
8	**SYDNEY,** Australia
9	**FRANKFURT,** Germany
10	**TORONTO,** Canada

Fig 7: Top global fintech hubs
Deloitte, 2017

When choosing winning cities of the future, therefore, investors need more than one eye on how fintech is developing. According to Deloitte, the leading global hubs for fintech are London and Singapore, due to their combined strengths in financial services and technology, as well as supportive policy decision-makers. The US takes the next three places, but Silicon Valley's inclusion in fourth place, despite not being a traditional finance hub, shows the potential change in the balance of power that could lie ahead.

At the same time, affordability is an increasingly important issue, alongside wellness and quality of life. Hence for tech workers rather than tech business, cities such as Berlin, Austin and Toronto often look most attractive, particularly in comparison to more traditional financial services locations.

Parts of the sharing economy can push down prices, helping to offset the affordability trap afflicting successful cities. However, innovations in financial services, such as peer to peer lending and other collaborative models, can be disruptive and potentially just as impactful on locational decisions as fintech as market power becomes fragmented and infrastructure unbundled. These innovations, alongside fintech, offer huge growth potential, in particular in markets which are currently under-served by financial services, such as China, India and Africa.

A key question for investors will therefore be: to what degree does new technology enable new businesses to leap ahead, and will some cities leapfrog others as a result, leading to a fundamental shift in the global city hierarchy?

To read more on Fintech in London, take a look at the ***C&W London Fintech Ecosystem Report***

07. TRANSPORT

Between the promise of Autonomous Vehicles (AVs), the rise of ride sharing, dockless bike sharing, and most recently scooter sharing, one would be forgiven for thinking that we are entering the Golden Age of Transport – and perhaps we are. Before we get there, however, cities have a lot of work to do in ensuring that these new technologies and modes of transport also make the cities they serve cleaner, safer, and more accessible.

DID YOU KNOW?

Streets are not only essential for getting around, they are also, literally, a city's biggest asset: 25-35% of the land area of a typical city are streets and pavements. Cities must not only focus on increasing the efficiency of their existing networks, but also develop strategies for how to best leverage this asset.

Every city is different, and the best implementation of these technologies and services will inevitably vary from market to market. However, combined they have the potential to dramatically reshape not only how we get around but also building design, the relative desirability of locations, and ultimately CRE values.

While it's unlikely that all the new services on offer will survive in their current iterations, their sudden rise is forcing cities to examine not only safety, accessibility, and environmental considerations, but also how space is allocated between modes of transport – and well-executed policies have the potential to boost a city's prospects and give it a competitive edge.

Investors should, therefore, be on the lookout for cities that:

TAKE A HOLISTIC VIEW

In order for new technologies and services to add value and improve overall connectivity, cities must consider all existing and new transportation services as part of the same overall network – as its users already do. Examining the transport network overall will help new services fill gaps in the market – for example, New York is using the introduction of dockless bike-sharing to address the much examined 'last mile' public transport problem. Focusing on how new entrants can address shortfalls in existing transport infrastructure provides an opportunity for these new services to improve connectivity and therefore, among other things, the appeal of hitherto isolated neighbourhoods.

WIELD THEIR POWER FOR GOOD

While some cities have fallen victim to believing that these new entrants are too large or impertinent to regulate, others have gone to the extreme of banning them outright – whether permanently, or as a stop-gap measure to buy time in order to try and address some of the externalities. Seattle is an example of a city working with new entrants, allowing four dockless bike schemes to enter the local market for a pilot project earlier this year, in exchange for receiving the data that they will subsequently generate. This information will be used to inform the city's overall transport strategy, demonstrating the potential value of public-private partnerships in this sphere.

ARE FOCUSED ON THE LONG GAME

While the timescale for fully autonomous vehicles is still up for debate, cities that are laying the groundwork now in terms of regulatory framework and testing will be in a much stronger position for thoughtful integration that best maximises the potential benefits of this technology. Singapore has invested heavily in supporting AV research and innovation, including numerous pilots on both segregated tracks and, shortly, on public roads in the form of a pilot commercial AV taxi service.

In Gothenburg, meanwhile, Volvo has recruited several local families to test-drive their semi-autonomous vehicles, enabling them to improve their product through feedback. The goal is for these test vehicles to become progressively more autonomous, reaching stage 4, near full autonomy, by 2021. Both Gothenburg and Stockholm have embraced AV testing, giving them an integration advantage when the technology does arrive.

To read more about the future impact of Autonomous Vehicles, take a look at the ***C&W Autonomous Vehicle Report***

08. DRIVERS IN ACTION: THE OLYMPIC EFFECT

by DTZ Investors

London and Paris have both seen successful bids for the Summer Olympics. However, now that London's plans have largely been implemented, and the effect of hosting a major international event on the local property market has been demonstrated, we look to Paris where we expect the 2024 games to be a similar catalyst for infrastructure investment and urban regeneration.

After the selection of London in 2005, major regeneration works targeted the Stratford area. This included enhanced transport links, new housing and a new retail/business district. Stratford station's annual rail passengers increased fivefold from 8 million in 2004-05, to 42 million in 2016-17. Approximately 2,800 new homes have been delivered and a further 2,000 are still in the pipeline. The International Quarter will offer c.4 million sq ft of office space once fully developed, and will compete to attract tenants from the City of London.

DTZ Investors' research shows that the relative rental value uplift from London's major infrastructure projects, the opening of the M25, the Jubilee Line extension, and Crossrail, peaked between 7 and 9 years after Royal Assent was granted. Since June 2012, Stratford's office rents have increased by 31%, above the City of London's average of 23%.

The boost to London's fringe locations, thanks to large-scale infrastructure investment, looks set to be replicated, if not surpassed, by the "Grand Paris" masterplan in France. The awarding of the Summer Olympics has provided the political will to ensure its implementation. The backbone to the plan is a new public transportation system, the 'Grand Paris Express', linking the city's suburbs, where over 80% of Paris' inhabitants live, together, and providing better access to its airports, rather than the current RER system where all trains go through the centre of Paris.

