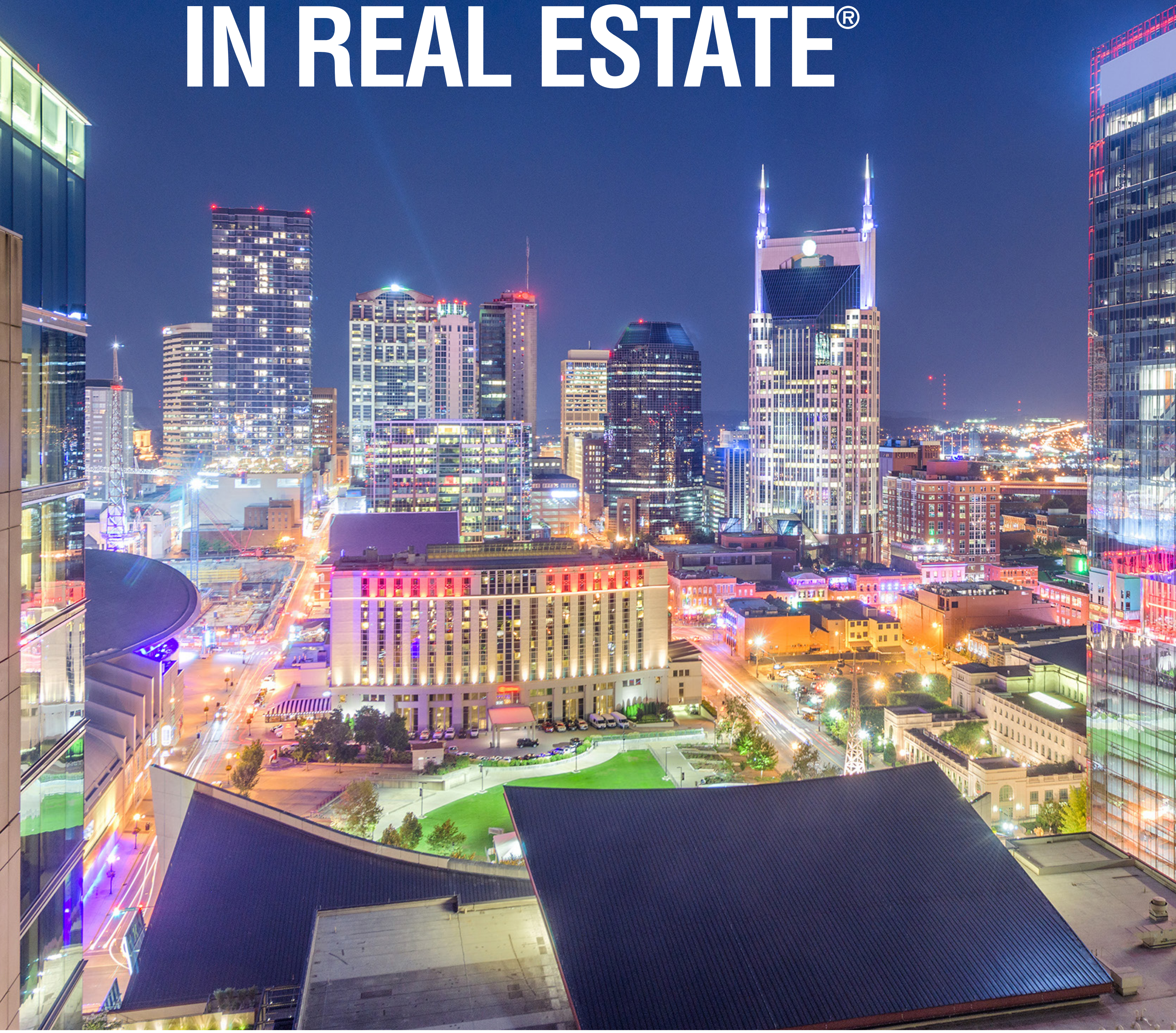
2022 EMERGING TRENDS IN REAL ESTATE®

United States | Canada



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Rooftop view of downtown Nashville, Tennessee, at dusk.

(Sean Pavone)

Emerging Trends in Real Estate®

2022

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Emerging Trends in Real Estate® is a trends and forecast publication now in its 43rd edition, and is one of the most highly regarded and widely read forecast reports in the real estate industry. *Emerging Trends in Real Estate® 2022*, undertaken jointly by PwC and the Urban Land Institute, provides an outlook on real estate investment and development trends, real estate finance and capital markets, property sectors, metropolitan areas, and other real estate issues throughout the United States and Canada.

Emerging Trends in Real Estate® 2022 reflects the views of individuals who completed a survey or were interviewed as part of the research process for this report. The views expressed herein, including all comments appearing as quotes, are obtained exclusively from these surveys and interviews and do not express the opinions of either PwC or ULI. Interviewees and survey participants represent a wide range of industry experts, including investors, fund managers, developers, property companies, lenders, brokers, advisers, and consultants. ULI and PwC researchers personally interviewed about 930 individuals, and survey responses were received from about 1,200 individuals, whose company affiliations are broken down below:

Private property owner or commercial/multifamily real estate developer:	35%
Real estate advisory, service firm, or asset manager:	22%
Private equity real estate investor:	8%
Bank or other lender:	7%
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Construction/construction services/architecture firm:	7%
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Other entity:	2%

Throughout this publication, the views of interviewees and survey respondents have been presented as direct quotes from the participant without name-specific attribution to any particular participant. A list of the interview participants in this year's study who chose to be identified appears at the end of this report, but it should be noted that all interviewees are given the option to remain anonymous regarding their participation. In several cases, quotes contained herein were obtained from interviewees who are not listed at the back of this report. Readers are cautioned not to attempt to attribute any quote to a specific individual or company.

To all who helped, ULI and PwC extend sincere thanks for sharing valuable time and expertise. Without the involvement of these many individuals, this report truly would not have been possible.

Surprising Resilience, Booming Economy, Worrying Risks

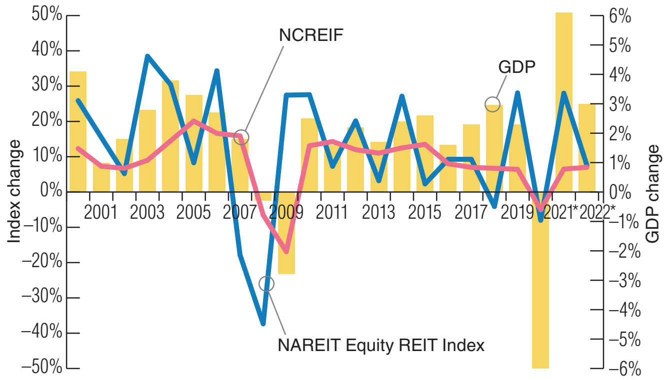
"Both the economy and the real estate markets have held up better than I would have thought. I would have honestly expected the fallout to have been worse."

The months since the pandemic hit in March 2020 have presented the property sector with an unending series of unprecedented challenges and enormous, rapid shifts. What do they portend for the industry going forward? The theme that emerged more than any other during the *Emerging Trends* interviews with industry leaders was the surprising resilience of the economy and of property markets generally, inspiring greater confidence in the industry's collective capacity to adapt to changing market conditions and future unknown risks.

Facing a devastating medical crisis of unknown dimensions, the economy sustained epic losses of output and jobs as the United States promptly shut down at the beginning of the pandemic. But confounding initial expectations of a protracted recession and then recovery spanning several years, the economy began to bounce back almost as quickly as it shut down. The recession ended up lasting only two months—the shortest on record—according to the official arbiters of business cycles. Economic output is already back above pre-COVID levels, and jobs may recover to previous levels by early 2022.

It would be vastly overstating the situation to say that property markets pivoted without skipping a beat. The firms and workers on the front lines had to overcome daunting hurdles just to keep doing business. Nearly every property sector was forced into urgent changes, though probably none more so than the retail sector. Retailers immediately had to scale up their home delivery and curbside pickup services while overhauling their supply chains to meet shifting consumer demand and overcome severe shortages. Working from home forced many people to adapt their own living spaces on the fly. This flexibility is a key *Emerging Trends* theme this year.

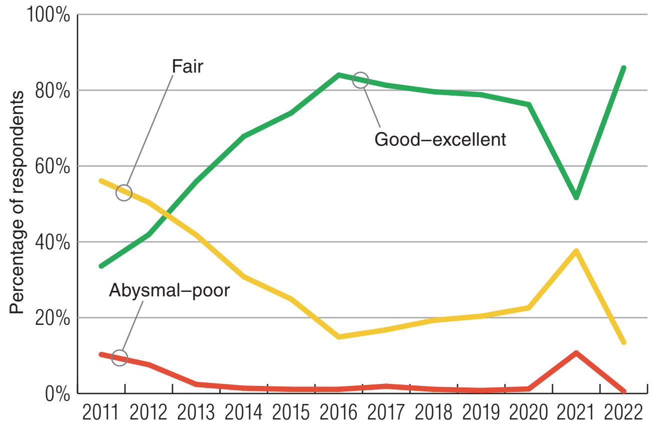
Exhibit 1-1 **U.S. Real Estate Returns and Economic Growth**



Sources: NCREIF, NAREIT, Bureau of Economic Analysis/U.S. Department of Commerce, PwC Investor Survey.

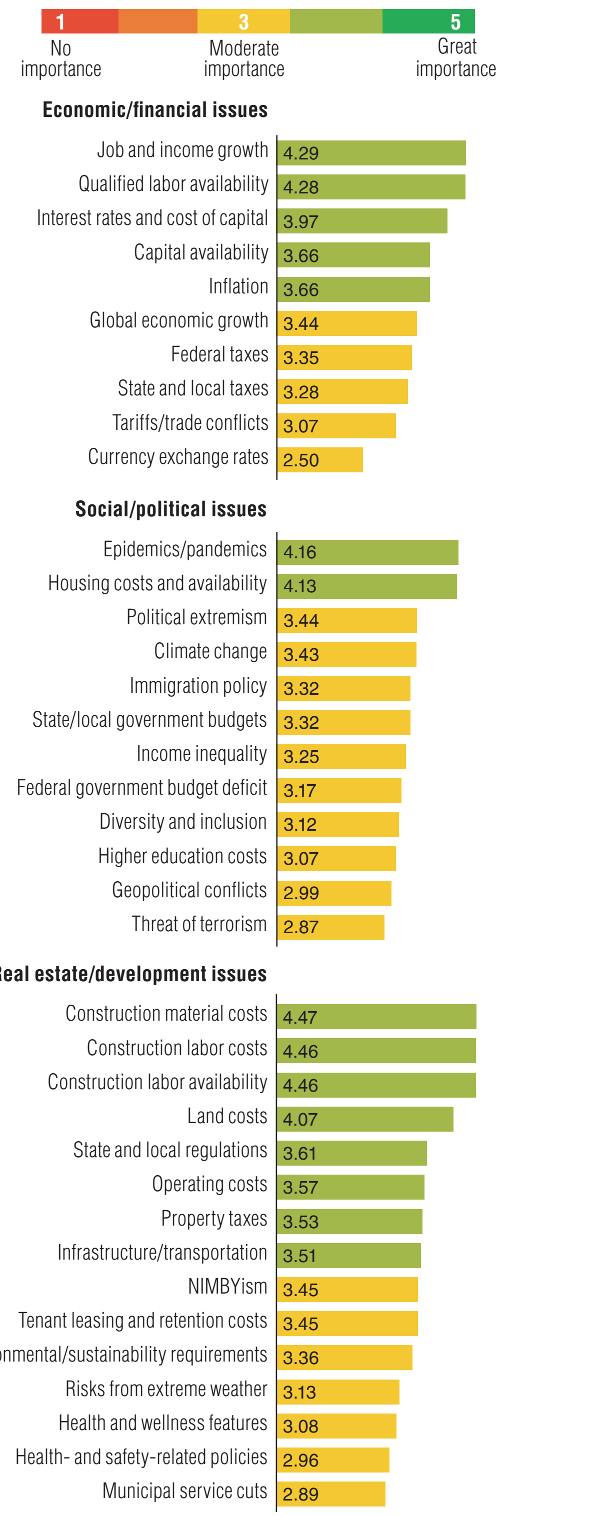
*NCREIF/NAREIT and GDP projections for 2021 and 2022 are based on the PwC Investor Survey.

Exhibit 1-2 **Firm Profitability Prospects for 2022**



Source: *Emerging Trends in Real Estate* surveys.

Exhibit 1-3 **Importance of Issues for Real Estate in 2022**



Source: *Emerging Trends in Real Estate 2022* survey.

A Brief and Muted Real Estate Downturn

Almost more remarkable than the speed and extent of adaptation was the pandemic's relatively muted impact on property market fundamentals. To be sure, occupancy rates and rents inevitably fell—with the conspicuous exception of industrial space, which experienced rising demand to meet the surge in online shopping—but the declines in most markets were much less than typical for even modest recessions.

One reason: tenants generally did not believe that the downturn would last very long, and firms did not want to give up valuable space, especially offices, if they would only need to reoccupy that space. The calculus undoubtedly changed for many firms as the "return to the office" kept getting delayed, and some ultimately gave up their space. But most tenants continued to pay their rent and some even renewed their leases. One industry leader interviewed, reflecting on her thought process for her own firm, said, "What is my business going to be like when we do go back? I want my space. So, you keep up with your payments."

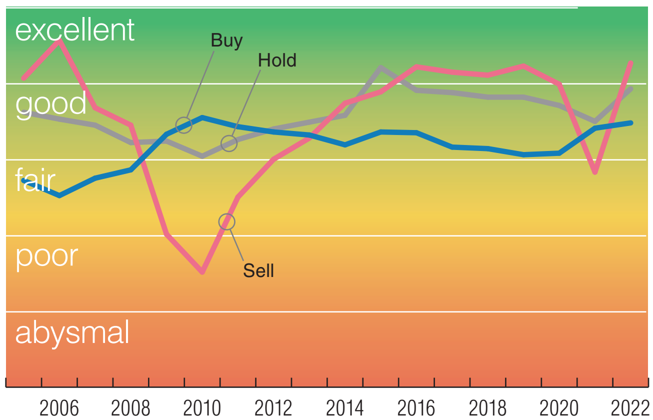
Sales transactions also fell—though again, not nearly as much as during previous recessions—while pricing mostly held firm. With low debt levels and relatively stable cash flows, borrowers continued to pay their mortgages, and distressed sales were few—to the shock and disappointment of many opportunistic investors looking for a deal. For one industry economist, the biggest surprise was that "the distress is maybe 20 percent of what we expected." Indeed, both domestic and offshore investors remain exceptionally interested in U.S. property markets, a key trend highlighted in the capital markets discussion.

But by far the most crucial factor for the relative stability of property markets during the pandemic was the unusually generous level of support from all levels of government, far exceeding expectations. The federal largess alone ultimately totaled $6 trillion in stimulus and other forms of federal government spending. Payments to families through stimulus checks and supplemental unemployment payments maintained personal incomes and kept consumers spending. Households also benefited from mortgage forbearance and rent relief programs, though at much pain to retail and apartment landlords and to mortgage holders.

The Optimists Were Mostly Right: A V-Shaped—and K-Shaped—Recovery

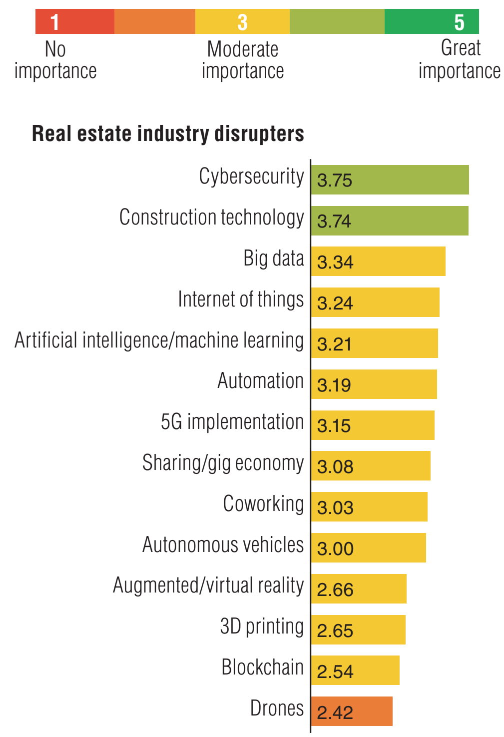
The economic outlook certainly looked much better in mid-2021 than could reasonably have been hoped for a year earlier—way, way better. Not only has economic output already recovered to pre-COVID levels, but growth is forecast to be at its highest rate in decades during 2021 and 2022. Again, much of the credit

Exhibit 1-4 **Emerging Trends Barometer 2022**



Source: *Emerging Trends in Real Estate* surveys.
Note: Based on U.S. respondents only.

Exhibit 1-5 **Importance of Disrupters for Real Estate in 2022**



Source: *Emerging Trends in Real Estate 2022* survey.

must go to continuing accommodative fiscal and monetary policies, including the 2021 federal infrastructure program and the Fed's "low forever" interest rates. Moreover, consumers managed to save much of their stimulus receipts, leaving households in solid financial shape. Meanwhile, enforced hibernation has left everyone aching for external stimulation and looking for ways to spend their savings.

At the same time, the economy faces enormous downside risks and uncertainty, particularly in the form of new waves of COVID infections—and most especially if those infections are more transmissible like the Delta variant or more lethal. The danger here is less of new government restrictions than consumer fears and thus pullback from economic activities as infections spike. What started early this past summer as promise that the world would finally return to some form of normal ended with disappointment as COVID cases surged in July. Organizers started to cancel mass events (like Jazz Fest in New Orleans and the New York Auto Show), people scrapped travel plans, and major employers delayed their returns to the office. Perhaps most telling: shoppers started to stock up on pandemic-related items like disinfectant sprays and cold medicine while delivery services were seeing increased demand. These trends, if they continue, would have a cumulative negative impact on growth.

And perhaps the biggest unknown of all: will the government keep spending to compensate for weakness elsewhere? Can it? "That's the $64 trillion question," jested one academic. Asked a capital provider: "What happens when we take away the punch bowl?"

And it must be emphasized that no matter how great the hunger for a return to normalcy, the reality is that much remains decidedly abnormal. As of early fall 2021, most office workers are still working remotely most of the time. Surveys still show that a sizable and growing share of the population is unwilling to undertake previously normal activities like dining inside restaurants, catching a movie at a theater, or attending a concert.

Despite the overall recovery, not all is well throughout the land. Most notably, some economic sectors have recovered much more than others. Labor markets have shifted in meaningful ways, with many workers dropping out of the labor force and others changing industries. Bottlenecks remain throughout the supply chain. The labor and product shortages are leading to the most serious inflation in a generation—a key economic risk, though a possible benefit to property owners, as discussed in the capital markets trend.

Moreover, despite the broad recovery, not everyone could adapt quickly enough or just hold on long enough during the pandemic. This is a theme addressed in the divergence trend. In an apt demonstration of the weak getting weaker while the strong get stronger, many stores and small businesses were shuttered permanently, though perhaps fewer than initially feared, even as leading malls and luxury retailers report record sales. Similarly, many small residential landlords were forced into bankruptcy when their tenants stopped paying rent, while institutional residential landlords are reaping surging revenue. However, direct assistance to businesses—especially small businesses—helped mitigate the worst impacts of the recession.

The More Things Change . . .

After the dislocations and a black-swan event, and after all the changes to business strategies and worker lifestyle choices, it is astonishing that the property sector ultimately ended up looking much like it did before the pandemic. But the simplicity of that conclusion masks some genuine and fundamental shifts. Despite overall resilience, some sectors and markets have experienced existential changes, leaving many assets obsolete and needing to be repurposed—a theme returned to again and again in these pages.

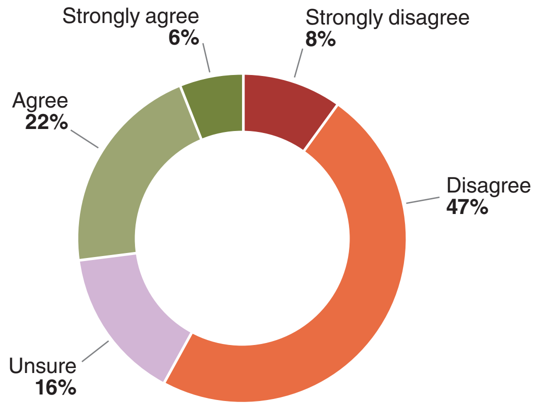
1. Flexibility and Convenience Drive the Next Decade

- By forcing people to work and live differently, the pandemic revealed hitherto unknown reservoirs of flexibility in how the property sectors could function—and changed expectations of how people will use properties in the future.
- A renewed emphasis on work/life balance and the importance of convenience and productivity in how people manage time will require physical changes to properties to better align with how they will be used, especially in accommodating increased working and shopping from home.

When the first true pandemic in a century upended life as we know it in spring 2020, people were forced to find new ways to do just about everything: how to work, how to shop, how to socialize, how to educate their children. How to live. And they needed to change almost overnight.

Since almost everything we do (outside of our minds) takes place in physical space, the way people use different types of property and the ways properties function had to adapt as well. Homes suddenly became the center of all activities in both people's personal and professional lives. Working and shopping from home existed well before the pandemic, but each has expanded significantly, and neither will revert fully back to previous levels. In accelerating these trends, "2030 arrived early," as one developer put it.

Exhibit 1-6 **Changes implemented as a result of COVID-19 will revert to pre-pandemic activity in 2022**



Source: *Emerging Trends in Real Estate 2022* survey.

Flexible Work

Working from home/working from anywhere (WFH/WFA) was relatively rare for most workers before COVID-19 but soared during the initial lockdown—for those who were still employed—since only "essential" workers continued to go to a workplace. As the economy has reopened, it has been primarily white-collar professionals who have had the luxury of working remotely. But having tasted the flexibility and convenience of WFH, workers will not be eager to relinquish these benefits. Said the chief executive officer of one investment firm: "When push came to shove, our employees largely chose to stay home even though they had asked for the office to be open. It came down to them making a value call each morning."

But at a cost. Remote working often means converting scarce space at home to provide a functional workspace—at the worker's expense. This arrangement imposes costs on employers as well. Firms needed to upgrade their infrastructure to accommodate remote working while also raising their facilities' health and safety standards in anticipation of a future reopening. If firms ultimately reduce their workplace footprint, as many experts anticipate, will they share some of their savings with their remote workers to compensate them for use of their homes? Will they end up paying employees less who choose to work remotely in lower-cost regions?

Flexible Shopping

Changes in how people shop and the impacts on the retail sector have been no less significant. Much ink has been spilled in these pages over the years documenting and explaining heightened focus on flexibility and convenience—trends that began well before the pandemic, of course. But growing consumer comfort with shopping online—first at home or the office with computer-based e-commerce, then increasingly with phone-based mobile shopping—provided the foundation for the dramatic increase in the scale and scope of online shopping during the pandemic. A national retail space broker commented that "the pandemic pulled forward the adoption of online shopping for goods that had seen lower levels of e-commerce penetration, like groceries."

Not all this new e-commerce was captured by digitally native brands like Amazon. Not nearly. Retailers stepped up and demonstrated perhaps even more flexibility than consumers in pivoting to dramatically expand their e-commerce capabilities. Major retail chains scaled up their online divisions while smaller retailers established delivery services or turned to third-party platforms for transactions and delivery. Even "in-store" sales looked different as retailers and eateries moved their operations outside. The entire retail ecosystem adapted.

The changes are not over yet. Retailers will need to continue to adapt to meet consumers where they want to be. The major chains are investing heavily to upgrade all aspects of their e-commerce infrastructure, from the way products are merchandised on their websites to how items are delivered to customers. Reiterating what is now a recurrent retailing theme, one shopping center owner said, "The customer wants it to be a seamless experience from the store to the online."

Shopping centers need to keep changing, too. Temporary outdoor dining will become a permanent feature. And people are going to continue picking up groceries and other items they purchase online, so retail centers need to provide more space for pickup. According to one consultant, "Retail stores, as they're configured today, aren't great for fulfillment. They need to be reconfigured."

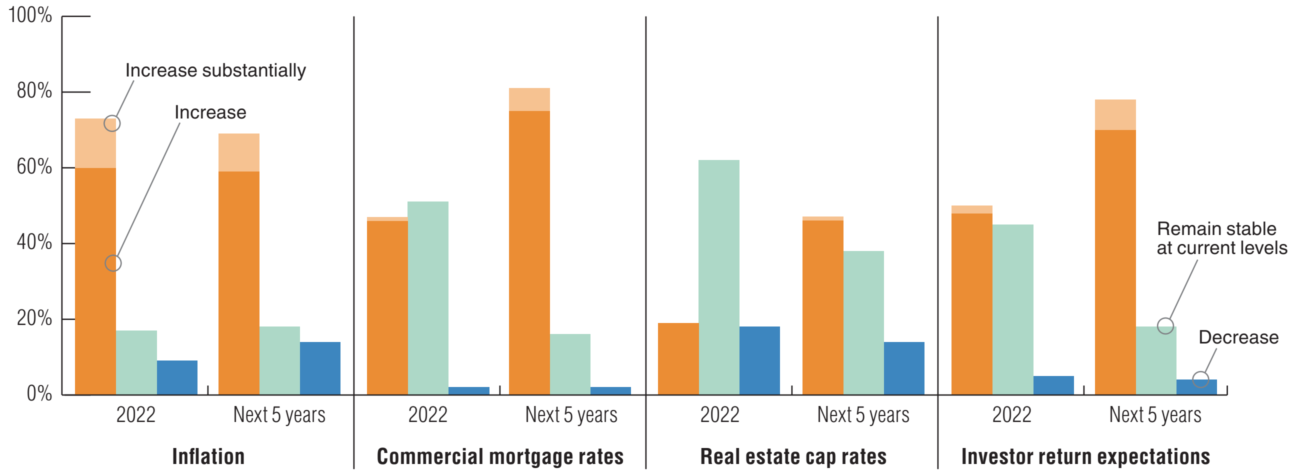
The retail sector may never be the same.

Flexible Home

Residential adaptations are going much further than just a home-based workspace and center for shopping. Homes also have become the schoolhouse, gym, and entertainment center. These multiple uses often conflict with one another—and put a lot more demands on the humble residence.

Initially families just made do, carving out space as they could. But as the weeks at home have dragged into months, and then more months, people are starting to undertake more ambitious improvements. If people were going to spend all this time at home, they might as well make it more comfortable and attractive. Aside from grocery stores—which boomed as restaurants closed and people began to prepare almost all their meals at home—no retail category saw more increased business than home improvement stores. Households are improving their gardens, installing new entertainment centers, and converting closets and dead space into home offices.

Exhibit 1-7 **Anticipated Changes in Commercial Mortgage Rates, Inflation, Cap Rates, and Expected Returns, Next Five Years**



Source: *Emerging Trends in Real Estate 2022* survey.
Note: Based on U.S. respondents only.

Over the longer term, the changes will be more significant. Although the mainstream press may have overstated the extent of migrations from dense central business districts (CBDs) to more suburban areas, there is no doubt that the pandemic accelerated patterns that began well before COVID. Freed of the requirement to come into the office every day, many households are willing to live farther from downtown office nodes, as discussed in the migration trend. A recent Zillow study of housing transactions found that the commute length is declining in importance: home prices are rising faster in communities with longer commutes than in closer-in neighborhoods.

With lower home costs in these more distant locations, buyers can afford larger homes that can better accommodate all the new functional demands in the post-COVID WFH world. And for households already in the suburbs, many will add extensions onto their homes or build out underused spaces. Noted one housing economist, "If the buyer is able to, increase the bed count. If you can't, the solution is to find the dead space [to convert]." The Leading Indicator of Remodeling Activity, prepared by the Joint Center for Housing Studies (JCHS) at Harvard University, projects that home renovation and repair expenditures will grow 8.6 percent by the second quarter of 2022 from a year earlier. Much of this spending likely will be for home modifications, though a specific forecast for this activity is not available. The JCHS's annual *Improving America's Housing* report noted that "in 2020, spending on home improvements and repairs grew more than 3 percent . . . as people modified living spaces for work, school, and leisure in response to the COVID-19 pandemic."

Flexible Health Care

Medical real estate also experienced what is likely to be enduring changes. Paradoxically, the use of medical facilities actually declined during the pandemic because hospitals canceled elective procedures and patients deferred nonurgent medical care. But as the lockdowns eased and people sought out medical appointments again, online consultations rose dramatically.

Telemedicine had been lightly used before the pandemic, mostly in rural areas far from medical facilities or for patients with mobility issues. As with other pandemic-related property shifts, the pendulum will certainly swing back, as evidenced by the rapid increase in office consultations once patients felt safe to visit. But there seems little doubt that the economics and convenience of telemedicine for patients and physicians alike ensure that this trend will remain elevated relative to pre-COVID levels.

Will that prompt a significant reduction in medical office space? Not likely, "because they still have to have the nurse in a room seeing the patient; they still have to have follow-up care for that patient that they have come back in," one medical real estate expert said. Telemedicine can also be used to reduce overcrowding in waiting rooms, but not at the expense of overall space leased.

But this sector is likely to ultimately see a rise in leasing of more localized alternatives to hospitals and large medical complexes. Following the increase in working from home, more people will want the convenience of having at least some of their medical appointments closer to home rather than near the office. And providers appreciate that the occupancy costs of these smaller, neighborhood-based clinics will be more affordable than downtown medical facilities, providing additional incentives for use of these satellite offices.

Future Needs, Future Changes

The pandemic demonstrated the incredible resourcefulness and adaptability of the property sector to meet rapidly evolving space needs. As people recover from the pandemic and revert to some form of normalcy—which everyone hopes will be soon—the "new normal" will encompass new ways of working, shopping, and living. These changes in how people conduct their everyday lives will require properties to adapt, along with their users, to better align with how they will be used.

2. Work Anywhere: An Office Reset

- Office buildings have long been the bedrock of commercial real estate portfolios. But COVID-19 has dented that hegemony as remote working becomes a permanent option for millions of office workers.

- A broad range of industry perspectives exists about how WFH will affect office demand, but under almost any conceivable scenario, firms will be leasing less space in the future. New hires and added space required for social distancing are unlikely to fill the resulting vacancies.

- Offices in pricy central business districts are likely to experience greater hits to demand than their suburban counterparts in part because their tenants typically have a higher share of occupations most amenable to remote working.

- Increased tenant focus on healthy buildings is accelerating the obsolescence of older buildings with outdated ventilation systems and floor layouts. Demand for this product will decline among tenants and investors alike as a "flight to quality" draws tenants to newer construction.

Every property sector was affected by COVID-19. As is highlighted in this report, the multifamily and industrial property sectors both gained during the pandemic and have maintained strong momentum through the recovery; hotels were crushed during the lockdown and initial travel restrictions but are rebounding quickly, at least for leisure travel; and the pandemic reinforced shopping trends that benefited online and convenience retailing while further weakening midpriced retailers and traditional malls.

But for all that—the many challenges imposed by the pandemic and the many adaptations required of landlords and tenants—commercial property markets have emerged largely as they entered the pandemic. Market fundamentals may have improved or faltered in each sector, and some trends accelerated, but the essential market dynamics remain much the same as before.

Except in the office sector. Unique among the major property sectors, the office sector seems to have forever changed in ways that would have been inconceivable before COVID. Firms in traditionally office-based sectors like professional services and finance are rethinking their space needs within an entirely new framework: Which workers need to come in and how often? In what type of space, and in which locations? What was once a given is now being reset.

These issues are not entirely new. Corporate real estate managers have long focused on these very decisions. Firms have been experimenting with hot-desking—a "musical chairs" approach to office planning in which firms maintain fewer desks than employees as a means of reducing idle space and occupancy costs. The difference now is the range of firms seriously considering permanent remote working arrangements, as well as the scope and scale of workers participating.

Fortunately for the office sector, the economy is roaring back at its strongest rate in decades, and office-type employment gains should be solid into 2022. Historically, office demand has closely correlated with growth in "desk jobs"—the knowledge-based occupations whose work is most likely to take place in an office setting. That growth will fill a lot of empty office space and fuel demand in the years ahead.

But not as much as before, even if social-distancing requirements increase the amount of space allocated per desk. Most firms want their employees back in the office, at least most of the time. But the great WFH experiment has been too successful for people to return to the way they worked—and commuted—before the pandemic. Firms have been pleasantly surprised at how productive their people can be when working remotely, and workers have gotten too used to working from home.

The Likelihood (and Uncertainty) of Remote Working

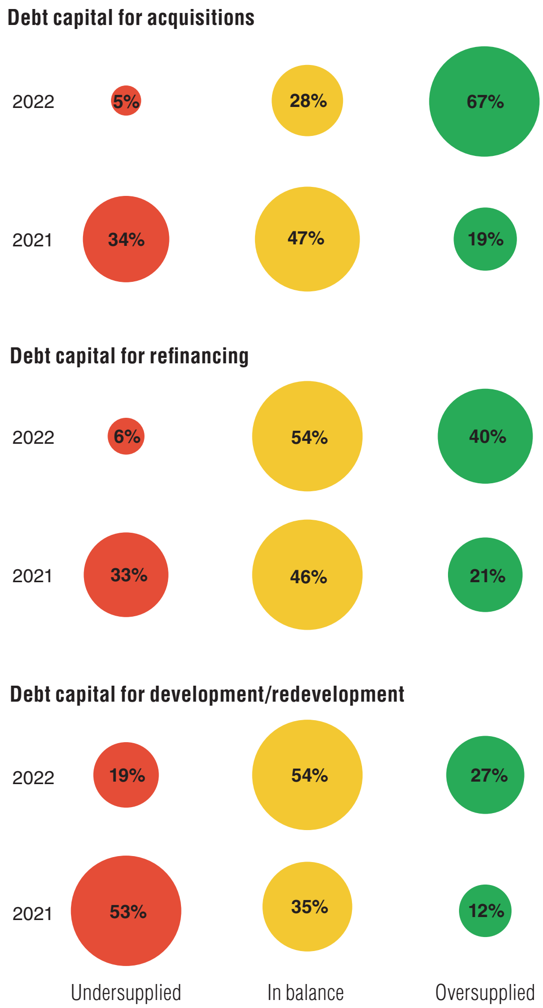
If there seems to be general agreement at least that people will not go back to the old ways, the extent of remote working in the years ahead and its impact on office leasing is much less certain. Perhaps no issue elicited a broader range of perspectives during our interviews than the outlook for office demand. One reason is that the process is still evolving, and firms are figuring out what works and what they need. But the uncertainly also reflects the inherent challenge of gazing into a future that will be so different from the past.

There are myriad reasons that firms would normally have people working together in an office. As stated by one capital provider, "People can't advance the shared consciousness and the culture of their firms without people physically in the office, and people can't grow their careers without physically being around people in their office." The chief investment officer at a national real estate investment company added, "Companies will try hybrid models, but everyone will eventually be back in the office. It is just too efficient to have everyone in one place."

Taking the opposite view, however, the managing partner of a value-add investment firm stated, "Hybrid work is here to stay. It just makes too much sense from a flexibility standpoint." Moreover, many firms see financial benefits in remote working. For one thing, they can save on occupancy costs—typically the second-largest operating expense for office firms after payroll. In addition, firms invested in the infrastructure to support remote working during the pandemic, and early studies show workers can be more productive in their hybrid work environment.

In any case, the answer will not be the same for all firms. According to one senior office broker, "The vast majority of people believe that the ultimate result of this experience will be a hybrid work environment—in different forms depending upon the companies, but also dependent upon the functions that people perform within their companies." Occupations and sectors that are more analytical, like tech and consulting, had the easiest transition to remote working and are likely to see the lowest share of workers returning to the office full time. On the other hand, in "relationship-based businesses [like investment banking], there is absolutely a trend in business leaders to encourage a return to the office for at least the bulk of the week," said the executive of a real estate analytics company.

Exhibit 1-8 **Real Estate Capital Market Balance Forecast, 2022 versus 2021**



Source: *Emerging Trends in Real Estate* surveys.
Note: Based on U.S. respondents only.

The Workers Will Weigh In, Too

But it is not only a management decision. Workers will also have a say in this, and many like their new WFH/WFA arrangements. Employees quickly learned to appreciate the flexibility and efficiency of working at home. Freed from a daily commute, they could reallocate that time to more productive uses while still leaving time for other activities. Little wonder then that at least a third of workers say they would sooner quit than return to their workplace full time, according to multiple surveys.

Generational differences are the subject of another raging debate in the office sector. A common assumption is that younger workers benefit most from in-person face time with superiors for networking and mentoring critical for career advancement. Being earlier in their careers, millennials are also less likely to have a private work area at home, whether because they are sharing a residence with a friend or raising a toddler in a small house.

But these younger workers are also "far more comfortable at connecting through technology," said an industry economist. Millennials and gen Z are also less enamored of conventional workplaces than their older baby-boomer colleagues, and surveys show them to be more interested in realizing a rewarding work/life balance.

What share of workers ultimately will work remotely some or all the time will vary by location and type of job, but the answer will depend partly on the relative bargaining power of firms and their employees. With many industries unable to hire needed workers and the ratio of job openings to unemployed workers at historic highs, the scales are tipping in favor of labor. Thus, the war for talent will cause firms to offer the flexibility and lifestyle choices increasingly valued by employees.

The Impact on Office Markets and Beyond

How will these WFH/WFA work arrangements affect office leasing? Overall, space demand will undoubtedly be lower than before. Still, as is emphasized in the office discussion in chapter 3, the decline will not match the reduction in the average daily worker occupancy in the workplace. Firms will need to provide enough space for remote workers to collaborate in person, at least occasionally. But under almost any conceivable scenario, firms will be leasing less space in the future than before.

Tenant preferences are also changing. Building on the bifurcation theme discussed below, our industry experts expect a "flight to quality." Tenants will leverage weak market conditions to trade up to newer buildings with superior ventilation systems, flexible floor plans, and modern amenities like touchless systems. These features will be essential for tenant safety and a vital tool for firms to attract talent and encourage workers to come into the office.

On the other hand, the nation has an extensive inventory of older buildings that would require costly upgrades to meet tenant requirements. As noted in chapter 3, more than a quarter of the U.S. office building stock, representing more than 4 billion square feet of space, is at least 60 years old. Renovations in many would be too expensive to merit the investment. These obsolete buildings might find more value as redevelopment sites or in being converted to other uses.

Continued migration from the most expensive CBDs and metro areas to more affordable, high-growth markets can also be expected—a trend very evident in our investor survey, as discussed in chapter 2. This trend preceded the pandemic but has gained momentum in the post-COVID recovery. Gateway markets like San Francisco, New York City, and Boston all saw sharp increases in vacant and sublet space and the steepest rent declines.

The issues are twofold, according to the economist of a residential listing service: "These markets tend to have local economies that are heavily skewed towards the knowledge sector and jobs that are remote-friendly. . . . At the same time, these are markets that are so expensive that even folks that are in these remote-friendly occupations—which generally are higher paid—in many of these markets, the housing costs have still kept homeownership out of reach."

Other sectors will be affected as well. Reduced foot traffic in office markets will decrease demand for ancillary services like restaurants and dry cleaners. People working from home will eat out lunch less often and wear fewer outfits requiring professional cleaning. Moreover, they may patronize businesses closer to home instead of the office, shifting the location of the demand.

A Reckoning

The muted outlook for tenant office demand and general uncertainty about the future of remote working has cast a pall on investor interest in office product. As noted in the capital markets trend, the office sector has seen the steepest drop in sales transactions of any sector relative to pre-pandemic volumes, consistent with its fifth-place ranking in the *Emerging Trends* survey among the six major product types.

The head of strategy for a major institutional investment firm said, "We are in a wait-and-see mode for office because there's three moving parts here that we've got to get our minds around." The unknowns are all large and fundamental: "What are the tenants going to do? What does the quality of the space need to look like? And then where are they going to want this space—in the CBDs or in the suburbs?"

So institutional investors are largely on the sidelines and looking to decrease their holdings of office assets, especially if it is not premium product. Said a senior investment banker: "If it's a newer quality, longer-term leased office product, built in the last 10 to 15 years and has quality long-term tenants, those are trading pretty similar to before. Where you see more challenges are the 30- to 40-year-old vintage product that has the classic 10 or 15 percent of space that rolls each year. That's where there's a real bid–ask spread." This divergence mirrors the split in tenant demand.

The waning interest in office assets represents a comedown for the sector and a conundrum for investors. Offices have long been the bedrock foundation for institutional investor portfolios. Offices are still the largest sector in the NCREIF Property Index, and CBD offices the single largest subsector measured by asset value. Investors historically prized their long-term stability as well as the large size of individual assets. CBD offices rank second to only superregional malls in terms of average asset size by market value. This bulk makes it relatively easy to deploy large sums of capital at once—but presents a daunting challenge for owners when selling because potential replacement assets are so much smaller, requiring multiple transactions and raising due diligence and other deal costs.

For now, investors are not rushing to dispose of even obsolete assets. Investors are being more "incremental and tactical," a leading pension fund adviser said, "following the data. I can see them eventually making significant changes and directional bets, but I don't see them leading that charge."

But it is clear that offices have lost their luster with investors and will account for a declining share of even institutional portfolios. The sector shares this fate with the beleaguered retail sector, which has similarly seen fading popularity as tenant demand declined, leading some to declare that "office is the new retail."

That's not quite fair to either sector, but there is some truth to the comparison. Both office and retail are experiencing diverging success trends within their sectors, with trophy office buildings and fortress malls commanding record pricing while inferior products become increasingly obsolete. In both cases, market forces on the fringe—WFH for offices, e-commerce for retail—have outsized impacts on the sector.

Investors will not be abandoning the sector altogether, however. The same investment manager who is cautious about acquiring existing offices is quite bullish on new construction. "It's an interesting time for office development because a lot of the offices out there are becoming increasingly functionally obsolete. So, I think there's going to be an opportunity for office development going forward."

3. Work Anywhere, Live Anywhere

- The dramatic rise in working from home prompted by the pandemic and lockdowns amounts to a significant break between work and the traditional workplace, providing workers greater—though generally not unlimited—flexibility in deciding where to reside.

- Workers are moving farther from their workplaces, some simply because they prefer a more suburban or rural environment and others so they can afford more space for a home office, a nursery, or whatever the new demands placed on the home. With housing demand climbing in these destination markets, home prices and rents are rising faster than in closer-in markets.

- These moves are likely to increase further as firms make hybrid and remote work a permanent option, reinforcing migration patterns that pre-date the pandemic and favoring less dense and (still) more affordable suburbs, especially in Sunbelt markets.

- This trend comes at a time when U.S. population growth has slowed to its lowest rate ever, magnifying the impact of intra- and interregional migration on property markets.

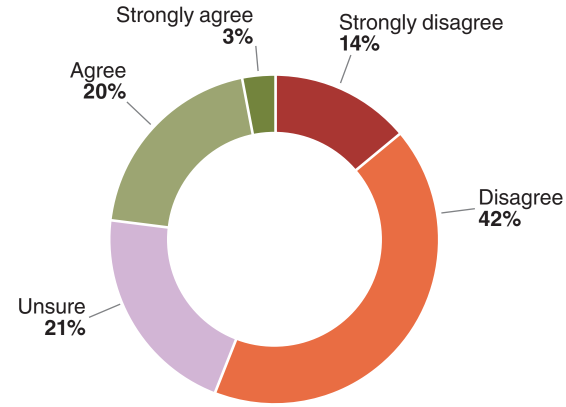
COVID-19 may have done more to stretch the connection between home and workplace than any single event in many generations. It was Cesare Marchetti, an Italian physicist, who postulated that people have long been willing to travel up to about a half hour to their workplace. People commuted first by walking and then progressively farther distances with each new generation of transportation technology—until congestion slowed them down and extended commute times.

Marchetti was right about Americans: the average commute in the United States was just under a half hour on the eve of the pandemic, rising during the past 50 years from about 22 minutes in 1980 to 27 minutes in 2019, according to the U.S. Census Bureau. Moreover, commute times are surprisingly consistent across regions, at least in the 50 largest metro areas representing more than half the nation's population. The longest average commute, claimed by New York City at 37 minutes, is only 12 minutes longer than the shortest average, in Deltona, Florida.

The Opportunity to Relocate

Those commute times may lengthen in the coming years. The dramatic escalation in the number and frequency of people working remotely during the pandemic looks to become permanent for a sizable share of the workforce. Freed from a daily commute, remote workers will enjoy a broader range of potential residential locations—with profound impacts on individual metro areas and property markets. Indeed, it would not overstate the case to say this issue may prove to be the most consequential factor driving change in property market dynamics over the coming years.

Exhibit 1-9 **There will be a trend away from high urban density**



Source: *Emerging Trends in Real Estate 2022* survey.

Before COVID, remote working was relatively rare. Just 5 percent of workdays were outside employer-provided workplaces before the pandemic, according to a study by the National Bureau of Economic Research, but the report authors project that the share of remote workdays will ultimately quadruple to 20 percent. That figure is for all workers; the WFH share will be even higher for office workers. Almost two-thirds of real estate professionals in the *Emerging Trends* survey believe that no more than 75 percent of office workers will come to the office three or more days a week in 2022.

Not Everyone Can Work from Home

Remote working soared during the initial COVID lockdown as only "essential" workers went to a workplace. But WFH has been limited mainly to college-educated office workers whose occupations are more conducive to remote working. A third of all workers "teleworked or worked at home for pay specifically because of the coronavirus pandemic," according to a Bureau of Labor Statistics (BLS) survey in June 2020. But there were sharp differences by educational level. Over half of workers with at least a bachelor's degree worked from home due to the pandemic, compared with less than 5 percent of workers with only a high school degree.

Inevitably fewer people are working from home as more workplaces have reopened, but the educational divide remains. In turn, this split reflects not just the nature of the work being done but the type of workplace. Most highly educated people normally work in an office setting. In contrast, those with only a high school degree are more likely to work in a factory, warehouse, or store—work difficult or impossible to do at home. Thus, remote workers are primarily desk workers who would normally work in an office.

And even in the absence of specific demographic data about these remote workers, it can be assumed that their incomes are well above average. According to the most recent BLS data, the median weekly earnings of workers with at least a college degree in 2020 were 67 percent higher than earnings of those with just a high school degree. Many office workers have an advanced degree, and their incomes, on average, are at least twice that of those with only a high school degree.

The higher incomes of remote workers help explain the sharp increase in migration rates among wealthier households during the pandemic. An Apartment List analysis of Census Bureau data found that households with incomes of at least $150,000 were the only income group that had significantly more moves in 2020 than in previous years. The Apartment List study also found that remote workers were far more likely to move during 2020 than were on-site workers, especially among upper-income households. In other words, WFH enabled or encouraged an increase in residential relocations during the pandemic by highly paid office workers.

The Great Relocation?

These migrations will almost certainly increase further as WFH/WFA liberates more households to move farther from their workplace. Thus far, the overall number of such moves has been relatively limited. Many workers likely were holding off on picking up stakes and relocating as they awaited callbacks to the office. But these moves can be expected to rise as firms again delay the return to work or formally make remote work a permanent option. “A significant share of the workforce is now going to have this geographic flexibility that they didn’t have before,” concluded one housing economist.

To be sure, relatively few workers are fully “untethered”—that is, working remotely full time and thus able to move wherever they desire, whether across town or across the country. Instead, most people will work in a hybrid WFH system, coming to the office two, three, or four times a week. These workers will thus have the flexibility to move farther from their workplace than before, though their need to still commute at least part of the week to a workplace will limit that distance for most people.

Most of these migrating households are moving to smaller, less expensive markets within the same metro area, reinforcing pre-COVID migration patterns. Many families are looking to stretch their housing payments in more affordable markets because they need a larger house that can accommodate a home office, a nursery, or whatever the new demands placed on the home. But many of the movers are highly paid office workers who can afford more expensive housing but are moving to more distant suburbs (or metro areas) simply because they can, now that they no longer need to commute as often.

This dynamic is already showing up in housing prices. As noted in the flexibility trend discussion, increasing demand is driving up home prices faster in markets with longer commutes to CBDs than in closer-in neighborhoods, demonstrating that people are willing to take on longer commutes than before—and pay for it.

And even if their numbers are relatively small, the impact of the untethered workers should not be discounted. Many of these “digital nomads” are highly compensated tech workers. Thus, “even a relatively small share of people [leaving San Francisco or New York City] is definitely going to impact the market,” said an economist with a residential listing service. “And if these folks are relocating to smaller markets, then you don’t really need as many of them to really disrupt the market.”

Demographic Stagnation

Any migration induced by increasing remote working will take place in the context of slowing population growth. Growth has been decelerating for several decades due to falling fertility rates as couples postpone starting families and then have fewer children. In addition, immigration has been slumping in recent years. The pandemic accentuated both of these trends, and also increased the mortality rate. In sum, the nation’s population grew just 0.35 percent in the year ended July 1, 2020—the slowest annual growth in the nation’s history—while half of all states lost population. Demographers fear the United States might actually lose population this year.

The prospect of zero population growth would be an unwelcome departure for U.S. property markets. How would new development be supported? Obsolete structures need to be replaced, of course, but then what? The era of remote working may provide the answer—accelerating migration trends toward smaller, more affordable Sun Belt markets.

A More Suburban Future

The gateway markets and downtowns will retain their appeal for a great many people, a theme explored further in an ensuing trend, “Retrofitting Cityscapes.” Cities are already snapping back to life as cultural offerings reopen. Said the head of an investment firm, "People didn't so much move out of the gateway markets during the past 15, 16 months as the young people that typically replace older people that are always moving out of those markets didn't move in. . . . I suspect there is pent-up demand from 18- to 30-year-olds to move into the cities."

At the same time, the pandemic has accelerated some existing trends that favor greater suburban growth and vitality. The permanent move to WFH—whether fully remote or hybrid working—is perhaps the trend with the greatest impact, enabling numerous workers, many of them affluent office workers, to consider a broader range of residential locations. For many of them, the choice will be more suburban than before.

4. Housing Crisis Redux

- Housing affordability worsened during the pandemic as the rise in both home prices and rents barely paused during the brief recession and then quickly accelerated as the economy reopened. Prices and rents are still climbing at some of the highest rates ever tracked, well ahead of relatively modest wage gains.
- Costs of both for-sale and rental housing are rising much faster in secondary and tertiary markets as people fleeing pricey gateway markets bid up residential prices in the smaller destination markets.
- With housing production falling far short of new household formations, affordability will continue to deteriorate absent significant private-sector and government intervention.

The problem of housing affordability takes its place as a top emerging trend, as it has for each of the past three years—which perhaps begs the question of how long an issue can continue to be defined as an "emerging" trend. Despite broad recognition of housing affordability, especially for lower- and moderate-income households, as a serious matter that the real estate industry must address, the problem manages to get ever worse.

Indeed, *Emerging Trends 2021* (written in 2020) concluded that the "affordable housing crisis [is] likely to explode without intervention." Government did intervene in housing markets throughout the pandemic—but in some ways that ultimately compounded the problems.

Highlighted by the Pandemic

COVID revealed the connection of shelter to health outcomes, as was explained in the ULI Terwilliger Center for Housing's *2021 Home Attainability Index*. Said one affordable housing developer interviewed for *Emerging Trends*, "Throughout the pandemic, we saw the fact that people who did not have stable housing really suffer disproportionately." This topic has significance beyond the morality of denying housing security for many Americans. Studies show that declining affordability inhibits migration and thus slows job growth because qualified workers cannot move to where the jobs are. Thus, the beneficiaries of improving housing affordability extend far beyond the immediate recipients by increasing overall economic growth and prosperity.

