

The year 2020 has been harrowing. The first half of 2021 is also likely to be very challenging. Real estate owners and operators will continue to be on the front lines coping with the pandemic and its aftermath. Fortunately, the immediate impairment to property income streams is much less severe than initially feared. Unfortunately, the public health ramifications for vulnerable populations and healthcare workers is much worse than predicted in some of the largest countries in the West. Currently, the successful containment of COVID-19 in many of the Asia Pacific countries has not been replicated in either Europe or the Americas.

With vaccine distribution just beginning, it will be many months before inoculations will be readily available to the general public. Our advice is for real estate portfolio managers and investors to hold the course. On the other side of the pandemic lies a landscape that real estate investors will recognize, but it will be different in surprising ways. The strength of the post-vaccine recovery could be one of these surprises.

In Chapter 1, we describe our outlook for the post-COVID-19 economy and what it might mean for real estate markets. The secular trends we follow have simultaneously accelerated and been interrupted. And these trends will continue to morph and affect real estate supply, demand, and performance in unexpected ways. To address these issues, we embarked on a global review of major property types. Our conclusions are summarized in a “Future of” series at the end of the chapter.



COVID-19 Economics

The pandemic that descended on the world in 2020 will continue to be an important determinant of the health of national economies and property markets in 2021. A highly synchronized economic collapse, followed by an asynchronous, protracted recovery in many countries, will lead to a wide dispersion of outcomes across major real estate markets. Many industry sectors shut down quickly during the first quarter of 2020. By contrast, a full economic recovery will take much longer than 90 days, and the return to “normalcy” will be diverse in terms of both timing and magnitude. The pace will largely be shaped by public policy decisions, local leadership, and trust in local institutions. These factors will help determine which countries and communities experience a rapid return to a “new-near-normal” and those that lag behind. Eventually, the pandemic will be behind us. For real estate, the post-COVID-19 era will be characterized by a broad range of outcomes, due to the wide variety of response tactics in different countries and cities, and the wide dispersion of returns across sectors.

Public health policy choices are not usually highlighted in the major macroeconomic factors that affect a country’s growth trajectory: aggregate demand, capital formation, government spending, and trade.¹ Moreover, fiscal and monetary policies are usually the main policy levers used to guide a national economy that nosedives. In a COVID-19 world, public health directives and measures are central to the length of time it will take to reopen an economy or a property market. These actions, alongside stimulus spending, forbearance directives, and effective public institutions, are all necessary to manage and ultimately control the most damaging impacts of the pandemic on society and on local economies.

Countries where state-guided allocation of capital dominates may hold a temporary advantage over countries with market-driven capital allocation mechanisms. More importantly, countries with strong traditions of collective action and acceptance of central government’s influence may have an advantage in controlling COVID-19 relative to nations where traditions of individual freedom supersede government interventions and control.

Many commentators observe that the future course of COVID-19 is unknown or that the virus itself is somehow “in charge.” Yet the facts do not support either position. The epidemiological evidence shows a clear pattern—that a high degree of control of the virus is achievable, even without a vaccine. Testing, contact-tracing, adherence to quarantine rules, mask-wearing, hand washing, and social distancing all play critical roles in controlling the spread of

¹ The generalized macroeconomic equation: $C+I+G+X-M$ is used all over the world to estimate gross domestic product, where C denotes consumption, I denotes investment, G denotes government spending, and X-M is the difference between exports and imports.

the virus during the “living-with-COVID” phase of the pandemic. Prominent among the COVID-19-controlling group are: China, Taiwan, South Korea, Japan, Germany, Finland, Australia, and New Zealand.

In our view, the rising second and [third waves of the pandemic](#) will increase the distance between the recovering and partially locked down economies of the world. A series of effective vaccines will be an equalizer, capable of closing the gap between the hardest-hit economies and those whose stricter public health guidelines prevented a destructive second wave. The process of managing the production, storage, transportation, distribution, and administration of a vaccine will take public health organization and skills that have already fallen short in several countries. Experts in the fields of immunology, virology, and epidemiology do not know the specific timing when COVID-19 will be conquered. They tend to agree that efficacious vaccines are well on their way to becoming available and will likely be increasingly available in 2021, and by 2022, most of the developed world will likely have reduced the spread of the virus to very low levels. Thus, investors should maintain a well-balanced real estate investment strategy that anticipates the upcoming “post-COVID-19 era.”

THE POST-COVID-19 ERA

Income-earning real estate is directly in the crosshairs of the pandemic. As an asset class, it is positioned along the front lines dealing with changes in mobility, social distancing, and the way that society interacts with the built environment. The dispersion of returns during 2020

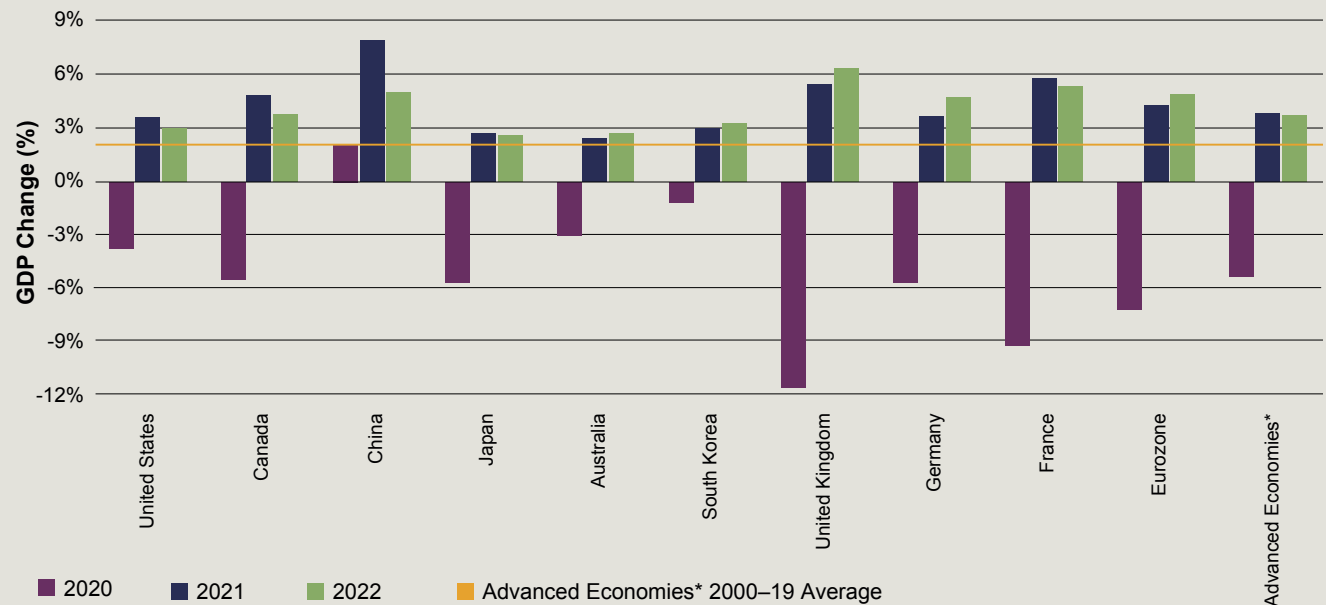


Kierland Village Center, Scottsdale, United States

Sharp Decline in 2020, Followed by Strong Recovery in 2021-22

GROWTH RATE FORECASTS WELL ABOVE THE 20-YEAR AVERAGE

Global Annual GDP Projections



*Aggregation based on Oxford Economics country classification:
services.oxfordeconomics.com/api/definitions/WDMacro/GlobalMacroEconomicDatabank.pdf.

Source: Oxford Economics forecast, most recent as of December 1, 2020.

reached record levels in both the listed and unlisted sectors, as some property types thrived (data centers, logistics, life sciences) while others were impaired (hotels, regional malls). The post-COVID-19 economic recovery is likely to include some unexpected surprises as the balance between permanent and temporary changes gradually emerges.

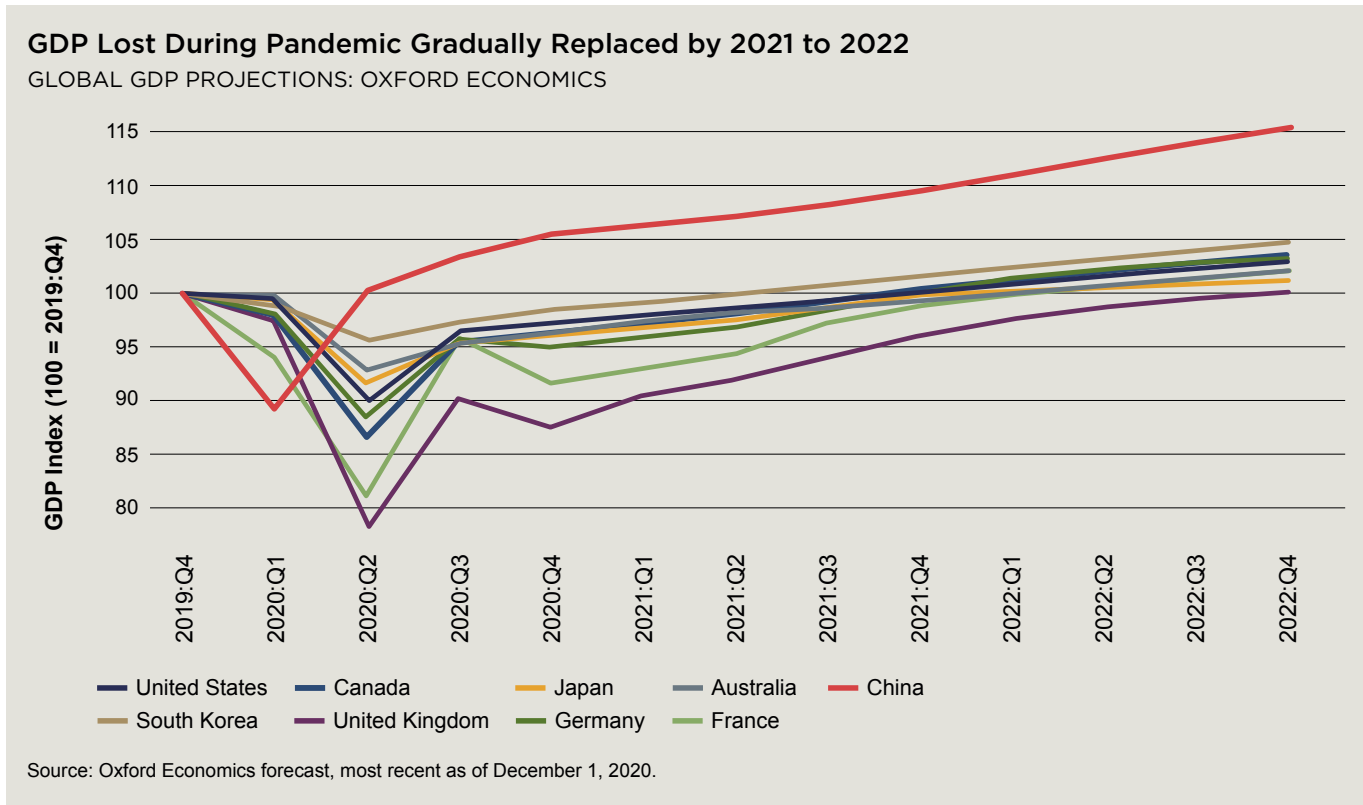
Real estate markets will slowly revitalize as COVID-19 eventually succumbs to a combination of vaccines, therapies, improved testing, and adherence to public health guidance. This transitional process will include adaptations, accelerated changes, and risk re-ratings that have all taken place during the pandemic. Shifts such as the rise of remote working, e-commerce extending to groceries/food, just-in-time delivery, just-in-case logistics, a focus on indoor air quality, touchless sensors, and heightened public health awareness are among the many pandemic-induced changes that are unlikely to disappear.

