

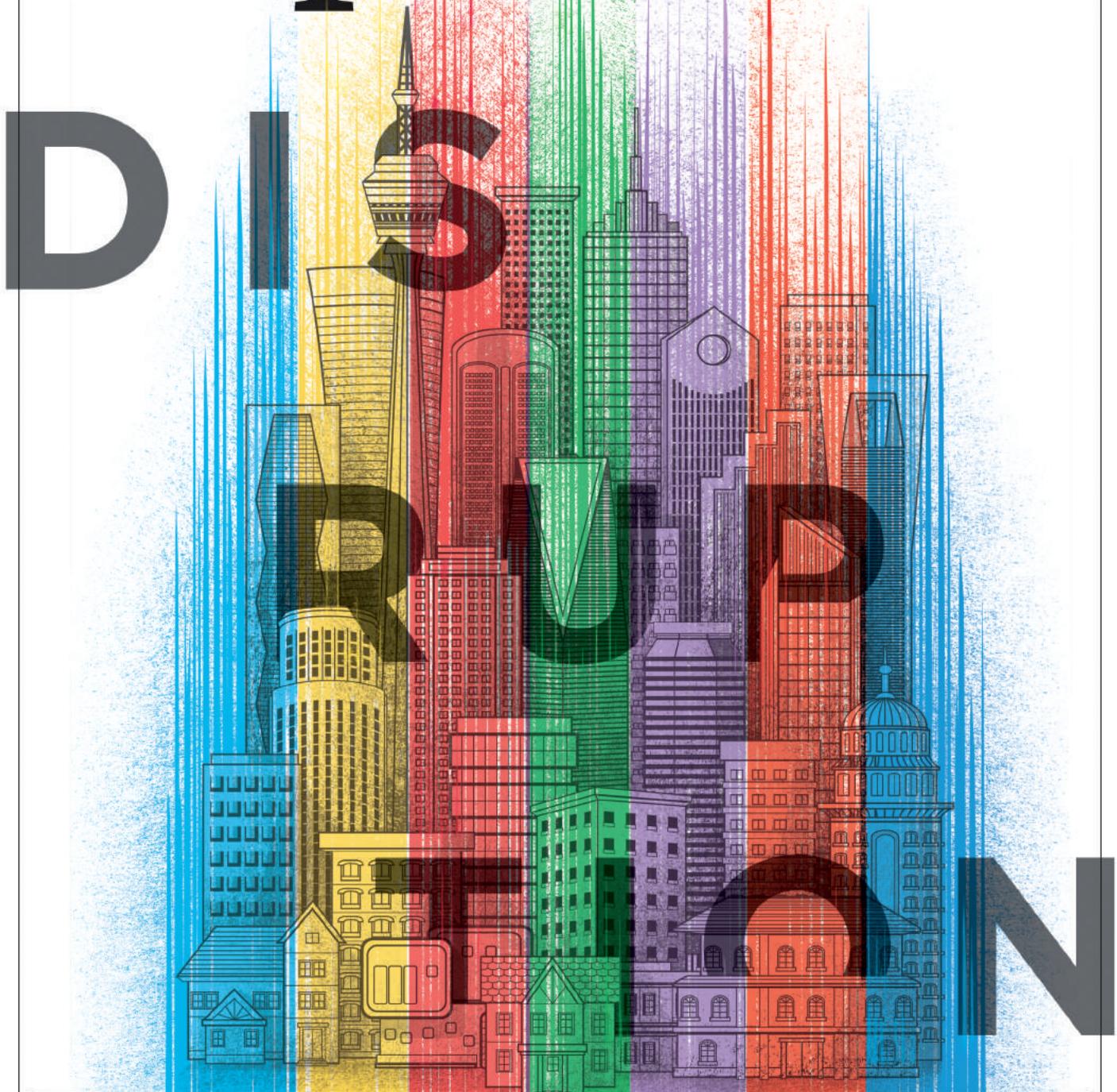
- ◆ Real estate's new world order ◆ The economic impact of populism
- ◆ Urban logistics innovators ◆ What is tokenisation? ◆ Retail reimagined
- ◆ Asia-Pacific's growing role ◆ Plus: synthetic burgers and a side of crickets



Issue 02. 2019

Impacts

THE FUTURE
OF GLOBAL
REAL ESTATE



disruption noun dis-rup-tion | ˌdɪsˈrʌpʃən : the act or process of disrupting something : a break or interruption in the normal course or continuation of an activity, process, etc.

Welcome



Mark Ridley
Group Chief Executive Officer, Savills

Welcome to the latest edition of *Impacts*, our global markets report, which this year focuses on disruption.

Political, economic and social change characterise the world today, and many of the mega-trends which stem from this uncertainty have implications for real estate. However, unpredictable times also offer real opportunity.

We are seeing significant demographic shifts and urbanisation as well as the rise of populism and protectionism across many territories.

In addition, everything we do in life is being enabled by technology, bringing efficiency and flexibility, but also challenging the values of different generations and how they want to live, work and play.

All of this is causing market participants to rethink their business models at an individual asset level to ensure they remain relevant and fit for purpose. These changes are also about helping to underpin the continued competitiveness globally of our urban environments whether as cities or emerging mega-regions, which are starting to blur country boundaries.

Impacts brings together leading experts within Savills as well as key contributions from external industry leaders to offer insight and some order to the big questions that arise from these mega-trends. Whether considering the resilience of cities, the sustainability of food production, the role of populist politics in cross-border investment or how tech is restructuring retail and leisure, our in-depth analysis shows that for those ready to embrace

change, there is an opportunity to shape real estate and our industry as a whole to meet the needs of an evolving world.

We hope that you will find *Impacts* both thought provoking and engaging, and I would like to thank all of those who have contributed to its excellent authorship. I believe this analysis and opinion provides a degree of certainty and optimism in these disruptive times.

Sign up for the *Impacts Quarterly*

It's the essential email update on the future of global real estate. See savills.com/Impacts

***Impacts* online**

A visit to savills.com/Impacts will help you tackle the real estate challenges of 2019 and beyond

Savills contacts

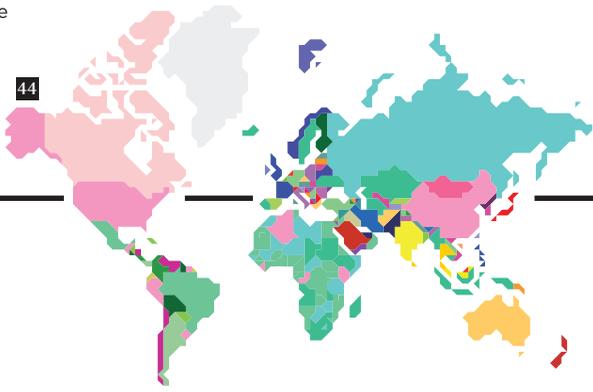
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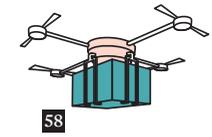
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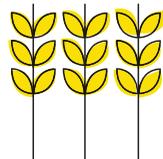
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Embracing disruption and evolving infrastructures will be the determining factor in success for the future



New

“In 2018, Asia-Pacific had the largest share of cities with GDP over \$50 billion, overtaking the Americas”

From top left: London, Tokyo, New York, LA, Washington DC, Shanghai, Singapore, Tianjin, Jakarta

World

The world order of top global cities may feel as though it is set in stone. But with disruption on the menu through technology, demographics and leadership, all that is set to change in the next decade.

For traditional leaders such as London, New York and Tokyo, the battle will be about resilience. How can they continue to harness favourable qualities such as strong economies and demographics to maintain their position?

Emerging locations in China and the Middle East are snapping at their heels, challenging the status quo with rising personal wealth and fast-growing economies. They are joining an increasingly crowded field. In the past decade, the number of cities with gross domestic product (GDP) of more than \$50 billion has grown from 177 to 248, underscoring the vital role that cities will continue to play in these disruptive times. By 2028, this number is expected to jump to 317. Those cities with GDP over \$50 billion accounted for 83% of global GDP in 2018, an increase from 79% a decade ago. This is forecast to increase to 89% over the next 10 years as the importance of cities continues to accelerate.

Their geographical distribution has shifted significantly over the past decade, too, and is expected to change again. In 2018, Asia-Pacific had the largest share of cities with GDP over \$50 billion, overtaking the Americas. By 2028, more than half of these influential cities are expected to be in this region.

A second threat to the traditional order is cities working together. The creation of mega-regions has seen cross-border collaboration

in the US and Mexico and across Europe. China can do this all on its own by linking populous metropolises.

Savills Research has undertaken an in-depth analysis of these emerging themes among cities, examining them for resilience, those challenging today’s order and growing mega-regions.

Resilient Cities

In a world of change, the search for sustainable cities in which businesses can thrive is increasingly important. The Savills Resilient Cities Index identifies those that will be able to withstand or embrace the many disruptive forces facing global real estate today and in 10 years’ time. These are cities that attract talent and encourage the innovation that drives city and personal wealth – factors that feature high in the decisions of real estate investors.

The top 20 ranking for 2028 includes familiar names alongside some of the US’s economic powerhouses. The leading four are forecast to be New York, Tokyo, London and Los Angeles, unchanged for the past two decades. These continue to have an inbuilt advantage from their position >

Resilience is key when searching for the most important global cities for real estate now and in the years to come. Sophie Chick and Paul Tostevin of Savills World Research size up the contenders

WHAT OUR RESILIENT CITIES INDEX MEANS FOR INVESTORS

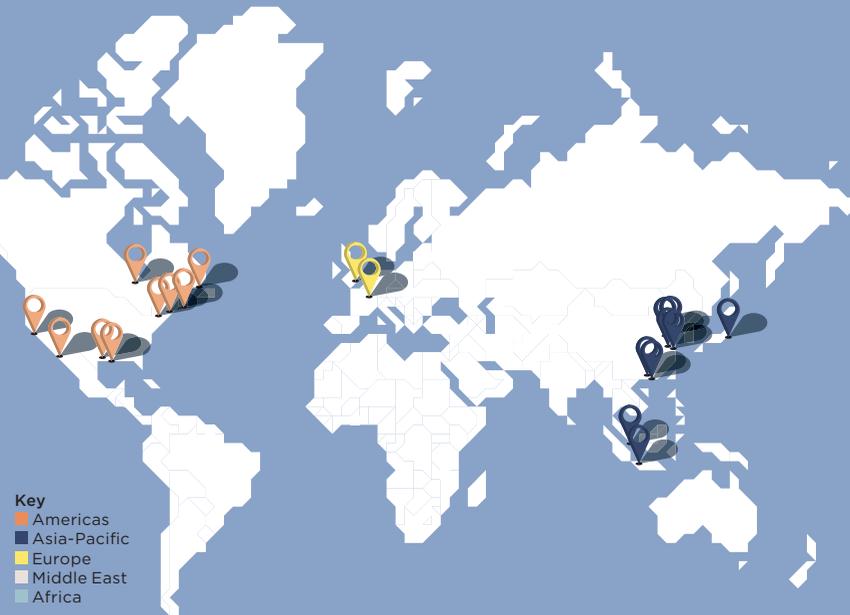
The Savills Resilient Cities Index informs future real estate investment decisions. The most established – ‘Resilient Cities’ – have a thriving economy and real estate sector. Emerging Resilient Cities are expected

to match this status by 2028, while the rapid progress of ‘Challenger Cities’ offers a longer-term investment opportunity.

Order

“The top four continue to have an inbuilt advantage from their position as world-class cities and will remain resilient over the next decade”

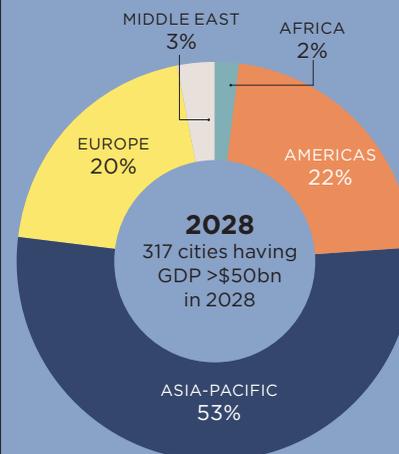
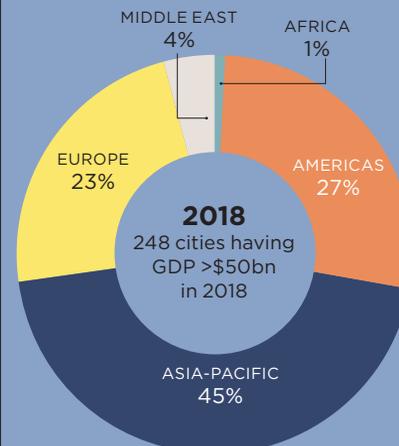
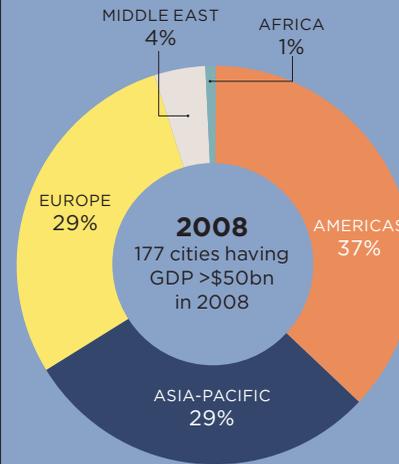
SAVILLS RESILIENT CITIES INDEX
Top 20 Resilient Cities over the next 10 years



City (metro area)	Country	Category	Ranking			Change 2018-2028
			2008	2018	2028	
New York	US	Resilient	1	1	1	0 -
Tokyo	Japan	Resilient	2	2	2	0 -
London	UK	Resilient	3	3	3	0 -
Los Angeles	US	Resilient	4	4	4	0 -
Shanghai	China	Emerging Resilient	23	11	5	6 ↑
Chicago	US	Resilient	5	5	6	-1 ↓
Beijing	China	Emerging Resilient	24	14	7	7 ↑
Paris	France	Resilient	6	6	8	-2 ↓
Shenzhen	China	Emerging Resilient	20	13	9	4 ↑
Dallas	US	Resilient	10	8	10	-2 ↓
Washington DC	US	Resilient	7	7	11	-4 ↓
Guangzhou	China	Emerging Resilient	35	21	12	9 ↑
Singapore	Singapore	Resilient	15	9	13	-4 ↓
San Francisco	US	Resilient	9	10	14	-4 ↓
Houston	US	Resilient	12	12	15	-3 ↓
Philadelphia	US	Resilient	11	15	16	-1 ↓
Tianjin	China	Emerging Resilient	40	26	17	9 ↑
Boston	US	Resilient	13	16	18	-2 ↓
Suzhou	China	Emerging Resilient	47	30	19	11 ↑
Jakarta	Indonesia	Emerging Resilient	103	51	20	31 ↑

Methodology Savills Resilient Cities Index is a measure of city wealth (GDP), personal wealth (households with an income greater than \$70,000), and demographics (population dependency ratio). **Source** Savills Research

CITIES WITH GDP OVER \$50BN
Regions with the largest share



as world-class cities and are expected to remain resilient over the next decade.

The greatest change during the next 10 years will be the rise of Asian cities. From 2008 to 2028, there are seven new cities from Asia breaking into the top 20. Of these, six are Chinese cities, with Jakarta, Indonesia, taking the final place. These Emerging Resilient Cities have risen dramatically in economic and wealth terms in the past decade, and are expected to cement their position on the back of increasing middle-class wealth.

Despite the changes to the make-up of the top 20, the global percentage of GDP that these cities account for in 2028 is forecast to remain stable at around 25%, compared with 26% in 2018.

While Resilient Cities make attractive propositions from a short and long-term economic and demographic perspective, it

HOW WE DEFINE EACH CATEGORY

Resilient Cities

These cities have been in the top 20 for at least the last decade and are forecast to remain so over the next 10 years. They are well-placed to withstand or embrace the many disruptive forces facing global real estate today and in the future.

Emerging Resilient Cities

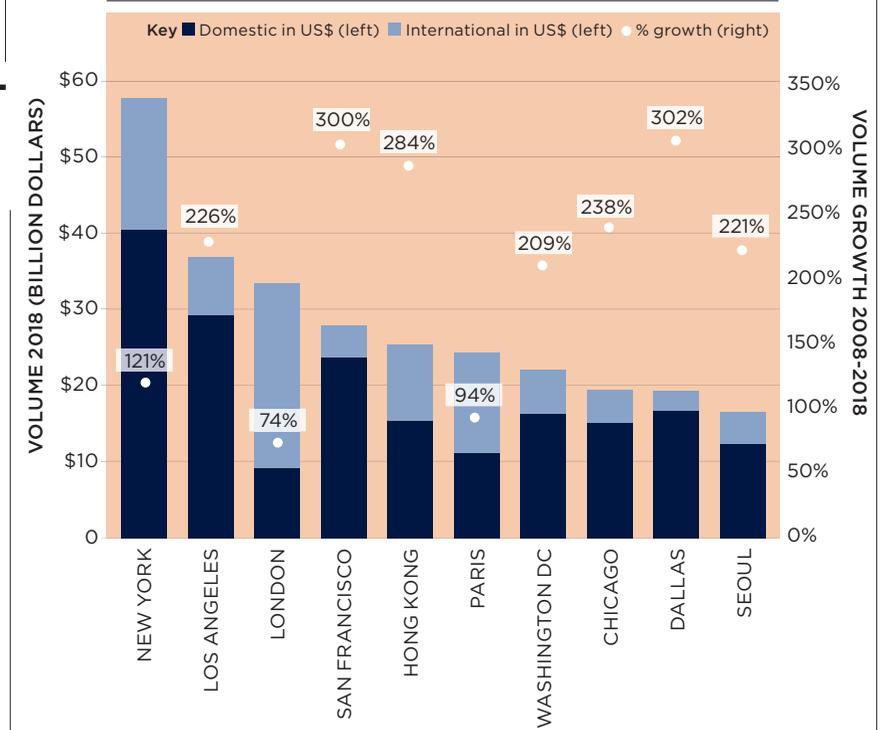
The new entrants to the top 20, either in the past decade or forecast to be so in the next. Although they're not currently as well-established

on a global stage, we expect them to match the status of the Resilient Cities by 2028 as they continue their dramatic rise in economic and wealth terms.

Challenger Cities

Cities that are forecast to make the top 50 by 2028 by jumping at least 10 places. They are poised to rise and challenge the established cities by using disruption to their advantage. For real estate investors with a long-term view, these are the cities to watch.

TOP 10 CITIES BY INVESTMENT VOLUME, 2018
Domestic and cross-border real estate capital flows



Source Savills Research using data from Real Capital Analytics

is interesting to see how this aligns with current real estate capital flows. This demonstrates whether investors are finding the appropriate risk/return profile in each market, and the size and liquidity of the investible real estate universe.

The top 10 cities for investment by volume ranks New York, Los Angeles and London in the first three places: each is in the top four in the Resilient Cities Index. Other US cities in the Resilient Cities top 20 and the top 10 investment volumes globally are Chicago, Washington DC, San Francisco and Dallas.

New York remains the largest market with \$57.5 billion invested in 2018, though it has become increasingly domestic with

the share of cross-border investment falling from 37% to 30% in a decade. In contrast, Los Angeles, San Francisco, Washington DC, Chicago and Dallas have all seen their share of cross-border investment rise over the same period, albeit from a lower base.

London remains third, with investment volumes of \$33.5 billion in 2018. Despite Brexit, London is still attractive to foreign investors, with cross-border investment comprising over two-thirds of volumes in 2018, an increase from half in 2008. Paris, the only other European city in the Resilient Cities Index, has an almost even split of domestic and foreign investors, attracted to the city's large and liquid office market. >

INCREASING CLIMATE RISKS

According to the World Economic Forum's (WEF) Global Risks Report 2019, extreme weather and climate-change policy failures are some of the greatest threats to cities over the next decade. "New York is a case in point. When Hurricane Sandy hit, people in high-rise buildings

became stuck as elevators flooded," says Alice Charles, Cities Lead at the WEF. For some cities, this requires new thinking and prioritisation from leadership, while others are already using technology to mitigate the threats of natural disasters. In Japan,

for example, integrated systems can halt high-speed trains in the event of a natural disaster. "Similarly, they can communicate with the public quickly by leveraging mobile phones, so they are using all kinds of technology to inform people to take cover," says Charles.

URBAN DESIGN CHALLENGES

For Resilient Cities to thrive, they need to maintain a positive approach to good urban design. For example, Los Angeles, fourth on the index, has been working hard to discard its image as a car-orientated city. "This low-rise, spread-out city has made an amazing effort through good urban planning and is overcoming

understanding that these are places to build with greater density." Los Angeles has also been spurred on by being named host city for the 2028 Olympic Games. In Chinese cities such as Shanghai, Beekingham sees a different approach. "The Chinese have the capacity to do very ambitious urban planning that is supported by the government," she says. "They do use eminent domain and can develop in a rapid way, when others would come up against special-interest groups.

"These are all ambitious schemes founded on good urban planning principles, but sometimes it can be at the expense of losing the old and favouring the new."

its reputation for poor public transport. The metro system [pictured] has been developed and expanded to areas it didn't reach before," says Jacqueline Beekingham, Creative Director at international architecture and masterplanning practice Benoy. "Along the path of the metro, there is now an



"For India's young, mobile population – 65% are under 30 – Delhi and Bengaluru are favoured destinations"

Challenger Cities

The Resilient Cities research identifies a number of Challenger Cities: ones forecast to be within the top 50 by 2028. They are expected to jump by at least 10 places in the rankings over the decade. The distribution of these cities contrasts with those in the top 20, with no contenders from the US or Europe. Instead, China, India and the Middle East make up the eight.

From India and the Middle East, these are well-known international cities such as Delhi, Mumbai and Bengaluru (Bangalore), and Riyadh and Jeddah in Saudi Arabia. However, the Challengers from China come from a second-tier league of large,

but less internationally recognised, cities such as Hangzhou, Nanjing and Ningbo.

India

The Indian Challenger Cities have very different dynamics driving growth, says Anurag Mathur, CEO of Savills India. "Delhi is the seat of government, so attracts industry that needs to be closer to policy-making," he says. "Mumbai is the financial capital, while Bengaluru has traditionally been about science and engineering."

Delhi and Bengaluru have growing tech industries attracting younger talent.

"As the home of the Indian Space Research Organisation, Hindustan

Aeronautics and the Indian Institute of Science, Bengaluru had a strong legacy of science and engineering before it saw a new wave of start-ups and other tech companies," says Mathur. "Tech growth in Bengaluru was initially about cost arbitrage, but it has moved up the value chain and is now a core tech research and development (R&D) centre," says Mathur. General Electric and Shell have located their R&D centres here.

For India's young, mobile population – 65% are under 30 – Delhi and Bengaluru are favoured destinations. Mumbai, by contrast, has a higher cost of living which does not support a start-up culture.

Middle East

The presence of Riyadh and Jeddah in the Challenger Cities rankings come as Saudi Arabia focuses on transforming its retail sector with the rise of e-commerce. With a population of 33 million willing consumers spread across a large area, e-commerce has provided retailers with a solution to get more goods to customers.

