2021

Global outlook

EMERGING TRENDS IN REAL ESTATE®

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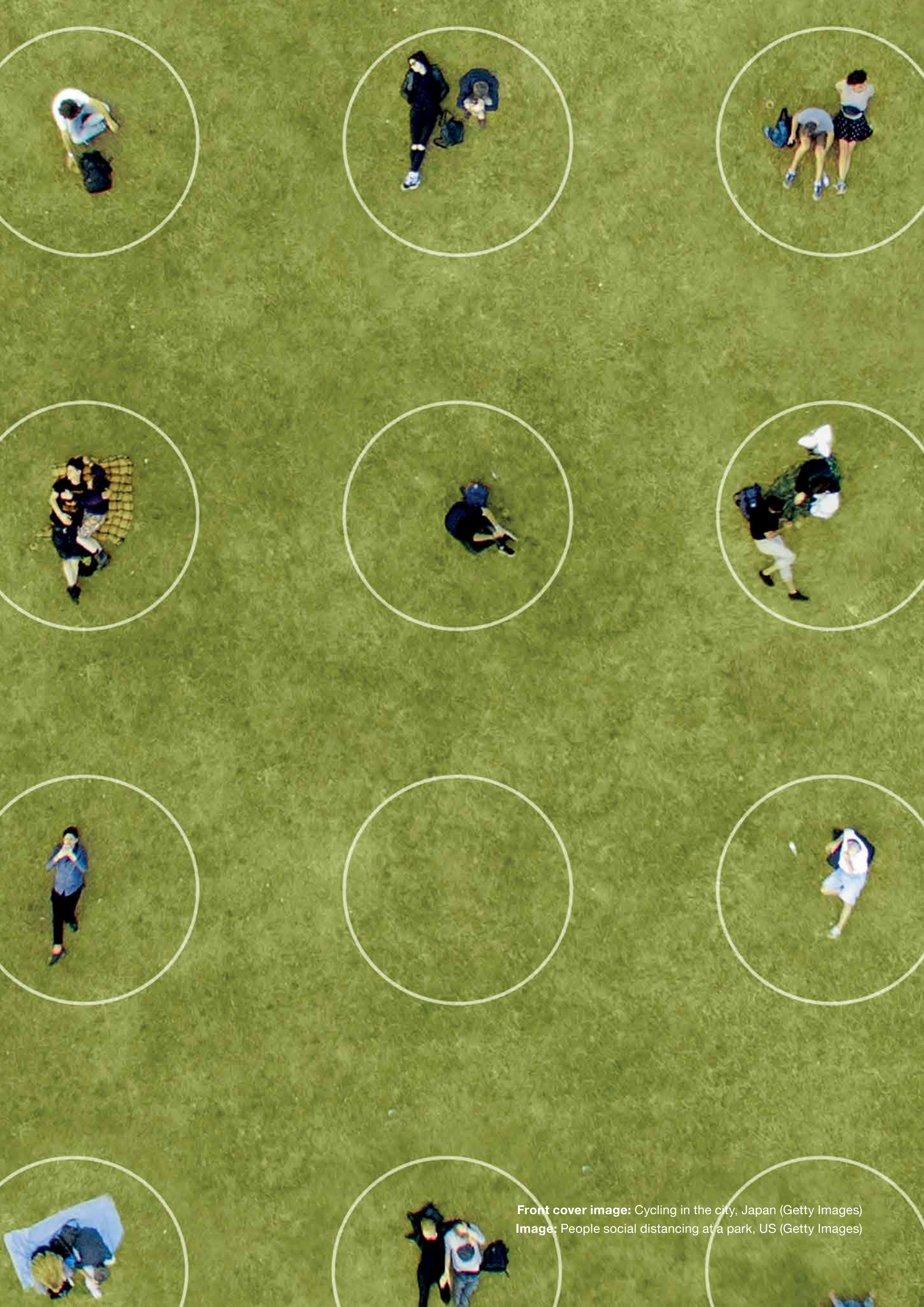

Front cover image: Cycling in the city, Japan (Getty Images)
Image: People social distancing at a park, US (Getty Images)

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Do I believe that the office is dead? No. Do I believe that most firms will be back in the office that they occupied prior to the pandemic? I do. I do think, though, that there will be some downward pressure on the amount of space they need.

US investment manager,
Global Emerging Trends in Real Estate 2021

Executive summary

“The shape of things to come depends on harnessing the virus spread and the effectiveness of the policy response. Whilst we hope that we are through the worst, we’re not out of the woods yet.”

European CIO,
Global Emerging Trends in Real Estate 2021

Image: Empty riverwalk during COVID-19 pandemic, Chicago, US (Getty Images)

More than a year after the outbreak of COVID-19, the real estate industry is still getting to grips with the daunting twin challenge of a cyclical downturn juxtaposed with the long-term consequences from the disruption to the way people live and work.

Regional and sectoral variations to the impact on real estate are inevitable. But there is nonetheless a clear global narrative of COVID-19 as an accelerator of existing trends such as digitalisation, dispersed working and online shopping while hugely reinforcing the industry’s environmental, social and governance (ESG) agenda.

The industry leaders canvassed for *Global Emerging Trends* are hopeful of a consumer-spending-led economic recovery feeding through into an uptick in real estate business in the second half of 2021. But much will depend on the rollout of the vaccine and an easing of lockdown restrictions.

Against that caveat, the consensus view is that Asia Pacific is leading the recovery, partly because the region’s major economies went into the pandemic in better shape, relative to most Western economies. They are also deemed to have managed the crisis with more of a sure touch so far, which is a key factor in global investors increasing their allocations of capital to the region.

There is also broad acknowledgement that the unprecedented levels of fiscal and monetary stimulus supporting the global economy come with their own threats to market volatility. The emergence of stock market bubbles and renewed inflationary pressure in the US and Europe are much bigger concerns for real estate leaders today than during the regional *Emerging Trends* research last year.

Despite the risk of greater volatility, the extraordinarily loose monetary environment is keeping interest rates low for the time being and accordingly making the yield spread for real estate over other asset classes hugely compelling to investors. Most industry leaders interviewed for this report believe the inherent attraction of real estate income is even stronger this year than in pre-COVID times.

By contrast, lenders are expected to adopt a far more cautious approach to real estate this year and next compared with equity investors — but also compared with their approach to the asset class during the first lockdowns of a year ago. While banks were generally supportive of business at the outset — invariably at the behest of governments and central banks — industry leaders attest to tougher lending criteria since the second lockdowns in the autumn. There is a wide expectation that distressed debt will increase once the government support packages end although it is considered unlikely to match the levels of distress seen after the 2008 global financial crisis.

Given this pressure on occupier markets, industry leaders already report "a bifurcation in pricing" between in-favour sectors like logistics that have provided stable income during the pandemic and those sectors that have been hardest hit, such as hospitality and parts of retail.

Logistics has been a startling success across all three regions, driven by surging e-commerce. Sustained investor demand is widely expected to fuel further cap rate compression this year, and that divides opinion. For some it evokes the asset bubble concerns in equities; for others it reflects a structural, long-term change.

Residential is also in favour for its stable income but there are additional attractions. Industry players in the US and Europe see investing in housing — social, affordable and private rented — as fulfilling a basic need in society and as such very much part of their ESG agenda. Interviewees in all three regions also see overwhelmingly favourable supply-demand dynamics, which make housing a prudent defensive play for the foreseeable future.

The outlook for the office sector is altogether more difficult to predict, given that sentiment here is influenced by such varied forces for change: the rise of remote working, the increasing concern for the health and wellbeing of employees and the eroded appeal of long commutes in big cities.

As the interviewees point out, these issues do not resonate so much in Asia Pacific. But in North America and Europe they will have a negative impact on leasing activity this year and next as large occupiers delay corporate decisions or commit to a greater reliance on remote working. Yet many interviewees believe that companies and their employees will eventually want to return to the office albeit in more of a "hybrid" working model than in pre-COVID times.

In any event, the need for more flexible space is inevitable. From an investor-perspective, therefore, industry leaders predict a polarisation between perceived high-quality buildings — modern and adaptable — and outdated and inflexible secondary stock that is likely to suffer from a marked decline in demand.

It is clear from the interviews, however, that the industry is looking beyond occupancies and returns and is starting to address its wider responsibilities.

There is no better example of that than the work being undertaken around the impact of carbon emissions from the built environment, which we explore further in Chapter 2.

Though decarbonisation and climate change have been rising up the agenda for years, it is only in the past 18 months that these issues have moved to the foreground of the industry's thinking. So far, the pressure is coming from the providers of finance and the biggest tenants. There is, though, the expectation that governments will ramp up regulation in the coming years.

More companies than ever before are putting in place strategies with decarbonisation at the heart of the way they do business, accepting the challenge that will define the future of humanity while managing downside risk and realising profits along the way.

The sense of urgency here is long overdue. Real estate is in its infancy when it comes to decarbonisation, and even now many people are still ignoring the far-reaching consequences of carbon emissions from buildings. The interviews indicate a big knowledge gap still — not enough data are being collected on how much energy buildings use during both construction and operation.

There remains a daunting amount of complexity in the development, ownership and management of real estate, which makes coming up with an effective strategy difficult even for the largest companies. Executing the strategy is more difficult again, requiring developers, owners, occupiers and all other stakeholders that make up the real estate value chain to work together with the same goals in mind.

As the leaders we have interviewed conclude, if real estate is to play its part in reversing climate change then there will need to be some form of collective action — a far greater level of collaboration than the industry has seen before — to address the complexity of decarbonising the built environment.

Chapter 1

On the road to recovery

"We're in an extraordinarily loose monetary policy environment that's keeping rates low; you can borrow at remarkable costs. So even though cap rates are under pressure and low in some of the favoured sectors, you can get great debt that helps offset that. But one of the risks out there is that the economic recovery gets stalled somehow."

Global investment manager,
Global Emerging Trends in Real Estate 2021

Image: Takeshita Street, Tokyo, Japan (Getty Images)

More than a year after the outbreak of COVID-19, real estate leaders are still coming to terms with the enormity of the immediate economic fallout from the pandemic and the far-reaching consequences for how people live, work and interact with the built environment.

As all the leaders canvassed for this Global edition of *Emerging Trends* testify, COVID-19 as an accelerator of such trends as working from home and online shopping has been the main narrative for the industry across the world.

At the same time, the health crisis and the prolonged lockdowns are serving to question some of the received wisdom around the built environment, not least the previously accepted move towards densification of the bigger cities of the US and Europe. More importantly, the pandemic has massively reinforced the environmental, social and governance (ESG) agenda.

These represent big, long-term challenges to real estate, which like all other industries is also trying to keep business going in the here and now. At a simple level, the industry is hoping for a boost to investment in the second half of 2021 as the rollout of the vaccine gathers pace around the world and economic output cranks up once again. The problem is that this is a crisis like no other.

"We're not in the standard economic cycle," says one interviewee. "We're in something that was a health and social crisis above all, secondarily economic and, so far, has not yet become a financial system crisis. So, we can't use the same language that we use in other circumstances. The sharpness, perhaps the shortness of the downturn and the rebound, will be very different than what we have experienced previously."

The International Monetary Fund (IMF) says the global economy shrank by 4.4 percent in 2020 — the worst decline since the Great Depression of the 1930s — but in January predicted global growth of 5.5 percent in 2021 although the headline number masks wide variation across countries, regions and sectors.

There is broad agreement in real estate circles that Asia Pacific is already leading the way, greatly helped by the assured management of the pandemic in many countries across the region. At the forefront is China, which was the only major economy to grow last year. As interviewees acknowledge, this is a key reason behind increasing allocations of capital to Asia Pacific — another accelerating trend. "I would say that the region as a whole is likely to outperform the rest of the world for the foreseeable future," says one global investment manager.

Another widespread industry expectation is that much of the impetus for growth worldwide will come from the freeing up of personal savings accrued over the past year — essentially acting as a spur to renewed consumer spending.

As a number of interviewees point out, China and other parts of Asia have already seen retail sales boosted in recent months by "revenge spending" — now part of the lexicon of COVID-19. Asian and Western economies are very different, but as one US interviewee suggests, it is reasonable to anticipate something of the same "exuberance" returning.

Summing up the pro-growth argument, a US player says: "Generally speaking, we're expecting an economic recovery, made possible by the vaccine and the confidence that that will bring. There are vast amounts of savings — 25 percent savings rates in some countries, the US is at something close to 15 percent. Some of that will stay in bank accounts, but some of it will get spent and that will stimulate economic growth."

Everyone, however, acknowledges the uncertainty that all assumptions here rely on a successful rollout of the vaccine in 2021. That prospect is in itself "fraught with risk", one interviewee observes. "We know that there are variants circulating which might evade vaccines. The vaccine rollout itself is faster in certain countries than people had assumed, but globally it's slower than perhaps everyone had hoped. And it could quite easily go in an unexpectedly negative direction. Or, alternatively, other pandemics could emerge in the future. I think we all need to be alive to that."

The high cost of economic stimulus

There are other serious concerns. Many of them revolve around the ramifications of the unprecedented level of fiscal and monetary stimulus — as it affects investment today but also what happens when it finally ends? The IMF estimates that direct fiscal support for businesses, employees and the unemployed during the pandemic now exceeds US$12 trillion. With quantitative easing (QE) on top, governments and central banks have shelled out a total of $24 trillion of stimulus to "put a floor under the world economy".

One consequence is that the debt total for governments, companies and households across the world has reached an all-time high of US$281 trillion, or more than 355 percent of global GDP, according to the Institute of International Finance.

The alarm bells have started ringing because the massive amounts of QE have helped fuel the recent stock market peaks in the US, Japan, Germany and France, raising unsettling questions about a disconnect between corporate earnings and share prices.

"In the US in particular, we have an asset pricing bubble that's not in real estate per se — I don't think we're leading this," says a US investment manager. "But if you just look at the multiples of companies that trade in these different indices, I do think that there is a real risk of an asset pricing bubble resetting, and that would have a very material impact on real estate."

Last year, the property industry in many Western markets voiced its concerns about security of income given the non-payment of commercial and residential rents – in certain markets, government-approved non-payment of rents. As lockdowns have continued, investors and lenders are now also asking what will happen to corporate occupiers once the government support stops? There is a feeling of inevitability that distressed debt – real estate and corporate – will increase at that point (see page 10). And then there is the likely spike in job losses and subsequent negative economic impact.

"What I worry about most as we look into 2021 is the structural unemployment COVID has created, not so much because of the recession but because it has dislocated a number of industries, particularly retail and leisure," says one global player.

"There will be lots of people who discover that their job doesn't come back when the economy recovers. In that regard, recession and rebound isn't the right way to look at it because it assumes that you're going back to the way it was before. That's not what's going to happen here."

