PGIM REAL ESTATE

INVESTMENT RESEARCH

TRENDS FOR 2022

REAL ESTATE TRENDS SET TO SHAPE THE NEXT 12 MONTHS

DECEMBER 2021

CONTENTS

As worrying new COVID-19 variants emerge, the pandemic is still far from over, while concerns about higher inflation and rising market interest rates persist. Nevertheless, the backdrop for real estate markets in 2022 is one of transition to a new phase of recovery and expansion. Leading indicators are pointing upward, and even though the gap between the best- and worst-performing parts of the market remains wide, most sectors and regions are set for sustained or improved investment performance in the year ahead. But that renewed optimism raises a new challenge for investors: deploying capital that has been raised. City office, apartment and retail markets that suffered during the pandemic are starting to come back into favor, and capital is increasingly finding its way into higher-returning operational assets, wherein returns are linked to long-term trends such as digital transformation, aging populations and environmental sustainability.

The following report sets out nine trends that are expected to be among the most important in shaping the investment outlook in 2022 and beyond.

TREND 1

RECOVERY TURNS TO EXPANSION

The recovery that has taken hold in the second half of 2021 is set to turn into a full-blown expansion phase, characterized by above-average demand and more-widespread rental growth.

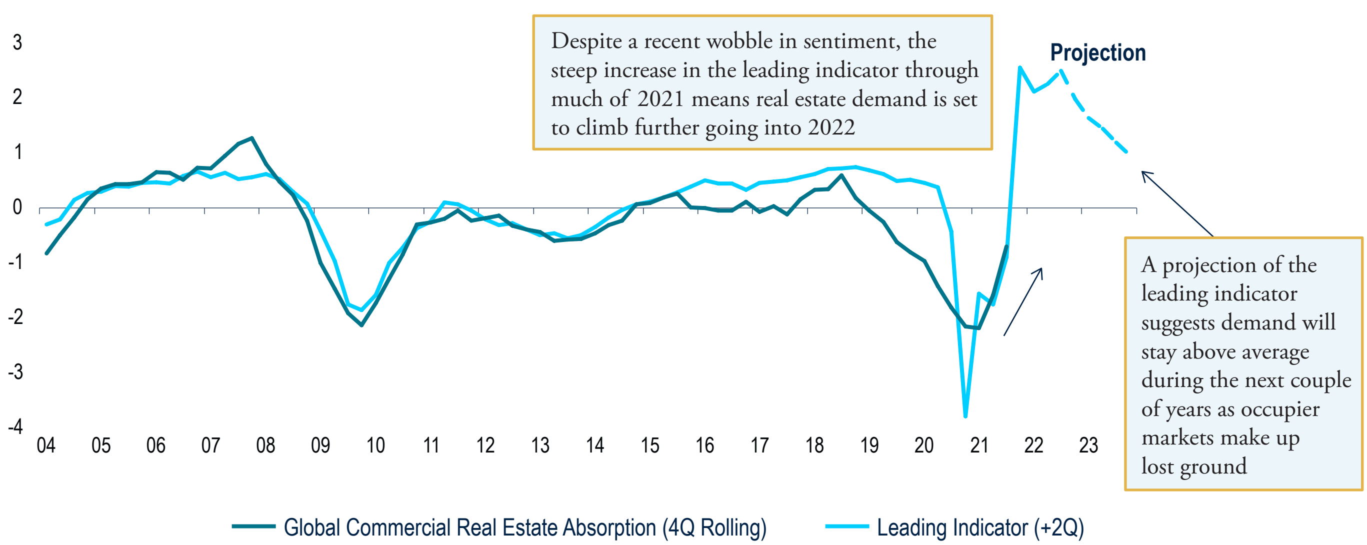
Everything points toward 2022 as a strong year for real estate performance. Prospects for household spending are being buoyed by a rebound in employment, faster wage growth and accumulated savings. Key occupiers go into 2022 in good financial shape and are once again looking at expansion plans so as to capitalize on the fast pace of growth being recorded as the global economic recovery continues.

Through the course of 2021, leading indicators picked up dramatically once successful vaccine rollouts paved the way for widespread reopenings of services, thereby boosting sentiment significantly (Exhibit 1a). Despite a recent wobble in sentiment — linked to such factors as supply chain issues, rising costs, inflation pressures, a pickup in COVID cases and the emergence of new variants of concern — real estate demand is now rising sharply.

Aggregate space demand is expected to recover further and remain above trend through 2022 as occupier markets make up ground lost during the pandemic when major tenant groups delayed location decisions, and COVID restrictions held back activity.

Exhibit 1a: Leading Indicator Points to Improving Occupier Demand

Global Real Estate Absorption and Leading Indicator (normalized)



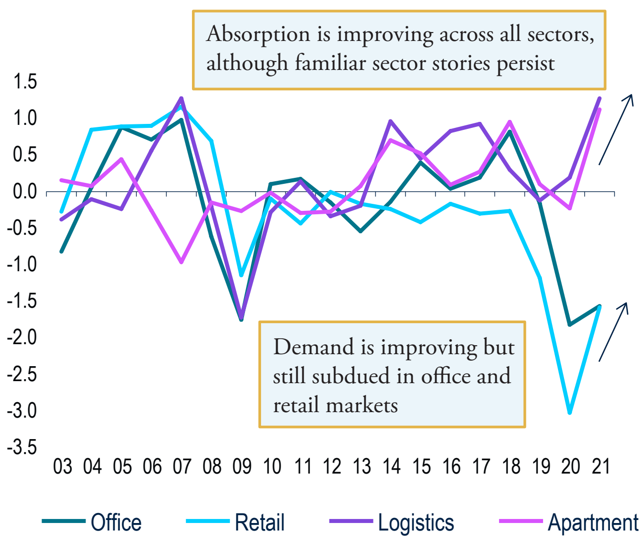
Sources: CoStar, Cushman & Wakefield, JLL, PMA, Eurostat, Manpower, Oxford Economics, PGIM Real Estate. As of December 2021.

While improvements in space absorption are being recorded across the board, the familiar sector differences are persisting (Exhibit 1b). Demand for logistics and apartments remains well above historical averages, and in the office and retail sectors, the pickup in absorption is springing from a low base.

The prospect of a continuation of increased demand suggest that more and more markets will record rental growth as 2022 goes on. Vacancy rates are starting to fall again, and 43% of major global real estate markets reported positive rental growth during the third quarter of 2021 — up from just 23% at the end of 2020 — whereas fewer markets are seeing rents fall (Exhibit 1c).

Exhibit 1b: Differences Persist Across Sectors

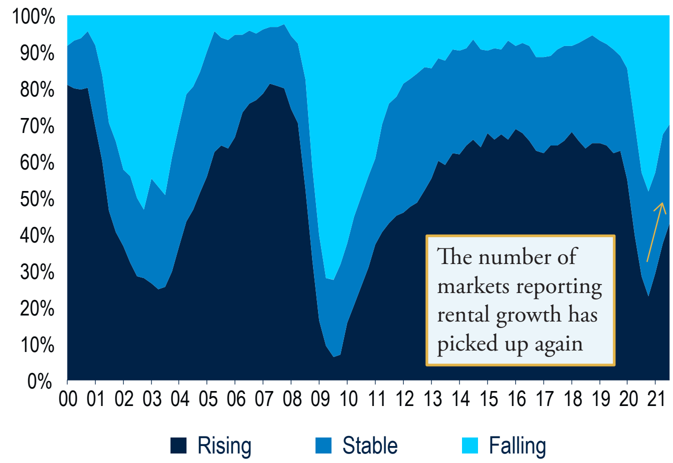
Global Real Estate Absorption by Sector (normalized)



Sources: CoStar, Cushman & Wakefield, JLL, PMA, PGIM Real Estate. As of December 2021.

Exhibit 1c: More Markets Now Reporting Rental Growth

Share of Markets Reporting Rising, Stable and Falling Rents Compared With Six Months Ago (%)



Sources: CoStar, Cushman & Wakefield, JLL, PMA, PGIM Real Estate. As of December 2021.