THE GRAND PARIS EXPRESS KEY FACTS:

$30bn
investment

200km
of new metro lines

85%
underground

68
new stations

2m
passengers a day

2-3mins
train frequency

6m
people served

To read more about the impact of major infrastructure investment on real estate values, take a look at the ***DTZ Investors report on the Impact of Crossrail***

Source: Société du Grand Paris

As the largest infrastructure project in Europe in the last 10 years, it will see the creation of four new metro lines and 68 new stations by 2030. Seven strategic development centres have been identified, with the aim of improving Greater Paris' contribution to the region's economy and creating new business and retail centres, specialised tech and industrial hubs, and more than 115,000 jobs.

The whole project is scheduled for completion by 2030, with transportation improvements integral to Paris' ability to host the Olympics being prioritised. Commercial property markets which stand to benefit from the introduction of lines 15 Sud, 16, 17 Nord and 14 should therefore be of particular interest to investors. In terms of commercial sectors, the appeal of existing economic hubs, such as La Défense and the Western Crescent, will be reinforced by improved interconnectivity over the next 5 years.

Saint Denis presents a particularly exciting opportunity and has already gained traction with investors, enticed by its enviable location at the interchange of lines 14, 15 Nord, 16 and 17, and proximity to both the city centre and Charles de Gaulle Airport. Saint Denis will also accommodate the 2024 Olympic Village and so will be the epicentre of activity during the games. The village will eventually be converted into 3,500 residential units which, taking lessons from Stratford, should boost demand for office accommodation in the surrounding area.

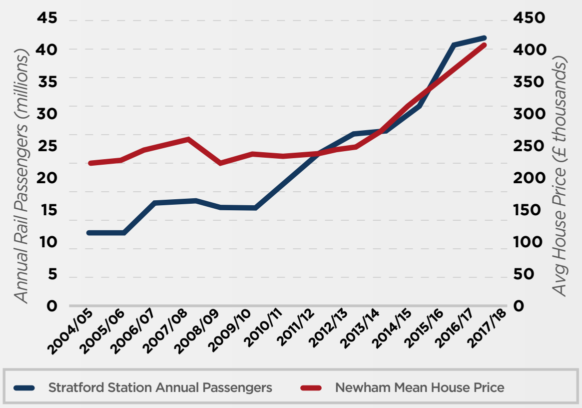
After the Olympics have come and gone and the remaining Grand Paris Express lines are completed, the heralded new economic zones should start to gain traction with occupiers.

However, given the inevitable uncertainty around the delivery of long-dated infrastructure plans, especially when there is no longer the incentive of hosting a major world event to drive investment, we would recommend vigilance and patience in respect of any emerging investment markets in the Greater Paris area.

Government spending has both direct and indirect effects on local real estate, and the two can be equally strong. For instance, the development of the Olympic Village in Stratford unintentionally caused a rapid rise in industrial rents as it swallowed up a large proportion of the local industrial land supply. It is in the shadows of the limelight surrounding the Grand Paris plan, therefore, where intuitive investors may be able to achieve the best returns.

Fig 8: Stratford Station Annual Passengers

Source: HM Land Registry, UK Office of Rail and Road



LEAVING A LEGACY: THE GLOBAL CONTEXT

Billions of dollars from city coffers go into holding an Olympic Games, and there are obvious benefits to playing host to the prestigious event to which hundreds of thousands of visitors flock. But what are the lasting rewards?

The 2008 Beijing Olympic Games catalyzed major urban transportation development in the city:

- The construction of Terminal 3 at Beijing Capital International Airport allowed the airport to overtake Tokyo Haneda as the busiest in Asia.
- In addition, three new lines were added to the city's metro system, with further upgrades to existing lines and stations to increase carrying capacity.
- Consequently, Beijing has experienced a marked improvement in connectivity, both locally and internationally, with higher tourist numbers demonstrating this change.
- In an effort to reverse the city's image as a pollution hotspot, $20 billion dollars has been poured into improving the city's air, with factories ordered to curb emissions and a reduction in the number of private cars permitted on central roads.

Since the 2009 announcement that Rio would play host to the 2016 Olympic Games, the city has undergone a transformation, stimulated by $40bn of investment from both public and private sources:

- Improvements in transport infrastructure as a direct result of the Olympics include the new VLT Carioca (light railway line), the incorporation of a new metro line and additional bus corridors that intersect the city center.
- In addition, the region's rundown harbor area underwent a revitalization project covering 5 million sq m, which incorporated an overhaul of the traffic system to include bicycle paths, and the installation of a cable car to better connect the newly named Porto Maravilha area.
- The 2016 Olympics also resulted in the opening of 70 new hotels and residences in the city, with job generation at an all-time high, a consequence of the upsurge in tourism.

With the games scheduled for 2020, the bulk of Olympics-related improvement was scheduled to begin construction this year:

- Hotel operators are planning to capitalise on the increase in tourism set to hit the city, with an expected 30% rise in the number of hotel rooms from 2016 to 2020.
- This influx is set to impact the Ginza district significantly, with the area to be converted from being a prominent retail destination into a high-functioning tourism base.
- In addition, some 569 miles of utility cables, which are currently visible on Tokyo's streets, will be buried underground to improve the city's aesthetic.
- Plans are already being made to convert the Olympic Village, in the Harumi area (Tokyo bayside), into residential blocks post-Olympics, helping to alleviate some of the pent-up residential demand. The area's current weak public transport will also be upgraded to improve connectivity.

STRATEGY

Monetary policy and trade tensions have clearly rattled financial markets, and the downside risks of a major policy miscalculation in either circumstance poses a threat to confidence and activity going forward.

For now however, the global economy remains supportive of property, as shown by robust job creation in the US and positive space absorption in China. In Europe and the wider Asian region, economic growth has eased compared to 2017, but they too remain in relatively good shape, with positive economic momentum filtering through to property markets.

In this environment of good but slowing growth combined with steadily tightening any monetary policy, what are the implications for investment strategy? Some of the most striking pointers which have recently emerged are highlighted below. In our view, they suggest ongoing demand for quality property but with a need to focus on growth and sustainability. This requires an emphasis on local market fundamentals, and a clear appreciation of what the occupier is looking for - even if the latter requires some guesswork given the challenges that they face. Indeed, experimentation should be an increasing feature of investor strategy going forward as we look to make the transition in business and operating practices that new technological, economic, social and environmental trends demand.

