

SUMMIT

AFIRE

SUMMER 2021

07



SUMMIT

AFIRE is the association for international real estate investors focused on commercial property in the United States.

ABOUT

Summit Journal is the official publication of AFIRE, the association for international real estate investors focused on commercial property in the United States.

Established in 1988 as an essential forum for real estate investment thought leadership, AFIRE provides a forum for its senior executive, institutional investor, investment manager, and service provider members to help each other become Better Investors, Better Leaders, and Better Global Citizens through conversations, research, and analysis of real estate capital markets, cross-border issues, policy, economics, technology, and management. AFIRE has nearly 200 member organizations from 24 countries representing approximately US\$3 trillion in assets under management.

Learn more at afire.org/summit

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About the cover: An outbuilding at Chicago's historic, 350-acre Rosehill Cemetery, built in 1864, once situated on sweeping farmland. Today it is surrounded by large residential districts and nearby commercial corridors. Photo by Benjamin van Loon.

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DIRECTOR OF MEMBER RETENTION**Steve Collins**

Head, Capital Advisors, JLL

DIRECTOR OF LEGAL AND TAX**R. Byron Carlock, Jr.**

Principal, PwC

STAFF

CEO AND PUBLISHER**Gunnar Branson**

gbranson@afire.org

COO**Lexie Miller, CAE**

lmiller@afire.org

COMMUNICATIONS DIRECTOR**AND EDITOR-IN-CHIEF****Benjamin van Loon**

bvanloon@afire.org

MEETING DIRECTOR**Asmait Tewelde**

atewelde@afire.org

DIGITAL COMMUNICATIONS INTERN**Vicky Mejia****DESIGN AND PRODUCTION****Campbell Symons Design**

campellsymons.com

CONTACT

AFIRE

1300 Pennsylvania Ave NW, #190-630

Washington, DC 20004

+1 202 312 1400 | info@afire.org

www.afire.org



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REAL ESTATE EDUCATION GOES GLOBAL

The evolution of global real estate education over the past three decades will be integral to developing a rich pipeline of talent for the future of commercial real estate.

Julian Josephs, FRICS
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NOTE FROM THE EDITOR

Whenever we issue a call for submissions for Summit Journal, we never pursue a specific theme.

Instead, we listen to what thought leaders across the commercial real estate industry are saying, and then we put those ideas to work.

For this issue of Summit, we also had a slight advantage. In March 2021, we released our 2021 Annual International Investor Survey (see “Shining Through the Darkness,” p.6), underwritten by Holland Partner Group, which details a cautious optimism for investors into US real estate for the rest of this year.

This positive sentiment is refreshing after a difficult and uncertain pandemic year, but it is ultimately couched in broader macro-level concerns on topics ranging from social and political unrest and ESG concerns to economic inequality and migration patterns across the US, which are addressed from various perspectives in this issue.

“Revisiting Inflation” (p.14) discusses inflation concerns for the year, while “Supply Change” (p.62) and “Herd Community” (p.20) focus on other trends affecting consumer habits and emerging migration patterns. “London Calling” (p.54) and “Recovering the Office” (p.50) provide some fresh takes on the ongoing office question, and “Accounting for Environmental Risk” (p.68) suggests a unique ranking system for determining different types of environmental risks in several US cities.

In other words, the broad concerns mapped by respondents to the March 2021 survey are playing out at all levels of the real estate value chain, some of which have proven more resilient than others throughout the pandemic.

It is perhaps not surprising, then, that housing—single-family, multifamily, rentals, and everything in between—is front-of-mind for contributors to the real estate investment conversation being led by Summit and the broader AFIRE membership. For this reason, we’re proud to declare this the first themed issue of Summit. Four unique perspectives from Aria (p.26), Berkshire Residential (p.32), Tricon Residential (p.40), and Squire Patton Boggs (p.46) detail the fundamentals, opportunities, and risks to watch for the sector—which is only growing in demand.

Welcome to the Housing Issue!

By Benjamin van Loon
Editor-in-Chief, Summit Journal
Communications Director, AFIRE



CONTRIBUTORS

AEGON ASSET MANAGEMENT (P. 14)

aegonam.com

Martha Peyon, Ph.D
Director



AFIRE (P. 6)

afire.org

Gunnar Branson
CEO and Publisher



Benjamin van Loon
Communications Director
and Editor-in-Chief



ARIA (P. 26)

ariadevelopmentgroup.com

Joshua Benaim
Founder



BARINGS REAL ESTATE (P. 50)

barings.com

Philip Conner
Head of US Real Estate
Research & Strategy



Ryan Ma
Managing Director
Real Estate Research



BERKSHIRE RESIDENTIAL INVESTMENTS (P. 32)

berkshireresidentialinvestments.com

Gleb Nechayev, CRE
Head of Research and Chief Economist



CITIZENM HOTELS (P. 82)

citizenm.com

Ernest Lee
Managing Director, Americas



GEORGETOWN UNIVERSITY (P. 90)

georgetown.edu

Julian Josephs, FRICS
FRICS, Adjunct Professor
Graduate Global Real Estate Program



GREEN STREET (P. 20)

greenstreet.com

Dave Bragg
Co-Head, Strategic Research



Jared Giles
Senior Research Associate



GROSVENOR AMERICAS (P. 76)

grosvenor.com

Lauren Krause
Director of Environment,
Social, and Governance



Brian Biggs
CFA, Research Director



MADISON INTERNATIONAL REALTY (P. 54)

madisonint.com

Christopher Muoio
Vice President, Data and Research

**PROLOGIS (P. 62)**

prologis.com

Melinda McLaughlin
Senior Vice President, Research



Heather Belfor
Director, Head of US Research

**SHEFFIELD HAWORTH (P. 86)**

sheffieldhaworth.com

Max Shepherd
Director, Global Real Assets



Jannah Babasa
Senior Associate, Global Real Assets

**SQUIRE PATTON BOGGS (P. 46)**

squirepattonboggs.com

John Thomas
Partner, Real Estate Practice Leader



Stacy Krumin
Partner, Real Estate Practice,
Global Board Member

**TRICON RESIDENTIAL (P. 40)**

triconresidential.com

Jonathan Ellenzweig
Chief Investment Officer

**YARDI® MATRIX (P. 68)**

yardimatrix.com

Paul Fiorilla
Director of Research



Claire Anhalt
Senior Analyst



Maddie Harper
Senior Analyst



SHINING THROUGH DARKNESS

KEEP
CALM
AND
INVEST
ON

The 2021 AFIRE International Investor Survey offers a sense of calculated optimism for CRE investment in the year ahead.



COVID-19 is not over. New variants; second, third, and fourth waves; and the logistical challenges of vaccinating 7.8 billion people around the world means that “post-COVID” is likely a way off. As some US cities begin to approach herd immunity with vaccination programs, some parts of normal life are returning, but with travel restrictions and supply chains disrupted by months of COVID lockdowns, cross-border investing is difficult and certainly not “normal.”

And yet, institutional investors are remarkably optimistic. As AFIRE members responded to the 2021 International Investor Survey, the reported intent was to keep crossing borders and keep finding high quality investments. Reports of transaction activity so far this year indicate that investors are finding them.

EXHIBIT 1: INTENTIONS FOR US INVESTMENT

Three in four respondents report intentions for a net inflow of capital for US real estate, with this positive trend set to continue over the next five to ten years. In 2020, 50% reported as net buyers, compared to 76% in 2021. Further, 88% of US-based investors cite net buyer, compared to 70% of non-US investors regarding current intentions.

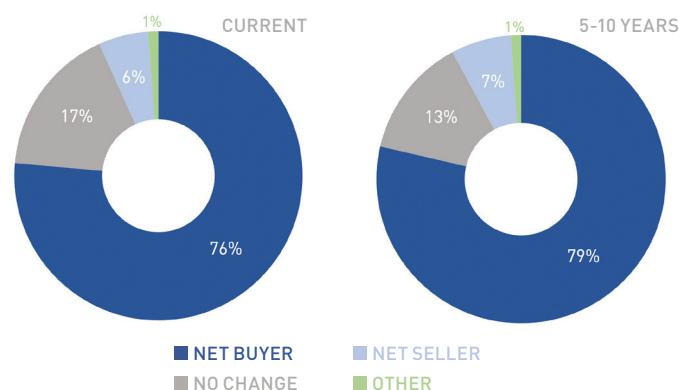
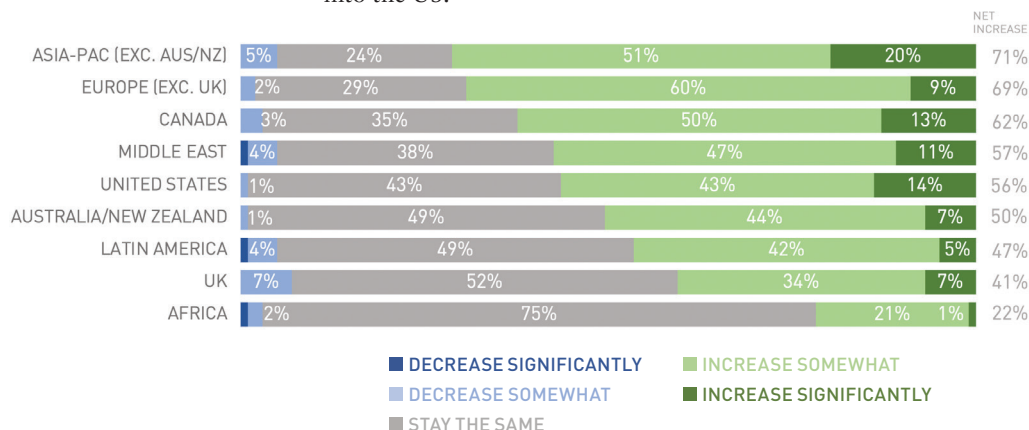


EXHIBIT 2: FORECASTED CHANGE TO CAPITAL FLOWS INTO THE US (3-5 YEARS)

Overall, investors foresee that the greatest increase of capital flows into the US over the next three to five years will come from Asia-Pac (71% net increase), Europe (69% net increase, excluding the UK), and Canada (62% net increase). No significant decreases are expected, complementing optimism for continued investment into the US.



In order to keep up the investment pace in difficult times, investors are changing their approach.

In the past, large institutions focused on large office buildings in the best gateway cities. Although a major portion of those assets are and will remain in institutional hands, the appetite for more of the same is waning.

Institutional investors are remarkably optimistic. For example, 76% of AFIRE International Investor Survey¹ respondents declared they would be a net buyer of US real estate in 2021, compared to 50% before COVID. When asked about their outlook for five to ten years from now, 79% expected to be net buyers. In 2021, they have allocated roughly the same amount of capital they allocated in 2020 even though they were only able to invest half of what they allocated last year due to the pandemic. In the UK, 38% of investors plan to increase investment in US property markets over the next three to five years. When asked whether they will be net buyers or sellers of US real estate, 76% of global investors raised their hands as buyers. This is a marked departure from months before COVID when only 50% intended to be net buyers.

In past economic recoveries, investors took advantage of distressed assets and forced sales to acquired properties and loans at a significant discount. That has generally not been the case so far, and few expect it to be so in the future. This is interesting to consider as high levels of allocations are in place without the prospect of significant discounting.

Investors are also shifting from a “core” strategy to more “value-add” and “opportunistic” investments. For decades, a majority of their property portfolios were in core stabilized assets in the top US cities, such as New York, Los Angeles, and San Francisco. In the last few years, core portfolios have steadily dropped on a percentage basis. In 2019, the respondents averaged 60% in core. In 2020, it was 56%, and this year it is 51%. Value-add and opportunistic portfolios have grown in kind, and it is not unreasonable to presume that we may see a continuation of this trend in the years to come.

EXHIBIT 3: US REAL ESTATE PORTFOLIO STRATEGY

Value-add activity is set for greatest growth in the next few years (59% net increase), and core remains the prominent investment strategy, accounting for half of all portfolios. However, core investing has been steadily shrinking. In 2019, respondents described their portfolio as 60% core. In 2020, it was 56%, and this year, it is down to 51%. As 15% of respondents report an intention to decrease their core portfolio, it is likely that the trend will continue.

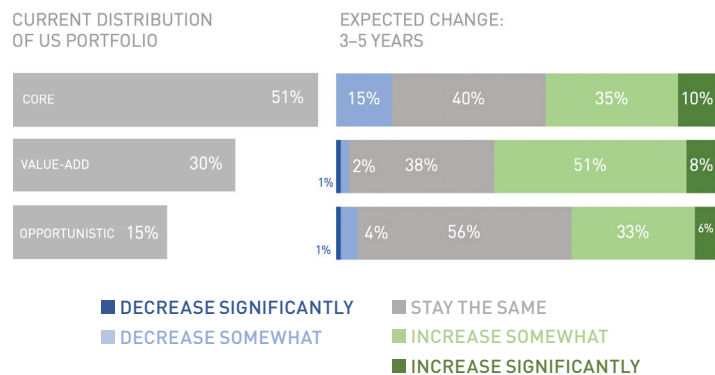
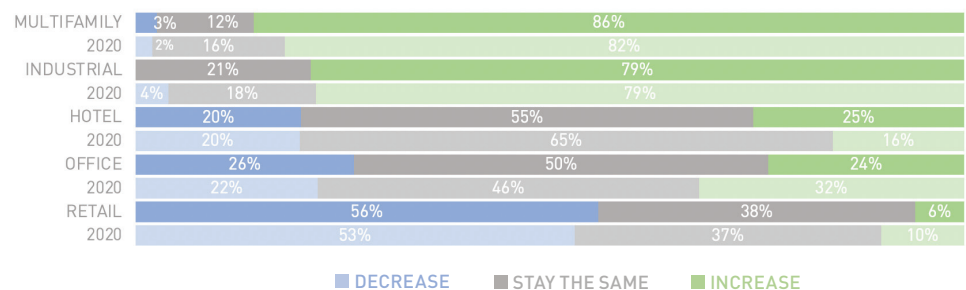


EXHIBIT 4: EXPOSURE INTENTIONS (3-5 YEARS)

The enthusiasm for increased exposure in multifamily and industrial was already trending upwards in 2020 and continues apace for 2021, at 86% and 79%, respectively. Meanwhile, office and retail have continued to cool, based on social and technological trends accelerated by the pandemic, as investors broadcast intentions for decreased exposure.



Why are institutions expanding value-add and opportunistic investments? Long-term investors need higher yields than many core investments are able to produce right now, and they are willing to move up the risk curve to find it. Competition is fierce and most high-quality core assets are already owned by long-term institutional owners. It's hard to buy what isn't for sale. In a pervasive low-yield environment, core assets have climbed in price, to the point where sometimes the only way to buy one is to build one, and construction isn't core (at least, not at first).

79% of respondents plan to increase their exposure to industrial, compared to 24% who plan to expand their office portfolio.

At the same time, institutions are shifting to other investment categories that don't sit as squarely in the core category, including housing and industrial/logistics. The survey shows 86% of respondents plan to increase their investments in multifamily over the next three to five years. There is a lack of housing options in many cities and at most economic levels except for the very fortunate. According to the US Department of Housing and Urban Development, 580,466 people in the US are homeless,² while those in the middle-class struggle to afford homes in major cities as well. A steady migration from northern and coastal cities to less expensive locations elsewhere in the US has increased during the pandemic. Collectively, these trends underscore a clear demand for more housing and institutional investors are paying attention.

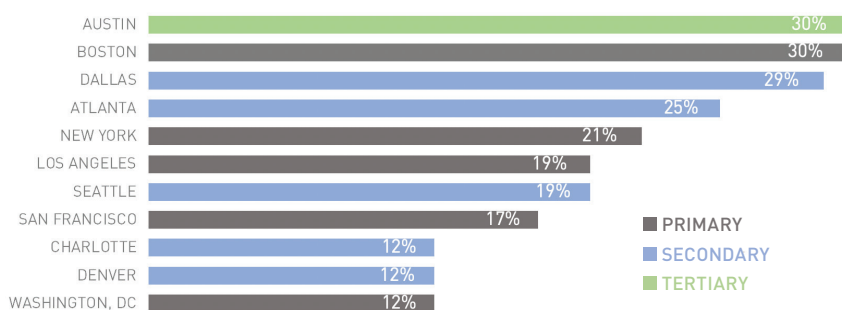
Through the pandemic, online shopping globally grew at an average of 16.5% leading to US\$3.914 trillion of sales predicted for 2021.³ Only 6% of investors intend to expand their holdings in

retail. But another asset class has benefited, as demand for data centers and distribution warehouses have, of course, followed: 79% of respondents plan to increase their exposure to industrial in that same time frame, compared to 24% who plan to expand their office portfolio. Office is certainly an institutional asset class and continues to be important for investors' portfolios, but there is less enthusiasm to grow in this area in part due to the uncertainty of office demand and tenant requirements in the years to come.

Given the global slowdown of hospitality due to COVID, it is surprising to see that slightly more investors (25%) indicated they wanted to expand their hotel portfolios, compared to those who wanted to expand office. A predicted industry-wide restructuring of hotels has not materialized. Owners have been able to hold on through the lockdowns and many are already experiencing an uptick in bookings. A quarter of investors see a return to health in the months and years to come.

EXHIBIT 5: TOP US CITIES FOR PLANNED INVESTMENT IN 2021

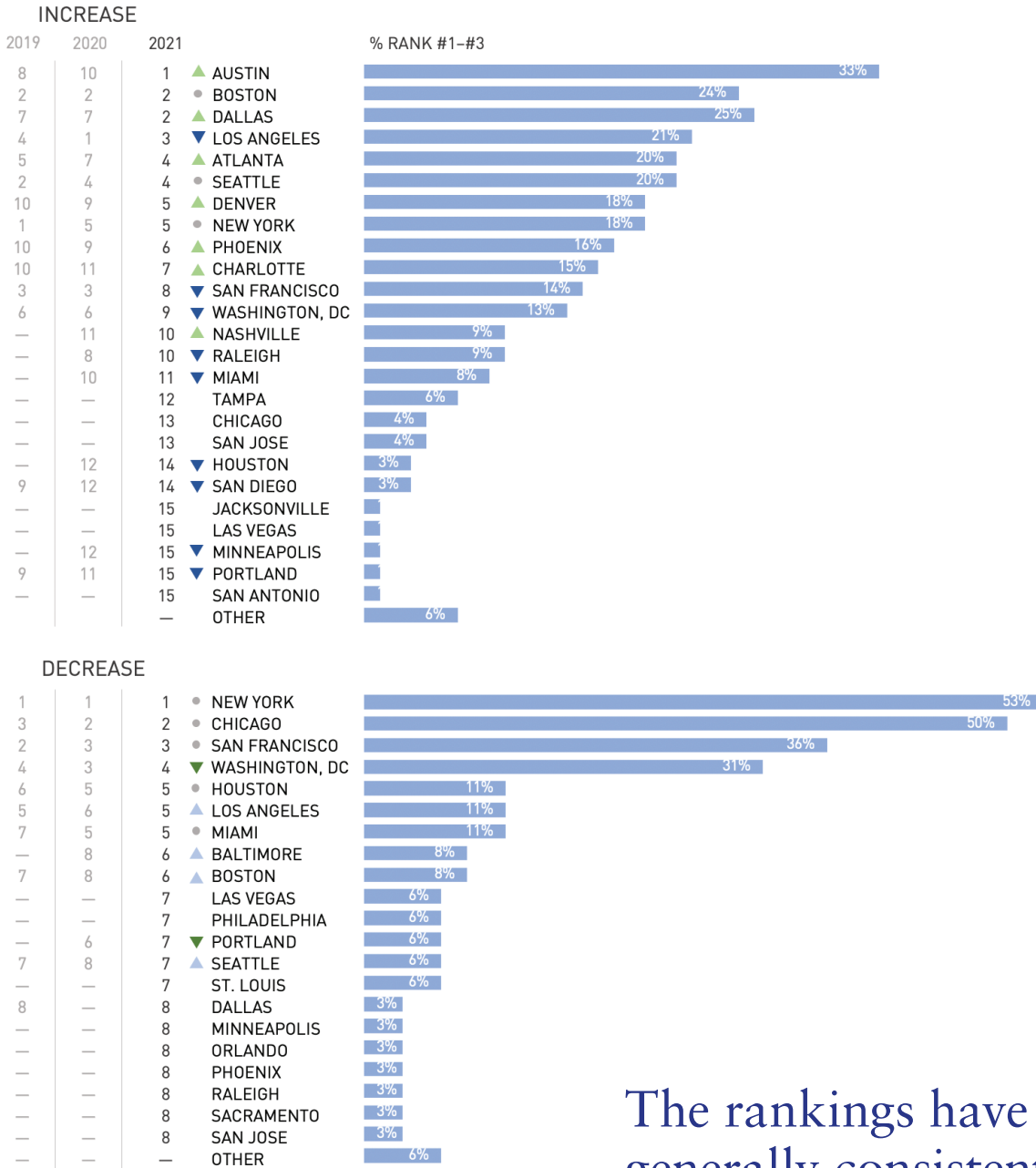
Austin, Boston, and Dallas—tertiary, primary, and secondary cities, respectively—are the top three US cities for planned investment in 2021. This is the first time a tertiary city has ever topped the AFIRE survey.



Note: AFIRE defines primary, secondary, and tertiary markets correspondent with general industry standards. Primary/gateway markets are large, dense, and long-established (pop. 5+ million). Secondary markets have less density and are slightly smaller (pop. 1–5 million), and tertiary markets are smaller (pop. ~1 million) but showcase steady job growth and are powered by traditional and alternative economic drivers.

EXHIBIT 6: EXPOSURE INTENTIONS IN US CITIES

Respondents were asked to rank the cities/markets in which they plan to increase or decrease their real estate exposure. The rankings have remained generally consistent over the past three years, with a few exceptions, including Austin graduating from tenth place in 2020 to first in 2021.



Note: Rankings from surveys in previous years asked respondents to rank global cities, while the 2021 survey focused only on US cities. For any US city that ranked in previous years, ordinal rankings have been updated to exclude non-US-city comparisons (for example, if New York, London, and Los Angeles were ranked 1-3, respectively, in a rank from 2019, New York and Los Angeles would be ranked 1 and 2, with London excluded.). Any US city without a ranking in a previous year means that the city did not register at the global scale.

The rankings have remained generally consistent over the past three years, with a few exceptions, including Austin graduating from tenth place in 2020 to first in 2021.

In addition to shifting priorities for property types, investors are changing their preferred cities and markets. In the 30 years that AFIRE has conducted its survey, only primary gateway cities have topped the list of US cities for future investments. Typically, cities such as New York, Washington, DC, San Francisco, Los Angeles, Boston, and Chicago occupy the top spots. Given the size and focus of global institutional markets, this is to be expected. Except this year. Austin, Texas, is the leading US city for investments in 2021. As a smaller tertiary city with a top-level university, an expanding tech and biotech sector, a younger and well-educated population, and limited taxes, Austin is experiencing explosive growth. In a general environment of limited rent growth, Austin stands out from other comparable cities.

Following Austin is Boston, Massachusetts (rich in education, tech, bio-tech); Dallas, Texas (rich in education, tech, finance); and Atlanta, Georgia (rich in education, fintech, healthcare). They are very different cities, with interesting cultures, dialects, and cuisine, but to an investor they look remarkably similar: Powered by rapid growth and fueled by well-educated young people focused primarily on technology. Even though cities such as Austin might represent smaller markets with fewer acquisition opportunities, they have precisely what investors hope to find.

Institutional investors are optimistic, but they have serious concerns as well. Their perennial worries about increasing tax rates, economic growth, and interest rate increases may have more weight as governments around the world invest in economic and infrastructure recovery. Almost as high on their lists, and perhaps more illustrative of the times, respondents ranked cybersecurity as a concern higher than in any previous year of the survey, alongside disruptive technology and changes in consumer demand. All three of those issues have already impacted the world and will likely continue to do so.

EXHIBIT 7: INVESTOR CONCERNS / BUSINESS CLIMATE

Austin, Boston, and Dallas—tertiary, primary, and secondary cities, respectively—are the top three US cities for planned investment in 2021. This is the first time a tertiary city has ever topped the AFIRE survey.

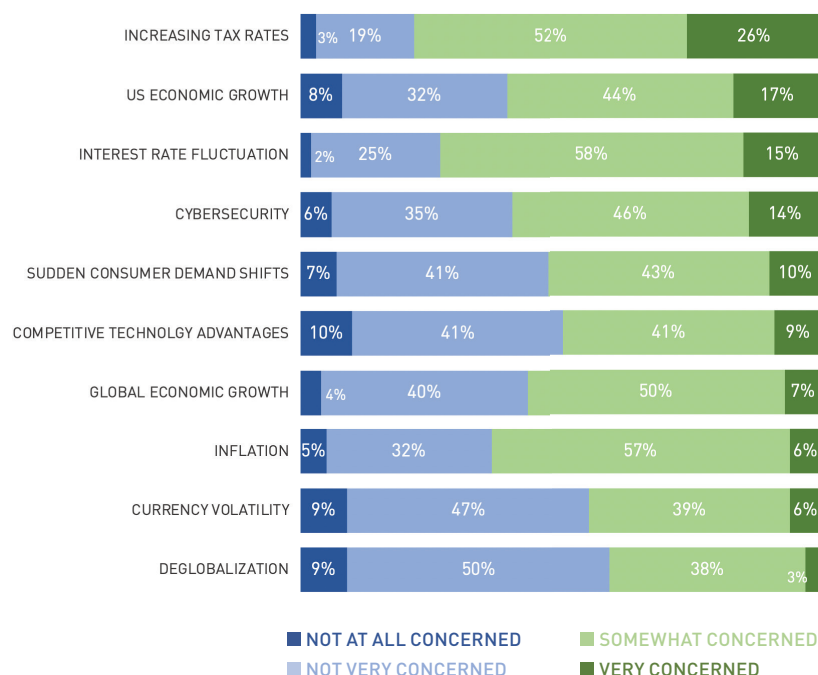


EXHIBIT 8: INVESTOR CONCERNS / SOCIAL AND POLITICAL

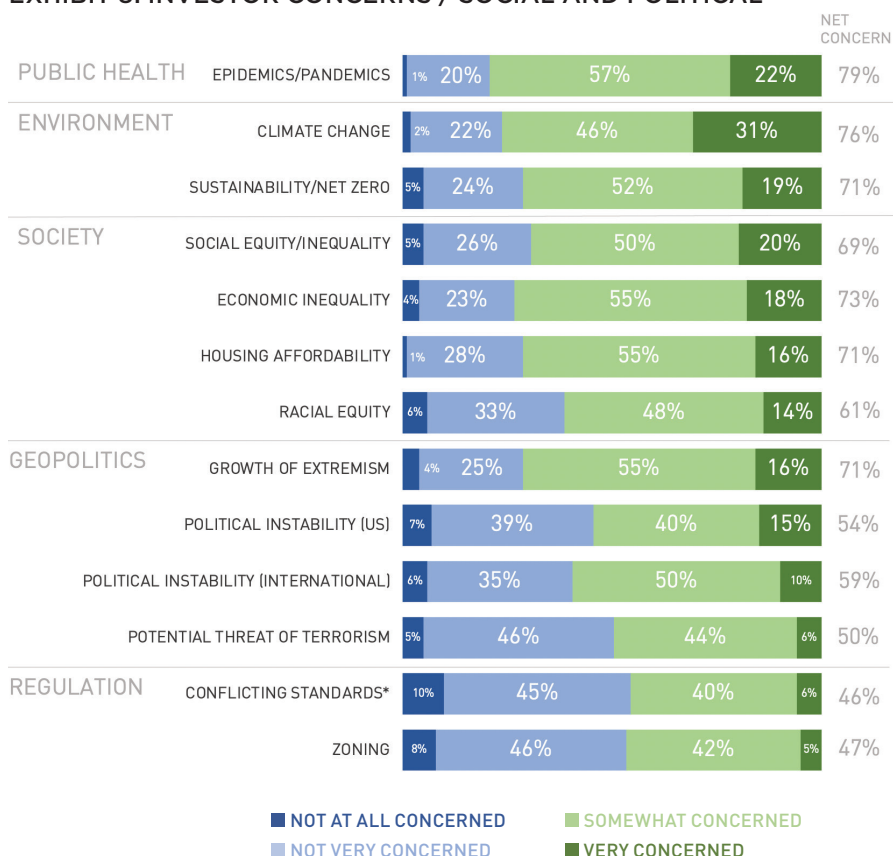
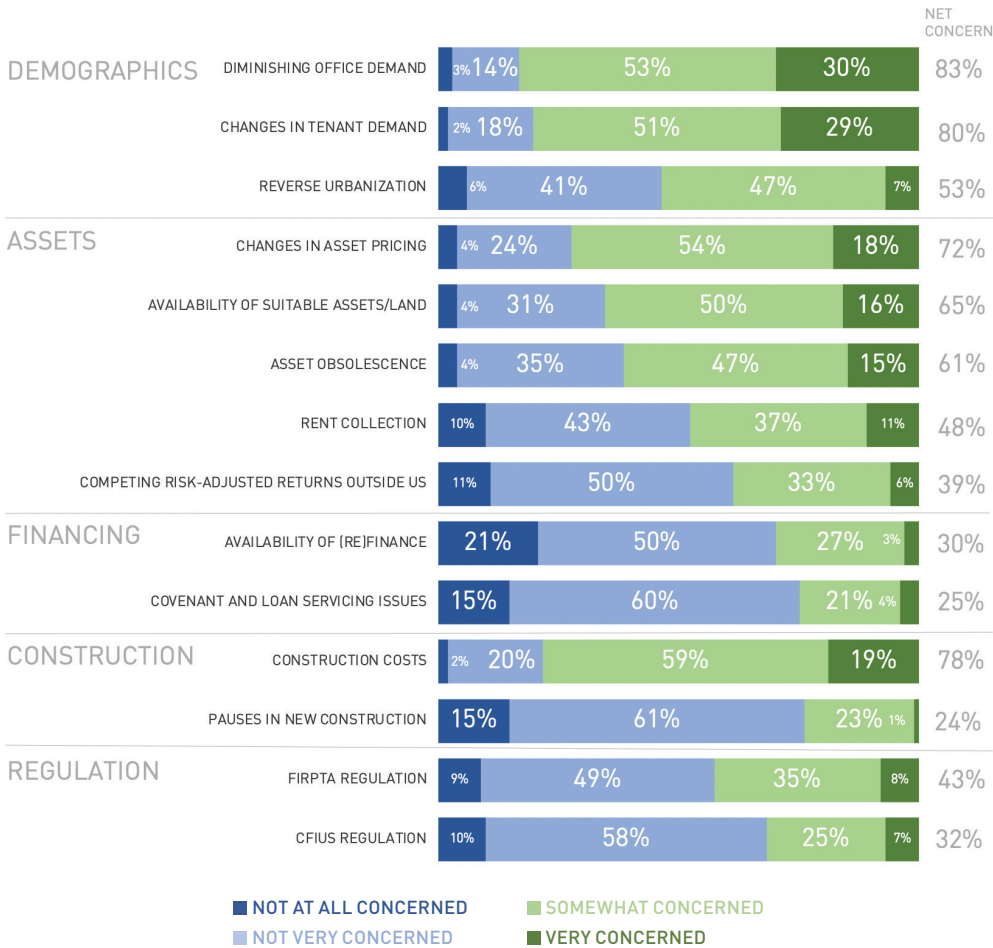


EXHIBIT 9: INVESTOR CONCERNS / REAL ESTATE



When asked about political and social concerns, respondents put pandemics at the top of the list, followed closely by social change, and sustainability, social inequality, economic inequality, housing affordability, and racial equity. Politics and regulations fell lower on their priority list of concerns. However, each of the concerns indicated by respondents have a tangible impact on tenants and users of real estate. What ails society, ails real estate. Especially as ESG dominates everyone's agendas, leaders in this space are intentionally focused on strategies that support a healthier society.

