WINNING IN GROWTH CITIES

A CUSHMAN & WAKEFIELD
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CUSHMAN & WAKEFIELD

WELCOME TO WINNING IN GROWTH CITIES

EXECUTIVE SUMMARY

TODAY'S MARKET

The global investment market saw volumes rise 4.0% in the year to June compared to the previous 12 months, a reflection of improving sentiment in 2017 and perhaps marking something of a surprise given the headwinds faced by the market in 2016.

Investment demand fuelled by yield has clearly remained strong and while interest rates and foreign exchange trends have grown more uncertain, equity and debt remain readily available for the right assets. Views on what those assets might be have widened somewhat as investors have sought out opportunities, but most have remained risk averse. Hence, signs of a firmer occupational market in some areas, fed by the strength of global labour demand, will be well received as they translate into rental growth. What is more, with businesses now starting to look to deploy CapEx into their expansion plans, confidence in real estate as an investment should remain high.

The threat of a rise in populism remains a threat, but globalization in the real estate sector continues apace. Eighteen markets which were not targeted by cross border investors in 2015/2016 are now making gains, an indication of investor willingness to move into new markets where the right

product is available. That said, the total volume of foreign investment underperformed domestic buying in the past year due to a pull back by North American players, resulting in a modest fall in the international market share to 22.0%. Within this, there was also an interesting shift away from global buying towards investing closer to home. Interregional buying fell 19.0% while intraregional rose 22.0%; faster growth, in fact, than seen among domestic buyers (5.3%) and driven both by European and Asian players.

Strategies are clearly evolving as buyers seek out value and, whilst those investors already looking for an alternative to the red-hot gateway city markets have begun to side step into alternative sectors and locations, this flow is likely to deepen as living and working patterns alter, empowered by the adoption of new technology and driven by an increasingly mobile workforce.

There are three routes explored in this report available to those seeking to diversify. Firstly, accessing emerging submarkets in tier 1 cities to achieve the desired returns whilst remaining within a relatively safe market. The benefits of such a play include retaining the liquidity and prestige of owning property in tier 1 cities whilst accessing the growth narrative of emerging districts. Secondly, investors may look at tier 1 cities outside the core countries, where they will find a host of compelling stories that are increasingly difficult to ignore given the future dynamic of global city networks, improving consumer markets, promising demographics and attractive premiums.

Finally, there is much to be said for accessing high quality tier 2 locations that present attractive pricing differentials and positive fundamentals, although it can be difficult to define exactly what constitutes the best in class tier 2 cities. While Paris, London, New York and Tokyo clearly fall within the tier 1 boundary, the next tier is harder to pin down – but is distinguished by cities within core markets which have the potential to become more regionally or sectorally dominant, but are somewhat overlooked by international capital flows and hence provide clear short term opportunities.

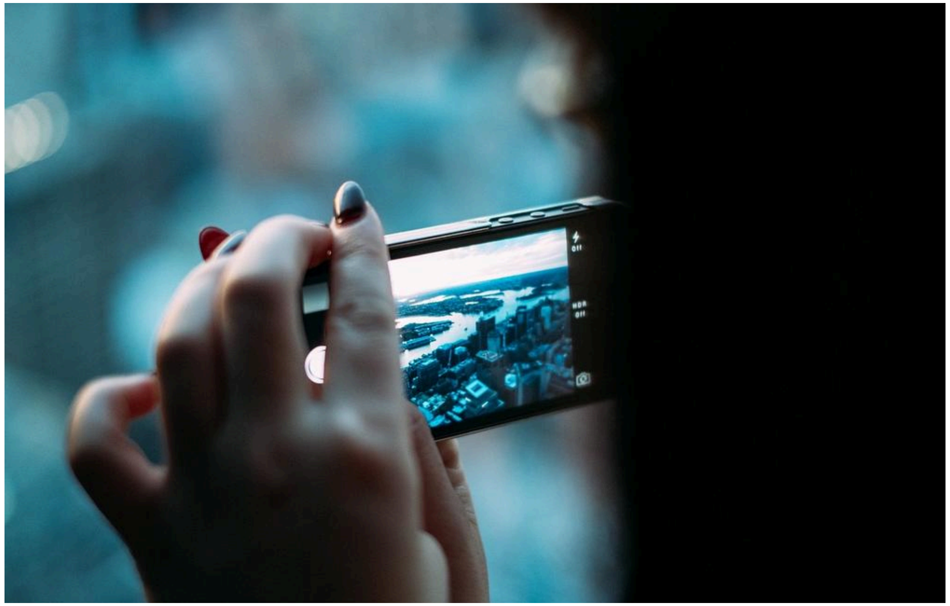
> "Investors seeking value are developing strategies that embrace alternative sectors and locations, with tier 2 cities and submarkets rising up the agenda, taking advantage of infrastructure investment, demographic changes and technological advancements.

DRIVERS FOR THE FUTURE

Further globalisation will become apparent as the revolution in technology now underway gains steam and as cities themselves incubate and promote this movement, stimulating a race to be the most digitally connected.

Indeed, with estimates running as high as 47.0% of existing Western jobs at risk from automation over the next two decades, it is those cities with embedded contingency plans able to address these issues, which will remain relevant.

In table 1, we pinpoint the advances that are enabling new technologies to develop and their consequences upon future city operations. From leaps in artificial intelligence revolutionising productivity, removing human error and altering working patterns, to big data solutions driving personalisation and its adoption, a range of emerging technologies will ultimately distinguish between winners and losers. Table 2 furthers this discussion, addressing some of the technologies under development based on these enablers and considering the time frame in which they will become a reality in influencing real estate.



While the ability of New York, Tokyo and London to adapt and reinvent themselves will continue to reinforce their global hegemony, we argue that competition is heating up and cities are at the epicentre of this change.

Technology of course has a clear role to play in this, with advances demanding a rethink of those factors that accelerate city success. Increasingly, cities need to be able to adopt smart design in buildings and infrastructure as well as have a strong focus on their target audience of talent and businesses, particularly for second tier cities.

BUT HOW IS THIS BEST ACHIEVED?

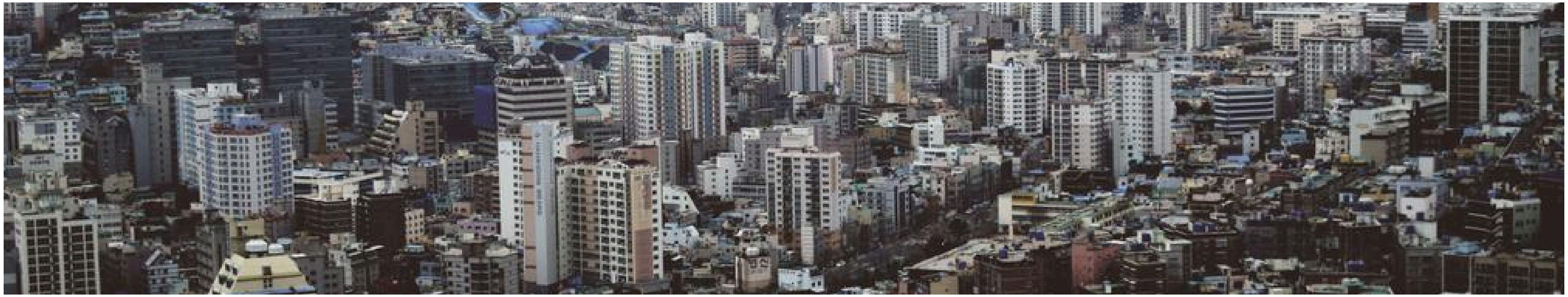
While advances in technology will offer an array of opportunities, it is important to remember that developments will also throw up hurdles, both predictable and as yet unseen. For example, cybercrimes have already plagued businesses in 2017 but events to date could be the tip of the iceberg, with the likelihood of further high-profile companies being subject to cybercrime increasing as their processes are further digitised, exposing businesses, society and the consumer.

CAPITAL FLOWS AHEAD

With global economic growth forecast to continue its positive trajectory into 2018, investment strategies will be encouraged by high corporate confidence and opportunities could emerge in all sectors, including further advances in non-traditional segments.

Cross border capital is expected to increase its market share with an emphasis both on regional and global buying as a demand for diversification and a search for income growth and stability drive more investors to cross borders. Against a forecast for total investment volume growth of 4.0-6.0% in the year to June 2018, we anticipate cross border buying to rise 7.0-9.0%, with the relative patterns of who is buying what and where influencing and being influenced by exchange rate movements.

While cross border flows regionally and globally will continue to escalate, capital flows will remain dynamic and strategies will need to evolve further as some buyers adjust their risk or return profile. North American capital, for example, has continued to flow globally but new allocations are being impacted by the outlook for interest rates and by uncertainty over how the US itself will perform under President Trump. However,



these uncertainties have also led to increased demand for core/core plus product, in some cases targeting Europe and Asia as a hedging strategy.

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Against a forecast for total investment volume growth of 4.0-6.0% in the year to June 2018, we anticipate cross border buying to rise 7.0-9.0%

Asian capital is likely to take a higher global share in the year ahead, even though an increased flow of regional opportunities will also provide more opportunities in Asia itself. Capital from China may remain somewhat constrained by the capital controls now in place even though foreign reserves have stabilised, helped by the weaker dollar. There will be more clarity on this once the People's Congress is completed later this year, but a material change in strategy would in any event take time to emerge, at least outside strategically important sectors such as residential and logistics.

Other sources of Asian capital, meanwhile, will continue to grow, driven in particular by interest from South Korea directed especially towards Europe due to the high cash on cash returns now available thanks to the low level of funding costs and the hedging premium. Demand from Hong Kong buyers for global diversification will also continue to drive interest in key assets in gateway cities and strong interest in diversification from other countries such as Singapore, Japan and Australia is also likely.

Middle Eastern buyers may continue to adjust their strategy to rebalance portfolios towards stronger long-term growth opportunities in global markets, partly due to the lesser profitability of oil and gas at current pricing but also due to increased tensions within the home region. Interest in the US in particular is likely to remain strong, but demand in Europe and Asia will also increase in 2018.

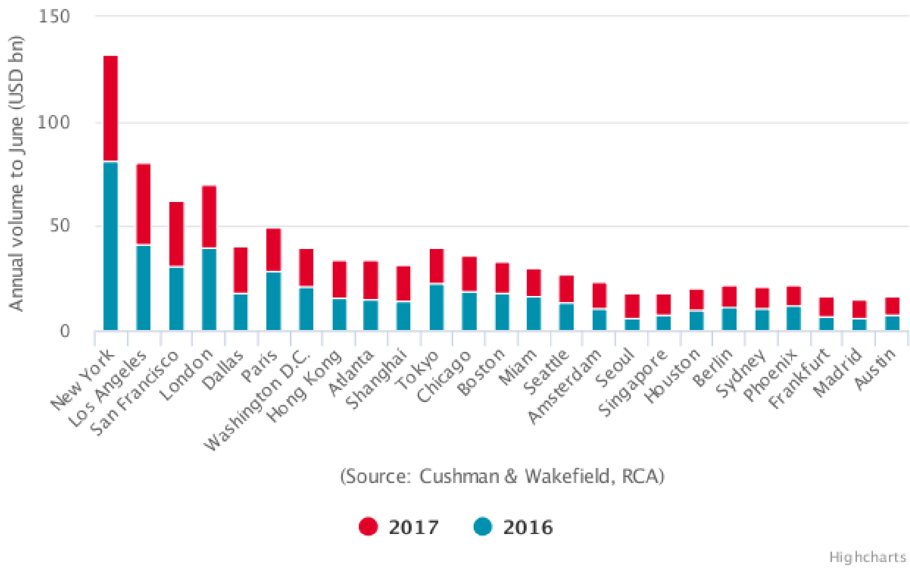
European buyers will remain most heavily focussed on the European region when crossing borders in the short term, but increased interest in other global regions is expected, particularly towards Asia as growth comes to dominate strategic thinking a little more.