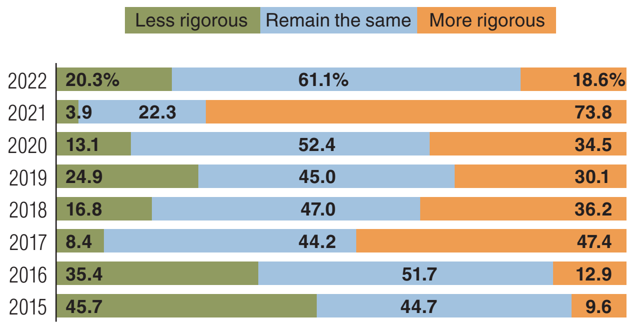
Confounding expectations and contrary to typical recessions, the pandemic recession did nothing to release steam from white-hot housing markets. After dipping briefly during the worst months of the initial pandemic and lockdown, home prices and rents both began to accelerate quickly and are still rising at some of the fastest rates ever tracked.

Once and for All, What Is the Problem?

To unpack that a bit, the affordability problem encompasses four related issues:

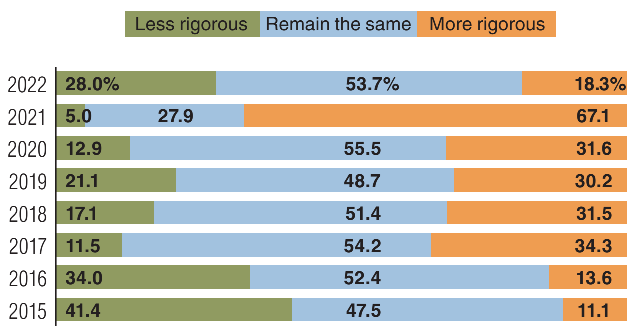
- Millions of potential homebuyers are priced out of the market because home prices are higher than they can afford in a large and growing number of markets, and prices continue to rise faster than wages.
- Even if they could afford the monthly payments, many other households—particularly younger ones seeking to purchase their first house—lack sufficient savings to make the downpayment needed to take out a mortgage. The challenge is especially acute for many households of color as the racial ownership gap has widened since the onset of the housing crisis and the Great Recession.
- With so many prospective homebuyers priced out of the for-sale market and thus continuing to rent, rents have soared to record levels and continue to increase faster than incomes. Thus, millions of moderate- and lower-income families are severely housing cost burdened, spending more than half of their income on housing.
- Costs of both for-sale and rental housing are rising much faster in secondary and tertiary markets in part in response to outmigration of people from pricier gateway markets in search of more affordable housing, bidding up residential prices in the smaller destination markets.

Exhibit 1-10 **Debt Underwriting Standards Forecast for the United States**



Source: *Emerging Trends in Real Estate* surveys.
Note: Based on U.S. respondents only.

Exhibit 1-11 **Equity Underwriting Standards Forecast for the United States**



Source: *Emerging Trends in Real Estate* surveys.
Note: Based on U.S. respondents only.

All these issues together have magnified the scourge of homelessness in America. The National Low Income Housing Coalition concluded that "more than 226,000 people in the U.S. experienced homelessness on sidewalks or other unsheltered locations on a given night in 2020, and another 354,000 experienced homelessness in emergency shelters." Other sources put the figures even higher.

As one adviser to the housing sector and former developer sees it, "We're gonna go from bad to worse. There's no question that we have an affordability crisis in this country, and a mismatch between the price of housing and escalation of home prices and the inventory of homes compared to where incomes are. So, without government intervention and public policy to address this, there's no way that the private sector can fill the gap."

The pandemic relief programs have been a mixed bag for housing affordability. On one hand, the mortgage forbearance and rent relief programs helped limit the number of families that otherwise might have lost their homes. Moreover, the Economic Impact Payment checks and supplemental unemployment payments put cash in the wallets of tens of millions of members of lower-income households and helped reduce poverty in the country. These programs mitigated the short-term crisis.

On the other hand, as noted in the "One Pandemic, Divergent Outlooks" trend, most of the income and wealth gains during the pandemic accrued to relatively affluent households. These income and wealth inequities compounded the problem of longer-term housing affordability by pushing up home prices and rents further beyond the means of needy families.

The inability of so many families to fund their downpayment is all the more unfortunate because interest rates are so low now. Said one housing economist, "Only a select few have been able to jump into the housing market and lock in basically free money for the next 30 years." Thus, the wealth gap and housing security inequities between homeowners and renters will only grow over time.

The heightened interest of institutional investors in single-family rentals (SFRs) may be exacerbating the problem by constraining the number of homes on the market. A recent Realtor.com analysis found that investors reduced the for-sale inventory in three-fifths of the 50 markets tracked, taking into account purpose-built SFRs. Moreover, these build-for-rent investors compete with for-sale developers for scarce lots, driving up land costs for all residential developers and producing more-expensive rental housing.

But SFRs also have their fans in the industry, beyond just the investors looking to cash in on record rents, who argue that SFRs expand the range of housing options available to renters. Said one residential specialist, "If you're doing a master plan and you can't hit a really low entry-level price, what some developers will say is, 'Let's bring in that build-for-rent; that's your entry level.'"

What to Do?

How, then, to improve affordability or expand the supply of units affordable to all who need shelter? There are many approaches, but *Emerging Trends* interviewees cite four main types of policy responses.

First, local governments can approve more housing and limit those trying to block construction. “Have government fight back against NIMBYism-type trends. Government could do that, but it’s unlikely,” said the adviser for a real estate analytics firm, referring to the “not in my back yard” response of many residents to new projects. Developers find resistance in both affluent and impoverished neighborhoods over concerns a project will change the area’s character—but for different reasons. Residents of lower-income areas often fight new market-rate development for fear it will gentrify the community by raising rents, pushing out current residents. Recent studies, however, demonstrate that adding more market-rate housing to a neighborhood typically brings down rents overall—in addition to expanding housing options. On the other hand, wealthier neighborhoods resist new construction—especially affordable housing projects—for the opposite reason: fear that the development will bring *down* property values.

Second, beyond approving major new projects, local governments can authorize smaller-scale changes that collectively can expand the housing supply. Municipalities can revise zoning codes to permit accessory dwelling units (in-law units) on existing homesites or encourage conversion of large rental units into smaller units. For example, California enacted legislation allowing developers to increase density on single-family-zoned lots.

Third, entrepreneurs are developing strategies for making homeownership more accessible to more people. “You’re starting to see more of these startups that are coming into the market that are rent-to-own companies or downpayment assistance companies,” said the residential economist for a property market research firm. Other entrepreneurs seek to bring down the cost of construction, such as through innovations in the production of prefabricated homes manufactured in factories then assembled on site.

Finally, government can scale up its many existing programs. These include expanding first-time homebuyer programs, reducing downpayment requirements, and expanding subsidized loan programs. Governments can also increase the production of purpose-built affordable housing through tax incentives and other programs. The budget framework working its way through Congress includes substantial funds for expanding affordable housing, though the details need to be hammered out.

* * *

It is said that an issue cannot be considered a “crisis” forever. A crisis implies a sense of urgency, an inflection point when action can no longer be delayed. The woeful shortfall of affordable housing is arguably the land use challenge of our time. At some point, we must recognize the issue as a condition that we, as a society, have chosen to allow. How long will we let this condition persist?

5. Retrofitting Cityscapes

- Most cities that suffered at least some outmigration during the pandemic are already regaining their vibrancy, but residents are returning to landscapes that have changed both visually and functionally in ways that are likely to endure.
- Lower commercial and residential rent levels in some gateway markets after the recession may be painful to landlords but make them more attainable for people and businesses with a greater range of incomes and occupations.
- In a monumental break with tradition, the allocation of common outdoor space has shifted ever so slightly from vehicles to pedestrians as parklets and outdoor café seating replace sidewalks and street parking, while “slow streets” welcome foot traffic over vehicular traffic.
- More worrisome is a brewing traffic nightmare as a plunge in mass transit patronage threatens the viability of transit operators, with potentially devastating consequences for the low-income riders who depend on them.

Despite what could now be dismissed as an “urban legend,” residents did not abandon most cities en masse during the pandemic, as was noted in the migration trend discussion, though some cities certainly suffered more than others, at least temporarily. But the pandemic has nonetheless changed urban landscapes in many ways—some that were arguably for the better, some unfortunate, and some just different.

Outflow and Inflow

Certainly, many city dwellers decamped to less expensive neighborhoods during the pandemic. Why pay for pricy urban living when all the amenities—including jobs—were shuttered? Some young (and even not so young) renters reclaimed their former bedroom in their parents’ home. Others moved to more affordable metropolitan areas. However, the vast majority stayed within the same metro area, likely seeking the perceived safety of less dense environs as much as the rent savings.

But cities are already regaining their vibrancy. The summer spike in COVID-19 cases again delayed the return to the office for many major employers, leaving high-profile downtowns in

San Francisco, Manhattan, and Boston decidedly quiet during the normal business workday. Yet young professionals have been returning to most of these markets, even in advance of the office reopenings. Early returners could take advantage of lower rents in many top markets, and most former residents had not moved very far anyway, easing their return. However, rents generally bottomed out by the spring, so the summer surge in rentals left few great deals to be had.

Urban versus Suburban

Last year's *Emerging Trends* spotlighted some of the challenges facing cities, since the pandemic was likely to reinforce longer-term trends favoring suburban growth over urban. And, indeed, property markets in large central cities generally suffered more than their suburban counterparts. CBDs in gateway markets endured the steepest declines in rents and occupancy during the pandemic.

But if painful to urban commercial landlords, this is good news for the cities themselves, in the opinion of some industry observers. Some of the priciest rental markets are now a bit more affordable, making them more attainable to people with a greater range of incomes. Even high-earning professionals were getting priced out of top markets, to say nothing of workers in lower-paying occupations—the artists, cooks, musicians, and educators who made these cities more interesting and livable.

Similarly, with remote work sure to be a permanent legacy of the COVID pandemic, few industry experts expect office occupancies to recapture their former rates, and certainly not at their previous rents. In the near term, empty office space at more affordable rents represents an opportunity for cities to attract a more varied tenant base. Over time, the obsolete, redundant space may be repurposed or cleared for other land uses, allowing markets to evolve to offer greater diversity and much-needed housing.

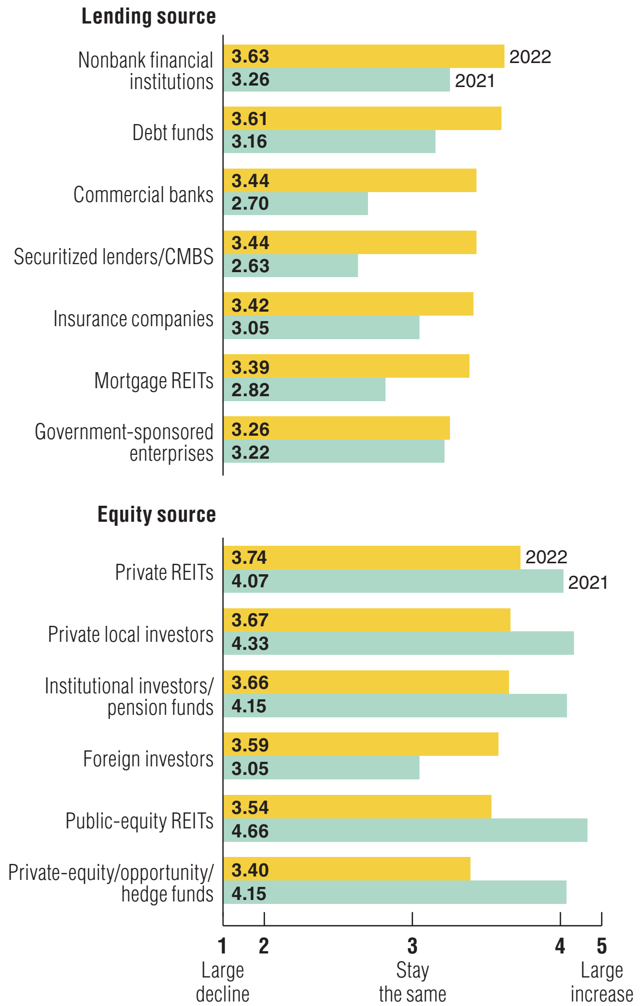
Still Got It, but Different

Whatever the headwinds, there is little doubt that cities retain their appeal to broad swaths of people and businesses. Younger people, as always, are especially attracted to city life, but the attraction is not limited to generation Z. As one developer summarized, "People want that 15-minute lifestyle if they can get it. They want walkable, amenitized, real places that allow them to live fuller lives without having to get into a car and transition from one segment of their life to another."

Downtown locations are also still the best option for many companies, providing an accessible hub for the greatest number of workers. A hub-and-spoke model was proposed early in the pandemic to locate offices closer to where workers live. So far, this decentralization strategy has not gained traction, probably because it fails firms' primary goal for wanting workers back in the office—to bring people together in one place at least some of the time. Though many suburban markets are seeing a more robust recovery, few expect a massive suburban shift.

Once they return to their downtown homes and offices, residents and workers will find an altered landscape that will change how people live and work in cities going forward. The pandemic forced some of the most rapid and significant physical changes to cities in generations. The most obvious physical

Exhibit 1-12 **Availability of Capital for Real Estate, 2022 versus 2021**



Source: *Emerging Trends in Real Estate* surveys.
Note: Based on U.S. respondents only.

change might be called the “pedestrianization” of city streets, as parklets, outdoor café seating, and retail space replaced sidewalks and street parking, while “slow streets” limited or blocked vehicular traffic in favor of pedestrians. This shift represents a monumental and unexpected break from a century of tradition.

Film footage from the early 20th century shows pedestrians, automobiles, bicycles, trolleys, and horse-drawn carriages all vying for passage on crowded city streets. But as autos displaced carriages, more and more street space was ceded to the automobile for both driving lanes and curbside parking. Pedestrians were relegated to sidewalks and the occasional narrow crosswalk.

This hegemony continued largely unchallenged until the pandemic. Though popular resistance thwarted some proposed urban highways in the 1960s and 1970s, and even forced the closure and demolition of some especially egregious highways later in the century, the primacy of autos on city streets was never really contested. Even adding bike lanes early in this century has been limited and highly contentious.

But COVID forced cities to get bold and creative to enable commerce during a health crisis by generously permitting outdoor dining and retailing. Almost overnight, American cities were made to resemble world capitals with restaurant seating lining sidewalks and even displacing sacrosanct parking spaces—with nary a complaint from anyone, not even from retailers that typically would be the most vociferous opponents of any measures to reduce parking.

Continuing Evolution

As with other trends discussed in these pages, such as remote working and online shopping, it is unclear how far the pendulum will swing back to the old ways once the pandemic eases. Nonetheless, these emergency measures are already becoming permanent fixtures of the urban landscape in cities and towns across the nation. Temporary barriers to protect diners from passing vehicles are being replaced with more substantial permanent structures as cities issue longer-term permits. And with COVID still raging in much of the United States, it is looking like these outdoor dining options will be needed for a while longer.

Cities are not about to give up on cars just yet, however. An unfortunate byproduct of the pandemic has been a dramatic reduction in mass transit patronage because riders fear sharing airspace in such close quarters. Many former users have little need for the transit anyway because their offices are still closed. Strapped for cash, most transit agencies, if not all, have been forced to make sharp cuts in service levels. In turn, these cutbacks in service and frequency reduce ridership further as service becomes less reliable.

No turnaround is imminent. The newest wave of infections is pushing out office reopenings and making riders reluctant to get back on buses and trains in any case. The longer-term prospects are grim. Even when workplaces finally reopen, remote and hybrid working is sure to reduce ridership below previous levels. Moreover, the stronger recovery in suburban markets relative to CBDs—even if not the huge shift some expected—still means that more workplaces will be situated far from transit options. These trends will further starve transit agencies of revenue and potentially undermine their financial viability.

The decline of mass transit service will have two further unfortunate consequences. First, many cities report that traffic congestion is already back to pre-COVID levels, despite many workplaces still being closed. Traffic will only worsen as offices reopen. Ironically, these autos will need parking spaces, which are now being used for other purposes. Equity issues are also associated with the erosion in transit service because lower-income workers tend to rely more on transit to get to work than do others.

Finally, on a more positive note, cities and transit systems are taking advantage of the reduced service levels to undertake long-neglected improvements and better rationalize service levels to anticipated service demands. As one consultant observed, agencies could “streamline their operations in a way that they couldn’t have done because of all the public hearing requirements.”

It was naive to believe that the pandemic signaled the end of the gateway urban core. While residents and businesses have made relocation decisions, the vibrancy of these city centers will prove too irresistible once the economy has fully reopened. Moreover, the adjustments made to accommodate pandemic-reduced economic activity may make city center living even more attractive.

6. Climate Risks Are on Us

- The increasing frequency of natural disasters—as well as more convincing research attributing these events to human-induced climate change—is raising the alarm for greater action.
- A growing consensus sees the property sector as bearing much of the responsibility for climate change—and uniquely positioned to institute improvements to both mitigate impacts and increase resilience to environmental risks.

- Despite broad industry participation in environmental accreditation programs and broader climate mitigation initiatives, evidence of investors incorporating future climate risks into underwriting has been difficult to quantify. However, the growing risks of climate-related property damage may induce more investors to follow the example of leading institutional investors in factoring market-level climate risk into their decision-making.

The natural disasters keep coming—record "heat domes" in the U.S. Northwest; fires and drought throughout the U.S. West; extreme floods in China and Europe, as well as the United States; and extreme weather just about everywhere. Then, as if to punctuate the horror of all these climate disasters, summer 2021 ended with a devastating United Nations climate change report that concludes what we already feared: we really must act now to save the planet.

This Should Not Be a Surprise

The urgency of climate change is not new to ULI or *Emerging Trends*. In the previous edition of this publication, the Institute's Urban Resilience program highlighted the implications of wildfires for real estate and discussed mitigation measures for climate risk.

And last year, ULI and Heitman LLC published a high-profile research report titled *Climate Risk and Real Estate: Emerging Practices for Market Assessment*. The report posed the simple question: How are leading investors factoring market-level climate risk into decision-making? The direct answer: in lots of ways, big and small, as escalating problems force investors to pay attention.

The report documents that, among other barometers, the annual number of natural disasters more than doubled from 1980 to 2016 and has only increased since then, adding even more urgency to the need for action. It is now understood conclusively that climate change is causing more frequent and more extreme weather events, ranging from floods to droughts and from fires to hurricanes. For the first time in its long history, the Intergovernmental Panel on Climate Change (IPCC) that produced the United Nations report definitively put the blame on human activity. Perhaps the most disturbing finding from the IPCC is that conditions on the ground and in the air will continue to deteriorate even if drastic measures are taken immediately. But postponing action will only worsen the impacts.

No wonder, then, that a key takeaway from the ULI/Heitman report is that "market-level climate risk will drive future investment decisions." This conclusion emphasizes the need for investors to consider how climate change might affect the performance of their individual assets. But it also reflects the growing recognition that the cumulative impact of millions of discrete property decisions can make a huge difference in the magnitude of the problem.

Property Sector Impact

As has been well documented, the property sector collectively must shoulder much of the responsibility for climate change. Despite concerted efforts to reduce impacts going back at least 30 years—starting with creation of the Building Research Establishment Environmental Assessment Method (BREEAM) and followed closely by the founding of the U.S. Green Building Council (USGBC)—the property sector still is the largest contributor to greenhouse gases and global warming. Buildings account for upward of 40 percent of both global energy use and carbon emissions, according to a 2017 report by the United Nations Environment Program. Two-thirds of real estate's impact comes from building operations, and the other third from building materials and the construction process. Both factors need improvement.

The property sector and allied industries have developed numerous systems to benchmark carbon emissions and energy efficiency and to incentivize better performance by recognizing superior achievement. The USGBC's Leadership in Energy and Environmental Design (LEED) program was one of the first and most widely adopted in the United States, but many others have emerged with broader mandates, including ULI's own Greenprint program for assessing building performance.

Over 80 percent of *Emerging Trends* survey respondents consider environmental, social, and governance (ESG) elements when making operational or investment decisions. Furthermore, most respondents said they are doing it because it is the right thing to do. But despite the growing awareness, "I don't see a whole lot of people taking climate change and flood risk that seriously, even though ESG reporting is being taken more seriously," said one green building expert. Even when people are motivated to "do the right thing," often that translates into "do the minimum thing" needed to get the environmental plaque. It is nearly impossible for market participants to appreciate the impact of their individual actions when the scale of the problem is so enormous. Nonetheless, the relentless pace, magnitude, and destructiveness of climate events demonstrate that the efforts to date have not been sufficient.

Some larger real estate companies are assessing the climate risk of their portfolios using climate-risk analytics consultants and a new cottage industry of climate-risk software companies. They are starting to work this risk into their investment decisions, mainly by discounting the cash flow (or increasing the cap rate) of assets they see as being exposed to greater long-term climate risks. But broader adoption is being hindered by the lack of standardized metrics. One real estate investment executive summed it up with, "We consider climate change in all of our valuations but don't have a real formal process to account for it." One factor that may lead to formalizing the process: the ability to show enhancements to risk-adjusted returns.

Some in the real estate industry are starting to consolidate around some climate and ESG reporting frameworks. The biggest publicly listed real estate firms report on their environmental performance to GRESB (formerly known as the Global Real Estate Sustainability Benchmark), and many of the largest companies are also aligning their ESG reporting with the United Nations Sustainable Development Goals (UNSDGs) and their climate reporting with the Task Force on Climate-related Financial Disclosures (TCFD). But the industry isn't there yet: more *Emerging Trends* survey respondents believe that broader ESG elements do not enhance returns than do.

Can We Get Everyone on the Same Page?

Local communities seem to take climate resilience (e.g., to floods and fires) more seriously than do private investors. But those attitudes may change as the frequency and seriousness of events increase—along with costs to owners and investors.

Research demonstrates that investors tend to have short memories, with climate-related events typically having little long-term impacts on value. New research published in *Business Economics*, the journal of the National Association for Business Economics, concludes that value impacts on commercial real estate from major storms are temporary. More generally, investors have been slow to incorporate environmental risks into underwriting.

This tracks with responses in the *Emerging Trends* survey. Industry participants are slightly more concerned about climate change generally than they are about the "risks from extreme weather." That may change if affected areas are subject to increasingly frequent events, and insurance rates rise. But a

ESG Risk Factors for Real Estate

As pressure continues to grow for real estate owners and investors to address environmental, social, and governance (ESG) concerns in their portfolios, the broader investment ecosystem also is looking for ways to quantify how environmental risks might affect financial returns. Major credit ratings agencies—including S&P, Moody's, Fitch Group, and DBRS Morningstar—have begun formally incorporating ESG factors into their credit ratings, both by integrating risk factors into their overall rating and creating separate ESG scores.

Quantifying the E, S, and G

Credit-agency risk factors do not assess responsibility or sustainability, but rather how those factors affect a transaction's finances, including revenues, expenses, cash flows, and asset value. DBRS Morningstar, for example, has 17 ESG factors relevant to credit ratings; only eight are applied to commercial real estate loans and transactions. These eight are grouped as *environmental factors:* carbon and greenhouse gas costs, climate and weather risks, and emissions, effluents, and waste; *social factors:* social impact of products and services, human capital and human rights, product governance, and data privacy and security; and *governance factors:* transaction governance.

For example, environmental risk factors like carbon and greenhouse gas costs take energy costs and efficiency into account, including any green building certifications that can reduce energy costs and improve net cash flow. Another environmental risk factor, climate and weather risks, could affect ratings as extreme weather catalyzes migration from certain areas, increases building construction costs to adapt to extreme weather events, or increases energy costs due to the changing climate.

Currently, environmental factors are garnering the greatest focus because they have the most available quantitative data sources. However, granular property-level data can still be difficult to obtain. Methods for collecting data for climate and weather risks are still being developed, and the data do not yet readily account for adaptations or critical equipment that might be in place to address extreme weather events. Metrics to measure social factors also are still being developed and likely will be included more substantially in the future.

The Challenges

A primary challenge for incorporating ESG into credit ratings is that investments made to mitigate ESG risk could result in some financial risk because some upfront investments to reduce carbon emissions or adapt to climate change may not lead to an immediate or simple-to-measure payback.

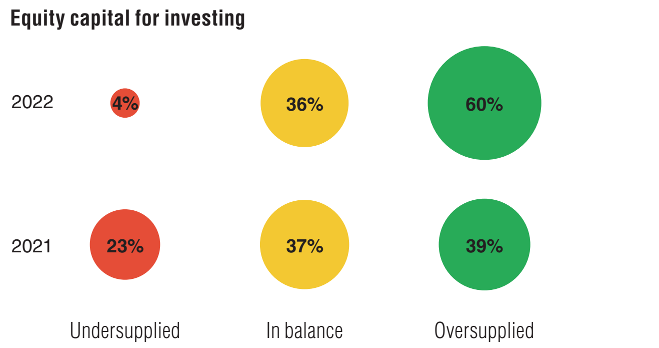
In addition, some question exists as to how ESG risks can be distilled into an ESG score or checklist separate from a credit change in attitudes might first require state and federal governments to stop subsidizing rates or offering insurance in disaster-prone areas.

The proposed (as of September 2021) bipartisan Infrastructure Investment and Jobs Act includes $47 billion to help increase the resilience of the nation's communities and infrastructure to better withstand the effects of climate change. Funds the Biden administration proposed to improve energy efficiency in both commercial and residential buildings did not survive the final infrastructure bill but are included in the budget framework working its way through Congress, along with additional funds to combat forest fires, reduce carbon emissions, and address drought concerns.

The Role of Consumers

But the entire onus cannot rest solely with businesses and government. Consumers control more than two-thirds of the economy, and the collective impact of their individual actions will

Exhibit 1-13 **Real Estate Capital Market Balance Forecast, 2022 versus 2021**



Source: *Emerging Trends in Real Estate* surveys.
Note: Based on U.S. respondents only.

rating because it can be difficult to disaggregate environmental or social criteria and economic risks. According to one real estate firm, "People, whether it be tenants or investors, think that some of these decisions that we always thought of as purely economic end up having a political element to them that affects people's behavior and decisions, and therefore actually do tangentially—and maybe more than tangentially—over time affect economics."

As climate change increases the frequency of extreme weather events globally, risk maps also will change over time and place less emphasis on historical events and more on trends and future conditions, making it difficult for current due-diligence spreadsheets to adequately account for potential hazards to property value. Reputation risk and how tenants and prices will respond to the changing perception of an organization over time are difficult to quantify.

Decision-Making on ESG

While data sources and the weight of individual factors are still being developed, ESG risk factors have already begun to affect decision-making in funds. For funds that target a long hold period, new assets are prioritized. On the office side, for example, tenants now see their office space as an extension of their brand, making newer and more efficient buildings better for attracting higher-quality tenants. For an opportunistic fund considering asset disposition, buildings that do not meet certain standards will have a harder time finding a buyer.

As one building owner noted regarding ESG risk factors, "It affects your cost of capital, it affects your business plan, it affects the leasability, it affects the type of tenants and by definition the credit of those tenants. So it is very much in how we think about even entering a business plan, executing the business plan, cost of capital of exit, and what we're willing to hold long term in the office market."

To mitigate transition risk across all asset classes, the preference is newer properties until owners can better understand the cost to retrofit properties to meet changing city regulations that govern building performance and are likely to be adopted in other markets. Such regulations are New York City's Local Law 97 and Washington, D.C.'s Building Energy Performance Standards. According to one global real estate adviser, these new policies will "dramatically affect property values in that market as you will have a [capital expenditures] plan on file that will expand people's thinking around how to calculate net present value or discounted cash flow assessment." And because the industry anticipates additional regulations in the future, with potentially high compliance costs or fees for noncompliance, the financial risks of not addressing ESG will only increase.

—ULI Greenprint Center for Building Performance have more force than anything else discussed in this section. Fortunately, consumers are becoming more aware of the climate impacts of their consumption choices. One prominent example: many people—even hard-core omnivores—are reducing their meat consumption and switching to meat alternatives in recognition of the enormous environmental impact of meat production, particularly beef.

Consumers are changing more than just their food choices. There is a growing movement in what some have dubbed "circular fashion" that aims to reduce the production of new "stuff" by purchasing more "pre-owned" items, whether it is furniture on Craigslist or clothes in second-hand and vintage shops. There also is a greater interest in renting clothes, especially for special occasions, to limit the one-time use of garments. Part of the motivation is undoubtedly financial, especially for cash-strapped households. But there is also an environmental impulse behind the increasing consumer focus on experience over goods. Said one retail broker, "We realize we don't need as much stuff to get by. And it seems as though the younger generation is taking that more seriously."

Next Steps

What else can be done? One positive move noted by an environmental expert: "With both climate change mitigation and in zoning codes, we're moving more towards performance-based standards. And what that means is, performance-based standards say we want to achieve a result, but we don't specify as much the specifics of how it's achieved." All these approaches and a strong bias for action are essential but still may not be enough. It is time to set aside passive theories and develop tangible and practical plans.

7. Proptech: Changing the Way Real Estate Is Done

- The property technology (proptech) industry has reached a level of acceptance usually reserved for a more mature sector. The use of technology to better understand and manage properties has accelerated sharply. Despite the higher acceptance, the proptech industry still holds significant areas for future growth.

- The pandemic is providing new impetus and scope for technology adoption. Proptech can now do more than efficiently operate and manage a property; it can also help tenants efficiently use their leased space as the way people work continues to evolve.

- A new generation of data analytics seems especially promising, allowing companies to use artificial intelligence to proactively identify opportunities rather than sift through deals one by one.

- Interest in proptech innovation remains high. Investment in new technologies can be seen in high levels of funding flowing to the industry and high confidence in the potential for success for technology developed with this investment.

Property Management

The early adoption of proptech centered on property management technologies, including the automation of energy, HVAC, air ventilation, and air filtration systems. The initial goal was to achieve efficiencies and effectiveness to reduce costs and support healthy indoor environments, as well as to automate such systems as access control and elevator queuing. Measured by lower costs for tenants and improved air quality, this goal is being accomplished.

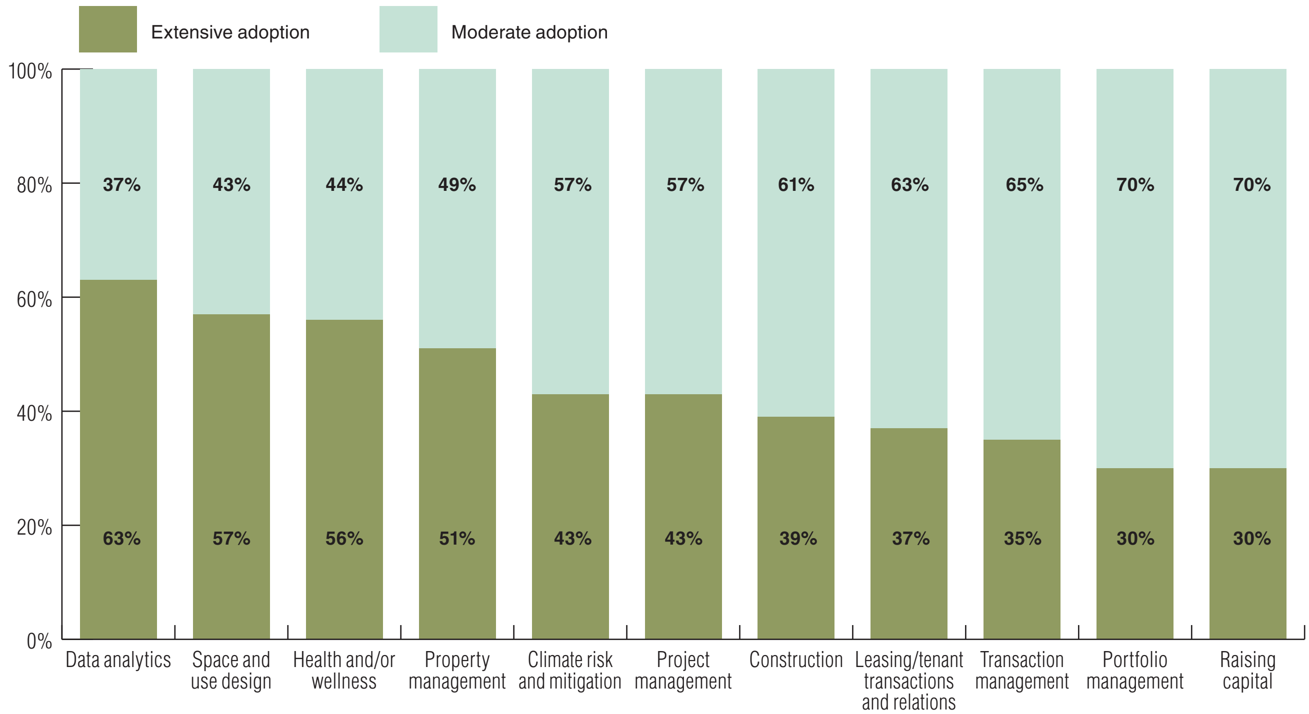
The chief operating officer of a property management and development company detailed the cost savings its portfolio realizes through use of property management software that determines the required level of cooling or heating based on building occupancy: "Now when you walk into a room or building, your occupancy is actually influencing the amount of chilled air or heated air that we're distributing, and we lower it as the population of the building leaves and we raise it when occupancy levels come back. It's a great tool that saves us roughly 55 cents a foot per year."

Post-COVID Acceleration

In the 2021 edition of *Emerging Trends* (released in fall 2020), one topic was the potential for proptech to facilitate the return to the office and become a competitive advantage in attracting and retaining tenants. In 2021, this is being put into practice. Interviewees mentioned the touchless experience (both in person and virtual) for tenants, for which demand was already evident before the COVID-19 pandemic and for which the need has accelerated.

In the area of a virtual touchless experience, a company described its focus on virtual-reality tools for a digital renting process at its residential properties, including an online virtual-reality navigator that allows prospective residents to walk through a building and, through use of drones, get a view outside from any apartment even before construction. A robot can connect to agents through WebEx so that a potential tenant can "walk" through the property with a robot and ask the agent any question.

Exhibit 1-14 **Level of Adoption of Proptech by Companies Recently Adopting New Technology, by Business Area**



Source: *Proptech: Changing the Way Real Estate Is Done*, Urban Land Institute, 2021.

Note: "Recently" refers to about the past three years; "new technology" refers to technology that is new to the respondent company. "Extensive adoption" includes "To a great/very great extent"; "Moderate adoption" includes "To some/moderate extent."

Other examples include platforms that allow prospective residents to access the entire leasing process online, creating a frictionless experience from finding the perfect space to signing the lease. Or, as one portfolio manager noted, this includes "anything that makes it easier to do business with us.'' From this company's perspective, this ranges from improved digital marketing to the ability to personalize the online experience—book appointments online; provide virtual, guided, or self-guided tours; complete first and renewal leases online; and communicate with customers through whatever channel they prefer.

The Way People Work

Tenant engagement tools for both commercial and residential properties, such as a tenant engagement experience platform, were also noted. Such a platform allows building tenants to interact with each other, make room bookings or desk bookings, and request personal services. One managing director of a real estate investor and developer noted, "We want to be a landlord that is not only providing space, but micro-services to enhance the user experience of our tenants and users of our buildings." Some of these types of micro-services were described by an interviewee at an investment management company as "things that make people more comfortable and [that] will facilitate a healthier workplace."

Specifically, on the commercial side, one company developed its own experience platform that streamlines everything from finding colleagues and space to work to knowing what is in and around the campus or within the office environment. A technology executive at a leading commercial real estate services firm said he believes that "you can't expect employees to have 20 different apps just around the workplace, so we've built a platform that is extensible."

One director of development at an investment and management firm described a platform for determining where employees should be placed when moving into a new space. The intelligent software mines calendar and email traffic through artificial intelligence. This was originally intended to be offered to new tenants to help them lay out their office space, but it offered another use after COVID: "During the pandemic, it was a way to maintain social distancing in the office," the interviewee said. "We use it to figure out an A/B structure when people come in the office and when they aren't allowed to come into the office."

Data Analytics

The pandemic accelerated the use of new types of data and analytics. As the economy spiraled downward with record speed in March 2020, the standard government data sets—long the gold standard for reliability—became hopelessly outdated. Acquisition of data quarterly and even monthly was not nearly frequent enough to comprehend how markets were changing. Almost overnight, the property sector adopted a new generation of high-frequency data that provide virtually real-time insights.

As the portfolio manager described the experience: "Our investment in data analytics is all about improved data-driven decision-making. We capture, consolidate, and mine data that we have, which allows us to continually learn, evolve. The way in which we make decisions through data is going to give us a leg up in just about all of our operations." Furthermore, the interviewee noted, "we are able to be nimble and do ad hoc reporting, dashboards, data visualization, etc., to get questions answered with greater speed and flexibility."

A designated data analytics team is another recent business model for adoption and use of data analytics technology. For one company, it was this team that created a robust platform for the entire organization that gathers data from all systems and sources. It has become central to how they do business and share information; everyone in the firm has access.

In addition to all the promise, however, advanced data analytics has a significant amount of room to grow. Said the CEO of an investment advisory firm, "What nobody has at this point is any model that is actually predictive, just because the data hasn't been around long enough to be able to provide statistically significant predictive models. But it's just a matter of time before that is going to come into the industry and affect decision-making regarding investments and development."

ESG and Climate Change Mitigation

One initiative noted by interviewees from multiple firms is the need for transparency and communication on health and metrics related to ESG factors. These firms share data with their tenants on air and water quality through an app or on lobby displays. The managing director said the urgency for these types of solutions in the company's buildings has increased, noting, "Not only are we using indoor tracking solutions to provide high air quality in the buildings, but we are also being transparent about that by showing it on a display. You need to have all those sensors for tracking and reporting. Therefore, the urgency and need for the proptech solutions in our buildings have increased."

One executive at an asset management firm explained that the company is using climate risk data to guide investments and mitigate risk by analyzing data at the micro location level for flooding, wildfires, hurricanes, and other climate events "to get a better grasp of how the climate is changing and what risk does that impose on certain buildings." The goal is to identify during investment due diligence the risk that an asset may become "stranded" and thus worthless at some later time.

The data can also be used to determine the sorts of protective measures that may be needed for an asset to be viable, such as raised elevation, dry floodproofing, or deployable flood barriers. This interviewee noted the importance of incorporating climate risk into the investment process, saying, "This is a self-reinforcing mechanism that will create even more advantages for the folks that use technology versus the folks that don't use technology."

The property management and development company is in the middle of a carbon accounting and renewable resources initiative: its portfolio management software identifies electricity demand and matches it with real-time renewable resource supply while creating a blockchain between the two bookends. Said the interviewee, "There is going to be a point in time where a regulator is going to knock on your door and say, prove that you bought this renewable energy and used it at a certain date and time at a certain building."

What's on the Horizon?

The most proactive companies are seeking out and adopting the most recent proptech innovations and leading the industry in change—a continual process for all companies as the number and nature of property technologies continue to evolve. Because the pace of recent proptech adoption is expected to continue over the next several years, one interviewee's observation succinctly sums up these rapidly accelerating industry trends: "All the technologies around automation, understanding workplace analytics and occupancy, making smart portfolio decisions, designing the new space differently, ensuring that the space maintains occupancy standards—all of that requires technology and data, and these trends are accelerating. It's a phenomenal time just from an application-of-a-technology standpoint to enable these critical business outcomes."

8. One Pandemic, Divergent Outlooks

- Unlike the last recession, which hit every region, industry, and property type, the impacts from the COVID-recession have been much more differentiated.
- Outlooks for U.S. property markets and sectors look to be diverging in ways significantly different than in the last recovery.

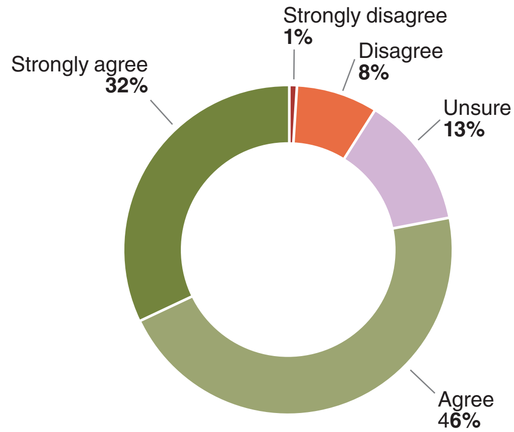
Despite the property sector's remarkable resilience overall through the economic upheaval since the pandemic hit, significant bifurcation can be seen in how various sectors and markets have performed. In turn, that largely reflects how different segments of the economy and society fared.

That is to be expected in a country and an economy as diverse as the United States: almost any trend or event will affect some households, some metropolitan areas, and some property sectors more than others. Some industries will benefit while others will be harmed. Indeed, most recessions hit some regions and some property sectors harder than others, whether it is the dot-com implosion of the early 2000s that laid waste to tech markets; the savings-and-loan debacle of the early 1990s that focused on financial centers; or the multiple energy-related recessions felt most acutely in the oil-patch states.

The pain of the global financial crisis (GFC)—the most recent recession, which began in late 2007—looms large in the country's collective memory. But the GFC was unusual not only for its depth and length, but also for its breadth: virtually every corner of the United States and every segment of the economy experienced significant job losses and property value declines. Though some areas and sectors were hit harder than others, this was very much a shared experience. Nothing and no one escaped the downturn unscathed (except for a few remarkably prescient hedge funds that shorted the housing market).

The pandemic recession and subsequent recovery represent a return to form, with greater differentiation of outcomes across regions and industries. These distinctions have translated into very differentiated recent performances—and outlooks—among U.S. property markets and sectors. This report delves into greater detail about the market dynamics of each major property type in chapter 3, but divergence is a growing theme across sectors—and, in some cases, within individual sectors. The reasons are as varied as the sectors themselves but are generally rooted in structural shifts in tenant demand as people change how they live and work—and use real estate.

Exhibit 1-15 **COVID-19 accelerated the shakeout among retailers that likely would have occurred over the next few years anyway**



Source: *Emerging Trends in Real Estate 2022* survey.

Sectors Diverge

The industrial sector barely paused as the surge in online spending fueled increasing tenant demand. Multifamily has been almost as strong overall, though sector fundamentals have suffered due to severe weakness in a few large markets like New York City and San Francisco. Vacancy rates ticked up slightly in both sectors during 2020, but primarily because much-needed supply was coming on line. With tenant demand still increasing, rents in both sectors are back at record levels throughout much of the country, and outlooks appear very strong in the view of just about everyone interviewed for this year's *Emerging Trends*.

Prospects for the other major property sectors are less positive as the pandemic impaired market conditions in ways that continue to hinder performance. The hospitality sector sustained the greatest blow initially as travel effectively shut down. Many hotels closed or generated revenue only by hosting essential workers or by being converted into temporary homeless shelters. As of mid-2021, "leisure-based hotels that one can readily drive to" are enjoying the "fastest path to normalcy," in the words of one senior debt analyst, because so many people are suffering from cabin fever and are eager to travel.

But business and international travel is proving much slower to recover, and many experts believe those activities may not return to pre-COVID levels for years. More than half the respondents to the *Emerging Trends* survey believe "business-related travel will be lower than 2019 levels" three years from now. This expectation, if realized, would pose significant hardships for not only hotels, but also luxury retail and upscale dining, both of which depend on deep-pocketed travelers, especially those on company expense accounts.

Meanwhile, the pandemic accelerated the retail property sector's long-term slide, which dates from before the GFC. Store closings and vacancies soared and were still rising as of mid-2021, and all expectations are for continued weakness and record vacancy rates—though not for everyone. Grocery-anchored centers, dollar stores, and home improvement retailers are all thriving, while the outlook for secondary malls, unanchored centers, and high-street retail are much darker, according to those interviewed.

Finally, the office sector seems to be in the early stages of a significant reset, with an unusually high degree of differentiation across both geographies and quality levels. Due to the traditionally long duration of office leases, market fundamentals so far have weakened only moderately in many markets. But weak leasing volumes and record sublease availability, combined with downbeat tenant survey data, together strongly suggest that vacancies will rise before peaking. Industry experts interviewed also see bifurcation in the office sector itself as health concerns from the pandemic are prompting a "flight to quality" favoring newer construction over older stock with inferior HVAC systems and technology features, and less flexible layouts.

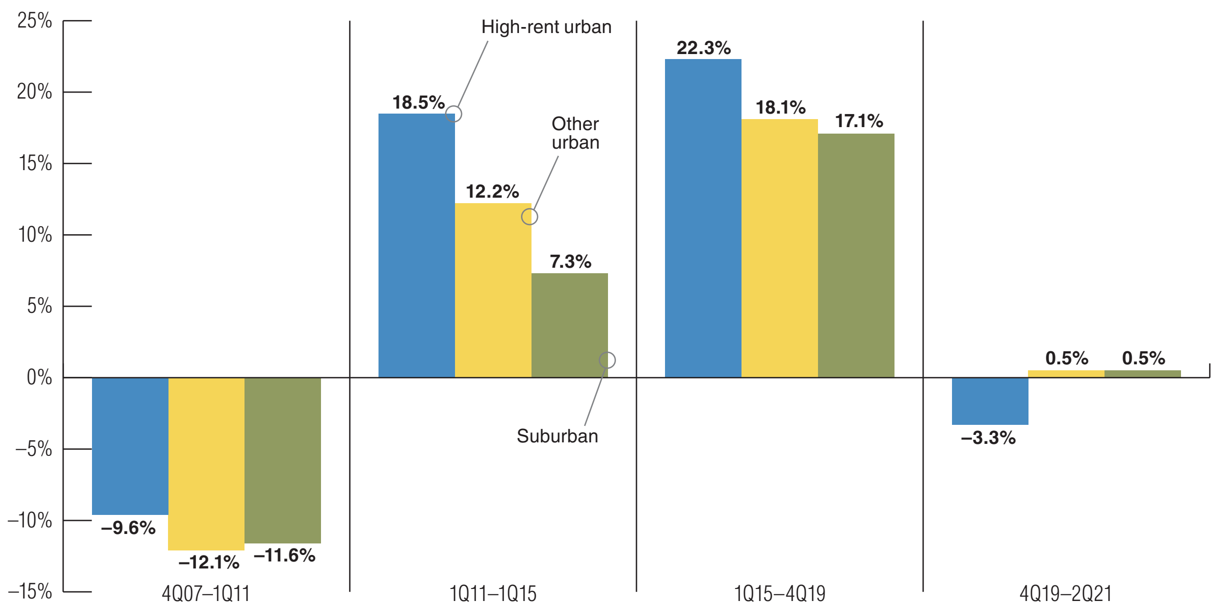
These diverging property fundamentals track closely with the *Emerging Trends* survey results and investment trends, as is discussed more fully in the capital markets trend. Both industrial and residential (single family and multifamily) remain investor favorites, while the hospitality, retail, and office sectors lag well behind. Those interviewed also show increasing interest in less traditional commercial real estate asset types like data centers, life sciences buildings, and student housing. Growing transaction volumes confirm these trends in these niche sectors.

Markets Diverge

Trends vary across geography, too. For several years, *Emerging Trends* has documented the shift of investor and tenant preferences away from expensive CBDs and toward smaller, more affordable markets. As is explored further in chapter 2, the so-called gateway markets dominated the top of the ULI prospects lists for many years, but investors have been increasingly turning to Sun Belt growth markets. The pandemic only magnified this trend, though some recovery in some hard-hit gateway markets could be seen starting in summer 2021.

Reasons for the shift in preference can be understood by looking at how property market fundamentals have been changing over time. Office rents are an example. Market conditions softened least in the traditional high-rent gateway markets during the last recession (end of 2007 through early 2011), and these

Exhibit 1-16 **Office Rent Growth**



Sources: CoStar Group, Nelson Economics.

markets also strengthened more quickly and strongly during the initial recovery, while other urban markets lagged, and suburban markets lagged further still (2011–2015). The spread narrowed during the expansion through the end of the last decade as tenant preferences began to shift away from the more expensive markets (2015–2019).

The pandemic recession and recovery so far show the accelerating shift in where tenants want space. Rents have declined in the gateway markets while increasing slightly in both the non-gateway urban markets and suburban markets (end of 2019 to mid-2021).

Almost everyone interviewed for this report expects the gateway markets to recover eventually. Said one investor: "We don't believe urban is dead. It always ebbs and flows. All the advantages of urban will still be there. It's as old as time: people congregate in cities. It will be delayed, and anything delayed creates a very challenged investment basis." Another consultant believes that "cities as a draw for talent will again be top of mind, at least for office occupiers." But not yet, and maybe not for some time. Meanwhile, it seems that so-called secondary markets will be leading the recovery. Once again, Sun Belt cities top ULI's lists for overall real estate prospects, homebuilding, and development, trends covered fully in chapter 2.

The Diverging Labor Market Affects Real Estate

The bifurcated recovery in property markets partly reflects diverging conditions in the underlying economy. Gauged by the country's total economic output, the recovery is essentially complete. But employment figures tell quite a different story. The economy is still missing a quarter of the jobs lost during the recession (as of the end of August), and job growth appears to be slowing in the face of the Delta variant. Moreover, there have been immense differences by occupation and industry during both the downturn and recovery. These varied outcomes will have further impacts on property markets.

For example, job losses during the downturn were far more concentrated among lower-wage workers, who typically have less flexibility to work from home, and now job gains still favor higher-wage workers. According to Opportunity Insights, a Harvard-based research initiative, the number of jobs paying more than $60,000 annually was up 10 percent over pre-COVID levels as of the end of June 2021 (latest data available), while the number of jobs paying less than $27,000 was still down over 20 percent.

Labor shortages are contributing to this employment split, with implications for property sectors. Many firms in industries with lower-paying occupations report difficulties hiring needed workers, slowing their recovery.

This hiring divergence has exacerbated the gap between those with lower-wage jobs and the substantial wealth gains by affluent households, which own most of the stock wealth in the country and thus gained disproportionately as the stock market surged during the pandemic.

To be sure, lower-income Americans gained a lot from the various pandemic relief programs. Calculations from the Urban Institute concluded that the poverty rate fell by almost half from 2018 through early 2021—a laudable achievement. Nonetheless, most of the income and wealth gains accrued to already affluent households, compounding the housing affordability crisis discussed earlier.

9. Everyone Wants In

- U.S. property capital markets are back. After a significant pause in mid-2020, transaction volumes are rebounding to near pre-pandemic levels. With investors sitting on an enormous pool of idle capital itching to be placed, deal volumes are sure to increase further.

- As has been the case for almost a decade, investor interest is especially keen for industrial assets and housing, both multifamily and single family, while demand for hotels, shopping centers, and offices remains weaker. But limited opportunities and record pricing in the favored sectors and markets are pushing more investors into alternative property types like life sciences, data centers, self-storage, and student housing, as well as various forms of debt.

- For now, investors are remaining reasonably prudent—or at least selective—regarding where and how they invest. The essential question going forward is, will investors maintain their discipline or might there be a bubble in the making?

In recent years, we have called attention to a "wall of capital" and then a "tsunami of capital" to describe all the dollars, loonies, yuan, pounds, and euros flooding the nation's property markets. We have noted a "surfeit of capital desperately seeking placement," feared that "debt and equity capital will be oversupplied," and simply expressed concern over the "pressure of capital" to be deployed. Frankly, we are running out of metaphors to describe all this capital seeking a home in property markets.

Why Real Estate?

Real estate returns look very attractive relative to alternatives for a comparable level of risk. "We like the income attributes of real estate," said one institutional investor, and few options appear to offer the relatively low level of risk and consistent cash flow provided by property markets.

What else is driving this demand? The Fed's monetary policy is one factor. Said one economist: "Because we're artificially holding down mortgage rates and interest rates, you can borrow at what is certainly real rates near zero. You almost have to borrow and leverage and take advantage of it with durable fixed real assets, and it's helping to drive real estate."

