United States Perspective 2020

INSIDE

- U.S. stands out amid slower global growth
- Opportunities in emerging talent centers
- Housing affordability & construction costs

BentallGreenOak

THEMES SHAPING THE YEAR AHEAD

Slower economic growth is upon us, but we don't see an imminent recession with central banks easing monetary policy and a likely handoff to governments for more fiscal stimulus. In this environment, healthy real estate operating fundamentals will continue to attract investment capital. Our 2020 Perspective highlights 10 key themes that we think will shape the beginning of the new decade.

COUNTERACTING THE SLOWDOWN

ONUS ON FISCAL POLICY TO DRIVE GROWTH

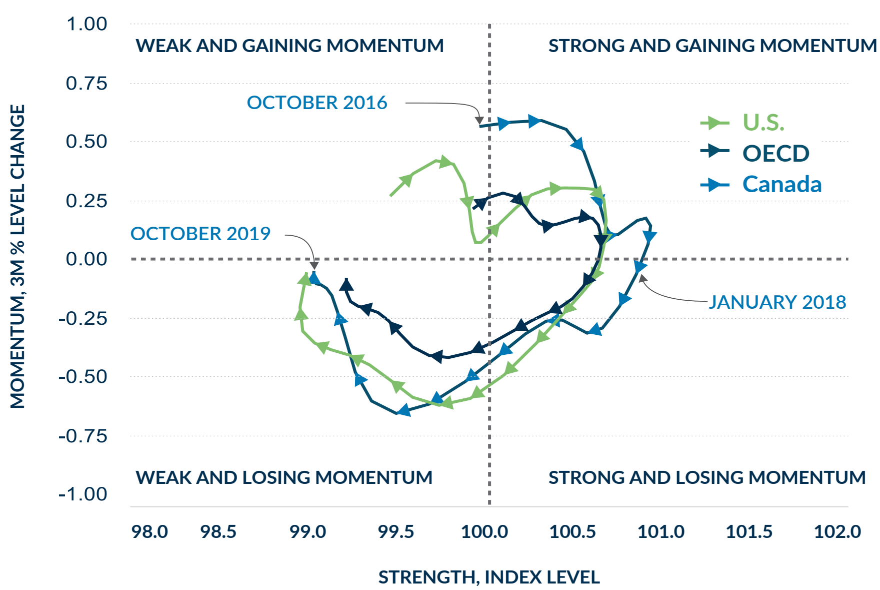
The global economy has downshifted from “synchronized growth” to a more tepid outlook. The Organisation for Economic Co-operation and Development (OECD) leading indicators, having lost momentum over the past 12 months, support this cautious sentiment. This has translated into a weaker global real GDP growth forecast of 2.9% for 2019 and 2020. The forecast does not call for recession, but it reflects a marked slowdown from average annual growth of more than 3.6% in 2017 and 2018.

Much of this weaker outlook revolves around soft industrial output and slowing trade activity, which could deepen if progress toward a China–U.S. trade resolution stalls. Other political events such as the U.S. impeachment hearings and election, Brexit and the Hong Kong protests further cloud the global outlook.

Against this uncertain and fragile backdrop, central bankers have taken a dovish stance. The Federal Reserve cut its benchmark rate three times in 2019. Meanwhile, the Bank of Canada and Bank of England have halted their rate-hike path, with possible cuts on the horizon.

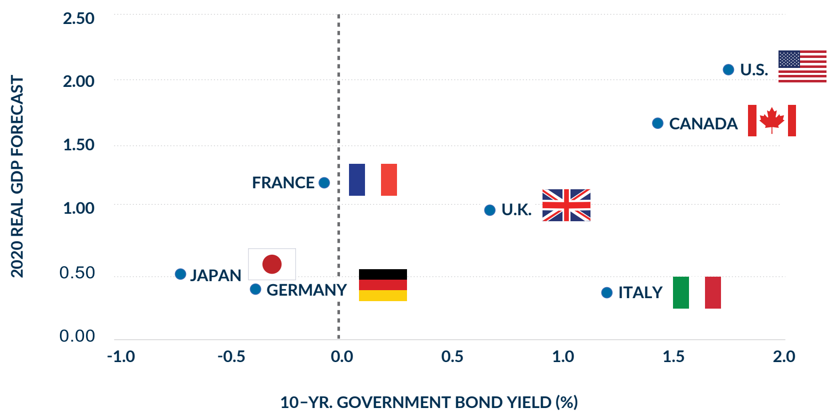
OECD Leading Indicator 3-Year Trend

Much of the OECD global growth forecast of 2.9% for 2020 revolves around soft industrial output and slowing trade activity, which could deepen if progress toward a China–U.S. trade resolution stalls.



Source: Macrobond, Organisation for Economic Co-operation and Development

Bond Yields Reflect a Complex Interplay of Growth Expectations and Perceived Risk



Sources: Bloomberg (bond yields November 29, 2019), OECD (November 2019)

During down cycles, conventional monetary policy has been the weapon of choice to stimulate the economy. In conjunction with government spending and quantitative easing, by lowering interest rates, central bankers played a key role in steering the global economy out of the Global Financial Crisis. However, with interest rates near historically low levels, there may not be enough firepower left on the monetary front to stimulate growth.

The effectiveness of the transmission mechanism depends on whether the household and private sectors are well positioned to drive aggregate demand. In the U.S., where economic growth is leading that of other G7 nations, households are doing their part as low unemployment, rising wages and record stock prices trigger healthy retail sales growth. Business investment trends, however, have been lackluster due to broad-ranging policy uncertainty.

Monetary stimulus may yet prove ineffective, however, as low and even negative rates in Europe and Japan have done little to foster a sustainable growth cycle. In fact, there are indications that low or negative rates may encourage more saving as households hoard cash in an effort to generate enough savings to carry them through their retirement years. Japan is perhaps the best example of this trend.

The onus then falls on fiscal stimulus to provide the fuel to overcome sluggish growth. Unfortunately, it remains to be seen whether there is enough political will in the U.S. to craft a big spending bill that could fuel stronger growth. Governments should be taking advantage of today's low rates to invest in infrastructure, which can create jobs in the near term and support healthy expansion longer term. But political brinkmanship and high debt levels pose obstacles to such policy efforts in many countries.

