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Making an impact

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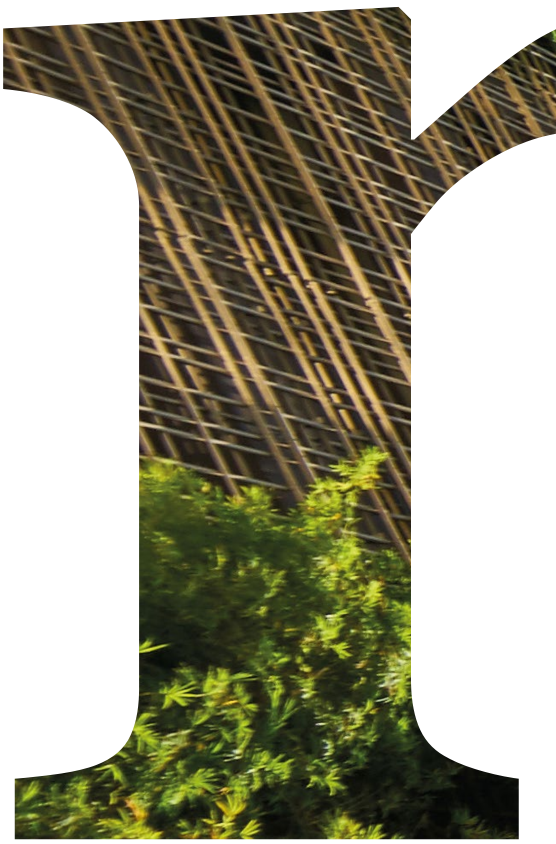


Introduction

Making an impact

Driving urban change, this year's MIPIM theme, is an opportunity for the real estate industry to showcase how we can create positive, impactful outcomes.

Recent events have laid bare many of society's shortcomings, from inequality and social justice issues, to access to health care and affordable housing, along with concerns about well-being and safety. Citizens, governments and investors are now demanding new solutions from the real estate industry, the success of which is measured in more than just financial outcomes.

Fortunately, investment practices are evolving to incorporate this. We have taken our approach beyond the basic environmental, social and governance (ESG) construct by setting an ambitious global goal to achieve net zero carbon by 2040 and by developing Nuveen Real Estate's impact investment framework. The insights in this collection of articles, gleaned from our research and the MIPIM conference, highlight how real estate investors can make a difference. We cover impact investing, affordable housing, net zero carbon targets, the role of technology, the future of cities, post-pandemic office life and rising inflationary pressures.

With so many factors influencing our living and working environments, it's unsurprising that people are demanding more from their real estate. Our task as an industry is to rise to this challenge and demonstrate how we can make an enduring positive impact on the world.

Abigail Dean
Global Head of Strategic Insights, Nuveen Real Estate

Driving urban change

MIPIM is delighted to partner with Nuveen on this report. With driving urban change as its main theme, sustainability and environment, social and governance issues were at the heart of many debates across MIPIM's 2022 three-day programme. More than ever, the consensus across the event was how the industry can tackle the risks presented by climate change, achieve net zero and net positive developments and ensure that positive social outcomes are embedded into real estate decision making.

We hope this report gives you further insight, and will inspire you to turn ideas into actions. We welcome any feedback you may have and hope to see you at MIPIM 2023.

Nicolas Kozubek
MIPIM Director

Successful impact investing in real estate

Authors: **Tanja Volksheimer, Maria Grubmueller, Stefan Wundrak, Abigail Dean**

From climate change and geopolitical tensions to rising inequality and a global pandemic, society faces many challenges and investors can be part of the solution.

Increasingly, they are looking for strategies that go beyond traditional environmental, social and governance (ESG) principles. They want investments that intentionally produce measurable benefits for people and the planet, and they are finding them with impact investing.

Real estate is a natural home for impact strategies. More than any other sector, the built environment shapes people's lives. The impact real estate can have on people and their home and working lives is far greater than most other areas of commercial activity.

But how can impact investing deliver on its intentions? Crucial for success is the ability to integrate impact measuring and monitoring with the investment management process.

Integration is key

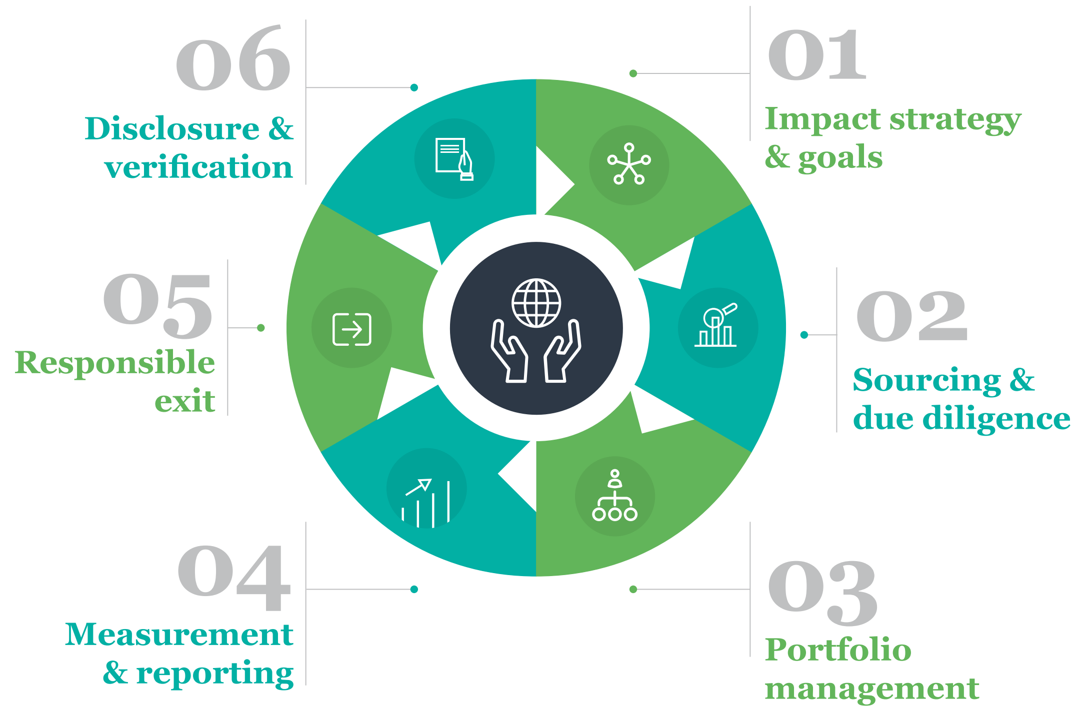
Along with financial returns, impact investing requires additional objectives and results. Given the many challenges we face, real estate impact strategies need to clearly define what they want to achieve, how they plan to do that and how to measure success.

Traditional investment management methods need to be broadened to include a comprehensive impact measurement and management system. This means articulating impact objectives from the outset, adding key performance indicators specific to those objectives and distilling the metrics and targets to improve efficiency over time.

A six-step process

We have a six-step process for real estate impact investing that integrates impact theory with investment analysis and management. We have developed it from Nuveen's 30 years of experience of impact investing in U.S. real estate and in other asset classes.

Nuveen impact management system:
Complete integration of impact theory into the investment cycle



Source: Nuveen Real Estate.