Age demographics are another factor. "We have a tremendous amount of wealth in our society, and that wealth has to have someplace to go," noted one industry consultant. "A tremendous amount has been in the stock market. But as our society and world have aged, there's been a tremendous need for slightly lower-risk, lower-return alternatives to reflect where people are in their investment appetites." U.S. property markets fit the bill for many of these investors.

Finally, U.S. property maintains great appeal to offshore investors, whose share of acquisitions did not decline last year despite the difficulty of getting deals done remotely during a global pandemic. (However, their overall deal volume did decline, along with every other investor type.) The United States is still viewed as a safe-harbor refuge, and the economy is growing faster than any other advanced economy.

The Distress That Wasn't

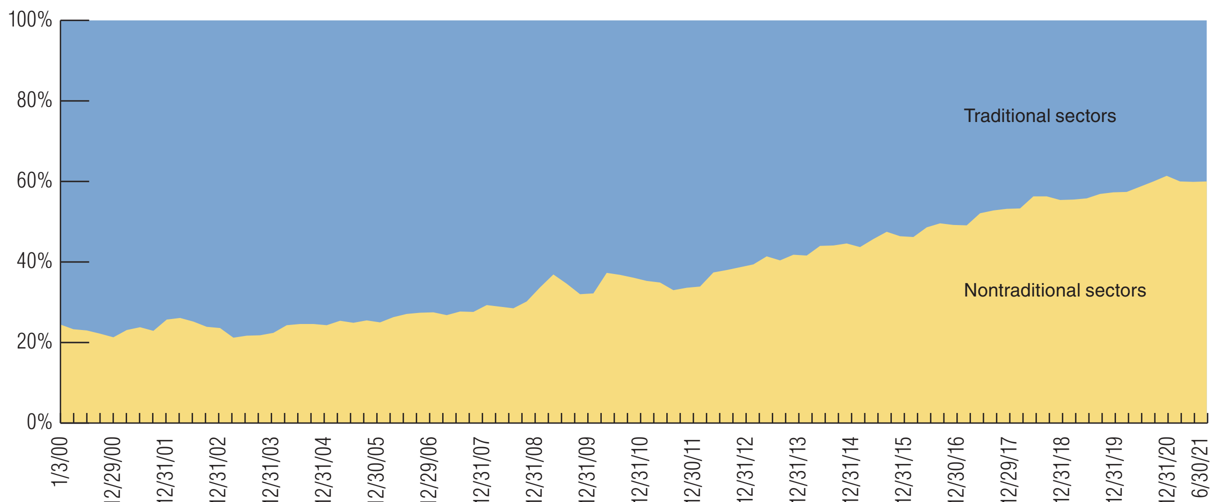
Perhaps even more surprising than the liquidity of capital during the pandemic was the limited extent of distress in property markets. Distressed property sales and foreclosures were well below the levels experienced during the GFC. Partly as a result, prices were generally stable, even in the hardest-hit sectors like office, hotels, and retail since few borrowers were forced to sell at inopportune times. Even delinquencies were relatively limited because market fundamentals did not deteriorate as much as in a typical recession. Most tenants kept current on their lease payments believing the downturn would be short lived.

"We've seen very few defaults and foreclosures compared to what the potential could have been," said one industry executive. "Lenders were very lenient with the borrowers. . . . The lenders learned in the global financial crisis that, whatever you want to call it—pray and delay, extend and pretend—was a good strategy then and an even better strategy now." It also helped that investors and lenders were more disciplined in this cycle, respecting market fundamentals, limiting leverage, and (generally) not overbuilding.

A Bubble in the Making?

But will that discipline last? One concern is all the opportunistic funds raised to capitalize on the anticipated wave of distress that never occurred. Fund managers could return the unused capital but might begin to hunt for other assets to invest in on the high end of the risk spectrum.

Exhibit 1-17 **FTSE NAREIT All Equity REITs Index Composition**



Sources: GreenStreet, NAREIT.

It is not just grave dancers looking for deals. There is a "tremendous amount of liquidity looking for allocations and investment in real estate," said one senior asset manager. Fundraising actually increased in 2020—a most unusual trend during a recession, when investors typically pull money out—resulting in a record amount of "dry powder" on the sidelines looking to be placed.

Some of that capital is getting impatient due to portfolio "denominator effects." Many investors have fixed allocation shares for each type of investment. When the value of one class rises, investments in the other classes must increase proportionately to keep the investment types in balance. A post-recession run-up in stock prices is putting even more pressure on multisector investors to boost their commercial real estate (CRE) holdings. The S&P 500 has doubled in value since bottoming out in March 2020 and is up one-third over its pre-COVID peak.

A further concern is that in their selectivity—avoiding asset types with greater uncertainty and weaker fundamentals and seeking out more promising options—investors risk overheating the new favored sectors. Historically, institutional investors like pension funds have limited their CRE investment horizons to a small range of sectors—first office and retail, then adding warehouses and apartments over time. These segments still account for virtually all the assets in the NCREIF Property Index, one of the primary benchmarks for institutional real estate investments.

Benchmarks can act as straitjackets for institutional investors. "Those of us who have portfolios measured against one of the NCREIF indexes can find ourselves limited in our ability to invest in new product types that could boost returns," explained the CEO of a global investment fund company. Combined with the typical mandate for "core" investments that provide the most stable returns, "index hugging" presents a particular challenge for institutional investors, whose investment options are effectively restricted to the traditional CRE sectors—and provides additional fuel for overheating the most popular sectors.

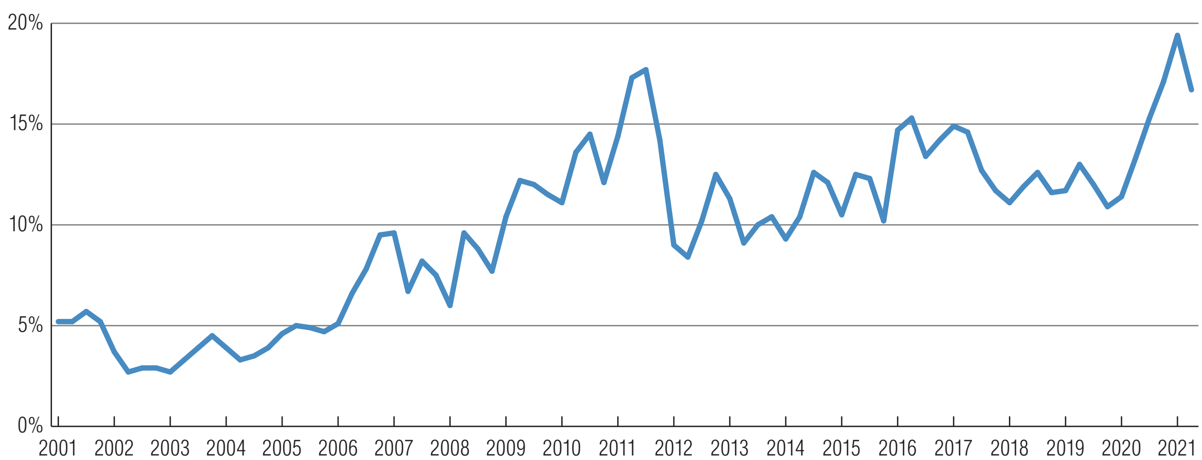
Venturing into Alternative Sectors

In contrast, real estate investment trusts (REITs) and private investors have been much quicker to embrace a broader variety of alternative sectors, ranging from niche housing types (such as student and senior housing) to specialized offices (like life sciences buildings and medical office) and warehouses (data centers and cold storage). These sectors are now gaining interest from a wider range of investors because they offer generally higher returns at higher cap rates (lower prices), often at no higher risk. Tenant demand in many of these alternative sectors is driven more by demographics than economic growth, making them less volatile over the business cycle—another appealing feature for investors.

Investment in alternative sectors has been capturing a rising share over the last two decades and spiked during each of the past two recessions as investors sought their relative stability.

A closer analysis of recent trends shows that investors are especially reducing their acquisitions of conventional property types like retail and office properties as they increase their purchases in niche sectors. A potential problem for property capital

Exhibit 1-18 **Alternative Sectors' Share of All CRE Investment, Two-Quarter Moving Average**



Source: Real Capital Analytics; compiled by Nelson Economics.

Note: Alternative investment includes medical office, manufactured housing, senior housing, student housing, R&D, self-storage, and data centers.

markets is the relatively limited universe of investible assets in these niche sectors. Moreover, the value of individual assets tends to be far smaller than in conventional CRE sectors. Thus, investors cannot easily swap out their CBD offices and regional malls without overwhelming the niche sectors and tanking the traditional CRE sectors.

Downtown office buildings and regional malls have long been the dominant sectors for institutional investors and still account for almost a third of the value in the NCREIF Property Index. Discussions with institutional investors and their advisers did not suggest that owners are running for the exits. Nonetheless, few core investors want to increase their office or mall holdings. Many will execute existing strategies to reduce their exposure to these sectors over time, especially to lower-quality assets that no longer merit "trophy" status.

Sellers will be challenged to redeploy the proceeds from these assets into the trendier niche sectors because so few assets are available for acquisition. Meanwhile, the multifamily and industrial sectors are riding a multiyear wave of popularity that shows no sign of abating. Pricing in these sectors is well into record territory, leaving investors hard pressed to find assets at a reasonable basis.

In any case, some of these options will be limited for institutional investors unless the incentives for benchmark hugging are weakened or the industry collectively moves to expand the definition of "core" investing to include some of these newer but still relatively safe alternative sectors. But progress may be slow. Said one adviser, "It just takes a long time. But at some point I would imagine it has to change, and when it does change, that will accelerate this movement."

That is not to say there are no other good options. Investors interviewed identified several compelling sectors, including build-for-rent homes and specialized warehouses, as well as studio space to produce all the streaming content being consumed now. And despite the weakness of the office sector overall, tenant focus on health and safety seems to support new construction.

But perhaps the best opportunities will be in preparing for the future, whether it is the adaptive use of obsolete office buildings and shopping centers or enhancing the resilience of buildings to meet the exigencies of climate change. "A lot of buildings are going to need money to renovate, but they don't have the excess equity to make the necessary investments," said one consultant. "And that's why we're going to need some new hybrid-type debt structures that may take various forms to fill that gap."

Exhibit 1-19 **Change in Share of All CRE Transactions, 1H 2021 versus 1H 2019**

Sector	Change
Apartments	–8%
Hotel*	23%
Industrial	12%
Office	–49%
Retail	–33%
Total conventional	–17%
Development sites	–30%
Total alternative**	11%
Total, all sectors	–14%

Source: Real Capital Analytics; compiled by Nelson Economics.

*Net of one major entity-level transaction, sales volume would have declined relative to 1H 2019.

**Includes medical office, manufactured housing, senior housing, student housing, R&D, self-storage, and data centers.

Debt Outlook

Lastly, the debt markets could see some market pressures as well. Debt markets are, if anything, even more liquid than the equity side, with lenders extremely eager to accommodate borrower needs. Mortgage originations soared in the first half of 2021, nearly reaching 2019's record levels.

Though industry experts believe that underwriting standards are holding firm at prudent levels, one concern is inflation. Said one industry observer, "When inflation and interest rates do go up, there's a wealth transfer that's going to happen. The people that are borrowing now at very low rates are going to be the beneficiaries. And the losers are going to be the investors in mortgage-backed securities and CMBS and buying into any kind of long-term fixed-rate deal."

* * *

With the economy roaring back and investment funds flush with cash, there will be lots of promising commercial real estate opportunities in the coming years—and pitfalls. Investors should prepare for a bumpy ride.

10. New Age of Uncertainty

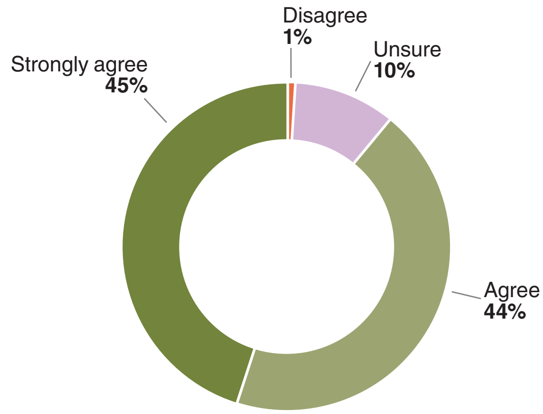
- The predictability of property markets over the past decade ended decisively with the pandemic and ensuing recession, heralding the beginning of a new era of heightened uncertainty.
- Much better understanding of the coronavirus since the pandemic first struck has reduced but by no means eliminated the uncertainty. COVID outbreaks remain the top risk to the economy and thus to the vitality of property markets.
- COVID-related uncertainty permeates investor views on property markets, holding back demand for office buildings especially, until more is known about firms' occupancy strategies. Rising infection levels risk also triggering pullback and shifts in consumer spending, affecting the retail and hospitality sectors.
- The increasing frequency of "500-year" climate events is the greatest long-term uncertainty for the real estate sector, requiring landlords and investors to make far-reaching decisions today to mitigate long-tail risks.

Last year, the opening trends chapter of *Emerging Trends* was titled "Dealing with Certain Uncertainties." The survey results then indicated that over half the respondents either were not confident making long-term strategic decisions or did not know whether they were confident or not! Despite this level of indecision, the overall sentiment—or maybe hope is a better descriptor—was that next year would bring improved conditions. The 2022 survey does indeed show some improvement in decision-making confidence: virtually 90 percent of respondents report feeling confident making those same long-term strategic decisions.

There are, however, indications that confidence is uneven. A capital markets director for a global investment fund described his confidence level as "100 percent more confident than I was a year ago, but only 50 percent more confident than I was six months ago." And there is more to be uncertain about. Said a portfolio manager for a national office owner, "It seems like more things are changing at the same time than during the typical cycle. We are dealing with if and/or when demand will come back, what type of space they will want, and everyone wants lease-term flexibility!"

So a year later, it looks like people will be living with elevated levels of uncertainty for a while longer.

Exhibit 1-20 **I am confident making long-term strategic real estate decisions in today's environment**



Source: *Emerging Trends in Real Estate 2022* survey.

Where Will Capital Go?

The property sector is no stranger to uncertainty, of course. After all, investing is all about assessing and pricing risk. But after 10 years of uninterrupted, if moderate, economic growth following the last recession—the longest expansion in U.S. history—real estate professionals could perhaps be forgiven for a growing sense of complacency. Property investing was becoming almost boringly predictable as investors and asset managers could count on market outcomes within a relatively narrow range.

The downside of this attenuated risk was that returns were low and falling in the latter years of the decade. On the other hand, it was almost hard to go wrong in that market, or at least horribly wrong. Everyone looked smart. Plus, the alternatives were no better elsewhere. Property sector returns still looked pretty compelling on a risk-adjusted basis, judging by the deal volumes and fundraising levels.

"Search for yield" far outpaced "refuge from risk" as investor goals. Perceiving minimal risk on stabilized core assets, investors bid up prices and pushed down capitalization rates, squeezing yields to among their lowest rates ever during an expansion. The NCREIF Property Index returned less than 7 percent in both 2018 and 2019, a far cry from the double-digit returns in the first six years of the decade, which averaged an astonishing 12.3 percent annually.

Capital flooded into riskier value-add (redevelopment or repositioning) and opportunistic (ground-up) investment projects. Yet, the returns frequently were not much higher because investors did not price in much of a risk premium.

To be sure, investors clearly distinguish the risks and opportunities for different property types. Before the pandemic, cap rates on industrial and multifamily assets were continuing their decade-long decline. In contrast, offices and retail rates had been flat in recent years, and hotel cap rates were increasing. Overall, however, investors were pricing in minimal risk.

The industry was already getting a bit nervous at the end of the decade, however, as leading indicators, including an inverted yield curve, were pointing to a possible near-term recession. Variations of the term "uncertain" rose from just five text references in the *Emerging Trends 2019* edition (released in fall 2018) to 16 in *Emerging Trends 2020* (released in fall 2019). But the number of "uncertainty" mentions jumped to 28 last year as COVID-19 upended much of what people thought they knew about their world, the economy, and property markets—and just generally scared the bejeebers out of everyone. Tellingly, the risk of epidemic jumped from last place to first among social/political issues important to real estate.

Ongoing Virus Concerns

There is now much greater understanding of the coronavirus than at the onset of the pandemic—how it is transmitted, how it can be controlled, and how to carry on despite its presence. And vaccines that sharply reduce the share of people susceptible to the disease were finally developed. Better knowledge of the virus has reduced but by no means eliminated the uncertainty.

An important point: polarized political attitudes in the United States and elsewhere are compounding a global vaccine shortage to hold vaccination rates well below the levels needed to fully tame the pandemic. So, COVID is very much still with us and remains far and away the top risk to the economy and thus to the vitality of property markets. Indeed, the risk of pandemics remained the top social/political issue in this year's survey. Barring a much wider outbreak than seems likely as of early fall, broad lockdowns and other extreme measures the government first imposed to stop the spread are not expected. But the economy and property markets nonetheless remain vulnerable to changing consumer behavior in response to health concerns.

Despite people's "immense pent-up demand for normalcy," in the words of one research leader, a return to pre-pandemic life remains elusive. As of October 2021, most office workers still were not back at the office, and the surging spread of the Delta variant was pushing the return date for many major companies into next year. Meanwhile, surveys show that most people still do not feel comfortable participating in previously normal activities like going to a crowded entertainment venue or even mostly empty movie theaters.

Consumer spending held up remarkably well even as infections from the Delta variant surged this summer, and spending continued to revert from goods to more normal levels of services like travel and spas—very positive signs for the economy. But rising infection levels risk triggering another pullback in consumer spending. Already, concert tours and other large events were being canceled, and many states and localities were reimposing indoor masking requirements. And the longer the virus remains in circulation, the greater the likelihood of even more contagious and deadly strains emerging.

Concluded one institutional investment adviser: "Trying to predict what companies and what individuals want and where behaviors are going to go, and dealing with these pandemics—there's just a tremendous amount of uncertainty."

A further COVID worry for businesses is global supply chains, especially in Asia. The pandemic led to severe shortages of critical imports, notably semiconductor chips integral to so many products from phones to cars, leading to product shortages and higher inflation here. Now COVID outbreaks are closing factories in Asia. Production disruptions with U.S. trading partners are raising concerns about deliveries for the all-important holiday shopping season. Said one retail broker, "Companies will need to look forward and really be strategic as to who their vendors are, getting to know them, because everybody that produces a good is being affected by this." Supply-chain bottlenecks also risk increasing already elevated inflation rates.

Will They or Won't They?

Beyond the virus itself, probably no issue is more important—and more uncertain—for property markets than the share of workers who will ultimately return to their company's workplace, as was discussed in a preceding trend. Over 90 percent of respondents to the *Emerging Trends* survey blame "lack of understanding about how a hybrid work model will affect office space needs" as the reason "driving uncertainty about total office space needs in next three years." More than half said it is "too early to know how long physical distancing may be required in the workplace."

As discussed earlier, there is little wonder that office sales transactions remain far more depressed than those for any other property sector relative to pre-pandemic volumes. Blame the stagnation on the wide bid–ask spread between buyer offers and seller expectations—which is really just a fancy way of saying elevated uncertainty exists about future market conditions, particularly for the "vintage product that has the classic 10 or 15 percent of the space rolls each year," said one senior investment banker.

But the discussion on remote-working decisions indicates they affect more than just office markets. The viability of hotels, restaurants, and other businesses all depends on the health of the local office market. Impacts on individual markets will vary depending on the predominant types of occupations and industry. All this uncertainty will weigh on investor outlooks.

Also on the collective minds of the real estate industry: shorter lease terms for sectors that long relied on long-term tenant commitments. The revolution in flexible workspace introduced by pioneers like WeWork and Knotel habituated office tenants to shorter, more flexible leases. Similar trends are playing out in the retail property sector, where temporary pop-up spaces are becoming more common lease options year-round, not just for seasonal stores. With more short-term leases and more frequent tenant turnover, landlords face greater uncertainty and property management becomes more operationally intensive. Concluded one adviser to the intuitional investment world: "the 'Airbnbification'" of these sectors "going more flexible or short term in nature—it's just . . . the fact of life now" for owners and lenders.

Finally, climate risk is emerging as perhaps the greatest known unknown. The now-perennial fires in the U.S. West, rising hurricane damages in the South and East, and growing environmental threats just about everywhere are an increasing worry of owners and tenants alike. The conundrum, expressed by another investment adviser, is that by their nature, these long-tail risks do not fall within the "traditional approach to assessing risk [by] assessing tenant risk and market risk." Yet the increasing frequency of these "500-year events" shows that they cannot be ignored—more uncertainty for the real estate sector.

* * *

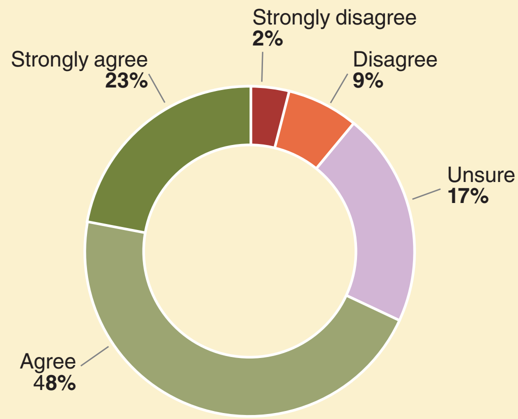
All business cycles are unique, though they do seem to follow similar rhythms. The current pandemic-induced cycle was exhibiting a familiar pattern, but the current beat is proving to be unpredictable, more syncopated, less waltz-like. If the past 18 months have taught us anything, it is that market participants will need to stay light on their feet as long as society is dealing with the virus.

A Year Has Passed. Now What?

The year 2020 will undoubtedly be remembered as a period of upheaval arising from both the COVID-19 pandemic and America's most recent racial reckoning. Without the distractions of normal routines and daily commutes, many were forced to truly confront the reality of racial disparity in America. As the end of 2021 nears, headlines have been overtaken by other national and global news. Now that protesters are no longer in the streets, are organizations holding themselves accountable for the promises they made?

This year, *Emerging Trends* survey respondents' self-identified understanding of systemic racism remained strong, with an increasing majority (71 percent) indicating an overall heightened level of individual awareness of racial disparity. In contrast, the percentage of respondents who agreed or strongly agreed that the collective real estate industry has a good understanding of how it has contributed to systemic racism remained quite low at 26 percent. On a more optimistic note, a sizeable majority of respondents agreed or strongly agreed that the real estate industry can address and help alleviate systemic racism.

I am confident I have a good understanding of what constitutes systemic racism



Source: *Emerging Trends in Real Estate 2022* survey.

continued next page

If the industry does not adequately understand the problem or its role in contributing to it, how can it hope to find a solution?

Emerging Trends interviewees describe an industry that appears to be in a diagnostic phase of how it will effect change, with more organizations collecting and dissecting data—for instance, by race/ethnicity, gender, sexual orientation, employment level, and function. Seven industry organizations, including ULI, recently partnered with Ferguson Partners to create a global benchmark of diversity, equity, and inclusion (DEI) metrics for the commercial real estate industry. An understanding of these baseline metrics is necessary for organizations to create solutions through tailored DEI business plans to fit the unique nature of their respective businesses.

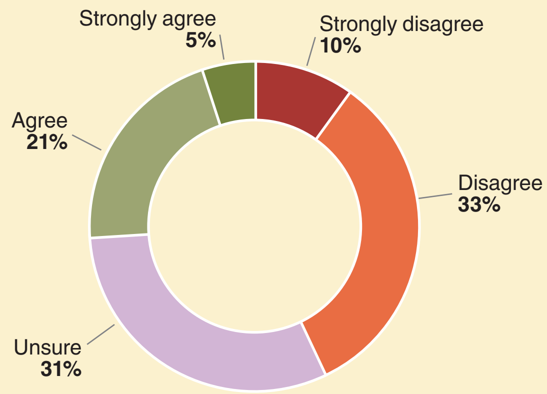
It is not likely those targets will be reached without allocation of sufficient resources—funding, time, and leadership attention—to underscore an organization's commitment to this work. The chief executive officer of an investment advisory firm described the company's success during the past year in hiring more diverse candidates: "It wasn't easy! We found that we had to reevaluate where we looked for talent and then put the infrastructure in place to reach those candidates and persuade them that we were the right place for them to work."

The extent to which the industry will hold itself accountable remains to be seen. The Securities and Exchange Commission's recent approval of Nasdaq's proposal to include gender and race in its listing rules could prove to be the next stage of transparency, benchmarking, and goal setting. Capital allocators will continue to be instrumental as they advocate for change through requests for transparency; they, too, must hold themselves accountable by voting with their checkbooks if adequate change does not take place.

As a managing director at an investment management firm summed it up: "The seeds of change have been planted, but the work has just begun. The extent to which the industry truly labors, by rolling up its sleeves and getting its hands dirty tending the soil, will determine the extent to which those seeds someday bear fruit."

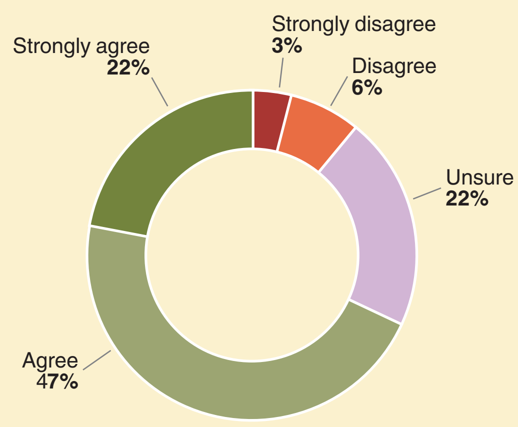
—Onay Payne, Portfolio Manager

I believe that the real estate industry understands how past policies and practices may have contributed to systemic racism



Source: *Emerging Trends in Real Estate 2022* survey.

The real estate industry can address and help alleviate systemic racism



Source: *Emerging Trends in Real Estate 2022* survey.

Markets to Watch

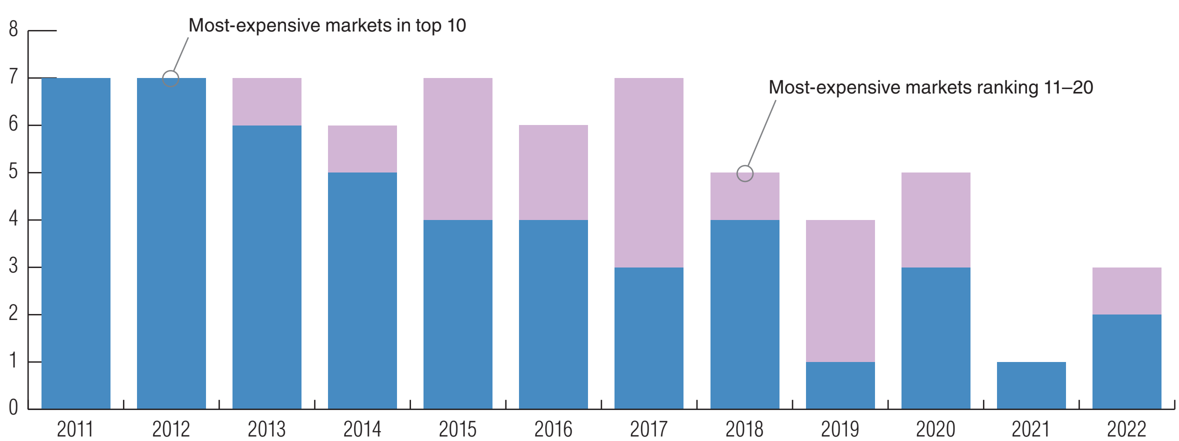
"We think [opportunities] are located in urban settings as well as suburban settings. We're not really choosing a side in these debates."

The pandemic upset some bedrock principles underpinning our understanding of property sector dynamics, as discussed in several themes from the opening chapter. So, too, for some longstanding assumptions of property markets: investor confidence in some long-dominant gateway markets was shaken while smaller, less visible markets gained newfound interest.

To be sure, the pandemic and ensuing recession reinforced some trends that well preceded the downturn. Most notably, the popularity of large gateway markets continues to wane in favor of generally smaller "smile" markets that extend almost across the southern half of the country. Until recently dismissed as "secondary" investor markets, these Sun Belt metropolitan areas account for the eight top-rated "U.S. Markets to Watch: Overall Real Estate Prospects" in the latest *Emerging Trends* survey. Their ratings are tightly bunched, with only one-tenth of a percentage point separating the ratings of the top- and fifth-ranked markets, suggesting a clear investor preference of this type of market. Sun Belt metro areas also occupy the top five places in the "Homebuilding Prospects" ratings.

A large or coastal metro area has not topped the "Overall Real Estate Prospects" survey since Seattle in 2018, and gateway markets have seen their supremacy in the *Emerging Trends* survey responses decline for a decade now, notwithstanding a minor reversal this year. As measured by the eight most expensive coastal markets—Boston, Los Angeles, Manhattan, Oakland, San Francisco, San Jose, Seattle, and Washington, D.C.—these gateway markets dominated the *Emerging Trends* "Markets to Watch" lists in the early years of the past decade,

Exhibit 2-1 **Appearances of 8 Most Expensive Coastal Markets in *Emerging Trends* Top 20 Markets**



Sources: *Emerging Trends in Real Estate* surveys, CoStar; compiled by Nelson Economics.

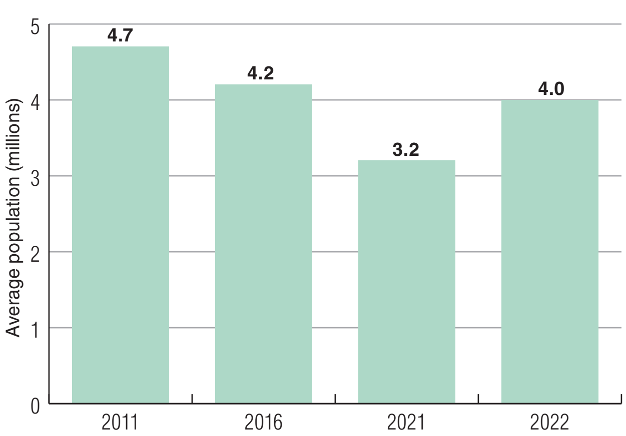
Notes: Top 20 market ranking is based on the *Emerging Trends in Real Estate* surveys (overall real estate prospects). Eight most expensive coastal markets are Boston, Los Angeles, New York–Manhattan, Oakland, San Francisco, San Jose, Seattle, and Washington, D.C.

accounting for seven of the top 10 places in both 2011 and 2012. As one interviewee in the 2011 *Emerging Trends* summed up the sentiment at that time: "Gateway 24-hour cites will always dominate and outshine secondary markets."

But over time, these eight markets have accounted for fewer and fewer of the top markets, as some began to slip out of the top 10 and then out of the top 20. Ratings for traditional investor favorites like San Francisco and Manhattan have fallen steeply. Last year, in the first year of the pandemic, Boston was the only one of the eight gateway markets that placed among the top 20 *Emerging Trends* investor markets. This year, the total climbed back up to three, as Seattle returned to the top 10 along with Boston, and Los Angeles returned to the top 20. But that count is still less than in any of the 10 years preceding the pandemic, affirming the long-term trend away from gateway markets.

Almost all the new top-rated markets are located in faster-growing southern and western regions away from the coasts. These Sun Belt metro areas have been ascending the rankings for several years now relative to the traditional leaders in the Northeast and along the Pacific Coast. And, as noted, these metro areas are generally smaller than those that used to monopolize the top rungs of the survey. In each of the past three years, the two top-rated metro areas in the *Emerging Trends* survey all had a population base of fewer than 2.5 million people. The "smaller is better" trend has paralleled the move away from expensive coastal markets over the past decade. The average population of the top 10 survey markets was 4.7 million people in 2011, and

Exhibit 2-2 **Shrinking *Emerging Trends* Top 10 Markets**



Sources: *Emerging Trends in Real Estate* surveys, U.S. Census Bureau; compiled by Nelson Economics.

Note: Top 10 market ranking based on the *Emerging Trends in Real Estate* surveys (overall real estate prospects). Where *Emerging Trends* ranks portions of a metro area as separate markets, only the population of the areas in the top 20 was included in the average.

this figure has been falling even as the U.S. population has grown.

The figure dropped to just 3.2 million people last year during the height of the pandemic as it seemed many residents and firms were ready to bolt large cities and head to smaller markets. But this year the average reverted to 4.0 million people when it became clear cities are retaining their appeal after all.

Investor interest in major suburban markets has followed a comparable pattern. Over the past decade, typically only two to three suburban markets—those in the Major Market–Adjacent category defined below—ranked among the top 20 *Emerging Trends* markets to watch. That figure rose to six last year but has since fallen back to its typical level of three. Of course, this comparison does not capture the growing interest in the smaller suburban submarkets contiguous to the CBDs of other metropolitan areas. Investment and development volumes in these submarkets do remain elevated, even if not captured directly in the *Emerging Trends* survey.

Grouping the Markets

After comprehensively reorganizing how we group our 80 geographic markets last year, in this edition we undertook a lighter refresh of the market categories. The key changes were:

- Created a new Supernovas market group to highlight hypergrowth metro areas and eliminated The Sunshine State—a catch-all for Florida markets, now redistributed into other subcategories. Most of these Supernovas graduated from 18-Hour Cities.

- Refined the Multitalented Metro Areas from last year to create Multitalented Producers, reflecting that these large, diverse metro areas all have something else in common—production of a wide range of goods and services. We also recast last year's Specialized Economies as Knowledge and Innovation Centers to acknowledge that all these markets have heavy office-based economies with a strong tech presence.

- Renamed Suburbs Ascending as Major Market–Adjacent. These markets are within major metropolitan areas, though none serves as the central business market. Some but not all are suburban in character, prompting the new category name.

- Recategorized 15 of the markets to more accurately reflect how these markets function and are perceived by investors and market participants. Several represent "promotions" of markets that have outgrown their former categories.

U.S. Markets to Watch

Exhibit 2-3 **Overall Real Estate Prospects**

1	Nashville
2	Raleigh/Durham
3	Phoenix
4	Austin
5	Tampa/St. Petersburg
6	Charlotte
7	Dallas/Fort Worth
8	Atlanta
9	Seattle
10	Boston
11	Salt Lake City
12	Denver
13	San Diego
14	Washington, DC–Northern VA
15	Miami
16	Orange County
17	Inland Empire
18	Orlando
19	Los Angeles
20	Boise
21	San Antonio
22	Washington, DC–District
23	Fort Lauderdale
24	Houston
25	Las Vegas
26	San Jose
27	Philadelphia
28	Chicago
29	Northern New Jersey
30	Sacramento
31	Oakland/East Bay
32	West Palm Beach
33	Indianapolis
34	Kansas City, MO
35	Richmond
36	New York–Brooklyn
37	Jersey City
38	Jacksonville
39	Minneapolis/St. Paul
40	Greenville, SC
41	Long Island
42	New York–Manhattan
43	Charleston
44	Cape Coral/Fort Myers/Naples
45	San Francisco
46	Cincinnati
47	Columbus
48	Washington, DC–MD suburbs
49	Portland, OR
50	New York–other boroughs
51	St. Louis
52	Chattanooga
53	Detroit
54	Baltimore
55	Westchester, NY/Fairfield, CT
56	Knoxville
57	Birmingham
58	Cleveland
59	Pittsburgh
60	Tacoma
61	Milwaukee
62	Honolulu
63	Tucson
64	Albuquerque
65	Virginia Beach/Norfolk
66	Tallahassee
67	New Orleans
68	Memphis
69	Madison
70	Omaha
71	Des Moines
72	Louisville
73	Spokane, WA/Coeur d'Alene, ID
74	Providence
75	Oklahoma City
76	Gainesville
77	Portland, ME
78	Deltona/Daytona Beach
78	Buffalo
80	Hartford

Source: *Emerging Trends in Real Estate 2022* survey.

Exhibit 2-4 **Homebuilding Prospects**

1	Raleigh/Durham
2	Tampa/St. Petersburg
3	Phoenix
4	Dallas/Fort Worth
5	Austin
6	Denver
7	Charlotte
8	San Antonio
9	Atlanta
10	Washington, DC–Northern VA
11	Houston
12	Seattle
13	Tacoma
14	Salt Lake City
15	Sacramento
16	Inland Empire
17	Las Vegas
18	Washington, DC–District
19	San Diego
20	Boise
21	Nashville
22	Orlando
23	Miami
24	Orange County
25	West Palm Beach
26	Fort Lauderdale
27	Cape Coral/Fort Myers/Naples
28	Columbus
29	Los Angeles
30	Jacksonville
31	Indianapolis
32	Kansas City, MO
33	Oakland/East Bay
34	Boston
35	Philadelphia
36	San Jose
37	Portland, OR
38	Charleston
39	Cincinnati
40	Minneapolis/St. Paul
41	Greenville, SC
42	Washington, DC–MD suburbs
43	Albuquerque
44	Richmond
45	Memphis
46	San Francisco
47	Spokane, WA/Coeur d'Alene, ID
48	Baltimore
49	Northern New Jersey
50	Oklahoma City
51	Louisville
52	Deltona/Daytona Beach
53	Chicago
53	Tucson
55	Virginia Beach/Norfolk
56	Knoxville
57	Chattanooga
58	Omaha
59	Tallahassee
59	Des Moines
61	New York–other boroughs
62	Birmingham
63	New York–Brooklyn
64	Honolulu
65	Madison
66	New York–Manhattan
67	Westchester, NY/Fairfield, CT
68	Jersey City
69	Buffalo
70	Providence
71	St. Louis
72	Milwaukee
73	Cleveland
74	New Orleans
74	Detroit
76	Long Island
76	Pittsburgh
78	Gainesville
79	Portland, ME
80	Hartford

Source: *Emerging Trends in Real Estate 2022* survey.

Key: More than 1 standard deviation above mean | +/– 1 standard deviation of mean | More than 1 standard deviation below mean

Mean

***Emerging Trends 2022* Market Categories**

Major group	Subgroup	Markets	
Magnets	Super Sun Belt	**Atlanta** **Dallas/Fort Worth** Houston Miami	**Phoenix** San Antonio **Tampa/St. Petersburg**
	18-Hour Cities	**Charlotte** Denver Fort Lauderdale Minneapolis	Portland, OR Salt Lake City San Diego
	Supernovas	**Austin** Boise Jacksonville	**Nashville** **Raleigh/Durham**
The Establishment	Multitalented Producers	Chicago Los Angeles	San Jose **Seattle**
	Knowledge and Innovation Centers	**Boston** New York–Manhattan	San Francisco Washington, DC–District
	Major Market–Adjacent	Inland Empire Jersey City Long Island New York–Brooklyn New York–other boroughs Northern New Jersey	Oakland/East Bay Orange County Washington, DC–MD suburbs Washington, DC–Northern VA West Palm Beach Westchester, NY/Fairfield, CT
Niche	Boutiques	Chattanooga Des Moines Greenville, SC Knoxville	Omaha Portland, ME Richmond
	Eds and Meds	Baltimore Columbus Gainesville Madison	Memphis Philadelphia Pittsburgh Tallahassee
	Visitor and Convention Centers	Cape Coral/Fort Myers/Naples Charleston Deltona/Daytona Beach Honolulu	Las Vegas New Orleans Orlando Virginia Beach/Norfolk
Backbone	The Affordable West	Albuquerque Sacramento Spokane, WA/Coeur d'Alene, ID	Tacoma Tucson
	Determined Competitors	Birmingham Indianapolis Kansas City, MO	Louisville Oklahoma City
	Reinventing	Buffalo Cincinnati Cleveland Detroit	Hartford Milwaukee Providence St. Louis

Note: **Bold** type indicates the 10 highest-rated markets in *Emerging Trends in Real Estate 2022* survey for overall real estate prospects.

Magnets

Magnet markets are migration destinations for both people and companies, and most are growing more quickly than the U.S. average in terms of both population and jobs. Their demographics are also skewed toward faster economic growth prospects with higher proportions of millennials and gen-Xers and relatively fewer seniors and retirees. These metro areas are also the preferred markets for investors and builders, with the highest average "Overall Real Estate Prospects" ratings of any group in the *Emerging Trends* survey by a wide and growing margin. Accounting for one-third of the population base in the *Emerging Trends* coverage universe, the Magnets are tied with the Establishment markets as the largest group in "Markets to Watch."

Exhibit 2-5 **Average Ranks by Category: Markets to Watch, 2021 and 2022**

(Lower scores are better)

Major group	Subgroup	Average rank		Top market in category	Market's overall rank
		2021	2022		
Magnets	Super Sun Belt	18.6	11.9	Phoenix	3
	18-Hour Cities	27.7	21.9	Charlotte	6
	Supernovas	10.8	13.0	Nashville	1
	All Magnets	*19.9*	*15.8*		
The Establishment	Multitalented Producers	34.5	20.5	Seattle	9
	Knowledge and Innovation Centers	42.8	29.8	Boston	10
	Major Market–Adjacent	26.3	33.8	Washington, DC–MD suburbs	14
	All Establishment	*31.3*	*30.4*		
Niche	Boutiques	54.0	57.3	Richmond	35
	Eds and Meds	51.3	58.3	Philadelphia	27
	Visitor and Convention Centers	49.8	50.3	Orlando	18
	All Niche	*51.6*	*55.2*		
Backbone	The Affordable West	54.6	58.0	Sacramento	30
	Determined Competitors	52.6	54.2	Indianapolis	33
	Reinventing	64.4	62.8	Cincinnati	46
	All Backbone	*58.4*	*59.1*		

Source: *Emerging Trends in Real Estate* surveys; compiled by Nelson Economics.

Note: Rankings based on *Emerging Trends in Real Estate* surveys (overall real estate prospects).

Super Sun Belt. These markets are large and diverse, but still affordable, forming powerhouse economies that attract a wide range of businesses. Despite their size—these metro areas average over 5 million residents, the second most of any subgroup in the survey—almost all are among the fastest-growing markets in the country. Moreover, their economic performance has been solid through thick and thin. Though every market lost jobs during the pandemic recession, recovery has been much quicker and more complete in the Super Sun Belt markets. By year-end 2021, these metro areas are projected to collectively regain nearly all their lost jobs, while the United States is expected to still be down almost 2 percent.

This dynamic helps explain the popularity of these markets in the *Emerging Trends* survey. These metro areas collectively have the highest average rating of any subgroup in terms of overall prospects, led by Phoenix, which cracked the top 10 for the first time in at least a decade. This category also includes longtime survey favorites Atlanta and Dallas/Fort Worth, which consistently rank in the top 20. Interviewees most commonly cite the solid growth prospects, business-friendly environment, and favorable quality of life as reasons for the popularity of these metro areas.

Population growth in these markets is fueling a lot of development and employment growth—and vice versa. Atlanta, Dallas/Fort Worth, and Phoenix all saw population growth of over 5 percent over the past three years, adding a total of about 860,000 residents—all of whom require new housing, services, and workplaces. Said one Atlanta interviewee, in what applies to all these markets: "Low cost of land, climate, and available jobs make the market attractive. Hence, the influx of people moving here."

18-Hour Cities. Metro areas in this now-classic *Emerging Trends* category faired relatively well during the pandemic recession, a testament to their enduring appeal. Though growing less affordable over time—partly due to price pressures from transplants from more expensive Establishment markets—these medium-sized cities nonetheless continue to attract in-migration

Exhibit 2-6 **Population and Economic Output: *Emerging Trends* Markets to Watch, 2022**

		Population (000s)		GDP ($ millions)		
Major group	**Subgroup**	**Total**	**Average**	**Total**	**Average**	**Per capita GDP**
Magnets	Super Sun Belt	35,159.5	5,023	$1,969	$281.3	$56,011
	18-Hour Cities	18,514.0	2,645	$1,163	$166.1	$62,795
	Supernovas	8,878.2	1,776	$505	$101.1	$56,913
	All Magnets	*62,551.6*	*3,292*	*$3,637*	*$191.4*	*$58,147*
	Share of all survey markets	*32.9%*		*29.2%*		
The Establishment	Multitalented Producers	24,256.3	6,064	$2,007	$501.8	$82,747
	Knowledge and Innovation Centers	8,828.4	2,207	$1,483	$370.8	$167,996
	Major Market–Adjacent	29,628.7	2,469	$1,745	$145.4	$58,899
	All Establishment	*62,713.4*	*3,136*	*$5,235*	*$261.8*	*$83,481*
	Share of all survey markets	*33.0%*		*42.0%*		
Niche	Boutiques	5,953.6	851	$320	$45.8	$53,831
	Eds and Meds	16,061.9	2,008	$998	$124.7	$62,128
	Visitor and Convention Centers	11,724.4	1,466	$570	$71.2	$48,601
	All Niche	*33,739.8*	*1,467*	*$1,888*	*$82.1*	*$55,963*
	Share of all survey markets	*17.7%*		*15.1%*		
Backbone	The Affordable West	6,096.9	1,219	$287	$57.4	$47,062
	Determined Competitors	8,208.5	1,642	$449	$89.7	$54,658
	Reinventing	16,851.6	2,106	$971	$121.4	$57,612
	All Backbone	*31,157.0*	*1,731*	*$1,706*	*$94.8*	*$54,769*
	Share of all survey markets	*16.4%*		*13.7%*		
Total, all markets		190,161.85		$12,467		

Source: *Emerging Trends in Real Estate* surveys, Bureau of Economic Analysis, U.S. Census Bureau; compiled by Nelson Economics.

due to lifestyle, workforce quality, and development opportunities, according to *Emerging Trends* interviews. Measured by per capita GDP, workers here are the most productive of any subgroups in the fast-growing Magnets category.

Several members of this group last year have moved into new categories: the three fastest-growing metro areas—Austin, Nashville, and Raleigh/Durham—joining the new Supernovas subgroup, and the largest, Seattle, moving to the more appropriate Multitalented Producers subgroup of larger, more diverse metro areas. The remaining 18-Hour Cities are scattered throughout the country, comprising a more geographically diverse set of markets than the other subgroups. The 18-Hour City markets now include Charlotte, Denver, Minneapolis/St. Paul, Portland (Oregon), Salt Lake City, San Diego, and newcomer Fort Lauderdale. Features common to all are active downtowns and urban-like suburban nodes.

The dynamic economies of these markets continue to make them popular with developers and investors alike. Four of the seven markets in this grouping rate among the top 20 markets nationally for overall prospects, led by Charlotte, followed by Salt Lake City, Denver, and San Diego. As a group, the 18-Hour Cities rate fourth highest among the 12 subgroups. Charlotte, in particular, is the focus of much new construction, including the Vantage South End and Design Center Tower projects in the hot South End neighborhood.

Supernovas. The Supernova markets are on a tear. In astronomy, a supernova is the explosion of a star that creates unusual brilliance, but more generally the term refers to things that

Exhibit 2-7 **Local Market Perspective: Investor Demand**

Weak | | Average | | Strong

Nashville	4.73	Houston	3.65
Austin	4.73	Tucson	3.60
Boston	4.59	Jersey City	3.59
Charlotte	4.57	Philadelphia	3.57
Raleigh/Durham	4.53	San Francisco	3.56
Inland Empire	4.50	Richmond	3.52
Denver	4.48	Greenville, SC	3.50
Salt Lake City	4.46	Cape Coral/Fort Myers/Naples	3.50
Dallas/Fort Worth	4.44	Spokane, WA/Coeur d'Alene, ID	3.50
Phoenix	4.43	Tacoma	3.50
Tampa/St. Petersburg	4.42	Minneapolis/St. Paul	3.50
Boise	4.41	New York–other boroughs	3.47
Atlanta	4.40	Cincinnati	3.44
Seattle	4.39	St. Louis	3.42
Orange County	4.29	Madison	3.38
San Diego	4.19	Portland, OR	3.37
San Jose	4.18	Knoxville	3.33
West Palm Beach	4.18	Des Moines	3.33
Miami	4.15	Omaha	3.33
Los Angeles	4.10	Birmingham	3.22
Charleston	4.07	Chicago	3.22
Indianapolis	4.06	Albuquerque	3.20
Orlando	3.95	Louisville	3.19
Washington, DC–Northern VA	3.95	Virginia Beach/Norfolk	3.19
Las Vegas	3.94	Pittsburgh	3.17
Kansas City, MO	3.92	Cleveland	3.08
Fort Lauderdale	3.89	Memphis	3.06
Washington, DC–MD suburbs	3.88	Milwaukee	3.00
Oakland/East Bay	3.87	Westchester, NY/Fairfield, CT	2.93
New York–Brooklyn	3.85	Gainesville	2.91
Honolulu	3.85	Detroit	2.91
Washington, DC–District	3.83	Baltimore	2.87
New York–Manhattan	3.78	Tallahassee	2.80
Jacksonville	3.75	Deltona/Daytona Beach	2.78
Columbus	3.75	Providence	2.77
Northern New Jersey	3.70	Oklahoma City	2.73
Sacramento	3.70	Portland, ME	2.67
San Antonio	3.70	New Orleans	2.67
Long Island	3.68	Hartford	2.50
Chattanooga	3.67	Buffalo	2.27

Source: *Emerging Trends in Real Estate 2022* survey.
Note: Ratings reflect perspective of local market participants.

Exhibit 2-8 **Local Market Perspective: Development/ Redevelopment Opportunities**

Weak | | Average | | Strong

Tampa/St. Petersburg	4.35	Los Angeles	3.51
Nashville	4.27	Tacoma	3.50
Raleigh/Durham	4.24	Cincinnati	3.47
Charlotte	4.18	New York–other boroughs	3.47
Phoenix	4.15	New York–Manhattan	3.46
Dallas/Fort Worth	4.12	Birmingham	3.44
Atlanta	4.08	Minneapolis/St. Paul	3.44
Denver	4.04	Baltimore	3.43
Austin	4.04	Cleveland	3.43
Salt Lake City	4.04	Tucson	3.40
Fort Lauderdale	3.94	Portland, ME	3.36
Seattle	3.93	Spokane, WA/Coeur d'Alene, ID	3.36
Boise	3.92	Knoxville	3.36
Inland Empire	3.92	Louisville	3.33
Washington, DC–Northern VA	3.90	Madison	3.33
Boston	3.89	St. Louis	3.33
Greenville, SC	3.88	New Orleans	3.27
Northern New Jersey	3.84	Cape Coral/Fort Myers/Naples	3.27
Houston	3.82	Long Island	3.26
Charleston	3.81	Chicago	3.26
Las Vegas	3.80	Pittsburgh	3.24
San Antonio	3.77	Columbus	3.24
Washington, DC–District	3.77	Virginia Beach/Norfolk	3.20
Jacksonville	3.76	Gainesville	3.18
Washington, DC–MD suburbs	3.75	Providence	3.17
San Jose	3.74	Detroit	3.17
New York–Brooklyn	3.74	Westchester, NY/Fairfield, CT	3.15
Philadelphia	3.73	Portland, OR	3.15
Orlando	3.71	Albuquerque	3.13
Miami	3.68	Tallahassee	3.11
Oakland/East Bay	3.67	Omaha	3.10
Indianapolis	3.67	Oklahoma City	3.09
Richmond	3.65	Memphis	3.06
San Diego	3.60	San Francisco	3.03
Orange County	3.59	Milwaukee	3.00
West Palm Beach	3.56	Hartford	2.93
Jersey City	3.56	Honolulu	2.92
Sacramento	3.55	Deltona/Daytona Beach	2.88
Kansas City, MO	3.54	Des Moines	2.80
Chattanooga	3.53	Buffalo	2.79

Source: *Emerging Trends in Real Estate 2022* survey.
Note: Ratings reflect perspective of local market participants.

