2023 United States | Canada

EMERGING TRENDS IN REAL ESTATE®

Emerging Trends in Real Estate® 2023

A publication from:

Emerging Trends in Real Estate®

2023

Contents

1 **Notice to Readers**

3 **Chapter 1** Taking the Long View
4 Normalizing
7 … Still, We've Changed Some
9 Capital Moving to the Sidelines—or to Other Assets
12 Too Much for Too Many
16 Give Me Quality, Give Me Niche
18 Finding a Higher Purpose
20 Rewards—and Growing Pains—in the Sun Belt
22 Smarter, Fairer Cities through Infrastructure Spending
24 Climate Change's Growing Impact on Real Estate
26 Action through Regulation?

35 **Chapter 2** Property Type Outlook
36 Multifamily: A Bumpy Ride and a Bumper Crop
47 The Future of Single-Family Housing
50 Industrial/Logistics: Strong Fundamentals Persist while Capital Markets Adjust
53 Office: Desperately Seeking Clarity about Its Future
65 Retail
68 Hotels

73 **Chapter 3** Markets to Watch
79 Grouping the Markets

93 **Chapter 4** Emerging Trends in Canadian Real Estate
93 Costs and Capital: Navigating a Period of Price Discovery amid Major Market Shifts for Canadian Real Estate
95 ESG Performance: A Critical Issue for Canadian Real Estate
97 Housing Affordability: A Challenging Issue for Canada and a Significant Concern for Real Estate Companies

101 **Interviewees**

105 **Sponsoring Organizations**

Editorial Leadership Team

Emerging Trends Chairs
R. Byron Carlock Jr., PwC
W. Edward Walter, Urban Land Institute

Editors-in-Chief
Andrew Warren, PwC
Anita Kramer, Urban Land Institute

Author, Chapters 1 and 3
Andrew J. Nelson

Authors, Chapter 2
Garrick Brown, Retail
Heather Belfor and Ahalya Srikant, Industrial
Lesley Deutch, Single-Family Residential
Paul Fiorilla, Office
John McManus, Multifamily Residential
Avikar Shah, Hotels

Authors, Chapter 4
Glenn Kauth
Peter Kovessy

Contributors
Paul Angelone
Lindsay Brugger
John Chang
Mike Hargrave
Roberto Hernandez
David Liggitt
Beth Burnham Mace
Hilda Martin
Onay Payne
Amber Schiada
Luke Smith
Maureen Waters
Carl Whitaker
Cody Young

Senior Advisers
Fred Cassano, PwC, Canada
Braiden Goodchild, PwC, Canada
Miriam Gurza, PwC, Canada
Frank Magliocco, PwC, Canada
Christopher J. Potter, PwC, Canada
Steven Weisenburger, PwC, U.S.

Project Staff, ULI Center for Real Estate Economics and Capital Markets
Jennifer Milliken, Director
Nolan Eyre, Senior Associate

ULI Editorial and Production Staff
James A. Mulligan, Senior Editor
David James Rose, Managing Editor/Manuscript Editor
Brandon Weil, Creative Director/Cover Designer
Deanna Pineda, Muse Advertising Design, Designer
Craig Chapman, Senior Director, Publishing Operations

PwC Advisers and Contributing Researchers

Aaron Sen*
Abhi Jain
Abhinav Ravi*
Adam Modhtaderi*
Adam Rose*
Alec Watson*
Alex Howieson*
Alex Schraft
Ali Abbas*
Allan Cheng
Alyssa Gilland
Andrea Ades*
Andrew Alperstein
Andrew Popert*
Andrew Simi
Annabelle Lafortune*
Anthony Di Nuzzo*
Ashley Somchanh*
Ashley Yanke*
Avery Parti
Avi Shah
Benjamin Roy
Bill Staffieri
Billy Ampatzis*
Blake Byl
Brendan Smith
Brendan White
Brian Ness
Bryan Allsopp*
Calen Byers
Cam Moniz
Camille Matute*
Charles Campany
Chris Bailey
Chris Dietrick
Chris Emslie
Chris Kavanaugh
Chris Vangou*
Christine Augusta
Christopher Bailey
Christian Serao
Christopher Emslie
Christopher Mill
Cindy Wu*
Claire Bennet*
Cosimo Pellegrino*
Dan Genter
Dan Picone
Dan Ryan
Daniel D'Archivio*
Daniel Lawson
Danielle Aucoin*
Danielle Desjardins*
Darren Speake*
David Baldwin
David Hughes
David Swerling
David Whiteley*
David Yee*
Derek Hatoum*
Donald Flinn*
Doug Struckman
Dylan Anderson
Edouard Godin*
Emily Pillars
Eric Desmarais*
Eric Lemay*
Ernie Hudson*
Evan Cohen
Frederic Lepage*
Gordon Ashe*
Graham McGowan*
Hannah Tam
Henry Zhang*
Hilda Garcia
Howard Quan*
Isabelle Morgan
Itisha Jain
Jake Wiley
Jano Van Wyk*
Jasen Kwong*
Jason Kaplin
Jeffrey Taveras
Jen Lawson*
Jeremy Lewis
Jessica Gordon
John Crossman
John Matheson*
John Mormile*
John Rosano
Jonas Pittman
Jonathan Connolly
Jonathan Osten*
Joseph Moyer*
Joshua Levine
Joshua Rubin
Joy Dutta*
Justin Belanger*
Justin Mukai*
Kartik Kannan*
Keegan Landry
Ken Griffin*
Kendall Breshears
Khaldoon Iqtait*
Kristen Conner
Kristy Romo
Laura Lewis*
Laura Lynch
Lauren Garrett
Leah Waldrum
Lee-Anne Kovacs*
Lee Overstreet
Lily Bannister
Luda Baiden*
Manisha Chen*
Marilyn Wang*
Mario Longpre*
Martin Bernier*
Martin Labrecque*
Martin Schreiber
Matt Manza
Matthew Berkowitz
Matthew Nichols
Matthew Rosenberg
Max Worobow
Maxime Lessard*
Meredith DeLuca
Michael Loranger
Michael Shea*
Michelle Zhu*
Mike Harris*
Minh Ngo*
Monique Perez
Munezeh Wald
Nadia King*
Natalie Cheng*
Nicholas Mobilio*
Nick Ethier*
Nick Worrall
Nicole Stroud
Nik Woodworth*
Nikki Mills*
Peter Harris*
Philip Heywood*
Philippe Desrochers*
Philippe Pourreaux*
Rabiya Adhia*
Rachael Fabian
Rachel Klein
Rahim Lallani*
Renee Sarria
Ricardo Ruiz
Richard Martin*
Richard Probert*
Rick Munn
Rob Sciaudone
Robert Sciaudone
Ron Bidulka*
Ronnie De Zen*
Ryan Dooley
Sabrina Fitzgerald*
Saket Ayala*
Samay Luthra*
Santino Gurreri*
Scott McDonald*
Serena Lowe
Seth Promisel
Shauna Peck*
Shivang Mahajan*
Spyros Stathonikos*
Stephan Gianoplus
Steve Hollinger*
Tatiana Smith
Tim Bodner
Tina Raether
Tom Wilkin
Tressa Teranishi*
Trevor Toombs*
Warren Marr
Wesley Mark*

*Based in Canada.

Emerging Trends in Real Estate® is a trademark of PwC and is registered in the United States and other countries. All rights reserved.

At PwC, our purpose is to build trust in society and solve important problems. PwC is a network of firms in 155 countries with more than 327,000 people who are committed to delivering quality in assurance, advisory, and tax services. Find out more and tell us what matters to you by visiting us at www.pwc.com.

© 2022 PwC. All rights reserved. *PwC* refers to the U.S. member firm or one of its subsidiaries or affiliates, and may sometimes refer to the PwC network. Each member firm is a separate legal entity. Please see www.pwc.com/structure for further details.

© September 2022 by PwC and the Urban Land Institute.

Printed in the United States of America. All rights reserved. No part of this publication may be reproduced in any form or by any means, electronic or mechanical, including photocopying and recording, or by any information storage and retrieval system, without written permission of the publisher.

Recommended bibliographic listing:

PwC and the Urban Land Institute: *Emerging Trends in Real Estate® 2023*. Washington, D.C.: PwC and the Urban Land Institute, 2022.

ISBN: 978-0-87420-481-0

Notice to Readers

Emerging Trends in Real Estate® is a trends and forecast publication now in its 44th edition, and is one of the most highly regarded and widely read forecast reports in the real estate industry. *Emerging Trends in Real Estate® 2023*, 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® 2023 reflects the views of individuals who completed surveys or were interviewed as a part of the research process for this report. The views expressed herein, including all comments appearing in 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 617 individuals, and survey responses were received from more than 1,450 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:	21%
Private-equity real estate investor:	11%
Bank or other lender:	7%
Construction/construction services/architecture firm:	7%
Homebuilder or residential land developer:	6%
Investment manager/adviser:	5%
REIT or publicly listed real estate property company:	3%
Private REIT or nontraded real estate property company:	2%
Other entity:	2%

Throughout this publication, the views of interviewees and/or survey respondents have been presented as direct quotations 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 in 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, the Institute and PwC extend sincere thanks for sharing valuable time and expertise. Without the involvement of these many individuals, this report would not have been possible.

Taking the Long View

"The short-term risks are real, and I'm not making light of any of them. But if you have the long view, I don't think it's time to panic."

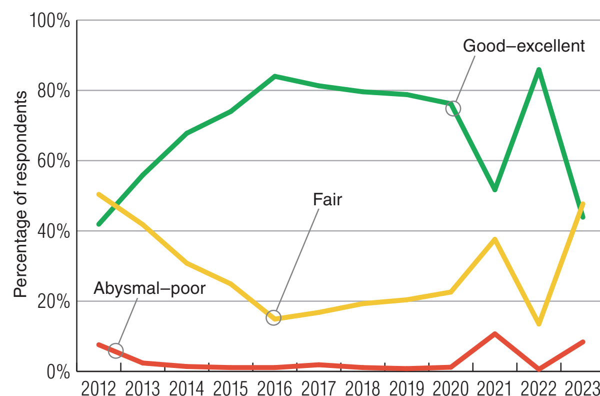
Interest rates are rising, economic clouds are darkening, and real estate deal flows are sinking because buyers and sellers cannot agree on pricing. But for all that, most commercial real estate professionals we interviewed for this year's *Emerging Trends* remain reasonably upbeat about longer-term prospects. Not everyone is as sanguine as the CEO of an investment management firm who provided our opening quote, and there certainly are some troubling risks ahead for the industry. But the consensus mood seems to be one of cautious optimism that we will ride out any near-term slump and be well positioned for another period of sustained growth and strong returns.

It makes sense that real estate experts would take the long view given the nature of real estate assets: buildings take a long time to conceive and develop. Even simply acquiring one typically takes more time (and effort) than buying just about any other type of financial asset, and they are usually held for longer durations. Still, the willingness of so many people in the industry to look beyond some of the cyclical headwinds is striking. Says the head of advisory services for a commercial real estate (CRE) analytics firm, "The recession—if we go into one—will obviously impact some markets worse than others, but it's just like anything else. We'll look back in 10 years, and the prices that seem astronomical today will seem like a bargain 10 years from now."

An Economic Rorschach Test

By one popular rule of thumb, the U.S. economy entered a recession in the first half of 2022, having sustained two straight quarters of (modestly) declining gross domestic product (GDP). But if we were in a recession at the time of writing, it would be a most peculiar one. For one thing, gross national income—the income side of the national accounts ledger that is supposed to square with GDP—has been positive over this same period, suggesting flaws in how we measure economic output. And other economic metrics certainly do not indicate a downturn:

Exhibit 1-1 **Firm Profitability Prospects for 2023**

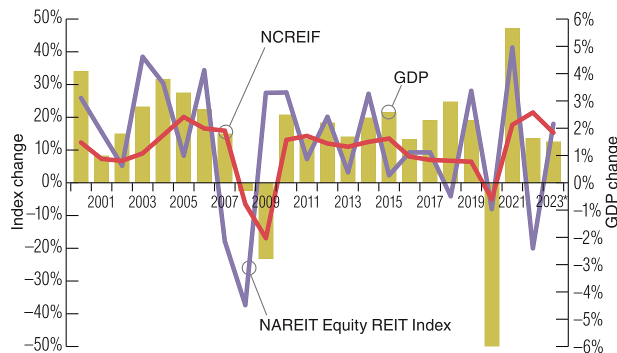


Source: *Emerging Trends in Real Estate* surveys.

- Jobs are still growing strongly while unemployment claims are at their lowest levels since the 1960s;
- Home prices and rents are at record levels and are still rising; and
- Consumer spending—which accounts for two-thirds of the economy—has been at least mildly positive every month this year (through July 2022).

This duality likely explains why the National Bureau of Economic Research—the official arbiter of business cycles—has not yet called this period a recession. That is not to suggest that all is copacetic with the economy. Key barometers like the business outlook indices compiled by the Institute for Supply Management have been trending downward since mid-2021,

Exhibit 1-2 **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 2022 and 2023 are based on the PwC Investor Survey.

even if they are not technically in the recession range. Declines in consumer confidence over the last year have been even sharper. All of these positive and negative factors together paint a kind of a Rorschach test, where observers can draw their own conclusions as to the strength of the economy.

The End of the Beginning

But there is one issue on which our interviewees agree: "The existential risk for the real estate economy right now is that Fed action in response to persistent inflation will tip us into a recession," says a senior partner with a leading advisory firm. But can the Federal Reserve Bank tame inflation without breaking the economy? Moderating inflation rates this summer led many to believe that the worst was over and that the Fed could soon ease up its contractionary monetary policy. Indeed, the consensus of experts we interviewed this summer was that the Fed would cease tightening by the end of 2022 and start cutting rates again in mid-2023.

That sentiment now appears optimistic. "Inflation is going to be a little stickier than people think," said an investment banking executive we interviewed during the summer, whose views turned out to be more prescient. Sentiment started changing in late August when Fed Chairman Jerome Powell gave his annual speech to fellow central bankers affirming the Fed view that inflation is not nearly under control, jolting markets. Any remaining doubt about that was quashed by the official Fed commentary accompanying their September rate announcement projecting that rates would keep rising through 2023. As Winston Churchill famously cautioned after the British army won a critical WWII battle, the victory marked "not the end, not even the beginning of the end, but, possibly, the end of the beginning."

Higher for Longer

With interest rates headed "higher for longer," the risk of a deeper, full-fledged recession is rising, according to a growing consensus of economists. In an August 2022 survey by the National Association of Business Economics, only a quarter of economists were even "somewhat" confident that the Fed could bring down inflation to its target range without causing a recession. Worrying signs out of Europe in early autumn and expectations of soaring heating bills this coming winter add to the gloomy global economic outlook.

These conditions would be problematic for property markets: slowing or falling economic growth dampens tenant demand, while higher interest rates raise the cost of developing or acquiring properties. Both factors would cut returns and reduce values. Indeed, rising interest rates and uncertainty over future market conditions are already killing deals since sellers have not been ready to capitulate to buyers' growing demands for price concessions, as we discuss in our capital markets trend.

New Horizons

Still, not all recessions are alike, and most economists, as well as *Emerging Trends* interviewees, expect any recession to be relatively short and shallow. Reflecting the view of several CRE leaders we interviewed, a senior executive with a global development and investment firm said, "My gut says we're going to have a recession, but it's going to be relatively mild compared to some of the more severe recessions we've had. I don't see anything like the 2008 economic downturn going on."

One leading CRE economist went so far as to say, "I think we're going into what I would say is a healthy down cycle. It's a cleansing, Schumpeterian idea that every so often, economies—property markets included—need to cleanse, and it washes out bad ideas, it washes out unrealistic unsustainable values."

That reset presents new opportunities, even as it introduces uncertainty. Says the CEO of a development company, "I think this is a moment in time. And when I look back historically, and I did not act in these moments in time, I've always regretted it."

The 10 emerging trends that we expect for 2023 and beyond follow:

1. Normalizing

- Property market fundamentals are "normalizing" as some markets weaken due to diminishing pandemic tailwinds and the potential for a cyclical economic downturn.

- Some property sectors may cool, including residential and industrial, while others may heat up to historical average levels, such as hotels and retail.
- Returns and prices of most assets are declining as cap rates rise and transaction volumes fall from record levels, while rent gains for others are merely moderating as demand returns to a more sustainable pace.

Defying just about every prediction voiced during the terrifying and uncertain days of the COVID lockdown that began in March 2020, U.S. commercial property markets actually embarked on a remarkable run, with some of the strongest returns, rent growth, and price appreciation rates ever recorded.

Not every property type, however: hotels endured their worst and most sustained downturn in memory, while offices suffered an unprecedented and significant cut in usage of space. And not every market: some of the nation's strongest gateway markets, like New York City and San Francisco, experienced sharp outflows of residents, businesses, and tenants of all types. But overall and across much of the United States, property markets far outperformed expectations and historical norms.

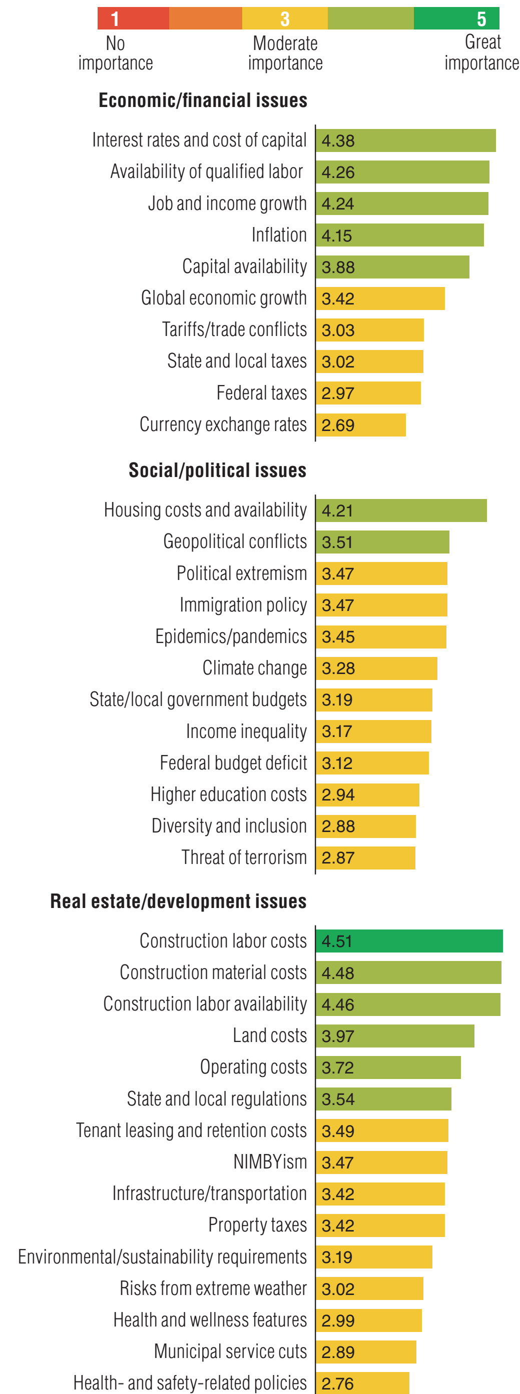
And now, more than two years on, property investors and managers are learning anew that whopping growth and profits eventually fall back to earth—a "reversion to the mean," to use finance jargon, or simply "normalizing," as numerous industry experts we interviewed put it. Some looming market adjustments will be cyclical due to the weakening economic conditions that most economists and real estate professionals expect, while others represent more of a return to normalcy after all the pandemic-fueled market distortions.

These market reversions will take several forms: prices of most assets are declining as cap rates rise and transaction volumes fall from record levels, while rent gains for others are merely moderating as demand returns to more sustainable levels. Perhaps the biggest surprise is that these reversals of fortune are hitting favored property sectors like multifamily and industrial. That does not necessarily mean the market corrections will be painful. In many cases, recent losses in property value will only trim already healthy gains. But many indicators suggest that the (really) good times may be over, at least for a while.

Housing Set to Cool

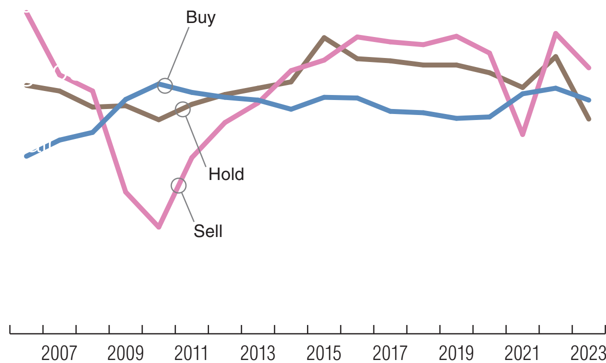
A finance executive with one national homebuilder told us, "We're still selling. It's just not at the pace that it was selling before [the last two years], which was a pace that you don't typically see. So, the markets are more normalizing." Indeed, home

Exhibit 1-3 **Importance of Issues for Real Estate in 2023**



Source: *Emerging Trends in Real Estate 2023* survey.

Exhibit 1-4 **Emerging Trends Barometer 2023**



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

sales—both new and existing—had an extraordinary 12-year run since bottoming out in the summer of 2010 until the Fed started hiking interest rates in the spring of 2022.

But it's not just home sales that are slowing. Virtually all aspects of the housing market—both for-sale and rental—have been decelerating. New home prices peaked in April 2022, while prices of existing homes likely peaked in June after appreciation started to slow with the rise in mortgage rates. Meanwhile, apartment rents have continued to push ever higher, but the pace has been moderating in recent months. Construction starts also have slowed. The National Association of Home Builders housing market index has fallen for eight straight months through August 2022 to its lowest level since May 2020.

This is not to say that we're in a housing recession—far from it. Homes are still selling at a healthy rate by historical levels, and home prices remain near record levels. And while multifamily vacancies are at their lowest level in four decades and rents continue to log new records every month, the rates of increase have been slowing and are expected to decelerate further, according to many experts we interviewed. "Maybe you don't see the 10 percent–plus rent growth in multifamily markets," says the head of one institutional investment advisory firm. "They should come back to more of a long-term historical average of 3 percent to 4 percent, and maybe offset some of the unaffordability in the country."

Indeed, housing markets may be partly victims of their own success as record prices and rents mean fewer households can afford to buy homes or rent apartments, particularly with mortgage interest rates and housing-related expenses like utilities rising sharply—a topic we explore in "Too Much for Too Many," our trend on housing affordability.

The "Amazon Pause"

The white-hot industrial market also seems set to cool after several years of unprecedented demand growth and rent gains that have pushed rents far above prior records. Growth in e-commerce is slowing and giving back some of the market share it captured from physical retailers during the pandemic. Amazon, the largest warehouse user in the United States, has delayed occupying numerous completed projects, trying to sublet many, as it slows its physical growth—what some are calling the "Amazon pause." Other major retailers also have been cutting back their distribution expansion plans.

To be sure, the industrial sector still enjoys record-low vacancy rates, as demand for high-quality, well-located logistics facilities has been running ahead of the market's ability to supply them. And investors are not ready to abandon industrial or multifamily, both of which still reign at the top of the heap in the *Emerging Trends* survey. Still, the ratings are a bit less exuberant than last year, and these high-riding sectors do not look quite as invulnerable as they had in recent years.

But even recognizing that industrial demand could ease at all from its torrid growth is a change—still robust, but a bit closer to historical patterns. The head of one investment management firm says, "While we still believe in the fundamentals over the long term, there's still cycles within the business and therefore you could potentially see some oversupply in the industrial market over a short period of time."