STEP

01 Develop impact strategy and goals

- Set impact themes
- Define evidence-based theory of change
- Establish strategic impact objectives and select KPIs

02 Sourcing and due diligence

- Screen investments against impact criteria and possible negative effects
- Assess alignment with United Nations Sustainable Development Goals
- Undertake ESG and impact due diligence
- Regularly review ESG and impact criteria

03 Portfolio management

- Monitor impact and engage with stakeholders
- Manage risks and possible negative effects
- Impact value creation

04 Measurement and reporting

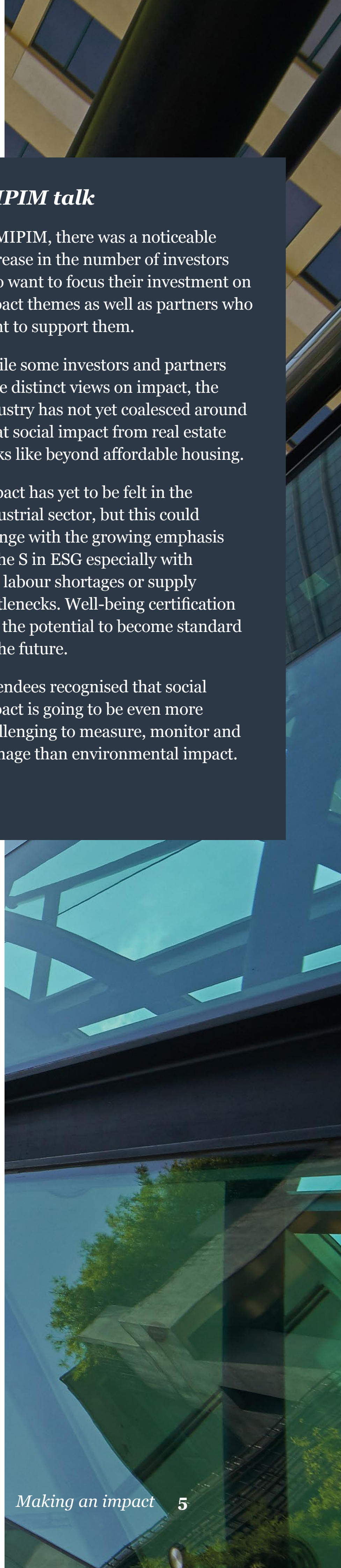
- Collect and analyse data on impact KPIs
- Report on impact to clients and public
- Use insights to inform future investments

05 Exit responsibly

- Consider long-term sustainability and impact at exit

06 Disclosure and verification

- Publicly disclose impact measurement and management approach
- Obtain independent verification of the approach



MIPIM talk

At MIPIM, there was a noticeable increase in the number of investors who want to focus their investment on impact themes as well as partners who want to support them.

While some investors and partners have distinct views on impact, the industry has not yet coalesced around what social impact from real estate looks like beyond affordable housing.

Impact has yet to be felt in the industrial sector, but this could change with the growing emphasis of the S in ESG especially with any labour shortages or supply bottlenecks. Well-being certification has the potential to become standard in the future.

Attendees recognised that social impact is going to be even more challenging to measure, monitor and manage than environmental impact.

Impact investing in practice

Authors: **Abigail Dean, Angela Goodings, Tanja Volksheimer, Maria Grubmueller, Stefan Wundrak**

Over the last 10 to 20 years European countries have experienced a rise in inequality, which almost all commentators across the political spectrum agree needs addressing.

While priorities and best practices to solve this problem remain contentious, there is broad agreement that sharply rising housing costs are a social as well as an economic issue.

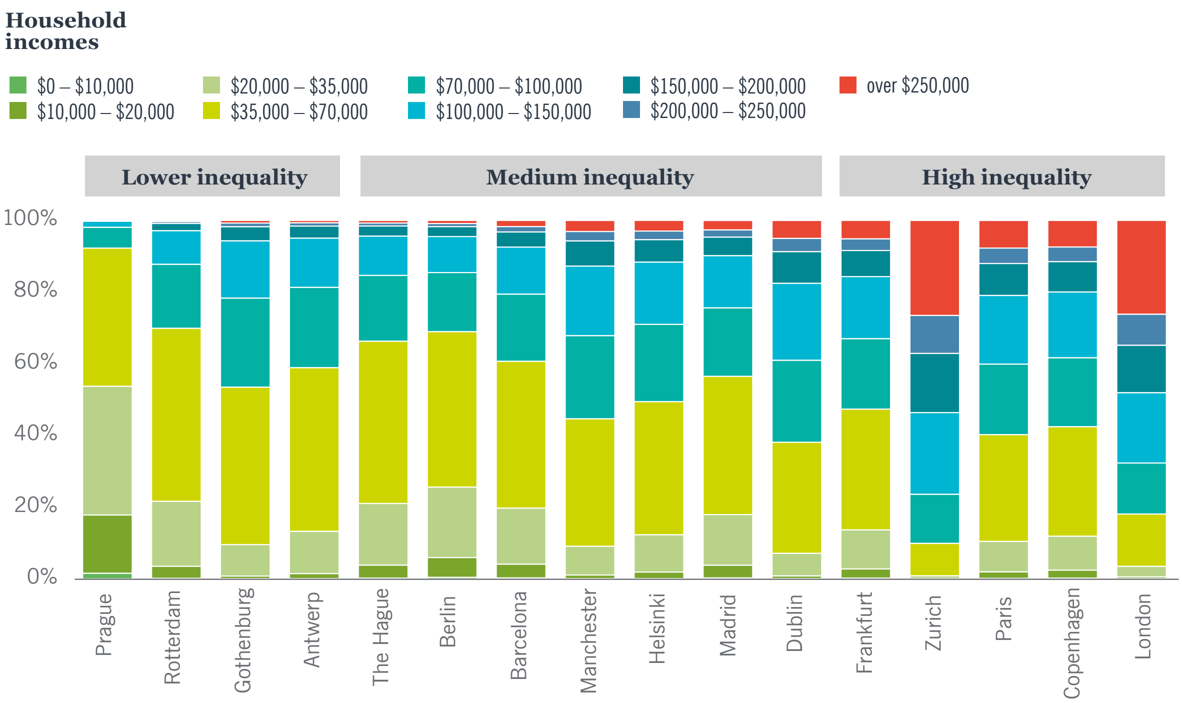
If nothing else, having lower-income workers unable to afford housing within reasonable distance to their workplaces creates serious economic inefficiency, resulting in lost GDP growth.

The current pandemic has highlighted the vital role low-wage professions play in keeping our communities and economies working. Our research shows that the risk of economic exclusion is prevalent (and growing) in the most successful European cities (see figure).

However, attempting a top-down, one-size-fits-all strategy for affordable housing, community buildings or education will not work.

Each country has its own unique set of challenges and is experimenting with a wide range of possible solutions. To add to the complexity, the larger cities, even within one country, have distinctive local requirements and housing policies.

Inequality is on the rise:
Risk of economic exclusion highest in most successful cities



Source: Oxford Economics, 2019, Nuveen estimates, 2020.

For each project to be effective for the community and economically successful for investors, it has to fit into national and regional policies and engage with local stakeholders.

The same is true for carbon reduction and other environmental issues. The broad goals are the same across Europe and beyond, but the path to reach these goals is varied and local.