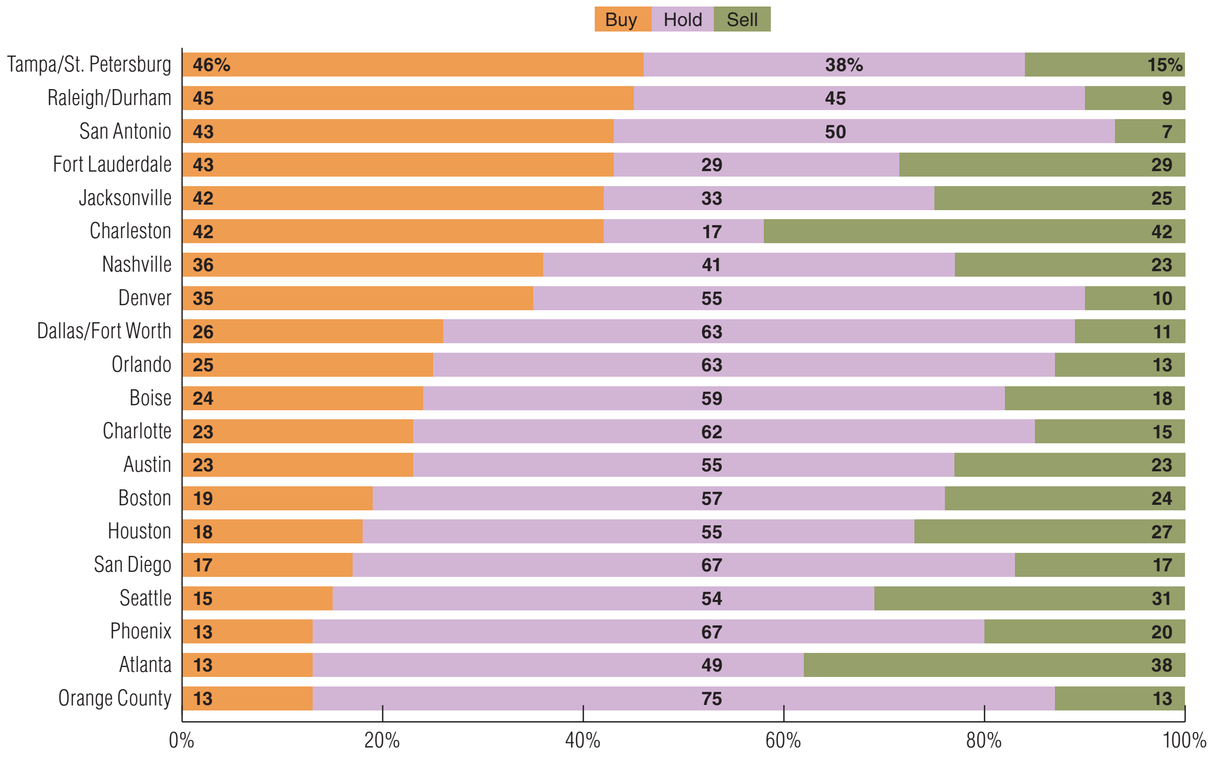
explode into prominence or popularity. So it is with the five metro areas in this new category. All are affordable smaller markets with between 1 million and 2 million residents. But their defining attribute is their tremendous and sustained population and job growth, which is well above national averages. These are true magnet markets, particularly for educated millennials. Over the past two years, the number of residents in these metro areas has grown by an average of 3.6 percent, more than four times the U.S. population growth of 0.8 percent over the same period.

Despite their relatively modest size, all the Supernovas have above-average levels of economic diversity and white-collar employment, factors that explain their strong investor appeal and should help them sustain further high growth in the years ahead. The triumvirate of Nashville, Raleigh/Durham, and Austin took three of the four top-rated spots in the 2022 survey, just a touch shy of their sweep of the top three places last year.

But perhaps most surprising has been the surge of Boise to the top ranks of U.S. metro areas. Boise has ranked among the top 20 markets for the past two years despite a population of fewer than 800,000 people—the only market in the top ranks with under 1 million people; the other 19 markets average 3.8 million. Boise is seeing an influx of migrants from California, Washington state, and other high-priced markets. The Boise metro area population grew by 5.6 percent last year alone.

Austin has long been among the brightest stars in the constellation and a darling for investors and developers alike, first breaking into the Top 10 markets to watch in 2009. Yet, the metro area has not rested on its laurels and continues to power forward with the fastest growth of any metro area in our coverage universe, despite pushing the upper limits of a medium-sized city. Similarly, Raleigh/Durham and Nashville continue their strong growth. Though their collective size is less than that of Houston and barely larger than that of Atlanta, investment and development opportunities abound in these three metro areas, thanks to boomlike growth: together, they grew by almost 10 percent over the past three years alone, adding close to a half million residents.

Exhibit 2-9 **U.S. Retail Property Buy/Hold/Sell Recommendations**



Source: *Emerging Trends in Real Estate 2022* survey.

Note: Cities listed are the top 20 rated for investment in the retail sector; cities are ordered according to the percentage of “buy” recommendations.

The Establishment

The Establishment markets have long been the nation's economic leaders. With a population base equal to the Magnets, these metro areas produce 44 percent more economic output, primarily due to the outsized contributions of the nation's gateway markets, which we now refer to as the Knowledge and Innovation Centers. These markets include the central cities and nearby markets for Boston, Chicago, Los Angeles, New York City, Silicon Valley, and the San Francisco Bay Area.

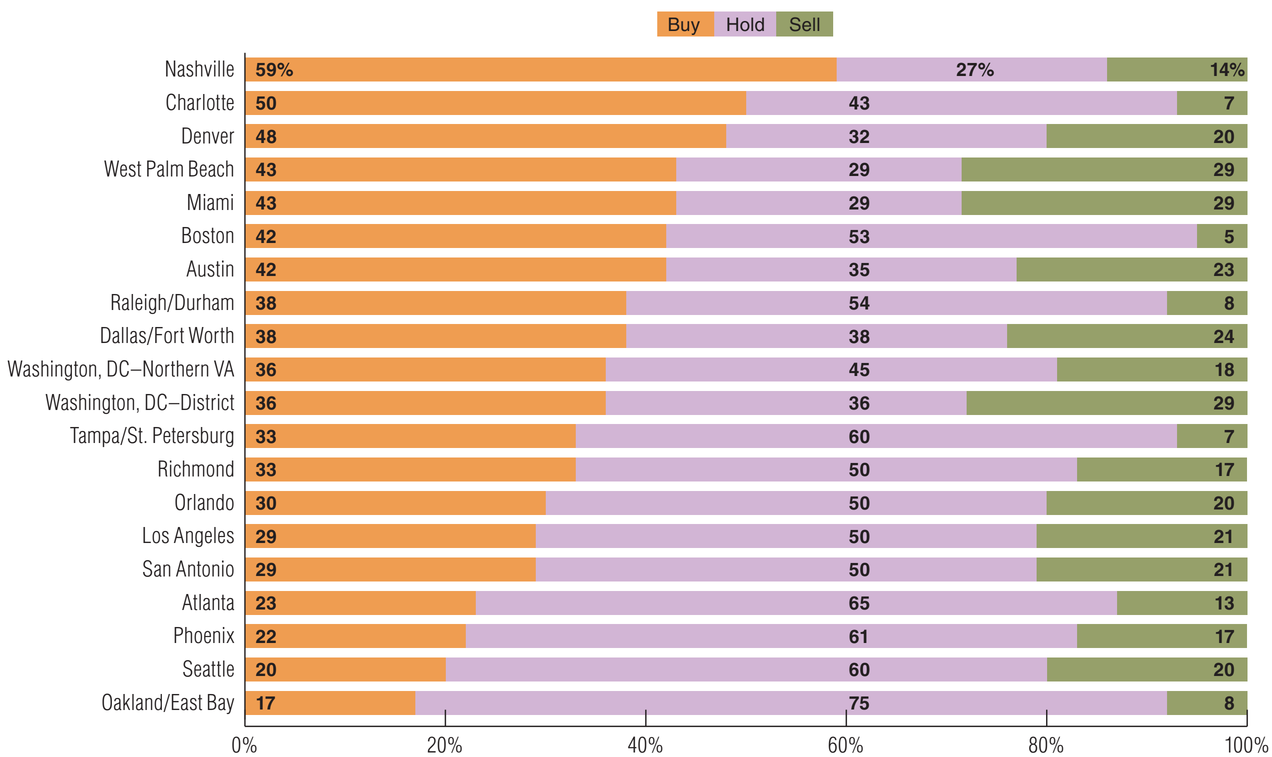
Though growing more slowly than the Magnet markets, the Establishment markets still offer tremendous opportunities. This group's average rating is second among our four major groupings. However, the appeal of these markets to investors and developers has waned in recent years as growth has slowed across many of these markets while challenges have increased.

Multitalented Producers. Though all the Establishment markets are large and economically varied, some are more diverse than others, specifically the Multitalented Producers metro areas of Chicago, Los Angeles, San Jose, and Seattle. This category was fine-tuned from last year to acknowledge that these markets distinctively produce a wide range of both goods and services, ranging from airplanes and software in Seattle to films and apparel in Los Angeles.

Though these metro areas all have a significant tech presence and a substantial STEM (science, technology, engineering, and mathematics) employment base, office-based jobs generally make up a smaller share of employment than in the Magnets or other Establishment markets. But make no mistake: workers here tend to be productive, with per capita GDP ranking the second highest of any of the subgroups. Though their elevated costs of doing business and getting deals done limit their appeal for some real estate professionals, the Multitalented Producers nonetheless continue to attract a disproportionate share of investment dollars.

Their overall rating in the survey increased substantially over last year, with the average ranking jumping 14 places, the highest of any subgroup. Seattle led the improvement, leaping back toward the top again after an improbable fall to 34th last year,

Exhibit 2-10 **U.S. Office Property Buy/Hold/Sell Recommendations**



Source: *Emerging Trends in Real Estate 2022* survey.

Note: Cities listed are the top 20 rated for investment in the office sector; cities are ordered according to the percentage of "buy" recommendations.

though this Northwest metro area typically rates among the top 10 markets. One local interviewee said Seattle's "expanding diversity of population is a catalyst to attracting more diversity and the best talent," while another points to the "rich history of entrepreneurship from Boeing to Paccar"—not to mention Amazon, Microsoft, Weyerhaeuser, and retail giants Starbucks, Nordstrom, and Costco, among other local legends. Significant projects underway include a major redevelopment of the central waterfront and expansion of the convention center, as well as headquarters projects for Microsoft and Amazon.

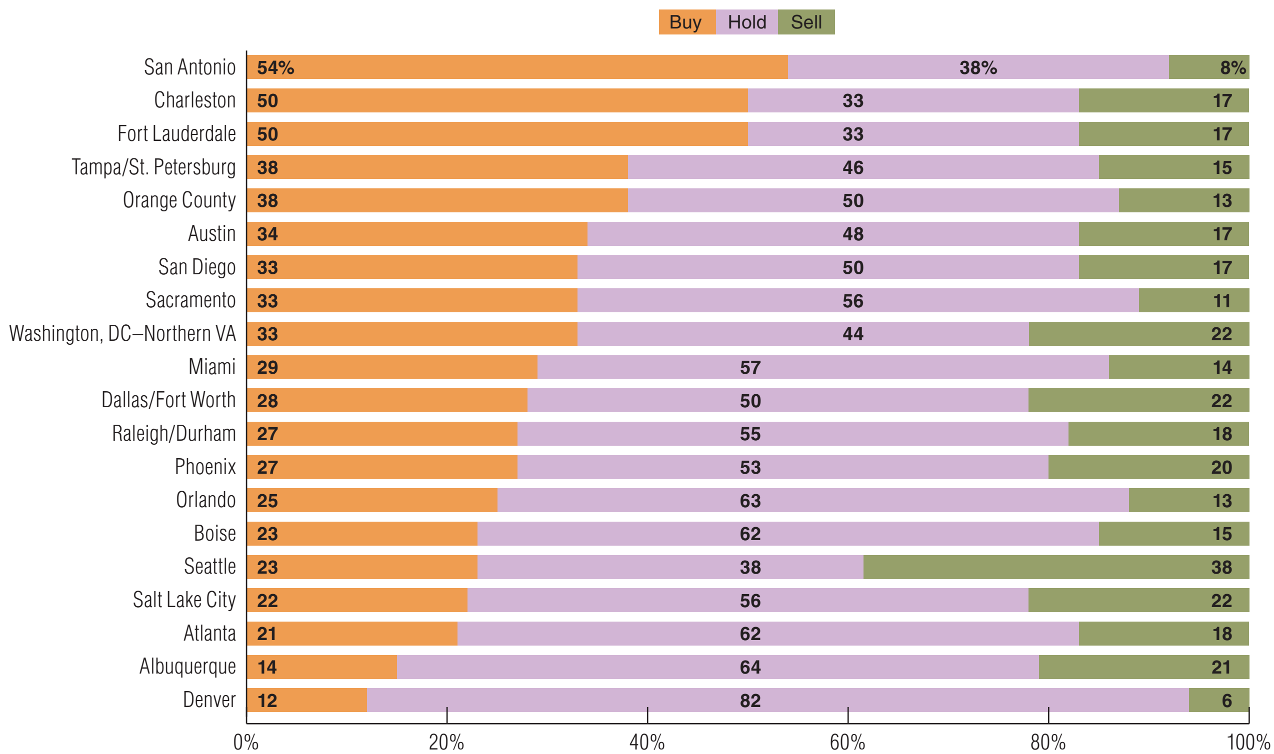
Knowledge and Innovation Centers. This new grouping serves as the focus of intellectual capital in the economy, whether in social media (San Francisco), finance (Manhattan), biosciences (Boston), or think tanks (Washington, D.C.). With the most educated workforces in the county, these innovation centers are by far the most productive, with per capita GDP more than twice that of any other *Emerging Trends* subgroup.

No surprise, then, that this group also has some of the most expensive housing in the country, along with the highest costs of doing business. Lofty asset prices have certainly cut investor appeal for most of these markets, especially as growth slowed in recent years. These markets also bore the brunt of outmigration from dense, expensive CBDs during the pandemic, precipitating atypically severe market downturns. However, the naysayers might have been too quick to pronounce the demise of these markets, which are already staging rapid recoveries as the economy has reopened. As with the Multitalented Producers, the average rating for this group rose significantly this year: Manhattan, San Francisco, and Washington, D.C., all rose by at least 15 places in the rankings.

Nonetheless, this group remains somewhat out of favor with investors, with only Boston among the 20 top-rated markets. Boston has leveraged its region's world-class concentration of higher education to become a world leader in life sciences. Much of the development is in its new Seaport submarket, augmenting a major cluster across the Charles River in Cambridge.

Major Market–Adjacent. This renamed group includes the markets surrounding high-cost CBDs in Los Angeles, Miami, New York City, San Francisco, and Washington, D.C. Though most are suburban in character, some are more urban.

Exhibit 2-11 **U.S. Hotel Property Buy/Hold/Sell Recommendations**



Source: *Emerging Trends in Real Estate 2022* survey.

Note: Cities listed are the top 20 rated for investment in the hotel sector; cities are ordered according to the percentage of "buy" recommendations.

Moreover, several are or contain metropolitan statistical areas (MSAs) or divisions in their own right: Northern New Jersey (Newark, NJ/PA metropolitan division), Inland Empire (Riverside/San Bernardino/Ontario, California, MSA), and suburban Maryland (Frederick/Gaithersburg/Rockville metropolitan division), among others. Recognition of the diverse geographies of these markets prompted the change from Suburbs Ascending to the more appropriate Major Market–Adjacent.

Many of these markets benefited, at least temporarily, from the out-migration from their neighboring CBDs during the pandemic, though it is still too early to assess the long-term gains. In any case, their prospects have dimmed somewhat in the eye of survey respondents. Their average rating this year fell more than for any other subgroup, and only three markets remain rated among the top 20—the Northern Virginia suburbs of Washington, D.C., which was the top-rated market in the group, and Orange County and the Inland Empire, both located south of Los Angeles. Northern Virginia is a leading hub for data centers: Amazon Web Services, Google, and Microsoft all have a massive cloud computer presence in the market and are expanding their operations in response to pandemic-fueled increases in demand for cloud capacity.

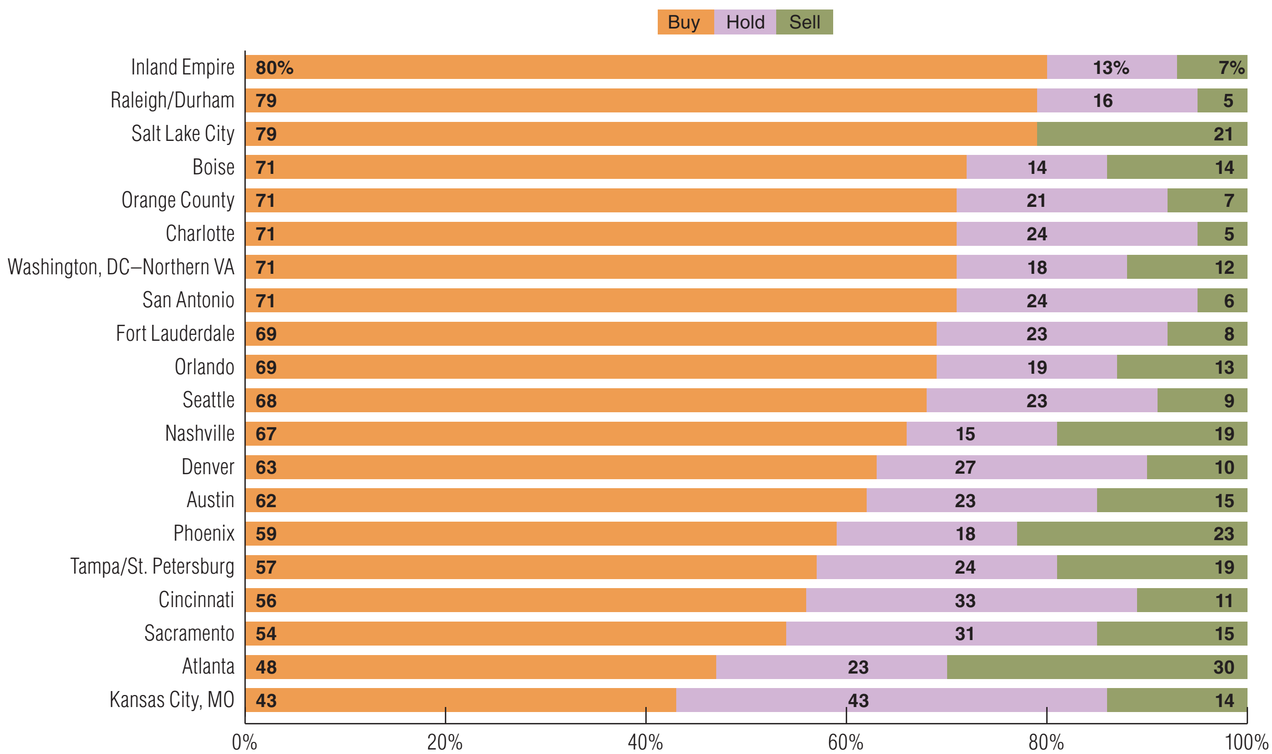
Niche

As befitting their moniker, Niche markets are generally smaller or less economically diverse than the Magnets and Establishment markets but typically have a dominant economic driver that supports stable economic growth.

Boutiques are smaller cities with innovative or unique developments that coordinate well with their economic and demographic profiles. However, the demographics in these markets—with fewer millennials and more seniors—tend to be less favorable for economic growth. Eds and Meds takes its name from an oft-used term to describe areas with sizable education and/or health care facilities. And finally, Visitor and Convention Centers markets focus on tourism, conventions, and in some cases, the retirement and second-home market.

Boutiques. These are smaller markets with lively downtowns; diversity in leisure, cultural, and natural/outdoor amenities; and

Exhibit 2-12 **U.S. Multifamily Property Buy/Hold/Sell Recommendations**



Source: *Emerging Trends in Real Estate 2022* survey.

Note: Cities listed are the top 20 rated for investment in the multifamily sector; cities are ordered according to the percentage of "buy" recommendations.

stable economic bases that withstood the COVID-19 downturn better than many markets. These markets offer a lower cost of living and cost of doing business in a diverse range of settings, primarily noncoastal. Chattanooga, Des Moines, Greenville, Knoxville, Omaha, and Portland (Maine) all have populations under 1 million, and all maintained their positive in-migration during the pandemic, indicating their appeal.

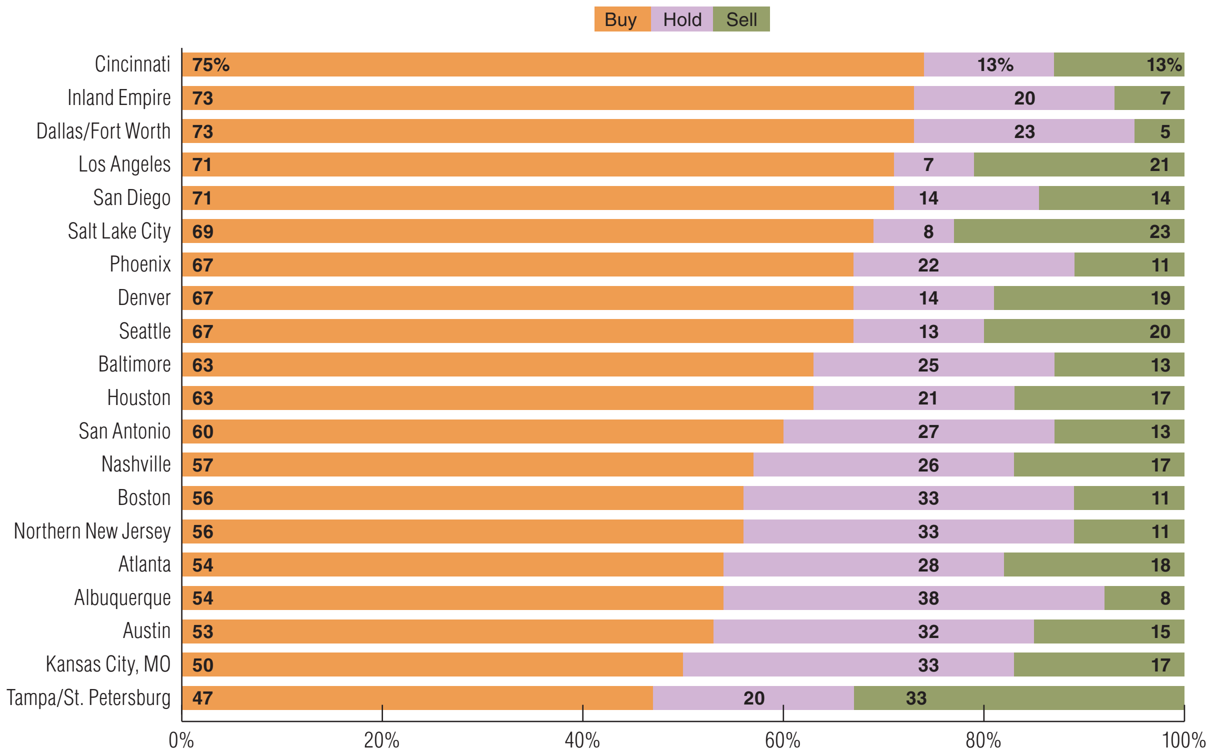
Richmond is the top-rated market in this group and continues to attract substantial residential and commercial development. The market made waves in real estate circles in 2020 when CoStar Group announced plans to double its presence in the city through relocation and expansion.

Eds and Meds. Before the pandemic, Eds and Meds markets were envied for their desirable combination of stability (large universities) and growth (health care). Though these sectors remain as important as ever, COVID-19 and the ensuing mitigation measures raised the question of how much these services need to be conducted in person. However, demand for both education and health care—and the facilities that house them—is likely to resume its ascent as the pandemic eases. Remote learning and telemedicine, although promising technologies, do not appear likely to dent the demand for eds and meds space anytime soon. Nonetheless, ratings for this group fell this year, with only newcomer Philadelphia ranking in the top 30.

This category also includes Baltimore, Columbus, Gainesville, Madison, Memphis, Pittsburgh, and Tallahassee. Each of these metro areas has one or more universities in the *U.S. News & World Report* top 100, while Memphis has St. Jude Children's Research Hospital, the top-ranked children's specialty hospital in the United States. Cities in the Eds and Meds category typically are more affordable markets. Philadelphia—the largest market in this category—also has significant employment in telecommunications and financial services, among other sectors, and both it and Pittsburgh, at the other end of Pennsylvania, have numerous corporate headquarters in various sectors.

Visitor and Convention Centers. These Sun Belt (or just sunny, in the case of Honolulu and Las Vegas) markets draw substantial numbers of visitors, whether for conventions or leisure, while several markets in this category also have substantial bases of retirement/second-home markets. Markets in this

Exhibit 2-13 **U.S. Industrial Property Buy/Hold/Sell Recommendations**



Source: *Emerging Trends in Real Estate 2022* survey.

Note: Cities listed are the top 20 rated for investment in the industrial sector; cities are ordered according to the percentage of "buy" recommendations.

category include Cape Coral/Fort Myers/Naples, Charleston, Daytona Beach, Honolulu, Las Vegas, New Orleans, Orlando, and Virginia Beach/Norfolk. All have significantly more tourism employment (relative to market size) than the U.S. average, with Las Vegas the most travel-dependent market in the country. These markets all endured significant challenges resulting from COVID-related restrictions, particularly those that rely on air travel, business demand, or both. Overall, this grouping has seen less recovery than any category in the survey, and ratings fell slightly overall as a group.

Orlando is one high-performing outlier, jumping back into the top 20, where it had ranked for the three years from 2018 to 2020. Though its outlook undoubtedly suffered last year as travel slumped, Orlando benefits from being a strong drive-to destination. Nonetheless, continuing waves of new infections could delay and mute the recovery in Orlando and the other tourism-dependent markets. Moreover, as was highlighted last year and is discussed more fully in chapter 3, business travel to meetings and conventions remains depressed and unlikely to recover soon, limiting bookings in Las Vegas and other convention-oriented cities.

Backbone

The final group comprises a wide variety of interesting and enjoyable places to live and work. Though generally rated relatively lower in the *Emerging Trends* survey, many of these metro areas offer select investment development/redevelopment opportunities. These 18 Backbone markets have more than 30 million residents among them. Although markets in the Affordable West subgroup are growing sharply, most of the Backbone markets are slower growing but benefit from moderate housing and business costs.

The Affordable West. Beyond the pricey coastal markets in Los Angeles, the San Francisco Bay Area, and San Diego, several small- to medium-sized cities offer attractive places to live at a more affordable price. Notably, they are among the fastest-growing metro areas outside the Magnets. These include Albuquerque; Spokane, Washington/Coeur d'Alene, Idaho; Tacoma; and Tucson.

This group also includes Sacramento, which vaulted into the top 30 for overall prospects. "One of things that makes Sacramento attractive is that housing is available here that may not be available in other parts of the state," said one local interviewee. "Sacramento is still, in comparison to other parts of the state, relatively reasonable"—a particular advantage when workers can work from home with firms based in the Bay Area, about 90 minutes away.

Determined Competitors. These diverse markets tend to be strong ancillary locations in their regions, with several successfully revitalizing their downtowns and neighborhoods. This group includes Indianapolis, Kansas City, Louisville, and Oklahoma City—all very affordable with a favorable quality of life. Significantly, all maintained population growth through the pandemic, and all are seeing faster job recovery than the national average—a positive sign for future economic growth. Nonetheless, the overall ratings for this group fell in the *Emerging Trends* survey this year.

Birmingham has one of the tightest labor markets in the nation, due to the city's diversified economy. Once known for its steel industry, the metro area benefits from a strong education system and a qualified workforce, according to local interviewees, and now has substantial employment in the health care, telecommunications, and education sectors.

Reinventing. Reinventing markets are eastern and midwestern cities that are seeking to modernize their economic base. Many were manufacturing centers and are now moving to a more sustainable mix of education, health care, and technology. These markets include Buffalo, Cincinnati, Cleveland, Detroit, Hartford, Milwaukee, Providence, and St. Louis. Though the economic rebound in most of these markets lags the national recovery, the federal government's stimulus programs have helped cushion the downturn. Detroit's unemployment rate has fallen below the national average for the first time in two decades, thanks in part to strength in the auto sector, still a vital force in the local economy. Its rating improved modestly this year over last.

Cincinnati continues to be the highest-rated market in this group, boasting the headquarters offices of several global companies, including Kroger, Macy's, and P&G. Among recent significant projects are two new entertainment venues: the ICON Music Center in Cincinnati and Ovation Music Pavilion in nearby Newport, Kentucky.

Exhibit 2-14 **Economy**

	2022 population*			Population distribution (% of total population)				Business costs					2022 employment*		Industry location quotient***			
Market	Total (millions)	5-year projected change (000s)	5-year annual projected % change	Ages 0–24	Ages 25–44	Ages 45–64	Ages 65 and older	2022 real GMP per capita	Real GMP per capita 5-year projected annual change	2022 real per capita income*	Real per capita income 5-year projected annual change	Cost of doing business**	Total (000s)	5-year annual projected change	STEM employment	Office-using employment	Goods-producing employment	Tourism employment
United States	**333.15**	**9,873.8**	**0.6%**	**31%**	**27%**	**25%**	**17%**	**$60,966**	**1.6%**	**$53,515**	**2.0%**	**100.0**	**152,070**	**1.0%**	**1.0**	**1.0**	**1.0**	**1.0**
Albuquerque	0.94	33.0	0.7%	30%	28%	24%	18%	$46,407	1.3%	$45,583	1.9%	95.6	394	0.8%	1.2	0.9	0.8	1.1
Atlanta	6.21	360.0	1.1%	32%	29%	25%	14%	$65,861	1.7%	$54,974	2.1%	97.4	2,892	1.5%	1.1	1.3	0.8	1.0
Austin	2.41	252.5	2.0%	35%	31%	22%	12%	$68,777	1.7%	$61,078	2.1%	102.2	1,198	2.4%	1.7	1.4	1.0	1.1
Baltimore	2.85	33.2	0.2%	30%	27%	26%	18%	$72,408	1.7%	$59,349	2.1%	111.2	1,425	0.7%	1.4	1.0	0.8	0.8
Birmingham	1.18	24.0	0.4%	30%	27%	25%	17%	$52,370	1.5%	$57,953	1.8%	87.6	549	0.6%	0.7	0.9	1.0	0.9
Boise	0.82	78.7	1.9%	32%	28%	24%	16%	$45,599	1.0%	$48,316	1.7%	93.0	370	1.7%	1.1	1.0	1.3	1.0
Boston	4.97	91.5	0.4%	29%	28%	26%	18%	$93,426	1.9%	$69,238	2.3%	126.1	2,778	1.1%	1.6	1.3	0.8	0.9
Buffalo	1.17	(25.2)	-0.4%	28%	25%	26%	21%	$57,566	1.4%	$52,256	2.0%	97.4	567	-0.1%	0.8	0.8	0.9	1.0
Cape Coral/Fort Myers/Naples	1.22	116.5	1.8%	25%	23%	25%	28%	$40,137	1.3%	$66,293	2.0%	100.3	444	1.7%	0.4	0.9	1.2	1.6
Charleston	0.83	51.9	1.2%	31%	28%	25%	17%	$51,735	1.4%	$53,534	2.1%	97.3	381	1.4%	1.0	1.0	1.0	1.2
Charlotte	2.69	179.1	1.3%	31%	28%	25%	15%	$61,775	1.5%	$57,154	2.0%	98.1	1,274	1.6%	1.1	1.3	1.1	1.1
Chattanooga	0.58	16.8	0.6%	29%	26%	26%	20%	$51,044	1.3%	$51,666	1.8%	88.1	268	0.4%	0.7	0.8	1.3	1.0
Chicago	9.45	(18.8)	0.0%	30%	28%	25%	16%	$70,667	1.6%	$60,724	2.1%	102.2	4,646	0.8%	0.9	1.1	0.9	0.9
Cincinnati	2.24	23.5	0.2%	32%	26%	25%	17%	$64,563	1.5%	$60,577	2.0%	91.5	1,123	0.6%	1.0	1.0	1.1	1.0
Cleveland	2.05	(0.4)	0.0%	27%	25%	27%	21%	$60,510	1.4%	$60,201	1.9%	91.0	1,050	0.6%	0.9	0.9	1.1	0.9
Columbus	2.18	77.1	0.7%	33%	29%	24%	14%	$59,774	1.2%	$56,919	1.8%	92.4	1,133	1.0%	1.1	1.1	0.8	0.9
Dallas/Fort Worth	7.94	587.1	1.4%	34%	30%	24%	13%	$67,485	1.1%	$56,935	1.7%	99.1	3,942	1.6%	1.2	1.3	1.0	0.9
Deltona/Daytona	0.69	35.0	1.0%	26%	22%	27%	26%	$30,407	1.6%	$45,395	1.6%	99.7	209	0.8%	0.4	0.7	0.9	1.4
Denver	3.03	166.1	1.1%	29%	32%	24%	15%	$75,321	1.5%	$63,419	1.9%	107.2	1,575	1.3%	1.5	1.3	0.9	1.0
Des Moines	0.69	39.7	1.1%	33%	30%	23%	14%	$72,163	1.4%	$57,752	1.8%	93.3	384	1.2%	1.1	1.3	0.9	0.9
Detroit	4.33	(8.7)	0.0%	29%	26%	27%	19%	$58,191	1.5%	$56,210	2.1%	99.7	2,000	0.6%	1.4	1.2	1.2	0.8
Fort Lauderdale	1.95	95.5	1.0%	26%	28%	27%	19%	$56,018	1.6%	$46,960	1.7%	115.6	860	1.7%	0.7	1.3	0.7	1.0
Gainesville	0.29	1.6	0.1%	37%	25%	21%	17%	$51,059	1.9%	$49,264	2.6%	97.6	152	0.6%	0.8	0.7	0.5	0.9
Greenville, SC	0.93	31.1	0.7%	31%	25%	25%	19%	$49,464	1.4%	$49,235	2.0%	91.5	432	1.0%	1.1	1.0	1.4	1.0
Hartford	1.21	2.8	0.0%	29%	25%	27%	20%	$83,349	1.2%	$61,055	1.8%	109.7	636	0.2%	1.2	1.0	1.0	0.7
Honolulu	0.98	4.6	0.1%	29%	27%	23%	20%	$67,371	1.8%	$46,978	2.3%	155.0	449	1.1%	0.9	0.8	0.6	1.5
Houston	7.29	533.2	1.4%	34%	30%	24%	12%	$71,692	1.4%	$55,757	2.1%	101.2	3,178	1.6%	1.1	1.0	1.3	1.0
Indianapolis	2.14	108.7	1.0%	32%	29%	24%	15%	$66,143	1.1%	$61,164	1.6%	93.2	1,109	1.1%	1.0	1.0	1.0	0.9
Inland Empire	4.77	247.1	1.0%	34%	28%	23%	14%	$40,788	1.6%	$39,782	2.0%	113.8	1,626	1.8%	0.5	0.6	1.1	1.1
Jacksonville	1.62	99.5	1.2%	30%	27%	26%	17%	$52,572	1.4%	$56,896	2.2%	100.1	754	1.3%	1.1	1.2	0.8	1.1
Jersey City	0.67	17.7	0.5%	30%	33%	25%	12%	$71,279	1.3%	$54,515	2.0%	126.6	284	0.6%	0.9	1.3	0.4	0.6
Kansas City, MO	2.20	62.4	0.6%	32%	28%	24%	16%	$61,264	1.4%	$58,090	1.8%	94.9	1,111	0.8%	1.2	1.1	0.9	0.9
Knoxville	0.92	27.7	0.6%	29%	25%	26%	20%	$47,291	1.3%	$51,688	1.5%	88.4	415	0.8%	1.0	1.0	1.1	1.0
Las Vegas	2.36	141.0	1.2%	30%	29%	25%	16%	$52,224	2.6%	$48,020	2.6%	101.5	1,017	2.7%	0.5	1.0	0.8	2.6
Long Island	2.93	(31.9)	-0.2%	28%	26%	27%	20%	$60,510	2.0%	$61,910	2.1%	126.6	1,319	0.6%	0.9	0.8	0.9	0.9
Los Angeles	9.86	(51.0)	-0.1%	29%	30%	25%	16%	$78,462	2.0%	$54,798	2.3%	123.9	4,424	0.5%	0.9	1.0	0.8	1.0
Louisville	1.32	32.4	0.5%	30%	27%	26%	18%	$54,367	1.2%	$56,801	2.0%	89.4	675	0.8%	0.8	0.9	1.3	0.9
Madison	0.69	24.8	0.7%	32%	27%	24%	16%	$73,477	1.6%	$62,553	2.1%	97.8	417	1.3%	1.7	1.0	1.1	0.8
Memphis	1.36	28.8	0.4%	32%	28%	25%	15%	$53,950	1.6%	$52,481	2.0%	88.9	661	0.6%	0.6	0.9	0.8	0.9

Sources: IHS Markit, U.S. Bureau of Labor Statistics.
*IHS Markit estimate for year-end 2022.
**Cost of doing business: national average = 100. Figures based on MSA-level data.
***Industry location quotient measures industry employment concentration by market—metro industry employment as a percentage of metro total, divided by national industry employment as a percentage of national total.

Exhibit 2-14 **Economy**

	2022 population*			Population distribution (% of total population)				Business costs					2022 employment*		Industry location quotient***			
Market	Total (millions)	5-year projected change (000s)	5-year annual projected % change	Ages 0–24	Ages 25–44	Ages 45–64	Ages 65 and older	2022 real GMP per capita	Real GMP per capita 5-year projected annual change	2022 real per capita income*	Real per capita income 5-year projected annual change	Cost of doing business**	Total (000s)	5-year annual projected change	STEM employment	Office-using employment	Goods-producing employment	Tourism employment
United States	**333.15**	**9,873.8**	**0.6%**	**31%**	**27%**	**25%**	**17%**	**$60,966**	**1.6%**	**$53,515**	**2.0%**	**100.0**	**152,070**	**1.0%**	**1.0**	**1.0**	**1.0**	**1.0**
Miami	2.68	126.5	0.9%	27%	28%	26%	19%	$60,796	1.4%	$49,019	1.8%	115.6	1,203	1.4%	0.7	1.1	0.6	1.1
Milwaukee	1.59	0.3	0.0%	31%	27%	25%	17%	$62,845	1.5%	$59,712	2.1%	96.5	856	0.7%	1.0	0.9	1.3	0.8
Minneapolis/St. Paul	3.74	117.4	0.6%	31%	28%	25%	16%	$70,937	1.6%	$60,650	2.1%	101.6	2,023	1.0%	1.3	1.1	1.1	0.8
Nashville	2.05	138.3	1.3%	32%	29%	24%	15%	$65,579	1.6%	$61,818	1.7%	95.1	1,079	1.6%	0.9	1.2	1.0	1.1
New Orleans	1.27	8.1	0.1%	29%	28%	25%	18%	$66,694	2.0%	$57,087	2.2%	91.9	555	1.1%	0.7	0.8	0.8	1.4
New York–Brooklyn	2.49	24.9	0.2%	31%	31%	24%	14%	$40,519	1.7%	$42,283	1.5%	126.6	830	1.3%	0.9	0.5	0.5	0.5
New York–Manhattan	1.58	4.5	0.1%	24%	37%	23%	17%	$429,129	2.3%	$157,785	3.2%	126.6	2,440	1.3%	0.9	1.9	0.2	0.7
New York–other boroughs	4.01	18.4	0.1%	30%	29%	25%	15%	$39,913	1.7%	$36,796	1.3%	126.6	1,177	1.1%	0.9	0.5	0.6	0.5
Northern New Jersey	6.65	79.8	0.2%	29%	25%	27%	18%	$71,599	1.3%	$58,914	1.8%	126.6	3,045	0.5%	0.9	1.0	0.8	0.7
Oakland/East Bay	2.81	90.2	0.6%	29%	29%	26%	16%	$81,935	2.0%	$62,155	1.8%	142.9	1,169	1.3%	1.7	1.0	1.3	0.9
Oklahoma City	1.44	57.3	0.8%	35%	28%	23%	15%	$58,993	2.1%	$52,370	2.1%	90.3	662	1.0%	0.9	0.8	1.0	1.1
Omaha	0.98	36.4	0.7%	34%	28%	23%	14%	$65,029	1.2%	$62,316	1.8%	93.7	512	0.8%	1.0	1.1	1.0	0.9
Orange County	3.17	52.2	0.3%	28%	29%	26%	17%	$82,300	2.1%	$60,797	2.4%	123.9	1,678	0.8%	0.9	1.2	1.2	1.1
Orlando	2.67	243.3	1.8%	31%	29%	24%	16%	$52,376	1.7%	$44,776	2.2%	103.4	1,283	3.3%	0.8	1.4	0.9	2.1
Philadelphia	6.24	61.6	0.2%	30%	27%	25%	18%	$69,581	1.6%	$61,610	2.1%	107.8	2,964	0.6%	1.1	1.0	0.8	0.8
Phoenix	5.04	348.6	1.3%	32%	28%	23%	17%	$53,600	1.7%	$49,494	2.1%	100.5	2,289	1.7%	1.1	1.3	1.0	1.0
Pittsburgh	2.33	(5.0)	0.0%	25%	25%	27%	23%	$67,048	1.7%	$63,458	2.1%	97.2	1,173	0.5%	1.1	1.0	1.0	0.9
Portland, ME	0.55	8.7	0.3%	25%	26%	28%	22%	$56,356	1.4%	$56,603	1.9%	107.4	293	0.7%	1.0	0.9	1.0	1.1
Portland, OR	2.55	93.1	0.7%	28%	31%	25%	16%	$68,238	1.3%	$55,966	1.9%	107.3	1,222	1.1%	1.4	1.0	1.3	0.9
Providence	1.67	12.2	0.1%	28%	26%	26%	19%	$50,267	1.5%	$53,389	2.0%	110.3	734	0.5%	0.9	0.8	1.0	1.0
Raleigh-Durham	2.72	176.5	1.3%	32%	28%	25%	16%	$64,592	1.6%	$56,960	2.0%	101.6	1,282	1.2%	1.5	1.1	1.0	0.9
Richmond	1.35	39.8	0.6%	30%	27%	26%	17%	$63,733	0.9%	$58,882	1.9%	96.6	682	1.1%	1.0	1.1	0.8	0.9
Sacramento	2.41	112.1	0.9%	31%	28%	24%	17%	$62,759	1.7%	$56,896	2.2%	113.2	1,051	1.4%	1.1	0.9	0.9	0.9
Salt Lake City	1.27	87.0	1.3%	35%	31%	22%	12%	$77,315	1.4%	$55,111	2.1%	100.2	792	1.5%	1.3	1.3	1.1	0.8
San Antonio	2.64	188.2	1.4%	33%	28%	24%	15%	$48,392	1.3%	$51,454	1.8%	93.1	1,116	1.6%	0.9	1.1	0.9	1.2
San Diego	3.34	53.6	0.3%	31%	30%	24%	16%	$76,233	2.1%	$55,050	2.4%	130.6	1,499	1.0%	1.4	1.1	1.1	1.1
San Francisco	1.60	41.7	0.5%	25%	32%	26%	18%	$212,709	2.5%	$107,143	2.7%	142.9	1,153	1.3%	1.7	1.9	0.6	0.9
San Jose	1.95	60.5	0.6%	31%	29%	25%	15%	$185,949	2.0%	$95,555	2.5%	139.6	1,148	0.9%	3.0	1.5	1.6	0.7
Seattle	3.17	139.3	0.9%	28%	32%	25%	15%	$121,536	1.9%	$74,415	2.3%	118.0	1,770	1.4%	2.0	1.2	1.2	0.9
Spokane, WA/ Coeur d'Alene, ID	0.79	42.2	1.1%	30%	27%	24%	20%	$64,592	1.6%	$47,609	1.0%	99.5	336	0.9%	0.7	0.8	1.0	1.0
St. Louis	2.81	(4.9)	0.0%	29%	26%	26%	18%	$59,101	1.5%	$61,931	1.9%	92.9	1,386	0.4%	1.0	1.0	1.0	0.9
Tacoma	0.93	46.2	1.0%	31%	29%	24%	15%	$49,459	0.7%	$45,571	1.6%	118.0	326	1.4%	2.0	0.7	1.1	1.0
Tallahassee	0.39	10.3	0.5%	36%	26%	22%	15%	$45,335	1.5%	$47,413	2.3%	96.7	188	0.9%	1.1	0.8	0.5	1.0
Tampa/St. Petersburg	3.29	161.8	1.0%	27%	26%	26%	21%	$50,937	1.5%	$49,792	1.8%	102.4	1,442	1.1%	0.9	1.3	0.9	1.0
Tucson	1.04	29.9	0.6%	29%	25%	24%	23%	$44,433	1.6%	$49,178	2.2%	94.6	391	1.1%	1.2	0.9	1.0	1.0
Virginia Beach/Norfolk	1.76	40.6	0.5%	32%	26%	25%	17%	$54,150	1.1%	$46,978	2.3%	97.5	795	0.7%	1.2	0.9	0.9	1.1
Washington, DC–District	0.72	18.1	0.5%	29%	38%	21%	12%	$189,099	1.8%	$69,121	2.4%	123.3	798	1.5%	1.9	1.1	0.2	0.6
Washington, DC– MD suburbs	1.35	37.2	0.5%	29%	27%	26%	17%	$79,170	1.8%	$70,262	2.1%	123.3	597	0.9%	1.9	1.3	0.7	0.8
Washington, DC– Northern VA	4.34	185.0	0.8%	31%	30%	25%	13%	$68,038	1.7%	$58,382	2.2%	123.3	1,966	1.5%	1.9	1.5	0.6	1.1
West Palm Beach	1.52	89.4	1.2%	25%	24%	25%	26%	$54,269	1.5%	$73,716	1.7%	115.6	650	1.4%	0.7	1.2	0.7	1.3
Westchester, NY/Fairfield, CT	2.70	0.0	0.0%	31%	26%	26%	18%	$73,437	1.9%	$80,431	2.0%	124.4	1,147	0.4%	0.9	0.9	0.8	0.9

Exhibit 2-15 **Housing**

	Households		Single-family market metrics				General market metrics			Multifamily metrics			
Market	2022 total* (000s)	5-year projected annual % change	% of owner-occupant households	% of all homes likely affordable to 4-person family earning 120% of AMI	Tenure cost proportion (own/rent)**	Single-family homes as % of new production	MSA AllTransit Score***	% of workers with commute of more than 1 hour	Permits per 100 HH added	% of renter-occupant households	Affordable and available rental units per 100 HH at 80% of AMI	Tenure cost proportion (rent/own)**	Multi-unit buildings as % of new production
United States	**130,440.0**	**1.1%**	**62.1%**	**53.0%**	**1.09**	**57.3%**	**4.0**	**7.3%**	**90.18**	**37.9%**	**92**	**0.97**	**42.7%**
Albuquerque	370.7	1.2%	66.8%	55.1%	1.14	80.3%	3.6	3.4%	229.95	33.2%	106	0.88	19.7%
Atlanta	2,340.9	1.4%	63.1%	50.1%	0.98	68.6%	2.5	4.2%	82.11	36.9%	99	1.02	31.4%
Austin	891.8	2.6%	58.1%	59.2%	1.11	55.6%	2.8	6.5%	124.70	41.9%	101	0.90	44.4%
Baltimore	1,095.9	0.7%	66.4%	51.8%	0.80	61.5%	4.2	4.3%	179.19	33.6%	104	1.26	38.5%
Birmingham	479.3	0.6%	69.1%	62.6%	0.88	77.9%	0.1	4.0%	—	30.9%	112	1.13	22.1%
Boise	298.7	2.2%	68.7%	45.5%	1.60	77.3%	1.8	7.4%	111.20	31.3%	93	0.62	22.7%
Boston	1,897.4	0.8%	61.7%	40.5%	1.19	38.5%	5.0	21.8%	107.22	38.3%	88	0.84	61.5%
Buffalo	504.8	0.1%	66.0%	72.3%	0.76	58.8%	3.9	14.2%	66.97	34.0%	101	1.31	41.2%
Cape Coral/Fort Myers/ Naples	510.7	2.4%	71.6%	35.6%	1.20	67.8%	2.1	6.3%	116.54	28.4%	77	0.84	32.2%
Charleston/ North Charleston	344.2	1.9%	65.9%	44.4%	1.19	69.7%	1.5	17.5%	112.01	34.1%	96	0.84	30.3%
Charlotte	1,033.6	1.7%	65.6%	69.8%	1.12	64.8%	2.2	10.3%	53.41	34.4%	103	0.90	35.2%
Chattanooga, TN/GA	233.4	1.0%	—	—	—	—	—	—	—	—	—	—	—
Chicago	3,650.8	0.4%	64.4%	64.3%	0.83	47.7%	5.1	11.6%	117.21	35.6%	96	1.20	52.3%
Cincinnati	882.0	0.7%	66.1%	82.2%	0.87	72.0%	2.5	14.0%	72.68	33.9%	104	1.15	28.0%
Cleveland	892.4	0.4%	65.0%	69.1%	0.72	85.8%	4.7	14.3%	84.99	35.0%	103	1.38	14.2%
Columbus	861.2	1.0%	61.4%	79.8%	0.91	48.7%	2.9	7.3%	67.82	38.6%	103	1.10	51.3%
Dallas/Fort Worth	2,860.8	1.8%	59.6%	66.1%	1.21	55.7%	2.8	12.1%	128.47	40.4%	100	0.82	44.3%
Deltona/Daytona Beach	301.5	1.5%	71.0%	60.7%	0.91	85.6%	2.4	7.0%	30.66	29.0%	79	1.09	14.4%
Denver	1,219.3	1.6%	63.6%	38.3%	1.33	50.6%	5.3	8.5%	106.32	36.4%	93	0.75	49.4%
Des Moines	272.6	1.6%	69.5%	82.1%	1.06	65.7%	2.6	7.5%	85.17	30.5%	105	0.95	34.3%
Detroit	1,754.9	0.5%	68.8%	63.7%	0.57	76.4%	2.8	5.9%	97.79	31.2%	98	1.76	23.6%
Fort Lauderdale†	758.6	1.2%	59.4%	59.0%	0.96	36.3%	5.2	5.3%	80.94	40.6%	49	1.04	63.7%
Gainesville	118.8	0.8%	56.6%	59.7%	0.82	49.1%	4.0	8.1%	45.10	43.4%	—	1.22	50.9%
Greenville, SC	379.1	1.2%	67.8%	65.0%	1.11	79.4%	0.9	14.8%	40.23	32.2%	109	0.90	20.6%
Hartford	475.1	0.6%	66.7%	67.8%	0.75	58.4%	3.9	3.5%	310.26	33.3%	106	1.32	41.6%
Honolulu	318.9	0.6%	55.8%	20.0%	1.24	43.2%	6.4	5.2%	297.26	44.2%	67	0.81	56.8%
Houston	2,651.1	1.8%	60.4%	57.7%	1.00	69.5%	2.8	4.7%	116.44	39.6%	101	1.00	30.5%
Indianapolis	839.9	1.4%	65.1%	66.2%	0.80	70.0%	2.4	7.8%	61.76	34.9%	105	1.25	30.0%
Inland Empire	1,463.5	1.4%	62.7%	22.7%	1.40	76.1%	3.8	5.1%	88.50	37.3%	72	0.72	23.9%
Jacksonville	642.5	1.6%	63.9%	53.3%	0.98	76.1%	2.6	5.0%	116.72	36.1%	94	1.02	23.9%
Jersey City††	269.6	0.9%	51.8%	37.7%	1.12	21.7%	6.9	4.0%	147.72	48.2%	79	0.89	78.3%
Kansas City, MO/KS	868.8	0.8%	65.2%	80.2%	1.16	56.2%	2.3	10.3%	128.38	34.8%	102	0.86	43.8%
Knoxville	374.6	1.1%	69.0%	61.2%	0.96	77.7%	1.1	8.3%	48.84	31.0%	104	1.04	22.3%
Las Vegas	894.2	1.7%	53.1%	37.4%	1.27	74.0%	4.8	8.8%	87.92	46.9%	92	0.79	26.0%
Long Island††	973.2	0.5%	51.8%	37.7%	1.12	21.7%	6.9	4.0%	147.72	48.2%	79	0.89	78.3%
Los Angeles†††	3,323.7	0.2%	48.6%	25.0%	1.67	30.5%	6.2	6.2%	136.69	51.4%	56	0.60	69.5%
Louisville	533.0	1.0%	67.0%	63.3%	0.89	62.1%	2.9	3.8%	—	33.0%	105	1.12	37.9%
Madison	291.6	1.1%	60.9%	62.7%	1.06	39.7%	3.0	4.0%	73.45	39.1%	100	0.95	60.3%
Memphis	534.6	0.8%	60.1%	67.8%	0.99	73.1%	2.3	4.1%	114.75	39.9%	103	1.01	26.9%
Miami†	1,001.9	1.1%	59.4%	59.0%	0.96	36.3%	5.2	5.3%	80.94	40.6%	49	1.04	63.7%

Sources: HIS Markit forecast; U.S. Census Bureau; walkscore.com; CoStar; U.S. Bureau of Economic Analysis.