> **While cross border flows regionally and globally will continue to escalate, capital flows will remain dynamic and strategies will need to evolve further as some buyers adjust their risk or return profile.**

WINNING CITIES OF THE PAST YEAR

THE HEADLINES FROM 2016/17

Fig 1: Top Cities for Investment (ex Development)



Over the year to Q2, global investment volumes increased by 4.0% to US$1.5 trillion (including development land). Growth was driven by high interest from regional buyers, with transactions involving continental investors growing at their strongest rate since 2014. The Asian market continued to experience the greatest growth overall, with market share creeping up to 47.4%. Excluding development sites, global volumes fell for the second consecutive year to US$909.1 billion, a fall of -6.5%.

While APAC was the only region to record growth over the year at 24.6%, gains were significantly boosted by development sites, with increases in the region just 6.7% year on year, excluding this sector. Elsewhere, transactional volumes fell, with the greatest declines documented in the emerging areas of MEA (-56.3%) and Latin America (-13.1%). Volumes in Europe disappointed, falling -11.0% in annual terms to US$295.0 billion, the largest decline since 2009, as changing political climates in addition to low availability of stock affected investment plans. North American volumes fared little better having fallen to their lowest point in three years with a decline of -7.5% year on year.

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Thanks to increased interest in buying land for development, Asian markets led for growth over the year, with a 24.6% increase comparing with declines of -11.0% and -7.5% respectively in Europe and North America.

INVESTMENT TARGETS

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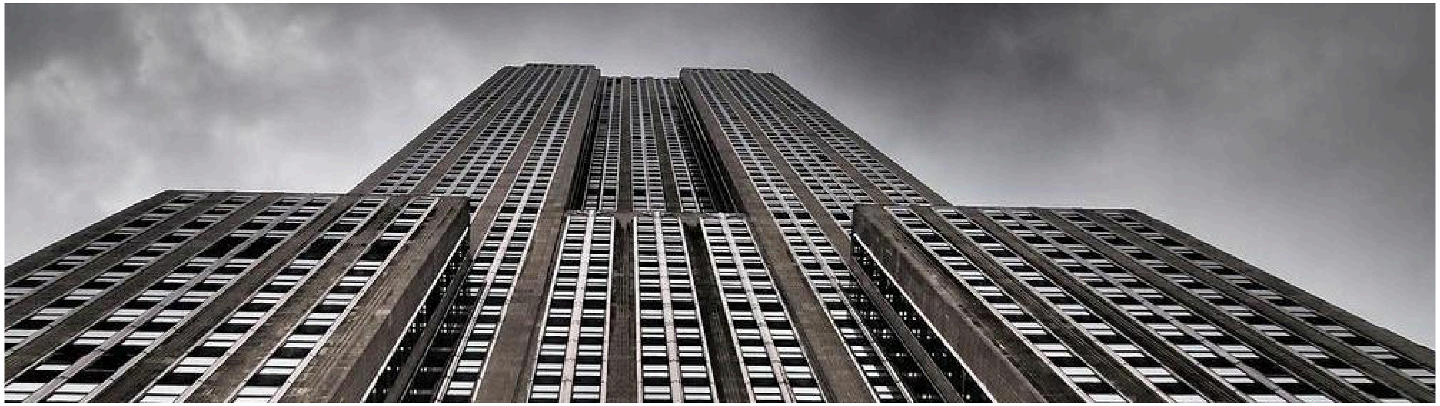
For the sixth consecutive year, New York was the most sought after market, whilst London saw volumes fall 25.0% and was displaced from the top three by San Francisco.



Despite a decline in market share of 120 bps, the top 25 gateway cities remained dominant with almost 50% of the market. Half of the top 10 city targets underwent volume declines over the year however, with these now representing just 29.5% of total volumes compared to 32.9% previously, and tier 2 cities such as Malmö, Nice and Osaka gaining in importance via international interest.

For the sixth consecutive year, New York was the most sought after market, whilst London saw volumes fall 25% and was displaced from the top three by San Francisco. In all, six US cities ranked within the top 10, with Atlanta placing within this range for the first time as Tokyo was driven down, now placing 11th globally. Europe and Asia had two cities each within the core 10, as volumes in European cities clung on despite falls in both London and Paris while overall interest in Asian cities matured.

Growth was recorded in the majority of North American cities with San Antonio, Charlotte and Las Vegas in particular experiencing strong interest over the year. Interestingly, the largest falls in the region came from cities placed within the global top 50: New York, San Diego and Denver undergoing falls of -37.2%, -29.7% and -22.6% respectively. Latin America was especially vulnerable to a decline in investor sentiment with just ten of the seventeen cities targeted in 2016 experiencing any investment, but four of these did record an increase in volumes.

Among European cities, Central and Eastern European capitals fared the best with volumes in Prague, Budapest and Sofia in particular outpacing growth in Western European cities. Likewise, while from a low base, confidence grew in Athens as real estate volumes reached a 10-year peak. Across the board, UK cities reported the greatest declines meanwhile, with notable falls in Reading, Aberdeen and Bristol - although these declines were less severe in sterling terms.

More than half of cities in the APAC region reported negative growth (ex. development) with capital cities across the region including Sydney, Kuala Lumpur, Beijing and Taipei undergoing declines. Despite this, Asian cities increased their global market share over the year and increased their presence within the top 50. The strongest growth in the region came from those cities experiencing rapid economic development, with Myanmar especially documenting impressive CRE expansion.

TRENDS BY SECTOR

As with 2016 development sites, favoured by Asian investors, saw the strongest growth, exceeding last year's pace by 780 bps. Likewise, interest in hotels increased over the year, while more traditional sectors suffered declines due to low availability of stock and increasing capital values, with retail taking the greatest hit as volumes sank -12.8%, followed by office (-6.8%) and industrial (-6.1%). Nonetheless, all sectors were above their 10-year average having regained the ground lost during the GFC.

> “Sector concentration was highest in the office sector with 60.7% of all office transactions occurring within the top 25 cities. More generally, however, concentration had pulled back with multi-family, land sales, apartments and industrial sectors all experiencing a move from investors beyond the core 25.

Multi-family and office buildings were the sectors of choice for North American investors; each representing about 30% of total investment. North American

interest in the retail segment continued to decline as structural changes brought on by e-commerce diverted capital away from the sector.

Characteristically, a European preference to invest in office products was seen but European interest did decline in most sectors, with just multi-family and hotels experiencing annual gains as interest filtered outside of the core three sectors due to expected diversification benefits as well as increasingly tighter pricing for traditional sectors.

Asian capital continued to target land for development, achieving a 74.6% share of Asian interest, as a tight regional property market drives up values for the asset class. The office segment declined in importance for Asian buyers with market share falling by 320 bps.

Industrial stock was the sector to experience a decline in Asian interest, despite it being seen generally as a strategic growth asset. The strongest gains were felt in the multi-family and hotel sectors at 74.4% and 42.6% respectively.

Once again, sector concentration was highest in the office sector with 60.7% of all office transactions occurring within the top 25 cities.

Multi-family followed with 49.1% of volumes occurring in top gateway cities, although the segment experienced a decrease in sector concentration of 500 bps. Indeed more generally, sector concentration had pulled back with land sales, apartments and industrial volumes also experiencing a movement beyond the core 25.

What sector do you see winning in 2018?

- Office
- Retail
- Industrial
- Development

SEE RESULTS

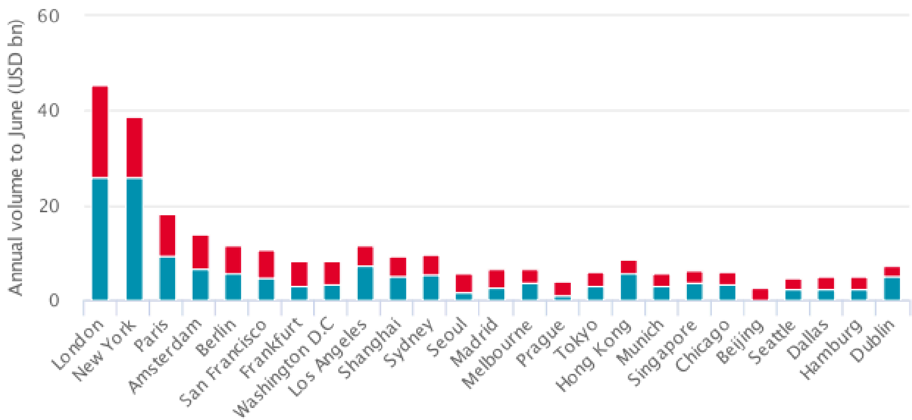
INTERNATIONAL CAPITAL FLOWS

London remained the most attractive city for international buyers despite declining interest from cross border players across all segments apart from retail, which increased by 20.1% over the year.

Asian buyers in the city retained a dominant market share but declined in total transaction volumes by -25.8% to US$7.1 billion.

Also retaining strong interest from cross border investors, New York City and Paris were popular rivals to London's hegemony, whilst a number of German cities rose up the rankings with Berlin moving up two places to rank fifth globally. Frankfurt rapidly climbed nine places over the year to rank within the top ten recipients of cross border capital. Investors from Asia and the Middle East in particular showed strengthening interest in the German city with volumes up 461.0% and 132.0% respectively.