Real estate investors have been capitalising on the changes by investing in logistics and warehousing focused on e-commerce tenants, such as Kaden's The Logistics Park in south Riyadh. Here, Noon.com signed a lease on a 40,000 sq m logistics facility at the park, while Jollychic >

Rise of Riyadh
E-commerce is transforming the city's retail landscape



“Shenzhen and Guangzhou will continue to see their influence increase as part of the Greater Bay mega-region that will unite 11 cities”

took around 130,000 sq m. Both companies have also signed up for headquarters space at the new Business Front in north Riyadh.

“The change in consumer behaviour has had an effect for physical retail,” says Richard Paul, Head of Professional Services and Consultancy, Savills Middle East. “The most successful shopping centres are now anchored by food and beverage and entertainment, to attract customers who generally purchase electronics, durable goods and clothing online.”

China

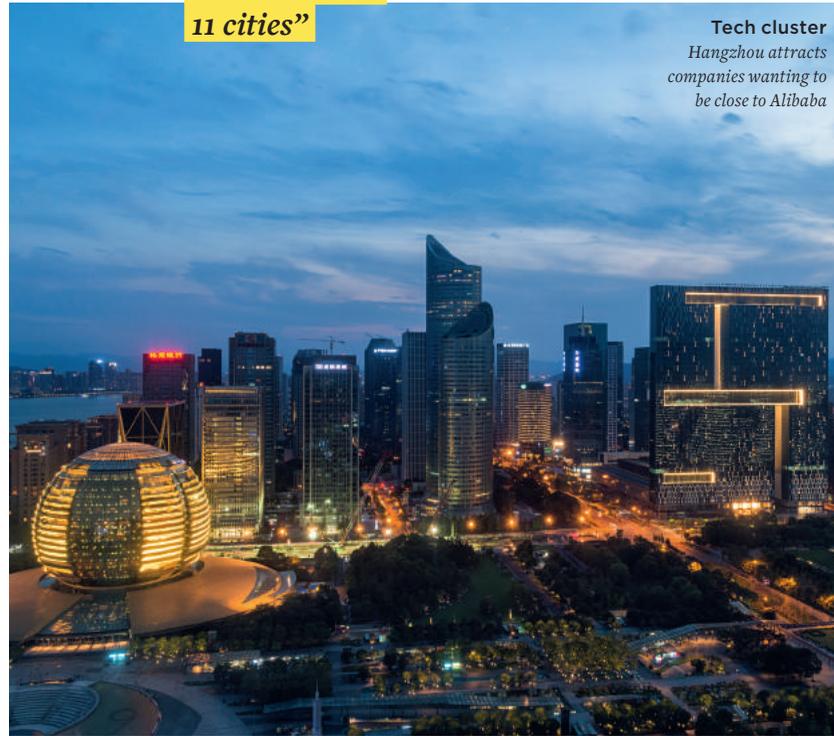
The rise of Chinese cities stands out as they make up the majority of the Emerging Resilient Cities (those that have risen dramatically in economic and wealth terms in the past decade and are expected to continue to do so to enter the global top 20) as well as many on the Challenger Cities list (those that are expected to enter the top 50 in the next decade).

For Emerging Resilient Cities such as Shenzhen and Guangzhou, this is reflected in their GDP, which is now ahead of Hong Kong’s. That said, Hong Kong’s importance should not be underestimated. Its location and financial and legal expertise are all factors that make it a real estate investment hotspot, ranked fifth globally.

Shenzhen has been a Resilient City in the making for several decades. Designated the first special economic zone in China in 1980, it is home to established companies, such as insurer Ping An and car-maker BYD. It has also moved with the times, and attracts tech-related companies, such as gaming firm Tencent and mobile giant Huawei.

For Challenger Cities, tech is driving many of the trends. Hangzhou, for example, is attracting tech companies and people that want to cluster near the Chinese e-commerce conglomerate Alibaba. “A lot of talent was moving to tier one cities, but Hangzhou emerges and people are more willing to move for a good salary and a lower cost of living than nearby Shanghai,” says Siu Wing Chu, Managing Director, Central China, at Savills.

Shenzhen and Guangzhou will continue to see their influence increase as part of



Tech cluster
Hangzhou attracts companies wanting to be close to Alibaba

the Greater Bay mega-region that will unite 11 cities through major railway investment.

“It is going to be a powerhouse as the region is becoming more integrated,” says Woody Lam, Managing Director of Savills Southern China. “They already have lots in common, such as Hong Kong companies locating their factories in the area, and many people travel in the region to work in the different cities.”

Given China’s size, there are a number of cities not mentioned that are growing in global importance and attracting real estate investors. By 2028, forecasts suggest that 43 of the top 100 resilient cities will be in China. These include cities such as Wuhan (the most populous city in central China with fast-improving infrastructure) which aims to be the economic engine of China’s central region. ■

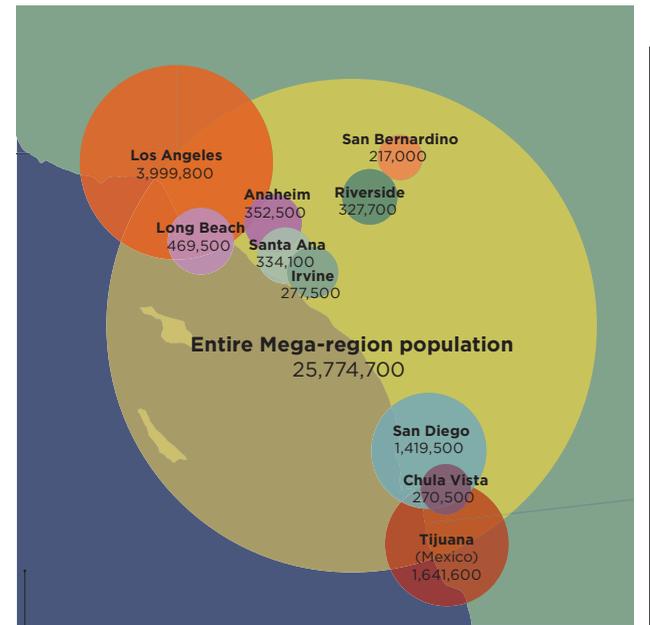
CHALLENGER CITIES

City	Country	Category	Ranking			
			2008	2018	2028	Change 2018-2028
Hangzhou	China	Challenger	54	40	29	11 ↑
Riyadh	Saudi Arabia	Challenger	66	44	31	13 ↑
Nanjing	China	Challenger	53	46	32	14 ↑
Ningbo	China	Challenger	57	50	40	10 ↑
Delhi	India	Challenger	166	106	44	62 ↑
Mumbai	India	Challenger	129	80	46	34 ↑
Jeddah	Saudi Arabia	Challenger	130	59	49	10 ↑
Bengaluru	India	Challenger	0	98	50	48 ↑

Source Savills Research

The growth of the mega-region

With rising urban populations, metropolitan areas are joining together, often across borders, to form powerful mega-regions. With a level of resilience that goes beyond even city status, this creates a favourable attribute for real estate investors. These regions can be identified using satellite images – continually lighted areas, correspond to economic activity. Mega-regions benefit from shared resources and talent, access to labour, expanded consumer markets and knowledge exchange. Challenges, especially if they cross borders, include differing national legislation, political risks and currency fluctuations.

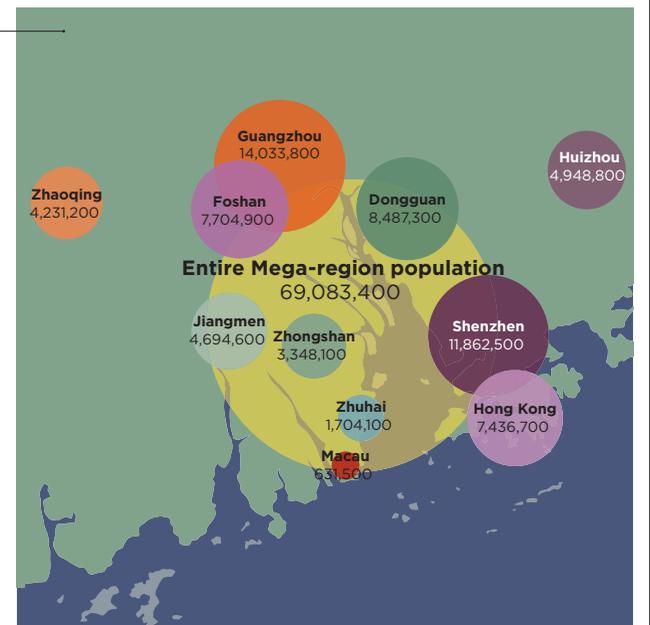


Southern California

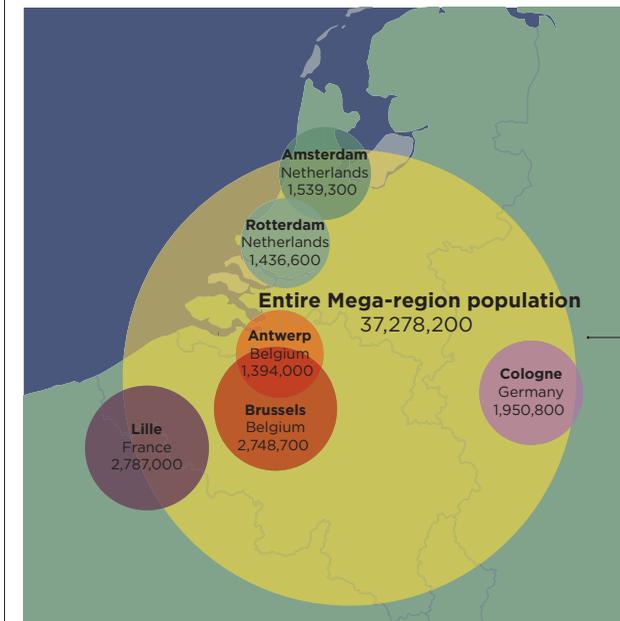
The bulk of the Southern California mega-region is in the US, stretching from LA to Tijuana in Mexico. As a mega-region, it is one of the largest economies in the US, with key sectors including entertainment, tourism, tech, automotive and finance.

Greater Bay Area/Pearl River Delta

This consists of nine Chinese cities in the Pearl River Delta and the two special administrative regions of Hong Kong and Macau. With a GDP of \$1.3 trillion, it is comparable with the San Francisco Bay Area and the Greater Tokyo Area, yet will overtake both by 2030. High-speed rail will transform travel times between major cities. What used to take 240 minutes is now 100. Hong Kong, Shenzhen and Guangzhou can be covered in 48 minutes.



Source Savills Research using Oxford Economics and national sources
Note Metro area populations cited



Amsterdam-Brussels-Lille-Ruhr

This mega-region spans four countries in northwest Europe, including the major urban centres of Amsterdam, Rotterdam and Brussels. It is an interconnected network for knowledge exchange and business innovation, housing some of Europe’s best universities such as Delft University of Technology, the University of Amsterdam, Eindhoven University of Technology and Leiden University.

The Savills Tech Cities Index assesses more than 100 metrics to rank the 30 leading cities worldwide, from the volume of inward venture capital investment to the cost of a flat-white coffee

Words: Paul Tostevin, Director, Savills World Research

Tech cities are leading the world. Testbeds for innovation and magnets for talent and venture capital (VC), they are not just vibrant places in which to live and work – they are also driving economies. The Savills top 30 Tech Cities are forecast to see gross domestic product (GDP) rise by 36% in the next decade, compared with 19% across other developed cities.

The third Savills Tech Cities Index measures more than 100 metrics to provide a ranking of the hottest tech locations worldwide (see panel right for details).

Access to a deep talent pool and its reputation as a global centre of commerce have propelled New York to the top spot, overtaking San Francisco in the process.

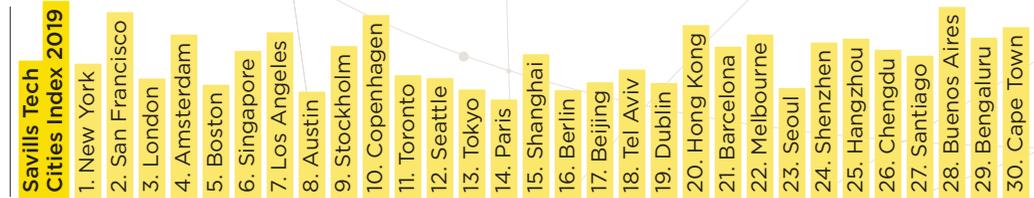
London took third place overall. It performs especially well on our ‘buzz and wellness’ metric, and the UK capital remains the dominant tech hub in Europe, with three times more VC investment in 2018 than its nearest rival, Paris. Amsterdam is hot on London’s heels, rivalling its position as the global gateway to Europe. The Dutch capital is a vibrant global hub that benefits from a skilled, English-speaking workforce.

Strong competition is also coming from five Chinese cities that have been included in the rankings for the first time. Chinese tech cities are emerging fast, and now account for a higher share of VC than their US counterparts. Beijing recorded an average \$34 billion of VC per year in the past three years – greater than New York and San Francisco. However, Shanghai is the highest-ranked Chinese city due to its international business environment and better quality of life.

Currently home to 291 million people, the 30 Tech Cities will add another 18 million residents in the next decade.

Tech Cities

Top spot
New York leads the Tech Cities rankings



As pressure builds on infrastructure, mobility becomes a critical success factor, prompting these cities to be at the forefront for shared mobility services such as self-driving vehicles.

To reflect this, our latest Index now includes metrics to cover this category. London ranks first for mobility overall, due to a combination of factors such as its integrated transport system. However, pollution remains a major issue, as does the ongoing challenge of upgrading the world’s oldest metro system.

For shared mobility, Chinese cities take the lead – dockless bike-share schemes such as Ofo and Mobike originated in China. Asian cities are also ahead when it comes to their modern metro systems, which are among the cheapest in the world and have onboard wi-fi and air conditioning.

For the final mobility pillar – the quality of the urban environment – it is European

cities that perform well. Amsterdam, Copenhagen, Stockholm and Barcelona are among the world’s most cycle-friendly, while their compact size allows for shorter commutes, easier access to amenities and a better work/life balance.

The trend for co-working space goes hand in hand with the growth of the global tech sector. In 2018, co-working providers accounted for 11% and 14% of office market take-up in Dublin and London respectively. The average monthly cost for a desk in a private office is \$590, and is highest in San Francisco at \$1,050. While it is an area of the market that is emerging fast, there is still room for growth. Even in US markets, such as Manhattan, total co-working space is estimated at just 2% of all offices. ■

Turn to page 16 to read about the factors that define a tech city in the US and China.

“Access to a deep talent pool and the city’s reputation as a global centre of commerce have propelled New York to the top spot”

WHAT IS A SAVILLS TECH CITY?

It’s an important centre of tech within its region, a major recipient of VC investment, a vibrant city in which to live and work and a generator of, and magnet for, talent. It would also be on the shopping list for expanding global tech companies. The Index measures what makes a successful tech city. Our assessment for each city comprises more than 100 metrics,

grouped into six categories: business environment; tech environment; city buzz and wellness; talent pool; real estate costs; and mobility. Each category is weighted to reflect its importance to the tech sector.

Business environment

- Investment
- Size of finance and business services sector
- Ease of starting a business

- R&D/innovation
- Physical linkages
- Cost of doing business (regulations, taxes, pay)

Tech environment

- Venture capital
- Size/value of tech sector
- Tech infrastructure
- Tech engagement

City buzz and wellness

- City wellness
- City buzz
- Cost of living

Talent pool

- Higher education
- Immigration and talent attractiveness
- City youthfulness

Real estate costs

- Cost of renting commercial and residential property
- Cost of co-working space

Mobility

- Shared mobility services
- Metro system
- Quality of infrastructure

When tech comes to town

Do US and Chinese tech cities share a pattern of growth? How does it shape local real estate?

US cities may occupy the higher reaches of the Savills Tech Cities Index (see page 14), but Chinese cities are rising fast, claiming a higher share of global venture capital investment in the process. Kevin Kelly, Senior Managing Director, Savills in the US, and James Macdonald, Senior Director, Savills Research, China, discuss the key attributes, technologies and influential companies that shape a tech city in their respective markets, plus the implications for real estate.

Is there a key attribute that defines a tech city – setting it apart in terms of innovation and investment?

Kevin Kelly Each tech city has its own story, but a common thread is the presence of great universities in the area. In California, Stanford and Berkeley have driven innovation and the growth of companies in San Francisco and San Jose.

However, when you combine these factors with quality of life, there are different drivers for different cities. For example, fewer people in their early 20s are moving to San Jose – they prefer San Francisco. This demonstrates that a city's

ability to attract talent varies – quality of life and urban layout are big factors.

James Macdonald Beijing has the best universities in China, and these are a source of talent for tech firms as well as being incubators for new ventures. Hangzhou is the home of Alibaba and this has driven the tech economy in this city. It is also one of China's most liveable cities. Shenzhen constantly reinvents itself, from a centre of manufacturing to hardware and now to software and finance. It also has a dynamic and ambitious population of immigrants from all over China.

Simon Smith, who's based in Hong Kong and Head of Research for Savills Asia-Pacific, believes Hong Kong is becoming a fintech incubator because it is a global financial centre and the first staging post for Chinese financial services companies who want to expand internationally.

KK Even though it is one of the most expensive cities in the world, young people want to be in New York for its overall liveability as well as its tech reputation. Young, educated people, especially in tech, worry less about affordability for housing and other costs when moving to a tech city. For those starting a family, it's more complex. Even in lower-cost places, such as Austin, Texas, it's difficult to find suitable residential property downtown.

Which cities have developed tech specialisms and what are the implications for real estate?

KK In the US, the hotbeds for hardware are in Austin and Boston, biotech in Boston and San Diego, and music- and film-related tech in Los Angeles. This is often the result of a feedback loop with local universities. Clusters of businesses emerge from the computer science output of a particular college. That local specialism then feeds back into the curriculum. St Louis, Missouri, which is outside the top six in the US, has become a centre of expertise

for security-related tech, while fintech is thriving in Atlanta thanks to Georgia Tech.

As companies cluster in micro-areas, the main real estate issue is rising rents. In New York, rents have exploded in Midtown South, an established tech location, and are now on par with traditional Midtown space. In San Francisco, space downtown is leasing at such a rate that if you are looking for a large block, you have to get in early and bid for it. Companies have to take into account what is most appealing not only for their existing employees, but where talent will want to live and work over the course of the lease. Take Austin, for example. Companies here would rather face the traffic to work downtown, where rents are \$50-60 per sq ft, rather than locations that are \$20 per sq ft but 15 minutes' drive away.

JM The Alibaba effect has made Hangzhou a hub for consumer-focused tech, thanks to the presence of the online shopping giant and companies who hope that being close to one of China's unicorns will boost them. Chengdu, in western China, offers cheaper labour than the eastern cities, so has become a low-cost, high-tech centre and a centre for business processing outsourcing, a big driver of the office market. Media and content are heavily regulated in China, so tech firms in this sector need to be close to the administration in Beijing. Shenzhen is home to a myriad of app developers and these smaller companies are often looking for flexible workspace.

These cities are top of the list for global tech companies. What factors drive their location decisions?

JM International tech companies choose China because of its market size and because the Chinese are willing to try new technology. That's why China leads the world in online and mobile shopping. A key factor for rapidly growing tech companies is the attraction and retention of talent. This means university cities, such as Chengdu, Beijing and Hangzhou, >



“Raleigh, in North Carolina, is a rising star. It has great universities and a cluster of biotech companies”

are favoured locations. Shanghai is the financial capital and the most international mainland city, so it is a prime location for a company to locate its headquarters.

Simon Smith adds: “Hong Kong is Asia’s most dynamic and well-rounded city, with a diverse international talent pool. It is a place people want to live and work in.”

KK Despite the immense power of the big tech brands, such as Amazon and Apple, recruitment for talent is still highly competitive. Amazon initially picked New York and Washington DC as its new secondary headquarters, before later pulling out of the New York deal. It could have differentiated itself with a new and unique location, but instead chose two of the largest, most expensive cities on its list. Ultimately, scale was the most important factor. I think those New York jobs will now be incorporated into an expansion at a planned site in Nashville, Tennessee.

What is interesting about the Amazon decision is that, for other large tech firms, location choice is also driven by the need for employees to find housing. Traditional tech cities are all expensive, making places such as San Francisco difficult to raise a family and have a reasonable commute. For most metro areas, housing gets cheaper as you move out from the urban centre. But in the Bay area, costs remain extremely high even as you head out of the city.

How have the real estate markets of these cities responded as tech companies have become major occupiers?

JM China does not wait for business to make decisions about location; the government sets out areas where it wants to see certain kinds of businesses and development. Shanghai has been declared an AI [artificial intelligence] hub, so there will be zoning and incentives to ensure AI companies make it their home. Along the road between Shanghai and Hangzhou, a series of towns have been allocated specialisms to form a tech corridor.

KK Clustering is the most obvious way cities are being shaped, as tech companies grow to be major occupiers. This is happening much more within cities such as New York and San Francisco. It used to be that the fastest-growth tech was in the boroughs and outside classic urban residential areas. Now, in Boston, New York and Austin, this clustering is happening in proper downtown environments.

A second major trend is the expansion of co-working space, which has gone hand in hand with the growth of these tech cities. Co-working companies, such as WeWork, are themselves dominant occupiers, providing repurposed office space for young start-ups and incubators.

Tech cities are leaders in shared mobility services and pioneers in clean transportation. How have they responded to the challenges and opportunities posed?

JM China is the birthplace of bike sharing, with companies such as Mobike and Ofo leading the market. Ofo has more than 20 million users, mainly in larger cities such as Shanghai and Beijing. China’s ride-sharing app market is also incredibly competitive, with a number of new apps competing with market leader Didi Chuxing, which bought Uber’s China operation.

China is also leading the world in public transport development, with plans to invest

\$300 billion in metro systems between 2010 and 2020. At 676km, Shanghai has the longest metro system in the world, and there is 120km of track under construction. The growth of public transport has been crucial for real estate development, which is often centred on transport nodes.

KK Shared mobility aligns with the innovation in tech cities, so they have become natural testbeds. However, they are finding it difficult to make it resonate with the existing transport infrastructure. This is partly down to human psychology: unless there is a cost or time saving for shared cars or bikes, it is difficult to take more time to do the right thing. We also see city planners struggling with oversupply, so this is going to continue to be a city-level debate with different answers in campus versus metropolitan cities.

Where are the tech cities of the future?

JM Guangzhou is the only first-tier Chinese city not in the Tech Cities Index and it has plans to become a centre for cross-border e-commerce. A new central business district and e-commerce hub is planned for the Pazhou district. The government also wants to develop regional centres. Xi’an in northern China is expected to benefit from this. The university cities of Wuhan and Nanjing are also contenders.

KK Raleigh, in North Carolina, is a rising star. It has great universities with computer science programmes – University of Carolina, Duke University – as well as a cluster of biotech companies. It is experiencing an explosion in hardware and software talent. IBM bought Raleigh-based software provider Red Hat for \$34 billion – the world’s second-largest tech deal.

A more unusual pick is Nashville. We looked at the ingredients that made Austin successful in the early days, such as scale of output, residential costs and nightlife, and then ran those metrics for cities today. Nashville came out on top. ■

Keeping mobile

Nicky Wightman, Director of Global Occupier Trends at Savills, talks to Eugenie Teasley, Head of Cities at Uber, about how cities address future transport issues

Nicky Wightman: Transport is a key factor in a city’s success. That’s why the 2019 Tech Cities Index includes a category on mobility. Do you see a relationship between tech cities and interest for new types of mobility?