— = data unavailable

*IHS Markit estimate for year-end 2022.

**Tenure cost proportionality – This metric illustrates whether rental and ownership costs in a region are proportional compared with the median for the Index dataset. A score of 1 indicates costs are proportional (for example, both rental and ownership costs are 5% higher than the median). A score greater than 1 indicates that homeownership is comparatively more expensive than rental; a score less than 1 indicates that renting is disproportionately expensive.

***MSA AllTransit Score – This metric assesses the quality and reach of the region's transit system. Regions with higher AllTransit scores provide households with better transportation alternatives beyond the automobile and put more employment opportunities within reach. Ratings are on a scale of 1 to 10, with a higher value indicating better transit access.

Exhibit 2-15 **Housing**

	Households		Single-family market metrics				General market metrics			Multifamily metrics			
Market	2022 total* (000s)	5-year projected annual % change	% of owner-occupant households	% of all homes likely affordable to 4-person family earning 120% of AMI	Tenure cost proportion (own/rent)**	Single-family homes as % of new production	MSA AllTransit Score***	% of workers with commute of more than 1 hour	Permits per 100 HH added	% of renter-occupant households	Affordable and available rental units per 100 HH at 80% of AMI	Tenure cost proportion (rent/own)**	Multi-unit buildings as % of new production
United States	**130,440.0**	**1.1%**	**62.1%**	**53.0%**	**1.09**	**57.3%**	**4.0**	**7.3%**	**90.18**	**37.9%**	**92**	**0.97**	**42.7%**
Milwaukee	657.4	0.5%	60.1%	75.2%	0.84	50.0%	4.6	8.1%	131.30	39.9%	99	1.19	50.0%
Minneapolis/St. Paul	1,450.1	1.0%	70.0%	66.2%	1.04	54.3%	3.7	5.2%	99.34	30.0%	98	0.96	45.7%
Nashville	795.2	1.8%	65.6%	44.9%	1.19	65.5%	1.7	6.6%	108.67	34.4%	97	0.84	34.5%
New Orleans	498.3	0.8%	62.0%	53.4%	0.93	84.6%	3.4	3.7%	84.88	38.0%	95	1.08	15.4%
New York–Brooklyn††	975.9	0.6%	51.8%	37.7%	1.12	21.7%	6.9	4.0%	147.72	48.2%	79	0.89	78.3%
New York–Manhattan††	817.4	0.4%	51.8%	37.7%	1.12	21.7%	6.9	4.0%	147.72	48.2%	79	0.89	78.3%
New York–other boroughs††	1,495.5	0.4%	51.8%	37.7%	1.12	21.7%	6.9	4.0%	147.72	48.2%	79	0.89	78.3%
Northern New Jersey††	2,485.4	0.7%	51.8%	37.7%	1.12	21.7%	6.9	4.0%	147.72	48.2%	79	0.89	78.3%
Oakland/East Bay††††	1,020.2	0.8%	54.5%	16.5%	1.91	31.8%	6.8	19.8%	97.37	45.5%	79	0.52	68.2%
Oklahoma City	563.4	1.2%	63.7%	68.4%	0.81	85.9%	1.7	5.2%	120.26	36.3%	103	1.23	14.1%
Omaha	384.1	1.2%	65.4%	83.7%	0.91	66.5%	2.7	16.2%	124.44	34.6%	103	1.09	33.5%
Orange County†††	1,056.2	0.6%	48.6%	25.0%	1.67	30.5%	6.2	6.2%	136.69	51.4%	56	0.60	69.5%
Orlando	1,001.1	2.0%	60.5%	49.5%	0.99	62.5%	3.3	12.0%	121.17	39.5%	75	1.01	37.5%
Philadelphia	2,404.5	0.6%	67.3%	63.6%	0.58	54.0%	5.3	4.0%	112.22	32.7%	98	1.74	46.0%
Phoenix	1,957.5	1.8%	62.4%	40.0%	1.18	70.5%	4.1	6.6%	83.94	37.6%	94	0.84	29.5%
Pittsburgh	1,051.8	0.3%	69.8%	68.4%	0.75	74.6%	3.3	3.9%	82.41	30.2%	100	1.33	25.4%
Portland, ME	236.5	0.8%	—	—	—	—	—	—	—	—	—	—	—
Portland, OR	1,023.4	1.3%	61.9%	39.8%	1.31	49.0%	6.1	4.6%	109.40	38.1%	92	0.76	51.0%
Providence	647.6	0.4%	61.0%	57.0%	1.12	78.5%	3.5	7.5%	117.64	39.0%	101	0.89	21.5%
Raleigh/Durham	1,101.3	1.7%	64.1%	67.4%	1.17	69.1%	2.3	7.5%	72.23	35.9%	105	0.87	30.9%
Richmond	516.8	1.2%	65.6%	69.6%	0.97	69.7%	2.4	8.3%	315.27	34.4%	101	1.03	30.3%
Sacramento	882.6	1.1%	60.0%	34.3%	1.53	80.2%	4.0	5.1%	78.44	40.0%	86	0.65	19.8%
Salt Lake City	435.7	1.7%	67.4%	54.7%	1.44	57.7%	6.6	5.8%	175.21	32.6%	103	0.70	42.3%
San Antonio	897.7	1.8%	62.7%	63.6%	0.98	65.3%	4.5	4.1%	121.81	37.3%	97	1.03	34.7%
San Diego	1,172.9	0.8%	53.1%	28.5%	1.40	35.4%	5.3	4.1%	110.68	46.9%	64	0.71	64.6%
San Francisco††††	645.6	0.5%	54.5%	16.5%	1.91	31.8%	6.8	19.8%	97.37	45.5%	79	0.52	68.2%
San Jose	674.2	0.7%	56.9%	14.2%	1.94	28.4%	6.4	7.0%	143.63	43.1%	80	0.51	71.6%
Seattle	1,284.8	1.4%	60.0%	45.8%	1.28	39.3%	5.1	3.4%	113.62	40.0%	87	0.78	60.7%
Spokane, WA/ Couer d'Alene, ID	314.3	1.5%	67.4%	43.5%	1.12	60.5%	2.5	7.4%	101.05	32.6%	99	0.90	39.5%
St. Louis	1,167.8	0.4%	68.9%	60.7%	0.78	72.4%	3.8	3.8%	196.73	31.1%	105	1.28	27.6%
Tacoma	353.5	1.5%	60.0%	45.8%	1.28	39.3%	5.1	3.4%	113.62	40.0%	87	0.78	60.7%
Tallahassee	158.0	1.2%	58.2%	59.0%	0.86	57.2%	2.6	2.6%	155.33	41.8%	—	1.16	42.8%
Tampa/St. Petersburg	1,324.6	1.3%	64.2%	56.9%	0.82	65.2%	3.3	8.3%	124.98	35.8%	86	1.22	34.8%
Tucson	436.6	1.0%	62.4%	58.5%	1.10	76.8%	3.7	4.0%	114.51	37.6%	100	0.91	23.2%
Virginia Beach/Norfolk	682.1	1.1%	64.9%	71.3%	0.89	77.1%	1.7	5.5%	159.20	35.1%	109	1.12	22.9%
Washington, DC–District†††††	316.6	0.8%	63.5%	47.3%	0.95	52.7%	5.5	5.9%	111.32	36.5%	98	1.05	47.3%
Washington, DC–MD suburbs†††††	476.1	1.0%	63.5%	47.3%	0.95	52.7%	5.5	5.9%	111.32	36.5%	98	1.05	47.3%
Washington, DC–Northern VA†††††	1,579.1	1.3%	63.5%	47.3%	0.95	52.7%	5.5	5.9%	111.32	36.5%	98	1.05	47.3%
West Palm Beach†	623.3	1.7%	59.4%	59.0%	0.96	36.3%	5.2	5.3%	80.94	40.6%	49	1.04	63.7%
Westchester, NY/ Fairfield, CT	949.7	0.5%	67.3%	43.3%	1.36	40.4%	4.5	13.0%	157.28	32.7%	93	0.74	59.6%

†Other than household figures, data are for Miami/Fort Lauderdale/West Palm Beach, FL.
††Other than household figures, data are for New York City/Newark/Jersey City, NY/NJ/PA.
†††Other than household figures, data are for Los Angeles/Long Beach/Anaheim, CA.
††††Other than household figures, data are for San Francisco/Oakland/Hayward, CA.
†††††Other than household figures, data are for Washington/Arlington/Alexandria, DC/VA/MD/WV.

Exhibit 2-16 **Local Market Perspective: Local Public and Private Investment**

Weak		Average		Strong

Salt Lake City	4.21	Tacoma	3.30
Raleigh/Durham	4.12	Kansas City, MO	3.30
Tampa/St. Petersburg	4.07	Spokane, WA/Coeur d'Alene, ID	3.29
Charlotte	4.06	Northern New Jersey	3.28
Nashville	3.97	San Jose	3.25
Washington, DC–Northern VA	3.94	Des Moines	3.25
Phoenix	3.94	Minneapolis/St. Paul	3.25
Dallas/Fort Worth	3.87	Virginia Beach/Norfolk	3.23
Boston	3.82	Cleveland	3.23
Denver	3.81	Gainesville	3.22
Miami	3.78	Oklahoma City	3.22
Boise	3.76	Cape Coral/Fort Myers/Naples	3.22
Seattle	3.75	Sacramento	3.20
Orlando	3.72	Jersey City	3.18
Inland Empire	3.70	Portland, OR	3.18
Austin	3.65	Tucson	3.17
Fort Lauderdale	3.65	Tallahassee	3.14
West Palm Beach	3.64	New York–Manhattan	3.13
San Antonio	3.63	Los Angeles	3.10
Washington, DC–District	3.61	Detroit	3.10
Houston	3.58	Portland, ME	3.09
Chattanooga	3.57	Cincinnati	3.07
Washington, DC–MD suburbs	3.57	Pittsburgh	3.00
Atlanta	3.55	Providence	3.00
Greenville, SC	3.53	Westchester, NY/Fairfield, CT	3.00
Charleston	3.50	New Orleans	3.00
Knoxville	3.50	Deltona/Daytona Beach	3.00
Las Vegas	3.50	Oakland/East Bay	3.00
Philadelphia	3.48	Milwaukee	3.00
Jacksonville	3.48	Chicago	2.97
New York–Brooklyn	3.44	New York–other boroughs	2.93
Birmingham	3.41	Memphis	2.93
San Diego	3.40	Louisville	2.85
Madison	3.38	Long Island	2.82
Omaha	3.38	Baltimore	2.82
St. Louis	3.36	San Francisco	2.78
Indianapolis	3.36	Albuquerque	2.73
Richmond	3.33	Buffalo	2.71
Columbus	3.33	Hartford	2.71
Orange County	3.32	Honolulu	2.43

Source: *Emerging Trends in Real Estate 2022* survey.

Note: Ratings reflect perspective of local market participants.

Exhibit 2-17 **Local Market Perspective: Availability of Debt and Equity Capital**

Weak		Average		Strong

Austin	4.72	Philadelphia	3.83
Boston	4.67	Jersey City	3.82
Nashville	4.67	San Francisco	3.81
Dallas/Fort Worth	4.58	Spokane, WA/Coeur d'Alene, ID	3.80
Charlotte	4.56	Sacramento	3.79
Tampa/St. Petersburg	4.53	Kansas City, MO	3.77
Raleigh/Durham	4.48	Chattanooga	3.76
Denver	4.48	New York–other boroughs	3.73
Inland Empire	4.42	Honolulu	3.73
Seattle	4.40	Portland, OR	3.72
Phoenix	4.39	Knoxville	3.71
Atlanta	4.39	Tucson	3.67
San Diego	4.37	Omaha	3.67
Orange County	4.35	Cape Coral/Fort Myers/Naples	3.64
Charleston	4.30	Madison	3.63
Los Angeles	4.25	Richmond	3.60
San Jose	4.23	Minneapolis/St. Paul	3.59
Salt Lake City	4.22	Albuquerque	3.57
New York–Brooklyn	4.21	Gainesville	3.55
Oakland/East Bay	4.21	Louisville	3.53
Las Vegas	4.20	Pittsburgh	3.44
West Palm Beach	4.19	Des Moines	3.44
Miami	4.16	Memphis	3.44
Washington, DC–Northern VA	4.15	Baltimore	3.43
Boise	4.13	St. Louis	3.42
New York–Manhattan	4.12	Chicago	3.41
Fort Lauderdale	4.11	Cincinnati	3.38
Orlando	4.05	Westchester, NY/Fairfield, CT	3.31
Jacksonville	4.04	Milwaukee	3.30
Northern New Jersey	4.00	Detroit	3.27
Washington, DC–MD suburbs	4.00	Providence	3.23
Washington, DC–District	3.95	Virginia Beach/Norfolk	3.20
Indianapolis	3.94	Portland, ME	3.18
Tacoma	3.92	Cleveland	3.15
Long Island	3.89	Tallahassee	3.11
Birmingham	3.88	Oklahoma City	3.09
Greenville, SC	3.88	Deltona/Daytona Beach	3.00
Columbus	3.88	New Orleans	2.91
Houston	3.87	Hartford	2.87
San Antonio	3.86	Buffalo	2.64

Source: *Emerging Trends in Real Estate 2022* survey.

Note: Ratings reflect perspective of local market participants.

Exhibit 2-18 **Local Market Perspective: Local Economy**

Weak		Average		Strong

Austin	4.76	Honolulu	3.67
Nashville	4.65	Los Angeles	3.67
Raleigh/Durham	4.58	Oakland/East Bay	3.65
Dallas/Fort Worth	4.58	Tucson	3.64
Phoenix	4.51	Long Island	3.63
Boise	4.50	Portland, OR	3.62
Tampa/St. Petersburg	4.48	Tacoma	3.60
Charlotte	4.47	Cincinnati	3.59
Salt Lake City	4.46	Cape Coral/Fort Myers/Naples	3.58
Denver	4.38	New York–other boroughs	3.56
Seattle	4.36	New York–Manhattan	3.50
Atlanta	4.29	Birmingham	3.50
Inland Empire	4.28	Omaha	3.50
Boston	4.26	Minneapolis/St. Paul	3.47
Miami	4.25	Knoxville	3.47
Charleston	4.21	Louisville	3.44
Orlando	4.13	Philadelphia	3.43
Las Vegas	4.13	Portland, ME	3.42
West Palm Beach	4.12	Westchester, NY/Fairfield, CT	3.36
Fort Lauderdale	4.11	Jersey City	3.33
San Antonio	4.09	Virginia Beach/Norfolk	3.31
San Diego	4.05	Albuquerque	3.31
Washington, DC–Northern VA	4.05	Des Moines	3.30
Orange County	4.04	Cleveland	3.29
San Jose	3.95	Oklahoma City	3.27
Greenville, SC	3.95	Milwaukee	3.27
Chattanooga	3.94	Memphis	3.25
Columbus	3.88	Detroit	3.25
Jacksonville	3.83	Deltona/Daytona Beach	3.22
Washington, DC–MD suburbs	3.83	Pittsburgh	3.21
Washington, DC–District	3.79	San Francisco	3.21
Houston	3.78	Tallahassee	3.20
New York–Brooklyn	3.75	Providence	3.15
Indianapolis	3.74	Chicago	3.11
Spokane, WA/Coeur d'Alene, ID	3.73	Gainesville	3.08
Richmond	3.71	Baltimore	3.00
Kansas City, MO	3.71	St. Louis	2.92
Sacramento	3.70	New Orleans	2.91
Madison	3.70	Hartford	2.87
Northern New Jersey	3.67	Buffalo	2.50

Source: *Emerging Trends in Real Estate 2022* survey.
Note: Ratings reflect perspective of local market participants.

Attractive Characteristics of Market Subgroups, as Indicated by ULI Focus Groups

Major group	Subgroup	Examples of frequent focus group responses
Magnets	Super Sun Belt	Growth Lifestyle Business/development friendly
	18-Hour Cities	High development demand Quality of life Workforce—talent
	Supernovas	Growth Lifestyle Tech sector
The Establishment	Multitalented Producers	Infrastructure Tech sector Workforce—talent
	Knowledge and Innovation Centers*	Institutions—financial Large companies Economic resilience
	Major Market–Adjacent*	Education Logistics/location/accessibility Large population
Niche	Boutiques*	Growth—population Quality of life Business friendly
	Eds and Meds	Cost of living Logistics/location/accessibility Workforce
	Visitor and Convention Centers	Growth Quality of life Infrastructure
Backbone	The Affordable West*	Cost of living Location Market stability
	Determined Competitors	Cost of living Development opportunities Business/development friendly
	Reinventing	Cost of living/lifestyle Development opportunities Public incentives

Source: ULI district council focus groups.

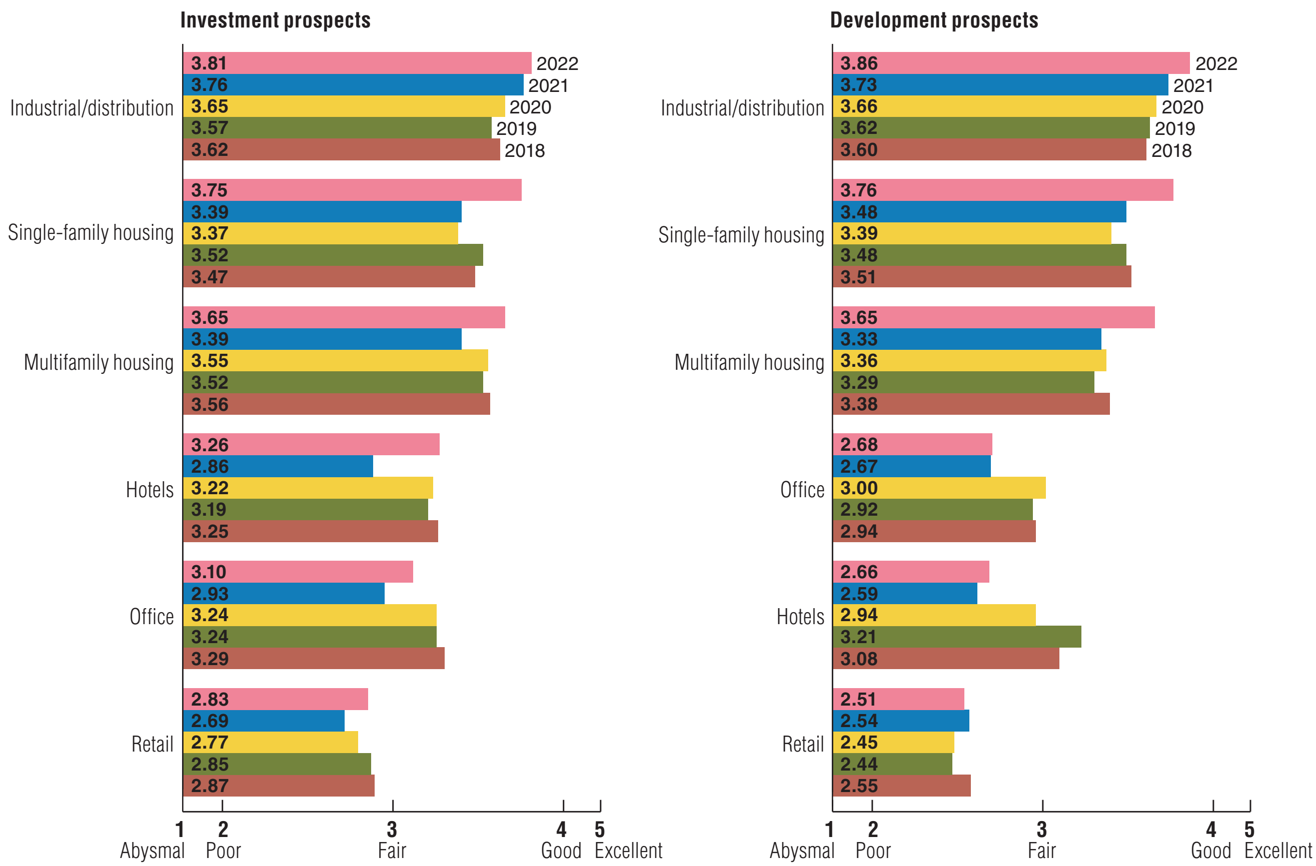
*Selection of responses from single market focus group within subgroup.

Property Type Outlook

"The single biggest story in real estate is the likely tremendous shift in global institutional investor allocations from other sectors to real estate."

No doubt about it: U.S. real estate is popular, both at home and abroad. Investment volumes are returning to pre-pandemic levels as cranes are back hoisting steel for new buildings. Market conditions also staged a dramatic reversal from a year ago across nearly all sectors and should continue to improve in the coming years, according to the outlooks from experts presented in the following pages, as well as the views expressed by industry participants surveyed for *Emerging Trends*.

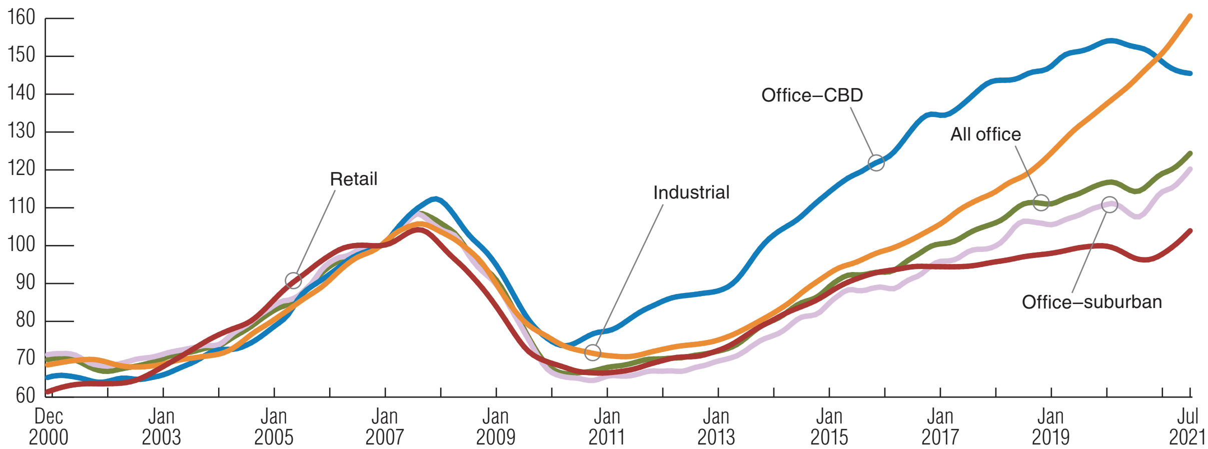
Exhibit 3-1 **Prospects for Major Commercial Property Types, 2018–2022**



Source: *Emerging Trends in Real Estate* surveys.

Note: Based on U.S. respondents only.

Exhibit 3-2 **Commercial Property Price Index, by Sector**



Source: Real Capital Analytics.

Perhaps the biggest industry story coming out of the pandemic is the resilience of the property sector. This resilience—on top of generally disciplined lending, building, and investing during the last cycle—helped sustain liquidity in the capital markets through the dramatic economic downturn and recovery in 2020. Add to that a robust economic forecast, and the industry is even more confident looking forward. Gauged by the *Emerging Trends* survey, investment prospects increased for every major property sector this year. Arguably more impressive, the investment outlook is healthier now for more than three-quarters of the subsectors than they were two years ago before the pandemic.

But developers and investors are being selective, and there is a growing divergence in the survey between the top sectors and the rest. Once again, industrial/distribution leads the pack, ranking first for both investment and development prospects, as it has for nine straight years dating back to 2014. Single-family and multifamily housing rank close behind. These sectors all have powerful demand drivers coming out of the pandemic and supply that struggles to keep pace, pushing rents and pricing back to record levels.

On the other hand, hotels, offices, and especially retail all lag well behind, though their prospects have improved over the past year. All suffer from demand challenges at least partly related to the economic downturn but also due to structural shifts accelerated by the pandemic. Though leisure travel is returning, particularly for drivable destinations, business travel is expected to be depressed for several years, dimming the outlook for a robust hospitality recovery.

The outlook in the office sector is likewise bifurcated. Prospects for central-city offices have declined as the swing to remote work has raised significant questions about future tenant demand. Yet, suburban offices are enjoying newfound support as leasing shifts to more affordable and less crowded markets. Investors also cannot get enough life sciences and medical office buildings. Finally, much of retail, though not all, continues to be out of favor. The significant shift to e-commerce during the pandemic compounded oversupply and other operational issues challenging the sector for almost a decade.

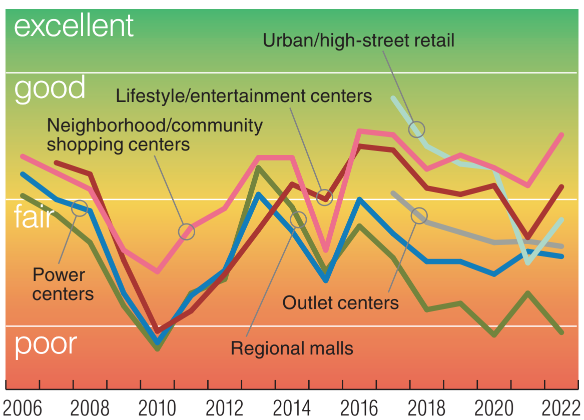
So, what can we expect in the next few years? Despite the vicissitudes we endured during the pandemic and its aftermath, the surprising answer is more of the same: continued strengthening of market conditions and capital markets across most sectors and markets, while many of the trends we have identified in *Emerging Trends* in recent years continue to reshape the industry.

Retail: Revived but Not Recovered

Whew! The retail sector managed to survive the pandemic recession largely intact, if not quite the same. In the immortal words attributed to Mark Twain: "The reports of my death are greatly exaggerated." After years of bad press and deteriorating market conditions, it seemed as if the pandemic would prompt the long-prophesied collapse of the retail sector. As one industry expert said last year, speaking for many industry participants: "If it wasn't a retail apocalypse before now, then this might be the real thing."

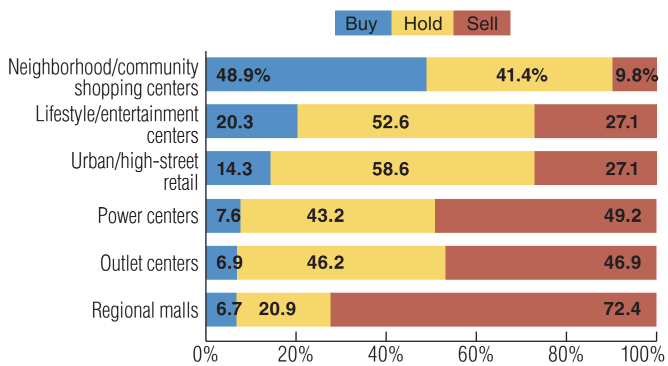
But something happened on the way to the funeral. The "corpse" emerged from the coffin looking—if not quite spry—then at least

Exhibit 3-3 **Retail Investment Prospect Trends**

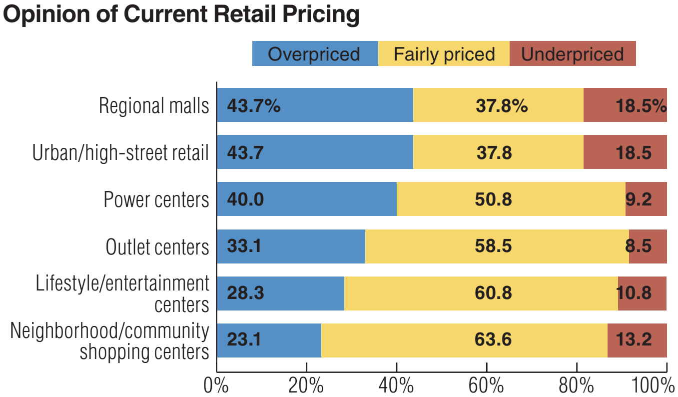


Source: *Emerging Trends in Real Estate* surveys.

Retail Buy/Hold/Sell Recommendations



Opinion of Current Retail Pricing



Source: *Emerging Trends in Real Estate 2022* survey.
Note: Based on U.S. respondents only.

very much alive. This, despite the fact the sector faced immense logistical, health, and staffing challenges presented by the pandemic, not to mention constantly changing regulations, shifting consumer demand, and unending uncertainty.

Much of the credit for retail's surprisingly strong performance through the pandemic must go to the unprecedented level of multiple government support packages, far exceeding expectations. This multifaceted largess ultimately totaled some $6 trillion in stimulus and other forms of federal government spending. Retailers benefited directly from government programs like the Payroll Protection Program (PPP), which provided a critical lifeline to millions of small businesses. And indirectly, the retail sector gained even more from the government's cash payments to households and unemployed workers. Combined with programs that allowed needy families to defer their rent or mortgage payments, consumers were able to keep spending through the recession.

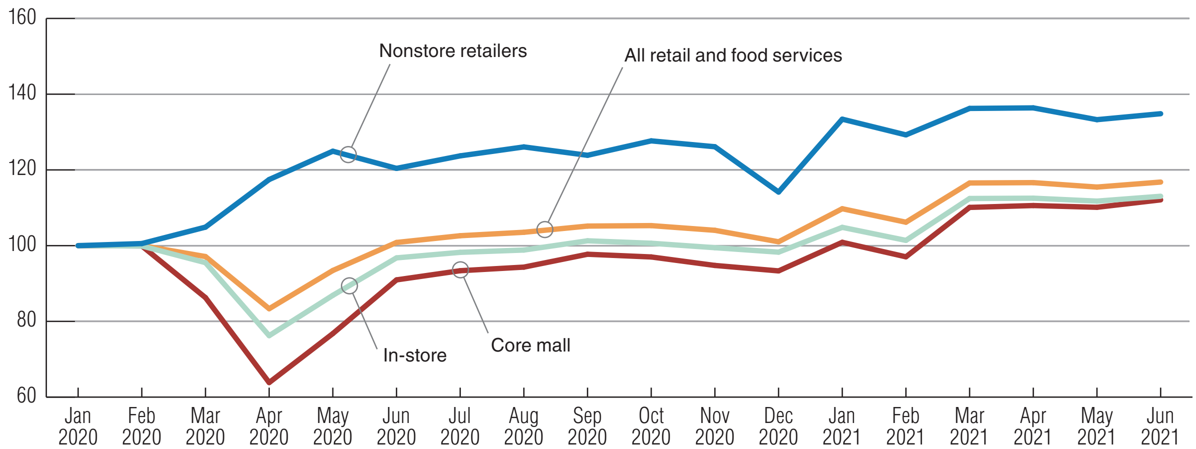
And spend they did—at least on retail goods, if not services like restaurant meals and haircuts. After plunging briefly during the lockdown at the beginning of the pandemic last spring, retail sales quickly rebounded, with overall sales (including e-commerce) recovering to pre-COVID levels by the fall and physical retailers matching pre-COVID levels by year-end. Retail spending has only continued to grow from there.

The Need for Immediate, Radical Change

But retailers' collective resolve and adaptability were also essential for the sector's bravura performance. No property sector had to adapt its ways of doing business more quickly or more extensively. Retailers had to reengineer, virtually overnight, the entire in-store shopping experience while dramatically scaling up home delivery and curbside pickup of more products like groceries and prepared food. At the same time, many retailers had to revamp their supply chain to address severe supply bottlenecks and shifting consumer demand. Quite a lift.

Physical changes also were required to meet operational shifts. E-commerce and BOPIS (buy online, pickup in store) required reconfiguring store layouts and access. But the greatest physical changes occurred with restaurants, once they were allowed to reopen after the initial lockdowns. Alfresco dining took over urban streets and suburban sidewalks as local governments waived restrictions and sped approvals, prompting a nationwide shortage of propane heaters last winter. The move outdoors quickly spread to other services (like gyms and salons) and even traditional retail segments (like apparel). This flexibility was remarkable even for a sector known for its constant change. The move to more outdoor dining seems poised to endure as a permanent change to the urban landscape (as discussed in chapter 1), even if other services move back indoors as the virus recedes.

Exhibit 3-4 **Retail Sales, Excluding Auto-Related Sales**



Sources: U.S. Census Bureau, Nelson Economics.

Note: Sales indexed to January 2020.

Lasting Damage . . . and Improvement

In the end, the sector rose to the occasion and fared much better than feared. But that's "not to say that there wasn't immense damage done," in the words of one retail research specialist. The number of store closings far outpaced store openings. Restaurants were hit especially hard. The National Restaurant Association estimates that more than 110,000 eating establishments closed in 2020 alone. And the number of retailer bankruptcies jumped to levels not seen since the height of the global financial crisis more than a decade ago. As a result, vacancies are soaring to their highest levels since the previous recession, according to Moody's Analytics, particularly in the beleaguered mall segment, while rents are still trending down.

And the pain for many landlords goes deeper than these standard market metrics suggest. Countless tenants stopped paying rent in 2021, particularly when their stores were closed, in some locations protected by special COVID regulations. Even as of late summer 2021, an unusually large share of scheduled rent is not being collected, especially from smaller regional chains and mom-and-pop stores. Another wave of store closings may follow when those unpaid bills come due, in particular as local commercial eviction moratoriums expire. However, those expirations could be a net positive for landlords, who can finally replace non-rent-paying tenants with new retailers—or warn of that possibility to enforce rent payment.

This is not the worst-case scenario that so many industry participants feared last year. One surprising reason: new business formations are at their highest level in two decades, with a large share in retailing. This spike in entrepreneurship has been one of the lesser-known but critical drivers of the economic recovery, particularly for the retail sector. Multiple factors account for this spike, which is highly unusual during recessions, but generally involve the highly unusual nature of this recession. Wealth and savings increased, for example, providing capital for budding entrepreneurs. Moreover, large portions of the economy remained strong throughout the pandemic while income rose, providing a solid base of demand for new businesses.

Our experts generally see these closures—though painful for the participants—as both inevitable and necessary to replace tired, less relevant brands to create the market and physical space for fresher, better-managed brands. In this way, the "pandemic might have ripped retail's ugly Band-Aid off all at once, [so] we might be reemerging in a place that's more sustainable for physical retail," concluded one leading retail sector analyst.

Change Continues to Accelerate

One direction widely—and correctly—predicted last year: the pandemic acted as an accelerant of trends already in place before COVID-19. In this "great retail reset," the industry experienced years' worth of change in just months. As noted, e-commerce and BOPIS both soared as consumers were either prevented from shopping in stores or then just afraid to. The online shift elevated the already heightened pace of store closings. The pandemic also hastened the shifts away from malls and high-street retail to more mixed-use centers and "neighborhood-centric" shopping.

Inevitably, these trends have already reversed somewhat as the economy has returned to something near normal and the online sales share has declined, but no one expects a full reversion to pre-COVID conditions. Store openings are way up from last year and may even exceed closings this year, but the "retail rationalization" will continue as chains open and operate fewer stores.

The focus on convenience is another trend likely to endure. BOPIS (or "click and collect") was slower to catch on in the United States than in some countries, but now seems to have taken root. Grocery and prepared-meal deliveries also are expected to be much more prevalent than previously, though all of these will no doubt remain below their pandemic peaks for some time.

Though opening up new sales channels for retailers and restaurants, these online orders also magnify the logistical challenges of fulfilling sales. Retailers can allocate excess store space for micro-fulfillment to compete with online-only retailers. However, stores and shopping centers must be reconfigured to enable efficient pickup by delivery trucks and consumers while still providing an environment conducive to in-store shoppers.

One clear benefit of the e-commerce shifts during the pandemic: a better understanding of the likely near-term upside limits of e-commerce's market share—and logistical limitations. As the retail research head of major brokerage concluded: "We might finally have a template emerging for retailers as to how many store locations actually make sense [and] how much of your business is online" as "we're getting closer to what will probably be normal rates of penetration and stabilization of e-commerce growth."

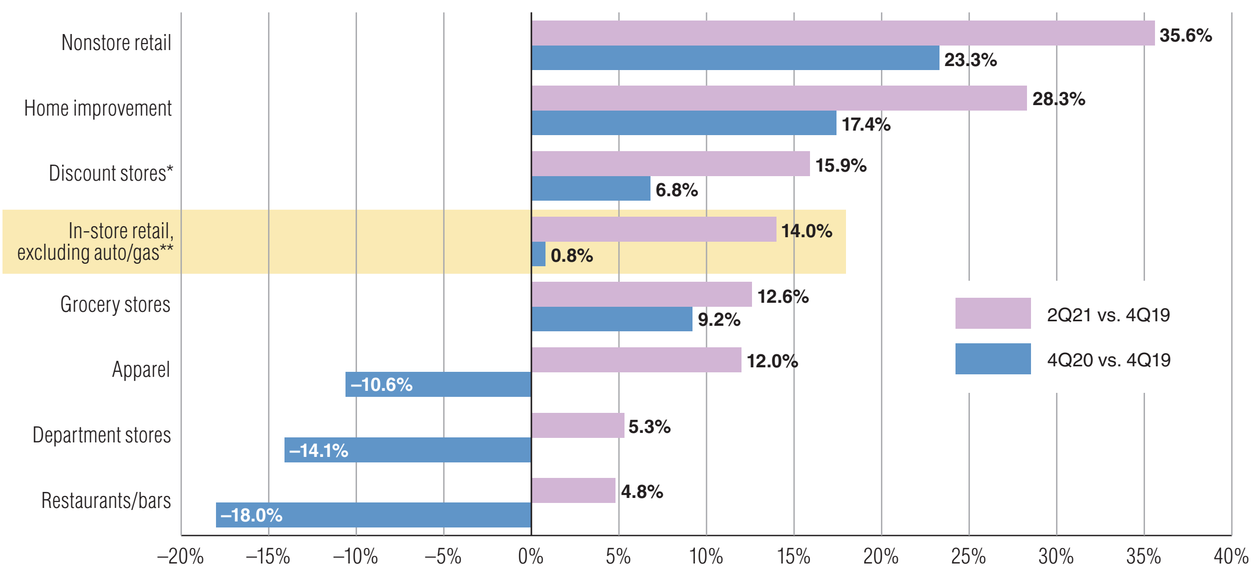
The Best Outlook in Years

In what must be the best possible news for the retail sector outlook, the robust economic recovery is being led by consumers, who are now flush with cash—and have a strong desire to spend it. Household wealth and savings both rose in 2020, while personal debt fell—in sharp contrast to the normal pattern in recessions—thanks to generous government payouts and other support programs, as well as a solid jobs recovery and the strongest wage gains in memory.

And spend it they will, long after the COVID-19 relief programs expire. After being cloistered inside in sweatpants for more than a year, consumers are ready to step out and want to look good doing it. The delayed gratification has fueled "just immense pent-up demand for normalcy." Add to that the larger waist sizes many people acquired during the pandemic, plus the need to replace unfashionable or worn-out clothing, and we can appreciate why clothing sales have surged back above pre-COVID levels.

Though recovery in the retail segments most affected by the pandemic was still lagging at the end of 2020, every major category registered sales exceeding pre-COVID levels by mid-2021. Nonetheless, the bounce-backs in department stores and apparel retailers are likely to prove short-lived. Our experts

Exhibit 3-5 **Changes in Retail Sales, Select Categories, 2Q 2021 and 4Q 2020 versus 4Q 2019**



Sources: U.S. Census Bureau, Nelson Economics.

*All general merchandise stores except department stores: primarily superstores and warehouse clubs.

**Excludes sales of motor vehicles, parts, and gasoline.

fully expect record holiday sales. Still, once the initial spending splurge passes, the long-term decline in department store and apparel sales will likely resume and even accelerate as more casual dress—both in the corporate and especially the home office—reduces demand. Moreover, growing awareness of the resources consumed to produce new clothing is stimulating interest in vintage and pre-owned clothing, further depressing demand for new garments.

But the overall outlook now is much more positive. With consumers opening their wallets and returning to physical stores and restaurants, "things for retail have not looked this good in years," according to one leading analyst. Nonetheless, occupancy and rent levels will keep falling in 2021 and into 2022 as old leases expire and as the lingering impacts of the pandemic force retailers to close more stores. Though the pace of store openings is rising as the pendulum swings back to a more sustainable in-store versus e-commerce split of sales, the country is still substantially oversupplied with retail, and current levels of retail space are not supportable.

With retailers operating smaller portfolios than before, we may expect more diverse and compelling tenant mixes—and, ultimately, more sustainable shopping centers. Said one owner, "We won't see as many megabrand stores. But we might see more brands in general," including from digitally native brands. So, we'll have "fewer [but] much more impactful stores."

And to continue a refrain common across most property types, retail is experiencing rising bifurcation, not just between stronger and weaker operators, but also between growing and shrinking retail segments—a "barbell of prosperity," in the words of the retail research lead at a major asset manager. "We're seeing luxury excel, but at the same time, if you look at who's growing their store fleets, two-thirds of it is dollar stores and discount stores." Said another consultant: "There is no middle. For physical retail, it's either got to be about the value or it's got to be about the experience." Or the convenience: grocery-anchored centers with essential services seem poised to outperform as well.

A Host of Challenges Remain

If the near-term future looks brighter than it has in quite a while, a host of challenges nonetheless are in clear view—as is one big risk. That risk, of course, is the return of a major COVID-19 outbreak, or worse, a continuing cycle of recurring infections that elude the vaccines. This downside risk to the economy was highlighted in our opening overview in chapter 1. But no property sector other than leisure and hospitality would be hit as hard as retail if an infection surge prompted consumers to hunker down in their homes again. Regardless of whether there were widespread lockdowns or other new government restrictions, the impact on retailers, especially restaurants and other services, would be severe.

Aside from the virus, top of mind for the owners and tenant advisers we consulted: labor shortages that will limit recovery and raise operating costs. The retail sector and leisure and hospitality sector lost far more workers than any other during the pandemic, as workers fled to industries with better pay and less stress. Many of those workers are gone for good, even as firms raise wages to entice their return. Service levels are declining, and consumers are taking notice, creating even more headaches for retailers. We can expect to see increasing use of robotics, particularly in major fast-food chains, to address short staffing, but smaller retailers will have fewer options.

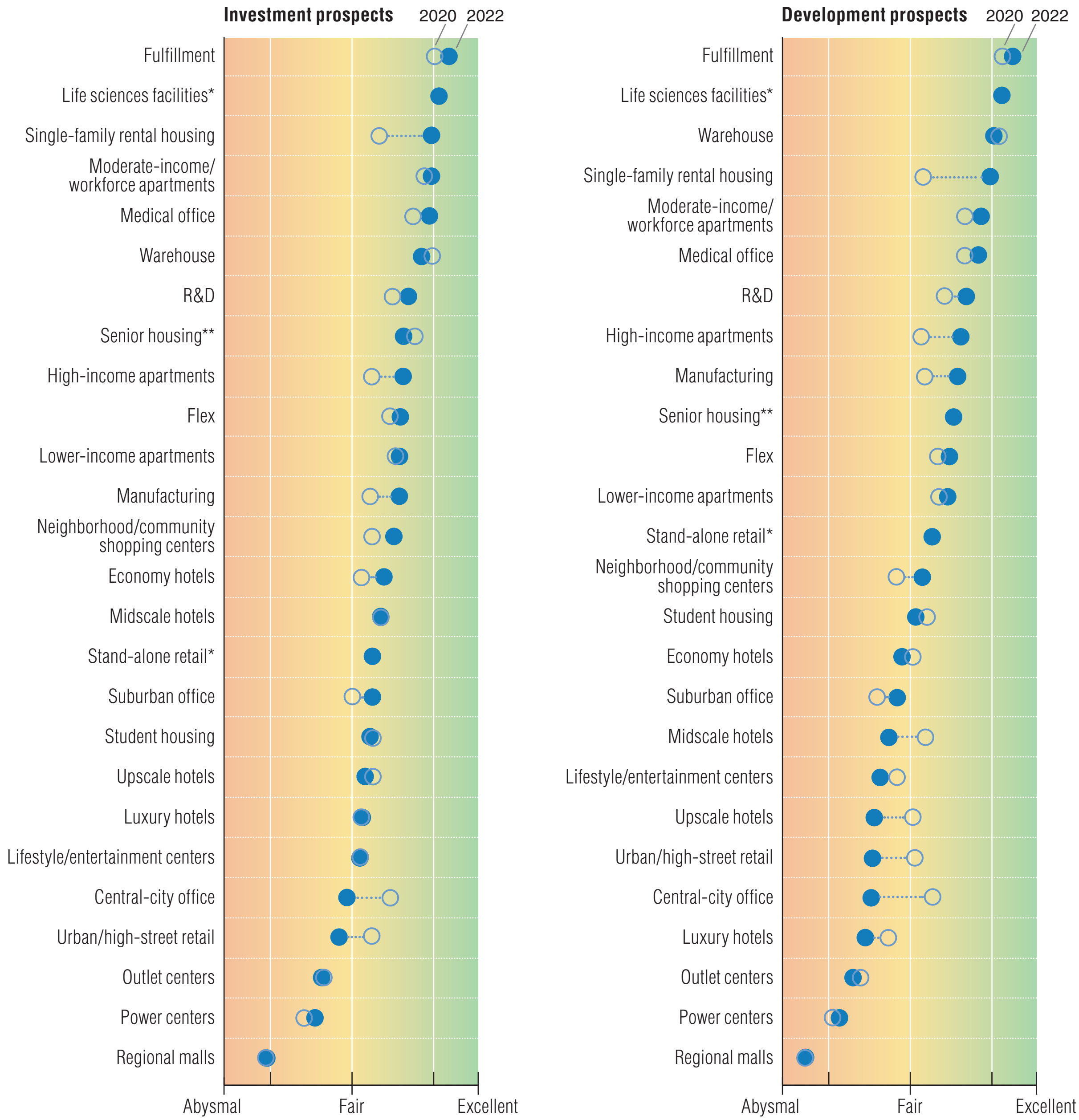
The recovery for some retail segments also will be slowed by the delay in the resumption of business travel, which will have the greatest impact on higher-end restaurants and high-street retailing.

Meanwhile, the innovation ante for retailers keeps rising, whether to fund market-leading efficiency and convenience to attract value consumers in a hyper-competitive market or to create a seamless omni-channel experience for luxury consumers. Both are expensive propositions. The surging economic recovery and consumers' extreme FOMO (fear of missing out) will buy some time. As one broker opined: "Retailers that were lagging on that a bit will have a pass of a few months because just physically being in a store again is going to be enough for a lot of people for a while." But only for a while.

The biggest challenge for the retail sector remains how to repurpose all the excess space. Despite some recent gains, the future of department stores is even darker than it was before the recession. And their fate is inextricably linked to that of the many obsolete secondary malls littered throughout the country. Many will be shuttered and sites scraped, with the land devoted to new uses. While the top 100 or so malls in the country continue to thrive and reinvigorate themselves for evolving consumer tastes and retailing technology, that leaves many others in the middle that need to reinvent. Their challenge, one interviewee said: "How quickly can they add mixed-use elements and densify?"

Getting there will take considerable investment, of course. But despite the wave of capital flooding U.S. capital markets, relatively little of it is finding its way into the retail sector. Once again, retail ranks last among the major property types in the *Emerging Trends* survey for both development and investment prospects. However, with retail so out of favor for so long and the outlook

Exhibit 3-6 **Prospects for Commercial/Multifamily Subsectors in 2020 (Pre-Pandemic) and 2022**



Source: *Emerging Trends in Real Estate* surveys. Data for 2020 are from *Emerging Trends in Real Estate 2020*, published in fall 2019.

Note: Based on U.S. respondents only. *First year in survey. **Not in 2020 survey.

suddenly positive, some intrepid investors are starting to scout for opportunities. We'll see.

For now, the retail sector can breathe a sigh of relief—when it's not rushing to fulfill the new surge of orders. Concluded one industry consultant: "I've probably never felt so positive in a long period of time." In accelerating needed change, the pandemic perhaps forced the retail sector to confront intractable problems sooner, putting it on a better trajectory. But retailers and owners will not have long to rest. More change is coming.

Office: The New Retail?

If a time traveler visited 2021 from the past and reviewed office property data, he or she might conclude that the pandemic was only a minor shock to the sector. Office vacancies rose moderately, but few tenants missed rent payments, and—in large part because office leases are long term—the impact on asking rents and property values has been minimal.

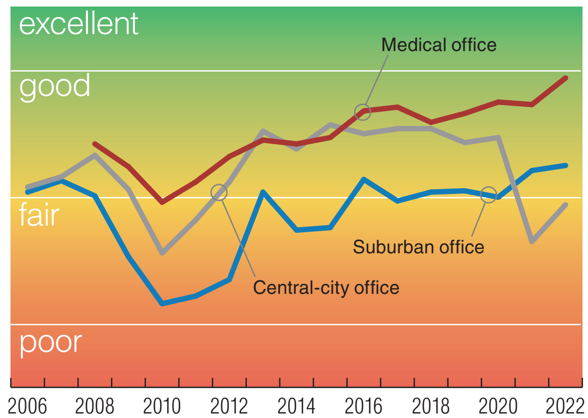
Living through it, we know that the pandemic created a massive shock that could transform office property demand. What's more, the future of offices is as much about technology and social and demographic forces as real estate. Office labor now has technological tools to disconnect from location, giving workers more freedom to choose where and how to live. Given a choice, some will move farther away from urban areas, but others will congregate in cities because they provide the social and work opportunities that many crave.

Work-from-home could create existential change for office use the way that online shopping did for brick-and-mortar retail. The eventual impact of WFH or hybrid work models on office demand is far from determined, but it would be wise to remember that although e-commerce still accounts for less than 15 percent of total retail sales, this relatively small percentage has had a significant impact on the retail sector. The office-use impact of WFH—even if it is limited—may lead the office sector to bifurcate like brick-and-mortar retail. Well-located and well-amenitized properties could thrive while lesser-quality and poorly located properties struggle with obsolescence. Further like retail, office property owners may increasingly find that providing an experience for tenant users is key to maintaining sustainable demand.

Ultimately, it will take years before we know how these dynamics shake out as individual companies determine space needs, one at a time. This evolution will persist well beyond 2022 as employees and employers learn more about what they want and what model best suits their needs. The pandemic has created an inflection point from which there is no retreat as individuals and companies rethink work choices.

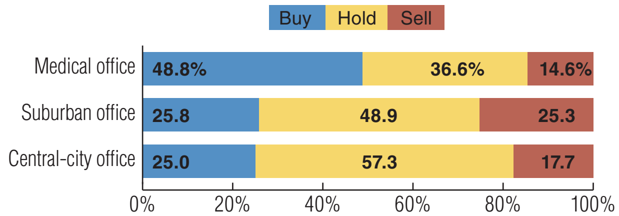
It would be foolish to pretend that the outcome is certain. Individual company choices will vary depending on location, workforce demographics, the type of work performed, and how much companies want to spend and/or can afford. The one certainty is that success will require intelligent planning, design, and execution.