As we head into 2020, a worsening geopolitical climate could have a trickle-down effect on the real economy. That said, the U.S. seems well positioned to outperform in large part due to the financial health of its consumer. Upward pressure on interest rates should remain limited, if not absent, over the next year in the U.S. as global capital flows seek out higher yields.

These conditions mean government borrowing costs will remain low and North American commercial property values should hold strong. To fend off the next recession and to break out of the modest economic growth trend experienced through much of the current expansion, policymakers will need to work together and think bigger regarding fiscal policy.

02

FOLLOWING THE TALENT

EDUCATED WORKERS MIGRATING TO NEW MARKETS

In past issues of Perspective, we have highlighted the increasing trend of employers following well-educated workers to the locations they are choosing to live in for lifestyle and/or affordability reasons. This trend has been unfolding for several years, and we have observed a significant transformation in the caliber of the workforce in many markets.

Tracking the share of the U.S. population aged 25+ with at least a bachelor's degree during the period from 2013 to 2018, we see that this measure rose by three percentage points, to 32.6%. In many markets this increase has been even more significant.

In the accompanying table we've highlighted some notable markets where growth in the number of degree holders has outpaced the nation. These markets had to meet a number of size, educational attainment, job growth and median age filters to be included on the list — but they are most noteworthy for the rate of change in the number of people with at least a bachelor's degree (we've sorted the table by this metric, starting with Austin at 34%).

Phoenix, Ogden and Reno have been highlighted because their strong growth in well-educated residents was not necessarily transformative. These are locales where overall population growth was so fast that the increase in the share of population with at least a bachelor's degree was three percentage points or less — not dissimilar to the nationwide figure. These areas have seen high growth rates in their educated population, but not to such an extent as to have a greater change in the educational attainment profile of their workforces than the rest of the country.

By contrast, Austin, Portland, Denver and Oakland are among the markets with a more significant increase in the share of population 25+ with at least a bachelor's degree. Most of these markets have seen a strong educational attainment shift, and we expect this shift to encourage a reciprocal growth trend as firms take notice and set up large operations in these markets, thereby luring additional talent. Two examples are the major offices planned by Amazon in Nashville and Apple in Austin.

It is no surprise that many of these locations are in Southern and Mountain states that offer a lower cost of living and a desirable lifestyle. Affordability is a significant issue in most mature markets, and the prospect of cheaper housing for workers and lower space and labor costs for firms is compelling.

This growth has not been without its challenges. These are often smaller markets with a strong car culture for commuting purposes, and traffic issues have become a significant constraint. Further, the influx of well-paid workers is having tangible effects on the cost of housing and the rapid gentrification of neighborhoods. Investors must take these issues into consideration when they assess new opportunities.

Well-educated talent should foster innovation and encourage additional growth, but there will be growing pains. Investors may be lured by the prospect of higher yields and higher expected growth, but they should also be cognizant of how growth is being managed in these locales, and of the risks tied to new supply and investment liquidity.

Finally, it should be noted that Boston, New York, San Francisco and Los Angeles all experienced more significant increases in the number of well-educated residents than most of the markets shown in the table, albeit with slower growth rates. These mature gateway cities continue to see their own talent centers emerge and evolve, and with greater supply constraints and higher liquidity these markets should remain attractive.

POPULATION AGE 25+ WITH A BACHELOR'S DEGREE OR HIGHER

Rank	Geography	2018 Share	PPT Chg. Since 2013	Change in Degree Holders 2013 to 2018	
				%	#, 000s
1	Austin, TX	46.6%	5.1	34.0%	172.4
2	Orlando, FL	33.1%	3.6	30.8%	138.2
3	Spokane, WA	30.1%	4.2	28.2%	26.1
4	Provo, UT	41.4%	3.7	28.2%	28.8
5	Charlotte, NC-SC	36.1%	4.2	27.1%	134.0
6	Fayetteville, AR-MO	31.6%	3.3	26.8%	23.3
7	Charleston, SC	36.5%	3.6	26.6%	42.0
8	Jacksonville, FL	31.7%	3.4	26.4%	70.4
9	Raleigh, NC	48.0%	4.3	26.1%	90.7
10	Miami, FL	31.4%	4.6	25.9%	127.5
11	Portland, OR-WA	40.0%	4.9	25.5%	142.2
12	Dallas, TX	38.1%	3.6	25.3%	250.1
13	Greenville, SC	30.8%	4.0	25.1%	38.0
14	Fort Collins, CO	47.6%	4.3	25.0%	22.1
15	West Palm, FL	36.9%	4.4	24.8%	79.9
16	Salt Lake City, UT	35.2%	4.1	24.8%	53.9
17	Nashville, TN	35.9%	3.6	24.4%	92.2
18	Tampa, FL	30.8%	3.1	24.4%	137.3
19	Phoenix, AZ	31.9%	2.7	24.2%	202.8
20	Denver, CO	44.8%	4.5	24.1%	177.3
21	Atlanta, GA	39.4%	4.3	24.0%	302.2
22	Seattle, WA	47.9%	4.5	23.2%	195.3
23	Ogden, UT	32.0%	3.0	23.0%	24.2
24	Oakland, CA	46.4%	5.4	22.9%	171.3
25	Reno, NV	31.3%	2.9	22.8%	19.0
	United States	32.6%	3.0	16.5%	10,308.4

Sources: U.S. Census Bureau, Moody's Analytics, BentallGreenOak Research

PORTFOLIO CONSIDERATIONS IN A LOW-YIELD ENVIRONMENT

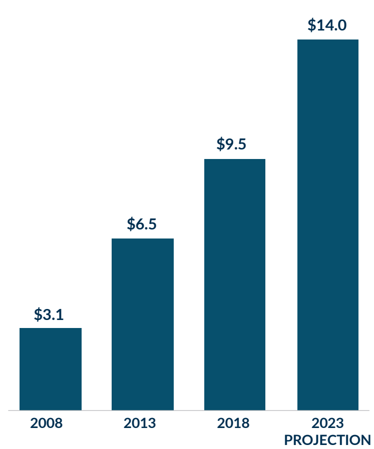
REAL ESTATE'S PORTFOLIO ENHANCING ATTRIBUTES

Capital is expected to continue to flow into private real estate in the year ahead. In times of increased economic and political uncertainty, real assets in liquid markets not only provide safety and diversification, but often outperform those directly linked to financial markets on a risk-adjusted basis. There is currently close to $16 trillion in negative-yielding debt around the globe. Consensus expectations for global equity returns over the next decade are in the mid single digits. In such a low-return environment, even the most conservative investors are looking to reallocate capital into real assets.