Reversion UP to the Mean, Too

While some sectors will be trending down in some fashion, others will be reverting *up* to more normal levels. Property fundamentals have been improving for the battered hotel sector, especially hotels serving leisure travelers, and there seems to be a growing consensus that the beleaguered retail sector has been oversold in recent years. Says the head of advisory services for a real estate firm, "I think we've had a little bit of a reset now where if you survived to this point in retail, the future probably looks pretty good for you."

The "Sugar Rush" Is Over

Property investment returns are primed for a reset. Earnings have been unusually robust during the two years since COVID-19 hit, driven by strong property fundamentals and intense investor demand—as well as ultra-cheap debt and the federal government's three rounds of stimulus spending. Total returns

for the institutional-quality real estate in the NCREIF Property Index (NPI) soared to over 20 percent in the four quarters through mid-2022, almost three times the 20-year average.

But returns will be coming down. The 43 economists and analysts surveyed in October 2022 by ULI's Center for Real Estate Economics and Capital Markets expect total returns to drop to 3.8 percent in 2023, and recover to a moderate 7 percent in 2024. That is to say, more normal returns.

That outlook tracks with the collective wisdom of respondents to this year's *Emerging Trends* survey. More than half believe that capitalization rates are heading up next year and returns are coming down, primarily due to rising "interest rates and cost of capital," which was the top economic concern voiced in our survey. After more than a decade of "lower for longer," the Fed is finally normalizing interest rates closer to historical levels. Those rising interest rates are already driving up debt costs and thus the costs to acquire and develop property, reducing leveraged returns.

At the same time, the federal government is done with providing stimulus, indirectly reducing tenant demand for space. Unlike in the Global Financial Crisis (GFC) and during the pandemic, "nobody's coming to the rescue, and now we got to take our medicine, and here it comes," says the head of research for an investment management firm. Thus, the government is turning off both the monetary and fiscal spigots that had been supporting commercial real estate and the economy overall.

The head of a development company summarized it like this: "I feel like we've been on a little bit of a sugar high with this stimulus and cheap debt. There's going to be a slowdown. There's got to be this normalization. So, what does that mean? I think it's going to be a little bouncy; it's going to be a little bit turbulent. But then we bottom out, and we start back into growth."

2. … Still, We've Changed Some

- The pandemic forced structural shifts in how and where we live, work, and recreate in ways that seem destinated to endure.
- Online spending is receding from its pandemic peaks but is not likely to revert to pre-pandemic levels. Business travel is unlikely to recover to pre-COVID levels for at least several years, meaning business hotels, fine dining, and conference facilities will continue to face challenges.
- The greatest changes may be in how and where we work. The impact on office use and leasing is still evolving, and a significant share of the existing stock may need to be repositioned to remain competitive.

Even as property markets begin to "normalize" in many ways after some of the disruptions of the past few years, we won't be resuming our former lives in some key respects. The pandemic forced structural shifts in how and where we live, work, and recreate in ways that seem destinated to endure at least at some level, even if less extreme than our behaviors during the peak of COVID.

Many activities have already returned to pre-pandemic levels, of course, especially those involving socializing. Americans are back to attending concerts and sporting events, and leisure travelers, at least, have returned to the nation's roads and airways. Meanwhile, we are obviously tired of exercising and cooking alone at home, so gym memberships have returned to historical levels while restaurant sales are back above groceries, as they had been since 2015 until COVID shut down dining establishments.

Yet many other activities—and how we use space—seem unlikely to return to the old ways. The pandemic changed us. Says a director of an investment management firm, "People are looking to achieve their lifestyle choices more quickly. They're less focused on their employer and more focused on their personal lifestyle. And that is changing how apartments are being viewed, how single-family residential is being viewed, how office is being utilized, and where corporations are heading."

In-Store versus Online Shopping

Much of our spending shifted online during the pandemic. The e-commerce share of retail sales (excluding auto-related sales) shot up from 13 percent in 2019 to a peak of 20 percent during the initial national lockdown. That drained a lot of spending from physical retailers and squeezed the nation's shopping centers.

The online share inevitably waned as the economy reopened and more consumers felt comfortable shopping in stores again. But don't expect online spending to drop down to pre-pandemic levels, say many experts we interviewed. While shoppers initially resorted to e-commerce due to safety concerns or simply because the stores were not even open—did we really live through that?—they still shop online today because of its other benefits, including greater convenience, selection, and price advantages. Thus, the share we spend online remains highly elevated at just under 18 percent, nearly five percentage points above the rate before COVID.

Where will it go from here? The fate of shopping centers and physical retailers hangs on the answer, with downstream impacts on warehouses and logistics. The retail property sector fared far better during and since the pandemic than anyone could have expected, benefiting from both direct government assistance to retailers and the stimulus payments to households, who could keep spending, even if out of work.

Those gains could moderate or even reverse if the online shopping share endures, however, as consumers shift some spending back from goods to nonretail services they avoided during the pandemic, like travel and entertainment. As one real estate investment trust (REIT) analyst notes, "There's still very healthy growth in e-commerce, but it's no longer the lofty expectations we used to have at the height of the pandemic."

With growth in online spending slowing, physical retailers will have an opportunity to regain some lost market share, especially those that can "bridge the gap between e-commerce and bricks and sticks. They survived very well in the pandemic and will probably continue to do well," says one investment consultant. Other winners will be the resourceful retailers that can provide consumers with compelling shopping experiences. But the permanent shift to greater online spending ultimately means that fewer shopping centers and retail space can survive.

Business Travel versus Video Meetings

The old Buggles song has it that "Video Killed the Radio Star." And indeed, radio began to fade as television ascended in popularity. Now, in a different era, video meetings just might kill—or at least greatly reduce—overnight business travel. According to the U.S. Travel Association (USTA), domestic business travel spending was 56 percent lower in 2021 than in 2019, while leisure travel was actually up modestly. Excluding the impact of inflation on spending shows that travel trips fell even more, since the number of meetings and events dropped by almost 80 percent.

A summer 2022 study conducted by Tourism Economics for USTA forecasts that U.S. business travel in 2022 will get back to only 73 percent of 2019 levels and will not return to pre-pandemic levels through at least 2026. Firms are restricting travel to save on costs, and employees are reluctant to travel anyway. Of greater importance, they have less need to travel since clients are often unwilling to interact in person, and many industry conferences have either been canceled or moved online. But perhaps the core issue is that after working from home for so long, we have learned to conduct business remotely, facilitated by improved meeting technology.

Business travel will continue to recover over time, but few expect levels to attain prior levels soon. The USTA study shows business travel flattening in 2023 short of pre-COVID levels. The greatest real estate impacts will be on business hotels, fine dining, and conference facilities. But office demand also could suffer as firms have less need to lease space to accommodate client visits.

Work from Home versus Return to the Office

No dynamic touches more property sectors and markets than how many of us will finally relocate from our home office back to the company workplace and how often. Two-plus years after the onset of COVID, most of us are still not back in the office nearly as often as in the "before times." Various sources suggest that less than half of office workers actually come into an office on a given day, at least in major markets.

That level may finally increase meaningfully this fall, as some leading tech firms and investment banks issued ultimatums for their employees to return to the office more often after Labor Day. As this publication goes to press in late September 2022, it is too soon to know whether this time will prove more successful than similar prior deadlines that passed with little apparent impact.

But will workers return? As the senior leader of a development company said, "Everyone's still in a fact-finding mode." The contours of the decision are by now familiar: employer demands for control and building culture, the need for mentoring and collaboration, and workers' "fear of missing out" will translate into more in-office work over time. But those factors will be weighed against the potential to save on occupancy costs and especially worker demands for more locational flexibility. As we continue to hear, "There's just been a shift in consumer behavior. Most people don't want to commute into the office five days a week," in the words of one senior investment adviser.

For now, tight labor markets ensure that employees have the upper hand in these negotiations and will resist employer desires to have workers return to the office. But that could change if unemployment rises in a downturn. Says the head of real estate at one investment bank, "I don't think we'll know the outcome of office until we're through a recession and the power dynamics between employee and employer change. But we do know there's definitely going to be less office demand."

One guess, which seems to reflect the collective wisdom of experts we interviewed, is that "probably somewhere between 10 and 20 percent of the stock needs to be removed or repurposed, leaving the 80 percent that really does a better job of delivering what tenants want," according to the head of research

at one asset management firm. But there is still considerable difference of opinion: a "jump ball—everybody's just guessing," says one investor. Whatever the ultimate figure, there is little doubt that a meaningful portion of today's office stock will be rendered redundant and available to be redeveloped—a topic we discuss in the "Finding a Higher Purpose" trend.

Also uncertain is how to design the space to best facilitate the kinds of collaborative work expected to dominate office work in the future, which likely will vary across firms and industries and take years to define. Another critical challenge is accommodating worker preferences for individual workspaces if most people come into the office on the same three days to be with their colleagues. Flex space might be the answer for many companies as they try to figure out their space needs.

So far, the impacts on office markets have been relatively muted during this prolonged discovery period. Firms have held onto their offices either as a precaution in case they need the space in the future or because they could not break their lease. Thus, the level of *physical* office occupancy (i.e., the share of workers actually coming into the office) is considerably less than standard *economic* occupancy metrics (the percentage of office space that is leased) as firms figure out what to do.

Tenants cannot afford to keep that empty space indefinitely, however, so office landlords should not be lulled into complacency by the relatively benign vacancy levels. More firms are downsizing or not renewing their expiring leases, so vacancy rates are still slowly rising, in contrast to every other major property sector. Plus, tenants are dumping unused offices by trying to sublet the space until their leases expire. Brokers report that a record level of office space is available for sublease, and more is hitting the market every quarter. Much of this space will eventually turn into outright vacancies as leases turn, unless firms eventually reverse course.

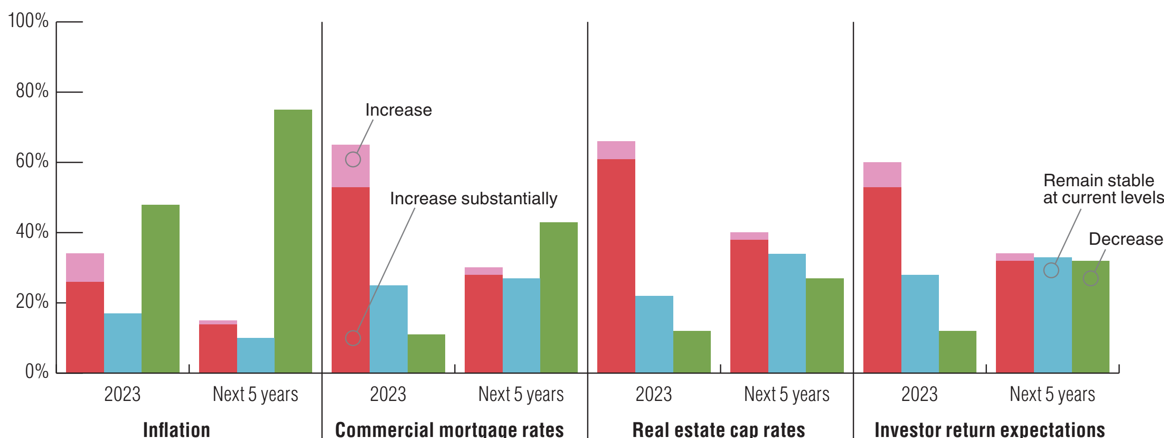
But no one we interviewed expects a mass departure from office buildings. Even under the most pessimistic scenarios, most knowledge work will occur in company offices, which, after all, were designed to facilitate this high-value work. But it will take more time for firms to figure out how much space they will need, how it should be configured, and where it should be located. As summarized by one economist, "Mixing Greek mythology and biblical references, it's probably really more of an Odyssey as opposed to an Exodus." The search for a post-pandemic "new normal" will continue.

3. Capital Moving to the Sidelines—or to Other Assets

- After a robust first half of 2022, real estate property transactions began declining, primarily because buyers and sellers cannot agree on pricing due to heightened market uncertainty.

- Rising debt costs and restrictive underwriting standards are also limiting transaction volumes.

Exhibit 1-5 **Anticipated Changes in Commercial Mortgage Rates, Inflation, Cap Rates, and Expected Returns, Next Five Years**



Source: *Emerging Trends in Real Estate 2023* survey.
Note: Based on U.S. respondents only.

- The denominator effect may force some institutional investors to reduce their CRE exposure, but any negative impact could be limited by the growing market share held by nontraded REITs, high-net-worth investors, and other non-institutional investors.

One of our key themes last year was "Everyone Wants In," reflecting the deep and wide investor demand for just about every type of real estate, except central business district (CBD) office and regional malls. Sales volumes jumped to over $800 billion in 2021, according to MSCI Real Assets—almost double the depressed total in the first pandemic year of 2020 and nearly one-third more than the prior $600 billion record reached in 2019. The surge continued into 2022, with sales volumes in the first half of the year up 38 percent over the same period last year, as even the sharp rise in interest rates did little to dampen transaction volumes.

But these recent volumes do not tell the whole story—and the story they do tell may be misleading as to where property markets seem to be heading. Discussions with numerous participants from all corners of the industry confirm that many investors have moved to the sidelines—or to other types of assets like equities and bonds. Indeed, the recent surge may well reflect a last gasp to get deals done before the expected increase in interest rates.

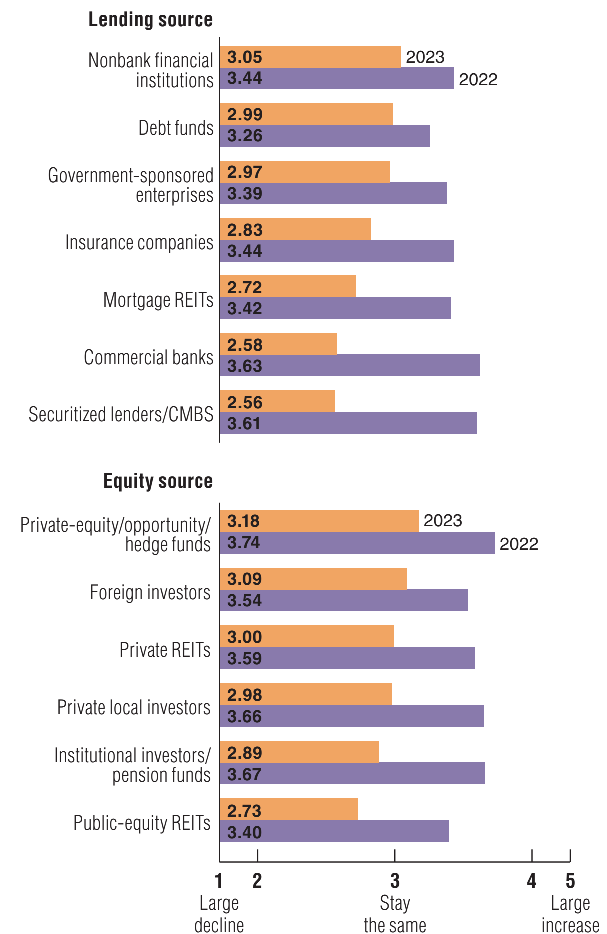
Fewer Investors

Fewer investors and lenders will be providing capital for assets, according to this year's *Emerging Trends* survey: expectations of availability declined for every one of the 13 equity and debt capital sources. Over the past decade, CRE markets benefited from a substantial capital inflow as alternative investment classes have gained wider acceptance and real estate offered compelling risk-adjusted returns.

Now, some of those inflows look to reverse. Investor interest is still healthy, but not what it was. "Instead of seven or 10 competing offers for sale, there's now two or three, which I think that's normal," says the head of an investment firm. "That's normalizing, too."

Several forces look to restrict investor demand, starting with the lower expected returns discussed in our "Normalizing" trend. Rising interest rates are making acquisition and construction debt more expensive, just when operating incomes seem destined to slide as the economy weakens in the forecasted downturn. Indeed, the prospect of lower income and higher costs is breaking deals, as buyers either seek price breaks or pull out altogether.

Exhibit 1-6 **Availability of Capital for Real Estate, 2023 versus 2022**



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

Says the regional leader of one global firm, "Cap rates have gapped out as interest rates went up. And suddenly, things didn't pencil, and that generated broken deals. The cost of financing for real estate and everything else went up dramatically. And so everything has to be repriced, everything has to be reset."

Also limiting investor demand: debt is getting more difficult to obtain, and the *Emerging Trends* survey expects underwriting standards to get even more rigorous. As the partner in one leading advisory firm explains, "This is one of those 'cash is king' situations where borrowing costs are higher, and if you're an all-cash buyer, those probably represent a disproportionate share of the people in the market today."

Meanwhile, the same interest rate increases that reduce leveraged returns and thus demand for real estate also make bonds and other interest-bearing investments more compelling. As the head of real estate banking at one investment bank explains, “Rising bond yields are going to mean that real estate and other alternatives are all going to be facing less availability of capital and some outflows.”

And while interest rates are increasing, equity and bond prices have been falling, triggering the “denominator effect” for some institutional investors with asset allocations that must remain in balance. The denominator effect can be magnified because CRE values in a portfolio are generally appraisal-based, which tend to be backward-looking.

However, the impact on CRE portfolios may not be severe this time. Many institutional investors have been under-allocated in CRE, so they will not need to rebalance by selling real estate assets. Furthermore, a rising share of CRE investors is not governed by fixed asset allocations, including public REITs, private investment firms, and high-net-worth individuals, and especially nontraded REITs, which have grown to be among the leading investors in CRE, with an asset value of almost $300 billion in 2021. In sum, capital availability should decline in the near term, though the denominator effect may not force sales as much as in typical downturns.

Uncertainty = Hesitancy

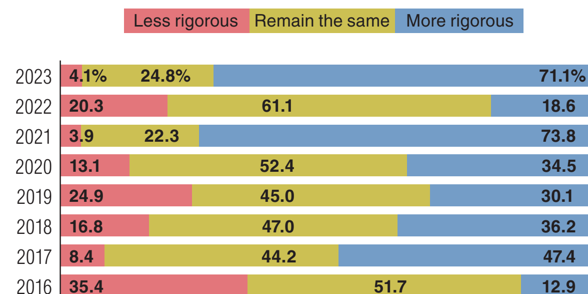
Perhaps the biggest headwind to getting deals done now is uncertainty over where prices will settle. Reflecting the views of many experts we interviewed, one senior investment banker says, “Transactions are being done at cap rates that are anywhere from 25 to 75 basis points wider than they were—but there is not any conviction that these are the right levels.” That translates into a 5 to 15 percent drop in values so far, with more to come. But there are too few assets trading now to know for sure.

Buyers are concerned about overpaying. Says one banker: “Now is not the time to be a hero—meaning, it’s not the time to go out and be aggressive on buying something. It’s not the time to be aggressive on borrowing.” On the other hand, sellers don’t want to sell their assets short and then see them retraded at higher prices once the markets improve and few suffer from the financial distress that forces them to. It all translates into fewer deals. One senior adviser to institutional investors said, “It’s pencils down in investment committee. We can’t get an acquisition or disposition approved in investment committee at this time.”

The fundamental issue for many investors is how long the Fed will keep raising rates. Many people we consulted in the summer believed that the Fed will finish hiking by the end of 2022 and could start lowering again by mid-2023. However, Chairman Powell’s comments at the end of August led more observers to believe that relief will not come until at least 2024 and seemed to precipitate a sharp market selloff. But everyone agrees that deal volumes will not return until market players better understand the Fed’s playbook—which, in turn, hinges on when inflation can be tamed. As the U.S. head of real estate at one investment bank explained, “That’s going to create more clarity, and then some of the volatility comes down, and that’s the opportunity to start buying.”

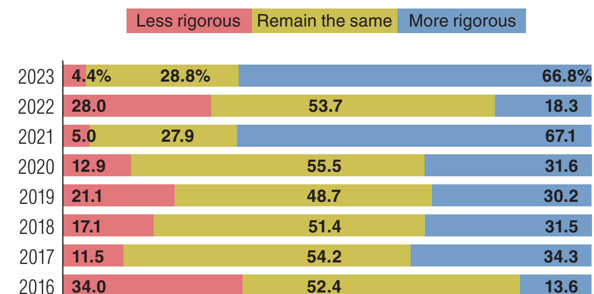
Deal flow will also require investors to recognize that pricing expectations have changed. Says one portfolio manager who wants to put money out now, “I just don’t know that sellers have capitulated enough to recognize the new environment.”

Exhibit 1-7 **Debt Underwriting Standards Forecast for the United States**



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

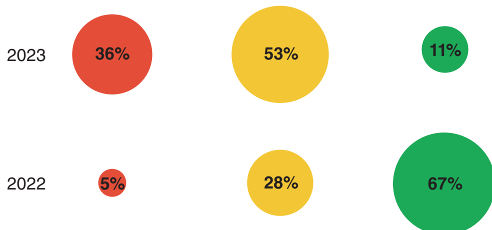
Exhibit 1-8 **Equity Underwriting Standards Forecast for the United States**



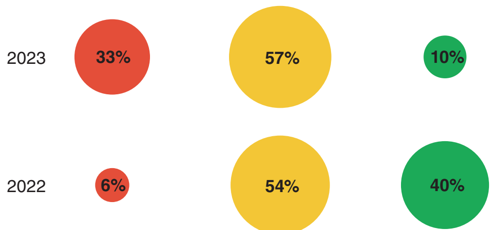
Source: *Emerging Trends in Real Estate* surveys.
Note: Based on U.S. respondents only.

Exhibit 1-9 **Real Estate Capital Market Balance Forecast, 2023 versus 2022**

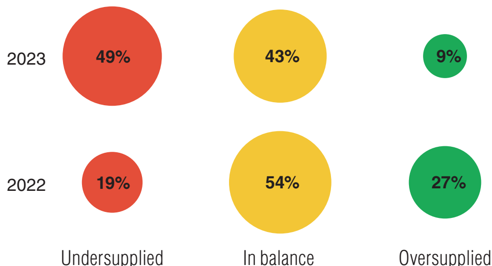
Debt capital for acquisitions



Debt capital for refinancing



Debt capital for development/redevelopment



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

More a Lull Than a Crash

If transaction volumes do fall, few real estate people expect a crash or liquidity crunch in property markets. Notably, there are few signs of distress. Balance sheets are generally strong, leverage is low, and values have not fallen very far, so few assets are underwater with their debt. Moreover, replacement financing is generally still available for those who need it, if at a higher price and with tighter underwriting. Many investors and developers are willing to look beyond the short-term turbulence to focus on longer-term opportunities, a theme we introduced in our opening overview. Thus, there are few examples of motivated sellers in the market.

At the beginning of COVID, several firms set up opportunistic funds anticipating all the distress that ultimately never came. Most of those funds eventually just went away or changed their focus. Investors waiting for distressed deals in the coming years may be similarly disappointed.

The research head of one investment management firm says, "A lot of bids have gone away, highly leveraged bids have gone away, but there's still a lot of depth to the capital markets. A lot of the nontraded REITs have plenty of money. There's still high net worth. The strength of the U.S. dollar, while it's going up, also confirms that foreigners like to own U.S. dollar assets. So, there's plenty of liquidity."

A pension fund portfolio manager adds, "We have pulled back on some things. We're more selective, and things have to be more compelling. You have to take a closer look, resharpen your pencils." But deals will get done. Concludes one adviser, "If deals underwrite and make sense, there is capital that is both eager and available."