Exhibit 3-7 **Office Investment Prospect Trends**

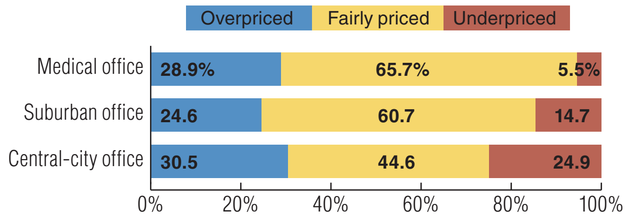


Source: *Emerging Trends in Real Estate* surveys.

Office Buy/Hold/Sell Recommendations



Opinion of Current Office Pricing



Source: *Emerging Trends in Real Estate 2022* survey.
Note: Based on U.S. respondents only.

What Do Workers Want? How Are Employers Responding?

Offices emptied out during the pandemic. Usage was lowest in public transportation–reliant gateway metro areas that were locked down more thoroughly than cities in states such as Texas and Florida. Office security firm Kastle Systems reported in summer 2021 that relatively few workers in New York City and San Francisco reported to offices compared with cities with looser COVID-19 policies such as Dallas and Austin.

Office use certainly will grow as infection rates wane and vaccination rates rise, even as the pace of both will differ by market.

One office company executive noted that occupiers will shift focus over the next year or two from renewing space short term to get through the pandemic to considering long-term needs. Still, "given the lack of activity over the last 18 months, . . . it will take time" to return to the office and determine future space needs, he said.

Both companies and individuals are sorting out how and when to return, even if the details remain highly uncertain. For one thing, the COVID-19 Delta variant showed that the course of the pandemic is no straight line, and companies must account for second- or third-wave outbreaks in return plans. Not to mention that coming into the office once or twice a week—situations where desks can be shared and meeting space might be at a premium—creates different space demands than coming to the office four or five days a week or being fully remote. "Everybody is navigating that [issue] right now and nobody has an answer," said the head of research at a large office owner/developer.

Surveys of employers in 2020 and the first half of 2021 produced varying results depending on when they were taken and how questions were worded. Typically, the later the survey was taken, the more bullish the results for office demand. "It's so hard to tell ultimately what people will do," said another analyst. "There is a difference between what they said six months ago and today."

Consistent in every survey, though, is that going forward more people will work remotely, with workers reporting to an office three to four days a week on average. The proportion of fully remote employees—about 3 percent pre-pandemic, according to a survey by job marketplace Upwork—is likely to grow substantially, with estimates of how much ranging from 6 to 9 percent to as much as of a quarter of the workforce.

Companies are reconsidering total space needs as well as design and health and safety concerns. "Employers need to take seriously that people are looking for a good place to do work," said one senior executive at an architecture firm. The industry "took design for granted," but that is no longer an option, she said. Another analyst noted that working remotely has shed light on issues such as loneliness and burnout. "We're starting to see a growing recognition [of how design impacts] mental health issues," he said.

Key to the design deliberations will be how to remain productive while supporting collaboration, corporate culture, and mentoring of young workers. A survey conducted by international architecture and design firm Gensler found that the time workers spent collaborating with colleagues fell to 27 percent during the pandemic from 43 percent before, while individual focus time more than doubled to 62 percent of time spent working. Gensler warns that the disparity may "negatively impact company creativity and

Life Sciences Steps Into the Spotlight

The COVID-19 pandemic pushed the life sciences industry into the spotlight both as a hopeful solution to the global health crisis and by investors with capital to deploy into high-growth and alternative asset classes. While this new investor interest in the lab property market emerged seemingly overnight, momentum had been building in recent years. Technological advancements driving the industry forward for the last several decades enabled the development of life-saving vaccinations in record time, and a focus on greater health and well-being emerged as a new economic engine.

These investment opportunities are attracting real estate capital from around the globe, and most investors are targeting legacy markets where industry clusters are strongest and where a density of lab properties already exist. However, strong buyer competition in key clusters, coupled with emerging growth in secondary markets, is driving investment and development activity beyond the traditional geographies. The fundamental drivers that predict a successful life sciences cluster are more rigid than those for other innovative industries, limiting the geographic opportunity; but as the industry evolves, it will continue to infiltrate markets that are building the right mix of ecosystem components that enable industry success.

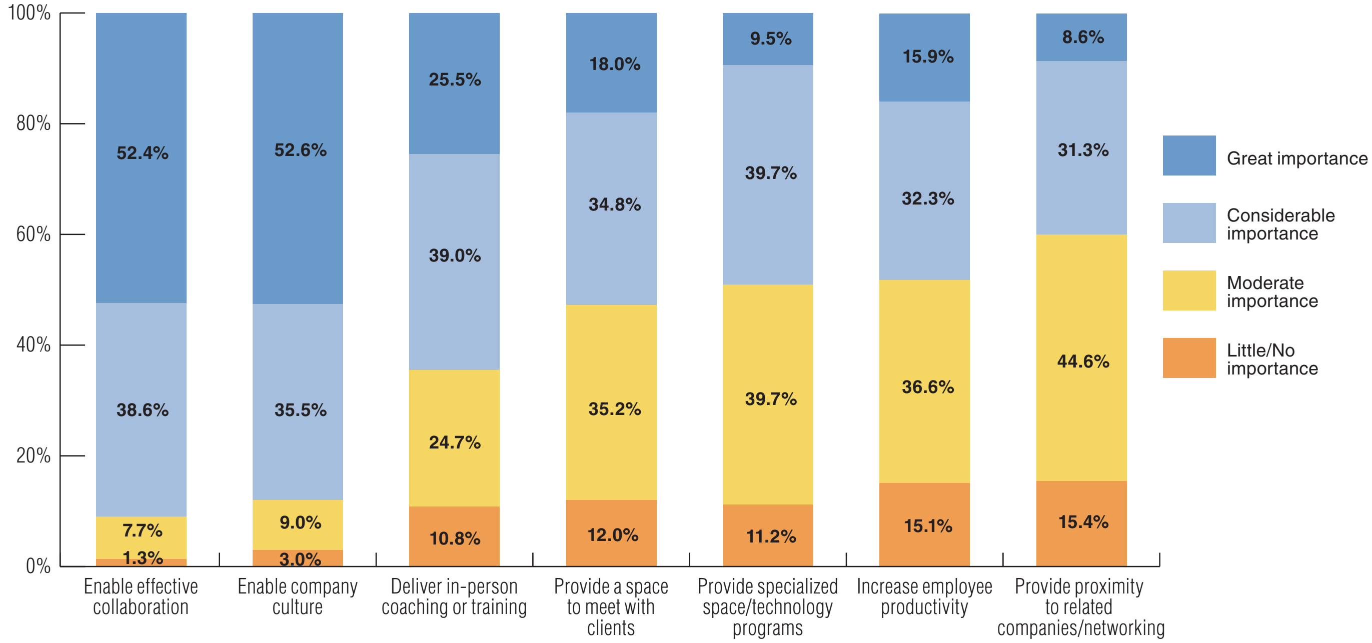
The Innovation Runway Will Drive Sustained Demand for Lab Space

The life sciences industry is defined by innovation. The fundamental drivers fueling industry growth are the best leading indicators for the runway ahead for the commercial lab sector:

1. **Greater demand for health care:** This almost goes without saying, but it is our most basic human instinct to want to live a long and healthy life. Medical advancements have increased our life spans, but they have also created a greater demand for care and for more specialized care.

continued next page

Exhibit 3-8 **What will be the primary value drivers for employees to use the physical office in the future?**



Source: *Emerging Trends in Real Estate 2022* survey.

There are several thousand known diseases in the world, with therapy available for about 500 of those. There is plenty of foundational demand for medicines, treatments, and cures.

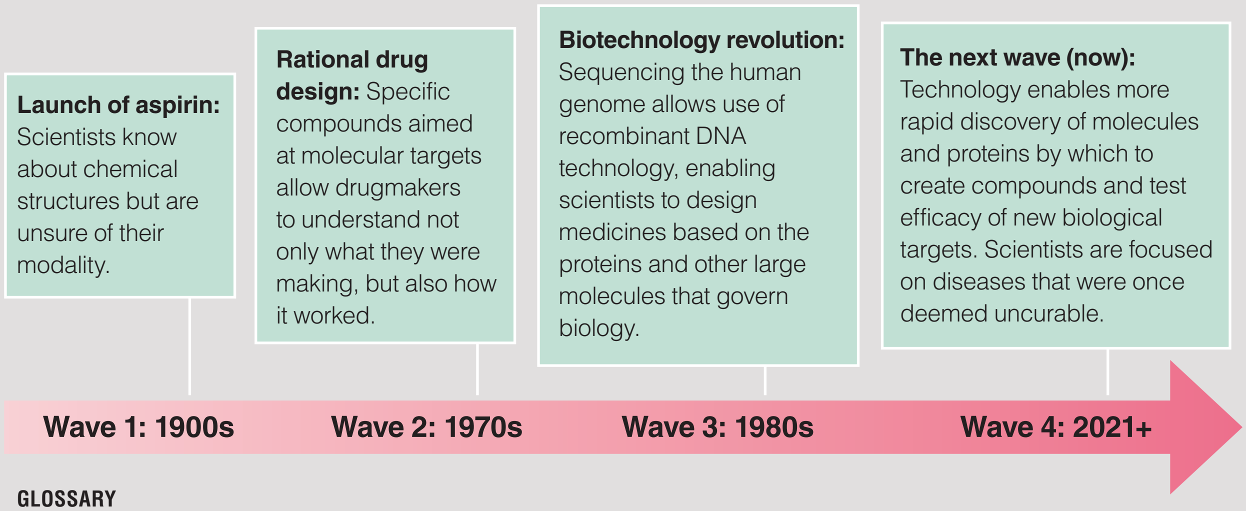
2. **The science itself:** We are at the forefront of rapid change concerning modalities of drug discovery and delivery. Every drug is essentially a specific molecule compound, and for that drug to effect change it needs to target a specific molecule in the body and block activity, enhance it, or destroy the molecule altogether. That is how biological diseases are conquered in the most simplistic form. Scientists have more tools at their disposal to find, test, and target molecules, enabling more efficiency in research and development efforts and a need for more specialized talent and space. Small-molecule therapies have been the dominant modality, but biologics (large molecules) are taking a greater share each year, thanks to new technologies driving more productive research efforts.

3. **Technology adoption:** We are seeing only the very beginning of what is possible through greater adoption of technology. Artificial intelligence (AI) methods are being employed for drug discovery, clinical trials, testing of existing drugs for new uses, and aggregation of data at scale. The "omics" field of study (genomics, transcriptomics, proteomics) is seeing tremendous growth because of the implementation of AI to collect, test, and analyze potential modalities and new biomarkers of opportunity from the millions of data points contained in the human genome. These technological advancements are precisely why several COVID-19 vaccines were developed in record time. Established biopharmaceutical companies are increasingly investing in AI-focused startups, and this field will continue to be a primary driver of the life sciences innovation engine.

Capital Fuels Innovation

The U.S. lab real estate market is a mere fraction of the greater real estate landscape, totaling just 150 million square feet of investor-owned lab space—the equivalent of the investor-owned downtown Chicago office market. But it is highly concentrated in a handful of market clusters—namely, Boston, Washington, D.C./Baltimore, Raleigh/Durham, San Diego, and the San Francisco Bay Area. This clustering effect

Life Sciences Innovation Is Entering the Fourth Wave
New modalities of drug discovery and delivery drive the innovation engine



GLOSSARY

Modality: the key (a drug) that unlocks a target molecule.

Drug discovery: research that aims to find new modalities.

Therapeutics: drugs that are developed through this research.

Small molecules and biologics: modalities by which drugs are delivered. Biologics now account for 26 percent of approved drugs, thanks to more productive research tools.

Source: Amgen.

is reflective of the markets' life sciences ecosystem infrastructure, often irreplaceable and many years in the making.

A world-class life sciences cluster is anchored by a strong research institution, has depth of scientific research talent, has a steady stream of National Institutes of Health (NIH) and venture capital dollars, is near regulatory bodies to advance commercialization efforts—and, of course, has best-in-class lab space in which innovation happens.

NIH provides a critical stream of funding that supports research to drive the industry forward, and is highly concentrated in Boston, accounting for one-quarter of all grant dollars among the top 10 recipient geographies and about 10 percent of all funding in the United States overall. Adding fuel to the innovation fire is the flow of venture capital dollars, up 62 percent in the United States year-over-year in the 12 months ending in March 2021. Volumes have never been higher, especially in key cluster markets where research activity is highly correlated with company formation.

Venture capital investment is one of the strongest leading indicators of commercial lab demand; in top cluster markets like Boston and the San Francisco Bay Area, a capital event typically leads to a lease transaction within six to nine months, on average. Developers must be willing to take on some speculative risk to capture this demand.

With such optimism around the industry, real estate investor interest has risen dramatically, especially in an environment of uncertainty in regard to the future of traditional office. Lab properties are highly coveted, and more real estate capital is targeting the sector than ever before. Higher barriers to entry in mature cluster markets, vis-à-vis a competitive buyer pool or long-term ownership dominance, will drive further investment and development into secondary markets. While the commercial lab real estate market is still a niche sector overall, institutional interest is certainly on the upswing.

Which begs the question: is the sector getting frothy, or is there really a long runway of demand ahead? And if so, is there enough lab space to satisfy this demand? Commercial real estate people are rarely scientists, so unlike the technology boom of the last 20 years where we all understood the impact and tangible improvements in our daily lives, our understanding of the drivers moving life sciences forward is at the mercy of our understanding of medical science, biochemistry, and scientific analysis techniques most of us have likely never heard of.

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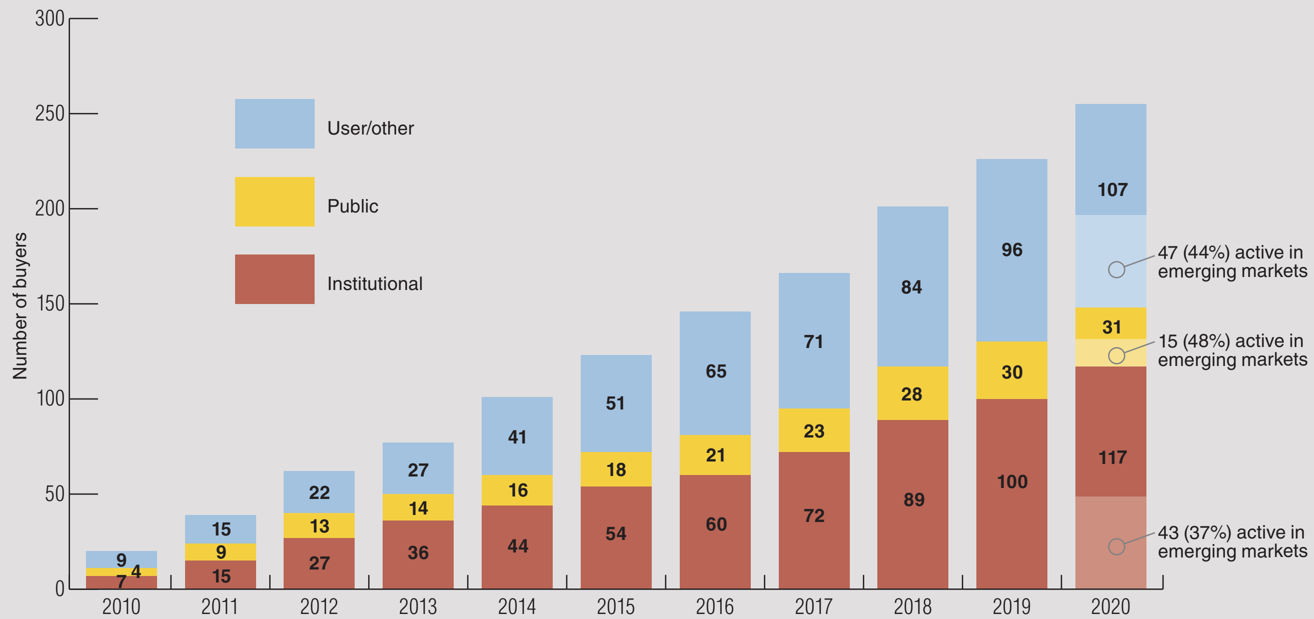
U.S. Active Life Sciences Buyers



Sources: JLL Research; Real Capital Analytics.

The development of new technologies is both fueling the growth of the sector and driving the science forward more productively than ever before. Like Moore's law, which refers to the speed and capabilities of transistors growing exponentially over time, the scientific developments ahead for the life sciences industry are truly at the beginning of what is predicted to be an impressive growth trajectory.

Cluster Markets Nearing Capacity, Creating Opportunities in New Markets

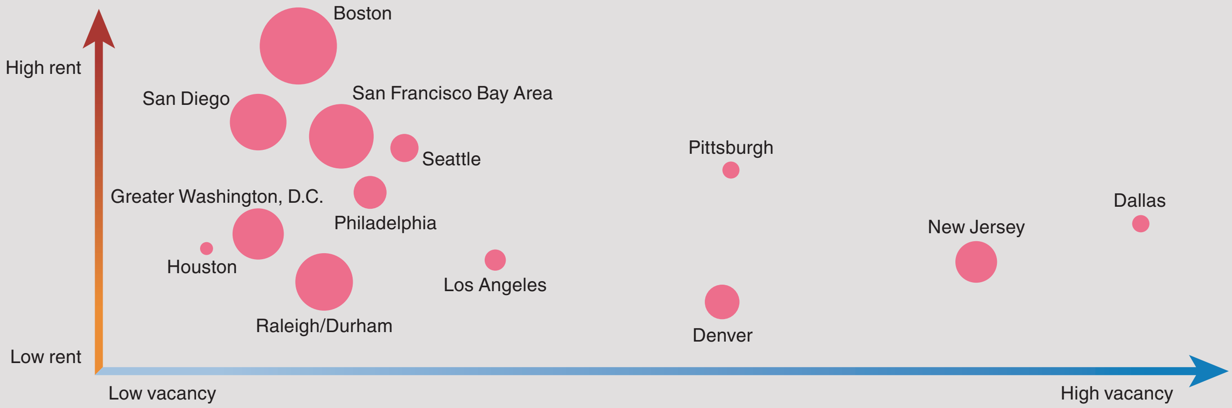
The largest lab markets have some of the tightest market conditions and are unable to meet tenant demand fast enough. For life sciences companies, it is imperative that they have access to the right talent, the right research partners, and proximity to capital; the real estate cost is secondary. Boston, the San Francisco Bay Area, and San Diego boast the highest asking rents, but also have the depth of fundamentals that support company growth.

New markets of opportunity are emerging where the fundamentals to support new industry growth exist, but the lab property markets are not quite as mature. Markets to watch include Minneapolis/St. Paul, Austin, and Pittsburgh: each boasts strong demographic growth, a high concentration of science, technology, engineering, and mathematics (STEM) degrees, and access to funding that is steadily increasing.

The lab development pipeline is filling fast to meet the challenge. The major clusters take the prize in terms of scale, with Boston accounting for more than half of the national lab development pipeline underway as of midyear 2021. But a few emerging markets are solid contenders—Chicago, Philadelphia, and Salt Lake City. The fundamentals for industry growth in these areas are supported by strong talent, funding, and strong research anchor institutions, along with an existing large-cap pharma or contract manufacturing presence in these markets.

As new capital continues to enter the space over the next year, expect more lab developments and conversions to begin. Conversions can be a viable option if the base building has a floor plate measuring between 30,000 and 60,000 square feet, clear height of at least 12 feet, increased electrical service, and dedicated freight loading, among other factors. Investors and developers considering this option will need to invest $135 to $400 per square foot depending on geography and scope of conversion required.

Vacancy Rates and Lab Asking Rents, 2Q 2021



Source: JLL Research.

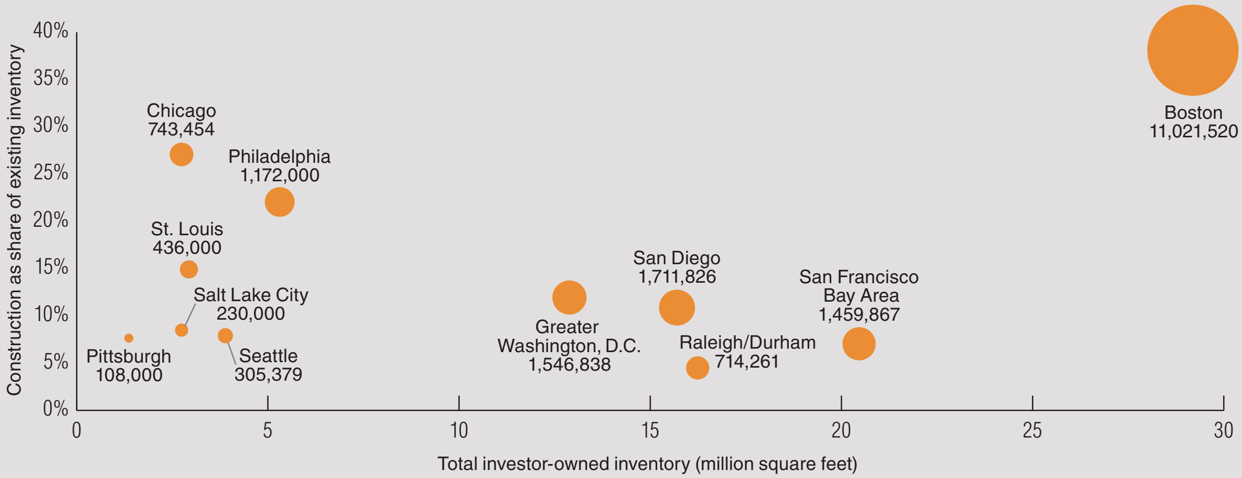
Note: Bubble size represents square feet of investor-owned inventory.

Outlook Ahead

Like the technology boom that grew out of Silicon Valley over the last 20 years, the life sciences industry is on a trajectory of similar expansion. What is different in this case is the nuance of activity that drives life sciences product development—scientific research that must happen in a lab space. While this may be a limiting factor in how quickly and how far this industry can scale, underlying demographics, capital flows, and technology-enabled changes in the life sciences industry overall will result in sustained growth in general, focused in the strongest geographic clusters. As the industry continues to evolve over the longer term, more activity will occur outside of specialized lab space, and markets that have the right mix of industry fundamentals will be better positioned to capture this growth.

—JLL

Lab Development Underway as Share of Existing Lab Inventory, 2Q 2021



Source: JLL Research.

Note: Bubble size and number represent square feet of lab space under construction or in redevelopment.

productivity." Said a Gensler executive: "It's a signal that there could be a downside to a workspace that is fully virtual."

Indeed, those concerns are borne out by the *Emerging Trends* survey, in which more than three-quarters of those surveyed said it is of "considerable" or "great" importance to go to an office to enable effective collaboration and company culture, with more than 60 percent saying it is important to "deliver in-person coaching or training."

Assessments of return to work must account for the fact that the pandemic has made employees less passive. Having been given an extended trial of flexibility and a break from grinding daily commutes, many are reluctant to return to their old routine. Surveys indicate that between a quarter and a half of workers would leave for companies with more flexible policies if required to report to an office full time. "The competition for talent will make it hard to force people to come back five days a week," said a partner at an office industry consulting firm. "You have to give employees a reason to come to the office; otherwise, they won't come in."

Bridging the Geographic Divide

Another important factor in gauging future demand is where office talent wants to live. During the pandemic, workers were freed from an office base, prompting some exodus from the central districts of high-cost gateway metro areas. That has given credence to proponents of secondary and tertiary market growth who contend that families—unbound from the need to be physically present in urban offices—will increasingly choose metro areas with cheaper housing, more living space, less traffic, less crime (whether in perception or reality), and better schools. "The pandemic has accelerated the life shift of millennials," noted one researcher.

Champions of a regional shift say employers will continue to leave gateway markets for fast-growing secondary metro areas such as Nashville, Charlotte, Phoenix, Miami, and Austin. Not only do those areas feature lower costs and less regulation, but also the pandemic has led skilled workers to gravitate toward those markets. "Is talent gravitating or are companies chasing talent? It's both," said a consulting firm executive.

However, the consensus of our interviewees is that a large COVID-related regional movement of employers is more talk than action, at least so far. "It's not showing up in the data," said one senior executive. "The story is a little overblown." Supporting this line of thought is that when gateway markets relaxed pandemic restrictions during spring 2021, apartment absorption and rent growth bounced back swiftly as people returned, per Yardi Matrix data. "Is this the demise of gateway markets? No. [But] secondary markets will take a greater share of the market than before," an office company executive said.

Maybe it's not all or nothing. Gateway office markets have thrived through recent decades when job and population growth was stronger in the Southeast, Southwest, and West. Core markets retain attractive features such as access to skilled workers and industry concentrations that provide "matching" opportunities for workers. "Access to labor is the reason cities will come back," said one analyst. "The power for urban areas is you have more options for your next job." Cities also provide social advantages centered on entertainment and the large numbers of like-minded peers. Those who view these attributes as of paramount importance may agree with a senior executive at a large office property who wryly noted: "You don't graduate from college and suddenly say, 'I can't wait to go live in [a distant secondary market].'"

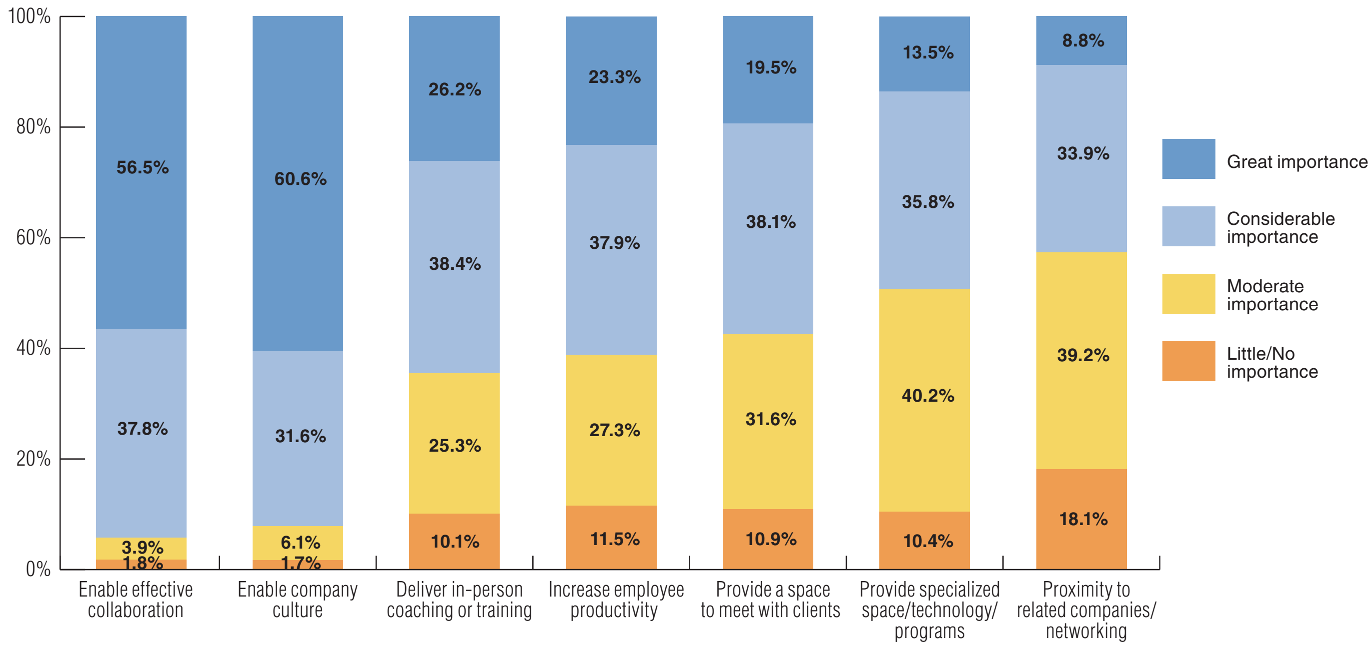
Impact on Office Demand

Opinions differ on how the new paradigm will affect space demand. The most optimistic say demand will be a wash, with no net decline, and that most workers will want to come back to the office eventually for at least some of the time, as indicated above. "The tribal need to interact with like-minded people will cause people to come back to offices," said a senior lending executive.

Optimists contend that the loss of demand from companies that increase WFH will be balanced by higher demand from factors such as overall growth in office-using workers and increasing space per employee. In this view, future job growth will be concentrated in office-using knowledge-based service industries. Plus, the decades-long shrinking of space per person will be reversed by growth in amenity space and conference rooms and the eschewing of shared desks.

Another view forecasts a moderate decline in space demand. This position concedes that, regardless of overall job growth, the increase in both fully remote workers and those who work part time from home will reduce the number of daily office users by 10 to 20 percent but notes that there is not a one-to-one relationship between the number of workers and occupied space. Workstations represent only one-third to one-half of office space, so by this calculation a 10 percent reduction in headcount represents a 3 to 5 percent decline in space demand. "People working in the office 20 percent less doesn't translate into a 20 percent reduction in demand," a senior industry researcher said.

Exhibit 3-9 **What will be the primary value drivers for companies to maintain a future physical office footprint?**



Source: *Emerging Trends in Real Estate 2022* survey.

Pessimists, however, see a much bigger drop in demand due to rapid growth in remote work and because companies will take advantage of the opportunity to reduce leasing costs. CBRE Econometric Advisors forecasts a 9.1 percent decrease in office space demand, while a Green Street Advisors report suggests that demand could drop by up to 15 percent. The *Emerging Trends* survey could be interpreted to corroborate the more pessimistic outlook, since nearly 60 percent of those surveyed expect space needs to drop by 5 percent or more, with a quarter of participants expecting a decline of 15 percent or more.

Ultimately, many factors that will determine space market demand are outside the industry's control. Some types of office work—computer programming, for example—are easier to perform remotely. "It's too soon to say work-from-home will reduce space. . . . A lot depends on the economy and which sectors grow relative to others," said the chief executive at a large office design firm.

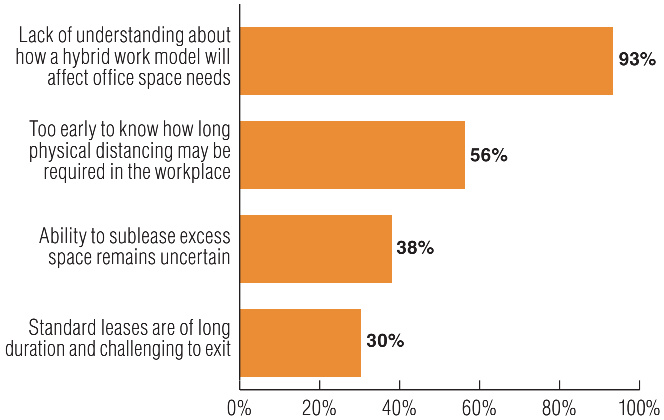
Fundamental Decline

The pandemic has produced more of a hiccup to office market fundamentals than a disaster, mostly because long-term leases shield offices from immediate impact, unlike, say, hotels. How demand shakes out will be determined over time as companies reorient space demands when leases expire, a process that will take years. In the meantime, tenants are paying rent. As of July 2021, only 2.2 percent of loans backed by offices in commercial mortgage–backed securities (CMBS) pools were delinquent, according to analytics firm Trepp.

Occupancy rates and asking rents dropped only moderately over the first five quarters of the pandemic, but they are likely to go down further before stabilizing. CBRE forecasts vacancy rates to climb 620 to 700 basis points and asking rents to drop by up to 11.5 percent over the next year or two, with the market not returning to pre-pandemic occupancy rate and rent levels until 2025.

Asking rents, however, just scratch the surface of the financial pressures faced by office owners. Prospective tenants are using newfound leverage to negotiate concessions and tenant improvement allowances (TIs) that can amount to 15 to 20 percent of the overall rent package. At a time when expenses are growing—including labor, energy, and maintenance costs; tenant remodeling; and retrofitting to comply with the latest environmental standards—some office owners are struggling to maintain net income. "Net effective rents are moving [down] meaningfully,"

Exhibit 3-10 **What is driving uncertainty about total office space needs in next three years?**



Source: *Emerging Trends in Real Estate 2022* survey.

a senior manager at a large office firm said ruefully. Net income will be squeezed as long as tenants have the leverage to extract concessions while costs, including those for taxes and retrofits, continue to rise. That could be years, given that Yardi Matrix reports more than 160 million square feet of space—planned when demand forecasts were rosier—is under construction.

Demand for new buildings is healthy, but net demand is flat, so new stock is poaching tenants from existing properties (i.e., companies moving from Midtown Manhattan to Hudson Yards). "New supply will be leased at the expense of existing stock," one researcher said. Demand is concentrated in space with access to cutting-edge technology such as touchless entry and mobile connectivity, and sought-after amenities such as high-quality HVAC for air circulation, health and wellness, energy efficiency, and appealing common areas. "It's getting increasingly harder for 'B' assets to compete," said the chief economist at a major office brokerage.

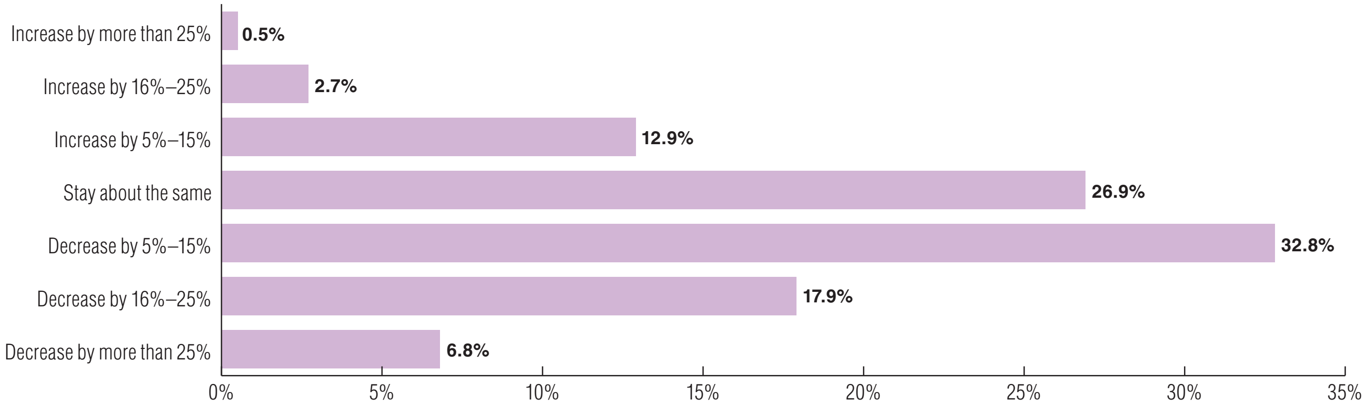
Less overall demand and occupiers' need for technology and amenities create a doubtful future for older, class B/C buildings that require increased capital expenditures. According to a report by the U.S. Energy Information Administration, the median age of U.S. office buildings is 40 years, and more than a quarter of those buildings—more than 4 billion square feet—are 60 years old or older. That provides another parallel to retail: some older stock is becoming functionally obsolete and is in line to be converted to other uses such as apartments or warehouses.

Healthy Capital Markets

Office transaction volume is on the road to recovery, but volume is likely to be weak in 2022 because underwriting future cash flow remains difficult and bid–ask spreads remain wide. Buyers are looking for discounts while most sellers are holding firm. "Transaction activity is muted because no one knows what long-term demand will look like," said the head researcher at a large brokerage.

Preliminary indications show that many investors are buying the future growth story in suburban and secondary markets. CBD transaction activity is substantially slower while suburban office transaction volume is flat. Pricing of CBD offices is down slightly while suburban office prices are up slightly. Capital availability remains healthy for properties with stable cash flows and in secondary markets that investors see potential for above-trend

Exhibit 3-11 **How do you anticipate total office space needs to be different three years from now?**



Source: *Emerging Trends in Real Estate 2022* survey.

growth. Much like leasing dynamics, sales are concentrated in strong markets and best-in-class properties with predictable cash flows. "Capital today is the tale of two cities. . . . It's moving to cities that investors believe will do well in the next cycle," said the regional director of a major owner/developer.

Despite the uncertainty, overall prices are remaining roughly on par with pre-pandemic levels. Doubts about future cash flow are balanced by low-cost debt in the 3 to 4 percent range and extraordinary demand from investors who see U.S. commercial real estate as attractive relative to other investment sectors. Although office is behind multifamily and industrial in the property type pecking order, debt markets are liquid and equity is not in short supply. Another factor is that cap rates of favored asset classes have tightened so much that office property yields look attractive by comparison. Unless there is an economic shock or a capital belt-tightening, pricing trends seem likely to hold.

Conclusion: Mixed Blessings

The pandemic has put the office market in a bind in the short term, and trends related to the future of work have injected a large dose of uncertainty into both the amount and location of future demand. When asked what is driving uncertainty about space needs over the next three years, over 90 percent of respondents to the *Emerging Trends* survey cited a lack of understanding about the impact of the hybrid work model, while nearly 60 percent were unsure how long physical distancing in the workplace would be required.

That said, the office sector has much going for it. Office-using industries including technology and professional services represent the backbone of future job growth. The unknown part of the equation is how long people will remain content to work from home and how many companies will decide they want a return to a more collaborative environment. How it plays out is far from clear, but the ride is bound to be enthralling.

Hotels

The performance of the lodging sector surged during the 2021 spring and summer months after a faster-than-anticipated vaccine rollout and emergency-use authorization of three vaccines earlier in the year, spurring a boom in leisure travel demand fueled by stimulus checks and a desire to travel after yearlong restrictions. According to STR data, revenue per available room (RevPAR) for the week of June 27 leading up to the Fourth of July holiday surpassed the same (pre-pandemic) week in 2019 for the first time, increasing 5.7 percent.

Nevertheless, recovery continues to be largely driven by the leisure traveler, resulting in uneven performance across markets and asset classes, benefiting beach resort and drive-to leisure markets disproportionately, while city-center business and group-dominated markets continue to lag. Extended border restrictions through the summer travel season further benefited U.S. leisure destinations, boosting domestic travel. Many domestic leisure destinations struggled with capacity

Long-Term and COVID-Related Factors to Drive Sustained Demand for Medical Office Space and Services

The aging population will remain a major driver of demand for health services. According to Oxford Economics, the age cohort that is 65 years old and older will grow by 1.72 million in 2022—the highest annual increase on record—and by an additional 12.7 million by 2030. Health care usage rates are significantly higher for this population than for younger age cohorts, and thus this growing demographic is expected to boost strong demand for medical services and medical space over the medium and longer terms.

Medical care deferred during the COVID-19 pandemic also will likely drive growth in outpatient visits in 2022. According to the Commonwealth Fund, outpatient visits plunged in spring 2020 following the initial outbreak of COVID. Visits picked up in subsequent months and were on par with early 2020 levels by late 2020 despite another surge in COVID cases. With vaccines now readily available, individuals who had put off medical procedures earlier in the pandemic will likely feel more comfortable receiving in-person care, driving demand for services in 2022. Telehealth use, which increased in 2020, will likely continue at a higher level than pre-COVID but not significantly affect demand for in-person visits, as evidenced by the rebound in outpatient visits even during the pandemic. Telehealth services will likely be used as a release valve for overcrowded waiting rooms and thus are not expected to reduce demand for medical office space.

Stable Fundamentals to Continue

The medical office sector remained remarkably resilient during the pandemic, particularly compared with other sectors,

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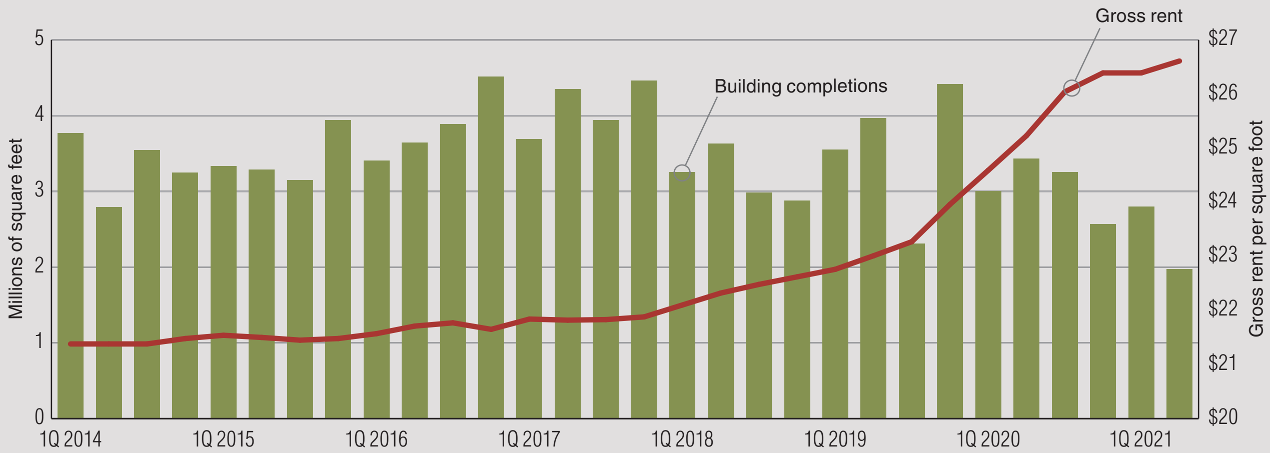
U.S. Medical Office Building Completions and Rents



Sources: CoStar, CBRE Research.

including traditional office. The vacancy rate increased by just 90 basis points from 9.1 percent in the fourth quarter of 2019 to 10.0 percent in the first quarter of 2021 and the second quarter of 2021. By comparison, the traditional office vacancy rate increased by 430 basis points since the fourth quarter of 2019, reaching 16.5 percent in the second quarter of 2021, according to CBRE Econometric Advisors. Medical office rents also continued to increase throughout the pandemic, in part due to rising construction costs. Stability and resilience—both hallmarks of the medical sector—are expected to continue in 2022.

Development Activity to Pick Up

Construction activity during the COVID-19 pandemic slowed due to lockdowns and logistical challenges. The amount of square footage under construction declined by about 3 million square feet between the fourth quarter of 2019 and the first quarter of 2021. Construction activity ticked up slightly in the second quarter of 2021 and likely will continue to increase in the coming quarters as developers resume work on the backlog of projects that were in process prior to COVID as well as in their pipelines of projects planned for 2022. However, rising labor and materials costs are a potential limitation on the rebound in development activity. Construction job openings are near record highs, while hires have been trending down in recent months due to acute labor shortages.

Medical Office to Capture Strong Investor Demand

The medical office sector has attracted growing interest from investors, including institutional players, in recent years. According to CBRE's 2021 Americas Investor Intentions Survey, 72 percent of respondents were actively pursuing alternative investments, up from 54 percent in 2020, and life sciences/medical offices represented one of the most sought-after categories.

Medical office transaction volume was not immune to the effects of COVID as logistical hurdles hampered deal volume, particularly in the second quarter of 2020 and the third quarter of 2020. However, according to Real Capital Analytics, volume rebounded to $4.4 billion in the fourth quarter of 2020, the highest fourth quarter on record. Volume slowed in the first quarter of 2021 but increased by 32 percent year-over-year in the second quarter of 2021. The average cap rate generally trended downward due to COVID, standing at 6.5 percent in the second quarter of 2021. Institutional investors have become increasingly active in the space, accounting for nearly 30 percent of deal volume in 2020, nearly double their average share from 2011 to 2019.

The resilience of the medical office sector through the COVID-19 pandemic and past economic downturns and the long-term favorable demand prospects for health care services are expected to continue to attract investor attention in 2022 and through the long term.

—CBRE

constraints and airlift to support the surge in demand. Following staffing cuts in the fourth quarter of 2020 during a gap in government aid, airlines and hotels have struggled to rehire staff to keep up with demand, resulting in flight cancellations and delays, reduced hotel capacity, and uneven service.

Following office and school reopenings this fall, markets that benefited from surges in leisure travel are anticipated to experience softening demand levels. Levels of group and individual business travel that historically take the place of waning leisure travel after Labor Day are expected to be slower to recover as companies continue to evaluate travel policies and countries extend cross-border travel restrictions.

While the pace of recovery to date has largely been predicated on vaccine rollout, sustained growth remains reliant on a significant decline in the rate of infection. Vaccination rates slowed significantly over the summer (only 55 percent of the U.S. population was fully vaccinated as of September 16, 2021), allowing for the more contagious Delta variant to cause a surge in cases. As a result, office reopenings were pushed later into 2021, likely slowing the pace of recovery of business travel and group demand. Until infection rates decline further, the potential for future virus-related shutdowns continues to threaten consumer confidence and resultant hotel demand.

Capital Markets and Transactions

In the second quarter of 2020, after it became apparent that the COVID-19 pandemic would cause prolonged closures, investors began to amass capital in preparation for distressed deals, anticipating 40 to 60 percent discounts to pre-pandemic pricing. However, large bid–ask spreads occurred, initially fueled by an uptick in summer drive-to leisure demand. As that demand slowed late in the third quarter of 2020 and into early 2021, a limited number of noncore assets began to trade at discounts of 15 to 40 percent as owners looked to reduce leverage and stabilize core portfolios.

While select hotel merger-and-acquisition activity occurred in the second quarter of 2021, individual and portfolio hotel transactions remained challenging due to valuation uncertainty from continued performance vulnerability. Nonetheless, despite an unprecedented level of delinquencies and defaults, the extent of distress sales initially anticipated failed to materialize due to timely federal relief, higher-than-anticipated pent-up leisure demand, continued lender resistance to take back the keys, and ownership stabilizing its portfolios by accessing readily available rescue capital and through select, noncore asset sales.

After accelerated vaccination rates resulted in a faster-than-expected rebound in leisure travel in the latter part of the first quarter of 2021, discounts were further reduced to 15 to 20 percent due to competition among buyers with pent-up capital. As a result, properties in popular leisure destinations recovered the fastest and were able to retain (or, in some cases, exceed) 2019 value levels.

City-center convention, business, and group hotels will likely continue to observe suppressed values in the near term due to a slower return of the business traveler and in-person group meetings stemming from continued uncertainty regarding new COVID-19 variants.

Furthermore, a series of devastating and high-profile natural disasters, coupled with heightened awareness of business risks associated with climate change, have resulted in significant rises in insurance premiums for regions with high fire, wind, and/or flooding risks. These premiums have had a substantial impact on investor return calculations and as a result are factoring into investment decisions in high-risk areas.

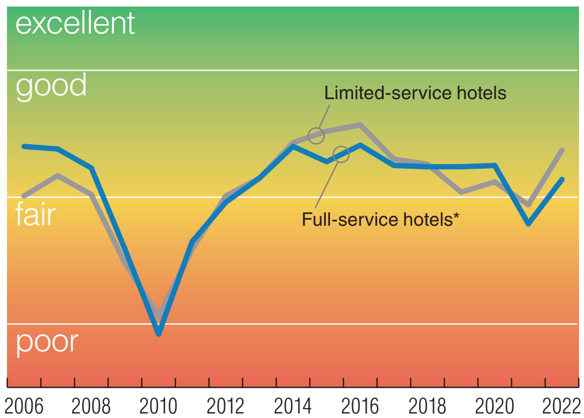
Labor Shortage

Hotels were initially forced to modify—and in many cases reduce—services at the onset of the pandemic to comply with Centers for Disease Control and Prevention (CDC) guidelines and minimize staff exposure; however, even after some guidelines were eased, properties continued to operate with reduced staffing as demand uncertainty persisted, pre-vaccine. Following a faster-than-anticipated vaccination rollout, hotels began to call back staff in early 2021 as leisure travel rebounded rapidly; however, the response from former employees was muted due to continued health and safety concerns, elevated unemployment benefits, child care difficulties, and/or alternative employment having been found in higher-paying or less strenuous industries.

This caused a cross-industry labor shortage among hourly wage workers and severe capacity constraints across industries. Highly visible examples of these labor shortages included airlines forced to cancel flights, restaurants continuing to restrict dine-in service, and hotels limiting available rooms, housekeeping, and food-and-beverage offerings to service guests with a significantly reduced workforce.

Uneven performance recovery and a lower cost of living have further spurred labor migration into secondary and tertiary markets. High-demand leisure markets continue to face labor shortages, with hotels raising room rates in an effort to suppress occupancy and constrain capacity. This is resulting in

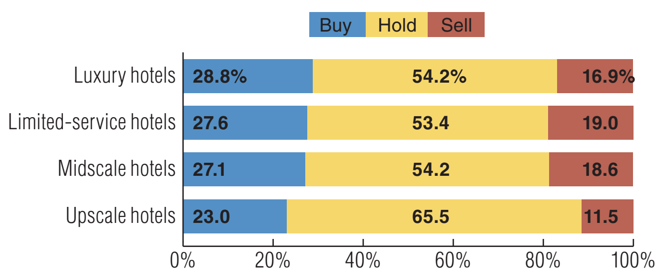
Exhibit 3-12 **Hotel Investment Prospect Trends**



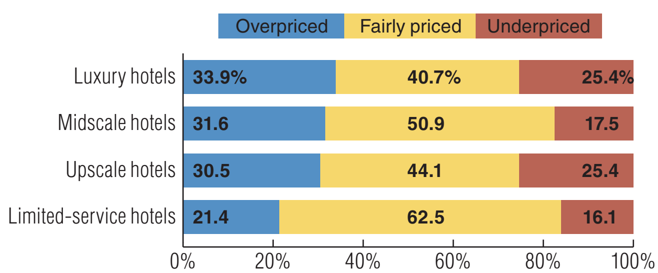
Source: *Emerging Trends in Real Estate* surveys.

*Starting in 2017, results are the average of investment prospects for three categories—luxury, upscale, and midscale hotels. Previous years' results are based on investment prospects for a single category—full-service hotels.

Hotel Buy/Hold/Sell Recommendations



Opinion of Current Hotel Pricing



Source: *Emerging Trends in Real Estate 2022* survey.

Note: Based on U.S. respondents only.

a growing gap between rate paid and service level offered that may not be sustainable long term. Furthermore, workforce relocations may result in longer-term implications on staffing for city-center and group-oriented hotels when business and convention demand recovers.

Regardless of service level, the pandemic has resulted in a heightened awareness of hygiene, with hotels spotlighted as a cleanliness theater for not only guests, but also on-site employees. As high-touch environments, hotels carry a perception of risk not only from rising regional case loads, but also from potential exposure from travelers coming onto the property. Transparent safety protocols and sanitation procedures became necessary not only for guests, but also employees, playing a role in hiring and retention.

Uncertain Value Proposition

In addition to more costly cleaning procedures and the rising cost of goods due to supply-chain disruptions, wages have begun to increase in light of current labor shortages. This has already resulted in increased pricing, particularly in markets experiencing strong leisure demand. Full-service hotels in particular will be forced to reimagine high-touch services in a post-pandemic environment to ensure a sufficient value proposition for guests that supports increased pricing as well as an owner's return on investment.

While the hotel industry continues to operate on a simplified service model, this may have a longer-term impact on consumer perceptions and decisions. As full-service properties initially cut back on services such as daily housekeeping and in-room dining in response to health concerns, labor shortages, and continued depressed group and business travel, the differentiation between full-service and select-service was reduced, also putting these hotels potentially at a competitive disadvantage to vacation rental properties with greater in-room amenities (like kitchens and a larger guest space). This could have a longer-lasting impact on consumer perception, further exacerbated by quality constraints stemming from labor shortages.

