nuveen
REAL ESTATE

RealAccess

Global insights for real estate investors

ISSUE NO. 01 | WHAT'S INSIDE

What's inside

The office is dead.

Long live the office!

OPINION PIECE. PLEASE SEE IMPORTANT DISCLOSURES IN THE ENDNOTES.

Investing in the future

Welcome to the inaugural issue of *RealAccess:* Global insights for real estate investors.

Nuveen has been managing real estate assets for more than 85 years, mainly on behalf of large institutional investors. Over the past few years, however, we have seen a growing demand for the income and growth potential of real estate and have also made our expertise available to individual investors and the financial professionals who advise them. *RealAccess* gives voice to our team of hundreds of seasoned real estate professionals with experience spanning the world.

Today's real estate market has been shaken by the effects of the coronavirus pandemic. We saw some of the largest cities in the world shut down, leaving hotels and office space empty. But we also see unprecedented demand for industrial space; large retailers growing; and medical offices reorganizing to accommodate increased volume, social distancing and controlled access. This market provides challenges and opportunities for real estate investors, as our feature article on offices illustrates.

Our goal is to provide investors with the tools and insights to make informed investment choices as they navigate the world of real estate. I believe that real estate represents the future, offering a tangible way to invest in tomorrow's world.

We look forward to working with you. Please reach out to our team and visit our website for more information: nuveen.com/realestate.

Sincerely,

Carly Tripp,
CIO for U.S. Real Estate, Nuveen

Is now the wrong time for real estate?

Not at all. In fact, our research points to a number of reasons why now may be an excellent time to invest. When other sources of income are falling, a well-diversified real estate strategy can provide investors with a more consistent, tax-efficient income stream.

See “Why real estate makes sense now”

02

Everyone is leaving the cities, why would I invest?

Not all cities are created equal. And, more specifically, not all ZIP codes offer the same opportunities. We see advantages in smaller cities and suburbs. Our cities-focused research provides the data we need to select the areas we believe are best positioned for growth.

See “Which cities will best weather the pandemic?”

06

Are we ever going back to the office?

The current shift in office real estate is complex. While millions of office workers are relocating to their homes, medical offices and other essential service companies need more space for their employees. This could result in long-term trends to redesign offices.

See “The office is dead. Long live the office!”

10

With so many vacancies, where will returns come from?

Managing real estate is not for the faint of heart, even in good times. Fortunately, Nuveen has a full tool box and the local real estate experts that know how to use it. Our real estate managers are singularly focused on adding value to drive returns for investors.

See “Eight ways to generate returns in a tough market ”

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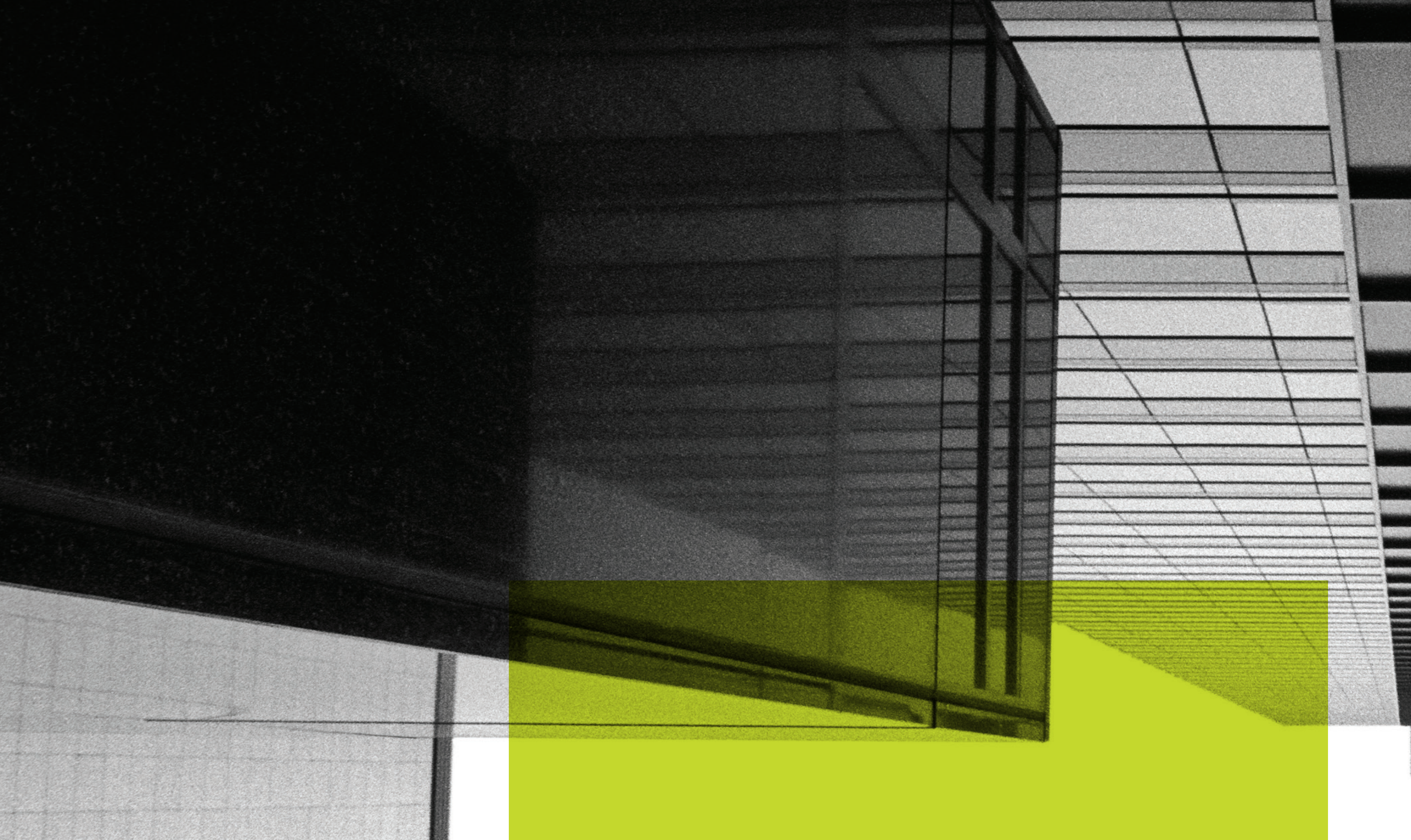