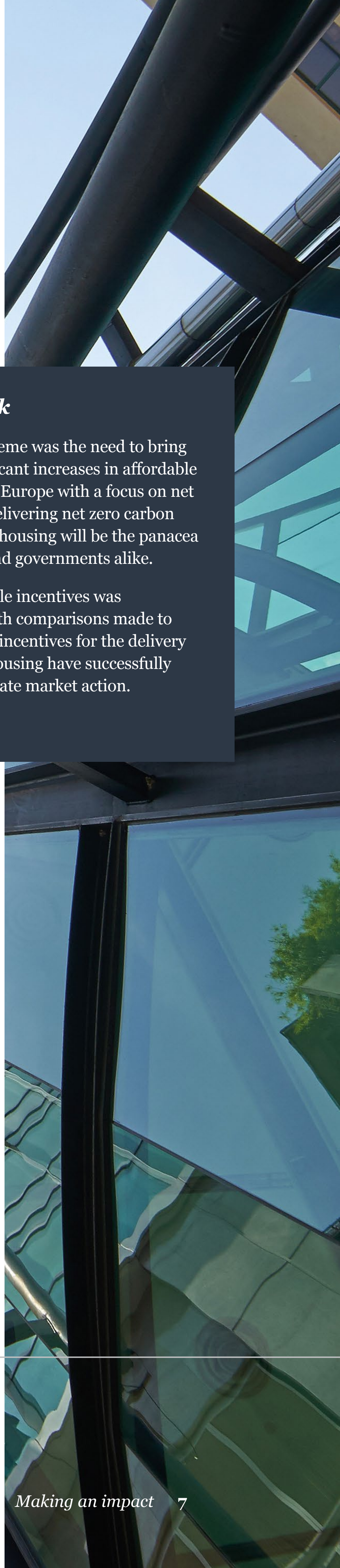
An impact real estate strategy can provide access to affordable and sustainable housing by improving the availability of units priced within range for low-income or underserved individuals. Specific solutions include regulated or restricted affordable housing, mixed-income housing and provision for underserved or vulnerable populations, such as seniors or students. The following sections highlight Nuveen's research and experience in real estate impact investing in Germany and the U.K.

MIPIM talk

A consistent theme was the need to bring together significant increases in affordable housing across Europe with a focus on net zero carbon. Delivering net zero carbon and affordable housing will be the panacea for investors and governments alike.

A lack of suitable incentives was highlighted, with comparisons made to the U.S. where incentives for the delivery of affordable housing have successfully stimulated private market action.

"A top-down, one-size-fits-all strategy for affordable housing, community buildings or education will not work."



Affordable housing: Nuveen's German residential impact strategy

Synthesising Nuveen's research and investment expertise, we have developed a framework for a real estate impact strategy that targets affordable housing in Germany. Following our impact framework, we outline our understanding of the challenge and how we can help solve it with specific measurable outcomes.

Impact thesis

Challenge: The demand for rental space in Germany is at an all-time high and households are burdened with rising rents more than ever. Four in 10 households in the big conurbations have to spend more than 30% of their disposable income on rent.[1]

- Families with a high rent burden spend too little on healthy food, education and health care, and suffer from poor housing and insecure living conditions
- Land prices and construction costs have increased exponentially, while salaries have risen only marginally. New developments cannot catch up with the demand for living space.

Nuveen's approach: Invest in solutions that create and preserve affordable and adequate housing while generating returns for investors. These solutions include:

- Regulated or restricted affordable housing (social housing for the lower-middle class)
- Mixed-income housing/inclusive housing
- Other solutions appropriate for specific underserved or vulnerable populations (e.g., senior, student, disabled, immigrants, people earning <100% of the area's median income)

Impact: Access to affordable, adequate and sustainable housing reduces the cost burden on households by improving availability of units priced within range for low-income or underserved individuals. This can lead to:

- Shorter commutes between work and home
- Higher share of population in adequate housing
- Improved community health and well-being
- Improved environmental sustainability

Outputs, outcomes and indicators

Targeted outputs:

- Increased availability and accessibility of affordable housing units
- Increased availability of green units
- Increased energy efficiency/service charge reduction
- Increased availability of housing units close to transit/social/communal services

Intended outcomes:

- Increased residential stability
- Increased resources available after housing payments
- Improvement in housing quality
- Decreased environmental harm
- Increased sense of community

Proposed investment-level indicators:

- Number of affordable housing units created or preserved
- Number of properties with green improvements
- Number of properties with social services
- Number of underserved tenants; % female
- Average differential to market rent (%) as estimation for % of household income spent on housing costs during reporting period

Impact themes and SDG alignment:

- Affordable housing
- Access to basic services
- Community development
- Energy efficiency/climate change

1 Source: Holm, Junker, Hans-Böckler-Stiftung, 2019.

Levelling up in the U.K.

In early February 2022, the U.K. Government announced its long-awaited 'levelling up' plan to address and close the gap between the richest and poorest parts of the country with 2030 as the ambitious target date.

Addressing the unequal level of productivity and economic success (which has historically been focused largely in the South East) is high on the agenda. The government's strategy also encompasses a broader range of social inequalities which includes education, health and connectivity.

To achieve this, the plan highlights detailed initiatives guided by 12 mission statements, which help frame the national agenda. But the plan is not about making places identical. In fact, it highlights the importance and difference of place.

Inequalities vary not just across the U.K.'s towns and cities but within them. Understanding the local makeup and associated needs and deprivation within towns is key to success. Real estate by its nature invests in places through the active control and management of assets. Investors and asset managers therefore have to understand places in which their buildings exist and the communities that use them.

Importance of place

In our view, investment in underserved regions is crucial to stimulate economic activity, and this will be supported by the shift of enhanced funding to these areas. Strong foundations are already in place for real estate investment to play a role. MSCI data indicates about 38% of U.K. real estate assets (by capital value) were located within the most deprived regions of the country at the end of 2020.

Nuveen's U.K. Real Estate Impact Strategy also follows the view that all places are different and uses the U.K.'s Index of Multiple Deprivation to guide investment through a national lens. It has also adopted a place-based needs toolkit which identifies local-level needs (based on the U.K. Government's seven domains of deprivation) and is able to highlight the different makeup of U.K. towns and where investment can be targeted.

Understanding what a place needs is vital for real estate investors because levelling up puts greater emphasis on community-led regeneration which will change the fortune of the U.K.'s towns and cities much faster than ever before.

Devolution and collaboration

Another key feature of the levelling up plan is the devolution of power to local districts. Devolution and collaboration are needed to drive success and ensure positive change is deeply embedded with a long-lasting impact. Collaboration with local voices and the importance of building quality partnerships have a significant role in Nuveen's U.K. Real Estate Impact Strategy.

Real estate investing usually requires a long-term investment horizon. Ongoing communication and cooperation with local stakeholders is therefore fundamental to ensure investments are responding to increasingly empowered local leaders and local people, as well as providing relevant and resilient real estate. This, in turn, should produce strong risk-adjusted returns.

Unleashing the power of the private sector

As the U.K. Government's paper acknowledged, success requires greater transparency, measurable data and accountability—principles which also apply to the private sector. Aided by the thorough analysis and clear aims of the levelling up agenda (and like established real estate environmental benchmarks), enhanced transparency among social impact solutions will garner favour among the private market. This will lead to increased demand for positive social impact products from consumers, occupiers and investors, and is a key element of Nuveen's impact framework.