THE HUNT FOR PRODUCTIVITY	Businesses need to find greater productivity and efficiency as labour markets tighten and wages increase. Confidence levels and rising interest rates may hold some back from investing, but developing and integrating new technology will be an increasing focus for most firms, and changing real estate needs will be next in line for many.
QUALITY OF LIFE	Sustainable growth relies on attracting talent and customers, and with changes in society's priorities towards well-being, the environment and work/life balance for example, quality of life issues are increasingly to the fore in developed as well as emerging markets. In all cases, the affordability of that quality of life is a mounting issue.
MARKET DIVERSITY AND LOCALIZATION	The apparently synchronised nature of the global economic cycle in late 2017 proved short-lived and patterns of growth and risk are now highly varied by country, city and industry. As such, locational and timing strategies need to be adapted in response.
AMPLE BUT CHANGING LIQUIDITY	The weight of capital in the global market remains high, but this liquidity does not extend to all assets, and will be subject to change as quantitative easing slowly reverses. It is also not reflected in a widespread availability of debt finance away from low risk areas of the global market.
THE REMAKING OF SPACE AND CITIES	Changing social and business preferences has led to the need for cities to alter how they operate. Challenges differ from city to city depending on the scale of existing infrastructure to remodel or remake, but in all cases, there is a need to experiment, to embrace sustainability and to better curate the offer a city makes to its residents and visitors.

In response to today's market position in the cycle and the ongoing fog of uncertainty, many investors will look to de-risk and move down the return spectrum in favour of stability and liquidity. Such a defensive response should be typified by a very refined focus on the best top-tier cities, but also on new market segments and 'alternatives' that will help diversify risk. A hunt for value in tier 2 markets is also underway, particularly in lower risk, more liquid and mature countries such as the USA, Germany and Japan.

LOW

RISK

HIGH

DEFENSIVE

SUPER GATEWAYS	NEW MARKETS	MATURE TIER 2
Focus on the most liquid and sustainable markets to protect income and value.	Boosts diversity through exposure to differing performance drivers in new sectors and cities such as the demographically driven residential market.	Expand the focus to secondary cities but in the lowest risk countries.

DARING

EMERGING MARKETS	CHALLENGER CITIES	RETAIL
Selective, focus on areas of sustainable, home-grown demand.	Tier 2 cities with key attributes to allow them to grow and compete globally, such as Dresden or Chengdu.	The e-commerce impact has further to go globally but physical space remains key to modern retailling and a possible source of success for innovative, active mangaers.

DISRUPTIVE

NEW SUB-MARKETS	BUILD AND INNOVATE	MANAGEMENT PLATFORMS
Developing new urban districts, largely in gateway cities.	Experimenting with what we build, where and how.	Dynamic, active management with new revenue models.

Those looking to take on more risk have a choice between the daring and the disruptive, with a key difference being the time frame over which investors can plan. The daring approach is largely about being ahead of the pack – getting in early, judging the time to enter emerging markets, accepting the evolution of new competing cities and deciding if, and when, to go back into the retail sector.

Each of these areas has clear risks, with the escalating dollar squeezing emerging markets, tier 2 cities typically more specialist and less liquid than gateway cities, and e-commerce's impact on physical retail still playing out. Carefully selected, however, we think risks and rewards are increasingly well-aligned, while pricing across parts of the retail market will look compelling in the year ahead when combined with operators and business models that can take advantage of the changes occurring in the industry.

In tier 2 cities, investors need to be selective and consider the fundamental appeal of a city, not just its price. It is worth noting, however, that such cities are not necessarily a second choice. The war for talent and changing technology is exposing a wider band of cities to greater scrutiny from occupiers, usually due to a mix of higher living standards, greater affordability, a skill or cultural cluster, typically with a strong university, good access and appeal to younger workers. Such 'Challenger Cities' also usually have a lower population density, according to the EIU's global liveability index, as well as lower crime rates and less congestion.

For those planning over a longer time frame, outright disruptive strategies need to be pursued; for example in developing new submarkets in successful cities, preferably based on new transport infrastructure, or educational, cultural or commercial hubs that can underpin long-term demand changes. Tackling construction and the development process itself could reap significant gains as well, using new designs, a mix of uses, technology and materials to change the affordability, flexibility, efficiency and sustainability of the built environment. Finally, building new platforms to create an efficient critical mass from an investment and an occupational perspective, while also generating and capturing data and harnessing new revenue streams, may be the ultimate disruptor strategy.

REGIONAL STRATEGY TRENDS AHEAD

A further slow increase in investment activity is expected in **Asia Pacific**, together with a modest fall in yields. In core markets investors are looking to increase their reach, with Brisbane and Perth providing options, as well as regional cities in Japan, where the supply outlook is more favourable than Tokyo. Among emerging markets, risk appetites are increasing in India, with investors embracing new sectors and brownfield development, while in Vietnam, prospects are bright, underpinned by a relatively stable political backdrop. Investors in core and emerging markets are also looking towards new sectors, with data centres and hospitality popular and others, such as co-living and retirement homes, being considered due to favourable demographic trends, albeit with the risk of regulatory oversight a complicating factor for some.

China meanwhile is likely to feature more on global buy lists going forward, following moves by President Xi to ease entry requirements for foreign investors. Tier 1 cities will be a key focus, but a greater share of investment will target decentralized and emerging CBD locations due to a shortage of opportunities and high prices in the CBDs, as well as transport improvements in these new areas.

The prevailing tight lending situation in China will lead to a softening in new development, but will also produce more opportunities for JVs and refinancing. Government initiatives are expected to continue to support growth, including the Greater Bay Area, Belt & Road Initiative and wider urban renewal schemes. China's tier 2 and 3 cities, particularly those linked to the Belt & Road Initiative such as Chengdu and Chongqing, will continue to record strong growth in logistics investment.