The pandemic hasn't changed everything: why real estate makes sense now more than ever

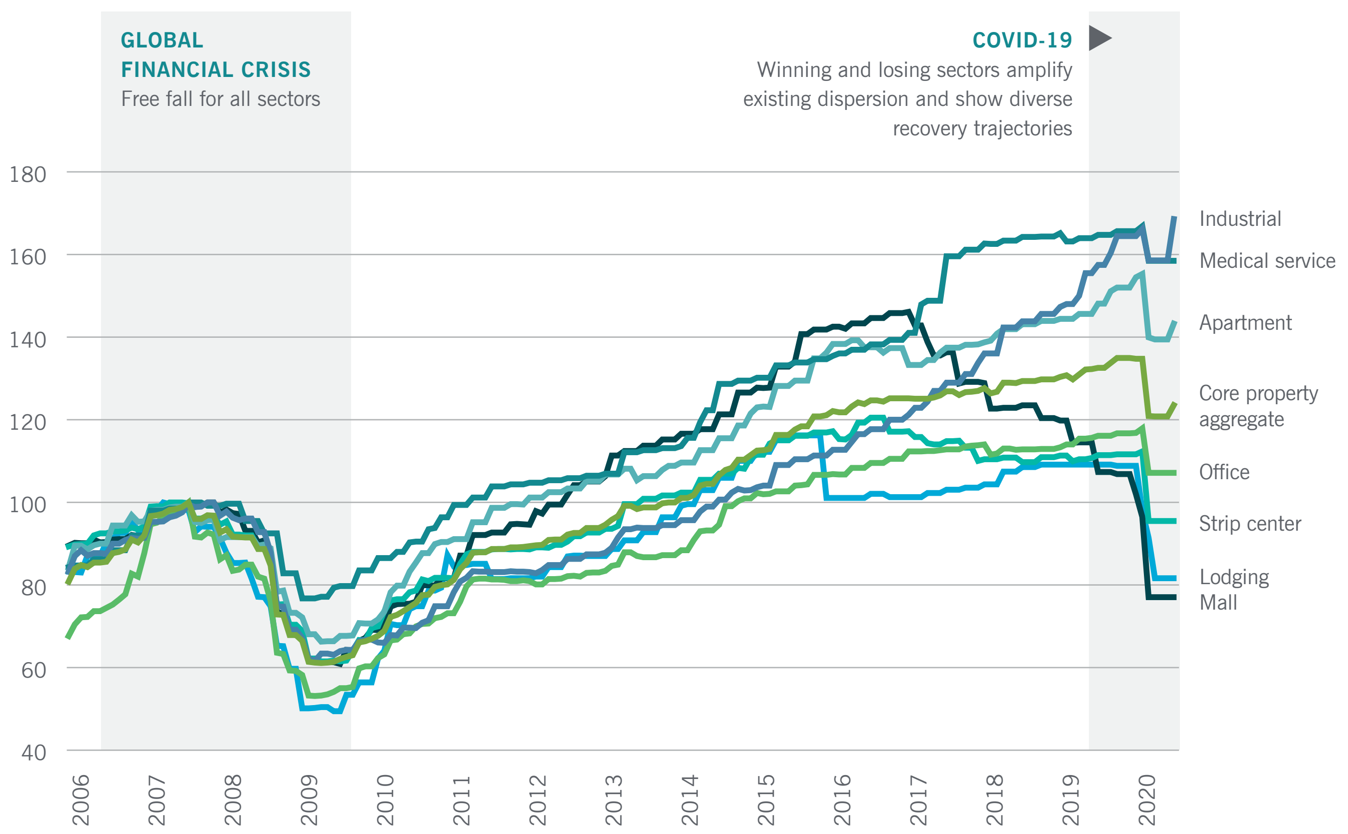
The coronavirus pandemic has not caused a paradigm shift for real estate, rather it has accelerated existing tendencies. The broad impact on the real estate market will evolve over the coming years, but we are already seeing a few important trends play out — and we believe they all make the case for real estate stronger.