Fig 3: Top Cities for Global Investors (ex Development Sites)



(Source: Cushman & Wakefield, RCA)

2017 2016

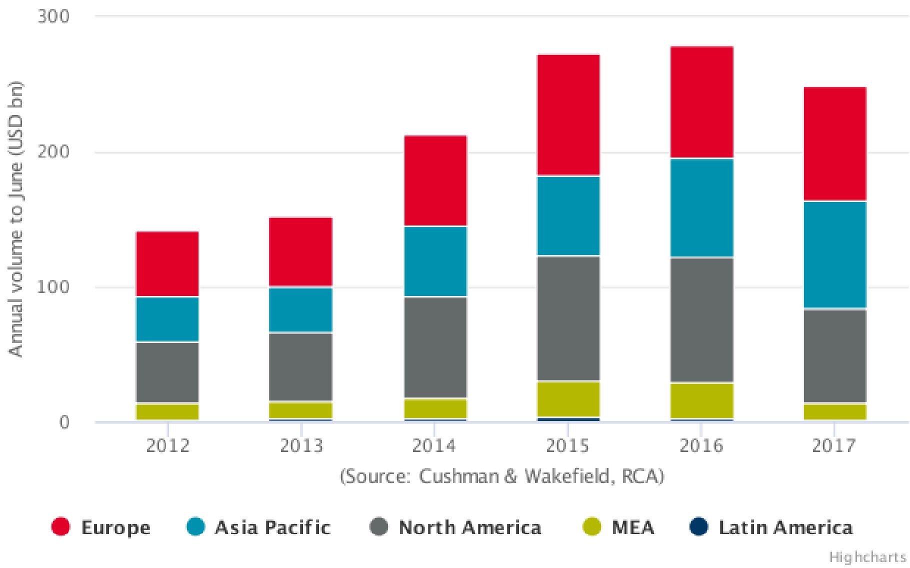
Highcharts

Among APAC cities, only Seoul, Tokyo and Beijing moved up as targets of cross border investors, with continental buyers the primary drivers of interest in the region. Shanghai was the only Asian city within the global top 10 for cross border investment, despite falling two places over the year. The most impressive gains from international investors were in Beijing, which experienced strong interest from both continental and global players in the office sector.

> **"Whilst London remained the most attractive city for international buyers, a number of German cities rose up the rankings this year and strong cross border interest in New York City and Paris also made these popular rivals to London.**

As well as being the largest recipient of cross border capital, Europe was also the largest source, besting North America for the first time since 2013. Investors from Germany, France and Switzerland have grown their investment abroad most significantly while within the top 20, only the UK and Luxembourg scaled back on the amount invested abroad.

Fig 4: Sources of International Capital



Compared to the previous year, North American buyers withdrew somewhat from investing overseas with cross border investment falling by -25.1% on the year. Indeed, domestic investment by comparison had improved its market share as US buyers favoured investing in national cities as domestic growth prospects improved.

Buyers from both the MEA region and Latin America reduced their international capital flows. Whilst this was in-line with falls in domestic investment in the Middle East and Africa, global investment by Latin American buyers had slowed by -55.3% year on year in favour of domestic volumes, which improved, highlighting the willingness of Latin American capital to remain within the domestic market despite political uncertainties.

The top five global investors were Hong Kong at $67.7 billion, followed by United States ($48.0 billion), China ($38.3 billion), Canada ($23.5 billion) and Singapore ($22.1 billion). Other key investors included Germany who lifted investment by 12.5% and the United Kingdom – as well as France and Switzerland.

The divide of cross border flows into regional and global targets varied by area; global investment was the preferred target for most

THE TOP FIVE GLOBAL INVESTORS

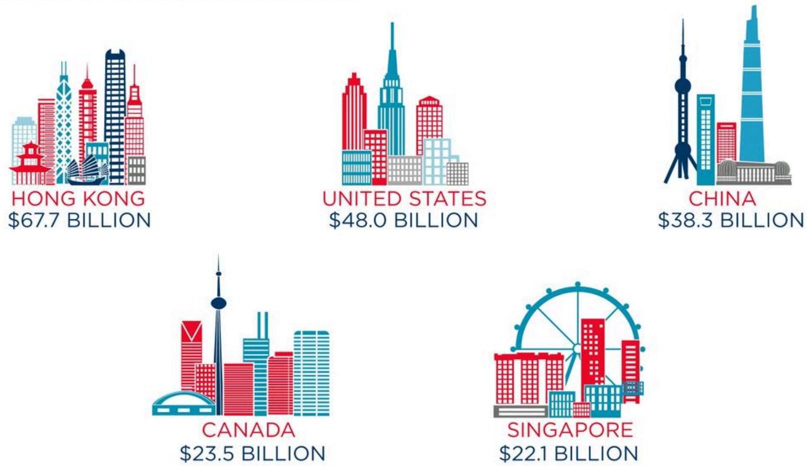
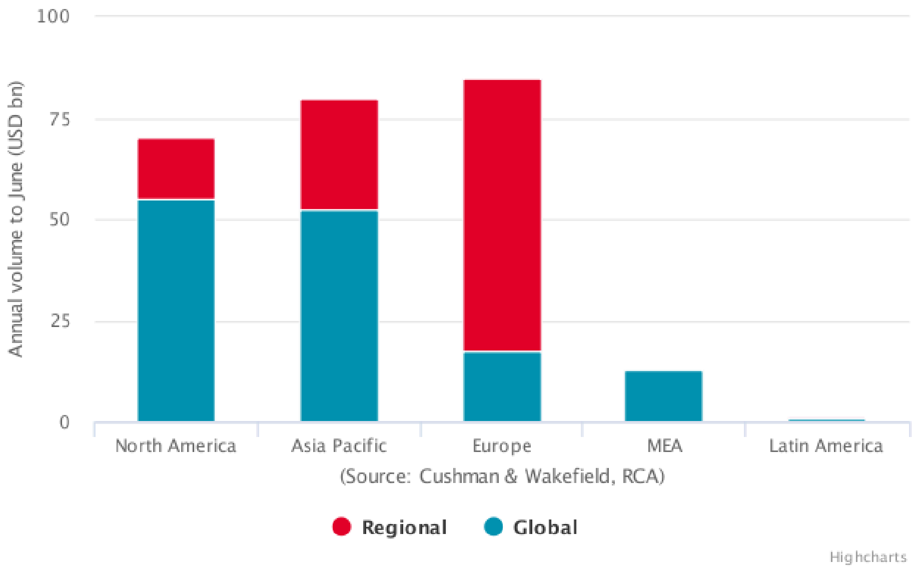


Fig 5: Regional versus Global Investment



cross border flows with the exception of European buyers who aligned their investment strategies to invest regionally with an 80:20 split focusing on the "European boom". Despite high levels of Canadian investment in the US and vice versa, North American cross border capital primarily targeted global locations with Frankfurt, Berlin and Rhine-Ruhr within the top 10 most popular cities for North American capital.

Even with the most balanced divide, cross border APAC buyers generally chose to spend their capital globally with gateway cities of London and New York remaining their key focus. Buyers in APAC also spread their capital around the most, having entered the largest number of metros over the year as they seek out greater diversification.

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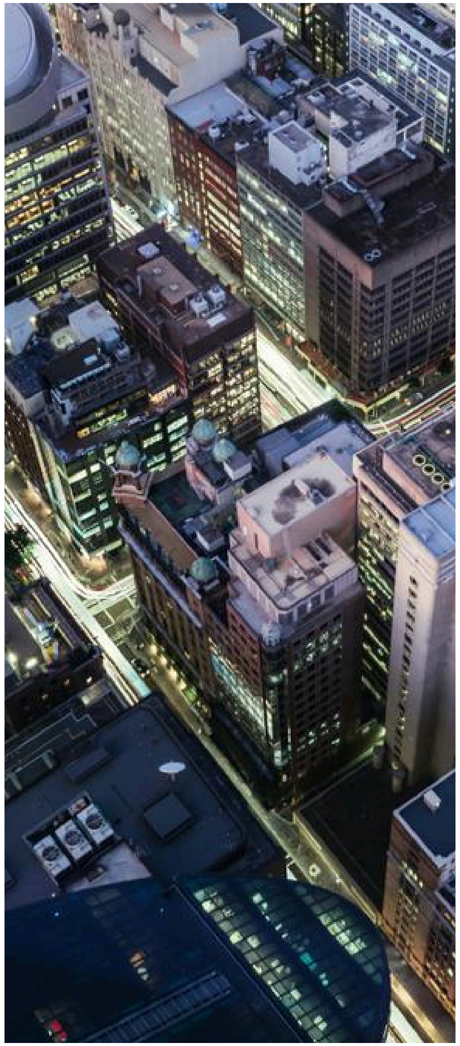
Globally, the top five investors were Hong Kong, the United States, China, Canada and Singapore. However, in addition to being the largest recipient, for the first time in four years, European capital was the greatest source of total cross border investment, surpassing even North America.



THE BIGGER PICTURE IN 2017/2018

THE BIGGER PICTURE

ECONOMIC OUTLOOK

The macro environment is widely seen as more favourable for real estate than just six months ago, with not just stronger sentiment but also an actual improvement in recorded activity and world GDP forecast to expand by 2.9% this year versus 2.6% forecast at the beginning of the year (Oxford Economics). Anticipated growth for 2018 meanwhile stands at 3.0%.

The drivers of this improvement are perhaps not as would have been expected, however, with China and the Eurozone playing a bigger part than the US and domestic demand as important as exports. Indeed, what for many advanced economies started as a trade-driven improvements thanks to stronger demand in China in particular, has now broadened to include higher domestic demand, with both manufacturing and services output rising.

While we have yet to see significant wage growth or productivity gains meanwhile, this could change as labour markets tighten. This could also signal a period of stronger corporate investment, opening the door to technology-driven changes and to investment in property: often key to making new tech applications work and for attracting and retaining shoppers, residents and workers.

The strength of the global job market together with such higher investment could extend this economic cycle for longer, but central banks will clearly dictate the degree to which this happens, with a risk that they may tighten too much and too soon. While the position of monetary policy is markedly divergent economy by economy, it is notable that the direction of travel for the major banks is now more in tune, with the Federal Reserve in the USA through the exit and the European Central Bank, Bank of China and Bank of England to varying degrees heading for the door.

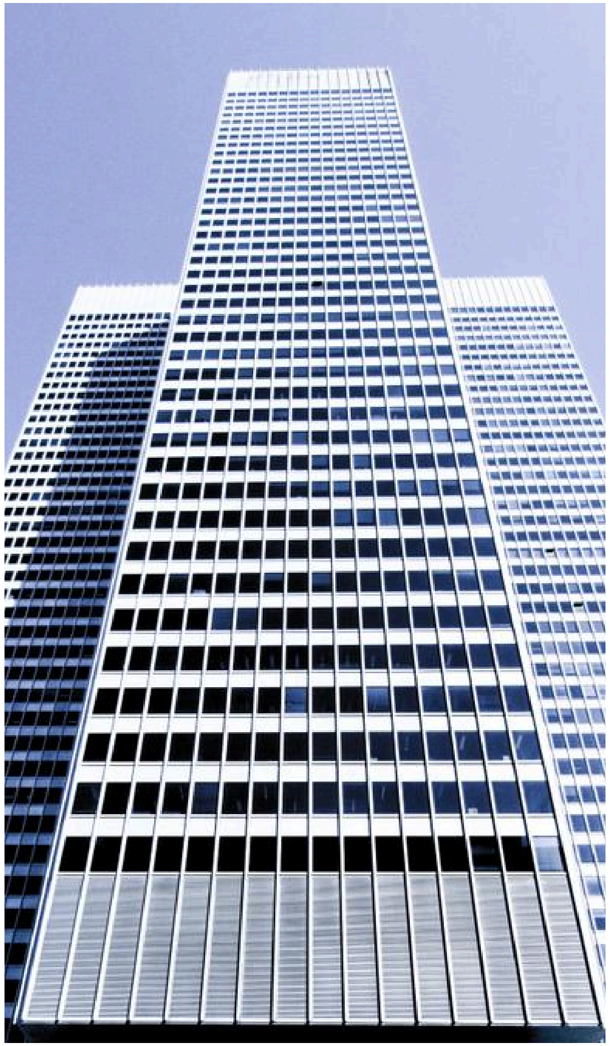
Inflation, however, appears in many markets to be peaking after the recovery in oil and some commodities lifted it over the past few months and looking forward there are numerous forces suggesting that price pressures will be muted. However, with asset prices buoyed by quantitative easing and potential wage inflation set to emerge, an inflation risk will remain. As a result, central banks may be tempted to act early to stay in control. Interest rates may therefore remain low but not as low and not for as long as many expect.