In South America, the headwinds facing investors from politics, a strong dollar and an uncertain trade outlook will continue. However, the economic backdrop has improved, and emerging market problems are not endemic in all countries, with regional and global interest increasing for secure investment opportunities. For core assets, Chile is a key attraction, but high demand has forced yields down and availability is limited, pushing buyers towards new sectors such as multi-family or elsewhere in the region, with Peru seeing increased interest thanks to solid economic growth and US$ denominated hard leases. In Brazil, key sectors of interest include Class A office and logistics in São Paulo, but new emerging market segments such as self-storage also offer potential. Elsewhere, the long-term promise of Colombia will attract attention, particularly for retail and logistics, helped by better short-term conditions, a new government and rising oil prices.

In **North America**, overall investment is likely to ease over the coming year as the cycle matures. Canadian markets continue to attract strong interest but stock shortages will push investors towards suburban areas and smaller cities, with office and industrial preferred. While vacancy rates are at record lows across major asset classes, particularly in outperforming markets Vancouver and Toronto, the threat of a trade war is on investors' minds. Nonetheless, over the longer run, Canadian commercial real estate remains a strong contender on a risk-adjusted basis, particularly in markets that provide demographic and locational advantages for businesses.

In the USA, with strong economic momentum maintained by tax cuts and government spending, the market remains ahead of the global cycle, leading both for expansion and employment growth, as well as for the pace of monetary policy tightening. Consequently, investment strategies must adjust as the cycle matures and performance enters a slowing phase. At the same time however, dry powder is at record levels, meaning liquidity is still very strong and domestic buyers are more than ready to pick up any slack left by those overseas players deterred by the strong dollar. Opportunities are increasing as more supply comes to market, but investors in general are selective, focussing on the highest quality, albeit in a widening variety of markets and sectors, including niches such as data centres and medical offices.

The logistics market remains buoyant, and while development is now up, it is still outpaced by occupier demand. In response, investor interest is strong, with an increased focus likely on those secondary and tier 2 markets that face less new construction. Office markets meanwhile are experiencing rising levels of supply but strong absorption is also being seen in gateway cities. Tech-driven markets from San Francisco down are attracting more investor demand and a range of tier 2 cities are being targeted. Similarly, opportunities continue to emerge in the multi-family market despite increased development. Foreign investor demand in the sector is up, and more buyers are looking towards B locations and suburban developments to find stock and higher yields. Retail is seeing strong consumer demand but the wave of bankruptcies continues. Nonetheless, the retail real estate market appears to be stabilising, with a growing realisation that there are winners and losers in the physical space market. Opportunistic players are taking note.

> **“Alternative sectors are gaining a greater market share in all regions, led by residential, hospitality and student housing but with smaller niches also seeing rapidly growing interest.”**

In **EMEA**, economic momentum has slowed but remains favourable, and with near full employment in some markets, the impetus is growing on businesses to invest internally. This should sustain the occupational cycle in 2019, and with monetary policy tightening at a slower pace than in North America, the macro environment for property is good. As a result, yields are set to find their floor, but investment liquidity will remain high and there is potential for supply to also increase as pricing peaks - leading to more potential opportunities coming to market. For now, however, a supply shortage continues to hold back the market, especially for investment grade stock.

Prospects remain quite varied by market, with macro risks in some, led by the UK and Italy, as well as Russia and Turkey. Geographically therefore, it's no surprise that performance is diversifying, with the Nordics perhaps best placed. Areas of good growth can also be found in Germany, France, Spain and the Netherlands. The UK is seeing growth slip back, but the occupational market is holding up well despite Brexit concerns, and attractive relative yields will continue to draw in long-term capital. In Central Europe, occupational fundamentals are good and there is potential for further yield compression, although rental growth may be more subdued due to higher potential supply. Geopolitical risks are holding back the larger emerging markets of Turkey and Russia, but smaller markets in Eastern Europe are drawing in more interest, and the Greek market is stabilising. In the wider region, current interest from global players is limited in Africa and the Middle East, but is set to rise over time among those looking at longer-term macro trends.

Demand is spreading across a growing range of less-traditional sectors, led by rental apartments and student accommodation. Among the more traditional sectors, change is being seen; offices are experiencing robust tenant demand, helped by co-working trends, and modern offices are in a strong position to outperform. With pipelines generally failing to match demand, gateway cities will continue to drive growth, led by Nordic cities as well as Madrid, Amsterdam and Paris. As affordability is squeezed however, decentralised tier 1 and better-quality tier 2 markets will gain.

Logistics will continue to be a focus for activity among occupiers and investors. Rental growth may be squeezed where development is on the rise however and urban logistics, where denser uses are starting to emerge, appears a stronger bet to outperform. While logistics benefits from e-commerce, retail continues to suffer, with the middle ground between affordable convenience and aspirational destinations under threat. While most European markets do not have the level of retail provision seen in the USA, some areas do have more space than they will need in the future. Nonetheless, with robust consumer spending growth, those cities and formats that match retailer aspirations do offer recovery potential with the right management team on board.

TARGETS FOR INVESTMENT IN 2018/19

CORE

AMERICAS

OFFICES:
Gateway CBDs: Manhattan (repricing creating a window), LA, Boston, Chicago, Washington DC, San Francisco and core Canadian cities (Toronto, Vancouver). Core assets in non-majors such as Denver, Atlanta and Phoenix.

RETAIL:
Class A neighbourhood and community centres, grocery-anchored and other personal service or experiential retail in gateway cities in the US and Canada.

APARTMENTS:
Class A suburban multi-family in top US cities plus build-to-core strategies, particularly in the southern sunbelt markets.

LOGISTICS:
Key Canadian markets and US distribution hubs (inland Empire, Dallas, Atlanta), plus port cities (LA) and along key supply chains.

APAC

OFFICES:
Sydney, Melbourne, Singapore, Osaka and Fukuoka.

RETAIL AND HOSPITALITY:
Sydney, Singapore and Tokyo (Hotels).

RESIDENTIAL AND SENIOR LIVING:
Tokyo and Osaka.

LOGISTICS:
Singapore, Sydney, Hong Kong, Tokyo, Osaka.

DATA CENTRES:
Tokyo.

EUROPE

OFFICE:
London, Paris, Copenhagen, Munich, Frankfurt, Berlin, Madrid, Hamburg, Amsterdam, Brussels.

RETAIL:
Dominant centres, flagship high streets and outlet centres in core German and Nordic cities, plus Paris, London, Milan, Madrid, Barcelona, Lisbon, Dublin, Amsterdam and Brussels.