Real estate investors should be aware of the importance of state-led versus market-led success in fighting COVID-19. However, real estate portfolio managers should not overreact to a temporary reliance on stimulus spending or expect that state-sponsored subsidies will continue indefinitely. Private equity real estate investors need to take a longer view than just the next 12 to 18 months. The market-driven approach will almost always lead investors to more vibrant and innovative local economies than those dependent on government largesse. As the COVID-19 threat diminishes, real estate investors seeking outperformance should target local

economies that value planning for resilience ([ULI video](#)), but also acknowledge the importance of market forces.

The chart above shows that the economies that have fallen the most during the pandemic are also likely to rebound the most, including Canada, the U.K., and France. However, GDP charts, based on annualized rates of change can be misleading. An economy that fell 10% due to the pandemic needs to rebound by 11.1% just to get back to where it was before. The Chinese economy, which experienced a brief contraction in 2020:Q1, will continue to surpass previous economic levels throughout 2021. Another way of showing when various countries are likely to replace the GDP they lost during the pandemic is shown in the chart GDP Lost During Pandemic on page 6. This way of looking at the data shows that some countries in the developed world may not regain their lost economic production until late 2022 or early 2023 (e.g., the U.K. and Italy), while others will replace lost GDP by early 2021 (South Korea) or toward the end of 2021 (the U.S.).

Nevertheless, with central banks pumping liquidity into the asset markets, real estate asset pricing can be expected to continue its upward trajectory, provided that income streams are perceived to be secure. This important proviso will be the litmus test between sectors that are out of favor and those that are not. Tenant income from the favored sectors will get discounted at lower rates than pre-pandemic levels, even though the credit worthiness of tenants may not have shown much improvement. Income from out of favor sectors will get discounted at higher levels, even if some of that income is from reliable



sources. This paradox is due to the shift in risk perceptions and realities as a result of the pandemic. Certainly, some of this risk shift is justified—our income growth forecasts for both office markets and shopping centers have fallen sharply. But, the shift could also lead to interesting investment opportunities (and perhaps mispricing) in the years ahead, as investors extrapolate temporary pandemic conditions to the post-COVID-19 era.

In sum, a COVID-19 under-control economy will not behave the same way as a locked down economy, or an economy with high and rising infection rates. It also will not look exactly like a pre-pandemic economy. Secular trends like remote working and e-commerce are accelerating and new disrupters like telehealth and virtual classrooms have become ubiquitous. The key to understanding the future progression of economies and property markets in the years ahead will be to understand and distinguish between temporary, pandemic-induced behavior and permanent or secular shifts in spatial preferences. Consequently, we believe it is wise to revisit the “DTU+E” secular investment trends (demographics, technology, urbanization, and environmental factors) we identified years ago, which will help shape the recovery in the post-COVID-19 era in many countries.

DTU+E Revisited

Investing alongside long-term, thematic trends can, over time, contribute more to positive investment performance than trying to time shorter-run cyclical changes. Yet, timing and pricing also matter as every thematic trend can get over-priced. The 2000–01 tech wreck is an extreme

example of how strong thematic trends became dramatically overpriced and capital was allocated indiscriminately, which led to a lot of capital destruction. Twenty years after the tech wreck, Internet-based commerce continues to be a powerful secular trend. Yet, the dot-com boom illustrates the dangers of a gold rush mentality where any secular trend can get indiscriminately over-priced. The premise behind our focus on secular themes is that the likelihood of strong performance improves when these trends act as a tailwind to an investment strategy, rather than a headwind. The acronymic watchword must be GARP, or “growth at a reasonable price.”

Currently, a plethora of secular changes can be identified in the capital markets, in politics, and in many spheres of society. For 2021, our view continues to be that the four DTU+E trends are particularly powerful for real estate investors. These trends interact with each other and strongly influence which cities and property types will prosper because, taken together, they are primary drivers of the demand for real estate.² However, these trends also constantly change, especially as the supply side responds or when they occasionally get interrupted or reversed, as during the pandemic. Most importantly, once these trends are identified, they tend to quickly get fully priced in both the

² It is certainly plausible that one or more new secular forces could rise to the level of these four. Just as we added “environmental factors” to the original DTU triumvirate several years ago, other recent trends could be added in the years ahead. The ones we are watching closely include health and wellness, social justice movements, rising inequality of wealth/income, rise of nationalism/populism, and trust or distrust in institutions like government or large corporations. While each of these trends are already very important for society, the question is whether any of them rise to a level that directly shapes real estate markets in the years ahead.

private equity and listed sectors of the investment markets. Investors can outperform the broader market by anticipating how and when these secular trends will shape real estate markets. It is through the process of moving from an incipient or unrecognized trend to one that is broadly accepted that investors will thrive.

In Chapters 2 and 3, we utilize our “fair value” models, which are driven in part by the ultralow interest rates shown in 10-Year Risk Free Rates on page 8, to identify how the DTU+E trends can drive outperformance in 2021–23. Below we recap how these trends are likely to change at the global level.

DEMOGRAPHICS

Human populations are the ultimate driver of all real estate demand. Changes in age structure, socioeconomic status, household composition, ethnicity, and mobility all play important roles in investment strategy and outcomes. Demographic analysis feeds into both the microanalysis of specific districts and the top-down trends across countries. For real estate investors, the cohorts to focus on shift constantly, depending on the targeted product type and how societal attitudes react to major events and economic forces. The current pandemic is a striking example of why demographics are so important for real estate.

Readers will see many references in this year’s *ISA* to the ways that demographics are affecting real estate demand: aging societies, movement of millennials to less-dense suburbs, reductions in international travel, increases in domestic travel, and the effect of COVID-19 across the globe.

The secular drivers of real estate demand 10-15 years ago focus on the rebirth of cities, as well as millennials and empty nesters attraction to urban living. Analysis of the demographics of real estate demand for the next 5-10 years should include several new angles:

- The aging of millennials as they enter their 30s and many start families.
- The aging of the baby boomer generation, as they either retire or participate in the labor force longer than previous generations.
- The shifting locational preferences of white collar workers of all ages in some markets, especially when the working from home (WFH) trend continues in the post-COVID-19 era.
- Demographic-driven changes in historic commuting patterns and residential choices are also likely, even after the pandemic is controlled.
- The growing disparity of incomes and wealth within cities and the subsequent pressures on the fiscal health of specific municipalities.

- The way that COVID-19 or climate change affects age and occupational groups differently.
- The ripple effects of climate change on human habitats, creating international pressures to migrate from at-risk regions and putting entire cities at risk (see *Climate Risk Analysis Moves into Investment Processes* sidebar on pages 24–25).

TECHNOLOGY

A series of industrial revolutions have occurred and each one has been built on the inventions and innovations that preceded it. Scientific, engineering, and entrepreneurial talent came together to create the first industrial revolution in the early 19th century (steam/water), the second at the turn of the 20th century (electricity/internal combustion), the third (computers/information technology) in the post-war 20th century, and now the fourth (digital) revolution.³ In this fourth industrial revolution, the lines between the physical, digital, and biological spheres are blurred. It brings the digital power of algorithms, data science, IoT, mobile communications, neural networks, and robotics into virtually every aspect of human life. This fourth wave of technology has been building for several decades, yet the pace of change and disruption that accompanies these new technologies is still accelerating. If anything, the pandemic gave these mobile, cloud-based technologies an even faster boost along their adoption trajectories.

The impact of the Digital Revolution on real estate is readily apparent. International office leasing statistics over the past five years show that in nearly every country,

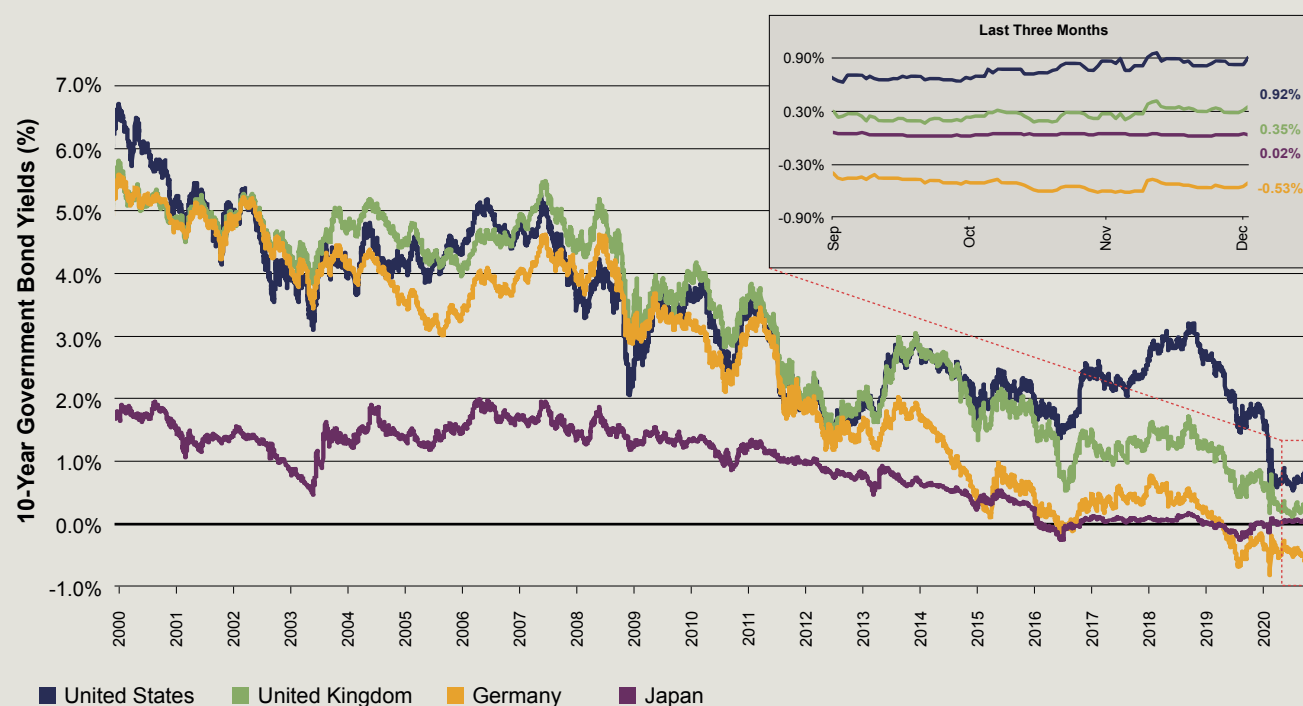


222 Exhibition Street, Melbourne, Australia

³ Klaus Schwab, the Founder and Executive Chairman of the World Economic Forum, coined the term “fourth industrial revolution.”