Governments are so focused on ending the pandemic there is something of a policy vacuum when it comes to the mid-to-long-term recovery. Resetting the economy also means addressing structural disruption to the way we live and work, which in turn means wide-ranging consequences for how the industry deals with real estate, from new building regulations to changes in zoning flexibility for the repurposing of redundant assets. The interviews reveal an industry that is alive to the fact that stimulus will need to be repaid, health and wellbeing and ESG regulations will be tightened. But this comes at considerable cost, and lead-times are significant for innovation to occur and changes to be implemented into supply lines. The vaccine alone will not take away the pain of impending reforms.

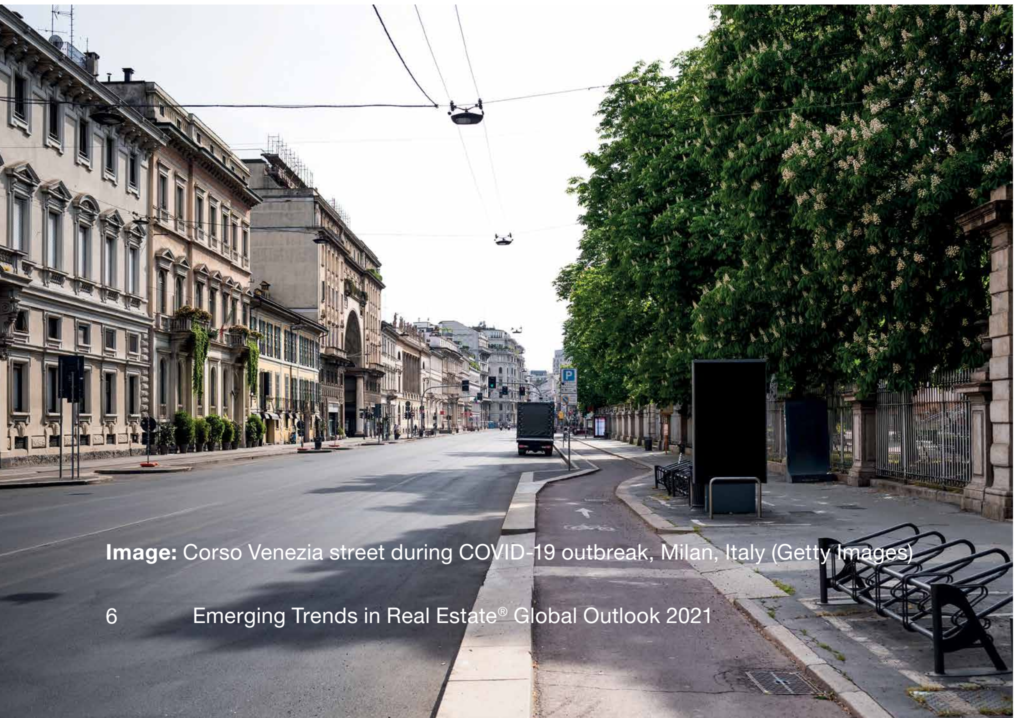

Image: Corso Venezia street during COVID-19 outbreak, Milan, Italy (Getty Images)

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Real estate keeps attracting capital

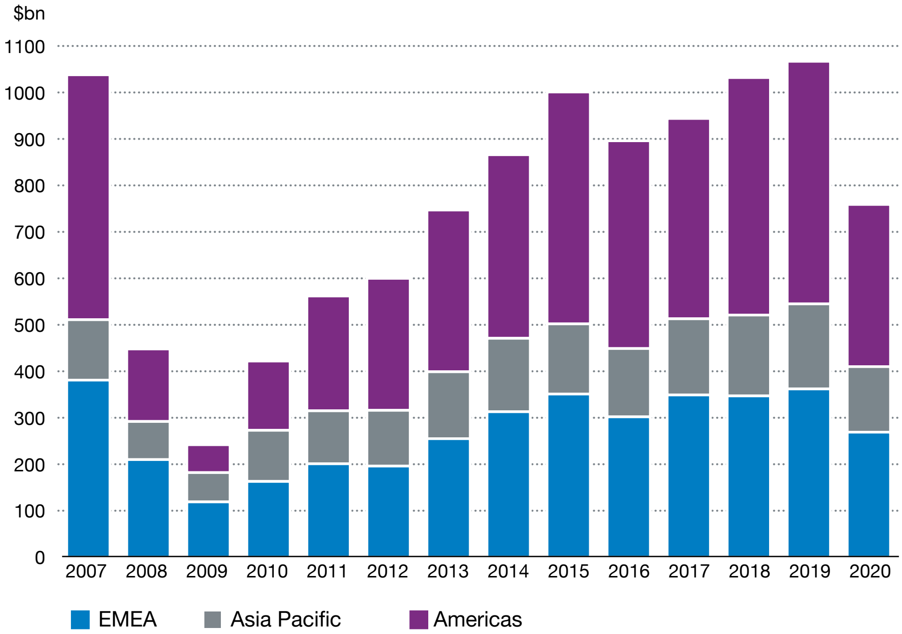
With higher national debt burdens resulting from the stimulus and support programmes, governments and central banks are expected to maintain low interest rates this year as they try to keep the public finances stable. Against that backdrop, they are likely to tolerate higher rates of inflation, and already, there are signs of inflationary pressure in the US and the Eurozone as well as fears that it could get out of control or at least spark greater volatility in the markets. As it stands now, the revised inflation target for both the US and Eurozone is 2 percent in 2021, a level at which the industry believes real estate can still produce acceptable returns.

It is no surprise, therefore, that many industry leaders across all regions are convinced that real estate will benefit from a lower for even longer interest rate environment. But even with the possibility of a rise in rates next year or beyond, they believe that the yield spread over other asset classes would still prove hugely persuasive to investors. If anything, the inherent attraction of real estate income appears stronger now than in pre-COVID times.

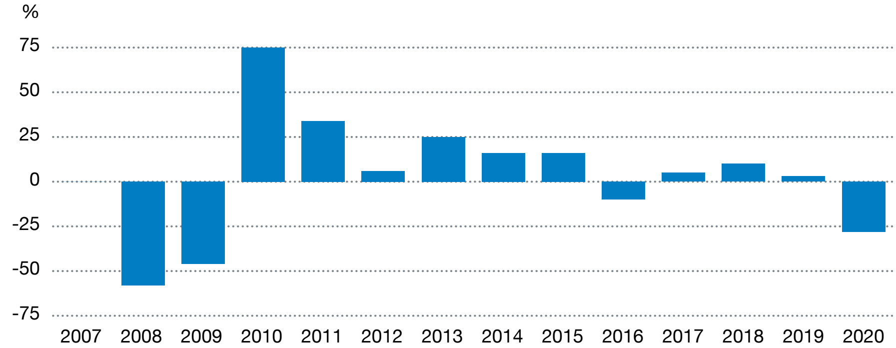
There is "this tectonic shift of capital that's coming our way", says one global investment manager, adding: "What will come out of this is that real estate will be looked at not as an alternative but as an essential investment component of anyone's portfolio because it's got the return along with an inflation hedge."

That is a common view, but not everyone is convinced that the weight of capital targeting real estate necessarily precludes greater market volatility.

Figure 1-1 **Global real estate capital flows 2007–2020**



Volume YOY change



Global Capital Trends charts exclude development sites unless otherwise stated

Source: *Real Capital Analytics*

According to another global player, the pandemic has mixed up the cyclical and structural changes to real estate in such a profound way as to challenge the established tenets around investment in a benign monetary environment. "Human behaviour changes, artificially low interest rates, incredible stimulus, each one of them individually, and then collectively, is introducing a level of volatility that I haven't seen in my career. Honestly, I don't know anyone who knows where the thing is going, it's so off the board."

According to Real Capital Analytics (RCA), global trading of income-producing properties fell by as much as 29 percent to US$759.4 billion in 2020, which was generally expected although interestingly not as sharp a decline in volumes as in the 2008 Global Financial Crisis (GFC). The figures also signal an improvement in many markets by the year end as vaccination programmes started in some countries, which reflects the cautious optimism for 2021 among most interviewees for *Global Emerging Trends*.

> "I believe certain assets will create cap rate compression. I don't think it's a bubble because investors are being more discerning around how they're putting capital to work.

Behind the headline numbers it is clear that many investors are diverting capital into residential, logistics and data centres — in other words, those sectors where the security of income is widely judged to be robust. As another long-established trend, the shift of capital into "beds and sheds" has been turbo-charged during the pandemic. Logistics, in particular, accounted for 21 percent of global market activity in 2020 compared with a long-term average of 13 percent. And yet, strong as its income appears to be, a few interviewees acknowledge that this is one hot sector where there is "hesitancy around pricing".

Opinion is mixed about whether the asset bubble in equities may yet spread to real estate generally, not least because the structural impact of the pandemic on such mainstream sectors as offices and retail is expected to result in lower values for poorer or outdated stock.

"We see a real bifurcation between the in-favour sectors that are trading as if there wasn't a recession and then the out-of-favour sectors where the bid-ask spread is so wide that assets aren't trading," one US interviewee says.

"I believe certain assets will create cap rate compression. I don't think it's a bubble because investors are being more discerning around how they're putting capital to work," says another US interviewee. "But I also think you have to have better information and be more knowledgeable. And that will be the big change in the future of real estate because it's been very opaque."

One global player, however, strikes a note of caution: real estate investors and fund managers are "broadly way too optimistic across the board" although "it's very hard to play contrarian" when so much capital needs to be deployed. "Transaction volumes will recover, and risk will be back on," this interviewee concludes. "But what's going to happen is, in five years from now, depending on what you bought and what you paid for it, there's going to be a bigger dispersion in outcomes. There's going to be big winners and big losers coming out of it."

Whatever their stance on pricing, the industry leaders agree on one thing when it comes to the deployment of capital: there is ultimately less margin for error this year than there was before the outbreak of COVID-19.

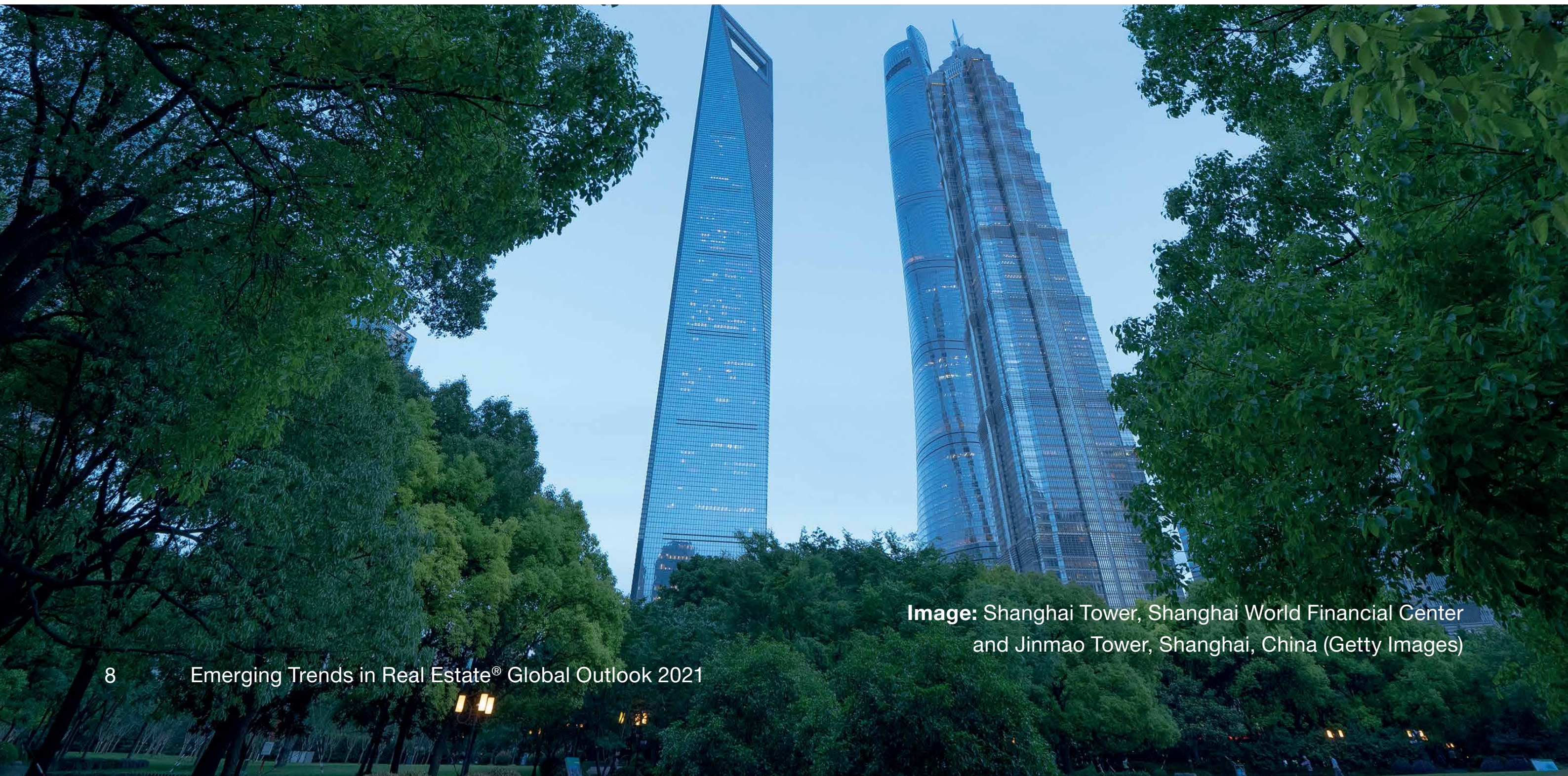


Image: Shanghai Tower, Shanghai World Financial Center and Jinmao Tower, Shanghai, China (Getty Images)

Real estate's ESG agenda

Daunting though the financial challenges are for the industry, the pandemic has highlighted its broadening role and responsibilities.

We examine the escalating issues around decarbonisation of the built environment in Chapter 2, but the "S component" of ESG has also become equally important to both investors and users of real estate over the past year.

Image: Cycling in riverside park, Seoul, South Korea (Getty Images)

Nowhere is this more apparent than in the US, where social unrest and protests across the country last year have clearly left a deep impression on respondents to *Emerging Trends United States and Canada*. While implicitly acknowledging that the industry has done too little in the past, over 70 percent of respondents believe that real estate can address and help end systemic racism. Such a shift in sentiment ranges from promoting diversity, equity and inclusion within the industry itself to doing more to develop under-served communities.

According to *Emerging Trends Europe* and ULI's report *Zooming in on the "S" in ESG: A Road Map to Social Value*, real estate practitioners have a strong interest in developing a better understanding of social value: how it fits with their fiduciary responsibilities, and how to measure, manage, and report on social value creation. Alongside this interest has come the rise of impact investing — investing with the intention of tackling social or environmental challenges or both while generating a financial return. This is a growing area of opportunity rather than a tick-box sideline.