> "The strength of the global jobs market together with higher investment could extend this economic cycle for longer, but central banks will clearly dictate the degree to which this happens, with a risk that they may tighten too much and too soon.

RISK AND REAL ESTATE

As current growth patterns are influencing interest and exchange rates differentially, they are also impacting on capital flows for real estate, particularly when placed alongside capital restrictions and domestic and international levels of risk. At a general level, these risks have reduced over recent months, with US policy more stable than some expected, for example, and elections delivering fewer upsets than in 2016. That said, there are plenty of areas of concern still in play in the global environment and potential surprises to come, with elections in the US, Russia, Italy and more over the next 12-18 months.

As a result, while the impact of individual factors is often exaggerated in the short-term, it is clear that uncertainty will persist and investors need to cater for this in their portfolios.



Running through just some of the macro issues currently impacting:

SHARING ECONOMY

GROWTH AND **INFLATION** TRENDS ARE **UNDERAPPRECIATED**

The **sharing economy** continues to go from strength to strength and its exclusion from national economic statistics may mean that growth and indeed inflation trends are under appreciated at present. With the value of properties listed on Airbnb said to make it the largest lodgings business in the world, how long before sharing in the office and residential markets start to make similar disruptive inroads and the trend spreads to other sectors? For landlords this can be positive in making better use of all space, increasing occupancy beyond 100% and creating a platform which allows other services and products to be cross-sold. Equally, however, for property owners that fail to react, innovate and create the right environment of flexibility and trust, significant potential losses could lie ahead.

CLIMATE CHANGE

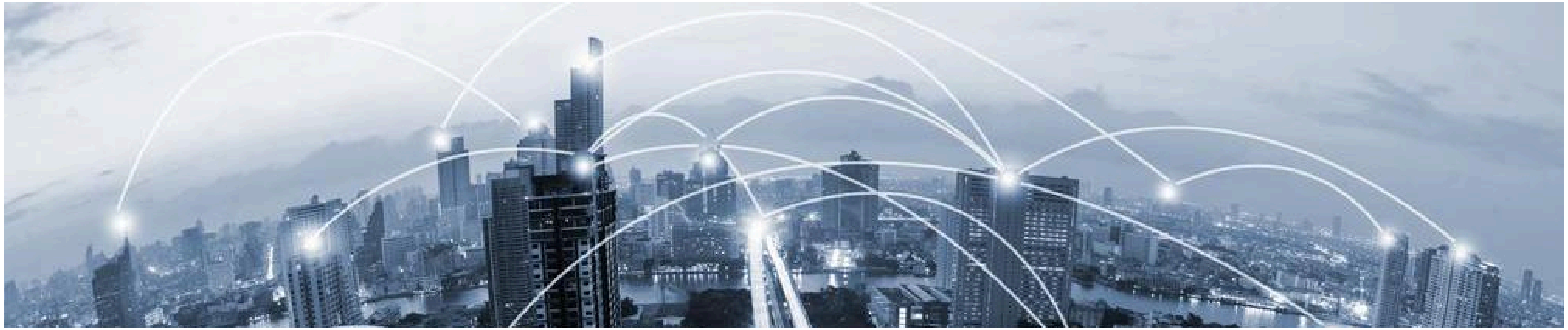
THE DEGREE **HUMAN ACTIVITY** IS CHANGING THE **ENVIRONMENT**

Climate change exemplifies the risk factors investors must consider: being global in nature and therefore relevant to all, but also highly variable in the scale and indeed direction of its impact city by city. Recent events in the US, Caribbean, India and Sierra Leone to name just a few, all underline the power of nature and raise again the question of the degree to which human activity is changing our environment. Whatever the rights and wrongs, the appeal of certain cities and the cost of operating in more exposed markets will clearly alter as such events take place, with an obvious direct impact but also a potentially significant indirect effect on real estate as business practices, disruption and costs change.

Is your business taking measures to become more sustainable?

- Yes
- No
- A plan for the future

SEE RESULTS



GLOBAL ENERGY

GREATER **EFFICIENCY** AND **DECARBONISED** SUPPLIES

Real estate is estimated to consume 40% of **global energy** and meeting our obligations under the Paris Agreement by 2050 requires not just greater efficiency, but also switching to decarbonised supplies. With significant advances in cutting the cost of renewable energy production and storage, this is becoming more realistic. However, developed markets, including the US, will need to take a lead if targets are to be met and there could yet be a material impact on property values. Businesses expect sustainable buildings with energy and water efficiency, and cities with older stock need to support the cost of retrofitting to compete. Utility costs, for example, may increase to pay for the infrastructure and cost of sustainable delivery, balanced somewhat by lower operating cost from green buildings.

> **Risks have reduced over recent months, with US policy more stable than some expected, for example, and elections delivering fewer upsets than in 2016. That said, there are plenty of areas of concern still in play in the global environment and potential surprises to come.**

OIL PRICE

HIT BY **INCREASED SUPPLY** AND **LOWER DEMAND**

Cheaper renewables are further undermining an **oil price** already hit by increased supply and slower demand. This is shifting power further between energy suppliers and consumers and between fossil and renewable suppliers, leading to political change as previously powerful producers look to restore their influence by other means, including hard power.

CYBER WARFARE AND CRIME

REPUTATIONAL **RISK** FOR CITIES AND COUNTRIES

Cyber warfare and crime have featured increasingly in attempted corporate and public sector extortion while clearly political ends are also being pursued. With no control or containment framework in place as there is for other risks – such as biological warfare - the problem is growing and much centres on not knowing which groups are to blame – usually by design. Aside from the business risk to individual companies, there is a reputational risk for cities and countries to consider and where business operators are being hit. There is also potential for smaller players to wield greater influence than their size would suggest.

SUPERPOWER COMPETITION

REGIONAL POWERS SUCH AS IRAN, SAUDI ARABIA, TURKEY, JAPAN, CHINA AND RUSSIA **EMERGING** AND **COMPETING** AGAINST THE UNITED STATES OF AMERICA

The US no longer has it all its own way, but it is still too early to talk about a multipolar world; no one yet can rival the US in military power and global reach. What is true, however, is that a whole series of regional powers are emerging and competing, from Iran, Saudi Arabia, Turkey, Japan and of course China and Russia. This will continue to lead to global tensions and pockets of regional conflict or strife, from Ukraine to the South China seas, Korean Peninsular and the Middle East.

POPULIST TAKEOVER

NEED FOR **POLITICAL** AND **ECONOMIC** REFORM HIGH ON AGENDA

Recent elections in Europe appear to have eased fears of a **populist takeover** that could reverse globalisation and lead to reduced productivity and more isolationism and inflation. However, such movements were based on grievances over immigration and inequality and in how the spoils of recent growth are being shared. As evidenced by the German election, neither of these factors has gone away and while an improved economy and labour market will help assuage some fears, a need for political and economic reform remains high on the agenda for many.

HUMAN COST OF TERRORISM

VIOLENT ACTS CLEARLY ADDING TO OVERALL INSECURITY

The tragic **human cost of terrorism** continues to mount globally, but the economic costs may be proving lighter than often feared, with security measures and restrictions put in place

often being adsorbed rather than diverting trade and tourism significantly. There is, nonetheless, a differential impact city by city and violent acts have clearly added to overall insecurity. This has risen steadily over recent years according to the EIU's Global Liveability Report and while seen in all regions, has of late had a stronger focus on Europe. While cities such as London and Paris have seen multiple attacks, it is far from limited to just gateway cities. What is more, social unrest can add to the insecurity terrorism brings, whether in the Black Lives Matter movement in a number of cities in the US or unrest and economic instability in Kiev caused by the ongoing civil war in the east.

> "At the same time, yesterday's worries may have faded but they haven't gone away, as Trump squares up against Republicans as much as Democrats to try to enact his policies but steer clear of a threat of impeachment that could grow after next year's midterm elections.

BREXIT

FRANKFURT, **DUBLIN** AND **AMSTERDAM** CLEAREST WINNERS TO DATE

Brexit meanwhile is about to get real, with negotiations on its form gathering pace. So far, at least, the impact has been less than feared, with no dominos among other EU members and no drastic weakening of London or the UK so long as the actual details of what an exit may look like are unknown. Indeed, London has made some gains with technology firms in particular and job growth and now office take-up are holding up well. The UK has seen some relocations announced nonetheless – largely tempering potential expansion rather than cutting into capacity – and while the winners from this are as likely to be global as regional, Frankfurt followed by Dublin and Amsterdam are the clearest winners to date.

TECHNOLOGY IN THE CITY

Technological change is happening sooner than many expect, with disruptors altering all areas of business and challenging the traditional city hierarchy with power spreading between an ever-broader group of contenders.

While the digital revolution has been in progress since the middle of the last century, the pace of change has undoubtedly hastened over the last decade and shows no sign of slowing now. Indeed, with a much more disruptive level of technology likely to emerge in the next decade, cities and their residents must start now to adapt to a new norm.

Engaged in the right way, technology is key to answering a whole host of problems that cities face, from the creation of 3D printing to alleviate a housing crisis, to driverless cars with the potential to reduce congestion in even Mexico City (the world's most congested city, *Tomtom, 2017*). Many innovations, however, will at best be a double-edged sword for real estate. While more intricate problems such as deciding what clothes to put on in the morning can be solved using AR enabled wardrobes, similar tools employed in the retail sector are likely to curb the amount of returns as technology creates a try-before-you-buy scenario. This reduces not only footfall, but also congestion, and hence is both good and bad for real estate.

In a world increasingly differentiated by cities rather than their nation states, size is no longer the precursor of significance; indeed the world's most economically successful cities house just 13.0% of the world's population, but attract more than 67.0% of global real estate investment flows. However, with demand in overheated key cities cranking up real estate values and pushing cycles into their latter stages, investors are becoming increasingly concerned. As such, side stepping into alternative locations could be key for many to building the next stage of a successful global portfolio.