The commitment to ESG is almost universal now: 93% of survey respondents said that ESG criteria are important for new investments, while 31%

said that new investments are required to meet them. Most of their focus has been on the impact of their buildings on the environment over the last decade, but more focus has shifted to issues related to the social and governance principles of ESG trends.

Optimism about the future should not be confused with a yearning for the way things used to be. It requires an acceptance of the way things are and a courage to take new action. Institutional investors know where innovation is taking place, and even though real estate is not known for quick changes, they are managing to intelligently position themselves for the post COVID world. It won't be easy, and it certainly won't be the same, but it certainly will be interesting.

Institutional investors know where innovation is taking place, and even though real estate is not known for quick changes, they are managing to intelligently position themselves for the post COVID world.

EXHIBIT 10: KEY FACTORS FOR US REAL ESTATE OVER THE NEXT TEN YEARS

MACROECONOMIC FACTORS	28	"Sustainable and predictable economic growth."	"US to remain a stable global power and the USD to remain the global currency."	"Stable economic growth, business friendly environment and digitalization."
GEOPOLITICAL STABILITY	22	"Stopping the rise of extremism, misinformation and conspiracy theories."	"Social and political stability and continued support for GDP growth."	"That the US remain a stable country politically, with a sizeable middle class."
EXPANSION AND SUCCESS OF ASSET CLASSES AND REAL ESTATE MARKET	15	"Successful investment requires stable and increasing demand, both for an asset and the greater market."	"The shortage of available deals and the amount of funding that is driving towards investment cannot be met without a substantial increase in asset pricing."	
UNDERSTANDING DEMOGRAPHIC TRENDS	15	"Correctly forecasting demographics and economic factors will be the key to success."	"The support of a demographic shift, which has only accelerated due to the pandemic, will continue to serve as a tailwind in this (multifamily) property sector."	
BUSINESS-FRIENDLY FISCAL AND MONETARY POLICIES	15	"Quality portfolio improvement, investor-friendly legal and tax environment."	"A moderate, business-friendly government; an environmental agenda that promotes real sustainable progress on fighting climate change."	
FLEXIBILITY AND ADAPTABILITY	14	"The ability to quickly reallocate among property types."	"Flexibility of the system to adapt and change due to changing conditions."	"Building with an eye on long term tenant use in mind allowing for flexibility of building use in the long run as trends change."
INNOVATION AND MODERNIZATION	11	"Access to data, both external and internal proprietary. The ability to interpret and translate it into market leading investments."	"Actually leveraging data to better understand risks and opportunities both at the individual asset and portfolio level."	

The 2021 AFIRE International Investor Survey was conducted in March 2021 and underwritten by Holland Partner Group. To learn more, visit afire.org/of-note/2021afiresurvey



ABOUT THE AUTHOR

Gunnar Branson is the CEO of AFIRE and the publisher of Summit Journal.

NOTES

¹ AFIRE's International Investor Survey has been conducted for 30 years to gather the pulse of AFIRE members and the industry itself. There are 200 AFIRE members from 23 countries that collectively represent approximately US\$3 trillion in assets under management. The focus of the membership and the survey is on cross-border investments into the US property markets. The survey was conducted in March of 2021 with over 100 respondents. Half of the respondents have under US\$20 billion AUM and the other half have over US\$20 billion AUM. Of the respondents, 64% represent institutions in Europe, the Middle East, Canada and Asia. The remainder are US based investors that work with global institutions.

² "Homelessness Increasing Even Prior to COVID-19 Pandemic," US Department of Housing and Urban Development (HUD) 2020 Annual Homeless Assessment Report Part 1 to Congress. hud.gov/press/press_releases_media_advisories/hud_no_21_041

³ Alexandra Samet, "Global e-commerce market report: e-commerce sales trends and growth statistics for 2021," Insider Intelligence, December 2020; businessinsider.com/global-ecommerce-2020-report

REVISITING INFLATION



By Martha Peyton, PhD
Managing Director of Real Assets Applied Research
Aegon Asset Management

For commercial real estate investors, inflation fears are real—but are they rational?

Investors cite inflation hedging power as one of the primary attractions of property investments.¹ This characteristic has been of limited use in recent years given the very low pace of inflation in the US and throughout most developed global markets, leaving other factors to drive the investment allure of real estate. Currently, inflation fears are emerging and raising concerns regarding potential negative effects on discount rates used to value portfolio properties, as well as potential positive effects on property cash flows.

However, inflation fears are potentially overblown, based on current macro-economic conditions. And, expectations of problematic inflation may actually have a negative impact on commercial property dynamics if they become pervasive.

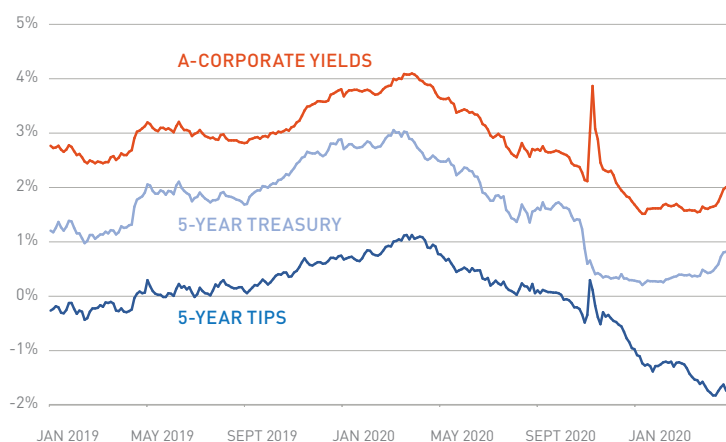
INFLATION EXPECTATIONS DEMONSTRATED IN FINANCIAL MARKETS ARE MINIMAL

The best indicator of inflation expectations is the yield on Treasury Inflation-Protected Securities (TIPs). These instruments are traded continuously in deep liquid global financial markets, thereby providing a real-time window into market views of inflation prospects. Yields on TIPs are credible indicators of inflation expectations because they represent actual financial transactions rather than opinion surveys. Investors in TIPs are betting money on the path of future inflation.²

As shown in *Exhibit 1*, inflation expectations have been increasing—especially since mid-January 2021. The increase reflects the projected enactment of the US\$1.9 trillion American Rescue Plan Act signed by President Biden on March 11. The plan is on top of the similarly-sized Coronavirus Aid, Relief, and Economic Security (CARES) Act, signed in March 2020, and the US\$900 billion follow-up signed in December 2020. The combined package is directed at supporting the economy through the COVID recession that began in March 2020 with extensive shutdowns in economic activity, intended to quell contagion. The five-year US Treasury yield dropped precipitously in March 2020 along with expected inflation as the economy tanked. High quality corporate bond yields behaved in similar fashion. Yields are now picking up in response with inflation expectations of roughly 2.5%.

EXHIBIT 1: TREASURIES, TREASURY INFLATION-PROTECTED SECURITIES (TIPS), AND A-CORPORATE YIELDS

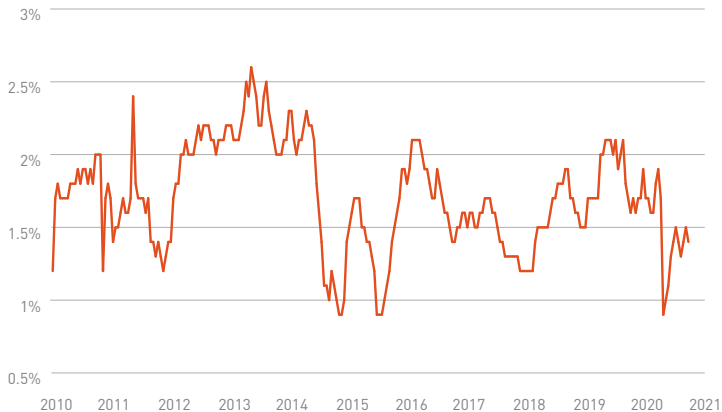
Data as of March 31, 2021. Source: Federal Reserve Bank of St. Louis



These expectations are in line with the Federal Reserve policy, which is targeting a period of above 2% inflation designed to super-charge job creation. The Fed focuses on prices of personal consumption expenditures excluding the volatile food and energy categories. Economic projections of Fed policymakers show a range up to 2.5% in 2021 and 2.3% in 2022, but averaging 2% in the long run.³ Similarly, the forecasters polled in the monthly Blue Chip Economic Indicators Survey project steady 2.1% personal consumption expenditure (PCE) inflation throughout a long-term ten-year window, with the most bearish expecting a 2.4% PCE inflation rate in Q4 2022. As shown in *Exhibit 2*, inflation has rarely breached a 2% rate over the last ten years.⁴ In plain words, financial markets and forecasters are expecting a very modest pickup in inflation, in line with the expectation of monetary policymakers.⁵

EXHIBIT 2: CORPORATE PERSONAL CONSUMPTION EXPENDITURE (PCE) INFLATION

Data as of February 1, 2021. Source: Federal Reserve Bank of St. Louis



Property cash flows are not fixed; they respond to economic growth and supply-demand drivers.

EFFECTS ON COMMERCIAL REAL ESTATE THROUGH BORROWING COSTS

If property cash flows and values were driven simply by yield arithmetic, the uptick in inflation and interest rates might produce negative effects similar to the negative effects on bonds. But property cash flows are not fixed; they respond to economic growth and supply-demand drivers.

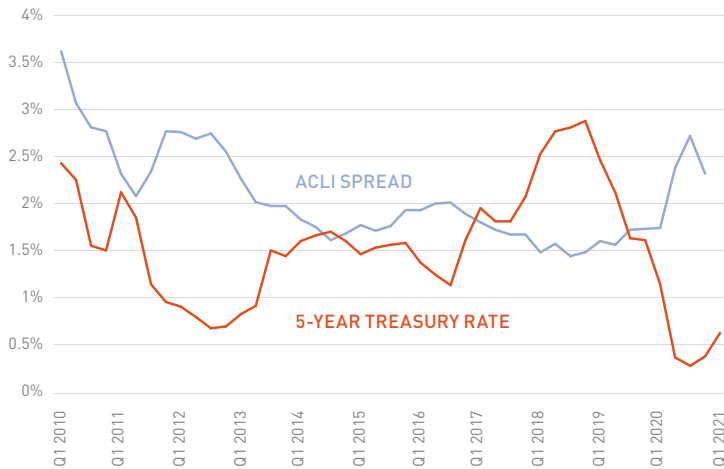
The federal spending directed at COVID relief is putting upward pressure on interest rates and inflation expectations precisely because it is supporting economic recovery. Recovery will impact commercial property sectors differently: **apartments** are likely to benefit as job creation stimulates demand, especially by stimulating household formation; **industrial** should benefit from increased consumer and investment spending boosting demand for warehouse space, but will be somewhat offset by the revival of in-person shopping at stores, which is expected to benefit the **retail** sector; we anticipate **office** will benefit from returning tenants with impact of work-from-home policies highly uncertain. In addition, the **hospitality** sector will likely benefit mightily as travel resumes.

At the same time, re-pricing of commercial mortgage borrowing could have a negative effect on levered property performance but this needs to be netted against the positive impact of stronger and faster economic recovery. In addition, commercial mortgage pricing did not respond fully to the COVID-related drop in Treasury yields. According to the American Council of Life Insurers (ACLI) and shown in *Exhibit 3*, life company commercial mortgage spreads actually widened as the COVID recession took hold in Q3 2020. Lenders apparently viewed the drop in US Treasury yields as a transitory shock and widened spreads in response. This leaves a cushion for a return to more normal US Treasury yields as recovery ensues.

As shown in *Exhibit 3*, the five-year US Treasury rate peaked at 2.88% in Q4 2018, meandering downward through Q1 2020 and then plunging in the Q2 2020 as the COVID shock prompted the Fed's rapid and strong policy response. Commercial mortgage loan (CML) spreads widened markedly at that time after holding in the 150-200 BPS range over the prior five years. Over that period, the low point in spreads hit 144 BPS in the Q3 of 2018. In the final quarter of 2020, spreads were 88 BPS wider than that low point which had a corresponding five-year Treasury rate of 2.81% versus the 0.37% US Treasury rate in the Q4 of 2020.

EXHIBIT 3: COMMERCIAL MORTGAGE LOAN (CML) SPREADS COMPARED TO US TREASURY

Sources: Federal Reserve Bank of St. Louis. Data as of March 31, 2021 American Council of Life Insurers. Data as of December 31, 2020.



Arithmetically, this history implies a substantial cushion in CML spreads to absorb rising interest rates as COVID recovery progresses. But, actual spread pricing depends on more than just arithmetic; it is enormously influenced by the competition among lenders for CML origination business.

Life insurance lenders committed almost US\$16 billion in Q4 2019, the highest commitment total since the beginning of the post-global financial crisis (GFC) cycle. Appetite reflected the availability of CML and pricing that remained attractive versus other fixed income assets offering comparable risk. Evidence of durable appetite for the period ahead is suggested in a strong uptick in commitments to US\$10.9 billion for the Q4 2020 as COVID vaccines were approved.

Beyond life insurance lenders' further demand for CML lending opportunities will likely come from private equity debt funds. A recent report from *The Real Deal* dated 30 March 2021 shows a cache of dry powder of US\$250 billion that will need to be activated to generate returns. Commercial banks will also compete for CML business, but their appetite is usually focused on shorter maturities.

A final note on inflation, interest rates, and borrowing costs involves the reason for rising interest rates and inflation—which is stronger economic growth! Under the Fed's new policy rubric, inflation above 2% will be tolerated on a temporary basis to strengthen job creation and economic growth. Stronger economic growth is the most powerful driver of commercial real estate performance. So, even if borrowing costs rise, revenues should offset some of the pain—but not all.

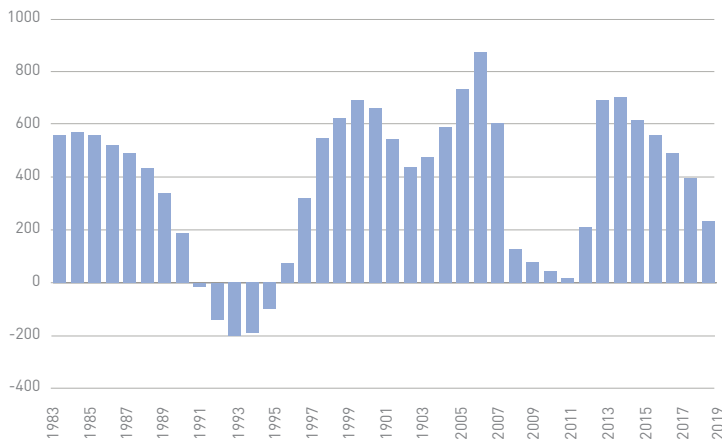
EFFECTS ON COMMERCIAL REAL ESTATE THROUGH LEASE STRUCTURE

Beyond the question of borrowing costs under a regime of rising inflation, there are reasons why commercial real estate has been and will likely continue to be considered an inflation hedge. First, investment performance has beaten inflation over medium five-year holding periods for the past forty years with the exception of the 1990's recession and its aftermath. This result is shown in *Exhibit 4* using total return on the National Council of Real Estate Investment Fiduciaries (NCREIF) National Property Index (NPI) minus the Consumer Price Index (CPI) including food and energy. Similar results are obtained using the core PCE price index to measure inflation. Commercial real estate performance beat inflation even during the more severe recession associated with the GFC.

Recession itself does not undermine the inflation hedging power of commercial real estate which rather depends on the supply-demand balance in property markets when recession takes hold. The five-year holding period reflects the relatively long investment horizon associated with property that is necessitated by the relatively high transactions costs.

EXHIBIT 4: NPI TOTAL RETURN VERSUS INFLATION, FIVE-YEAR ROLLS

Source: NCREIF, US Bureau of Labor Statistics; as of December 31, 2020



Second, commercial property returns are influenced by the structure of leases where some inflation protection can occur from triple-net leases that pass property expenses to tenants (especially for industrial property), inflation step-ups that index rents (especially for office properties), short-term leases that can be adjusted to compensate for inflation (especially for apartments), and common area maintenance (CAM) passthroughs that are prevalent for regional mall retail. It bears noting, however, that these lease structures did not prevent the shortfall in property performance versus inflation in the first half of the 1990's because more powerful supply-demand forces were out of balance.

Third, inflation mitigation can arise from investor behavior when expectations of rising inflation encourage investment in property expecting it to hedge inflation. Rising investor demand, in turn, can generate increasing values that may indeed hedge inflation in a self-fulfilling prophecy. If rising inflation does materialize and is associated with stronger economic growth, the bet on property will be rewarded and vice versa.

LOOKING AHEAD

We believe commercial real estate performance in all sectors should benefit from the recovery in economic growth as COVID vaccinations bring the contagion under control.

Forecasters predict real GDP growth to average 6.3% in 2021 and 4.3% in 2022.⁸ Inflation in both years is expected to reach or slightly exceed 2% with the periods slightly above 2% within the Fed's tolerance.

Each sector will face local market challenges as the pattern of geographic growth and post-COVID behavior emerge. The modest construction over the last few pre-COVID years will help to buoy investment performance but, as always, investors will need to select properties and manage portfolios carefully.

The outlook is complicated by the potential for a material increase in federal spending from President Biden's infrastructure proposal now under discussion. The US\$2 trillion proposal would be spent over eight years and paid for largely by raising corporate taxes. On a positive note, US infrastructure is in dire need of attention, in the American Society of Civil Engineers' 2021 Report Card for America's Infrastructure, a US\$2.6 trillion shortfall is estimated over the next ten years unless the current pace of infrastructure spending is boosted. In addition, the need for improvements in clean energy generation, cybersecurity and public health preparedness add to the US\$2.6 trillion gap. Over the long term, infrastructure investment might also improve productivity and jump start private sector innovation which are both positive for economic growth and for real estate. The eight-year time frame for projects is important to note because it will spread out the demand for labor and materials and mitigate short-term inflation increases as pent-up demand is addressed in the aftermath of the recession.

ABOUT THE AUTHOR

Martha Peyton is Managing Director of Applied Research for Aegon Asset Management, the global investment management brand of Aegon Group.

NOTES

¹ PREA. "Why Real Estate?" Accessed June 22, 2021. <https://www.prea.org/research/whyrealestate/>

² Some analysts are discounting the efficacy of TIPs as indicators of market inflation expectations because the Fed has been buying them as part of the COVID quantitative easing program. These concerns are countered by the steadiness of the Fed's purposes throughout the recent increase in inflation fears, suggesting that market participants are not fighting TIPs yields resulting from the Fed's actions.

³ Federal Reserve Summary of Economic Projections. "Core Personal Consumption Expenditures." March 17, 2021. <https://www.federalreserve.gov/monetarypolicy/files/fomcprojtabl20210317.pdf>

⁴ Blue Chip, "Blue Chip Economic Indicators." Accessed March 12, 2021. https://www.aeaweb.org/rfe/showRes.php?rfe_id=1922&cat_id=12

⁵ Aegon Asset Management expectations are similar. See Rybinski white paper April 2021

⁶ Blue Chip, "Blue Chip Economic Indicators." Accessed April 9, 2021. https://www.aeaweb.org/rfe/showRes.php?rfe_id=1922&cat_id=12

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HERD COMMUNITY



By Dave Bragg
Co-Head, Strategic Research
Green Street

Jared Giles
Senior Research Associate
Green Street

Uncertainty surrounding remote work and politics suggest a wide range of potential outcomes for big cities, which may upend the long-running megatrend toward urbanization.

The origin of the air conditioner can be traced back to the first US patent for mechanical refrigeration granted in 1851. The proverb “necessity is the mother of innovation” applied, as the recipient, Dr. John Gorrie, was a Floridian. A century later, the mass production of affordable home air conditioners began to reshape the country. The Sun Belt region population has more than tripled since the middle of last century as its share of the US total population rose from one-fifth to one-third. Prominent Eastern and Midwestern metro areas declined over the same period. Eight of the ten largest US cities as of 1950, most of which were in the East and Midwest, have fewer residents today.

Detroit is the posterchild of that fall from grace. As the nation’s fifth largest city in 1950, its population of nearly two million exceeded that of Austin, Dallas, and Houston combined. The Motor City was home to General Motors, Chrysler, and Ford, plus a cluster of smaller firms servicing them. Detroit’s decline was set in motion in the 1950’s as automakers reacted to the unionization of their labor forces by shifting

factories first to the suburbs and later to lower-cost locales. The city’s path toward financial ruin was paved by the failure of elected officials to cut spending in response to secular and cyclical economic challenges. Over the course of decades, they increased pension benefits, borrowed more, and raised taxes, triggering a fiscal death spiral. Detroit’s population and its total assessed value of property in today’s dollars has decreased by about two-thirds over the past seventy years.

The rise or fall of a city is tough to foresee and impossible to forecast with precision, but history suggests that investors keep an open mind about the future. This is particularly the case today as work-from-home (WFH), fiscal health, and politics may portend deurbanization, which would carry implications for both gateway and Sun Belt markets, as well as urban/suburban dynamics within metro areas.

WORKING FROM HOME

Post-COVID Flexible WFH policies will allow some employees to relocate to the suburbs, and others working remotely to move elsewhere. The WFH revelation has also increased comfort in operating a workforce distributed across multiple offices, as evidenced by an uptick in hedge fund and corporate headquarter relocations out of coastal cities. This anecdotal evidence is supported by employment data capturing migration. The spread between Sun Belt and gateway market office-using job growth spiked last year to its highest level in two decades. The biggest winners are places with high WFH utilization rates, based on our metric comparing the pre-COVID propensity to work remotely and an employee’s ability to do so.

EXHIBIT 1: GATEWAY OFFICE-USING JOB GROWTH IN THE SUN BELT

Source: BLS, Green Street

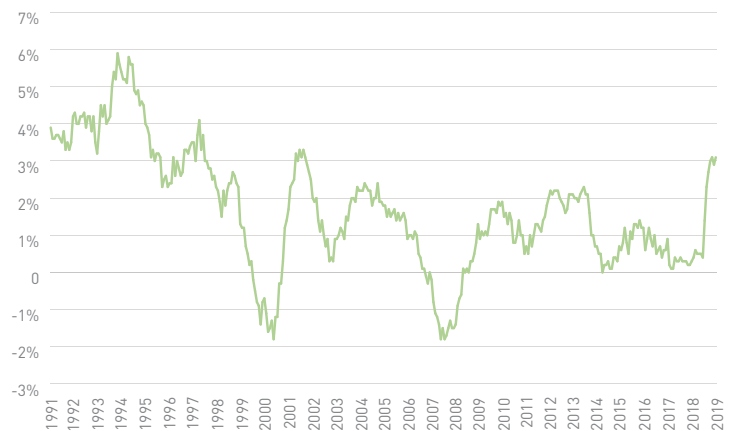
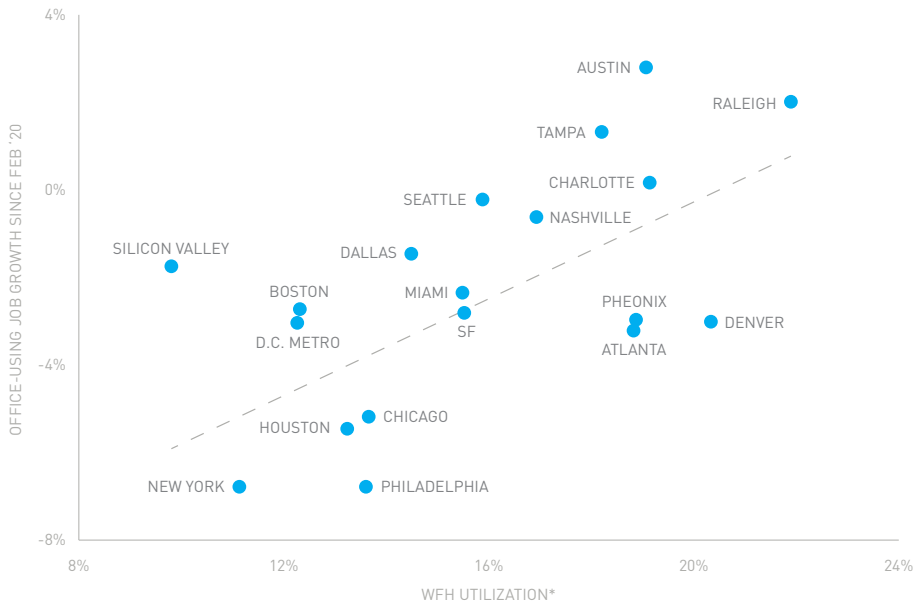


EXHIBIT 2: WFH UTILIZATION RATE AND OFFICE-USING JOB GROWTH

Source: BLS, Green Street



Public and private market property investors often reach different answers on big questions, but they are roughly aligned on the extent to which the outlook for Sun Belt versus gateway markets has changed over the past year. The Sun Belt has been repriced favorably on a relative basis by an order of magnitude in the high single-digit range for apartments and mid-single digits for office. On the other hand, our changes to market-level underwriting suggest a greater warranted bifurcation.

Green Street's outlook reflects a base case, but a left-tail-risk scenario for a gateway market or two warrants consideration. The two places hit hardest over the past year—New York City and the San Francisco Bay Area—are the most likely suspects. They share low WFH utilization rates, relatively poor fiscal health, and progressive politics. It is quite unlikely that their future will rhyme with Detroit's past, but there are parallels.

A LOOK AT TWO GATEWAY MARKETS

Successful finance and tech firms have long concentrated in New York City and the Bay Area, respectively, as auto companies did in Detroit. These places have thrived despite high costs because network effects have allowed for productive interactions among creative people, which has, in turn, led to high and growing income. Geoffrey West's Scale explains that cities scale "super-linearly." For example, as a city's population increases, income rises at a greater rate (by an additional average of 15%).¹

The notion of a big industry fragmenting away from its hub runs counter to urban agglomeration theory. But a reduction of institutional and cultural barriers to remote work may break the mold. The perceived benefit of clustering in the physical sense may be permanently altered if virtual connections suffice. Many firms are ready to find out. The net outflow of hedge funds from New York City accelerated in 2020 to 6% from a 2% average over the prior five years, per Hedge Fund Alert. Silicon Valley's slice of the venture capital (VC) pie is shrinking; the cloud is now the top choice to locate a start-up. In a headquarters move less substantive than Oracle's, but chock full of symbolism, Hewlett Packard Enterprise is off to Texas as of late 2020. The Palo Alto garage in which HP was founded in 1939 is known as the "birthplace of Silicon Valley."