Four-fifths of respondents to the European survey believe that demand for impact investments in real estate will increase over the next five years. And participants are addressing it now: 58 percent say incorporating social impact or social value contributions in their portfolios will increase in importance in 2021.

It is also evident from the US and European surveys that the provision of affordable housing has become more of an industry concern over the last few years. COVID-19 and rising unemployment have only reinforced the problems around housing supply while adding fresh impetus to the industry's response.

As one European industry leader interviewed for *Global Emerging Trends* concludes, "the ESG agenda-stakeholder vision has become much more significant" as a result of COVID-19. "We are reminded that we are part of a community and that we have social obligations. Remember that the underlying capital is in many cases, insurance companies and pension funds. It would be unconscionable for them and the managers of that capital to look at things just from an enforcement of contracts point of view, and damn the consequences."

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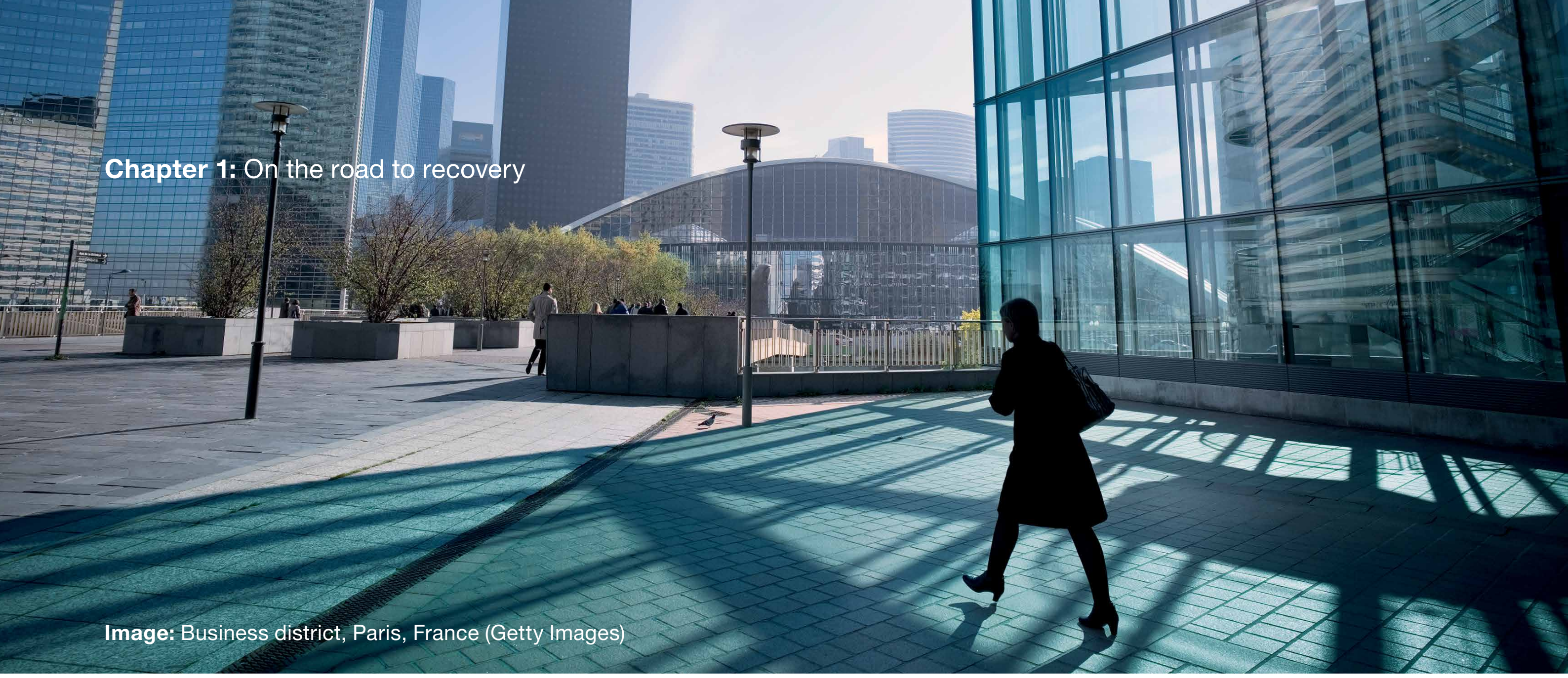

Image: Business district, Paris, France (Getty Images)

Debt and distress — difficult times ahead

Lenders are expected to adopt a far more cautious approach to real estate in 2021 compared with their equity investor counterparts – but also compared with their approach to the asset class during the first lockdowns of a year ago.

Though high-profile examples of distress in retail and hospitality have been among the unfortunate corporate legacies of the pandemic, in most cases these were already struggling businesses tipped over the edge by the pandemic.

Until now, banks have been supportive of business overall since the outbreak of COVID-19, and in many countries the economic impact in terms of bankruptcies has been moderate.

In the US, for example, PwC's latest *Turnaround and Restructuring Outlook* report shows that the number of Chapter 11 filings with liabilities of more than US$10 million grew by 16.5 percent in 2020 — a relatively modest increase given the disruption to business last year. While that volume was the highest level for several years, it was well below the levels during and after the GFC of 2007 to 2009.

Industry leaders canvassed for *Global Emerging Trends* point out that the banking system is much stronger now than in the dark days of the GFC. As one interviewee says: "The level of experience – therefore the lack of panic – that I'm observing in the workout of the existing situations is much, much higher. The borrowers themselves are less levered."

Such an "accommodating" approach to finance has translated into relatively few forced sellers of distressed property assets so far. According to Real Capital Analytics, sales out of distress totalled less than 2 percent of total investment activity in 2020 for both the US and Europe — again negligible when measured against the levels seen in the immediate aftermath of the GFC.

This is one reason why, according to most industry players, "there hasn't been the price capitulation" across real estate that many feared at the outset of the pandemic. Says one US interviewee: "Lenders have been more reasonable in working with borrowers. It's not that they're being nice so much, it's they're trying to minimise their losses by helping their borrowers get to the other side."

In Europe during the first lockdown, it was evident that individual governments as well as the European Central Bank instructed the banking sector to adopt an "accommodating" stance towards corporate customers. With fiscal support and low interest rates as well, many corporate occupiers have been able to stay afloat as a result.

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More financial distress facing the occupiers

But everyone interviewed for this report acknowledges that banks are unlikely to be so supportive once the full economic impact becomes clearer. In Europe, industry leaders already report a far stricter approach by the banking sector.

As the banks tighten their lending criteria, the signs are that real estate investors are turning in greater numbers to debt as a less risky way of exposure to real estate, just as they did following the GFC. “Many traditional lenders have been pulling back dramatically during this pandemic crisis,” says one global player, “and that’s opening up very significant opportunities for non-bank lenders.”

However, a serious — and unanswered — question faces all lenders in assessing the tenants in the buildings they finance. How many tenants have effectively taken on government-backed borrowings that they could not have been able to secure on their own before COVID-19, and certainly cannot now?

At the same time, in all regions there are companies that have bolstered liquidity through the raising of “cushion capital” but must now manage higher debt service and more levered balance sheets in the face of continued uncertainty and the possibility of further lockdowns. In Asia, a growing number of companies are resorting to sale-and-leaseback transactions with their property assets to raise working capital.

As many industry leaders point out, even if businesses are otherwise well run, the current shortfalls of customers and cash will make it hard, if not impossible for some, to make it through the next few months.

“The regulators have made it very difficult for the banks, in terms of capital allocation, to underwrite any credit risk where everything’s going to be fine once the vaccine comes but there’s zero cash-flow today,” says one European interviewee.

Others point out that major additional demands on banks’ capital have emerged over the past year, such as long-term infrastructure projects that have stalled, missed their financial milestones and require re-financing or re-structuring. All of this may end up with the banks becoming more discerning when it comes to their more vulnerable borrowers.

PwC’s US research signals “more financial distress ahead of us than we’ve seen in the past year”, highlighting retail as the sector most at risk. There were more than 8,000 brick-and-mortar store closures in the US during 2020, a figure PwC estimates could eventually approach 25,000.

In a separate study on the UK, PwC tells a similar story: the closure in 2020 of over 17,500 stores, hospitality and leisure venues. Even allowing for 7,665 openings, there was a net loss of 9,877 outlets — largely in shopping centres — which was the worst annual decline in more than a decade. “We’re still waiting to see the full impact of COVID-19 on store closures,” says PwC’s *Store Openings and Closures – 2021* report.

“The regulators have made it very difficult for the banks, in terms of capital allocation, to underwrite any credit risk where everything’s going to be fine once the vaccine comes but there’s zero cash-flow today.

The US and European industry leaders interviewed for *Global Emerging Trends* also anticipate continuing distress for retail, as well as for leisure and the business travel side of hospitality. In the US, the retail misery has already led to bankruptcies involving some specialist mall real estate investment trusts, a trend that is expected to continue.

Though much of Asia Pacific has endured the same retail and hospitality challenges, the narrative around distress is more specific to individual markets. In China, for instance, the interviews indicate a liquidity squeeze for smaller, residential developers although they are not expected to present opportunities for international capital.

By contrast in India, as *Emerging Trends Asia Pacific* outlines, an implosion of local non-bank finance companies has created opportunities for foreign private equity funds.

And in Australia, where the economic impact has been most acute, the greater market transparency there is likely to open up more buying prospects.

Buying opportunities in one form or another are expected to emerge across all three regions. As all interviewees agree, distress will be more of an issue for real estate later in 2021 — and very likely in 2022 — than it was last year. But as bad as it will be for the companies concerned, the widespread view is that distress is unlikely to become the pre-eminent force in real estate investment it was for several years after the GFC.

As one interviewee puts it: “I think that the private equity guys who believe it’s their God-given right to buy at massive discounts are going to be disappointed. We will see more distress but not nearly as much as they would like.”

> “I think that the private equity guys who believe it’s their God-given right to buy at massive discounts are going to be disappointed. We will see more distress but not nearly as much as they would like.

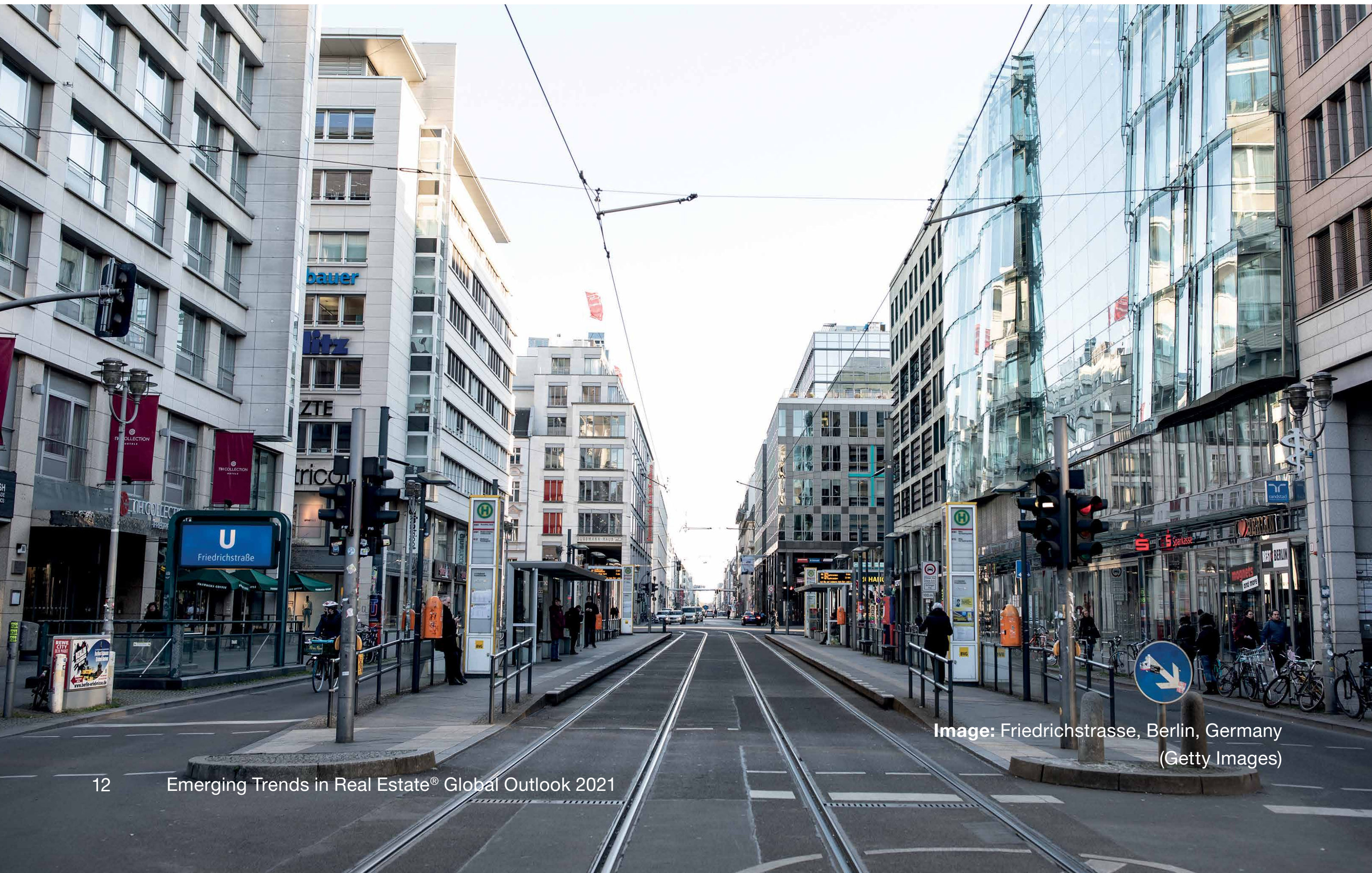


Image: Friedrichstrasse, Berlin, Germany (Getty Images)

Accelerating trends in a pandemic — by sector

The pace of economic recovery from the pandemic may vary from country to country, but the interviews for the three regional *Emerging Trends* reports and for *Global Emerging Trends* reveal that the sector issues and preferences are remarkably similar across the world.

Offices

The future of work and how it affects the office sector are arguably the most fascinating unknowns in real estate as corporate occupiers continue to focus on managing through the pandemic rather than taking long-term decisions.

Though the early, extreme "end of the office" pronouncements have subsided, COVID-19 nonetheless means that owning and managing an office building is a far more challenging proposition than before – especially around the health and wellbeing of occupiers.

From an investor's viewpoint, the future of offices is complicated by what one US player refers to as the "capital intensity" of these buildings compared with assets in other real estate sectors. In other words, offices are expensive to run and only going to get more expensive at a difficult time when the quality and resilience of income is all-important to investors.