Assets under management (AUM) in alternative categories such as private debt, real estate, infrastructure, natural resources, hedge funds and private equity have increased more than three-fold over the past decade. Alternatives research firm Preqin predicts that AUM in global portfolios will jump from $10 trillion in 2018 to $14 trillion by 2023. Similar projections by PwC anticipate that investment in alternatives will increase to as much as $21 trillion by 2025.

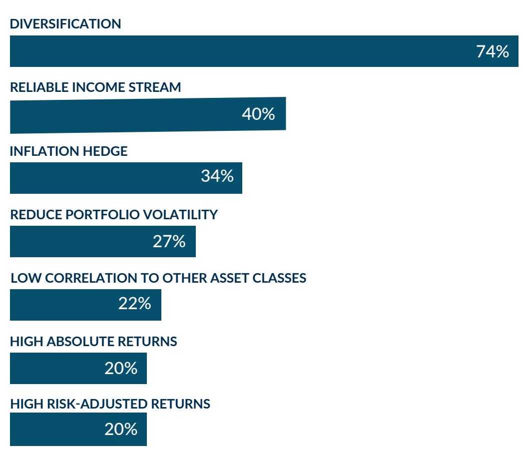
Investors typically cite several reasons for using alternatives, including higher absolute returns, higher risk-adjusted returns, low correlation to other asset classes and reduced portfolio volatility. In a recent Preqin survey, investors cited diversification, reliable income stream and inflation hedge

Projected Growth of Global Alternative Assets Industry
AUM ($ Trillions)



Source: Preqin, 2019

Main Reasons for Investing in Real Estate Assets
(Proportion of Investors)

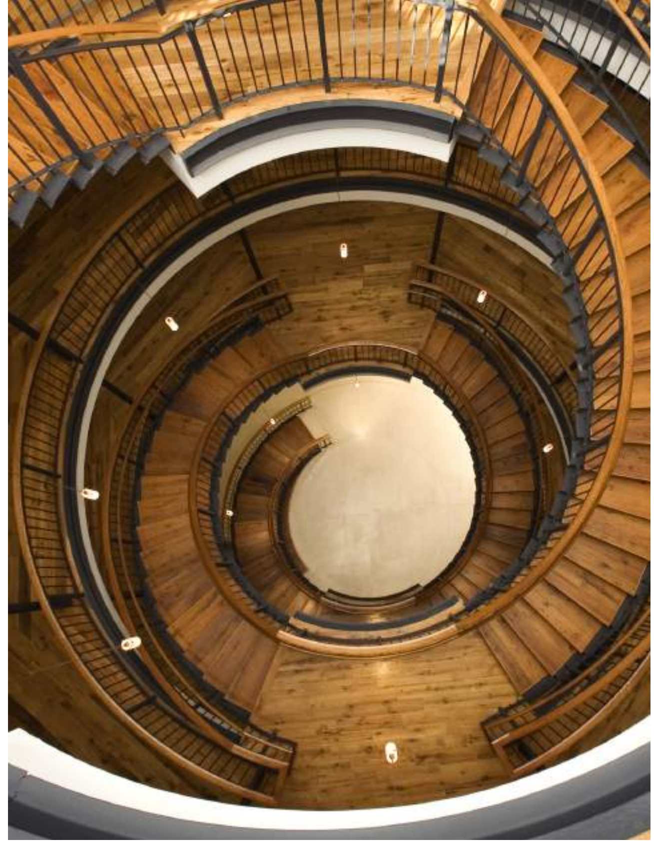


as the three most common reasons for incorporating real estate into their portfolios.

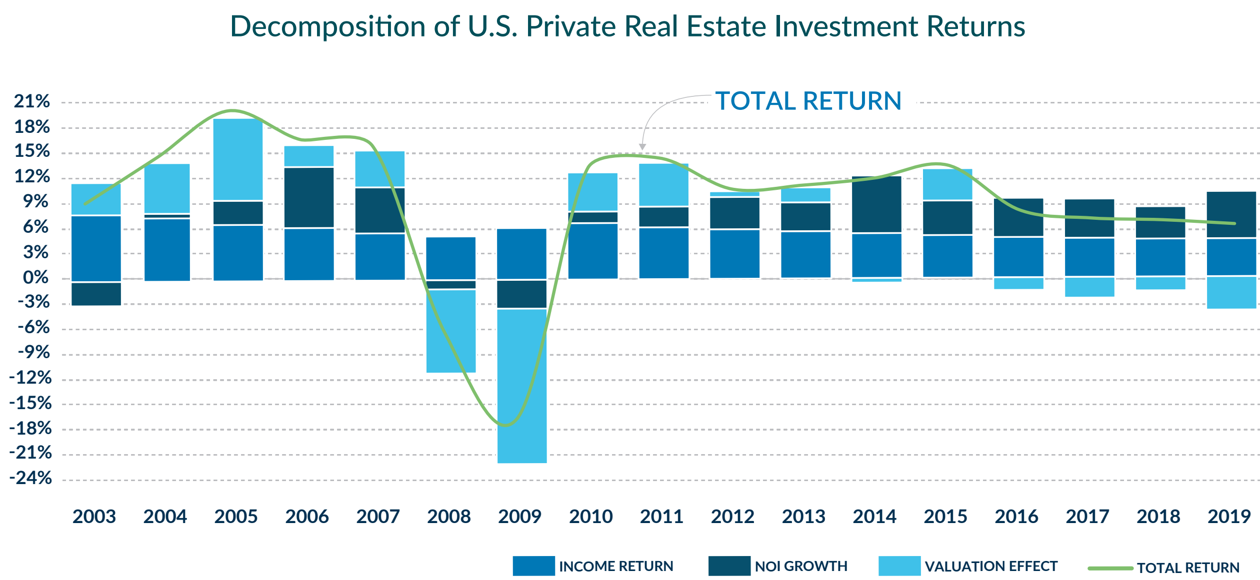
There is a consensus view that public market valuations are peaking. And investors and fund managers in alternatives indicate fulsome valuations are the biggest challenge to future real asset returns. But with heightened market uncertainty, investors are looking to increase portfolio resiliency with alternatives, seeking stable income yield, geographic and sector diversification, and fundamental-driven value creation to underpin their cash flows.