Eugenie Teasley: A city’s mobility and its tech credentials don’t always go hand in hand. Amsterdam was reimagining its streets to make cycling the mode of choice well ahead of the tech upswing globally. But in San Francisco, tech gets into everything, including mobility – you found JUMP bikes [shared electric bikes] there before anywhere else. The evolution of mobility isn’t just about infrastructure, though, it’s also about a government’s approach to experimenting and allowing innovation in often highly regulated markets.

Cities struggle with moving millions of people around. Where do shared-mobility services such as Uber fit within a city’s wider integrated transport system?

Our platform vision is to enable people to have seamless multimodal journeys, and to work with other



forms of transport – trams, metros, buses, subways. For example, we’ve just launched Uber Transit in Denver, Colorado, which provides real-time public transport information so people can decide what sort of journey would suit them best. We would love to see people move away from owning cars towards relying on shared transport.

Can car-sharing make poorly connected locations more economically viable from a real estate perspective?

A few years ago, if you lived in the outer boroughs of New York you had two options: public transport or your own car. Car-sharing has deepened the transport offer. Now, more than 50% of Uber trips in New York originate in the outer boroughs. In addition, we’re also finding people in these areas use the service to get to and from transport hubs, complementing the existing public transit offer.

Elsewhere, we’re seeing apartment complexes that have few or no parking spaces. This frees up space for other facilities, such as gyms and cinemas, while tenants who forgo a parking space receive credits to spend on Uber rides.

What does urban planning need to improve on to quicken the arrival of self-driving cars?



There are different challenges for different cities around the world. In the US, the grid system of most city streets makes it a lot easier for self-driving vehicles to navigate. In Europe and other parts of the world, however, the web of narrow streets makes it harder. So, in the first instance, determining a small number of key routes where self-driving cars could provide pooled rides, and ensuring there is suitable provision for clear pedestrian and cycling routes, will be key.

Abolishing parking minimums would free up both curb space and urban space, which would give smoother routes and allow for more sustainable urban design. San Francisco recently abolished parking minimums for future developments. In London, the Mayor wants to see “an appropriate balance being struck between promoting new development and preventing excessive car parking provision that can undermine cycling, walking and public transport use”. He also wants to see one in five spaces designated for electric-vehicle charging.

Do you see drones and vertical take-off and landing (VTOL) aircraft playing a role in future mobility solutions?

Yes, and we’re actively working with aviation leaders to make this happen. As part of our Elevate programme we’re convening aircraft companies such as Bell and Embraer, regulators and government agencies and real estate partners to make sure we are all working together. We’ve identified Dallas and Los Angeles as the first two cities to test 100% electric VTOLs with aims to launch a public service by 2023.

Populism vs prosperity

Populism is rising around the world. Heidi Learner, Chief Economist at Savills, examines what this could mean for the global economy and real estate

Populism is in the ascendancy in today's political environment. Whether its rise is a result of the global financial crisis may be a subject for debate, but one thing is clear: populism thwarts long-term economic progression.

Loosely defined as any ideology that separates 'the people' from a 'corrupt elite', populism has existed in various forms over the last century. While it is often believed to be the preserve of the right, populism and democracy are not mutually exclusive: parties on both sides of the political aisle espouse populist platforms under the guise of being 'anti-establishment'. On the left, one might find policies advocating for a diminished role of the private sector; on the right, more libertarian moves to reduce government regulation. Regardless, a common theme for populists across the political spectrum is the invocation of an existential crisis (either real or imagined) to justify the need for political unity. Typical policies include income redistribution, public spending increases, a rise in trade barriers and tariffs, tax cuts, restrictions on immigration, and a pro-nationalist or anti-global rhetoric.

Non-economic consequences of populism include increased polarisation across political parties, and criticism of outlets that seek to check power (such as the media) and other branches of government (such as the judicial system). In the extreme, a rise in scapegoating, civil unrest and human rights abuses may result, as leaders consolidate power and increase autocratic rule.

But what about the economic impact? Some items on the populist agenda can spur growth in the short term. Few would argue against an increase in spending on outdated public infrastructure, for example, or disagree with the notion that tax cuts can boost consumption and investment. However, populism has the potential to hinder growth, fuel inflation and result in a loss of competitiveness and productivity over the long term. >

An increase in government spending – especially in the form of rising transfers and benefits, combined with tax cuts – can increase the budget deficit, the financing of which can crowd out private investment and potentially lead to higher inflation. Restrictions on migration can hamper worker mobility and have a similarly inflationary impact on wages from a mismatching of labour, skills and demand. Attempts to limit the independence of external agencies, such as a country’s central bank, can also lead to inflation as politicians run expansionary policies at the expense of fiscal discipline in order to fuel short-term growth.

Excessive taxation on incomes and capital can discourage labour and productivity-enhancing investment. Taxation on acquired or inherited wealth can lead to avoidance strategies and a shifting of assets offshore. Trade barriers can lead to the suboptimal use of resources under the show of protecting national security interests, when those same resources could have been used in more productive capacities.

Implications for global assets

One of the primary channels by which populism can affect financial assets is through protectionist policies. Countries that impose restrictions on foreign investment may end up limiting the investor base for global assets, resulting in inefficient price discovery and potentially lower valuations. Capital controls – whether designed to alter the composition, size or timing of foreign investments, and/or restrict capital flowing out of the economy – can be harmful to inward investment, particularly if foreign investors are uncertain about their ability to dispose of assets at their discretion. Uncertainty surrounding the conduct of monetary and fiscal policy, too, can weigh on investment decisions to the extent that inflationary policies can lead to destabilising currency depreciation, adding a source of additional risk to the investment.

Foreign capital matters

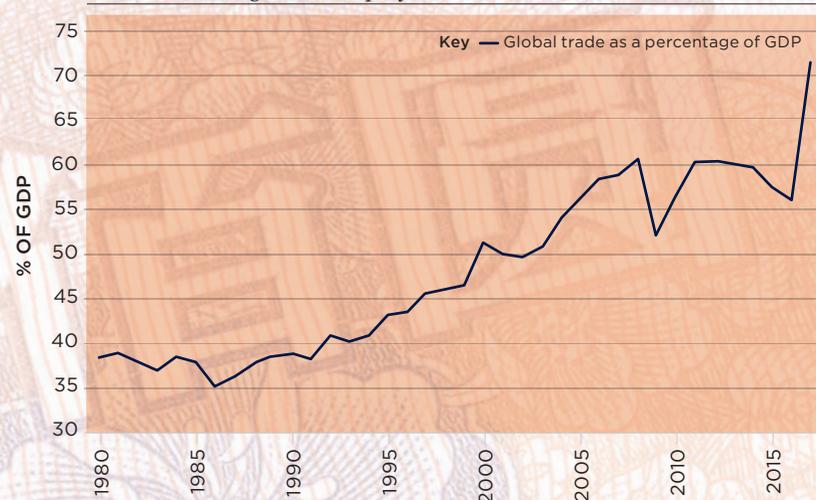
As trade continues to grow (and, indeed, has risen more rapidly than overall GDP), countries such as the US and the UK, which have run trade deficits for decades, should be mindful of their dependence on foreign capital for financing consumption. Trade deficits do not imply a lack of economic health, but rather a dearth of savings versus investment, which must be imported from abroad. Investment from overseas – which includes net purchases by foreigners of equities, corporate and government debt, and real estate, among other assets – plays a significant role in making up for the US and UK’s relative lack of national saving.

As the International Monetary Fund points out in a recent issue of its *Finance & Development* magazine, “Protectionist policies are unlikely to be of much use in improving the current-account balance because there is no obvious connection between protectionism and savings or investment”. However, protectionist policies can act as a disincentive for new foreign investment, necessitating a drop in the value of the foreign currency or an increase in yields in order to drive investment.

“Capital controls can be harmful to inward investment, particularly if foreign investors are uncertain about their ability to dispose of assets at their discretion”

GROSS TRADE AS A SHARE OF GLOBAL GDP

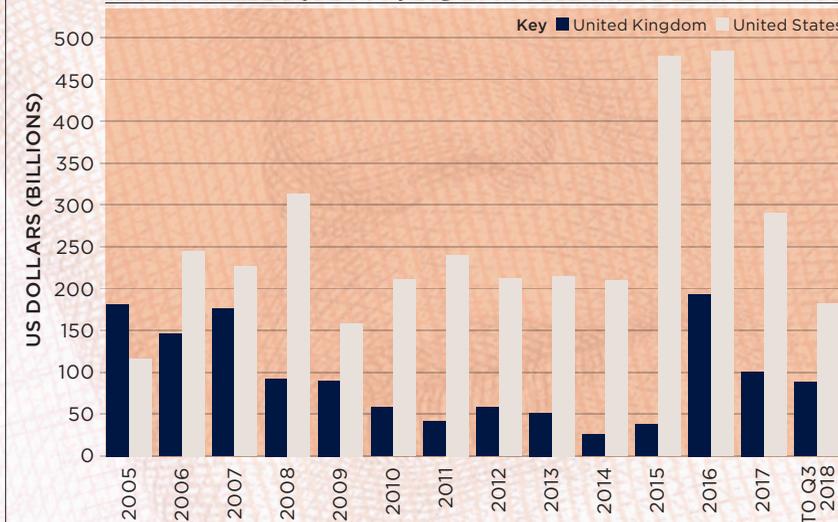
Trade continues to grow more rapidly than overall GDP



Sources World Bank, OECD

FOREIGN DIRECT INVESTMENT IN THE US AND UK

Financial transactions for inward foreign direct investment, directional basis



Note Includes current-cost adjustment for reinvestment of earnings Source OECD

Foreign direct investment

While financial transactions supporting a country’s current-account deficit can take the form of a purchase of fund shares, a bond or currency (to name a few examples), foreign direct investment (FDI) is particularly important. FDI refers to cross-border investments made by residents and businesses from one country into another, with the aim of establishing a ‘lasting interest’ in the country receiving the investment, as measured by a minimum 10% controlling interest. (In contrast, investments with less than a 10% controlling interest are referred to as portfolio investments.) FDI includes the impact of mergers and acquisitions activity, flows from investment in the form of equity and loans, as well as reinvested income, and has been an important source of financing capital for both the US and the UK.

FDI has been linked with greater knowledge transfer and management

expertise, generally leading to increased productivity. As with trade, FDI also stimulates competition and investment in new, more productive technologies. A UK study by the Office for National Statistics showed that firms with inward FDI were 74% more productive than non-FDI firms, with the highest productivity among those with both inward and outward FDI flows, although they acknowledge the relationship is not necessarily causal.

According to a study by the UK’s Centre for Economic Performance that used bilateral flow data to assess how FDI was impacted when countries joined the European Union (EU), membership was found to increase FDI by approximately 28%, and ranged from 14% to 38% depending on the statistical method used. In contrast, no gains were found for membership in groups such as the European Free Trade Association >

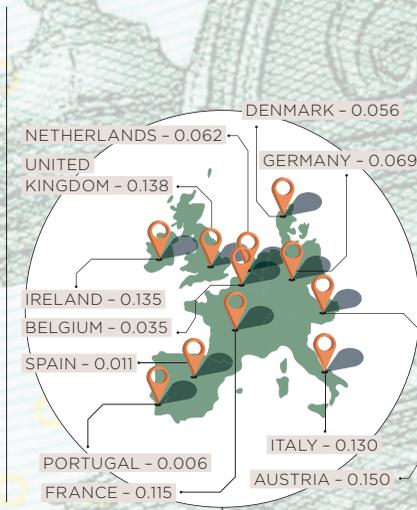
(for countries such as Switzerland, for example). With 43% of the UK's estimated £1.3 trillion stock of FDI having come from other EU members as of 2017 – already down from 51% in 2008 – a reduction in FDI from the EU could prove problematic, particularly if greater FDI is linked to EU membership.

Similarly, the current protectionist trade war between the US and China could imperil FDI flows between the two countries. China's stock of FDI in the US is low – it stood at 1% at the end of 2017 – but had been growing until recently. FDI flows from China into the US, which totalled \$5.1 billion in 2015, rose to \$25.5 billion in 2016 before becoming negative (a net

disinvestment) to the tune of \$500 million in 2017.

The US and UK already have some of the more restrictive policies towards FDI among Organisation for Economic Co-operation and Development (OECD) members. According to the OECD, restrictiveness can take the form of “new rules or more rigorous enforcement of existing ones; greater conditionality attached to regulatory approval mechanisms; or a more expansive notion of strategic industries, the national interest and national security”.

While the absolute level of restrictiveness is still low in the US and UK, the OECD has found evidence that in Brazil, Korea, Vietnam and the Philippines



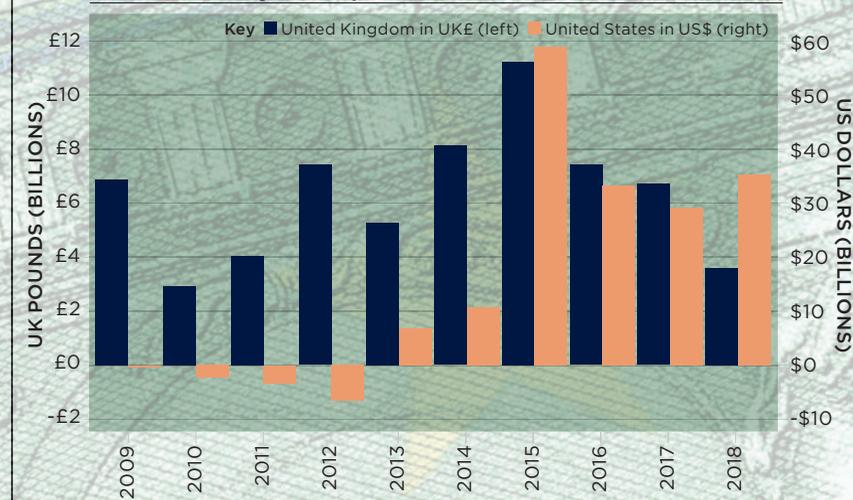
OECD FDI REGULATORY RESTRICTIVENESS INDEX

Levels of regulatory restrictiveness on foreign direct investment



CROSS-BORDER ACQUISITIONS IN THE US AND UK

Net cross-border acquisitions of commercial real estate



Source RCA Note Includes sales of office, industrial, retail, hotel, apartment, seniors housing and care, and development sites/land

– countries with previously high levels of restrictiveness – there has been a clear correlation between improved regulatory reforms and greater FDI inflows. One cannot ignore the possibility that an even greater level of restrictiveness under the guise of protecting national interest could lead to a reduction in FDI.

The future of cross-border real estate acquisitions

While much of inward FDI in the US and UK is focused in financial services, non-residential real estate assets have been a growing area of investment for cross-border investors. Even so, after reaching a peak in 2015, net acquisitions of commercial real estate assets by cross-border investors have declined for the past three years in the UK, even as cross-border activity rose in the US in

2018 (led by the sizeable acquisition of Westfield by Unibail-Rodamco). Slowing global growth (particularly in less open economies) could cause cross-border investment to slow in the year ahead; already, China's government has restricted outbound flows through capital controls amid a decline in economic activity, resulting in a year-on-year decline in cross-border capital from Greater China of 60% in 2018.

It is too soon to tell what long-term consequences a rise in populism will have. An increase in protectionism may raise the return premium demanded by investors as compensation for increased country risk, particularly for less liquid assets such as commercial real estate. To paraphrase a comment from a European Central Bank panel member, there will be no winners under protectionist policies – just different degrees of losers. ■

“In countries which previously had high levels of restrictiveness, the OECD found a correlation between improved regulatory reforms and greater FDI inflows”

11 ways Asia-Pacific will dominate the 21st century

From its growing middle class to its huge demand for infrastructure, the region will play a key role in the coming decades, says Simon Smith, Head of Asia-Pacific Research, Savills

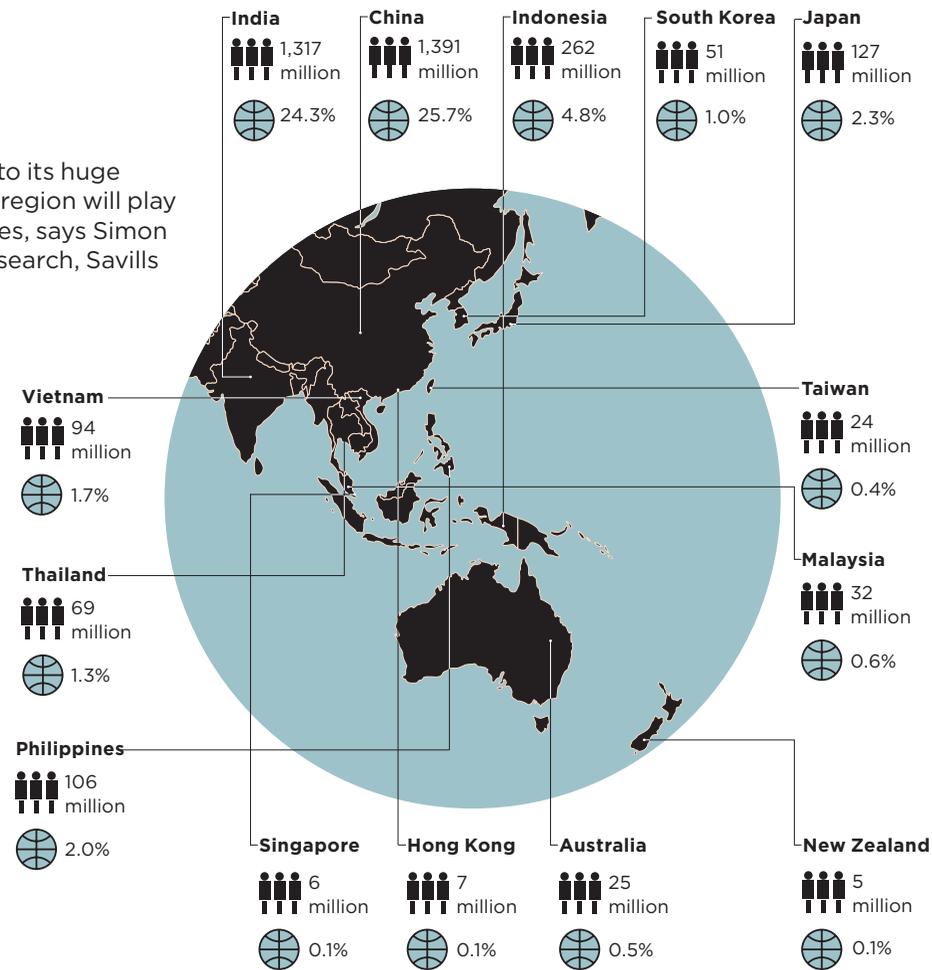
1 The Asia-Pacific 14 account for 65% of the world's population

Sheer population size is one reason why the region will lead the 21st century, especially economically. Asia-Pacific's 14 leading nations – China, India, Indonesia, Japan, the Philippines, Vietnam, Thailand, South Korea, Malaysia, Australia, Taiwan, Hong Kong, Singapore and New Zealand – account for nearly two-thirds (65%) of the world's population.

Key

- Population (millions)
- Percentage of global population

Source Focus Economics



2 The region drives global economic growth

The Asian Development Bank estimates that Asia-Pacific accounted for around 60% of global growth in 2017, and this share will rise further as Asian economies get larger. Last year, China's economy grew by more than \$800 billion, more than the GDP of Saudi Arabia. If we imagine that growth as a national economy, it would be the 19th largest in the world. The region's economic growth will not only lead to demand for real estate as an investment, but also require more real estate development to support it in the future.



3 There are more billionaires in China than in the US

The Hurun Research Institute estimates that there are 658 billionaires in Greater China, compared with 584 in the US. Many of China's super-rich, such as Dalian Wanda's Wang Jianlin (above), made their fortunes in real estate, and still more are shaking property markets the world over, buying up office towers in London and penthouse apartments in New York. India has the next highest number of billionaires in Asia with 104, taking 5th spot globally behind Germany and the UK.

MADE IN VIETNAM

4 South-East Asia will be the next workshop of the world

As employment and land costs rise in China, expect to see more 'Made in Vietnam' or 'Made in Indonesia' labels on goods. Chinese manufacturers are looking to outsource to South-East Asian neighbours, where average wages might be half those expected by Chinese workers. This outsourcing is driving demand for industrial real estate, both for manufacturing facilities and for logistics space to support exports and infrastructure.

5 Demographics are very diverse

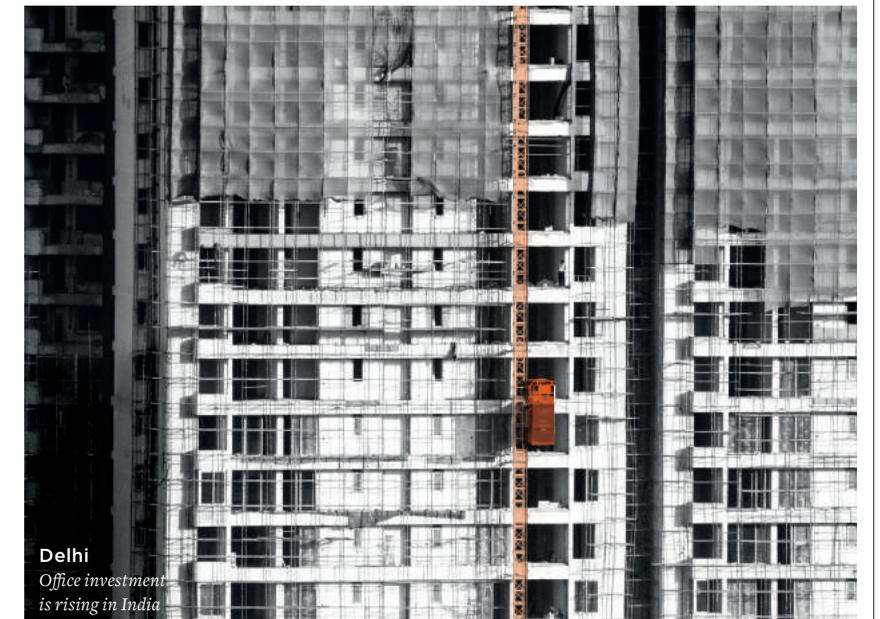
There is a strong polarisation in demographics between Asia's developed and developing nations. Countries such as India and Indonesia have young and growing populations, so there is huge demand for housing and infrastructure. Japan's ageing population is well documented, but fewer people realise that China is ageing just as rapidly. Ageing need not be a negative, however: Japan is set to lead the world in solutions for elderly care – such as Toyota's Kirobo Mini robot, which provides conversation and companionship for the lonely – and for helping older people to remain in or rejoin the workforce. >



Kirobo Mini
Toyota's 10cm-tall companion robot is a conversation partner for the elderly

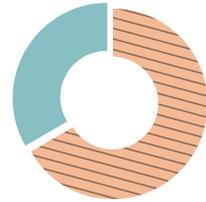
6 India is a sleeping giant

The world's second-most populous nation has lagged behind China in terms of infrastructure and growth. However, with Prime Minister Narendra Modi's stable, business-friendly government at the helm, India is making up for lost time by investing in infrastructure and introducing legislation to boost the economy, including a real estate investment trust (REIT) regime. India overtook China in terms of GDP growth in 2015 and is forecast to grow faster for the foreseeable future. The world's biggest real estate investors recognise this and have begun to invest heavily in office parks and warehousing.