1. REAL ESTATE SECTOR PERFORMANCE IS BECOMING MORE DISPARATE.

The pandemic has not caused a paradigm shift for real estate, rather it has accelerated already-present underlying trends. Currently, signs of a recovery are beginning, which makes the opportunity to invest in real estate timely. Sectors such as industrial, medical office, and apartments present a dramatically different trajectory than more troubled sectors like lodging and malls.

Real estate sectors are recovering at differing rates

Commercial Property Price Index



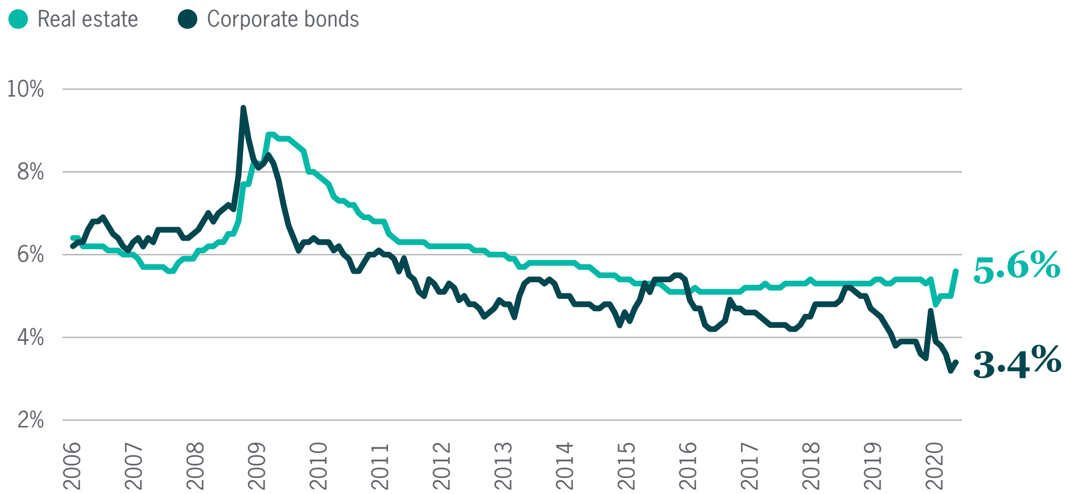
Data source: Green Street, 01 Jan 2006 – 31 Aug 2020. **Past performance is no guarantee of future results.**
Sectors represent components of the Commercial Property Price Index. Investors cannot invest in an index.

2.

INVESTORS ARE SEEKING ALTERNATIVE SOURCES OF INCOME.

The pandemic has broadly ensured that rates will remain lower for longer. But real estate may still offer investors the advantage of tax-efficient, stable yields. Real estate managers have the ability to secure long-term leases with contractual rent increases, which helps protect in-place income and embeds future growth.

Real estate yields have been relatively strong and stable



Commercial real estate may provide investors with tax-efficient, stable yields.

Data source: Green Street, 01 Jan 2006 – 31 Aug 2020. **Past performance is no guarantee of future results.** Real estate yield represented by the nominal cap rate of major sectors, an equal-weighted average of the asset-weighted averages of the five major property sectors (apartment, industrial, mall, office and strip center). Corporate bond yield represented by corporate Baa-rated long-term bonds.

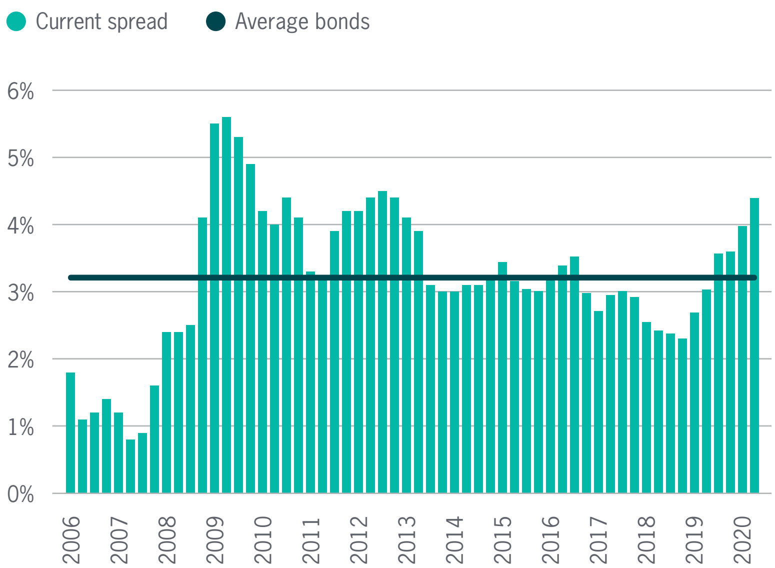
3.

RELATIVE VALUE IN A VOLATILE MARKET IS INCREASINGLY CRITICAL.

Real estate is showing strong relative value versus traditional markets. For instance, the spread between direct real estate and U.S. Treasury yields has grown over the last few years and is significantly wider than the historical average. We believe this signals an attractive investment opportunity.