NCREIF data shows that over the past 20 years approximately 70% of the total return generated by private commercial real estate investments has been derived from the income component. The latest PREA Consensus Forecast Survey shows core real estate is expected to generate a 4.5% income return with tepid capital appreciation of 1.3% over the next year. While the expected investment performance of 5% to 6% total return is below the long-term average for investment-grade, private real estate, it remains attractive on a relative basis.

While it seems certain the best performance of the cycle for commercial real estate is behind us, market fundamentals remain strong, and real estate's attractive relative performance and portfolio enhancing attributes should continue to keep capital flowing. This will remain true as long as the economic expansion continues, but there are steps that can be taken at the portfolio and asset levels to help smooth out the impact of a potential downturn as well.



The Octagon Apartments, New York, NY



Sources: NCREIF, BentallGreenOak Research
Note: 2019 data = 4-quarter trailing return as of Q3 2019

04

INCREASING PORTFOLIO RESILIENCE

SUSTAINABLE INVESTING HELPS DRIVE PERFORMANCE

Portfolio resilience is top of mind for investors, in terms of both protecting cash flows and valuations from a cyclical downturn and ensuring that assets endure over the long term. Asset managers have levers to pull to position assets for the next downturn, including locking in occupancy and lease terms with new and existing tenants, undertaking major capital projects to better position properties competitively, and bringing additional focus to monitoring of tenant credit. But central to constructing a "portfolio of tomorrow" is the incorporation of climate change and environmental, social and governance (ESG) factors into the investment decision-making process.

Research from BentallGreenOak, REALPAC and UNEP FI has affirmed a consensus view on the increasing role ESG is playing in real estate investment decisions. This was one of the largest ESG-focused surveys of global real estate investors ever conducted and included investment managers representing over $1 trillion in AUM in North America, Europe and the Asia-Pacific region. This viewpoint is critical, as buildings account for approximately one-third of global greenhouse gas emissions and consume 40% of global energy. As investors and consumers shift to lower-carbon energy sources, assets will be increasingly scrutinized for carbon-related risks.

A November 2018 climate assessment report issued by the U.S. government noted that extreme weather-related events were intensifying, a fact that has become all too evident for property owners. Flooding, hurricanes, wildfires, landslides, drought, heat waves, food and water scarcity and rising sea levels — these climate-related events present both physical and operational risks for real estate assets.

Sustainability practices have now become a prerequisite for fund managers whose institutional investors require their consideration in underwriting, operations and asset management and increased transparency in ESG disclosure (measuring and reporting) as part of de-risking a portfolio. And as a fiduciary, it's now essential to take into consideration climate change impacts, from both a risk mitigation and a value creation perspective, to enhance the long-term financial and operational resiliency of real estate portfolios. High tenant satisfaction, lower tenant turnover and reduced operating expenses are just a few of the metrics that demonstrate the return on investment from sustainability initiatives.

More investors are beginning to understand the correlation between sustainability and financial performance. And more data is beginning to prove out that sustainable investing produces superior returns. With the United Nations Environment Programme (UNEP) being the latest to ring the alarm bells on rising global temperatures in its Emissions Gap Report, expect to see more discussion and action among real estate stakeholders in the year ahead. Just as investment managers are thinking about how to insulate their portfolios from the next market cycle, they also have an obligation to take steps to address these ESG issues today.

Buildings account for approximately one-third of global greenhouse gas emissions and consume

40%

of global energy

THE HOUSING AFFORDABILITY CRISIS

LIMITED HOUSING SUPPLY CAPS ECONOMIC POTENTIAL

Housing affordability is a complex social and economic issue that affects many of the world's most prosperous cities. Income disparity, land scarcity, rising construction costs, strong population growth and a surplus of investment capital all play a role in the issue. But the main culprit in many North American cities is a dearth of adequate housing supply. Bureaucratic planning, zoning and approval processes are simply insufficient to keep pace with soaring demand.

Many of the federal polices implemented over the past 20 years have been targeted at helping first-time home buyers. There are many conclusions that can be drawn concerning the policies that contributed to the housing bust in the U.S., but it is clear that those efforts took the short-term perspective of helping buyers afford housing at current prices, rather than getting at the core problem, which is a lack of supply.

Further, while efforts to boost homeownership may have been well-intentioned, they may also have encouraged households to purchase properties even though many would have been better served by the lower financial commitment and higher mobility offered by renting. As the head of Canadian Mortgage and Housing Corporation (CMHC), Evan Siddall, recently quipped, "This glorification of home ownership is this odd North American thing that's counter intuitive." Because rental housing is most likely to fit household budgets, it should play a critical role in addressing the issue of housing affordability.

Although the level of purpose-built rental construction has ramped up in recent years as low interest rates and rising rents have made projects more feasible, such projects still must be primarily targeted at more-affluent renters in order for the economics to work. This merely achieves a trickle-down effect whereby lower-priced rentals only become available when renters "move up," as opposed to creating new supply directly targeted at rents that are affordable for those making a living wage.

The National Apartment Association conducted a countrywide survey to better understand factors that impact the new supply of apartments. The survey measured development complexity including the impact of community involvement, construction costs, affordability issues, infrastructure, density and growth restrictions, land supply, environmental restrictions, approval process complexity, intricacy of political structure and time to develop a new property.

The key takeaways from the survey were that:
1) in addition to the importance of land availability, input from local citizens significantly influences development (or lack thereof — NIMBYism);
2) rising land and labor costs are inhibiting the production of affordable housing; and 3) complex

approval systems are correlated with affordability issues. These findings ring true in other major markets across the globe as well. Housing affordability is a global crisis, particularly in metro areas, where prosperous cities have become victims of their own success.