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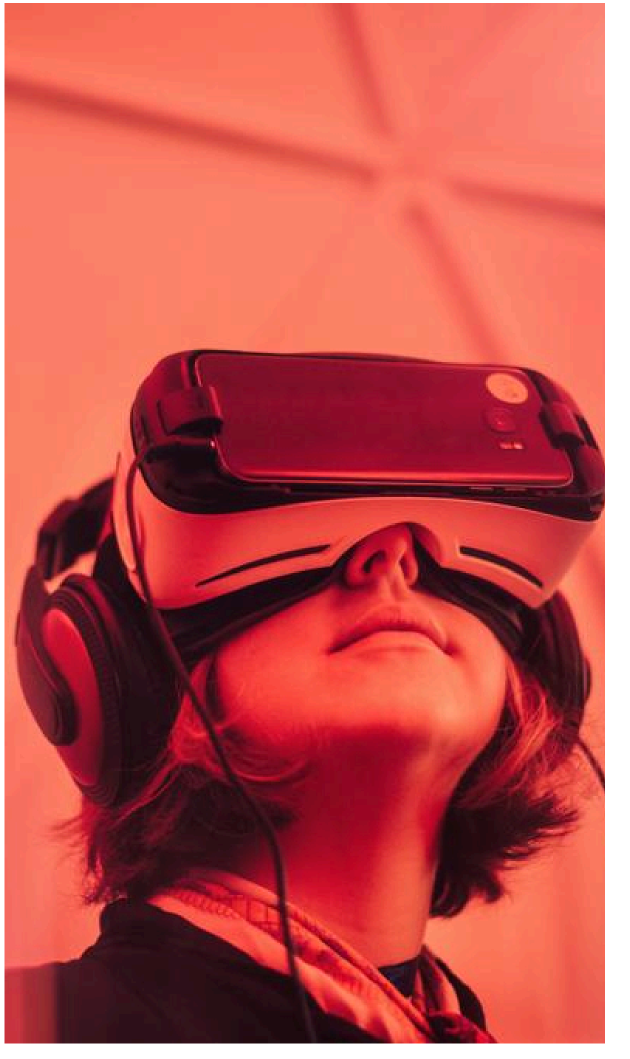
Of the world's most economically successful cities house just 13.0% of the world's population, but attract more than 67.0% of global real estate investment flows.

Regardless of investors pricing needs, occupier fundamentals point in the same direction. Indeed, with 75.0% of global companies anticipating an increase in the volumes of mobile workers over the next three to five years, the hierarchy of cities is clearly set to be further challenged, with power spreading between an ever-broader group of contenders. While living and working patterns alter, empowered by the adoption of AR/VR as a platform for business networks and enabled by increasingly effective methods of transportation, understanding markets outside the tier 1 cities will be critical to understanding where growth will lie in coming years as the balance of economic power shifts.

With new gadgets, devices and software set to revolutionize city environments and the living/ working experience they offer, a city's future competitiveness will rely heavily on the ability of the local government and citizens to harness new opportunities through attracting and nurturing innovative tech companies. Some of the key factors shaping this are outlined over the next few pages.



AFFINITY FOR NEW TECHNOLOGY

A city's capacity to develop will be a reflection of its ability to implement new technology, with those at the forefront of innovation likely to progress ahead of more introverted areas unwilling or unable to embrace change.

Those cities already displaying a willingness to be used as a testing ground will have a competitive advantage going forward. Given their openness to pilot schemes, such urban centres are already ahead in creating and adopting the legislation necessary to integrate future technologies.

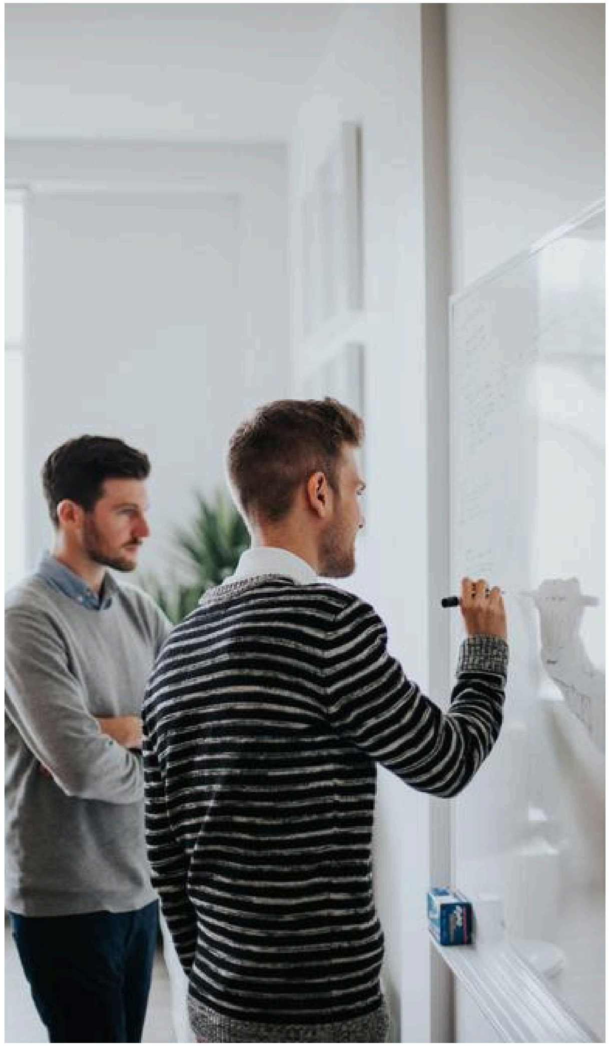
One measure of openness to technology is the social acceptance by the local populace to disruptive forces, in many cases also reflected in the proximity of universities or the percentage of Millennials residing within the city. Owing to the size and quality of their institutions for example, cities such as Montreal, Atlanta and Pune are likely to be winners going forward as their highly educated local populations act as a source of innovation to both develop and utilise new technologies.

ATTRACTIVENESS FOR TALENT

"

75% of global companies anticipating an increase in the volumes of mobile workers over the next 3-5 years, the hierarchy of cities is clearly set to be further challenged.

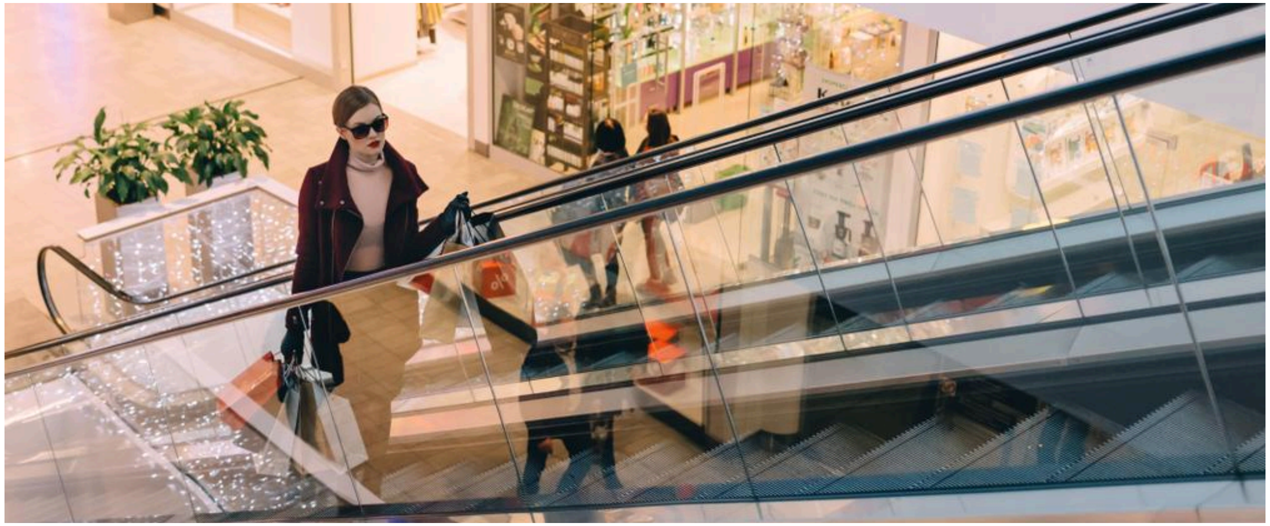
The growth of AR/VR technology is lessening the need for individuals to maintain physical attendance, and with leaps in virtual conferencing making a "virtual presence" feel increasingly real, the question is whether the positioning of offices in core cities will be enough to keep a digitally connected workforce in close proximity. Instead, employees may choose to disperse and



relocate to cities more amenable to their individual tastes and "plug-in" in order to collaborate with colleagues and clients.

Urban centres will have to contend with growing competition both nationally and internationally as the draw of cities as a place to live will change in focus. Decisive elements key to understanding a city's likely attraction include low crime rates, affordability, access to healthcare services, cultural appeal as well as other more subjective factors personal to the individual.

The quality of life, affordability and governance of Australian and Canadian cities place them highly on this measure; however, the historical and cultural draws of European cities also make them attractive places to live. Lyon, Utrecht and Goteborg in particular stand out for example due to already established amenities, high quality of life and lower cost of living relative to their capitals.



RAISON D'ETRE/CITY BRAND

As globalisation, for good and ill, irons out the differences between far-flung places, creating a more homogenous world, cities that reinforce their specific USPs will benefit from businesses wishing to set up shop in markets with a purpose and identity, but also one allowing multi-tasking by employees and clients. This situation is already apparent in the retail sector which has been disrupted by the growth of e-commerce, with profitable bricks and mortar retailing finding success through locations that have a "reason to be" and offer a mix of cultural and leisure activities to appeal to a convenience-orientated customer.

Businesses located in cities with a strong brand that appeals to multiple areas of a client/customer's interests will optimise their likelihood to succeed, thereby improving their own image further. Conversely, urban centres with little or no attractive offering outside its core functions will fall down the hierarchy.

Where do you do your retail shopping?

- Online
- In store
- A mixture of both

SEE RESULTS

With a good offering of diverse activities and cultural experiences, tier 1 cities are difficult to outcompete on this measure, with London and New York topping the scoreboard in almost every case. However, the size of a city does not always equate to culture and creativity, tier 2 cities that offer relatively strong city characters include Cork, Bergen and Fukuoka with compelling heritages, cultural offerings and a high number of leisure facilities.

CONNECTIVITY

In a digitised world, the ability of cities to connect with each other will remain a decisive factor in their success, with strong transport networks between cities rather than within the city key to determining their capacity for growth and increasing the ability of businesses and their employees to collaborate.

Exchanging of ideas is an important factor for the development and dissemination of new technologies. Whilst explicit knowledge can be shared online or via the phone, tacit knowledge, a primary form of information exchange during innovation, requires physical interaction with others. Therefore, those cities boasting ease of accessibility are more likely to get a head start as strong networks enable entrepreneurial culture and supports productivity.

Furthermore, the ease of travel to other global cities reinforces a city's importance in the global hierarchy creating a race to be the most connected. At the same time, the quality of local connectivity will enable cities to expand, absorbing new areas into the urban agglomeration and increasing economic strength.

Manchester is the only city mentioned within Rome2Rio's top 20 outside of the tier 1 markets, ranking joint 14th alongside Zurich, with flights to over 200 global destinations, highlighting its potential as a global node facilitating flows in the complex network of cities.

> “
> **There is a race for global cities to become the most connected...with local connectivity becoming increasingly important to ensure economic strength.**

TECH INFRASTRUCTURE

It goes without saying that the availability of tech infrastructure greatly influences a city's ability to quickly implement new technologies and upgrades, and is therefore deemed a prerequisite for future success.