An outmigration from New York City and the Bay Area would merely represent a continuation of the pre-COVID trend. Population growth rates for both cities in 2019 were at their lowest of the past decade, and negative in absolute terms. The same can be said for Chicago and Los Angeles. A lesson from Detroit, as well as the mall sector, is that negative demand is highly problematic for property values.

Negative growth in gateway cities would not necessarily translate into a one-for-one benefit for nearby suburbs or the Sun Belt, meaning that de-urbanization is probably a net negative for real estate values. Strong demand can be matched by supply if barriers are low. The Sun Belt has earned its low-barrier reputation, but the absence of excess supply at last cycle's end raises questions about whether a NIMBY mentality is beginning to blossom in hot markets (e.g., Austin, Nashville, etc.) as new residents worsen traffic on the roadways and bring added pressure to school systems.

RETAINING THE INCOME BASE

Gateway markets have an opportunity to stem the tide. But the ball is in the court of politicians, who appear ready to drop it. Fiscal challenges aren't as concerning as they were during the depths of COVID. Progressive politicians are ramping up spending in some cases, and have proposed a fresh slate of tax increases, particularly on the wealthy. But big taxpayers must be retained. The 17% of New York City residents earning six-figures pay 80% of city income tax, which accounts for one-quarter of total revenue. But the risk is that high-income earners in the US are highly mobile, unlike Europe.

There is a bit more reason for optimism in New York City than San Francisco due to the former's stature as a global leader in multiple industries, diverse employment base, and resilient history. New York City's population declined between 1950 and 1980, and in the mid-1970s, it nearly went bankrupt, and its workers earned less than those in Detroit. But the Big Apple reinvented itself thanks to the rise of the finance industry and good policymaking.

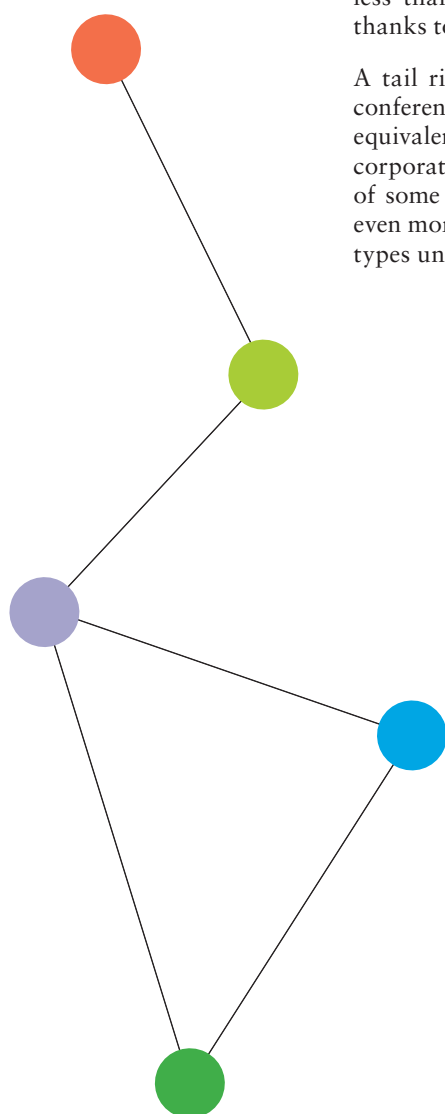
A tail risk worth contemplating is that Zoom and other video conferencing platforms are proving to be the modern-day equivalent of Gorrie's air conditioner. In that scenario, WFH and corporate relocations catalyze a shift of high-income workers out of some gateway cities, policymakers raise taxes again, causing even more residents to leave, and local property investments of all types underperform dramatically.

ABOUT THE AUTHORS

Dave Bragg is Co-Head of Strategic Research, and Jared Giles is a Senior Research Associate at Green Street, the preeminent provider of actionable commercial real estate research, news, data, analytics, and advisory services in the US and Europe.

NOTES

¹ Geoffrey West, Scale: *The Universal Laws of Growth, Innovation, Sustainability, and the Pace of Life in Organisms, Cities, Economies, and Companies* (New York: Penguin, 2017)



WFH and corporate relocations catalyze a shift of high-income workers out of some gateway cities, policymakers raise taxes again, causing even more residents to leave, and local property investments of all types underperform dramatically.

THE HOUSING ISSUE



By AFIRE Staff

While single-family housing has long been the domain of individual owners, the past few decades have seen an increasingly large share of corporate and institutional investors move into the residential space.

Like all trends accelerated by the pandemic, the pace of institutional interest in the asset class significantly quickened over the past year. According to Redfin, investors put a record \$77 billion into the single-family market over the past six months, with institutional acquisitions in the space jumping by 2.7% in Q1 2021, compared to Q1 2020.¹

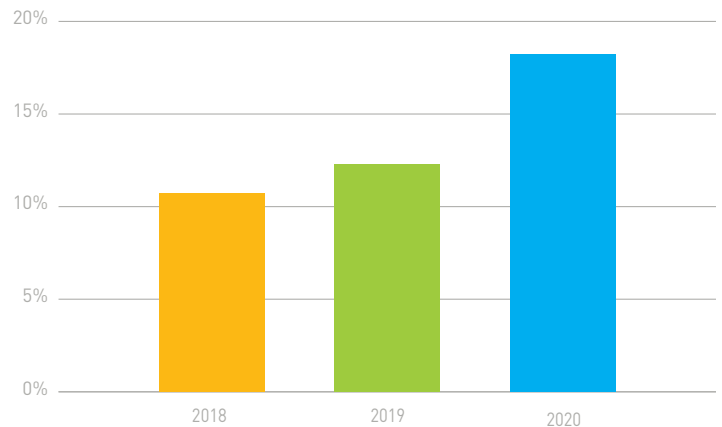
Though the housing sector presents a unique institutional opportunity in everything from single-family rental (SFR) conversions and build-to-rent (BTR) developments, it is also facing a historic supply/demand challenge. In the nearly twenty years between 2001 and 2020, the US built an average of 276,000 fewer homes per year compared to the three decades between 1968 and 2000.² This is 5.5 million units short of historic levels, according to a recent report from the National Association of REALTORS®.³ To make up for this shortage, and to accommodate for the influx of would-be homeowners contained within the large millennial cohort—the next generation of homeowners—the US will need to build 2.1 million homes each year for ten years.

Solving for this would be an unprecedented building boom that could only be made possible through new policies, including tax credits, loans, and grants for builders, as well as denser and more amenable zoning laws in urban areas—including the possibility of converting disused office and retail assets (such as shopping malls) to residential uses.

As residential demand continues to outpace supply, the sector also faces a convergence with larger macro-economic trends, including affordability, which investors rank as one of the leading concerns for real estate over the next few years (see “Shining in the Darkness,” p. 6). For example, the share of millennial renters who have entirely given up on homeownership has gone from 10.7% to 18.2% in the past two years (*Exhibit 1*)—though according to Freddie Mac, “as more millennials reach age 40, their household formation rate will accelerate due to higher marriage rates and more stable incomes.”⁴

EXHIBIT 1: PERCENTAGE OF MILLENNIAL RENTERS WHO “EXPECT TO ALWAYS RENT”

Source: Annual Apartment List Renter Survey



Despite this impending generational shift in forecasted homeownership, the single-family sector will need to find smart solutions to counter (or solve for) these trends, especially because median household income⁵ rose only 19% between 2010, while median home sales prices⁶ rose 44% in the same period—and they continue to trend upwards.

With these questions in mind, this special four-part section of Summit Journal presents a few key ideas that point towards possible futures for the single-family sector, and the role investors can have in solving some key problems—while also generating target yields.

NOTES

¹ “Institutional Buyers are Flooding the Single-Family Market,” The Real Deal, 24 May 2021, therealdeal.com/2021/05/21/institutional-buyers-are-flooding-single-family-market/

² “US Housing Market Needs 5.5 Million More Units, Says New Report,” Wall Street Journal, 16 June 2021, [wsj.com/articles/u-s-housing-market-needs-5-5-million-more-units-says-new-report-11623835800](https://www.wsj.com/articles/u-s-housing-market-needs-5-5-million-more-units-says-new-report-11623835800)

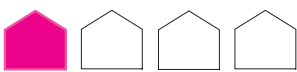
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⁴ “Millennials and Housing: Homeownership Demographic Research,” Freddie Mac, May 2021, sf.freddiemac.com/content/_assets/resources/pdf/fact-sheet/millennial-playbook_millennials-and-housing.pdf

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HOW TO REBUILD



By Joshua Benaim
Founder
Aria

Could an idea to “bring back” New York after the pandemic work in other cities?

There's been a lively debate over whether cities are dead.^{1,2,3} With the recovery gaining steam, it has become clear that rumors of the city's demise have been greatly exaggerated. But there's no question that cities are hurting badly. Before the coronavirus, many of our greatest cities got overheated and unaffordable and became unlivable for many people. Now, technological changes accelerated by COVID—principally remote work—pose a deeper challenge to the life of cities.

Yet cities have a unique and indispensable role to play in our society. They give people a place to discover their purpose, build their careers, and find love. If there is room for optimism amid this historic tragedy, it is that the current technological and social challenges will spur us to reimagine our great cities to deliver on the unbelievable potential of city life.

As the great cities of America begin to recover, we have an opportunity to rebuild them better. And as a prototypical global city in the US, New York provides a meaningful case for imagining the future.

REAL ESTATE—A LOVE STORY

I grew up on the West Side of Manhattan in the 1970's and 1980's. Pretzel vendors, yellow checker cabs, and feeding pigeons in Central Park were my daily fare. I lived in a neighborhood filled with fascinating people pursuing their dreams.

Many years ago, I was waiting for the M10 bus in the rain on my way home from school and shared a taxi with a lady with a stroller and a young child. Turns out she was heading to meet an opera teacher on my block. She said something about *kismet*, a Turkish loanword which she explained meant destiny or serendipity. Who would have imagined that after joining her at the lesson, I fell in love with opera, built a real estate company inspired by creativity and beauty, and even got to perform with the Metropolitan Opera in my old neighborhood? Only in New York!

But it's hard to imagine all that happening today.

I see four key areas of investment and action that would help bring New York City and the great cities of America back better than before. These are a few ideas—not a comprehensive prescription for public policy or a panacea for the major challenges of jobs, health care, transit, inequality, climate change, and quality of life. Perhaps they will constitute a tiny piece of the puzzle of how to make a more just and beautiful city.

EMBRACE HOUSING BIODIVERSITY

We need to address affordability and create mixed-income, mixed-use, intergenerational neighborhoods. Developers today have really two choices—build expensive, Class A apartments, or build federally subsidized low-income housing. There's no in between. This makes for a tale of two cities. Housing monoculture—whether for rich or poor—isn't good for anyone.

This can be addressed by embracing what I call housing biodiversity. We need a mixture of family apartments, small units for young single people, affordable housing, co-living, rooming houses, middle-income apartments, and senior living. A mixture of incomes and generations living together in the same buildings, in the same neighborhoods. That's what made the West Side great.

Today, a legal and regulatory thicket makes it impossible to build efficient apartments to meet the diverse needs for reasonably priced housing in mixed-use neighborhoods.

Regulations that have accumulated over generations still shape what can and cannot be built. The result is less density and significantly less supply of housing. New York City is a prime example. “The 1910 population of Manhattan was 2,331,542, or 164 people per acre. In 2010, the population was 1,585,873, or 109 people per acre.”⁴ How is it that we accommodated one million more people one hundred years ago on the same island?

As we emerge from COVID, we have a fresh chance to re-examine zoning laws to allow the kinds of walkable, mixed-use neighborhoods and housing we need. Why not make it legal to creatively live in small spaces? Why maintain zoning districts that keep work and life apart? Why regulate what light and air constitutes a bedroom, where across the country people are getting creative about sleeping quarters? Code-compliant new apartments are so great that no one can afford to live in them.

Allowing people to revive hotels as apartments without kitchens would make more affordable units and provide much needed work to restaurant workers,

who could reactivate the hotel restaurant and bar. At present, a costly renovation would be required to obtain a residential Certificate of Occupancy. There are a lot of concerns about young newcomers moving into established neighborhoods and raising the rents. Accommodating more young professionals in converted hotels or newly constructed smaller units would relieve some of the pressure on the remainder of the housing stock and stands to make housing more attainable for everyone.

With beautiful, mixed-use, mixed-income neighborhoods, more people could walk to work. While the virus has wreaked havoc on our aging public transportation infrastructure, which needs long-term investment and support, embracing housing biodiversity and adaptive reuse would be an immediate shot in the arm. And in an era of climate change, less commuting would be a win for quality of life and for the environment.

LET MUSIC PLAY ON

We need to invest in music and the performing arts to restore the vibrancy of the city. Cities need the arts and artists to provide the creative energy, the innovation, and the fresh way of looking at the world that enriches our lives and supports the growth of media and creative industries.⁵ Recent legislative efforts have helped arts venues stay afloat, but the ecosystem of performing artists is in dire straits. Why are large industries bailed out, but artists and musicians left for dead? These are the people who make us laugh or cry and feel human.

Once we safely reopen, we must ask ourselves how we can create an ecosystem of artist housing, so people have a place to live that’s reasonably priced. Many of the artists, costume makers, set designers, lighting designers, orchestral musicians, dancers, and singers have had to leave New York City because it’s unaffordable, and COVID has accelerated that shift. These are economic and artistic ecosystems (clusters, to borrow the language of HBS professor Michael Porter) that have been created and sustained over generations. Think about how it feels to walk through the streets of New York and hear a solo saxophone playing “My Funny Valentine,” or to experience “Hamilton” or to hear “La Bohème” for the first time. Let’s invest in safe concerts and in safely reopening performing arts venues. Let’s invest in affordable artist housing to make New York and other great cities hospitable to the artists who bring our city to life. Without music, the city is dead.

MORE STREETS FOR PEOPLE

We need a new era of creative urban design and parks to encourage walking, nurture neighborhoods, and democratize city living. Central Park was created as a great democratic experiment, a natural place as grand as any English manor, but free for all to enter and find refuge in the heart of the city. There are no elaborate gates. The creators of the park wanted anyone to walk in and feel at home.

We have seen what happens when restaurants spread out as outdoor cafes—the city blossoms with street life. What if that’s just the beginning? A recent article in the New York Times by Farhad Manjoo highlighted city streets as a vast land area ripe with opportunity for reinvention.⁶ According to the article, roughly one quarter of New York City land area is taken up by roads, parking, and places for cars. “The island of Manhattan is about 23 square miles. Much of it is covered in roadway, street parking and parking garages. If you added up all the space Manhattan devotes to cars, you’d have an area nearly four times as large as Central Park.” Consider the potential for city life if some of that area were reclaimed for people!

In the great reshuffling of the city that’s about to take place as geography adapts to technology, empty offices and hotels will become residences and the whole economic order of the city will be recast.

As a thought experiment, imagine if large chunks of Broadway became a walking park, flanked by outdoor cafes and theaters? An unconventional path that has always marched to the beat of its own drummer, Broadway winds its way from the bottom to the top of Manhattan and beyond. With all the bike trails and pedestrian plazas installed with great effect during the Bloomberg administration under the leadership of Janette Sadik-Khan, much of it barely serves for vehicular traffic anymore.⁷ Pedestrian friendly zones are great for retail. In cooperation with local merchants, Broadway theaters, and restaurateurs, there’s so much potential to reimagine the streetscape.⁸ With the epic success of the High Line, why not figure out how to make one on the ground?

Great cities have beautiful walks. Romantic walks. Business walks. I know businesspeople who do their meetings on walks so they don’t sit on a desk all day! People who walk live longer. Let’s restore broad swathes of the city to shoe leather. It will make the city much more livable.

Paris is leading the way in the reinvention of public streets and plazas. Under the leadership of Mayor Anne Hidalgo, Paris is embracing the concept of “the fifteen-minute city” expounded by Carlos Moreno, a professor and visionary of urbanism. “His fifteen-minute concept was developed primarily to reduce urban carbon emissions, reimagining our towns not as divided into discrete zones for living, working, and entertainment, but as mosaics of neighborhoods in which almost all residents’ needs can be met within 15 minutes of their homes on foot, by bike, or on public transit.”⁹ The thinking is that as people start to live and work in closer proximity, street space that is presently used for cars can be reimaged for other uses.

In the great reshuffling of the city that’s about to take place as geography adapts to technology, empty offices and hotels will become residences and the whole economic order of the city will be recast. If people can live and work in the same neighborhood, so much the better. Let’s try to do it to enhance the neighborhood as the unit of organization. That’s what makes New York so terrific. Ultimately, we need a broad movement of property ownership, civic leaders, business owners, and citizens to capitalize on the enormous opportunity of reimagining public space for people.

BUILD THE NEXT GENERATION OF BUILDERS

We need a new form of inclusive business education, to embrace all of our society. Business, industry, creativity, and technology will need to be part of the solution. We need a way to bring in the talent that exists and teach young people how to use their talents in a meaningful way. That business can be a force for good and can make a difference in people's lives. I have built many luxury homes, and those are a lot of fun, but the most meaningful work has been making creative use of unappreciated and misunderstood raw materials and turning them into places for people to live a big life in the city at a lower cost.

There is already a movement afoot to do this. Project Destined, a nonprofit organization that transforms minority youth into owners and stakeholders in the communities in which they live, is bringing diverse high schoolers and college students and veterans who might never have had the chance to learn the real estate business into the fold. For example, I had a chance to work with a group of interns from Howard University last Fall, which culminated in an exciting live business plan competition. The level of passion for real estate and thoughtful preparation was inspiring—and bodes well for the future of our industry. We who are part of development, construction, and finance help shape and build the city. We need to ask ourselves what kind of a city do we want to build?

We know in our hearts what it will take to get New York and other great cities back. It will take patience. It will take love. It will take a lot of work—private sector, philanthropic, thought leadership, government. This is a hard time, but also a time of renewal and hope. By taking a small step to make our cities better and more livable, you never know if you might be opening the door to the next person pursuing their dreams.

ABOUT THE AUTHOR

Joshua Benaim is the Founder of Aria, an award-winning real estate company, an operatic baritone, and the author of *Real Estate, A Love Story: Wisdom, Honor, and Beauty in the Toughest Business in the World*.

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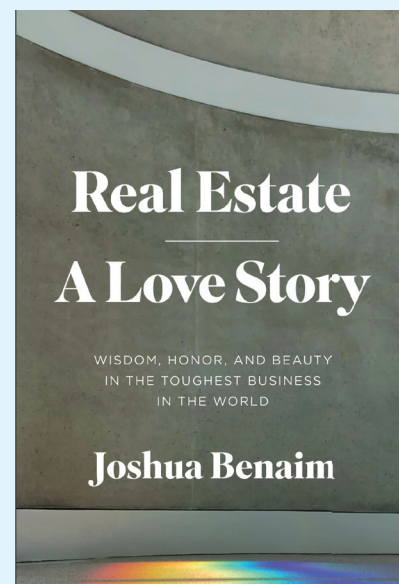
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This article has been adapted from *Real Estate: A Love Story* by Joshua Benaim, released in June 2021. To learn more, visit realestatealovestory.com.



By taking a small step
to make our cities better
and more livable, you
never know if you might
be opening the door to
the next person pursuing
their dreams.

SINGLE FAMILY, MULTIPLE QUESTIONS



By **Gleb Nechayev, CRE**
Head of Research and Chief Economist
Berkshire Residential Investments

Institutional ownership in single-family rentals accounts for less than 5% of the segment, but answers to key questions could start to change that balance.

The single-family rental (SFR) market emerged as a rapidly growing segment for institutional real estate investment in the aftermath of the housing bust and the Great Recession of 2008 and 2009. And while institutional ownership in SFR still accounts for less than 5% of the total unit count in the segment, it is expected to continue expanding as more private and publicly traded owners/operators enter this space in the next few years.

The article addresses ten key questions institutional investors should consider regarding the relative size of this segment nationally and across major markets, including means to understand aggregate supply/demand balance, typical resident and unit profiles, and demographic tailwinds supporting the outlook.

1. HOW LARGE IS SFR DEMAND NATIONALLY?

SFR demand is estimated to be between 14.5 and 15.1 million units, or 32.9%–33.8% of total rental demand. From the perspective of residential mortgage lending, however, the segment also includes small multifamily properties (2–4 units per structure), which are estimated to capture another 7.6–7.8 million renters, or 17.3%–17.5% of the total demand. The estimated market value of today's SFR market is about US\$4.5 trillion, and about US\$6.5 trillion if including rental properties with 2–4 units.

EXHIBIT 1: SFR DEMAND BY HOUSING STRUCTURE TYPE

Sources: American Community Survey, American Housing Survey, Berkshire Research.

UNITS IN STRUCTURE	RENTER-OCCUPIED UNITS, MILLIONS		% TOTAL	
	ACS	AHS	ACS	AHS
1	14.5	15.1	32.9	33.8
2-4	7.6	7.8	17.3	17.5
5+	20	20.1	45.4	44.9
OTHER*	1.9	1.7	4.4	3.8
TOTAL	44.1	44.6	100	100

* Other: Manufactured/mobile homes, trailers, boats, RVs, vans, etc.

2. HOW DOES THE SHARE OF SFR DEMAND VARY ACROSS MARKETS?

The composition of rental demand varies widely across the country. Across major markets, the SFR share of rental demand ranges from less than 6% in New York to 47% in Riverside, California (Inland Empire). At the same time, the share of rental demand accounted for by properties with 2–4 units are among the highest in the most mature markets (especially on the East Coast) where it is about 35% in Newark and Boston, in contrast to Washington, DC, where it is less than 7%; or Houston, Denver, Charlotte, or Miami, where it is under 9%.

EXHIBIT 2: SHARE OF RENTER-OCCUPIED STOCK BY UNITS IN STRUCTURE (%)

Sources: American Community Survey, Berkshire Research.

	TOP 5	TOP 10	BOTTOM 10	BOTTOM 5
	SHARE OF RENTER-OCCUPIED STOCK BY UNITS IN STRUCTURE, %			
MARKET	1	2-4	5+	OTHER
RIVERSIDE	47	13	35.4	4.5
SACRAMENTO	42.4	13.8	42	1.8
CHARLOTTE	40.1	8.4	44.7	6.7
LONG ISLAND	38.4	22.4	38.7	0.5
PHILADELPHIA	38	23.4	38.4	0.2
LAS VEGAS	37	16.8	44.1	2.1
PHOENIX	36.9	11.7	47.3	4.1
ATLANTA	36.2	8.7	51.3	3.8
PITTSBURGH	35.4	19.9	42.1	2.6
BALTIMORE	35.2	10.3	54.1	0.4
ORLANDO	33.9	11.2	51.1	3.8
OAKLAND	33.6	17	48.5	0.8
FORT WORTH	33.4	13	50.6	2.9
RALEIGH	33.4	10.4	49.6	6.6
TAMPA	33	12.1	48.2	6.7
SAN ANTONIO	33	13.9	49.1	4
SAN DIEGO	32.8	9.6	55.3	2.2
CHARLESTON	32.2	10.8	46.6	10.4
NASHVILLE	31.6	12.7	50.2	5.5
WEST PALM BEACH	30.7	16.2	50.4	2.7
SAN JOSE	30.5	12.8	55.4	1.2
SALT LAKE CITY	28.8	15	54.5	1.7
DENVER	28.7	8.3	62	1.1
ORANGE COUNTY	28.5	17.5	52.1	1.9
PORTLAND	28.3	15.4	54.2	2.1
HOUSTON	27.5	8.1	60.6	3.8
MIAMI	27.3	8.6	62.9	1.2
LOS ANGELES	27.1	14.3	57.7	0.9
DALLAS	25.2	9.1	63.9	1.8
SEATTLE	25	11.9	61.8	1.3
AUSTIN	24.8	12.7	59.8	2.8
WASHINGTON, DC	24.7	6.8	67.8	0.8
MINNEAPOLIS	22.8	9.7	66.7	0.8
FORT LAUDERDALE	21.7	16.2	60.4	1.7
CHICAGO	17.2	27.7	54.6	0.5
SAN FRANCISCO	16.8	20.5	62.4	0.4
NEWARK	15	35.1	49.6	0.3
BOSTON	12.5	34.7	52.5	0.4
NEW YORK	5.8	23.1	70.9	0.2
40 Markets	29.6	14.9	53	2.5
US	32.9	17.3	45.4	4.4

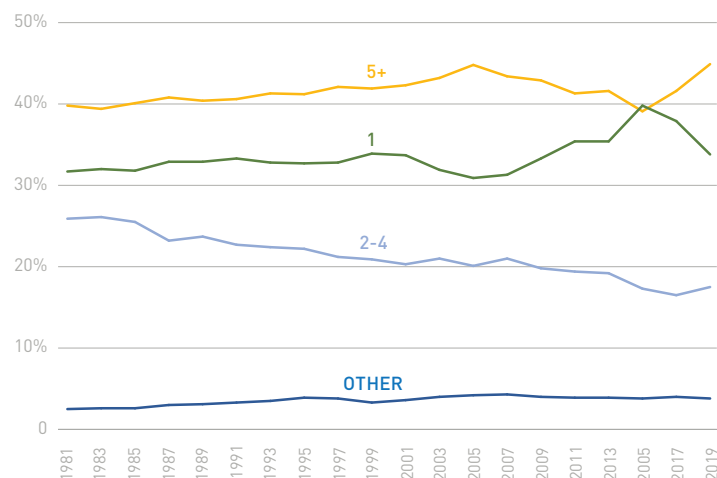
3. HOW MUCH HAS NATIONAL SFR DEMAND CHANGED OVER TIME?

The SFR share of the national rental demand has averaged 33.5% over the last forty years and is estimated to be slightly above that figure now.

SFR demand fluctuates substantially with the housing cycle: its share dropped to about 31% in 2005 as homeownership peaked, but then soared to almost 40% in 2015 as homeownership was near its bottom. This is not surprising considering that most of the segment is owned by individual investors who try to sell such properties when home prices are high and buy when prices are low. In contrast, the share of rental demand accounted for by properties with 2–4 units has been largely trending down since the 1980's as many properties were lost to obsolescence or demolition.

EXHIBIT 3: SHARE OF RENTER-OCCUPIED INVENTORY (%)

Sources: American Housing Survey, Berkshire Research.

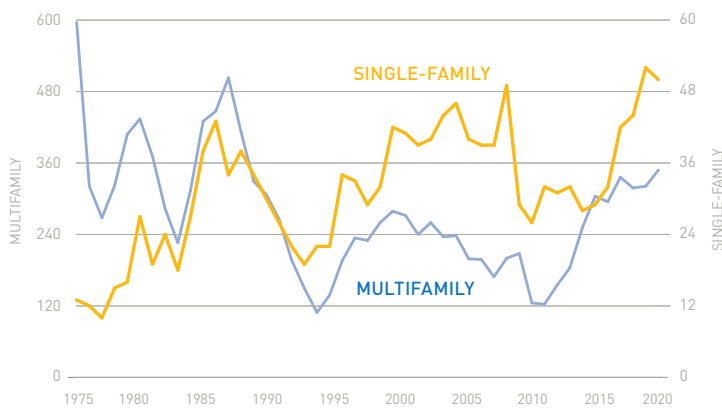


4. HOW MANY NEW SFR UNITS ARE BEING BUILT EACH YEAR AND HOW MANY ARE BEING CONVERTED FROM OWNER-OCCUPIED TO RENTER-OCCUPIED?

While SFR is the second largest rental demand segment after multifamily with five or more units, its annual volumes of new construction are relatively low. For example, over the last thirty years, completions of single-family homes for rent averaged just 35,000 units per year (about 0.3% of the existing inventory), compared to 260,000 units (1.7% of the inventory) for apartments. In fact, new SFR construction is basically just replacing inventory lost annually to demolitions in this segment. However, this does not mean that SFR supply is staying constant, as hundreds of thousands of single-family homes are being converted each year from being owner-occupied or vacant-for-sale to being renter-occupied or vacant for rent (although the opposite also takes place depending on housing market conditions).

EXHIBIT 4: NEW RESIDENTIAL COMPLETIONS INTENDED FOR RENT (THOUSANDS)

Sources: US Census Bureau, Berkshire Research.



5. HOW DOES THE DISTRIBUTION OF SFR BY YEAR BUILT COMPARE TO APARTMENTS?

SFR inventory is much older relative to apartments, with the median year built for detached SFR of 1967 compared to 1981 for rental multifamily with five or more units. The rapidly aging SFR stock is also contributing to the wide supply/demand imbalance in the sector as thousands of such units are lost to obsolescence each year. As a result, SFR replacement demand rate is also higher relative to apartments.

EXHIBIT 5: RELATIVE AGE OF SINGLE-FAMILY INVENTORY.

Sources: American Housing Survey, Berkshire Research.