If there is a consensus on offices, it is from a capital markets perspective – that investors will want to go with perceived high-quality buildings – modern and adaptable – but secondary stock is likely to suffer from a marked decline in demand.

The pandemic has undeniably given remote working a boost and, as one investment manager puts it, "we're not going to go back to how we were with everybody working in the office all the time". At least, that's the US and European narrative. In Asia, the story is somewhat different.

As the interviews make clear, the region's major cities, such as Hong Kong and Tokyo, are very densely populated and average living spaces tend to be relatively small and unsuited to working from home.

"Culturally, many Asian companies just expect their employees to be in the office and will continue to operate that way," says one regional player. "There will be some changes to the way offices operate, especially among multinational occupiers. But I think it'll be less of an impact than it is in Western Europe and North America."

In fact, many of the industry leaders from the US and Europe stress the importance to businesses of the "creative combustion" that occurs when employees collaborate in an office setting. It is evident that they are also drawing on their own experience. "We know that there's creativity that's required for investment strategy development at a complex time like this. That just doesn't happen on a Zoom call," says a US investment manager.

A European interviewee points out that away from the major Continental cities "there are plenty of markets where the office utilisation rate is 80-90 percent", suggesting the impact of the pandemic is lower than widely assumed. "There's also lots of precedent. When we have looked at Amsterdam, most of the Nordics, big portions of the Germanic markets, where there is a history of work from home, nobody talks about it. It was already integrated into the way we worked, and the office didn't disappear. It is just used differently."

One global player goes further: "We think it's dangerous to extrapolate from the bottom of a pandemic crisis and lazily assume that everyone's going to continue to work from home forever. As time goes on, people will realise that companies based on teamwork and collaboration will find it hard to grow their business."

Yet everyone acknowledges that the industry is facing difficult judgement calls right now. "Trying to underwrite demand in the interim, or short-term, with remote working is super-challenging without any definition yet as to what demand will be from the tenant perspective. That's the big unknown," says a US interviewee.

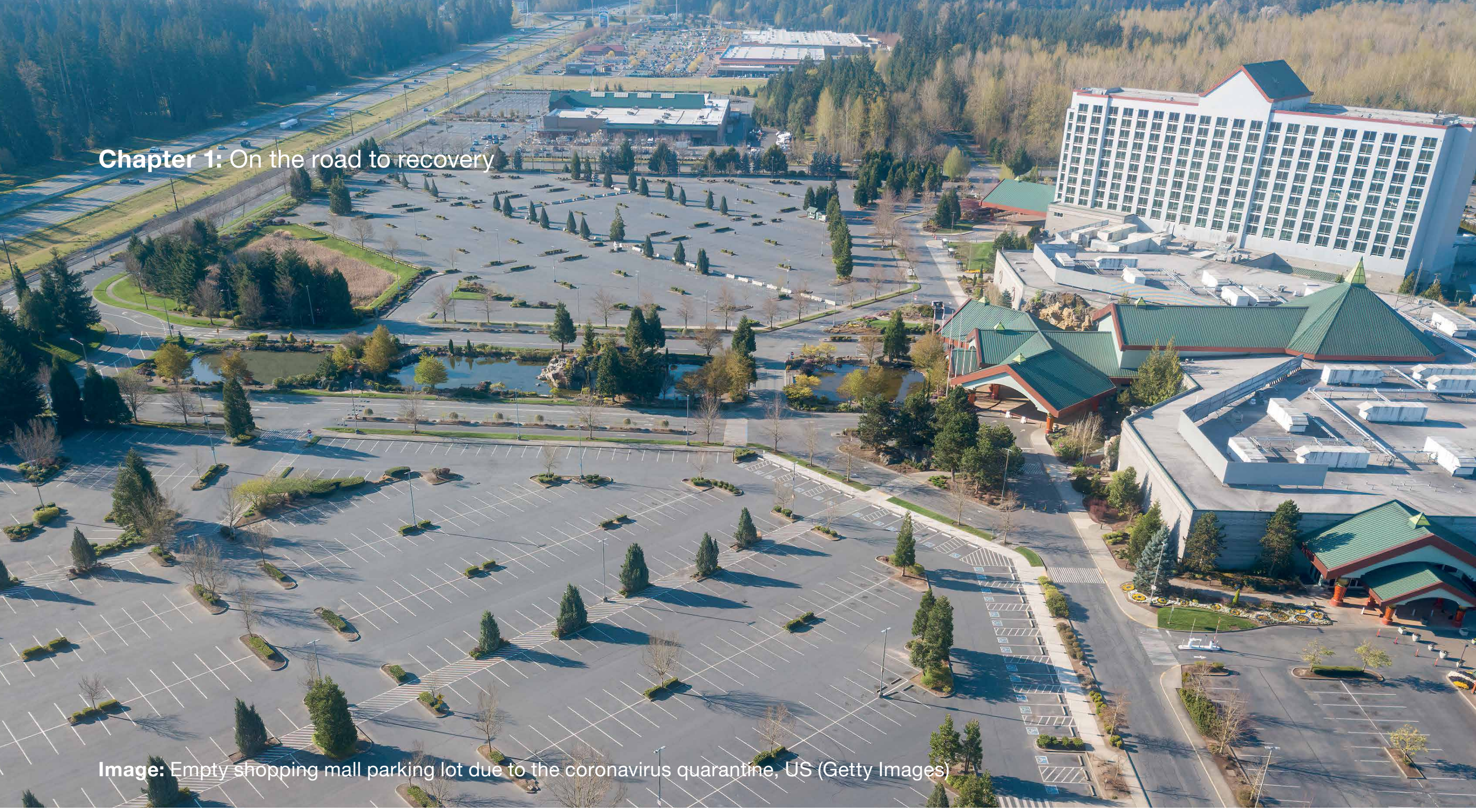


Image: Empty shopping mall parking lot due to the coronavirus quarantine, US (Getty Images)

> There will be really interesting opportunities in retail actually. It's going to be a contrarian play, but at some point prices will fall to a level which is way below replacement cost in many cases, when assets can be acquired and repositioned.

Logistics

Logistics is seen as "a winner in every region", driven to record levels of investment by surging e-commerce. Most industry players see this as a structural, not cyclical, trend. But there are nonetheless concerns expressed by some over pricing.

"One way of mitigating against risk is not necessarily following the herd into the asset classes that are attracting the most attention, such as big box logistics," says one global player. "Some of those prices are being bid up to unsupportable prices, and in some cases for not very good quality assets."

Retail

Much of the physical retail sector had been hit by online sales for years anyway before things got even worse after the outbreak of COVID-19, albeit essential and convenience shopping have proved to be notable exceptions.

The structural refocus of retail continues while the overall trading outlook for 2021 remains bleak in the US, parts of Europe and Asia Pacific.

And yet investors are already on the lookout for "oversold retail". Says one: "There will be really interesting opportunities in retail actually. It's going to be a contrarian play, but at some point prices will fall to a level which is way below replacement cost in many cases, when assets can be acquired and repositioned either to more usable retail formats or something completely different, which might be residential or urban logistics."

Hospitality

In no other sector has COVID-19 had such a sudden and devastating impact as it has in hospitality. Many hotels have seen occupancy and income fall to a fraction of pre-pandemic levels, posing a serious economic risk to operators, but also cities that are heavily reliant on tourism.

Not surprisingly, in 2020 investor activity fell to levels not seen since the GFC and yet some interviewees say that this year they have already completed "discounted" hotel deals.

Unlike retail, the slump in leisure tourism is mostly cyclical, which is seen as a factor in its favour although some forecasts suggest that international travel and tourism will not return to pre-pandemic levels until 2025.

Much still depends on the rollout of the vaccine and the relaxing of travel restrictions but the consensus is that, as one US player says, leisure-related hospitality "is going to rebound pretty quickly when things open up".

The corporate side of hospitality is far more uncertain. One US interviewee cautions: "Business travel is not going to come back anytime soon to where it was, which is going to impact hotels and all the restaurants and food and beverage revenue associated with it. And there may not be the obvious alternative use for some of those properties to convert them to apartments, just given the reverse urbanisation dynamics that we're seeing play out."

Housing

Favourable supply-demand dynamics have led investors across all three regions to increase their allocations to residential for years, but COVID-19 has clearly accelerated this trend. It is seen as a defensive rebalancing of portfolios, but equally important, the industry is also addressing the need in society for more affordable housing.

"Residential is an enormous, untapped sector that in many countries is just embryonic," says one global investment manager. "We've seen what's happened in North America over the last 40 years, where it's become a major investable asset class for institutions. The same thing has happened in Japan. But in many other parts of the developed world, it hasn't really begun."

Life sciences

COVID-19 has put life sciences under the spotlight, and it is clearly of growing importance to real estate investors in the US and Europe although, so far, the trend is less obvious in Asia Pacific.

It is one of those sectors "where we have the greatest conviction as an investor", says a US investment manager. "As a result of the pandemic … we've accelerated our focus on investing into those very demographic or demand-driven opportunities as we see them."

"

Business travel is not going to come back anytime soon to where it was, which is going to impact hotels and all the restaurants and food and beverage revenue associated with it. And there may not be the obvious alternative use for some of those properties to convert them to apartments, just given the reverse urbanisation dynamics that we're seeing play out.

United States

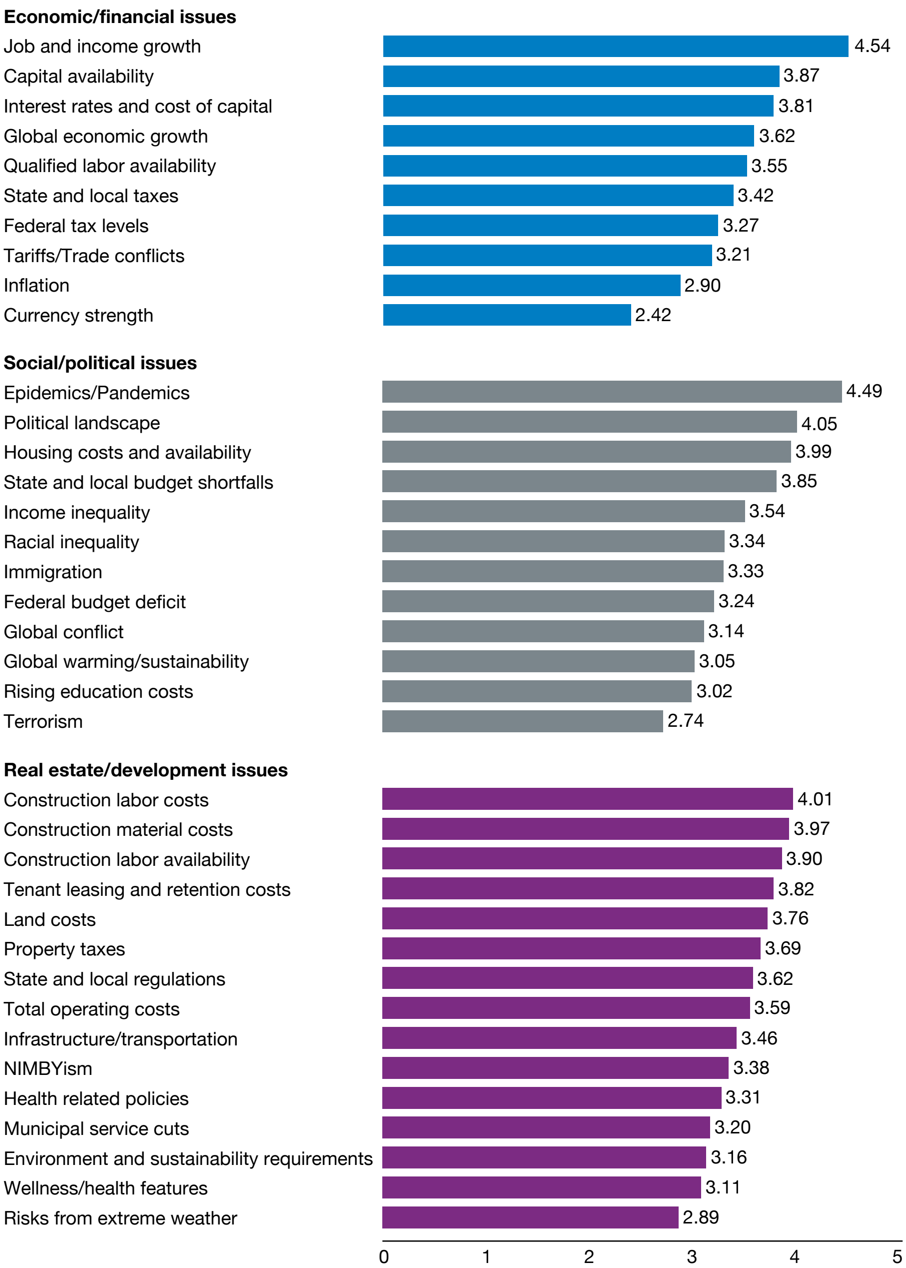
Investment volumes slumped by a third to US$405.4 billion in 2020, according to Real Capital Analytics, but the stark year-end total masks encouraging signs of a pick-up in transaction activity in the more resilient property sectors during the final quarter.

This upturn in investment has come despite the political turbulence before and after the election of President Biden. As one interviewee observes: "Investors are somehow able to compartmentalize the world of politics and government from the world of business. The stock market may be the best indicator of this, but I think the real estate industry is similar."

Though the early data for 2021 indicate a fall in deal activity, industry leaders canvassed for this report nonetheless express "a sense of relief" that there is "more predictability" for the US economy following the election. "It's a little easier to build conviction around an investment strategy," says one.

There are still concerns over the lasting debt burden from the sheer scale of President Biden's US$1.9 trillion stimulus package — 10 percent of US GDP — but most see it as a necessary "bridge to the other side of COVID".

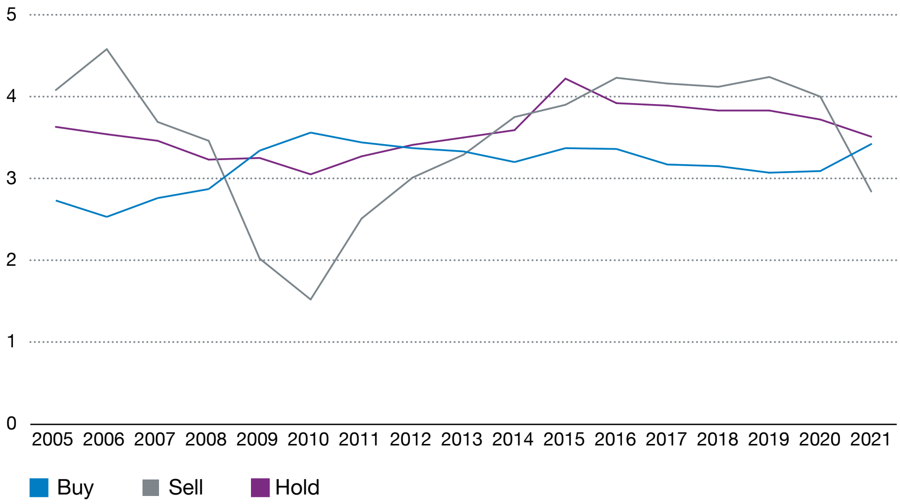
Figure 1–2 **Importance of issues for real estate in 2021**



1 = No importance 2 = Little importance 3 = Moderate importance
4 = Considerable importance 5 = Great importance

Source: *Emerging Trends in Real Estate United States and Canada*

Figure 1–3 **Emerging Trends barometer 2021**



1 = abysmal 2 = poor 3 = fair 4 = good 5 = excellent

Source: *Emerging Trends in Real Estate United States and Canada*
Note: *Based on US respondents only*

> There's a nice putting together of building blocks for us to be a less carbon-intensive society, and a smarter, more productive one.