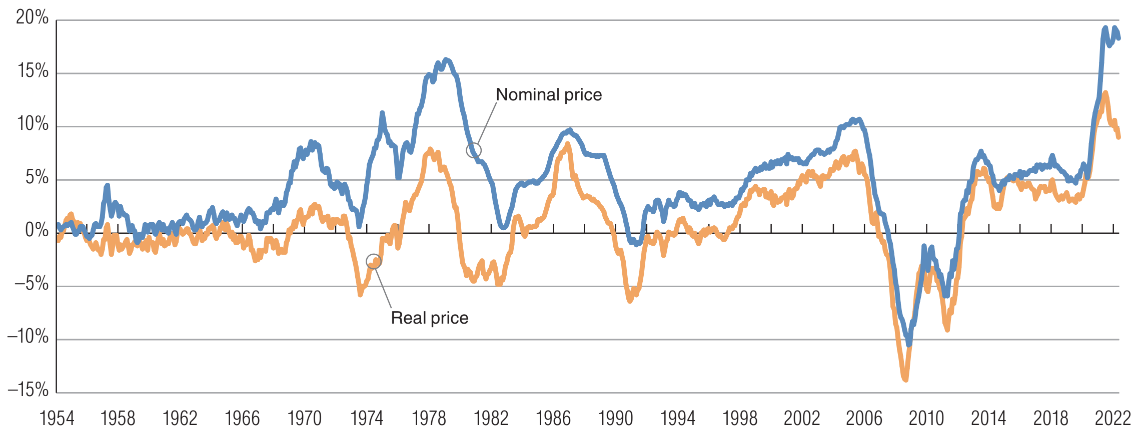
4. Too Much for Too Many

- Housing affordability has fallen to its lowest level in over 30 years. Prices and rents have soared relative to incomes. Spiraling mortgage rates have pushed the homeownership bar further out of reach for a growing share of households.
- The chronic undersupply of housing is the result of government policies that limit new supply or increase construction costs and is exacerbated by a labor shortage, as well as NIMBYism.
- Simply constructing more housing may be the most obvious and effective solution, but is far from easy to achieve.

Housing is too expensive. It has been that way for too long—for too many people neither for-sale nor rental housing is affordable—but prices and rents have soared even further out of reach over the course of the past year. And even if we experience an economic downturn, as many economists expect, it is not projected to provide significant relief.

It starts with record home prices. The U.S. median existing-home price jumped by over 18 percent in 2021 alone—the largest increase on record going back to the early 1950s—and then tacked on a further 15 percent through mid-2022. Combined with rapidly rising mortgage rates, housing affordability has fallen to its lowest level in over 30 years relative to incomes, according to the National Association of Realtors.

Exhibit 1-10 **Median Price of Existing Single-Family Homes, Nominal versus Real Prices, 1954–2022**



Source: DQYDJ.com based on data from the National Association of Realtors, Robert Shiller, and the Federal Housing Finance Agency; compiled by Nelson Economics.

Though prices began to fall modestly in the summer, as we discuss in the "Normalizing" trend, prices are still near record levels nationally.

The rise in mortgage rates alone has had a significant impact. John Burns Real Estate Consulting calculated that the number of U.S. households that could afford a $400,000 mortgage—about the mortgage amount required to purchase the median-priced home with a 5 percent downpayment—dropped by 16.5 million due to rising interest rates, just in the first half of 2022.

That hurts. But the fundamental issue is the overall chronic undersupply of housing, especially at affordable price points. The challenges are hardly new. Restrictive zoning and building codes block or limit new supply, while NIMBYism delays and curbs approvals of even as-of-right projects. Affordable housing developers complain that increasingly complex deals now require more underwriting from more capital sources. One developer says, "The average deal for us used to take 90 days to close, and now it's over six months."

Some experts we interviewed believe that the rise of single-family rentals (SFRs) also contributes to declining affordability of for-sale housing. Proponents argue that SFRs extend the opportunity to live in a single-family house to those who cannot afford to buy or just don't want to, while generally expanding the supply of rental housing. But critics point out that "institutional capital is driving up prices in the resale market," in the words of one housing adviser, by outbidding owner/occupant homebuyers for existing homes.

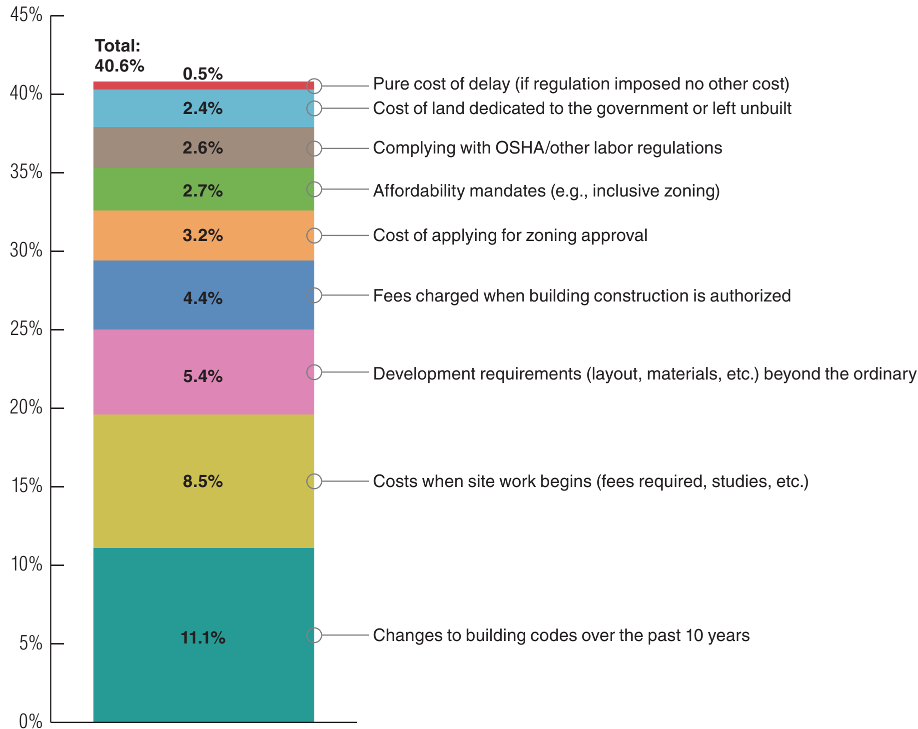
One reason: existing tax laws are stacked against the individual homebuyer. Explains one academic, "Investors are allowed to not only deduct everything, but also they can depreciate the unit. They also have access to lower cost of capital." In sum, institutional buyers assembling "horizontal apartment" portfolios can afford to pay more to be the high bidder for homes. And they do. Investors account for one in five homebuyers, up by a third compared with before the pandemic.

Another supply constraint is homebuilders' cautious construction pacing, a vestige of the last recession. Explains the director of an investment institute who developed housing earlier in his career, "A lot of the homebuilders, when the Great Recession happened, were stuck with inventory, said, 'We're not doing that again. We're going to build 10 new units, and as they sell, we'll start the next one, etc.'"

And then labor shortages are compounding the problems. "The construction sector as a whole hasn't returned to the peak we saw prior to the Great Recession. We saw a lot of that labor leave the sector for something maybe perceived more stable," says the economist for a housing advisory firm.

All these factors are conspiring to limit housing construction far below population growth. In fact, the number of single-family housing starts in the last decade (2010–2019) relative to household formations was the lowest since the government began tracking these trends and half as much or less than in preceding decades, despite the consistent increase in deliveries since bottoming in 2010. And now both permits and housing starts have been trending down again in 2022. Plunging homebuilder

Exhibit 1-11 **Average Cost of Regulation as a Percentage of Total Multifamily Development Cost**



Sources: National Association of Home Builders; National Multifamily Housing Council.

confidence suggests that that decline will likely continue until the interest rate environment turns more favorable.

And the homes that do get built are expensive, particularly since the pandemic. Construction costs shot up due to supply chain disruptions and are still worrisome. As one housing industry adviser notes, “There’s a stress index about global supply chains, and those stress indices are all indicating that they’re moderating, but they’re still at very high levels.” Finally, high permitting fees and utility charges and large minimum lot sizes push developers to build more expensive homes.

Renters Priced Out of the Homebuying Market

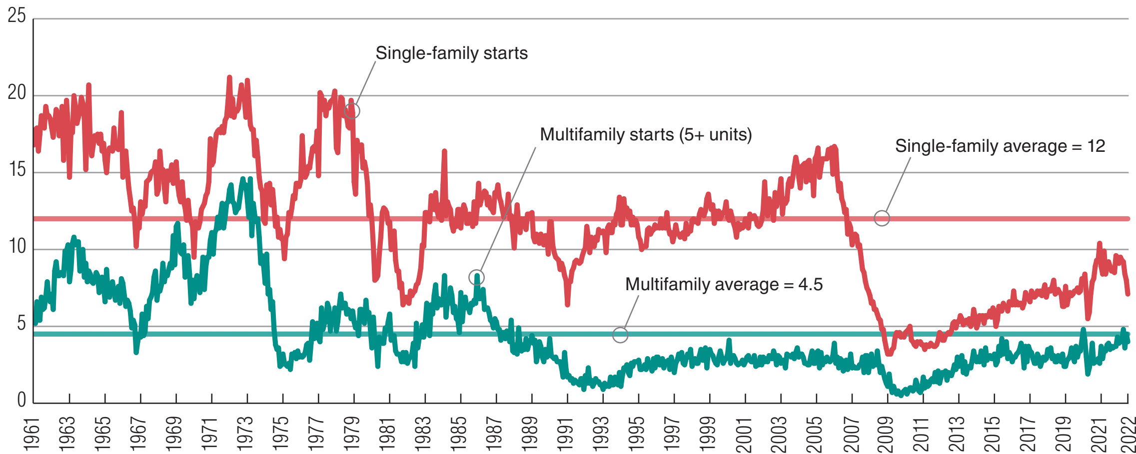
With a growing share of households priced out of the for-sale market, demand for rental units is far outstripping new supply. Though population growth slowed sharply during the pandemic, demand is also rising from the many young adults eager to start their own households after moving back in with their parents during COVID. Further boosting demand is the increasing number of younger adults choosing to live alone, according to a report from economists at the Fed, perhaps a reaction to lockdown claustrophobia.

The multifamily sector has responded with an unprecedented increase in new supply. “We’ve built more multifamily housing units over the last 10 years than we had in any other time since 1980,” notes an adviser to institutional investors. But it is still far less than needed. Vacancies have fallen to their lowest levels ever while rents are rising faster than ever—even faster than home prices. And though not a formal part of the affordability calculations, other housing-related costs like utilities and maintenance are also rising faster than incomes, further constraining the ability of households to afford basic shelter.

Moving to More Affordable

Recent slowdowns in rent growth and home price appreciation, noted in our “Normalizing” trend, have done little to increase affordability. So how to address this? Millions of people have taken matters into their own hands. As an executive with one developer notes, “A lot of people are moving to markets where

Exhibit 1-12 **U.S. Housing Starts per 1,000 Households, 1961–2022**



Sources: U.S. Census Bureau and U.S. Department of Housing and Urban Development; compiled by Nelson Economics.
Note: 2022 figures are through July.

they can go buy a house and it's a little more affordable." That solved the issue for many early movers, but prices and rents have been rising much faster in many of these "Zoom towns," reducing their affordability, a topic we take up in our trend "Rewards—and Growing Pains—in the Sun Belt." So far, migration from the highest-priced markets has not been enough to actually reduce housing costs in those markets, though costs generally are rising more slowly there.

Demographics and the slowing economy could also help ease the housing imbalance. The nation's population is growing at its slowest pace ever, thanks to both low birth and immigration rates. And fewer buyers are on the hunt for homes now due to affordability and concerns about possible job losses in a recession. "The good news is that it is an opportunity for homebuilders and land developers to do a little catch-up. They've been running behind for two years, and they may actually welcome a little respite to finish the homes that they have sold," thinks a senior adviser to many homebuilders.

But these favorable trends alone will not be nearly enough to solve the affordability quandary. What else would help? As we outlined in previous editions of *Emerging Trends*—when housing was less expensive than it is now—there are no easy fixes, but several obvious policy options would help: notably, lowering the many obstacles to housing construction, decreasing rising regulatory costs (stemming from fees and changes to building codes), and expediting approvals.

Technology can play a bigger role in actually delivering homes by helping bring innovation and cost efficiencies to a sector that has been notoriously slow to change. Most notable are different approaches to prefabricated and modular housing in which much or all of the house is built in a factory and then assembled on the homesite. These methods can dramatically reduce the need for labor and shrink production times at more affordable costs. Promising innovations are also arising from the nascent single-family build-to-rent sector, which is learning how to scale construction and design to reduce costs and development time, as explained in our single-family sector overview found in chapter 2.

Government could also expand affordable housing production. Unfortunately, Congress dropped the affordable housing components of the proposed Build Back Better Act from what became the Bipartisan Infrastructure Law, meaning that no additional federal help is on the way. But many state and local governments are stepping into the breach, as we discuss in our final trend on regulation.

In the end, perhaps the most effective solution is the most obvious: we must construct more housing that is affordable to more people. As the former homebuilder we quoted earlier puts it, what is needed is "a new way of getting housing out there and get it built more affordably."

5. Give Me Quality, Give Me Niche

Investment demand for commercial real estate assets is still healthy, if more tentative, as discussed in "Capital Moving to the Sidelines—or to Other Assets." But real estate capital markets are also becoming more bifurcated between the favored and the scorned as investors, lenders, and developers turn more selective than they have been in recent years. What assets will find love—and capital—in the coming years?

Investors and developers seem to be preferring three distinct types of opportunities:

- The security of major product types with the strongest demand fundamentals, notably industrial and multifamily housing, which essentially tie for top investment ratings in this year's *Emerging Trends* survey;
- Best-quality assets in sectors undergoing significant demand disruption, especially retail and office; and
- Narrowly targeted subsectors (like student housing) and newer "niche" asset types (like single-family rentals).

There is much less appetite now for riskier opportunistic investments. Our survey also confirms continuing strong interest in Sun Belt markets, though the rankings are moderately tighter than last year, as we show in our markets review in chapter 3.

Hot or Not?

The dominant capital market trend is the increasing divergence of demand among different property types and then within property types, particularly office. As investors get more selective, they increasingly choose safer sectors with the most compelling market fundamentals. Tenant demand continues to outpace the market's capacity to add new supply in both the residential and industrial sectors, which therefore draw the greatest interest from capital markets. Retail and office, by contrast, find much less support.

We repeatedly heard some version of that story in interviews with industry leaders. But that big picture does not fully capture the range of market currents. Tenant and investor demand for apartments and warehouses is deep at all price points and almost every market, but the story is more nuanced for office and retail. Demand for well-located, top-quality office and retail space is as strong as ever, but tenants, and thus investors, are losing interest in lower-quality buildings and shopping centers.

Exhibit 1-13 **Share of All CRE Transactions, by Major Property Sector, 1H 22 and Change from 1H 21**

Sector	Share of 1H 22 sales	Change from 1H 21
Apartments	43.7%	+3.6%
Hotel	6.3%	–2.4%
Industrial	21.1%	–0.8%
Office	16.3%	–3.3%
Retail	12.6%	+2.8%

Source: MSCI Real Assets; compiled by Nelson Economics.

Bifurcation and the Flight to Quality

The bifurcated demand that started a decade ago in the retail sector and expanded over time has now spread to the hotel and office sectors. However, the dynamics are different for each sector. The retail bifurcation was driven primarily by years of overbuilding combined with the sector's failure to update or demolish obsolete centers and then compounded by the growing competitive pressures from e-commerce. The tenant market could not support all the existing centers, causing a divide between the best-located centers with the best retailers and everything else. Investors have followed suit.

A similar divergence is taking place in the hotel sector but through a very different dynamic. Here, the divide is being driven by the contrast between the broad post-COVID recovery in the leisure market and the much slower and incomplete business market recovery. Thus, resorts and destination hotels are commanding record revenue while many convention and business hotels languish.

And then there is office, where tenants are increasingly choosing newer, more modern buildings and abandoning everything else, especially pre-1990 buildings. Unfortunately, for current owners, the office sector experienced its greatest construction boom in the 1980s. Now, many of those assets are becoming functionally obsolete, unwanted by tenants or investors.

Says a senior leader of a global development firm, "If it's old class B office, I'd be worried because that's the kind of space that companies will ultimately shed to move into new space." But not just any new space. The top tier of space—which industry experts say accounts for only about 20 percent of all office stock—is distinguished by several key modern design features. These include the following:

- High ceilings and floor-to-ceiling window lines that allow for abundant natural light;
- Sustainable design that minimizes or even zeros out the building's carbon footprint; and
- Premium health and safety features, such as efficient HVAC systems with rapid air-refresh rates.

The U.S. head of real estate banking for another major investment firm sees office building quality more as a competitive advantage in the war for talent. "Major companies, especially their headquarters space, think of that as synonymous with their brand. And so if they want to attract talent, they want to be at a modern, sustainable building."

"Those rents continue to hold up really well," says the head of a real estate investment bank. "And everything else continues to be really, really tough. So it's going to be 'trophy and trauma' in the business." It is almost hard to overstate how much that older office product has fallen out of favor. A global portfolio manager of an investment management firm explains that "office, especially value-add office, has kind of become toxic. The debt funds were the primary lender to value-add, especially opportunistic office. That's completely dried up."

As with failing retail centers, many of these older office assets will need to be either upgraded or converted, as discussed in our next trend on repurposing obsolete buildings. The biggest challenge is the enormous cost of renovating a 40-year-old building to the health and safety and sustainability features and modern design standards offered by the top-tier properties.

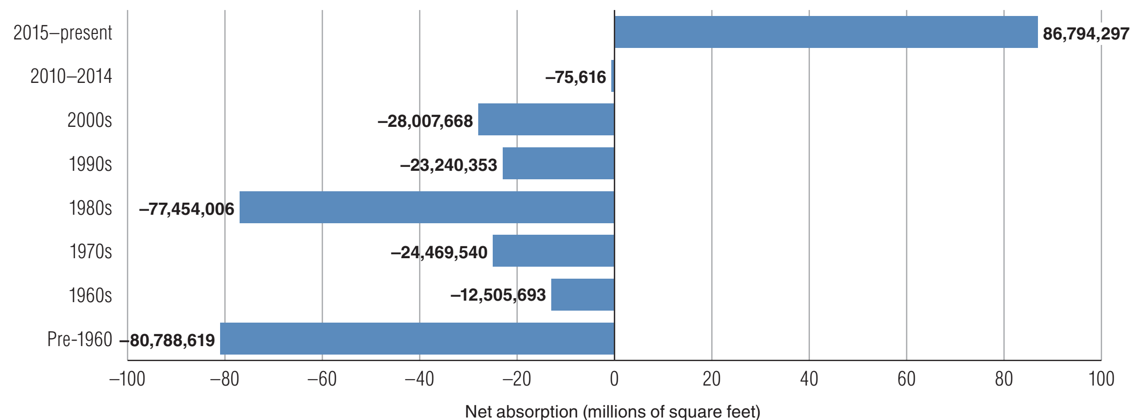
Mainstreaming of Niche Property Types

In last year's *Emerging Trends*, we documented the growing interest by institutional investors in nontraditional CRE product types. This year's survey and interviews reveal an even stronger interest in niche products. Niche property types occupy five of the top-rated six slots for "investment prospects," as shown in chapter 2, including the two top subsectors, workforce housing (market-rate housing affordable to middle-income households) and data centers.

This shift partly reflects investor expectations that cyclical trends will reduce returns in 2022 and 2023, intensifying the eternal search for yield. That search will favor some of these smaller product types that generally command higher cap rates and returns relative to the traditional product types. Why? Exits are less certain because these assets tend to be more thinly traded. Moreover, there is less reliable operating data, and these products often require more specialized management, raising the risks for investors lacking experience in these sectors.

The significance of these factors is likely to recede as more investors enter these sectors. That potential looks to get a boost from an unlikely, if wonky, source: NCRIEF's Property Index (NPI). Pension funds, investment advisers, and other institutional players often construct their portfolios to match the NPI mix, a phenomenon known as "benchmark hugging." The NPI includes only the five major product types—apartments, hotels, industrial, office, and retail—and a select few subtypes, like flex space and research and development (R&D) under industrial. In a revolutionary move for the often-plodding institutional investor world, NCREIF plans to promote a new, expanded "NPI Plus" with all product subtypes as its headline benchmark. This subtle

Exhibit 1-14 **Net Office Absorption since COVID Onset (April 2020–June 2022) by Building Age**



Source: JLL Research. ©2022 Jones Lang LaSalle IP Inc. All rights reserved.

change will effectively give investors more latitude to pursue less traditional asset types.

This change comes at a propitious time in the investment cycle as investors seek assets better positioned to outperform during more volatile market conditions. These include some of the more established subtypes like medical office, self-storage, and student and senior housing with strong demographic tailwinds supporting rising demand. There also are newer subtypes with growing interest, like cold storage warehouse, life-sciences office, and single-family rentals, generally benefiting from favorable demand shifts. And still others don't fit neatly into traditional CRE categories, like media (e.g., movie studios, sound stages, and recording studios), cell towers, and data centers, but all benefit from solid demand.

Some investors introduce niche products to add diversification to their portfolios. Says a senior adviser to institutional investors, "I like, within certain traditional segments, playing off the niche a little bit. Medical office is an interesting offset to traditional office exposure in a portfolio. And you have the same thing happening with other major property types like industrial with cold storage and data centers."

In summary, real estate investors are viewing calendar year 2022 as a transitional year requiring changes in near-term investment tactics. Some capital has moved to the sidelines until there is greater clarity on pricing and future market conditions. But investors still actively seeking opportunities are generally seeking the safety of top-quality assets or sectors most likely to ride out expected headwinds due to strong demographic support or other favorable demand fundamentals.

6. Finding a Higher Purpose

- Long-term demographic trends and more recent structural demand shifts have rendered countless existing buildings and properties either redundant or obsolete. Many of these buildings may ultimately need to be repurposed or upgraded to meet new market requirements.

- Key repositioning targets are concentrated among retail, office, and older industrial structures and sites. Promising opportunities include residential units and newer or better-located industrial stock, as well opportunities to "retrofit for the future."

- These conversions are often much easier to envision than to execute, however, often requiring specialized expertise and substantial investment to execute. The value loss that owners may need to recognize in order to justify the transformative investment could be the greatest barrier to project feasibility.

We have too much retail space and too many office buildings, and not enough residential units or modern industrial space. That is the inescapable conclusion from our many discussions with leaders across the industry, as summarized in the preceding pages. There also is not enough developable land on which to build all the housing and warehouses where needed. Hmmm, maybe there's something to that.

The Importance of Older Buildings

In her classic 1961 urban planning treatise, *The Death and Life of Great American Cities*, Jane Jacobs elucidates the critical ingredients for a diverse, vibrant city. Among them is one rule that may seem puzzling at first: "The district must mingle buildings that vary in age and condition, including a good proportion of old ones." Why the need for old buildings? Why not all new?

"If a city area has only new buildings, the enterprises that can exist there are automatically limited to those that can support the high costs of new construction." How boring and monotonous that would be. Jacobs points to all the small local businesses that occupy these older structures that give the neighborhood its diversity and vitality.