While it feels we are at the beginning of a long journey, we hope the U.K.'s levelling up proposals are the first steps towards providing solutions to the U.K.'s geographical inequalities and driving new opportunities for real estate markets in towns which to date have been underserved. The Government's paper puts increasing importance on driving positive social impact and is something the real estate industry cannot and should not ignore.

Transitioning to a net zero carbon portfolio

Abigail Dean, Global Head of Strategic Insights, explains Nuveen Real Estate's ambitious plans to achieve net zero carbon across its portfolios.

How does Nuveen intend to achieve net zero carbon across its real estate portfolio?

The World Green Building Council has said that to meet the Paris Accord goal of limiting global warming to two degrees, and ideally to 1.5 degrees, all real estate must be net zero carbon by 2050. We expect governments, occupiers, and investors to coalesce behind this target.

Buildings that are not net zero carbon, or transitioning to that status, will start to lose their value. We believe there'll be a heightened stranded asset risk in the last decade leading up to 2050, so we want to be able to transition our entire investment portfolio to net zero by 2040. To do that, we gather information on the buildings in our existing portfolio and those we're planning to invest in to understand the costs and barriers involved in this transition, and also undertake regular net zero carbon audits across our portfolio.

What actions are you taking now to get to that 2040 target?

We have an interim goal to reduce the energy intensity of our real estate assets by 30% by 2025 from a 2015 baseline. We're well on track to achieve that goal with several success stories. For instance, at Dalton Park, an outlet shopping centre in the U.K., we have installed on-site solar photovoltaic panels, which means a significant portion of the centre's energy needs is met by affordable and sustainable onsite renewables.

One of our office properties in Sydney's central business district, 183-185 Clarence Street, is being retrofitted to become a modern, stylish, yet energy-efficient building. We set targets at the start of the design process to ensure that we deliver a low-carbon building and are aiming to achieve five-star NABERS (National Australian Built Environment Rating System) and Green Star ratings for it.

Even if a building is in a region or country where there isn't demand for net zero carbon buildings, we act quickly to reduce the energy consumption of buildings, through retrofitting or installing lower-cost measures. This ensures that we're well set up by the time demand increases and stranded asset risk increases.

How does Nuveen leverage technology to achieve net zero goals?

Proptech is a useful tool to get us to our net zero goal. For instance, in our Swindon Outlet Mall in the U.K., we installed a cost-effective energy-monitoring technology backed by artificial intelligence. Real-time monitoring, via sensors linked with metering and building management systems, collects millions of data points. With this granularity and richness of information, we can easily turn equipment off when it isn't needed, reducing energy consumption by around a third at the mall without huge capex spend. This technology can be easily rolled out across other buildings.

What external impact certifications does Nuveen use for its portfolio of assets?

For building-specific standards, we use BREEAM across Europe, LEED and Energy Star in the U.S., and local certifications like DGNB in Germany. We also use the WELL Building Standard and Fitwell to measure how buildings ensure the health and well-being of occupiers.

Additionally, almost all our funds are rated by the Global Real Estate Sustainability Benchmark (GRESB) annually. Nuveen is also a signatory of the UN Principles for Responsible Investment (UN PRI) across all asset classes. We're rated by UN PRI every year on our overarching strategy and governance as well as individual asset classes. Our last ratings for overall strategy and governance and the real estate asset class were both A+.

What are the main challenges to achieving your net zero goals?

One is getting occupiers on board. As our occupiers use and often procure energy directly, they're under no obligation to share their energy consumption data with us. We need to work closely with our occupiers to access such data, and we need their support when we carry out significant upgrades.

The second is a skills gap in the industry. To operate net zero carbon buildings, everyone who works in real estate needs to change the way they work and have a keen understanding of the implications of becoming net zero carbon. The industry will require time to achieve the knowledge uplift.

How can asset managers balance the need to deliver returns for LPs with impact investing goals?

Impact investing is an investment style where social or environmental objectives have the same weight as the financial return objective. It's a level above integrating ESG into mainstream investing, where the main objective is still financial return. In real estate, the most obvious examples are affordable housing strategies, while there are also potentially impactful investments in healthcare and education facilities, as well as regeneration.

In real estate investing there doesn't need to be a trade-off between the two because buildings that can transition to net zero carbon perform better financially; they get higher rents and hold their value better. The nuance comes in when considering how quickly we should get a particular building to net zero carbon, especially in places where the market isn't necessarily valuing the concept of net zero carbon just yet. So, it's important to judge how quickly we want to get to the goal while also ensuring returns for investors.

We have a fiduciary responsibility to deliver good returns to our investors, and recognise that not every investment can deliver social and environmental impact alongside a healthy financial return. It's not as straightforward as saying that delivering social impact delivers high returns, although we think that with the right strategy it can. Ultimately, it's about understanding the local nuances and the specific investment strategies that work for various investment time horizons and return criteria.

Overall, we believe that in the long term, impact investing and achieving our net zero carbon goals will deliver a clear uplift in value, especially as the global shift toward a net zero carbon economy continues.

The full interview was first published in the 2022 Preqin Global Real Estate Report.

MIPIM talk

Net zero carbon was the hot topic. The industry has coalesced around the need to deliver net zero carbon real estate at pace.

The key challenges were identified as occupier engagement, the skills gap throughout the supply chain and a lack of clarity on definitions.

The conversation has shifted from 'why' and 'when' to 'how'.

The practical reality of the hard work needed to deliver the net zero carbon transformation must be given sufficient focus and should not be lost amid the excitement of the grand commitments being made.

Investors are becoming more aware that (demolition and) new construction to BREEAM excellent standard is not the only way to make meaningful progress. Refurbishment with energy efficiency gains and placemaking is receiving more attention.

Some construction firms, developers and investors were sounding out the costs of alternative energy sources and willingness to pay for any upgrade. There was clear feedback that tenants would need to contribute as they will benefit from the savings.

Proptech grows up

Author: **Jeanne Casey**

The term proptech has quickly become an important part of real estate vernacular in recent years. Before COVID-19, the industry was just beginning to wake up to the increasingly urgent, fundamental need for digital transformation.

Driven partly by consumer trends and innovation in adjacent markets such as fintech, real estate practitioners were beginning to recognise technology's potential to improve net operating income, grow assets under management, and attract and retain the next generation of talent.

The pandemic massively accelerated interest in adopting technology across the real estate world. Almost overnight, what were once thought of as nice-to-have amenities became mission-critical technologies. Transactions had to close remotely, agents began to rely on virtual tour technology and occupiers demanded touchless access control.

Proptech expands

As proptech has matured as a technology category, its definition has expanded beyond simple property-level technologies. As depicted in the chart, proptech now refers to all technologies being embraced across the real estate value chain and includes any digital tool used by stakeholders across the industry.

We can expect a mature definition of proptech to include technologies that improve the real estate industry, making it more efficient, sustainable and accessible. It does so by drawing on technologies and business models in fintech, insurance, climate tech and consumer internet. For example, the lines between proptech and sustainability are already blurring, as technology is expected to play an outsized role in ambitious (and public) net zero carbon targets being set.