10-Year Risk-Free Rates at Ultralow Levels

RATES ACROSS ADVANCED ECONOMIES HAVE CONVERGED NEAR ZERO



Sources: Bloomberg and LaSalle Investment Management. Data through December 1, 2020.

technology companies are the leading source of net absorption. Even industries not typically classified as “high technology” are part of this digital wave, including banking/commerce (fintech), healthcare (telehealth, wearables, AI), manufacturing (3D printing, robotics, augmented reality), pharmaceuticals (life sciences, nanotech, genomics), and real estate and construction (proptech, ER,⁴ digital twins). The secular trends that underlie all these technologies often start with basic science, and then take advantage of advances in chip processing power, miniaturization, cloud computing, and 4G (now 5G) communications to bring data analytics to new levels. How the new technologies impact the way that buildings are used will likely become a major theme in the post-COVID-19 era.

Advanced technology brings with it new challenges, especially in the areas of cybercrime, privacy protections, regulations, and “winner takes all” economics. Nevertheless, technology adoption generally occurs in a “path of travel” that moves in an upward-only direction, with advances in one discipline leading to advances in others. The built environment is also likely ready for an accelerated burst of technological improvements as ubiquitous broadband, well-building attributes,⁵ and sensors that measure the intensity of building usage and energy efficiency all move to the forefront of how buildings will be evaluated in the future.

URBANIZATION

Of all the secular trends, urbanization⁶ is positioned to undergo the most changes: some temporary, some permanent, and many unknown. For centuries, there have been secular trends that dominate human settlement patterns: 1) a rural to urban shift particularly in emerging markets; and 2) rising density in the urban core⁷ in both developed and developing markets. These twin trends will continue to favor the growth of dynamic metropolitan areas with diversified economies capable of attracting pools of talented workers. However, in the post-COVID-19

4 Extended reality includes virtual, augmented, and mixed reality technologies.

5 Well-building standards include performance-based systems for monitoring features of the built environment that impact human health and well-being, through air, water, nourishment, light, fitness, comfort, and mind. See: www.wellcertified.com/about-iwbi/.

6 The concept of urbanization is often misunderstood as applying only to dense urban cores. Yet urban economists and geographers understand that “urbanization” applies to the entire range of human settlement patterns in metropolitan areas, including the city center, the urban fringe, suburbia, and even ex-urban nodes that are part of a regional “metroplex.”

7 In 2020, this trend reversed as urban residents in Europe and North America fled high-density neighborhoods in the most expensive cities for suburban enclaves or small towns. Time will tell if this trend is temporary or permanent. In many countries, the mixed-use densification of the urban core (including residential, hotels, and offices) took off in the mid-1980s. Because large building sites were hard to find, densification often expanded to include the urban fringe (La Defense, Canary Wharf, Battery Park City, Yokohama, Roppongi Hills, Pudong), a trend that continues to this day in Hudson Yards (New York City), Barangaroo (Sydney), and Stratford (East London). In Asian and North American metros, the trend toward higher density occurred simultaneously in urban cores, in suburban centers (e.g., Bellevue, Wash., Bethesda, Md., Mississauga, Ont.) and in satellite cities (e.g., Qingpu or Jinshan outside Shanghai or Incheon and Suwon outside of Seoul). A recurring series of pandemics could conceivably reverse the international densification trend, but this seems highly unlikely.

era, some of the very largest, most expensive, and densest cities could be at risk. Nevertheless, the *raison d'être* of cities will endure long after COVID-19. These include agglomeration economies that accrue to synergies from co-location and proximity to anchor institutions (e.g., stock exchanges, governments, courts, universities, and cultural assets); deep networks of support services that draw on accounting, advertising, legal, and software talent pools; and geographical advantages from proximity to airports, deepwater ports, and other transportation or broadband networks.

A collection of “genie out of the bottle” arguments can be used to make a case against the largest and wealthiest “gateway cities.” These include the footloose nature of top talent in an Internet-connected world, the high cost of living in these gateway cities, recognition that “work from anywhere” strategies can be used alongside a traditional “headquarters,” leading to a hybrid virtual/actual collaboration model, and a lingering COVID-19 stigma that could create a long tail of aversion to crowded, transit-served central business districts. Only time will tell how long it will take for a “decay function” to mitigate the bad memories of waves of European and North American mismanagement of the pandemic. In the meantime, the gateway cities of Asia Pacific, including Beijing, Shanghai, Seoul, Sydney, and Taipei, have had early successes reopening, so the positive agglomeration effects evident in

these cities may point the way to how any remaining stigma from the pandemic could eventually be overcome.

There are significant differences in each country’s cultural and urban planning responses to COVID-19. In auto-centric metros (e.g., the Sunbelt United States, Western Canada, and parts of Germany and Australia), suburban nodes could outperform if they have a sufficient number of amenities and transportation networks to attract the best talent and top technology firms. As we discuss in The Future of Office Properties sidebar on pages 13–16, one of the most valuable features of the modern workplace is the opportunity for face-to-face collaboration, learning, and innovation. A suburban office building will need to provide a stimulating environment and plenty of serendipitous interaction for these functions to occur—not an impossible task, but one that has not been a strong suit of many stand-alone, low-density office parks. At the same time, it may also require a massive public relations effort for urban density to return to its former status as a preferred environment for working and living. In countries with a strong transportation network, the sunk costs of infrastructure will likely induce local governments to do all they can to get commuters back on trains. In any event, the tilt away from crowded central business districts is inevitable at least until 2022 (with the exception of many Asia Pacific cities, such as Shanghai), as employers and talent pools adjust to new workplace strategies. Ultimately,



Ocean Gate Minato Mirai, Yokohama, Japan



Logiport Beijing Tongzhou, Beijing, China

high-density locations will rely on the success of the largest science project in the history of the world: The development, mass-production, and deployment of a collection of effective COVID-19 vaccines.

ENVIRONMENTAL FACTORS

We added the “E” factors to the original DTU trio several years after we selected the other trends. Sustainability issues in energy consumption (heating, cooling, and waste management), construction and refurbishment (reducing carbon dioxide emissions during these activities and using environmentally-friendly building materials), and the risks of climate change alongside building wellness attributes are important considerations for occupiers, investors, lenders, and insurers of the built environment. This rising awareness is occurring despite setbacks in U.S. environmental policy under President Trump, a rising awareness that energy conservation and COVID-19 safety in buildings are not always aligned,⁸ and a tepid response to environmental issues in some of the largest emerging markets (e.g., Brazil, Russia, and several Middle East countries).

Nevertheless, since we adopted environmental factors as our fourth secular trend, the environmental, social, and governance (ESG) awareness of institutional investors has expanded, the improvement in measuring energy usage in buildings has led to significant improvements in reducing carbon dioxide emissions, and net zero carbon pledges have been embraced in a number of jurisdictions where LaSalle does business. All of this suggests that environmental factors have gained traction as a secular

trend, and the environmental movement has expanded to include “wellness in buildings,” social and racial justice, local community support, and other precepts of impact investing⁹ that have been added to the emphasis on energy conservation and decarbonization.

The next phase in analyzing what impact these environmental factors have on real estate investments includes understanding the future of climate change and anticipating how higher insurance costs will influence building operations. The risk management industry is paying close attention to where climate risks like flooding, wind damage, heat, drought, and wildfires can be spread across an actuarially-sound base of assets and where they cannot. Data from climate risk models have become more readily available. The rising cost of insurance is not the only issue; the availability of insurance is also likely to become an issue for investors and lenders. Banking authorities and insurance regulators have already added climate risks to the stress tests they use to assure the long-term solvency of the institutions under their supervision. As time goes by, investors should expect that climate risks will become quantified and integrated into the cost of financing properties (see Climate Risk Analysis Moves into Investment Processes sidebar on pages 24–25).

⁸ Examples include higher levels of energy required to push air through the highest-rated air filtration systems, or the use of patio heaters to expand restaurants to outdoor spaces.

⁹ See “[Impact Investing in the UK](#)” May 2020, LaSalle Investment Management white paper.



60 London Wall, London, United Kingdom

Regional Headwinds and Tailwinds

When it first surfaced, the new coronavirus did not respect national borders, trade treaties, or the wealth of nations. As 2020 unfolded, public health responses to COVID-19 played an enormous role in the economic resilience or damage sustained by each country. In 2021, the IMF, OECD, and Oxford Economics all expect to see the widest swing in global GDP since 1945. This swing is projected to be 9% to 10% between the 2020 “pandemic” recession (-4.4%) and the 2021 “vaccine” recovery (+5.2%).¹⁰ This economic revitalization, however, will likely play out quite differently around the world. Below is a brief summary by region of what we expect in 2021.

ASIA PACIFIC

Future epidemiologists will note the amazing cases of China and South Korea’s resistance to COVID-19. Together these countries constitute 50% of the region’s GDP and thus far they have the lowest infection rates of any of the larger countries. Including Australia, which also kept its infection rate quite low in comparison to the West, nearly 70% of the region’s GDP enters 2021 with economies well on their way to resuming full capacity. In addition, the Regional Comprehensive Economic Partnership (RCEP) agreement will bring 15 Asia Pacific countries into the world’s largest trading bloc, representing 30% of global GDP. The RCEP will eliminate about 90% of all tariffs within the bloc within 20 years. All five of LaSalle’s key Asia Pacific markets are signatories: China, Japan, South Korea, Australia, and Singapore. The RCEP

is expected to accelerate regional integration and reinforce the development of domestic and intra-regional growth to benefit real estate demand going forward.