Although Jacobs doesn't say it precisely, there is another crucial observation regarding the importance of older buildings: so many of them find new life with uses different from their original function. Walk around the bustling old port districts of Montreal or Boston or Portland, Maine, and you will find hundreds of former warehouses that have been repurposed into upscale hotels, cool offices, hip restaurants, and distinctive retail spaces.

Conversions are hardly limited to old warehouse districts. Every vibrant downtown is filled with buildings of varying types and vintages that have been converted into new uses. Often the conversions go "upstream," as lower-value land uses like warehouses convert into higher-value uses like office or retail. But the direction is often reversed, with old offices converting into artist space or storage.

Lemonade from Lemons

Demographic trends and structural demand shifts magnified by the pandemic have rendered countless existing buildings either redundant (no tenant demand for the current use or at the location) or obsolete (unable to lease in its current condition and/or configuration). But many—though not all—of these can be either repurposed or upgraded to meet new market standards. The many opportunities include the following:

- Converting older offices to residential uses, or upgrading them into modern offices, where feasible and supported by the market;
- Repurposing excess retail space for other uses (including fulfillment, service office, and residential) or improving with mixed use (especially residential, office, and hospitality); and
- Scraping buildings to create development land where conversion is not feasible, or where density can be increased, to site new housing.

These conversions are often much easier to envision than to execute, however. The notion of converting obsolete malls into fulfillment centers, for example, has been a point of interest by both people inside and outside the real estate industry. But the case for these conversions can be easy to exaggerate. Nearby residents don't relish sharing local roads with big-rig trucks serving these logistics facilities, while local governments resist losing retail sales tax revenue and jobs. And everyone laments losing what had been a community gathering place.

But the greatest barrier to land use conversions is the value loss that owners must recognize in order to justify transformative investment and make projects feasible. Malls, for example, often command the highest values per square foot of any property type and warehouses among the lowest: converting a mall into a warehouse may require an enormous value writedown.

It is possible to convert malls to uses with higher values than warehouses. For example, the Austin Community College converted Highland Mall into a mixed-use campus, while Amazon purchased the former Lord & Taylor flagship store in Manhattan, aiming to convert the building into offices, though those plans have since been frozen as Amazon reevaluates its space needs. An even more likely step for failing malls is to convert just the most problematic portions. For example, at York Galleria in York, Pennsylvania, a former Sears was converted into a casino and then a vacant Bon-Ton department store into a self-storage facility.

What's Next for Office?

Perhaps the biggest challenge confronting urban landlords and city leaders is what to do with all that older office space that increasingly looks redundant, obsolete, or both.

"One of the major problems we have in the office market right now is we've got a bunch of pre-1980 buildings that are functionally obsolete, and we don't know what we do with them," says the global head of research for an investment management firm. The instinct of many owners will be to upgrade in order to attract new tenants. But that approach can be expensive, with the payoff highly uncertain. Owners of one older high-rise in Boston invested $300 million to convert the 1 million-square-foot concrete building into a sleek glass-lined tower. Some major leases have been signed, but significant blocks remain available.

Not every older building would require such extensive improvements to compete for tenants, of course, but even funding tenant improvements may be too risky in this highly competitive market. A senior executive with one CRE investment firm believes, "There's going to be a lot of distress. Even in a great market, if their debt is coming due, they're going to be hard pressed to refinance that building, particularly if that building needs the capital to fit out space, get new building amenities, all the things that are required as table stakes today in leasing office space."

Says one real estate investment banking executive, "It's all going to be triggered by when major leases roll or debt matures or there's some debt extension test that comes up. Some of those buildings will come back to the lenders, but others may be candidates for conversion to other uses."

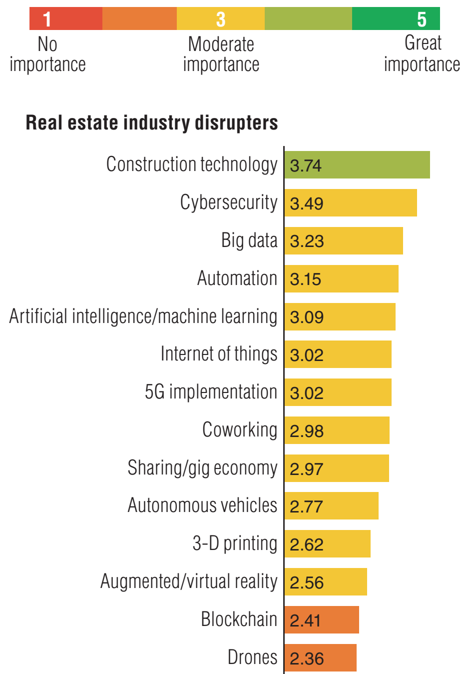
One affordable housing developer is optimistic about the potential for more housing. "Anybody who's sitting in city hall with a homelessness problem, which is pretty much everybody, needs to start thinking about how to take some of these office buildings and repurpose them into all flavors of residential, including some homeless shelters."

But as with the aforementioned mall conversions, that would require a tremendous value decline to make such projects feasible, among other hurdles. That capitulation could be painful and really has yet to begin. Half of the industry people surveyed for *Emerging Trends* believe that central-city offices are overpriced. But at some point, owners may have no alternative to a serious writedown if office tenant demand keeps falling.

Moving from Here to There

Discussions with experienced practitioners for the upcoming ULI report, *Behind the Facade: The Feasibility of Converting Commercial Real Estate to Multifamily*, suggest several lessons that can increase the odds of successful conversions. First is the understanding that there is no cookie-cutter building to convert, particularly when converting commercial real estate to multifamily use. Not only is each experience different, but developers of successful conversions expect that each subsequent one will be different. Because of the unknowns when taking off a facade and walls and bringing it down to the concrete, interviewees stressed the need for an experienced and nimble team that can

Exhibit 1-15 **Importance of Disrupters for Real Estate in 2023**



Source: *Emerging Trends in Real Estate 2023* survey.

adjust in real time. As one developer summed it up: "You go with the flow of what the building is telling you it wants to do or can do and then merge that with your financials."

Second, two perceived stumbling blocks of office conversions to multifamily—large floor plates and office buildings that are not fully vacant—may not be the universal impediments once thought. They have been successfully addressed enough times to suggest that there are options to pursue, at least in some cases. The former by innovative configurations, often by providing bedrooms without direct natural light, use of internal space for amenities, or creating a lightwell. The latter typically by the expected departure of a main tenant but then lease termination negotiations with the remaining tenants. Of course, the financial viability of these solutions—and the full conversion process itself—depends on the strength of the multifamily market in the particular location.

A growing number of developers are honing the skills required to understand which buildings are most amenable to transformation at a feasible price point and to undertake the complexities of conversions. Conversions to residential units have become a mainstream development option, and perhaps even a specialized niche sector. And institutional and private capital are finding investment opportunities in this area.

Retrofitting for the Future

The obstacles to converting from one property type to another are varied and daunting. Many owners will rise to the challenge, but such undertakings are often not practical—either too expensive or just too difficult. But the need to "retrofit for the future," as one real estate adviser points out, provides another set of opportunities that may be more limited in scope but ultimately broader in scale. Owners and managers of real estate will need to enhance the resilience of their assets against potential climate change impacts or otherwise decarbonize their assets as increasingly demanded by tenants, investors, and regulators, as we discuss in greater detail below.

But whether a full-scale conversion to another land use or a more limited retrofit to higher building standards, there is a compelling sustainability reason for these projects beyond their potential financial feasibility. It has been said that "the greenest building is one that is already built." Simply, it is far more sustainable for the planet to reuse existing buildings than to build new ones. Reason enough to encourage landowners to consider what reuse options exist before demolishing buildings to make way for new construction.

7. Rewards—and Growing Pains—in the Sun Belt

- Despite their continued popularity among residents, employers, tenants, and investors, some Sun Belt markets are experiencing growing pains. "Big city" problems are coming to these markets known for their affordability and quality of life after years of continuous economic and population growth.
- These destination markets typically offer lower tax rates and lighter regulatory burdens than many gateway markets, heightening their appeal to many businesses. Conversely, some of these attractive characteristics may limit their capacity to accommodate continued massive population inflows.
- These markets will remain popular for both business and residential in-migration but could see the pace of both occur at more moderate levels.

Everyone still likes the hot Sun Belt markets. Almost all the *Emerging Trends* "magnet" markets that shone most brightly in our last report—the large Super Sun Belt metro areas and the fastest-growing Supernovas—still shine luminously in the

CRE galaxy, as we detail in the "Markets to Watch" chapter. But another year of hypergrowth has brought growing pains and has slightly dimmed the outlook for some star markets, as indicated by this year's survey.

All this growth is bringing big-city problems to some smaller, vibrant markets that *Emerging Trends* once described all-inclusively as 18-hour cities. Such problems include those that affect the quality of life (like congestion) and standard of living (like declining housing affordability). These side effects to unfettered growth bring to mind the old joke about the hot restaurant that is so popular that no one wants to go there anymore. The Sun Belt markets are still strong population and business magnets, but they may now draw fewer and different people as their appeal changes.

Becoming a 24-Hour City

Though still ranked among the highest of all markets, some high-flying Sun Belt metros declined in ratings this year. Housing is more expensive, traffic is getting worse, longtime residents are getting frustrated, and even some newcomers are finding the proverbial grass to be not quite as green as they envisioned.

In focus groups with local market experts conducted by ULI district councils across the United States, participants from the Supernovas and some other Sun Belt markets were likelier than members from metro areas with more sluggish economies to cite issues like living costs, housing affordability, and infrastructure quality as being a regional disadvantage. These issues were most frequently mentioned as problems in some of the booming markets, like Austin and Nashville.

Describing the growing pains in her market, a focus group participant commented, "Nashville is like a teenager. We have grown too quickly and haven't decided what we want to be when we grow up." Like some other Sun Belt markets, this former "18-Hour City" has graduated to a full-fledged 24-hour metropolis, but the regional infrastructure has strained to keep pace.

Too Much, Too Soon

The pandemic supercharged interregional migration patterns to leading Sun Belt and lifestyle metro areas, as well as intraregional migrations from CBDs to suburbs. Some of this migration was destined to reverse eventually. Some households left their inner-city apartments for safer environs until the pandemic was better understood and brought under control. Some young adults moved back in with their parents until their jobs reopened or their old neighborhood revived. Many of these migrants have moved back to their old places.

But beyond these temporary moves, the pandemic accelerated more permanent migration. Some workers were freed to move wherever they wanted by flexible work arrangements that became more commonplace during the pandemic. Many left expensive coastal markets in search of more affordable "lifestyle" markets that offer what they perceive to be more favorable amenities or superior economic opportunities. A ULI focus group participant from Salt Lake City said, "Quality of life and affordability have been great draws to the market. Sustained high growth will test these factors long-term."

These migrations certainly caught the attention of investors and developers. Many of these lifestyle markets jumped to the top of the *Emerging Trends* rankings. A senior executive with one development firm said, "We are fans of certain 'lifestyle markets.' We think they were already on a very good growth trajectory for work/life balance, and then the jobs have come in a big way. They were already doing right, and then the COVID tailwinds really accelerated the growth."

However, there are signs that the pace of this migration may ease—even as developer interest and investments are still gaining momentum—risking oversupplied markets. While job growth and income growth in these markets far outdistance national trends, home prices and rents are growing even faster, compromising the affordability that helped made them draw migrants in the first place. Inflation rates in Phoenix, Atlanta, Tampa, and other popular Sun Belt metro areas are among the highest in the country, partly due to surging housing costs, which make up a significant portion of the inflation calculation.

What happened? For some markets, it was just too much, too soon. Population in the markets we identified last year as either "Supernova" or "Super Sun Belt" grew by an average of over 5 percent since 2019, almost four times faster than the rest of the nation, primarily due to rapid net in-migration. For some metro areas, that was just more than they could handle. Homebuilding has been rapid but not enough to keep up with demand.

Tax Burdens versus Quality of Life

At the same time, one appeal of these destination markets is their lower tax rates and perceived lighter regulatory burden. But more relaxed taxation and regulation come at a cost, as evidenced by the challenges of accommodating massive population inflows.

Of course, every fast-growing city that successfully morphs into a major metropolis inevitably experiences growing pains along the way. A key issue confronting the current generation of hypergrowth markets is whether they will invest in the infrastructure and regional planning needed to facilitate growth while maintaining the qualities that led to their appeal.

One ULI focus group participant in Austin said, "The disadvantages of housing affordability, lack of mobility due to inadequate infrastructure, and property taxes will likely negatively impact our market in the coming years." Similarly, a Boise representative offered that "the rapid increases in cost of living that we've seen in the region have hindered some of the advantages the area had for attracting new residents and businesses."

The Impacts on Migration and Development Opportunities

It is too soon to know which way these sometimes-opposing winds will blow, but growth is moderating in some of these Sun Belt markets. Population growth is forecast to be slower in four of the five Supernova markets over the next five years than in the years since COVID hit, and brokers already report housing price cuts and broken deals in cities like Boise, Denver, and Salt Lake City.

For many participants in the CRE community, any slowdown would compound concerns about looming oversupply of both residential and commercial real estate. The head of an institutional investment advisory firm says they are "paying much closer attention to supply in traditionally unconstrained markets," especially Dallas, Atlanta, Austin, and Phoenix. "We are probably relatively less attracted to the growth markets despite their fundamentals, relative to where we were last year. These were the hot markets, but we're a little concerned about what it looks like going forward."

But don't count out these markets just yet. In-migration to these markets will continue, if at a slower pace going forward, and will continue to attract a disproportionate share of the investment capital. And any "oversupply" of homes could help ease housing affordability concerns.

Concludes the head of research for an investment management firm, "We've always been about growth markets because we've always believed that population and employment growth are keys to success. And they can also cover up a lot of mistakes. So those markets are still a major focus."

8. Smarter, Fairer Cities through Infrastructure Spending

- Infrastructure spending is back among the top trends in *Emerging Trends*, but this time on a more hopeful note.
- New federal infrastructure spending provides the opportunity to replace and expand critical urban infrastructure to rebuild cities and spur new development—and address historical inequities.
- After years of uncoordinated local efforts, the new national programs may provide the leadership needed to transform the built environment.

The title of the final trend in the 2020 edition of *Emerging Trends* captured the sorry record of federal leadership in funding critically needed infrastructure: "Washington Fumbles; States and Cities Pick Up the Ball." Noting that "decaying infrastructure is a national problem needing a national solution," our report predicted that progress "will likely be more influenced by action at the state and local levels."

At least seven "infrastructure weeks" came and went between 2017 and 2019 without any tangible movement in Washington, after which infrastructure completely fell off the agenda. In the meantime, state and local governments took the initiative with efforts destined to be more piecemeal and less coordinated than a comprehensive national program.

Three years later, the federal government finally stepped up with the Bipartisan Infrastructure Law enacted in November 2021. This $1 trillion bill provides $550 billion in new spending over five years and eclipses the $305 billion infrastructure bill that President Obama signed into law at the end of 2015. This program will be supplemented by additional infrastructure programs in the Inflation Reduction Act of 2022, as discussed in the following "Climate Change's Growing Impact on Real Estate" trend on resilience.

The main infrastructure bill encompasses a broad range of activities focused chiefly on transportation—including bridges and roads, rail and transit, ports and airports—but also provides funding for broadband internet, power, environmental remediation, and resilience, among other programs. The Inflation Reduction Act adds spending for combating climate change and building energy security.

While every program promises to touch some part of the built environment, several stand out as having especially significant impacts for cities and the potential to advance economic and environmental justice by investing in traditionally underserved communities.

Reconnecting Communities by Capping Divisive Highways

Of particular note is the "Reconnecting Communities Pilot," which provides $1 billion "for projects that remove barriers to opportunity caused by legacy infrastructure." Many highway projects (and urban renewal programs) of the 1950s and 1960s bulldozed through Black neighborhoods and other communities of color, dividing previously thriving places, displacing thousands, and destroying generational wealth. The Reconnecting Communities Pilot program will provide "dedicated funding for

planning, design, demolition, and reconstruction of street grids, parks, or other infrastructure" to reconnect these bifurcated communities. An additional $3 billion was included within the Inflation Reduction Act of 2022 furthering this initiative.

A growing "cap-and-cover" movement is already underway, but work by ULI and others show that there is a lot of work to be done and injustices to reverse. The Rondo neighborhood of St. Paul, Minnesota, is one glaring example. As explained in ULI's Restorative Development: Infrastructure and Land Use Exchange forum held in February 2022, Rondo was a vibrant African American community with a thriving business district before Interstate 94 was constructed through the heart of the neighborhood. According to a leader of the reconnect effort, the community then lost 61 percent of its population and almost half of its homeownership between 1950 and 1980. As he concludes: "That's a pretty devastating gutting of a community."

Minnesota plans to cover part of the highway and build a new 24-acre neighborhood on top of it, including parks and other cultural amenities, in addition to affordable housing and a new business corridor. St. Paul already has received a $1.4 million grant to "develop a comprehensive transportation plan for the Rondo neighborhood to address safety, equity, and quality of life concerns."

The Reconnecting Communities Pilot program may help this project and other similar ones move forward:

- The Texas Department of Transportation is building a deck above a sunken portion of I-10 separating downtown and uptown El Paso to create, as described in the federal grant application, "amenities such as green space, public gathering space, and entertainment venues."
- A community group called Loving the Bronx supports capping the Cross-Bronx Expressway, which runs through dense neighborhoods in the South Bronx, with the goals of improving local air quality and providing new land for development projects.
- In Seattle, Lid-5 activists are advocating for the city government to cover and add green space over I-5.
- Reconnect Austin is pushing the city of Austin to bury I-35 through the urban core of Austin and dedicate the new land as public space and developable land.
- Many projects of note are either in the works or being actively discussed, including those in Syracuse, New York; Richmond, Virginia; and Houston.

Expanding Broadband Access

Another program from the Bipartisan Infrastructure Law with significant potential impact on communities and the CRE industry is the $65 billion to expand broadband access to the 30 million Americans living in areas without broadband infrastructure. Recognizing the relatively high cost of service in the United States, the program also seeks to "lower prices for internet service and help close the digital divide, so that more Americans can afford internet access."

The importance of this initiative was anticipated in ULI's 2021 report *Broadband and Real Estate: Understanding the Opportunity*: "Availability of widespread, high-speed broadband networks already has a wide variety of benefits to the real estate industry, communities, and individuals. . . . Increasing mobility opportunities can present potential value that real estate owners and managers can harness for their buildings. Such opportunities include repurposed or reduced parking facilities, denser projects, and higher rates of return."

Expanding broadband access to underserved communities is also critical to increasing opportunities for employees in more communities to work from home, as we discussed in our "… Still, We've Changed Some" trend above.

Transportation Infrastructure

We noted in a prior trend that many hypergrowth markets have been unable to keep up with building critical infrastructure, particularly that which is related to transportation. The infrastructure funding bill will provide almost $600 billion in transportation funding. More than half of that will be allocated to the highway system, the largest such investment since the Interstate Highway System began construction in the 1950s.

The Institute's 2021 report *Prioritizing Effective Infrastructure-Led Development: A ULI Infrastructure Framework* highlighted the need to invest in public transportation: "Increasing access to jobs, economic opportunities, social interactions, and mobility is essential. Public transportation provides the regional framework for compact, people-centric urban development, enables significant real estate and value creation opportunities, and mitigates climate change." The new infrastructure funds more than $90 billion to modernize transit, improve accessibility, and continue existing transit programs.

Finally, the infrastructure bill provides critical funding for building environmental resilience and expanding water availability, as will be discussed in the following trend.

9. Climate Change's Growing Impact on Real Estate

- The CRE sector has an important role to play in mitigating climate change. But with climate risks growing, the real estate industry must proactively address the impacts of climate change on assets.
- Climate change may alter the dynamics of where people want to live and invest. In addition to the discomfort and health risks of living in ever-hotter climates, energy costs rise with temperatures, as do the risks of power outages as more strain is placed on power grids. Extended drought conditions may limit new development because authorities may limit new hookups.
- Many investors rely on insurance rather than capital improvements to protect their investments, but changing investor sentiment toward climate risks may force more affirmative changes.

The earth is getting hotter. The latest global climate report from the National Oceanic and Atmospheric Administration (NOAA) found that July 2022 "marked the 451st-consecutive month with temperatures above the 20th-century average. And the five warmest Julys on record have all occurred since 2016."

As a result, extreme weather and climate events are becoming more frequent and more severe. NOAA's National Centers for Environmental Information calculates that the annual number of billion-dollar events (inflation-adjusted) in the United States has been increasing rapidly in recent decades, rising from about three per year in the 1980s to over 20 in the 2020s. More disturbing is the increase in severe summer storms, excluding climate events like drought, flooding, and wildfires. The number of billion-dollar severe storms has jumped from less than one per year in the 1980s to 12 in this decade—a 15-fold increase in less than 40 years and trending further upward.

Just in the recent summer of 2022, we experienced five "once-in-a-1,000-year storms" in Dallas, Death Valley, central and southern Illinois, Kentucky, and St. Louis, which recorded the most intense rainfall in the city's history. These storms demonstrate that buildings and infrastructure are poorly equipped to withstand the changing climate—much less what might be coming.

There is still a political divide in the country about what is to blame for climate change, and what, if anything, to do about it. But there is now growing agreement about its prevalence. Fully two-thirds of Americans surveyed by the Pew Research Center in 2021 believe that extreme weather events across the United States occur more often than in the past. Close to half say that it is hitting close to home as their community has recently experienced severe weather like floods and intense storms (43 percent) or long periods of unusually hot weather (42 percent).

Last year in these pages, we highlighted the role of commercial real estate in accelerating—or potentially mitigating—climate change, in a trend we called "Climate Risks Are on Us." Despite recent calls by some CRE leaders that we should deemphasize ESG issues now as we grapple with growing economic threats, many in our industry are continuing to answer society's call to do even more to reduce our carbon footprint. But with climate risks climbing still further, this year we highlight climate's impact on us as owners, managers, and users of real property—and how our industry can proactively address the impacts of climate change on our assets.

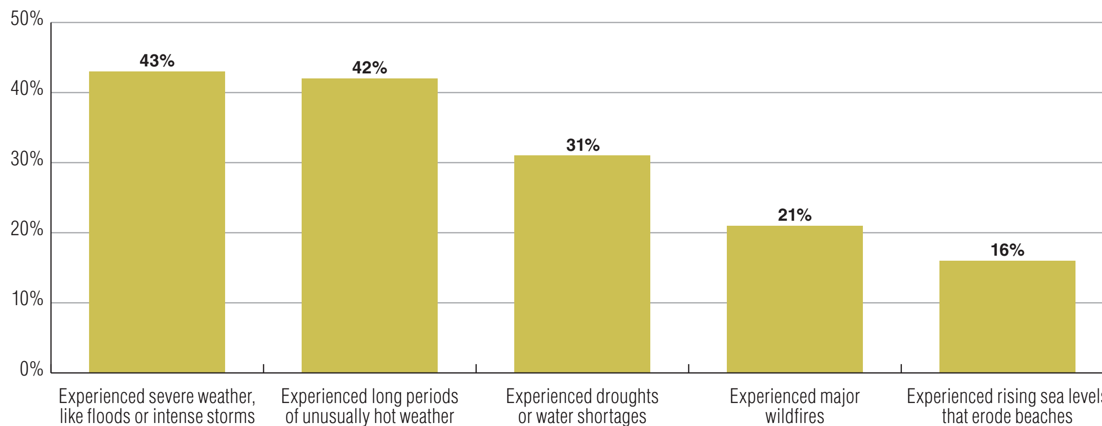
Hotter, More Expensive Summers

Several themes stand out. First, climate change may alter the dynamics of where we want to live. The hottest metro areas may soon face declining demand—and potentially an exodus—due to unbearable weather, even as households continue to migrate from colder climates to warmer metro areas overall. Large swathes of Texas and the U.S. Southwest have endured 100-degree highs almost every day this summer, with nighttime temperatures frequently not dipping below 80 degrees. And it's not confined to just the Southwest. "Heat domes" have settled over the Pacific Northwest during the past two summers, bringing heatwaves unprecedented in their length and intensity.