Proptech smashes records

Following the uncertainty of the early days of COVID-19, the pandemic rapidly pulled forward the growth of the proptech market. As proptech's relevance to real estate executives skyrocketed, so did its relevance to the venture capital (VC) community. Proptech has become mainstream in the VC world, and nearly every generalist fund has a dedicated partner or investment thesis for the space. Investment dollars have poured into the sector, making 2021 a record-setting year. According to AGC Partners, nearly $25 billion of venture capital was invested into proptech in 2021, eclipsing 2020's previous record of $10 billion. While early-stage start-up activity continued to increase, the market of later-stage proptech start-ups also developed. We saw a robust exit environment in 2021 with the highest levels of M&A and IPO activity ever seen. These dynamics have created conditions for 2022 to be another banner year for proptech, with continued dynamism and growth expected.

Proptech spans sectors and stakeholders

Sectors

- Office
- Retail
- Housing
- Industrial
- Alternatives*
- Other*

* Mixed use, single family, life sciences, hospitality, senior, student, storage, parking, leisure

Stakeholders

- Investors
- Owners
- Operators
- Occupiers
- Developers
- Contractors

Technologies

- Software
- Hardware
- Data
- Internet of things (IoT)
- Marketplaces
- Services

Proptech gets noisy

The real estate industry has accelerated its adoption of proptech, and many firms have begun to embrace the impending digital transformation. However, proptech venture capital funding seems to be outpacing the rate of adoption of these technologies. Proptech start-ups have raised more money more quickly than ever before, and much of that funding goes to sales and marketing efforts toward the world's oldest industry. It will be a challenge for the real estate industry to pilot so many new technologies successfully in the near term given competing demands on time and resources. No doubt, there will be winners and losers.

Finding the signals in the noise

A taxonomy for proptech can help make sense of this ever-changing market. As the figure shows, one way to organise the universe of proptech start-ups is by thinking about technologies across the lifecycle of an asset. This framework illustrates how different technologies support and enhance the different stages by removing friction, digitising workflows and providing actionable insights through data and analytics.

Two of the most exciting areas for growth and adoption of proptech are related to data and environmental, social and governance factors. Real estate owners and operators are sitting on top of incredible troves of their own data. New tools – both third-party and home-grown – are just beginning to unlock the value of that data with analytics and actionable insights. In parallel, the real estate industry is reckoning with existential threats such as climate risk and housing affordability. Tech-enabled solutions will be at the forefront of mitigation efforts, and talent is flooding into companies that are building solutions to these massive societal issues.

MIPIM talk

Proptech was a significant presence at MIPIM.

It was presented as a major part of the solution to two of the biggest challenges facing the industry: the net zero carbon transformation and incentivising and easing the return to office.

The role of tech in transactions was a focus: Will a 'Zillow' or a 'Rightmove' emerge for commercial real estate?

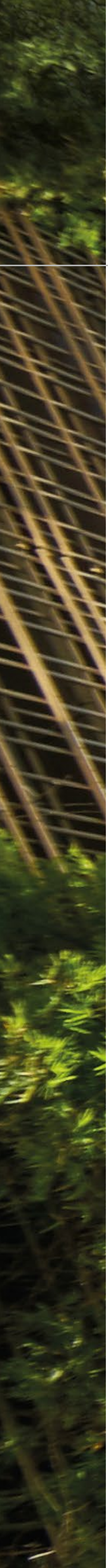
The technologies that can help deliver sustainable buildings, and in particular solve energy data-gathering challenges, were under the spotlight.

Proptech's ability to facilitate occupier engagement was also frequently discussed.

A taxonomy for proptech

Asset value chain			
Find & evaluate	**Transact**	**Development & construction**	**Management & operations**
Listings & brokerage	Transaction management	Materials management	Leasing & asset management
CRM & marketing	Investor reporting	Fleet management & last mile	Tenant experience
Appraisal	Financing platforms	Field management	Rent tech
Virtual tours	Transaction underwriting	Project management	Property management
Property data	iBuyers	Models & analytics	Smart building, IoT, sensors

Source: Nuveen Real Estate, 2022.



Back to (hybrid) work?

Author: **Andy Schofield**

As Omicron recedes and various restrictions are dismantled, firms across Europe are once again dusting off plans to either encourage or summon their staff back to the office.

In terms of what to expect, we can look in the rear-view mirror to late last year when office staff had begun making their way back to the workplace.

Busier offices before Omicron hit

Morgan Stanley's extensive survey of office employees in November revealed office staff in the big five European countries were back in the office on average 67% of the time, with the U.K. trailing at 60% and with Spain and Italy at 70%. Half of staff were back full time and 44% of those interviewed said they were working from home at least some of the time because of their firm's hybrid working policy. In the U.K., work-from-home guidance ended in late-January and financial firms wasted no time in summoning their staff back to the office, some with immediate effect and others stipulating at least three days a week. Law firms and consultancies also opened their offices and encouraged staff to re-engage.

Although migration back to the office is gaining momentum, we will likely have to wait until the spring before we observe how staff and employers come together to determine the new working normal. During the past two years of disruption, firms and staff alike have had a real opportunity to evaluate what works for them and what does not. And while surveys reveal staff preferences are not aligned with what they believe their employers will allow, they are not worlds apart.

The new normal takes shape

Businesses will seek to align an offer of greater flexibility with their corporate goals of improving productivity through innovation and promoting corporate culture. There will inevitably be large differences between business and occupational types. Employers' concerns may arise from knowledge gaps if younger staff members are unable to learn effectively from experienced colleagues. Upskilling home-grown talent to plug gaps in a firm's business model can be more challenging if the remote working culture is unbalanced.

There are compelling reasons for the office nucleus to remain at the heart of the new normal. Humans are social animals and office real estate is now regarded as a key strategic weapon in the war for talent and for fostering innovation through collaboration.

Sustainability and well-being offerings are also increasingly deployed in the quest for talent retention. The shift to hybrid working is all too often presented as a cost-saving opportunity for businesses, the quid pro quo for tolerating more flexible working patterns. This has inevitably raised investor concerns that swathes of surplus may be returned to the market, causing rents to fall.

Rising surplus or reconfiguring space?

The return to office witnessed in late 2021 implies (on a weighted basis) that future utilisation could be around 25% lower under hybrid working. This clearly does not imply 25% of space will be returned by office users. For instance, there is likely to be more collaboration and community or social space, as employers seek to encourage attendance. Notwithstanding office re-design, are those working remotely for just the odd one or two days a week going to expect a dedicated workstation? Even if they don't, employers may still want to support innovation by maintaining island teams for as and when staff do attend.

And of those who work remotely for three to five days a week? Space will still need to be reserved for them on the days they attend the office with enough hot-desking to accommodate peak attendance given the attendance profile is unlikely to be evenly spread. Then there is the potential for unsustainable office densities to unwind. JLL's Global Office Benchmarking Study 2021 revealed enormous differences in the floorspace per worker across global markets. For instance, Berlin and Amsterdam office staff enjoyed 18.2 and 16.3 square metres (sqm) respectively, while London employees squeezed into 9.8 sqm. Hybrid work models can be deployed to enable an increase in floorspace per worker—a natural de-densification—offsetting the amount of space deemed surplus.

Is the office dead?

While we expect future hybrid working to impart a net negative impact on the leasing market, the risks presently feel overstated and reliant on dramatic conjecture. In any case, the profile of future lease events means the impact would likely be spread over time, avoiding any shock to market equilibrium.

What is clear, however, is that the quality of office product and service offer will need to be even higher than pre-pandemic standards. We therefore expect demand to remain robust for offices in well-connected central business district locations, particularly in buildings with high levels of well-being and environmental certification. Institutional landlords will need to transform their passive leasing approach into active engagement strategies, working alongside tenants to help them re-define their post-pandemic workplace design.