LOGISTICS:
London, Paris, Hamburg, Munich, Berlin, Rotterdam, Antwerp, Copenhagen.

SENIOR LIVING:
Germany.

HOTELS:
Indexed leases key cities (affordable/economy).

DATA CENTRES:
Hub cities and managed residential (Nordics and UK).

CORE-PLUS

AMERICAS

OFFICES:
Class A in growth markets (e.g. Dallas, Miami, Atlanta, Seattle, Denver, Phoenix, and Austin), Transit rich secondary markets and near-in suburbs of gateway markets and new Class A leased offices in São Paulo, Lima, Santiago.

MULTI-FAMILY:
US Class B in cities and suburbs of tier 1/2 markets, emphasis on repositioning in the sunbelt.

RETAIL:
US Class A Neighbourhood and power centres serving larger conurbations with repositioning opportunities in tier 1/2 markets.

LOGISTICS:
Development in space constrained top 10 US markets, Class B product along supply chains and cold storage.

Class A logistics platforms in Lima, Buenos Aires, Santiago, Bogota and Medellin plus build to suit/sale & leaseback platforms in São Paulo.

APAC

OFFICES:
Brisbane, Perth, Hong Kong, Seoul, key Indian cities: NCR, Mumbai and Bangalore, plus Shanghai, Beijing, including emerging CBD markets underpinned by new transport routes and stronger tier 2.

Fringe office locations in core cities such as Sydney, Melbourne and Tokyo.

RETAIL:
Growth markets such as Singapore, Jakarta, Kuala Lumpur and Seoul, plus centres in core areas of Shanghai and Beijing and tier 1 Indian cities.

Tier 2 logistics hubs linked to China's Belt and Road Initiative, led by Chengdu and Chongqing.

ALTERNATIVES:
Data centres, student housing and medical serving core cities.

EUROPE

OFFICES:
Select tier 2 cities, tech and culture-led, plus Budapest, Barcelona, Stockholm, Helsinki, Vienna, Milan, Lisbon, as well as repositioning in core cities and medium-term gains in Polish cities.

RETAIL:
Refurbishment in core cities in Northern Europe. Core space in larger cities in France, Italy, Spain and Central Europe. Dominant retail parks around larger cities, led by UK, Germany and Spain (leisure anchored).

LOGISTICS:
German and French second tier, Dublin, Madrid, Warsaw, Prague and Budapest. Developing urban logistics.

STUDENT HOUSING:
Forward commitments and development.

HOTELS:
Germany, UK, Spain, tourist-led Central and Eastern European cities.

TARGETS FOR INVESTMENT IN 2018/19

OPPORTUNISTIC

AMERICAS

Assets or platforms in Brazil with office and industrial in São Paulo a long-term target and high-energy markets such as Houston, Edmonton & Calgary.

OFFICE:
Repositioning/redeveloping suburban office product in major and secondary US markets, core assets in tertiary markets.

Class A office development of partially pre-let offices in Santiago and Lima and Class A stabilised office in Buenos Aires, Rio de Janeiro, Medellin, and Bogota.

RETAIL:
Heavy repositioning/redevelopment of Class B+ US malls into mixed-use with experiential retail or industrial component.

Brazilian tier 1 shopping centres with low relative pricing and proven resilience. Class A in Santiago, Mexican and Colombian cities.

MULTI-FAMILY:
Affordable housing in the US, Mexican and Colombian cities, in infill high transit locations of Santiago, Class A in São Paulo.

INDUSTRIAL:
US cold storage, infill distribution product in tertiary markets, Class B and development in secondary markets. Markets servicing key Brazilian and Mexican cities.

APAC

OFFICES:
Emerging growth markets of Manila, Jakarta, Kuala Lumpur, Bangkok, Ho Chi Minh City and brownfield development in tier 1 and 2 Indian markets.

RETAIL:
Emerging markets such as Bangkok, New Delhi and other top Indian cities.

LOGISTICS:
Gateway Chinese cities -Shanghai, Beijing, Ho Chi Minh City, Guangdong and Indian hubs, plus Kuala Lumpur, Bangkok and Vietnamese hubs (including light industrial).

CHINA:
Underperforming assets for upgrade or conversion (e.g. retail to co-working or office towers to residential) and over-leveraged developers, via investment in local platforms.

DATA CENTRES:
Multi-let in Japan, plus other growing regional hubs.

EUROPE

OFFICES:
Spec development and repositioning in core West and Nordic cities, plus leased property in the EU East and Moscow.

RETAIL:
Repositioning and active management/development in larger cities, established centres in EU East.

LOGISTICS:
Development serving large Central & Eastern European cities and peripheral Western cities: e.g. Oporto, Barcelona and Milan.

AFRICA AND UAE:
Schemes serving key hubs for technology and hospitality.

HOTELS:
Asset management in key Western cities and development (Southern Europe).

DATA CENTRES:
Central and Eastern Europe.

APPENDIX

APPENDIX
TOTAL INVESTMENT VOLUMES (EXCL. DEVELOPMENT SITES)