> **Demand for logistics and apartments remains well above historical averages, and in the office and retail sectors, the pickup in absorption is springing from a low base.**

TREND 2

CITIES MAKE A COMEBACK

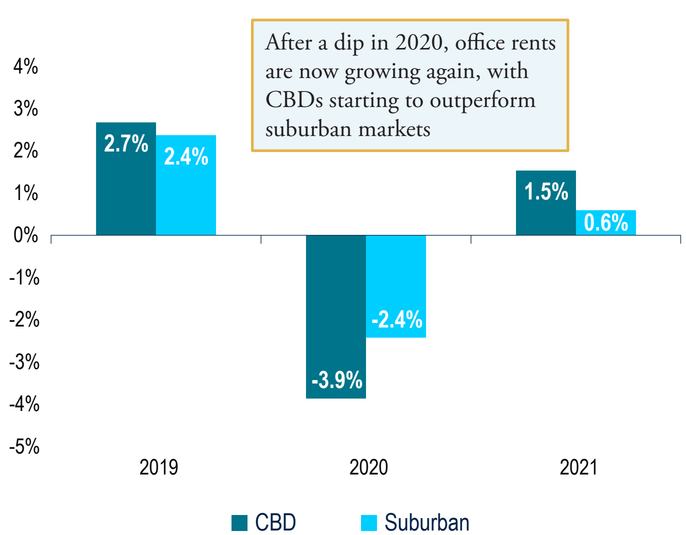
Cities are seeing signs of improved rental growth, with central business district (CBD) offices and centrally located apartment markets benefiting from a sharp increase in hiring intentions that are driving employment and space requirements.

Despite initial concerns about major cities' resilience to the pandemic — that envisioned various temporary upheavals, including a switch to remote working as workplaces closed and an associated shift in preferences toward suburban living that offered more space and more amenities — mainstream property types in city center areas are now reporting rising demand and are seeing signs of improved rental growth.

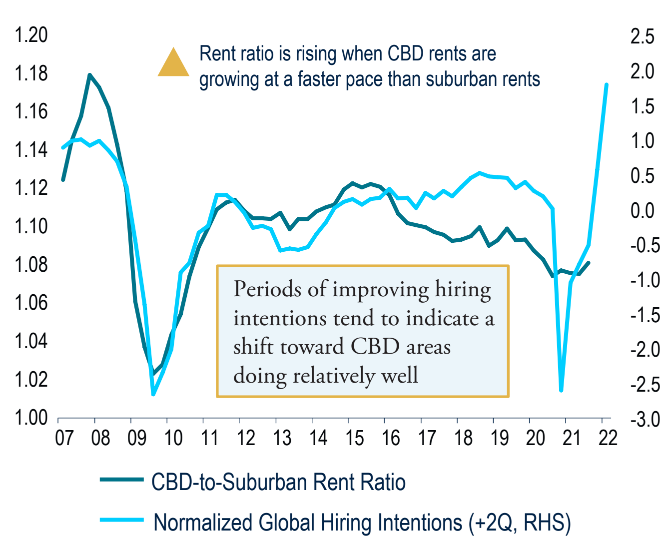
It is still early days with regard to an office recovery story. Demand is still subdued on an absolute basis but appears to have turned a corner linked to workplace reopenings and corporate tenants starting to make previously delayed long-term location decisions. Rental growth has now turned positive in aggregate across global gateway markets (Exhibit 2a), with rising competition for a small pool of available modern grade A space driving rents higher in such markets as Munich, London, Paris and Singapore.

Exhibit 2a: CBDs Starting to Outperform as Hiring Intentions Improve

Annual Office Rental Growth: Gateway Markets (%)



Rents in CBDs Relative to Suburban Areas (%)



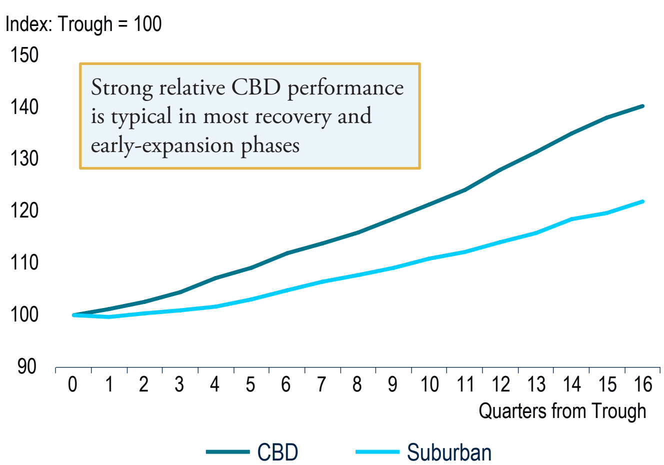
Sources: CoStar, Cushman & Wakefield, JLL, PMA, Eurostat, Manpower, PGIM Real Estate. As of December 2021.

Unlike during 2020, when suburban markets held up better, CBD areas are now outperforming. And even though that is a nascent signal that emerged only in the third quarter of 2021, there are several reasons to expect the pattern to continue into 2022. One reason is that CBD rents tend to rise more quickly than in suburban areas when hiring intentions are elevated — as they are in today's market — because businesses are compelled to use location as a way of helping attract talent in a competitive labor market.

A second reason is simply that CBD markets tend to outperform in a recovery, linked to the agglomeration benefits of central locations. During the past two recoveries, CBD rents grew at double the pace of suburban markets in the four years after reaching a trough (Exhibit 2b). A drop in rents in the past couple of years has boosted affordability in previously expensive CBD locations, and slightly higher vacancy compared with prepandemic levels means improved choice, thereby paving the way for rental growth during the expected demand upswing.

Exhibit 2b: Past Cycles Point to a Good Run Ahead for CBDs

Office Rents During Cyclical Recovery Periods Since 2000 (average past cycles)

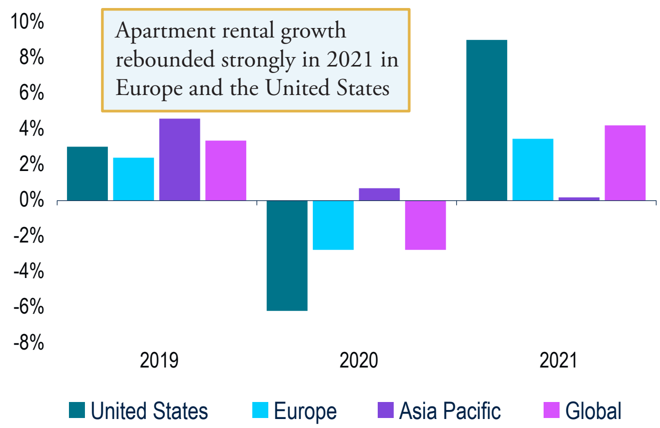


Sources: CoStar, Cushman & Wakefield, JLL, PGIM Real Estate.
As of December 2021.

A similar pattern is playing out in major apartment markets, where household-location decisions are linked to employment prospects as well as such factors as amenities and accessibility — and, of course, whether workplaces are open or not. After a struggle in 2020, as workplaces have reopened and firms have started hiring again, apartment demand has rebounded sharply in major cities, and rents are rising at a rapid pace (Exhibit 2c). While rental growth remains weak in Tokyo, where vacancy rates in central areas remain above prepandemic norms, London and U.S. cities such as Boston and Washington, D.C., are recording steep rent increases, regaining lost ground after a sharp correction in 2020.

Exhibit 2c: City Apartment Markets Are Recording Rental Growth Again

Major City Apartment Rental Growth (% p.a.)



Note: Asia Pacific data are for Tokyo in Japan, which is the region's largest institutional residential investment market.

Sources: CoStar, PMA, Savills, Kantei, ARES, PGIM Real Estate.
As of December 2021.

TREND 3

RETAIL IS BACK ON THE AGENDA

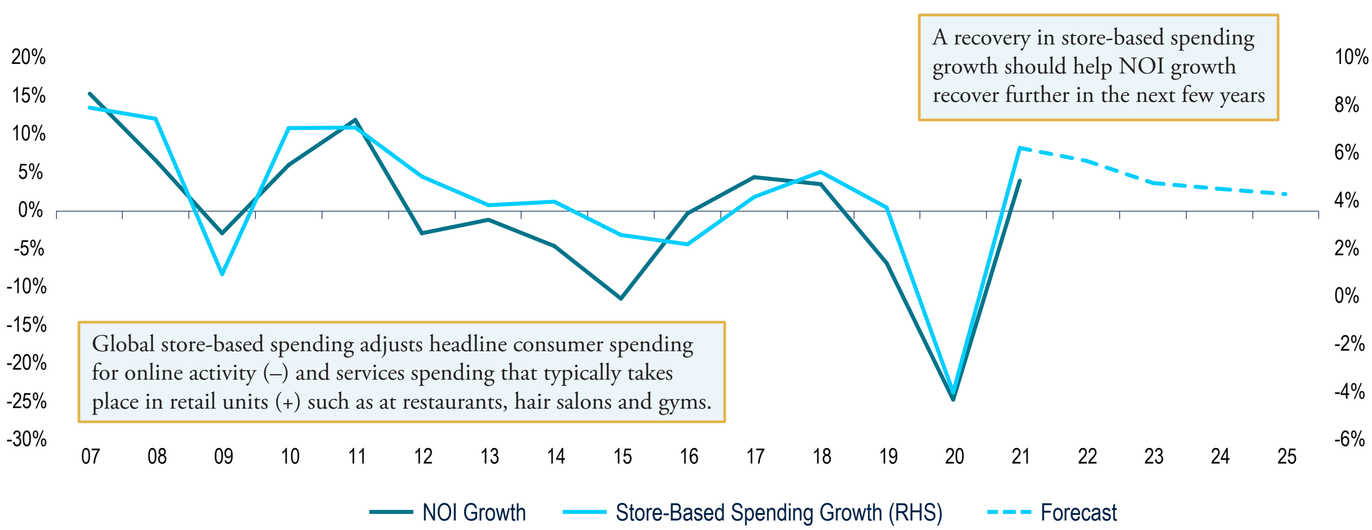
A recovery in store-based spending growth is positive for the retail net operating income (NOI) outlook, and signs of capital value growth are showing up in more markets and segments, meaning that retail investment activity is set to increase.