Long live the office!

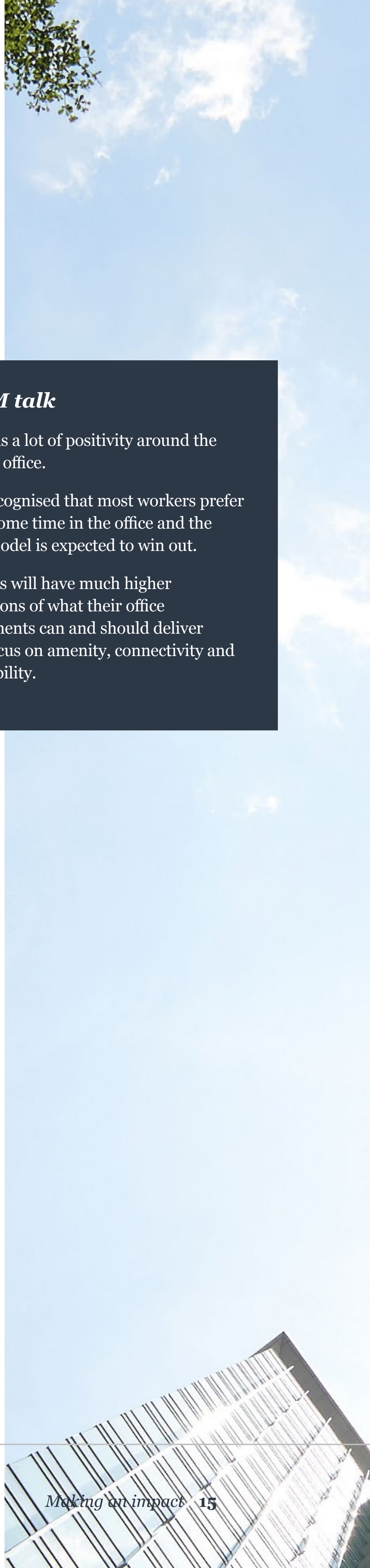
“The risks presently feel overstated and reliant on dramatic conjecture.”

MIPIM talk

There was a lot of positivity around the return to office.

It was recognised that most workers prefer at least some time in the office and the hybrid model is expected to win out.

Occupiers will have much higher expectations of what their office environments can and should deliver with a focus on amenity, connectivity and sustainability.



Analysing global cities in the 2020s

Authors: **Jayanth Ganesan, Stefan Wundrak, Harry Tan**

Post-pandemic life is on the horizon, but which global markets are best positioned to benefit over the next decade?

The coronavirus pandemic has changed how we work, shop, communicate, and even where we choose to live. While some of these changes will be temporary, we believe that the pandemic has accelerated trends that will have a lasting impact on our lives and cities worldwide.

Certain cities and submarkets within cities are better positioned to capitalise on these trends, creating opportunities for investors around the globe.

What's changing?

Notable trends that will affect global market performance include:

- A wider adoption of work-from-home and hybrid work models
- Significant migration to the outer ranges of commuter belts, revived cities and towns, and growing regions that provide attractive lifestyle benefits
- The integration of e-commerce into both in-person and online retail experiences
- The evolution of transportation and industry supply chains
- Lower demand for business travel, relative to the demand for leisure travel

Which cities will benefit?

Successful investing in real estate will rely on understanding the impact of these trends on cities worldwide. And the population centers that will benefit from these shifts, most notably due to the added flexibility afforded to workers, will differ based on region.

In the United States, suburban areas outside of gateway and low-cost markets will benefit economically. The coronavirus pandemic has accelerated suburban migration in all regions, as workers have felt less tied to city centers with a work-from-home lifestyle that is likely to continue in some capacity after the pandemic. Furthermore, the economic and lifestyle calculation of living in many of the country's most expensive markets makes increasingly less sense given the greater flexibility afforded to workers. Low-cost markets that can transition workers from low-wage sectors damaged by the pandemic (such as retail) to growing industries that rely on low-wage employment (for example, logistics, storage and residential construction) should also present opportunities.

In Europe, many residents may migrate to small towns outside gateway markets, leading to an extension of commuter belts. Some residents may move to innovative and attractive second-tier cities. However, given the regional differences within Europe, real estate investment implications are likely to be unique to cities and sectors. For example, while residents of larger international cities like London, Paris, Amsterdam and Berlin have widely adapted to using digital alternatives, many smaller companies in more traditional industries, such as law, manufacturing, retail or transport, have not fully embraced remote work environments. We also see opportunities for some markets in the industrial heartlands to benefit from the pandemic's boost in e-commerce, provided they can tap into the higher demand for logistics.

Real estate total return correlations 2001 – 2020

United States

		United States			
		Retail	Office	Industrial	Residential
United States	Retail	1.00	0.82	0.67	0.87
	Office	0.82	1.00	0.89	0.93
	Industrial	0.67	0.89	1.00	0.87
	Residential	0.87	0.93	0.87	1.00
Europe	Retail	0.86	0.66	0.46	0.70
	Office	0.63	0.78	0.74	0.72
	Industrial	0.46	0.62	0.73	0.60
	Residential	0.65	0.67	0.59	0.62
Asia	Retail	0.87	0.72	0.54	0.67
	Office	0.67	0.82	0.70	0.62
	Industrial	0.63	0.75	0.66	0.62
	Residential	0.74	0.89	0.95	0.86

Europe

		Europe			
		Retail	Office	Industrial	Residential
United States	Retail	0.86	0.54	0.49	0.54
	Office	0.62	0.76	0.59	0.74
	Industrial	0.44	0.77	0.70	0.75
	Residential	0.69	0.68	0.60	0.64
Europe	Retail	1.00	0.61	0.65	0.54
	Office	0.61	1.00	0.86	0.90
	Industrial	0.65	0.86	1.00	0.77
	Residential	0.54	0.90	0.77	1.00
Asia	Retail	0.75	0.50	0.33	0.39
	Office	0.53	0.74	0.50	0.86
	Industrial	0.72	0.84	0.70	0.86
	Residential	0.56	0.83	0.76	0.75

Asia

		Asia			
		Retail	Office	Industrial	Residential
United States	Retail	0.87	0.67	0.63	0.74
	Office	0.72	0.82	0.75	0.89
	Industrial	0.54	0.70	0.66	0.95
	Residential	0.67	0.62	0.62	0.86
Europe	Retail	0.75	0.53	0.72	0.56
	Office	0.50	0.74	0.84	0.83
	Industrial	0.33	0.50	0.70	0.76
	Residential	0.39	0.86	0.86	0.75
Asia	Retail	1.00	0.57	0.46	0.61
	Office	0.57	1.00	0.81	0.69
	Industrial	0.46	0.81	1.00	0.69
	Residential	0.61	0.69	0.69	1.00

Source: MSCI

In the Asia Pacific region, the pandemic has accelerated some existing trends. It has increased the growing market share of e-commerce, deepened technological innovation and penetration, and reshaped behavioural attitudes over work-life balance. However, it is unlikely that these overarching macro trends will overturn many long-held beliefs over the attractiveness of urban living and the existing hierarchy of cities within each country. Even though workers are unlikely to leave the major cities, there is evidence of workers moving further away from the city centers. Additionally, while the larger markets will continue to grow, some markets will gain importance from the pandemic over others, and the delineation between gateway markets may widen.