The built environment intensifies climate change as buildings and roads absorb and retain heat. This "heat island effect" raises not only daytime peaks but especially nighttime temperatures, which can be hazardous to humans if they cannot cool down at night. Sun Belt cities like Phoenix and Dallas are working with CRE owners to reduce heat islands by expanding the tree canopy, adding reflective coatings or vegetation to roofs, and using cool pavements to reduce the heat absorption of asphalt streets and concrete sidewalks. These approaches are important and necessary but may ultimately prove inadequate to the challenge if climate change keeps ratcheting up temperatures as expected.

Beyond the discomfort and health risks of living in ever-hotter climates, energy costs rise with temperatures, as do the risks of power outages as more strain is placed on power grids. A less obvious cost: higher temperatures and ultraviolet exposure can increase building maintenance costs. Extreme weather worsened by climate change is even exacerbating inflation as

Exhibit 1-16 **Percentage of U.S. Adults Who Say Their Community Has Experienced Weather- and Climate-Related Events in the Past 12 Months**



Source: Pew Research Center, published August 12, 2022.

Note: Based on survey conducted May 2-8, 2022. Respondents who did not give an answer are not shown.

drought and floods reduce U.S. crop yields and close factories in China as droughts force authorities to ration power. Other impacts—and strategies for addressing water scarcity—are highlighted in ULI's 2022 report *Water Wise: Strategies for Drought-Resilient Development*.

Water and Power

The combination of rising temperatures and drought—often related—may soon limit where we can build. Drought throughout much of the Southwest is prompting water authorities to cut allocations to several states as water levels in rivers and lakes fall to multidecade lows. Declining water availability could require reductions in new hookups and compromise hydroelectric power sources. States may be forced to choose between growing cities and agricultural areas. Some of the fastest-growing markets in the country—and investor favorites—are located in areas of the Sun Belt that already suffer from alarming water shortages. We are already seeing the first instances of cities pausing all new development because of drought in some western states.

Building Resilience

Climate-related programs in the Inflation Reduction Act of 2022 aim to reduce greenhouse gas emissions and could eventually begin to reverse or at least slow climate change. But improvement will come slowly, and forecasts expect temperatures to keep rising and weather to become more extreme for the foreseeable future. So how are we to adapt?

The Bipartisan Infrastructure Law highlighted in the preceding "Smarter, Fairer Cities through Infrastructure Spending" trend contains major programs specifically designed to improve the resilience of physical and natural systems. These include funding for water efficiency and drought resilience projects in eight western states and programs to increase the resilience of transportation systems. The infrastructure law also provides funding to homeowners for energy efficiency upgrades through the Department of Energy's weatherization assistance program.

Though none of these programs offers direct assistance to owners of commercial real estate, there is plenty of motivation for the CRE sector to act on its own, given the enormous potential impacts of unchecked climate change. But it can be a "hard, slow sell" to convince owners and asset managers to undertake even cost-effective physical improvements that would protect their buildings, admits the principal in a CRE investment firm specializing in improving building resilience. Because extreme weather events occur so infrequently in any one location, "the odds are low that anything will happen on your watch, especially if you're managing or holding the asset for only a few years." Thus, asset managers, who typically rotate every few years, often prefer to protect their buildings through insurance rather than upgrading them to withstand the extreme weather better but likely would be more expensive in the short term.

That calculus could change if insurance costs are allowed to rise to reflect the full risks of climate change. In many high-risk areas, insurance is subsidized, or insurers are limited in what

they can charge, creating a "moral hazard" that encourages owners to locate in risky regions and not undertake sensible physical improvements. "I would prefer that they bear the price of that amenity and location fully, and they don't," says one academic. "But I think we're moving in that direction. When the insurance costs reflect the reality, and when the mortgage risks reflect the reality, the market will start to work."

That would be a step forward but not the total solution. In ULI's 2022 report *Enhancing Resilience through Neighborhood-Scale Strategies*, the global head of ESG strategy for an investment management firm explained that insurance is not a substitute for building resilience: "Now investors understand the need to model climate risk over a longer period of time. Insurance can protect us against damage loss but not demographic or investor sentiment changes."

It's a race against time—and climate change.

10. Action through Regulation?

- Pressures for greater ESG disclosure by real estate owners and investors are intensifying due to efforts both from industry groups like NCREIF and PREA and from government regulation by the SEC.
- As shelter costs increasingly strain household budgets, state and local governments are resorting to regulation to address affordability, including various types of rent control and vacancy taxes.
- While building owners and developers benefit from various government incentives, the industry faces an increasingly challenging set of environmental and economic regulations. Will certain regulations end up being counterproductive?

Preceding trends highlighted several areas where private markets have been slow to fix mounting problems that the property sector has played a central role in creating, notably climate change and housing affordability. Industry groups are calling for collective voluntary action, which is a start. But, if the growing number of regulations being considered at the federal, state, and local levels is any indication, governments are getting impatient about the limited progress.

ESG Disclosures

Pressures for greater ESG disclosure by real estate owners and investors are intensifying. In October 2021, the two primary industry groups for institutional investors—the National Council of Real Estate Investment Fiduciaries (NCREIF) and the Pension Real Estate Association (PREA)—jointly released their ESG *Principles of Reporting for Private Real Estate* handbook for reporting ESG factors, as well as diversity, equity, and inclusion (DEI), for private real estate investment managers.

The handbook emphasizes that "[t]he principles presented . . . are best practices only and should not be considered requirements in order to claim compliance with the Reporting Standards" (of how member firms report their performance and portfolios to their clients and the industry). Nonetheless, these principles likely will be widely adopted by institutional investors, given NCREIF's and PREA's influence in their respective communities. The NCREIF/PREA guidance joins a growing list of standards and tools being developed to help investors and regulators in their quest to accelerate decarbonization in the built environment and promote broader ESG adoption by the private sector.

Moreover, the impact of this greater disclosure could be felt more widely throughout the real estate industry due to the market size of pension funds and other institutional investors. "Some of our clients really resist adapting the ESG protocols, but I think the capital demands it," notes one senior adviser to institutional funds.

As investors increasingly demand newer, greener, and more energy-efficient buildings, particularly offices—as noted in our "Give Me Quality, Give Me Niche" trend—older "brown" buildings will see their values discounted, and their owners have trouble selling them. As the head of U.S. real estate for a global private-equity firm explains, "You can't sell the building to a major core fund, you can't sell the building to [major insurance firms] or other major players if the building is not sustainable. The REITs won't buy your building."

Even if investor demand increasingly pushes the market to more sustainable buildings, some investors believe that a downturn might slow progress for a while. Says a senior leader of one global development firm, "That's going to keep marching on, there's no doubt about it. And it needs to. But in the near term, I think it's definitely going to be overshadowed by the economic reality of the U.S."

Owners may not have a choice, especially in markets implementing their climate action plans. Buildings in several leading markets will need to achieve energy efficiency targets and greenhouse gas emission limits as early as 2024 or face significant fines. The climate impact of buildings will likely become more transparent across the United States if the Securities and Exchange Commission (SEC) has its way. The SEC proposed

new ESG disclosure regulations in May 2022. The amendments to rules and reporting forms aim "to promote consistent, comparable, and reliable information for investors concerning funds' and advisers' incorporation of . . . ESG factors." In simple terms: greater disclosure and transparency, as well as enhanced consistency in reporting that go beyond what industry self-regulation calls for. This would include reporting on greenhouse gas emissions and the portfolio's carbon footprint, as well as the climate risks an owner or investor may have in their real estate portfolio.

Not all investors are covered, but as with the NCREIF/PREA reporting principles, the SEC regulations could have broader impact given the market size of the entities that are specifically covered. The proposed changes would apply to "registered investment advisers, advisers exempt from registration, registered investment companies, and business development companies." These would include REITs, with additional reporting requirements for funds specializing in ESG investing, such as green building funds. Indeed, the SEC and European Union regulators are already launching investigations into companies accused of misrepresenting their environmental impacts in funds claimed to be "green."

Still, these are only draft regulations. Indeed, some question whether the SEC has the authority to implement these rules, especially given the recent U.S. Supreme Court decision regarding the EPA's authority to regulate climate change. Regardless, few doubt that more regulation is coming, including at the local level. Several investors we interviewed expressed concern about being able to comply with New York City's new Local Law 97, which mandates that "most buildings over 25,000 square feet will be required to meet new energy efficiency and greenhouse gas emissions limits by 2024."

To be fair, building owners and developers may also leverage a host of new incentives from federal, state, and local governments, including billions of dollars in the Inflation Reduction Act, to help buildings hit these aggressive climate goals. But these "carrots" only underscore that the industry faces an increasingly challenging set of environmental regulations.

ESG Disclosures So Far

A recent survey conducted by RCLCO shows both the progress and potential for greater industry participation. As of June 2022, 38 percent of real estate companies report having policies in place to integrate ESG considerations into the investment process. But adoption varies widely by type of firm, with generally much higher levels from public companies (61 percent) and institutional investors (55 percent) than private companies (23 percent).

ESG disclosure will be costly, requiring not only capital improvements in buildings to reduce carbon impacts but also the systems to measure them and the staff to comply with the proliferation of reporting requirements. Those costs could favor larger, better-capitalized investors, leading to more industry consolidation. Concludes one senior investment banker, "It's clear there's going to have to be far more disclosure around carbon footprints and related issues, which is going to inure to the benefit of larger, more established REITs and market participants who can meet that disclosure obligation and have the resources to address the carbon offsets or other measures."

Regulation to Address Housing Affordability and Blight

Rent control. "Regulation is something that should be top of mind for a lot of property owners. And we're starting to see significantly more rent control laws being passed at the local and municipal levels. That does have trickle-down impacts to individual property owners." That warning comes from the head of advisory services for a real estate data analytics firm.

As shelter costs increasingly strain household budgets, some state and local governments are resorting to regulation to address affordability. This takes two primary forms: limits on how much landlords can increase rents and imposing costs on owners who keep units empty. At present, only California and Oregon, plus the District of Columbia, have statewide rent control, although about 25 municipalities in California impose their own laws. Four other states—Maine, Maryland, New Jersey, and New York—allow some or all local governments to enact local own regulations but have no statewide law. Most other states either expressly preempt rent control or limit home rules that would allow it.

That could soon change, however. As of spring 2022, at least 17 states were considering some form of rent control legislation, according to National Multifamily Housing Council tracking. The states span all regions of the country and both political parties, demonstrating the breadth of frustration with rising rents. Several of these initiatives already failed to pass before the legislatures adjourned for the session. But the volume and range of these proposals show just how widespread the concerns are, and some of these initiatives could be revived if rents do not cool soon.

In addition, many cities are considering enacting their own rent laws. In November 2021, voters in St. Paul, Minnesota, passed what some call the strictest rent control in the United States, limiting annual rent increases to 3 percent with no adjustment

for inflation, no exemption for new properties, no allowances for capital expenditures, and no vacancy decontrol for move-outs. Cities in both Massachusetts (Boston) and Florida (Miami and Tampa) are considering either new laws or emergency declarations. However, both states prohibit local rent control, and both governors opposed relaxing state control, reducing the likelihood of ever being enacted.

Vacancy taxes. Vacancy taxes can take various forms, but the goal is to increase the effective supply of housing by imposing costs on landlords who keep housing units vacant. Another goal, which can also be applied to commercial property, is to address blight by encouraging property owners to put their buildings to productive use. For example, Washington, D.C., imposes a tax on vacant buildings of $5 per $100 of assessed value, while "blighted" properties are taxed at $10 per $100 of value.

Vancouver, British Columbia, is believed to be the first city in North America to impose a vacancy tax, enacted in 2017 to combat widespread pied-à-terre ownership. While the tax did raise funds for affordable housing initiatives, skeptics point out that the tax apparently did not cause empty condominiums to be converted into active rental units.

Oakland, California, enacted a flat vacant property tax of $6,000 tax on houses and nonresidential properties and $3,000 on condominium units "in use less than fifty days in a calendar year." Berkeley and San Francisco are considering adopting versions, while several other cities have considered them in recent years

Inclusive and Equitable Growth: The Emergence of Impact Investing within Institutional Real Estate

In recent years, institutional investors and corporations have announced billions of dollars' worth of capital commitments targeted at addressing socioeconomic inequity, particularly with respect to bridging the racial wealth gap. At the same time, there are very few announcements detailing if and how those commitments have been met.

It appears that many of these corporations and investors are struggling with how, where, and with whom to deploy that capital; industry leaders have not yet coalesced around solutions to address inequity that are innovative, replicable, *and* scalable.

The 1977 Community Reinvestment Act initiated a wave of investment targeted at meeting some of the basic needs of low- and moderate-income communities. The passage of the act was an important step aimed at reversing years of intentional disinvestment caused by practices such as redlining and blockbusting.

In my view, it was a recognition that capital should be deliberately directed to address the needs of low-income individuals: all members of society deserve to be affordably housed, have enough food to eat, and have access to employment that allows them to address at least their most basic needs. It is critical that society continue to support its most vulnerable.

It is now equally critical, however, that new capital deployment strategies be developed to support much more than simple sufficiency; they need to be tailored toward more equitable societal outcomes and the economic mobility that is required to achieve them. Scalable solutions must be created that allow more people to thrive, not just survive.

The distribution of that prosperity within America has become increasingly inequitable, and socioeconomic mobility has become less and less attainable for Americans in the lower and middle classes. Research from McKinsey found that, despite the longest economic expansion in U.S. history through much of the 2010s, the Gini index (a measure that represents the income inequality or the wealth inequality within a nation or group) reached 0.485 in 2018—the most inequitable level of income distribution recorded in the United States since the Census Bureau began tracking the metric in 1947, and the highest level of income inequality among Group of Seven countries. In terms of wealth inequality, the top 1 percent of Americans hold nearly 40 percent of the nation's net worth as of 2019, the highest on record since the Federal Reserve began collecting survey data in 1989.

Research from Opportunity Insights comparing children's household incomes at age 30 to those of their parents at the same age shows that absolute mobility has declined precipitously. Ninety percent of people born in the 1940s out-earned

but either rejected them or not yet voted on them. Most are in California (such as San Diego, Long Beach, West Hollywood, and Los Angeles), but the list also includes Honolulu and New York City.

San Francisco also enacted a commercial vacancy tax on vacant retail stores in 2020 but suspended implementation for almost two years due to the COVID-19 pandemic. The measure finally took effect in 2022 for commercial space vacant for more than 182 days in a calendar year. The tax equates to an average annual levy of $6,250 for a typical store with a width of 25 feet, rising to $25,000 by year three. Local press accounts find that the tax is very unpopular with landlords, who also complain about the city's slow and expensive permitting process, but it is too soon to gauge the program's effectiveness.

It is unclear how many local or state governments will follow these early adopters, but more are sure to follow, particularly if housing affordability does not improve.

Several industry leaders we interviewed noted that Washington's divided political climate was unlikely to yield any significant changes to the essential tax structures and accounting regulations that govern commercial real estate. However, both federal and local governments seem more willing to push the industry to address social issues related to its core function, especially climate change and housing affordability.

their parents by age 30, while only 50 percent of people born in the 1980s did the same. The decrease in absolute mobility has affected people in all socioeconomic classes, with lower-income Americans being affected most acutely.

A generational wealth gap has emerged. Wealth is now increasingly held in fewer hands, with millennials and Black Americans disproportionately affected by this rising inequality. According to research from the St. Louis Federal Reserve Bank. in 2016, older Americans had more than 12 times as much wealth as younger families, up from 7.5 times the wealth of younger families in 1989. The top 10 percent of families ranked by household wealth owned 77 percent of America's wealth in 2016, while the bottom 50 percent owned only 1 percent. White families owned 89 percent of America's wealth in 2016, while Black and Hispanic families owned about 3 percent each.

Millennials now represent the largest segment of the U.S. workforce—paradoxically its most diverse, most educated, and yet least financially stable cohort. Their ascendance as talent and, increasingly, leadership within the workforce will likely lead to a heightened focus on finding solutions to these disparities. Their voices have been amplified by social media, and they are increasingly holding corporations, investors, and governments more accountable for mitigating negative externalities that have been imposed on society.

Many recognize certain risks that come with wealth and income disparity; growth potential may be disrupted by social unrest and political instability that often accompany inequality as those on the bottom see less opportunity available to them.

A more promising, evolving school of thought—impact investing—shifts focus away from simply limiting downside toward creating upside. While the definition of *impact* will vary by investor, this deliberately inclusive form of capitalism focuses on unlocking the potential of people and places that have been historically overlooked and underserved. Looking through a dual lens of purpose and profit, measurable impact and equitable outcomes are central to this investment strategy. This stands in stark contrast to how investors have often viewed social responsibility in the past—as a tangential and philanthropic "nice to have," but not a "must-have."

Increased transparency has contributed to the evolution of impact investing. The increases in both regulatorily mandated and stakeholder-driven environmental, social, and governance (ESG) disclosures for public companies and pension funds have required that investors spend more time considering their negative and positive impacts on society and demanding that their investment managers do the same.

Analyses of ESG-related key performance indicators alongside their returns can now disabuse people of the notion that purpose-driven investing must equate with concessionary returns. Research now suggests that a company's improvement on material industry-specific ESG measures is predictive of significant future financial outperformance relative to its competitive set.

Continued next page.

Furthermore, big data and social media also are helping shed light on strategies that may contribute to more equitable outcomes. For real estate investors, there now is a better understanding of the characteristics of places that are correlated with higher rates of upward mobility. Among the most notable, Harvard Think Tank Opportunity Insights has used anonymized census data, tax records, and most recently Facebook data to analyze the characteristics of "high opportunity neighborhoods." They found a direct link between economic connectedness (one form of social capital) and higher levels of socioeconomic mobility for lower-income individuals. It is important to highlight that the research found that simple coexistence did not correlate with mobility; the correlation was with true connectedness (i.e., meaningful, ongoing interactions and friendships) across socioeconomic class lines. The built environment can fundamentally support or, conversely, limit that sense of connectedness.

A sustainable and scalable solution for bridging wealth gaps through increased social mobility will require increased participation from the private sector, in tandem with the cooperation of the public and social sectors. Recognizing that government funding is often inflexible, inefficient to obtain, and insufficient, it is critical that state, local, and federal governments continue to focus on lowering the cost of capital for private investments in low- and moderate-income communities. Institutional investors will likely need to be further incentivized to increase their allocations outside the major metropolitan areas that have traditionally been the primary beneficiaries of institutional capital flows.

Public policy that deconcentrates poverty, reduces barriers to the creation of affordable and attainable housing, and incentivizes the development of mixed-income neighborhoods with deliberate infusions of social capital warrants additional consideration. The Economic Opportunity Coalition (EOC) recently announced by Vice President Kamala Harris's office is a positive step toward coalescing the public and private sectors to deploy billions of dollars' worth of investment into underserved communities. Notably, the EOC "has committed more than $3 billion of investments into CDFIs [community development financial institutions] and MDIs [minority depository institutions], including $250 million in long-term, low-interest debt and over $70 million in grants to CDFIs and MDIs."

The social sector will continue to play a leading role as well, particularly as more foundations and endowments broaden the scope of their charitable and investment mandates. As reported by Barron's, some have even shifted from strictly granting plus or minus 5 percent of annual spending to models in which they allocate increasingly larger percentages of their assets under management with managers from diverse backgrounds and/or with strategies that are focused on bridging wealth and gender gaps.

Impact investing can increasingly be informed by data-driven, evidence-based approaches as a result of the growth of big data and social science research, but it will need to be complemented by qualitative input from local, community-based stakeholders who will be essential in co-creating sustainable solutions to reducing inequity. The importance of intentional co-creation cannot be emphasized enough given that only 1 percent of real estate assets under management are deployed by minority-led real estate firms and only 2 percent of real estate development companies are led by African Americans. Those investors who may be best positioned to co-create sustainable solutions are still typically unable to access the capital necessary to scale those solutions. It matters where capital is deployed, how it is deployed, and with whom it is deployed.

A new generation of impact investors within the real estate industry is innovating holistic approaches to addressing inequity. Their impact frameworks and investment strategies reinforce one another. Investments of financial capital in low- and moderate-income neighborhoods complemented by people-focused investments empower individuals to realize their potential and, in so doing, further contribute to society.

And beyond the moral imperative for investing in social and human capital lies a clear economic rationale. These investors are using data to demonstrate that supporting the financial, physical, and mental well-being of their tenants enhances their ability to deliver market-rate, risk-adjusted returns. Consciously inclusive capitalism has the potential to turn vicious cycles of disinvestment that leave many people behind into virtuous cycles of inclusive growth that create a larger pie for all. Mission-driven, data-informed innovators are leading the way to a future when we can all do well by doing good.

—Onay Payne is the managing director of real estate, Lafayette Square Holding Company, LLC.

The Opportunities and Challenges of Climate Risk Analytics

It is clear that real estate investors and developers can no longer avoid risk related to climate change; in 2021 alone, the U.S. National Oceanic and Atmospheric Administration identified 18 separate billion-dollar disasters in the United States. Many of these types of events—and the material risk they pose to the real estate industry—are unavoidable in the near term, irrespective of the emissions scenario. As extreme weather events continue to grow in frequency and intensity, the real estate industry must protect the long-term value of their assets.

Climate risk is typically categorized into two types: physical risks and transition risks. While both are critical to address, acute (e.g., floods and hurricanes) and chronic (e.g., sea-level rise) physical risks present a special concern for the real estate industry given the geographically stationary nature of most assets.

An array of climate analytics data, software, and consulting services has emerged in response to the changing climate and the attendant shifts in policy frameworks, regulatory environment, and growth in investor focus on environmental, social, and governance (ESG) issues. These data providers offer a wider range of commercialized science applications designed to help institutional real estate managers identify, measure, and describe physical risk at the asset and portfolio scales. While these tools offer an opportunity to evaluate current and future physical risk; the process by which investors integrate the information into investment decisions is currently opaque.

The Challenge of Climate Risk Analytics

Differences in climate risk analytics providers' input data and methodology for estimating risk can make it difficult to compare results of analyses. For instance, within their product offerings, these firms often create summary metrics that aggregate the risk of multiple individual hazards. When aggregated, the weighting factors and hazards included vary by provider. Likewise, when calculating risk, providers may or may not include government, municipal, or asset-level risk mitigation considerations.

Some providers, in addition to determining the likelihood of physical risk to assets, also calculate value-at-risk (VaR) to assets, where VaR represents the expected financial loss stemming from an event. Providers that offer a VaR measure tend to introduce further variation in outputs. This is due to the differences in how providers source the "value" of VaR.

Variations across Providers among Overall Physical Risk

Asset	State	Vendor A	Vendor B	Vendor C
A	CA	High	Very low	Low
B	DC	Medium	Very low	Low
C	FL	Low	Medium	Very low
D	IL	Medium	Very low	High
E	NY	Very high	Low	Medium
F	TX	Medium	Very low	Low
G	VA	Medium	Very low	None

This figure from an institutional real estate manager depicts a set of aggregate risk scores generated by three different climate risk analytics providers (vendors A, B, and C) for assets (A to G), demonstrating the challenge of translating complex climate science into business decisions.

