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Executive summary

"Right now, everybody's flying blind, and it's much harder to make decisions with money at stake."

Senior director, global real estate adviser, Global Emerging Trends in Real Estate 2022



Just as everyone dared to hope that the pandemic is receding, Russia's invasion of Ukraine has set off a new wave of apprehension across the world along with fears of a wider conflict.

The invasion is having devastating consequences for the people of Ukraine, and there is no clear outcome for this humanitarian crisis nor for the global response to Russia through economic and financial sanctions.

From a capital markets perspective, attention has dwelled on the immediate effect of the conflict on already surging energy prices, leading inevitably to inflation lasting at higher levels for longer. At the very least, the "economic war" will slow global growth in 2022.

For real estate, there is much uncertainty. A huge release of pentup demand led to record volumes of investment transactions as economies reopened during 2021. That level of activity never looked likely to be repeated this year. Even before the invasion, industry leaders canvassed for Global Emerging Trends were scaling back their expectations. Central banks, led by the Federal Reserve in the US, had been planning to tighten monetary policy to keep inflation in check, but there is now a question over whether this will continue in Europe. Supply chain disruptions, already a big problem, could get worse.

The industry still clings to the familiar pro–real estate investment criteria — property as an inflation hedge and the premium between yields and interest rates — but with serious concerns over how long they remain in place. The risk is that inflation spirals outside the influence and control of the central banks.

The outlook for real estate is not just dependent on the direct effects of Russia's invasion of Ukraine on global economies but also on how the conflict will hit confidence among consumers, businesses (or occupiers) and investors. Against those unknowns, property deal-making is expected to slow down, especially in Europe.

There are other potential implications for real estate from the prevailing uncertainty in terms of intensifying existing trends. The industry is already paying far closer attention to detail in asset management than in prepandemic times. Some investors are thinking more about diversification in investment strategies — spreading risk across sectors and geographies, which may well see already strong capital flows from the West to Asia Pacific gather momentum.

Some operational real estate sectors have won wide and growing support across the industry, partly because they are contra-cyclical and offer more of an inflation hedge than mainstream sectors. It remains to be seen whether demand for such assets will become even stronger during the economic fallout from Russia's invasion of Ukraine.

In any event, when it comes to deployment, real estate investors can redirect capital or turn off the tap altogether. Far more difficult questions arise around other, longer-term capital expenditure commitments, not least those relating to COVID-19. The industry is once again facing an economic slowdown while struggling to come to terms with long-term structural trends reinforced or accelerated by the pandemic.

A key difference this time is that industry may also have to deal with the consequences of very swift changes in government spending in favour of defence and energy policies and away from the areas that directly affect real estate, such as infrastructure and housing.

Above all, how will the current crisis influence the environmental, social and governance (ESG) agenda? The pandemic has already reinforced the importance of ESG for everyone in real estate. If anything, the interviews for *Global Emerging Trends* indicate even greater concerns this year around capital and operational expenditure as well as the risks associated with making real estate fit for purpose in all aspects of ESG.

As we explore in Chapter 2, equity investors have stepped up their game and are leading the way when it comes to directing capital towards decarbonising real estate whereas lenders have been mostly following. There is much more to be done by lenders and regulators if the industry is to meet its targets.

But there is now great uncertainty about whether the surging energy costs resulting from the Ukrainian crisis will speed up or undermine the global transition from fossil fuels to cleaner energy sources to fight climate change. The danger is that high prices will spur further investment in oil and gas production, at least in the short term, just as they did in previous crises. For the longer term, the hope is that acute problems of energy security will act as a wake-up call to governments about the radical economic transformation they need to implement under the ESG agenda.

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Some investors are thinking more about diversification in investment strategies — spreading risk across sectors and geographies, which may well see already strong capital flows from the West to Asia Pacific gather momentum.

Chapter 1

State of uncertainty

"We think people will continue to allocate money to real estate, but the biggest risk is what's happening in Ukraine and Russia, and the impact of energy prices on inflation."

Global investment manager,

Global Emerging Trends in Real Estate 2022



After the disruptive force of the pandemic, Russia's invasion of Ukraine comes as another humanitarian crisis and massive economic shock that have yet to make their full mark on the world of real estate.

The huge uncertainty from COVID-19 as an accelerator of major trends in society and business has been the main narrative for the real estate industry for over two years. The invasion of Ukraine — the threat of war escalating in Europe — takes that uncertainty to an altogether higher level.

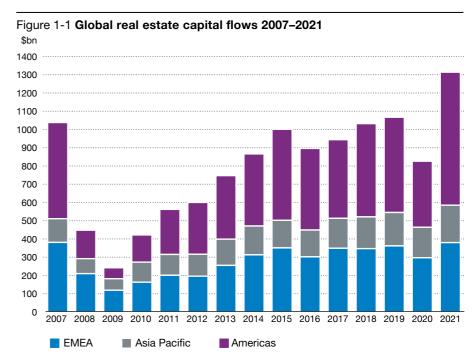
In some respects, the industry faces a potential re-run of the early days of COVID in 2020 — a cyclical downturn uneasily juxtaposed with long-term structural changes to real estate. That was an extraordinarily difficult year of adjustment, and the industry is still figuring out how those long-term trends will unfold.

If there is a consensus among economists, it is that the Ukraine conflict is unlikely to lead to world recession although no one is ruling out that outcome. At the very least, however, the effect of the Russian invasion of Ukraine is expected to be a far greater geopolitical risk alongside slower global growth and higher and longer-lasting inflation.

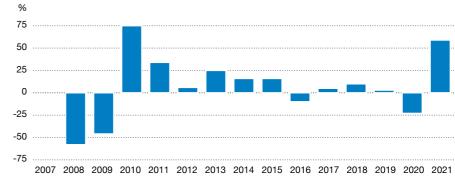
Even that relatively benign macro scenario this year would serve as a major jolt to the real estate industry, which throughout the sharp economic recovery of 2021 enjoyed record levels of investment, almost as if COVID had never happened.

Global volumes for completed sales of commercial properties totalled more than \$1.3 trillion in 2021, 59 percent higher than the 2020 total and 22 percent ahead of the previous peak in 2019, according to MSCI Real Capital Analytics (RCA). This extraordinary level of activity was driven by worldwide demand for residential and industrial property and in particular a dramatic upturn in the US.

A key factor was the premium between property yields and interest rates, which remains in place across most global markets. This positive capital markets perspective for real estate just about holds good — for the time being. But the uncertainty will inevitably slow the deal-making down, especially in Europe.







Source: MSCI Real Capital Analytics.

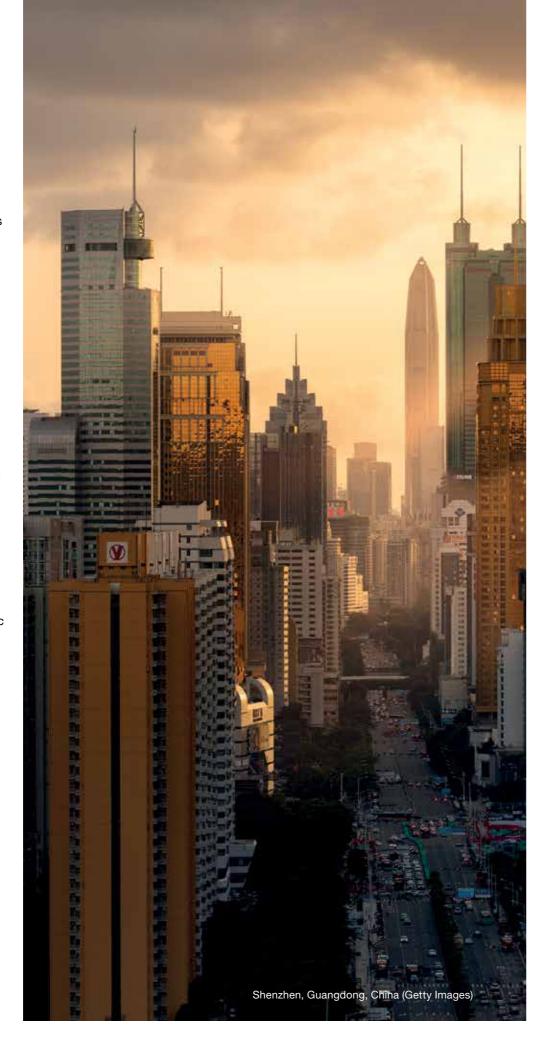
 $\textbf{Note:} \ \textbf{Charts exclude development sites}.$

Chapter 1: State of uncertainty

It is possible that the industry in Europe may have to deal with the consequences of very swift changes in government spending in favour of defence and energy policies and away from the areas that directly affect real estate, such as infrastructure and housing.