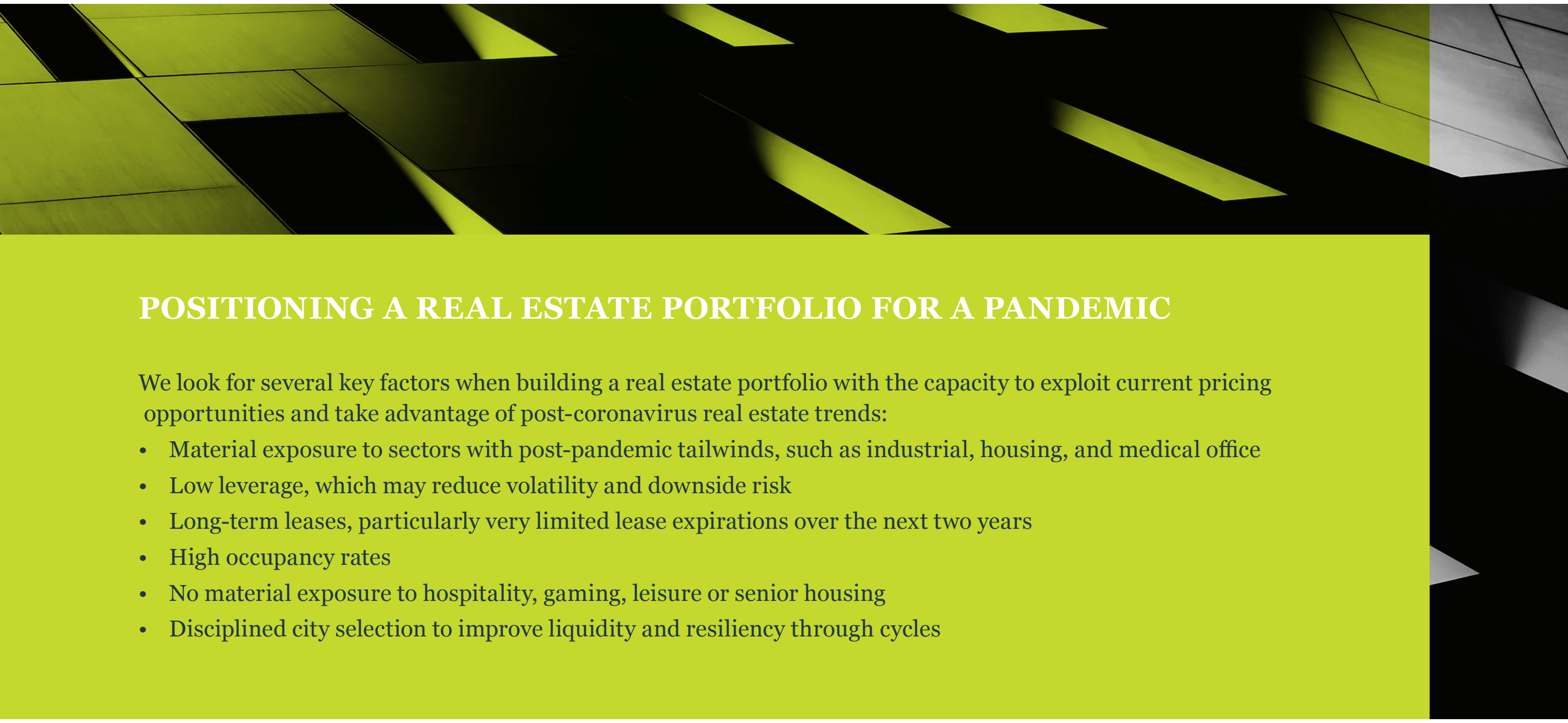
Rising real estate spreads are wider than average

Real estate yield versus 10-year U.S. Treasury yield



The wide current spread signals strong relative value and indicates an attractive investment.

Source: Green Street, 01 Jan 2006 – 31 Aug 2020. **Past performance is no guarantee of future results**. Real estate yield represented by the nominal cap rate of major sectors, an equal-weighted average of the asset-weighted averages of the five major property sectors (apartment, industrial, mall, office and strip center).



POSITIONING A REAL ESTATE PORTFOLIO FOR A PANDEMIC

We look for several key factors when building a real estate portfolio with the capacity to exploit current pricing opportunities and take advantage of post-coronavirus real estate trends:

- Material exposure to sectors with post-pandemic tailwinds, such as industrial, housing, and medical office
- Low leverage, which may reduce volatility and downside risk
- Long-term leases, particularly very limited lease expirations over the next two years
- High occupancy rates
- No material exposure to hospitality, gaming, leisure or senior housing
- Disciplined city selection to improve liquidity and resiliency through cycles

Which cities will best weather the pandemic?

As volatility climbs across global financial markets, investors are wondering where to find opportunities. Real estate is no exception. Nuveen Real Estate's research team created a model to forecast U.S. real estate performance across the 50 largest cities in the country, and the results may surprise you. As selective investors, we know that even in the midst of a crisis, research and experience can uncover opportunities for growth and income.

Markets with large exposure to newer non-cyclical industries such as information technology (San Jose), life science (Boston) and defense (Washington, D.C.) are best - positioned for resilience. Markets with large exposure to cyclical industries such as tourism (New Orleans), hospitality (Las Vegas), energy (Oklahoma City) and retail (Miami) may face continued challenges.