When thinking about the outlook for retail markets, which still represent a significant part of the investment landscape, it is important to look beyond traditional measures of retail activity. For example, headline retail sales figures are only part of the story because they are limited to a narrow coverage of spending on physical goods. To get a true measure of store-based spending, the online component has to be subtracted; and other personal services such as those offered by restaurants, hair salons and gyms, which typically occupy retail units, have to be accounted for. Similarly, rent received can either be fixed or be based on a more-flexible arrangement, such as turnover based, meaning an assessment of NOI is important alongside headline rents.

As services have reopened through 2021 and as some of the huge jump in online spending has reverted back to physical shops, there are signs that the associated rebound in store-based spending is boosting retail investment performance. After several years of decline, NOI growth has turned positive, and based on a simple relationship with forecasts for store-based spending, it will stay positive in the coming years (Exhibit 3a).

Exhibit 3a: Store-Based Spending Growth Driving a Retail Net Operating Income (NOI) Recovery

MSCI Global Retail NOI Growth and Global Store-Based Spending Growth (% p.a.)



Sources: MSCI, Oxford Economics, Economist Intelligence Unit, PGIM Real Estate. As of December 2021.

Of course, questions remain about whether this improvement is enough to tip the risk–return trade-off in favor of higher retail allocations. The returns outlook is fairly modest based on a sluggish, rather than a strong, recovery that is more about recovering lost ground than it is about expansion; and the sector still faces lots of challenges. Ongoing digital transformation, uncertainty about the future pace of transition to online spending and a shift toward turnover-based rents all mean a significant risk premium is required.

After a sustained period of value correction, investors are starting to consider retail again. Since 2019, almost all major retail segments have recorded declines of 10% to 30% in headline values (Exhibit 3b). Some of the retail correction came in absolute terms when headline rents, NOI and capital values fell, often sharply, in the face of challenging trading conditions. The correction has also played out in relative terms in that a period of stable to gently rising yields in recent years has seen a large spread open up relative to other real estate sectors that have recorded significant yield compression.

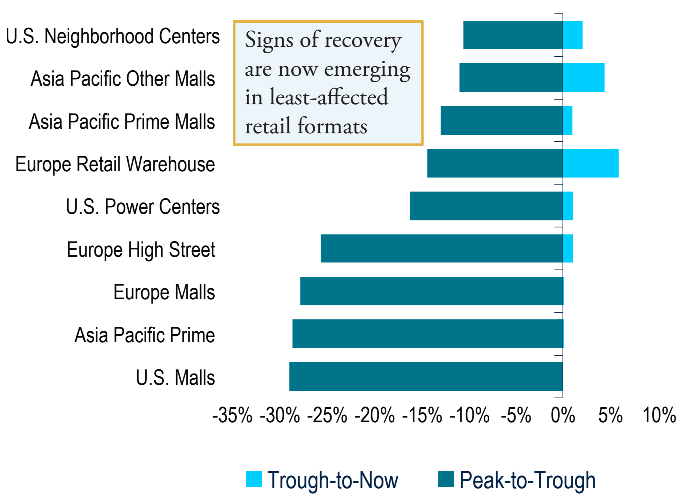
Meanwhile, there are clear signs that momentum is now turning. In all of the major retail segments across the three major worldwide regions, capital value growth in the third quarter of 2021 was either positive or, at least, falling at a slower rate than it was in 2020.

Parts of the market that are reporting positive capital growth, along with still-elevated yields, are likely to attract further investor attention in 2022. The theme for the better-performing segments is clear, comprising mainly local, accessible, amenity-based and low-cost shopping options like neighborhood centers in the United States, retail warehouses in Europe and Australia, and smaller suburban malls in Asia Pacific. Assets in those groups are able to compete with online channels through value and convenience, and they can offer access to physical services such as gyms, restaurants and hair salons. In some markets, notably in the United States, these sites can offer complementary services that link to online services, such as collection points and store return services.

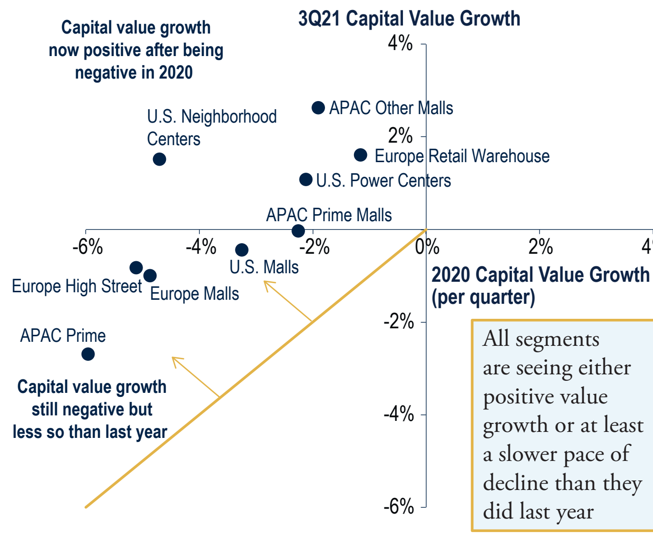
In contrast, the correction experienced by malls and many prime shopping streets — already deeper than for neighborhood centers and retail warehouse formats — is still ongoing as retailers reevaluate how such locations fit into the store portfolio of the future. Although values look set to bottom out soon, rents may still come under further pressure; and making the returns stack up against the elevated risks remains a challenge.

Exhibit 3b: Values Growing Again in Parts of the Retail Market

Retail Capital Value Movements Since 2019 by Region and Format (%)



Quarterly Capital Growth: 3Q21 Versus 2020 Average (%)



Sources: CoStar, Cushman & Wakefield, JLL, MSCI, PMA, PGIM Real Estate. As of December 2021.

TREND 4

SUPPLY OUTLOOK REMAINS SUBDUED

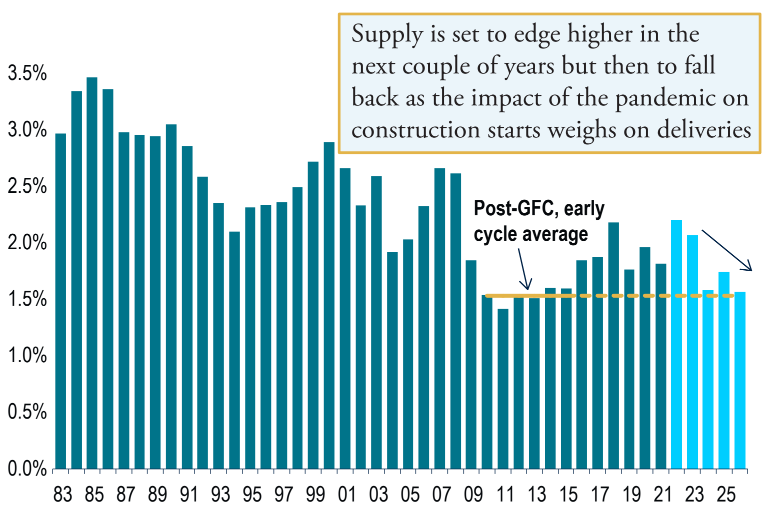
Supply growth is set to pick up in the next couple of years, although it remains somewhat contained compared with history. Improvement in real rent growth may lead to forecasts being revised up, but rising construction costs are dampening starts and, therefore, future completions.

A combination of completions of projects that got under way before the outbreak of the pandemic and the delivery of space that was originally scheduled for 2020 means that supply growth across all major property types is expected to be equivalent to about 2% of existing stock per year across 2022 and 2023 (Exhibit 4a). And although that rate of completions may be considered relatively low compared with history, it is above the average recorded in recent years and through the most recent cycle. A sluggish recovery in supply growth after the global financial crisis has some similarities to the situation today, because project starts were held back by the restricted availability of debt finance and shortages of construction workers.