Diversify across a range of variables to benefit

While the pandemic may have affected every global region, as these views show markets and countries within different regions will emerge from the pandemic with different economic trajectories. Real estate investors will benefit significantly from international diversification. In this new economic cycle, markets within one country or region tend to be more correlated than markets within different countries and regions. The correlation data in the table highlights this.

Workers, firms and local governments are reassessing the locations that could provide a better quality of life and higher productivity in the post-coronavirus world. Real estate investors should take note of these behavioural changes. Cities are far from uniform, and our research shows that opportunities for real estate markets vary widely across the globe.

Rising rates, inflation and real estate

Author: **Stefan Wundrak**

Inflation risks are starting to feel more real. As we emerge from the pandemic-induced recession, central banks and governments have implemented massive monetary and fiscal stimulus policies to support re-opening.

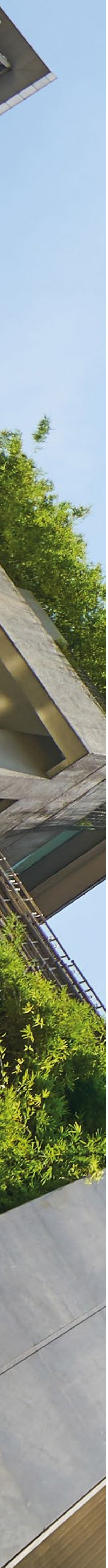
Strong demand has been met with supply bottlenecks. Real estate investors are asking how the potential for rising inflation might impact their returns.

Over the long-term, real estate has generally been a good hedge against inflation, but not always. It depends on each landlord's ability to pass increased expenses along to tenants. With construction costs still elevated, building new properties is more difficult. Markets with strong fundamentals today should generally continue to do well. Independently of how inflation will play out across economies, we expect that investors targeting the healthiest cities should find that low vacancy rates across many sectors and locations give landlords pricing power to increase rents.

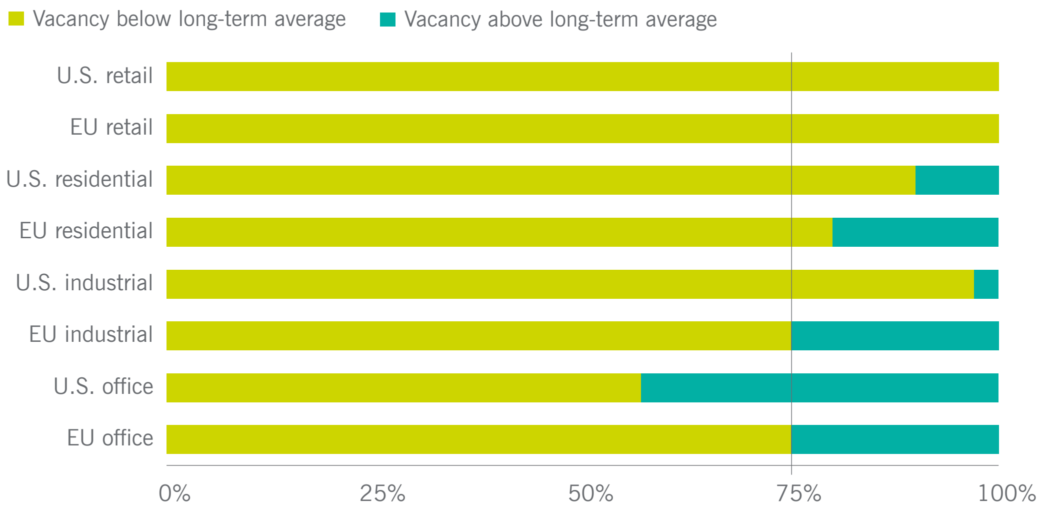
Developed market inflation rates have increased almost in unison to levels not seen for 30-odd years. While we believe inflation will fall markedly again as the post-pandemic realignment works through the system and central bank actions lead to a cooling, it is important to remember that historically, higher inflation rates have not systematically dented real estate investment performance.

The relative stability of real estate during the COVID-19 pandemic was the result of the asset class's stable income generation even during times of high economic volatility. Historic data from U.S. and European economies suggest that real estate can protect investors from inflation risks. Inflation hedging works better in demand-driven inflation periods compared with cost-driven inflation. The current bout of inflation has both features.

The strong economic rebound has led to the aggregate demand overhang driving up wages and prices of goods and services including real estate, which benefits from higher rents. However, part of the global inflation rise is driven by higher energy



Landlords have pricing power in a majority of markets



Source: Greenstreet, PMA, JLL, CBRE et al.

costs and supply bottlenecks. These impose costs on the economy leaving less for firms and households to spend on real estate. Historical evidence from developed economies indicates that investors need to play the long game to benefit from real estate's inflation-hedging characteristics. In most periods, there is a lag before real estate net operating income (NOI) fully absorbs inflation.

How inflation hedges work in practice

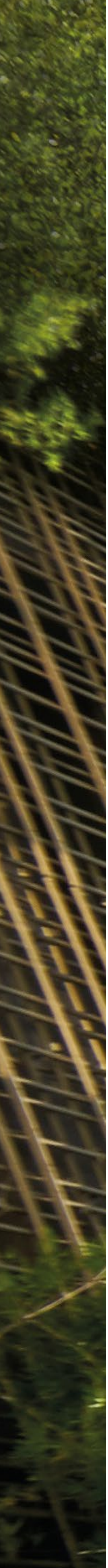
Inflation can directly drive NOI growth when long-term leases have built-in rent escalators that are tied to inflation data, which protects the income generation of in-place leases. New leases allow investors to capitalise on rising market rents.

The sharp increase in commodities and building costs will constrain new supply to some degree, which will further support real estate values. In fact, construction cost inflation has outrun other measures of inflation (e.g., core inflation) in recent years. High construction costs imply increased replacement costs for buildings, making existing real estate investments more valuable.

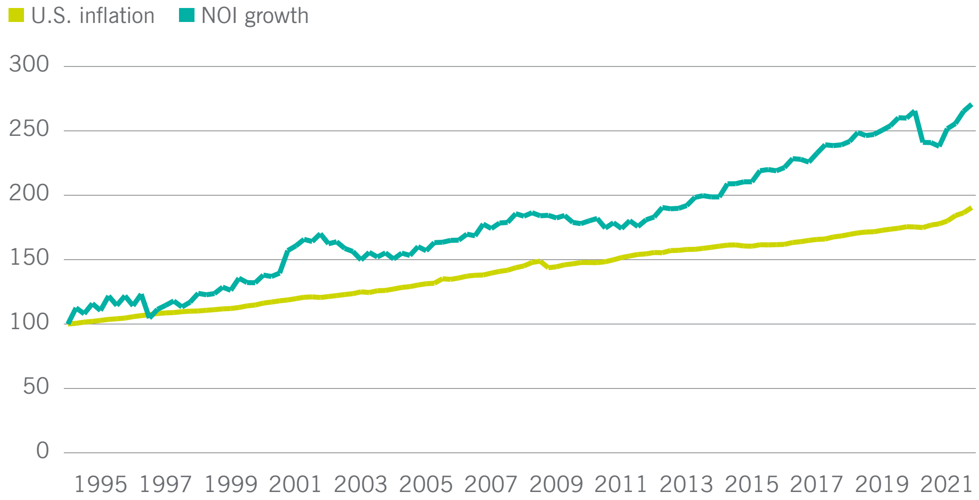
The current run of inflation is partly attributed to an economy running at full speed increasing the demand for real estate across the economy and driving rents upwards. This can be witnessed across property types, in particular apartment rents and logistics rental growth.