WE THINK THESE METROPOLITAN AREAS ARE POSITIONED MOST FAVORABLY

REAL ESTATE MARKETS MAY BE HIT HARDEST IN THESE CITIES

WHAT DID WE MEASURE?

For each city, we considered these factors:

- Employment in industries most- and least-negatively affected by the pandemic
- Indicators of coronavirus severity, such as mortality rate, unemployment claims and population at risk
- Projections of economic and fiscal health
- Exposure to fossil fuel industry employment and generation/production
- Proportion of revenue from “elastic” sources of income
- Proportion of the workforce employed by small businesses
- Projected unemployment rate and gross metropolitan product growth rates
- Proportion of non-current commercial loans
- Change in consumer spending year - over - year, or data measuring mobility

Real estate is just one facet

when it comes to which cities might fare best from here.

Many factors need to be considered, such as how severe the next wave of the pandemic could be. It is important to recognize that our analysis does not take into account all those that could be considered when evaluating the economic impact of the coronavirus pandemic. Additionally, significant variations in outlook could occur.

Finally, the impact on specific property types in a given city can vary significantly from the city's economy as a whole, as sector performance is also driven by supply, demand and valuation.

However, this framework provides real estate investors with insight into the dramatic diversity of opportunity and challenge at play in the market today.

CONSUMER SPENDING PATTERNS HELP UNDERSTAND REOPENING TRAJECTORIES

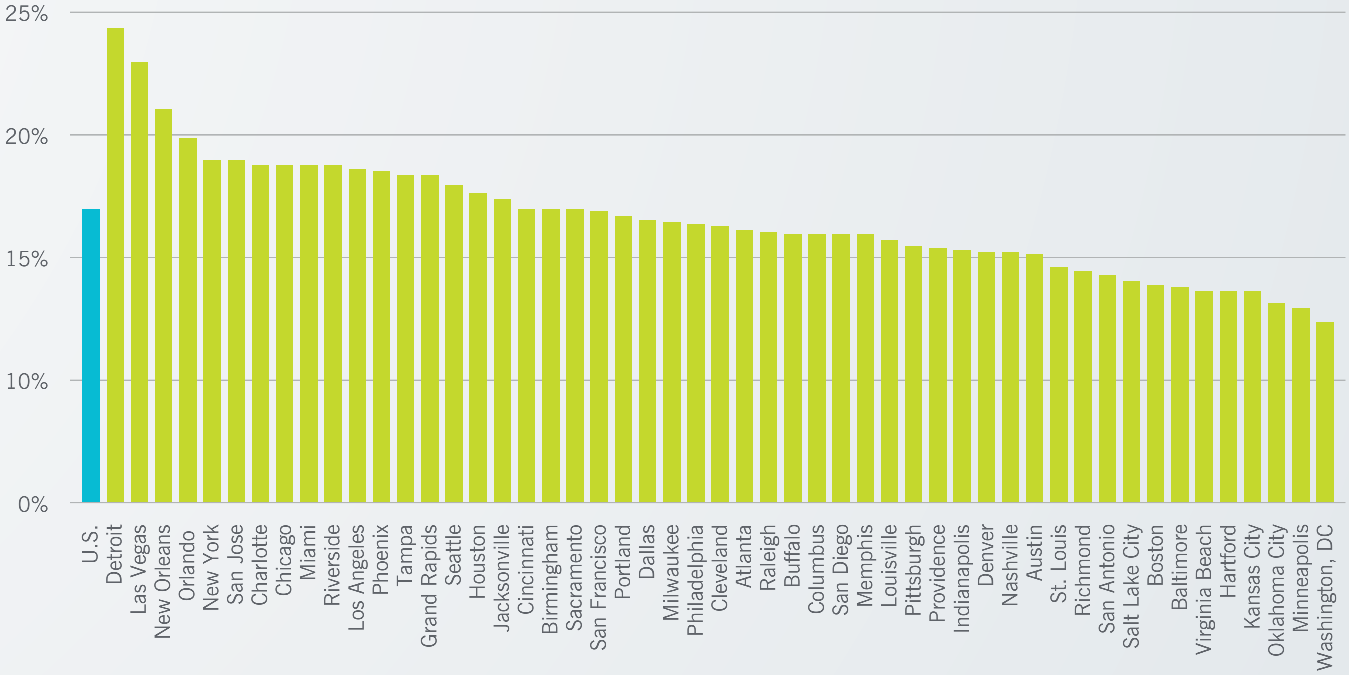
Consumer spending, percent change year over year

Data source: Moody's Analytics, 31 May 2020.

PLEASE SEE IMPORTANT DISCLOSURES IN THE ENDNOTES.