YEAR BUILT	UNITS IN STRUCTURE		
	1	2 - 4	5+
← 1970	51	52.3	32.8
1970-1979	13.5	16	15.6
1980-1989	11.5	12.2	15.6
1990-1999	8.8	8.1	11.3
2000-2009	11.4	8.2	13.6
2010-2019	3.9	3.3	11.2
TOTAL	100	100	100

The rapidly aging SFR stock is also contributing to the wide supply/demand imbalance in the sector as thousands of such units are lost to obsolescence each year. As a result, SFR replacement demand rate is also higher relative to apartments.

6. HOW DO SFRS AND APARTMENTS COMPARE IN TERMS UNIT SIZE AND RENT?

Nationally, the average size of an SFR home is estimated to be 1,555 SF/144.5 SM compared to 944 SF/87.7 SM for apartments, although these figures do vary widely across markets, submarkets, and product types. While the average monthly cost for an SFR unit is higher relative to apartments, SFR homes are more affordable on a per-square-foot basis with the average of US\$0.93 compared to US\$1.40 for apartments overall, but more comparable to a typical garden-style unit in the suburbs.

EXHIBIT 6: MONTHLY COST PER SQUARE FOOT/PER UNIT

Sources: American Housing Survey, Berkshire Research.

UNITS IN STRUCTURE	SQ FT PER UNIT	MONTHLY COST, \$	
		PER SQ FT	PER UNIT
1	1,555	0.93	1,186
2-4	1,124	13	1,156
5+	944	1.40	1,109
Other	1,074	0.76	811
TOTAL	1,187	1.10	1,071

7. HOW DO SFR UNITS AND APARTMENTS COMPARE IN TERMS OF RESIDENT PROFILE?

Given a notably larger square footage of an SFR house relative to a typical apartment, it is not surprising that the segment derives much of its demand from families with children. For example, more than 41% of renters aged 45–54 chose to live in single-family homes compared to the 38% with a preference for apartments. In contrast, more than half of renters age 25–29 rent apartments compared to about 28% residing in single-family homes.

As a result, households in prime family age groups (35–64) account for 57% of SFR demand, compared to 45% of demand for apartments (five or more units in structure). However, it is important to recognize that while households under the age of 35 and households over the age of 65 do have higher propensities to rent apartments, these groups do rent single-family homes as well, just as many middle-aged households rent apartments.

EXHIBIT 7: RENTER DEMAND COMPOSITION BY AGE AND BY UNITS IN STRUCTURE

Sources: American Housing Survey, Berkshire Research.

AGE	SHARE OF RENTER-OCCUPIED UNITS BY UNITS IN STRUCTURE, %				
	1	2-4	5+	OTHER	TOTAL
← 25	6.1	9.7	10.1	7.9	8.6
25 - 29	10.4	12.4	13.9	11.5	12.4
30 - 34	12.7	12.2	11.8	10.7	12.1
35 - 44	22.3	19.4	17.5	24.6	19.7
45 - 54	20	16.2	13.8	15.2	16.4
55 - 64	15	16.3	13.6	17.7	14.7
65 - 74	8.4	8.1	9.5	7	8.8
75+	5.1	5.8	9.8	5.4	7.4
TOTAL	100	100	100	100	100

AGE	SHARE OF RENTER-OCCUPIED UNITS BY HOUSEHOLD AGE, %			
	1	2-4	5+	OTHER
← 25	24	19.8	52.7	3.5
25 - 29	28.4	17.6	50.5	3.5
30 - 34	35.4	17.6	43.7	3.3
35 - 44	38.2	17.2	39.9	4.7
45 - 54	41.4	17.3	37.8	3.5
55 - 64	34.4	19.4	41.7	4.6
65 - 74	32.3	16	48.7	3
75+	23.4	13.8	60	2.8
TOTAL	33.8	17.5	44.9	3.8

EXHIBIT 8: RENTER DEMAND COMPOSITION BY HOUSEHOLD SIZE AND BY UNITS IN STRUCTURE

Sources: American Housing Survey, Berkshire Research.

SHARE OF RENTER-OCCUPIED UNITS BY UNITS IN STRUCTURE, %					
PERSONS PER HOUSEHOLD	1	2-4	5+	OTHER	TOTAL
1	24	38.7	49.4	29.4	38.2
2	27	28.8	28.4	27.6	28
3	18.5	14.9	11.9	21.9	15
4	15.6	9.8	7	14.4	10.7
5	8.4	5.1	2.6	6.6	5.1
6	4.2	1.5	0.6	NA	2
7+	2.3	1.2	0.2	NA	1.1
TOTAL	100	100	100	100	100

SHARE OF RENTER-OCCUPIED UNITS BY UNITS IN STRUCTURE, %				
PERSONS PER HOUSEHOLD	1	2-4	5+	OTHER
1	21.3	17.8	58.1	2.8
2	32.7	18.1	45.6	3.6
3	41.7	17.5	35.5	5.3
4	49.7	16.1	29.3	4.9
5	55.3	17.3	22.6	4.7
6	72.1	13.8	14.1	NA
7+	72.6	18.9	8.4	NA
TOTAL	33.9	17.6	44.9	3.7

8. DO SFRS COMPETE WITH APARTMENTS?

While SFRs and apartments appeal to different age demographics and household sizes, there is a tangible overlap between the two segments in terms of demand they end up capturing. About 30% of renters under the age of 35, and households with one to three people, live in single-family homes while about 40% of renters age 35–64, and 25% of renter households with four people, live in apartments. In other words, the two segments can and often do compete for significant portions of rental demand. The degree to which SFR and apartments compete does vary across markets, however. The higher the share of rental demand already captured by single-family homes in a market, the greater the competitive pressure on apartment demand, and vice versa.

Another reason SFR competes with apartments is that while each segment does operate under its own set of real estate fundamentals, both are closely linked to broader housing market dynamics and share common drivers such as relative affordability of home-buying or household income. Rents in the two segments tend to be closely connected across markets over longer time periods. Considering that SFR and apartment properties share and directly compete for a significant portion of demand, they also impact each other from the supply side. In a market where combined SFR and apartment supply is too high relative to the overall number of rental households, both segments are likely to have elevated vacancy rates, and vice versa.

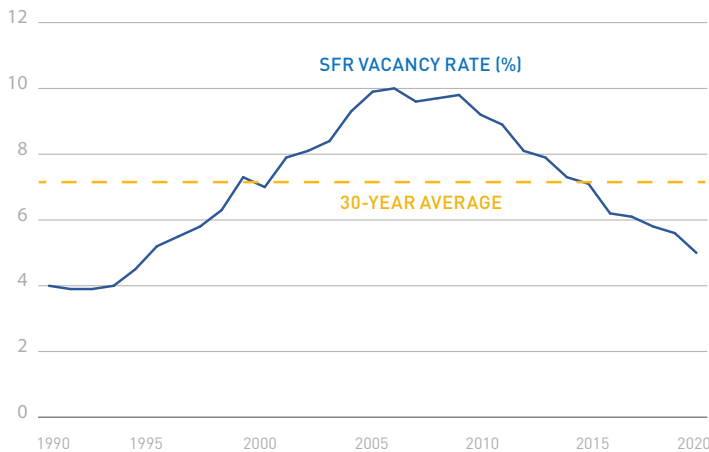
About 30% of renters under the age of 35, and households with one to three people, live in single-family homes while about 40% of renters age 35–64, and 25% of renter households with four people, live in apartments.

9. WHAT IS THE CURRENT SFR SUPPLY/DEMAND BALANCE?

The SFR segment remains extremely tight by historical standards. As Exhibit 9 shows, SFR vacancy rates dropped to 5% in 2020, the lowest level since the early 1990's, and about 200 BPS below the long-term historical average. This implies an SFR supply shortage of more than 300,000 units—a deficit that will take years to close through new SFR construction at the current pace.

EXHIBIT 9: SFR VACANCY RATE (%)

Sources: US Census Bureau, Berkshire Research.



The aggregate SFR supply shortage is only part of the story, however. There is a major disconnect between the current distribution of renter households by size relative to the distribution of existing rental inventory by the number of bedrooms. As of 2019, renter households with four or more people accounted for 19% of the total, whereas rental units with four or more bedrooms accounted for about 8%. The current distribution of the rental inventory by the number of bedrooms relative to the composition of underlying demand makes the existing SFR supply deficit even more severe.

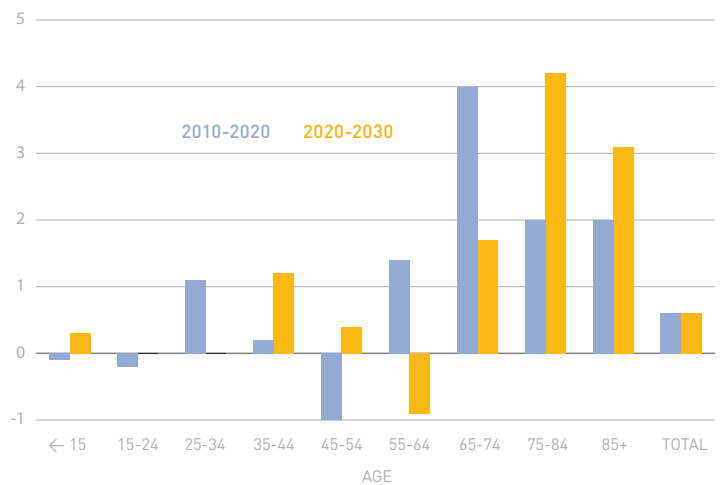
The shifting age composition of the US population should benefit SFR demand in this decade more as compared to the last one.

10. HOW WILL CHANGING AGE DEMOGRAPHICS IMPACT SFR DEMAND GOING FORWARD?

The shifting age composition of the US population should benefit SFR demand in this decade more as compared to the last one. As discussed earlier, household cohorts with higher propensity to rent single-family (rather than apartments) fall within 35–64 years of age. The latest projections indicate that in contrast to the last decade (2010–2020), there will be much stronger growth in the population aged 35–44 (accelerating to more than 1% per year) and 45–54 (turning positive). At the same time, growth in population age 55–64 is expected to turn negative, but this decline will be more than offset by the two other age groups.

EXHIBIT 10: AVERAGE ANNUAL CHANGE IN POPULATION (%) BY AGE

Sources: US Census Bureau, Berkshire Research.



From a purely demographic perspective, the shifting age composition in this decade will also benefit SFR demand more than multifamily, which will face a headwind of a slight decline in population age 25–34.

In total, population age 35–64 should increase by 360,000 per year in this decade as compared to about 220,000 per year from 2010–2020. Moreover, in this decade, growth in the 36–64 age range will be driven primarily by the population aged 35–44 (who are more likely to rent) as compared to those aged 55–64 the last decade.

From a purely demographic perspective, the shifting age composition in this decade will also benefit SFR demand more than multifamily, which will face a headwind of a slight decline in population age 25–34.

SFR is a major part of the US rental housing market that will continue to attract large capital. Understanding its fundamental drivers, cyclical and structural trends, as well as its links to other housing segments, multifamily in particular, will be key in developing viable long-term strategies for institutional investment.

ABOUT THE AUTHOR

Gleb Nechayev, CRE, is Head of Research and Chief Economist at Berkshire Residential Investments, a people-focused investment management company known for its vertically integrated organization and experience in US residential real estate.

NOTES

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INSTITUTIONALIZING SINGLE-FAMILY



By Jonathan Ellenzweig
Chief Investment Officer
Tricon Residential

Over the past two decades, the single-family rental industry has evolved into an institutional-caliber asset class—so where is the sector going next?

Over the past decade, the US single-family rental (“SFR”) industry has matured from a largely mom-and-pop cottage business to a professionally managed, institutional-caliber asset class that fills a pronounced gap in the US housing continuum. Of course, before the GFC there were always SFR homes; however, these were typically owned and managed by individuals or small local operators, who were often more focused on near-term cash flow rather than customer service and providing a high-quality product. In fact, in 2005 there were approximately 13 million occupied SFR homes,¹ or 34% of the entire rental housing stock in the US.²

The GFC served as a catalyst for the institutionalization of the industry, as large and newly formed technology-enabled owner/operators were able to acquire distressed and neglected homes, renovate them to a high standard, and rent them to families looking for quality rental housing and a high level of customer service. In many instances, these operators transformed what may have been the worst home on the street into the best home on the street. This served to benefit both local homeowners, as it improved the quality of their neighborhood, and renters, who benefited from increased housing options, and served as the genesis of today’s SFR industry.

In spite of strong resident demand and high levels of customer satisfaction, the SFR industry remains very small and concentrated among a handful of operators – in fact, less than 2% of the country’s approximately 16 million SFR homes are owned by institutional owners.³

DEMOGRAPHIC TAILWINDS SUPPORT SFR

One of the significant drivers in the growth of the SFR industry is demographics, especially the aging of the millennial generation (born from 1981 to 1996). This cohort of 72 million people⁴ fueled a major growth in demand for multifamily housing over the past 10 years and is now entering the prime period for family formation. As a result, from 2018 to 2028, more than 12 million net new households are expected to be created in the US⁵ compared to approximately 10 million formed from 2008 to 2018.⁶ Whereas homeownership was top of mind for many predecessor generations, a combination of tighter mortgage lending restrictions, heightened student debt, sizable down payment requirements, and the desire to spend money on experiences rather than possessions are all factors strengthening the preference of many millennials to rent homes, rather than own.

In addition to millennials, the country’s 69 million baby boomers (born from 1946 to 1964)⁷ are likely to rely less and less on retirement homes, and have exhibited a strong preference to age in place. The results of a survey by the American Association of Retired Persons (AARP) in 2018 found that 76% of older Americans would prefer to stay in their existing home as they aged or move to a similar suburban home.⁸ This is a primary reason why the US “mover rate,” which measures the rate at which households move to other homes, has decreased over the past several years from 13% in 2010 to 9.3% in 2020,⁹ further increasing demand for suburban housing and reducing available rental supply.

These demographic tailwinds, accelerated by fallout from the COVID-19 pandemic, have led to an increased preference for detached single-family homes, which offer more indoor and outdoor space, as well as access to common suburban amenities like neighborhood parks. Even as the economy and country open back up, there has been a measurable shift toward work-from-home (either full-time or part-time), which often requires additional space for home offices or “Zoom rooms,” and a reduced need to commute every day has made certain suburbs more attractive, as residents are willing to bear a longer commute for a couple of days per week, compared with the more traditional five-day in-office workweek.

PROVIDING SFR RESIDENTS WITH SUPERIOR PRODUCT AND SERVICE OFFERINGS

The evolution of SFR from mom-and-pop to professional management has provided residents with meaningful lifestyle improvements across a number of dimensions. As SFR operations have continued to expand and evolve over the past decade, significant investment has been made in technology-enabled service offerings that are designed to save residents both time and money, while enhancing the efficiency of operating platforms.

At every step of the resident life cycle, property managers have found innovative ways to serve their residents, relieving them of many of the burdens associated with leasing or owning a home, such as:

- **Leasing:** Using cutting edge websites and new self-showing technology, prospective residents can lease a home quickly, efficiently and with minimal distraction. With a few clicks, residents can view detailed information on a particular home online, take a virtual tour, book an in-person home visit, and complete an application. Digital locks, facial recognition, and smart phone technology have also revolutionized the leasing experience, as residents can now enter homes using self-showing apps on their own schedule and at their own pace, without the need for a leasing agent. Many residents of SFR homes can actually go from finding a home online to move-in in a matter of days, in a predominantly “virtual” experience.
- **Home Quality and Energy Efficiency:** Institutionally owned and managed SFR homes are typically renovated to a high standard, and often include energy-efficient appliances, newer-vintage roofs, windows, and insulation, as well as smart home technology such as smart thermostats, leak detection sensors, smart locks, and other connected tools. These features, combined with high-grade and environmentally friendly paint, flooring, and carpets, provide residents with an incredible move-in and lifestyle experience, as if they are moving into a brand-new or freshly renovated home, with improved air quality and circulation, as well as reduced utility expenses compared to a similar vintage but unrenovated home.
- **Ongoing Maintenance:** In many ways, technology-enabled large-scale managers of SFR homes have revolutionized the home maintenance process. Instead of waiting for individual vendors to service homes, many large operators have built a robust staff of in-house maintenance technicians who can be dispatched on short notice to tend to day-to-day repairs. These technicians are usually very personable, have a background in home repair and construction, and are equipped with service vehicles that are well stocked with numerous parts for common plumbing, HVAC, and handyman issues. As a result, home repairs can usually be completed by one technician in a single visit, as opposed to requiring multiple visits from multiple vendors, which can cause frustration and waste valuable time for SFR residents.
- **Superior Customer Service:** State-of-the-art call centers in the SFR industry leveraging Interactive Voice Agents (IVA), enable residents to quickly resolve a wide range of issues, either through “self-service” functionality or by speaking to a live agent. These range from submitting a maintenance service request, to asking about a renewal notice or inquiring about moving to a larger rental home in the same neighborhood. The general goal across the industry is to achieve a high level of customer satisfaction while reducing stress and time wasted.

In many ways, renting an institutionally managed single-family home today is like living in a full-service apartment or hotel, and certainly more convenient and compelling compared to renting from a non-institutional landlord, or even homeownership in some cases. Professional property management, combined with high-quality renovations and worry-free maintenance, provides residents with more free time to spend with family and friends.

SFR: A KEY COMPONENT OF THE INSTITUTIONAL REAL ESTATE PORTFOLIO

Traditionally, the composition of an institutional real estate portfolio has relied heavily on office and retail – two sectors that continue to experience major disruptions worldwide. In fact, based on PREA’s 2020 survey data, office and retail comprised approximately 55% of portfolios, with residential making up only 23%,¹⁰ despite the fact that the value of all single-family housing in the US (on a standalone basis) is over \$35 trillion,¹¹ more than double the size of the traditional commercial real estate market (including multifamily, office, retail, industrial, hospitality, and others).¹²

Given current trends, recent performance, and uncertainty regarding the future usage of office and retail space, the 2021 AFIRE International Investor Survey reveals that institutional investors are keenly focused on increasing their exposure to rental housing, with 86% intending to increase exposure in the next three to five years (ranking first in the survey). Meanwhile, office and retail continue to cool.

In allocating capital to an institutional real estate portfolio, investors have historically taken the view that “residential” or “housing” is essentially 100% “multifamily rental.” However, as the SFR industry (and other housing-related industries, such as manufactured housing, student housing, and senior housing) have matured, many investors are looking at these strategies as part of an expanded “rental housing bucket.” In some instances, investors are allocating more than 30% of their capital to this sector, using this broader definition.

A major driver of this allocation and definition change is investment returns. Over the past five years, housing asset classes have tended to outperform other traditional real estate asset classes, with SFR (12.6% annual return over five years), senior housing (8.8%), and multifamily (5.4%) at or ahead of office (5.7%) and shopping malls (1.6%).¹³ Given the large size and relative superior performance of the housing asset classes, institutional investors are likely to benefit from expanding their historical portfolio allocation to include these housing asset classes.

INCREASED CAPITAL FLOWING TO SFR

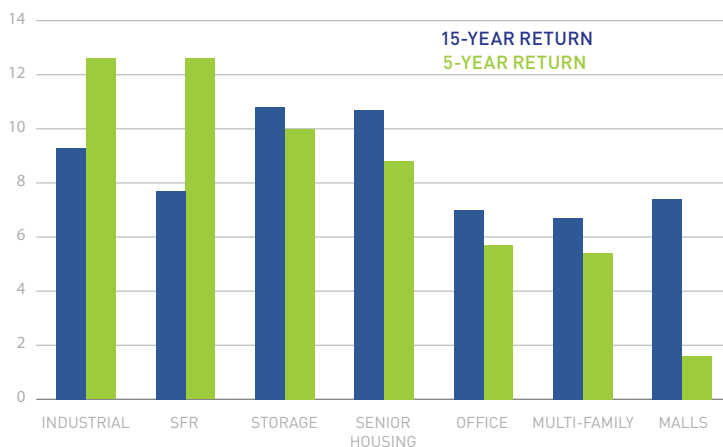
With demand for single-family housing outpacing supply, and demographic trends, combined with the recent pandemic, accelerating the appetite for suburban living in detached homes, the potential for long-term growth has continued to spark the interest of institutional investors. During the first quarter of 2021 alone, institutional equity investments or commitments to the SFR space exceeded US\$6 billion. This is more than half of the US\$10 billion committed to the sector over the past three years.¹⁴ Comparatively, in Q1 2021 office and retail investment volume each decreased over 40% year over year.¹⁵

The stability of the housing market and predictable cash flow streams from rental income also make SFR a compelling asset class for public and private debt investors. Since the first SFR securitization in 2013, there have been 93 debt offerings for more than US\$45 billion of proceeds.¹⁶ Earlier issuances tended to be floating rate private label securitizations; however, the vast majority of recent transactions have been fixed rate. Leverage points vary by offering, but typically range from 65% to 75%, with some offerings approaching 87.5% LTV or higher. Demand for SFR securitization remains strong in 2021, with each new securitized debt issue well oversubscribed by both traditional and new investors, another example of the strong institutional demand in the sector.

Institutional investors are keenly focused on increasing their exposure to multifamily, with 86% intending to increase exposure in the next three to five years.

EXHIBIT 1: PRIVATE MARKET RETURNS IN SFR, 2006–2020

Source: Green Street Real Estate Analytics, US SFR Outlook, February 3, 2021



Demographic shifts,
deteriorating ownership
dynamics and the absence
of housing inventory
have continued to drive
SFR demand and fuel
institutional investment.



A RESILIENT FUTURE

Demographic shifts, challenging homeownership dynamics and the shortage of housing inventory have continued to drive SFR demand and fuel institutional investment. The maturation and institutionalization of SFR have led to improved property management, an increase in the affordable housing stock, flexibility for American households, and the development of in-demand build-to-rent communities – all while generating strong returns to investors.

BUILD-TO-RENT: A COMPELLING RENTAL HOUSING OPPORTUNITY

A relatively new and exciting niche within SFR is build-to-rent (BTR), whereby new communities of homes are being built and rented across the US. As of March 2021, John Burns Real Estate Consulting has been tracking over 300 new communities in their proprietary database that have either been built or are under development.¹⁷ Although this seems modest on the surface, it has been growing exponentially over the past two years, and has plenty of runway when taken in the context of historical annual housing starts of 800,000–1.2 million.

From a resident perspective, living in a BTR community means enjoying a newly built and professionally managed rental home complete with embedded smart technology systems and state-of-the-art design, and often with a variety of amenities typically associated with multifamily or master planned community living, such as neighborhood pools, indoor and outdoor gathering spaces, fitness facilities, and dedicated dog parks.

BTR investors benefit from increased efficiencies through higher retention, lower turnover, and lower repair and maintenance costs (given home warranty coverage). In turn, investors could potentially earn higher returns compared to new multifamily developments. In fact, this is a major reason why BTR has been gaining popularity among investors, who see this asset class fitting in neatly between multifamily and scattered SFR homes, providing a gateway to the broader SFR sector.

ABOUT THE AUTHOR

Jonathan Ellenzweig is Chief Investment Officer for Tricon Residential, which owns and operates approximately 31,000 single-family rental homes and multifamily rental units in 21 markets across the United States and Canada, managed with an integrated technology-enabled operating platform.

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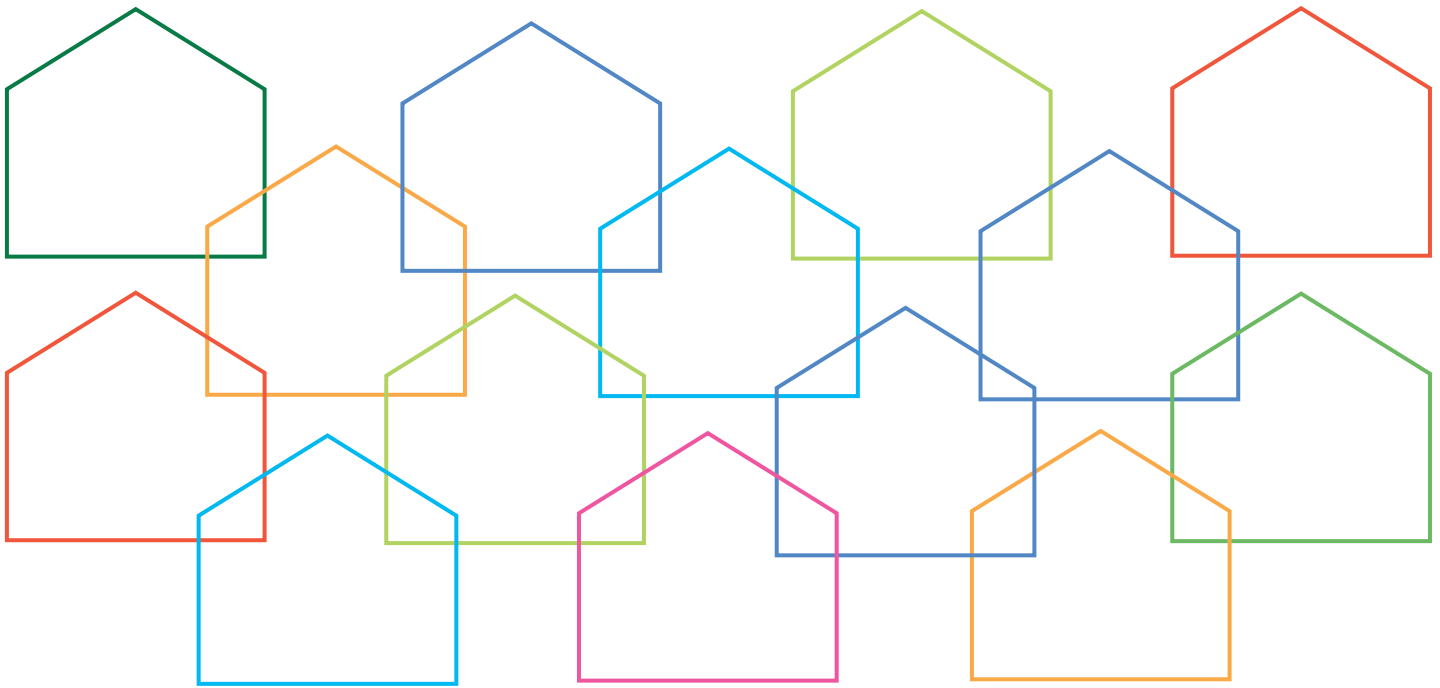
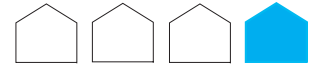
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BUILD-TO-RENT BOOM



By John Thomas
Partner, Real Estate Practice Leader
Squire Patton Boggs

Stacy Krumin
Partner, Real Estate Practice, Global Board Member
Squire Patton Boggs

The future is bright for build-to-rent and institutional investors are increasingly looking at investing in this sector.

Build-to-rent is hot. Demographics; economic changes; generational shifts in desires, values and priorities; and a pandemic have come together to accelerate growth in what was already one of the fastest growing classes of real estate investment.

Demand for single-family rental homes continues to exceed supply, partly fueled by a surge in demand for rental product from high-income renters (those with an annual household income exceeding US\$75,000). Over the past year and a half, this sector has attracted nine- and 10-figure investments from such well-known investors as JP Morgan Asset Management, Blackstone Real Estate Income Trust, Nuveen Real Estate, Walton Street Capital, and CalSTRS, as well as developers such as Brookfield, Lennar, Taylor Morrison, and Toll Brothers, among many others. *The Washington Post* reported in May 2021 that record occupancy rates are allowing landlords to aggressively increase rents by an astronomical 8% to 10%.¹

In order to take advantage of this expanding market, developers are building entire communities of rental homes that run on a multifamily management model offering shared open-air amenities, on-site leasing and property management, and predictable and lower maintenance costs. The communities are much more similar to traditional, gated residential neighborhoods with desirable amenities, such as swimming pools, tennis courts, dog parks, and professional management, without burdening residents with the time and expense of home maintenance, homeowner association costs, or a large mortgage. In addition, investors and developers are also scooping up scattered, infill-type lots for building more single-family rental (SFR) product.

BUILD-TO-RENT DRIVERS

During the GFC, institutional investors bought existing, foreclosed single-family homes in bulk at substantial discounts. The investors began to rent them out at attractive yields. Eventually home prices recovered, driving down the rate of return. The maintenance issues that come with older housing, stock, and operational challenges of owning and managing homes across different geographies, pointed these early investors toward a new model—building large communities of single family homes for rent rather than sale.

According to the Harvard Joint Center for Housing Studies' Rental Housing 2020 report, the number of all SFRs—both previously existing homes and new build-to-rent units—grew 18% from 2008 to 2018 to 15.5 million units, or about a third of all rental units nationally.²

There is a large number of “renters-by-choice” millennials, Gen Xers, and downsizing baby boomers who want the space of a single-family home, but without the maintenance obligations of owning or the shared walls, hallways, and limited private outdoor space of most multifamily communities. Millennials with large student loan debt often cannot afford the down payment for a home, or prefer spending disposable income on other things such as vacations. But, as they have aged, they are looking for more space to spread out with their families and pets. According to the National Multifamily Housing Council, tenants who rent single-family homes come from all age groups, with more rental residents living in single-family houses than multifamily units and apartments.³ Many baby boomers are moving to be close to grandchildren and want the flexibility to follow their children should they move, without the burden of selling and buying a home again.