Yet the invasion of Ukraine also poses bigger questions around the ESG agenda. The pandemic has already reinforced the importance of ESG for everyone in real estate. If anything, the interviews for *Global Emerging Trends* indicate even greater concern this year over the capital and operational expenditure as well as the risks associated with making real estate fit for purpose in all aspects of ESG.

With surging oil and gas prices an immediate consequence of the Ukrainian crisis, the focus has been on the short-term inflationary impact. But longer term, will the acute problems of energy security act as a wake-up call to governments about the radical economic transformation they need to implement under the ESG agenda?



Mixed macro outlook

The International Monetary Fund (IMF) has forecast that global economic growth will moderate from 5.9 percent in 2021 to 4.4 percent in 2022, and slow still further to 3.8 percent in 2023. Even before news of the invasion of Ukraine in February, as one global investment manager says, many in the industry were "starting to ratchet back expectations" for 2022 after the record investment of last year.

"We are absolutely assuming that COVID is here to stay, but its impact is in the process of sort of evaporating," says another global manager. "We think that by the end of next year, there will be even clearer signs of slowing economic growth, not because of COVID but because of the regular economic cycle actually rearing its head."

One European-based investment manager says: "In terms of occupational activity, around this time last year, there was a lot of confidence in the economic recovery because of pent up demand. There is still confidence but also a level of realism now that the recovery may not be as strong as we first thought."

The Ukraine crisis has rapidly emerged as a fresh risk to global economic growth. Forecasts had been scaled down anyway, not least in the US, which RCA says was "the engine of growth for the global property market in 2021". According to the IMF, the US economy grew by 5.7 percent in 2021 but is likely to be hindered this year by labour shortages and reduced government support.

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Inflationary pressure

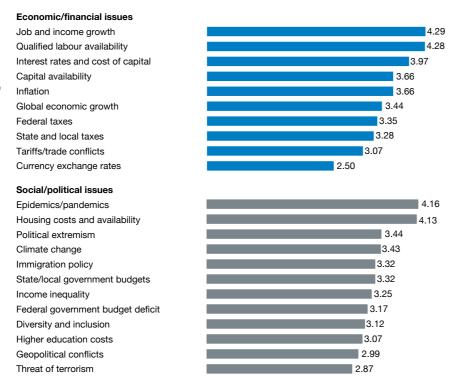
Real estate leaders are naturally monitoring the global economy alongside the issue of inflation, which was one of the major concerns last year but an even greater concern today as the Ukraine crisis unfolds, at least in Europe and the US. In January, inflation in Europe hit 5.1 percent and in the US 7.5 percent, which is the fastest annual rise there for 40 years.

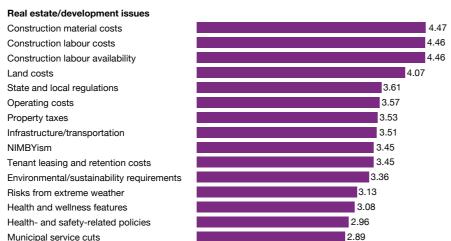
The full impact on real estate of labour shortages, rising wages and food bills and surging energy costs remains unclear. Last year, disruption to global supply chains, especially in Asia, helped increase inflation rates. This year, the big unknown is the outcome of the Russian invasion of Ukraine, which has heightened the fears over supply chains, energy prices and the risk of inflation spiralling out of the control of central banks.

Yet as this report goes to press, the prevailing view among many in the industry, and many economists, is of moderating economic growth, inflation peaking this year and central banks led by the Federal Reserve following with only modest interest rate rises.

As one global investment manager predicts: "Inflation will be sustained at a higher level than what we've seen for a long time, but not at a disruptive level and not at the levels we have seen at this moment."

Figure 1-2 Importance of issues for North American real estate in 2022





- 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 survey 2022.

Perhaps not disruptive, but an elevated level of inflation remains problematic when it comes to development, just at the point when the industry wants to resume pandemic-delayed projects or advance repurposing initiatives.

The Emerging Trends reports for
Europe and United States and Canada
both highlight construction material
and labour costs as among the most
important issues facing the industry in
2022. The interviews for Global Emerging
Trends suggest that risk is still keenly
felt. "I do worry about inflation," says
one global manager active in both north
America and Europe. "The vast majority
of our fresh capital is for development
and so we are susceptible to inflation. It
is very hard to predict costs."

Though inflation appears to be less of a concern in Asia Pacific than the other regions, even there it adds to the development challenge. "Logistics on the development side is more exposed to inflation than other sectors just because of the nature of the product," says one regional player. "Developments are usually very quick builds and they're not very complicated. You tend to do most of your procurement at one time, and if you're at a point where there's a spikiness in pricing you could get hurt."

With big caveats over development and huge uncertainty due to the invasion of Ukraine, most interviewees still cling to the traditional view of real estate as a good inflation hedge generally. "Intuitively," says one global investment manager, "I do think that real assets are better positioned than fixed income, especially, to handle inflation. And levered real assets, which is a lot of the industry, will actually come out as a relative winner."

Another global player believes base rate rises by central banks are likely but doubts they are going to be able to raise them "sufficiently" to move the real risk-free rate. "What we care about in real estate is the spread to the real risk-free rate. I think the real risk-free rate stays low, nominal rates stay low in some formats, and so we'll continue to see allocations of money to real estate."



Logistics on the development side is more exposed to inflation than other sectors just because of the nature of the product.



Finding late-cycle value

"Economies have been stopped, reopened, stopped again, reopened. That's not what you would call a typical economic cycle," says one global investment manager. "But in real estate, we've got the intellectual luxury to basically say that with industrial, it's pretty late cycle. It's had a massive ride."

Another interviewee suggests that the global economy appears to be heading rapidly towards "late-cycle dynamics", indicating a return to the typical language and concerns that prevailed in all the *Emerging Trends* reports in the years leading up to the pandemic.

In an echo of those pre-pandemic times, last year's *Global Emerging Trends* highlighted a "hesitancy around pricing" of logistics. One year on, logistics has come to epitomise the potential risks and rewards of real estate investment — a sort of lightning rod for bullish and bearish comment about the asset class as a whole.

With a buildup of capital that favours real estate over other asset classes, logistics remains the main draw, alongside residential. That trend shows no sign of stopping, say the industry leaders canvassed for this year's report, although investment volumes will likely fall in these sectors along with the rest of real estate. Unsurprisingly, given the greater geopolitical risk this year, the hesitancy over logistics pricing persists. As one sceptic puts it: "A lot of capital is not always smart capital."

Over the past year, average yields across the major global logistics markets have converged to a relatively narrow range of between 4.25 percent and 5 percent, according to RCA. The challenge for investors lies in balancing what looks like late-cycle pricing with the societal, or non-cyclical, shift to e-commerce that has underwritten the growth of logistics since before the pandemic.

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Economies have been stopped, reopened, stopped again, reopened. That's not what you would call a typical economic cycle.



With supply chains continuing to be disrupted, the demand for logistics space is clear and it is growing. But as some interviewees point out, supply has increased a lot over the past year. "If supply increases a lot more, then there is a risk that those tight cap rates are not accompanied with big rental growth in the future," warns one European investor. "At the moment for the logistic sector I think that pricing has gone to a point where you've got to be very careful. You've got to analyse it deal by deal. You cannot say, our strategy is to buy more industrial, and anything goes."