The availability of adequate infrastructure including access to Wi-Fi, data centres, tech incubators and new factors such as docking stations for driverless vehicles, will be a motivating factor of where businesses choose to locate. This has already been highlighted by some of the UK's financial institutions considering relocation as a result of Brexit, with a city's tech infrastructure one factor they have said must be considered, but one where London is hard to beat.

Urban environments that boast a strong technological ecosystem are more likely to facilitate the digital education of the next generation, as access to computers and software in educational institutions promote a technologically savvy population, able to keep up with the pace of change and ready to be absorbed into a digital workforce.

US cities in general have strong tech infrastructure already in place, tier 2 cities ahead in this regard include both Austin and Raleigh, with tech incubators and robust policies already fostering and encouraging entrepreneurship.

SUPPORTING GOVERNANCE

City authorities must be able to pick up on trends and alterations in the global market and reflect these in their policies. High quality local governments with a clear vision will promote the adoption of technology, encourage clean, healthy and attractive city environments and be supportive of innovation.

National and city governments must strive to create fair and effective rules with priorities tailored to embolden the dynamism that encourages innovation, avoiding rigid regulations that inhibit entrepreneurial culture. As such, the fairness and effectiveness of government is an important differentiator between cities, with the ability to bring the ingredients of success together in order to create an atmosphere attractive to talent.

Strong leadership, advances in ethics and the development of new standards as directed by city authorities, will foster the growth of key technologies and their use, for example, in waste management and smart buildings, creating new jobs whilst also improving the urban environment.

With integrated planning strategies for both the environment and local businesses, Melbourne's authorities have been promoting start-ups in the region, empowering the city to compete with Sydney, Perth and Adelaide to be seen as the smartest city of Australia.

MEASURING MARKET POWER

> "Despite worries concerning Brexit, London still places highly compared to other European cities and indeed globally, whilst New York, Tokyo and Singapore also remain central to the global hierarchy.

Table 3 shows some of the key indicators for city success today. The leading group remains little changed from previous years with New York, London, Tokyo and Singapore keeping the top spots. Indeed, despite worries concerning Brexit, London still places first in four of the six variables whilst other European cities only enter the top five in two categories. Similarly, New York places within the top six in four variables, maintaining its dominant position. Of the cities in the APAC region just Singapore, Tokyo and Sydney place within the top ten across these variables, scoring particularly well for financial centres and technology hubs demonstrating their hegemony in these two key business areas.

While the usual suspects dominate the upper reaches of the rankings across the majority of variables, quality of life provides one measure in which these leading cities do not dominate. Those ranking highest are mid-sized cities in wealthier countries without high crime levels and overburdened infrastructure due to lower population densities. Further, these cities are home to a large creative class that fuels an entrepreneurial spirit and sets in motion a virtuous cycle for dynamism and growth.

CUSHMAN & WAKEFIELD

TABLE 3: **MARKET POWER**

	ECONOMIC SCALE	FINANCIAL CENTRE	TECHNOLOGY HUB	AIR CONNECTIVITY	QUALITY OF LIFE	INNOVATION
1	Tokyo	London	London	London	Vienna	London
2	New York	New York	San Francisco	Paris	Zurich	New York
3	Los Angeles	Singapore	New York	Frankfurt	Auckland	Tokyo
4	Seoul	Hong Kong	Singapore	Amsterdam	Munich	San Francisco
5	London	Tokyo	Chicago	Istanbul	Vancouver	Boston
6	Paris	San Francisco	Berlin	Munich	Dusseldorf	Los Angeles
7	Osaka	Chicago	Hong Kong	Brussels	Frankfurt	Singapore
8	Shanghai	Sydney	Zurich	Dubai	Geneva	Toronto
9	Chicago	Boston	Sydney	Rome	Copenhagen	Paris
10	Moscow	Toronto	Boston	Dusseldorf	Basel	Vienna
11	Beijing	Zurich	Toronto	Vienna	Sydney	Seoul
12	Cologne-Dusseldorf	Washington DC	Stockholm	Milan	Amsterdam	Amsterdam
13	Houston	Shanghai	Tokyo	Zurich	Berlin	Barcelona
14	Washington DC	Montreal	Dublin	Manchester	Bern	Sydney
15	Sao Paulo	Osaka	Taipei	Moscow	Wellington	Munich
16	Hong Kong	Beijing	Amsterdam	Barcelona	Melbourne	Dallas-Fort Worth
17	Dallas	Vancouver	Copenhagen	Toronto	Toronto	Berlin
18	Mexico City	Luxembourg	Beijing	Berlin	Ottawa	Atlanta

TABLE 3: **MARKET POWER**

	ECONOMIC SCALE	FINANCIAL CENTRE	TECHNOLOGY HUB	AIR CONNECTIVITY	QUALITY OF LIFE	INNOVATION
19	Guangzhou	Los Angeles	Paris	Dublin	Hamburg	Montréal
20	Tianjin	Geneva	Austin	Hong Kong	Stockholm	Chicago
21	Singapore	Melbourne	Los Angeles	Madrid	Luxembourg	Seattle
22	Nagoya	Shenzhen	Edinburgh	Doha	Perth	Houston
23	Shenzhen	Frankfurt	Oslo	Copenhagen	Montreal	Madrid
24	Boston	Seoul	Washington DC	Seoul	Nurnberg	Vancouver
25	Istanbul	Dubai	Abu Dhabi	New York	Singapore	Melbourne
26	Philadelphia	Taipei	Kuala Lumpur	Prague	Stuttgart	Miami
27	Suzhou	Munich	Warsaw	Stockholm	Brussels	Washington DC
28	San Francisco	Abu Dhabi	Tel Aviv	Bangkok	Adelaide	Dubai
29	Taipei	Paris	Shanghai	Singapore	Canberra	Milan
30	Jakarta	Casablanca	Lisbon	Geneva	San Francisco	Beijing
31	Amsterdam	Cayman Islands	Shenzhen	Oslo	Helsinki	Stockholm
32	Buenos Aires	Tel Aviv	Prague	Palma	Oslo	Shanghai
33	Chongqing	Dublin	Vienna	Cologne	Calgary	Copenhagen
34	Milan	Bermuda	Brussels	Taipei	Dublin	Philadelphia
35	Busan	Kuala Lumpur	Milan	Beijing	Boston	Hong Kong
36	Atlanta	Bangkok	Madrid	Helsinki	Honolulu	San Diego

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TABLE 3: **MARKET POWER**

	ECONOMIC SCALE	FINANCIAL CENTRE	TECHNOLOGY HUB	AIR CONNECTIVITY	QUALITY OF LIFE	INNOVATION
37	Toronto	Guangzhou	Bangkok	Abu Dhabi	Brisbane	Tel Aviv
38	Seattle	Qingdao	Budapest	Birmingham	Paris	Stuttgart
39	Miami	Doha	Moscow	Lisbon	Lyon	Oslo
40	Madrid	Amsterdam	Eindhoven	Kuala Lumpur	London	Hamburg
41	Brussels	Warsaw	Vancouver	Tokyo	Milan	Frankfurt
42	Chengdu	Tallinn	Oulu	Hamburg	Barcelona	Denver
43	Wuhan	Jersey	Denver	Jeddah	Lisbon	Moscow
44	Frankfurt	Oslo	Sao Paulo	Miami	New York	Lyon
45	Sydney	Riga	Jakarta	Warsaw	Edinburgh	Manchester
46	Munich	Stockholm	Dubai	Stuttgart	Seattle	Helsinki
47	Hangzhou	Guernsey	Helsinki	Shanghai	Chicago	Austin
48	Wuxi	Liechtenstein	Bangalore	Montreal	Tokyo	Portland
49	Minneapolis	Calgary	Melbourne	Malaga	Washington DC	Dublin
50	Qingdao	Busan	Auckland	Bristol	Kobe	Osaka
	GDP 2014 PPP Brookings	Z/Yen 2015 GFCI	Composite based on various studies – C&W	Rome2rio, 2016 Global Connectivity Ranking	Mercers 2015	2thinknow 2017

Cushman & Wakefield

Note: Shaded cities appear in either 5 or 6 categories.
Source: Rome2rio, 2016, global connectivity ranking.

STRATEGY FOR THE YEAR AHEAD

Changing macro conditions point to a need to change strategy: focusing more on income growth and sustainability and less on just the relative or absolute level of income.

The improved economic environment in most regions will help to drive stronger occupier interest in the market and should therefore put rents under upward pressure (or at least help to stabilize supply in markets with increased pipelines). It will also signal an earlier rise in interest rates.

These changing macro conditions point to a need to change strategy: focusing more on income growth and sustainability and less on just the relative or absolute level of income.

At the same time, given the significant uncertainties that still exist, risk aversion should remain a key driver of strategy and, above all, demands greater diversification to limit downside and raise liquidity.

This should include more international exposure in a typical portfolio, but also a greater mix of locations as core countries and the larger gateway cities become increasingly expensive and high quality, secure developments in the core of tier 2 cities and countries look more attractive.

Three areas of opportunity are therefore most apparent: targeting tier 1 cities in the most developed countries, looking at larger cities but in more emerging countries, or focusing instead on tier 2 cities, chiefly in larger core countries.

Regardless of city size however, urban areas must constantly evolve to meet the challenges of the future and hence the flexibility and effectiveness of city regulators and decision-making will be of increased importance, as will the network and infrastructure for collecting, exchanging and making decisions based on better data.

TIER 1 - IN DEVELOPED MARKETS

Large gateway cities with diverse economies and high liquidity should remain the bedrock of any global investor's portfolio. Finding opportunities in these markets is also set to become somewhat easier as some existing owners look to take profits and adjust strategy. However, these will typically be strongly priced where the assets are of the best quality and location and for those unable to compete with the low cost of capital of many current global players or who are seeking higher short to medium term returns, other options need to be sought.

If staying in tier 1 markets, this may be achieved by either expanding the range of cities considered "gateway" or looking to newly emerging submarkets in major cities.

Expanding the investment scope to look at a broader range of sectors is also clearly advisable and should embrace mixed-use space, residential sub-markets and community services such as health and education.

> "As prices rise in keenly sought markets, newly emerging submarkets in tier 1 cities will increasingly be targeted, prompted by transport changes, events such as the Olympics or other drivers of rejuvenation.

With respect to a broader range of cities, in the USA this may mean looking towards markets such as Dallas or Houston, usually considered key for domestic players but often less targeted by global capital. In Europe, this could mean expanding the search area to smaller capital cities such as Copenhagen, Dublin or Milan or to again enlarging the pool in core countries, for example targeting cities such as Stuttgart and Cologne in Germany. In Asia, this approach could include moving beyond the Australian and Japanese markets so heavily favoured by global capital and moving to core but somewhat more volatile cities such as Singapore, Shanghai and Hong Kong.

Within the top tier of cities meanwhile, risk may be taken by focusing on areas where rental growth is emerging such as Sydney, Frankfurt or Los Angeles or by looking towards transitional assets which are well-located but have operational challenges for a new owner to overcome. Alternatively, many will have newly emerging submarkets prompted by transport changes, events such as the Olympics or other drivers of rejuvenation. Where they are well-anchored and accessible, such emerging submarkets can offer exciting and sustainable potential future performance.