	METRO	12 MONTH VOLUME ($BN)*	GROWTH**
1	NEW YORK	49.6	-3.4%
2	LOS ANGELES	40.7	4.8%
3	LONDON	35.4	12.3%
4	PARIS	34.6	42.0%
5	HONG KONG	32.5	67.9%
6	SAN FRANCISCO	26.2	-18.0%
7	WASHINGTON, DC	24.0	19.4%
8	TOKYO	20.9	13.6%
9	DALLAS	19.3	-14.3%
10	CHICAGO	18.5	7.2%
11	AMSTERDAM	17.1	27.8%
12	SEOUL	16.1	21.8%
13	ATLANTA	15.9	-12.9%
14	SHANGHAI	14.0	-23.1%
15	HOUSTON	13.1	18.3%
16	SEATTLE	12.5	-6.6%
17	PHOENIX	12.2	23.1%
18	SYDNEY	12.0	1.9%
19	BERLIN	11.4	-2.0%
20	MIAMI	11.3	-20.4%
21	DUSSELDORF	11.1	-5.9%
22	MADRID	11.1	16.0%
23	DENVER	10.7	20.5%
24	BOSTON	10.6	-29.5%
25	TORONTO	10.5	50.3%
26	FRANKFURT	9.2	-3.0%
27	BEIJING	8.3	11.0%
28	MELBOURNE	8.1	25.8%
29	SINGAPORE	8.1	11.5%
30	PHILADELPHIA	7.7	20.8%
31	SAN DIEGO	7.5	17.7%
32	MUNICH	7.5	-8.0%
33	HELSINKI	7.3	112.1%
34	LAS VEGAS	6.3	-7.7%
35	ORLANDO	6.0	-2.0%
36	HAMBURG	5.9	20.4%
37	AUSTIN	5.6	-37.1%
38	VIENNA	5.5	83.1%
39	MINNEAPOLIS	5.4	24.5%
40	STOCKHOLM	4.9	-8.5%
41	TAMPA	4.9	-8.9%
42	BRISBANE	4.9	45.6%
43	DUBLIN	4.7	28.9%
44	VANCOUVER	4.5	-24.3%
45	RALEIGH	4.5	26.1%
46	SACRAMENTO	4.4	45.7%
47	CHARLOTTE	4.3	-32.1%
48	BALTIMORE	4.2	-1.9%
49	COPENHAGEN	4.2	11.0%
50	PORTLAND	4.1	-23.0%

Source: Cushman & Wakefield, RCA.
**12 months to Q2 2018, **Growth compared to previous 12 months*

APPENDIX
TOP 10 CITIES FOR INVESTMENT BY SECTOR

		METRO	12 MONTH VOLUME ($BN)*	GROWTH**
RETAIL	1	HONG KONG	9.1	42.4%
	2	NEW YORK	7.4	30.7%
	3	LOS ANGELES	7.4	51.1%
	4	LONDON	4.8	14.8%
	5	SEOUL	3.7	67.4%
	6	TOKYO	3.2	40.0%
	7	AMSTERDAM	3.0	140.0%
	8	CHICAGO	2.5	-23.4%
	9	SYDNEY	2.4	29.1%
	10	SAN FRANCISCO	2.2	-38.0%

		METRO	12 MONTH VOLUME ($BN)*	GROWTH**
OFFICE	1	PARIS	28.5	55.0%
	2	LONDON	22.1	2.7%
	3	NEW YORK	20.3	-9.8%
	4	HONG KONG	17.4	120.9%
	5	TOKYO	13.6	6.7%
	6	LOS ANGELES	12.0	-9.2%
	7	SAN FRANCISCO	11.3	-24.0%
	8	SEOUL	11.2	18.8%
	9	SHANGHAI	10.8	-11.6%
	10	WASHINGTON, DC	8.7	-10.2%

		METRO	12 MONTH VOLUME ($BN)*	GROWTH**
INDUSTRIAL	1	LOS ANGELES	9.2	21.4%
	2	SAN FRANCISCO	5.6	27.0%
	3	CHICAGO	4.8	41.4%
	4	NEW YORK	4.7	-4.4%
	5	HONG KONG	4.6	96.3%
	6	WASHINGTON, DC	3.8	155.6%
	7	DALLAS	3.0	0.6%
	8	TORONTO	2.8	83.0%
	9	SINGAPORE	2.5	268.1%
	10	ATLANTA	2.5	36.6%

Source: Cushman & Wakefield, RCA.
**12 months to Q2 2018 **Growth compared to previous 12 months.*

APPENDIX
GLOBAL YIELDS Q2 2018

	COUNTRY	CITY	LOCATION	OFFICE	SHOPS	INDUSTRIAL
1	ARGENTINA	Buenos Aires	Americas	10.00%	N/A	N/A
2	AUSTRALIA	Sydney	APAC	4.50%	4.25%	6.00%
3	AUSTRALIA	Melbourne	APAC	5.00%	4.75%	6.50%
4	AUSTRIA	Vienna	EMEA	2.80%	2.85	5.75%
5	BAHRAIN	Manama	EMEA	8.50%	8.50%	8.00%
6	BELGIUM	Brussels	EMEA	4.40%	3.15%	5.90%
7	BRAZIL	Rio di Janeiro	Americas	9.80%	8.85%*	9.80%
8	BRAZIL	São Paulo	Americas	8.50%	8.85%*	9.54%
9	BULGARIA	Sofia	EMEA	7.75%	8.25%	8.75%
10	CANADA	Toronto	Americas	4.31%	4.50%	4.75%
11	CANADA	Vancouver	Americas	4.38%	3.63%	4.25%
12	CANADA	Montreal	Americas	5.75%	5.00%	6.25%
13	CHINA	Beijing	APAC	4.40%	3.70%	6.20%
14	CHINA	Shanghai	APAC	4.84%	4.66%	6.50%
15	CHINA	Hong Kong	APAC	1.92%	2.40%	2.80%
16	CYPRUS	Limassol	EMEA	4.75%	5.00%	N/A
17	CZECH REPUBLIC	Prague	EMEA	4.50%	3.50%	5.75%
18	DENMARK	Copenhagen	EMEA	3.75%	3.00%	5.75%
19	ESTONIA	Tallinn	EMEA	6.70%	6.70%	8.00%
20	FINLAND	Helsiki	EMEA	3.40%	4.10%	5.75%
21	FRANCE	Paris	EMEA	3.00%	2.50%	4.75%
22	GERMANY	Berlin	EMEA	3.10%	3.30%	4.70%
23	GERMANY	Frankfurt	EMEA	3.20%	3.50%	4.60%
24	GERMANY	Hamburg	EMEA	3.10%	3.40%	4.65%
25	GERMANY	Munich	EMEA	2.80%	2.90%	4.50%
26	GREECE	Athens	EMEA	7.95%	6.70%	10.00%
27	HUNGARY	Budapest	EMEA	5.50%	5.00%	7.50%
28	INDIA	Bangalore	APAC	8.50%	8.00%	8.50%
29	INDIA	Mumbai	APAC	8.00%	8.00%	7.50%
30	INDIA	New Delhi	APAC	7.50%	5.70%	8.00%
31	INDONESIA	Jakarta	APAC	7.00%	10.00%	10.00%
32	IRELAND	Dublin	EMEA	4.00%	3.50%	5.25%
33	ISRAEL	Tel Aviv	EMEA	6.25%	5.00%	6.00%
34	ITALY	Milan	EMEA	3.50%	2.75%	5.50%
35	ITALY	Rome	EMEA	4.00%	2.75%	6.25%
36	JAPAN	Tokyo	APAC	3.20%	3.25%	3.80%
37	KUWAIT	Kuwait City	EMEA	9.00%	8.00%	7.50%
38	LATVIA	Riga	EMEA	6.50%	6.50%	7.80%
39	LITHUANIA	Vilnius	EMEA	7.00%	7.00%	8.50%