There is also support for the Biden administration's proposed infrastructure programme and the fact that it is pro-environment, albeit with broad acknowledgement that the US is lagging other parts of the world on both counts. "There's a nice putting together of building blocks for us to be a less carbon-intensive society, and a smarter, more productive one," says one interviewee.

In the meantime, the logistics, industrial cold storage, data centre, medical office, life sciences and suburban housing sectors have shown extraordinary resilience over the past year. Values for logistics properties, in particular, have held up and are expected to increase in 2021.

By contrast, senior living has endured historic low occupancy rates during the pandemic although this is seen as a temporary decline. As in every region, hospitality has been badly hit during the crisis although interviewees point out that deals are being done – heavily discounted pricing is evidently tempting some investors back to this sector.

Retail, however, remains under a heavy cloud, with COVID-19 accelerating the shift from bricks and mortar stores to online sales. US shopping malls were the first to suffer years ago and are clearly still bearing the brunt of this difficult transition although most US players believe the best malls will adapt successfully. "The mall space needs to be rethought," says one. "There will be an opportunity in that space, whether it's redevelopment as residential, distribution or other uses. And then I believe there will be a time – probably not in the short term – when there's going to be this consolidation where retail will do very well. But it's hard to say because I think 25 percent of the thousand malls that are out there today are likely to be gone in the next 12 to 24 months."

The short-term outlook for US offices, meanwhile, is hard to untangle from the move to widespread remote working and the demographic-based suburban growth, especially in the Sunbelt markets. Though COVID-19 has called into question the appeal of big cities the world over, the "population shift to the suburbs", as one interviewee puts it, is much more of a US trend.

According to one US investment manager, a likely consequence of this trend is that "we will see outpaced, stronger demand growth for office space, in particular, in the secondary markets than in our global city markets over the next three to five years".

Yet no-one is writing off the gateway markets of Boston, Los Angeles, New York City, San Francisco and Washington. "We're seeing persistence of demand for some suburban strategies. But the arguments in favour of the gateway cities are still quite compelling. They tend to bounce back," says another US player.

This interviewee adds: "I think there's something for every risk profile. You can execute strategies now and should. Let's ignore the richly priced sectors for a second and just say, what recessions do is to reprice property types, reprice locations, and therefore you can buy certain places on depressed rents, you can get better terms from the seller or joint venture with the seller, perhaps you keep them in. There are opportunities that recession make possible."

"We're seeing persistence of demand for some suburban strategies. But the arguments in favour of the gateway cities are still quite compelling. They tend to bounce back.

Image: Medical Business Building, Scottsdale, Arizona, US (Getty Images)

Europe

Huge volumes of quantitative easing (QE) and record low interest rates continue to help European real estate overcome the negative economic effects of COVID-19.

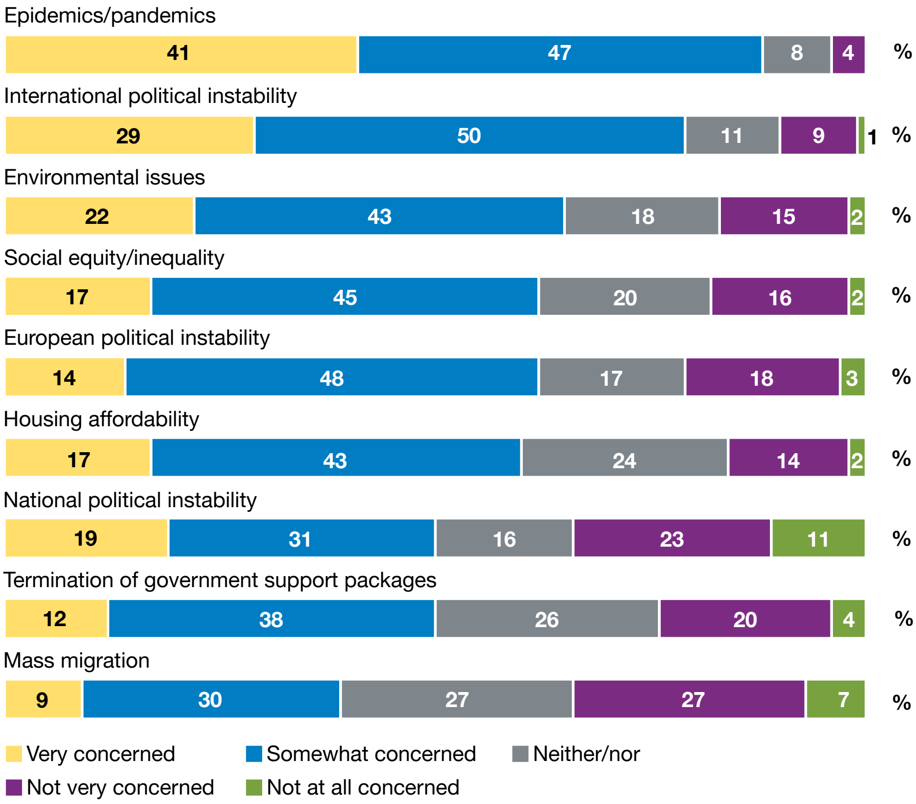
"What's interesting is that capital values and rents have not tracked with GDP in this crisis in the way that we've seen historically. It's quite unusual and it's largely driven by the QE factor," says one industry leader.

It is one reason why office values and rents have held up remarkably well as the industry comes to terms with remote working and the debate around just how office property will be used in future. Against that uncertainty, overall take-up has slumped to its lowest level since the since the 2008 global financial crisis (GFC) with little respite anticipated in 2021 as major corporate occupiers cut back on costs or delay decisions. Yet Berlin and Paris lead *Emerging Trends Europe's* ranking of overall investment and development prospects for cities in 2021, just as they did pre-COVID.

As it turns out, prime office yields in Berlin and Paris are widely acknowledged to have seen compression during the pandemic while pricing has held steady in London despite the early post-Brexit loss this year of financial services business to the European Union.

However, interviewees note that London and Paris are struggling disproportionately with some of the pandemic's side effects compared with smaller competing cities. Aside from the collapse in foreign tourism, both these big capitals have a high dependence on public transport and therefore the not entirely appealing prospect of long, crowded commutes to work once lockdown is over. They also have the social distancing issues of higher office densities per employee.

Figure 1–4 **Social-political issues in 2021**



Source: *Emerging Trends in Real Estate Europe 2021*

These pandemic-related challenges are informing the industry debate — as yet unresolved — around urbanisation, densification and where future opportunities lie. "The reality of it is that the statistics on urbanisation are pretty compelling," says one interviewee. "London and Paris have had a bigger impact from COVID. But fundamentally, smaller cities like Copenhagen, Hamburg, Munich, are all still growing."

"What's interesting is that capital values and rents have not tracked with GDP in this crisis in the way that we've seen historically. It's quite unusual and it's largely driven by the QE factor.

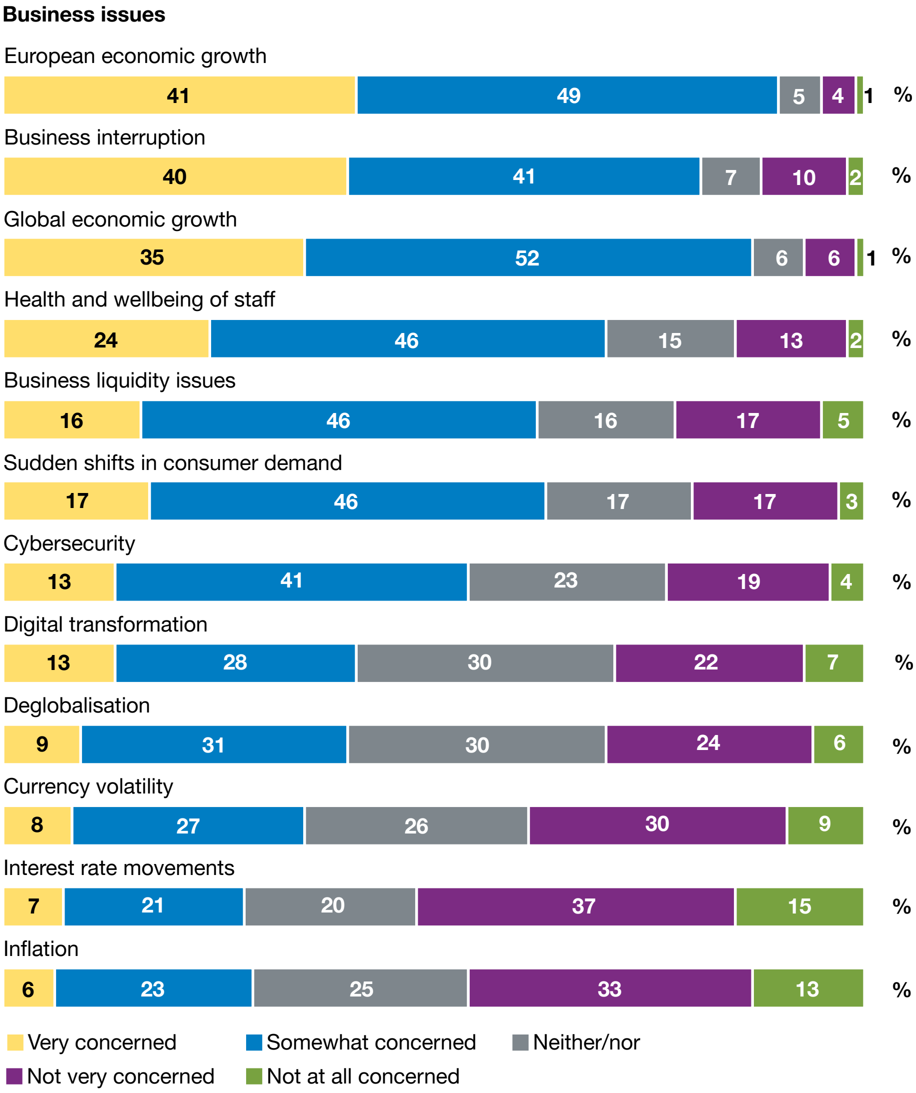
The industry is also examining how European governments are handling the pandemic, which in Germany's case had helped boost real estate investment before its Christian Democratic Union–led coalition government imposed a hard lockdown from mid-December. "Germany was open for business for most of 2020," says one investment manager.

That domestic freedom of movement undoubtedly helped Germany retain its position as Europe's most active country market for investment last year, albeit its €66.7 billion total volume was 23 percent down from 2019, according to Real Capital Analytics (RCA).

Europe's overall transaction volume for 2020 fell 27 percent to €254.9 billion. Beneath the headline numbers it is clear that southern European markets, such as Spain and Portugal, that depend more on foreign investors, particularly from the US, have been faring worse than those with a strong domestic capital base.

With COVID-19 reinforcing so many real estate trends, one of the most notable examples is the increasing allocation of capital into "beds and sheds", which was already significant in Europe. RCA says apartment and logistics investment accounted for a record 37 percent of all European transaction activity in 2020, which for the first time was greater than the amount spent on offices.

Figure 1–5 **European business environment in 2021**



Source: *Emerging Trends in Real Estate Europe 2021*

Interviewees suggest that the pandemic has made the investment rationale for logistics in Europe even more compelling than before, and not just reliant on the loose monetary environment. "I think that that's an example of where there has been a structural shift," says one, "and it's responding to the needs of the occupier. That's so important for any sustainable investment and it is often underrated."

Meanwhile, the European real estate industry sees investing in housing — social, affordable and private rented — as fulfilling a basic need in society but also as a prudent defensive play at a time of economic uncertainty. Germany, Denmark and the UK have all seen strong investor demand for housing over the past year. There is, however, pandemic-related caution attached to student accommodation, retirement housing and co-living, at least for 2021.

"We'll be very selective about where we take risk, across all sectors," says one investment manager, "but in the living sector demand outstrips supply pretty much across all European geographies. And, we haven't been building enough residential accommodation for the demand since the GFC, and even before the GFC."

For the short term, the industry hopes for an upturn in investment in the second half of 2021, but much depends on the vaccine rollout and the continuing government policy responses to the pandemic, not least in Germany following its September election. With Chancellor Angela Merkel not standing for office after four consecutive terms, this so-called "super election year" may yet test Germany's position as Europe's safe haven for capital.

"We'll be very selective about where we take risk, across all sectors.