More recently, instead of short-term cuts to services, capacity, and staffing, full-service hotels are pursuing long-term efficiencies to operate with less staff while still maintaining a positive guest experience. Previously sluggish adoption of technology was rapidly accelerated immediately following the start of the pandemic to reduce headcount, predominantly through the implementation of guest-facing technology. Now, technology implementation at a hotel is shifting toward long-term operational efficiencies to retain and supplement—rather than reduce—headcount, and to amplify efforts of high performers in an effort to not only better serve guests, but also retain these top staff members.

Meanwhile, technology is allowing select-service hotels and vacation rental services with lower-touch models to continue providing streamlined services (e.g., free breakfast instead of costly in-room dining, opt-in housekeeping, and so on) included in the room rate, with a less labor-intensive model, while guests find reduced interaction with staff reassuring during and after the pandemic. This has had an impact on investments. Investors are turning toward extended-stay, economy, and midscale properties that were previously underserved pre-pandemic, attracted by the sectors' lower-cost labor model and higher leisure demand mix, resulting in a faster return to pre-pandemic performance levels.

Fundamental Shift in Demand

Leisure demand has played a significant role to date in the recovery of the hotel sector, as border closures encourage domestic visitation, office closures are prolonged, and group demand continues to be heavily restricted. This has already resulted in a fundamental shift in the relative importance of leisure to overall demand, as indicated by faster performance recovery—at times exceeding 2019 levels—in drive-to leisure destinations, in smaller and rural markets, and at select-service and extended-stay hotels. To date, this is a reversal of previous growth trends that heavily favored urban locations in the top 25 markets.

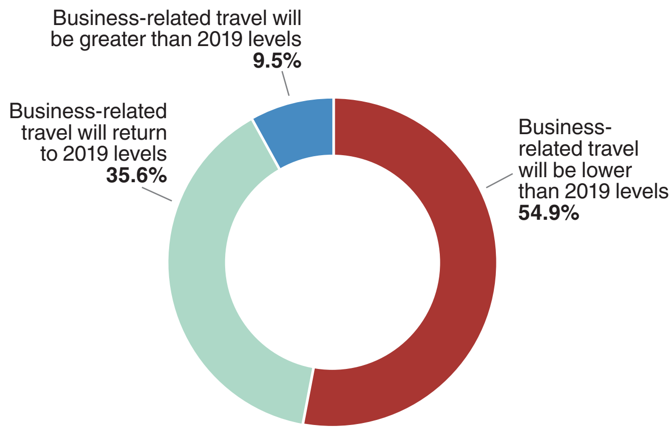
Office closures have further strengthened leisure demand by enabling locational flexibility and migration, providing travelers the option to extend time in a vacation destination or discover new regions by working remotely, resulting in the average length of stay increasing in 2020 by 11.74 percent to an average of 2.04 room nights, according to Kalibri Labs.

For business travel, what began as employee travel restrictions for employee safety has become more permanent, as companies realize the cost savings of reducing their in-office presence (and leased footprints), business travel, and carbon footprint, and a generational shift toward remote interactions and ESG initiatives. While business and group travel will undoubtedly resume, the length and frequency of stay remain an unknown.

Multifamily: Connecting the Dots

For the apartment property sector, COVID-19 came and COVID-19 . . . didn't depart as scheduled. The pandemic decided to linger for a long-COVID foreseeable future. What that means is that after a whiplash spell of horror and havoc in early 2020, stakeholders in U.S. rental apartment properties face uncharted prospects today. Another collateral-damage shoe could drop—or not. The challenge now is to piece together what was in motion before the pandemic and what will come later—and to do that with no obvious benefit of present-day clarity as to how the two separate trend paths might work.

Exhibit 3-13 **How do you anticipate business-related travel to be different three years from now?**



Source: *Emerging Trends in Real Estate 2022* survey.

Still, a consensus of sector leaders gravitates with tempered optimism toward five common denominators seen as carryovers from pre-pandemic trends to a post-pandemic decade ahead.

- Technology advances—in homes, business, and construction—have accelerated and will continue to do so, speeding vertical assembly via modular and factory-based component design and construction, as well as easing the demands of property management and improving net operating incomes. These advanced processes will expand work-from-anywhere options that allow renters to find hybrid live/work communities that fit their budget.
- More time spent at home calls for evolved flex-space design and greater-square-footage floor plans, with a programming deemphasis on indoor common amenity spaces like fitness centers in favor of outdoor living and recreation space.
- Mixed-age communities reflect convergence of rent-for-financial-reasons working adults and rent-by-choice near- and post-retirement-age residents. Fuss-free, agile, financially nimble living comes of age.
- New is for but a few: cost economics of new development in the multifamily rental sector relegates the majority of working-adult households to mostly older class B, C, and D properties.
- Appealing to the mercurial middle—a population of low- to middle-income households and a typology of denser, low- to

mid-rise multifamily buildings—hangs as both an elusive challenge and an enormously rewarding solution.

The Long-COVID Apartment Economy

Under the sway of expanding adult-household demographics and job formations, a decade-long upward growth trajectory spanned the gap between the gloom of the Great Recession and the doom of COVID-19. During that time, development and management of multifamily rental property shone as real estate's fair-haired golden child. Apartments had it all, it seemed: a pig-in-a-python of incoming demand, underbuilt supply, swelling capital, and even an undercurrent of political capital that real estate developers seldom get to feel.

While the demographics driver continues to do its job of replenishing the sweep and structure of demand, it is a post-COVID-19 economic prognosis that heavily clouds what's next, especially as the Delta-variant surge disrupts what many had hoped would be a full economic reboot by fall 2021. Demographics' "devil's in the details" questions include how quickly and extensively millennials exit rentership in pursuit of owning their own homes, how soon generation Z will ascend into career and credit stature to become renters, and how many aging baby-boom retirees choose vertical neighborhood living after 40 to 60 years as single-family households.

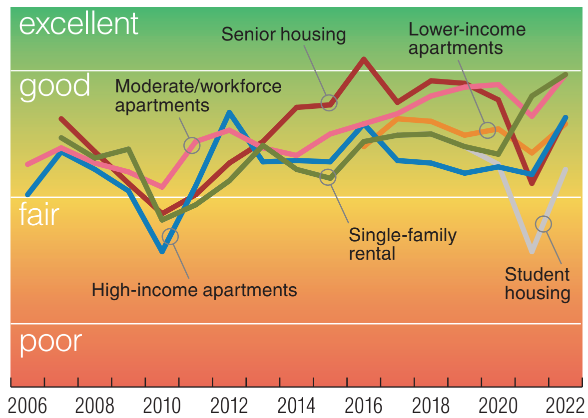
Unpredictability and risk fissure into the decade ahead. This is particularly true for those who invest in, produce, and manage rental apartments for Main Street working-household America—not for lack of demand, but for the political, economic, and social difficulty of meeting it.

The COVID Inflection

Heading into 2020, the bright luster of apartment business momentum sparkled in broad strokes and national averages. Focus, investment, big valuations, and floods of demand cherry-picked designated metro areas as winners and bypassed others, as well as their outer-ring outskirts. In a couple of dozen or fewer urban magnets, multifamily rental stood tall as the go-to housing option for America's largest generation of newly minted adults. Millennials effectively energized, youth-ified, and quickened the pulse of the sector even in the latter grasp of the Great Recession as a bold, breakout sign of green shoots.

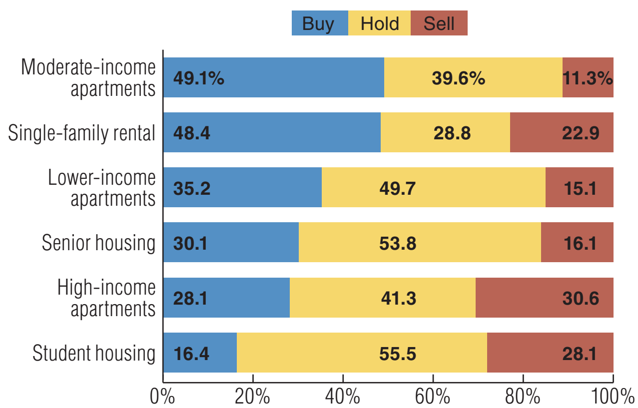
Too, as a safe-haven, steady-return-on-investment asset class in an undersupplied real estate sector, apartment capital deals enjoyed attention among lenders and investors clamoring to get into developers' capital stack. What's more, multifamily rental properties enjoyed goodwill as well as political and social standing among national policymakers—and at least some policymakers in

Exhibit 3-14 **Apartment Investment Prospect Trends**

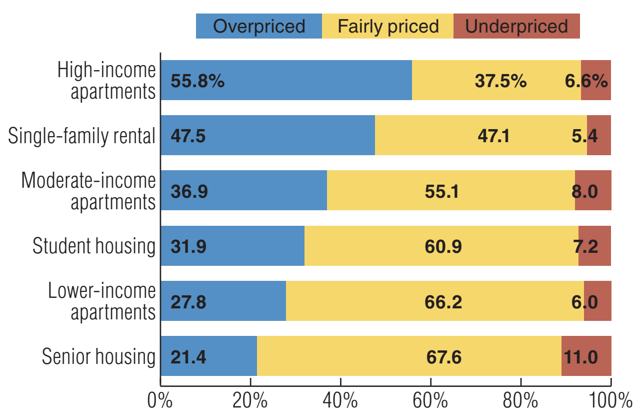


Source: *Emerging Trends in Real Estate* surveys.

Apartment Buy/Hold/Sell Recommendations



Opinion of Current Apartment Pricing



Source: *Emerging Trends in Real Estate 2022* survey.

Note: Based on U.S. respondents only.

the urban magnets—as the closest thing the nation could get to affordable housing.

It looked like all the apartment sector needed to make the 2020s prosperous was to continue doing what it was doing; be itself—productive, if overskewed to the high end of the market; and remain on the glide path. An inadvertent assist came in the form of tight supply of for-sale homes, channeling even more demand toward rentals.

As home to more than one in three American households, apartments by 2020 housed about 44 million households and 111 million Americans, contributed $3.4 trillion annually to the economy, and supported a reported 17.5 million jobs. Only the leading edge of the millennial cohort—ages 35 to 40—have pivoted toward homeownership, meaning most of the rest of the 75 million millennial generation wants to rent. Further, with an enormous generation Z filtering into real-world adulthood, the demand side of the apartment sector shows no sign of ebbing through at least another decade.

The challenge to the business would be to find a way toward matching monthly rents, once again, to monthly incomes when they have fallen out of whack over a 20-year period that started in 2001.

The Goalposts Moved

Having cracked the code of developing new high-end neighborhoods in economic hubs for an increasingly discretionary renter, leading housing strategists thought that if they could somehow get on and maintain a consistent track to produce, lease up,

Senior Housing

As we continue to emerge from the 2020–2021 COVID-19 pandemic, its aftereffects will remain for the foreseeable future. For the senior housing sector, there are lessons learned, experiences shared, crises managed (and sometimes averted), as well as shifts in operations, management practices, and the bottom line of financial statements. There are broad secular changes taking root as well that began before spring 2020 that were hyper-accelerated by responses to the pandemic. And finally, there are the realities of the market fundamentals that have occurred in the last 18 months that will take time to fully work themselves through. All these factors will influence the investment considerations for senior housing in the next year and beyond. These influencing factors are discussed below.

First, the good news. The fast discovery and relatively rapid distribution of vaccines that combatted the COVID-19 coronavirus have been a huge success for America's elders living in congregate settings such as senior housing. The public policy decision to prioritize older adults in the vaccination queue has been effective. Surveys conducted by the National Investment Center for Seniors Housing & Care (NIC) among C-suite operators of senior housing and care properties show that more than 90 percent of residents are vaccinated.

In addition to the success of vaccinations, best-in-class protocols have been developed for infection control, sanitation, hygiene, and safety—many of which will likely stay in place. Flexibility, responsiveness, and readiness are new standards for successful operators. As a result, COVID-19 case counts have fallen precipitously, potential new resident inquiries have risen, leads have been generated, and move-ins have accelerated. Demand, as measured by net absorption, reversed course to the positive during the second quarter of 2021, following a full year of negative net absorption, according to NIC MAP data, powered by NIC MAP Vision.

Now, the not-so-good news. Occupancy levels remain near or at historic lows, although they vary by metropolitan market. For aggregate senior housing at the national level, occupancy fell 8.7 percentage points, slipping from 87.4 percent in the first quarter of 2020 to 78.7 percent one year later and where it remained in the second quarter of 2021. That flat occupancy rate occurred despite the beginning of a recovery in demand due to the growth in inventory during the second quarter. Based solely on historic demand patterns—which albeit could understate the future pace of improvement—it may take until mid- to late 2023 to fully restore property census.

As a result, revenue growth has been hard to achieve for many—but certainly not all—operators of senior housing properties. This has put a squeeze on the bottom line, as has upward pressure on expenses. Rising wage costs associated with temporary agency workers, overtime hours, and sick leave associated with COVID-19 have combined with dollars expended on personal protective equipment (PPE) and rising insurance costs to put significant pressure on expenses.

All of this is occurring at a time of countervailing forces affecting senior housing. First, the demographics: they are full bore

continued next page

and manage 900 newly developed apartment units a day for the next nine years—328,000 new multifamily units a year—they would likely leverage the high volume of new inventory to make progress toward narrowing affordability gaps that yawn ever wider as costs and rents outpace household incomes. Business leaders believed that the math of adding more housing in more places, period, could relieve relentless pressure on rent rate increases as it let the air out of some of the supply/demand imbalance.

That work of adding more rental apartment inventory in more places was still regarded as a reasonably reachable challenge in early 2020. Then, COVID-19's hit sent a shock, and the goalposts moved. Development deals in the pipeline for 2021 and beyond went into mothballs or fell off the table, pending the outcome of Main Street America's ultimate decision as to how and where to live under siege of a transmissible, fatal contagion. "We were not able to produce the kind of housing that we need to produce to meet the demand. We lost all momentum we had," said one of multifamily rental's leading industry executives. "The imbalance now is even worse than it was before."

moving in the right direction to support growing demand for senior housing. The number of 82-year-olds—often the age at which a person moves into senior housing—is growing at an accelerating pace. In 2021, there were 10.5 million Americans aged 82 and older; by 2025, that is projected to grow to 12 million, and by 2030 to 15 million, according to the U.S. Census Bureau.

Second is the rise in the acuity levels of many older adults moving into senior housing, which makes the service offerings provided by senior housing that much more of a necessity for many senior citizens to achieve a certain quality of life. As this is happening and compounded by the effects of the pandemic, there has been a shift in senior housing to provide a fuller service offering that includes elements of health provision. This was a trend that began several years ago and only accelerated during the past 18 months. Many operators now collaborate with third-party health care providers, such as Medicare Advantage providers, to bring health care more directly to individual residents within their properties. Health and wellness programs are being developed as the virtues of population health management are being recognized to increase quality of life as well as length of stay, which, in turn, supports revenue growth.

At the same time, there is growing recognition of the need for senior housing for America's "forgotten middle," a term coined by NIC in its 2019 seminal study that assessed and quantified the need for more affordable housing and care options for middle-income seniors. Middle-income seniors are those who are classified as having too many financial assets to qualify for Medicaid but not enough to fully cover housing and support needs. The study concluded that this cohort of seniors is expected to represent 43 percent of all seniors in 2029, an 82 percent growth rate over 10 years.

Individual operating companies as well as public REITs have seemingly embraced this dynamic and are proactively developing strategies to tap into this burgeoning and untapped demand cohort.

While the level of needs and assistance has been rising in many senior housing properties, much attention also is being paid to the "younger old"—that is, the cohort of 75- to 82-year-olds. This is the demographic cohort that is growing at a very rapid pace today (even faster than the 82-plus cohort), with the oldest baby boomer now age 75. This expanding cohort is likely to create unprecedented demand for a newer rental housing option, frequently referred to as active adult. While generally still in its infancy, it is emerging as a large opportunity for investors, developers, and operators of both multifamily and senior housing. It ranges from lifestyle-focused, highly amenitized rental product to a middle-market rental option, with social activities as well as recreation and health programing with no home or yard maintenance. It is less operationally intensive than senior housing and has potential to generate higher margins and returns. While some active adult properties have been in existence for many years, this rental property segment is generally new and has much room to evolve.

Based on the growing interest in the middle market and the active adult and the rising acuity levels of senior housing, a broad diversification of different types housing products for seniors is emerging. Much like the hotel sector that has a wide variety of options and choices for consumers, is the evolution of housing for older adults as operators select the specific service offerings and consumers they wish to reach.

Regardless of the focus of an individual investment or operating strategy, however, is a common challenge faced

As a function of the disequilibrium, operational focus has fixated on an in-the-weeds, one-day-at-a-time array of priorities: building-supply-chain bottlenecks, talent shortages in skilled workers and property management, and the ongoing challenges of remote and distanced execution, communication, negotiation, and trust building that made being present difficult and being absent a showstopper. Preoccupation with these immediate-term disruptions falls short of addressing the blunt challenge of sparking the kind of new supply that would be needed to ripple out and trickle down in the form of more inclusive access to attainable rental homes and communities. The following explains why.

A Tale of Two

In the early months of the pandemic limbo, strategists held their breath and hoped their best-laid plans for the hustle-and-bustle and buzz of "amenitized" vertical communities everywhere was still beginning rather than, all of a sudden, coming to an end.

Millions—20 million, in fact, and many of them renters—were either furloughed or laid off altogether starting in March 2020.

by all providers of care for older adults, and that is staffing. Shortages of labor have become a common theme in the months following the worst of the pandemic. Federal Reserve officials recently updated their predictions on the path of the unemployment rate and now project that the jobless rate will fall to 3.5 percent by the end of 2023, matching its pre-pandemic low of February 2020. The official unemployment rate in June 2021 was 5.9 percent, down from a pandemic peak of 14.7 percent in April 2020. For perspective, the lowest postwar recorded jobless rates prior to February 2020 were 2.6 percent in 1953, 3.4 percent in 1969, and 3.9 percent in 2000. And, unfortunately, a smaller pool of available workers is likely to keep labor market conditions a challenge for the foreseeable future.

While good for employees, low jobless rates present challenges to employers who must staff their businesses. This is true for nearly all industry sectors. The specific challenge for the senior housing and care sector is recruiting and retaining appropriately trained and skilled staff for all positions, from the front line to the executive director and management level. And as new properties start to come on line in the coming months, new competitors are likely to recruit existing staff from incumbent properties. Strategies to combat labor shortages include improving the work environment and culture, recruitment programs comparable to those used to market to new residents, and collaboration with educational institutions.

Tight labor markets as well as the broad economy directly affect the senior housing sector, although the relationships on demand are complex. Interest rates, housing market conditions, consumer confidence levels, stock market performance, job growth, the unemployment rate, and household wealth are all influencing factors. Sentiment toward senior housing itself and the perceived risks versus benefits of living in a congregate setting also are important. The pandemic and myriad negative headlines about congregate living settings—often focused solely on skilled nursing but just as often confused and conflated as senior housing—have led to reputational risk and marketing efforts to distinguish skilled nursing from senior housing. In fact, a study conducted by NORC at the University of Chicago, funded by a grant by NIC, showed that the COVID-related mortality rates for senior housing during 2020 were significantly lower than for skilled nursing. Specifically, 67 percent of U.S. independent living properties had no COVID-19 deaths in 2020, while 64 percent of assisted living and 61 percent of memory care properties had no deaths. This compares with only 39 percent for skilled nursing. Furthermore, the average mortality rate for adults in independent living was comparable to its corresponding county's mortality rate.

In conclusion, as the COVID-19 crisis recedes (at least at the time of this writing in July 2021), the pre-COVID value proposition of senior housing will be able to take center stage once again, positioning the sector for growth and solid investment returns. The underlying fundamentals and drivers of senior housing remain in place. These include demographics, property obsolescence (two of every three properties were built before 2000), the role of senior housing in population health management and health care cost containment, and its "needs-based" demand characteristics. Indeed, from a resident's or an adult child's point of view, senior housing offers a strong value proposition of personal care, health care, socialization, diet, exercise, medical care plan adherence, and safety.

—National Investment Center for Seniors Housing & Care (NIC)

With lifelines of economic stimulus and extended unemployment insurance, they got put on a clock that would tick down the months of protection from dislocation, displacement, eviction. Their landlords—many of whom owe mortgage payments, and pay their bills and feed their families with the rent money they collect from their properties—were not so lucky.

Cold economic reality flayed the apartment rental marketplace—nearly 20 million rental properties, with 48.2 million individual units—leaving two parallel realities. One—mostly for-profit businesses that own around 4 million properties, but whose properties are home to 21.7 million units—resides in the upper vector of an economic recovery experts denote with the letter K. The other large group—mostly individual investors who own upward of 14.3 million properties that house 20 million households—occupy the lower part of that K shape, mostly passed by as the recovery took shape.

As it happened, for-profit developer and corporate owner and manager communities were largely home to workers who mostly kept their jobs and continued to pay rent. It was the other group, the landlords of one or two or a handful of rental properties—where more than 7 million renters have fallen behind on rent payments—that bore the brunt of an economy that broke for some, while the others who stayed employed were able to continue life and work as they knew it, albeit from home.

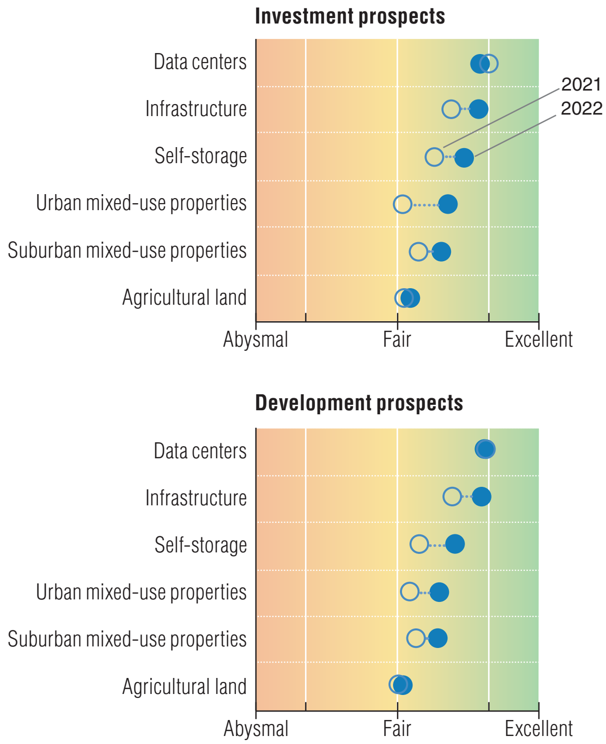
If economic recovery, a massive COVID vaccination crusade, and people's own urge to return to work went as planned, the timing of the end of government stimulus and rescue programs and the reboot to normalcy would have dovetailed by late summer 2021. Instead, Delta variants of COVID emerged as a threat to all those plans. So, now is when those in the lower vector of the K recovery—both renters and landlords—face months into 2022 elevated risk and uncertainty.

A Full Circle on Demand and Some Shifts

The thing is, the beauty of the previous decade's economic mechanics—more adults each year, with household means just shy of what it would takes to achieve homeownership—remains in place. By midyear 2021, and with the prospect that an effectively immunized nation would safely reopen, few doubts remain that apartments in all their forms, formats, and locations will be a fixture in the residential landscape.

More than half of Americans are millennials or younger, and if you add to that a growing rent-by-choice stream of older folks who seek fuss-free, flexible, lifestyle-oriented communities close to food, culture, recreation, and health, the stage is set for apartments' juggernaut to continue.

Exhibit 3-15 **Prospects for Niche and Multiuse Property Types in 2021 and 2022**



Source: *Emerging Trends in Real Estate* surveys.
Note: Based on U.S. respondents only.

"Early results show people are returning to the cities and repopulating them," says the CEO of one of multifamily rental's top 10 public REIT developers. "So, I believe that's kind of our offensive defensive game plan and, in general, landscape of the world. I don't think it's too different for a broader set of people running companies today. Can you find a net-net in that? Yes. The net-net, I think, is we're coming out ahead of this. And the acceleration of the recovery is probably striking for everybody."

Thanks to the emergence of hybrid work/live models and hybrid workweeks as more firms bring workers into the office, demand has shifted to the suburbs, where apartments are often less expensive and have more square footage.

So, the urban and suburban demand axis now covers a greater radius from job-center hubs and allows households to choose from a wider array of affordability and desirability options than they had had before. What's more, culture, food, fun, and entertainment have begun to reawaken where a few months ago all was virtually quiet. The allure of downtown living has reignited.

Political Will . . . or Won't

The harshest reality of all is that, to increase the supply of more attainable rental housing, stakeholders have no choice other than to produce more units at a greater pace. The biggest barrier to that level of production, spooling up as an entropic force—and widely dispersed and squarely opposed to free-market dynamism's ability to equalize apartment rental supply and attainability with sufficient demand—is restrictive local regulations. Those restrictions typically pit homeowners' often mistaken fears about the impacts of development and inclusiveness—the majority of a municipal jurisdiction's voter base—against the interests of would-be renters.

"Nothing's more urgent than the adoption of more friendly approaches to community zoning regulations to facilitate housing," says the CEO of a national, privately held multifamily rental property owner and management enterprise. "I've been disappointed in what we have seen from coast to coast—that community leaders like to talk the talk on housing affordability but very few of them walk the walk of wanting to stay current with what the market's people seek for housing product."

Single Family: The Tail Wags the Dog

Single-family for-sale real estate trends for 2021 to 2030 will be forged in a simmering cauldron of demand for shelter, constrained by an inadequate supply of new development and construction. Further, single-family build-to-rent purpose-built communities will secure a place as a core magnet of housing preference, and could permanently alter the calculus of lifetime homeownership trends among adults. And, as pandemic-era mobility patterns affect land planning, acquisition, and development, "rise-of-the-rest" secondary, tertiary, and jewel-box metro areas will thrive as technology untethers households from expensive urban job centers.

The Context: Unmet Need

One of U.S. history's largest generational cohorts—the 72.1 million or so millennials, all of working age at 25 to 40 years old—was a sleeping giant that finally woke up in 2019 and began family and household formation in earnest. The following year, COVID-19 hit. These two megaforces—the latent household- and family-formation engine of millennial adults, and the pandemic's public health menace—collided. Two other aspects came into play. One was the time spent sheltering in place, locked down, quarantined—households waiting out the COVID-19 siege. The other was the Fed's willingness to throw open its war chest. During this convergence, a home-with-a-yard's primal promise of protection, personal self-actualization, and a place to prosper flashed irresistably bright.

Because a majority of millennial adults today are still renters—and now they are playing catch-up in family and household formations—the demand curve for homeownership for the next decade is epochal. Powering this demand will be other generational demographic shifts as well. Four discrete cohorts today collectively account for more than 200 million adults. That is three out of five Americans who are nearing or are well into adulthood. Youngest is the vanguard of the newly minted working generation Zers, the oldest of whom are 24. On the opposite end of the age spectrum is a never-say-never horde of 56- to 70-something baby boom adults, with whom the ballast of America's household wealth resides. In between the Zers and the boomers—the heart and soul of a household consumption–driven economy—are millennial generation adults and 68 million gen Xers in the zenith of their career earnings. Furthermore, technologies and business practices and policies alike have now untethered many employees from workplaces. Many are shifting geographies.

Altogether, what has become crystal clear is the central challenge and pivotal opportunity for single-family property investment through 2030: how to build out of the profoundly deep hole of housing supply while structural demand momentum grows, and how to do it both affordably and sustainably.

A plausible juggernaut of demand over the next 10 years may prove out. The other parts—having to do with building more houses—are, unfortunately, fantasy. Why? Supply simply cannot keep up. "The tail wags the dog," said the principal of an institutional investment capital adviser whose clients are homebuilders and building technology disrupters. "Constraints on supply—policy, regulation, lost productivity—have more to do with what happens in housing than people's need for it."

Where capital, land, production, and municipal coffers each sequester so many of the dollars that residential real estate property value generates, spoils left to buyers and renters price most of them out of the marketplace. In turn, those spoils price in a smaller and smaller segment of the population. But why is America so underbuilt? "Where I think we've lost our way is an appreciation of what housing can do to stimulate jobs and our collective responsibility to bring shelter to Americans today," the CEO of one of the nation's five leading homebuilding enterprises said.

Back to School: Student Housing Outlook

Historically touted as a recession-resistant sector, even student housing took a dip in performance during the COVID-19 pandemic–driven economic downturn. Still, multifamily housing of all types was a relatively safe haven for investors in comparison with other commercial real estate sectors.

An Unprecedented Time for the Sector

As with fall 2020, it is probably best to analyze fall 2021's student housing trends on two separate timelines.

In fall 2021, leasing got off to a sluggish start due to the pandemic's impacts on fall 2020 leasing. Weakness carried all the way through March 2021. In fact, February and March saw annual rent cuts occur for the first time in recorded history. Although these cuts were modest, it was discouraging to see rents backtrack and pre-lease occupancy trail fall 2020—a year that was already the weakest on record.

But in a manner similar to its conventional counterpart, demand surged in the late spring/early summer months. Pre-lease occupancy in May matched its best-ever May monthly improvement. Equally impressive were the June and July figures, both of which saw record leasing activity for those months.

With occupancy rates improving, rents also are growing once again. Only 10 percent or so of the nation's investment-grade campuses rounded out the fall 2021 leasing season with sizable rent contraction. That is a far-better share than the spring months, when close to 30 percent of the country's schools were cutting rents.

Altogether, the recent improvement in demand is about as encouraging of a trend as the industry could have hoped for during the past 12 to 18 months. The end-of-leasing-season data for fall 2021 suggest that the industry has finally normalized with pre-pandemic norms and that the worst of the downturn is in the rearview mirror.

With the fall 2021 semester now underway, though, all eyes have quickly refocused on fall 2022 and beyond. Here are a few key trends the industry is watching going forward.

What Will Construction Look Like in the 2020s Decade?

Although it is difficult to provide a concrete view of the second half of the 2020s decade, a few influences and factors inform the near-term outlook.

1. Current construction levels for fall 2022 indicate that supply will come in comfortably below the 2010s-decade norm.
2. Overall multifamily permitting activity eased modestly due to the pandemic. It appears that the share of student housing projects permitted has pulled back slightly more than multifamily housing overall.
3. Rising construction costs—both from material and labor inputs—may be further exacerbating the pinch on near-term student housing supply since student construction tends to be slightly more cost-sensitive than conventional housing.
4. With many of the most viable development sites already built out during the 2010s decade, construction levels may be compressed in the longer term as developers seek alternative options such as value-add/renovation projects as opposed to new development.
5. An increase in on-campus public/private partnership development could also lend itself to moderating off-campus development going forward.

What Happens with Enrollment Going Forward?

Enrollment growth is presented with its own unique set of headwinds and tailwinds. It is likely that modest enrollment growth persists for at least the next five to seven years. But expectations that the 2020s decade will see the same level of growth as the 2010s decade are probably too optimistic.

1. Tailwinds for enrollment growth are still out there. One of the positive influences is the continued growth of the 18-to-24-year-old cohort—the key renter segment for student housing assets. While growth is happening, there is less growth today than at the start of the 2010s decade. In turn, a headwind mounting against the industry's medium- to long-term outlook is the slowing growth of that 18-to-24-year-old cohort (and the eventual decline in that age segment as the U.S. population ages).
2. A growing share of high school graduates are enrolling in post-secondary institutions. While growth is ultimately finite and there is a portion of the high school graduate population that will always forgo post-secondary enrollment, the good news is that the share of those who do elect to continue their education has steadily grown throughout the past decade. Still, expectations for a similar pace of growth in the forthcoming years should be tempered.

continued next page

3. Growth in international enrollment halted in 2020 and 2021. Moving forward, this number is likely to begin growing again. That is going to be a critically important part of the outlook in the long term. The pace and degree to which this segment of the student population expands going forward, however, come with a high degree of uncertainty. As such, some prognosticators are adopting a more conservative growth forecast than pre-pandemic.

Beyond Enrollment, What Might Affect Industry Performance in the Future?

A number of exogenous influences beyond enrollment growth and construction may affect the longer-term outlook. While these influences are likely to be marginal for the coming year or so, they should be monitored beyond year two of the forecast horizon.

1. Changes to renter preferences (in part due to demographic shifts) will influence design trends and likely some operational practices. As millennials have aged out of the 18-to-24-year-old age range, the industry is already seeing some shifts in renter preferences. And as generation Z (generally defined as those ages six to 24 today) continues to age, more shifts will occur. Technological preferences and post-pandemic construction changes will be of particular note.

2. Still nascent relative to its conventional multifamily housing counterpart, there has been an increase in capital flow toward the student sector throughout the past decade. But the increase in capital flow will increase competition for a relatively small number of existing properties. That has already led to compressing cap rates. As a result, continued changes in underwriting measures and expectations will likely persist through the 2020s decade.

3. As some campuses struggle with overbuilding, some potential exists for a "relief valve" at appropriately positioned assets at select campuses. That is, some off-campus student assets that are in the right market and right location could be converted to conventional multifamily housing. In turn, that will help alleviate pressure on student-specific assets at those campuses. This is a recently emerging trend, but it should be monitored in the coming years.

—RealPage

Still, consensus among single-family housing leaders is that the tail will wag the dog. Supply will massively squeeze demand, and local no-growth policies will be an ever-larger factor in why that tail wags.

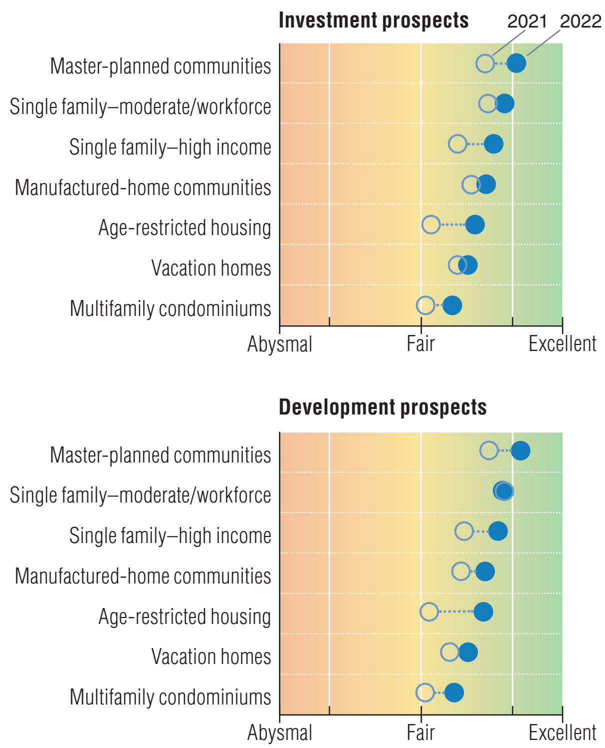
High Demand Plus Scarce Supply Equals High Prices

Housing analysts calculate the current level of long-term underbuilding in a range from 2 million to 5 million missing, unbuilt homes. That imbalance of organic, structural supply constraint versus brute increasing demand will define residential investment, development, and construction dynamics for years to come. Beneath that macro umbrella of growing demand and undersupply, several pan-cyclical trends will shape property and community value dynamics in the span of the decade.

Housing's New Mezzanine Level: Built to Rent

Single-family rental homes—long a bedrock of the housing occupied through the decades mostly by people who neither could afford homeownership nor preferred urban apartment communities—has turned into housing's sexiest phenomenon.

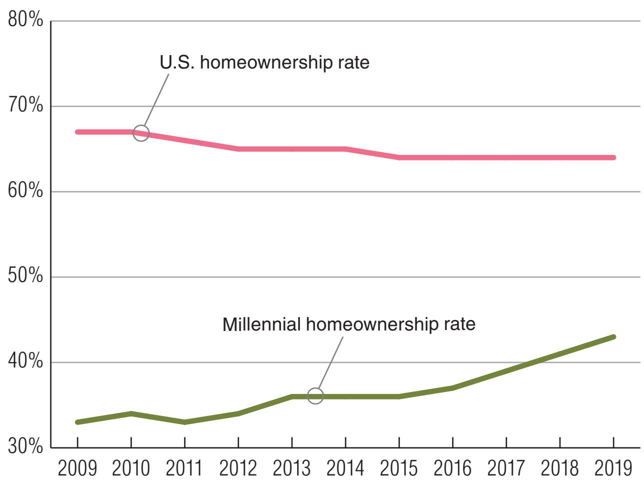
Exhibit 3-16 **Prospects for Residential Property Types in 2021 and 2022**



Source: *Emerging Trends in Real Estate* surveys.

Note: Based on U.S. respondents only.

Exhibit 3-17 **Millennial Homeownership Trends**



Source: Federal Reserve, Freddie Mac Research, U.S. Census Current Population Survey.

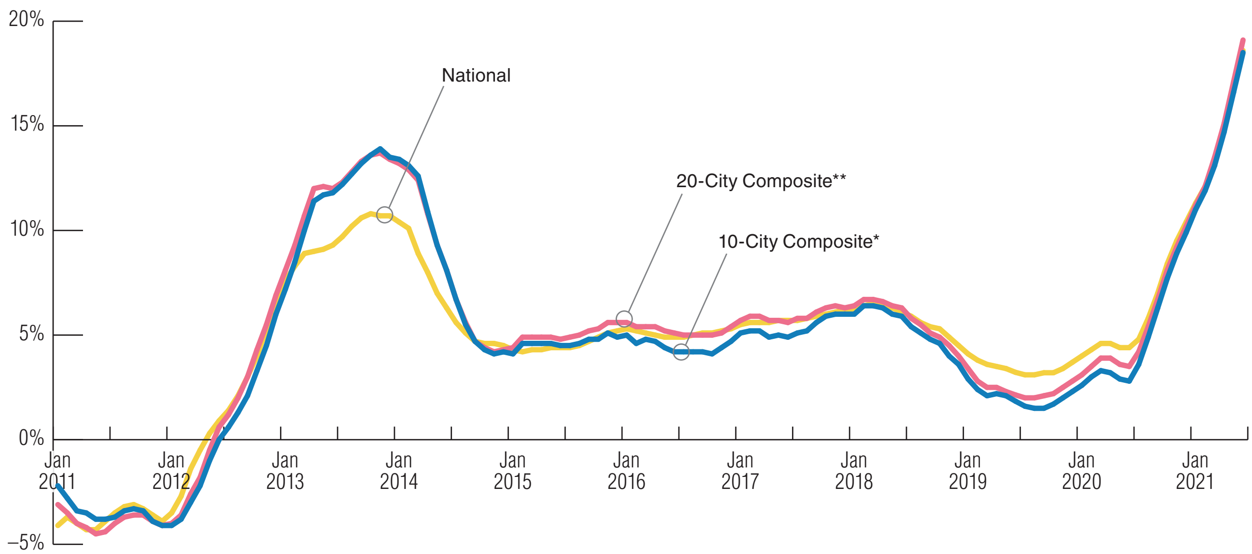
The pedigree of the property type evolved out of the Great Recession as institutional investors bought large portfolios of single-family properties, mostly out of foreclosure, and kitted them as rentals.

In the past five years, as renting either an apartment or a house blended both financial necessity and choice, a value proposition for single-family rental living was distilled and clarified. Purpose-built-to-rent communities are part of nearly every single-family housing enterprise's blueprint and the focus of intense joint venture discussions everywhere. Interested parties include homebuilders, private equity–backed land speculators, land developers, and multifamily REIT investors alike, as well as institutional investment capital. Purpose-built single-family residential (SFR) community living has proved to be a housing-type preference for consumer households. This goes for both rent-by-necessity households and rent-by-choice residents.

A macro question—assuming that production volumes and market share in the single-family-for-rent segment of households continue on an upward trajectory—is what could happen to homeownership rates, and what happens to the number of homes that a life span of homeownership has typically encompassed as SFR scales as a need the market can meet. "Does [traction for single-family rental] mean that purchases of homes over the long run are pushed out? Or does it mean that the number of homes that an actual, traditional nuclear family household will own over its life span declines?" asked one homebuilding and building materials' equity research analyst. "There's a new mezzanine level of 'single-family living.'"

At the macro housing level, expanding that mezzanine level adds to the baseline inventory of housing units and gives

Exhibit 3-18 **Changes in S&P CoreLogic Case-Shiller Home Price Indexes, Year over Year**



Source: S&P CoreLogic Case-Shiller Home Price Index.

*Index based on data from the following metropolitan areas: Boston, Chicago, Denver, Las Vegas, Los Angeles, Miami, New York City, San Diego, San Francisco, and Washington, D.C.

**Index based on data from metropolitan areas in the 10-City Composite, plus the following metropolitan areas: Atlanta, Charlotte, Cleveland, Dallas, Detroit, Minneapolis, Phoenix, Portland, Seattle, and Tampa.

consumers alternatives to either vertical apartment living or homeownership. This a la carte addition to the menu of housing preferences makes aspects of living in horizontal, single-family communities more accessible for those not yet financially ready to buy a home. The reality, however, is that most new SFR development continues to target the more well-heeled renter because that is where finance and property management profit margins are highest.

The Meteoric Rise of Tertiary Markets

Time was that it took a minimum of 250 or 300 annual new-home closings, and more commonly, 400 completions—on a sustainable, foreseeable future horizon of a decade or so—to merit a full-on divisional expansion for a big builder.

Consider those minimum benchmarks a thing of the past now. The COVID-19 disruption and its aftermath—coupled with the exponentially expanding advance of data mining and newly emerging and freshly embraced building technologies—have begun to power a pop-up, asset-light market presence by some big players in places once considered secondary and tertiary markets too small to support volume enough to carry their overheads.

"SG&A [selling, general, and administrative expenses] got reeled in and disciplined after the last boom and the Great Recession stripped out a lot of wasted expense," said the CEO of one multiregional production homebuilder. "With the reemergence of land bankers, our asset-light operational models translate well to some of these emerging hot markets we may have passed over considering in the past. Secondary markets are now the new primary markets, given where we're seeing mobility and migration occurring, especially among knowledge-economy millennials keen to get family formation and kids kick-started. And tertiary markets are the new secondary markets, which means that even some of those metros may be an opportunity for some of our flags."

The pandemic, we remember, did not invent remote work, nor work/life balance trends, nor enabling technologies, nor the appeal of naturally amenitized life. Those macro trends were and remain the future—and the future, in some ways, crashed the party of the present thanks to COVID's arrival on the scene in 2020. However, given two inalienable factors—millennial biological clocks and the fact that COVID is not a one-and-done phenomenon, but an enduring force-factor in the economy and business—the impacts to mobility and migration from expensive, dense, and constraining big urban areas to places that offer multiple dimensions of lifestyle support and livelihood connection will change the way that a relatively rapidly consolidating homebuilding sector views development and construction opportunity.

Still, having more markets of opportunity does not mean more opportunity for all. "One or two big players can do fine in some of those smaller metros, but beyond that, it gets crowded fast," said the multiregional strategic chief executive.

Single-Family Property X-Factors

Three powerful questions—each a potential cause of trends inflection—have surfaced and begun to infiltrate strategic and scenario planning, especially as environment, social, and governance commitments and measures have gained traction as business and investment requirements.

- Does affordability rule out environmentally sustainable construction?
- Can commitment to diversity, equity, and inclusion by more private-sector organizations spell the end of racial inequality in capital investment as well as zoning?
- Do natural hazards—storms, rising seas, wildfires, seismic events, and tornadoes—begin to affect land and property valuations, especially as infrastructure targets places at risk as defunded sites for continued support?

"I have a slide that I use whenever we have company or ownership gatherings, and it's called my constituents slide," said the CEO of a regional homebuilding enterprise. "It shows the communities we build in, the environments we impact, the shareholders' value, the employee value, our trade partners, our ownership. You have to make decisions to contemplate every one of those constituencies because they're all important."

Industrial/Logistics

In pulling e-commerce penetration forward, the COVID-19 pandemic amplified the need for resilient supply chains and modern stock, which, in turn, has propelled demand for logistics real estate. As the economy began to reopen in early 2021, occupier leasing accelerated as structural and cyclical trends combined; in fact, the industrial real estate operating environment has never been stronger. Demand has been deep and diverse across a range of industries. Robust demand, acute scarcity of supply, and rising replacement costs have accelerated rents across the board, reaching historic double digits in many markets, while the vacancy rate fell to a record low.

Logistics demand is set to outperform due to structural trends centered on consumption and managing risk. Consumption-oriented uses remain the primary driver of logistics demand. E-commerce penetration rates continued to rise through 2021, albeit at a much slower pace than the previous year as consumers shifted some of their spending to services, entertainment, and travel as the economy began to reopen. Prologis Research forecasts that after rising by more than 500 basis points in 2020, e-commerce penetration rates will rise by 180 basis points in 2021, to 22.6 percent. This continued climb can be attributed to the "stickiness" of consumer habits, a lack of brick-and-mortar retail options due to store closings, and improvements in e-commerce service levels, which, in turn, attract more demand. The rebounding economy has supported robust retail sales in cyclically tied goods focused on lifestyle upgrades, such as home improvement and automotive. Housing is in high demand and a huge consumer of logistics space; this trend is likely to contribute to even greater logistics demand in the foreseeable future.

Supply-chain bottlenecks, surging retail sales, and rising consumer expectations for faster delivery options are placing extreme pressure on logistics users as they restock in order to capture growth. Prologis's IBI, the company's proprietary survey of logistics real estate customer activity, revealed record-high activity in the second quarter of 2021. Activity occurred across all customer sizes and regional categories. Elevated port volumes illustrate the strong flow of goods: for example, volumes were up 15 percent through May compared with the same period in 2019.

While logistics users are currently responding to shorter-term needs, they are also planning for the longer term, keeping resilience front of mind. A shift from just-in-time to just-in-case had begun to drive demand prior to the pandemic, with trade disputes complicating global goods movements, but they became even more urgent amid pandemic-related disruptions.

When asked about the top concerns for her customers, a senior vice president at a top industrial REIT said, "Cost is not at the top of their list. . . . Our customers are dealing with immense supply chain issues right now that the pandemic has just really exacerbated." As a result, she said, "The concept of supply chain resiliency is becoming even more important to our customers." She elaborated that there is immense focus on getting goods to the right places quickly and avoiding stockouts. All-time-low retailer inventory-to-sales ratios, which were 1.09 in June 2021, highlight the long runway that logistics users must travel to integrate resilience into their operations. Prologis Research estimates that a continued shift toward resilient supply chains could drive logistics inventories up by more than 5 to 10 percent over the next five years.

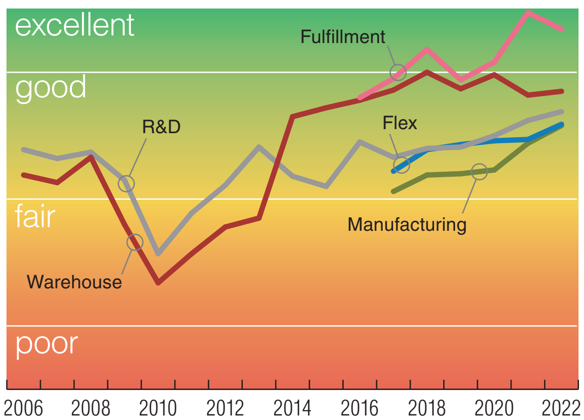
Strong demand has fueled a rise in construction and robust pre-leasing activity. Given record competition in the market, developers are working quickly to monetize zoned and entitled land. Starts in the top markets reached the highest quarterly volume since Prologis Research began tracking, with more than 99 million square feet in the second quarter of 2021. Through the first half of the year, this represents an increase of 60 percent compared with the same period in 2020. The urgency to secure prime logistics space has driven record pre-leasing activity of more than 60 percent of the pipeline. Although new supply is on the rise, risk of oversupply is limited due to increasing barriers to new supply and strong demand.

Barriers to supply are rising, in turn pushing new supply farther away. Growing barriers to development are constraining new logistics supply, especially in the most crucial locations. Consumers increasingly desire faster package deliveries, which requires more logistics space in infill areas, where there is high competition from other land uses and shrinking industrial-zoned land. Land costs have risen by more than 30 percent in 2021 in some places as developers compete for developable land. Requirements and longer timelines for permitting and entitlement limit the number of opportunities to construct logistics facilities in the most in-demand locations. The time between breaking ground and completion has increased by two to three months, or 20 percent, in the last decade.

Increased use case restrictions for industrial occupiers further limit the number of viable sites, adding to customers' operational challenges. When asked to name the biggest risk to the sector, a real estate executive focused on the New York/New Jersey market answered: government regulation on development. "We have been hearing for quite a few years, 'Hey, I want that package tomorrow, but I don't want that 18-wheeler or the 53-footer in my backyard.' There has been some legislation introduced or talked about that would make it very difficult or continue to make it very difficult for developments to get up and going."

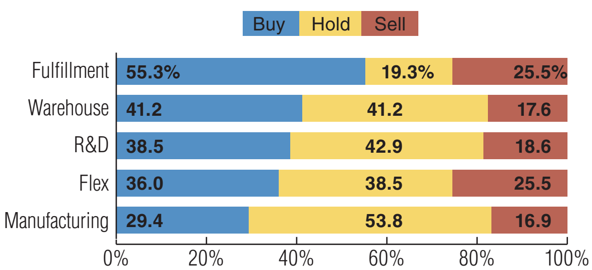
Pandemic-related issues have further elevated supply barriers. Supply-chain bottlenecks paired with surging demand accelerated materials costs, and delays in sourcing lengthened construction timelines. Between the second quarter of 2020 and the second quarter of 2021, steel prices tripled in the United States, and materials shortages have created six-week-plus project delays.

Exhibit 3-19 **Industrial/Distribution Investment Prospect Trends**

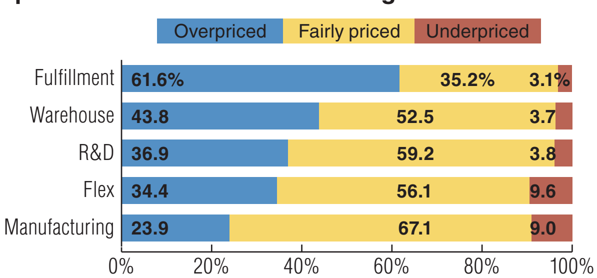


Source: *Emerging Trends in Real Estate* surveys.

Industrial/Distribution Buy/Hold/Sell Recommendations



Opinion of Current Industrial Pricing



Source: *Emerging Trends in Real Estate 2022* survey.

Note: Based on U.S. respondents only.

Looking ahead, a lack of well-located industrial-zoned land and population expansion outward from urban centers will continue to push new supply farther from existing supply. For example, logistics properties built before 2010 in the Greater New York City region were 28 miles from Manhattan; post-2010, they are now 50 miles away. This growing distance can create challenges from a labor, cost, and sustainability perspective. According to a recent Massachusetts Institute of Technology study, built-out logistics networks, which include urban fulfillment centers, can reduce transportation-related emissions by 50 percent. As new supply gets pushed out, the need for well-located Last Touch facilities is increasing.

Differentiation among properties will widen over time. Users' willingness to pay a premium rent for buildings in well-located areas or for those that have modern features will continue, leading to a growing differentiation among properties. Well-located buildings near consumer populations can offer benefits in the form of revenue generation and cost control because they allow users to offer fast delivery times and cut transportation costs. In these infill areas, new supply is very scarce, yielding low vacancy rates and high competition for limited space.

For new supply less proximate to densely populated centers, modernization and sustainability are increasingly important. Building design features that can attract and retain labor, such as the WELL Building standard to enhance worker well-being, improve operational productivity, control costs, and are a competitive differentiator. Features that can accommodate operational innovation, such as high-speed data, floor quality, and increased clear height, allow for flexibility and process improvements. A logistics executive at a multinational energy and automation company said, "readiness to be able to handle or allow us to deploy the proper automation" and "accommodate multiple forms of automation" is a key consideration and essential for optimal business operations. Outside of e-commerce, other industries that are driving the charge toward automation include transportation and distribution services, and food and beverage.