UNEMPLOYMENT AND GMP HELP MEASURE OVERALL ECONOMIC STRENGTH

Projected unemployment rate, 2Q20



Gross metropolitan product growth, annualized

Top 25 metro areas	4Q20	4Q21	4Q22
New York	- 5.3%	0.7%	2.9%
Los Angeles	- 3.2%	1.7%	3.4%
Chicago	- 2.8%	1.6%	3.1%
Dallas	- 1.8%	3.1%	4.9%
Washington, DC	- 1.5%	2.3%	3.7%
Houston	- 2.3%	2.8%	4.7%
San Francisco	- 3.8%	1.8%	3.9%
Boston	- 3.1%	1.7%	3.5%
Philadelphia	- 2.5%	1.8%	3.3%
Seattle	- 4.4%	2.0%	4.2%
Atlanta	- 1.8%	2.6%	4.2%
Miami	- 4.9%	1.2%	3.4%
San Diego	- 2.5%	2.1%	3.8%
San Jose	- 3.5%	1.7%	3.6%
Phoenix	- 0.7%	3.6%	5.2%
Minneapolis	- 1.1%	2.9%	4.3%
Detroit	- 3.1%	1.5%	3.0%
Denver	- 2.2%	2.5%	4.3%
Riverside	- 0.6%	3.2%	4.7%
Baltimore	- 1.5%	2.0%	3.3%
Tampa	- 3.6%	1.6%	3.5%
Portland	- 1.9%	2.7%	4.4%
Pittsburgh	- 1.8%	1.8%	3.1%
St. Louis	- 1.9%	1.8%	3.0%
Sacramento	- 1.9%	2.4%	3.9%

Data source: Moody's Analytics, 30 Jun 2020.

The office is dead.

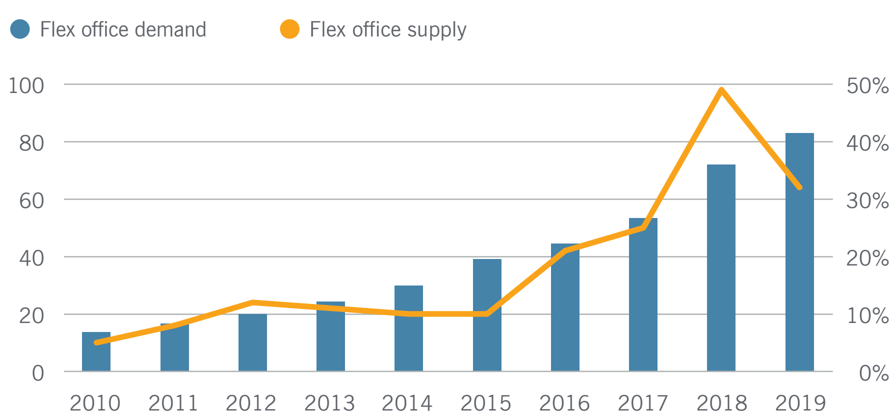
Bank and tech firm CEOs have set alarm bells ringing across the real estate community with headline-grabbing comments about the possibility of downsizing their offices now that working from home has become the post-pandemic norm for many.

The office sector has been able to shake off previous work-from-home (WFH) threats, but this pandemic creates a new set of challenges, given the widespread nature of the WFH experiment coupled with better technology. History tells us that the social nature of humans' need to interact, recruit, innovate and collaborate has outweighed the benefits of "hot desking," telecommuting and other remote-work schemes. Yet we still have to ask: Is this time different?

Who needs an office anyway?

We expect considerable differences in opinion about the best workplace solutions. But as corporate leaders continuously assess what is and isn't working through the crisis, they cite experiences that suggest they will not abandon the office en masse: communications technologies that aren't up to the job, loss of competitive edge, and younger or newer employees unable to learn from experienced colleagues or contribute meaningfully to meetings or projects.

Greater flexibility in work styles is trending



Data source: JLL, 2019. Demand is represented by the US Flex office inventory (MSF). Supply is represented by the U.S. flex office share of total net absorption.

Due to the social distancing measures expected in the workplace after the transition from lockdown, companies may look to permanently reduce workplace densities, reversing that long-running trend.

Work-from-home would allow for increased floor space per worker without the need for costly expansion. It would also accelerate an already prevalent trend for greater flexibility in work styles. Even firms that value face time may come to appreciate that WFH can increase efficiency by reducing commute times.

So while companies will return to the office, we're likely to see more WFH, too.

AFTER ANALYZING THE EFFECTS OF THE PANDEMIC ON THESE TRENDS, NUVEEN'S REAL ESTATE EXPERTS SEE FOUR KEY OUTCOMES:

01

Overall demand for office space shouldn't be affected dramatically, but could reduce moderately as companies restructure their portfolios and accommodate greater workplace flexibility.

02

Demand for supplementary flexible space is expected to rise, but flexible operators will need to evolve their business models. Industry consolidation may occur, and the shift away from coworking to flexible space is a material transition.

03

Landlords, property managers and tenants will form closer alliances to enhance the experience and value of the office; they'll explore new services for tenants with associated income streams for landlords, reinforcing the migration to a partnership model.

04

'Active animation' will drive workplace evolution, with an enhanced focus on collaboration, community, hospitality, health and wellbeing.

Long live the office!

Disruption has always driven evolution in the office sector, and the pandemic may finally break the binary thinking that has always frustrated change: It's neither everyone in the office nor everyone at home.

Chad Phillips
Head of Office Sector, Americas

The future of flexible space

Clearly the pandemic will significantly impact the serviced office market.