Delhi
Office investment is rising in India

Two-thirds of the global cities with more than 10 million people are in Asia



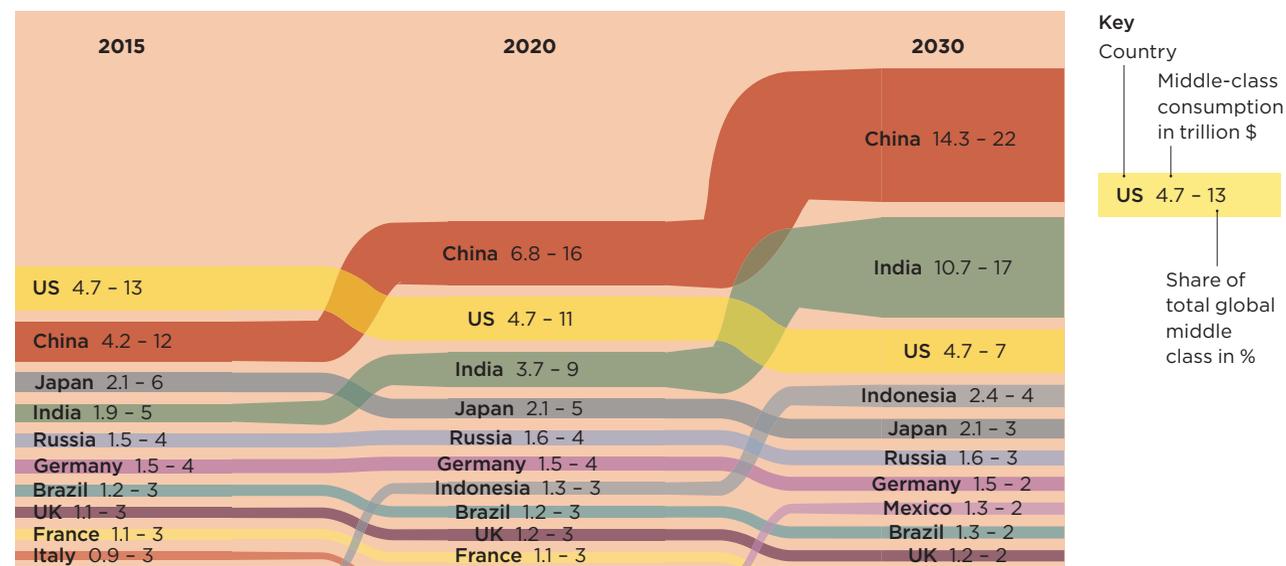
7 Asia-Pacific is home to most of the world's largest cities

The most fundamental driver of real estate markets is urbanisation, and Asia-Pacific is in the midst of an unprecedented migration from rural areas to cities. There are 45 metropolitan areas worldwide with populations of more than 10 million; two-thirds of them are in Asia. Meanwhile, mega-regions such as the Tokyo Bay Area and the Greater Bay Area in southern China are even larger than mega-cities and will be a focus for further urbanisation, growth and development.



CHINA WILL ACCOUNT FOR MOST MIDDLE-CLASS CONSUMPTION BY 2030

The top 10 countries for middle-class consumption – 2015 to 2030



Source Roland-Holst, Sugiyarto and Loh

8 The middle class is growing - and fast

A key characteristic of the world economy in the 21st century has been the growth of the Asian consumer. While the region lags behind the US in terms of GDP per capita, hundreds of millions of Asians have moved into the consuming classes and are buying electronics, branded fashion and leisure experiences as never before. By 2030, more than 60% of the world's middle class will live in Asia-Pacific, and China and India will each account for a greater share of global middle-class consumption than the US.

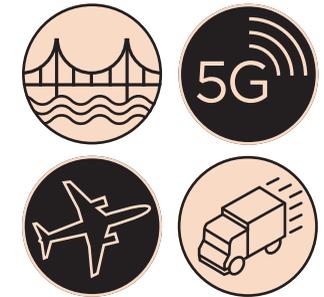


9 China's companies are rising in profile

We are accustomed to US and European brands being globally dominant; everyone has heard of Coca-Cola and BMW. However, Chinese companies are getting bigger and so are their profiles and influence. More than one-fifth of the 2018 Fortune Global 500 companies are headquartered in China. Companies such as Tencent and Alibaba are not quite household names worldwide, but few people are unaware of them.

11 Asia is a growing force in technological innovation

It is a rather tired trope that Asian technology copies the West's. Japan has been an innovator for decades (its high-speed rail network pre-dated the UK's by 50 years) and now China is ahead of global rivals in a number of fields. It is by far the world's largest and most advanced e-commerce market, and has pledged to take a lead in artificial intelligence (AI) technology. The prime challenge for all tech firms is finding and retaining talent: with nearly five million science, technology, engineering and mathematics (STEM) graduates each year, China has an unrivalled talent pool. India comes close, however, with 2.5 million yearly STEM graduates.

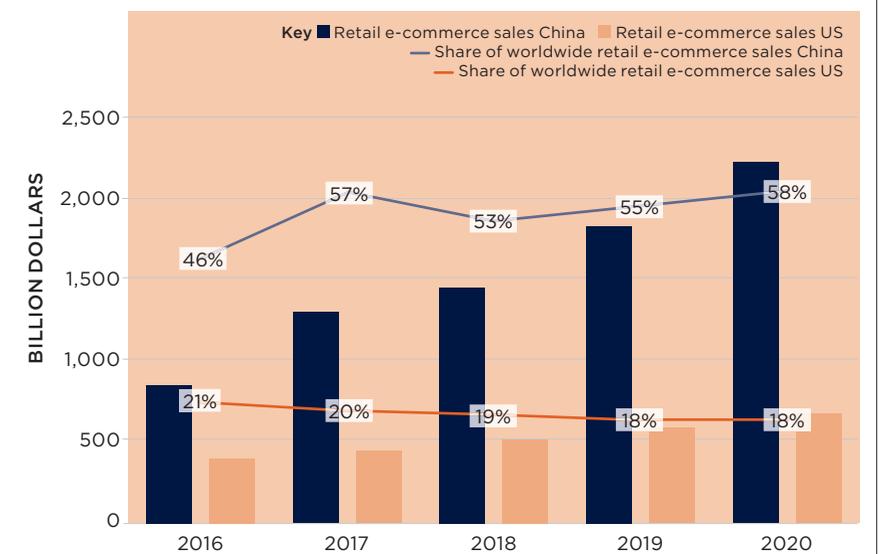


10 Huge infrastructure is in demand

The region's rising population, wealth and urbanisation are generating substantial demand for infrastructure. The World Bank estimates that Asia accounts for more than half of global infrastructure demand. China has the ambitious Belt and Road Initiative, and emerging nations such as India and Indonesia need new roads, airports and power stations. Developed Asia needs renewable, clean energy, 5G mobile networks and same-day delivery. Some developing nations are leapfrogging their developed counterparts: India aims to become a leader in smart city development, for example.

RETAIL E-COMMERCE SALES OF CHINA AND US, 2016-2020

China is the world's largest e-commerce market



Source eMarketer



Altered states: yields, cycles & normalisation

How will global real estate perform over the next five years? And what might this mean for occupational and investment markets around the world, asks Mat Oakley, Head of UK & European Commercial Research, Savills

“The volume of capital invested in real estate rose from \$600 billion in 2008 to \$1.8 trillion in 2018”

According to the legendary investor Sir John Templeton, “The four most dangerous words in investing are ‘it’s different this time.’” However, the period post-global financial crisis (GFC) has been unique in terms of monetary policy, asset pricing and real estate investing.

The key characteristic of the post-GFC period has been how central banks have responded to its aftermath with a remarkably coordinated policy of quantitative easing and lowering of interest rates, to record lows in many domains. These policies were created to stimulate spending, and there can be no doubt that the world’s real estate markets have benefited. Real Capital Analytics estimates that the volume of capital invested in real estate (excluding domestic housing) rose from \$600 billion in 2008 to \$1.8 trillion in 2018. This makes it the most active year ever in the global real estate market, almost 30% higher than the last peak in 2007.

Low interest rates are not the only reason for the boom in interest in real estate as an asset class. Other drivers include financial liberalisation in parts of Asia-Pacific, as well as the rapid growth of some economies in the region. Erratic price movements in resource-producing countries have also played their part, as domestic investors seek to hedge volatility against stability. However, the key driver of the rise in attractiveness of real estate has been its comparatively strong return compared with other asset classes.

Traditionally, property has been positioned somewhere between equities and bonds in terms of investor characteristics and performance. This is certainly true over the long term. Since 1990, the average annual return from the three main asset classes is remarkably similar: UK 10-year government bonds showed 8.4% per annum, the FTSE 100 9.5% per annum and MSCI UK All Property 8.5% per annum. This feels like a rational place for real estate to sit – it is less liquid than equities and offers less security (but more upside) than bonds.

Real estate also has several other reasons to recommend it to the professional

investor. These are well summed up in the Investment Property Forum’s regular publication *Understanding UK Commercial Property Investments*. This guide lists the pros and cons of commercial property as an investment (most of which are relevant to real estate across the world):

Pros

- Physical asset
- Relatively stable income return
- Capital growth potential
- Diversification benefits
- Risk/return profile
- Inflation protection

Cons

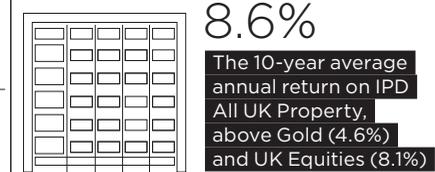
- Heterogeneous
- No trading exchange
- Large lot size
- Valuation, not market prices
- Transaction and management costs

Going back to Templeton’s concern, some of these factors clearly must have changed in the post-GFC period, but these changes probably have more to do with the weakness of other assets than any real difference in the attractiveness of property assets. As the Ten-Year Average Annual Total Return chart (overleaf) shows, property has crept up the comparative returns table, which has undoubtedly led to more money being targeted at the sector.

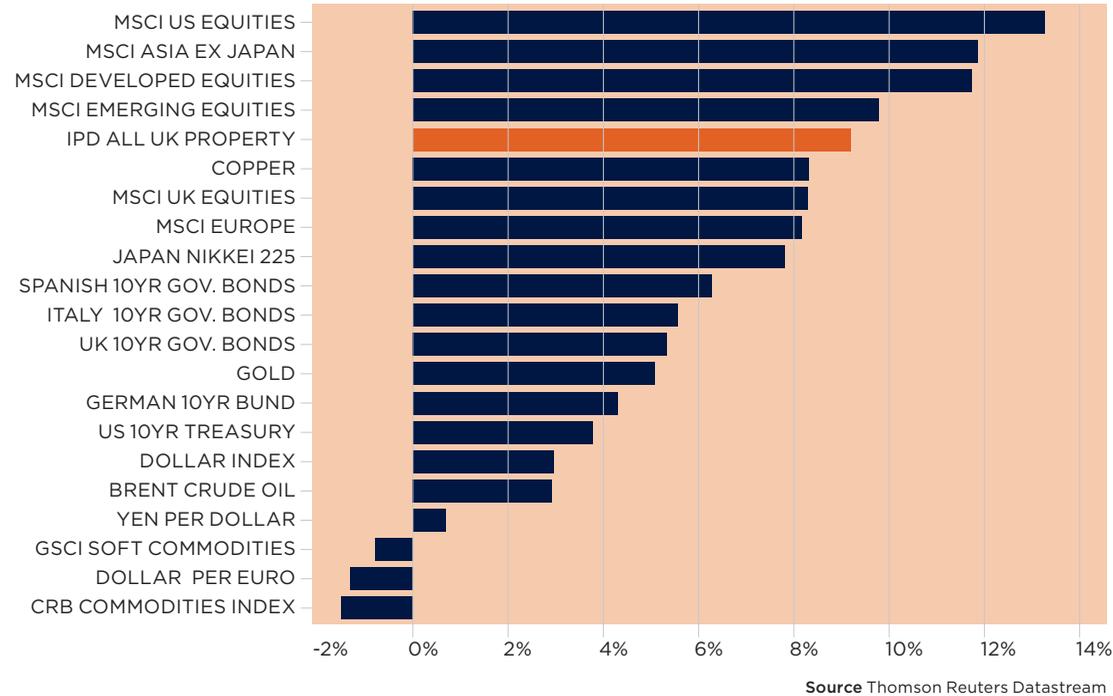
Greater investment in global real estate has led to a steady fall in yields over the last decade and, as the latest Savills World Office Yield Spectrum (see page 33) shows, prime yields in most markets are at, or close to, record lows in most of the world.

Increasing investor demand, rising prices and falling yields have affected far more than just the investment market for property. For example, they have made it less expensive for landlords to aggressively increase concession packages to avoid reducing their gross rents. Mitch Rudin, President at Savills in New York, points out that “these increased concession packages have enabled businesses to spend more on modernising their workspaces >

“As and when interest rates start to normalise, the volume of money targeted at real estate will reduce”



TEN-YEAR AVERAGE ANNUAL TOTAL RETURN (GBP)
To end of December 2018



with the amenities necessary to attract the right talent”. You could argue that one of the most surprising impacts of quantitative easing has been the rise of the wellness and agile working agenda among employers.

However, the fact that most central bankers are talking about ‘normalisation’ of policy rates gives a clear indication that what was different about the past decade could change in the next. It is very unlikely that the rise in interest rates will be as synchronous as the fall. But with the US leading the pack, it is a safe bet that the future path for central bank rates, and hence sovereign bond yields, is upwards.



Of course, rates are unlikely to go up in any one country until economic growth is strong, and strong growth usually leads to strong occupational demand for property – and hence rental growth.

So, what might normalisation of interest rates mean for property pricing? In my opinion, things may be a little different this time. A traditional fundamental pricing model for real estate yields is based around the assumption that the investor borrows money to fund that purchase. Thus, any



From left: Sumitomo Fudosan Roppongi Grand Tower, Tokyo, Japan; Galaxy Soho, Beijing, China; 30 St Mary Axe, London, UK

movement in the risk-free rate of return should (and generally did) have a direct impact on the property yield.

However, a significant regulatory change has taken place since the GFC in terms of lenders’ attitudes to risk. Not only has the average loan-to-value on real estate lending fallen from 90%+ to 60%+, but the type of deal that lenders are prepared to lend on has also changed significantly. This, combined with a degree of risk aversion among borrowers, means that not only is there less speculative property development taking place around the world, but also that a far lower proportion of real estate investments



are at risk of bank-led disposals if the market cycle turns down.

This means that, as and when base rates do start to rise in any domain, a similar rise in yields is by no means guaranteed. Indeed, the relationship has never been particularly strong unless rents have been falling during a period of rising base rates.

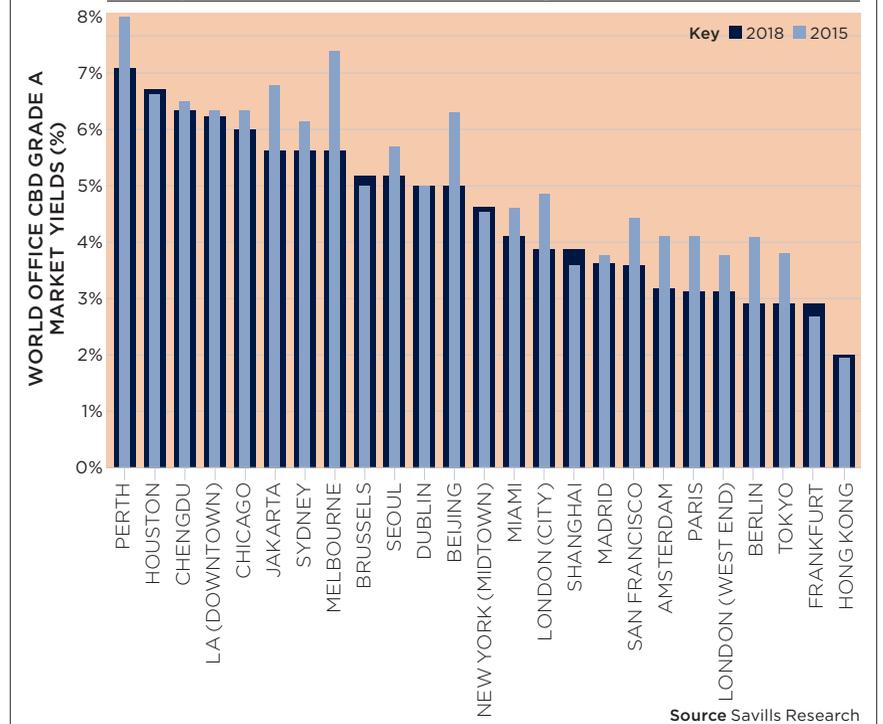
The relationship between base rates and property yields has also been further complicated by the type of investor that has been dominant in global real estate markets in the past few years. The rise of the global income-focused institution has increased the demand for stable returns. Many such investors now view property as more of an infrastructure play than a capital value-focused one. This has reduced the need to buy at the bottom and sell at the top, and led to a dramatic rise in interest in subsectors such as logistics and student housing that deliver a low but stable yield.

While the link between real estate yields and base rates has become less strong, it is by no means broken. Investors who look across a multitude of asset classes, and particularly those in search of longer-term secure income streams, will reach a point where the yield on sovereign bonds becomes attractive enough again to suggest a relocation of some money away from real estate and back into bonds.

So, as and when interest rates do start to normalise, the volume of money targeted at global real estate will reduce. This, in turn, will reduce downward pressure on yields on the most ‘dry’ and ‘core’ assets. Indeed, the mere fact they are rising might not be the most relevant factor as, according to Simon Hope, Global Head of Capital Markets at Savills, “any perceived risk around rising interest rates does not lie in the rise itself, but rather the rate at which the rise occurs”.



YIELD COMPRESSION: GRADE A OFFICE YIELDS
Selected global cities from the Savills World Office Spectrum



However, I do not expect real estate yields to move in lockstep with base rate rises, as the global appetite for income-producing assets will remain strong. This then creates opportunities for those investors whose business model has always been about creating the product that more risk-averse investors want to buy. Arguably, the rising prices and falling yields of the past decade have made it harder for value-add and opportunistic investors to source development and asset management opportunities, and modest rises in yields should make this easier in the years to come.



So, are things going to be different this time? Well, yes. But only slightly. And the difference is more about returning to pre-GFC normality. Once again, the best opportunistic investment strategy will be the traditional one of buying short income and turning it into long. As ever, out-performance will come from local market knowledge, an understanding of the structural changes affecting occupational demand, and an ability to look behind the headlines and focus on fundamentals. ■



From left: European Central Bank, Frankfurt, Germany; Four Towers, Madrid, Spain; Empire State Building, New York, US

“The trade in so-called ‘blue water’ is a major concern in achieving sustainable agriculture targets”

Feeding the nine billion

Agriculture’s huge thirst for water and changing patterns in global protein consumption mean we must change the way we grow and consume food. Synthetic burger with a side of crickets, anyone?

Words: Emily Norton and Ian Bailey, Savills Rural Research

As global populations grow – to a predicted nine billion by 2050 – and diets evolve, sustainability becomes an increasingly significant issue. Resources (particularly land and water) are limited and consumer behaviour is changing. Food producers cannot ignore these factors and need to address whether they are supplying what the consumer wants, at the right price, at a sustainable cost and to the right location.

Agriculture sustainability is a global concern. One country cannot export its problems to another and claim a successful reduction of an issue such as carbon emissions or water use. Countries need to explore the tensions between consumer demand and productive capacity.

Water sustainability

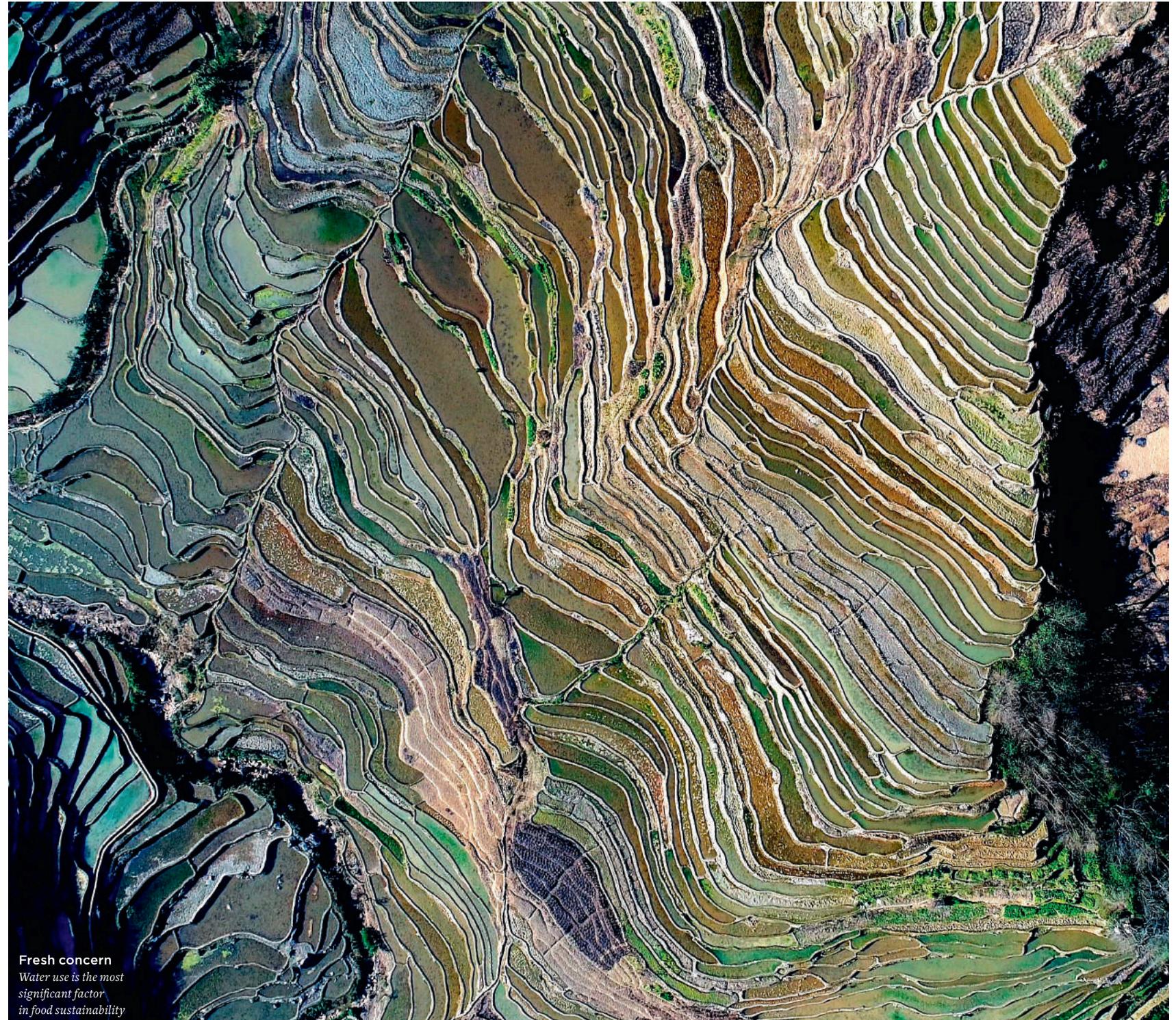
Consumers in developed nations are now accustomed to accessing a wide selection of fresh produce, regardless of seasonality. Imports have been the only way to meet this demand. For these countries, this trade in so-called ‘blue water’, net imports of water in food, is a major concern in achieving sustainable agriculture targets.