Considerations might include market value, the assumed percentage change in value, capital repair estimates, replacement cost, assumed business interruption loss, or assumed mitigation costs. Indirect considerations, such as ownership structure, structure of the capital stack, lease considerations, and insured amount, may or may not be factored in.

Needless to say, it is easy to see why a wide variation in prediction patterns is prevalent across providers.

Improving Decision-Making with Climate Risk Analytics

To overcome these challenges of variability between climate risk analytics providers' outputs, it is necessary for institutional real estate managers to carefully articulate their use case needs—specifically regarding valuation and value-at-risk. The climate risk analytics provider community can, in turn, benefit from sharing more about their approaches and the strengths and limits of models and physical risk data. To the extent that these conversations can be continuous and earnest, they will help guide both industries forward.

For more information on how to choose, use, and better understand climate risk analytics, visit ULI's Knowledge Finder site.

—ULI Urban Resilience Program

Emerging Proptech Developments

The 2022 Mid-Year Global PropTech Confidence Index shows that confidence in proptech, as an industry, is at an all-time low for both investors and founders. This latest sentiment level is an abrupt departure from record-high confidence levels in 2021, following years of unprecedented growth in the industry, and is in keeping with 2022's broader sentiment shift in the capital markets.

Investor confidence has declined considerably, measuring 5.8 out of 10, down from 9.3 in midyear 2021, the lowest level since we began the index in 2016. According to KBW PropTech Pulse, proptech firms' enterprise value-to-sales multiples were down 40 percent for incumbents and 75 percent for new entrants since the market's fourth quarter 2021 peak. Transaction volume in the late-stage venture market has declined as some of the most active investors during the recent bull run—nontraditional and crossover investors—exited or meaningfully slowed their deal pace amid well-publicized losses and continued market volatility.

Doom and gloom aside, there are favorable tailwinds for proptech. Commercial adoption of software and hardware technology is at an all-time high and overall revenue for enterprise software continues to grow quickly. As real estate owners, operators, and developers struggle with increasingly challenging environments of their own, many believe that technology can provide an opportunity for revenue generation and cost savings.

The real estate recession during the Global Financial Crisis of 2007–2010 saw some of the fastest growth rates for revenue of property management software systems as the recession forced chief financial officers to embrace technology as a means to drive efficiency. It is possible that this trend will only accelerate during the current environment, as technological efficiency compounds over time. In fact, many startups have experienced record levels of revenue growth and margin expansion in the second and third quarters of 2022 despite the challenging financing environment.

Only time will tell how long it will take for confidence to rebound; and while these metrics reflect the current mood of the industry, they by no means indicate an industry beyond repair. This economy—record-low unemployment, runaway inflation, an inverted yield curve, and strong customer sentiment included—presents the opportunity to adapt and share best practices across asset types, sectors, and geographies. It encourages founders to move toward greater capital efficiency and gives investors a new lens on how to make meaningful investments.

As the real estate market continues to evolve, technology will play an increasingly important role. In this section, we will cover five emerging trends that are fueling new growth and innovation in the proptech industry moving into 2023:

1. Investor and Regulatory Pressures Driving Increased Focus on ESG Solutions

The global recognition of the climate crisis has led to over 70 countries setting net zero commitments as well as proposing and passing key legislation to meet these targets. In addition to environmental pressures, a number of prominent social equity movements have catalyzed a shift towards the public and private sectors including nonfinancial-related disclosures, such as emissions and diversity data, into their reporting. Firms are actively searching for an effective way to collect and share data related to their pursuit. The real estate industry is no exception to these shifting pressures, and it faces heavy scrutiny as a significant negative contributor to the environment.

An initial step for real estate companies with ESG targets is to establish a baseline and measurement framework to map any future improvements against. A selection of relevant benchmarks include asset- and portfolio-level energy, water, and waste data. Several companies have emerged as potential leading solutions for reporting on such real estate ESG data. After data collection is completed, real estate owners and/or operators can take action to decarbonize individual assets or entire portfolios. This solution set is deemed "climate tech" and has a critical part to play in decarbonizing the global economy since buildings account for about 33 percent of global CO_2 emissions, based on a report from the IEA. Energy and HVAC optimization, water and waste management, and renewable energy sources help address emissions throughout the building life cycle.

2. Increased Adoption of New Construction Technology Solutions

The construction industry is facing a series of intertwined pressures—a worsening shortage of skilled labor, volatile material prices, evolving contracting structures—that are

contributing to an increase in demand for and adoption of a new array of compelling construction technology solutions. The shortage of skilled labor has led many companies to turn to digital-first labor marketplaces to meet demand for projects, and to robotics and automation solutions to address both labor scarcity and inefficiencies. For example, construction and facilities management firms may employ solutions that leverage artificial intelligence (AI) and robotics to boost the productivity of a skilled painter more than 10 times within certain applications.

Similarly, the spike in prices of materials and ESG pressures to reduce the carbon emissions impact of the built environment are driving advancements in steel and concrete production. The continued growth of modular and prefabricated construction methods is aiming to make a dent in rising construction costs and a structural shortage of 4 million homes in the United States, while heavy equipment and parts marketplaces seek to wring greater efficiency out of valuable production assets. And as the majority of large-scale construction projects shift to design-build contracting frameworks, platforms are making it easier for builders, developers, architects, and other stakeholders to streamline decision-making and bring in projects on time and under budget.

3. Growing Demand for Data Interoperability, Infrastructure, and Intelligence Tools

As the level of technology adoption within the real estate industry and built environment has grown, the demand for tools to coordinate and build upon the data and capabilities produced by this increasingly robust yet fragmented solution set has grown as well. As they have in other technology categories, data infrastructure and interoperability layers are beginning to gain prominence in proptech as the sector continues to grow and mature. These layers help to 1) normalize data flows between software systems (e.g., ensuring the real-time, automatic updating of floor plans across all reliant systems), 2) ease new vendor integration challenges into a real estate firm's existing tech stack (e.g., reducing the need for implementation consultants and engineers to integrate a new vendor technology into a building), and 3) enable customers and/or third-party vendors to create and build upon the capabilities of existing tools via a few lines of API code.

4. Emergence of New Asset Management Technology Stack for the SFR Market

The single-family rental (SFR) housing market has been one of the fastest-growing segments of the real estate industry over the past decade and a half. Kick-started during the Global Financial Crisis of 2007–2008, the industry has rapidly grown and institutionalized, with the largest players controlling many tens of thousands of homes each. Of the total SFR market, valued at $4.7 trillion, institutional ownership is projected to grow from 5 percent market share (700,000 homes) in 2022 to 40 percent market share (7.6 million homes) by 2030 according to Yardi Matrix, 2022.

In order to service this explosively growing institutional investment, a new technology and service stack is emerging to power all stages of the asset management life cycle, for all sizes of market participants. From acquisitions to leasing to work order and facilities management solutions targeting large and midsized owners and operators to full-service acquisitions and property management solutions for longer-tail players, a new tech ecosystem designed around the nuances of single-family and scattered-site rental housing stock is rising to power the continued growth of this exciting asset type.

5. Increasing Globalization of Proptech Solutions

Proptech growth over the past decade has historically been confined to its roots in the mature markets of North America, with expansion prioritized to other English-speaking regions of the globe. However, in the last few years, technological advancements including the internet of things (IoT), big data, and the cloud have catalyzed supply-side capability and ambition to expand into mature international proptech hubs earlier than predecessors. The supply is coupled with an increasing demand for innovation and proptech from leading real estate owners, operators, and developers across Europe, Asia, and Latin America who have tracked proptech's success across North America and prepare to foster growth of compelling foreign technologies or similar local solutions. This confluence of demand and supply-side appetite and technological advancements has led to a new wave of proptech companies expanding to new international markets easier, quicker, and more successfully than ever before.

Continued next page.

As proptech internationalizes, local solutions emerge, often adapting models pioneered in more mature markets, and established solutions expand more quickly into new geographies. As this happens with greater frequency, best practices for cross-border expansion surface. The top four drivers of cross-border business success include the following: 1) establishing a local presence (people and office); 2) building a local ecosystem (network of "influencers"), whether that be a champion customer, investors, and/or local brokers and advisers; 3) tailoring the business model, including performing a cost/benefit analysis for the new region, assessing local competitors, and developing a region-specific go-to-market plan; and 4) localizing the product including user interface, workflows, language, currency, data sovereignty, and security, to name a few.

—Maureen Waters, founder of Metaprop

Metaverse Poised to Help Shape the Future of Real Estate

Business leaders are closely monitoring the potential impact on the real estate industry of the metaverse—a digital platform that may profoundly change how businesses and consumers interact with products, services and each other. Metaverse properties, like any other type of real estate, can be bought, sold, purchased and leased. This could open up real estate investing to a new pool of investors.

Real-world activities such as conferences, trade shows, exhibitions, weddings, sporting events, and other social gatherings could all be enhanced with the metaverse. Thus far, no one is predicting that the metaverse will replace brick-and-mortar properties, but the platform could, down the road, affect how people interact with physical locations.

One of the biggest areas that the metaverse could affect is the workplace. The metaverse can enhance collaboration, complement the physical office, and improve the overall workplace experience at a time when more workers are demanding flexible work arrangements. The metaverse could also be useful in helping firms build their employees' professional skills at a time when everyone is hunting for employees.

Like any new technology, the metaverse has potential risks of which companies should be wary. Among them are data privacy and cybersecurity risks. As firms pursue applications, they should conduct a thorough assessment of their organizations' vulnerabilities to the metaverse and how to manage them. For example, metaverse real estate buyers and sellers are unlicensed virtual brokers and property managers who are not required to obtain real estate licenses. Companies will need to vet potential partners and work with someone they trust as they outline a long-term plan.

—PwC

Property Type Outlook

"We don't see significant sales of assets taking place, but we do see a lot more choosiness, pickiness, selectivity when it comes to new opportunities."

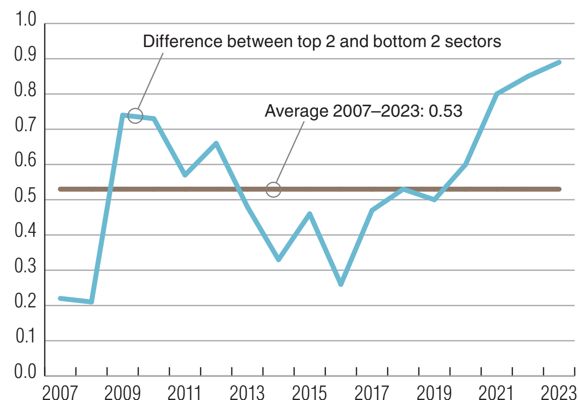
Real estate capital markets are still open for business. Investors are still buying, lenders are still lending, and no one seems to be panicking just yet. But everyone is being more careful about which deals they do until there is more market clarity.

Reflecting the more cautious mood, the average rating for all property types together in our *Emerging Trends* survey fell more this year than in any year since the GFC. But that overall trend masks diverse underlying dynamics. Though the rating fell for 15 of the 25 property subsectors, they rose for the other 10, so sectoral preferences are moving in different directions, even if the general mood is less exuberant this year.

In this environment of economic and market uncertainty, investors seek properties with the strongest operating performance while shunning weaker sectors viewed as riskier. This flight to safety is shown in the nearby graph, as "investment prospect" ratings for the top two major property sectors have been separating from those for the bottom two sectors, meaning that investors are more selective. The trend for "development prospects" shows a comparable widening spread. In fact, the gap between the preferred sectors and shunned sectors is wider now than it has been for at least 15 years, which suggests that investors perceive a narrowing range of compelling market opportunities.

The industrial/distribution sector has again come out on top of the major property types this year, followed closely by multifamily housing. These two property sectors have ranked at or near the top of the *Emerging Trends* surveys almost every year going back to before the global financial crisis of 2008–2009, but the margin of preference for them over other property sectors has been increasing steadily for six straight years.

Exhibit 2-1 **Rating Spread between *Emerging Trends* Top Two and Bottom Two Property Types, 2007–2023**



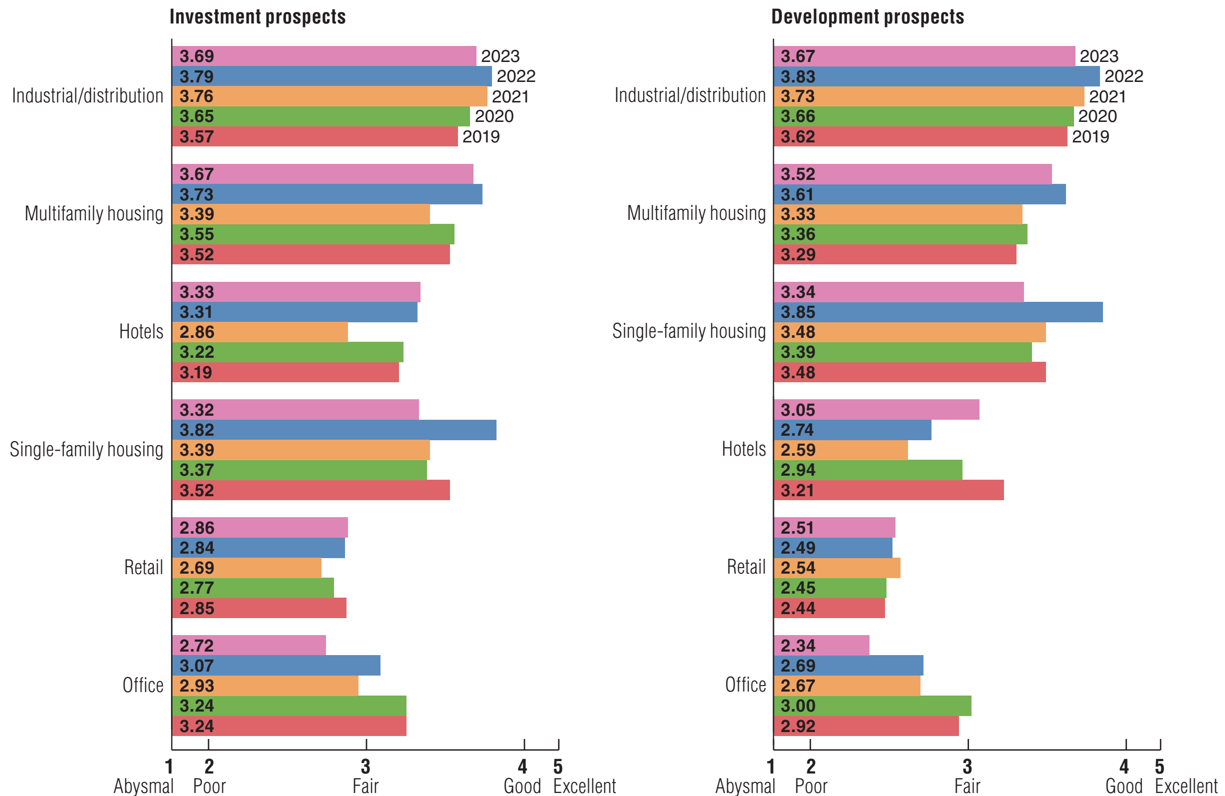
Source: *Emerging Trends in Real Estate* annual surveys; compiled by Nelson Economics.

Note: Based on "Investment Prospects." Includes industrial/distribution, multifamily housing, hotel, office, and retail for all years, plus single-family housing from 2016 onward.

On the other hand, office and retail remain out of favor with survey respondents. Office actually displaced retail as the lowest-ranked property sector this year. Retail had registered the lowest ranking of any property type for over a decade but seems to have at least stabilized, while the future for the office sector is uncertain at best.

In between these two extremes are the hotel and single-family housing sectors in a virtual tie, though their fortunes have reversed in the last year. Interest in hotels rose more over the last year than any other major property type as tourists—if not business travelers—returned to the roads and airways. By contrast, prospects fell for housing as rising mortgage rates have cooled buyer interest in new homes.

Exhibit 2-2 **Prospects for Major Commercial Property Types, 2019–2023**



Source: *Emerging Trends in Real Estate* surveys.

Note: Based on U.S. respondents only.

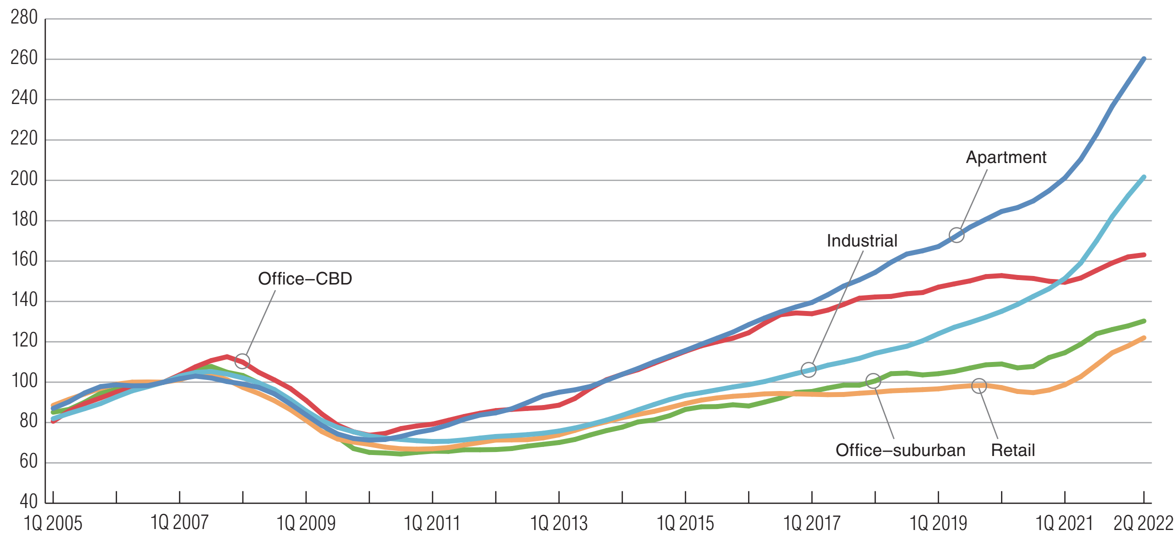
Beyond the major property types, 2023 may be known as the year that "niche" property types came into their own. Five of the six highest-rated property subtypes would be considered niche, led by workforce housing and data centers, as well as life-sciences facilities, medical office, and single-family rental housing. These sectors generally command greater returns than traditional product types due to higher cap rates. But investors also value the strong demographic tailwinds supporting these niche sectors at a time of expectations of cyclical market challenges.

Multifamily: A Bumpy Ride and a Bumper Crop

- **Demographics:** A four-generation surge of household formation and housing preference will buoy fundamental apartment demand through and beyond 2030.
- **Technology impact:** Exponential advances in technology, data, and artificial intelligence capability and applications will have impacts on building-cycle, property operations and management, and resident experience cost-versus-value models.
- **Capital liquidity:** A post-pandemic-era flight to safety will continue to divert yield-seeking capital into residential rental real estate vehicles.
- **Policy constraint:** Policymakers' ever more restrictive land use barriers will spread sharper supply-versus-demand mismatches to more cities, straining market-based solutions and sculpting evolving geographies as people seek refuge from high-cost locales.

In its broadest sense, a housing shortage in the United States describes a lack of sufficient access to income-matched apart-

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



Source: RCA CPPI, MSCI Real Assets.

Note: 100 = December 2006.

ment rental housing. Today, with more than one out of three of America's 44 million renter households earning less than $36,000 a year, roughly every other rental household puts more than 30 percent of their earnings toward rent. And one out of every four households spends 50 percent or more of their wages on housing. Those percentages reflect divides that deepen because not enough new apartment units are coming online.

A present that is polarized grows more so over time. For market-rate property investors, developers, owners, and managers, what lies ahead is the brightest beacon of prosperity. But for those who live and reside below the cutline of wherewithal and social mobility, the future of apartment rentals holds more questions than answers.

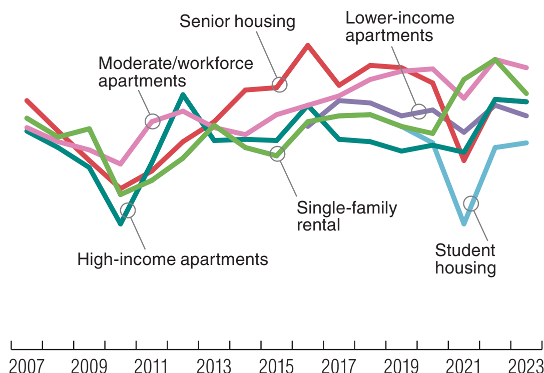
With 1.3 million new U.S. households projected each year through 2035, apartment industry trade groups—the National Multifamily Housing Council (NMHC) and the National Apartment Association—calculate that the United States needs 4.3 million newly built apartments between now and then. That level of new development would work out to 331,000 new multifamily rental units annually. This would expand the existing apartment rental stock in the United States by more than 20 percent in just over a decade. What makes this goal plausible are two strong tailwinds: household demographics and an unprecedented global embrace of apartment development by the investment community.

Still, the throes of land use policy drag on development. But beyond local policy barriers, tugging housing to its future, are a trio of macro forces—work/life balance, an urgency to stall the climate effects of global warming, and an array of technologies—in business management, livability, and construction.

Can this darling of real estate asset classes sustain its hold on global investment inflows, unleash construction's modern manufacturing era, turn the tide on local political will, and win over the hearts, minds, and pocketbooks of consumer households to pull off such a feat? If you had to guess today—with residential rental vacancies at historical lows of 6.2 percent and occupancy rates and median asking rents for vacant units at historical highs—the answer would be a cautious "yes."

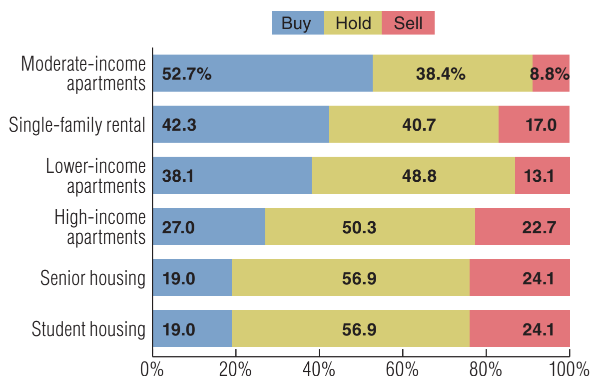
However, a gigantic hurdle stands in the way of telling fleeting trends apart from ones that will last: the pandemic and its aftermath. During that two-year span—depending on whether the data source is a private one like Apartments.com or Zillow or a public-sector one like the U.S. Bureau of Labor Statistics—rent

Exhibit 2-4 **Apartment Investment Prospect Trends**

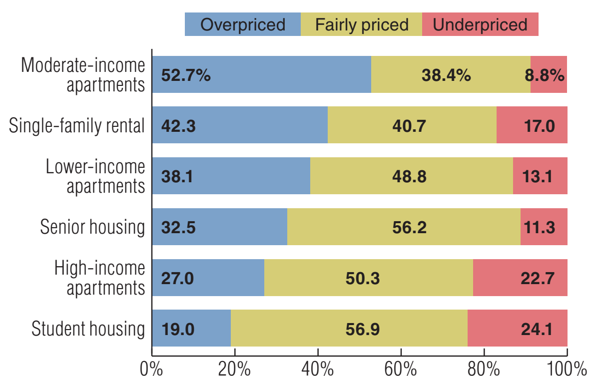


Source: *Emerging Trends in Real Estate* surveys.