In the past few years, operators offered highly creative and interactive communities for their member tenants and drove their profitability through smart densification of desk space around communal areas.

In the short term, we expect a major challenge for the sector. Operators will look to shed unprofitable centers, as well as refit spaces to respect social distancing. Researchers have found that open office floor plans increase the spread of illness among workers relative to lower density layouts.

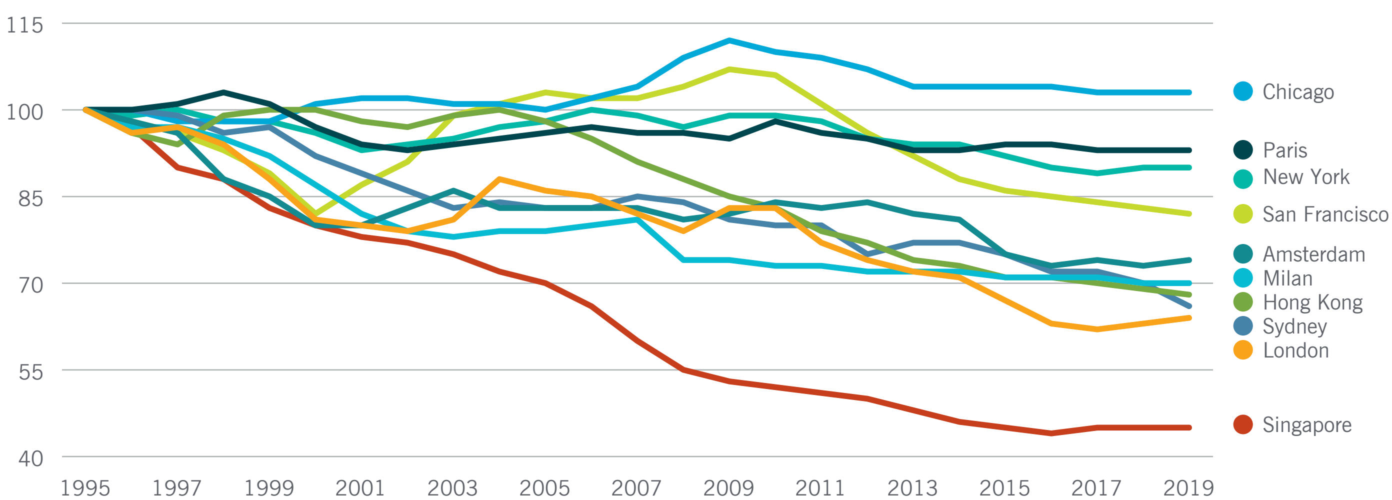
The space allotted per office worker has been falling for years. But we expect that trend to reverse, with floorspace per worker rising in years ahead.

One possible mitigating factor: Delays in completion of new offices due to the pandemic could create opportunity for serviced - office operators to provide temporary facilities pending completion of fit-outs.

Longer term, however, operators will need to evolve. They'll look to share both the burdens and benefits of occupancy and income volatility with building owners through new operating lease structures or management agreements. Landlords will seek to reimagine their buildings while also damping some of their own risks.

Corporate demand will still come from firms that seek to actively use the serviced office market to satisfy their flexible space quotas, but operators may not be able to shoulder all of the new and increased costs of smart densification in a post-pandemic world. We expect a higher number of conventional property owners to play a greater part in satisfying the demand for flexible space.

Floorspace per worker is expected to rise



Data source: PMA. Data indexed to 100 in 1995.

The great accelerator

Agility has proved to be key to navigating a crisis — property, working practices, redirecting resources, adapting sales strategies.

The need for companies to be nimbler should reinforce the ongoing shift toward the core-and-flex model in which companies hold the majority of their strategic real estate — we estimate around 70% — on long leases, with the remainder more flexible and short-term.

Demand for centralized office space may reduce moderately in the longer run, with the head office focusing more on higher-value activities that foster collaboration and innovation. That means the quality of the product and service will need to be even higher than before the pandemic. Institutional landlords will also have to adapt, transforming their passive leasing practices into active engagement strategies and working closely with existing and prospective tenants.

While all of this may reduce demand for core space, the impact will be spread over future lease events and is unlikely to create significant market disequilibrium at any one time.

And as it transforms to accommodate lower densities, flexible office space will benefit over time.

Finally, suburban, serviced office space may also experience a revival in demand, particularly if firms decide to offer flexible office space options closer to their employees' homes — so called "work close to home", or WC2H arrangements.

The pandemic will impact ongoing trends that in turn will affect demand for the types and quantity of real estate. All of this will reinforce the value of the office as a strategic resource and ultimately underpin healthy long-term demand for space.

Nick Deacon, Head of Office Real Estate, Europe

Summing up

Trend	Short term	Long term
Floorspace densities	Halted	Reversed
Flexible space demand	Reversed	Accelerated
Flexible/Work from home (WFH)	Considerably increased	Accelerated
Work close to home (WC2H)	Not expected	Possible
Demand for core office space	Weak	Moderately lower
Agile/collaborative/workspace	Strong	Accelerated
Efficient, productive real estate	Strong	Accelerated
Active landlord-tenant engagement	Improving	Accelerated

Data source: Nuveen

Eight ways to generate returns in a tough market

With rising market volatility and the current economic upheaval, many investors worry about achieving their goals for growth and income from their real estate investments. Good news: Nuveen relies on more than 600 real estate professionals in more than 25 offices around the world to seek out returns, even in challenging times. Our team is engaged in everything from sourcing new acquisition opportunities, managing leases and financing, to maintaining and enhancing the properties we already own.