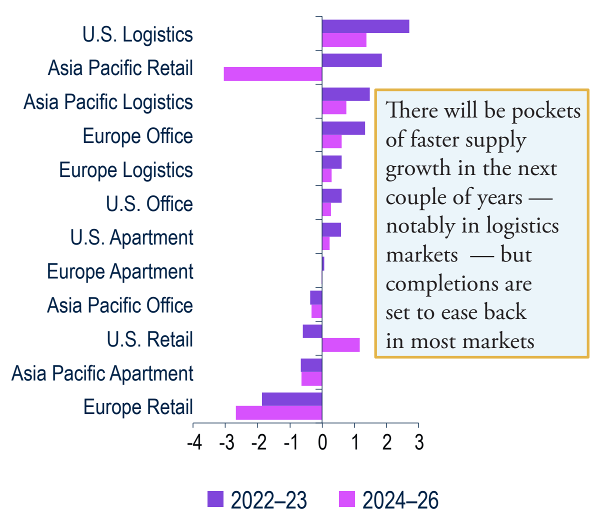
Echoing wider occupier market trends, the story differs across sectors. Relative to the past cycle, supply growth is elevated in most global logistics markets as space gets added to cater to growing supply chain requirements. In Europe and the United States, office supply growth is high relative to a subdued period

Exhibit 4a: Near-Term Supply Pickup Not Set to Persist

Estimated Global All Property Supply Growth (% existing stock)



Supply Forecasts by Sector and Region (normalized versus last-cycle average)



Note: Supply growth is weighted by sector and region investment market size.

Sources: CoStar, JLL, PMA, PGIM Real Estate. As of December 2021.

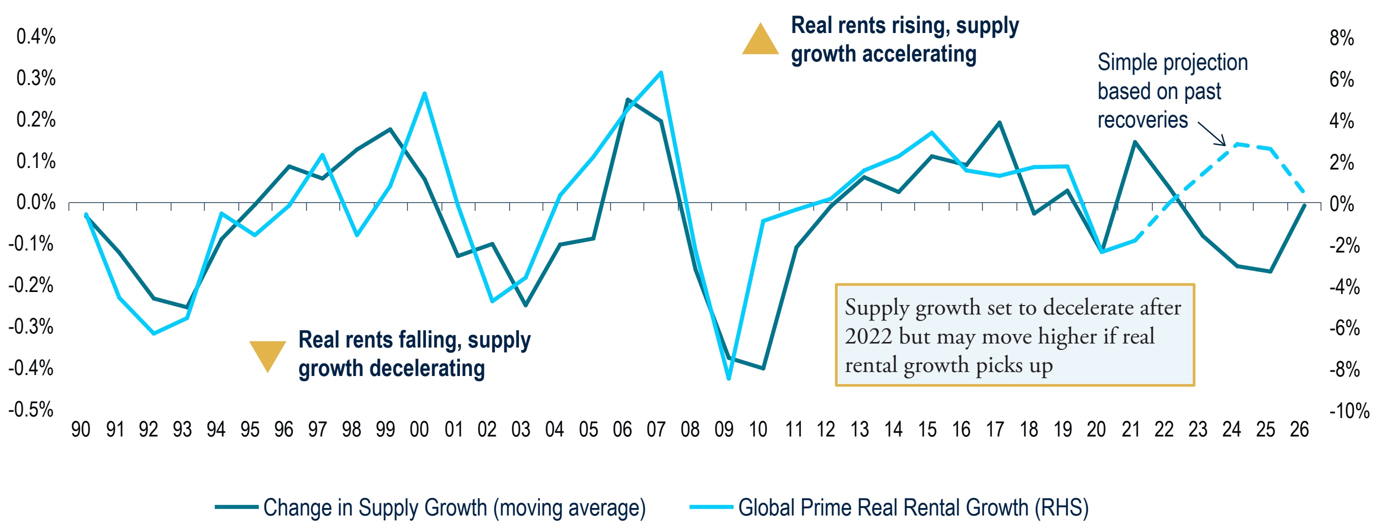
through much of the last cycle, whereas in Asia Pacific, retail space is still being added in China and other emerging markets, linked to structural growth in consumer spending. Apartment markets in the United States feature pockets of high supply where demand is rebounding swiftly.

Looking ahead, supply growth is forecast to fall back toward sluggish, post-global-financial-crisis recovery levels in most sectors and regions, although there are risks on both sides of that outlook.

On the upside, if real rental growth picks up, it would likely stimulate an increase in the rate of supply growth. Typically, real rental growth stays negative for several years before recovering as occupier demand improves. If real rents follow a pattern similar to past cycles, there will be upward pressure on current supply forecasts from 2023 onward (Exhibit 4b) — essentially, as higher projected values for completed space tip more projects into viability.

Exhibit 4b: Supply Outlook Influenced by Rents

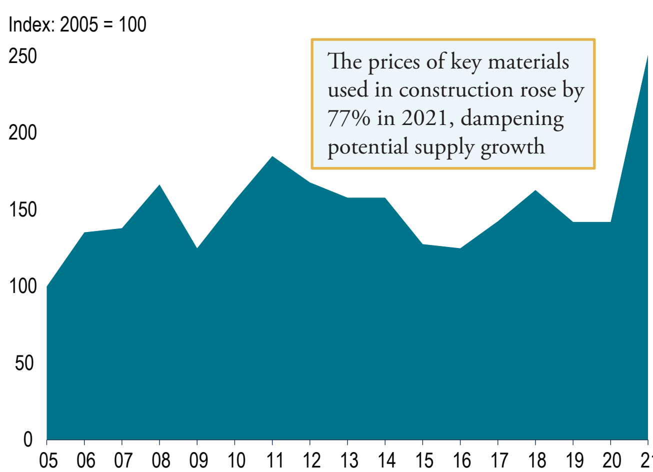
Change in Supply Growth (%) Versus Real Rental Growth (% p.a.)



Sources: CoStar, Cushman & Wakefield, JLL, PMA, PGIM Real Estate. As of December 2021.

Exhibit 4c: Sharp Rise in Construction Costs

Index of Key Construction Input Material Prices



Note: Index comprises headline prices for steel, copper and timber.

Sources: Oxford Economics, World Bank, PGIM Real Estate. As of December 2021.

At the same time, construction costs have jumped, working in a direction opposite to rents. Labor costs are rising as falling unemployment is making filling vacancies harder, which is putting upward pressure on wages, notably in the United States, where the shortage of workers is being exacerbated by a low labor force participation rate. In addition, prices of key raw materials used in construction, such as steel, copper and timber, have risen sharply (Exhibit 4c).

Forecasts are for raw material input prices to ease back once global supply pressures subside, but clearly elevated costs will have an effect at the margin, weighing on construction starts now — and, therefore, limiting potential future supply growth — even if occupier demand and rents start to grow more rapidly.

TREND 5

PUSH FOR LARGER DEALS EMERGES AS INVESTMENT VOLUME GROWS

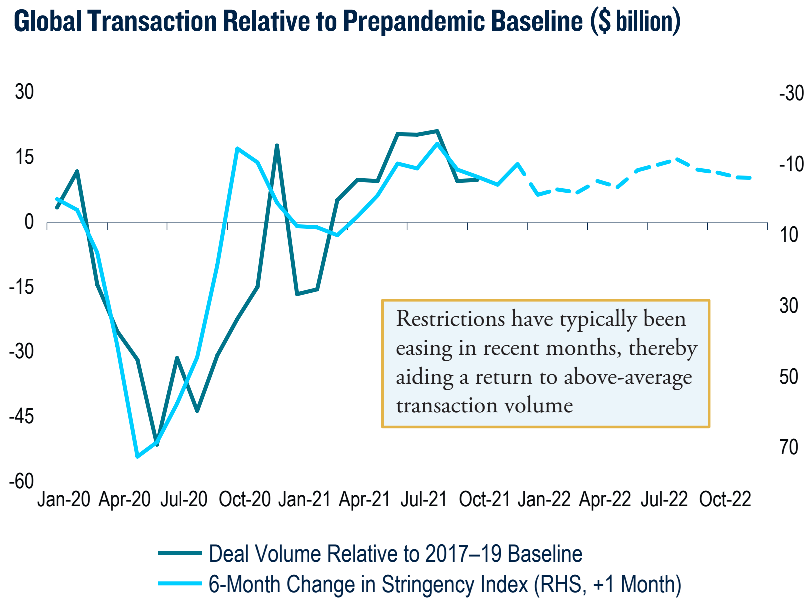
Pandemic-related restrictions continue to ease, thereby letting deal volume normalize, and the outlook is for a strong year of investment activity, with upside risks from $300 billion of lost deals in 2020.