The decision to rent rather than buy is typically not impacted by income or interest rates. More often, it is a result of lack of down payment, undesirable credit score, the strains of student and consumer debt, or more simply, a desire for flexibility. In addition, changes in the tax code (in particular, the limitation on deductibility of state and local taxes) have made homeownership less advantageous.

Add a pandemic to this mix, driving more work from home arrangements and the need for additional space to function as an office. Another reaction to the pandemic has been an atypical number of people moving out of urban areas to less densely populated suburbs where single-family homes are more common.

Together, this makes build-to-rent one of the fastest growing sectors of the US housing market.

While major homebuilders are still primarily focused on building and selling, several major players—namely Lennar, DR Horton, LGI, Taylor Morrison, and Toll Brothers—are moving into the build-to-rent space. There are sound economic reasons for this move. When selling a brand-new home, the builder typically offers the buyer a range of choices of colors, materials, and finishes to personalize one's home. This step is skipped when building homes for rent, thus reducing time and costs for construction. Eliminating this level of choice allows builders to build the same or similar homes all the way through the subdivision, which creates efficiency and saves money. Overall, returns for a build-to-rent community can often exceed a for-sale project.

THE OPPORTUNITY

While the build-to-rent sector is hot, investors should take care before making their investment decision. While there are many similarities to investing in multifamily housing, this sector has unique challenges.

Build-to-rent communities are attractive for investors because tenants stay in SFRs longer compared to multifamily or apartment rentals and there are lower transaction costs compared to buying one-off homes listed on the multiple listing service. That said, an SFR among a community of owner-occupied homes may be a more attractive product for renters due to perceptions of greater stability and investment in the neighborhood.

Freddie Mac reports that SFR growth is expected to outpace multifamily, office, retail, storage, and hospitality growth by 2022.⁴

“Occupancy levels are at a thirty-year high,” says Don Walker, Managing Principal and Chief Financial Officer for John Burns Real Estate Consulting, based in San Diego, California.⁵ Other developers say that renters of this type of product are “stickier” than typical apartment renters because they see their rental home as more of a long-term decision. Renewal rates are often higher than those for apartments. Rent increases have consistently outpaced those in conventional apartments, and sometimes the margin is quite wide.

Finally, should the investor decide to pull cash out after a few years in the rental business, they can easily refinance or sell off individual properties, which can be a huge advantage over multifamily investing.

WHAT TO LOOK FOR IF INVESTING

Build-to-rent has seen the most rapid growth in the Southwest, Southeast, and Sunbelt markets. Large tracts of land available at more affordable price points, combined with solid economic and population growth, are the most attractive areas for this investment. These regions have seen a significant population influx with the pandemic. How long that trend continues will impact build-to-rent opportunities.

Look for a well-researched market study of the competitive area to support the need for the project. Other data to collect should include population growth trends, job growth and opportunities, and the current rental property inventory for both traditional apartment projects and SFRs. Another consideration is the quality of the school district, as many of the tenants will have school-age children. Lastly, it is important to compare the estimated rental rates for the project and the rental rates of the anticipated competition along with projected net operating income, along with current and projected cap rates in order to evaluate exit strategies.

Investors should watch for challenges in terms of zoning and entitlements. Just as there is often push-back against multifamily, there can often be more pushback against rental homes than those that are built for-sale. This is particularly true in larger communities of rental homes.

The experience of the developer is another key concern. While the design of build-to-rent homes is similar to for-sale homes, experienced build-to-rent developers build the homes with long-term maintenance in mind. Choices such as carpet or tile flooring, and low-maintenance cabinet materials that cost more initially,

will save money over time. Developers also may pay more for appliances if they are going to last longer and require less maintenance.

Whether to build a community of SFRs or scatter them over lots in an area will impact your investment as well. While the scattered model may be more attractive for renters and offer an opportunity to invest in markets where large tracts of land may not be available, or there is local resistance to larger build-to-rent communities, this model also loses the economies of scale and ability to provide amenities offered by larger build-to-rent communities.

When looking at exit strategies, it is important to note whether the community is comprised of plotted lots, compared to a horizontal apartment model with multiple units on one lot. The ownership of amenities is also a factor. Individually, plotted lots allow more options for exit, such as selling individual units to the occupant or other investors, or a sale of the entire community. On the other end of the pole, a horizontal apartment model with multiple units on one lot limits your buyer pool to parties with the ability to purchase multiple units. Using a homeowner association model up front for the ownership of amenities (even though it will be solely controlled by the developer initially) also allows flexibility in your exit from the investment.

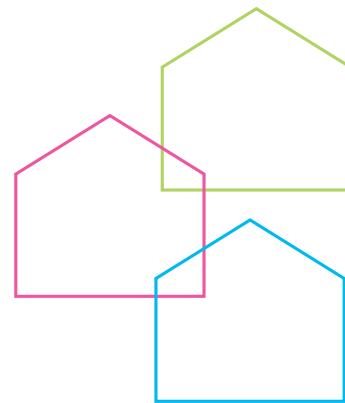
The future is bright for build-to-rent and savvy institutional investors will focus on developing a deep understanding market fundamentals and trends to find success in this growing sector.

ABOUT THE AUTHORS

Stacy Krumin is a Real Estate Practice Partner and John Thomas is a Real Estate Practice Leader and Partner at Squire Patton Boggs, a full-service global law firm providing insight at the point where law, business, and government meet.

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RECOVERING THE OFFICE



By Philip Conner
Head of US Real Estate Research & Strategy
Barings Real Estate

Ryan Ma
Managing Director, Real Estate Research
Barings Real Estate

While most agree that the office sector has a difficult road ahead, there is less consensus about future demand in the sector. What are the indicators investors should be tracking?

The US office market has been in a state of suspended animation since COVID-19 sent most office workers home more than a year ago. As one indicator of this, utilization rates for office buildings in Barings' portfolio and across most major US cities, as of June 2021, have started to creep higher from the sub-20% levels where they have been for most of the past year, but limited office leasing and sale transaction activity has deprived the market of meaningful price discovery for assessing the pandemic's impact on rents and prices.

Unsurprisingly, while few doubt the office sector faces a difficult near-term road ahead, there is far less consensus among real estate lenders and investors about future demand for office than any other property type.

Broader adoption of remote work will likely be a net negative for office demand going forward, but the uncertainty and differentiated landscape will create opportunity for discerning investors. The forced work-from-home (WFH) experiment during the pandemic has effectively compressed years of obsolescence into a span of about eighteen months, and both companies and workers

will increasingly have the ability to substitute technology for physical office settings. However, the top strategic priorities for most companies post-pandemic will not be terribly different from those before the pandemic—namely, growing earnings and attracting and retaining the best talent. So, while earnings objectives increase the likelihood that companies will find a way to leverage technology to reduce their real estate costs, the intensifying war for talent will continue to make the office important—perhaps even more important—as a place for collaboration, cultivating corporate culture, training, mentoring, socialization, and productivity.

For investors with or seeking office exposure, three drivers—(1) the transition to a hybrid workplace, (2) employment growth in science, technology, engineering, and mathematics (STEM), and (3) and the escalating war for talent—will shape office demand in the recovery ahead and ultimately determine which assets and markets will be winners and which will be losers.

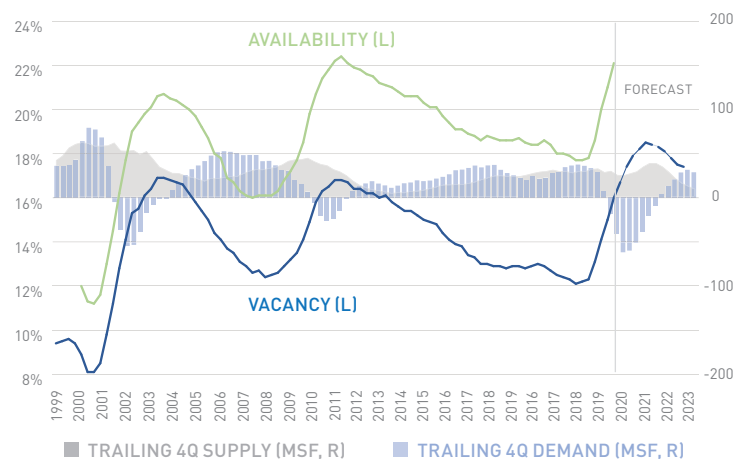
ASSESSING THE DAMAGE

The pandemic and lockdown measures meant to contain its spread have taken a serious toll on US office market fundamentals, and conditions in most markets will likely get worse before improving. The combined effects of a year with little or no new leasing, givebacks of space (including sublease offerings), and a cyclical peak in new construction have created a perfect storm, driving vacancy rates to the highest levels in more than a decade.

Office demand, as measured by net absorption, turned negative in the first quarter last year, and according to CBRE Econometric Advisors (CBRE-EA), has since grown to nearly -110 million SF/10.2 million SM, or more than twice the total during the GFC. With supply continuing to deliver and not expected to peak until next year, the overall US office availability rate, which includes occupied space available for sublease, has increased 440 BPS since year-end 2019 to 22.1%.

EXHIBIT 1: OFFICE FUNDAMENTALS HAVE DETERIORATED RAPIDLY

Source: CBRE-EA (Oxford Economics forecast scenario, Q1 2021)



While the severe hit to office market fundamentals makes sense in the context of the nearly three million office jobs lost in March and April 2020, the weak office demand forecasts are difficult to reconcile with the strong rebound in office-using employment since May 2020 and the positive outlook for office job gains going forward. CBRE-EA's forecasts anticipate another -36 million SF/3.34 million SM of negative net absorption over the remainder of 2021 against a forecast 1.1 million increase (per Moody's Analytics) in office-using jobs that will leave office employment slightly ahead of the pre-pandemic level. Viewed simply on the basis of occupied office stock, and after factoring in expected absorption and completions, the forecasts point to a 4.2% decline in occupied space at essentially the same (i.e., pre-pandemic) level of employment.

The COVID recession is fundamentally different from the early 2000's "tech wreck" and the "Great Recession" a decade later. However, a continuation of negative net absorption would be a departure from the two previous cycles, when absorption and office job growth turned positive around the same time. Office-using employment during the pandemic and GFC suffered a similar decline in absolute levels and as a share of total employment, but both the fall and the recovery in jobs from the pandemic shock have progressed much faster. Office-using employment during the GFC declined for 32 months before hitting bottom, then took another 44 months to regain the pre-GFC level. In the COVID downturn, office jobs reached a five-year low just two months into the pandemic, but have already recovered about 1.9 million (65%) of the jobs lost and, per Moody's Analytics, will recover to pre-pandemic levels by year-end 2021—just 22 months from the previous peak.

From 2010 to 2019, high-tech employment expanded by about 3.5% per year, more than double the 1.4% growth rate for the labor market overall.

A BIFURCATED RECOVERY

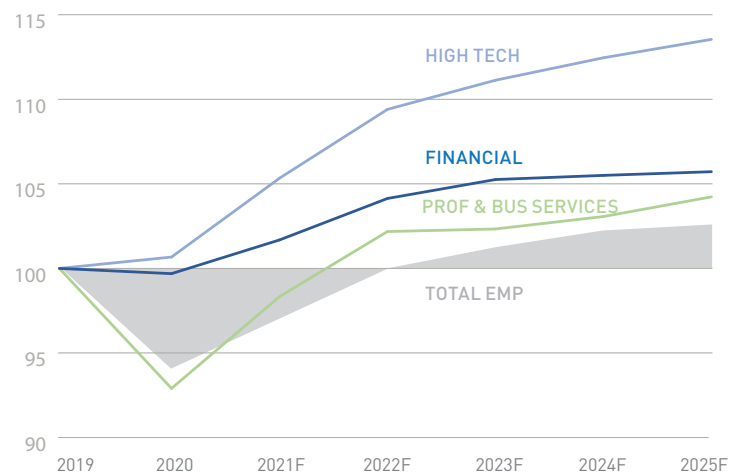
Whether or not the office recovery can advance at an accelerated pace, the bigger questions for office investors clearly revolve around the potential longer-term impacts on office demand and use from the pandemic experience. Despite conflicting headlines of companies' intentions—which range from re-affirming commitments to an office-centric future to transitions to fully remote corporate structures with little or no office space—survey data and anecdotal evidence increasingly point to a hybrid model where workers have greater flexibility in where and how much time they spend in the office.

The design and use of the hybrid office will vary widely by company, but most likely will include some combination of traditional workspace for workers who are either unable or unwilling to work remotely, and space that serves a more specialized purpose—collaboration, training, socialization—that is difficult to replicate through technology alone.

From a pure demand perspective, while broader adoption of remote work will enable companies to shrink their office footprints, office-using employment growth should provide a structural tailwind to office demand as the economy continues to evolve to a knowledge-based structure and office-using employment continues to capture a growing share of total job growth. As part of that process, with the ongoing digitization of the economy, the most dynamic growth will continue to be in high-tech and, more broadly, STEM sectors. From 2010 to 2019, high-tech employment expanded by about 3.5% per year, more than double the 1.4% growth rate for the labor market overall, and STEM sectors continued to add jobs in 2020. That outperformance is expected to continue over the next several years at least. Moody's Analytics forecasts high-tech employment will expand at a 1.5% annual rate over the next five years versus 1.2% for total employment.

EXHIBIT 2: TECH WILL PACE EMPLOYMENT RECOVERY

Source: Moody's Analytics (May 2021)



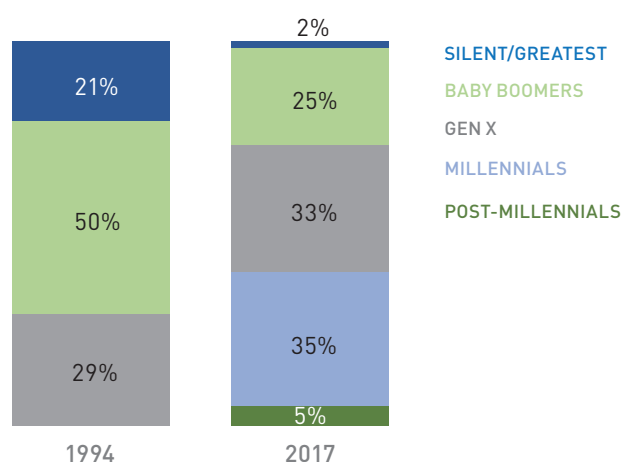
The strong growth forecast should provide a solid foundation for the office demand recovery, but it will also contribute to the escalating war for talent, which will only intensify as working-age population growth slows and innovation becomes the key driver of the US economy. The US population is undergoing a generational handoff from the baby boomers (those born from 1946–1964), who for decades have dictated all things in the economy, culture, and public policy, to millennials (1981–1996), who now comprise the largest share of the US labor force. For employers in knowledge-based sectors, especially highly competitive STEM fields, the ability to attract and retain well-educated millennials will be paramount. The physical workplace and remote work policies will be important weapons in that effort.

Taken together, the transition to a hybrid workplace, growth in office-using employment, and the escalating war for talent point to a bifurcated office recovery and future state that widens the gap between “space with a purpose” and generic, “commodity” space that faces increased competitive pressures from remote work.

In the near term, we expect the pandemic will increase demand for modern, “healthy” office buildings as companies seek to provide a safe environment for workers to return to the office. Longer term, the most competitive space will be in office buildings designed for a more agile workforce and the next generation(s) of knowledge workers who we believe will demand highly amenitized workplaces with best-in-class ESG credentials.

EXHIBIT 3: GENERATIONAL HANDOFF TO MILLENNIALS

Source: Pew Research Center (2018)



The WFH experiment has let the remote work genie out of the bottle, mostly by proving out technology that was widely available but woefully underutilized before the pandemic.

PREDICTING DEMAND

Changes in office demand, use, and design will take time to manifest, and aggregate demand will expand as office employment outpaces overall job growth. While this will help mitigate the immediate impact of the trends accelerated by more than a year of working remotely for most office workers, we believe the pandemic will have a lasting impact on office occupier and worker behavior going forward.

The WFH experiment has let the remote work genie out of the bottle, mostly by proving out technology that was widely available but woefully underutilized before the pandemic. While the wider adoption of remote work will render large segments of existing office stock less competitive, not unlike what has transpired in the retail sector over the past twenty years, office assets that meet the new standards should attract robust demand (and command premium rents) as companies seek to leverage the office to cultivate corporate culture, enhance innovation and productivity, and compete for talent.

ABOUT THE AUTHORS

Philip Conner is Head of US Real Estate Research and Strategy and Ryan Ma is Managing Director of Real Estate Research for Barings Real Estate, a US\$354+ billion global financial services firm dedicated to meeting the evolving investment and capital needs of our clients and customers.

LONDON CALLING



OFFICE SPACE

By Christopher Muoio
Vice President, Data and Research
Madison International Realty

With Brexit and pandemic resolutions coming into focus, pricing disparities could dissipate based on improved cross-border liquidity and cap rate compression in the London office market.

Because the global real estate industry is so interconnected, what happens in one part of the world often affects what happens elsewhere. In particular, the UK's 2016 vote to leave the European Union (Brexit) created economic and financial uncertainty that permeated into commercial real estate capital markets, particularly London's office market.

London, historically a top destination for foreign capital, saw a decline in liquidity owing to reductions in cross-border deal volumes as investors fretted over the economic implications of the vote. Liquidity, especially cross-border liquidity, was further impaired by the COVID-19 pandemic and its ensuing travel restrictions and economic impact. As cross-border liquidity has eroded, London office pricing has diverged from its European peers and cap rate spreads have risen to levels higher than those seen during the Great Financial Crisis (GFC). Now, with Brexit and pandemic resolutions coming into focus, this pricing disparity could dissipate owing to improved cross-border liquidity and cap rate compression in the London office market.

BREXIT AND ITS AFTERMATH

The 2016 vote for the UK to leave the EU resulted in heightened economic uncertainty as trade deals would need to be established and the future of the financial industry's access to Europe was called into question. The heightened uncertainty had a profound effect on London commercial real estate capital markets as liquidity eroded rapidly. This situation was then exacerbated by the COVID-19 pandemic and resultant recession.

Prior to the Brexit vote, commercial real estate deal volume was growing steadily at a rate of 15.4% per year from 2011–15, reaching a peak of US\$43 billion. Volume fell sharply in 2016 in response to the vote, measuring just US\$24 billion, and has averaged an annual decline of 7.4% per year from 2016–20, with 2020 seeing just US\$15 billion in deal volume, owing in part to the pandemic.¹

The decline was particularly stark in cross-border deal flows, which historically comprise 65% of total London deal volume.² Cross-border deal volume in 2020 was 64% lower than its 2015 peak and at its lowest levels since the GFC.

EXHIBIT 1: LONDON CROSS-BORDER DEAL VOLUME (\$)

Source: Real Capital Analytics, as of February 25, 2021

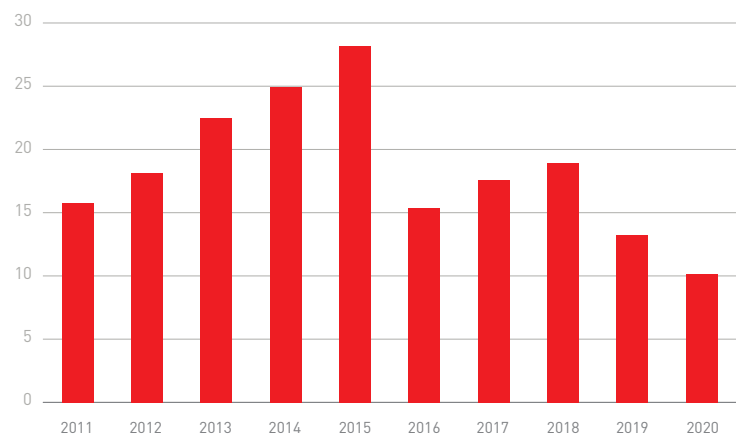
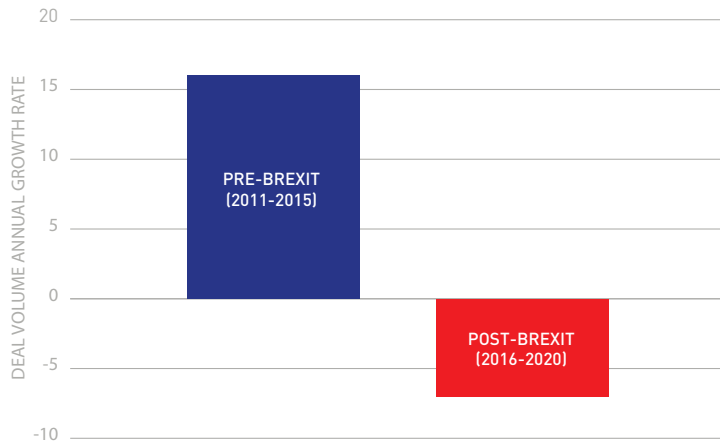


EXHIBIT 2: OVERALL DEAL VOLUME GROWTH PER YEAR, PRE- AND POST-BREXIT

Source: Real Capital Analytics, as of February 25, 2021



LONDON OFFICE PRICING

The liquidity decline has had a notable effect on London office pricing, though nominal cap rates mask the effect. Data from Property Market Analysis LLP (PMA) shows that London office cap rates have held steady at 3.7% since the start of 2016 and have only registered a 20 BPS increase since the Brexit decision. However, during this time, interest rates have fallen substantially, from just under 2% on the ten-year gilt to 0.27% as of the fourth quarter of 2020, per Oxford Economics.³ This means risk premiums have widened substantially, as cap rate spreads have measured near 350 BPS in the wake of the pandemic. Cap rate spreads are at their highest level in this data series history, around 100 BPS higher than their previous peaks in the wake of the GFC, and 160 BPS above their average level during the pre-Brexit GFC recovery.

EXHIBIT 3: CAP RATES ROSE VERY MILDLY POST-BREXIT AND REMAIN NEAR LOWS

Source: PMA, as of March 2, 2021

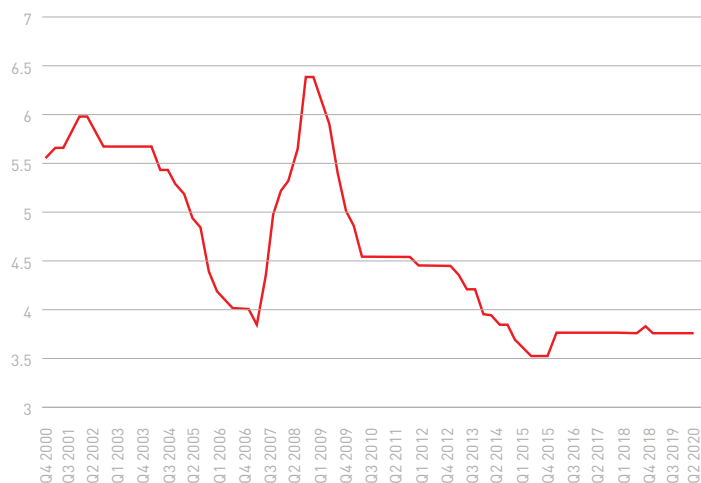


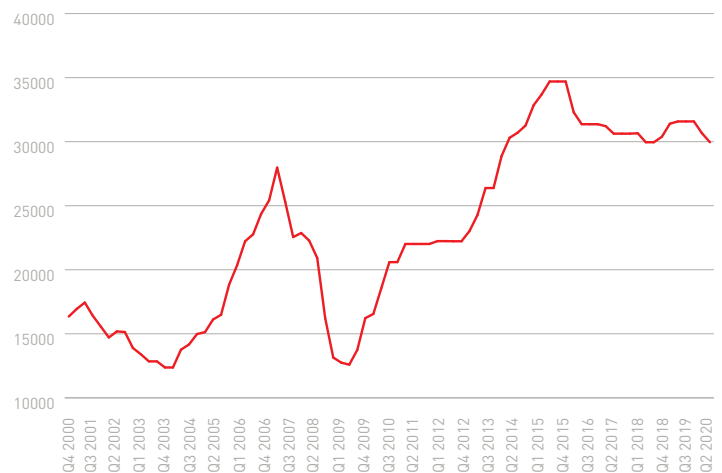
EXHIBIT 4: CAP RATE SPREADS HAVE RISEN TO RECORD LEVELS

Source: PMA, Oxford Analytics, as of March 2, 2021



EXHIBIT 5: CAPITAL VALUES HAVE ERODED SINCE BREXIT

Source: PMA, as of March 2, 2021



The erosion in pricing is more clearly reflected in prime capital values, which saw sharp growth following the GFC and again after the European debt crisis, averaging year-over-year growth of 13% from Q1 2011 until Q2 2016. Prime capital values peaked at €34,698 PSM in the second quarter of 2016 leading into the Brexit referendum and have been declining since. Prime capital values have fallen 13.7% from their pre-Brexit peak and 5.1% from a year ago to €29,955 PSM.

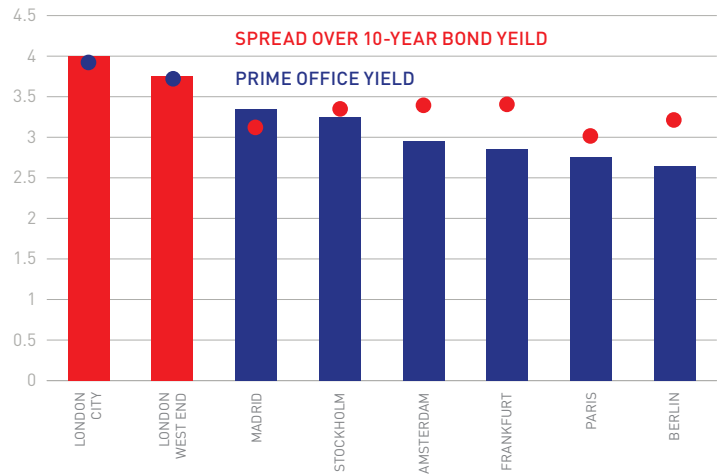
The rise in cap rate spreads and decline in prime capital values highlight the discount London office has traded at in the wake of the economic uncertainty created by Brexit and compounded by the COVID-19 pandemic and recession. However, with a Brexit trade deal agreed to and vaccination underway, this uncertainty may soon lift, potentially resulting in appreciation.

LONDON VS. EUROPE

London office pricing is not only currently attractive relative to its historical basis, but also when compared to its peer set in Europe. Nominal cap rates in the city of London and West End are higher than in Madrid, Stockholm, Amsterdam, Frankfurt, Paris, and Berlin, measuring 4% and 3.75% respectively, per JLL. The next highest cap rate is 3.35% in Madrid, and cap rates in Amsterdam, Frankfurt, Paris, and Berlin are all below 3%. While negative rates from the European Central Bank compared to 0% interest rates set by the Bank of England are partially responsible for the lower nominal cap rates in other prime European cities, London office cap rate spreads are higher than any of its European peers, and they offer a higher risk premium for investors.

EXHIBIT 6: LONDON CAP RATES AND CAP RATE SPREADS ARE THE HIGHEST AMONG PEER CITIES

Source: JLL, as of Q2 2020



UK commercial real estate pricing is currently trading at a discount relative to its historical pricing.

EXHIBIT 7: UK PRICING IS CHEAPER THAN EUROPE

Source: Standard deviation compared to average through Q2 2020; PMA, as of October 2020

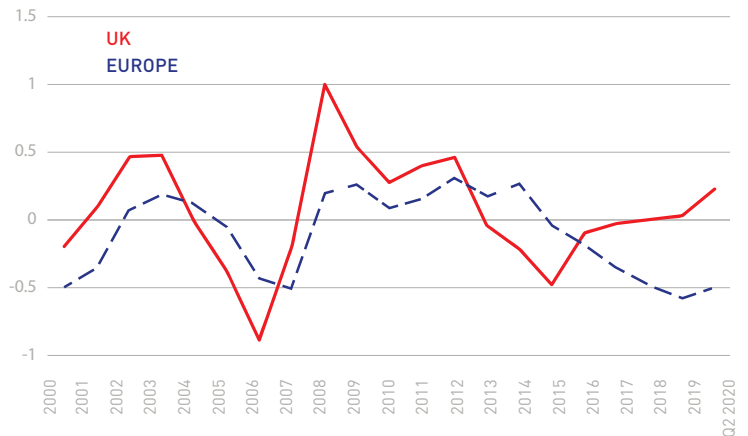
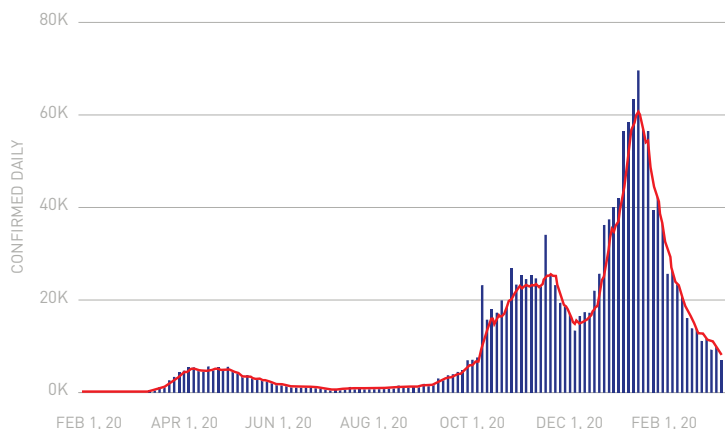


EXHIBIT 8: COVID CASES IN THE UK HAVE PLUNGED OWING TO LOCKDOWN AND VACCINATION

Source: Johns Hopkins University, as of March 2021



A PMA analysis of European and UK commercial real estate pricing relative to their historical averages since 2000 illustrated a divergence in relative value and further highlights the potential opportunity in the London office market. European commercial real estate pricing is currently 0.5 standard deviations more expensive than its historical average. The last time European commercial real estate pricing measured at this relative level was prior to the GFC in 2006–07. Meanwhile, UK commercial real estate pricing is currently trading at a discount relative to its historical pricing, measuring 0.25 standard deviations below average, having risen consistently since 2015, when they measured 0.5 standard deviations more expensive than average prior to the Brexit referendum.