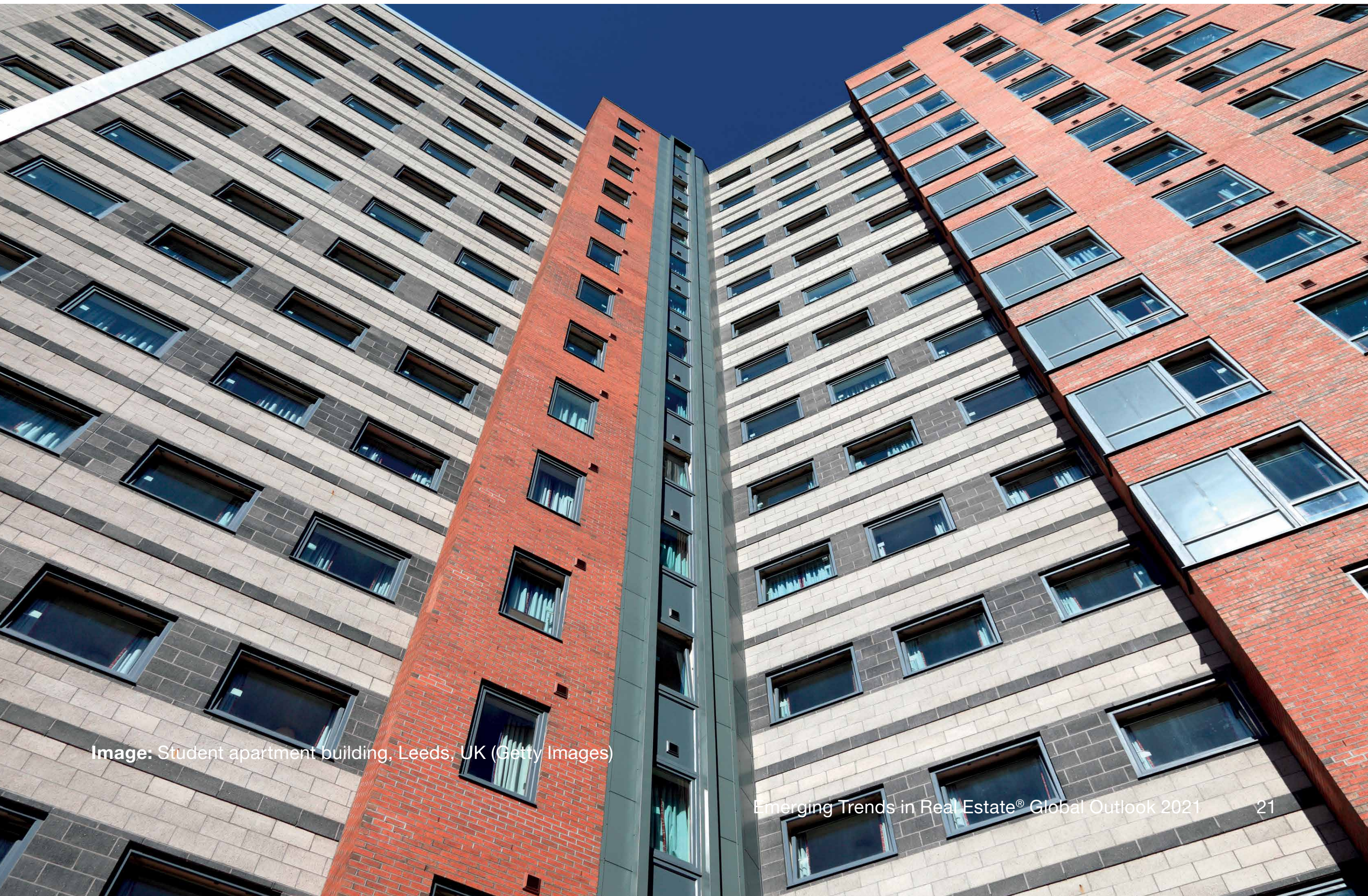


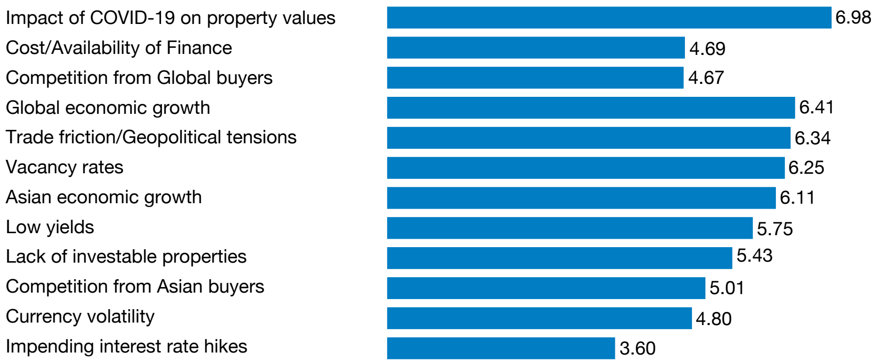
Image: Student apartment building, Leeds, UK (Getty Images)

Asia Pacific

The success of Asia Pacific governments in containing the spread of COVID-19 has become a key factor in reassuring global investors of the region's relative strength as an investment destination in 2021 and beyond.

The interviews suggest that many global investors are "placing their biggest growth bets" on parts of Asia Pacific. As one industry leader points out, "a lot of people concluded back in March of 2020 that there was probably going to be a correlation between who recovers first [economically] and who has handled the pandemic better".

Figure 1–6 **Most problematic issues for real estate investors**



Source: *Emerging Trends in Real Estate Asia Pacific 2021*

Image: Shibuya Scramble Crossing, Tokyo, Japan (Getty Images)

"If we just keep politics out of it," says a regional player. "we have a lot of centrally planned, authoritative governments, and the reality is that can work pretty well in the time of pandemic — kept it under control a bit more."

Others suggest that the favourable megatrends that helped attract global capital to the region before the outbreak of COVID-19 — such as growing savings and the massive emerging middle classes in places like China and India — are as important as ever.

As one global investor active across the region observes: "If you're in Asia, it's because you believe in the demand drivers in Asia. Not because of international capital flows, not because of multinational tenants or whatever it may be. That plays a part of it, but that's rounding errors in all these economies."

According to Real Capital Analytics (RCA), there was an overall 23 percent year-on-year fall in transactions to US$141.2 billion but an encouraging final-quarter pick-up in activity.

It is still worth highlighting the differences in capital trends across a region of such disparate economies. Sharp declines in investment by both domestic and foreign players in Singapore and Australia, in particular, dragged the 2020 total down although interviewees expect core capital to return to both markets in 2021.

In stark contrast, India, Taiwan and South Korea all achieved record investment volumes last year, and there is no sign of any let-up in momentum. In the case of South Korea, a surge in office and retail investment — driven by domestic institutions — resulted in Seoul becoming the world's largest retail transaction market in 2020, and the second largest office market, behind Paris.

None of this diminishes the region's complex geopolitical backdrop to investment. COVID-19 has inevitably overshadowed the US-China tensions — the trade war of 2019 becoming more of a "systemic rivalry" today — as well as the pro-democracy protests in Hong Kong. But they are still problematic for some US players. One global investment manager recalls a recent conversation with a US colleague: "Life's a bit too short right now to get China through the investment committee."

Yet RCA records that North American capital flows elsewhere in Asia Pacific remained "resilient" in 2020 while European investors deployed US$9 billion in the region — their second highest annual outlay despite the challenges presented by global travel restrictions.

Industry leaders also stress the growing importance of domestic institutions and cross-border investors from within the region.

"Asia has a lot of Grade A real estate. Doesn't mean it was designed as an investable asset and held by institutions. The aggregation of that capital is just starting to happen and just starting to move freely. That's our exit market, and it's not geopolitically impacted," says one interviewee. "If you create long-term, sustainable income, and it's wrapped in an institutional-quality asset, we're consistently finding that we are under-estimating how many people want to buy that, and what they'll pay for that income. It's across multiple sectors."

"If you're in Asia, it's because you believe in the demand drivers in Asia. Not because of international capital flows, not because of multinational tenants or whatever it may be. That plays a part of it, but that's rounding errors in all these economies.

As in other regions, logistics is regarded as the sector that emerges from the pandemic strongest across Asia Pacific, largely driven by the growth in e-commerce. Even though logistics pricing is "frothy", regional players note that there is "a massive under-supply of proper grade A stock" in key markets like China.

Residential investment, meanwhile, is expected to be an important defensive play in markets such as Japan in the coming year. "I'd say that we have found a particularly strong level of interest in Japan residential," says one global investor. "When the shackles get taken off and people can travel, I think that will open up more opportunities."

Top cities for real estate investment in 2021…

US	Europe	Asia Pacific
Raleigh/Durham	Berlin	Ho Chi Minh City
Austin	London	Singapore
Nashville	Paris	Shenzhen
Dallas/Fort Worth	Frankfurt	Tokyo
Charlotte	Amsterdam	Seoul
Tampa/St. Petersburg	Hamburg	Osaka
Salt Lake City	Munich	Sydney
Washington, DC	Madrid	Shanghai
Boston	Milan	Guangzhou
Long Island, NY	Vienna	Taipei

Source: *Emerging Trends in Real Estate® Asia Pacific, Europe, United States and Canada 2021*

…and how countries fared in 2020

Table 1–1 **Transaction volumes, 2020**

Americas	Volume (US$ bn)	YOY (%)
United States	328.6	-33%
Canada	17.4	-28%
Brazil	2.2	-36%
Mexico	0.7	-61%
Americas	**349.2**	**-33%**

EMEA	Volume (US$ bn)	YOY (%)
Germany	70.9	-22%
United Kingdom	51.6	-16%
France	34.7	-35%
Netherlands	18.5	-25%
Sweden	16.9	-17%
EMEA	**268.9**	**-26%**

Asia Pacific	Volume (US$ bn)	YOY (%)
Japan	38.0	-15%
China	33.4	-21%
Australia	25.1	11%
South Korea	18.0	-45%
Hong Kong, SAR, China	8.6	-43%
Asia Pacific	**141.2**	**-23%**

Source: *Real Capital Analytics*

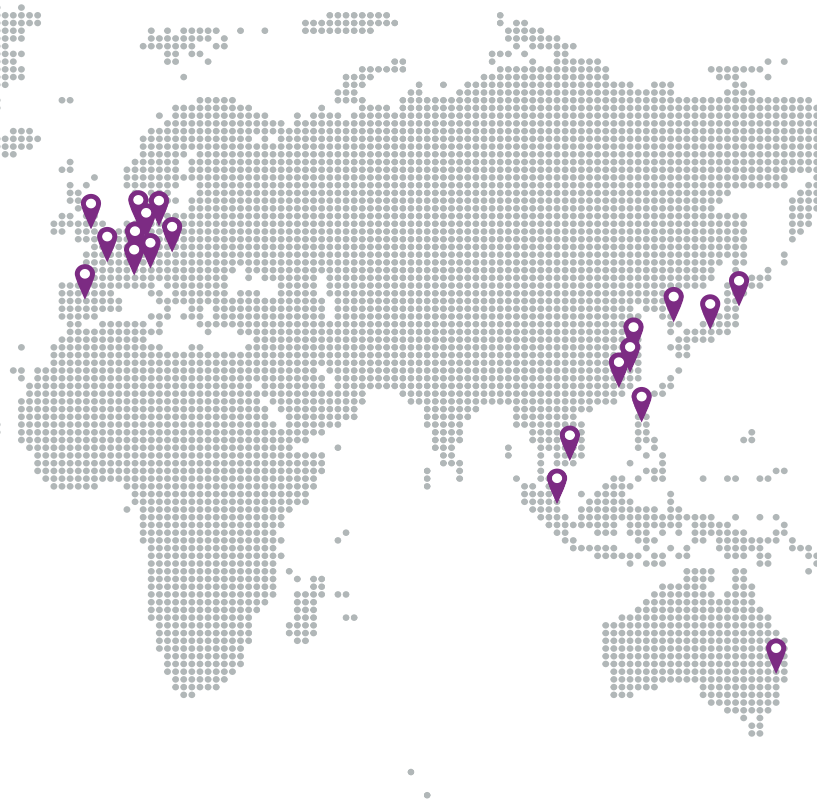


Table 1–2 **Global transaction volumes by property type 2020**

	Volume (US$ bn)	YOY (%)
Office	254.6	-34%
Industrial	162.5	-7%
Retail	88.9	-35%
Hotel	28.1	-65%
Apartment	208.9	-19%
Seniors housing & care	16.4	-43%
Income properties	759.4	-29%
Development sites	662.3	-7%
Grand Total	**1,421.6**	**-20%**

Source: *Real Capital Analytics*

“

If you look at the global themes of a negative interest rate, low-return environment and challenges in fixed income, fundamentally every investor around the world that you speak to wants to increase their allocations to alternatives, whether that’s infrastructure, debt or real estate. There’s no shortage of capital.

European CIO,
Global Emerging Trends in Real Estate 2021

“

If you look forward three to five years, the global gateways – the San Francisco, LA, New York and DC markets – are going to have the roughest road in terms of demand. In those cities it is about price; they will find equilibrium where supply equals demand for both housing and offices. But I think it’s going to be painful. Rents will be down meaningfully.

US investment manager,
Global Emerging Trends in Real Estate 2021

Chapter 2

Dealing with decarbonisation

"When we are talking about net-zero, you have to look at which buildings warrant salvation. With some, it will be better to knock them down and start again, they are so inefficient. But if you can, retrofitting is always a better option than building something new."

Global investment manager,
Global Emerging Trends in Real Estate 2021

Image: Modern energy-efficient apartment buildings, Tubingen, Germany (Getty Images)

“It’s moving quickly, and by the end of this year it will be an avalanche.” This is how one investment manager describes the growing awareness across real estate that the industry must deal now with the impact of carbon emissions from the built environment.

Though decarbonisation and climate change have been rising up the agenda for years, senior real estate professionals interviewed for *Global Emerging Trends* say it is in the last 12 to 18 months that these issues have moved to the foreground of the industry’s thinking.

For myriad reasons, more companies in all areas of the built environment than ever before are putting in place strategies that place decarbonisation at the heart of the way they do business, accepting the challenge that will define the future of humanity while realising profits along the way.

But the industry remains in its infancy when it comes to decarbonisation, and the path ahead is complex, requiring detailed thought and previously unimagined levels of collaboration.

Industry leaders concede that many people in real estate are still ignoring the far-reaching consequences of carbon emissions from buildings. There are big gaps, in skills but also in terms of data being collected on how much energy buildings use.

There remains a daunting amount of complexity in the development, ownership and management of real estate, which makes coming up with an effective strategy difficult even for large companies that can hire experts in the subject. Executing the strategy is more difficult again, given the need for multiple companies at different points of the real estate value chain to work together with the same commitments and goals in mind.

Some interviewees also argue that the industry is focusing too much on the carbon emitted during a building’s operations (operational carbon), far less on the carbon emitted during construction (embodied carbon), including the carbon emitted for the production and during the transportation of materials. That opens the possibility to a damaging form of greenwashing that perhaps undermines some of the good work being done.

But the industry is working to surmount these issues. The effort to decarbonise and reduce emissions is increasingly seen as an investment in the future, for businesses as well as the planet. It is an inspirational act that will require companies, cities and governments to work together in a way never seen before, to solve the great challenge of this and perhaps any generation. That investment in the future is inherently an act of hope, and real estate is hopeful of playing its part.

“

It’s moving quickly, and by the end of this year it will be an avalanche.

> We have done the desktop analysis; that took a couple of years. Now we are moving from the analytical to the implementation phase.

Moving from analysis to implementation

Almost all interviewees agree that there has been a dramatic increase in focus on decarbonisation in the real estate industry in the past 12 to 18 months, an acceleration they expect to continue.

A total of 67 real estate companies have put in place or committed to put in place a strategy to get to net-zero (operational) carbon emissions from their portfolios with a science-based target, according to the Science-Based Target Initiative. In other words, they have committed to a strategy backed by rigorous standards to help limit global warming to 1.5-2 degrees Celsius, the target set by the IPCC to avoid the worst effects of climate change. The number of companies is small in terms of the overall real estate universe, but growing.

Interviewees point to numerous, interrelated social, economic, political and regulatory factors all pushing the industry towards decarbonisation.