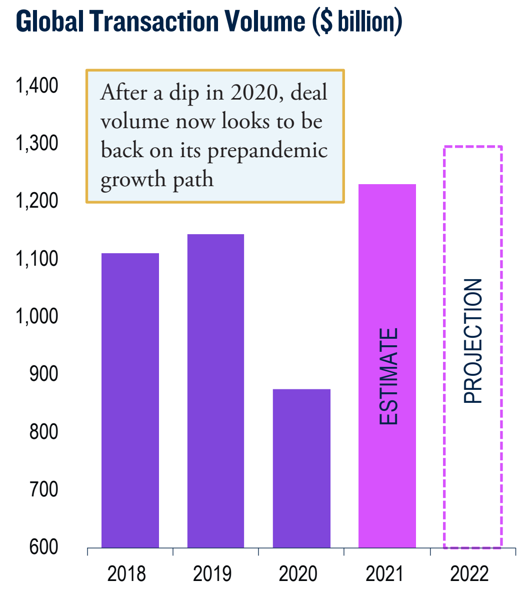
The global economy and financial markets are already looking beyond the pandemic, but day-to-day restrictions persist in some places, and voluntary behaviors such as working at home and avoiding unnecessary travel are still common. In real estate markets, physical presence for surveying or inspecting assets is important for investors and lenders, and such measures raise a physical barrier to transactions.

Since early 2020, deal volume relative to prepandemic norms has been tracking measures of stringency, typically with a lag of several months for easing or tightening to take full effect (Exhibit 5a).

As new variants emerge, the Northern Hemisphere's winter is likely to see some reimposing of restrictions — notably in parts of Europe — but the broader trajectory is that the global stringency index has been easing over time and is at levels consistent with transaction market activity normalizing.

Exhibit 5a: Transaction Volume Recovery Continues as Restrictions Ease





Sources: Real Capital Analytics, Blavatnik School of Government/University of Oxford, PGIM Real Estate. As of December 2021.

Boosted by a strong second half of the year, estimates for 2021 put overall global deal volume at about $1.23 trillion — up 43% from the depressed, 2020 level — and volume is set to increase further. A simple projection for 2022, based on a further easing of restrictions and a reversion to prepandemic norms, would take investment volume to $1.30 trillion.

Transaction volume may have normalized, but since 2016 there has been a significant gap between levels of capital raising and deal activity, along with an estimated $300 billion of deals that was simply lost in 2020 because of restrictions. As a result, the volume of so-called dry powder — capital that fund managers have raised but not yet deployed — has climbed significantly in recent years and remained elevated in 2021 even as transaction volume recovered (Exhibit 5b).

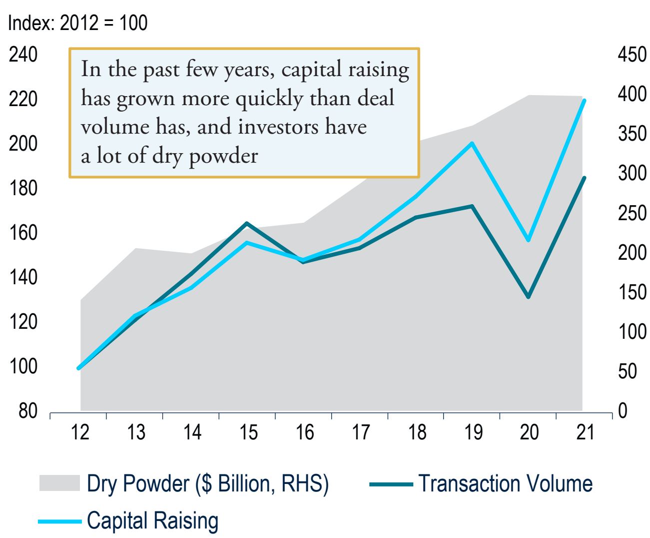
Clearly, a combination of substantial fundraising in 2021 and significant dry powder support the thesis that transaction volume will increase further in 2022 and point toward significant upside risks to the level of activity over the next few years.

A closer look shows that it is also notable that typical new fund sizes have grown, rising by 28% to an average of $542 million in 2021, which is significant because fund managers want to optimize the benefits of having diversified portfolios while recognizing that doing too many deals can become costly and time-consuming and bring little incremental performance benefit.

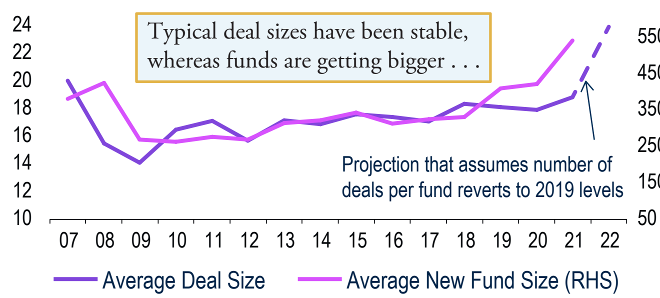
As such, deals are set to get bigger. At current average deal sizes, a typical fund would have to do 29 transactions to fully deploy its capital — up from 23 in 2019. Assuming that that measure reverts to its prepandemic level, average deal sizes would have to rise 27% to $24 million. In addition to implying scope for more portfolio deals, developments and platform transactions as ways of deploying capital more rapidly, mainstream sectors such as retail and office stand to benefit from the larger lot sizes they offer. ■

Exhibit 5b: Pressure on Deal Sizes to Grow

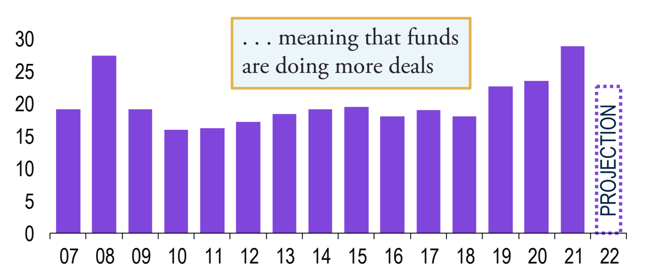
Index of Global Transaction Volume and Capital Raising Activity (2012 = 100)



Average Global Deal Size and New Fund Size ($ billion)



Implied Number of Deals per New Fund



Sources: Preqin, Real Capital Analytics, PGIM Real Estate. As of December 2021.

TREND 6

DEBT SUPPLY IS SHIFTING TOWARD A GREATER PROVISION OF NONBANK CAPITAL

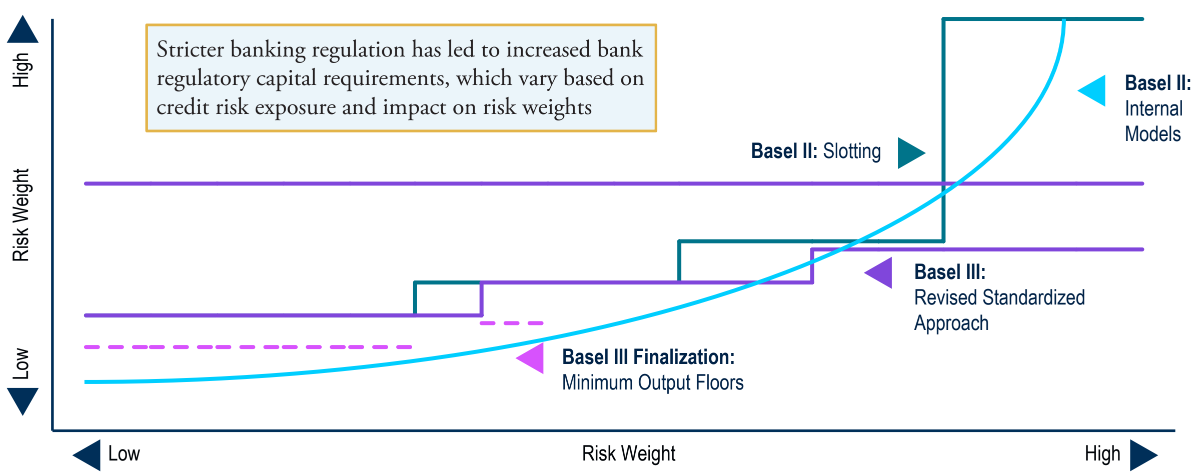
Stricter bank regulation has led to an ongoing structural shift in the commercial real estate lending market, with a surge in private debt provision underpinned by strong capital raising for debt strategies.