The headwinds that the region faces are the same ones that have been around for at least the past four years—the volatile state of U.S.-China trade relations, aging populations in North Asia, and the rising levels of government debt in Japan and of corporate debt in China. Currently, both countries can afford to carry this debt due to favorable current account balances in both countries and low interest rates in Japan. We expect the economic outlook for Asia Pacific to remain bright, as intra-regional trade grows and dependency on export markets in the West shrinks.

EUROPE

Europe’s pandemic experience and its impact on economic prospects for 2021 is an exercise in “compare and contrast.” Like a tough final exam question that has no right answer, summarizing the complex outlook for Europe is no easy task. While most major European countries were hit early and hard by the pandemic, their recovery trajectories since have been highly varied. Divergences in economic performance have gapped out, with differences mostly explained by countries’ varying economic structures, public health situations, and economic policy responses. Rates of recovery in 2021 will likely be steeper for the harder-hit countries (the U.K., France, and Spain). In terms of output levels, they will still lag countries that

¹⁰ Source: International Monetary Fund estimates, November 2020.



Mason Mill Distribution Center, Atlanta, United States

had greater success in managing the pandemic balancing (e.g., Germany and the Nordic countries).

Brexit has taken a backseat to the pandemic, but much uncertainty remains as to the U.K.'s trading relationship with the European Union. However, the European story is not just about the region becoming more fractured, as there are unifying factors as well. Strong leadership at the European Central Bank managed a robust monetary response across the eurozone. A precedent-setting agreement for mutual borrowing to fight the pandemic's fallout raises the (previously remote) prospect of closer ties within the EU. Despite its clear challenges, Europe's long-run prospects will come down to its robust stock of human capital, a portfolio of strong companies, and dynamic cities that attract investment, migration, and tourists from the world over.

NORTH AMERICA

By almost all measures, the U.S. has mounted a disjointed and lackluster response to overcoming the COVID-19 pandemic, with more cases, a more consistent level of cases, and more deaths.¹¹ Relative to other nations, the U.S. has clearly performed poorly in containing the pandemic. The approach of some in the U.S. enabled a higher level of economic activity. However, economic forecasts are being dialed back to account for the "third wave" of infection this winter. At first, Canada coped better with the coronavirus, drawing on its experience with SARS. However, Western Canada has been hit hard by the collapse in energy prices and COVID-19 cases are rising across the country in a pattern similar to the U.S.

Both countries face a difficult winter in dealing with the pandemic and the renewed restrictions on travel, restaurants, and gatherings. They are both positioned well for a strong recovery if effective vaccines provide a path to control COVID-19. Both markets also have strong structural tailwinds, with Canada driven by a well-organized system of immigration and rich natural resources, and the U.S. supported by strong leadership in the thriving technology and biotechnology sectors. The upcoming presidential change in the U.S. is fueling optimism that an organized approach to vaccine deployment and a return to global cooperation on the part of the U.S. will also enable 2021 to be a year of strong economic recovery.

The pandemic opens up opportunities, just as it interrupts many others. At LaSalle, the events of 2020 gave our global research team the opportunity to focus on the major sectors that have traditionally formed the backbone of a real estate investment portfolio. With a global crisis like the pandemic, it suddenly became clear that mainline property types were responding differently. And, at first, these differences were even greater between sectors than they were between different geographies. This prompted us to spend the past five months exploring the "future of" each sector and to try to separate temporary from permanent changes that each sector has been undergoing. The conclusions of this global review are summarized in the following pages.

¹¹ Source: The World Health Organization.

The Future of Office Properties

Office investing in the post-COVID-19 era comes down to having a view on the outlook for demand and if the risks on that demand outlook are fairly priced in the capital markets. A global perspective brings insights that might be lost if only one or two office markets are examined. In our review of major office markets around the world, it is clear that demand will be negatively impacted by firm and worker experiences during the pandemic, but there is large variation based on industry, location, asset type, employee base, and market. There are two elements to this negative impact: 1) the cyclical impact of a global recession; and 2) potential secular changes from more remote working and how much space is needed per employee in the office. The extent to which any negative demand impacts rents and values depends on other factors as well, such as supply growth and the strength of fundamentals entering the downturn.

Past cycles show how office rents become volatile as demand falls due to tenants who are eager to save money in a downturn. Landlords respond by offering aggressive concessions like free rent to lure tenants as many more options become available to tenants. Then, as the economy recovers, office demand returns, available space becomes more limited, tenants become less rate-sensitive, concessions disappear, and rents recover. The cyclical strategy to acquire assets at pricing based on depressed rents and/or occupancy has often delivered attractive returns for office investors. Cyclical recoveries have been supported by the long-term growth of industries and activities that use offices, such as business services and technology. The amount of office space per capita increases with economic growth, as tenants commit to expansion space, so long-term economic growth is a double tailwind for the office market.

STRUCTURAL CHANGES

The impact of more remote working and the rising need for flexibility among tenants complicates the demand outlook today. There is ample debate on this, and the data on what the future might hold are limited. The lines of debate are clear. Those who believe office demand will decline emphasize that remote working is a productive, positive lifestyle change for many employees, and it can reduce office space costs for firms. Those who believe office demand will be sustained argue there is value in having employees together in the office and many employees and firms are realizing that remote working on a permanent basis may be suboptimal for building culture, innovation, and training new employees.

In what we label as “Phase 2” or “living with COVID-19,” there are safety concerns about being in the office, restrictions on how offices can be used, and challenges with safely getting to offices. We expect these will dissipate in Phase 3 “COVID-19 under control” and behavior while the pandemic is raging may not be indicative of future behavior. The value of the office comes from bringing employees together. When infection rates are high, this face-to-face collaboration is limited by split staff rules or conference room restrictions. This limits our ability to use current behavior to guide an outlook on the post-COVID-19 era. This lack of clarity is consistent with tenant behavior, as firms seek short-term renewals and leases to preserve flexibility for a future where they do not know what their space usage or demand will look like.

Within this broad debate there are important nuances:

- **Impacts will be at the margin:** The demand for office space does not have to “collapse” for there to be an adverse impact on occupancy, rents, and values. If some workers are in roles that can operate remotely on a full-time basis and they are eager to do so, then space requirements can be reduced. Even a 5%-10% decline in demand could create a period of elevated vacancy. In this scenario, the secular headwind could extend the time to recover to five or ten years or even longer depending on the strength of the secular headwinds, the rate of economic growth, and any changes in supply.
- **Timing matters:** In countries where office leases are long and it is not easy for tenants to sublease excess space, a temporal mis-match problem arises when occupier needs change faster than the term of the lease. This mis-match creates a burden for office tenants and may make more of them reluctant to enter into long-dated lease contracts. This slow pacing of change means structural headwinds will have an extended impact rather than an immediate, large short-term impact. This delay then interacts with the cyclical demand decline and eventual economic rebound. These interacting time dynamics have implications for office space demand, market rents, and asset cash flow.
- **Office space needs are driven by peak demand, not average capacity:** Not all levels of remote working have the same, or even any, impact on office demand. For example, not requiring office attendance on Fridays to provide some flexibility to employees should not impact the amount of office space a firm requires. Office space usage schemes, such as hoteling or hot-desking, which enable employees to “share” desks are needed to reduce

space needs for part-time remote working schemes. However, these require scheduling employees for days in and out of the office and thus reduce the value of the office as a place for employees to connect. As we model the impact of remote working, we need to make important assumptions about how many days people are in the office and what level of desk sharing is implemented for different groups.

- **Market, employee, and tenant differences impact the return to the office:** Remote working is more appealing where workers are dealing with longer commutes and have more space at home to work. Culture is also a factor, with some societies, companies, and even departments having a culture that focuses more on being in the office, while others are more comfortable with remote work. Life stage also matters, with early and later career individuals most eager to be in the office, while mid-career individuals, often with young children and competing family demands, may find the appeal of being at home relatively greater.

Office density is the other important secular trend to consider. Prior to COVID-19, density has been a secular headwind as firms moved employees out of private offices and into denser, open-office configurations. Even before the pandemic, densification was stalling or starting to reverse. Firms faced an employee backlash and were starting to reduce density to provide a mix of private and collaboration spaces for employees to work most efficiently. With the pandemic, preserving health has become part of the consideration as well. Many offices are too dense for full occupancy as long as limiting the spread of COVID-19 is a priority. It is uncertain whether health concerns will impact office density targets when the pandemic is controlled, but it seems wise to adjust our demand models to take into account a lingering aversion to high-density workplace environments.

The combination of secular headwinds, cyclical impacts, and investor wariness concerning the future of the office market could lead to significant value loss. While this threat is apparent, among those most knowledgeable about the dynamics of the office market it can be hard to disentangle who is “talking their book” and who is providing an honest view based on thought and analysis. Too often, office owners see only one side of the debate, while others (often in the media) paint doomsday scenarios on the death of the office. As is often the case, the reality is likely to be somewhere in between. Office occupancy advisors, such as tenant rep brokers, architects, and real estate consultants, sometimes paint an image of a future office that is a



KONTOR, Berlin, Germany

radical break for a property type that has historically experienced incremental, not revolutionary, change. Among real estate investors, there is a temptation to look at what is occurring in retail and judge it is better to over-estimate negative secular trends and avoid office investment entirely.

While much remains uncertain, with variations by region or market, we aim to be clear about our current outlook for the office market:

1. **Office investment is higher risk than pre-pandemic. And compared to other property types, investors should be compensated for that risk shift with higher returns.**
 - a. Secular headwinds are difficult to forecast precisely and create elevated uncertainty on future, aggregate demand. More uncertainty manifests itself as higher risk.
 - b. Asset-specific features that tenants will value highly in the post-COVID-19 era are still largely unknown. Until employees return to the office and the pandemic is contained, we do not know for certain whether electrostatic air filters, windows that open, no-touch sensors, or other building “wellness” programs are going to make a difference in space selection. This lack of knowledge is another risk element.
2. **Secular shifts to office demand are tilted towards the downside.** As we estimate the impacts of remote working and employee density, we believe it is likely remote working will outweigh any benefits from lower density. This means demand forecasts are lower than a pre-pandemic outlook, even absent cyclical dynamics.