In 2018, the Economist Intelligence Unit (EIU) published its Global Food Sustainability Index, covering 67 of the world’s major agricultural producers. Each country is ranked by indicators across three primary categories: food loss and waste, sustainable agriculture and nutritional challenges. The EIU’s research shows that the UK, Germany and Japan were the worst offenders for importing high levels of water contained in fresh produce to meet off-season demand.

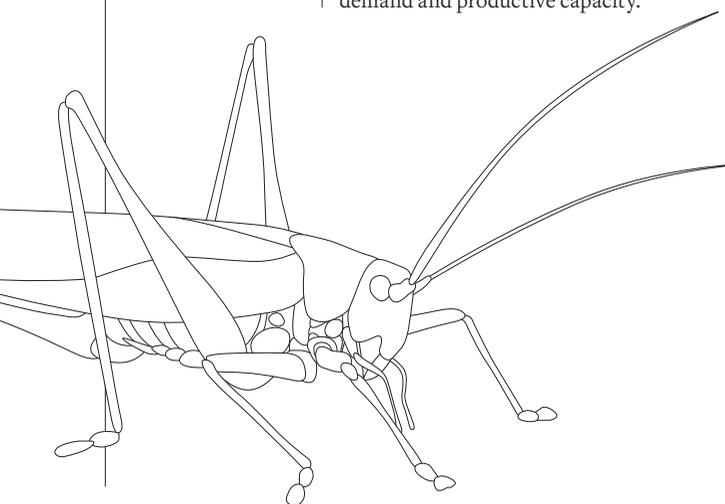
According to the UN, water is the most important resource in terms of sustainability and the environmental impact in the production of our food. But, as noted above, trade in fresh produce is only one part of the water sustainability dynamic. Another consideration is meat production.

Protein production

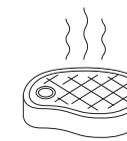
Savills Research has created a single metric to evaluate the sustainability of protein sources, taking into account greenhouse-gas emissions, and land and water use. Looking at eight sources of >



Fresh concern
Water use is the most significant factor in food sustainability



“Insects can eat almost anything and still produce clean protein, thanks to their filtration system”



2017 meat consumption (tonnes per year)
EU 35,303,250 < China 69,594,642
2027 consumption (OECD prediction)
EU 35,888,919 < China 79,876,290

protein – poultry, milk, beef, lamb, cereals, pulses, insects and synthetic protein – we compared the water and land required to produce one gram of protein, as well as the resulting greenhouse-gas emissions.

Our research shows that, to produce the equivalent amount of protein, the environmental impact of lamb is less than half that of beef. Poultry is 19%, cereals 9% and insects almost zero (see below).

Insects also have an impressive capacity for converting food into body mass. The conversion rate for cattle is 10%; for insects, it is 90%. What’s more, insects can eat almost anything and still produce clean protein, thanks to their bodies’ filtration system. Insect protein can also be turned into flour, added to bread or substituted for soya in animal feed.

These statistics do not take into account the positive environmental impact of grazing systems in regenerative and sustainable agriculture production. Nor do they account for the negative environmental impact of controlled environment agriculture (sheds and greenhouses) in replacing natural environmental growing systems, such as fields. Nonetheless, it is a valuable metric to put consumption patterns in context.

Changing global consumption

In the EU, annual meat consumption has plateaued at around 69kg per capita. Between 2007 and 2017, there was a reduction of around 2kg each for both red meat and pork, with poultry – generally acknowledged as a less resource-intensive meat – making up the difference with an increase of 4kg in the same period.



The switch from red to white protein has also been observed in the US, amounting to a combined EU and US reduction in greenhouse-gas emissions equivalent to taking around 600,000 passenger vehicles off the road.

A bigger concern is the dietary trend of other economies, particularly that of developing nations such as China. These are pushing global diets in the opposite direction, with severe implications on the world’s farmland and water stocks. In 2017, China consumed more meat in weight than Europe and the US combined. It was the

Growing trends
Vegetarian and vegan options are tempting many in the US and EU away from meat

first time this had happened, and the OECD predicts the gap will widen.

With a population of 1.4 billion, compared with 838 million across the EU and US, the change in Chinese dietary patterns already dwarfs any savings achieved by the EU and US in reducing the negative impacts of meat production.

Combined EU and US meat consumption stands at almost 700 million tonnes per year (84kg per year per person). If a growing Chinese population consumed the same amount, the additional strain on the environment would be the same as an additional 158 million cars on the world’s roads. And this only considers China. Brazil and South Africa are also showing similar patterns with respect to growing populations and meat consumption.

The planet’s ability to sustain global growth towards the already high consumption benchmarks seen in western diets is questionable. A rebalancing of global meat production and consumption seems a necessary outcome if the planet is to meet sustainability targets.

In the UK, the dietary recommendation for red and processed meat consumption is 70g per day (the equivalent of two rashers of bacon). If this were standardised across the world, global production would need to increase by 6.5% compared with current production levels.

The barriers to achieving this rebalancing seem insurmountable: both a major realignment of national trade policies to meet global supply-and-demand requirements, alongside a substantial shift in global diets, would be necessary.

Key issues that need to be addressed are whether food policy in developed countries will support consumers in switching to healthier diets, and whether developing countries will leapfrog the excessive growth phase seen in the West and balance meat consumption at more sustainable levels.

Sustainable agriculture remains a challenging aspiration. But with resource pressures mounting, and international reporting frameworks such as the UN’s Sustainable Development Goals and Food Sustainability Index, real progress looks more likely. ■

FRESH OPPORTUNITIES FOR REAL ESTATE

Synthetic protein
Commercial lab-grown protein is gaining credence in consumer and innovation communities, with serious investment in the US in particular. It will require a new type of food manufacturing premises, but the feedstocks are still grown in fields. Demand for arable land will not abate.

Prime meat production
If alternative proteins are used in processed-food markets, prime grazed meat that contributes to an ecosystem and achieves the highest welfare should continue to find markets. Farms that can support this output remain valuable.

would reduce the negative impacts of water abstraction. Creative implantation of sustainable drainage schemes and infrastructure investments could offer attractive returns in selling to commercial water users facing restrictions in groundwater abstraction.

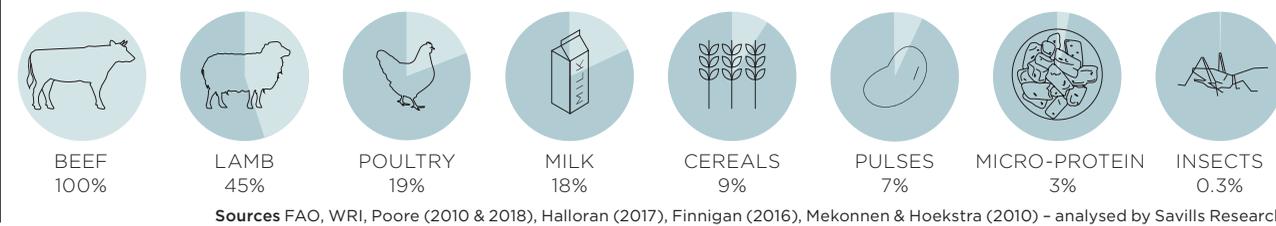
Insect protein
A dietary staple in the Far East, insect protein is attracting interest both as a human food and for animal feed supply chains. As with all forms of controlled environment agriculture, the biggest investment is heat, but excess heat can be recycled, for example, by utilising waste-heat sources. The margins look tight in commercial property, but allied to waste-processing facilities, the opportunities to provide feed to poultry and fish look good.

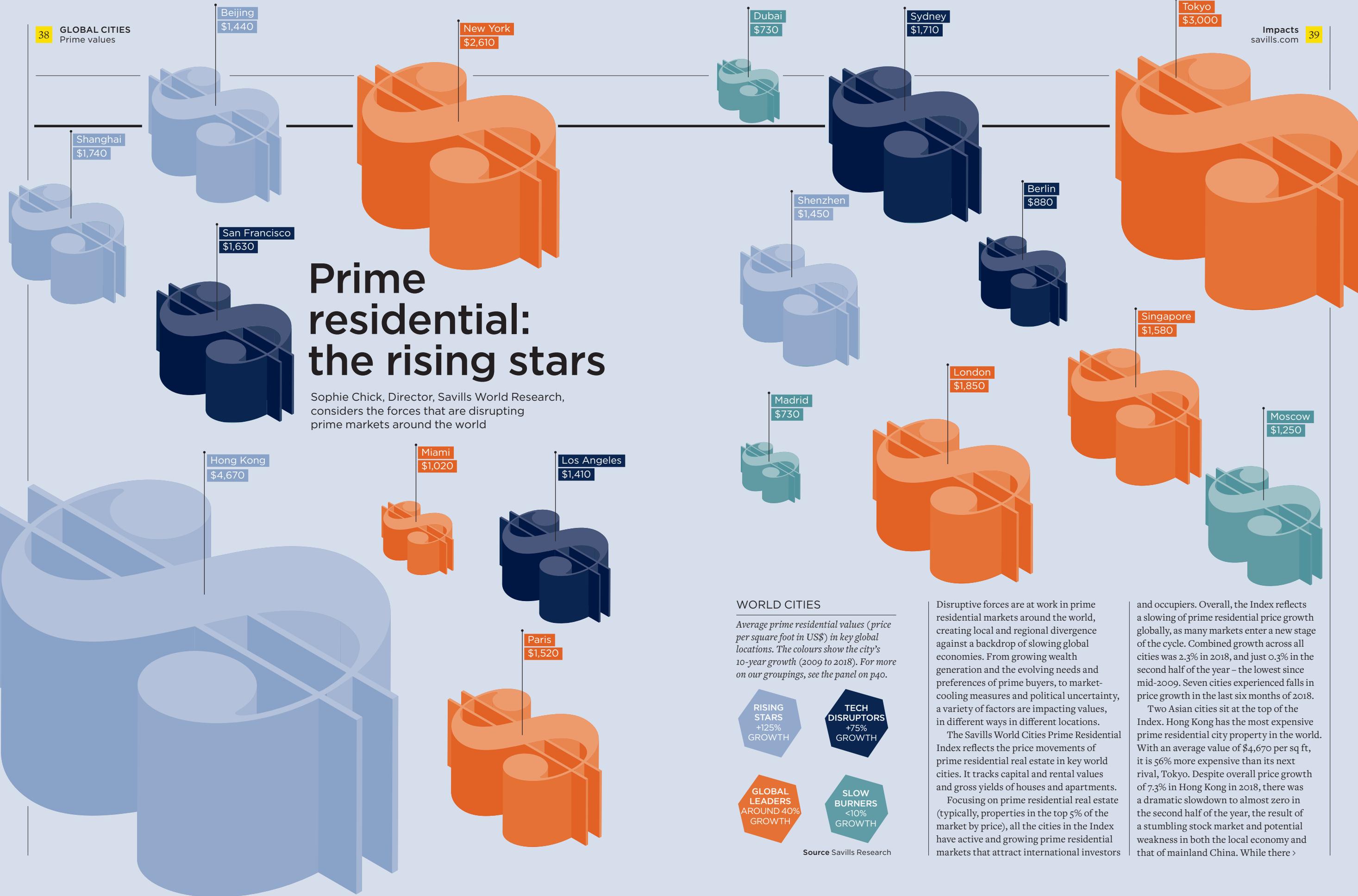
Recreation and forestry
Poorer-quality land that misses out from future public environmental subsidy may decline in value. If these farms can find new opportunities in the push for environmental services, including forestry, and the carbon storage and tourism markets, values may be sustained or enhanced.

Vertical farming
As well as consumer education, shifting off-season production of salad and vegetable crops into controlled environment agriculture systems, such as vertical farming, may be a viable opportunity. Getting the market right is as important as understanding the infrastructure and technology. Minimising energy costs is vital, but finding proximity to consumers, or high-value end uses, is critical.

Water management
To reduce water usage, initiatives to capture waste water from commercial or residential sources and divert it to irrigation

ENVIRONMENTAL IMPACT OF PROTEIN PRODUCTION
In terms of water and land use, and greenhouse-gas emissions, compared with beef





Prime residential: the rising stars

Sophie Chick, Director, Savills World Research, considers the forces that are disrupting prime markets around the world

WORLD CITIES

Average prime residential values (price per square foot in US\$) in key global locations. The colours show the city's 10-year growth (2009 to 2018). For more on our groupings, see the panel on p40.



Source Savills Research

Disruptive forces are at work in prime residential markets around the world, creating local and regional divergence against a backdrop of slowing global economies. From growing wealth generation and the evolving needs and preferences of prime buyers, to market-cooling measures and political uncertainty, a variety of factors are impacting values, in different ways in different locations.

The Savills World Cities Prime Residential Index reflects the price movements of prime residential real estate in key world cities. It tracks capital and rental values and gross yields of houses and apartments.

Focusing on prime residential real estate (typically, properties in the top 5% of the market by price), all the cities in the Index have active and growing prime residential markets that attract international investors

and occupiers. Overall, the Index reflects a slowing of prime residential price growth globally, as many markets enter a new stage of the cycle. Combined growth across all cities was 2.3% in 2018, and just 0.3% in the second half of the year – the lowest since mid-2009. Seven cities experienced falls in price growth in the last six months of 2018.

Two Asian cities sit at the top of the Index. Hong Kong has the most expensive prime residential city property in the world. With an average value of \$4,670 per sq ft, it is 56% more expensive than its next rival, Tokyo. Despite overall price growth of 7.3% in Hong Kong in 2018, there was a dramatic slowdown to almost zero in the second half of the year, the result of a stumbling stock market and potential weakness in both the local economy and that of mainland China. While there >

“The effects of market-cooling tax regimes are being felt in many world cities, affecting capital value growth”

THE BIGGER PICTURE

Looking back at the prime residential markets over the past 10 years, it is the rise of Asian cities that is the standout trend. There has been astonishing growth from China’s Rising Stars, which have shown a price increase of more than 125% in 10 years. For Hong Kong, this reflects its appeal as a world-class city with strong economic performance. Others, such as Shanghai and Shenzhen, are seeing strong growth off a low base and the impact of rising middle-class wealth, as well as an affinity for investing in real estate.

Behind these are the Tech Disruptors, a group of four cities that have achieved more than 75% growth, as their tech reputations are cemented. Los Angeles has a lower average cost at \$1,410

per sq ft, while San Francisco is \$1,630 per sq ft. Coming next, with around 40% growth, are the Global Leaders, a group of cities with strong track records for luxury residential. The cheapest of these is Miami at \$1,020 per sq ft, while the most expensive is Tokyo at \$3,000 per sq ft. First, prices in Berlin (\$880 per sq ft) are substantially lower than those in prime Paris (\$1,520 per sq ft). Berlin also recorded the highest growth of any city in the Index, up 9.1% in 2018. Paris and Madrid showed price increases too, of 4.5% and 4.3% respectively.

This leaves the Slow Burners, three cities that have had growth of less than 10%. For Madrid (\$730 per sq ft) this has been caused by high levels of distress and supply in the residential market following the global financial crisis. Moscow and Dubai, with average prices of \$1,250 and \$730 per sq ft respectively, have been dogged by political uncertainty and lower oil prices.

have been several major deals that have continued to grab the headlines, both townhouse and luxury apartment price growth has flattened.

Dubai experienced the largest fall in prime residential prices in 2018, with a 6.1% drop to \$730 per sq ft. Here, the market has failed to bounce back from its decline, coinciding with a fall in oil prices and high stock levels.

Where HNWIs are heading

Top-tier world cities, such as London, New York, Hong Kong, Singapore, Los Angeles, Sydney and San Francisco, have long been the first choice for prime buyers. Now, when high-net-worth individuals (HNWIs) look to purchase prime property, Germany is an increasingly attractive location.

First, prices in Berlin (\$880 per sq ft) are substantially lower than those in prime Paris (\$1,520 per sq ft). Berlin also recorded the highest growth of any city in the Index, up 9.1% in 2018. Paris and Madrid showed price increases too, of 4.5% and 4.3% respectively.

We have also seen how Chinese buyers are seeking to diversify. As well as the top-tier cities, they are increasing their presence in continental Europe. In part, this is driven by a recovering economy and better availability of large new-build projects in key European cities.

Politics and policies

The effects of market-cooling tax regimes are being felt in many world cities, affecting capital value growth, as the Influence of Tax chart shows (see right).

“In London, higher rates of stamp duty were introduced in December 2014, there has been an additional tax of 3% for second homes, plus changes to capital gains and inheritance taxes,” says Lucian Cook, Head of UK Residential Research at Savills.

“But the gradual price decline since 2014 has been less about changes to property taxes and more about political uncertainty, such as the 2015 general election and the EU referendum in 2016.”

In mid-2016, Sydney introduced a 4% surcharge purchaser duty for foreign buyers,

SAVILLS WORLD CITIES PRIME RESIDENTIAL INDEX

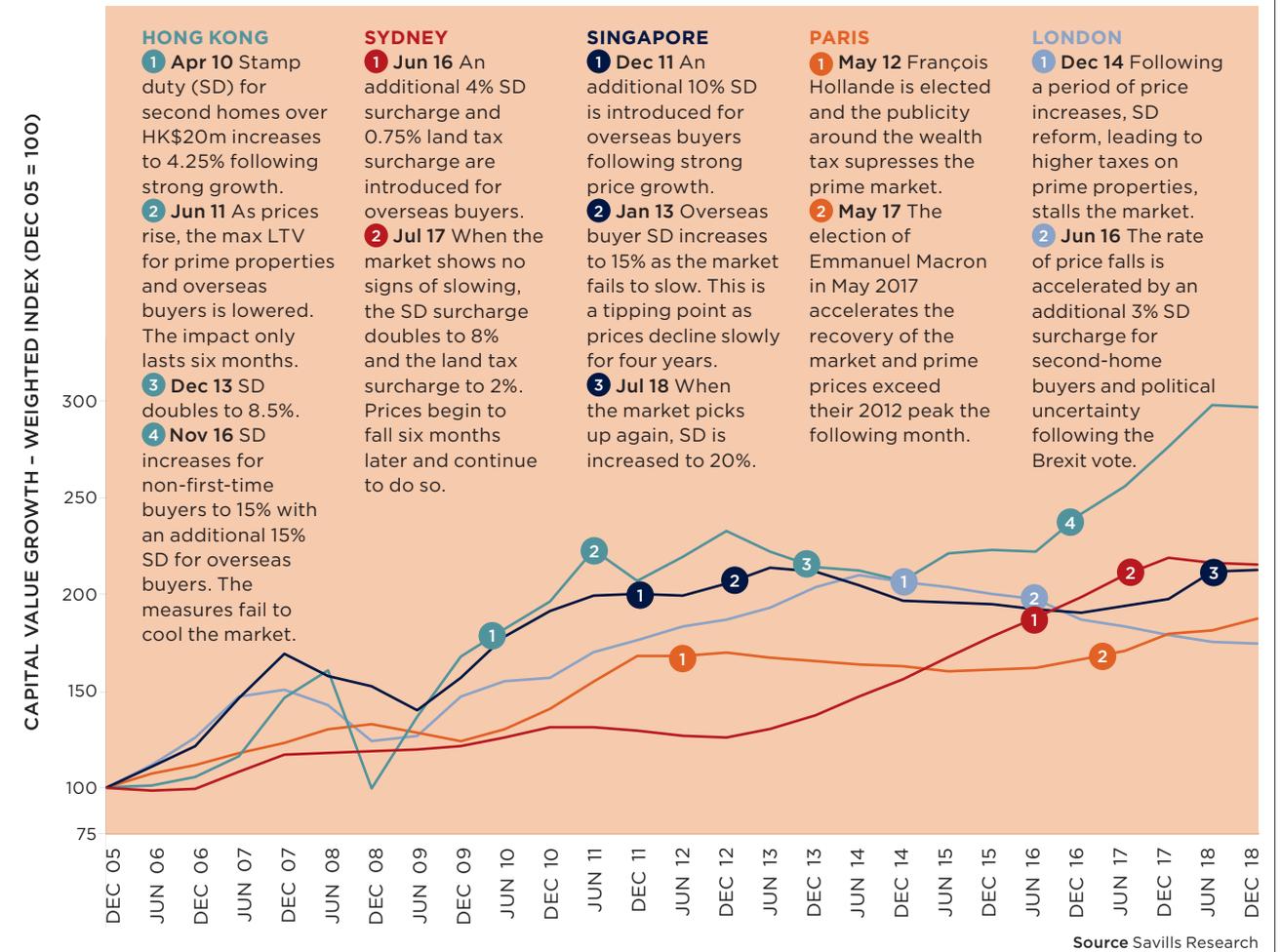
Change in values in key global locations to December 2018

City	6-month change	1-year change	10-year change
Berlin	3.8% ↑	9.1% ↑	119.1% ↑
Paris	3.5% ↑	4.5% ↑	41.4% ↑
Shanghai	2.4% ↑	7.9% ↑	133.3% ↑
San Francisco	2.2% ↑	6.9% ↑	80.4% ↑
Tokyo	1.8% ↑	5.6% ↑	44.6% ↑
Madrid	0.9% ↑	4.3% ↑	-12.4% ↓
Los Angeles	0.5% ↑	1.9% ↑	75.2% ↑
Singapore	0.4% ↑	7.7% ↑	40.2% ↑
Beijing	0.0% –	-1.7% ↓	321.7% ↑
Miami	-0.1% ↓	0.5% ↑	38.8% ↑
Shenzhen	-0.2% ↓	4.8% ↑	387.5% ↑
Hong Kong	-0.4% ↓	7.3% ↑	200.0% ↑
Sydney	-0.6% ↓	-1.7% ↓	80.3% ↑
London	-0.7% ↓	-2.6% ↓	41.4% ↑
Moscow	-1.6% ↓	-4.8% ↓	5.2% ↑
New York	-3.1% ↓	-4.3% ↓	40.4% ↑
Dubai	-3.1% ↓	-6.1% ↓	-28.5% ↓

Source Savills Research

THE INFLUENCE OF TAX AND POLITICS ON CAPITAL GROWTH

The impact of taxation policies and political events



doubling it to 8% just a year later when the market failed to show any signs of slowing down. From late 2017, prices for prime residential did start to fall. This was in line with the wider mainstream market, which has also slowed through affordability issues for buyers and tighter lending policies.

The Singapore Government was keen to slow price growth, introducing a 10% additional buyer’s stamp duty (ABSD) for non-Singaporeans in late 2011. This was later increased to 15% in 2013 as it had not had the desired effect of slowing prices. The market had a gradual price decline for

around four years, but picked up in late 2016. As growth accelerated in early 2018, the ABSD was raised again to 20%.

Looking ahead

Despite forecasts that show global economic growth will slow modestly, demand for prime residential real estate is expected to continue to be supported by a growing population of HNWIs. Locations that are considered a safe haven to store wealth and offer a secure income stream are forecast to be top of buyers’ lists, with mainland Europe poised to benefit from its ability

to offer lower entry prices and greater potential for growth.