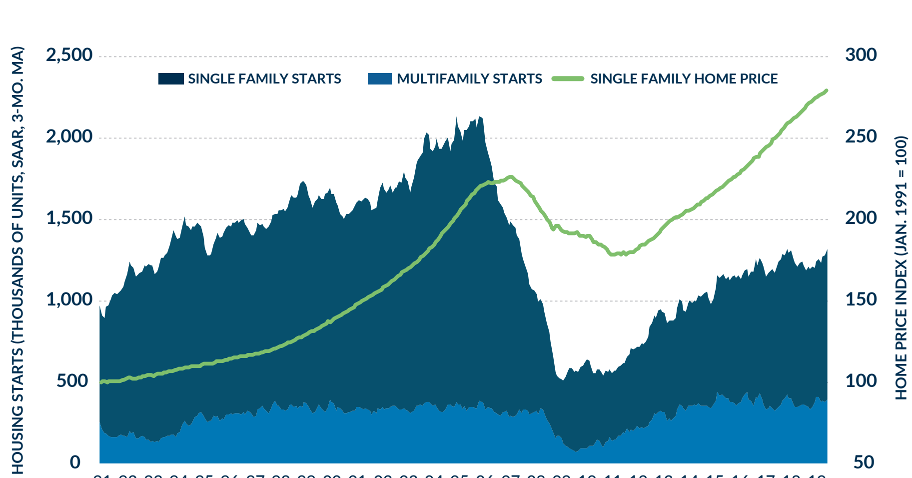
Populist policies to address affordability are gaining increasing momentum, such as various forms of rent control introduced in Oregon, California and New York. Historically, rent control efforts have tended to constrain new supply and exacerbate affordability issues over the long term. We remain cautiously optimistic that the Opportunity Zone program may help bring relief to cost-burdened areas, but the program has had a disappointing start, particularly in terms of attracting affordable housing development.

The Five (FKA Broadstone Ridge), Atlanta, GA

Real estate investors like supply constraints, but supply constraints that adversely impact the labor force and the ability of firms to grow will weigh on investment performance over the medium and long term. In addition, there are social and political considerations that will play out through the current election cycle and beyond. From an investment perspective, the economic consequences of the shortage of affordable housing should not be ignored, nor should the policy responses of state and local governments.

Low Supply Driving Prices Higher

Starts averaged over 1.5 million units per year during 1990–2007 and have averaged less than 1 million units per year since 2008.



Sources: FHFA, Moody's Analytics, U.S. Census Bureau, BentallGreenOak Research

06

RISING DEVELOPMENT COSTS

RESTRAINING NEW SUPPLY AND EXACERBATING AFFORDABILITY CHALLENGES

By limiting new supply, rising replacement costs have been a key factor in extending the positive cycle for commercial real estate occupancy and rent growth. But high costs have also exacerbated affordability issues for both households and businesses. While headline consumer price indices show a benign inflation environment, the cost to build or improve any type of building continues to soar.

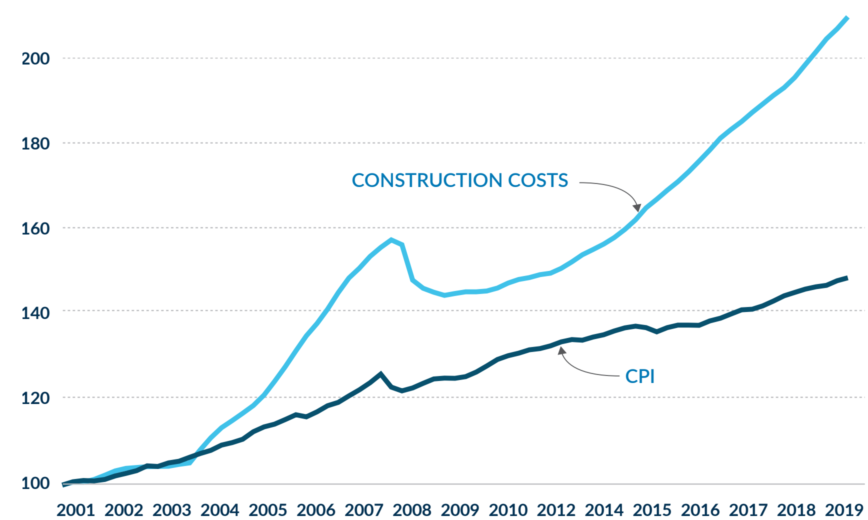
There is emerging evidence of price-pressure relief for construction materials, but land costs, labor costs, development fees and other municipal charges are expected to continue to outpace inflation. Slow approvals in planning and rezoning processes also add significant time and cost to development projects. According to Rider Levett Bucknall data, cost increases have been highest in San Francisco, Seattle and Chicago based on year-over-year data as of Q3 2019. Such rapid cost escalations are further limiting housing affordability in many of the most expensive U.S. cities.

Investment capital is drawn to development for incremental yield (albeit less than what has historically been achieved) relative to acquiring in-place income from operating assets. Development can be a means of building resiliency in a portfolio by creating assets with a longer economic life. This

Construction Costs and CPI

(Q1 2001 = 100)

While headline consumer price indices show a benign inflation environment, the cost to build or improve any type of building continues to soar.



Sources: Rider Levett Bucknall, U.S. Bureau of Labor Statistics

“Although tariffs on construction materials such as aluminum and steel as well as finishes and fixtures receive most of the headline blame for increased costs, labor scarcity is also having a significant impact.”

Following the Great Recession unemployment in the construction sector peaked at just above

27%

and many skilled workers left the sector.

Source: BLS

wall of capital has pushed land values to extraordinary heights.

Although tariffs on construction materials such as aluminum and steel as well as finishes and fixtures receive most of the headline blame for increased costs, labor scarcity is also having a significant impact. According to data from the U.S. Bureau of Labor Statistics (BLS), unemployment in the construction industry is 4%, and wages are rising well ahead of inflation. These figures are notable given that the single-family homebuilding industry has not rebounded to prerecession levels.

A decline in labor productivity has exacerbated this situation. Following the Great Recession unemployment in the construction sector peaked at just above 27%, and many skilled workers left the sector. Employment in the construction industry as of October 2019 was still lower than it was in October 2007. Just as in many other occupations, a demographic transition is also adding to productivity declines as older, highly skilled workers move into retirement. Significant knowledge transfer will need to occur to prevent further dips in productivity.

These barriers to new supply are helping drive rents and asset values higher. While it looks as though cost pressures may have peaked for this cycle, growth is anticipated to remain above the rate of inflation, and if potential fiscal policy initiatives include a major infrastructure spending bill, construction cost growth could accelerate once again. Investors can expect rising replacement costs to continue to exert upward pressure on rents over the medium term, while also supporting existing property values.

07

SECULAR TAILWINDS FOR INDUSTRIAL

BUT ARE SUPPLY/DEMAND DYNAMICS TURNING LESS FAVORABLE?

Technology continues to significantly disrupt the retail and industrial sectors as consumers buy more goods online. Ecommerce has driven space demand from warehouse and logistics users to new heights. Speed is essential in this new environment, as rising service level expectations mean users need to be close to end consumers and must drive higher throughput of goods in their facilities.