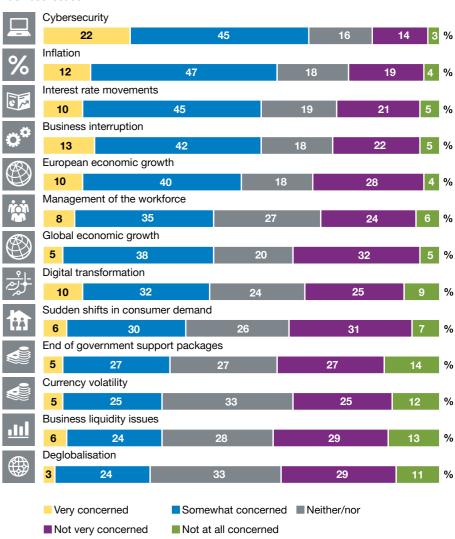
According to a US-based investment manager, rents must be assessed in the context of logistics operators' overall supply chain costs. "The rent is a tiny percent. So, I do think there continues to be room to run in industrial. That said, I would be prioritising three and a half to four percent cap opportunities [in the US], as opposed to two and a half to three percent."

While logistics has soared, various forms of retail have struggled, and certainly the pros and cons around the growth of e-commerce have formed a well-rehearsed storyline for years. Retail has played the part of the real estate pariah, and yet some interviewees across all three regions are a little more open-minded now about "value opportunities" arising in the sector, and not necessarily for the sake of repurposing the assets.

"You have to ask, what is the purpose of a physical retail environment?" says one global manager. "What we're seeing is that physical retail is recovering where the answer to the question why it should exist is clear. And really the answer to that, we believe, includes outlets, convenience retail and the best shopping malls, which offer amenities, food and beverage . . . an experience."

Figure 1-3 European business environment in 2022

Business issues



Source: Emerging Trends in Real Estate Europe survey 2022.

At the moment for the logistic sector I think that pricing has gone to a point where you've got to be very careful.



We are already present in the region, but we are really trying to understand it beyond the main markets where everyone is playing and focus more and more on the smarter economies in south-east Asia, even if there is less liquidity.

There is a clear sense now that as a result of two crises following in quick succession the due diligence undertaken on the acquisition of any property type will be more rigorous than ever. And as the interviewees all point out, at a very basic level far greater care is taken over asset management now than pre-pandemic.

Even in what was once regarded as mainstream real estate, the story has advanced from the early lockdown rhetoric of "winners and losers" into a much more nuanced analysis. "We are looking closely into each and every sector," says one European institutional manager.

Instead of writing off offices and retail, for instance, another European investment manager believes their "very uneven recovery" presents opportunities. "We went from the chasm between winning and losing property types to now tracing the fissures and fault lines in these unfavoured sectors."

Many of the interviewees stress the importance of diversification in investment strategies — spreading risk across sectors and geographies. With that diversification in mind, previous editions of *Global Emerging Trends* highlighted how some global investors were placing their "big growth bets" on Asia Pacific. In light of Russia's invasion of Ukraine will those capital flows gather momentum this year?

One global investor acknowledges the need to go "much more granular" in Asia: "We are already present in the region, but we are really trying to understand it beyond the main markets where everyone is playing and focus more and more on the smarter economies in south-east Asia, even if there is less liquidity."

At the same time, a big theme in *Emerging Trends Asia Pacific* relates to both the office and retail sectors as "currently oversold". Indeed, one investment manager based in Asia Pacific and interviewed for this global edition stresses the importance, still, of "relative value" and therefore "the opportunities in the traditional spaces" such as retail and offices.

This regional manager refers to "the institutionalisation of real estate in Asia" — in other words, a long-term shift of all grade A real estate sectors into institutional ownership. "You ignore that tailwind at your peril," this interviewee says. "If you're delivering a durable income stream, there's demand for that yield. We're just consistently pleasantly surprised when we deliver a build-to-core asset by the number of investors that are interested in the asset and the price they're willing to pay for the income. Out of all the things that potentially keep me up at night, liquidity on exit is not even on the list."

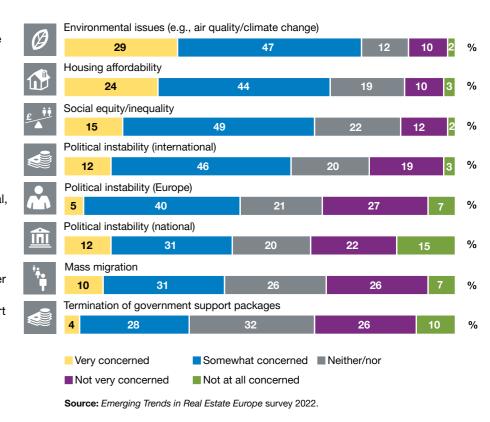
Altered expectations

After all the changes to business strategies and worker lifestyle choices over the past two years, it is remarkable that the investment ebb and flow of real estate can appear much like it did before COVID-19. But the simplicity of that observation masks the fact that the pandemic has dramatically altered expectations of how people will use properties in the future.

Despite overall resilience, some sectors and markets have experienced upheaval, leaving many assets obsolete and needing to be repurposed — a theme that to varying degrees runs through all three regional reports. Repurposing initiatives have been gathering pace over the past year, but again the likelihood is that the momentum here will stall as part of the greater market uncertainty and ongoing supply chain disruptions.

The need for repurposing does not go away, certainly not in the office sector, which has long been the foundation of commercial real estate portfolios. But COVID-19 has dented that hegemony, reinforcing a long-standing trend for remote working to such an extent that it has become a permanent option for millions of office workers, at least in North America and Europe. It is accepted that the office sector in Asia is not facing the same existential crisis from remote working as in Western markets. In Seoul, for instance, office investment in 2021 was well ahead of previous years, according to RCA.

Figure 1-4 European social-political issues in 2022



By contrast, office deals last year accounted for less than 20 percent of the total invested in US real estate for the first time. It is a startling decline, given the sector's past status as a bedrock component of real estate portfolios.

"We do want to reduce our exposure to office," says one US-based investment manager interviewed for *Global Emerging Trends*. "The driver is actually [that] we have more conviction on a relative basis for future performance, rent growth and capital appreciation in industrial and multifamily than we do in office. It's not that we don't believe in office, but we believe in it less on a relative basis, put it that way."

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We have more conviction for future performance, rent growth and capital appreciation in industrial and multifamily than we do in office.



Two years on from the outbreak of COVID-19 there is still no clear direction here. A disconcertingly broad range of industry perspectives exists about how some form of hybrid working model will affect office demand. But in any conceivable outcome, companies will be leasing less space in the future. New hires and added space required for social distancing are unlikely to fill the resulting vacancies.

I don't think that this business about obsolescence is a gradual decline. I see it much more as a hard stop. You could fall off a cliff and find your asset is now, frankly, unsellable. The running debate about the future of the office is also inextricably linked to ESG, which is a narrative thread that is only growing in its influence over real estate, including finance, which we examine in Chapter 2. As one US player says of ESG: "I feel like that dial got turned."

There is arguably an element of industry self-preservation here because increased tenant focus on healthy buildings is accelerating the obsolescence of older buildings with outdated ventilation systems and floor layouts. Demand for this product will decline among tenants and investors alike as a "flight to quality" draws tenants to newer construction.

Another US investor points out that the only segment of US office stock that has seen positive net absorption over the past year is supply completed since 2015; everything else is negative. "It's not that it's just new, it's that it is more sustainable, it is greener, and it is more efficient. And I think for those who are making new decisions, if their employees are coming back to the office, if they are going to be in that environment, they're going to want to be in the right environment."

If anything, the latest interviews reflect even greater urgency around ESG and the resulting risk of obsolescence, or stranded assets, than the industry acknowledged even just a year ago. "I don't think that this business about obsolescence is a gradual decline. I see it much more as a hard stop. You could fall off a cliff and find your asset is now, frankly, unsellable," says one European institutional player.

"Climate change is clearly far more front and centre on a global agenda than it has been, and it's becoming actionable. That's the key," says one US-based investment manager. As this interviewee points out, two-thirds of US office stock is located in cities that already have some form of 2030 net carbon target, and a tax or consequence if owners fail to meet it

"I do think that it has absolutely put a spotlight therefore on obsolescence because you now need to have a plan for a property over a 10-year period to bring it in line with where you think it's going to need to be. And it's clear that some assets are cost-prohibitive when making the improvements, or modifications, that would be required to achieve carbon-reduction targets."