Additionally, such changes will benefit some existing more traditional sub-markets in each city, be that La Défense in Paris for example, which will see its attractiveness and connectivity increase significantly as the Grand Paris Express routes are developed or the downtown and decentralized markets of Washington DC and NoVa (Northern Virginia) when the new metro link to Dulles airport opens.

TIER 1 - EMERGING MARKETS

Current economic drivers are biased towards developed markets, but many emerging markets are performing ahead of expectations and clearly offer superior medium to long term growth potential in real estate.

Current economic drivers are biased towards developed markets but many emerging markets are performing ahead of expectations and clearly offer superior medium to long term growth potential in real estate as urbanisation, the growth of the middle class and the modernisation of business and social infrastructure gathers pace.

Due to the current pattern of growth, commodity prices and geopolitics, opportunities in this space are currently biased towards Asia and Europe more so than Africa, the Middle East or Latin America.

INDIA

LEADING CITIES INCLUDE **MUMBAI**, **DELHI** AND **BENGALURU**

In Asia, India may have taken a back seat recently in economic growth terms, but with reforms accelerating, high yields and a rapidly modernising business base, the case for including it in a global growth portfolio is reaching tipping point. Leading cities to consider are Mumbai, Delhi and Bengaluru, but tier 2 cities such as Pune, Hyderabad and Chennai should be on the radar.

BANGKOK

MASSIVE INFRASTRUCTURE SPENDING

Bangkok, meanwhile, will be off the agenda for many due to the political environment but the city has massive infrastructure spending

TABLE 5: SELECTED TIER 2 CITY TARGETS 2017/2018

AMERICAS	ASIA PACIFIC	EMEA
• **Atlanta:** Fintech	• **Auckland:** Quality of life, open	• **Dresden:** IoT/smart tech hub
• **Austin:** Tech/transport hub, cool	• **Adelaide:** Growth and quality of life	• **Edinburgh:** Cultural hub
• **Calgary;** Quality of life, energy	• **Brisbane:** Growth and quality of life	• **Eindhoven:** Tech cluster
• **Denver:** Biotech and Millennial hub	• **Chennai:** IT, automotive and culture	• **Goteborg:** Diverse, regeneration
• **Nashville:** Creative hub	• **Fukuoka:** Tech, culture	• **Krakow:** Culture and education
• **Orlando:** Trade and culture hub	• **Guangzhou:** Tech and Infrastructure	• **Lyon:** Culture and life sciences
• **Pheonix:** Diversified high growth	• **Hyderabad:** Tech and culture	• **Malmo:** Tech cluster
• **Portland:** Creative hub	• **Pune:** Tech, university	• **Manchester:** Image, regeneration
• **Raleigh-Durham:** Tech hub	• **Yangtze River Delta Cities:** Growth	• **Nuremberg:** Digital hub
• **San Diego:** Tech hub	• **Yokohama:** Tech, culture, trade	• **Utrecht:** Culture, education

Source: Cushman & Wakefield, Global Capital Markets underway ($50 billion over the next five years) and operates as a key gateway to the IndoChina region. Vietnam is also set to benefit from infrastructure investment and has made genuine reform efforts which are raising liquidity and liberalising market practices, a fact that has been rewarded by strong FDI inflows and hence Ho Chi Minh and Hanoi will present an increasingly attractive environment for real estate investors over time.

LATIN AMERICA

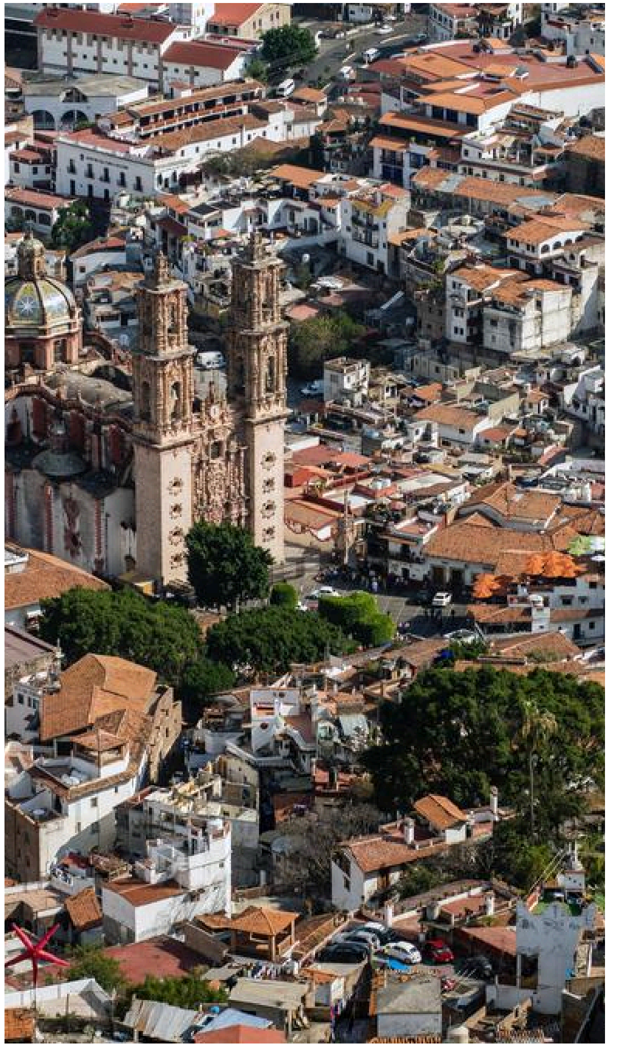
MEXICO LEADING WITH **BRAZIL** MOVING CLEAR OF RECESSION

In Latin America, economic conditions are improving with Mexico leading and Brazil at last seemingly moving clear of its long recession, despite ongoing political uncertainty. Interest rates generally are falling and risk factors such as the likely future shape of US trade policy are priced in to some extent at least. As a result, selective opportunities are starting to appear, starting perhaps in more liquid share markets but also in some asset markets based on the more attractive level of exchange rate adjusted pricing.

EUROPE

SMALLER EASTERN COUNTRIES PRODUCING **GOOD GROWTH**

Elsewhere, a number of Europe's smaller eastern markets are benefiting from the EU's recovery and are producing good growth, led by Romania of late. Russia also appears to have turned a corner economically and is seeing a broadening recovery with lower inflation allowing interest rates to be cut. The country is coping well with lower oil prices and while some uncertainty exists ahead of next year's election, risk takers are increasingly set to look back towards its larger metro markets for opportunities. Turkey meanwhile is also seeing a robust economic recovery and while political uncertainty is holding investors back, core areas of the market will start to attract interest in the near-term.



TIER 2 CITIES - DEVELOPED AND HIGH GROWTH EMERGING MARKETS

> “The war for talent and changing technology is exposing a wider band of cities to greater scrutiny from occupiers, with wise investors increasingly taking note of tier 2 cities in core economies and high growth emerging markets.

It is clear that smaller cities can offer good value for investors in all global regions, with a potential mix of a higher yields, strong growth and diversification merits. Even the typically lower liquidity that might be expected relative to a tier 1 city may be a lesser drawback than imagined, particularly where the domestic market is strong and has a broader appetite than the average cross border player.

While interest in such markets needs to be selective and very much based on their fundamental appeal not just price, it is worth noting that such cities are not necessarily just 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 locations usually have a lower population density according to the EIU's global liveability report as well as lower crime and less congestion.

The focus for property investors should be on income-producing prime assets in core locations in cities typically featuring a specialism to provide profile, attractive pricing relative to other markets and to replacement costs and a limited supply or pipeline. In many cases, working with a local partner or platform will be key to accessing the right opportunities, at the right time and price.

In North America, a wide range of cities may tick the right boxes, including Calgary in Canada due to its strong standing for quality of life as well as rates of population growth. Tech hubs are a key defining feature for US opportunities meanwhile, such as Austin, Portland, Raleigh-Durham, San Diego and Seattle/Bellevue, but creative and cultural hubs also feature, such as Portland, which is considered cool and creative but with a cluster of HQs, and Nashville with its strong image and cultural identity but also biotech and healthcare cluster. There are also diversified cities to consider such as Pheonix and Atlanta, the third largest home for Fortune 500 companies but also a growing fin-tech cluster.

Quality of life together with skills clusters and universities also feature for a lot of European opportunities, but so too does culture and tourism as well as a willing local authority supporting and promoting large-scale redevelopment as in Manchester and Goteborg for example. Tech hubs such as Malmo, Nuremberg, Eindhoven and Dresden are important, and usually also have a top ranked university in place. A number of cities specialise in other industries or are more diverse, but offer cultural benefits and are attractive for inhabitants and visitors, such as Lyon, Krakow, Utrecht, Dresden and Edinburgh.

Once more, a number of Asian centres feature strongly on the back of the quality of life, notably Auckland, Perth, Brisbane and Adelaide but most of these also feature well for population growth. What is more, quality of life is seen as a key factor in the emerging market selections as well.

Skill clusters are an evident driver in many emerging markets led as one might expected by opportunities in the multipolar countries of India and China. For India, growth is obviously a key driver in all cases but cities such as Chennai, Hyderabad and Pune typically offer a safer and better standard of living than other Indian cities, albeit with differing costs of living and economic strong points, with Pune a university town, Chennai strong for automotive and Hyderabad one of India's leading start-up cities. In the case of China, a range of tier 2 cities are clearly growing rapidly but table 5 focusses on two areas: Guangzhou, where property market fundamentals are currently promising but longer-term trends are also noteworthy, as part of the Greater Bay and the Belt and Road Initiative (BRI) as well as benefiting from the rise of fin-tech and e-commerce. Secondly, the Yangtze River Delta cities (Hangzhou, Ningbo and Nanjing) offer a good quality of life, strong universities and an affordable opportunity to gain from their developing infrastructure as well as spillover demand from Shanghai.

APPENDICES

The following figures indicate the views of Cushman & Wakefield's Capital Markets team and relate to the top investment cities and very best prime property in each market rather than an historic or sample average.