The US prime residential market is likely to continue to slow after eight years of sustained growth, as interest rate rises impact purchaser activity, and major markets such as New York and Miami grapple with high supply of new stock. While the prime markets in some of the most internationally invested cities have largely taken cooling measures in their stride, slowing growth means further taxes on overseas buyers are less likely in the near term. ■

San Francisco

As with other US cities, holding and selling costs are high, while buying costs are low. Over a five-year hold, property taxes amount to almost 6% of the purchase price, while selling costs are a little over 6%.

New York

Although buying costs are low, New York has the highest disposal cost of these cities, at close to 8%. This is driven by high agency fees, a factor for other US cities too. In addition, for foreign sellers, 10% of the sales price is withheld until all taxes are paid.

London

Brexit aside, this is one of the most accessible cities. Although buying costs are close to 10% of the purchase price, low holding (0.7%) and selling costs (2.3%) make London 12th overall. There is an additional 3% stamp duty tax for second homes payable by domestic and foreign buyers alike.

Paris

Buyers in Paris face a more evenly weighted split of taxes. Purchase and selling costs are 7% and almost 5% respectively. With holding taxes over five years of 4.2% (only Madrid beats that in Europe at 5.5%), Paris ranks seventh overall.

Berlin

Driven by a property transfer tax of 6% and agency costs of 7%, Berlin is the third most expensive city in which to buy a second residential property. However, the exit is easier. There are no costs to sell as the agency fee is fully covered by the buyer.

Moscow

With no stamp duty and just a \$65 registry fee, Moscow is the cheapest of our global cities in which to buy a second residential property. The main costs come when it is time to sell, with the 3.5% agency fee paid by the seller.

Dubai

International buyers will find a low overall cost to buy (5%) and sell (1%) in Dubai. With holding costs of 0% (as is the case with Beijing and Shenzhen), Dubai ranks 14th in overall costs.

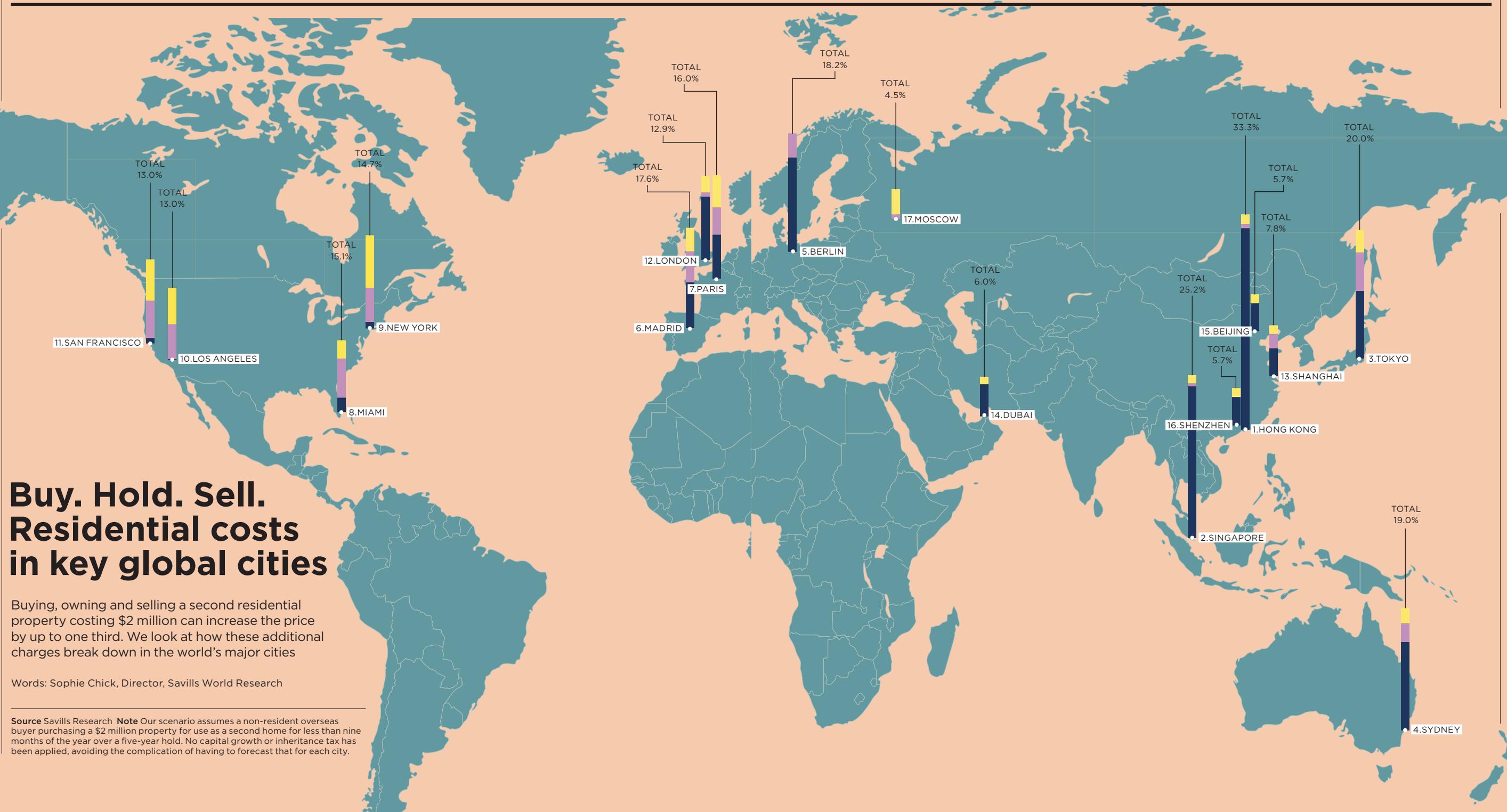
Hong Kong

Overseas buyers face an additional 30% stamp duty charge, making Hong Kong the most expensive city for overseas buyers. There is also a penalty of between 10% and 20% for speculators who try to sell within three years of purchase.

Sydney

In 2017, New South Wales doubled stamp duty for foreign buyers from 4% to 8% in an effort to cool price rises in Sydney. The city is the fourth most expensive place to buy and fourth for overall costs.

Key ■ Cost of buying ■ Holding cost (5 years) ■ Cost of selling



Buy. Hold. Sell. Residential costs in key global cities

Buying, owning and selling a second residential property costing \$2 million can increase the price by up to one third. We look at how these additional charges break down in the world's major cities

Words: Sophie Chick, Director, Savills World Research

Source Savills Research **Note** Our scenario assumes a non-resident overseas buyer purchasing a \$2 million property for use as a second home for less than nine months of the year over a five-year hold. No capital growth or inheritance tax has been applied, avoiding the complication of having to forecast that for each city.

The global flow of wealth

Globally mobile individuals shape prime residential markets around the world, but activity is changing

Words: Paul Tostevin, Director, Savills World Research

While mainstream residential markets are driven by domestic buyers, prime property is affected by the world's high-net-worth individuals, who relocate and buy additional homes for business and leisure. London, New York, Hong Kong and Singapore remain among the most globally invested cities, but buyer demand is diversifying. Here are three key trends.

1. Iberia is back in vogue

A recovering housing market has put Spain back on the map for a broad range of international buyers. Once dominated by the British, other Northern Europeans are now active – Germans and Scandinavians particularly so. Madrid and Barcelona have global appeal, with demand from Russia and the Middle East, and there is rising activity from Spanish-speaking South Americans. In Portugal, international buyers have transformed the Lisbon market, attracted to its historic centre. Many entrants – particularly those from Brazil, South Africa, Russia and Turkey – took advantage of Portugal's golden visa programme. Other EU citizens, notably the French, are attracted by its non-habitual residency scheme.

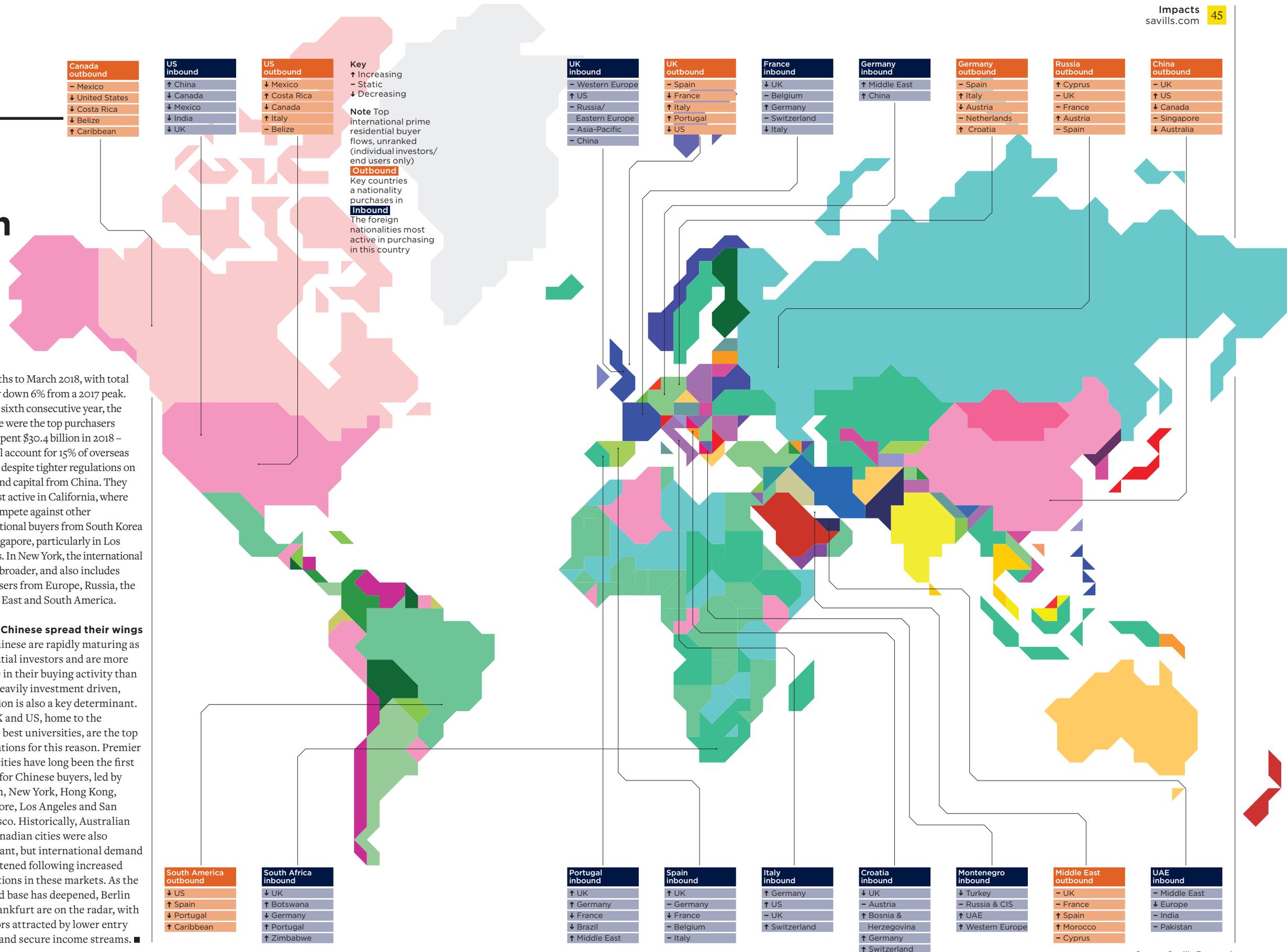
2. International activity declines in the US

Overseas buyers accounted for 8% of all home sales in the US in the

12 months to March 2018, with total activity down 6% from a 2017 peak. For the sixth consecutive year, the Chinese were the top purchasers – they spent \$30.4 billion in 2018 – and still account for 15% of overseas buyers, despite tighter regulations on outbound capital from China. They are most active in California, where they compete against other international buyers from South Korea and Singapore, particularly in Los Angeles. In New York, the international base is broader, and also includes purchasers from Europe, Russia, the Middle East and South America.

3. The Chinese spread their wings

The Chinese are rapidly maturing as residential investors and are more diverse in their buying activity than ever. Heavily investment driven, education is also a key determinant. The UK and US, home to the world's best universities, are the top destinations for this reason. Premier world cities have long been the first choice for Chinese buyers, led by London, New York, Hong Kong, Singapore, Los Angeles and San Francisco. Historically, Australian and Canadian cities were also important, but international demand has softened following increased restrictions in these markets. As the demand base has deepened, Berlin and Frankfurt are on the radar, with investors attracted by lower entry points and secure income streams. ■



Token investment

Dividing up assets into digital securities could revolutionise real estate investment. Welcome to tokenisation, says Steven Lang, Director, Commercial Research at Savills

SO HOW DOES TOKENISATION WORK?

Let's take a property worth \$20 million as an example. The quantity of tokens issued could be determined by the value of the property – in this case creating a supply of 20 million tokens worth \$1 each, which are then listed for sale on an online platform. An individual could choose to buy anywhere between one and all 20 million tokens – and sell any number of them at any time. A share of the income is determined by the number of tokens owned.

Four hundred years ago, the Dutch East India Company became the first publicly traded company. By offering bonds and shares to the general public to raise capital, it created a new tradeable marketplace. But, while the concept of fractional ownership is not new, a fresh approach to real estate investment is: tokenisation. As the name suggests, this is the process of 'tokenising' real estate: breaking down ownership of real-world assets into tokens, or digital securities. These tokens run on a blockchain – the technology underpinning cryptocurrencies such as Bitcoin and Ether. Despite the well-documented fluctuations of cryptocurrencies, the blockchain itself is fundamentally sound and incredibly useful: a decentralised, irrefutable and secure platform on which trade of tangible assets is possible.

Blockchain technology has many potential applications for real estate – enabling tokenisation is just one. So, it comes as no surprise that real estate companies are embracing the benefits for owners and investors across all sectors.

Julian Kwan, founder and CEO of InvestaCrowd, a digital securities investment platform and ICTX digital securities exchange for secondary trading, is based in Singapore and believes the technology offers clear benefits. "Property owners can issue blockchain-enabled tokens or digital securities, but many only wish to part-sell their ownership rather than the whole asset," he says. "Importantly, the investor can sell their shares in a secondary market online at any time. Tradability and liquidity are both enhanced – with associated cost and time savings. It's super exciting, with all the benefits that the digital security layer adds. Speed of transaction is also a clear benefit."

However, in these early stages, for the marketplace to succeed, there needs to be an underwriter, a regulated group to assist in the creation of compliant tokens, an exchange (marketplace) in which these tokens can be traded and, of course, willing buyers and sellers to create liquidity.

Tokenisation creates fragmented ownership, but within a private market. With more than \$300 billion of cross-border investment in 2018, the enhanced capability of investors to provide private equity is an attractive proposition for owners of all types. Not only are relatively 'private' markets now accessible by smaller investors, but the fees and the time taken to execute deals can also be drastically reduced.

The Asian markets are currently leading the way. One of the benefits of the blockchain is that title searches

and transfers can be verified instantly – particularly important in Asia's developing markets, where security of title can prove difficult for investors. "It will increase the efficiency of real estate transactions," says Troy Griffiths, Deputy Managing Director of Savills Vietnam. "Vietnam has the potential to quickly follow this trend, as the population is young and eager to embrace new technology, while policymakers are forward-thinking."

Tokenisation will impact on every process that we see today, agrees Chris Marriott, CEO of Savills South East Asia. "The digitalisation of real estate ownership is a natural progression and emerging companies are raising venture capital today to help solve the perceived inefficiencies with the ownership of commercial real estate," he says.

So what does the future hold? The adoption of tokenisation will increase over time, but it's difficult to predict the speed at which it will become more mainstream. However, the ecosystem around it is growing, and credible companies are emerging. The prospects for growth are certainly bound by the regulators, but it is encouraging to see new methods of ownership – such as the IPSX commercial real estate exchange – meeting regulatory approval in the UK. This reimaging of real estate investment presents opportunities to change the way property is owned – and bodes well for the future of tokenisation. ■

"Property owners can issue blockchain-enabled tokens, but may only wish to part-sell their ownership rather than the whole asset"

“Full-time workers increasingly want to feel the co-working spirit in their offices”

The sharing principle

Collaborate, connect, share: the world is being shaped by the values of a new generation. Eri Mitsostergiou, Director of European Research at Savills, explains how they are making real estate sit up and take note

Young people love to collaborate. For them, connecting with other people, either through planned meetings or serendipitous interactions, is valuable professionally. It helps enrich their communities.

Co-working was the first place we saw this trend, as young companies deliberately chose open-plan offices with other businesses and freelancers to share and innovate together. Now, this format is transforming the office sector. Full-time workers also want to feel the co-working spirit in their offices, and employers are seeing the benefit of fostering this culture.

Co-working was responsible for 9.9% of office take-up in Europe in 2018, led by the global brand WeWork, which took one-third of the space. Stockholm and Brussels had the highest rates of take-up at almost 25% and 22% respectively, followed by Birmingham, London and Paris at about 15%. Now, traditional landlords, such as British Land and The Crown Estate in the UK, and Tishman Speyer in the US, have launched their own co-working brands.

The concept has also extended to homes. Co-living is becoming a housing option of choice for millennials in large cities, as they can live in a community and socialise and exchange ideas with like-minded people. Brands in this space include The Collective in the UK, Common, WeLive and Roam in the US, and You+ and Harbour in China. The format is competing with traditional residential markets, which struggle to keep pace with growing urban populations and their evolving needs.

Space as a service

Flexibility is another core value for millennials. In response to the financial crisis and the emergence of more sophisticated mobile technology, the gig economy has cemented employment where professionals make money by sharing their skills and talents directly with consumers. Sometimes, this is their main income, while for others it's a 'side hustle'. But in all cases, these professionals want their workplace to suit this flexibility.

This is a trend that corporate occupiers now want to be part of. They are taking space in co-working environments, particularly with teams that grow and

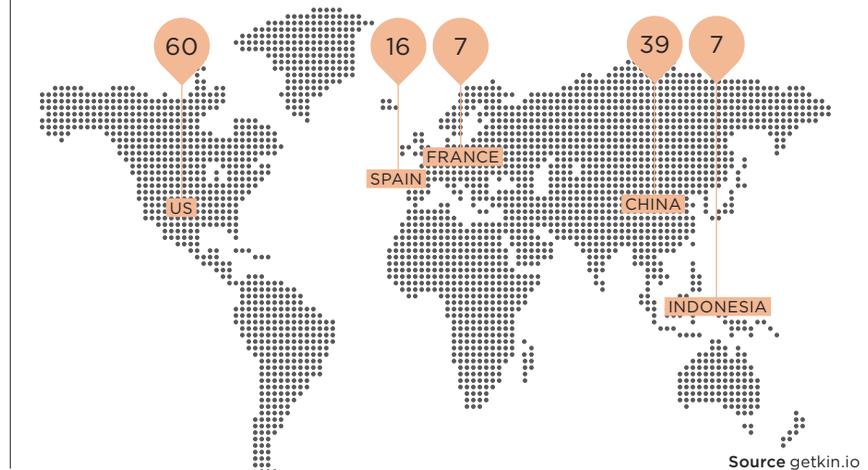
shrink in response to market forces. This flexibility is good for the economy. It not only allows businesses to expand and contract more easily, but also compels traditional landlords to work harder to keep tenants and become operators of 'space as a service'. This is likely to start a trend towards traditional lease terms on conventional office space being shortened.

Landlords will also increasingly join forces with specialist operators to help them maximise the potential of their assets through branding, marketing and active management.

A move towards shorter lease terms will also change the role offices play in >

A DESIRABLE HOUSING OPTION FOR MILLENNIALS

The most co-living spaces – top five countries



Source getkin.io



In France, specialist food retailer Grand Frais is managed by local, self-employed artisans

THE VALUE OF SHARING SPACE

A sense of sharing is also permeating regular multi-tenant offices, with corporates now less guarded about issues of confidentiality that have kept companies rigidly apart. "The place called 'work' is happening all around us," says Katrina Kostic Samen, Founder and Managing Partner of KKS, and current President of the British Council for Offices. "Employees have to use their judgement on confidentiality issues but corporates are now more understanding about sharing space."

This could be shared social or meeting spaces, or, in the instance of KKS, letting out co-working desks to two complementary companies. "It allowed me to build in flexibility and bring diversity into my design world with revenue-supporting expansion," says Kostic Samen.

For landlords, it allows for a creative way to use space that might not be leased traditionally – either by providing shared space or co-working options. However, there is still some way to go before landlords are doing this more willingly. "For the landlord to give up space for the betterment of the totality, the sticking point is the investment value," says Kostic Samen, with valuers still focused on ring-fenced 25-year leases. "The whole world of valuation has to change to pick up these pieces."

an investment portfolio – income is less secure, but the risks can be reduced through better active management. Office property cash flows will require an operational approach, similar to the practices we see in the hospitality sector. In the US, we already see examples of landlords entering into management agreements with flexible office space operators to minimise voids and maximise their buildings' potential through shorter lease agreements.

Experience versus material goods

Younger generations seek experience rather than material goods. This is partly due to necessity: in difficult economic times they want to get the most enjoyment out of what they have. The spirit of this value is reflected in Airbnb. The effects are already being felt in the hotel industry, which is taking Airbnb seriously as a competitor. Consumers choosing a hotel instead of Airbnb are now seeking a more personal

experience, and the industry is starting to respond by offering more boutique hotels in niche locations, and a focus on individual experience whether through architecture, the design of common areas or cuisine, such as The Student Hotel.

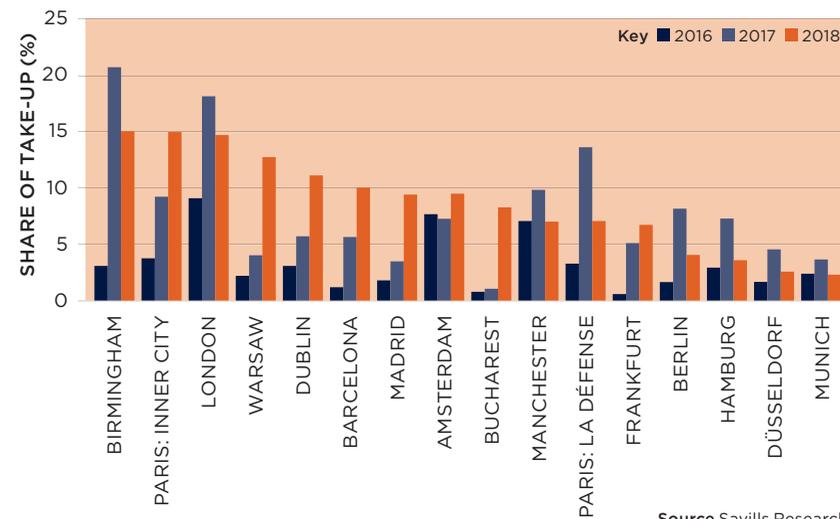
With large purchases, such as cars and houses, increasingly out of reach of young people, they are craving ownership less. For them, to borrow or share is a more efficient and environmentally friendly option. Again, Airbnb is a good example. Some are treating the service as quasi-residential, renting in different cities for three or six months.