Excluding autos and gas, ecommerce accounts for just over 13% of retail sales in the U.S., but its rate of growth remains stellar. Preliminary data from the U.S. Census Bureau for Q3 2019 show ecommerce increasing by nearly 17% year-over-year, a material acceleration from growth during the same period a year earlier. The ecommerce share of retail sales has roughly doubled since early 2012.

With this tremendous tailwind, industrial availability has fallen to the lowest levels seen since the early 2000s, according to CBRE-EA. At 7.2%, Q3 2019 availability was 2.6 percentage points below its prerecession low from 2007. Availability has fallen by more than half from its 2010 high.

We detailed in our June 2019 Perspective report that, even in the event of a complete demand shutdown, expected supply over the next 12 months was not enough to push availability above its long-term average. This was an extreme stress test, as demand growth shows no signs of stopping, but supply growth continues to accelerate, and net absorption has slowed.

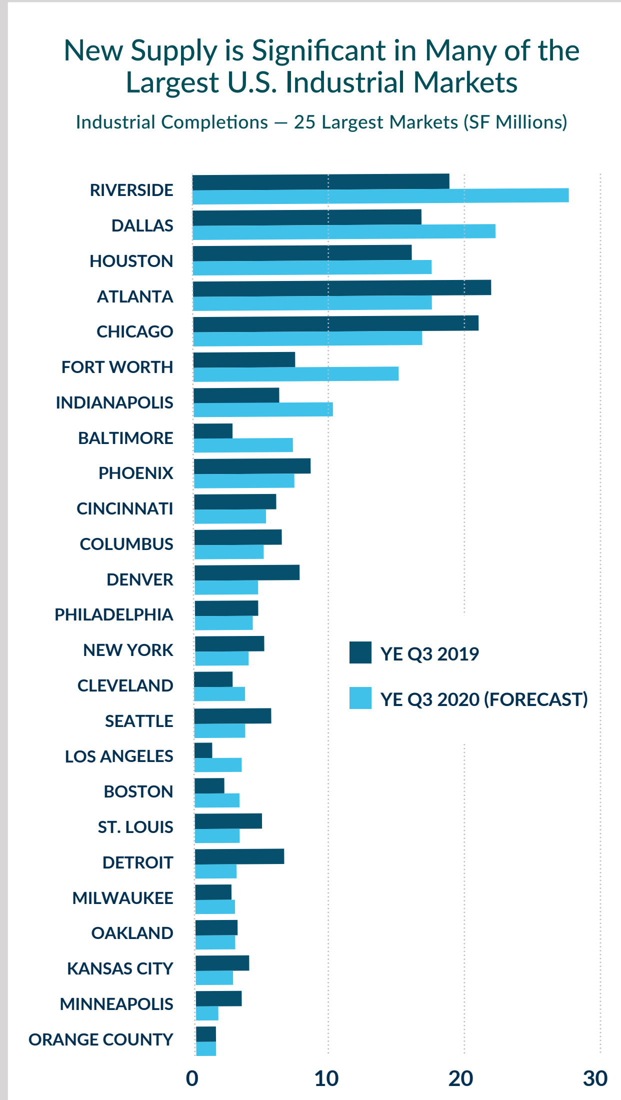
Slower absorption is owed at least in part to low availability, but availability is little changed from a year ago, and completion rates have been similar. The deceleration in demand seems to speak to a larger underlying trend. We still believe the ecommerce demand story has legs, but between the trade war, strong dollar and maturing economic expansion, there are also headwinds.

Traditional industrial demand indicators reflect this view. Industrial production has fallen, and the Institute for Supply Management's manufacturing index has reflected this slowdown for the past four months. With these weaker economic conditions, the secular drivers of ecommerce demand on their own will be hard-pressed to replicate the type of net absorption figures the industrial market has been experiencing. Further, ecommerce will not be immune to the economic cycle even if the retooling of supply chains mitigates a slowdown somewhat.

Given investor optimism that industrial will remain the strongest-performing major property sector over the next several years and the fact that high acquisition prices are encouraging them to access the sector through development, a healthy dose of caution is warranted.

According to CBRE-EA, 10 of the 25 largest industrial markets saw new supply outpace demand over the four quarters ending in Q3 2019. Looking at the current forecast, all 25 will see supply exceed demand over the next four quarters. Even assuming demand levels remain constant over the next year, 16 of the top 25 markets will see new supply outpace demand.

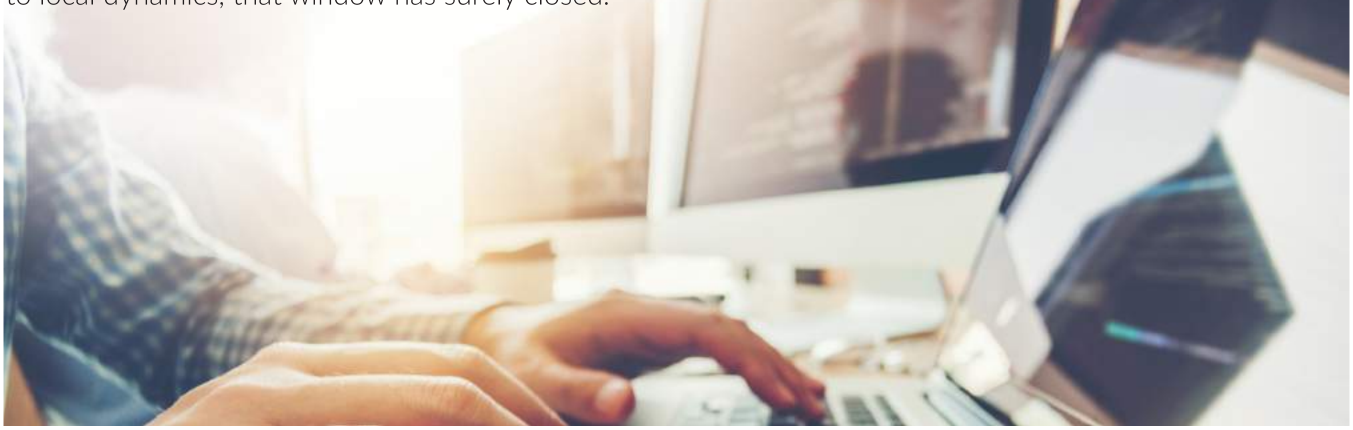
> “The deceleration in demand seems to speak to a larger underlying trend.”