Beyond the mainstream

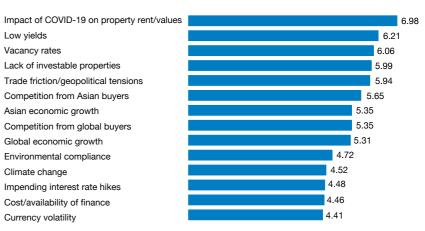
Between them, the business disruption from COVID-19 and the strictures of ESG have forced the industry to broaden its scope beyond mainstream property sectors and think more about the overall role of real estate in society.

"You must have the conviction of thematic investing long term: What are you investing behind?" says one US-based investment manager, reflecting the views of many. "We are trying to anchor more consistently — and strongly align our investment strategies — with housing affordability, migration trends, technology and AI, climate change. These topics are social, and they are global, and they also have a very direct impact on our industry."

The pandemic has certainly reinforced the trend of investors targeting contracyclical sectors, such as life sciences and data centres, which profit from megatrends and therefore generate resilient income.

In effect, as one Asia Pacific player puts it, the industry is "buying into the new generation, new economy sectors where the underlying business growth is coming from digitization, wellness or healthcare, because those are just tenants that are growing".

Figure 1-5 Most problematic issues for Asia Pacific real estate investors in 2022



1 = Least problematic 5 = Neutral 9 = Most problematic **Source:** Emerging Trends in Real Estate Asia Pacific survey 2022.

For several years, Global Emerging Trends has signalled the move into these sectors as part of a fundamental shift into more operational and service-based real estate although such investment comes with challenges. In Europe, the lack of availability of life sciences and data centre deals has been a problem. In Asia Pacific, one interviewee refers to the need to understand the "ecosystem" around data centres. "The tenant concentration is massive in the space. And so, if you don't create an asset at the right price point that can have some pricing power against that demand, you're going to struggle."

Challenges aside, operational real estate has won wide and growing support across the industry. It remains to be seen whether demand for such assets will become even stronger during the economic fallout from Russia's invasion of Ukraine. As one European interviewee points out, operational real estate usually comes into its own during a period of higher inflation. "Anything where you can add a service component can be quite helpful in terms of an inflationary environment because you can increase the price of your service, or you have the optionality to do it."

We are trying to align our investment strategies with housing affordability, migration trends, technology and AI, climate change. These topics are social, and they are global.

Balancing housing affordability against returns

For years, housing affordability has been near the top of the list of social-political concerns among industry leaders in North America and Europe, and it is an issue clearly exacerbated by COVID-19.

The point has been made in *Emerging Trends* before that stable housing markets are integral to the mobility of companies and their employees as well as the broader economic development of society, which benefits everyone. Yet house prices and rents barely paused in many Western cities during the brief recession before resuming their upward path as economies have reopened.

For investors, the corollary of this widespread problem has been a reallocation of capital from unfavoured sectors into various forms of housing. And again, the growing attraction of residential has been reflected in *Emerging Trends*' North American and European editions over several years.

Interviewees for Global Emerging Trends suggest the same supply-demand dynamics that have led to the housing affordability issue are, in turn, creating a compelling resiliency from a capital markets perspective. The likes of senior living, student housing and co-living, for instance, benefit from lower vacancies and attractive risk-adjusted returns compared to commercial assets.

But 2021 marked something of a tipping point in real estate investment — more capital was deployed in the global apartment market than offices for the first time, according to RCA. By all accounts, investor interest in the residential sector continues unabated in 2022, but so do concerns over affordability.

In the US, as one interviewee puts it, international capital is "buying into trends", such as the pandemic-induced domestic migration to Sun Belt cities, some of which, RCA says, showed the greatest residential price increases last year.

Europe's residential growth was led last year by Germany following the completion of Vonovia's acquisition of Deutsche Wohnen to create a portfolio of some 550,000 apartments worth over €80 billion. This ranks as one of Europe's largest ever property deals. But regardless of its financial merits, the transaction has also shone an even brighter spotlight on Deutsche Wohnen as the focus of public protests in Berlin over tenant rights and affordable housing.

Housing affordability has not surfaced as an issue for the respondents to the *Emerging Trends Asia Pacific* survey in the same way as the other regions. And yet the perennial problem for regional multifamily markets has been high prices, which have generally made cap rates too low to attract private-equity investors.

However, capital flows into Asia Pacific's housing markets are evolving. Long-term institutional investors are considering build-to-rent as a means of accessing the sector across the region. A number of interviewees also indicate that global players are targeting Japan, which is the region's most mature multifamily market by far but is still seen as "fragmented" and therefore ripe for some consolidation.

There is another important aspect to the shift of capital into residential, which lies at the social/affordable end of the spectrum, and once more this trend is more prevalent in North America and Europe than Asia Pacific. Investing in social housing is increasingly seen by investors as an opportunity to combine a stable income with the "S" in ESG. In other words, this represents a smart strategy in both the short and long term.

"It is about finding extra opportunities that are mispriced in the capital markets because they are under-addressed by those markets," says one global investment manager. "Maybe it's low returning to invest in this sector, but maybe it's a safer return. We are figuring out the risk and reward to the level that would actually direct capital at solving some of these social issues."

Sentiment swings back in favour of big cities

Big cities still find favour with the industry leaders canvassed for the Europe and Asia Pacific editions of *Emerging Trends*, reflecting an inherent preference for the safe and the familiar as well as the adaptability of these markets to structural changes in society.

Against the prevailing economic uncertainty following the pandemic, it is little surprise that London, Berlin and Paris are seen as the best investment prospects in Europe, nor that Tokyo, Singapore and Sydney lead the rankings in Asia Pacific (see page 18).

London and Paris are lauded for their "gateway status", but there is a broad attraction common to all the leading cities in these regions around market liquidity and breadth of economic activity.

It is noteworthy that London now tops the European rankings despite being perceived to have suffered in the immediate backlash against big cities and long commutes during the worst of the pandemic in 2020.

European leaders also express confidence in London's ability to reinvent itself as a base for technology and life sciences, and the importance of flexibility is a theme picked up by interviewees for *Global Emerging Trends*.

As one global investor says, the major cities are "much more resilient to the working-from-home trend" and conducive to upgrading buildings so they conform to more stringent ESG criteria. "If you want to think about where to continue to hold offices, or indeed buy more offices, you're looking at locations that have got quite dense populations. They are big talent pools, they tend to have good public transport, and they've simply got more alternative users of space."

As this investor suggests, offices in dense city centres, close to public transport, usually have higher rents and will be much more cost-effective to be made green. "What is really going to suffer are buildings in the suburbs because the rent is too low; the economics of ESG just don't work on them."

The narrative around city growth is arguably more nuanced in *Emerging Trends United States and Canada*, which identifies "a more suburban future", particularly in the Sun Belt region. Once dismissed as secondary investor markets, Sun Belt metropolitan areas now dominate the city rankings on the back of economic and employment growth as well as strong prospects in homebuilding and affordability.

Dallas, Atlanta and Phoenix — three of *Emerging Trends*' Sun Belt staples for some years now — were also among the top 10 global cities in terms of investment activity in 2021, according to RCA. And yet top of RCA's list is Los Angeles, which suggests all is not lost for the gateway urban core in the US.

Though some city dwellers decamped to less expensive neighbourhoods it was not the mass exodus of "urban legend". *Emerging Trends United States and Canada* points out that young professionals have been returning to downtown areas of cities such as San Francisco, New York City and Boston, even in advance of office reopenings.

Yet given the strong prospect of remote or hybrid working as a lasting legacy of COVID-19, the consensus view is that office occupancies are unlikely to recapture their former rates or command previous rents. It remains to be seen whether this turns into an opportunity, as some believe, for US cities to attract a more varied tenant base through the repurposing of redundant space.

"Big cities continue to be viable, robust places to invest because there are jobs and there are people," says one US player. "Looking forward, however, if you think in terms of key drivers such as population, the relative percentage growth is definitely greater in other cities. I think the gateway cities will bounce back, but back to a pace of growth and expansion, vitality and investment attractiveness that they held before? Not necessarily."