"We have done the desk top analysis, that took a couple of years, now we are moving from the analytical to the implementation phase," one investment manager says. Policies that were put in place after the Paris Climate Agreement was signed in 2015 are now starting to have a practical impact.

Partly it is a response to the impact of climate change becoming more tangible. "People are reacting to the evidence of their own eyes," one adviser says. "California and Australia are on fire, and 100-year storms are becoming more and more common."

The Science-Based Targets Initiative

The Science-Based Targets Initiative is a partnership among CDP, the United Nations Global Compact, World Resources Institute (WRI) and the World Wide Fund for Nature (WWF) to show companies how much and how quickly businesses need to reduce their greenhouse gas emissions to prevent the worst impacts of climate change, leading them on a clear path towards decarbonisation. Companies commit to decarbonise their business in such a way that they will contribute to hitting a specific target in terms of limiting climate change — ideally limiting this to 1.5 degrees Celsius, but a maximum of 2 degrees.

In terms of the built environment, there are 67 real estate companies signed up to the initiative, 37 construction and engineering companies, 17 construction materials companies and 10 homebuilders.

Of the real estate companies, 28 are based in Europe, 18 in North America, 14 in Asia, four in Oceania, two in Africa and one in Latin America.

> For a long time, there was a lot of greenwashing; it was just words and people paying lip service. Now we are seeing action. The Paris Agreement has been a huge trigger.
>
> **Adviser,**
> *Global Emerging Trends in Real Estate 2021*

Image: Modern energy-efficient suburb, Esslingen am Neckar, Germany (Getty Images)

Regulatory pressures

But market and regulatory forces, above all, are making decarbonisation a matter business cannot ignore, with a direct impact on the bottom line.

"I don't think everyone in real estate suddenly woke up and became a tree hugger," one investment manager says. "It's about risk."

A big debate in real estate used to be about whether the cost of investing in reducing the carbon emissions of a building justified the financial returns.

Now, among the biggest investors and investment managers at least, the conversation has changed. By not decarbonising your portfolio, are you taking an unacceptable risk?

The pressure is coming from both the providers of finance and the biggest tenants. "Pensioners want good financial returns, but they want to live up to the goals of the Paris Agreement too," one institutional investor says.

"Institutional investors are starting to set net-zero carbon targets, that means they are now under pressure to decarbonise, and that means if you want to win money from them, or keep existing allocations, you have to care about that too," one investment manager says. "When it comes to questions from institutions there are three main topics: ESG, diversity and digitisation," another adds. "That wasn't the case a few years ago."

It is by no means wholesale: one property company executive points out that the amount of focus an investor places on decarbonisation is closely correlated with size; another says that European and Canadian investors are far more focused on the topic, although US and Asian investors are catching up quickly.

The interest is being driven partly by the changing attitude among pension holders, but there is also the expectation that city, regional and national governments will start to ramp up regulation in coming years.

"Governments and cities are starting to put in place their own net-zero targets," one investment manager says. "At the moment there is little visibility about how that will affect buildings. But given the proportion of emissions that come from the built environment then regulation of the sector will have to increase."

Examples of legislation influencing behaviour commonly cited include New York's Local Law 97, which fines property owners if their building breaches carbon emission levels. Venture capital firm Fifth Wall estimates that not bringing buildings up to code standards could cost owners in the city US$10 billion a year in fines. Los Angeles is implementing similar, albeit less stringent, regulations in its recent Green New Deal legislation. "Where those cities go, others in the US will follow," one investor says. Or as another interviewee puts it: "We are an investor in cities, so what cities do is more important to us than what governments do."

Image: Modern zero-energy houses, Tubingen, Germany (Getty Images)

> Every time we look at a new acquisition, we are underwriting how much it might cost to get that building to net zero.

In Europe, the UK has minimum energy efficiency standards, which means any commercial building below a certain standard cannot be leased. The Netherlands is introducing something similar for office buildings.

Germany has recently introduced a carbon tax that will affect commercial buildings that emit more than a certain amount of carbon. Although the tax is currently very low, and not expected to influence behaviour as a result, there is the expectation that it will be increased over time.

More broadly in Europe, the European Union's Green Deal is a set of policy initiatives aimed at making the bloc "climate neutral" by 2050, and this will require the individual member nations to enforce stricter regulations. When it comes to property, the initiative's focus is on retrofitting existing buildings and enforcing tougher standards on emissions from buildings while they are in operation.

In Asia, China and Singapore have recently unveiled net-zero targets, with expectations that tougher regulation of real estate could follow to ensure that these targets are hit.

In the US, there is a feeling that the new administration of President Biden will change the narrative around decarbonisation in the US economy, as highlighted by his early announcement that the US will rejoin the Paris Climate Agreement. "He could really change the psychology, and we see the US catching up fast with Europe," one investment manager says.

And globally, while it is not regulation per se, an increasing number of institutional investors are signing up to the Taskforce For Climate-Related Financial Disclosure. This sets out standards for investors to disclose risks related to their business, which could be brought about by climate change.

And these changes are influencing the real estate investment and leasing markets today. One service provider points out that of their top 200 clients, 60 percent now have a net-zero carbon target in place.

Green premium or brown discount?

"We firmly believe it is starting to affect value now," one investment manager says. "It is not affecting every deal, but we think that within the next decade it will, and in real estate terms, that is basically now."

Driving this decision-making is the capital expenditure that investors feel is necessary to ensure their existing buildings and new acquisitions meet those increasingly stringent carbon emissions regulations. Ignoring this issue runs the risk of creating a "stranded asset" that cannot be brought into line with regulations, and for which there will be no buyers or occupiers. It is a phrase that is becoming increasingly prevalent among investors. Greener buildings are increasingly being seen as more saleable.

"Every time we look at a new acquisition, we are underwriting how much it might cost to get that building to net zero," one investment manager says. "If you come into our investment committee, and you haven't come up with a cap-ex budget for getting the building to zero, you're told to go away and come back when you have," another adds. "We don't even look at a deal until we understand that."

Not every investor is thinking in this way just yet. It remains to be seen how seriously opportunistic investors, with relatively short holding periods, will engage with the necessarily long-term commitment to net-zero.

One investment manager points out that they are not taking a blanket approach across the world — this way of thinking will be applied first in locations where regulation is expected to tighten fastest, with European countries taking the lead over the US and Asia.

But in those places, some investors report already seeing live examples of buyers asking for a "brown discount" on a building, offering a lower price because the cost of getting the building to net zero carbon emissions is relatively high. And there is a widespread belief that "dirtier" buildings are already close to a point where they are less saleable.

"Like everything in real estate, it is a negotiation — if there are 20 bidders on an asset then you have less leverage," one investment manager says. "If there are fewer, then you have room to negotiate."

The data on whether there is a green premium or brown discount for the price of a less or more carbon intensive building are sparse. On the leasing side it is becoming clearer. A report by JLL in 2019 showed that in a sample of central London offices, buildings with a higher BREEAM rating achieved a rental premium of 6 to 11 percent over lower-rated buildings, and that they leased up faster. Certifications like BREEAM are of course just a proxy for the carbon emissions of a building, rather than a direct marker of their output. But it shows that, at the very least, the perception of sustainability creates a green premium on leases.

"The financial value comes from the fact that to get the best tenants and the best rents, you need the best buildings," one property company executive says. Another investor adds that pressure is coming in particular from US tech occupiers, and the fact that companies with net-zero carbon targets are assessing how their buildings contribute to their carbon footprint. For services firms, buildings play a very large role in their output.

In terms of how to make this way of thinking more ubiquitous, several interviewees point to one, perhaps overlooked, group: valuers and appraisers. A change in valuation methodology to take into account the cost of retrofitting a building to make it net zero would force the industry to change. "It would turn something that is currently a cost into a value-driver," one property company executive says.

This would include modifications to industry best practice and could require changes from the regulatory bodies that govern how valuations and appraisals work in different countries — appraisers only work within the strictures that govern their profession. Some investors are moving faster, and making this change themselves. If the market as a whole starts to discount brown buildings then valuers will follow suit: valuations in many countries work on a comparative basis and are based on the price at which an asset should transact in the market. But a change in valuation rules — or better education for the valuation profession on how decarbonisation will change the value of real estate — would force every investor to take the move to net-zero real estate into account.

What are you aiming for?

Reversing decades of unfettered carbon emissions is inherently a complex problem. But there is also a wide and often bewildering array of certifications and standards that can be applied to buildings; and it can be fiendishly difficult to work out what kind of targets building owners should be trying to hit to make sure they are doing the best for their business and the planet.

Most interviewees concur that net-zero carbon is fast becoming the most important standard for a building in terms of climate change and decarbonisation, more important than certifications given by bodies like LEED or BREEAM, many of which are in fact starting to incorporate net-zero into their certifications.

But what does net-zero carbon even mean when it comes to buildings? There are many different definitions provided by different bodies, some of which carry more weight and rigour than others, often subtly but importantly different.

When calling a building net zero, is that referring only to operational carbon emissions, those produced during its working life, or also those generated by the production and transportation of materials in construction? Does net-zero operational carbon mean just the carbon emitted by the areas the landlord controls, or those emissions created by tenants as well? Should it take into account the ways in which people get to the building — if it can only be reached by car, should that count against it in any net-zero assessment?

"People are gravitating to standards like the UN Sustainable Development Goals because they are relatively simple," one service provider says. "It would definitely be easier if there was a single standard to adhere to," an investment managers adds.

This profusion of certifications, standards, targets and terminology creates the potential for "greenwashing", giving the appearance of decarbonising for reasons of brand and to attract capital, while actually focusing on only part of the story. Put more charitably, this complexity means real estate professionals might unwittingly take a wrong path and end up implementing strategies that fall well short of their aims.

Given that 73 percent of *Emerging Trends Europe* survey respondents believe that brand and reputation will become more important to the success of real estate firms in future, it is clear why they would want to be seen to be doing the right thing. But not coming up with and executing a careful strategy, with clear goals based around evidence — in short, treating decarbonisation as a box-ticking exercise and "net-zero" as a badge for the corporate brochure — has the potential to do more harm than good. "I worry that a lot of people are going to rush into this, and get it wrong," one investment manager says. "We have been doing this for years, a lot of people haven't."

Tools do exist to help owners cut through this complexity, such as the Carbon Risk Real Estate Monitor (CRREM), which allows owners across the world to input details of the individual assets in their portfolio and see what measures they will need to take and when to decarbonise their assets within a particular time.

Image: Green building with vertical garden, Barcelona, Spain (Getty Images)

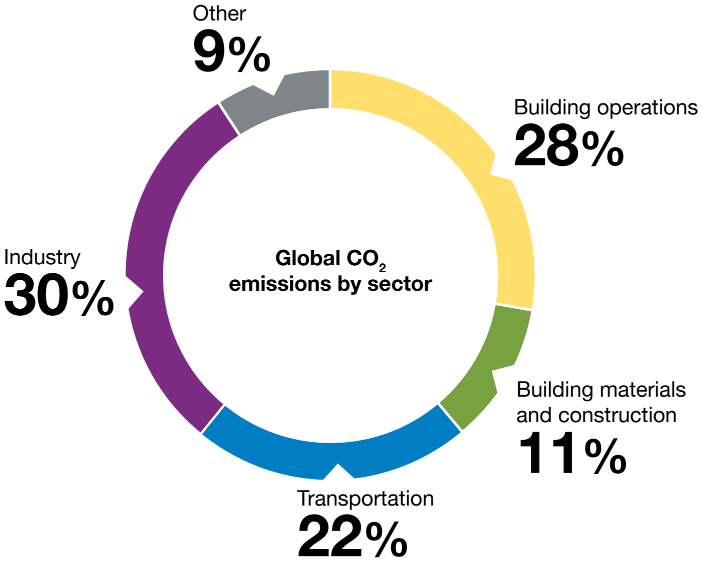
Simple lies and complex truths

One of the main areas of contention currently is around how to measure and account for embodied carbon — the carbon emitted during the production and transportation of the materials and as part of a building's construction. Together, the construction and demolition of building materials account for about 11 percent of global annual carbon emissions, according to the Global Alliance for Buildings and Construction.

Research by Architecture 2030, using figures from the UN and the US Energy Information Administration (EIA), suggests that about 74 percent of the carbon emitted during a building's lifecycle comes from its construction and demolition, just 25 percent from its operations. Is it worth building a new, low-emission building, given the amount of carbon emitted by its construction?

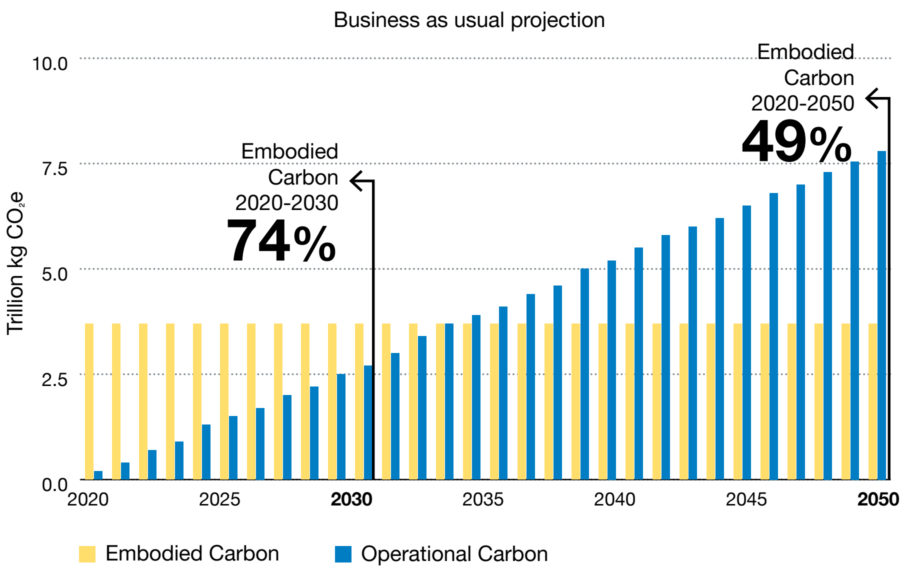
One large investment manager admits that while they have a huge amount of data on the amount of operational carbon their buildings emit, they have virtually no information on their embodied carbon footprint, because it is far more difficult to measure, especially with very old assets. It is "so detrimental" because the manufacture of cement and steel is so carbon-intensive. A further layer to this is the fact that the extra glass or insulation used to improve operational carbon efficiency itself has a carbon footprint, which is emitted when it is manufactured.

Figure 2–1 **Global CO_2 emissions by sector**



Source: *Architecture 2030*

Figure 2–2 **Total carbon emissions of global new construction from 2020-2050**



Source: *Architecture 2030*

> Retrofitting is where the sexy stuff goes on; that is where you have the potential to make really big gains.

For critics of the path the real estate industry is taking, there is too big a focus on operational carbon, both in the net-zero labels being applied to buildings and in the strategies that companies are putting in place.