Summary

- Real estate may provide a particularly attractive option for investors seeking to hedge against inflation, as both rents and property values are highly correlated with rising consumer prices
- Most long-term leases have built-in rent escalators that are tied to inflation, which protects the income generation of in-place leases
- Today's inflation is partly attributed to an economy running at full speed increasing the demand for real estate across the economy driving rents upwards
- Investors need to play the long game to benefit from real estate's inflation-hedging characteristics



Rental growth should move in line with inflation over long term



Data rebased to 1994. Source: NCREIF, 3Q21; Moody's Analytics, 3Q21

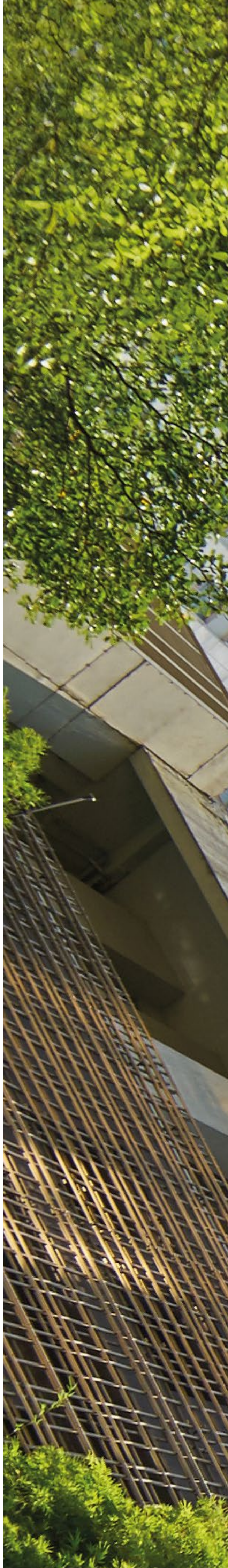
How inflation hedges work in practice

Office

In the European office sector and in Australia, rents on the market-typical long leases are wholly or partly uprated by national consumer price index (CPI) inflation, and higher inflation will immediately benefit the operating income of landlords. In the Asian office market, a rise in inflation can benefit landlords in a different way: Traditionally shorter lease terms of just three years allow for a quick reversion to market. The exception are U.S. offices with typically intermediate- to long-term leases, placing the sector at greater risk because these are typically not index linked. The U.S. medical office and life science segments face similar inflation risks with longer leases but have a stronger fundamental operating environment than traditional office, making them more defensive.

Industrial

European industrial property directly benefits from index-linked lease terms. While the U.S. industrial sector has intermediate- to long-term leases and lacks contractual inflation protection, many properties have below-market rents due to strong rent growth across the sector. Globally, the sector is well-positioned to benefit from inflation driven by economic growth due to the expanding need for warehouse space. Structurally, industrial rents should gain disproportionately from rising inflation, as margins improve for e-commerce and third-party logistics operators. This is especially true in markets with an undersupply of modern distribution or last-mile facilities such as Seoul, Paris or New York.

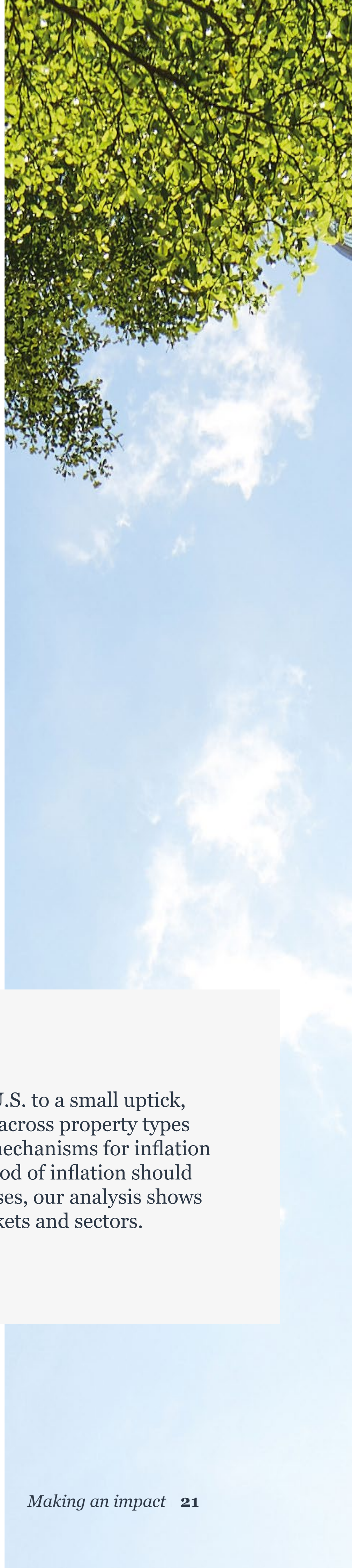


Retail

Retail markets should profit from rising inflation where pent-up demand outstrips supply in some consumer sectors (namely hospitality and apparel), resulting in higher prices and healthier occupier balance sheets. In some parts, the retail sector carries greater inflation risk. In the U.S., leases are intermediate-term and they rely on retailer operations, which have been challenged recently. The discretionary and luxury segments are likely to remain fundamentally changed, mainly from e-commerce penetration in markets such as China, Italy and the U.S. Across global markets, the grocery-anchored segment offers a unique reprieve. Greater inflation fuels a recovery in wages and consumer spending, which in turn allows for greater rental affordability which would improve the grocery-anchor's finances and allow for rental uplifts.

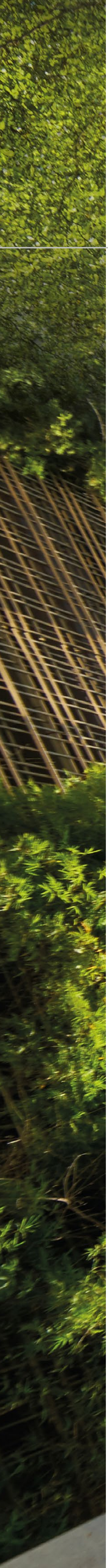
Residential

U.S. residential real estate leases are mainly short-term, allowing for quick adjustment to new price levels. U.S. housing has historically been a low-risk segment, and its limited expected sensitivity to inflation risk is no exception. The more heavily regulated European housing sector is more at risk from short-term inflation with fewer options for landlords to adjust rents upwards, in particular due to long-term rental contracts common in important residential markets like Sweden, Germany and the Netherlands. Japan is the only Asia Pacific residential market with a deep and liquid pool of multi-family assets. The traditional lease structure means rising inflation has little bearing on rental growth prospects.



Conclusion

Inflation rates vary widely around the world, from high-single digits in the U.S. to a small uptick, barely above zero, in Japan. Property markets also function very differently across property types and between developed economies with an array of different transmission mechanisms for inflation trends into the respective real estate values and rental levels. While this period of inflation should be largely benign for real estate, even offering some protection from price rises, our analysis shows that investors are best advised to gain exposure to a variety of property markets and sectors. *Diversification can be the best protection against inflation.*



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Source: Nuveen, 31 Dec 2021.

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