London office pricing on nominal, cap rate spread and historical relative value basis is currently more attractive than the other prime European markets. And while London office pricing is currently attractive owing to its higher cap rates and cap rate spreads relative to other European prime cities, this fact becomes more compelling as its timing coincides with two catalysts that could reduce the uncertainty surrounding the market and establish the conditions for cap rate compression.

The first catalyst is the resolution to Brexit, as a trade agreement was reached between the UK and the EU in December 2020⁴ with some final outstanding issues scheduled to be resolved in the spring of 2021. Madison believes the Brexit referendum was likely the initial driver of cap rate spreads widening in London as it created uncertainty over the nation's economic outlook and the city's financial sector. However, Bank of England Governor Andrew Bailey noted that the financial sector only lost between 5,000 and 7,000 jobs as a result of Brexit, "substantially less... than the sorts of numbers that were being talked about after the referendum."⁵ In our view the majority of Brexit risk appears to have passed alleviating one of the drivers of cap rate spread expansion.

OPPORTUNITY AND RISKS

Improvements have been made in containing the COVID-19 pandemic in the UK since January 2021 when daily case counts peaked.⁶ Vaccination rates have continued to rise since, resulting in declining case counts even as Prime Minister Boris Johnson has taken the initial steps on his reopening program, with the current stated goal for all economic restrictions to be removed by the end of June 2021.

The Office of Budget Responsibility is projecting 4% GDP growth this year as restrictions impact the first half of growth and 7.3% GDP growth in 2022 when the economy will surpass its pre-pandemic peak.⁷

EXHIBIT 9: OVERNIGHT SWAPS EXPECT INTEREST RATES TO TURN NEGATIVE NEXT YEAR

Source: Financial Times, November 2020

Disclosure: Forecasts are inherently limited and should not be relied upon as indicative of future results.

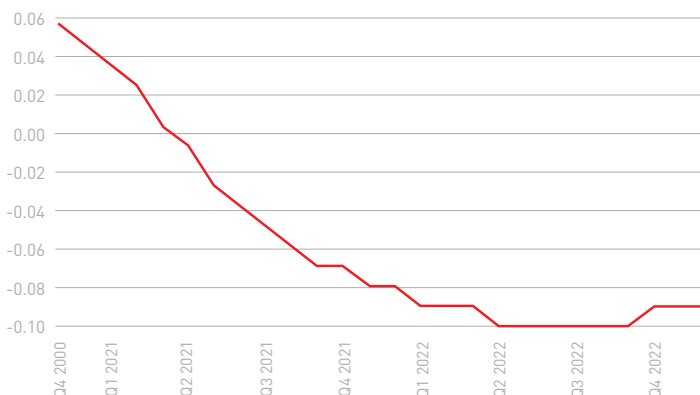


EXHIBIT 10: BANK OF ENGLAND GILT HOLDINGS HAVE SURGED

Source: Financial Times, November 2020

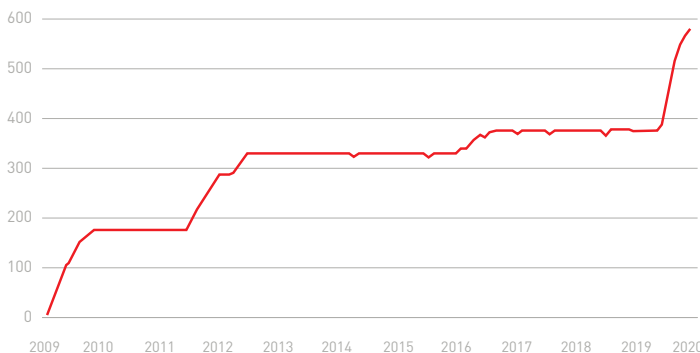


EXHIBIT 11: US EXECUTIVES HAVE A POSITIVE VIEW OF REMOTE WORK

Chart represents Work From Home Sentiment Analysis from earnings call transcripts, 2020Q1 to 2020Q3. Within these transcripts, conversations that mentioned “work from home” or related phrases, such as “remote work,” were isolated and run through a Valence Aware Dictionary and Sentiment Reasoner (VADAR) algorithm that scored the sentiment of the phrase on a continuum from -1 (negative) to 1 (positive). These scores were then plotted into distributions to determine the aggregate sentiment of executives towards remote work and any potential shifts in sentiment over time. The following Sentiment Analysis is based on Madison’s proprietary methodology and is subject to change.

Source: MIR Research as of December 2020

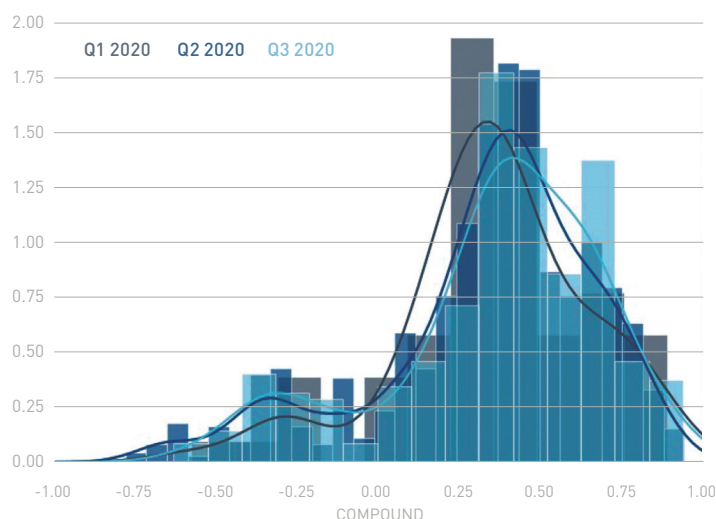
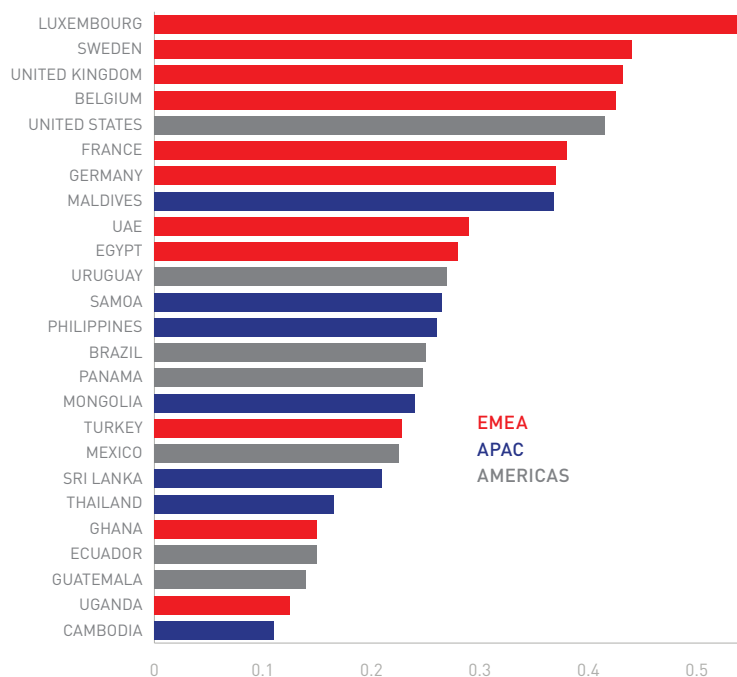


EXHIBIT 12: UK'S ECONOMY IS ONE OF THE MOST AMENABLE TO REMOTE WORK IN EUROPE

Source: University of Chicago, June 2020



Assuming that the economy remains on a path to return to normalcy and growth, and that Brexit and related financial shocks are mostly completed, two drivers of cap rate expansion would be alleviated, which could lead to spread compression. Interest rates, meanwhile, are poised to remain low for some time. The Bank of England has taken significant easing measures, and now owns 44% of the gilt market, double the proportion of the Federal Reserve in the US.⁸ Additionally, overnight swaps are pricing in negative interest rates next year as the Bank of England has told banks to prepare for negative interest rates as they could become a necessary policy tool pointing to monetary policy remaining loose for some time.⁹

As uncertainty and risk subsides from the UK office market, liquidity could improve, especially once non-UK-based investors can travel freely to the country again, and cap rate spreads will revert towards their long-term average and European peers. Coupled with monetary policy that is poised to remain accommodative, Madison believes this will result in declining cap rates for London office assets.

REMOTE WORK AND ASSET SELECTION

One risk to this thesis is the sector facing a structural repricing owing to the proliferation of remote work, which became a more common practice during the pandemic. Madison Research has shown through sentiment analysis of earnings transcripts that US executives have a positive view of work from home. The UK's economic construction is also conducive to remote work with one analysis showing it trailing only Luxembourg and Sweden globally in the proportion of occupations able to work from home.

Should remote work remain widespread, we believe London office asset pricing should be more insulated than its European peers owing to its higher nominal cap rates and cap rate spreads.

We believe that, going forward, employers are more likely to utilize flexible working arrangements and maintain a physical office space, as opposed to going fully remote en masse. Data show that employees still desire the ability to utilize an office and are most engaged when utilizing a hybrid model that allows them to work from home a few days a week. While working fully remote during the pandemic, nearly half of employees struggled to connect with company culture, felt they weren't learning, and did not have a sense of well-being, per a recent Cushman & Wakefield study. Cushman & Wakefield found that every firm in their study still utilized a physical office in some form.

EXHIBIT 13: EMPLOYEE ENGAGEMENT IS HIGHEST WHEN UTILIZING A HYBRID APPROACH TO REMOTE WORK

Source: Gallup, as of February 2020



EXHIBIT 14: CONNECTION TO COMPANY CULTURE WHEN WORKING FROM HOME DURING COVID-19

Source: Cushman & Wakefield, as of October 2020

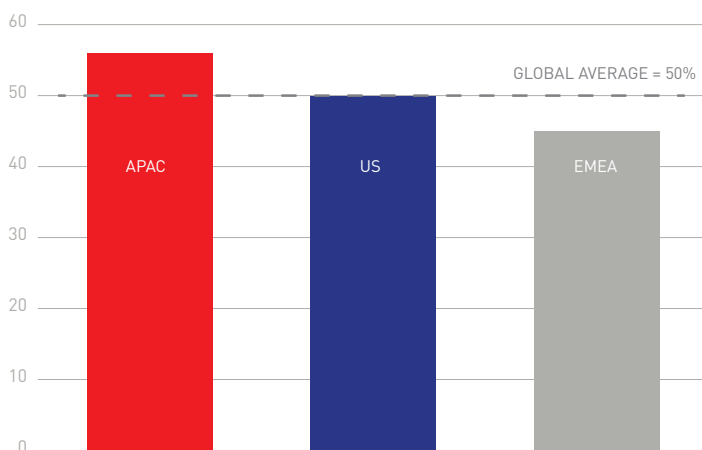
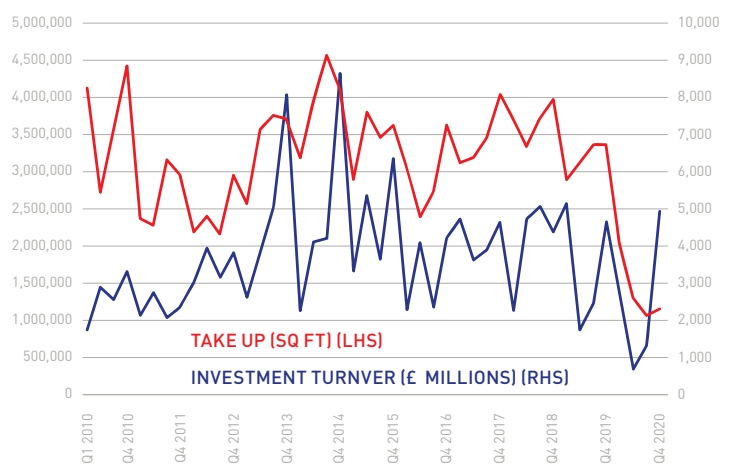


EXHIBIT 15: LONDON OFFICE INVESTMENT VOLUMES SHOWED SIGNS OF REBOUNDED IN Q4 2020

Source: Knight Frank, The London Office Market Report, Q4 2020



The risk presented by remote work to office fundamentals can be further mitigated through asset selection. Madison believes that generational office assets with long weighted average lease terms and strong credit tenancy face lower risks to near-term occupancy and cash flows from remote work. This is evidenced by Hines UK's pre-let at The Grain House in the West End, which Knight Frank notes stemmed from a shortage of what they refer to as "best-in-class space." Additionally, American Express renewed their 131,000 SF lease in Belgrave House and Netflix leased 87,000 SF in the Copyright Building. Furthermore, 56% of new construction is pre-let, highlighting the persistent demand for quality space.¹⁰ Lower quality assets, or those with substantial space to release, may face risks from reduced space needs of tenants as employers adapt to hybrid models.

Madison believes that London office assets, particularly those with long WALTs and strong credit profiles, could see value appreciation in the coming years as cap rates compress and liquidity improves in the wake of a Brexit resolution, and the end of the COVID-19 pandemic and recession, while interest rates are poised to remain low for the foreseeable future. We believe this provides a compelling potential opportunity for investors to capitalize on reduced commercial real estate in a top global destination for capital.

56% of new construction is pre-let, highlighting the persistent demand for quality space.



ABOUT THE AUTHOR

Christopher Muoio is Vice President, Data and Research at Madison International Realty, a real estate investment firm committed to excellence in providing capital, equity monetizations and recapitalizations.

NOTES

¹ Real Capital Analytics, www.rcanalytics.com as of 2/25/21

² Real Capital Analytics, www.rcanalytics.com as of 2/25/21

³ Oxford Economics, <https://www.oxfordeconomics.com/> as of 3/2/21

⁴ "Agreements reached between the United Kingdom of Great Britain and Northern Ireland and the European Union." Gov.UK. December 24, 2020. Accessed June 22, 2021. <https://www.gov.uk/government/publications/agreements-reached-between-the-united-kingdom-of-great-britain-and-northern-ireland-and-the-european-union>

⁵ "UK has lost up to 7,000 financial services jobs due to Brexit, BoE says." Reuters. January 6, 2021. Accessed June 22, 2021. <https://www.reuters.com/article/us-britain-boe-bailey-jobs/uk-has-lost-up-to-7000-financial-services-jobs-due-to-brexit-boe-says-idUSKBN29B1XE>

⁶ Johns Hopkins University, <https://www.jhu.edu> as of March 2021

⁷ Strauss, Delphine. "OBR Pains Brighter Picture for UK Economy." Financial Times. March 3, 2021. Accessed June 22, 2021. <https://www.ft.com/content/ec9b58a5-fa69-422d-91bf-7cbc0799926d>

⁸ Stubbington, Tommy. "Bank of England Faces New Doubts Over the Potency of Buying Bonds." Financial Times. November 2, 2020. Accessed June 22, 2021.

⁹ Nelson, Eshe. "The Bank of England Tells Banks to Prepare for Negative Interest Rates." New York Times. Accessed June 22, 2021. <https://www.nytimes.com/2021/02/04/business/bank-of-england-negative-interest-rates.html>

¹⁰ "The London Office Market Report Q4 2020." Knight Frank. Accessed June 22, 2021. <https://www.knightfrank.com/research/report-library/the-london-office-market-report-q4-2020-7863.aspx>

SUPPLY CHANGE



By Melinda McLaughlin
Senior Vice President, Research
Prologis

Heather Belfor
Director, Head of US Research
Prologis

Urbanization, digitalization, and demographics are the key trends to watch for understanding the future of logistics real estate.

The global pandemic has forever altered the logistics real estate landscape. Supply chain decisions have become more holistic, more data-driven, and more urgent than ever.

Underlying this shift are the same forces of urbanization, digitalization, and demographics that have changed the way we live, work, and shop over the past few decades. The future of the supply chain and its concurrent effect on retail will determine demand for logistics real estate for years to come. So what are the trends driving demand for logistics real estate in a post-pandemic world?

ECONOMIC GROWTH NOW REQUIRES MORE LOGISTICS REAL ESTATE THAN IN THE PAST

Consumption has advanced as the primary driver of demand on the global level. Retail sales have a higher correlation with logistics demand growth than do drivers of the past—namely, manufacturing and trade. In addition, changes in how we consume are further amplifying this shift, because e-commerce is more space intensive.

AT THE SAME TIME, TECHNOLOGY AND DEMOGRAPHICS ARE TRANSFORMING RETAIL

Demographic trends, the rapid pace of technological change, and COVID-19 have transformed how we live, and evolved our notions of what is possible, driving an evolution in retail and boosting logistics demand. Millennials—digital natives who now comprise 23% of the global population¹—have entered higher income brackets and are a primary target for retailers. At the same time, dual-income households continue to rise.²

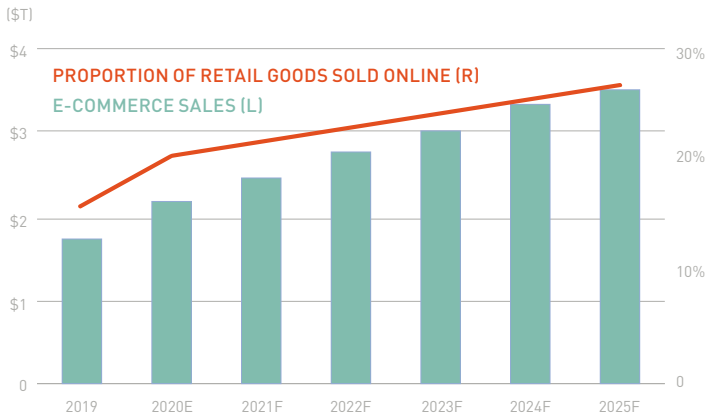
The internet as a platform for commerce continues to expand around the world; over the past decade, about 2 billion people gained internet access.³ Consumer expectations have increased in a permanent way, favoring convenience, choice, reliability, and immediacy. Naturally, the combination of new digital options and a desire for convenience have propelled the adoption of e-commerce. E-commerce as a proportion of retail goods sold globally grew to nearly 20% in 2020, from about 4% in 2011.⁴

COVID-19 AND STAY-AT-HOME ORDERS PULLED E-COMMERCE ADOPTION FORWARD, PROMPTING SUPPLY CHAIN INVESTMENTS THAT WILL YIELD FUTURE GROWTH

Globally, e-commerce penetration increased at an outsized rate of 390 BPS in 2020 due to the pandemic, equal to roughly five years of adoption (*see Exhibit 1*). Senior populations and other late adopters, as well as retailers, overcame barriers to online shopping out of necessity. Given pandemic-related constraints on services and brick-and-mortar spending, it is possible that e-commerce growth will temporarily slow once vaccines are distributed broadly and consumers relish the novelty of in-person shopping, travel, and entertainment. However, before COVID-19, a structural shift in retail was already in play.

EXHIBIT 1: GLOBAL E-COMMERCE SALES AND PENETRATION RATE

Source: Euromonitor, Prologis Research forecast



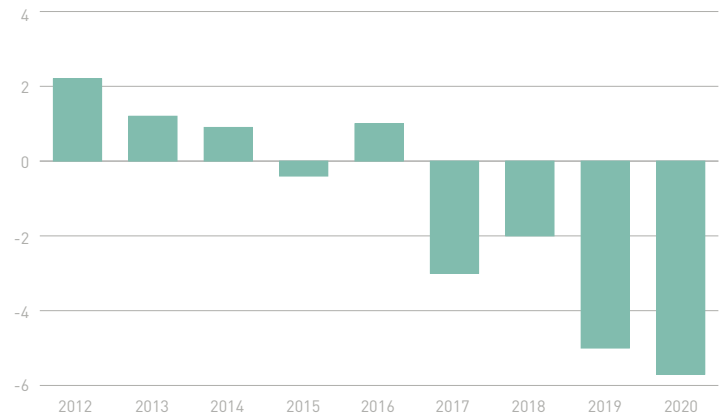
E-commerce penetration will likely continue to rise due to the following reasons:

- Consumers' habits are "sticky" once barriers to adoption are overcome.
- Innovation and supply chain investments made during or in the wake of the pandemic should increase competitiveness of online options. This is especially true for segments with low e-commerce penetration prior to the pandemic, such as grocery and home improvement.
- The challenges faced by brick-and-mortar retailers in the near term should mitigate future competition for consumers. More than 15,000 US retail outlets were permanently closed between 2017 and 2020 on net (see Exhibit 2).⁵

The challenges faced by brick-and-mortar retailers in the near term should mitigate future competition for consumers. More than 15,000 US retail outlets were permanently closed between 2017 and 2020.

EXHIBIT 2: NET CHANGE IN NUMBER OF RETAIL STORES, US (000S)

Source: Coresight



Still, in order to compete, brick-and-mortar retail will need to meet the same demands for convenience and reliability as offered by online shopping. Options to buy online and pick-up in store could drive traffic and sales post-pandemic, but would put increased pressure on store inventories, necessitating a rapid replenishment operation close to stores to keep shelves stocked.

Online order fulfillment requires more than three times the logistics space of brick-and-mortar⁶ because:

- All inventory is stored within a warehouse.
- Digital storefronts offer greater product variety.
- Higher volatility in sales patterns necessitates deeper inventory levels.
- Parcel shipping requires more space than shipping pallets.
- Many e-fulfillment operations include value-add activities such as assembly and reverse logistics.

Taken together, this intensity of use generates substantial incremental demand as a greater proportion of retail goods are sold online. The forecasted share shift alone (holding sales constant) should drive the need for an incremental 125 million SF/11.6 million SM of logistics space or more per year through 2025 in the US and Europe alone.⁷

Leveraging data and technology in retailing and supply chain management creates a competitive advantage that can help companies more efficiently scale and globalize operations. Rising consumer classes across the world have increased the growth opportunity for companies able to successfully establish their operations in new locations.

As businesses cross borders, they bring logistics real estate requirements and supply chain best practices, driving the need for modern logistics facilities. Large companies, which tend to have more robust financial and technological resources, have grown at a faster rate than medium- and small-sized companies, which often do not have the same ability to deploy best practices and take advantage of growth in other geographies (*see Exhibit 3*). On average, the adoption rate of modern logistics is about 35 SF per consumer household today (*see Exhibit 4*). A rise in that ratio to 40–50 SF by 2030 would yield the need for 3–4 billion SF/278.7–371.6 million SM in the world's largest logistics markets.⁸

EXHIBIT 3: EMPLOYMENT GROWTH BY BUSINESS SIZE

(INDEX: 1990=100)

Note: Small defined as fewer than 500 employees; medium is between 500 and 9,999 employees; large is 10,000+ employees

Source: US Census Bureau, Prologis Research

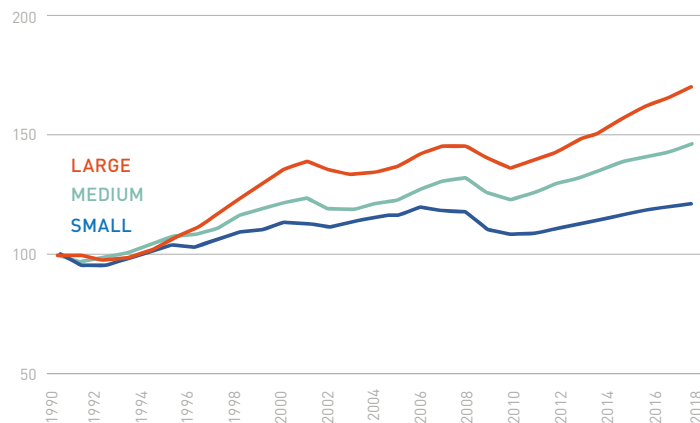
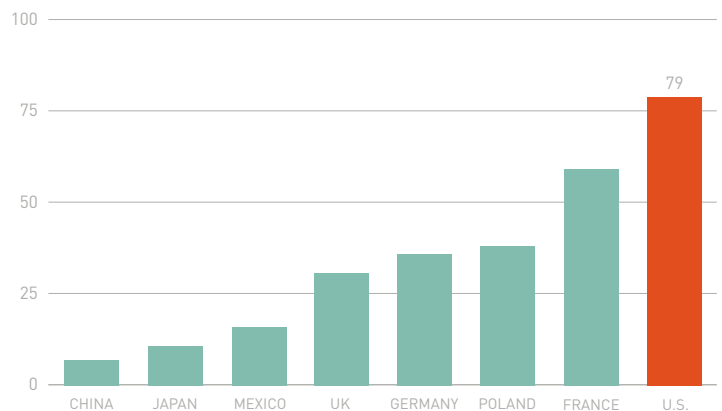


EXHIBIT 4: ADOPTION RATE OF MODERN LOGISTICS REAL ESTATE (SF PER CONSUMER HOUSEHOLD)

Note: Modern stock represented as a share of consumer households (those earning at least US\$20,000 annual (PPP and inflation-adjusted). Mexico City shown as a proxy for Mexico's domestic distribution configuration.

Source: CBRE, JLL, Colliers, Cushman & Wakefield, Gerald Eve, Oxford Economics, Armstrong & Associates, Inc., Prologis Research; as of December 2020



SUPPLY CHAIN DISRUPTIONS HAVE PUNCTUATED THE NEED FOR RESILIENCE

For decades, supply chains have been moving to globalize, take advantage of cost differentials, and streamline to a just-in-time model in order to reduce inventory carry costs (*see Exhibit 5*). At the same time, disruptions have extended beyond natural disasters, congestion, and labor disputes to include major trade renegotiations and a global pandemic. The supply chain risks that have been exposed include:

- Minimal on-hand inventory, which leads to stock-outs when consumer demand shifts quickly.
- Single source of origin and low supply chain visibility, which together limit the ability to source goods when disruptions hit.
- Long lead times and trade bottlenecks, which prevent goods from getting to end consumers as quickly as they are needed.

EXHIBIT 5: INVENTORIES TO SALES RATIO, RETAILERS

Source: US Census Bureau, Prologis Research



HIGHER INVENTORIES ADD RESILIENCE AND AMPLIFY THE NEED FOR LOGISTICS REAL ESTATE

The shift from just-in-time to just-in-case supply chains could drive inventories up by more than 5-10%. In the US, Prologis Research estimates this shift could create 57–114 million SF/5.3–10.6 million SM of additional logistics demand per year over the next five years without accounting for a rise in sales.⁹

Maintaining production bases close to destination markets shortens production lead times for businesses and provides protection against lost revenue, lost customers, and higher supply chain costs. However, wages are cost-prohibitive for large-scale reshoring to the US and much of Europe. Multinational corporations have pursued near-shoring instead, establishing production facilities in markets adjacent to end consumers such as Mexico, and Central and Eastern Europe. Still, the bulk of consumer goods production and upstream supply chain operations will likely remain in Asia, home to half of the world's middle class, with attractive labor pools and industrial infrastructure, particularly in China.¹⁰ This strategy has a dual benefit as the rise of China's consumer class has led to a transformation of its supply chains—originally configured for exports, today they are being designed to serve domestic consumption.

USERS OF LOGISTICS REAL ESTATE ARE NOW MORE WILLING TO PAY HIGHER RENTS

This is in part because rent does not represent a large share of supply chain costs (only about 5%).¹¹ More importantly, supply chains are increasingly viewed holistically and used as a competitive advantage. For most users, the revenue generation benefits from being able to meet consumer demands for product availability, choice, and delivery speed likely greatly outweigh the additional real estate costs. Locating closer to consumers reduces transportation costs, which account for about 50% of supply chain costs.¹² A recent study by MIT on carbon emissions revealed that adding an urban fulfillment center can cut transportation emissions (and therefore costs) by half, compared to out-of-town distribution.¹³

Wages are cost-prohibitive for large-scale reshoring to the US and much of Europe. Multinational corporations have pursued near-shoring instead.

Logistics real estate in locations close to end consumers offers the ability to reach homes and retail outlets quickly and realize transportation cost savings—key sources of competitive advantage today and in the future.