"The industry is kidding itself, and it is a form of greenwashing," one property company manager says. "There is far too much attention paid to operational carbon. If you look at the data, even the most energy-efficient new building can never offset the amount of carbon that is created during its construction. It is because it is easier to focus on operational emissions. It is like [French revolutionary writer] Alexis de Tocqueville says, it is easier for the world to accept a simple lie than a complex truth."

According to the UN and EIA, about 28 percent of the world's emissions come from building operations, and about 11 percent from construction — but while operational emissions can be reduced, once a building is constructed, those emissions are in the atmosphere, with nothing to be done about them.

By focusing on building operations, the real estate industry ignores the fact that in many countries the electricity grid is becoming more and more based around renewable energy, so building operations will become net-zero carbon anyway.

The solution proposed is a much greater focus on retrofitting existing buildings rather than developing new ones. This still has an embodied carbon footprint of course, but it is much lower than knocking a property down and replacing it. The lower embodied carbon footprint means that the efficiency savings created during its operations have a better chance of being greater than the carbon emitted during the redevelopment phase.

"Retrofitting is where the sexy stuff goes on, that is where you have the potential to make really big gains," one adviser says.

An often-cited fact in this regard is that 80 percent of the buildings that will be in existence in 2050 have already been built. Making them energy efficient rather than developing new buildings would have a huge impact on meeting net-zero carbon goals. Data from the International Energy Agency show that on a global basis green retrofits create more jobs per $1 million spent than almost any other green measure.

Solutions to reducing embodied carbon do exist. Using timber rather than steel in a building reduces its carbon footprint if the source is local. The French government, for instance, has just mandated that all new public buildings developed after 2022 will have to use 50 percent timber. Here again however complexity abounds; it can be more difficult for timber buildings to pass fire safety regulations, and their insurance costs can be higher. For greater adoption, far more collaboration between the real estate industry, regulators and insurers is necessary.

Building materials manufacturers are also undertaking research into making concrete that is less carbon intensive. Indeed, one major developer says they are funding research in this area, including technology that injects nano particles into concrete so it can use less cement. "We use a lot of concrete, so this can play a major role in helping us meet our targets."

Image: Construction site, China (Getty Images)

Another interviewee involved in the construction process says their policy is to exclude materials unless they meet a certain energy-efficiency standard. They are prioritising "innovative" new materials that can reduce embodied carbon. "Manufacturers might have these products in beta stage testing, and we want to help them be able to produce those products at scale, so the cost comes down."

Organisations such as Netherlands-based Madaster are coming up with materials registration schemes, or "passports", that document, register and archive all of the materials used in the construction of a building. That way when a building is at the end of its viable life it can be "deconstructed" rather than simply demolished, and as much of the construction material as possible reused.

But strictly following the UN and EIA data, nothing beats making an old building more energy-efficient.

Shifting the focus away from new buildings on to retrofitted assets may involve changing behaviour in a group that real estate can't always control: tenants. If tenants prioritise operational rather than embodied carbon when looking to meet their decarbonisation targets, then they are incentivised to pick a new building rather than one that has been retrofitted. In effect, the carbon emitted during construction is ignored. "There is no easy answer on how to change tenant preferences," one investor says.

However, if tenant behaviour changes, and embodied carbon is more accountable when assessing net-zero targets, then the incentive for the real estate industry to develop new buildings would be vastly reduced. Of course, that would be an even bigger challenge in sectors that are growing fast, like logistics, life sciences or data centres. And developers and architects will need to think carefully about how to adapt outdated retail assets so that they are not required to be demolished and rebuilt.

"It is always better to retrofit than build a new building, but we need to stop kidding ourselves that we can be truly net zero," one property company manager says. "The price you pay to reduce emissions is often so high that we think real estate investors would be better off taking their money and investing it in carbon extraction technologies in other sectors."

In this view of the world, any certification or net-zero standard that does not put embodied carbon front and centre of its thinking risks sending the real estate industry down the wrong path, stifling innovation in the areas where it is truly required while diverting funding to initiatives that would not be impactful in reducing carbon emissions.

Solutions big and small

In terms of the strategies building owners are putting in place to reduce the carbon emissions of their assets, one of the biggest challenges for the sector is also one of the biggest opportunities.

“We have data for about half of our portfolio, the other half we are just estimating,” one investor says, echoing a sentiment shared by many interviewees. While new buildings come with management systems that measure energy usage as standard, the same is not true of older properties. Adding such a system can reap huge rewards.

“The payback time on the cost of the system was 10 minutes in terms of the cost of the energy it saved, and it allowed us to save more than £650,000 in energy costs over three years,” one investment manager says. “It also showed up some pretty bad management practices that we didn’t even know about: the property management team at one asset didn’t want to pay someone to go in and turn things off at the weekend, so all the systems were kept running when the building wasn’t being used.”

Others point to LED lights as an even less expensive energy-saving solution. More expensive but also regularly cited is improving building insulation, albeit the production of insulation and double glazing creates a lot of carbon; and replacing gas boilers with those powered by electricity, albeit this is only useful if the energy network where the building is located has been decarbonised.

HVAC systems with more energy-efficient motors are more expensive but hugely important. Research firm Global Efficiency Intelligence highlights data from the IEA and US Department of Energy which shows that electric motors in commercial buildings account for about a quarter of global electricity usage. Making them more efficient is vital and, the firm says, the payback time on investment is typically less than five years.

Many interviewees refer to switching a building’s energy source to renewable energy as a hugely important strategy. In countries where the renewable power infrastructure is more advanced, renewable energy is the same price or only slightly more expensive than non-renewable sources.

“We have data for about half of our portfolio, the other half we are just estimating.

Alas, this is not available to investors everywhere. Hong Kong does not have an open, decentralised energy market, one interviewee points out, meaning they have to either rely on carbon offsets to meet energy efficiency targets or try to install their own renewable energy. China and the US are other markets where the ability to switch to renewable energy sources is patchy.

As already touched on, some real estate companies are investing in R&D that goes beyond the traditional purview of property companies to make their assets more sustainable.

One investor and developer in the logistics sector is investing in battery storage technology for electric vehicles to help speed the transition to zero-emissions vehicles in its supply chain. They are also investing in AI technology that tells lorries exactly when to turn up at its facilities so that they spend less time idling and emitting fumes.

Another investor is funding an innovation competition, where start-ups can submit proposals for technological solutions that will help the firm reduce carbon emissions, with the best submissions receiving funding.

Varying emissions across the sectors

There are no hard and fast data as to which real estate sectors emit the most carbon, whether embodied or operational. But there is a clear perception among interviewees about where various sectors sit on the spectrum of emissions.

On an operational level, data centres are high on the list, due to the amount of energy they consume due to cooling needs. Logistics assets are relatively simple buildings, which also often have the possibility of having solar panels on the roof to provide some of their power. Offices are also high energy users because of the power required by HVAC systems.

More important than asset class, interviewees say, is the nature of the asset. “Multi-let assets, whether it is office, retail or residential, are much more difficult than assets with one or a few tenants,” one investor reports. “It is much easier to help change the behaviour of one tenant than lots of them, and easier to make larger spaces more efficient.”

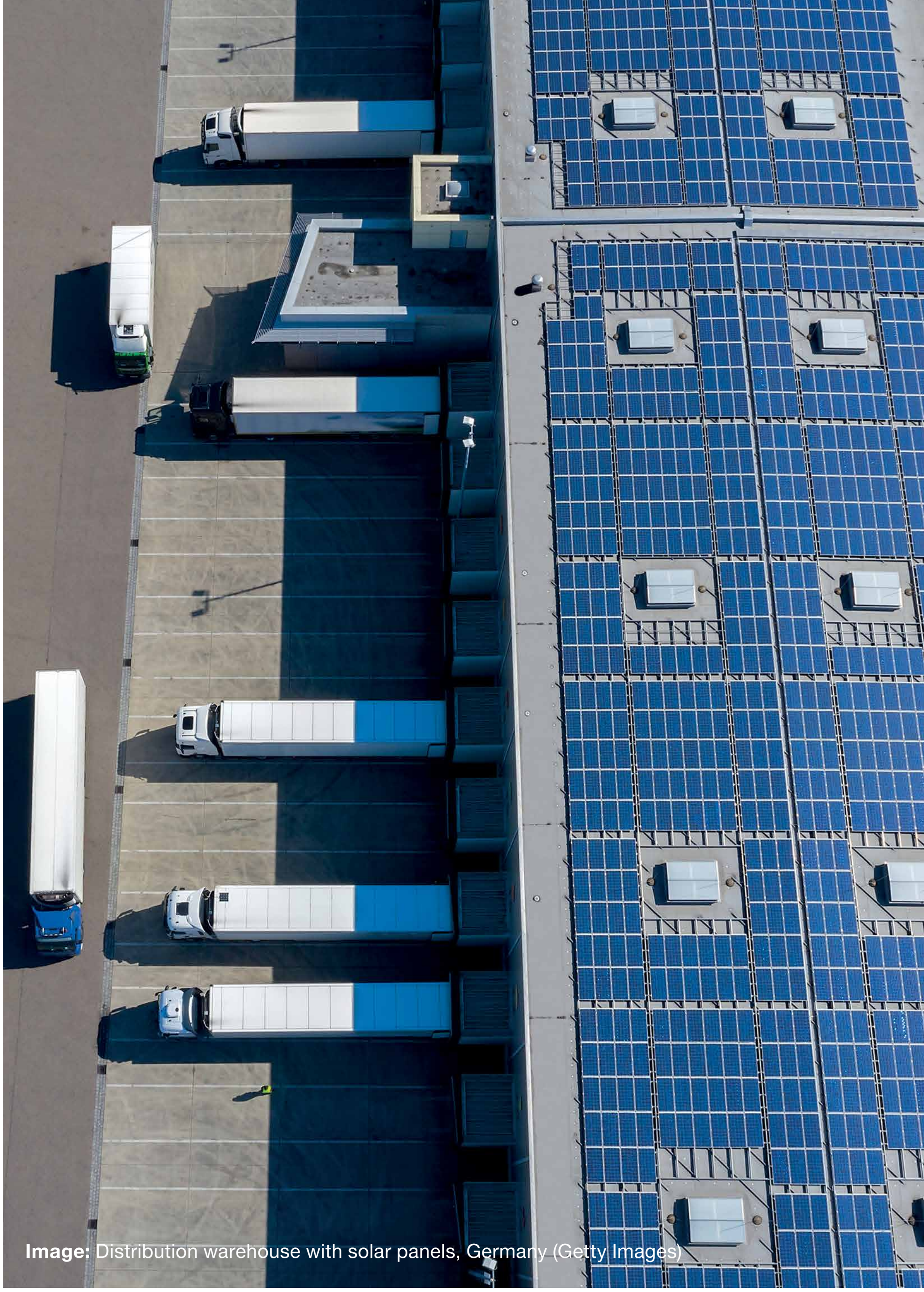


Image: Distribution warehouse with solar panels, Germany (Getty Images)

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Multi-let assets, whether it is office, retail or residential, are much more difficult than assets with one or a few tenants.

Image: Rooftop solar system, Hong Kong, China (Getty Images)

> "
> Owners could be held back from decarbonising their assets if the energy network in their country or city does not give them access to renewable energy sources.

Making the case for collective action

If real estate is to play its part in reversing climate change the industry will need to instigate some form of collective action to address the complexity of decarbonising the built environment.

Real estate is good at working collaboratively: joint ventures are common and there is an in-built need to work with multiple stakeholders like local authorities. But cutting carbon emissions will require a level of collaboration never before seen in the industry. Developers, owners, suppliers, advisers, customers, national and city policy makers and international bodies will all need to work together with the same common goal and the same strategy.

The complexities outlined throughout this report make that inherently difficult. Fire safety regulations and insurance costs are slowing the process of moving away from a reliance on concrete and steel. Certifications or labels like net zero that do not take into account the whole life cycle of a building, its construction, operation and demolition, risk sending the sector down the wrong path when it comes to reducing emissions. Owners could be held back from decarbonising their assets if the energy network in their country or city does not give them access to renewable energy sources.

Individual property investors are coming round to the idea that decarbonisation has a financial benefit, reducing risk and increasing liquidity of assets, and slowly making greener assets more valuable. But this attitude needs to permeate every element of the real estate supply chain if the sector is to begin to reduce its overall emissions.

Investors have the power to encourage their suppliers and service providers to adopt shared goals on decarbonisation, even if this is not always easy for those providers or something they want to do. “A lot of the investment managers we hire don’t have the data or the capability we are asking them to have, especially in more emerging markets,” one institutional manager says. “But we are big, so we usually get what we ask for.”

Architecture firm Gensler has committed that all of the projects it designs will be net-zero carbon by 2030. With more than one billion square feet of projects undertaken annually, that commitment has the possibility of forcing its suppliers to think closely about decarbonisation. Architecture firms are not typically seen as being at the top of the supply chain in real estate, but their procurement power is significant and could move the needle.

Improving the supply chain is no simple matter, however, and involves a certain amount of trust. “It is hard to keep track on what our own staff are doing, let alone those of our service providers,” one investment manager says. “There is a big skills and knowledge gap in this area as well.”

One of the key partnerships that need to be fostered is that between landlords and tenants. Tenants play a huge role in determining how much energy is consumed in a building. “It is very difficult to control what a tenant does, and that can be a problem — you can have a net-zero building where the tenant still uses a lot of energy,” says one investment manager. As this interviewee also points out, large tenants might have their own net-zero and corporate decarbonisation targets, but the majority of real estate across the world is occupied by small businesses.

Green leases are one solution, incentivising as they do tenants to switch to renewable energy sources and reduce their own energy consumption. Companies instituting these leases often share their contents in an open-source manner, to encourage their wider adoption. In France, new legislation is proposed to make landlords and tenants equally responsible for the energy consumption of a building. “That puts both sides on the hook,” one adviser says, before adding that this is a classic opportunity to turn a negative into a positive. “A lot of the time ESG can be a great way of opening a dialogue with a tenant where there hadn’t really been one before.”

“

A lot of the investment managers we hire don’t have the data or the capability we are asking them to have, especially in more emerging markets.

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Global Outlook 2021

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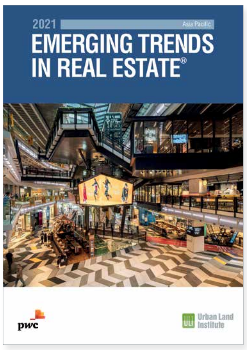

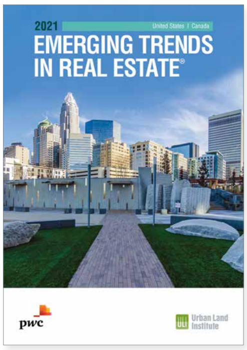

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