Apartment Buy/Hold/Sell Recommendations



Opinion of Current Apartment Pricing



Source: *Emerging Trends in Real Estate 2023* survey.

Note: Based on U.S. respondents only.

growth spiraled upward nationally in ranges from just under 10 percent to just shy of 25 percent.

The Pandemic: This Time Is Different

With the pandemic and the cascade of economic and social policies it set off, five macro apartment industry tailwinds reached gale-force levels:

- One, there was a preexisting multigenerational avalanche of both rent-by-choice and rent-by-necessity demand for multifamily rental units.
- Two, demand gathered speed and sweep as people sought larger living spaces to balance remote work and household life, and more outdoor living options.
- Three, constrained construction of new supply, and a price run-up on the single-family for-sale front, spilled over into expanded apartment demand.
- Four, construction capacity to add new supply stalled as COVID aftershocks played out.
- Lastly, compounding the effects of these four dramatic imbalances came the rocket fuel of a global capital rotation toward de-risked assets (i.e., the safe haven of U.S. residential real estate).

Outsized demand, a sudden spike in remote work mobility, constricted supply, and floods of money with nowhere better to go—a grand slam of anomalies.

The U.S. apartment property sector—providing shelter to 37 million residents in 21.3 million structures of five or more household units, and contributing $3.4 trillion annually to the U.S. economy, according to the NMHC—morphed quickly into an investment asset class pressure cooker. Inflated property valuations, compressed cap rates, and a sea change from individual owners to medium and large-sized corporate owners became a new norm seemingly overnight.

This time period veers wildly from a steady slope of otherwise well-entrenched trends across the structural demand front. Operational modernization kicked into super-fast-forward mode toward self-service, and a robust new-development pipeline at least. According to a recent Bloomberg report, “After dipping in 2020, the number of new units authorized in multifamily buildings took off, running 37 percent higher over the past 12 months [as of June 2022] than in the same period in 2018/2019.” As of August, 862,000 apartments were under construction, up 25 percent from a year ago.

At the same time, COVID's aftermath sharply defined conflicting forces—which together destine virtually all of America's newly developed and built apartment communities for a financially privileged professional class. Rather than causing an expansion of rental housing stock, however, higher-income households' come-lately demand for rental neighborhoods instead served to crowd out moderate- and lower-income households in supply-constrained areas.

"It's been virtually impossible to build affordable," says the chief executive of one of the apartment industry trade groups. "You can't build ground-up affordable because of the price of land, and the regulations that govern that, and everything the NIMBY activists rule . . . it all puts a real damper on the industry's ability to produce."

In mid-2022, yet another freshly drawn inflection point—coinciding with the devastation wrought by the Russia-Ukraine war and an aggressive U.S. monetary and fiscal tightening effort to dial down inflation—quickly spread the pain of a cost-of-living crisis across America's households. In addition, it casts a new cloud of uncertainty over the near-term outlook for market-rate residential investment.

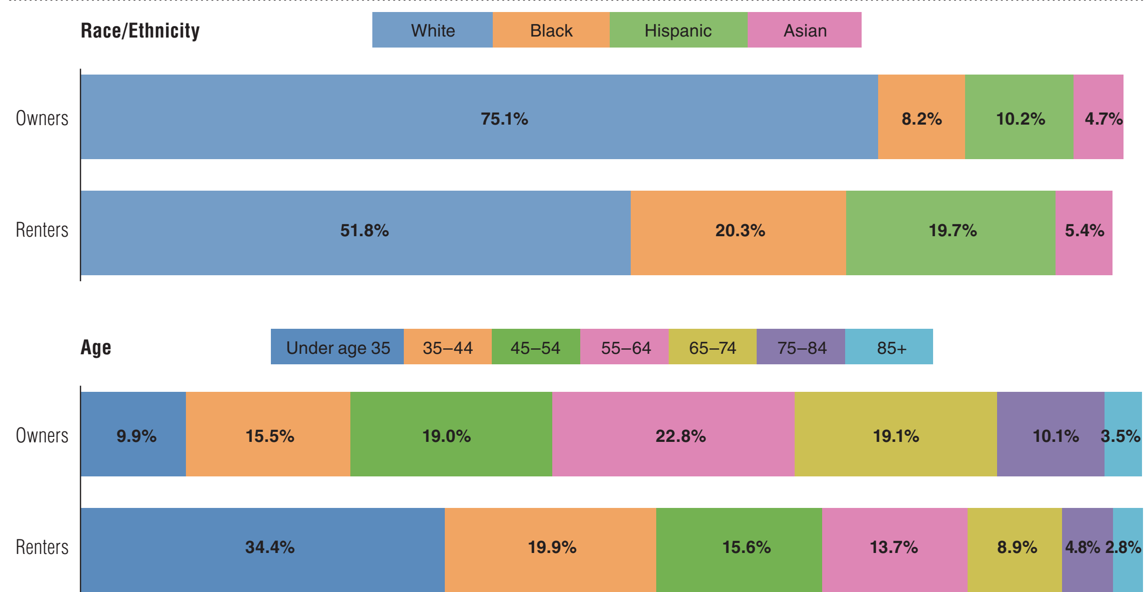
The Push and Pull of Trends: Rentership Rising

Broad-stroke household demographics point irrefutably to strong secular demand for multifamily rental apartment development. During the 2022-to-2035 stretch that lies ahead, 275 million adults —the total of all the adult-aged generational cohorts—will continue to make shelter decisions, especially as U.S. domestic migration and mobility continues at over 27 million movers (approximately 8 percent) each year. Financial factors—given that runaway costs and high mortgage interest rates will price more households out of homeownership as an option—will determine many of their decisions, as has long been the case.

What is different over the past several years has been growth in discretionary rental households, also known as rent-by-choice households. According to Harvard's Joint Center for Housing Studies (JCHS), the number of renters making at least $75,000 jumped by 48 percent over the decade ending just before the pandemic, to 11.3 million. With this increase, the share of renter households in this income group rose from 20 percent to 26 percent.

Younger, older, and more economically, racially, and culturally diverse households together will bend the economic and cultural arc of rentership upward. (American Community Survey data

Exhibit 2-5 **Owners and Renters: Select Household Characteristics**



Source: Pew Research Center analysis of U.S. Census Bureau data.

Note: Data as of 2019. Race and ethnicity categories reflect U.S. Census Bureau terminology. Black or African American adults and Asian Americans do not include Hispanics. Hispanics/Latinos are of any race.

notes that people of color represent 91 percent of total household growth between 2009 and 2019, and fully 85 percent of renter household growth in that period, according to the JCHS.)

Apartment industry leaders now recognize a blurring of behavioral lines across generations. When it comes to housing type need or preference, generational cohorts—generation Z, millennials, generation X, and empty-nester baby boomers—act more like each other than not.

"Our customer experience research shows it's more appropriate to classify people by [buying pattern] behaviors than by generational cohorts," says the CEO of one of the nation's top 20 privately held multifamily developers. "You're going to find people in gen Z and millennials and even gen Xers that have very similar behavioral components and some of that is stage of life, but not all of it is."

Consumer-driven trends—a desire for indoor/outdoor living, health and well-being features and functionality, designs for a nimble work/life balance at home, holistic home technology solutions for everything from package delivery management, to smart locks, privacy, and security systems, to self-service access to concierge and other community amenities—are becoming non-negotiable standards as technologies improve.

"Since COVID, we were able to pivot to a technology footprint for our business model that reduces reliance on people and improves the customer experience," said the CEO of a publicly traded, top-10-ranked multifamily apartment owner-developer. "So, it was an acceleration of what we've seen in other sectors to a self-service business model. The core of it is, 'How do you interact with your customer?' and if that gets disrupted or the rules of the road change, 'How quick can you adapt?'"

Capital Calculus

As COVID dynamics shifted multifamily property ownership from individual owners to business and investor enterprises, transaction volumes, multifamily loan originations, and property valuations surged. Yield-thirsty investors greenlighted a boom in new construction, with 420,000 completions estimated for 2022, up from 364,000 in 2021.

"Wall Street investment giants were raising massive amounts of capital, buying every apartment they could," says the chief executive of a top-10 multifamily real estate investment trust (REIT), speaking of the pandemic-era capital pivot into apartments. "And so, all of a sudden, they became the market themselves. When you're buying apartment portfolios at $20 [billion] or $30 billion at a clip, you're establishing what the market floor is. It was, 'We're going to buy apartments everywhere at a 3.5 or 4 capitalization rate.' They didn't differentiate one property from another."

Class A property investments align with rent-by-choice higher-income households and a swelling population of aging Americans ready to downsize and simplify. B and C value-add investments suit a growing market of younger and mid-career households stuck in the limbo of scarce supply, high prices, and high interest mortgages that will delay their becoming homeowners.

Closing a gaping, and widening, chasm in new investment and development would well serve households in the 80 to 120 percent range of area median household income levels—the wage range of many essential workers such as teachers, sanitation workers, law enforcement officers, and fire and medical first responders. Furthermore, addressing this "missing middle" household income level does not preclude the need for additions to and preservation of properties for lower-income households.

The Great Bottleneck: Local Ballot Boxes

Apartment stakeholders' number-one nemesis, blocking private-sector market solutions to deep and growing mismatches between demand and supply, is a many-headed hydra—a bevy of deep-rooted restrictive land use, permitting, and regulatory cost burdens that thwart higher-density multifamily development. On top of these longstanding challenges, a growing push for rent regulation is adding uncertainty to the market. For example, while 26 states prohibit local municipalities from implementing rent control laws, five states permit localities to enforce rent control—New York, New Jersey, California, Oregon, and Maryland—as well as Washington, D.C. Regulations being proposed throughout the country would allow landlords to boost monthly rents by no more than 2 percent to 10 percent. Arizona, Florida, Hawaii, Illinois, Kentucky, New Jersey, New York, Washington, and Massachusetts have all introduced proposals to add or expand rent control protections.

"The problem of impact fees and NIMBYism really dominates many markets and makes it too expensive to develop," the CEO of one of the nation's largest property management organizations says. "I think we're still stuck in the past. Some policymakers are not in tune. Voters who may not be well versed in these issues elect government officials who then become a huge wall to economic solutions. I don't see solutions for all this happening in my lifetime."

Exhibit 2-6 **Prospects for Commercial/Multifamily Subsectors, 2023 versus 2022**

Source: *Emerging Trends in Real Estate* surveys.

Note: Based on U.S. respondents only.

*First year in survey.

Emerging Trends in Senior Housing

Major factors influencing senior housing continue to evolve. Some trends are well known while others are developing. In 2022 and into 2023, senior housing trends include the following:

1. The growth of the sector into new product types differentiated by rate and service offerings as the sector continues to mature and evolve.
2. The articulation of a new value proposition for senior housing as the proverbial "fountain of youth" for future baby boomer residents who seek a high quality of life, wellness, longevity, and a sense of purpose.
3. The recognition that senior housing is truly part of the health care continuum.
4. The gradual recovery of occupancy from the nadir reached during COVID-19, boosted by a recent slowdown in inventory growth and strong post-pandemic demand patterns.
5. Outside exogenous factors including the national and global economies, inflation, and rising interest rates, which present new challenges for senior housing.
6. Staff recruitment and retention as well as rising expenses associated with labor shortages, insurance, food, energy, and other goods and services. Collectively, these are squeezing operator margins, investment returns, and debt issuance.
7. And, of course, U.S. demographic patterns, which are pushing greater numbers of individuals into the 75-plus cohort, creating a captive pool of potential new residents for senior housing.

These and other topics will be explored below.

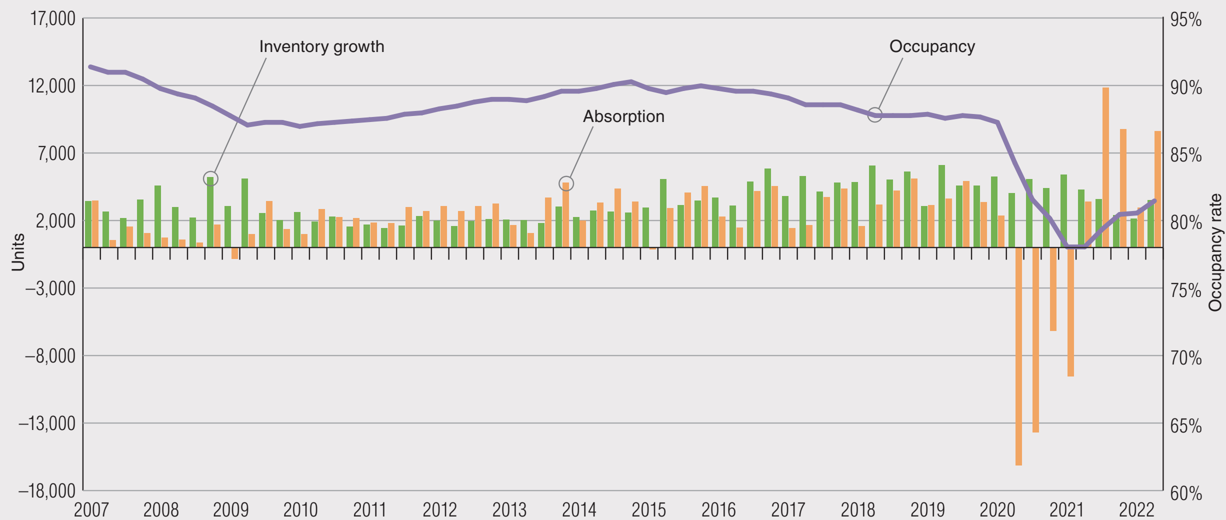
Sector maturation. It is an exciting time in the senior living industry as the sector matures and product offerings become increasingly differentiated. Much like the hotel industry, with offerings from Motel 6 to the Ritz-Carlton, operators, developers, and capital providers are increasingly segmenting the senior housing market by both price point and service offerings. "Active adult" offers amenitized rental housing for the "younger old" cohort seeking community involvement, lifestyle, purpose, and connection. The "Forgotten Middle," a term coined by the National Investment Center for Seniors Housing & Care (NIC) in its 2019 seminal study that assessed and quantified the need for more affordable housing and care options for middle-income seniors, offers care and housing options for the value-minded older adult consumer. And "ultra-luxury retirement communities" offer older adults high-end concierge lifestyle living options with wellness centers, five-star culinary options, entertainment, and A-list cultural events. And, of course, the traditional senior housing product remains, with a price point that falls between the two and offers a value proposition of security, socialization, engagement, room and board, care coordination, and lifestyle.

Wellness value proposition. Many operators increasingly recognize that senior housing provides an environment that can promote and support health and wellness, enticements to the baby boomers as they age and seek the aforementioned proverbial fountain of youth. Furthermore, the movement of many operators to incorporate wellness programs into their offerings has the ability to be a significant competitive advantage as potential residents seek communities that hold promise to improve the quality of their life through programs focused on the intellectual, physical, social, spiritual, vocational, emotional, and environmental dimensions of wellness as defined by the International Council on Active Aging.

Senior housing as part of the continuum of care. Simply stated, senior housing operators influence social determinants of health for hundreds of thousands of older Americans. Operators can help manage chronic illness and keep older adults healthy—they have 24/7 eyes on residents and can systematically monitor changes in conditions. Properly managed, this can result in fewer resident hospitalizations, reduce federal and state-level health care spending, and act as a catalyst for future business opportunities and collaborations. Further, thoughtful care intervention can provide support to the overall health care ecosystem through the support and creation of conscientious awareness and follow-through. And, once senior housing is fully recognized as part of the health care continuum, senior housing operators will be able to participate in the revenue streams associated with a capitated risk-sharing model of care.

Tailwinds for occupancy recovery. Two tailwinds support an ongoing occupancy recovery for senior housing. First, on the supply side, the number of senior housing units under construction in the second quarter of 2022 for the 31 NIC MAP Primary Markets was the fewest since 2015. And that pattern may remain in place—at least in the near term—because senior housing starts continue to linger at moderate levels and remain well below their peaks seen in the 2016–2018 period. This is because rising prices for materials and

Senior Housing Fundamentals, Primary U.S. Markets, 1Q 2007–2Q 2022



Source: NIC MAP Data Service, ©2022 National Investment Center for Seniors Housing & Care Inc. (NIC).

inflation, labor shortages in the building trade industries, and the change in Fed policy of higher interest rates are collectively affecting plans for new development; many projects increasingly do not pencil out for reasonable returns.

Second, demand is also a tailwind for an ongoing improvement in occupancy. Indeed, demand, as measured by the change in occupied inventory or net absorption, was robust in the second quarter of 2022, increasing at its strongest pace ever recorded by NIC MAP Vision except for the post-pandemic boost in demand in the last half of 2021. Since the recovery began in the second quarter of 2021, 78 percent of the units placed back on the market have been reoccupied.

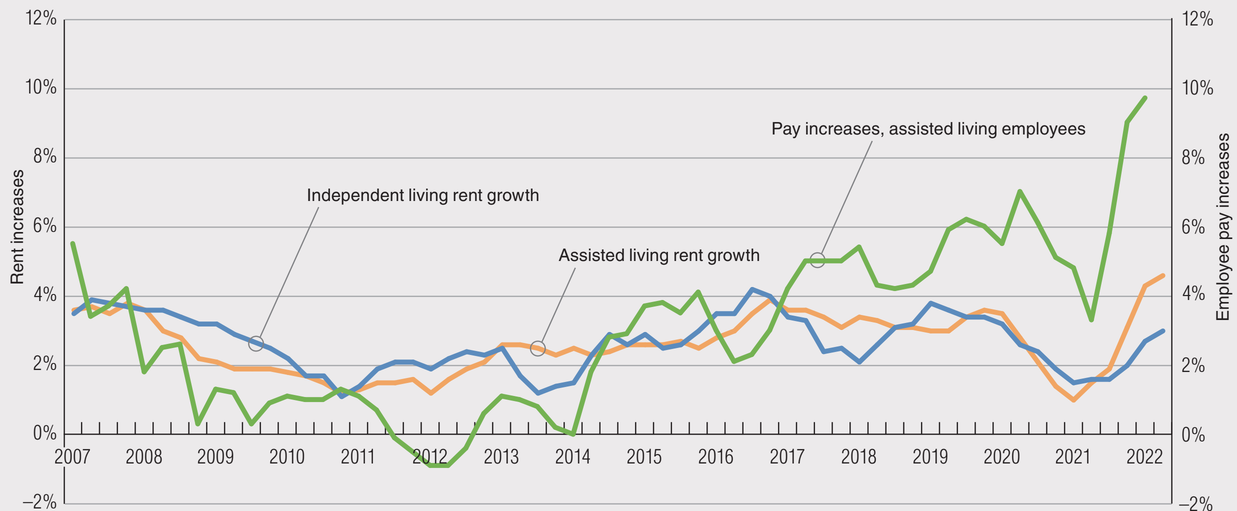
As a result of these conditions, the occupancy rate for senior housing—where senior housing is defined as the combination of the majority independent living and assisted living properties—rose 0.9 percentage point during the second quarter of 2022 to 81.4 percent for the 31 NIC MAP Primary Markets. This marked the fifth consecutive quarter in which occupancy did not decline. At 81.4 percent in the second quarter, occupancy was 3.4 percentage points above its pandemic-related low of 78.0 percent recorded in the second quarter of 2021 but was 5.8 percentage points below its pre-pandemic level of 87.2 percent in the first quarter of 2020.

Outside influencing factors. Looking ahead, several exogenous factors will influence the strength of net move-ins and demand. These include demographics (as discussed further below) as well as the following:

- The broad performance of the U.S. economy,
- Consumer confidence (which is very low, according to a University of Michigan survey),
- The rate of inflation (the Consumer Price Index increased by 9.1 percent from year-earlier levels in June 2022, resulting in the largest increase since 1981),
- Interest rates (rising as the Fed tightens monetary policy and increases the Fed funds rate),
- The pace of sales for residential housing (slowing from higher mortgage interest rates),
- The stock market (considered in a bear market),
- Pent-up demand for senior living settings (strong through the second half of 2022),
- Development currently underway (moderately paced compared with history),
- New competition in the form of recently opened properties since the pandemic began, and
- Local market area demand and supply pressures.

Continued next page.

Senior Housing Rent Growth and Employee Pay Increases, Primary U.S. Markets, 2007–2022



Source: NIC MAP Data Service, ©2022 National Investment Center for Seniors Housing & Care Inc. (NIC).

Note: Rent growth is change in annual asking rent. For 2022, wage growth is as of first quarter and rent growth is as of second quarter.

Staffing challenges. Of importance, labor also is a key consideration, with an increasing number of operators citing labor shortages as a potential limiting constraint on growth. In the WMRE/NIC Investor Sentiment Survey conducted in June 2022, just under half of respondents (41 percent) reported that labor shortages have caused a reduction in the number of operating units/beds in their portfolios. This is presenting challenges for operators seeking to maintain census, much less grow and expand.

Indeed, the U.S. jobless rate was low at 3.6 percent in June 2022 and was only 0.1 percentage point above the pre-pandemic level of 3.5 percent seen in February 2020. Furthermore, tight labor market conditions are pressuring wage rates up quickly, especially for workers in skilled nursing and assisted living properties.

While good for employees, low jobless rates present challenges to employers who must staff their businesses. Surveys conducted by the NIC among C-suite operators of senior housing and care properties highlight strategies to combat labor shortages and include raising wages, offering flexible work hours, higher pay frequency, improving the work environment and culture, recruitment programs comparable with those used to market to new residents, and collaboration with educational institutions.

Expenses, margins, and returns. 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 and rising insurance costs to put significant pressure on expenses. Rent growth, while rising, has not been sufficiently able to offset expense growth for many operators. As a result, net operating income has been hard to achieve for many—but certainly not for all—operators of senior housing properties.

COVID was particularly hard on the senior housing sector. Many investors had reduced their appreciation expectations for senior housing as the impact of the coronavirus weighed heavily on their view of the sector. According to NCREIF Property Index (NPI) investment return data, short-term total returns for senior housing were low at 1.08 percent in the first quarter of 2022 compared with the broader NPI, which saw total returns of 5.33 percent in the first quarter. Appreciation returns for the NPI dwarf those of senior housing, since the NPI was boosted in part by outsized returns in industrial properties (10.96 percent). The senior housing income return in the first quarter was 0.91 percent, its best showing since late 2020. This was stronger than industrial and nearly on par with apartments, and slightly less than the NPI (0.99 percent).

Nevertheless, on a longer-term basis, the 10-year return for senior housing was the strongest of the main property types

except for industrial. For this time frame, the income returns for senior housing (5.47 percent) surpassed the NPI (4.83 percent), while the appreciation return (4.49 percent) was slightly less than the NPI (4.61 percent).