URBANIZATION AND RISING CONSUMER EXPECTATIONS WILL CONTINUE TO INCREASE THE BENEFITS OF AN URBAN LOCATION

The world's urban population doubled over the past thirty years and is forecast to double again during the next thirty years¹⁴ with major implications on consumption, transportation, and land use. Whether to the shelves or doorstep, consumers have been conditioned to expect more.

Densifying consumption centers will produce larger revenue opportunities while rising consumer expectations and congestion will produce larger challenges for global supply chains. Logistics real estate in locations close to end consumers offers the ability to reach homes and retail outlets quickly and realize transportation cost savings—key sources of competitive advantage today and in the future.

Demographic, economic, and technological mega-trends will continue to drive the future of retail and supply chain planning. While the pandemic may have accelerated e-commerce adoption, it has also changed how organizations approach their supply chain operations. Combined with structural drivers, including more companies leveraging logistics real estate in urban settings as a competitive advantage, these trends raise the long-term growth rate of logistics real estate demand through the next decade and beyond.

ABOUT THE AUTHORS

Melinda McLaughlin is Senior Vice President of Research and Heather Belfor is Director and Head of US Research for Prologis, the global leader in logistics real estate with a focus on high-barrier, high-growth markets.

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ACCOUNTING FOR ENVIRONMENTAL RISK



By Paul Fiorilla
Director of Research
Yardi® Matrix

Claire Anhalt
Senior Analyst
Yardi® Matrix

Maddie Harper
Senior Analyst
Yardi® Matrix

When it comes to guards against environmental risk, Boston, Indianapolis, Minneapolis, and Portland are some of the most prepared US cities. What makes them different?

The events of the past year have brought environmental, social, and governance (ESG) front-of-mind for investors and experts in commercial real estate. The growing number of weather-related disasters that produce billions of dollars of property damages, changes in work practices spurred by the COVID-19 pandemic, and recognition of the need for equity and diversity have created an urgency for businesses to act on ESG criteria.

Of course, this is not entirely new: over the last decade or more the industry has taken steps by implementing “green” construction standards, retrofitting buildings to reduce energy consumption, and developing other ESG strategies. But in this new environment as the world slowly emerges from a historical pandemic and a year of environmental and political turmoil, addressing ESG has taken on a newfound urgency.

In the US, for example, the new Biden administration has driven change from the top. After his inauguration in January 2021, President Biden immediately rejoined the Paris Agreement, a 2015 accord to reduce emissions and deal with the impact of climate change. He has also instructed regulatory agencies to incorporate into reviews “the interests of future generations,” reversing the policies of the former president, whose regulatory efforts were geared at easing the compliance burden on business.

Federal agencies are taking the environment seriously. Treasury Secretary Janet Yellen has pledged to create a climate change task force, noting that it is an “existential threat” to the banking system. Regulators may, for example, require banks to account for environmental risk as an element of forward-looking loss projections.

COMMERCIAL REAL ESTATE AND ESG

Commercial real estate is focusing on ESG more than ever. Several industry trade organizations have created or expanded working groups to address issues such as environmental risks and diversity in hiring practices, and the recent 2021 AFIRE International Investor Survey (see page 11) shows that ESG is an increasingly urgent concern for global investors. Additionally, the Federal Housing Finance Agency in 2021 started requiring Fannie Mae and Freddie Mac to use half of their US\$70 billion allotment on multifamily properties that reduce energy consumption.

A growing number of investors are vetting money managers to ensure that capital is deployed by those with concrete ESG policies. Just over half of private equity capital raised for commercial real estate funds between 2018 and 2020 was raised by managers with ESG strategies, according to Preqin. A recent survey by BlackRock of 425 investors that control US\$25 trillion of assets found that 88% believe climate change is a risk, and 75% plan to account for ESG risks in their portfolios.¹ Collectively the respondents expect to double their allocations to funds with ESG components by 2025, though slightly more than half of the investors surveyed also noted that the poor quality of data is a hinderance to sustainable investment practices.

GROWING RISK TO COMMERCIAL REAL ESTATE

Scientists warn that environmental risk is increasing due to global warming, with the last seven years marking the hottest temperatures the earth has reached since the 1800s. The melting of polar ice caps has released water into oceans. Climate scientists say that coastal waters are rising, hurricanes are becoming more frequent and intense, and droughts more common, leading to more risk of wildfires in dry areas and making coastal cities vulnerable to flooding.

Whatever one makes of the science, property investors cannot ignore risks to the bottom line. The annual average of billion-dollar disasters in the US more than doubled to sixteen between 2016 and 2020, up from an average of seven in the prior forty years. More than 400 weather events caused US\$268 billion of damage globally in 2020, including a record US\$63 billion caused by severe weather events, according to insurance broker Aon.² Wildfires in the US have caused more than US\$10 billion of damage in three of the past four years.

With all this in mind, Yardi Matrix has developed a scorecard for 21 large US metros, using eleven metrics in four categories to create a metro-level analysis of environmental risk. The categories are natural disasters (*Exhibit 1*), air pollution (*Exhibit 2*), water quality (*Exhibit 3*), and the response by state and local governments (*Exhibit 4*). We assigned grades in each category, green for the least risk, yellow for moderate risk and red for the most risk. We then totaled the grades and came up with scores in each category and the overall environmental risk (*Exhibit 5*).

Natural disasters

EXHIBIT 1: TOP US CITIES PROTECTED FROM CLIMATE-RELATED DISASTERS

Source: Yardi Matrix

Note: Higher scores indicate better protection and resiliency.

MARKET	STATE	HURRICANES, TORNADOES, TROPICAL STORMS	WILDFIRES	RIISING SEA LEVELS	OVERALL RATING - NATURAL DISASTERS
Atlanta	GA	3	3	3	3
Chicago	IL	3	3	3	3
Indianapolis	IN	3	3	3	3
Minneapolis	MN	3	3	3	3
Portland	OR	3	3	3	3
Salt Lake City	UT	3	3	3	3
Dallas	TX	2	3	3	2.7
Nashville	TN	2	3	3	2.7
Charlotte	NC	1	3	3	2.3
Denver	CO	3	1	3	2.3
Orlando	FL	1	3	3	2.3
Raleigh-Durham	NC	1	3	3	2.3
Seattle	WA	3	3	1	2.3
Washington	DC	3	3	1	2.3
Austin	TX	2	1	3	2
Boston	MA	2	3	1	2
Los Angeles	CA	3	1	2	2
New York	NY	1	3	1	1.7
San Francisco	CA	3	1	1	1.7
Tampa	FL	1	3	1	1.7
Houston	TX	1	2	1	1.3

Properties are at greater risk in markets subject to natural disasters such as hurricanes, tropical storms or tornadoes, wildfires caused by extreme heat and drought, and potential for flooding caused by rising sea levels. Additionally, insurance is more expensive in high-risk areas.

- **Hurricanes, Tropical Storms, Tornadoes:** We looked at the number of hurricanes and tropical storms that occurred in each metro over the last hundred years, using data from the National Oceanic and Atmospheric Administration (NOAA). This metric was then combined with the average annual number of tornadoes by state, using data from the Storm Prediction Center.
- **Wildfires:** The wildfire data came from a ULI report titled “Firebreak Wildfire Resilience Strategies for Real Estate,” which used data adapted from Verisk.³ States were ranked by the number of properties at risk from wildfires, alongside the ability of a metro to implement strategies that combat fire risk.
- **Rising Sea Levels:** Data came from ArcGIS, a geographic information system software maintained by the Environmental Systems Research Institute, a supplier of GIS mapping software. ArcGIS measured the cumulative changes in relative sea level from 1960 to 2018. Cities where sea-level change was two inches (five centimeters) or less were rated green, metros where sea level changed by two to four inches (five to ten centimeters) were rated yellow, and cities where the sea level rose more than four inches (ten centimeters) were rated red.

Pollution

EXHIBIT 2: AIR QUALITY AND POLLUTANTS IN US CITIES

Source: Yardi Matrix

Note: Higher scores indicate better protection and resiliency.

MARKET	STATE	AIR QUALITY	TOXIC CHEMICALS, PESTICIDES	WATER POLLUTION	OVERALL RATING - POLLUTION
Orlando	FL	2	3	3	2.7
San Francisco	CA	2	3	3	2.7
Tampa	FL	2	3	3	2.7
Austin	TX	2	3	2	2.3
Boston	MA	2	3	2	2.3
Denver	CO	1	3	2	2
Los Angeles	CA	1	3	2	2
New York	NY	2	2	2	2
Raleigh-Durham	NC	1	3	2	2
Seattle	WA	2	2	2	2
Atlanta	GA	2	1	2	1.7
Charlotte	NC	1	2	2	1.7
Chicago	IL	2	2	1	1.7
Dallas	TX	2	2	1	1.7
Minneapolis	MN	2	1	2	1.7
Nashville	TN	2	1	2	1.7
Portland	OR	1	1	3	1.7
Washington	DC	2	2	1	1.7
Houston	TX	2	1	1	1.3
Indianapolis	IN	1	1	2	1.3
Salt Lake City	UT	1	1	1	1

Areas with air or water pollution will become unattractive as places to live and work, impacting the value and livability of properties.

Areas with air or water pollution will become unattractive as places to live and work, impacting the value and livability of properties, contributing to potentially unhealthy indoor air, and creating maintenance and financial obligations for operators.

- **Air Quality:** A metro's air-quality grade was based on the average number of days per year in each market where the US Environmental Protection Agency's Air Quality Index was at the "unhealthy for sensitives groups" level or worse from 2016 to 2020.
- **Toxic Chemicals and Pesticides:** Each market was graded based on two different toxic pollutant metrics: (1) the volume of toxic chemicals released into the metro's environment in 2019, and (2) the average state rate of pesticide exposures from 2008 through 2017.
- **Water Pollution:** Water pollution poses a risk to people, households, businesses, crops, and animals. Water pollution grades were based on the number of unsafe contaminants detected in the metros' largest local water utility system.

Water quality

EXHIBIT 3: WATER QUALITY (SUPPLY AND INFRASTRUCTURE) IN US CITIES

Source: Yardi Matrix
Note: Higher scores indicate better protection and resiliency.

MARKET	STATE	WATER SUPPLY: QUANTITY & QUALITY	CONDITION OF WATER INFRASTRUCTURE	OVERALL RATING WATER QUALITY
Denver	CO	3	3	3
Boston	MA	3	2	2.5
Indianapolis	IN	2	3	2.5
New York	NY	3	2	2.5
Charlotte	NC	2	2	2
Chicago	IL	3	1	2
Dallas	TX	1	3	2
Minneapolis	MN	1	3	2
Nashville	TN	2	2	2
Portland	OR	2	2	2
Raleigh-Durham	NC	3	1	2
Salt Lake City	UT	1	3	2
Seattle	WA	2	2	2
Tampa	FL	3	1	2
Washington	DC	2	2	2
Orlando	FL	1	2	1.5
Atlanta	GA	1	1	1
Austin	TX	1	1	1
Houston	TX	1	1	1
Los Angeles	CA	1	1	1
San Francisco	CA	1	1	1

Unsustainable depletion of nonrenewable fresh water sources may impact population and economic growth, particularly in arid regions, as water stress and risk increase.

In addition to water pollution metrics detailed in *Exhibit 2*, unsustainable depletion of nonrenewable fresh water sources may impact population and economic growth, particularly in arid regions, as water stress and risk increase. The condition of each city’s water infrastructure (e.g., distribution pipelines, sewer systems, and treatment plants) helps to identify water-related risks beyond pollution. Inadequate and deteriorating water infrastructure intensifies the effects of storm damage and creates physical risks, including flooding from sewer overflows and poor drainage.

- **Water Supply, Quantity and Quality:** Markets were graded based on the quantity and quality of the local water supply, including potential risks such as shortages and contaminants.
- **Condition of Existing Water Infrastructure:** Markets were graded based on the condition and vulnerability of the local water infrastructure, including the structural reliability, failure events, and need for replacement of lead pipelines.

State and local government investment

EXHIBIT 4: STATE AND LOCAL GOVERNMENT PERFORMANCE IN US CITIES

Source: Yardi Matrix

Note: Higher scores indicate better protection and resiliency.

MARKET	STATE	STATE HAZARD MITIGATION PLAN	BILLION-DOLLAR WEATHER & CLIMATE DISASTER COST PER MILLION RESIDENTS	UNFUNDED PENSION LIABILITY	OVERALL RATING - STATE & LOCAL GOVERNMENT
Minneapolis	MN	3	3	3	3
San Francisco	CA	3	3	3	3
Boston	MA	3	3	2	2.7
Indianapolis	IN	2	3	3	2.7
Los Angeles	CA	3	3	2	2.7
Portland	OR	3	3	2	2.7
Salt Lake City	UT	2	3	3	2.7
Washington	DC	3	3	2	2.7
Atlanta	GA	2	3	2	2.3
Charlotte	NC	2	2	3	2.3
Denver	CO	3	2	2	2.3
New York	NY	3	2	2	2.3
Orlando	FL	2	2	3	2.3
Raleigh-Durham	NC	2	2	3	2.3
Seattle	WA	3	3	1	2.3
Chicago	IL	2	3	1	2
Nashville	TN	2	2	2	2
Houston	TX	1	1	3	1.7
Tampa	FL	2	2	1	1.7
Dallas	TX	1	1	2	1.3
Austin	TX	1	1	1	1

While the onset of natural disasters may be unavoidable, forgoing the opportunity to plan for disasters puts people and assets at risk. In this category we measure whether states have plans and/or the ability to mitigate environmental risk, and how seriously states take the Federal Emergency Management Agency's (FEMA) assistance to plan for climate change.

- **State Hazard Mitigation Plan:** Our grade is based on the Columbia Law School's Sabin Center for Climate Change Law report titled "State Hazard Mitigation Plans & Climate Change: Rating the States 2019 Update."⁴ The report ranks mitigation plans, with the lowest grades for those that did not recognize climate change or did so inaccurately.
- **State Billion-Dollar Weather and Climate Disaster Cost per Million Residents:** Markets were graded based on a report from NOAA titled "Billion-Dollar Weather and Climate Disaster: Overview," which ranks states on the total cost of climate disasters per million residents from 1980 to 2020.⁵
- **Unfunded Pension Liability:** States and cities that have large unfunded liabilities may be constrained in their ability to fund mitigation to environmental risk. Data for each state's unfunded pension liability was taken from Pew Charitable Trust's report titled "The State Pension Funding Gap: 2018."⁶

States and cities that have large unfunded liabilities may be constrained in their ability to fund mitigation to environmental risk.

Final grades: action counts

Based on our methodology, four metros stood out as having the least environmental risk: Boston, Indianapolis, Minneapolis, and Portland. The commonality was their location in states with policies and leadership that take environmental risk seriously.

The five lowest-ranked metros include three in Texas (Houston, Austin, and Dallas), along with Tampa and Los Angeles. The grades for Texas metros were dragged down by low scores in the natural disasters and government response categories. Both of those problems were on display in the severe winter storm in February 2021 that led to 4.5 million residents losing power and food and water shortages. Some 151 residents died in winter-related storms, according to the Texas Department of Health and Human Services.⁷

The Texas storms are a demonstration of the stakes. Texas has reaped the benefits of deregulation and low taxes and utility costs, but utility providers' lack of investment to winterize the power grid left the state unprepared to handle extreme weather. The result was a disaster and an estimated US\$20 billion in costs.

Four metros stood out as having the least environmental risk: Boston, Indianapolis, Minneapolis, and Portland. The commonality was their location in states with policies and leadership that take environmental risk seriously.

EXHIBIT 5: OVERALL RANKING OF US CITIES SAFEGUARDED AGAINST ENVIRONMENTAL RISK

Source: Yardi Matrix

Note: Higher scores indicate better protection and resiliency.

MARKET	STATE	OVERALL RATING NATURAL DISASTERS	OVERALL RATING POLLUTION	OVERALL RATING WATER QUALITY	OVERALL RATING STATE & LOCAL GOVT.	OVERALL RATING - ALL 4 CATEGORIES
Boston	MA	1	3	3	3	2.5
Indianapolis	IN	3	1	3	3	2.5
Minneapolis	MN	3	2	2	3	2.5
Portland	OR	3	2	2	3	2.5
Chicago	IL	3	2	2	2	2.3
Denver	CO	2	2	3	2	2.3
Salt Lake City	UT	3	1	2	3	2.3
Washington	DC	2	2	2	3	2.3
Atlanta	GA	3	2	1	2	2
Charlotte	NC	2	2	2	2	2
Nashville	TN	2	2	2	2	2
New York	NY	1	2	3	2	2
Orlando	FL	2	3	1	2	2
Raleigh-Durham	NC	2	2	2	2	2
San Francisco	CA	1	3	1	3	2
Seattle	WA	2	2	2	2	2
Dallas	TX	2	2	2	1	1.8
Los Angeles	CA	1	2	1	3	1.8
Tampa	FL	1	3	2	1	1.8
Austin	TX	1	3	1	1	1.5
Houston	TX	1	1	1	1	1

Starting the Conversation

Our rankings are not meant as a final word on the topic, but rather, a first attempt to understand the issues and develop a model for how to approach the topic—which is of increasing importance for commercial real estate.

These rankings are not meant as investment advice. ESG is a complicated topic that encompasses a wide range of specialties, of which we focused on one: environmental risk. Data in this emerging field remains difficult to obtain and measure. The field is in its infancy, with better data and metrics yet to come.

Some will no doubt question the categories we chose, the methods we used to grade metros, or what constitutes a proper response to ESG issues. This is our intention. Our rankings are not meant as a final word on the topic, but rather, a first attempt to understand the issues and develop a model for how to approach the topic—which is of increasing importance for commercial real estate.

ABOUT THE AUTHORS

Paul Fiorilla is Director of Research, and Claire Anhalt and Maddie Harper are Senior Analysts, for Yardi® Matrix, which offers the industry's most comprehensive market intelligence service for multifamily, office, self-storage, and vacant land properties.

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PUTTING PEOPLE FIRST



By Lauren Krause
Director of Environment, Social, and Governance
Grosvenor Americas

Brian Biggs, CFA
Research Director
Grosvenor Americas

Though “impact investing” is no longer totally distinct from investing in general, investors still have a lot of work to do to fulfill the social and governance aspects of ESG expectations.

Gone are the days when investors considered “impact investing” separate from just “investing.” In virtually every industry, environmental, social, and governance (ESG) matters have moved from a peripheral concern to a core business pillar. Real estate is no exception.

Within real estate, the conversation around the environmental component of ESG is quite advanced—and with good reason, as real estate is one of the largest domestic sources of greenhouse gas emissions¹ and embodied carbon² in the developed world. The “E” of ESG also has well-defined assessment metrics, key milestones for decarbonizing, and a robust certification marketplace for verifying a building’s green credentials.

The social and governance (S&G) components, by contrast, have received comparatively little attention, until recently. The data landscape for these criteria is less mature and performance standards and key metrics are less widespread and less consistent, partly due to lack of high-quality data.

This article introduces a “stakeholder perspective” as a tool for real estate companies to use when assessing the most material ways in which their business interacts with S&G considerations. Due to the challenge of collecting data within S&G, companies can struggle with identifying how their business activities can address social and governance needs/issues most effectively. The aim of this article is to offer a different perspective from those prevalent in S&G discourse in order to advance thinking and practice in real estate. We contend that the stakeholder perspective is a useful framing device companies can use to ensure their S&G activities are material, high impact, and consistent.

S&G: TAKING A STAKEHOLDER PERSPECTIVE

The United Nations Principles for Responsible Investing (“UNPRI”) in Real Estate outline the basis of S&G in ESG investing (*Exhibit 1*).

EXHIBIT 1: SOCIAL AND GOVERNANCE COMPONENTS OF THE UNITED NATIONS PRINCIPLES FOR RESPONSIBLE INVESTMENT (UNPRI) FRAMEWORK

Source: United Nations

SOCIAL	GOVERNANCE
<ul style="list-style-type: none"> • Community development • Health and safety • Human rights • Inclusion and diversity • Labor standards and working conditions • Social enterprise partnering • Stakeholder relations • Occupier amenities • Controversial tenants 	<ul style="list-style-type: none"> • Anti-bribery and money laundering • Cybersecurity • Data protection and privacy • Legal and regulatory fines • ESG clauses in existing leases

At a high level, the key social aspects of S&G are ethics, equity, and social cohesion, whereas governance focuses on legal matters and compliance with regulation. The UNPRI framework focuses on embedding ESG into the investment process from due diligence to acquisition, as well as holding through to disposition.³

Rather than consider S&G from an operations- or initiative-based perspective, taking a stakeholder perspective highlights how broad S&G principles touch multiple stakeholders and provide a structured approach to desired impacts.

We will consider five core stakeholder groups: (1) employees, (2) customers, (3) the local community, (4) contractors and suppliers, and (5) capital partners (*Exhibit 2*)

EXHIBIT 2: KEY STAKEHOLDER GROUPS FOR SOCIAL AND GOVERNANCE PRINCIPLES

Source: Grosvenor



1: EMPLOYEES

Quality employees, who demonstrate high productivity, creativity, and loyalty are a key component to a company's success. Hiring, retaining, and growing employees can be a competitive advantage for companies that view the employee-employer relationship holistically.

A growing percentage of employees cite a company's mission and/or values as a primary reason they choose to work or stay with a particular company.⁴ Encouraging employee involvement in S&G efforts not only demonstrates a company's values to employees but empowers employees to be directly involved in S&G impacts.

For example, at Grosvenor Americas our internal voluntary ED&I groups are one of our most popular employee engagement initiatives, annually attracting more than one-third of our staff. In a recent internal survey, more staff commented on the ED&I groups' work than sent questions relating to post-COVID working preferences. Additionally, in an effort to state clearly and focus on our values, our annual review process explicitly considers and financially rewards ESG efforts.

2: CUSTOMERS

Customers, such as tenants or homebuyers, are responsible for transactions that facilitate real estate companies' operation and longevity. Leases incentivize repeat business and significant operating expense can be avoided by retaining tenants.

A growing body of research demonstrates the direct correlation between a building's characteristics and tenants' health.⁵ Whether considering COVID-19 safety precautions, or the impacts of physical space on mental health, health and wellness impacts tenants' decision to occupy space. For instance, multiple high-profile tech companies have committed to only executing new leases in buildings that prioritize tenant health through certifications such as WELL and Fitwell. These market signals indicate that customers recognize the importance of occupying space that prioritizes tenant health and reduces risk by establishing standards surrounding business partners.

In response to these shifting trends, savvy real estate companies are responding by including commitments or goals surrounding S&G considerations. BentallGreenOak includes "healthy building" considerations, including water quality, air quality, healthy food options, fitness amenities, natural light, and biophilic features, in investment and asset management decision-making.⁶ As office occupancies continue to rise with reducing COVID cases, one can expect the focus on healthy buildings to only increase.

3: LOCAL COMMUNITY

The local community comprises individuals, organizations, and companies who occupy physical space around a real estate company's area of business. Central to much of how UNPRI defines "S" is the encouragement of actions that support communities and the avoidance of activities that detract from or harm communities. Local communities are typically considered less significant to a company's performance than customers, though a company's actions often impact them. Thus, their inclusion in a stakeholder view of S&G is not only warranted, but also serves as an important reminder of the mutual relationship between communities and companies.

A company that adopts S&G as a focus will consider local community concerns and desires within its decision-making processes. As an example, Tishman Speyer and the San Francisco Giants have partnered with the Port of San Francisco on the redevelopment of Mission Rock, a major mixed-use project in San Francisco. In connection with the procurement of consulting and contracting services, the developer has promoted a series of innovative approaches to encourage hiring local, small, and/or minority-owned businesses.

The project has a 20% local business enterprise (LBE) participation goal for all project contracts, and 30% local workforce requirement, with 15% goal for disadvantaged workers. For example, during procurement the development team, general contractors, and subconsultants work closely to understand any business challenges that may make small businesses less competitive, such as upfront burdensome mobilization costs, higher insurance premiums, or less purchasing power, and work to remove those barriers. Contracting innovations include flexible payment contract structures, labor-sharing "service agreements" for sub-tier subcontracts, and mentorship arrangements between larger companies and LBE's.

4: CONTRACTORS AND SUPPLIERS

Supply chains are increasingly becoming a point of focus and understanding the stability, ethics, and practices of businesses that are integral to the operation of a company is both a risk and an opportunity.

By including contractors and suppliers, a company broadens the impact of their actions. Companies can advocate for S&G actions with downstream supply chain partners by openly discussing businesses practices and developing principles or rules that are incorporated into contracts or other binding agreements.

One example of this in real estate is Revo's Social Value Framework, where the company has included "Responsible Procurement" as a priority and has begun to measure the percentage of suppliers that adhere to specific supply chain considerations.⁷

Supply chains are increasingly becoming a point of focus and understanding the stability, ethics, and practices of businesses that are integral to the operation of a company is both a risk and an opportunity.



5: CAPITAL PARTNERS

Capital partners are organizations that act as part of a real estate asset's capital stack, either by owning a portion of the asset on a passive basis or as a lender. This group of S&G stakeholders is also known as “upstream” supply chain partners, in contrast to the “downstream” supplier chain partners (#4).

The process of soliciting capital partners and finding operators that align with a lender's or manager's goals is a two-way process. Assessing risk/return profiles, diversification strategies, and business practices is a critical part of developing a new investor/investee relationship. Operators that prioritize S&G standards demonstrate responsibility, risk avoidance, and innovation to capital markets.

Managers are tasked with growing the capital under their control in the most risk-adjusted manner possible. By understanding how an operator considers risks and opportunities surrounding S&G, managers can better assess and select operators. Additionally, some equity partners and lenders manage capital from individuals or groups who have internal ESG metrics. By aligning funds under management with an operator with similar perspectives, incentives are more likely to be similar.

In the real asset industry, GRESB was established in 2009 by a group of investors looking for a way to quantitatively assess operators' performance on ESG factors. As capital market's focus on ESG continues to expand, GRESB participation has increased, demonstrating the desire for quantitative ways to measure all aspects of ESG.

EXHIBIT 3: SOCIAL AND GOVERNANCE STAKEHOLDER GROUP IMPACT SUMMARY

Source: Grosvenor

STAKEHOLDER	WHY THEY MATTER	HOW THEY INTERACT WITH S&G	EXAMPLE
Employees	ESG focus is increasingly a competitive advantage to retaining high-quality and motivated staff.	Demonstrates a company's values to employees and empowers them to be directly involved in S&G initiatives.	A company pays employees for time spent on internal and external ESG initiatives, noted in annual review metrics.
Customers (e.g., tenants or buyers)	Responsible for transactions that facilitate operation and longevity for companies.	Avoiding reputational and operational risk of doing business with companies that do not focus on S&G.	The inclusion of “healthy building” considerations into investment and asset management decisions (e.g., water quality, air quality, healthy food options, fitness amenities, natural light, biophilic features).
Local Communities	Deeply impacted by a company's actions in the built environment.	A company that adopts S&G as a focus will consider local community concerns and desires within its decision-making processes.	A company formed a joint venture with a national sports team on a new development with set targets that encourage hiring local, small, and/or minority-owned businesses.
Contractors and Suppliers	Supply chains are increasingly becoming a point of focus as operators direct capital to high S&G suppliers.	Companies can advocate for S&G actions with downstream supply chain partners by transparently discussing business practices and developing principles incorporated into contracts and agreements.	A company's “social value framework” includes “Responsible Procurement” as a priority and has begun to measure the percentage of suppliers that adhere to these considerations.
Capital Partners	Operators that prioritize S&G targets demonstrate responsibility, risk avoidance, and innovation in capital markets.	Minimize reputational and financial risk through selecting high S&G operators; aligning investor and operator values.	GRESB, a set of international ESG standards, was established by investors in 2009 as a way to quantitatively assess operators' performance on ESG criteria and increasingly informs capital decisions.



As capital market's focus on ESG continues to expand, GRESB participation has increased, demonstrating the desire for quantitative ways to measure all aspects of ESG.

TAKING S&G TO THE NEXT LEVEL

By considering impacts on stakeholders and taking a “stakeholder perspective” in the development of its S&G goals, a company can align its actions with the areas in which it can have the greatest impact.

By focusing on who is impacted by S&G activities, as opposed to simply tracking what is being achieved, a stakeholder perspective offers several advantages to operators and investors:

1. **Clearer understanding of key stakeholders leads to better data collection:** With a clearer and more targeted definition of stakeholder groups, a company can collect better data on how best to serve stakeholder groups. Data comprises both quantitative (as is common in the environmental component of ESG) and qualitative (reflecting the fact that some S&G actions are better defined with traits or characteristics surrounding goals).
2. **Addressing S&G “blind spots:”** Without a structured way of thinking about stakeholder groups, even well-intended S&G activities might overlook a key stakeholder. By understanding and categorizing stakeholders in a structured manner, this perspective helps ensure that S&G impacts on all company stakeholders are considered. This includes primary impacts, targeting the stakeholder group in question, and secondary impacts, indirectly affecting stakeholder groups not targeted. In this way, the stakeholder perspective helps ensure companies have no blind spots in their S&G activities.
3. **Embedding S&G in day-to-day operations:** Companies interact with each of the stakeholder groups during day-to-day business operations. By centring stakeholders in S&G thinking, companies can move from having separate, discrete S&G initiatives to embedding S&G in the course of their everyday business operations.