Co-living/co-working concepts targeting mobile professionals, such as Outsite and Nomad House, are also responding to the needs of 'digital nomads': young, adaptable people who avoid traditional leasing and ownership arrangements.

Car-sharing is also a mainstay for the younger generation, many of whom believe they will never need to own a vehicle. Instead, they rely on cheap and readily available services such as Uber, Lyft in the US, Zipcar in the UK and GoGet in Australia. This is influencing residential values by providing access to locations that aren't well-served by public transport. Suddenly, the benchmark of the affordable late-night cab home has opened

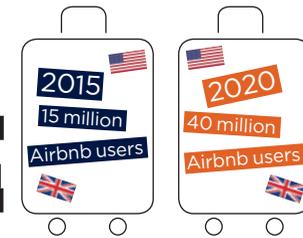
FLEXIBLE OFFICE TAKE UP

The collaborative, innovative co-working spirit is driving demand across Europe



Source Savills Research

The number of Airbnb users in the US and Europe is predicted to reach 40 million by 2020



Source Morgan Stanley via Statista

"With purchases such as cars and houses increasingly out of reach, young people are craving ownership less"

up new locations. As we move towards self-driving cars, this will also reduce car ownership and the need for parking spaces. Some car parks and garages may become redundant and emerge as possible future redevelopment opportunities for uses such as residential, or last-mile delivery centres.

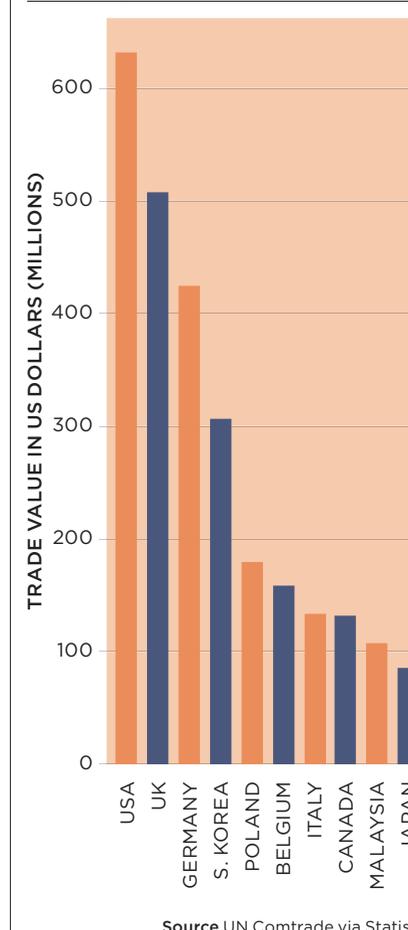
Changing behaviour

With a less predictable life path than their parents' generation and so much new technology, younger people are more adaptable, and more open to alter their behaviour to satisfy other values, such as ethical consumption. For example, they see how much clothing people buy and then dispose of quickly. These generations are likely to support a more evolved sector of second-hand goods. We already see this in major cities globally where there are a growing number of shops with well-selected second-hand items.

Another response to changing consumer ethics and preferences is co-retailing,

MATERIAL GAINS

The value of the second-hand clothes market



Source UN Comtrade via Statista

where business hosts offer designers, local producers and start-up retailers the chance to share space, often on flexible lease terms. This gives them the freedom and flexibility to experiment and engage with the community in order to try their products. Bulletin in the US supports female-led, online-only brands, while in France, Grand Frais is a food specialist managed by self-employed artisans. The produce is primarily locally sourced and in limited amounts, which helps keep stock costs down.

Work-life balance

This millennial generation has it right when it comes to work-life balance. By making the most of technology, people are freer to work and live how and where they want. Real estate cannot fall behind in this shift in attitude. From co-working and co-living to providing personalised experiences, the heart of this change for the real estate industry will be about service.

Hybrid concepts are emerging, combining workspace with retail, student housing with hospitality, living with working. Real estate owners will be expected to offer service and experience. They will need to be closer to their consumers, working harder to remain attractive to tenants and residents, and providing easy, flexible and social environments for people to live, work and play. Only then will it have the attention of the younger generation. ■

MAKE IT PERSONAL: HOW TO MARKET TO MILLENNIALS

Connecting with the younger generation is a challenge that all businesses face, even ones such as Unilever, whose products are used by 2.5 billion people a day. "We have hyper-empowered consumers with a remote control to the world – a smartphone – that enables them to search for free, post for free, watch videos for free and connect with brands, whether that is Savills or Hellmann's Mayonnaise," says

Keith Weed, Chief Marketing Officer at Unilever.

For Unilever, this means getting closer to individual consumers. "We used to have a very broadcast approach to marketing, and it is now actually narrowcast," Weed says. "We have more access to first-party data so we can engage directly with individuals on content and advertising and sales." One example is Unilever's

successful company Dollar Shave Club, which is a direct-to-consumer razor business.

Weed says brevity and accessibility are the way to catch consumers' attention. "People are engaging with content in a casual manner in all sorts of different places. They could be looking at content on the bus or train, or while waiting for a cab," he says.

Consumers are also backing products that they see as

purpose-driven, such as Dove, with its body-positive attitude, or Ben & Jerry's, with its focus on social justice in business. "These purpose-led brands are growing 46% faster and delivered 70% of our growth," says Weed, with a growing number moving out of the niche or premium space and becoming mainstream.

**“Private offices
now comprise 25%
of floorspace in
co-working facilities”**

The smart route to a collaborative office

Wellness and technology are combining to disrupt the traditional office market. The solution? A compelling, collaborative approach

Words: Melissa Marsh, Managing Director of Occupant Experience, Savills

Employees are turning away from the traditional 9 to 5 and embracing flexible ways of working. As a push for wellness and technology reshape how people can and want to work, businesses seek flexible solutions offering more than just square footage for rent. Here are 10 ways offices can change for the better...

1 Design to get people moving

Buildings need to change their shape so that active experience is preferred over inactive. A staircase, for example, could be positioned at the building’s perimeter to give rewarding views the higher you climb, with point-of-decision prompts such as signs at lifts to encourage use. Daylight is important, too – not only for lighting the space efficiently, but also to support the body’s natural circadian rhythms.

2 Promote total wellness

The social component of health can be an important factor in improving behaviour. This could take the form of a fitness app that encourages people to compete with one another, or a workplace community manager who introduces yoga classes instead of doughnuts. Such efforts may need an initial investment, such as access to a suitable space. According to research published in the US healthcare journal *Health Affairs*, medical costs fall \$3.27 for every dollar spent on wellness programmes. Absenteeism costs fall by \$2.73.

3 Play to the senses

Of the five senses, smell and taste may be the two that we consider least in an office environment. Smell is associated with memory – retailers and hospitality brands often use signature scents to create memorable multi-sensory experiences. Scent solutions such as soaps and candles

in toilets are low-cost, yet show occupants that you’ve considered their full sensory experience. Taste can be as simple as providing good-quality coffee to demonstrate that you’re doing more than the bare minimum, or offering a varied and nutritious selection of snacks.

4 Put people in control

Technology that ensures comfort, enables customisation and gives a sense of ownership is in demand. For example, as part of their workplace experience solution, Comfy offers an app that “empowers employees to control all aspects of their workplace – including easily finding amenities, seeing and booking available workspaces, and adjusting temperature and lighting to their personal preferences,” says Erica Eaton, VP of Business Development and Strategy at Comfy. “Comfy aggregates data from employees’ interactions with the app and layers that with data from different building systems to drive the optimal use of the building,” she says.

5 Empower with technology

Amenities can improve comfort, productivity and satisfaction – but only if they are managed well. As offices and their occupants generate increasing amounts of data, there is a need for leadership at the intersection of people, place and technology. A building technology officer can use the data to make a case for change in the workplace. They may also have expertise in design or social science and combine these disciplines with the technology to enable the community to thrive.

6 Engage people with data

Occupants of smart buildings want to know how their data is being used. Tools such as fingerprint access or facial recognition

need to balance security and privacy. Digital services that people already use, such as Google Maps and ride-hailing apps, have helped them to become more comfortable with sharing information – users recognise that doing so will enable a better experience.

7 Embrace flexibility

Private offices now comprise 25% of floorspace in co-working facilities, according to the latest survey from Deskmag. Cal Lee, founder and Head of Workthere, a Savills venture that helps businesses find flexible space, believes people often confuse the term ‘co-working’ with ‘flexible working’. Companies taking private offices are buying into the culture, he says. >



“It’s about community aspects; they want to meet and collaborate with companies, attend the free events and enjoy simple perks, like free breakfast or cake.”

8 Stand out from the crowd

As co-working operators proliferate, Lee predicts a shift towards niche strategies. “These could be sector-specific, so tech, retail, fashion or arts-led, with the operator curating the mix of companies,” he says. Hong Kong-based The Executive Centre, which has been operating for 25 years, is one example. “It’s a mystery why all these co-working options are competing with a nearly identical product,” says CEO Paul Salnikow. “Our response to the expanding market has been to become even more premium, and we have redoubled our efforts to differentiate.”

9 Learn from great places

While businesses are buying into flexible space, Amanda Stanaway, Global Head of Workplace at the architecture firm Woods Bagot, says there is still much to learn: “What is consistent is the domestication and decorporatisation of the workplace,” she says. “There is also a drive for service.” The Dutch hotel brand citizenM optimised underused space in hotels for communal workplaces. Co-working spaces are offering increased service and experience, delivering workplace densities often double that of the traditional office.

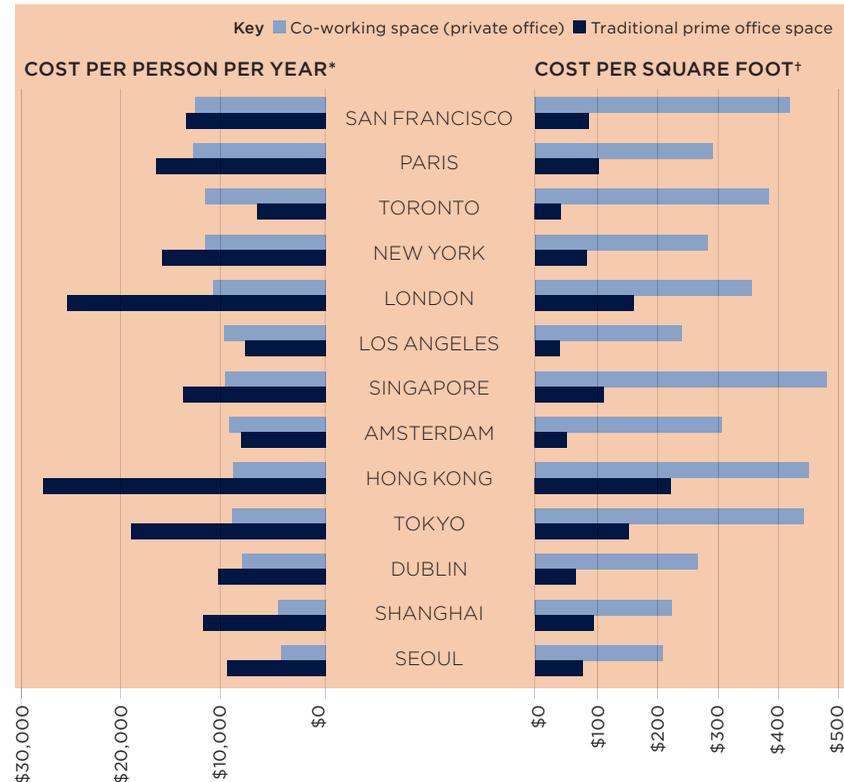
10 Offer more than space

Co-working is, in part, about building and managing a successful ecosystem. Providers

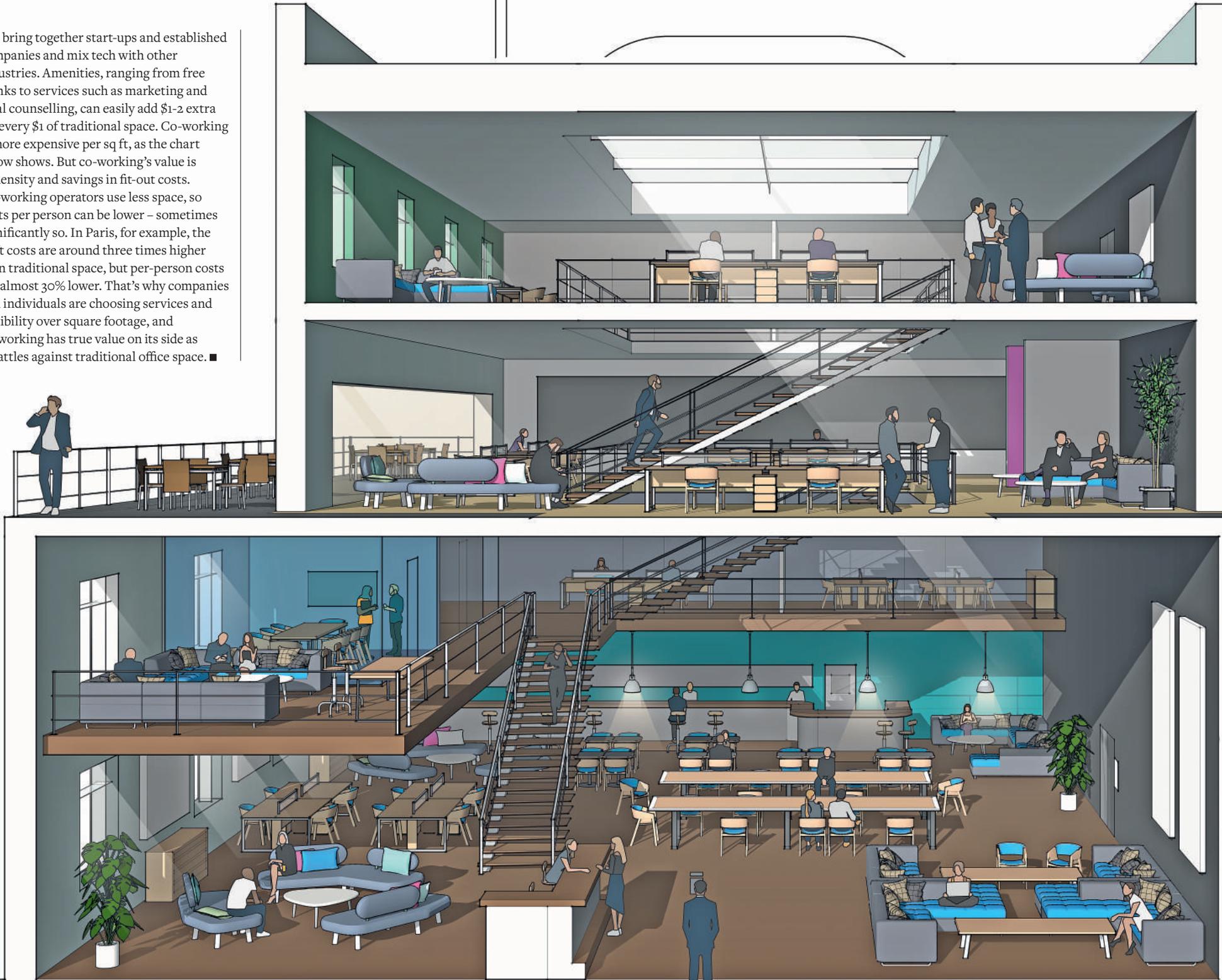
can bring together start-ups and established companies and mix tech with other industries. Amenities, ranging from free drinks to services such as marketing and legal counselling, can easily add \$1-2 extra for every \$1 of traditional space. Co-working is more expensive per sq ft, as the chart below shows. But co-working’s value is in density and savings in fit-out costs. Co-working operators use less space, so costs per person can be lower – sometimes significantly so. In Paris, for example, the sq ft costs are around three times higher than traditional space, but per-person costs are almost 30% lower. That’s why companies and individuals are choosing services and flexibility over square footage, and co-working has true value on its side as it battles against traditional office space. ■

OCCUPANCY COSTS COMPARED

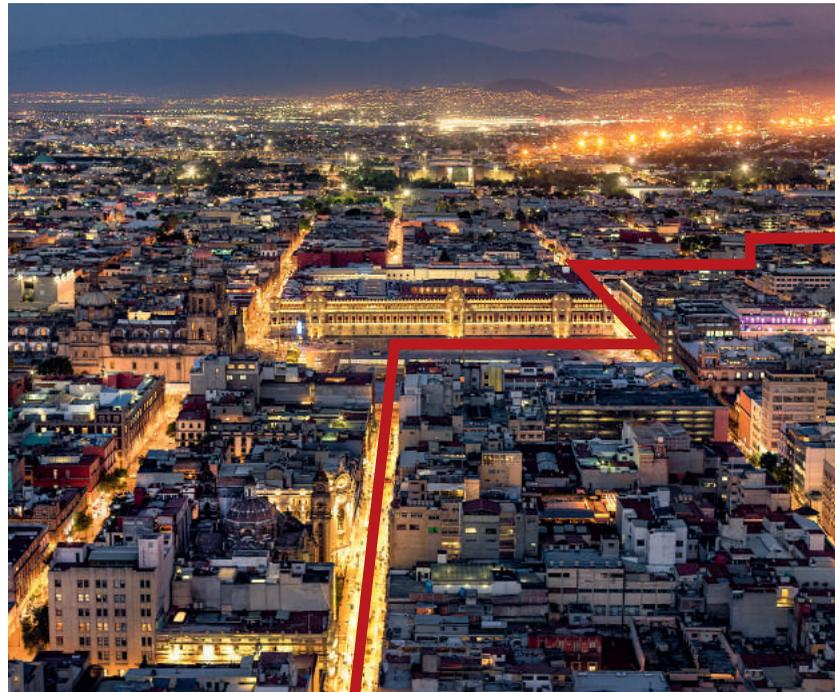
Density matters: the value of co-working analysed on a per person basis



Note *Co-working: annual cost per person. Traditional: annual occupancy cost per person including fit-out costs. †Co-working: annual sq ft cost per person. Traditional: annual occupancy cost per sq ft
Source Savills Research



Mexico City is the most congested city in the world. Congestion increases travel times by 63%



Going the extra mile

For any package, the last mile of its journey is the least efficient. The solution? Delivery facilities closer to population centres, says Kevin Mofid, Director, Commercial Research at Savills

Along with the usual business mail and packages, a city-centre office can now expect a steady delivery of goods as employees take advantage of their workplace as a drop-off location for online shopping. What sets the office apart from home deliveries is the additional resource needed to deliver to a busy, congested environment far from a handy warehouse.

For cities everywhere, it's just one example of how urban logistics is becoming more complex, putting pressure on the existing road network and demanding more space from urban real estate.

In his 2016 book *The Geography of Transport Systems*, Jean-Paul Rodrigue defines urban logistics as "the means over which freight distribution can take place in urban areas as well as the strategies that can improve its overall efficiency while mitigating congestion and environmental externalities". Essentially, this means locating warehouse facilities close enough to their final delivery points while avoiding as much traffic congestion as possible.

So how big an issue is this for the real estate sector? With the rise of e-commerce fulfilment, the emergence of mega-regions and the continued focus

on the environmental concerns of such activities, the real estate needs of tenants occupying urban warehouse space is expected to change in the future. Indeed, the EU's 2011 transport White Paper established a goal stating the need for a zero-emissions strategy for urban logistics by 2030.

Should this emerge into policy, it would suggest that more delivery facilities are required closer to population centres.

Delivering the right location

Whereas industrial real estate is focused around the production of commodities, urban logistics is about the distribution of those commodities – in particular the last leg of the journey to the consumer, wherever they may be at the time.

At present, these real estate facilities tend to be on the outskirts of cities. Although supply networks are in place, they were built to serve bricks-and-mortar high-street shops rather than the multitude of delivery destinations, such as customers' homes and workplaces.

If we take London as an example and examine the variables that make it a beacon of interest in urban logistics, we can see a number of property and non-property factors working together to create disruption.

London's logistical requirements

First, the property factors. London has an extremely low vacancy rate for warehouse property at just 2.5%. Indeed, the stock of warehouse property has been steadily declining as space has been lost to higher-value uses, such as residential.

In addition, rents for warehouse space within the city boundaries far exceed those further out. For example, all parts of London now record warehouse rents in excess of £11 per sq ft (£30 has recently been achieved for units smaller than 5,000 sq ft in the capital's Zone 2 area).

Even at £11 per sq ft, this rent would still be about 50% higher than rent in areas located further away, such as beyond the M25 – London's orbital motorway.

Non-property factors at play include a very high population density and, crucially, an extremely high daytime population.



According to the London Datastore, there are approximately two million commuters and tourists in the city at any one time. This impacts supply chains, as workers have online deliveries sent to their offices, and the food supply chain caters for many more people than the population would suggest.

High need, low supply

London also suffers from severe traffic congestion. During the day, it is almost impossible to travel across the city in less than one hour, meaning that warehouse units on one side of the city can really only serve that particular area. Congestion is even more severe in other cities, as the chart below shows – London doesn't even rank in the top 25. This suggests that these cities will be high on the list to benefit from urban logistics innovation.

Lastly, the UK has the highest online retail penetration rate in Europe with figures recently reaching 21.4% and rising.

The additional deliveries associated with this form of retail mean that extra warehouse space is required in a market where the supply is already low. When the online retail rate hit 11% in the UK we saw a surge in demand for warehouse space. Currently, within Europe, only Germany has passed this 11% mark. Demand for urban logistics units in France and the Nordics is likely to surge as they are forecast to be next to pass the 11% threshold. These varied situations will lead companies to look at new ideas to service their requirements.

No individual factor is more important than any other in this equation, but in many markets around the world they are conspiring in different ways to disrupt traditional property markets and deliver innovative solutions.

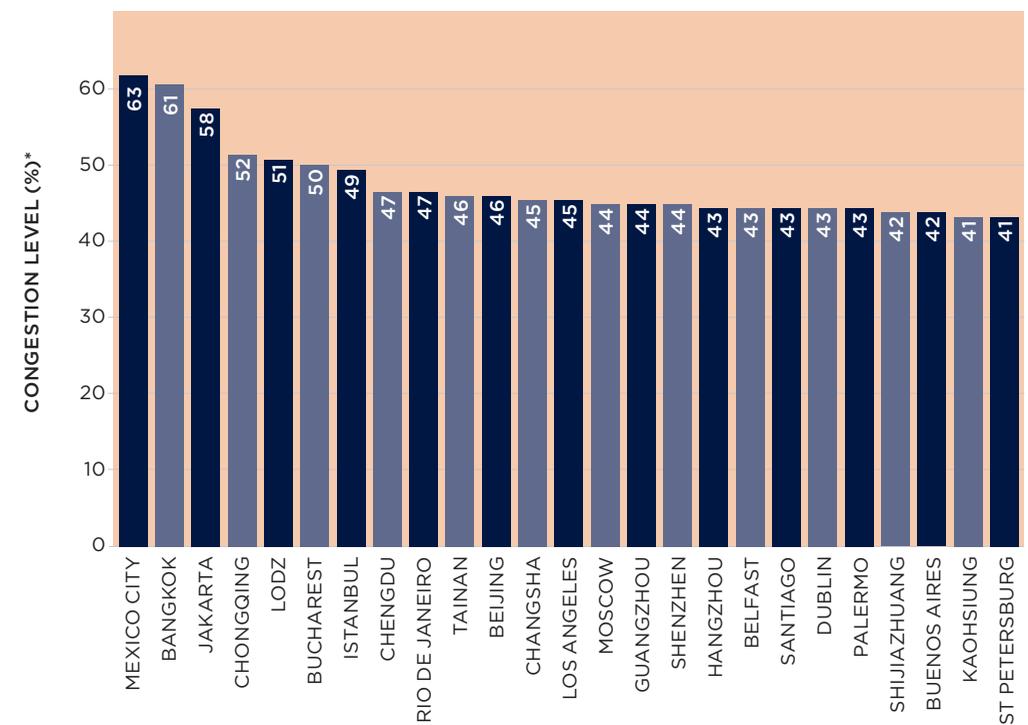
Turn to pages 58 for examples of how modern logistics requirements are shaping real estate.