	COUNTRY	CITY	LOCATION	OFFICE	SHOPS	INDUSTRIAL
40	LUXEMBOURG	Luxembourg	EMEA	4.20%	3.25%	8.00%
41	MACEDONIA	Skopje	EMEA	9.25%	9.50%	12.75%
42	MALAYSIA	Kuala Lumpur	APAC	6.00%	6.00%	7.50%
43	MEXICO	Mexico City	Americas	10.40%	11.50%	11.60%
44	NETHERLANDS	Amsterdam	EMEA	4.00%	3.00%	5.25%
45	NEW ZEALAND	Auckland	APAC	5.75%	5.00%	5.25%
46	NORWAY	Oslo	EMEA	3.60%	3.75%	5.25%
47	OMAN	Muscat	EMEA	8.00%	7.00%	8.00%
48	PHILIPPINES	Manila	APAC	7.50%	3.50%	8.60%
49	POLAND	Warsaw	EMEA	5.00%	5.25%	6.75%
50	PORTUGAL	Lisbon	EMEA	4.50%	4.50%	6.25%
51	REPUBLIC OF KOREA	Seoul	APAC	4.50%	5.75%	7.00%
52	ROMANIA	Bucharest	EMEA	7.25%	7.50%	8.75%
53	RUSSIA	Moscow	EMEA	9.50%	9.50*%	11.50%
54	SAUDI ARABIA	Riyadh	EMEA	7.00%	6.80%	7.25%
55	SERBIA	Belgrade	EMEA	8.75%	7.75%	11.00%
56	SINGAPORE	Singapore	APAC	3.30%	4.50%	6.00%
57	SLOVAKIA	Bratislava	EMEA	6.25%	7.50%	6.50%
58	SLOVENIA	Ljubjana	EMEA	7.75%	7.00%	10.00%
59	SPAIN	Madrid	EMEA	3.50%	3.30%	5.75%
60	SPAIN	Barcelona	EMEA	3.50%	3.30%	5.50%
61	SWEDEN	Stockholm	EMEA	3.50%	3.25%	5.15%
62	SWITZERLAND	Geneva	EMEA	3.25%	4.25%	6.00%
63	SWITZERLAND	Zurich	EMEA	3.50%	3.20%	5.50%
64	TAIWAN	Taipei	APAC	2.61%	2.26%	2.62%
65	THAILAND	Bangkok	APAC	7.00%	8.00%	8.00%
66	TURKEY	Istanbul	EMEA	7.25%	7.00%	9.00%
67	UAE	Dubai	EMEA	8.00%	8.50%	8.00%
68	UKRAINE	Kyiv	EMEA	12.00%	9.50%	12.75%
69	UNITED KINGDOM	London	EMEA	3.50%	2.50%	4.00%
70	UNITED KINGDOM	Manchester	EMEA	4.75%	4.25%	4.75%
71	UNITED KINGDOM	Birmingham	EMEA	4.75%	4.50%	4.75%
72	UNITED KINGDOM	Edinburgh	EMEA	4.75%	4.75%	6.00%
73	UNITED KINGDOM	Glasgow	EMEA	5.25%	4.00%	6.25%
74	USA	New York	Americas	4.00%	4.00%	4.25%
75	USA	Chicago	Americas	5.20%	5.35%	5.00%
76	USA	Los Angeles	Americas	4.50%	4.50%	4.25%
77	USA	San Francisco	Americas	4.30%	3.30%	4.00%
78	USA	Washington, DC	Americas	4.50%	4.50%	5.00%

Source: Cushman & Wakefield
**denotes Shopping Centre. Note: Yields are quoted based on local measurement standards.*

ABOUT THE REPORT

This report has been written by David Hutchings, Emily Tonkin and Carolina Dubanik in our Capital Markets Investment Strategy team with support from Research, Capital Markets and other specialist teams. The report has been prepared using data collected through our own research, as well as information available to us from public and other external sources. The transaction information used relates to non-confidential reported market deals, excluding indirect investment and future commitments. All investment volumes are quoted pertaining to deals of USD 5 million and above, unless otherwise stated. Alongside Cushman & Wakefield information, data has been used from Real Capital Analytics (RCA). Where the data was sourced from RCA, it is as at 14 August 2018.

Volumes for the multi-family sector include transactions where existing multi-family buildings are collectively sold by groups of individual leaseholders for the purpose of redevelopment, refurbishment or investment. Volumes for the apartment sector do not include these transactions.

In respect of all external information, the sources are believed to be reliable and have been used in good faith. However, Cushman & Wakefield cannot accept responsibility for their accuracy and completeness, nor for any undisclosed matters that would affect the conclusions drawn. Certain assumptions and definitions used in this research work are given within the body of the text. Information on any other matters can be obtained from Cushman & Wakefield.

SOURCES

Investment data: Cushman & Wakefield, Real Capital Analytics.

OTHER SOURCES

Oxford Economics Forecasts, C40 Cities, Deloitte, European Commission, Bloomberg Philanthropies, Societe du Grand Paris, EIU, HM Land Registry, UK Office of Rail and Road.