Table 6: **GLOBAL YIELDS JUNE 2017**

REGION	COUNTRY	OFFICES	SHOPS	INDUSTRIAL
Americas	Argentina	9.00%	7.50%	10.00%
APAC	Australia	4.50%	-	6.25%
EMEA	Austria	3.00%	3.00%*	5.75%
EMEA	Belgium	4.40%	3.25%	6.00%
Americas	Brazil	9.00%	7.50%	9.7%
EMEA	Bulgaria	8.00%	8.50%	9.50%
Americas	Canada	6.13%	3.63%	4.25%
EMEA	Channel Islands	6.50%	6.50%	-
APAC	China	4.50%	4.61%*	6.50%
EMEA	Croatia	8.25%	8.00%	9.00%
EMEA	Cyprus	5.00%	5.00%	-
EMEA	Czech Republic	4.60%	3.50%	6.00%
EMEA	Denmark	4.00%	3.00%	6.25%
EMEA	Estonia	7.00%	6.90%	8.00%
EMEA	Finland	4.10%	4.25%	6.10%
EMEA	France	3.00%	2.50%	5.35%
EMEA	Germany	3.00%	3.10%	4.95%
EMEA	Greece	8.00%	6.90%	10.50%
APAC	Hong Kong	2.35%	2.60%	3.10%
EMEA	Hungary	6.20%	5.50%	8.00%
APAC	India	8.00%	7.50%	7.50%
APAC	Indonesia	6.60%	10.00%	-
EMEA	Ireland	4.25%	3.50%	5.25%
EMEA	Italy	3.25%	2.75%	6.25%
APAC	Japan	3.00%	3.25%	
EMEA	Latvia	6.90%	6.75%	8.00%
EMEA	Lithuania	7.00%	7.00%	8.50%
EMEA	Luxembourg	4.30%	3.50%	8.00%
EMEA	Macedonia	9.75%	9.50%	13.00%
APAC	Malaysia	6.25%	5.5%*	-
Americas	Mexico	10.60%	11.75%	11.50%
EMEA	Netherlands	4.75%	3.30%	5.25%
APAC	New Zealand	5.75%	5.00%	6.15%
EMEA	Norway	3.75%	3.75%	5.50%
APAC	Philippines	8.50%	3.50%	-
EMEA	Poland	5.25%	5.25%	6.75%

Table 6: **GLOBAL YIELDS JUNE 2017**

REGION	COUNTRY	OFFICES	SHOPS	INDUSTRIAL
EMEA	Portugal	4.75%	4.75%	6.50%
APAC	Republic of Korea	4.70%	6.00%*	-
EMEA	Romania	7.25%	7.50%	8.75%
EMEA	Russia	10.50%	12.50%	12.75%
EMEA	Serbia	9.25%	7.75%	11.25%
APAC	Singapore	3.35%	4.75%	6.00%
EMEA	Slovakia	6.60%	7.50%	7.50%
EMEA	Slovenia	8.00%	7.00%	10.00%
EMEA	Spain	3.50%	3.40%	5.90%
EMEA	Sweden	3.50%	3.25%	5.65%
EMEA	Switzerland	3.25%	3.05%	5.55%
APAC	Taiwan	2.56%	2.00%	2.50%
APAC	Thailand	7.00%	8.00%*	-
EMEA	Turkey	7.15%	6.50%	9.00%
EMEA	Ukraine	12.50%	10.00%	13.25%
EMEA	United Kingdom	3.25%	2.50%	4.25%
Americas	USA	4.02%	3.95%	4.80%

*Shopping Centres

Note: Yields markes in red are calculated on a net basis to include transfer costs, tax and legal fees.

Source: Cushman & Wakefield

Table 7: **TOTAL INVESTMENT VOLUMES (EX DEV. SITES)**

	METRO	Q3 2016 – Q2 2017 (US$)	GROWTH*
1	New York	51,059,375,912	-37.2%
2	Los Angeles	39,126,120,913	-4.5%
3	San Francisco	31,988,294,052	4.5%
4	London	30,001,249,393	-25.1%
5	Dallas	22,070,284,134	21.4%
6	Paris	20,963,237,117	-26.7%
7	Washington D.C.	19,002,938,696	-8.8%
8	Hong Kong	18,389,232,472	18.8%
9	Atlanta	18,282,221,836	20.8%
10	Shanghai	17,643,410,497	26.2%
11	Tokyo	17,164,987,675	-23.9%
12	Chicago	16,669,757,084	-12.4%
13	Boston	14,713,978,466	-18.2%
14	Miami	13,577,351,449	-19.1%
15	Seattle	13,347,611,631	-1.5%
16	Amsterdam	12,684,973,739	23.2%
17	Seoul	11,769,886,415	97.6%

Table 7: **TOTAL INVESTMENT VOLUMES (EX DEV. SITES)**

	METRO	Q3 2016 – Q2 2017 (US$)	GROWTH*
18	Singapore	10,983,840,533	51.7%
19	Houston	10,862,140,529	14.3%
20	Berlin	10,781,888,286	-3.4%
21	Sydney	10,288,968,195	-3.9%
22	Phoenix	9,951,527,745	-15.5%
23	Frankfurt	9,584,728,083	41.4%
24	Madrid	9,327,212,867	62.2%
25	Austin	8,958,387,739	19.2%
26	Denver	8,764,022,167	-22.6%
27	Munich	7,639,147,432	29.6%
28	Beijing	7,491,575,259	-0.4%
29	Las Vegas	6,878,895,050	29.7%
30	Toronto	6,518,526,743	-10.9%
31	San Diego	6,406,803,390	-29.7%
32	Charlotte	6,357,939,470	31.9%
33	Orlando	6,302,435,524	15.7%
34	Philadelphia	6,259,429,547	-21.4%

Table 7: **TOTAL INVESTMENT VOLUMES (EX DEV. SITES)**

	METRO	Q3 2016 – Q2 2017 (US$)	GROWTH*
35	Melbourne	6,122,649,052	-19.2%
36	Tampa	5,563,036,231	-4.1%
37	Portland	5,261,981,223	-2.5%
38	Stockholm	5,168,942,893	-26.6%
39	Hamburg	4,702,550,992	-7.0%
40	Minneapolis	4,269,732,460	-1.4%
41	Osaka	4,179,366,302	6.3%
42	Baltimore	4,168,070,478	-26.0%
43	Prague	4,157,959,141	175.5%
44	Vancouver	4,107,542,606	-30.5%
45	Barcelona	3,841,648,278	115.4%
46	Yokohama	3,714,262,321	191.8%
47	San Antonio	3,599,561,319	45.0%
48	Raleigh	3,585,125,573	-20.6%
49	Oslo	3,233,183,611	-14.8%
50	Brisbane	3,172,056,373	-2.7%
51	Nashville	3,125,752,587	-10.8%

Source: Cushman & Wakefield, Real Capital Analytics.
Growth compared to previous 12 months.

Table 8a: **RETAIL INVESTMENT**

	METRO	Q3 2016 - Q2 2017 (US$)	GROWTH*
1	New York	5,629,105,354	-42.3%
2	Hong Kong	5,267,785,969	63.1%
3	Los Angeles	4,909,807,269	-34.9%
4	London	4,081,743,031	-2.1%
5	Miami	3,758,669,999	3.1%
6	San Francisco	3,586,900,609	36.8%
7	Las Vegas	3,569,761,407	54.1%
8	Chicago	3,277,310,220	-18.0%
9	Singapore	2,934,071,271	201.2%
10	Shanghai	2,885,720,757	109.3%

Table 8b: **OFFICE INVESTMENT**

	METRO	Q3 2016 - Q2 2017 (US$)	GROWTH*
1	New York	22,370,914,053	-35.7%
2	London	20,364,259,714	-28.1%
3	Paris	15,013,926,704	-32.8%
4	San Francisco	14,947,439,164	16.1%
5	Los Angeles	13,147,307,307	0.6%
6	Shanghai	12,035,282,987	5.0%
7	Tokyo	11,499,741,649	-14.8%
8	Seoul	9,256,566,593	114.1%
9	Washington D.C.	9,252,074,338	19.4%
10	Boston	9,050,907,654	-6.7%

Table 8c: **INDUSTRIAL INVESTMENT**

	METRO	Q3 2016 - Q2 2017 (US$)	GROWTH*
1	Los Angeles	7,838,464,831	-2.2%
2	New York	4,792,341,457	-11.7%
3	San Francisco	4,311,383,719	-27.0%
4	Chicago	3,403,461,209	2.5%
5	Dallas	2,889,152,505	2.6%
6	Hong Kong	2,279,454,314	13.5%
7	Sydney	2,230,843,528	25.2%
8	Miami	1,912,410,463	28.7%
9	Atlanta	1,799,058,900	-28.6%
10	London	1,762,589,303	-18.6%

Table 8d: **MULTIFAMILY INVESTMENT**

	METRO	Q3 2015 - Q2 2015 (US$)	GROWTH*
1	New York	14,223,239,640	-44.1%
2	Los Angeles	9,951,103,489	2.6%
3	Dallas	9,830,168,870	16.3%
4	Atlanta	8,822,826,431	29.4%
5	Seattle	5,247,262,658	11.0%
6	San Francisco	5,233,249,485	-10.5%
7	Denver	5,198,708,504	-12.5%
8	Washington D.C.	5,143,314,527	-35.8%
9	Houston	4,738,878,517	11.3%
10	Phoenix	4,393,287,727	-12.3%

Table 8e: **DEVELOPMENT SITES INVESTMENT**

	METRO	Q3 2015 - Q2 2015 (US$)	GROWTH*
1	Hong Kong	24,788,515,221	225.2%
2	Hangzhou	24,496,208,969	19.8%
3	Beijing	23,834,380,269	-27.6%
4	Wuhan	23,132,326,210	109.1%
5	Nanjing	22,217,441,711	-1.7%
6	Shanghai	21,959,827,599	-13.2%
7	Suzhou	19,232,005,128	1.1%
8	Chongqing	18,881,942,621	65.5%
9	Tianjin	18,377,204,324	39.4%
10	Guangzhou	16,390,821,901	13.0%

Table 8f: **HOTEL INVESTMENT**

	METRO	Q3 2015 - Q2 2015 (US$)	GROWTH*
1	New York	4,043,775,408	-30.9%
2	San Francisco	3,909,321,075	16.7%
3	Los Angeles	3,279,438,017	23.6%
4	London	1,786,167,486	-49.5%
5	Hong Kong	1,676,971,638	39.6%
6	Honolulu	1,662,951,169	4272.7%
7	Washington D.C.	1,540,689,739	8.1%
8	Chicago	1,530,181,848	-18.5%
9	Amsterdam/Randstad	1,428,088,908	246.6%
10	Miami	1,269,994,143	-22.9%

Source: Cushman & Wakefield, Real Capital Analytics. Growth compared to previous 12 months.

ABOUT THE REPORT

THE REPORT

This report has been written by David Hutchings and Emily Tonkin in our Capital Markets Investment Strategy team with support from the global research group. 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. Alongside Cushman & Wakefield information, data has been used from Real Capital Analytics (RCA). Where the data was sourced from RCA, it is as at 7 September 2017.

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.

A number of rankings contained within this Winning in Growth Cities 2017/18 report are Cushman & Wakefield composite rankings, collated using a variety of in-house proprietary data, reliable secondary sources and a range of data indicators.

Sources

Investment data

Cushman & Wakefield, Real Capital Analytics

Other sources

Cushman & Wakefield, Oxford Economics Forecasts, Tomtom, Brookings, Ecnomist Intelligence Unit (EIU), Mercer, Youthfulcities, Z/Yen Group, Rome2rio, 2thinknow.

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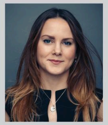

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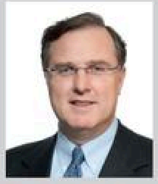

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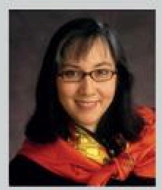

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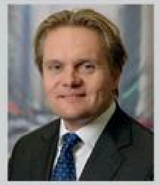

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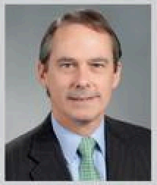

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