Top cities for real estate investment in 2022 ...



... and how countries fared in 2021

Table 1-1 Transaction volumes, 2021

Americas			EMEA			Asia Pacific		
	Volume (US\$ bn)	YOY (%)		Volume (US\$ bn)	YOY (%)		Volume (US\$ bn)	
United States	699.1	105%	Germany	114.0	46%	China	55.1	
Canada	27.7	49%	United Kingdom	83.5	55%	Australia	40.4	
Brazil	2.1	-16%	France	35.1	-11%	Japan	38.6	
Mexico	0.8	15%	Sweden	34.5	94%	South Korea	37.3	
			Netherlands	17.0	-24%	Hong Kong, SAR, China	11.3	
Americas	729.9	101%	EMEA	380.1	28%	Asia Pacific	205.4	

Source: MSCI Real Capital Analytics.

Table 1-2 Global capital trends by property type, 2021

	Volume (US\$ bn)	YOY (%)	
Office	337.6	22%	
Industrial	287.2	58%	
Retail	137.8	42%	
Hotel	73.2	134%	
Apartment	452.3	102%	
Seniors housing and care	27.3	46%	
Income properties	1,315.4	59%	
Development sites	713.3	6%	
Grand total	2,028.6	35%	

Source: MSCI Real Capital Analytics.



You do have to consider total returns. But I worry for some investors that are very incomefocused, with the cap rate compression that's already occurred, and a rising interest rate environment that yield gets compressed. In the end, it is not nearly as attractive.

Global investment manager, Global Emerging Trends in Real Estate 2022



People are going to demand betterquality office space and want a better environment to work in. I think the older assets where you're unable to reposition or comply with the fastgrowing environmental requirements of our governments here will get left behind.

Asia Pacific interviewee, Global Emerging Trends in Real Estate 2022

Financing decarbonisation

"Regulation is changing dramatically, in a good way, pushing the entire industry to be a crucial lever for accelerating the transition economy."

European lender,

Global Emerging Trends in Real Estate 2022



Morality, good intentions and science are unlikely to advance the environmental, social and governance (ESG) agenda in real estate on their own. Money and regulation will make the difference.

The Organisation for Economic Co-operation and Development calls for \$7 trillion to be invested each year between now and 2030 for the world to meet climate and development objectives. "That will mean an historic reallocation of capital in real estate," one *Global Emerging Trends* interviewee says of how that will affect the built environment.

That reallocation has the potential to enable real estate, a major contributor to global carbon emissions, to play its part in decarbonising the world economy. The shifting of equity and debt towards green buildings and away from assets with little chance of reducing carbon emissions is already well under way.

In concert with governments and financial regulators, the organisations providing the equity and debt that drive real estate and determine how it acts have the power to influence the industry's approach to issues like decarbonisation and social impact.

The question of whether environmental sustainability makes business sense, is largely answered. "This is not a philanthropic issue," one interviewee says. "This is hardcore business development."

By contrast, the "S" in ESG, social impact, is in its infancy. But the financing of real estate looking to improve society is growing, a subject addressed in *Emerging Trends in Real Estate Europe 2021*, and which is explored further on page 33.

However, there are still fundamental issues to resolve in finance markets, the world of debt and equity, before that reallocation can start to ensure real estate does its bit in solving the problems of the climate crisis.

Equity investors are leading the charge, and to a large degree are working to get ahead of impending regulation.

Debt providers on the other hand, with notable exceptions, seem to be waiting for regulation to come. They are being reactive rather than proactive when it comes to using their influence to help real estate decarbonise. Real estate is an industry where debt plays a huge role in the financial ecosystem. For lenders to hold back from using their influence at this crucial moment of history is a real missed opportunity.

Sometimes financial markets are creating barriers rather than breaking them down; the abundance of liquidity in the global economy offers an historic opportunity to allocate capital to green buildings and projects. But that same liquidity can reduce the urgency to act among lenders and investors. The way real estate defines a green building can misdirect investors and lenders that might want to act in good faith but end up acting in a way that hinders rather than helps wholesale decarbonisation.

But most of all, the real estate industry needs to come together to work with regulators at city, national and international levels to harmonise the definition of "zero carbon", the way in which carbon emissions are measured, how green buildings are classified, the kind of targets regulators and authorities are going to enforce, and what constitutes a green loan - there is currently no standardised definition. Financial actors in real estate are reacting to the market forces that dictate that greener buildings will prove more financially valuable in the coming years. But regulation is a crucial factor influencing those market forces.

As many interviewees say, regulation here is positive, albeit something of an invisible hand that is precipitating change at different speeds across the world. It will get more stringent. But it needs to do so in a cogent way, and the industry needs to help regulators to do that.

Real estate knows what it needs to do. It has a pretty good idea of how to do it. If it can work out how to pay for and profit from it, it has a great shot at achieving its goals.

The shifting of equity and debt towards green buildings and away from assets with little chance of reducing carbon emissions is already well under way.

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We see sustainability as a licence to operate in terms of our keeping our pool of capital the same as it has been, or even bigger, in the future.

Cash rules everything

If you want equity from someone in real estate today, you must have a sustainability strategy. Some might call it decarbonisation, some might call it net zero, some might call it environmental. But it would be rare to raise equity for real estate investment without a robust strategy in this area today.

"We see sustainability as a licence to operate in terms of our keeping our pool of capital the same as it has been, or even bigger, in the future," one interviewee says. "And our access to capital is crucial for us."

Whether you are a listed company trying to get investors to buy your shares, a fund manager raising equity for an unlisted fund, or a private company looking for a backer, interviewees say there is now little difference. Because large institutional investors are increasingly focused on the topic, and they are such huge sources of equity capital, they are calling the tune.

"Shareholders want to know that carbon, energy, water, waste are being measured, they want to see the KPIs," one interviewee says. "They want to know that there's a positive trend showing that you're making some effort to decarbonise. And they want to tell that story to their LPs and investors on the flip side, who are asking them questions. So, everyone's a middleman."

It is just a distant rumble coming from the future right now, but there are the first murmurings of a word that has been a major talking point in other polluting sectors like oil, gas and heavy industry: disinvestment.

"There are anecdotes out there, where equity investors [in listed companies] have told real estate operators that if they don't have a GRESB score of X, they can't make the investment," one interviewee says. "So that is happening. But it's not mainstream by any stretch. I think what has gone mainstream is the dialogue."

What is driving this? It is a shift in the perception of what constitutes a valuable building, a market force that is being pushed by regulation.

"Today's green premium is tomorrow's brown discount," one interviewee says bluntly. In some countries, real estate appraisers and valuers are being explicitly tasked with taking sustainability into account when assessing the value of a building. For instance, TEGOVA, the European Group of Valuers' Associations, has recently updated its Blue Book of valuation standards and is planning another review this year.



The market decides

But even when it is not formalised, the market is already doing this to a large degree. Not every investor cares equally, and in some markets, this is happening faster than others, depending on the likely tenant or the end buyer of an asset.

An increasing number of tenants want to be in the most ESG-advanced buildings, to achieve their own targets, and investors want the buildings where there is tenant demand.

If you want your building to be liquid, it has to be green. There is a feeling that only the very best buildings from an environmental standpoint command that "green premium", which research on the London market by JLL suggests could be as high as 12 percent for the best assets.

But the brown discount, buildings without much chance of meeting sustainability standards set by tenants, investors, regulators or a combination of all of the above, is seen as very real. The International Renewable Energy Association has estimated that \$7.5 billion of real estate assets globally could be left stranded by tightening regulation and changing investor sentiment, a huge figure, albeit this covers residential real estate too.

"In light of this current transition to a low carbon economy, some buildings that might have been viewed as core before suddenly are not core anymore," one interviewee says. And if you are a core investor, this fundamentally changes the type of building you can buy or hold — several investor interviewees say they are undertaking processes to decide which buildings they think will meet current and future sustainability requirements, which can hit targets with some capital expenditure, and which might need to be sold.

This reallocation process also has the potential to influence the flows of capital between sectors, interviewees say. The conversation around sustainability happens most frequently about offices, given its size as an asset class on a square metre basis. But international industrial developers like GLP and Segro are increasingly developing new assets with high sustainability credentials because tenants are becoming more demanding.