REPORT AUTHORS

DAVID HUTCHINGS
EMEA Investment Strategy
david.hutchings@cushwake.com
+44 20 7152 5029

EMILY TONKIN
EMEA Investment Strategy
emily.tonkin@cushwake.com
+44 20 7152 5877

CAROLINA DUBANIK
EMEA Investment Strategy
carolina.dubanik@cushwake.com
+44 20 7152 5773

With contributions from:

KAT HANNA
Associate Director, Urban Change
kat.hanna@cushwake.com
+44 20 3296 4947

And DTZ Investors:

KATE FEARNLEY
Business Development
Kate.fearnley@dtzinvestors.com
+44 20 3349 0224

MIKE BARNES
Investment Strategist
Mike.barnes@dtzinvestors.com
+44 20 3349 0256

CAPITAL MARKETS SERVICES

Capital Markets provides comprehensive advice and execution services to clients engaged in buying, selling, investing in, financing or developing real estate and real estate-related assets across the globe. Our solutions are tailored to meet the objectives of private and institutional owners and investors, as well as corporate owners and occupiers.

Whether you are seeking to dispose of an asset in Hong Kong, finance the purchase of a hotel in New York, or structure a complex cross–border portfolio deal in Europe, Cushman & Wakefield's expertise in capital markets is the gold standard.

Located in major markets around the world, our professionals execute customised acquisition and disposal strategies across all major property types. Additionally, we provide our clients with unique access to opportunities and capital sources worldwide. As a global leader in investment transactions, we have an unsurpassed network of buyers and sellers, access to international capital and superior market data.

Our services include, but are not limited to:

- Investment Sales & Acquisitions
- Investment Advisory Services
- Investment Strategy and Market Analysis
- Investment Management
- Equity, Debt & Structured Finance
- Corporate Finance & Investment Banking

For more information, please refer to the Global Capital Markets map.

INVESTMENT STRATEGY

The Investment Strategy team assists clients in shaping their investment approach and strategy in response to the changing world in which real estate markets operate. In addition to market reporting and investment insights, the team produces bespoke client studies and provides strategic investment advice to aid strategy development and portfolio analysis, advising on how best to meet objectives and achieve the optimum balance of risk and return. Integral to this is the provision of actionable ideas, including ongoing advice to aid decision making with respect to sales or acquisition strategies.

For more information, please contact:

EMEA

DAVID HUTCHINGS
EMEA Investment Strategy
david.hutchings@cushwake.com
+44 20 7152 5029

EMILY TONKIN
EMEA Investment Strategy
emily.tonkin@cushwake.com
+44 20 7152 5877

CAROLINA DUBANIK
EMEA Investment Strategy
carolina.dubanik@cushwake.com
+44 20 7152 5773

GLOBAL CAPITAL MARKETS TEAM

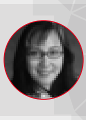
CARLO BAREL DI SANT'ALBANO
Global Chairman of Capital Markets & Investor Services

"Our experienced and geographically diverse platform gives our clients unrivalled access to global capital at a time of intense interest from overseas investors. This global network is built on established and trusted local relationships. The global teams focus on their particular markets, ensuring that the right capital is sourced for the right product in the right geography."

AMERICAS

DOUG HARMON
Chairman,
Capital Markets Americas
Doug.Harmon@cushwake.com

ADAM SPIES
Chairman,
Capital Markets Americas
Adam.Spies@cushwake.com



JANICE STANTON
Executive Managing Director,
Capital Markets Americas
Janice.Stanton@cushwake.com

NOBLE CARPENTER
President,
Capital Markets & Investor Services, Americas
Noble.Carpenter@cushwake.com

STEVEN KOHN
President,
Equity, Debt & Structured Finance
Steven.Kohn@cushwake.com

EMEA

JAN-WILLEM BASTIJN
CEO,
Capital Markets
JanWillem.Bastijn@cushwake.com

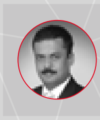
STEPHEN SCREENE
International Partner,
Global Capital, EMEA
Stephen.Screene@cushwake.com

PAUL BOURSICAN
International Partner,
EMEA Business Space
Paul.Boursican@cushwake.com

MICHAEL RODDA
International Partner,
EMEA Retail
Michael.Rodda@cushwake.com

JAMES SPENCER-JONES
International Partner,
Debt & Structured Finance
James.Spencer-Jones@cushwake.com

APAC



PRIYARANJAN KUMAR
Regional Executive Director,
Singapore
Priyaranjan.Kumar@ap.cushwake.com

JASON LQ ZHANG
Head of Outbound Investment,
Greater China
Jason.LQ.Zhang@cushwake.com

JOSH CULLEN
International Director,
Head of Capital Markets Australia
Josh.Cullen@cushwake.com

RICK BUTLER
International Director,
Capital Markets, Australia & New Zealand
Rick.Butler@cushwake.com

FRANCIS LI
International Director, Head of Capital Markets,
Greater China, Capital Markets
Francis.Li@cushwake.com

ABOUT
DTZ INVESTORS

DTZ Investors is a real estate focused investment and asset management house. Our team of over 100 property specialists manage more than $12bn of direct and indirect property globally. As part of the Cushman & Wakefield group, with over 300 offices worldwide, we enjoy excellent local market knowledge and immediate access to stock across the globe.

In the UK, our house performance has beaten the IPD/MSCI benchmark by 1.9% pa over the last 20 years. We attribute this success to our occupier-focused investment strategy. We understand and work in partnership with the occupier to ensure that our properties suit their requirements today, and adapt as their businesses evolve.

For more information, please contact:

KATE FEARNLEY
Business Development
Kate.Fearnley@dtzinvestors.com
+44 (0) 20 3349 0224

MIKE BARNES
Investment Strategist
Mike.Barnes@dtzinvestors.com
+44 (0) 20 3349 0256

DTZ INVESTORS

ABOUT
CUSHMAN & WAKEFIELD

Cushman & Wakefield is a leading global real estate services firm that helps clients transform the way people work, shop, and live. The firm's 45,000 employees in more than 70 countries provide deep local and global insights that create significant value for occupiers and investors around the world. Cushman & Wakefield is among the largest commercial real estate services firms with revenue of $6 billion across core services of agency leasing, asset services, capital markets, facility services (C&W Services), global occupier services, investment & asset management (DTZ Investors), project & development services, tenant representation, and valuation & advisory.

To learn more, visit www.cushmanwakefield.com or follow @CushWake on Twitter.

Follow us:

www.linkedin.com/company/cushman-&-wakefield

www.facebook.com/cushmanwakefield

CUSHMAN & WAKEFIELD

CUSHMAN & WAKEFIELD