- 3. We expect secular shifts to drive a slower cyclical recovery, rather than an extreme spike in vacancy.** Secular changes to office usage will be phased in over time. This will lead to a slower recovery as some firms resize their leased space while others expand as their business goes through a cyclical expansion. These timing dynamics lead to a forecast not of an extreme increase in vacancy during the crisis, but a slow recovery from a near-term cyclical increase in vacancy rates.
- 4. Tenant location preferences unchanged from pre-pandemic.** The value of the office comes from collaboration. Putting parts of teams in different offices diminishes that value. As more people work remotely, this collaboration value of the office becomes even more significant. This will sustain demand for centrally located offices, which are often transit accessible. There will be growth in out-of-town/suburban coworking, but this is a complement to remote working and is not expected to create a sustained, significant office investment opportunity.
- 5. Modern buildings will outperform older buildings.** It remains uncertain what office attributes will make a difference to tenants. It is likely that ventilation and touchless building systems will be new items on tenant checklists, and modern buildings have more system flexibility to meet tenant needs. We believe amenity space will remain of value, even if the uses of that space may evolve. Another dynamic is that higher paid/higher value-add employees are more likely to maintain their current office space, and they are more likely to be in modern buildings. This does not mean that all older buildings are doomed, but they will need to meet the needs of higher-end tenants, which includes amenities, such as high-quality air filters and HVAC systems. The net result will be higher capital expenditures when underwriting older and some newer buildings.
- 6. Flexible office demand will be sustained.** The shifting ways that tenants are using offices should enable sustained growth in flexible office space. This might not be the dense coworking operations of the past, and the economic model is likely to change as well.
- 7. Tenants that draw demand from office workers will likely be impacted.** The fact that office space needs are driven by peak demand, not average demand, does not help businesses like fitness centers, restaurants, parking, and other services that depend on office occupancy. We expect broader adoption of flexibility in remote working than in

moving to full-time remote working. The implication is that in the post-COVID-19 era, there will be fewer workers buying lunch near their offices, fewer people taking transit or needing parking spaces each day, and less need for some workers to live close to their offices. This implies changes that might impact adjacent real estate and office building cash flows tied to retail or other business services, like banking.

GLOBAL SIMILARITIES AND DIFFERENCES

At real estate webinars and virtual conferences, the “future of office” has become a favorite topic. In our view, commentary on the “death of the office” or “things will soon be back to normal, just as they were after 9/11” both miss the point. A structured, data-dependent approach to tracking the future workplace is essential. The performance of office markets in different countries will vary greatly depending on the adoption of remote working practices and the underlying dynamics of cyclical office demand. Post-pandemic, we expect a greater move to remote working in markets like the U.S., where residential living space is larger. In some European cities, especially London, the adoption of remote working seems to be driven more by commuting challenges. In Asia, there is a strong cultural push towards spending time in the office. This is supported by the fact that many workers in Asia, where COVID-19 containment is advanced, have already returned to the office. Houses and apartments in major Asian cities also tend to be smaller, which makes working from home more challenging. Continental Europe cities are between U.S./U.K. and Asia, with shorter commutes that make working in the office less challenging. Design formats, like operable windows and semi-private offices, also make the office environment safer and user-friendly.

Across all markets, long-term growth in office jobs will eventually counter any structural headwinds. Here again, Asia is well-positioned where many markets, especially in China, are growing fast. North America is diverse, with faster growth in Sunbelt markets in the U.S. and immigration driving growth in major Canadian cities. Meanwhile established U.S. markets are likely to experience slower growth. The U.K. faces near-term growth challenges associated with Brexit that could be compounded by cyclical economic factors. Many markets in Continental Europe and Japan are also experiencing slower growth due to mature economies and limited population growth. In these mature markets, other factors, such as shortages of modern office stock and competition for talented workers, are expected to drive balanced office fundamentals.

The key factors that differentiate markets and guide toward the relative long-term demand outlook are

International Comparison of Office Demand Risk Factors

POST-PANDEMIC WITH EFFECTIVE VACCINES WIDELY AVAILABLE

Risk Factors	Commute Time	Safety/Trust*	Living Space Size	Collaboration/Innovation	Office Demand Growth	Cultural Factors	Return to Office Progress	Overall Risk
Description → Market Segment ↓	Longer commutes increase appeal of remote working.	Physical risk (elevator rides, windows that do not open) and trust in landlords, employers, govts, and colleagues to help keep them safe.	Larger living spaces make remote work more appealing.	Markets with employees focused on innovation or collaboration activities that benefit from being in an office.	Long-term demand growth counters structural headwinds.	Cultural expectation for employees to be in the office.	Metric of how much return to office has been achieved.	Comparison of greatest and least structural risk.
U.S. Major CBDs								
U.S. Sunbelt Suburban								
U.K. / London								
Continental Europe								
Australia Major CBDs								
Japan (Tokyo 5-Ku)								
China (Shanghai CBD)								

Assessment of Demand Risk Factors ■ Low Risk to Demand ■ Moderate Risk to Demand ■ Elevated Risk to Demand

Note: Safety/Trust captures the physical risk of being in an office, such as long elevator rides in high-rise buildings and windows that do or do not open. It also captures the trust elements of safety, such as if employees tend to trust landlords, employers, governments, and colleagues to do things that will keep them safe.
Source: LaSalle Investment Management.

summarized for some major global office market segments in the table International Comparison of Office Demand Risk Factors above.

OFFICE INVESTMENT IMPLICATIONS

Even in the hardest hit markets, we do not expect office properties to follow the path of retail, with many assets permanently impaired. After a strong rebound in office REIT pricing, following positive news on vaccines, the public market is still pricing in a more severe decline than we expect to see in the private market (as of late November). In the private market, office pricing should adjust downward to account for the higher risks in office investment. This implies a price decline for offices, but not a price collapse. Before the pandemic, we already saw headwinds for office investment in many markets stemming from higher volatility and rising capital expenditures, but some investors and market pricing seemed to overlook those challenges. Meanwhile, the office sector was often an attractive value-add strategy due to the opportunities to sell to buyers who underestimate those challenges. In markets like Tokyo or Western Europe where new supply is more constrained, under-managed older buildings still represent an upgrade opportunity. However, a re-rating of office risk due to a combination of secular demand change and gradual

acknowledgement of the chronic capex drag on cash flow from office buildings is likely to raise discount rates and required returns, and therefore erode office pricing from pre-pandemic levels.

The more impacted assets are going to be those with existing vacancy and near-term lease roll because of the impact near-term demand headwinds will have on income. The most insulated investments are going to be those with long-term leases to credit tenants. These assets are positioned to continue to provide a stable income return through a period of depressed demand and rents. There could still be a valuation re-rating from lower market rents, but the value of stable income is increasing across all assets. Specialized office space, such as medical office and life sciences space, also should perform better because of a better demand outlook. The traditional core office asset with a diversified lease roll will sit between these two extremes. And as with any market shift, there is the potential for mispricing that could create investment opportunities. ■

The Future of Retail Real Estate

For nearly 50 years, shopping centers have been one of the core holdings of an institutional real estate portfolio. In 2021–23, retail properties will face many challenges, including the reinvention of stagnating assets. Digital disruption and changing consumer habits were placing considerable pressure on brick-and-mortar retail prior to COVID-19. The pandemic has also significantly impacted the sector, with social distancing measures and the weak economic climate accelerating many of the structural changes already in motion. The fallout from the pandemic is uneven across retail segments; for example, while sales are up at grocery and home improvement stores in many countries, they are down sharply for restaurants and apparel.

RETAIL PROPERTIES STAND OUT FOR THEIR HETEROGENEITY

While all developed markets are home to significant inventories of various types of retail properties, each country has a distinctive approach to the configuration of shops, restaurants, and larger stores. Retail warehouses, which is terminology not used in the U.S., is the largest retail subtype in the U.K. Even terms like “out-of-town shopping centre” and “high street” have different meanings in each country. With the pandemic hitting retail so unequally, these subtypes provide useful shortcuts to understanding institutional investors’ exposure to retail. These are summarized in the chart Index Allocations to Retail for three major countries with highly transparent investment indices. The differences between them are illuminating, even though the different naming conventions make comparisons challenging.

At LaSalle, we have dug one layer deeper to analyze tenant mix, which is especially useful when comparing exposure across portfolios. Retail properties that are highly weighted to more essential categories like supermarkets have had higher rent payment rates during the pandemic, while small shops experienced fewer permanent closure rates than we initially projected. Fitness centers and movie theaters, on the other hand, are experiencing solvency issues.

LaSalle’s U.S. and U.K. tenant mix, with close to a fifth of gross rent from food retail, compares favorably to REIT averages. In Japan, grocery stores and restaurants also perform well as many citizens resist buying groceries online. In many large shopping centres in Japan, grocery anchors account for a smaller share of rent and gross living area. These centers also include many restaurants and services that occasionally suffer due to social distancing measures,

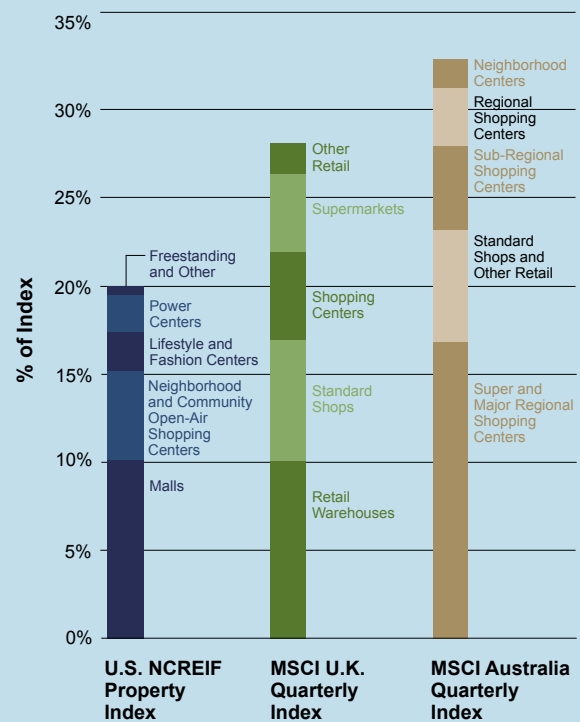
although COVID-19 cases have been more limited in Japan. Some retail subtypes have surprisingly low exposure to some of the most vulnerable tenant types. In Canada, for example, the largest retail REITs rely on apparel for just 5% of their rent.