Part of the reason that transaction volume hasn't kept pace with fundraising in recent years has to do with a tighter regulatory environment for bank lenders — certainly when compared with past cycles. This has become more apparent in Australia and Europe, where bank lenders traditionally dominated, but it nevertheless also affects liquidity in the United States, where the lending market is already more diversified.

The supply of debt to global commercial real estate markets is shifting, however. Banks are reducing their balance sheets in response to tough regulatory frameworks that limit the scope for riskier lending — for example, lending on assets with vacancy, assets with development risk and assets that are at higher loan to value ratios (Exhibit 6a).

Exhibit 6a: Regulatory Drivers Behind the Structural Shift in Debt Supply

Illustration of Bank Regulatory Capital Requirements



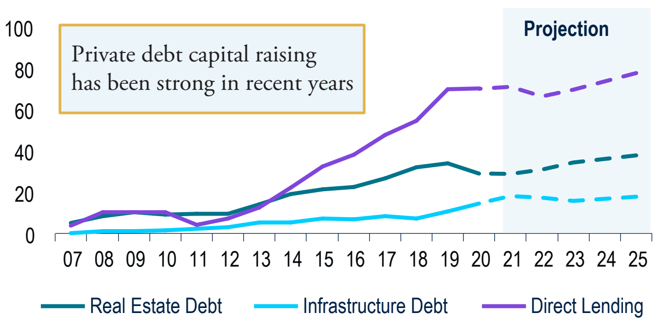
Note: This diagram is for illustrative purposes only. It is intended to be a simplified expression of the risk weights for income-producing real estate exposures (non-recourse secured CRE lending) rather than a precise representation.

Sources: CREFC Europe, PGIM Real Estate. As of December 2021.

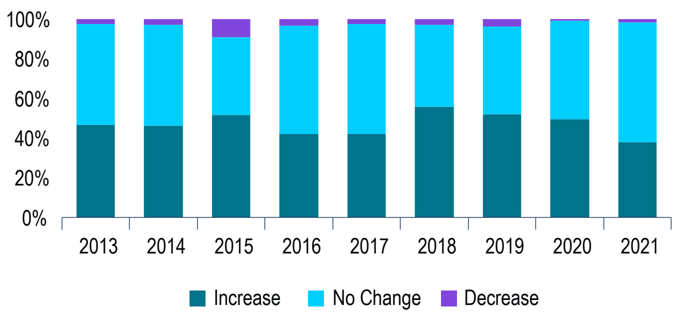
At the same time, there has been a surge in private debt provided by nonbank lenders such as insurance companies, pension funds and debt funds that has been underpinned by strong capital raising for private debt strategies (Exhibit 6b).

Exhibit 6b: Capital Flowing to Private Debt

Three-Year-Average Fundraising for Private Debt Strategies ($ billion)



Expected Changes to Investor Allocations to Real Estate Debt (% respondents)



Sources: Preqin, ANREV, INREV, PREA, PGIM Real Estate. As of December 2021.

> **Borrowers typically have significant surplus cash flows and will be in good positions to absorb any interest rate increases that occur.**

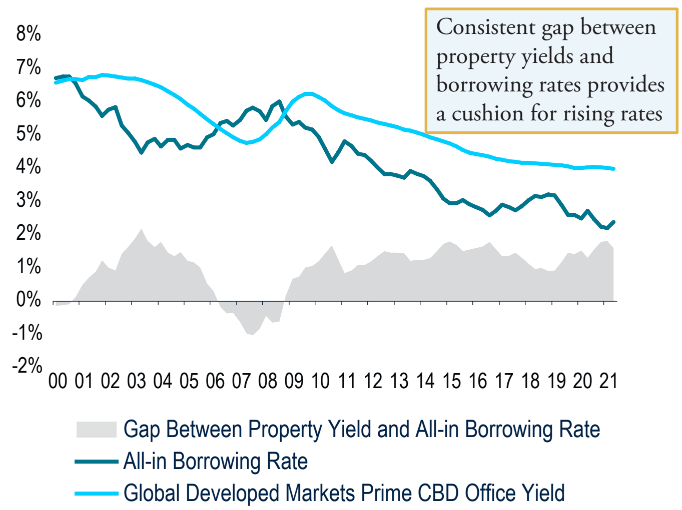
Almost all debt investors plan to either maintain or increase their allocations to real estate, thereby keeping liquidity elevated through 2022 despite pressures on bank lenders.

As a spike in global inflation pushes some central banks to consider tightening interest rates earlier than planned, market interest rates edged upward during the second half of 2021. And although rising rates are attractive for new lenders, they pose a threat to existing loans — especially if the rates rise far enough to make refinancing difficult.

Unlike in past cycles — notably, before the global financial crisis — all-in borrowing rates are now well below typical in-place yields (Exhibit 6c). That means borrowers typically have significant surplus cash flows and will be in good positions to absorb any interest rate increases that occur. In addition, margins are wider than in the past and have the scope to narrow further if interest rates rise.

Exhibit 6c: Debt Strategies Are Cushioned Against the Prospect of Higher Interest Rates

Global Office Yield Versus All-in Borrowing Rate



Sources: Bloomberg, Bayes Business School, CBRE, PMA, ACLI, Real Capital Analytics, PGIM Real Estate. As of December 2021.

TREND 7

OPERATIONAL DEALS GAIN FURTHER POPULARITY

Investors are increasingly looking to deploy capital in operationally driven real estate assets. Aging demographics are motivating capital flows beyond senior living toward medical offices and life sciences real estate, for which space requirements are set to rise significantly.

Investors have lots of capital to deploy, but even though the outlook for occupier markets is improving, low yields and stiff competition for available stock mean that equity and debt investors are increasingly looking beyond traditional, commercial, leased real estate.

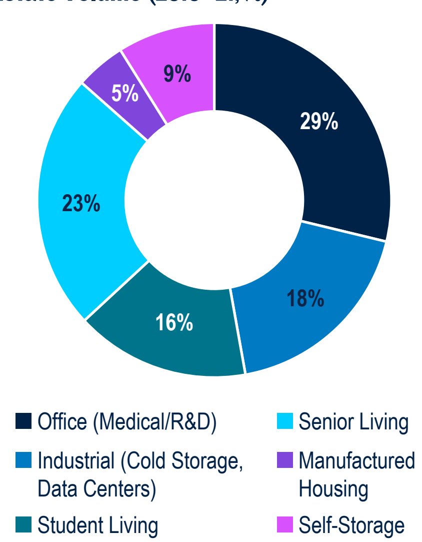
Operational assets expand the investment opportunity set, which introduces a wider range of options for investors to generate returns by investing in operating platforms and profitable enterprises as well as real estate — albeit with higher risk involved. At the same time, looking beyond the established hospitality sector, many niche operationally intensive sectors such as senior living, cold storage and data centers tap into favorable macrotrends linked to aging populations, online spending and digital infrastructure.

The share of operational real estate in global transaction volume is small — at an estimated 12.3% — but that proportion more than doubled during the past cycle (Exhibit 7a).

Exhibit 7a: Share of Operational Sectors Is Rising Quickly

Annual Global Investment Volume ($ billion)

Share of Global Non-Hospitality Operational Real Estate Volume (2019–21, %)

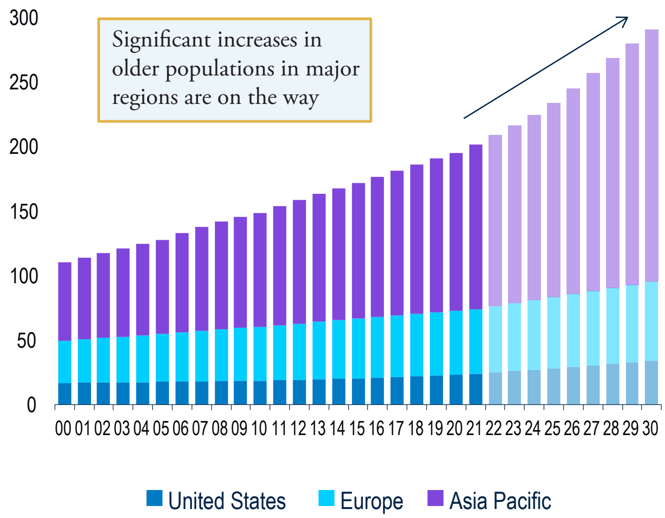


Sources: Real Capital Analytics, PGIM Real Estate. As of December 2021.

One of the significant trends that are driving investment into a variety of operational sectors is the aging population. In the next decade, the over-75 population across Asia Pacific, Europe and the United States is set to rise by 100 million, which is the same increase as was recorded during the past two decades and which implies a rapid acceleration (Exhibit 7b).