The stakeholder perspective is a novel approach to a long-standing challenge in the ESG field: developing S&G goals that truly impact the groups a real estate company directly or indirectly influences. S&G topics are broad, and by centring stakeholders, this approach serves as a method companies may use to focus on meaningful and measurable actions.

S&G topics are broad, and by centering stakeholders, this approach serves as a method companies may use to focus on meaningful and measurable actions.



ABOUT THE AUTHORS

Lauren Krause is Director of Environment, Social, and Governance for Grosvenor Americas, responsible for leading sustainability, enhancing the existing focus of delivering social benefit, and chairing Grosvenor’s Equity, Diversity, and Inclusion group. Brian Biggs, CFA, is Research Director for Grosvenor Americas, responsible for helping set Grosvenor’s investment strategy, analyzing transactions, and advancing the firm’s thought leadership projects.

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INFLUENCING MULTIFAMILY



By Ernest Lee
Managing Director, Americas
citizenM Hotels

As we come out of the pandemic to a new economy, it seems likely that the creator economy will continue to grow. This will have a major impact on the multifamily sector.

The current way most technology platforms monetize is based on attention at scale. More eyeballs and clicks results in more advertising. This also applies to other media—whether they are tech platforms, record labels, or newspapers—and this construct is almost always disproportionately better for those that control the tracks, not the trains.

But in an era where people increasingly follow people, not companies, the host platform needs to evolve – and the real estate world needs to take notice of how these trends will shift the relationships tenants will have with cities and buildings.

What you see now with the likes of Clubhouse, Patreon, OnlyFans, and Substack is a business model shift from an attention-based ecosystem to one that is focused on the creator.¹ This means consumers can engage and transact with creators directly, leading to a far more equitable structure and sustainable relationship with host platforms.

Already by the end of 2020, nearly 50 million people worldwide consider themselves creators, and two million of those derive full-time income from this work.² Even pastry chefs are getting in on the game, as barriers between creators and consumers keep falling.³ At the same time, despite the economic recovery being well underway, millions of jobs, such as those in the service industry or industrial, are predicted never to return.⁴ And two-thirds of those who were jobless in the US during 2020 thought about changing their field or occupation.⁵

As we come out of the pandemic to a new economy, it seems likely that the creator economy will continue to grow. Add to this the reality that 59 million Americans⁶ already performed freelance work in 2020—a 22% increase from 2019—and overall self-employment is being fueled by younger, higher skilled workers seeking flexible alternatives to traditional employment.⁷

In the worlds I inhabit—hospitality and real estate, mainly—few people are paying attention to this critical demographic and economic shift.

As another way to understand this shift, Pivot podcast cohost and NYU professor Scott Galloway is advancing an idea he calls “the Great Dispersion.”⁸ This is a belief that a lot of things that have historically been anchored to physical locations—workforce, healthcare, education—will in time become uncoupled from each other and spread out over greater geographic distances. Soon there will no longer be a need for these services to be co-located or even near each other, and, as a result, people will move further away from major cities that have historically been primary employment hubs, and in many cases towards second- or third-tier cities, or even exurbs across the country.

There’s good reason to believe the creator economy will have as great an impact on geographic dispersion, and subsequently real estate, as corporate remote work becomes more standardized.

The creator economy is centered on entrepreneurs and the self-employed; those who can unilaterally decide to pack up and work from anywhere. This increase of creators has led to better tools for those in the space to earn a living, and the prospects of earning a better living consequently attract more creators.

The numbers of new creators and newly self-employed will be staggering and will have far-reaching effects on real estate. There are already an estimated 11 million Americans who consider themselves “digital nomads,” along with an additional 19 million who say they are planning to become digital nomads—and another 45 million claiming they are considering the shift.⁹ While these numbers will undoubtedly come down as more employers call their workers to return, the message is clear: when you can work anywhere, you can work for anyone, including yourself.

This seems to be fundamentally at odds with real estate, which is by nature fixed in place. It's also highly fragmented and very local. Different owners have different stakes, often focused on particular markets or regions. And through time immemorial, these owners have rested easily because the tenant pool was typically married to a city, and it was only a matter of pricing in order to ultimately get a tenant through the door.

But what happens when significant portions of the population are no longer married to cities? What is driving a creator to sign a twelve-month lease? As the creator economy builds on the momentum that digital nomads have started, new waves of creators could be just “dating” these locations—a few months here, a year there. When nothing particular is holding these people down anymore—when, in other words, they become transient like hotel guests—the basic business model of apartments will need to shift, just as they are already doing in the office sector.



HOSPITALITY DOESN'T ONLY MEAN AMENITIES—IT ALSO MEANS FLEXIBILITY

The amenity wars that defined most of the previous multifamily development cycle were driven by apartment owners looking to make their buildings more “hotel-like.”¹⁰ To a large extent, that tactic worked, as it drove leasing and rents, but quickly, amenitization became less of a competitive advantage as newer buildings offered the next best thing. In an environment where the self-employed make up a larger part of the economy, especially in urban markets, tenants will become increasingly transient, and being hotel-like will take on new meaning.

Reharnessing the energy and capital spent in amenities towards flexibility, with furnished accommodations and medium-term leases, will allow a more hospitable setup to this new creator class. The reason companies such as Airbnb were¹¹ (and still¹²) focusing on stays shorter than a year, but longer than a vacation, is because of this white space that traditional multifamily operators are not filling. This is a category that property owners and operators should be taking on directly. While some see operational risk, there is a certain inevitability this is where the market is headed.

OWNERS NEED TO SELF-ORGANIZE, BEFORE TECHNOLOGY DOES IT FOR THEM

There are lots of innovative elements multifamily assets can carry over from the hospitality world, but there are also a lot of lessons the sector can learn from hospitality. One of the biggest recent mistakes for the hotel sector was its inability to take back control from online travel agencies (OTAs) after the GFC. What started in the late 1990's and early 2000's as a better way to sell rooms, quickly became a duopoly¹³ in the 2010's, where companies such as Priceline were collecting 17 cents from every dollar booked.¹⁴

As creators continue to compress standard lease length, the sales cycle is likely to get shorter and Internet aggregators will play a larger role in controlling the leasing motion. What was the operator's greatest advantage—tenants' need to physically see space—becomes less critical when there is less commitment and need to buy furniture, fixtures, and assets.

In order to aggregate and be more attractive to creators, property owners should consider creating partnerships, affinity groups, and cross-sales with owners and operators in different cities that have similar tenant profiles. Consider loyalty programs and reward frequent tenancy. Invest in community, hospitality, and experiences, not just design, amenities, and services. And with a substantial portion of America's rental properties still owned and managed by individuals or small, generally local ownership groups, it may pay to be open to franchise or management models that will allow better geographic offering and connectivity.¹⁵

METRICS NEED TO EVOLVE, AS MINDSET CHANGES FROM PROJECTS TO PRODUCTS

In order to keep up with the changes caused by the impending mass dispersion of the workforce, apartments will need to start reinventing how they measure themselves. As author and chair of ULI's tech and innovation council Dror Poleg put it in a recent AFIRE Podcast, real estate can no longer be considered a safe, passive investment product.¹⁶ The operational risk associated with changing lifestyle preferences will increase operational risk and the KPIs once held sacred need to be reevaluated.

When creators rent an apartment in an owner's portfolio for four months, then another in a different city for five months, it also makes sense to take a page out of the hospitality playbook. Focus on metrics such as customer lifetime value, customer acquisition costs, churn rate, and net promoter score alongside the standard real

estate measures of rent per foot, vacancy, and IRR. The level of analysis required when pricing becomes much more dynamic, involves different skill sets and levels of stress testing. Hospitality talent such as revenue managers and loyalty-plan specialists may become as important in multifamily as they are in hospitality.

What we are witnessing today with housing and furnished apartment startups such as Common, Starcity, and Sonder is just the beginning of increased operationalization in real estate. There will undoubtedly be more risk, but greater rewards.

As a hospitality professional, I've seen the transformational power of hotels viewing themselves as consumer products, and its effects are not only felt in guests but asset values in the long run.

Hospitality talent such as revenue managers and loyalty-plan specialists may become as important in multifamily as they are in hospitality.

ABOUT THE AUTHOR

Ernest Lee is Managing Director of Development & Investments for citizenM Hotels in North America. In this capacity, he is responsible for leading new development efforts, managing the company's principal investments, business activities, as well as implementing strategic initiatives within that region.

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ENHANCING LIFE SCIENCES



By Max Shepherd
Director, Global Real Assets
Sheffield Haworth, London

Jannah Babasa
Senior Associate, Global Real Assets
Sheffield Haworth, New York

As the global life sciences sector continues to grow in real estate, highly specialized skills and experience will be the keys to success.

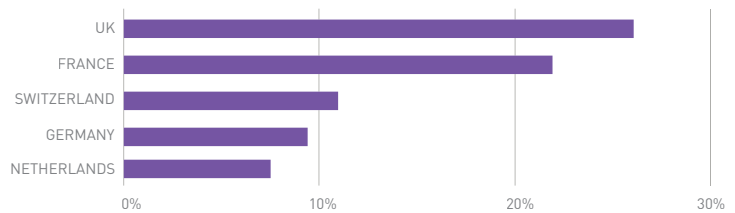
In a year of poor performance in some commercial real estate sectors, investors and developers are eyeing up a move into life sciences, but do the risks outweigh the potential benefits?

The life sciences industry consists of companies operating in pharmaceuticals, biotechnology, medical devices, biomedical technologies, nutraceuticals, cosmeceuticals, and food processing. Recent growth, partially driven by the pandemic, has centered on the health and medical side of the industry, including businesses dedicated to developing, producing, and commercializing innovative treatments, diagnostic tools, equipment, and software to improve and prolong lives.

The pandemic highlighted the resilience of life sciences compared with other commercial real estate sectors, especially because much of the activity in the industry, including lab work, cannot be done from home. At the same time, the pandemic and the rush for vaccines highlighted the benefits of self-sufficiency for localized medical manufacturing and distribution. This has led to changes in government policy and increases in public and private funding for the sector (see *Exhibit 1*).

EXHIBIT 1: TOP DESTINATIONS FOR INVESTMENT IN EUROPEAN LIFE SCIENCES REAL ESTATE

Source: Real Capital Analytics



However, the sector has proven resilient also based on other underlying trends not related to the pandemic, including aging populations, the increased volume of lifestyle diseases, such as diabetes, and rapid technological innovation. In that sense, the pandemic has ultimately acted as a catalyst for growth in the sector, rather than a cause.

As a result, investors and developers beginning to move into life sciences must exercise caution, because real estate in the space requires highly specialized skills that don't always come from traditional real estate talent pipelines.

We spoke to several life sciences real estate veterans in the US and Europe to get their views on the skills needed to lead real estate in this sector.

INTEREST IN LIFE SCIENCES REAL ESTATE IS AT AN ALL-TIME HIGH

Life sciences deals reached a record 16.4% of total office and flex transactions, according to a January 2021 report from New York-based advisory firm Newmark.¹ In the largest life science hubs in the US, the amount of real estate dedicated to the sector has grown to around 40 million SF in the Greater Boston area, some 30 million SF in San Francisco, and around 20 million SF in San Diego.²

Based on the scale of the sector, Ronan Furlong, Head of the DCU Alpha innovation campus in Dublin, Ireland, and private consultant for scitech and life science real estate investors and developers, says "investors should be careful deploying capital through 'vanilla developers' who lack life sciences specialism.

To begin with, life sciences firms need more than just office space. They need wet and dry labs—dedicated research space and manufacturing facilities that are mission-critical to the development and production of new therapies and technologies.” Andrew Blevins from Liberty Property Trust, a Prologis company, says that the key considerations for building a life sciences ecosystem include “amenities, lease flexibility, specification, and research support infrastructure.”

Furlong adds that buildings in life sciences “need to be constructed very differently. Building services, engineering, floor loading, circulation, deliveries, floor to ceiling heights—all of these are different and more costly than for office space.”

Further, life sciences businesses thrive on collaboration and access to top talent. “There is absolutely a unique skill in building a successful ecosystem, so you can’t apply standard development models to life sciences,” Furlong says. “A standard developer or private equity investor will not understand how to create an ecosystem. This is important because, to make the product attractive, you need to create a community with the right people. The upshot is that the landlord or developer needs to bolt on universities, research centers, hospital trusts, and to be in tune with the commercial participants. Then they need to package all of that into an environment with lots of attractive amenities and service provision.”

In other words, beyond building specs and amenities, firms look for locations where they can cluster together in proximity to world-class research universities and medical institutions, highly educated talent, and venture-backed startups. Hence the popularity of well-known life sciences hubs in Cambridge, Massachusetts; Research Triangle Park in North Carolina; or Cambridge and Oxford, England.

As well as requiring unique facilities, support services, and locations, investments in life science assets have a much longer timeline than other assets, and therefore require more patience from the investor.

“In the UK, a lot of the opportunities to own or develop life science assets are owned by the universities, who are also a key player in the life science ecosystem, as many of the start-ups in this sector emanate from these same world-class medical universities. As such, developing relationships that focus on a long-term alignment of interest is important to unlocking these opportunities,” says Abby Shapiro, Head of Offices, Retail and Life Sciences, Europe, at Oxford Properties. “We are a long-term investor who understands the value of creating sustainable communities through its real estate, which we believe will align well with the university’s ambitions for this sector.”

Investors also need to commit a lot of capital because they need a portfolio to cater for different sizes of businesses, some of which may be loss-making for years before they experience growth.

Beyond building specs and amenities, firms look for locations where they can cluster together in proximity to world-class research universities and medical institutions, highly educated talent, and venture-backed startups.

THE EARLY MOVERS HAVE A COMPETITIVE ADVANTAGE

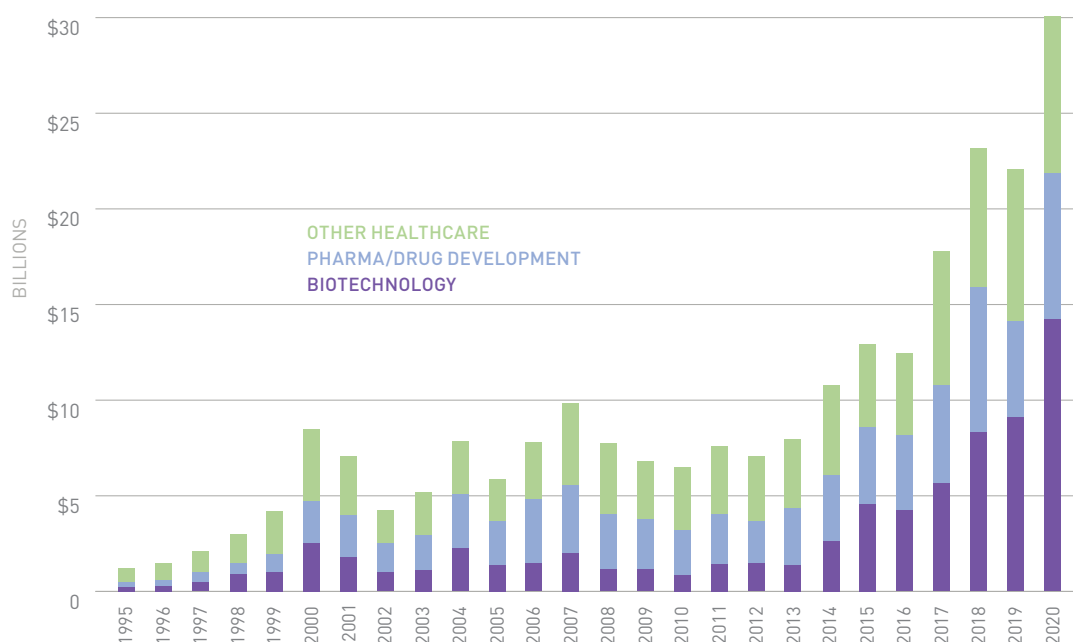
Several of our US-based contacts told us that industry connectivity is crucial for success in the sector. Due to the highly technical nature of the design and development process for life science properties, landlords need to know the right architects, contractors, engineers, property managers, and service providers.

Real estate firms and their talent must demonstrate an ability to deliver infrastructure and services to the highly specialized technical specification their prospective tenants expect. The fact that life sciences used to be more of a niche sector within alternative real estate before becoming the recognized stand-alone asset class it is today means that the larger players and early movers such as Alexandria, BioMed, and Healthpeak have had a significant competitive advantage.

These firms have already spent lots of time or money—or both—building up the networks, talent, and skills to lead in the sector. For example, Alexandria entered the market as a specialist in 1994 and now owns more than 40 million SF of life sciences real estate, making it the largest company in the sector. The company also secured a twelve-year lease with COVID vaccine maker Moderna. This kind of size, track record, and credibility are hard to replicate. As the market continues to grow, new entrants will need to bring in specialists or develop expertise in order to become and remain competitive.

EXHIBIT 2: VC FUNDING FOR LIFE SCIENCES IN THE US

Source: Newmark

**LANDLORDS ALSO NEED TO UNDERSTAND THE LIFE SCIENCES MARKET**

Although record amounts of venture capital (VC) funding have been pouring into life sciences in recent years (see chart above) this is no guarantee of success for landlords or developers in the space. The majority of firms are small, and they represent wildly varying levels of credit risk. As in the VC space, the failure rate is high.

The most successful developers and investors need to act almost like VC investors themselves, being able to spot tenants who are more likely to succeed and then nurturing them like startups.



“You need to really understand the products they are developing to be successful,” says Thomas Renn, Managing Director at Bruntwood SciTech, which is based in the UK.

Several of our US contacts agreed, saying that understanding the science and technology helps to assess its market viability and potentially mitigate any concerns about credit quality.

Ronan Furlong adds: “You need to treat this like any early-stage investment and offer flexibility—perhaps even long rent-free periods. It’s worth it in the long run, because those tenants who do scale significantly could end up being a one-million-square-foot tenant very quickly.”

While some developers and landlords talk about the need to act like VC investors, Alexandria Real Estate Equities (ARE) actually is one such investor. As well as being the largest owner-operator of life sciences real estate in the US, Alexandria runs its own specialist strategic VC platform that invests in promising innovative companies across a wide range of technologies and sciences. According to Crunchbase, Alexandria’s notable VC investments include Moderna and Vera Therapeutics. The firm was also an early investor in Corixa Corp, a biopharma firm based in Seattle that was later acquired by GlaxoSmithKline. As of June 30, 2020, ARE had a carrying value of more than US\$1.3 billion in their venture portfolio, across companies in the fields of immunology, neuroscience, gene therapy, drug discovery, and synthetic biology.³

PRIME ECOSYSTEM LOCATIONS ARE RUNNING OUT OF SPACE

A major challenge now for life sciences developers is that purpose-built supply is limited, even in top markets such as Cambridge and San Francisco, leading to more redevelopment and conversion activity, which is more expensive. Although US developers such as Breakthrough Properties and IQHQ are now expanding into Europe, markets there face a similar challenge of reaching capacity in hotspots such as Oxford, Cambridge, London, Zurich, Amsterdam, and others.

“Because there are very limited greenfield sites available in projected key life science locations in London, we also expect the focus to shift to conversions of existing properties to meet future needs,” confirms Abby Shapiro. Furthermore, “with an increased focus on ESG requirements of both investors and tenants, there is a strong argument for focusing on repurposing existing buildings to reduce the higher carbon footprint associated with demolition and rebuilding.”

While Cambridge, San Francisco, and San Diego remain the dominant life sciences ecosystems, other areas such as Seattle, Research Triangle, Maryland, and Philadelphia are growing. There are also a handful of emerging markets that are experiencing strong tailwinds and have potential for significant growth.

These markets have similar attributes to the dominant ecosystems. They have access to STEM talent, good universities, and hospitals. They’re also experiencing job and wage growth. According to JLL, cities such as Charlotte, Seattle, Denver, Austin, and Nashville could be poised to become significant life science ecosystems in the years ahead.⁴



SPECIALIST KNOWLEDGE AND TALENT ARE VITAL FOR SUCCESS IN LIFE SCIENCES REAL ESTATE

In summary, a strong case exists for investment in life sciences real estate, but success in this space will require specialist knowledge and technical skills. These include the ability to develop technical facilities such as laboratories, an understanding of the life sciences sector itself, experience with the unique needs of life sciences tenants, and the need to develop extensive networks across universities and healthcare organizations.

The property advisory industry, particularly in Europe, needs to recruit more specialist knowledge to be able to effectively support the growth in the sector. Given the immaturity of the market in Europe, there is reportedly a lack of specialist knowledge and experience in the mainstream advisory firms. In a highly competitive market, recruitment is one of the biggest challenges for both the advisors and client-side organizations.

Although the US life sciences sector is far more mature than Europe, many of the same constraints exist on both sides of the Atlantic—principally, the need for deep sector experience and knowledge. At a time when many office developers and landlords are looking to enter the market, attracting the right talent will be crucial to success.

ABOUT THE AUTHORS

Max Shepherd is Director Global Real Assets for Sheffield Haworth, London, and Jannah Babasa is Senior Associate Global Real Assets, Sheffield Haworth, New York. Sheffield Haworth provides highly tailored executive search and talent advisory services to help financial services companies find, attract, and retain talent.

NOTES

¹ “2020 Year-End: Life Science National Overview & Top Market Clusters.” January 2021. Newmark. Accessed June 24, 2021. https://www.ngkf.com/storage-nmrk/uploads/fields/1-column-with-sidebar-links/Newmark_LifeSciences-YearEnd2020_FINAL-2.pdf

² “2020 Life Sciences.” Newmark Knight Frank. Accessed June 22, 2021. https://www.ngkf.com/storage/uploads/documents/NKFRResearch_LifeSciences_June2020.pdf

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⁴ “Life Sciences Emerging Markets Index.” JLL. Accessed June 22, 2021. <https://www.us.jll.com/en/trends-and-insights/research/life-sciences-emerging-markets-index>

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REAL ESTATE EDUCATION GOES GLOBAL



By Julian Josephs, FRICS
Adjunct Professor
Graduate Global Real Estate Program
Georgetown University

The evolution of global real estate education over the past three decades will be integral to developing a rich pipeline of talent for the future of commercial real estate.

It is no surprise that global real estate education has increased in parallel with the growth of AFIRE over the past three decades. And as the academic focus on international real estate has evolved over this period, aided by a global mindset, and better access to technology and research, this changing landscape will be integral to the future of commercial real estate.

A PERSONAL REFLECTION

Since I came to the United States in 1977 after completing my MBA at INSEAD in France and was hired as the first International Investment Coordinator at Romanek Golub in Chicago, the growth of foreign investment in US real estate has multiplied many times over. Back in the 1970's and 1980's, investment was for foreign nationals coming to the US with advisors such as Jones Lang Wootton—now JLL and Richard Ellis, now part of CBRE—who brought European professional expertise to US, including a number who had trained as Chartered Surveyors. Although the real estate profession was offered at some universities in the UK, it was hardly taught in the US, with a few notable exceptions and in just a few programs at the graduate level.

Since the 1970's, real estate programs have become a significant part of offerings at the Universities of Wisconsin, Pennsylvania, Denver, Southern California, Texas, Johns Hopkins, and MIT. They and others were examples of pioneers in their field of expertise, but mostly at undergraduate level. But even then, international real estate was not part of many of those curricula, though some programs in recent years have exposed students to international real estate meetings abroad, such as MIPIM and EXPO REAL, and some select associations, such as the Urban Land Institute and FIABCI, have offered mentoring, scholarships, internships, competitions, and exchanges, thus enhancing their international appeal.

Based on these changes, it is exciting to observe that in recent years there is now a larger, focused academic interest in international real estate. A significant number of international students have come to the US to participate in advanced real estate programs, not available in their own countries. Students have also become very focused on ESG factors and how they can make an impact on real estate going forward. For example, in my course at Georgetown, I give my students a hypothetical US\$100 million to invest on behalf of a US pension fund in building up a real estate portfolio in a country of their choice, diversified by real estate sector and geography, with an exit strategy as well as a separate hypothetical US\$100 million back into the US, from an institution from that same overseas country. Their presentations have become increasingly more sophisticated over the years, as well, benefitted by increased access to technology and smarter tools for data analysis and visualization.

Much of this sophistication has also come directly from the business community of investors, especially at AFIRE. I am greatly and personally indebted to a great many guest lecturers over the years (a large number from AFIRE member organizations), who have been willing to come in person or online to speak to my students about their direct experiences working in international real estate—building a direct connection between the university and real-world practice. For example, in the early 2021 semester, we had a total of forty guest lecturers, with broad experience in international real estate, including developers, investors, appraisers, lawyers, and more. Five of the speakers will have been former students from the programs where I have taught, and over the time of my teaching, around a few dozen students have gone to work for the same companies welcomed into our classroom.

There is a direct connection between education in real estate and overall talent development in the industry.

WHAT HAS CHANGED IN INTERNATIONAL REAL ESTATE EDUCATION?

When I started teaching this course in the late 1980's international real estate investment was not the big factor in the investment market, but today, it is. The buyers were usually US investors and there were far fewer properties changing hands. Back in 1977, computers had not yet been embraced by the profession and many companies relied on real estate analysts to provide the numbers and research to justify the investments, with handheld HP calculators.

It was essential to travel to the location of the targeted properties and those like me spent a great deal of time on the road, visiting potential investments and trying to find sources to verify market data and justify the investment. In my case, I would spend one to three weeks per quarter overseas, communicating with the investors and presenting the case for investing in the respective properties. In the late 1970's, it was the German and Dutch institutional investors who were the main source of international investment into the US.

As part of my own path into international real estate, I joined the Fédération Internationale des Administrateurs de Bien-Consolis Immobiliers (FIABCI, or the International Real Estate Federation) in 1979. Having lived and worked in the UK, Belgium, and France, it seemed like a logical part-time activity to expand my network by teaching the expertise from what had become my day job. FIABCI gave me the opportunity to network globally, and even though their focus became more residential than commercial.

I loved the educational aspect of the work, and soon grew into different roles as the FIABCI-USA President, FIABCI-UK President, and World President, to impart to others what is required to accomplish a real estate transaction across borders.

Today the international real estate profession is more sophisticated and offers opportunities for students to focus on different areas of growth and attraction for investors. Additionally, technology has dramatically changed real estate investing in the last forty years, and today's students have grown up and benefitted from a data-driven profession. The educator's role has changed in kind, especially in the wake of the pandemic.

Additionally, some funds have historically determined they cannot acquire overseas unless the properties are physically inspected by one of their employees, which has meant potential new employment for new talent that may be based in those countries. There is thus a new and growing need for accomplished graduate students who understand the culture of the cross-border investor and can apply that knowledge to the local US real estate markets, to acquire, value, advise, recommend, asset manage, and, if necessary, oversee the sale of real estate assets for the foreign-based investor. This is how graduate global real estate students can and are filling this void, to their investor's benefit.


STAYING AT THE FOREFRONT OF TALENT DEVELOPMENT

Though it is now one of many programs focused on international real estate, the graduate global real estate program at Georgetown University is very appreciative of AFIRE's membership, which has in turn, enabled expert knowledge being passed down to the students. It has also brought cutting-edge subjects, such as ESG and sustainable and social investing, to the forefront of global investment programs—in addition to a growing focus on proptech, bitcoin, and other technological and financial developments that have made global investing more efficient in recent years. Today's students have grown up with these advances and can shift their graduate courses to make their educational experience that much more efficient.

As part of the association's core mission, AFIRE has made a special effort to enable its membership to stay at the forefront of real estate invention, with links to graduate international real estate programs that have facilitated access to lectures, publications, and potential employment—permanent and through internships—which has greatly enhanced the quality of talent recruitment by AFIRE's members. It has indeed been encouraging to see former students rising quickly within member firms to take leading roles in leading their acquisition and asset management of their global portfolios, and lead the future of real estate.

ABOUT THE AUTHOR

Julian Josephs, FRICS, is Adjunct Professor of the Graduate Global Real Estate Program at Georgetown University.



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ABOUT AFIRE



AFIRE is the association for international real estate investors focused on commercial property in the United States.

Established in 1988 as an essential forum for real estate investment thought leadership, AFIRE members gather throughout the year to help each other become Better Investors, Better Leaders, and Better Global Citizens through conversations, research, and analysis of real estate capital markets, cross-border issues, policy, economics, technology, and management.

Dialogue fostered by AFIRE is designed to help members gain competitive advantage through strategic and operational thought leadership, and to help improve the global real estate investment industry as a whole.

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AFIRE membership is exclusive, granted by invitation only, and currently includes approximately 200 organizations from around the world representing institutional investors, investment managers, and service providers for real estate investing.

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General Inquiries

+1 202 312 1400
info@afire.org

Membership and Sponsorships

Lexie Miller
+1 202 312 1403
lmiller@afire.org

Meetings and Events

Asmait Tewelde
+1 202 312 1404
atewelde@afire.org

Media and Publications

Benjamin van Loon
+1 202 312 1405
bvanloon@afire.org

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