The costs associated with modernization can be high, but readiness to deploy the appropriate automation and technology is essential for logistics users to sustain future growth. Moving forward, logistics buildings that implement these features will see the highest demand.

The Reality of Labor Challenges

Labor is the top pain point for logistics customers of all types, but particularly for e-commerce. E-commerce requires more labor than a traditional logistics facility because of the intensity of use involved in the space. In addition, labor turnover in an e-commerce facility is about four times that of other uses. Automation can help alleviate some of these issues, but labor will be an essential part of site selection for the foreseeable future.

The same executive cited in the previous section said his company is "looking more and more for people with digital acumen . . . people that can bridge operational manual procedures to handling technical equipment and manage those assets to drive optimal efficiency within a distribution center." He added, "We have two challenges: everyone looking for the same people, and secondly, there is not the same population of youth that is interested in working in a DC [distribution center]." Workforce development and community outreach are pivotal to ensuring a pipeline of ready and skilled logistics talent.

Investment Outlook: Continued Outperformance

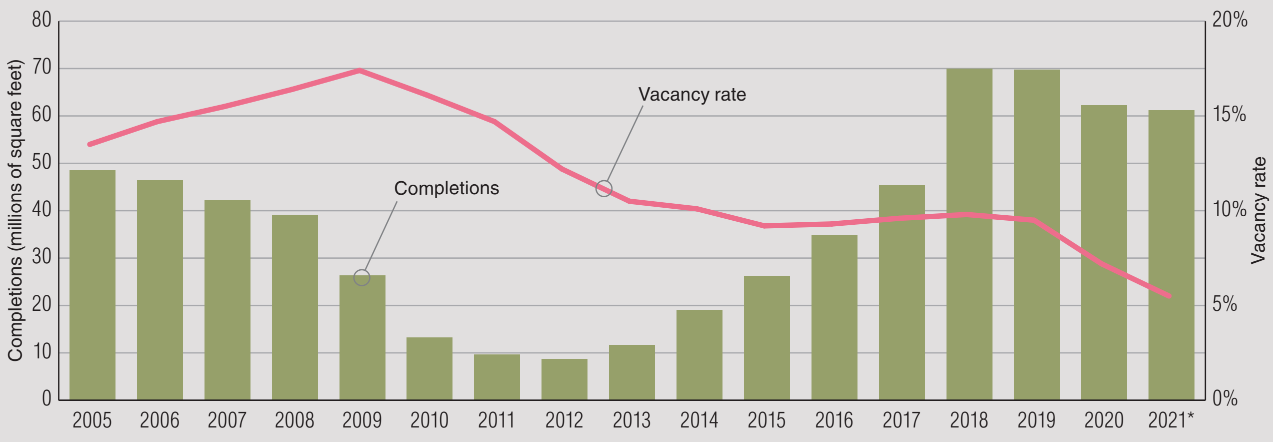
The influx of capital into logistics reflects the sector's structural tailwinds, lasting growth opportunity, and relatively low risk. Results from the *Emerging Trends* survey echo this sentiment as respondents place industrial/distribution at the top of their list for investment prospects for the fifth year in a row. In addition, over

Self-Storage Delivers Record Performance; Competition for Assets Increasingly Aggressive

Self-storage properties outperform through the pandemic, with the runway extending into 2022. The COVID-19 health crisis, while raising many challenges, also generated new demand drivers for self-storage properties that have buttressed fundamentals. The sudden shift to remote learning and working, a greater emphasis on outdoor activities, and numerous household relocations to lower-density areas created additional need for storage units. Together, these trends pushed the national vacancy rate to a record-low 5.5 percent at the end of the second quarter of 2021 despite three years of record self-storage completions. The drop in availability has applied an updraft to asking rents as well, returning the U.S. average to the $1.24-per-square-foot benchmark last recorded in 2016 before the wave of development forced rates down. Renter demand is anticipated to exceed supply into the near future, even as some pandemic-driven factors dissipate. The reopening economy could reignite a broad range of traditional self-storage demand motivators that further build on the market's historically tight operations.

Homeownership demographics buoy future self-storage use. While the spread of the Delta variant is driving COVID-19 cases up in many regions of the United States, widespread vaccine availability should enable the economy to remain largely open. The return of students to campuses and employees to workplaces will weigh on some pandemic-related storage needs. At the same time, the current outlook for household formation is particularly favorable. By encouraging people to stay at home, COVID-19 accentuated some of the advantages of suburban living. This prompted many urban households to relocate, accelerating a preexisting trend that will likely continue even after the health crisis finally concludes. Millennials have led the way in the migration trends. With more than 60 percent of this generation now in their 30s, many have begun a period of family formation. As millennial households age and expand, they often seek larger living accommodations frequently located in suburban

Self-Storage Supply and Demand Trends



Sources: Marcus & Millichap Research Services, Radius+, Yardi Matrix.

*Trailing 12 months through second quarter.

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70 percent of respondents recommend "buy" or "hold" across all industrial property types.

Logistics real estate is attracting a larger share of commercial real estate capital, both equity and debt, according to Real Capital Analytics. Lenders are eager to hold safe assets in their portfolio loans, which is why logistics is taking up a larger amount of debt capital. With substantial rent growth acceleration of more than 10 percent in the last year and market cap rate compression of 60 basis points to 3.8 percent in the second quarter, according to NCREIF, values have risen significantly.

Looking ahead, cap rate compression is expected to continue, given strong capital interest and positive demand-side fundamentals. The MSCI Pension Real Estate Association's (PREA)

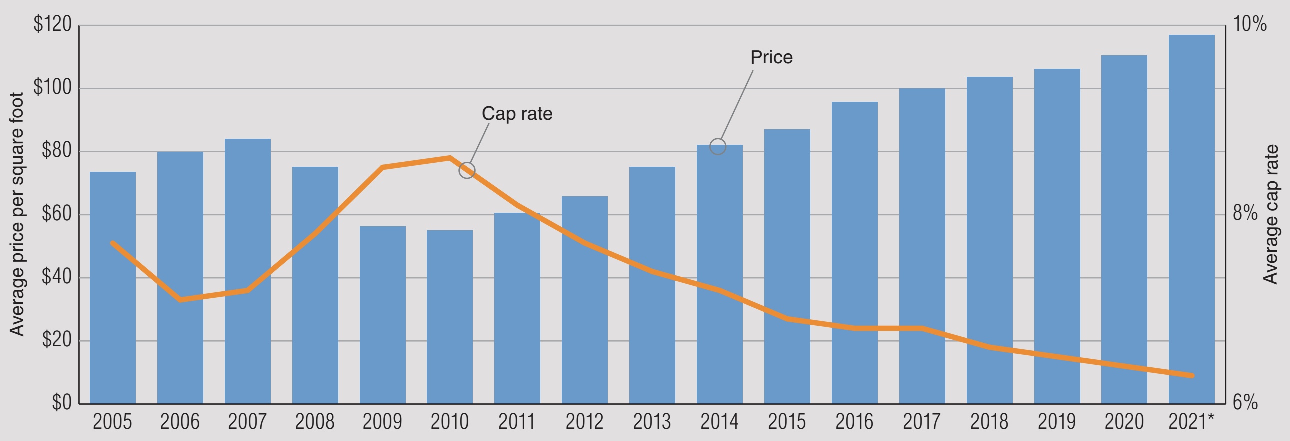
neighborhoods. Through the cycle, migrations have largely been to the suburbs near their existing home, but many young adults have moved to other metro areas. Relocations such as these are the second-most-common reason to rent a storage unit, behind insufficient storage space at home, and will create demand in the years ahead. Despite outbound migration, storage facilities in urban areas will still have sturdy demand. Reopening offices will reignite the recruiting of recent college graduates, inspiring many to move to new cities for employment. As with past generations, these young professionals will likely reside in apartments near their places of work, where living space is often at a premium.

Strong property performance engages investors. Trading activity for self-storage assets dipped modestly in 2020 compared with 2019, a record year for transactions. Sales velocity has remained strong this year, with competition for assets applying upward pressure on sale prices and downward pressure on cap rates. While the mean yield lies in the low to mid-6 percent range, interest for high-quality assets in growing submarkets has led to cap rates reaching below 4 percent for some recent trades. Investors expect this pattern to continue. A June 2020 Marcus & Millichap survey of self-storage investors revealed that the majority of respondents anticipate sales prices to increase over the next year, with initial yields holding steady or contracting.

Primary market recoveries to draw buyers; smaller metro areas gain attention. While the volume of transactions swayed little during the health crisis, the composition of trades did change. Stringent and prolonged lockdowns in many major West Coast and Northeast metro areas pushed buyer interest to the Southeast and Southwest, which feature favorable population dynamics and comparatively lower business costs. Smaller investor groups and private buyers will likely continue to focus on secondary and tertiary markets in these regions, given anticipation for high levels of household formation. Institutions, meanwhile, are demonstrating an ongoing interest for properties in gateway markets. Metro areas such as New York City, Los Angeles, and the San Francisco Bay Area—while hard hit by the pandemic—also feature low levels of inventory relative to still-sizable populations that speak well to future property performance. As these municipal economies recover, more investors are likely to reenter the buying pool of these areas.

—Marcus & Millichap

Self-Storage Investment Sales Trends



Sources: Marcus & Millichap Research Services, CoStar Group Inc., Real Capital Analytics.
*Trailing 12 months through second quarter.

Consensus Forecast Survey forecasts that average annual total returns for industrial between 2021 and 2025 will make it the highest-performing property type, outperforming apartment, office, and retail by at least 230 basis points.

Even though *Emerging Trends* survey respondents generally agree that industrial is a top investment prospect, there is a higher proportion of respondents who feel that warehouse and fulfillment are overpriced compared with other industrial property types, suggesting that the market is still determining the appropriate risk compensation for these sectors. As more capital flows into the space, it will become increasingly important to be selective on location to avoid the risk posed by new supply and achieve return outperformance.

Emerging Trends in Canadian Real Estate

A blueprint for future growth.

Canada's real estate companies are rethinking their strategies as several disruptive forces create new opportunities and challenges for the industry. Many of these challenges reflect issues the real estate industry has been dealing with for some time that continue to take hold, as well as key global megatrends—like climate change, digital disruption, and critical workforce shortages—that are fundamentally reshaping business and society. As these global shifts deepen, real estate companies have an opportunity to embrace creative solutions to stay ahead of these challenges as they plot their growth strategies for the future.

The industry is keeping a close eye on three key trends reshaping Canadian real estate:

- The impacts of a changing world of work;
- Finding the right approach to ESG; and
- Costs and competition.

1. Assessing the Impacts of a Changing World of Work

"Humans are social creatures. People want to be together."

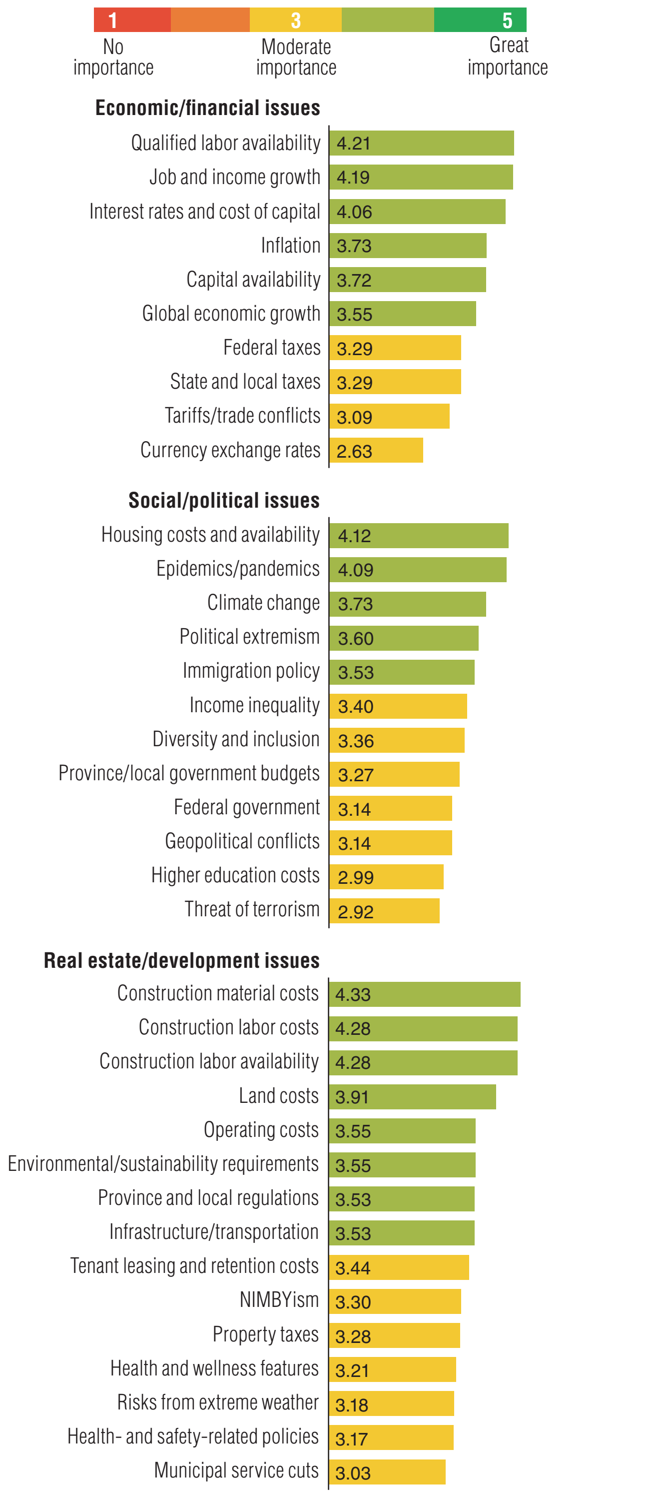
We have seen significant shifts in the world of work since 2020 that have had major impacts across the Canadian real estate market. While interviewees have diverging opinions on how permanent those changes are and what the future of work ultimately will be, there is little doubt that the workplace will be different from what it looked like before 2020. This will have implications for business decisions across key asset classes as well as for the users of real estate themselves.

What we do know is that—for now—many employees remain hesitant to return to the office, with significant numbers indicating they want a hybrid arrangement combining in-person and remote work even after the COVID-19 pandemic has more fully subsided. Interviewees told us that "flex is here to stay," and a number of recent PwC and other independent surveys around the world have reinforced this. In 2021, when we asked workers about their ideal work arrangement, the most popular option—selected by 36 percent of Canadian respondents—was to have an even split between face-to-face and remote working, while just 10 percent chose a traditional in-person environment.

Adding to the uncertain outlook for offices are recent surveys showing that a high number of Canadian workers are willing to leave their jobs if their employers do not continue to offer flexible arrangements like remote working. And there also are signs that the distances that Canadians are willing to commute to work are getting shorter. Amid signs of a growing war for talent, many companies will be thinking carefully about how they respond, while others—including Canada's major financial institutions—have already declared that hybrid working arrangements are now policy and here to stay.

But the impacts on space requirements will vary, with businesses looking to reconfigure their workspaces to include larger collaboration areas, enhance health and safety protocols by putting more distance between employees, and focus on different ways of offering flexibility by giving employees more choice in regard to their working hours rather than work location. Adding even more complexity to these discussions are the different vaccination policies that employers are putting in place as they prepare to bring workers back to their offices.

Exhibit 4-1 **Importance of Issues for Real Estate in 2022**



Source: *Emerging Trends in Real Estate 2022* survey.
Note: Based on Canadian respondents only.

A Shifting Landscape for Offices

While no one can predict how these trends and preferences will shift over time, it is clear that an evolving workplace will have a significant impact on offices and how they are used. And for office property owners navigating these trends, a changing world of work will accelerate the real estate industry's ongoing shift toward a more service-oriented business with a sharper focus on the user. As this shift takes hold, it will be more important for property owners to address the purposes that a physical workplace will serve and make their spaces more attractive for workers to commute to.

There will be many reasons for coming into the office—collaboration, teamwork, and communication are some of the commonly cited purposes—but the challenge for property owners will be to better understand what their tenants' specific requirements are. While many interviewees said they are thinking about new configurations and technology solutions to meet those expectations, the shifting environment and diverging perspectives mean that property owners will need to be more open to creating customized offerings for their occupiers, recognizing that there will be continued demand for adaptability.

This could also include offering a variety of new leasing model structures. For example, one interviewee noted that more consideration is being given to arrangements in which a tenant would have a set amount of space to cover typical space needs, but with a flexible component available on days when more employees than usual come into the office.

Changing Migration Patterns

The changing world of work is also having major impacts across the asset classes, notably on the housing market. Remote working has opened up opportunities for some Canadians to move out of major city downtown centers, where their offices have typically been located. This has led to rapid growth in the housing markets of suburban areas, secondary cities, smaller towns, and even places farther afield like communities in Atlantic Canada.

Some of this migration was already happening, in part due to affordability concerns in some of the largest cities, and we can see evidence of this in recent population growth data from Statistics Canada. Comparing 2019 and 2020, the data showed cities like Oshawa (2.1 percent), Halifax (2 percent), Kitchener-Waterloo (2 percent), and Kelowna (tied with Calgary and Saskatoon at 1.9 percent) had the highest population growth rates among census metropolitan areas.

The pandemic and the rise of remote working have only accelerated this trend in many provinces. In Ontario, for example, we can see the impacts in polling data released in July 2021 by the Ontario Real Estate Association. The survey found significant numbers of Ontarians have thought about moving to a smaller community outside the Greater Toronto Area (38 percent) or even to another province (27 percent) in the past year. The willingness to relocate correlates strongly with age, with 45 percent of those between 18 and 29 years old considering moving to another province. This compares to 39 percent for those ages 30 to 44 and 22 percent among respondents between the ages of 45 and 59.

An Even Greater Focus on Mixed-Use Communities

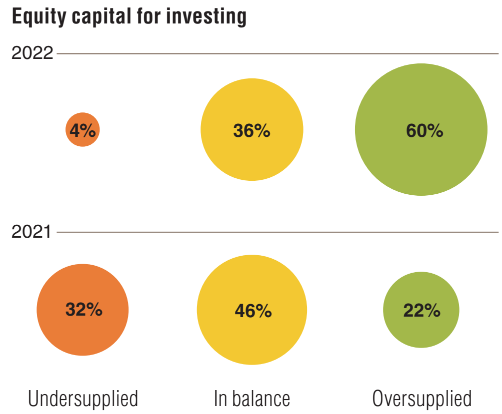
The implications of a changing world of work go beyond where people are choosing to live to the types of communities they want to be in. In 2020, we explored the trend of 15-minute cities, which refers to the growing focus on ensuring that people can meet their daily needs, such as a trip to the grocery store or school, within 15 minutes of their home either by walking or cycling. This has only added to the push to build more complete communities with a vibrant live/work/play dynamic even outside of more urbanized areas.

But giving even more impetus to this movement is the growing desire among Canadian workers to commute less or not at all. If more employees are going to look for jobs that let them either work from home or have shorter commute times, the trend toward building mixed-use communities with retail services and offices nearby will become even more important for real estate players. This extends beyond developments like transit-oriented communities, which are being embraced by municipalities across Canada and typically incorporate mixed-use considerations from the start, to apply to other areas—like single-family neighborhoods in major urban centers, suburban communities, and secondary cities—that have typically incorporated less diverse uses.

Time to Embrace "Fracking" of the Housing Market?

A related issue in the residential market is the growing concern about housing affordability across the country. The combined impact of low interest rates, increased savings by some Canadians during the pandemic, and the desire for more living space amid a shifting world of work has helped boost the demand for housing and, consequently, home prices. And while concerns in the past have tended to focus on affordability in larger cities like Toronto and Vancouver, recent migration trends have extended the issue to smaller centers. According to RBC Economics' recent housing affordability report for the first quarter of 2021, mortgage carrying costs have risen more as a share of household income in places like Windsor, Hamilton, and London than in Vancouver, Ottawa, Montreal, or Toronto.

Exhibit 4-2 **Real Estate Capital Market Balance Forecast, 2022 versus 2021**



Source: *Emerging Trends in Real Estate* surveys.
Note: Based on Canadian respondents only.

With federal government plans to significantly increase immigration to Canada set to boost housing demand even further, affordability pressures will only continue to grow. Supply to match the demand is a key issue, which Scotiabank explored in a May 2021 report comparing the Canadian housing market to that of the other Group of Seven countries. According to the report, Canada has the lowest number of housing units per 1,000 residents of any G7 country. It found that the number of units per 1,000 residents has been falling since 2016, in large part due to population growth reflecting immigration increases during much of that period. While interviewees emphasized that increased immigration will be critical to Canada's economic recovery and the continued bright outlook for the real estate market, they also felt strongly that supply will be key to addressing the demand for housing and rising affordability pressures.

But as one interviewee put it, Canada needs to look at unconventional approaches to the housing market by "fracking" for new supply. While addressing longstanding challenges like municipal approvals and restrictive zoning rules would help relieve the supply gap, that is only part of the solution. Labor shortages mean that even if municipalities addressed those issues, it would still be hard for the real estate industry to build enough new units to meet rising demand. This means that part of the solution will come from thinking differently about the housing market.

One approach is to focus on finding ways to encourage and support co-living arrangements to help fill the millions of empty bedrooms in Canada and open up more affordable housing options. And while there are diverging opinions among interviewees about the feasibility of expanding single-family rental housing in Canada, it does have the potential to address affordability as well. Not only could this be an affordable alternative to owning a single-family home for Canadians looking for more space, but also changing the rules to allow for more than one unit or kitchen in these types of houses or even permit smaller lot sizes could help reduce housing costs.

Filling the Missing Middle

The conversation about urban and community design is also an important part of the affordability discussion. Many cities have been slow to embrace housing types whose density falls between single-family homes and high-rise condominiums, a phenomenon often referred to as the missing middle. This lack of medium-density housing options is particularly acute in urban neighborhoods already dominated by single-family homes, where alternatives like mid-rise buildings and townhouses on major urban boulevards could offer more affordable options.

The gap often comes down to neighborhood opposition to even gentle densification, but the rising affordability challenge means that it will be increasingly important to find ways to incorporate different types of housing options. Medium-density housing types are also key to concepts like the 15-minute city, where gentle densification can support the diversity of uses and the more walkable environments that many people are seeking.

2. Finding the Right Approach to ESG

"ESG is absolutely fundamental to future success."

The affordability issue also links to another key trend for the Canadian real estate industry: ESG matters. Supporting the growth of affordable housing options is one area where many interviewees believe they can play a role in the social aspects of ESG performance, in addition to addressing key environmental matters, such as sustainability and climate change, as well as governance issues like diversity and inclusion.

ESG matters are a rising priority for the industry. We saw this in PwC's 2021 Global CEO Survey, which showed that 67 percent of top real estate executives are planning to increase investments in sustainability and ESG initiatives. Many interviewees emphasized the role that real estate can play in addressing climate change given the industry's contribution to greenhouse gas emissions in Canada. According to the government of Canada, homes and buildings are the third-largest contributor to the country's emissions, after oil and gas, and transportation.

There is a fairly strong feeling among many interviewees that ESG performance will be a business imperative for Canadian real estate companies, but there is a significant divide between private and institutional players. For institutional investors, ESG matters are becoming a key criterion for investment decisions; on the private side, there needs to be a return to justify the additional upfront costs. This divergence is reflected in responses to our online survey this summer of Canadian real estate participants. While ESG matters are definitely on the agenda of many interviewees, survey participants attached only moderate levels of importance to key issues like climate change, diversity and inclusion, and environmental/sustainability requirements (see exhibit 4-1).

One Greater Toronto Area homebuilder summed up much of the sentiment among private companies: "We do it because it attracts our investors, and it's the right thing to do in the long run. But it has to make financial sense."

A key step in understanding the value proposition of good ESG performance will be to establish a stronger, more unified measurement and regulatory framework that corresponds to ESG programs and certifications. This will be critical because there is increasing evidence that consistently defining and measuring social returns can ultimately be linked to flexible financing structures that lead to positive long-term financial results.

A Complex Issue for Canadian Real Estate

It was evident in our interviews that ESG performance is a complex issue for the real estate industry. Many interviewees said they are already doing a lot on ESG matters like climate change but have yet to find a way to tell their story. An increasing number of projects are focused on net-zero emissions, with companies taking a range of actions, including incorporating solar panels into new home builds, harnessing geothermal energy, using rainwater harvesting systems for nonpotable water, and offering carbon-neutral options to their customers. Some emphasize that redevelopment activities make a positive ESG contribution by their very nature given the reuse of embedded carbon in the original building materials.

But many interviewees also said efforts to boost ESG performance, particularly when it comes to making significant investments in energy efficiency measures, are most relevant to commercial real estate, where operating cost competitiveness, tenant demands, and institutional investors drive this agenda. There is a fairly widespread feeling among those involved in residential real estate that homebuyers are not willing to pay for the extra costs of ESG-related features today. "A good kitchen and a good bathroom is way ahead of energy conservation," one interviewee said.

That may be changing. One interviewee said that a surprising number of homebuyers have been willing to pay a premium for the company's net-zero home upgrade option. And with Canada having accelerated its greenhouse gas emission reduction targets for 2030 as it continues to outline the path toward its 2050 net-zero ambitions, it is clear larger forces are at play that are driving the ESG agenda for Canadian real estate.

Markers of Success

ESG performance clearly will be a rising factor in long-term value creation for the real estate industry, whether by attracting premium rents and pricing, accessing lower-cost financing, increasing efficiencies, or reducing risks. One interviewee noted that climate change risk is becoming a significant factor in analyzing which sites to develop, especially since some noncoastal major cities may attract increased migration of people seeking safe harbor from environmental impacts—not to mention considerations regarding how to make buildings more resilient to extreme weather events. Other considerations for real estate players include the projected growth of the electric vehicles market as Canada aims for a greenhouse gas emissions reduction of 12 megatons from the transportation sector by 2030. This is an issue that will quickly move up the agenda for real estate companies, which will need to incorporate charging infrastructure into their building plans.

But sentiment was strong among interviewees that many real estate players are struggling with where to start their ESG journeys. For many, the challenge is to set out an approach to ESG performance that builds trust with stakeholders and addresses their expectations and priorities. A critical place to start on the climate change front is with a strategic look at your business to take an asset-level view of where the biggest risks and opportunities are in your portfolio. Key steps in this journey include the following:

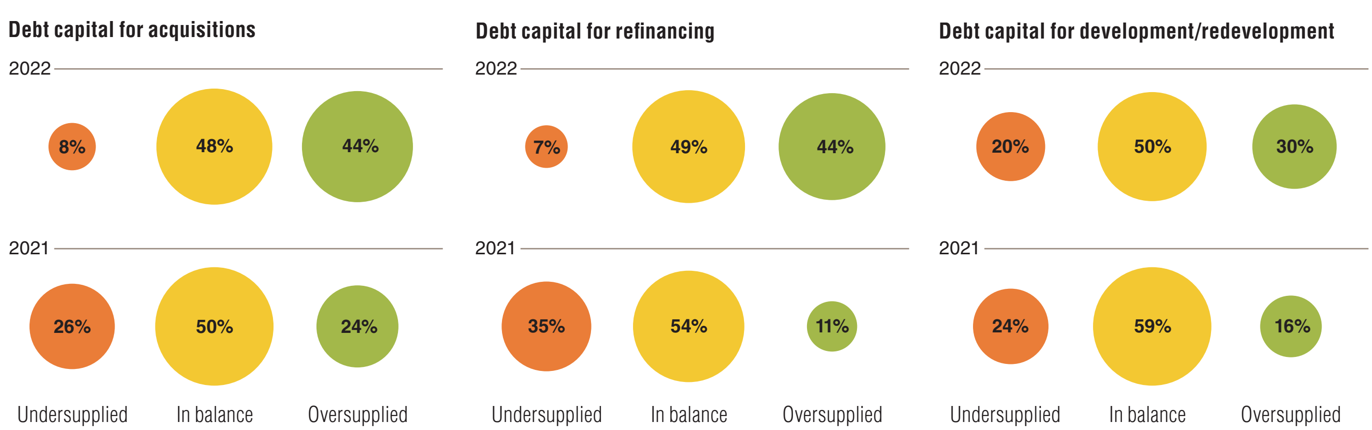
- understanding your current total emissions;
- assessing how climate change issues are changing market dynamics and value, which includes looking at the potential for stranded assets in the future; and
- developing a business case for and prioritizing actions, like energy efficiency initiatives, to deliver on your emission reduction targets.

Another challenge for many interviewees is measuring and reporting their progress against their ESG targets. Choosing from the menu of standards for disclosure and reporting is a significant challenge, and some interviewees said they are still struggling to find the best ways to measure their environmental footprint across the life cycle of their assets in the first place.

This is a key area where investments in data, technology, and innovation will be critical. For example, sensors incorporating technologies like the internet of things can help generate baseline data on energy consumption, which companies can then use to set their emission reduction goals and track their progress on an ongoing basis. Further investments in technologies applying artificial intelligence to that data can help companies make better decisions about optimizing their energy use.

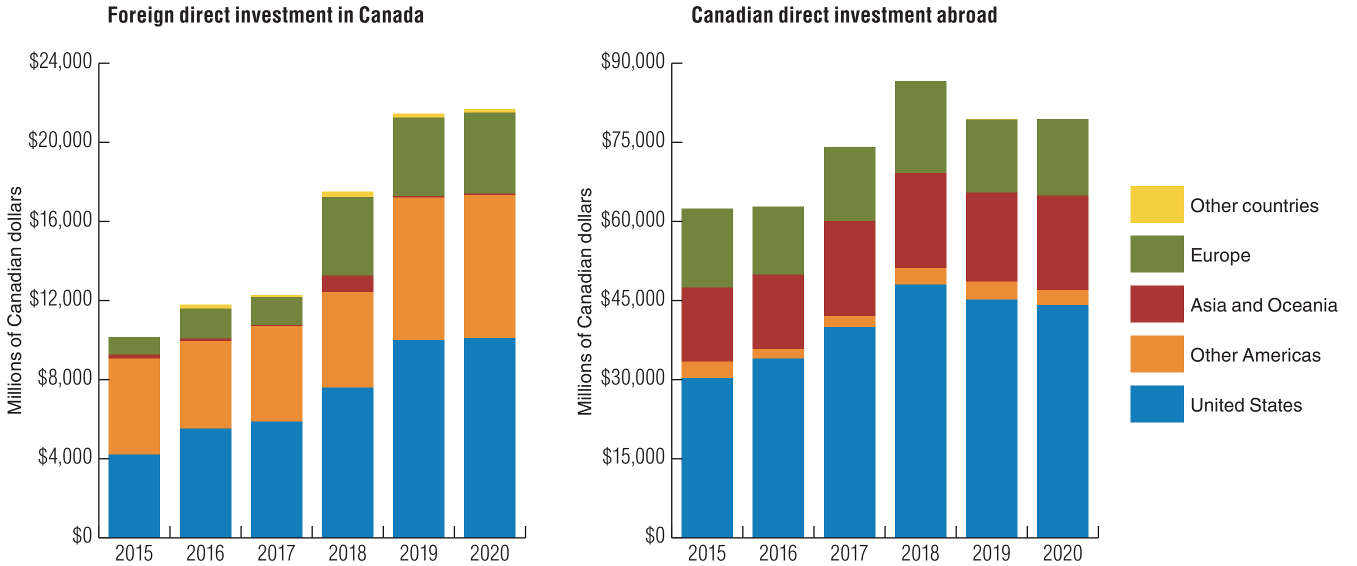
Having the right data can also help answer very important questions surrounding the return on investment from and impacts of their ESG-related initiatives. One interviewee described success in adopting building information modeling tools to generate a

Exhibit 4-3 **Real Estate Capital Market Balance Forecast, 2022 versus 2021**



Source: *Emerging Trends in Real Estate* surveys.
Note: Based on Canadian respondents only.

Exhibit 4-4 **Foreign Direct Investment in Canada and Canadian Direct Investment Abroad: Real Estate, Rental, and Leasing**



Source: Statistics Canada, accessed August 4, 2021.

Note: Figures include firms under the North American Industry Classification System (NAICS) 53.

real-time calculation of a development's carbon use and the impacts of using different materials. This helps the company better assess alternatives for its projects.

An Urgent Need for Collaboration and Coordination

While real estate players are moving forward with their ESG plans, strong sentiment exists that they will need help addressing complex issues like climate change and net-zero emissions. Governments will have an important role to play in many areas. This includes creating a more consistent policy environment through changes to building codes and other regulations and offering incentives for real estate companies to adopt energy efficiency initiatives.

Actions by the private sector are critical, but the scale of the changes needed to meet long-term goals like net-zero emissions will require governments to work closely with the real estate industry.

Working Together to Tackle Housing Affordability

The need for collaboration on ESG matters also applies to the most important social/political issue identified by our respondents: housing affordability (see exhibit 4-1).

A key concern for interviewees is having a more consistent approach by governments to the housing market. Many, for example, noted the inconsistency of a federal government helping boost housing demand by increasing immigration activity on the one hand, while provincial and municipal policies impede the construction of new homes and, in many cases, gentle densification to create more affordable options on the other. A more harmonized approach among all levels of government focused on increasing supply would make a significant difference.

A role also exists for better coordination with the real estate industry. While programs like the rental and affordable housing initiatives run through the Canada Mortgage and Housing Corp. (CMHC) are helpful, making a bigger impact on affordability in Canada will require better incentives for developers to set aside more low-cost units. Many interviewees noted that there is an inconsistent view by the various stakeholders of what affordability means, which can limit the impact of these programs. One interviewee also cited the challenge created by CMHC funding guidelines that focus on the number of affordable units delivered rather than how many bedrooms are created. This tends to favor building single-dwelling units rather than larger homes that could house more people at an affordable cost.

These gaps and inconsistencies highlight the need for a greater sense of partnership with the real estate industry to more effectively address housing affordability in Canada. Though the industry is willing to do its part, making meaningful progress will require a policy environment that puts increased housing supply at the heart of any solution.

3. Costs and Competition

"When you can't get control of price escalation, there is fear and risk."

Despite a strong outlook for many asset classes, rising prices for land and critical supplies are just some of the factors creating cost pressures that, in turn, are having an impact on rates of return, investment, and development decisions and affordability. In fact, respondents to our survey this summer cited construction material and labor costs as the top two real estate/development issues (see exhibit 4-1).

Lumber prices were a big story during the first half of 2021, but they have come down significantly since their highs in the spring. Even with the pullback in lumber prices, interviewees pointed to several cost pressures for key materials, such as metals like aluminum and copper, as well as steel, concrete, and plastic. The inability to secure supplies has also been a challenge.

Another significant issue creating cost pressures is labor shortages. Availability of qualified labor was the top economic/financial issue identified by survey respondents this year (see exhibit 4-1). When it comes to skilled trades, looming retirements will continue to add to labor shortages in the coming years for the construction industry, which has seen rising challenges in recruiting and retaining skilled workers. According to Statistics Canada, job vacancies in the construction sector rose by 33 percent in the first quarter of 2021, with 34 percent of businesses surveyed in that industry citing recruiting and retaining skilled employees as an obstacle for their organizations. And the shortage is not just in the construction trades: interviewees throughout the real estate industry report a fierce war for talent across their organizations.

Tax Worries

Industry players are also keeping a close eye on government policy changes that could affect their businesses and increase costs. While timelines for approvals are a constant concern, interviewees are also expressing significant concern about tax policy.

We saw the worries about taxes in PwC's 2021 Global CEO Survey, in which top real estate executives expressed significant concern about policy changes that could affect them. A large majority (80 percent) of real estate CEOs said they were concerned about increasing tax obligations, with more than half (59 percent) agreeing that policy changes to address rising government debt levels would affect their organization's planning and decision-making. Specific concerns for our interviewees include potential changes to capital gains provisions, wealth taxes, the impacts of carbon pricing on key inputs like concrete, and further increases to development charges and other municipal levies.

Rising Competition for Deals

Adding to the challenge is the increasing competition for deals and development opportunities. The ongoing rise of Canada's real estate market has helped spark what one interviewee called an "insatiable appetite" by investors for assets. We saw this reflected in our survey this summer, in which the percentage of respondents saying that equity capital for investing was oversupplied rose to 62 percent from 22 percent last year (see exhibits 4-2 and 4-3). The appetite for Canadian assets includes interest from foreign investors, whose direct investments in Canada real estate reached C$21.7 billion in 2020, up from C$11.8 billion in 2016 (see exhibit 4-4).

Interest has come from many players from both Canada and abroad, with interviewees noting that many institutional investors are increasing their allocations to real estate, particularly in the multifamily segment. According to a 2021 report by CIBC Mellon, 42 percent of Canadian pension funds surveyed are planning to increase their investments in real estate over the next 12 to 24 months. A similar number are planning to keep their allocations the same.

One interviewee expressed concern about maintaining prudence in investment decisions in this environment, with falling yields creating a fear of overbidding among some industry players. Though bullish on the outlook for real estate over the next decade—citing everything from rising immigration to continued low interest rates amid high government debts, as well as an abundance of capital looking for places to invest—this interviewee also expressed concern that the amount of money chasing deals would push yields down further.

Another interviewee said there is simply too much money in the system, adding that this is creating challenges even for very buoyant asset classes, such as industrial real estate, that are seeing declining and historically low capitalization rates in primary and secondary markets across Canada in both class A and B properties.

Additional sections and graphics are available at **knowledge.uli.org/et22** and include:

- Rising Competition for Deals
- Property Type Outlook
- Markets to Watch


Province

Interviewees

28 Walker Development
Rontay Muse

313 Historic Preservation
Dawn Bilobran

360 Real Estate Analytics
Eldon Rude

5th Dimension Architecture & Interiors
Dan Fritts

Abode Communities
Brendan O'Donnell

Ackerberg
Ivan Alvarado

Adi Development Group Inc.
Tariq Adi

Advance Realty Investors
Alexander Cocoziello

AEW Capital Management LP
Michael Acton
Michael Byrne
Tony Crooks

Affordable Central Texas
Kathy Denny

Alberta Investment Management Corporation
Michael Dal Bello

Alle Landscape Architecture & Placemaking
Amanda Staerker

Allensworth and Porter
Karly Houchin

Alliance for Economic Development of Oklahoma City
Cathy O'Connor

Alliance Global Advisors
Jennifer Stevens

Alliance Residential Company
Bob Weston

Alliant Partners
Spencer Muratides

Allied Properties Real Estate Investment Trust
Michael Emory

Altman
Tim Peterson

Altree Developments
Zev Mandelbaum

Altus Group
Gina Gallant
Stephen Granleese
Sean Robertson-Tait

Amegy Bank
Jesse Mudgett

American Constructors
Rhonda Bly

American Realty Advisors
Elsa Mann

America's Central Port
Ben McCall

Anchor Health Properties
Tammy Moore

Angelo, Gordon & Co.
Reid Liffmann
Mark Maduras
Adam Schwartz
Gordon Whiting

Anthem Properties
Eric Carlson

Anton Communities
Sahar Soltani

Aon Private Risk Management
Elise Coutré

Apartment List
Chris Salviati

Aquila Commercial
Miles Whitten

AR Spruce
Alan Razak

AREA Real Estate
David Adelman

Armanino LLP
Edward Markaryan

Armco Capital Inc.
George Armoyan
George Armoyan Jr.

The Armour Group Limited
Scott McCrea

Arnon Development Corporation Limited
Gillie Vered

Ascent Environmental
Dan Krekelberg

Ashton Woods
Ken Balogh

Asociación de Puertorriqueños en Marcha
Rose Gray

Aspen Management and Investment Properties
Rob Blackwell
Greg Guatto
Scott Hutcheson

Atlantic Corporation Limited
Craig Lynk

Atlantic | Pacific
Randy Weisburd

AvalonBay
Nora Collins

Avenue Living Asset Management
Dave Smith

Avison Young
Amy Erixon
Craig Leibowitz

Bailard Real Estate
Tess Gruenstein
James Pinkerton

Bain Capital
Clelia Warburg Peters

Balch & Bingham
Patrick Krechowski

Baltimore Development Corporation
Kim Clark

Bank of America
Ada Chan

Bank of Tampa
Rachael Brown

Bard Consulting
Roy Schneiderman

Barrings
Shawn Kimble

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Mark Bhasin

BCT Design Group
Sally Plunkett
Emily Turner
Ann Tyler

Beacon Partners
Mike Harrell
Brian Richards

Beedie Group
David Pearson

Beljan Development
Chris Dulaba

Bellwether Capital
Anthea Martin

Bellwether Enterprise
Matt Good

Belz Enterprises
John Dudas

Beneficial Communities
Leonard Burke

BentallGreenOak
Sonny Kalsi
Christina Lacoucci
Amy Price
Phil Stone

Berkadia
Scott Wadler

Best Best & Krieger
Todd Gee
Nancy A. Park

Billingsley Interests
Alan Billingsley

BKM Capital Partners
Tracee Jones
Sam Melehani
Ryan Welch

Bleakly Advisory Group
Stan Reecy

Boardwalk REIT
Sam Kolias

Boise Valley Economic Partnership
Clark Krause

BOKA Powell
Danielle Smyth

BOMA Canada
Benjamin Shinewald

Boston Properties
Christina Bernardin
Michael LaBelle
Ben Myers
Owen Thomas

Boyer Company
Nate Boyer

Boyle Investment Company
Jonathon Aur

Brainbox AI
Sam Ramadori

Brandywine Realty Trust
Jessica Gordon
George Hasezecz
Alexis Hilinski
Stacey Mosley
Nicole Stroud
Suzanne Stumpf

Brasfield & Gorrie
Emily Cannon

Brightview Senior Living
Kristian Spannhake

Brinshore
Kathleen Bole

Brivia Management Inc.
Vincent Kou
Serena Zhang

The Broadband Group
Jeffrey Reiman

Broadshore Capital Partners
Elaine Philis
Bleecker P. Seaman III
Donald Sheets

Broccolini
Paul Broccolini

Bromley Companies
Nick Haines

Brookfield Asset Management
Annie Laurie McCulloh

Brookfield Properties
Ben Brown
Peter Dennehy
Thomas Lui
Vicki Mullins
Malee Tobias

Brookfield Residential
Matthew McCafferty

Brownstein, Hyatt, Farber, Schreck LLP
Rebecca Miltenberger

BRP Companies
Meredith Marshall

BTB Real Estate Investment Trust
Mathieu Bolté
Michel Léonard

BTIG Group
Carl Reichardt

The Builder's Daily
John McManus

The Building Industry and Land Development Association
David Wilkes

Bull Realty
Michael Bull

BuyProperly
Khushboo Jha

Buzz Oates
Amy Lerseth

Cabot Properties Inc.
Bradford Otis

Cadillac Fairview
Louie DiNunzio
Sal Iacono

CAHEZ
Dana Boole

Caliber Company
Chris Loeffler

California State Teachers Retirement System
Michael McGowan

CallisonRTKL
Michael Lee

Camber Real Estate Partners
Christopher M. Bellapianta

Camino Enterprises
Dan Young

Canadian Apartment Properties REIT
Mark Kenney

Canderel Management Inc.
Shawn Hamilton
Brett Miller

Capital Associates
Tom Huff

Capital City Bank
Ashley Leggett
Helen Proctor

Capital Impact Partners
Elizabeth Luther

Capital Rivers Commercial
Greg Aguirre

Capstone Partners
Chris Nelson

Carmel Partners
Dennis Markus
Ron Zeff

Carr Properties
Oliver Carr
John Schissel

Castle Contracting
Christie Brinkmann

Castle Hill Partners
John McKinnerney

Catalyst Urban Development
Paris Rutherford

CA-Ventures
Jesse Ostrow

CBI
Lawson Still

CBRE
James Breeze
Sandeep Davé
Russel Ingrum
Jeanette Rice
Hanna Rochelle
Jay Sholl
Brian Stoffers
Candace Thurmond
Mary Ann Tighe
Todd Tydlaska
Julie Whelan
Dave Young

Center City District
Paul Levy
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Rob Holuba
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Central Atlanta Progress
Jennifer Ball

Childress Klein Properties
David Haggart
Landon Wyatt

Choice Properties REIT
Mario Barrafato

Cirrus Asset Management
Steve Heimler

Citigroup
Thomas Flexnor

City Living Detroit
Austin Black

City of Austin
Caitlin Admire

City of Birmingham
Bert Kuyrkendall

City of Cedar Park
Katherine Caffrey

City of Charlotte
Tracy Dodson

City of Dayton
Todd Kinskey

City of Detroit
Aaron Goodman

City of Henderson
Alejandra Fazekas

City of Hopkins
Peggy Sue Imihy

City of Huntsville
Dennis Madsen

City of Pflugerville
Trey Fletcher

City of Plano
Peter Braster

City of Raleigh
Ken Bowers
Patrick Young

City of San Antonio
Erika Ragsdale

CityVolve
Jeff Baxter

Clarion Partners
Jeb Belford
David Gilbert
Hugh Macdonnell
Onay Payne
Tim Wang

CLB Porter
Shawn M. Barney

Clover Investment Properties
Lyle Fogarty

The Clyde Companies
Brandon Henrie

CM Constructors
Kelly Maxwell

Cogir Immobilier
Mathieu Duguay

Coldwell Banker Commercial McLain Real Estate
Brannon Butler
Scott McLain

Coleman & Associates
Olive Pitt-Perez

Colliers International
Sofie Babic
Gregg Broujos
John Friedrichsen
Annie Labbé
Ann Natunewicz
Scott Nelson
Alex Stringfellow

Colonnade Investments Inc.
Hugh Gorman

Combined Properties Incorporated
Drew Faha
Steven Gothelf

Concert Properties
Brian McCauley

Concord Group
Richard Gollis

Concord Street
Laura Solie

Continental Properties
Jim Schloemer

Conundrum Capital Corporation
Daniel Argiros

Cooper University Health Care
Andy Bush

Cord Construction
Bryce Thompson

Cordano Capital Company
Jim Cordano

Cord Meyer Development Company
Matt Whalen

Core Development Group Ltd.
Corey Hawtin

Corporate Office Properties Trust
Stephen Budorick
Todd Hartman
Anthony Mifsud

Corson Cramer Development
Larry Corson

Costar Group
Jan Freitag

Cowan Nakios
Ross Cowan

CPM Texas
Dave Stauch

CREA
Stephen Buchanan

CreateTO
Steven Trumper

Crescent Communities
Blake Bickmore
Liam Torpey

Crombie REIT
John Barnoski
Glenn Hynes

Crow Holdings Capital
Michael Levy

Crux Capital
Peter Aghar

Cushing Terrell
Christine Holman

Cushman & Wakefield
Dana Baird
Charlie Gibson
Lexie Hall
Bill MacAvoy
Travis Mason
Tom Powers

D3 Creative Studio
Anthony DeBono

Dallimore & Co
Simon Dallimore

Danis
Nick Hoyng

David, Hicks & Lampert Brokerage
Phil Hicks

David Weekley Homes
David Jae

dbURBAN
Dustin Holt

DDA Development
Bowen Arnold

Deloitte
Sally Ann Flood

Demmon Partners
Kathy Demmon

Desjardins Global Asset Management Inc.
Michel Bédard

Detroit Economic Growth Corporation
Nevan Shokar

Develop Nova Scotia
Jennifer Angel

DIRTT Environmental Solutions Ltd.
Kevin O'Meara

District Wharf Properties LLC
Andrew Son

DivcoWest
Mike Carp
Stuart Shiff

Domeyko Taylor Holding Company
Isabel Domeyko

Donahue Schriber Realty Group
Michael Glimcher
Kevin Halleran
Warren Siu

Doucet and Associates
Keith Young

Downtown Development Authority, Lafayette
Anita Begnaud

Downtown Huntsville
Chad Emerson

Downtown Memphis Commission
Katie Flynn
Paul Young

Downtown Raleigh Alliance
Will Gaskins

Dream On Group
Rene Garcia

Dream Unlimited
Jason Lester

DRHorton
Craig Cadwallader

Duane Morris
Cristi Sanchez

Dunaway
Roberta Salas

Dune Real Estate Partners
Daniel Neidich

Dutchtown South Community Development Corporation
Annissa McCaskill

DWS
Ana Leon

E Properties
Emeka Onwugbenu

Eagle Realty Group
Chad Gagnon

East West Partners
Mariel Beaudoin
Chris Framption

Eastman Equity
Lauren Campbell

Economic & Planning Systems
Mark Polhemus

Economic Alliance of Greater Baltimore
Michelle Wheley

Econsult Solutions
Peter Angelides

ECS Florida LLC
Matt Robertson

EDEN Multifamily
Jay Massirman

Edens
Jodie McLean

Edgewater Ventures
Scott Humphrey

Ellington Management Group
Brian Neilinger

EllisDon Corporation
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Elm Street Development
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Emergent Research
Steve King

Empire Communities Group
Andrew Guizzetti
Daniel Guizzetti

Encore Real Estate
Tony Avila

Ensemble Real Estate
Jewelle Kennedy

Ensight Haynes Whaley
David Carter

Epic Investment Services
Craig Coleman
Laetitia Pacaud

Equus Capital Partners
Arthur Pasquarella

Ernst & Young
Robert Karver

Essex Property Trust
Michael J. Schall

Feldman Equities LLC
Mack Feldman

Fengate Capital Management Ltd.
Jaime McKenna

Fiera Real Estate
Richard Dansereau

Fifield Companies
Joe Pitsor

First Capital Realty Inc.
Adam Paul

First Gulf Corporation
Derek Goring

First National Bank of Pennsylvania
Lisa Kelly

First Southern Mortgage
Stephen Brink
Graham Gilreath

First Trust Bank
Samantha Burke

Flannery Construction
Jamey Flannery

The Flynn Company
David Ricci

Focus Strategies
Terese Everson

Fonds QScale s.e.c.
Vincent Thibault

Fonville Morisey Barefoot
Audie Barefoot

Forest Gate Financial Corp.
Daniel Marinovic

Forgestone Capital Management LP
Keith Jameson

Foster Strategy LLC
Helen Foster

Franklin Street
Laura Gonzales

Freddie Mac
Steve Guggenmos

Froehling & Robertson
Daniel Perry

Frost Bank
Lance Coplin
Andrew Grimm

Fulton Homes Limited
Michael Mauro

Gables
Eric Veith

Garza EMC
Rudy Garza

GBT Realty Corporation
Jeff Pape

G.C. Garcia Inc.
Melissa Eure
George Garcia

GDC Communities and Genstar Development Company
Gina Papandrea

GEM Health Care Group Ltd.
Syed Hussain
John Yuan

GEMCAP Development
Josh Speed

Gemdale USA Corporation
Chandler Hogue
Michael Krupa

General Investment & Development
Jeff Beckham
Hisham Kader
Thad Palmer

Gensler
Diane Hoskins
Jessica Rollason

George Urban Properties
G. Ryan Smith

Geranium Corporation
Cheryl Shindruk

Gestion Laberge
Charles Laberge

GGLO
Beth Dwyer

Giarratana LLC
Tony Giarratana

Gilded Age Development
Chris Goodson

Gill Properties
Brown Gill

Glenview Homes
Jake Shabinsky

GMC
Adam Martin

Goldman Sachs
Alex Cheek
Michael Graziano
Nick O'Neill
Joseph Sumberg

Granite Point Mortgage Trust
Jack Taylor

Granite REIT
Teresa Neto

Grass River
Tom Roth

Great Gulf Group Limited
Ilias Konstantopoulos

Greater Minnesota Housing Fund
Miranda Walker

Great-West LIFECO
Paul Finkbeiner

Green Cities
Molly Bordonaro

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Emerging Trends in Real Estate® 2022

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Emerging Trends in Real Estate® 2022

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