Below are the key points on retail markets we derived by studying our retail portfolio in a dozen countries:

- Each retail center is a unique collection of businesses that must constantly adapt to its trade area.
- Differences in retail properties within and between countries are greater than any other property type.
- COVID-19 is having a wide range of effects on retail centers, with some more resilient than others. Unlike other property types, the effects on rent collection are immediate and, in some cases, lead to rapid tenant insolvencies.
- In a post-COVID-19 era, many retail property managers will have to change their approach to tenant mix and customer safety. Some may even have to introduce entirely new land uses into their footprint in order to survive, including residential, office, or fulfilment tenants.

Index Allocations to Retail

U.S., U.K., AND AUSTRALIA



Sources: MSCI, NCREIF, and LaSalle Investment Management. Based on data as of 2020:Q2.

Retail Reinvention

In many countries, a growing proportion of retail stock is surplus to tenant demand, making conversion to other uses a potential strategy. A review of several of our retail conversions provides some insights and common themes on this approach. We have repurposed retail space to other uses on a range of asset types, including shopping malls, retail parks, and high street stores across Europe and North America.

We find that there is no “one size fits all” strategy for reinventing or repurposing retail properties. Our review reveals a mix of both adaptive and value-add retail reinvention. The adaptive approach is used when dealing with changes that occur during a property’s holding period. Value-add reinvention, by contrast, is the acquisition of distressed retail with the goal of adding significant value through a repurposing conversion.

All the retail properties we converted have a number of common concerns, including high vacancy, falling rents, rising costs, tenant failures, and impending lease events. In some cases, single-let properties were fully vacant due to a tenant failure. In multi-let properties, we occasionally observe anchor tenant risk, prompting the need to consider defensive action.

Retaining the existing use of a retail property is always the first consideration in a retail reinvention, as this is the fastest and most cost-effective solution, as well as being the most environmentally friendly. However, in projects that proceed to a change-of-use strategy, there are typically no prospective retail tenants due to weak demand; and identifying a retailer to backfill would result in extended voids, excessive incentives, or unacceptably low rents. Competition from a newer nearby property can also be an issue.

When we pursue a reinvention strategy, we have typically reduced the retail component of the project from 25% to 100%. Given densification is a key driver of value creation, while the retail floorspace is reduced, most conversions actually result in an expansion of the floorspace for other uses. Examples of these include Place Vertu in Montreal, Canada and The Galleries in Bristol, U.K. Where this is not possible, one goal of the refurbishments is to maximize the income potential by delivering a better space configuration, along with a change of use. In most cases, we convert retail space to a “beds” strategy, such as residential-for-rent, hotels, and student accommodations. For example, in Los Angeles and Seattle, we converted small ground-floor retail units in apartment buildings into residential units.

Mall properties in North America are typically surrounded by vast parking lots, which can create

opportunities as values decline and the underlying land parcels become more valuable for other uses. Malls are often located in high visibility locations adjacent to major highways, making this real estate often well suited to warehouse/logistics and restaurants. They are almost always surrounded by residential properties, which present opportunities for outpatient medical facilities or higher-density apartments.

Residential uses frequently command the highest value per square meter of all the property types. Our retail conversions to residential use have several overlapping themes. They are all located in well-connected urban locations with strong economic growth prospects (e.g., a retail park in Greater London or a middle-class suburb in Montreal). They have high land values, and, in a few circumstances, the land value exceeded the value of the existing asset, providing a particularly compelling case for acquisition. In other cases, the development was de-risked by having secured pre-lets prior to development.

In the current market cycle, converting at-risk retail into high-value residential is not always a viable option. Obstacles include thin occupier demand for the alternative land use, or prohibitive construction costs compared to the projected development value. In some countries, local zoning is often a barrier to conversion. Because sales taxes are collected at the local/municipal level in the U.S., some municipalities



Montecito Marketplace, Las Vegas, United States



Carré Bad Cannstatt, Stuttgart, Germany

have incentives to prevent the conversion of retail properties. Moreover, development risk is inherently higher than leasing risk, and the conversion project needs to deliver a higher risk-adjusted return than retaining its existing use or disposing of the asset. Underwriting an acceptable development profit margin is not always straightforward.

Given these risks, an investor may not wish to undertake a retail conversion themselves. They may instead prefer to obtain planning permission before selling their retail asset to an investor with a higher risk tolerance. Indeed, for some of our assets, the intention was solely to gain development consent for a retail conversion, thereby improving its marketability to potential buyers.

However, obtaining planning permission can be challenging. In several instances, the changes in use were challenged or altered at the planning stage by the local government. For example, they required that the project retain a retail component to support the local economy and as an amenity for the local neighborhood. Moreover, the slow nature of planning systems may result in a missed opportunity to capitalize on short-term demand. The significant impact of lockdowns during the pandemic provides an extreme example of how quickly unforeseen factors can lead to severe market deterioration. In one of our projects, a key objective was to ensure that there was sufficient flexibility in the development masterplan to reflect changing market conditions.

In some of our retail reinventions, the land rezoning facilitated the conversion. Indeed, there are a few instances when the conversions to residential were actively encouraged; planners were aware of the surplus of retail space; and, in many locations, the undersupply of housing. Our best results are achieved by working closely with local governments to reach a mutually beneficial outcome.

Our experience is that the conversion of a retail asset into an alternative use is not a panacea because it can be costly and risky, and securing local approval can be difficult. Yet it also represents an opportunity for the reinvention of hard-hit retail assets, especially as the pandemic provides an impetus for local governments and planning authorities to be more flexible. Retail assets in locations with multiple sources of demand, high land values, and a sympathetic planning board have the highest chance of success. In some cases, however, investors may only partially offset the losses incurred by the original asset. In others, investors can proactively target distressed assets and motivate sellers to take advantage of these factors using a countercyclical strategy. Retail repurposing and conversions will become more commonplace as retail values fall further during 2021. ■

The Future of Warehouses

The warehouse sector is a top-performer in nearly every country we follow. The pandemic is accelerating this trend and widening the gap between the one-, three-, and five-year performance of these assets as compared to office, retail, and even residential properties. The rise of warehouse properties is easy to explain. The demand drivers have been stronger than any other major property type. Rent growth has exceeded expectations in many markets, despite an active supply pipeline. And most importantly, the capital markets have rewarded the sector with steady capitalization rate compression globally.

Investors will have to grapple with a more complex picture in the next few years. While the demand drivers are expected to remain strong and supply pipelines are rising in a large number of markets, the rising valuations of warehouse properties have reduced entry yields and the narrowing spread between rapidly rising construction costs (especially land costs) and slower increases in stabilized value have reduced returns on build strategies. Despite this, leased and stabilized warehouse properties still trade at a handsome premium to replacement cost in many markets, which attracts more and more money into development strategies.

Looking forward, the warehouse sector is expected to continue to lead performance among the major sectors in the next three to five years. However, returns are expected to trend lower, primarily due to the compression of the going-in yields of income-generating warehouses and the reduction of development margins due to the increasingly competitive development landscape. Over the long term, warehouses that are in close proximity to consumers and transportation infrastructure have the configuration to appeal to modern distribution. Warehouses that favor the implementation of technology are expected to outperform the overall warehouse sector.

Building upon our study of key demand drivers of warehouse markets in the [2020 ISA Mid-Year Update](#), we develop a framework on the supply and demand analysis of several of the largest warehouse markets. We focus our study on whether supply will outstrip demand by comparing three types of warehouse markets: high, moderate, and low supply markets. We expect the weight of institutional capital targeting warehouse properties to continue to grow in 2021. Moreover, investors are likely to continue to pay record-high prices for income-generating warehouse assets, partly because the fundamentals are stronger than other property types. As pricing for leased warehouse properties continues to rise and going-in

yields decline, many investors are willing to take on additional risks to boost returns through value-added strategies, such as taking on lease-up risk. Some investors have also turned to build-to-core or develop-and-sell strategies since the yield differential between developing a warehouse property versus acquiring a stabilized asset remains wide in many markets globally. We summarize our investment strategy recommendations for the three types of warehouse markets in Warehouse Investment Strategy Recommendations on page 21.

LOW SUPPLY, MAJOR MARKETS

In the largest low-supply markets such as London, Los Angeles (LA), and Tokyo, core warehouse properties are richly priced, and going-in yields continue to compress. Limited opportunities exist to develop near city centers due to limited available land and high construction costs. For example, in LA and Tokyo, land values as a share of replacement costs can be higher than 50%. For the rare land parcels suitable for warehouse development, construction costs are high and residential or office uses may be more valuable or preferred by planning authorities. One response to these market conditions is to build multistory warehouses. This has been the case for several decades in Hong Kong, Singapore, and Tokyo, and is now a trend showing up on the U.S. west coast and in Tier 1 cities of China.

With limited land availability and strong pricing of leased warehouses in these low supply markets, value-added strategies such as speculative leasing, renovating old warehouses to modern specifications (where possible), or converting other property types (e.g., suburban retail) to warehouses can boost returns.

These low supply markets usually have large demand bases to draw upon, but often lack modern warehouse stock. Limited new supply, restricted existing stock of modern warehouses, and a high value placed on proximity to population centers or ports are driving rents up. All of these contribute to low rent affordability in these markets and require tenants to trade-off between infill and peripheral locations. Most new supply serving these markets is built in peripheral locations, such as the Inland Empire market for LA, Chiba and Saitama for Tokyo, and Outer London boroughs or beyond the city boundaries for London. The build-to-core strategy is often attractive in the peripheral locations of these low-supply major markets, as the healthy occupier demand is expected to continue due to the large demand bases that these locations can draw upon.

MODERATE SUPPLY, REGIONAL HUBS

In regional hubs with moderate barriers to supply, such as Madrid, Shanghai, and Toronto, the risk of

Warehouse Investment Strategy Recommendations

	Low Supply, Major Markets (e.g., Los Angeles, London, Tokyo)	Moderate Supply, Regional Hubs (e.g., Madrid, Shanghai, Toronto)	High Supply, Growth Markets (e.g., Phoenix, Warsaw, Xi'an)
Attribute	Limited land availability	Adequate land availability in the near term	Land widely available
	High construction cost (Land value as a share of replacement cost >50%)	Moderate construction cost (50% > land value as a share of replacement cost >25%)	Low construction cost (Land value as a share of replacement cost <25%)
Implication	Lack of modern warehouse stock	Near-term supply-demand imbalance	
	Rent affordability concerns	Supply constraint over the long term	Increasing barriers to supply over the long term
	Trade-offs between infill and peripheral locations	Moderately reactive supply pipeline	Highly reactive supply pipeline
Strategy	Leasing/Value-added	Build-to-core Develop-and-sell	Develop-and-sell
	Build-to-Core (in peripheral locations)		
	Core Caution on pricing, but most assets well positioned	Core Seek strong locations in these markets	Core Long-term leased assets at income yield premium to low-supply markets

■ Higher Return ■ Core

Source: LaSalle Investment Management, November 2020.

warehouse oversupply is low over the long term, despite some expected supply-demand imbalance in the near term. Recent supply pipelines in these moderate supply regional hubs will be elevated over the next two to three years. Due to the near-term supply pipelines and some headwinds from the COVID-19 pandemic (e.g., offline retailers' demand for warehouse), no to low rental growth is expected in these markets in the near term. The good news is that the supply-demand dynamics in these moderate supply markets are versatile and highly reactive as soon as landlords reduce rents or offer less rental increases during renewal reviews. The supply-demand imbalance can be quickly adjusted, partly due to the large demand base that these moderate supply regional hubs can draw upon.