Source: CBRE-EA

Industrial will still present strong opportunities for investors in the years ahead. We expect the share of retail sales that take place online to continue rising at a healthy rate, particularly as ecommerce penetrates deeper into the grocery segment. Further, with today’s low availability rates there is still pent-up demand to be unlocked as new product is delivered.

Consensus expectations are for healthy national industrial rent growth over the next year even as supply outpaces demand. There will continue to be tactical opportunities to acquire and develop industrial product in locations with strong rent growth prospects, but if there was ever a window to gain exposure to the sector without giving much thought to local dynamics, that window has surely closed.



08

FUTURE OF WORKPLACE-AS-A-SERVICE

FLEXIBLE OFFICE PAUSES AFTER THE FAILED WEWORK IPO

The failed WeWork IPO should not be conflated with impending doom for the broader flexible office market. Quite simply, there were too many red flags tied to its valuation, corporate governance, business model and path to profitability, especially through a full business cycle. But despite WeWork's woes, expect demand for flexible office solutions to continue, albeit at a more modest rate, as there has been a paradigm shift in how office space is being secured and used.

Drawn by its convenience and optionality, users will continue to lease flexible space as an increasingly large component of their real estate and talent management strategies. It's a way to enter a new market or grow in an existing market. Modern, tech-enabled buildouts with highly amenitized communal spaces are attractive for employees. For employers, it's a way to promote innovation and helps with attracting and retaining talent.

U.S. tax policy also encourages more flexible office leasing, as firms can avoid carrying a long-term liability by opting for a shorter commitment to flexible space. Indirectly, high construction costs may be a factor here as well. The cost to build out a space can be extremely high, and avoiding this expense by moving into a flexible office suite adds to the appeal.

According to CBRE, flexible office space penetration in the U.S. was less than 2% as of mid-year 2019, and of that WeWork has about a one-third market share. Thus, the possible failure of WeWork does not pose a systemic risk to the U.S. office market. Even in the markets with the highest flexible office penetration rates, San Francisco (4%) and Manhattan (3.6%), there is relatively low risk.

> "Several key structural forces underpin the demand for flexible office space. Work is becoming more project-based — a 'set of tasks' rather than a 'place you go.' "

Flex office operators have been a major absorption accelerator this cycle, and most of their recent growth has come from enterprise users. These users would provide some stability to landlords in the event WeWork were to give back space. Further, many of WeWork's locations are in highly desirable urban areas where user demand has been healthy. Other flexible office space operators could also step in to pick up the slack.

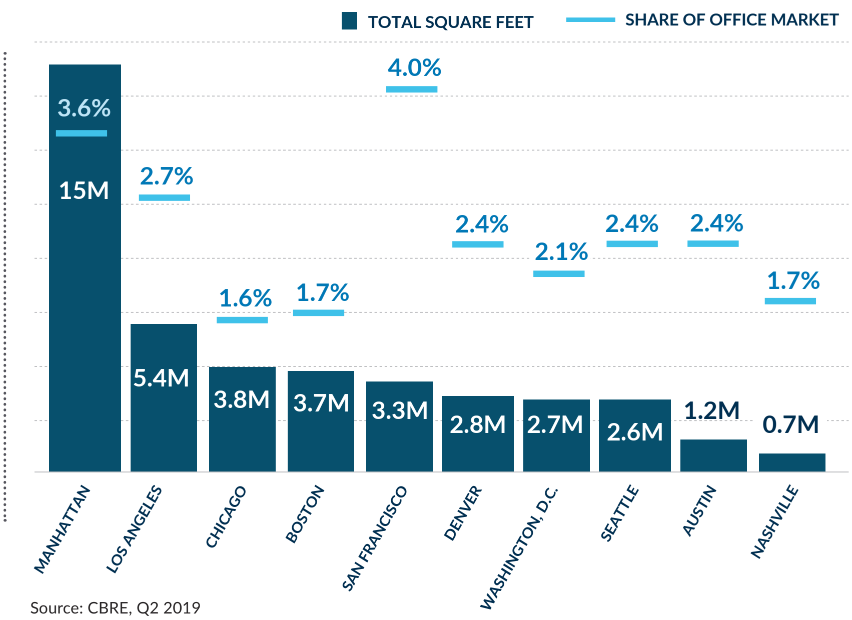
Several key structural forces underpin the demand for flexible office space. Work is becoming more project-based — a "set of tasks" rather than a "place you go." As such, there will be increasing pressure

for businesses to provide their employees with the tools and options to work anywhere.

In addition, the traditional relationship between employee and employer is evolving, and a more flexible labor landscape is emerging. Contingent workers are becoming an increasingly large share of the labor force, driven by new technologies that enable projects to be matched with skills in the gig economy. Expect these trends to continue to shape demand for "workplace-as-a-service" and for landlords to evolve their strategies to infuse flexible space into their product offerings.

Flexible Office Space Penetration by Market

Occupiers will continue to seek flexible space as an increasingly large component of their real estate and talent management strategies.



Source: CBRE, Q2 2019

TECHNOLOGY PERMEATING ALL ASPECTS OF REAL ESTATE

PROPTECH FINDING PRODUCT/ MARKET FIT

As Marc Andreessen (Andreessen Horowitz) famously said in a 2010 Wall Street Journal article, "software is eating the world," meaning that a broad economic and technological shift was occurring in which digitally native companies were taking over large facets of the traditional economy. There are various examples in the real estate space — Airbnb, Amazon, Uber and Zillow being the most prominent.

For the most part, real estate incumbents continue to eat their own lunch, but software is undoubtedly penetrating the real estate world at an increasing rate in much the same way that it has other industries in recent years. While there will always be outliers that fundamentally disrupt business models, most of the technology companies focused on real estate are innovating on existing processes and practices and working to eliminate inefficiencies.