Retail is seen by many interviewees as lagging behind significantly when it comes to the energy efficiency of its properties — another problem for the already struggling sector. The popular multifamily sector is a mixed bag: new assets are being built with good sustainability scores, but retrofitting older buildings with many hundreds of occupants is costly and complex.



If you can measure it, you can reduce it.

Data centres are huge consumers of energy, but that is seen more as an issue for the users than the owners, with big occupiers like Facebook and Amazon committing to green energy for their buildings in many geographies.

Underpinning this supply and demand for green buildings lies regulation. Why do tenants want green buildings? It is about their brand, but they also have sustainability targets to hit, which might be imposed by cities, sector regulators, governments or central banks.

And there is an increasing amount of direct regulation being placed upon real estate owners. One of the most prominent at a city level is local law 97, a New York City regulation that will fine owners whose buildings exceed permitted carbon emission levels from 2024. "We're undertaking refurbishments at one building to avoid fines," one interviewee says. Many other large US cities are now in the process of enacting similar regulations.

At a governmental level, several countries have introduced or are in the process of introducing energy performance certificates (EPCs), setting a minimum energy efficiency standard for buildings that is expected to get higher over time.

One national scheme praised by many interviewees is the National Australian Built Environment Rating System (NABERS). This enables owners to measure their energy usage and waste, unlike many EPC rating systems that give an abstract score, bearing little resemblance to actual energy usage. "If you can measure it, you can reduce it," as one interviewee says. Australia's financial regulators are also mandating that companies must publish their emissions if they go over a certain threshold. "It is voluntary now, but in our opinion the voluntary always becomes compulsory," one interviewee says.

The future is retrofitting

For investors, buildings that need capital expenditure to make them more energy efficient, present the biggest challenge, but also the biggest opportunity.

Some interviewees argue that, for existing assets in a portfolio, there has never been a better moment to spend the money required to decarbonise.

"In an environment where interest rates are super low, if you cannot invest now to make your asset better from an environmental perspective, you will never be in position to do it," one interviewee says. "The cost of funding of additional capex is almost zero. If you cannot make it financially viable today, it will be harder tomorrow."

There is a growing understanding in real estate of the role embodied carbon plays in the overall carbon emissions of a building — the carbon emitted in the creation and transportation of the materials needed to build it, and during the demolition process. Creating a new super-green building is almost never the greenest option because of the carbon emitted demolishing what was there previously and creating the new building.

"The bigger issue is with the existing stock," one interviewee argues. "If we talk about what has the highest impact, it's brown to green, and it's repurposing."

With that in mind, the capital targeting green retrofits, whether from existing owners or new buyers, is perhaps the greenest capital of all, even if it is not expressly labelled as such.

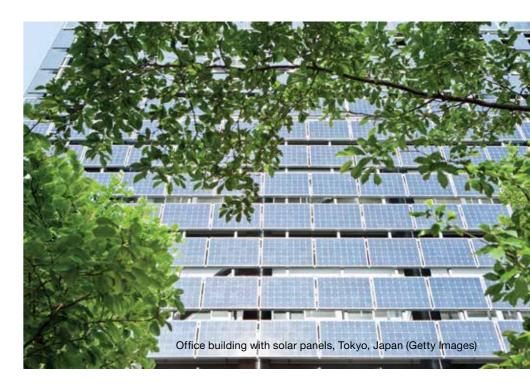
There is a perception, albeit one that is challenged by some interviewees, that value-add and opportunistic investors have been less focused on sustainability than more institutional investors because they are likely to hold assets for the short term and sell them before tougher regulations and higher green standards kick in.

But they are also the kind of investors likely to look at buying buildings that need to be retrofitted and re-let. They are fully aware that the mantra of "buy it, fix it, sell it" now involves the requirement to make a building as sustainable as possible.

Other interviewees point out that the industry will not fix this problem on its own. "In some cases, especially where the economic benefit is marginal, governments will need to provide the incentives for owners to upgrade properties, possibly in the form of subsidies," one says.

The argument follows that if governments fail to help the industry with subsidies, they risk missing their own country-level, net zero targets.

In an environment where interest rates are super low, if you cannot invest now to make your asset better from an environmental perspective, you will never be in position to do it.



A collision of interests

Most interviewees believe that lenders, particularly banks, are a step behind owners, investors and developers in grasping the fact that it is funding the refurbishment and improvement of existing stock that would have the biggest impact in helping real estate cut carbon emissions.

"We're having to step beyond ourselves and move in lockstep a little more with our clients and say, if we're serious about addressing this, then we have to do more on the redevelopment side, otherwise we aren't really speaking to the core of the issue," one interviewee says. "But it's a difficult discussion internally because banks have historically focused on financing core. My risk guys are loving this discussion."

"We finally have wrapped our heads around the fact that simply put, if you're telling clients, you will only finance [existing] green buildings, you're not really contributing, are you?" another says. "If a client comes to you and says, okay, we're repositioning from brown to green, you need to put your money where your mouth is. And so that's what we're going to do more of. But we have been burned by development before."

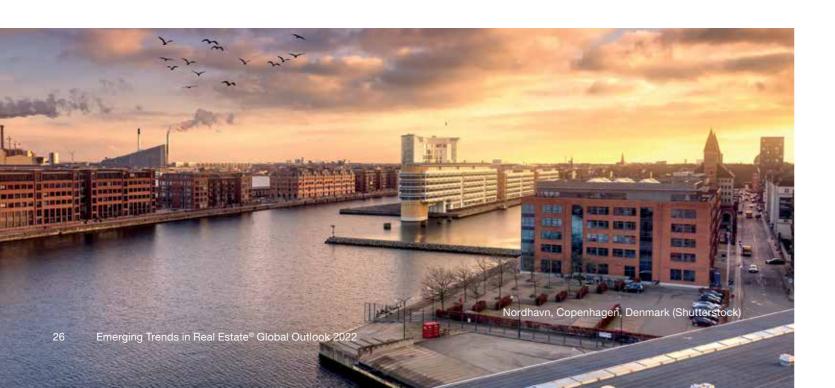
Interviewees point out that it is often debt funds that provide finance for value-add refurbishment schemes. Unlike many banks, these unregulated funds are seen as less likely to have a defined sustainability strategy or framework. But by funding such refurbishments, they are playing their part in the green transition, even if the debt they are providing is not designated a "green loan".

At the same time, many lenders will provide "green development finance" to projects that will have a high energy efficiency rating when they are complete, without factoring in the embodied carbon created by a project. In that sense, they are providing finance for a project that is creating a significant amount of carbon but is still considered "green".

"It is just so hard to measure embodied carbon, and there is no standard definition or measurement of it, and that makes it difficult for lenders," one interviewee says. But as the measurement of embodied carbon becomes easier, and understanding of the whole-life carbon output of a building becomes more sophisticated, lenders might start to look more closely at whether a new development justifies its carbon output — is it really necessary for the society or community in which it is being built? "We expect the same to happen with the planning system," this interviewee adds.

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It is just so hard to measure embodied carbon, and there is no standard definition or measurement of it, and that makes it difficult for lenders.



Green lending growth

Green lending generally has boomed in the last five years. Green bond issuance has grown from just less than \$200 billion in 2017 to nearly \$4,800 billion in just the first three quarters of 2021, according to Climate Bonds.

Though there are no specific data on green real estate lending available, anecdotal evidence suggests that it is still a tiny fraction of all real estate lending. But it will grow, at different speeds in different parts of the world.

A key definition to bear in mind: the terms green loan and sustainability-linked loan are often used interchangeably, but they are not the same thing.

Though definitions are not set in stone, a green loan tends to refer to a loan against an existing building or planned development that meets a certain set of sustainability criteria. A sustainability-linked loan can be secured or unsecured, and it incentivises the owner of a building or portfolio to improve the sustainability performance of assets, often through the mechanism of a reduced interest rate margin or lending fee.

Interviewees are split on whether a green loan on an existing asset would typically offer a reduced margin; some do, some do not. In any case, the reduced loan margins sometimes available to borrowers are not the main benefit. As one interviewee says: "It is 10 or maybe 15 basis points, which is nice, but it isn't really that important. The main benefit is in marketing, being able to turn round to our investors and use it to promote our overall ESG credentials."