Additionally, government intervention and increasing land prices are creating barriers to supply over the long term. Since 2007, supply in Shanghai, for example, has been on a declining trend, as the government has intentionally restricted warehouse land supply. Recently, the Shanghai government has further set stringent restrictions on converting industrial land to logistics land, or building warehouses on industrial land. These restrictions are expected to constrain the supply of Shanghai warehouse properties over the long term. In the Greater Toronto Area, the 800,000-acre, provincially mandated green belt prevents development in areas that surround the metro, making supply difficult to deliver and driving up land prices.

Taking all of the above into consideration, for investors with a long-term or flexible investment horizon, they can consider build-to-core strategies in these markets to boost returns, or cautiously search for fairly priced core warehouses in strong locations. For investors with a finite or short-term investment horizon, pricing for leased warehouses would need to be adjusted to reflect the near-term supply-demand imbalance in these regional hubs.

HIGH SUPPLY, GROWTH MARKETS

In markets with high supply, such as Phoenix in the U.S., Xi'an in China, and Warsaw in Poland, this supply needs to be accompanied by strong demand to make them investment targets. These markets are often characterized by strong consumer spending growth, rapid expansion of e-commerce, easy access to low-cost labor, improving national and regional road infrastructure, and most importantly, relatively low rents compared to low supply markets.

Robust supply pipelines work in these markets as long as demand remains strong. Supply in these markets is responsive to economic conditions. As a result, the rent growth outlook is often more moderate than that of low supply markets. The development strategy requires a view that demand will remain strong enough for the asset to lease-up relatively quickly after delivery. This often depends on delivering products that appeal to the key needs of tenants in the market, as there will be competition from other developments. ■

Residential Rising:

Expanding Role of Rented Residential Property

Residential housing is the largest form of real estate in every country, city, and village in the world—and where most have spent an unusually large portion of their time in 2020. So, it may seem odd to think of it as a property type that is still maturing, expanding, and becoming more mainstream. Yet, for the global income-generating subset of residential real estate that is rented out to individual tenants, the past 15 years have been dynamic, with large increases in institutional ownership and emerging residential niche property types. The COVID-19 pandemic will likely result in an even greater role for residential housing in institutional portfolios.

Income-generating residential property markets have mammoth cross-border differences, beginning with even the name of the property type: in North America, these property types are most commonly referred to as “apartments” and “multifamily.” In the U.K., it is the “private rented sector.” For clarity, here we use “rented residential” to describe the property type.

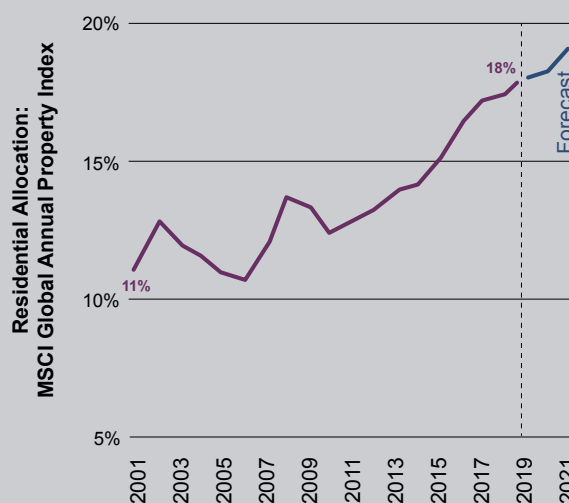
Institutional allocations to rented residential range from the low single digits in Australia and China to a quarter or more of most core portfolios in the U.S. and Switzerland (see Global Index Allocation to Residential). These large differences reflect historic government regulations, social perceptions of rented housing, and the underlying building stock available for investment, factors we examine in more detail below for China and Europe.

This cross-market variation gives rise to meaningful differences in the risk and growth characteristics of rented residential cash flows, as well as the associated diversification benefits. For example, highly regulated rental residential markets like Japan and Germany produce lower beta cash flows with more predictable growth rates. Less regulated markets like the U.S. or U.K. have potential for more cash flow growth but can be associated with more volatility.

Despite distinct cross-border differences, we have identified three rented residential themes common across many markets:

- **Institutional under-allocation:** Rented residential comprises a smaller share of private institutional portfolios, in aggregate, than it does of the built stock.
- **Expansion into new niches:** Even in markets with high levels of institutional rented residential ownership like the U.S., institutional investors are expanding into new niches of rented residential, like active-adult and single-family rentals (SFR). In some markets, niche residential types, such as student housing in Australia and the U.K., were among the first to attract institutional ownership.
- **Changing investor (and tenant) perception:** The COVID-19 pandemic is accentuating the defensive and essential characteristics of rented residential. Prior to the pandemic, rising transparency contributed to changing perceptions, prompting more institutional investors to become interested in “build-to-rent” (BTR) projects in markets with less existing rented residential stock.

Global Index Allocation to Residential



Sources: MSCI Global Annual Index and LaSalle Investment Management (forecast). History to 2019. Latest available data as of November 2020.

These themes are driving rented residential allocations higher, notably in China and Europe.

CHINA

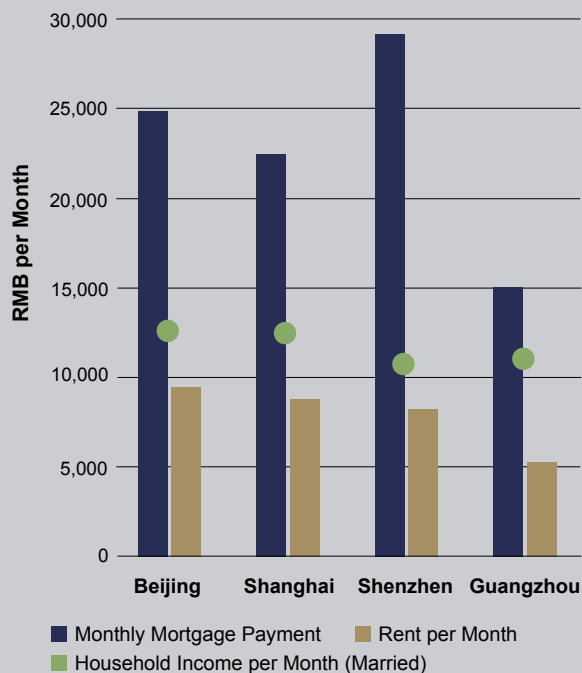
The rented residential sector in China emerged in 2014 when a local investor launched the first professionally managed project in Beijing. As with the early origins of the property type in the U.S. and Germany, government policy proved a key catalyst. Growth in the sector was slow, due to the lack of assets, until the government started to require that developers retain control of a portion of larger for-sale residential and mixed-use projects. Since then, many developers have built rented residential on this retained land.

Developers' participation has increased the supply of transactable assets. In 2018, the government issued a regulation encouraging insurance companies to invest in the rented residential sector. In the same year, overseas investors, such as GIC and CPPIB, also started to make investments in the sector. These investors, together with the asset-backed security (ABS)/quasi-REIT market, are accelerating institutionalization by providing market liquidity.

Investors are attracted to rented residential in China due to its high growth potential. Growing demand is supported by fast urbanization, low for-sale residential affordability, for-sale residential purchasing restrictions, and an increasing willingness to rent. The individual purchasing restrictions are unique to China. The original purpose of the restrictions was to cool down the residential market, but they have essentially pushed new urban immigrants to the rental market. The cost to rent in major Chinese cities is well below the cost to own (see Cost to Rent vs. Own in Major Chinese Cities on page 23).

Healthy demand fundamentals are driving up market rents. Annual average rent growth in major Chinese cities ranged from 4.5% to 8.5% between 2014 and 2019, although it has

Cost to Rent vs. Own in Major Chinese Markets



Note: Main assumptions: down payment: 30%; Size=100 sqm; mortgage rate: 5.43%; and mortgage term: 30 years. Average household income assumes two income-earners. Raw data are sourced from CEIC and creprice.cn.

not been able to catch up with the increase in for-sale residential prices. The stabilized yields of rental apartments have been driven to a low level that now makes build-to-core strategies feasible, such as greenfield development and conversion. These strategies can provide expected returns in the high teens in 2021.

EUROPE

In Europe, market targeting has come to be thought of as an exercise in selecting winning cities rather than countries. Yet there are vast national differences among Europe's rented residential markets that recall the days of a more fragmented continent. Large differences in tenant protections, regulatory systems, ownership patterns, and physical typologies can in many cases be traced to how each country dealt with housing shortages after World War II.

A comparative study of the U.K. and Germany is instructive. In British cities, neighborhoods leveled during the Blitz were replaced with redevelopments owned by local governments, effectively converting households that were once private renters into tenants of the state. By the 1980s, Thatcherism called for a shift toward private ownership, and a massive "Right to Buy" program transferred these flats to owner occupation. In parallel, the privately rented sector was squeezed by tenant-friendly rules to less than 10% of the housing stock.

In the 1990s, these rules were made more landlord friendly and this created a major shift so that by 2015, the privately

rented sector stock doubled. But, until the last few years, landlords were private individuals owning units in blocks, not institutions. Despite the growth in the PRS stock, most institutions have not been able to find suitable, existing whole blocks so have chosen to create their own; i.e., build-to-rent (BTR), usually in partnership with a developer. This has also enabled them to invest at their desired scale. Today, the U.K.'s investable rented residential inventory is mostly recent construction. It is purpose-built to address housing affordability challenges driven by new migration patterns and entrenched NIMBY¹ attitudes toward new supply. Mirroring trends in the U.S., today's BTR landlords in the U.K. compete for young professional renters.