THE SCALE OF URBAN SUPPLY

More than half of the world's population now lives in urban areas, and the top 600 cities produce about 60% of the global GDP (Dobbs et al, 2011). Consider, too, that in the developed world, freight-intensive sectors of the economy (manufacturing, food) represent about half of commercial establishments, while employment and service-intensive sectors (finance, retail) represent the other half (Holguín-Veras et al, 2018). Both sectors need supplies brought in and shipments dispatched in varying quantities, speeds and timings.

TOP 25 GLOBAL CONGESTED CITIES

Increase in travel times compared with free-flowing traffic



Source TomTom Traffic Index Note *Percentage increase in overall travel time compared with free-flowing traffic

“At the Goodman Interlink building in Hong Kong, the first 15 floors are fully accessible by vehicles”

Warehouse v2.0

Forward-thinking policies, ground-breaking warehouse designs and innovative supply chain solutions are transforming urban logistics

Words: Kevin Mofid, Savills Research

1 Multi-level pioneer

Prologis Georgetown Crossroads, Seattle, US

This three-floor, 54,777 sq m industrial warehouse is just minutes from downtown Seattle. The first of its kind in the US, the building features truck ramps leading to loading docks on the second level, and a third floor for lighter-scale warehouse operations, served via forklift-accessible freight elevators.

2 Micro (electric) machines

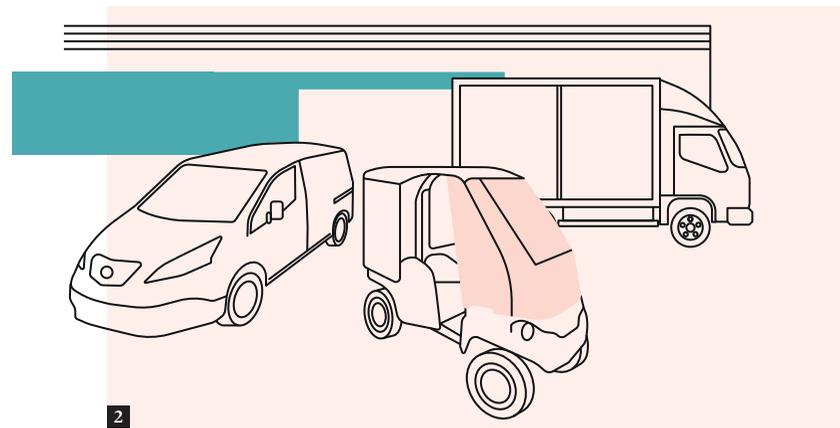
DPD Westminster, London, UK

A former car park in central London has become parcel delivery company DPD's first all-electric distribution centre. From this 464 sq m facility, 2,000 parcels a day will be delivered by all-electric vehicles exclusively to the capital's SW1 postcode area. The site also includes a pick-up shop allowing customers to collect and return parcels. The company expects to open seven more micro all-electric units across the city. A second London depot, in Shoreditch, has already been secured.

3 Rising high

Goodman Interlink building, Tsing Yi island, Hong Kong

Developed by Goodman in 2012, this building contains 223,000 sq m of

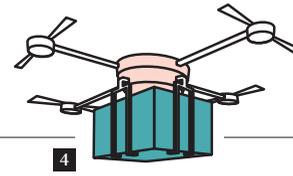
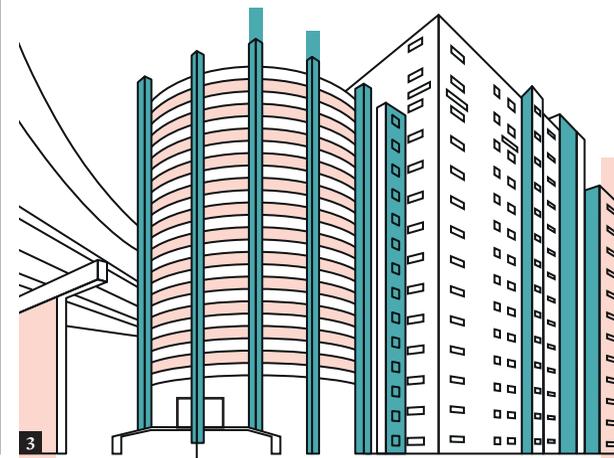


warehouse space across 22 floors and houses international tenants such as DHL, fashion retailer Net-a-Porter and Yusen Logistics. The first 15 floors are fully accessible by vehicles and the remainder by goods lifts. The true impact of this building in real estate terms is only now being felt as other cities around the world start to address the issues around urban logistics that Hong Kong has already tackled.

4 Policy matters

Government intervention, China

China is planning to build 150 logistics hubs by 2025. This is an example of how policy intervention will impact real estate markets and facilitate logistics development in the future. There will be six types of hub: inland harbour, cargo port, airport, service-orientated port, commerce and trade-orientated port,

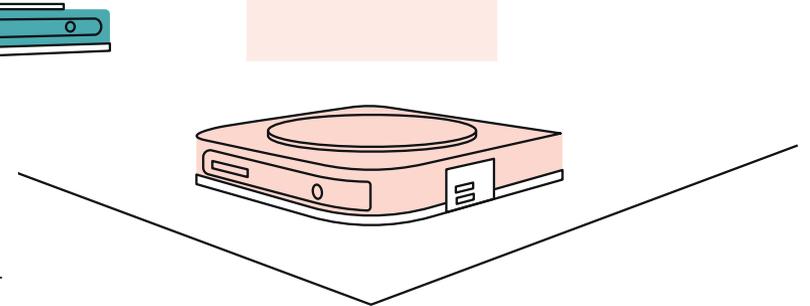
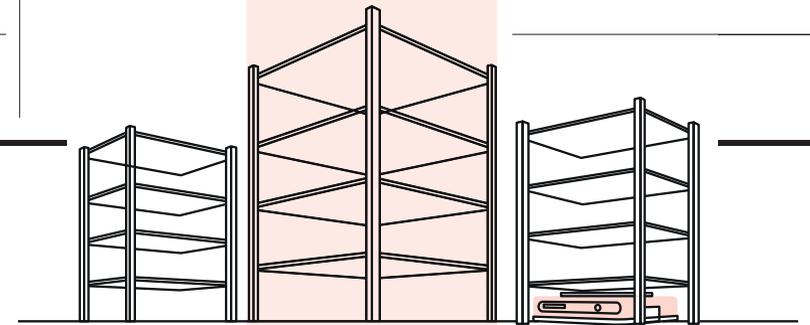


and inland border ports. Automated vehicles and drones will be used to increase express capabilities for air, high-speed rail, cold-chain and rural e-commerce.

5 Distribution. Now!

Amazon, Barcelona, Spain

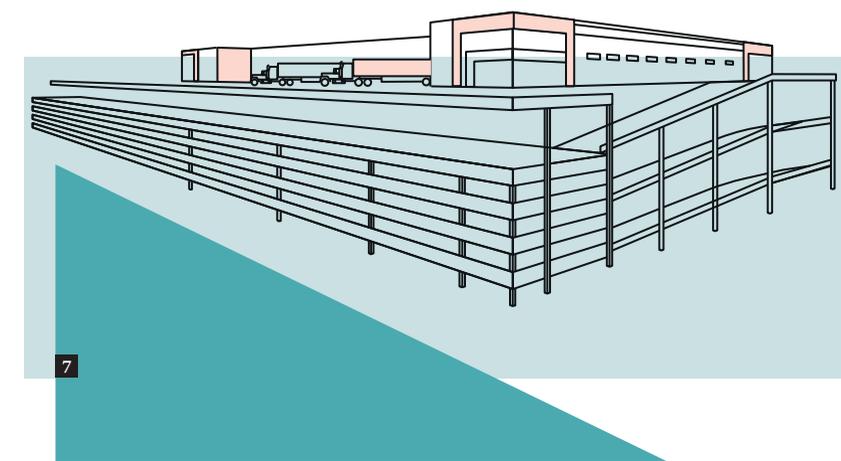
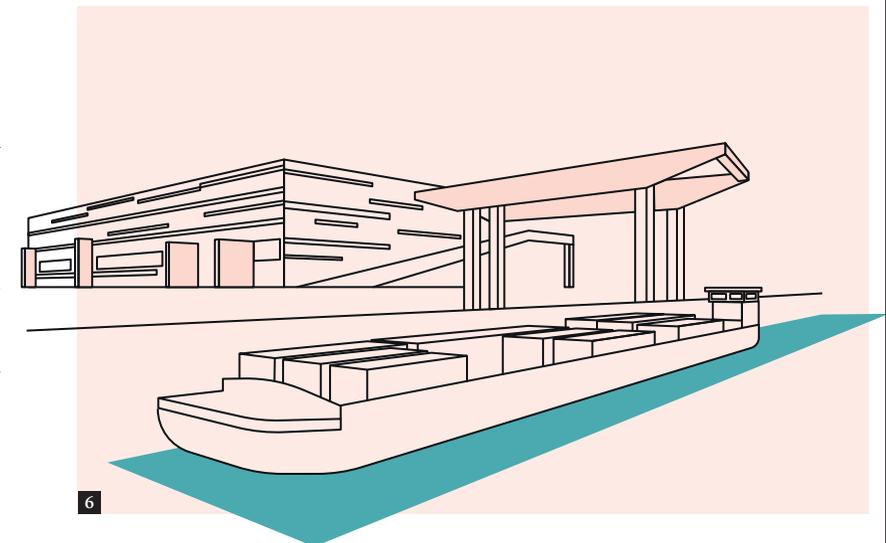
In 2016, Amazon took a lease on the city-centre former headquarters of publishing house Editorial Gustavo Gili. Part of the appeal was the building's large basement, which can store 20,000 of Amazon's most commonly ordered products. More than 100 people work in the facility, preparing orders from the Amazon Prime Now app for delivery across Barcelona within two hours.



6 Boats, trains and automobiles

Paris Air2 Logistique, Paris, France

This tri-modal site has been let, in part, to IKEA and is an example of how modern logistics requirements are working in urban environments. The 63,000 sq m building is built over two floors and will allow the brand to transport goods using electric vehicles to central Paris and the western suburbs. The Port de Gennevilliers location will also allow distribution of goods via the River Seine, which will reduce potential delivery delays caused by traffic congestion. Plus, the site benefits from easy access to the rail network, making the scheme ready for future urban-logistics requirements.



7 Record breaker

Sunset Industrial Park, Brooklyn, New York, US

Plans are in place to demolish the site's existing brick industrial buildings and replace them with a 120,000 sq m, four-floor warehouse, the largest multi-storey warehouse in the US. The Park is located close to the Verrazano-Narrows Bridge, and within a one-hour drive of 13 million consumers. Its design allows trucks to access all four floors, with more than 11m clearance height on the first two floors and 8.5m clearance on the top two, comparable with other single-storey units. ■

“The Dolce Vita Tejo shopping centre is being reimaged as a retail resort”

Repurposing retail

With the ongoing shift to online, owners and developers must reinvigorate retail space. Savills experts select five of the most innovative solutions from around the world

The retail landscape is changing. As online shopping continues to rise, the overall need for physical space is decreasing, affecting values in some locations. They say necessity is the mother of invention, and owners and developers are finding increasingly creative solutions for transforming derelict and declining sites into desirable new developments. It goes without saying that no two sites are the same, and that what works in one will not necessarily work in another. Size and location are crucial factors, as is the need to develop a sustainable, future-proof building, both in terms of usage and environmental standards. Conversion to residential use is by no means the ‘silver bullet’, either. Here are five solutions, from alternatives such as office and industrial space to reinvigorating existing retail with mixed-use schemes that improve footfall.

Artistic licence

Vanke Times Center, Beijing, China
“A former shopping mall in Beijing’s busy Chaoyang district has been transformed into a 47,000 sq m mixed-use ‘urban complex’ that blends retail space with offices, exhibition space, art installations and a bamboo meditation garden. Designed by architects Schmidt Hammer Lassen, the basement and ground levels of the four-storey building are still dedicated to retail, while the upper floors house offices, event spaces and green spaces, including the second-floor meditation garden with its white stone gravel floors and bamboo forest. The entrance atrium is dominated by a striking suspended sculpture installation by French artist Charles Pétillon.”
Lesley Wang, Retail Director, Savills Beijing

Google it

One Westside, Los Angeles, US
“This redevelopment of the Westside Pavilion shopping mall in West Los Angeles will create 54,000 sq m of office space. Opened in 1985, the 72,000 sq m mall was once home to 70 retailers and a 12-screen cinema. The latter, along with a restaurant on the site, will remain when the conversion is completed in 2022. Developers Hudson Pacific and Macerich plan to spend up to \$475 million on improvements, using the mall’s high ceilings, skylights and multi-level atrium to create light-filled, state-of-the-art offices. Google has committed to a 14-year lease of the development and could also absorb a separate part of the mall, a former Macy’s store that is currently owned by GPI Companies.”
Joshua Gorin, Vice Chairman, Los Angeles Office Lead, Savills

Prime site

Amazon fulfilment centre, Ohio, US
“Once laying proud claim to the title of the world’s largest mall, Randall Park Mall in North Randall, near Cleveland, Ohio, has been repurposed into an 82,000 sq m warehouse by Amazon. The existing building was demolished in 2014 and replaced by a multi-level distribution centre, which opened in late 2018 and now employs more than 2,000 full-time staff. The \$177 million development is expected to attract new businesses, such as restaurants and retailers, back to the local area, and Amazon has already made substantial contributions to the local community, including \$76,000 to fund a senior citizen transport programme in North Randall.”
Adam Petrillo, Head of Industrial Services Group, Savills



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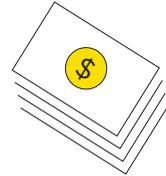
- 1 Vanke Times Center** A dramatic art installation dominates the atrium
- 2 Dolce Vita Tejo** Adventurous leisure and retail mix at this Lisbon development
- 3 Cantium Retail Park** Plans include 1,200 new homes in two blocks of flats

Leisure centre

Dolce Vita Tejo, Lisbon, Portugal
“The Dolce Vita Tejo shopping centre near Amadora is being reimaged as a retail ‘resort’, adding cultural and outdoor attractions to the traditional shopping experience. The country’s second-largest shopping centre attracts 15 million visitors a year – but the ambition is for it to become Portugal’s premier retail and leisure destination experience. The new concept will be renamed Ubbo, and add activities including miniature golf, a climbing wall and a water park to the existing two-level, 80,000 sq m shopping centre. The central square will also host a variety of events, and will be home to one of Europe’s largest permanent LED displays.”
Cristina Cristovão, Retail Director, Savills Portugal

Master plan

Cantium Retail Park, London, UK
“This redevelopment of a tired retail park on Old Kent Road in south-east London will transform it into a desirable residential, retail and dining destination. The designs, submitted by developer Galliard Homes and asset management company Aviva Investors, include 1,200 new homes in two blocks of flats – 35% of which would constitute affordable housing – along with 15,800 sq m of retail space, restaurants and a new park and square. The proposals are part of a public consultation under Southwark Council’s Area Action Plan, which sets out its visions, planning policies and masterplans for key regeneration areas.”
Mark Garmon-Jones, Director, UK Investment and Repurposing, Savills



\$1 million
Total prize fund
for the 2019
Counter-Strike
Majors in Katowice

The disruption game

The relationship between the physical and virtual worlds of competitive gaming is creating the need for a whole new model of real estate

Nicky Wightman, Director of Global Occupier Trends at Savills, talks to James Dean, Managing Director of ESL UK, about the demands of the evolving esports sector.

Nicky Wightman: What are esports?

James Dean: Esport is multiplayer video gaming, played competitively for online and offline spectators. Almost everyone has heard of the early computer games Pong and Pac-Man, and the essence of gaming still stays true to those early pioneers – the idea of creating immersive entertainment. Gaming started as very niche, very male-orientated, but it has evolved into an industry that now accounts for more than half of the UK's entertainment market, according to the Entertainment Retailers Association. Gaming is now a larger market than film and music combined, and the accessibility of games on mobile devices has increased the number of female players.

How did esports evolve into an arena-style spectator event?

Multiplayer games were the real genesis of esports. Players started by connecting computers together on a local area network, but faster internet allowed them to take the experience online and make it more social, as well as creating and sharing content. As more people competed, more gamers wanted to watch others play. That's how ESL evolved. We were founded in 2000 and created physical events with large crowds.

As communities build around a new game, developers work with us to broadcast tournaments. There could be a world cup event in a physical space, and from there things grow until there is demand for a big stadium event. We now run some of

the world's biggest esports leagues. At our flagship event in Katowice, Poland, earlier this year, we had around 170,000 people physically attending, plus hundreds of millions more watching online.

What are the real estate issues surrounding the sector?

How esports will play out physically is still evolving. A lot of gaming communities exist virtually, but also meet physically. Each person tends to have more than one of these communities, as in social media, where people move from one platform to another. We're exploring how we can create a better experience for these communities to meet in the physical space at our events. How can we enable gamers to create communities and then give those communities a physical offering where they can live, work, shop and be entertained?

You're currently using existing stadiums built for different types of events. What would be the ideal esports stadium?

HOK, the architectural firm behind the Mercedes-Benz Stadium in Atlanta in the US, has created a concept. Rather than a single curved seating space, they propose petal-like sections that overlap. Each petal would have space for 100 to 500 people. When selling tickets to events, we would allow fans to collate into their own communities to fill those petals. Spectators would define what those spaces become. That's fascinating. The event could sell in a very viral way, as groups chat online and buy tickets to be based in different sectors.

Then there's the fringe element. Big events have lots of activity surrounding them – look at how the Olympic Games activates a city; an entire country. In Katowice, a whole expo space has been built because the fringe activity was missing from our world championship event.



Masters at work
Players compete in front of live audiences at ESL's flagship Katowice event

Like other sectors, understanding the niche requirements of esports is vital?

Absolutely. I imagine gaming-dedicated developments. We need residential and hotel suites with practice rooms for gamers. Influencers need mini studios in their living space with access to the industry – on-site game developers and esports companies, studios to hire and technology companies that can lease equipment. Alongside that, there's the wellness, retail and F&B [food and beverage] potential. There could soon be colleges and universities based around this sector, and academies where gamers can develop their skills as players, plus the tactics they need to monetise themselves as brands. With facilities that can scale, there would be a perfect ecosystem.

The ESL Pro League – the world's biggest Counter-Strike league – could be positioned in an environment like that. Weekly online competitions are now played in a physical space. We have a studio in the UK, but we need to find a proposition where there is some residential next to the studio and a great retail and F&B experience. For retail, creating a store that is a physical representation of a game would be perfect – think of an M&M's store, but for a game.

Teams, players and influencers will relocate to places that give them the best opportunities. And there is huge potential. Esports is a career path. Many of these players are now high-net-worth individuals.

Would you describe the esports market as a benchmark for disruption?

Yes, esports is in a unique position to disrupt. I genuinely believe we are an example for other sectors, because we have a youth audience, one that isn't afraid to try new things. Gaming is starting to drive technological disruption in other sectors. Look at VR [virtual reality] – gaming is the industry that drives VR, but its applications are tenfold in other sectors. ■

“I imagine gaming-led developments. We need residential and hotel suites with practice rooms for gamers”

Winners on the global stage in the age of disruption

With trends playing out differently across the world, the real estate industry should embrace disruption as a positive force for change, says Parag Khanna



It might be easy to pinpoint disruptive global trends such as populism, urbanisation and technology, but understanding them is more challenging as they play out so differently across the regions and cities of the world. In an age of global disruption, the definition of success is whatever works.

For example, labour automation is predicted to destroy certain types of jobs across the West. In Asia, with still so much more room for the internet, wi-fi and telecommunications infrastructure to grow, labour automation is instead seen as a positive disruptive force that will create more jobs.

It is the same with urbanisation. In the West, urban services productivity is what is keeping economies above zero growth. In Asia, by contrast, urbanisation is a much bigger story, driving massive change as the long tail of rural populations continues to move into cities and drives high growth rates.

Of course, technology remains at the heart of disruption for cities as economies see a rapid transition towards services: retail, digitised communication, telecommuting and co-working space. Cities are moving from the vertical to horizontal; those with gleaming office towers need to be careful as it is not clear who is necessarily going to occupy them – even the financial services sector is being disrupted by digitalisation.

To embrace this trend, future design and development has to be as flexible and as mixed use as possible. The younger you are as a city in terms of demographics, the more this becomes the preference of its people. On the margins, I see cities with initiative trying to promote this lifestyle – this is where Europe has an advantage – but I don't yet see it happening on a large scale.

“To embrace this trend, future design and development has to be as flexible and as mixed use as possible”

Disruption and the global order

Many think China is trying to assert dominance through its Belt and Road Initiative (BRI). However, this is basically infrastructure finance that will outlive China's involvement. Europe would be wise to support it as Asia will continue to be a very strong trading partner. In my view, the BRI promotes critical connectivity, trade, urbanisation and economic diversification for a number of previously neglected large countries.

The BRI is just one way that we will likely see Europe-Asian integration, with the US remaining very powerful, if less connected. That's partly because it has all it needs to more or less survive on its own: the people, land, natural resources, food, fuel and tech industries. While this makes it a global force, it doesn't automatically give it a finger on the pulse of what other countries need.

Interestingly, Latin America and Africa are now becoming more central to the global order. They are the least powerful, but they are connected and participating in the world economy on a voluntary basis, not as colonies. Their resources are helping to keep commodity prices manageable for fast-growing regions, and bringing in revenue that helps them transition and diversify their economy.

It is difficult to have confidence in some countries because they are so fragmented internally, but Kenya and its neighbours, for example, have done a lot of joint infrastructure projects to connect to the Indian Ocean. Meanwhile, on the west coast of South America, the Pacific Alliance, that includes Colombia, Mexico and Peru, is increasing its trade with Asia.

In embracing disruption, the real estate industry should not treat Asia or other countries like developing markets. It should assume they want to leapfrog to having the highest standards of goods and services, and the highest quality of life and sustainable living. This is an opportunity for the real estate industry as, with 40% of GDP, the highest savings rates, and the world's largest sovereign wealth funds and infrastructure investment, the money is essentially already there. ■

Parag Khanna is a best-selling author and founder of strategic advisory firm FutureMap. His new book is *The Future is Asian*.

Savills plc is a global real estate services provider listed on the London Stock Exchange. We have an international network of more than 600 offices and associates throughout the Americas, the UK, continental Europe, Asia-Pacific, Africa and the Middle East, offering a broad range of specialist advisory, management and transactional services to clients all over the world.

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