Exhibit 7b: Global Population Aging Rapidly

Over-75 Population by Major Region (millions)



Sources: Oxford Economics, PGIM Real Estate. As of December 2021.

> **Against the backdrop of a pandemic with public health in the spotlight, real estate related to healthcare such as medical offices and life sciences is gaining further attention.**

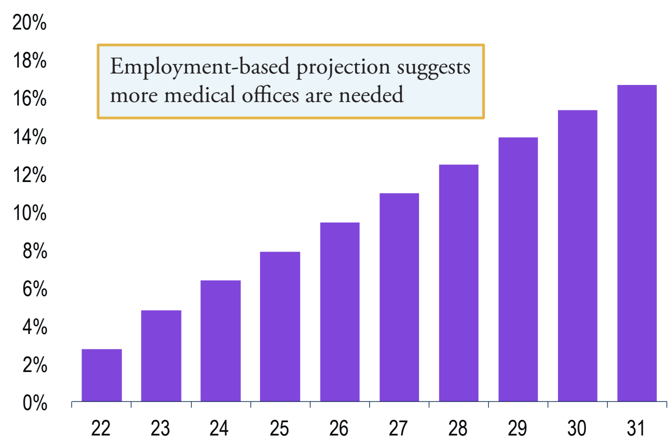
Senior housing investment is well established, but aging populations also have implications for real estate that go beyond the living sector.

Against the backdrop of a pandemic with public health in the spotlight, real estate related to healthcare such as medical offices and life sciences is gaining further attention. And though both of those examples can be considered specialized uses of office space, medical offices provide outpatient medical services, and life sciences real estate provides space for research and development in such fields as pharmacology and biotechnology.

In those segments, demand for space is linked to healthcare industry employment, which is set to increase in order to serve aging societies. An analysis of projected global healthcare employment and space required per medical employee suggests that 17% of additional office space will become needed during the next decade (Exhibit 7c). And it will require substantial investment capital to provide medical offices at a faster pace than in the past.

Exhibit 7c: Healthcare Space Requirements Set to Rise

Estimated Additional Medical Office Space Required Globally (%, relative to 2021)



Sources: Oxford Economics, PGIM Real Estate. As of December 2021.

The aforementioned trends are set to persist, but investors' need to source assets that offer income streams; higher returns, including from the development of new facilities; and potential scale is behind the acceleration in interest in operational deals that is set to persist into 2022.

TREND 8

FOCUS ON GREEN INVESTMENTS INTENSIFIES

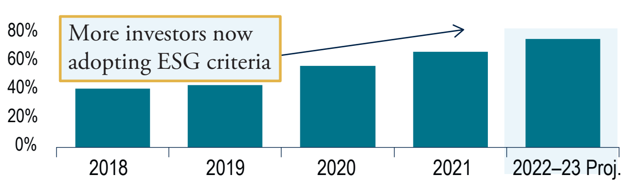
Focus on investments that are environmental, social and governance (ESG) compliant is intensifying as market participants strive to reach net zero carbon goals, and evidence is emerging that ESG-certified assets are achieving lower yields and higher rents.

Based on survey evidence, an estimated two thirds of real estate investors and fund managers have already formally adopted ESG criteria into their investment processes, and that figure will rise further in the coming years (Exhibit 8a).

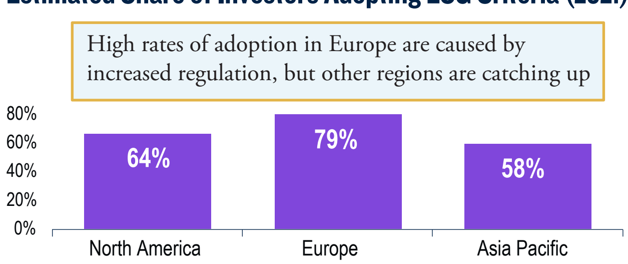
The widespread focus on ESG — and on environmental factors in particular — is relatively new, but it is already showing up in pricing. A look at global office transactions shows that yields on highly rated green buildings have compressed more quickly than the wider market in recent years. However, a regional aspect is at play too, yielding an effect that is more noticeable in Europe, where the trend toward ESG-based investing started before the pandemic, driven by increased regulation. In contrast, in Asia Pacific and the United States, the big shift has happened more recently — and accelerated significantly in 2021.

Exhibit 8a: Investors Are Focusing on ESG

Estimated Share of Global Real Estate Investors Adopting ESG Criteria Over Time



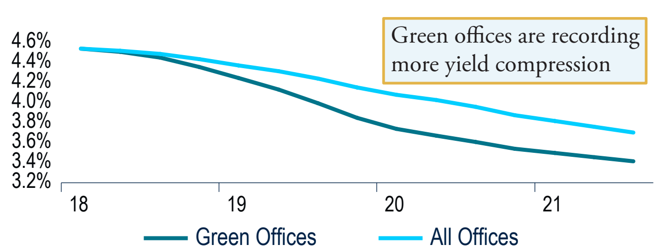
Estimated Share of Investors Adopting ESG Criteria (2021)



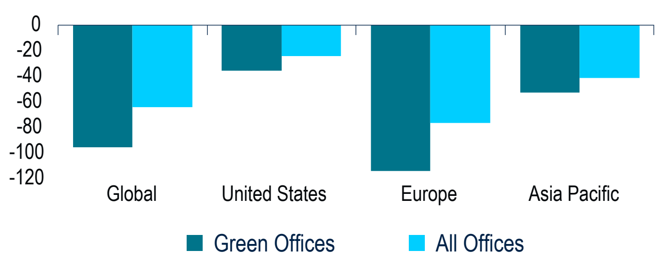
Note: Estimated share based on evidence from various surveys, with projected figures for 2022–23 based on responses to forward-looking questions.

Sources: CBRE, PMA, Real Capital Analytics, PGIM Real Estate.
As of December 2021.

Global Prime Office Yields (%)



Yield Shift Through the Past Cycle (basis points)



Compared with offices in buildings without energy certifications, green offices typically demonstrate higher levels of energy efficiency and have lower carbon footprints. While the effect of green credentials is hard to disentangle from other building characteristics, there is increasing evidence that buildings with environmental certification command higher rents. An assessment of various studies in the UK and the United States points to a green rent premium in the range of 5% to 15%, with an average of about 10% (Exhibit 8b).

Looking ahead, occupiers, like investors, are committed to carbon emission reduction targets and increasingly see green buildings as sources of competitive advantage and ways to attract and retain talent.

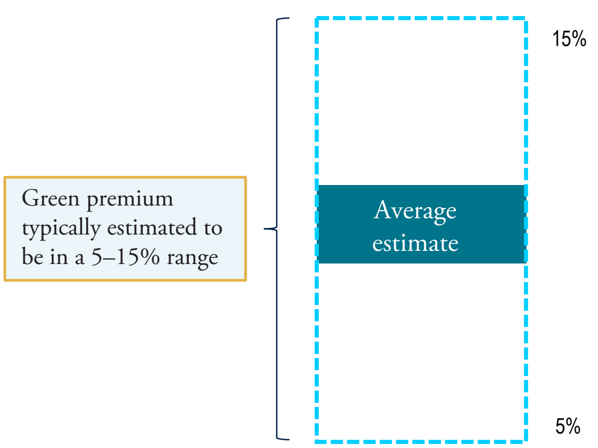
In the United States, a clear separation is emerging between assets with environmental certification and those without. Rental growth on LEED Platinum–rated offices is estimated to have been stronger than for uncertified buildings in 2021, and illustrative forecasts point to that outperformance continuing in the coming years.

Favorable relative pricing, a stronger rental growth outlook and an obsolescence risk associated with assets that can't be fully modernized mean that ESG criteria are set to be crucial in determinations of asset-level performance in coming years. For investors, there will be opportunities to develop new, high-standard buildings and to retrofit existing properties to meet tougher standards. All of it will come at a cost, but the risks associated with older, poorer-quality stock that can't be adapted or modernized are rising sharply.