As in the U.K., postwar replacement housing in Germany was built quickly, in this case by a mix of local governments and state-linked industrial corporations. Unlike in Britain, Germany's political winds did not shift in favor of homeownership, and the country remains a "nation of renters."² Instead of being sold to individual occupants, German rental housing was traded in large chunks to private equity investors in the 1990s–2000s; these portfolios formed the basis for the listed companies that now comprise the largest segment of the European listed real estate universe. Germany's postwar rental regulation system remains in place, contributing to a low-growth/low-volatility investment proposition, with attractive but slow-going opportunities for enhanced returns through gradual renovation.

Despite the different historical market constructs represented by the U.K. and Germany, a crossover of investment styles is now underway. Investors seeking stable cash flows and looking to make a positive social impact are capitalizing on affordable housing in the U.K. Meanwhile, a new generation of stock in Germany's most dynamic cities is unencumbered by tight regulatory controls and caters to a more mobile population of style-conscious young professionals.

The healthy fundamentals and increasing diversity of European rented residential risk/reward propositions is attracting the attention of core investors. In the early days of the PEPFI balanced index³ in 2007, there was zero exposure to residential housing in any of the constituent funds. Most residential was held by specialist local and national investors. Today that share stands at just 5% but is rising rapidly; eight of the 12 constituent funds have exposure and the others are seeking entry points. But European rented residential is not a one-size-fits-all proposition. Investors seeking to invest in rented residential need to understand how lingering structural differences at the national level interact with more familiar city-level dynamics. ■

1 Not in My Backyard. Most key British cities are surrounded by vast "greenbelts" in which urban development is highly restricted. The U.K. planning system permits development only by case-by-case approval; there is little ability to develop property of "as of right."

2 Around half of the German population owns their own home, one of the lowest rates of homeownership among developed countries.

3 MSCI's Pan-European Property Fund (PEPFI) balanced index is the European equivalent of the ODCE index in the U.S., reflecting open-ended, pan-European core investment vehicles.

Climate Risk Analysis Moves into Investment Processes

The real estate industry initially responded to climate change by finding ways to reduce a property's greenhouse gas emissions. Beginning in the 1990s, a range of new "green" technologies has been implemented—from innovative construction materials and techniques to novel approaches to measuring (and certifying) energy efficiency. The motivations for these transformations are diverse and overlapping. They include altruistic concern for the environment, reputational positioning or marketing, and the pursuit of a green premium for rents or asset prices.¹

More recently, the industry has also become attuned to real estate's own physical vulnerabilities to climate change. This has been accelerated by the increased frequency and severity of natural events, such as tropical cyclones, floods, wildfires, and droughts, which have damaged or destroyed properties. Risk scores that capture a property's potential for flooding and other weather-related challenges have made their way into investors' underwriting reports alongside the usual financial ratios and market data.

The motivation for considering climate factors in property assessments is, at its core, about risk and return. Of course, it remains critically important to reduce greenhouse gas emissions for the future of humanity and our planet. But even if we were able to instantly transform our economy into a zero-carbon one, the emissions already released mean that global temperatures would continue to rise for some time. Investors need to know how their assets will fare in a warmer world that is prone to extreme weather.

The awareness of climate change and the availability of climate risk assessment data have both risen significantly over the past few years. The next stage is to fully embed this knowledge into the investment process. In our view, reaching this next step requires unpacking and digging deeper into the two widely-recognized components of climate risk: physical risk and transition risk.² We believe that investors who think of these concepts too narrowly are at risk of making poor investment decisions.

At LaSalle, we are undertaking several projects as we integrate physical and transition climate risk into our processes:

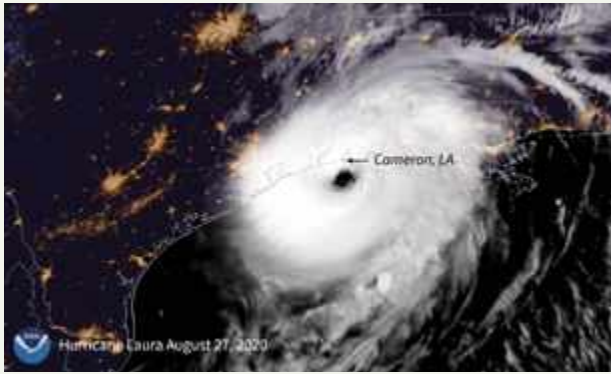
- Translating scoring metrics into measurable risks to capital:** To assess physical risk, investors and managers have sought the expertise of data providers³ that can provide climate risk evaluations for a specified location. Scores across risk dimensions, such as flooding, sea level rise, heat stress, and cyclones, allow us to get a sense of risk relativities among locations and portfolios.

The inclusion of risk scores in a due diligence report is important. To ascribe financial measures (or basis points of return) in an asset's underwriting is the necessary next step. We implement a value at risk (VaR) approach when we evaluate climate risk. The VaR measure, part of the classic financial risk management analytic toolkit, estimates how much an investor might lose, with a given probability and during a set period of time. Thinking of climate risk in this way allows for a direct comparison of potential losses from climate-related events to those from other potential sources, such as a cyclical economic downturn.
- Considering physical risk on multiple geographic scales:** The core output of most climate risk analytics platforms is an evaluation of specific locations; indeed, providers issue competing claims as to the level of detail in the geographic scale they use in their analyses. Spatial granularity at the land parcel level is great for estimating prospective capex needs and insurance pricing, but it may miss the forest for the trees. For example, a site that is not expected to be particularly flood-prone is nevertheless at risk if it is served by infrastructure, such as roads and electrical supply, which could be rendered unusable by flooding.
- Factoring in mitigation measures:** An evaluation of climate risk should also consider resilience-driven investments made at either the asset or a broader level that might include improvements undetected by climate risk providers. For example, a property might benefit from significant "hardening" improvements, such as moving critical building systems out of basement areas in flood-prone areas. Similarly, government investments in larger-scale infrastructure, such as sea walls, will render some areas less vulnerable, yet climate data vendors vary in the extent to which they incorporate these differences.

1 LaSalle has written extensively about the issue of green premiums, beginning with a white paper titled [Environmental Factors & Real Estate Demand: Secular Drivers of Real Estate in June 2017](#).

2 Physical risk refers to the chronic and acute impacts of climate change that may lead to physical damage or disruption to an asset or site. Transition risk covers the broader societal, economic, and political implications from climate change as the economy adapts to a warmer world. The introduction of a new local building energy regulation, and cost of compliance, are examples of transition risk.

3 Leading providers serving the real estate industry include The Climate Service, Four Twenty Seven (now part of Moody's), Carbon Delta (now part of MSCI), and Jupiter Intelligence.



Hurricane Laura made landfall in southwestern Louisiana on August 27, 2020. Photo credit: NOAA.

- **Identifying “E” feedback loops in “DTU” trends:**

Our DTU+E framework⁴ is the basis for our evaluation of longer-term trends and their impact on real estate. These factors do not exist in isolation, as changes that fall under one can have potential effects on the others. Consideration of transition risks must be broadened to consider potential feedback of E-factors into the DTU drivers of secular change. In particular, investors should consider the broader economic and societal aspects of climate change, avoiding a narrow focus on physical damage. For example, chronic flooding or heat stress can influence migratory patterns, driving growth and shrinkage at the metro area or country level.⁵

- **Collaborate closely with partners in the insurance industry.** Not too long ago, many investors looked to insurance as their silver bullet for covering physical climate risk. But they have become increasingly aware that insurance is traditionally provided on shorter horizons than most investment holding periods, and that coverage may increase in cost or simply become unavailable as physical climate risk accelerates. We are working with our insurance providers to understand how they are using climate risk modeling and over what time horizon they are doing this analysis. By understanding their approach, we may be able to better predict the path of insurance costs and where coverage may actually cease altogether.

- **Adopting carbon reduction initiatives to manage transition risk:** In Europe, LaSalle has signed the Better Buildings Partnership Climate Change Commitment to deliver net zero-carbon (NZC) buildings, both for whole building operational carbon and embodied carbon,⁶ by 2050. We recently published our European pathway to NZC, which sets out the tasks that will allow us to embed NZC into each stage of the asset life cycle.⁷ And at the global level, in late October LaSalle aligned with the Urban Land Institute’s Greenprint Center for Building

Performance’s 2050 NZC goal to reduce the landlord-controlled operational carbon emissions of its global portfolio of managed assets to net zero.

NZC offers the dual benefits of reducing a property’s greenhouse gas emissions and mitigating regulatory risks. There is considerable potential for climate-related regulatory changes—from real estate-specific energy standards to generalized carbon taxes—and it is best to prepare for potential changes rather than having to react to them. It is not a coincidence that LaSalle’s NZC initiative was launched first in Europe, where climate-related regulations are already entrenched. However, new initiatives are spreading across the globe. In late 2020, Japan’s Yoshihide Suga and Canada’s Justin Trudeau committed to making their countries carbon neutral by 2050, and we expect similar moves by the Biden administration in the U.S. Climate-related regulations and incentives for a raft of sectors, including property, are likely to follow.

PRICING CLIMATE RISK: SEEKING A STRATEGIC ADVANTAGE

Typically, market participants lack a consistent approach to evaluating climate risk, which may lead to a range of potential investment opportunities. We believe that taking advantage of the relative pricing of green versus non-green buildings can be a channel for value creation.⁸ In the case of climate risk, sizing and pricing physical and transition risks with appropriate rigor and nuance will also be a contributor to risk-adjusted performance. Just as investors differentiate themselves by weighing trade-offs between, for example, tenant credit quality and yield; or by calibrating refurbishment capex to maximize ROI, they will need to consider physical and climate risks as an integral part of every business plan. ■

4 In 2012, we introduced the DTU (demographics, technology, and urbanization) secular investment trends that impact real estate markets, adding an “E” (environmental factors) component in 2017.

5 As a thought experiment, consider a parcel on the highest and driest ground in a hurricane-prone urban region. If successive storm events discourage migration and investment in that area, economic growth—and therefore occupier demand—could falter over the long term even if the property itself remains intact.

6 Operational carbon concerns the regular energy consumption of an operational asset. Embodied carbon is emitted during the construction of the building and the manufacturing of the raw materials that make it up. It is thought that embodied carbon makes up at least a third of a building’s total carbon footprint over its life, but it is far more difficult to measure than operational carbon.

7 These range from better understanding the operational performance of new acquisitions and the capex required to bring it in line with our decarbonization trajectory, through to the embodied carbon targets we will aim for in our development and refurbishment projects.

8 Note that there are broadly two possible ways to design actionable investment strategies around the pricing of green buildings: 1) when the spread between the “fair” and observed green premium is large, earn the premium by converting a non-green building into one with suitably green characteristics; and 2) when the yield differential between non-green and green is negligible, invest in assets already meeting green criteria.