Evidence from the more transparent market in publicly traded green bonds suggests there is a premium to similar bonds without this designation, with an ING study showing this to be 10 to 30 basis points. Anecdotal evidence suggests that the same is broadly true for real estate loans, although the size of the interest rate spread between green and non-green loans varies on a deal-by-deal basis, and is not the only driver pushing borrowers to seek green finance.

The pace of adoption of green lending by banks varies wildly, and so does the perception of how quickly the category of loans will grow. And this links to a running debate about whether lenders can be leaders in the field of sustainability or will follow in the footsteps of their clients.

As it stands, the real estate lending sector is following, not leading, the transition to a low-carbon economy and the process of decarbonisation in real estate. Trepp, the financial analytics firm, estimates that there is \$5 trillion of commercial real estate debt in the US alone — the global figure is likely to be many multiples of this amount. Yet real estate debt is a huge lever that could be pulled to help the world decarbonise. At the moment, not enough is being done, either by market participants or regulators.

One of the issues hindering the growth of green lending is lack of demand, or at least, lack of product to lend against, interviewees say. "It's not because they don't want to give the quarter point [discount on the loan margin], but because it's really hard to find somebody who fulfils certain criteria," one interviewee says.

This emphasises the earlier point about making debt available for the refurbishment or retrofitting of existing properties. If lenders restrict their green lending programmes to existing energy-efficient properties, then they will quickly run out of available buildings to finance; they are not therefore enacting change.

Some property companies have agreed unsecured credit facilities with lenders to undertake decarbonisation strategies on a portfolio-wide basis, with examples in the past few years including Europa Capital, Brookfield and the Queensland Investment Corporation.

But as one lender points out, such unsecured facilities are only likely to be extended to the biggest borrowers, with the best credit ratings, because providing such facilities to smaller borrowers would be deemed too risky.

It is hard to criticise lenders for being risk averse when it comes to providing debt to refurbish vacant properties or unsecured debt for smaller borrowers. But whether or not it is prompted by changes in financial regulation, this will have to happen if real estate is going to meet its decarbonisation targets.

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The terms green loan and sustainability-linked loan are often used interchangeably, but they are not the same thing.

Incentivising change

Some interviewees feel that banks have the ability to catalyse their borrowers towards adopting greener practices, while others believe they can only follow, especially in times of abundant liquidity.

"The glut of liquidity chasing real estate loans makes it harder," says one. "To be frank, borrowers that are not so green can still get finance. So, until the liquidity dries up over time, you can't really force the borrowers to adopt green practices. Quantitative easing lasted way too long."

For that interviewee, in a world where debt finance is less plentiful, lenders will have the ability to make borrowers adhere to certain criteria. For another, that would be a dereliction of duty: "We don't say that we will stop financing buildings which are not green. We will never do that simply because that is not the reality of our client universe, and that actually doesn't help the transition. It simply takes liquidity out of the market."

Others argue that this takes too passive a view of the role that lenders can play in real estate's green transition. "We feel that as lenders, we have a responsibility to move clients towards that goal," one interviewee says.

One lender recalls how underwriting a green loan for a logistics investor and developer prompted interest from other clients. "All of a sudden, almost overnight, we had three or four other big logistics clients coming to us saying, well hang on a second, that's a conversation we should be having, can you advise on a green framework for us? So, we are a supplier. But I'd like to think we also serve as a catalyst in this."

Another lender talks of putting in place a green loan framework specifically designed to help small- and mediumsized enterprises (SMEs) access green finance, as a way of encouraging them to decarbonise their portfolios. Such companies typically do not have the resources to come up with their own green loan strategy or employ an ESG specialist, so the lender needs to do the heavy lifting for them. And such small companies will be vital if real estate is to cut their emissions. Real estate is a long-tail industry, where even the biggest players own only a tiny fraction of the world's real estate stock.

"We developed a framework with SMEs in mind because we know that they are the ones who struggle the most when it comes to refinancing," the interviewee says. "And the costs of getting a green loan done, hiring a specialist consultant, for these borrowers are prohibitively high. We have certain parameters. If the client is able to meet these parameters, they can get a green loan from us."

Borrowers that are not so green can still get finance. Until liquidity dries up over time, you can't really force the borrowers to adopt green practices. Various jurisdictions are going about things in different ways. In Singapore, for instance, grants are available if a Singaporean-domiciled entity takes up a green loan. But on the whole, central banks seem to be more focused on physical risk than transition risk. In other words, they are asking for data rather than insisting on change, which would force banks in particular to be more proactive. And given banks typically have the lowest cost of capital of all lenders active in real estate, they have the biggest ability to enact change.

Some interviewees believe that regulators have a lever that could be pulled to incentivise banks, in particular, to write more green loans.

When banks make a loan, they have to hold a certain amount of capital on their balance sheet to guard against losses if the loan goes into default. The less risky the loan, the less capital they must hold, and the cost of capital of making that loan reduces.

If bank regulators designated loans to more sustainable real estate as less risky, then the cost of capital for these loans would be reduced, and they would become more profitable for banks to make, incentivising them to write more of these loans. If loans to refurbish existing assets are designated less risky than loans on new development, then banks would be incentivised to make more of these loans, rather than fund new development that might not be necessary.

"The banking community was talking to the European Central Bank asking, can you link capital consumption to sustainability somehow? And the response was always well, no, sustainable assets are not necessarily less risky. So no, we cannot," one interviewee says. "The mechanism does exist in the world of infrastructure, where social infrastructure loans need to have less capital held against them. If sustainable real estate loans were deemed less risky, you could invest more, or finance more competitively."

Some interviewees raise the prospect of a world where banks will finance only green properties, and borrowers who are suddenly unable to refinance resort to legal action because of the lack of agreement about what constitutes a green building.

"Banks are starting to say, at the moment, we're giving you a quarter point incentive, in the next 10 years, we're going to say we're not renewing your loan, unless we see certain kinds of green improvement," says an interviewee. "That is quite controversial, because the borrowers are saying, if we can't even agree on what the baseline is, how are we going to agree on what the improvement is? And if you just arbitrarily cancel my loan, that's grounds for litigation."



Borrowers are saying, if we can't even agree on what the baseline is, how are we going to agree on what the improvement is?



Measuring up

It is something of a cliché at this point, but the plethora of standards and regulations in the world of sustainable real estate is seen by *Global Emerging Trends* interviewees as a major hindrance in the ability of equity and debt providers to catalyse the ESG agenda.

As many of them point out, lack of agreement about the benchmark level of emissions from a building hinders the ability of a financier to demand an improvement. If you do not know where you started, how can you make things better?

Not being able to measure carbon emissions, whether in a building's construction or operation, makes it hard to set targets to improve. And thus, it becomes a more difficult, almost paralysing, decision on how best to allocate capital.

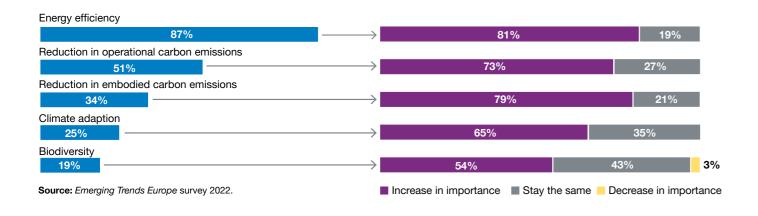
"We have dedicated teams in 14 countries, in and outside the European Union, meaning when we look at setting standards and targets, the first thing that comes to mind is how do you actually define a uniform target?" one lender says. "We're not unique in that, we are probably actually representative of the sector, in the difficulty of coming up with a target that makes sense to everyone and makes sense to not just the banking world, but also the outside world."