Even in a market where overall price support is lagging, our teams can help generate outperformance.

PROPERTY RENOVATION

As investors, we look for properties that have potential for price appreciation, which sometimes means buying properties that need renovation or improvement. For example, in the industrial warehouse sector, older facilities may not be suitable for the modern automated warehouses in high demand by logistics tenants. In this sort of situation, we can generate returns by enhancing properties through renovation.

PROPERTY DEVELOPMENT

We may look for micro-locations where the demand for products, such as multifamily properties, exceeds supply. In these cases, our local teams may partner with a developer to build and lease new space at premium rents.

TENANT “ENGINEERING”

Our local teams work closely with tenants in our properties to negotiate leases, provide service and cultivate high-quality relationships. This allows us to attract and retain tenants with longer lease terms, maintain high occupancy, diversify our tenant base and transition through any lease terminations while minimizing lost revenue.

SUSTAINABILITY

Tenants and investors are interested more than ever in environmentally sustainable buildings. Our team of ESG specialists ensures that we are at the forefront of this critical trend. For example, by adding high-quality solar power grids, or other smart environment-enhancing technology, we can increase the value of a property and generate returns for investors through higher rents or operating cost savings.

TECHNOLOGY

Our technology and innovation team ensures that our properties utilize the most cutting-edge systems. In a post-COVID world, touchless entry systems and highest quality air purification systems are emphasized, resulting in properties with greater appeal to, and a healthier work environment for, workers and tenants.

LOCAL ACCESS AND EXPERTISE

Our central research team works with local in-market teams to identify locations poised to outpace the market based on long-term trends, such as demographics, technology and climate change mitigation. This allows our investment teams to focus on resilient cities and target micro-location opportunities within those cities. In addition, as a large-scale investor, our teams can access off-market deals, thus helping us generate income opportunistically.

STRATEGIC FINANCING

As one of the largest global lenders and borrowers, our capital markets teams understand financing market trends and can source and implement prudent financing on the properties we buy and own. Our attractive interest rates and structures help to enhance investment returns.

EXPENSE MANAGEMENT

Returns from properties are not solely a function of the rental income. Indeed, returns are negatively affected by capital expenditures and operating expenses. Given our experience and scale, we understand which capital expenditures will optimize the revenue on a property and we can minimize operating costs, leading to higher “take-home” returns.

CityWatch | Berlin

Demand drivers rising

Each city around the world has a unique DNA and topography of opportunity. Here's one where real estate opportunities abound:

Berlin is one of the top-performing office markets in Germany, with extremely strong rental growth and high demand from business for both office space and for housing a skilled workforce.

As Germany's largest city and the capitol of Europe's biggest economy, Berlin attracts both non governmental agencies and corporations. It is also home to three large universities and a vibrant cultural scene. These attributes drive demand for many real estate sectors.

- ***Sustainability standout:*** Air quality is better than the average big European city
- ***Technology trailblazer:*** Highest tech concentration in Germany
- ***Investment intensive:*** Thriving economy of innovative businesses
- ***Tourist target:*** Attracts visitors and residents to its cultural offerings

Population growth
(2010–2030)

2.7%

Discretionary spending growth
(2010–2030)*

28.2%

Overall, the cost of living in Berlin is

33%

cheaper than Paris, and

36%

cheaper than London.

* Discretionary spending is a good measure to capture the growing affluence of a city.

Source: Nuveen Real Estate estimates based on Oxford Economics, 2019 and United Nations data, 2019

PLEASE SEE IMPORTANT DISCLOSURES IN THE ENDNOTES.


Berlin

For more information, please visit nuveen.com.

Endnotes

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Such information may include, among other things, projections, forecasts, estimates of market returns, and proposed or expected portfolio composition. Any changes to assumptions that may have been made in preparing this material could have a material impact on the information presented herein by way of example. Past performance is no guarantee of future results. Investing involves risk; principal loss is possible.

All information has been obtained from sources believed to be reliable, but its accuracy is not guaranteed. There is no representation or warranty as to the current accuracy, reliability or completeness of, nor liability for, decisions based on such information and it should not be relied on as such.

A word on risk

Real estate investments are subject to various risks, including fluctuations in property values, higher expenses or lower income than expected, and potential environmental problems and liability. Please consider all risks carefully prior to investing in any particular strategy. A portfolio's concentration in the real estate sector makes it subject to greater risk and volatility than other portfolios that are more diversified and its value may be substantially affected by economic events in the real estate industry. International investing involves risks, including risks related to foreign currency, limited liquidity particularly where the underlying asset comprises real estate, less government regulation in some jurisdictions, and the possibility of substantial volatility due to adverse political, economic or other developments.

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This information does not constitute investment research as defined under MiFID.

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