> **Occupiers, like investors, are committed to carbon emission reduction targets and increasingly see green buildings as sources of competitive advantage and ways to attract and retain talent.**

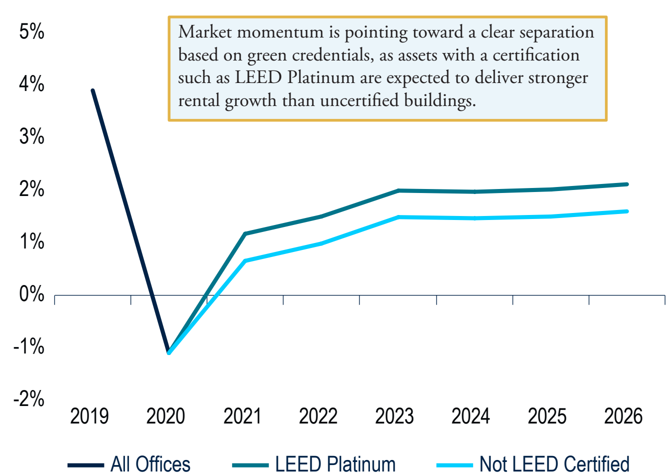
Exhibit 8b: Signs of Green Outperformance Start to Emerge

Estimated Existing Global Green Rent Premium Range



Note: Green rent premium range is indicative, based on an assessment of various studies that have published estimates.

Illustrative Office Rental Growth Forecasts: United States (% p.a.)



Sources: PMA, CBRE, U.S. Green Building Council, CoStar, PGIM Real Estate. As of December 2021.

TREND 9

PERFORMANCE GAP STAYS WIDE

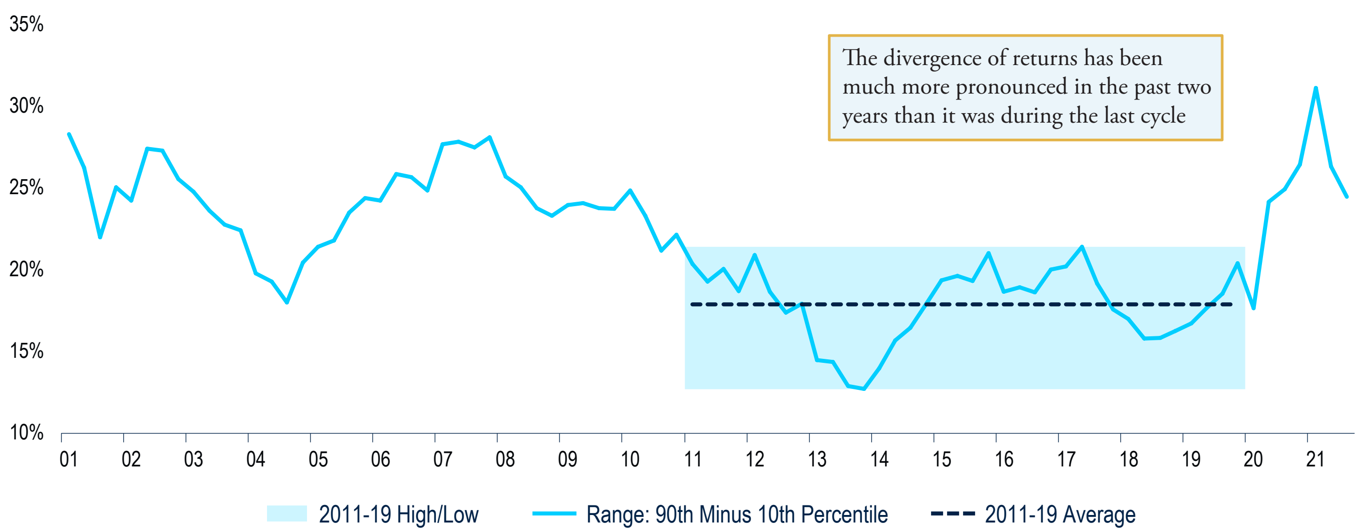
The significant gap between the best- and worst-performing parts of the market is set to persist, but sector differences are starting to narrow and location is once again set to play a greater role in driving relative performance.

One of the notable features of real estate performance during the pandemic and now in the recovery-to-expansion phase has been a clear widening of the gap between better-performing cities and sectors and struggling parts of the market. The reasons are well rehearsed, with investors targeting assets that have benefited from stable income and favorable demand shifts — notably, online retail driving logistics and remote work driving suburban residential — over market segments such as high-end shopping malls, which have faced elevated uncertainty and weaker occupier performance.

The range of returns recorded across global markets has edged back down from a peak of over 30% at the start of 2021 but nevertheless remains well above historical norms (Exhibit 9a). The wide performance gap contrasts sharply with much of the previous cycle from 2011 to 2019, when returns were more similar across sectors and cities. During that period, differences in occupier performance were often overshadowed by the effects of

Exhibit 9a: Gap Between Best- and Worst-Performing Parts of the Market Still Wide

Range of Annual Prime Total Returns Across Global Markets (%)



Source: PGIM Real Estate. As of December 2021.

a structural period of yield compression driven by capital flows and falling interest rates, which boosted values simultaneously across sectors and geographies.

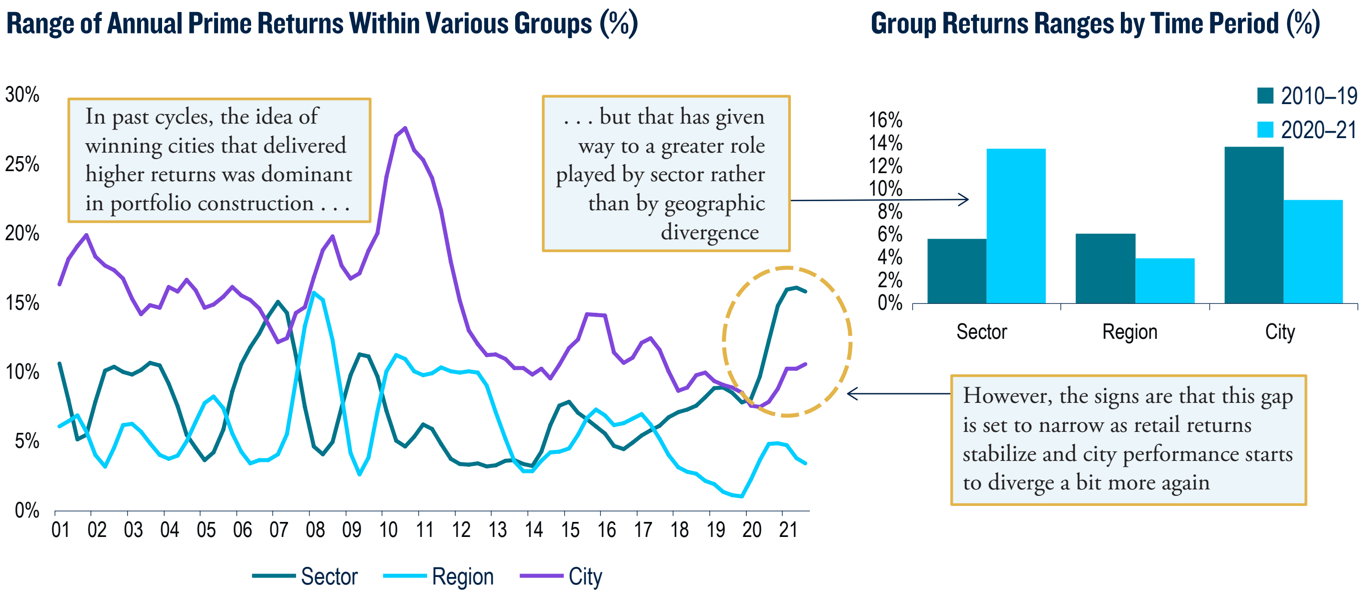
During the past couple of cycles, the pattern of returns really emphasized the value of identifying so-called winning cities, with large gaps frequently opening up between major markets — especially during the global financial crisis, when, for example, exposure to the financial sector gave rise to divergent patterns of real estate value movements. However, more recently, cities have fallen behind sectors in being key drivers of performance differentials (Exhibit 9b).

That pattern is unlikely to persist. Already the gap is narrowing as retail markets stabilize and logistics returns start to settle down. Recent yield compression can't go on forever, and so a deceleration is inevitable. To an extent, much of the sector differentials reflect a one-off adjustment in values to reflect shifting patterns of consumption that are linked to, for example, digital transformation and a change in the mix of retail and logistics assets required as a result.

Several conclusions can be drawn. Clearly, performance gaps are set to remain wide in 2022. Sector stories persist, and even within sectors, the difference between assets varies significantly — notably, in the office sector, in which the demand profile for modern, flexible, ESG-compliant space is different from that of older, secondary stock. However, the sector performance gaps will narrow, and, gradually, portfolio decisions and diversification will once again become more heavily dependent on cities, where differences are driven by fundamental characteristics, including supply constraints, physical land constraints, occupier sector mix, cluster benefits and workforce productivity.

As the global economy continues its recovery from the pandemic, city differences are set to grow. The targeting of best-performing locations is set to once again be a key determinant of relative investment success.

Exhibit 9b: Sector Effect Dominant Since 2019 but Set to Fade



Source: PGIM Real Estate. As of December 2021.

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