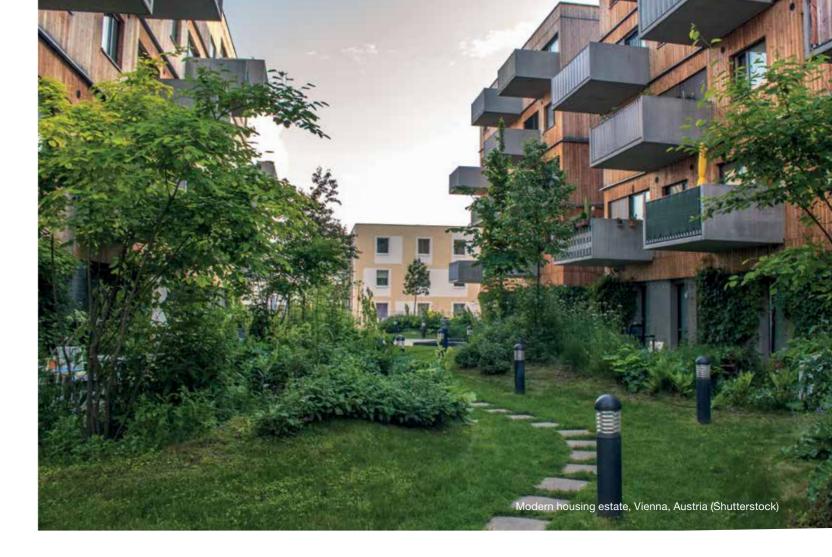
The same is true of the standards of what constitutes a green building, and at a wider level, how net-carbon zero should be measured. There are many labels and certificates, making it more difficult for equity or debt providers to decide what really constitutes a green building to which they should allocate capital. NABERS is commonly utilised in Australia, and is starting to gain traction in other parts of the world too. The UK government, for instance, is consulting on NABERS.

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When we look at setting standards and targets, the first thing that comes to mind is how do you actually define a uniform target?







In the European Union, the taxonomy for environmentally sustainable activities is seen as a standard that will supersede individual building ratings with its definition of whether a building is in the top 15 percent of its peer group in terms of energy efficiency. The fact that it is a common piece of cross-border classification means it is something both investors and lenders will rally around in the European market.

"We believe that the EU taxonomy will disrupt the game because it will be a legislative level that will actually make it plausible for people to see what is and what is not a green building," one interviewee says. "Because right now, everybody is allowed to have their own definitions."

Even the taxonomy is far from perfect, however, with the semantics and vagaries of the system allowing oil production to be classified as a green activity.

Measurement, standards and certifications might seem dull and technical, but they are problems on which the industry, across the world, must agree and work in conjunction with regulators. Because regulation, where it is not already in place, is coming soon.

"By forcing transparency and visibility on the carbon-intensity of a portfolio, it also starts putting pressure on lenders and investors, and eventually might also manifest as a cost of capital for some firms," one interviewee says. "But right now, it's more of a naming shame, type of impact."

"It's obvious that the banks need to be much more specific and much more hardcore, in terms of which assets they actually allow to get into green bond frameworks," one interviewee says. "Whatever the regulatory criteria are today, we anticipate they are going to be much tougher tomorrow," another says. "In the short term the amount of our portfolio which we count as green might go down, because our standards have been raised. But then that number needs to go up again."

As most interviewees for *Global Emerging Trends* conclude, in an ideal world, the term green loan would be unnecessary — every loan would be a green loan. But that world is still a long way off.

Making more of proptech

Part of the problem in going green is not just which buildings equity and debt providers choose to finance but how the technology required for decarbonisation is financed.

In this sense, proptech aimed at climate mitigation, often labelled climate tech, is an important part of the financial equation.

Think building monitoring systems that measure energy emissions and thus carbon usage; more efficient heating, ventilation and air conditioning systems, lighting or insulation; or investment in building materials that do not emit as much carbon as standard concrete and steel, to cite a few of the more obvious among hundreds of such technologies.

Once these technologies have been invented and reach a point where they can be cost-effectively deployed at scale, real estate owners can see the financial rationale for adopting them.

"We installed smart building management systems and smart thermostats across all of our buildings last year," one interviewee says. "The cost was de minimis, it's a six-to-12-month payoff period. And as a result of installing those, we can better monitor and control our energy usage, and in six to 12 months, we've got the money back and the upside of savings on our OpEx."

The rapid proliferation of proptech solutions can have a chilling effect on building owners and managers, particularly for smaller companies with little expertise in technology. But even for larger firms, it can be hard to understand and decide which of the multiple products on the market will be genuinely effective. This can create a barrier to adoption.

But the bigger issue is getting the technologies to the point where it is cost-effective to adopt them, and this involves more thought from financial actors. Because right now, the available technologies are not enough to help real estate hit its targets.

"If you were to take all of the existing technologies available today and deploy them into your buildings, you only solve about 50 percent of the total carbon problem for the real estate industry," one interviewee says. "So even if hypothetically, the rest of the capital stack is working incredibly well, so that all of these technologies could be financed and deployed, we don't solve the problem." The other 50 percent of the problem needs new technology to be invented, particularly in the area of construction and reducing embodied carbon; and it needs to be scaled up to the point where it becomes cheap enough for building owners to see the financial benefit of using it.

At the moment, venture capital is funding the invention of new technology and trying to scale it up. But even though \$40 billion of venture capital was deployed in climate tech last year, that still is not enough to fund the new innovation needed, let alone scale it up.

Partly the problem is related to the second half of this equation, and a lack of debt finance available to help companies that have a good product get to the stage where it has the scale to be adopted by the market.

"We almost need a new tranche of debt capital financing, willing to take that potential lower IRR to fund the project deployment of these earliest-stage technologies in order to bring them down the cost curve," one interviewee says. "Project one isn't going to hit that 10 percent IRR. But Project 20 probably will. But someone's got to go in for the first 19 projects."

The returns on these investments are complementary to the sustainability goals, and investors in these businesses do not have to pick doing good over making money, such is the opportunity created by the need to transition the real estate sector.

"Many of the companies buying these solutions have no other choice given regulations, pressure from their boards and customers and investors," one interviewee says. "And many of the technologies have a low enough, or non-existent, green premium, that the returns in investments in these startups could outperform other sectors, or at least be on par with investments in startups in other categories."

Starting to make a social impact

Exact figures for specifically designated social impact debt and equity in the real estate sector are hard to come by, precisely because what constitutes a social impact investment is hard to define.

What is clear, is that the idea of making investments, either equity or debt, in real estate that has a defined, intentional, additive social impact is some way behind other sustainability considerations. But the equity commitment is growing, as *Emerging Trends in Real Estate Europe 2021* revealed in its analysis of impact investing. And lenders are very slowly dipping their toe into this sector as well.

"We produce new loans under social criteria," one interviewee says. "Once the deal is concluded, we put it into our social mortgage pool, and if we reached a certain volume for the pool, normally not less than €500 million, we issue a €500 million social bond on the capital markets."

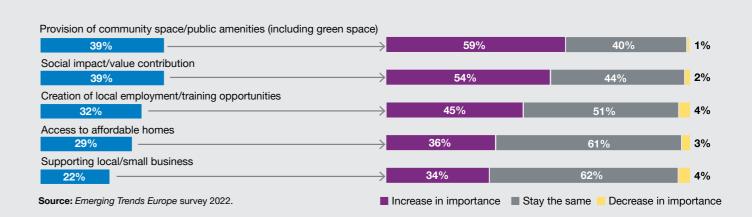
The willingness of bond investors to buy social impact bonds allows real estate lenders to issue social impact loans, knowing there is liquidity in capital markets to fund their lending. A social impact loan made by a lender might offer a discounted margin to a borrower in return for hitting certain targets although the bond investors are not willing to pay more for the bonds just because they are social impact investments.

That means the lender makes a small loss when issuing this kind of loan and selling it into the bond markets, a price they are willing to pay to help prime the pump for this market.

But for many lenders, that lack of a clear definition and measurement standard for social impact is holding them back. But the interest again is growing. "We talk about the social impacts, we talk about inequality, we talk about diversity and inclusion, and how real estate actually either facilitates that or doesn't," one interviewee says. "That's something that didn't figure into our targets and goals discussion probably up until about a year ago."

As this interviewee concludes: "The question is, can you evolve your product offering to align more with some of this other kind of existential, social stuff that's happening? And we have to play a role. We know that, how to do that in a coherent way. It is a really great discussion, but nascent still."

Figure 2-2 Social issues measured by the industry in Europe



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