Global investment in property technology (PropTech) companies grew from just $1 billion less than a decade ago to $18 billion in 2018. PropTech lies at the intersection of the physical and digital worlds, and the integration is becoming more seamless. But PropTech is just one part of a much wider digital transformation in the property industry. Artificial intelligence (AI), machine learning, robotics, process automation, 3-D

Value of Fundraising by PropTech Companies Worldwide

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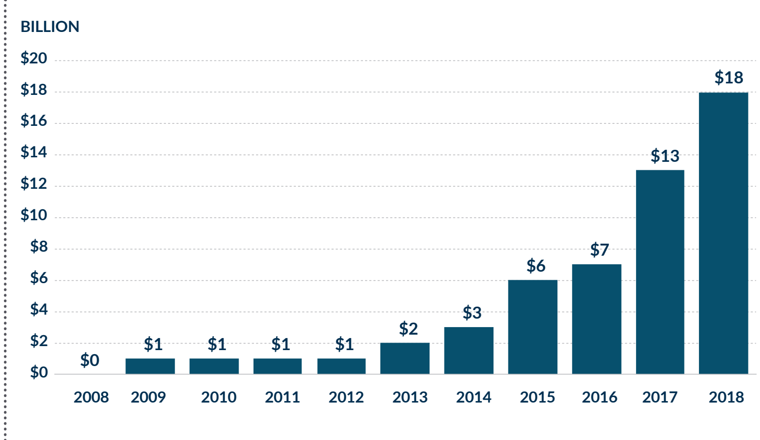

Source: Statista

printing, big data and blockchain technology are all being used to create innovative solutions for space users, property owners and investors.

Understanding the PropTech landscape can be an overwhelming task even for those who are immersed in it every day. Technology is being infused into every facet of the business, including brokerage, construction, valuations, market and site selection, space usage optimization, financing, asset management, fundraising, property management, and client service. New solutions can be divided into four broad categories based on the targeted outcome: generating more revenue, reducing costs, improving customer service, or formulating strategy.

The biggest challenge facing organizations isn’t necessarily the technology stack, but the cultural shift that is required to fully utilize and leverage data and technology. One of the biggest challenges facing the industry is how to upskill the existing workforce and how to add additional skillsets in a challenging hiring environment. The war for talent is playing out across the real estate industry as companies now find themselves competing with other industries for top engineering, computer science and math graduates.

The acceleration of real estate technology, particularly with respect to sensors, smart buildings and the Internet of Things (IoT), will be underpinned by the deployment of 5G, which provides connectivity at lightning-fast speed. 5G will enable a huge range of new business cases for the IoT. With so much data being generated, how much of it will be useful? How much should be retained? How will data risks be mitigated? How will the data be analyzed and made actionable? When it comes to making use of data, the challenge is creating not only a robust data governance model, but also critical business rules necessary to align with a digital transformation strategy.

Investment managers who have a strategy and can separate the wheat from the chaff in implementing technology solutions and leveraging internal data will have a competitive advantage. And in this tech-driven, winner-take-all world, that means better performance, greater accumulation of assets under management and more real-time insights gleaned from a growing portfolio of assets.

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RETAIL IN THE ONLINE ERA

REIMAGINING THE STORE AS FIRMS EMBRACE BRICKS AS WELL AS CLICKS

While Amazon converting defunct malls into fulfillment centers seems to make for splashier headlines, the convergence between online and traditional brick-and-mortar retailing is the bigger story for real estate investors.

Digital brands such as Adore Me, Allbirds, Amazon, Bonobos, Casper, Glossier, Peloton, Tesla, UNTUCKit, Warby Parker and Wayfair are increasing their retail storefront presence, a trend becoming known as “clicks to bricks.” Various factors are at play here, from increased online advertising and delivery costs, to a desire for richer and more diverse customer experiences, to the conversion of digitally averse consumer segments.

Both online marketplaces and brands are finding value in a physical presence, particularly as more-traditional conduits for reaching customers, such as department stores, are facing headwinds. Casper has opened stores where it does not sell anything, but instead offers consumers the chance to rent a pod and enjoy a nap on a Casper mattress. The experience helps Casper build brand awareness.

Earlier this year Tesla had signaled plans to close many of its physical locations before reversing course and opening 25 new stores and service centers in the second quarter of 2019.

This trend goes both ways, as traditionally store-based retailers such as Target, Walmart and Home Depot are increasing their online presence, focusing on in-store customer experience and leveraging their supply chains to the benefit of the customer. Firms like Home Depot embrace the idea that stores can serve multiple purposes: as links in their supply chain, warehouses for inventory, and customer experience and educational centers.

> “Both online marketplaces and brands are finding value in a physical presence, particularly as more-traditional conduits for reaching customers are facing headwinds.”

Buy online, pick up in store (BOPIS) has been adopted as a savvy way to lure shoppers into stores while selling goods online more profitably by avoiding delivery costs. Target is among the retailers utilizing more technology in their stores to allocate order fulfillment for both home delivery and in-store pickup to increasingly large segments of their store employees. Digital brands are clearly taking notice of this trend and trying to capitalize on it in their own way.

In an era of technological disruption, we find the most dominant industry players are hesitant to discount the advantages of a retail storefront presence. As customers demand more experiential retail, these companies benefit from the symbiotic relationship between their storefronts and digital marketplaces. Further, online-based firms are creating a physical shopping experience from a clean slate, which allows them to use data and technology to reimagine what a store can be.

We expect both digital and traditional retailers to develop hybrid models that will allow them to leverage their competitive advantage to upsell, cross-sell and acquire new customers. This is not necessarily news for investors — we have noted it in Perspective for several years now — but we believe that momentum is gathering and that this trend will be a boost to the struggling retail sector in the years ahead. It may not save property owners from vacant anchor stores, but it is sure to be a growing source of demand.

ABOUT BENTALLGREENOAK

BentallGreenOak is a leading, global real estate investment management advisor and a globally recognized provider of real estate services. BentallGreenOak serves the interests of more than 750 institutional clients with approximately $48 billion USD of assets under management (as of September 30, 2019) and expertise in the asset management of office, retail, industrial and multi-residential property across the globe. BentallGreenOak has offices in 24 cities across twelve countries with deep, local knowledge, experience, and extensive networks in the regions where we invest in and manage real estate assets on behalf of our clients. BentallGreenOak is a part of SLC Management, which is the institutional alternatives and traditional asset management business of Sun Life.

The assets under management shown above include real estate equity and mortgage investments managed by the BentallGreenOak Group of companies and their affiliates.

For more information about Perspective, please contact **usresearch@bentallgreenoak.com.**

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ON THE COVERS

FRONT COVER:	Spoke Apartments, Chicago, IL
INSIDE FRONT:	South Waterfront, Portland, OR
INSIDE BACK:	Windward Apartments, Portland, OR
BACK COVER:	757 Third Avenue, New York, NY

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