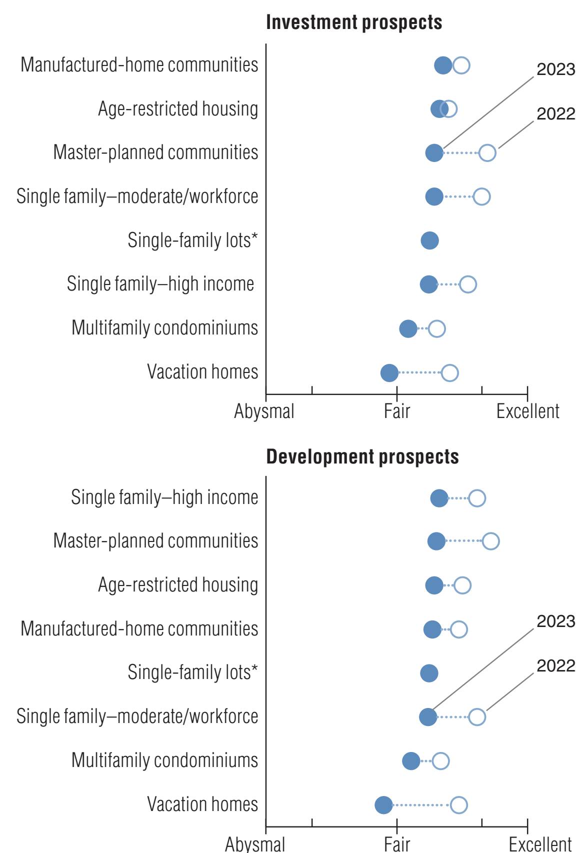
Demographics favor senior housing. The demographics supporting senior housing cannot be denied, as the number and share of older adults continue to grow. For example, the number of persons 82 and older—often the age at which a person moves into senior housing—is growing at an accelerating pace. In 2022, there were 10.6 million Americans aged 82 and older; by 2026, this figure is projected to grow to 12.3 million, and by 2030 to 14.8 million, according to the U.S. Census Bureau. Further, in the not-very-distant future, the ratio of adult children family caregivers (those aged 45 to 64) who are available to take care of aging parents (those over 80 years of age) will continue to shrink at a precipitous pace from 7:1 in 2015 to 6:1 in 2022 to 5:1 in 2026 to 4:1 in 2031 and to 3:1 in 2044.

With fewer family members and spouses available for caregiving—divorce rates are high for older adults—congregate settings will indeed get a further boost in demand. In addition, the increasing segmentation and differentiation of senior housing in serving the vast numbers of seniors in the middle-income cohort will add a large demand pool for operators to serve, as will the movement of "younger old" adults into the active adult segment. With an industry penetration rate of roughly 11 percent of U.S. households, the penetration rate does not need to increase dramatically for occupancy to rise to pre-pandemic levels.

Looking ahead, many reasons exist to be optimistic about the outlook for senior housing, but the path forward may be a bit bumpy due to the prevailing winds in the broader economy. Inventory will continue to expand, although at a reduced pace in the near term, which should act as a tailwind for occupancy improvement. And, while demand may also be affected by economic headwinds, the value proposition of senior housing—security, socialization, engagement, room and board, care coordination, and lifestyle—remains in place and ultimately should win the day by attracting new residents to senior housing properties. In addition, the movement of many operators to incorporate wellness programs into their offerings has the potential to be a significant competitive advantage as potential residents seek communities that hold promise to improve the quality and length of their lives.

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

Exhibit 2-7 **Prospects for Residential Property Types, 2023 versus 2022**



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

Student Housing: Improvement in Fundamentals

For those active in the student housing sector, fall 2022's massively improved performance has shaped up to be essentially a best-case scenario. At a minimum, it has been the rebound that many had hoped for. At best, it has been something of a renaissance after two very challenging years due to the COVID-19 pandemic.

Rent Growth and Occupancy Levels Not Seen in at Least a Decade

Heading into the final month of the fall 2022 leasing season, both rent growth and occupancy sit at all-time highs. The former sits right at 6 percent—almost three times greater than the 2010s' decade norm—while the latter clocks in above 90 percent–plus. That is the earliest the sector has ever crested above that 90 percent threshold on record. By the semester's start, it is almost a foregone conclusion that the year will kick off with never-before-seen occupancy rates. With student competitive housing (in other words, nearby conventional multifamily housing properties that compete with purpose-built assets) also seeing record rent growth and occupancy rates as well, there is less pressure on purpose-built off-campus housing space than in years past.

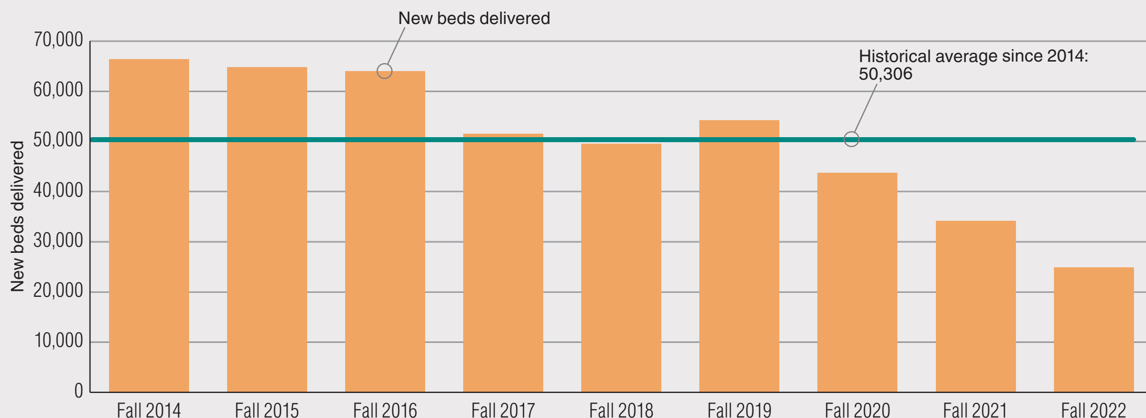
Investment from Institutional Players Solidifies Student Housing as a CRE Sector

Back in 2018, there was a big splash in the student housing space when Greystar completed its acquisition of EDR. At the time of acquisition, that left only one publicly traded real estate investment trust (REIT) in the student housing space. Yet another massive announcement followed in 2022 with Blackstone's acquisition of American Campus Communities, which closed in early August. Although the acquisition leaves no publicly traded REITs in the sector—a development that lends itself to some challenges in terms of reporting and benchmarking—the more important takeaway is that institutional capital continues to flow into the sector.

Will Fall 2022 Be a Flash-in-the-Pan Rebound, or a Positive Shift in Long-Term Expectations?

While somewhat more difficult to measure, the return to a more normal campus life for students, university employees, and industry professionals alike has been widely welcomed. After all, record leasing activity and record rent growth indirectly point to improved qualitative aspects of student life such as on-campus activities and in-person classes. Only time will tell whether the 2022 rebound is a short-lived bounce back or a resetting of baseline expectations for the coming few years. Though with supply easing and students who elected to take a gap year being reintroduced to the pipeline of prospective student renters, it is reasonable to suggest that the coming few years could see sustained performance readings.

U.S. Annual New Supply of Student Housing, Fall 2014–Fall 2022



Source: RealPage Market Analytics.

Note: Data reflect purpose-built off-campus student housing, and year-over-year production from July to July.

Construction Levels at Decade Lows

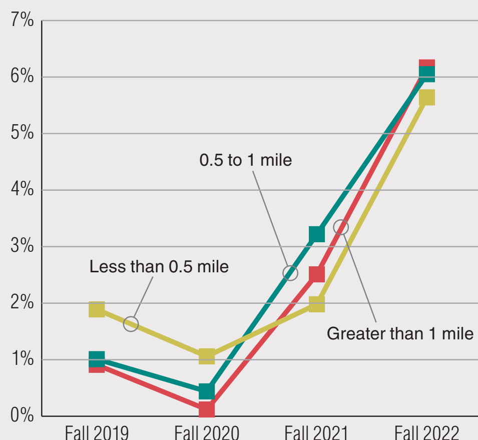
In recent years, one of the more remarkable trends in the student housing space has been the sheer consistency of national supply totals. Although campus-level construction figures are often capricious—it is not uncommon to see a huge wave of deliveries followed by years with no construction—the United States averaged roughly 50,000 new beds per year over the past few years, with relatively little deviation from year to year. But the pandemic bred a lot of uncertainty. And, as a result, fall 2022's expected delivery total (fewer than 30,000 new beds) will easily be the lowest figure in at least a decade. Not much is expected to change in 2023 either.

Despite Positive Signals, Be Aware of Headwinds and Risks

Although fall 2022 performance is a welcome sight for industry professionals, external risks and headwinds should not be discounted. For one, inflation remains at its highest level in 40 years. Although there does not appear to be a correlation between rising inflation and increasing missed payments (and eventually evictions) thus far, that does not mean that the broader inflation story should be dismissed. In addition, demographic trends such as fewer 18- to 24-year-olds moving into the collegiate ranks alongside declining total U.S. enrollment levels suggest longer-term pressure on the student space. Still, it is worth noting that the core set of major U.S. campuses—primarily large, state-funded institutions—do not seem to be seeing a decline, unlike their smaller counterparts (e.g., small liberal arts schools and some smaller private institutions).

—RealPage Inc.

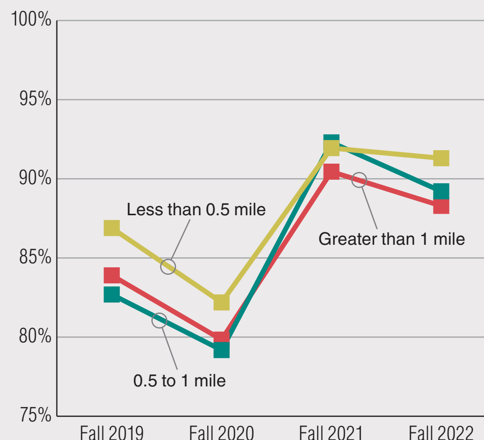
U.S. Student Housing Effective Rent Change by Distance from Campus, Fall 2019–Fall 2022



Source: RealPage Market Analytics.

Note: Data reflect purpose-built off-campus student housing. Rent change data is year-over-year from July to July.

U.S. Student Housing Pre-Lease Occupancy by Distance from Campus, Fall 2019–Fall 2022



Source: RealPage Market Analytics.

Note: Data reflect purpose-built off-campus student housing. Pre-lease occupancy data is as of July for each year.

The Future of Single-Family Housing

The early 2020s have been a transformative time for the housing industry as the pandemic caused people around the world to reevaluate both where they live and how they live. The United States experienced "the Great American Move" in which households and businesses relocated to more affordable places, often to buy or rent a home with additional space and a yard, and farther from employment centers. Builders across the country could not keep up with the new demand—and supply chain interruptions, labor shortages, and permitting delays during the COVID-19 pandemic did not help matters. As a result, home prices escalated at historic rates; the median new home price in the United States increased 22 percent since the start of 2020 and existing home prices increased 58 percent.

Today, the single-family housing industry is on the other side of the rapid run-up in demand and prices—inflation and the rapid escalation of mortgage rates have resulted in a cooldown of the for-sale housing market. Every housing metric is indicating a softening, and builders are starting to recalibrate their business plans in the face of slowing demand. As the housing market resets, we should start to witness the true impact of the pandemic on home design, location preferences, amenities, and financial preferences.

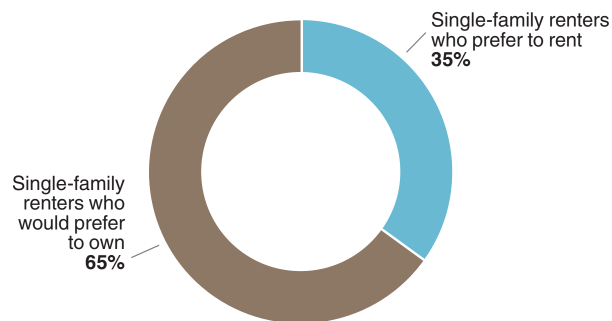
How People Live

Home offices and flex spaces are nothing new, but the desire for more functional spaces grew tremendously during the pandemic-related lockdowns. Builders have not had time to create new designs, but they are modifying current ones. The CEO of a large private homebuilder noted that consumers prefer a higher bedroom count (for offices and additional space), so in many instances he is choosing existing plans with those features. His team also puts in "reading nooks" and "drop zones" where they can, often using space taken away from larger spaces. Architects are reporting similar adjustments. Three significant trends include the following:

- More function in the same-sized home. Spaces added include an extra bedroom and additional flex or office spaces. To fit in the extra functions, architects are taking space from typically large areas like the kitchen or dining room and "right-sizing" the home office (which does not need to take up a whole bedroom) and making additional flex spaces (like in a hallway or loft) that serve as additional work space.
- Balance between public and private spaces—open great rooms are not going away. Instead, they are being paired with more private spaces like prep kitchens, drop zones, retreats, and nooks.
- Outdoor spaces taking a larger share of space and homeowner spending. This often takes the form of "nodes"—small patios, decks, and balconies off the primary living areas instead of relying on one larger yard.

Despite the overwhelming desire for outdoor and indoor space, density continues to rise as a way to improve affordability. Over 62 percent of architectural designers for production builders are working on denser projects in 2022, compared with only 10 percent with lower-density projects. One of the most successful active-adult brands in the United States has reported overwhelming demand for its cottage product—1,200- to 1,400-square-foot homes—and the builder is phasing out its larger (65-foot-wide) lots. Buyers like the low maintenance and compact design of these homes.

Exhibit 2-8 **Single-Family Renters: Preference to Own or Rent**



Source: New Home Trends Institute by John Burns Real Estate Consulting LLC.

Note: Data collected in April 2022 survey of 1,160 single-family renters with a household budget for rent of over $1,000.

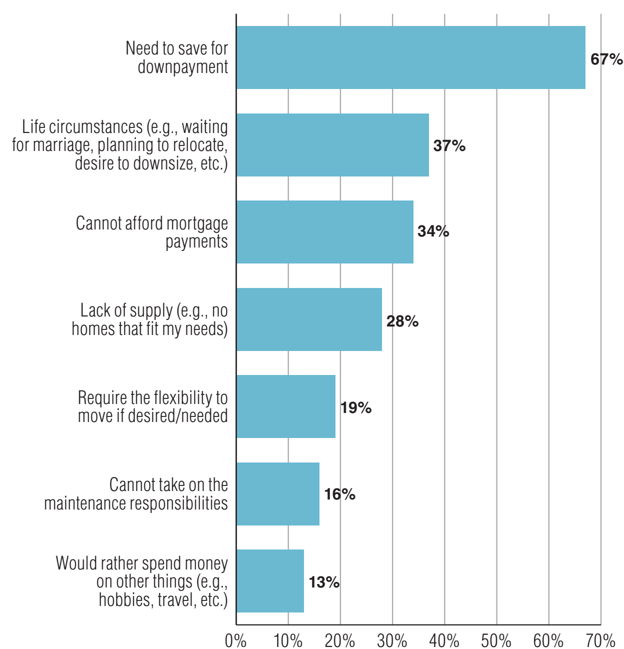
Technology also will affect the way people live, and faster than most people believe, according to the CEO of a national firm specializing in residential architecture. Homes have not changed significantly over the past few decades, and he believes there are "aspirationals"—people who value time more than money and innovation over sameness—who are waiting on the sidelines for innovation. He is focused on designing the "thoughtful home," infusing floor plans with performance capabilities that will save homeowners time, make life easier, and perhaps help homeowners live longer. Homebuilders are often willing to embrace new technology depending on the cost, but more often, buyers will choose their own technology after they purchase the home.

Where People Live

The pandemic brought massive migration across the United States as people reevaluated where they wanted to live based on cost, weather, community, and family. Builders noted the large number of Californians who moved to Florida, and also took note of apartment dwellers becoming homebuyers because they wanted yards. A large private builder in the South experienced the same and furthermore found that new in-migrants had sufficient cash for larger homes and more upgrades.

The ability to work from home accelerated the migration. According to a 2022 John Burns New Home Trends Institute (NHTI) survey, only 49 percent of workers expect to come into the office every day versus 66 percent of workers who expected to come into the office every day prior to COVID.

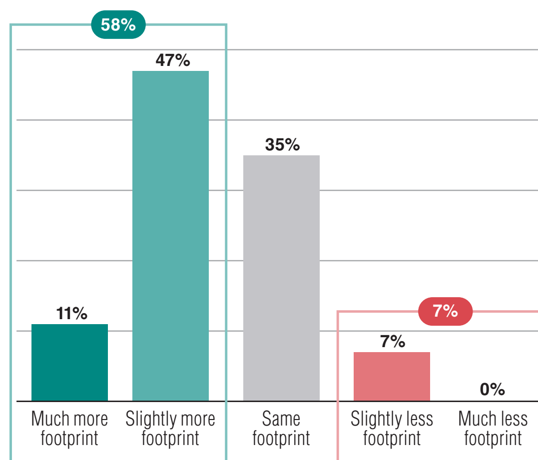
Exhibit 2-9 **Reasons Renters Continue to Rent, Based on Rental Households That Believe Homeownership Is Important**



Source: New Home Trends Institute by John Burns Real Estate Consulting LLC.

Note: Data collected in a survey of 1,347 U.S. homeowners and renters ages 18 and over with household income of over $50,000. Survey fielded July 12–17, 2022.

Exhibit 2-10 **Footprint Allocated to the Home's Outdoor Space, 2021 versus 2020**



Source: 2022 Annual Survey of Architecture. conducted by the New Home Trends Institute/ John Burns Real Estate Consulting LLC and *Pro Builder.*

Buyers are also searching for the right community. With such high levels of new residents, a CEO of an amenity planning and lifestyle design company noted how amenities played a more direct role in connections. New residents want to be connected—especially via the outdoors—with their neighbors and amenity programming. Lifestyle directors can make an outsized impact in new communities. Her focus for new communities is to make outdoor spaces livable all year long, with heating and cooling elements to make residents comfortable.

Historically, affordability has played a key role in housing purchase decisions, and the rise in home prices along with higher mortgage rates has brought affordability to the forefront. Over 67 percent of households who rent cite the lack of a down payment as the biggest hurdle to homeownership. Builders have always struggled to provide affordable housing, but the rise in the cost of materials over the past two years has impeded any progress. However, some builders are starting to report lower costs—especially labor—as the market cools.

The key to improving affordability, according to the CEO of a national firm specializing in residential architecture, is lowering the cycle time for building homes. Just as Henry Ford slashed the time needed to build a Model T from 12 hours to 96 minutes through process improvements, the same innovations and improvements should be focused on housing. If we could reduce cycle times in half to build a house, builders could offer homes for less, thus improving affordability across the board.

Single-Family Rentals

The rise of the single-family rental business has huge implications for traditional builders. There are positive implications—a hedge against slower demand from consumers of for-sale housing, as many builders report that they are receiving multiple calls each day from single-family rental operators who want to contract builders to build homes. There are negative implications as well: as single-family rentals become more prevalent, they could become a competitor to traditional for-sale homes. The nascent stage of the industry makes the future hard to determine, but one ought to consider the following:

- Nearly half of all master-planned communities are planning a build-for-rent section.
- Thirty-five percent of single-family renters with budgets of $1,000-plus per month rent by choice.
- Single-family renters with rent budgets of $1,000-plus per month prefer to rent for more flexibility, as well as for less maintenance and fewer financial responsibilities, than they would have as homeowners.

- Renters of single-family homes can have private yards, no one living above or below them, pets, and garages—the primary features that motivate people to own.

As the industry grows, the single-family rental space can serve as a "living laboratory" for reducing cycle times, according to the CEO of a national firm specializing in residential architecture. As single-family rental operators design new floor plans and build hundreds of houses at a time (with no option choices from consumers to manage), the industry can modernize and become more precise. The repetition will allow for innovation and ultimately reduced cycle times that could, in the end, solve the problem of affordability faster than expected.

So, it is possible that the housing issues raised by the pandemic could result in industry improvements that outlive it.

Industrial/Logistics: Strong Fundamentals Persist while Capital Markets Adjust

With today's supply chain volatility and red-hot inflation, it may come as a surprise that industrial rent growth in 2022 is on track to break the previous year's all-time high. Resilient consumption supported demand for logistics real estate through the first half of 2022, requiring more space to move goods quickly and hold higher inventories. The urgency to secure more space, paired with delays in supply and rising replacement costs, pushed rents to historic highs while vacancies fell to record lows. At the same time, capital market dynamics began to shift, marked by repricing and a pullback in volume.

E-Commerce Holds Strong, Despite a Return to In-Store Shopping

Consumer spending patterns returned to in-store shopping as local economies reopened, but the future of retail still relies on e-commerce. Why? Because consumers prefer the convenience and choice of shopping online. The number of people who used same- or next-day delivery held steady in 2021 during the holiday season, compared with a decrease in people who purchased goods online and picked them up in store. And e-commerce supply chains are being built to accommodate faster delivery timetables, which attracts sales because consumers appreciate the speed. More than 90 percent of consumers expect delivery in three days or fewer, and 30 percent expect same-day delivery. In addition, the COVID-19 pandemic forced many physical stores out of business, limiting the number of retail options close to home.

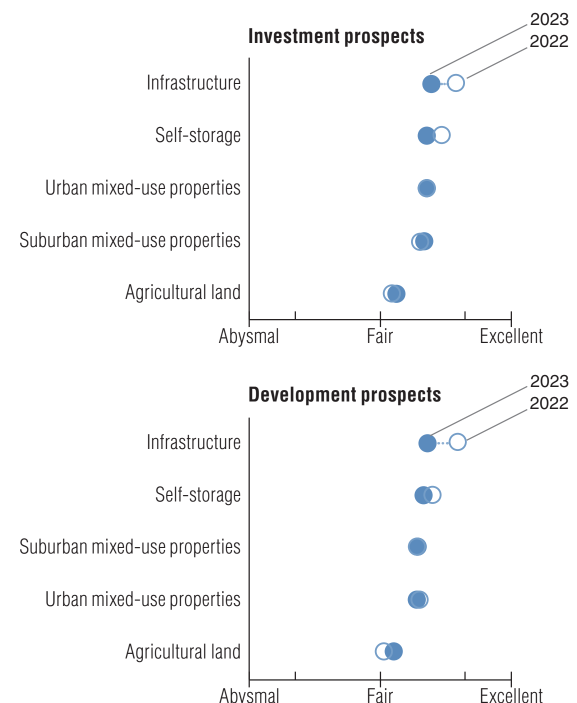
The pandemic's impact on the growth of e-commerce extends across retailer and product categories. While Amazon is now focused on supply chain optimization and less on absorbing additional space, other users are stepping up to secure additional space. E-commerce will continue to drive logistics demand for the foreseeable future with growing diversity.

Demand Still Outpaces Inventory

Given persistent stock-outs, rapidly rising prices, and unreliable supply chains, the need for higher inventories increased. Inventory growth was rapid in the six months from February through July 2022, up 9 percent on a net basis for wholesale and retail. Although inventories are up, they continue to lag sales. The July 2022 inventory-to-sales ratio for all retailers (excluding automobiles) was almost 4 percent below average 2019 levels.

While inventories are growing, they are still too low overall. The Institute for Supply Management (ISM) Manufacturing PMI and Services PMI ask about inventory levels: sentiment was below 50 until July 2022, when the services inventory sentiment tipped slightly above. Meanwhile, the Manufacturing PMI customers'

Exhibit 2-11 **Prospects for Niche and Multiuse Property Types, 2023 versus 2022**



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

inventories remained below 50, meaning that there is still a need for higher inventories, despite substantial inventory building in recent months. This aligns with what some major retailers noted during recent earnings calls: their inventories are not yet back to pre-pandemic levels, and they are focused on carrying more product to improve customer service. The end goal is to plan for long-term capacity to shield from future supply chain disruptions. Supply chain volatility should persist, so securing inventory in response to changes in consumer behavior will continue to be a challenge. Cyclical trends will only affect the timing of this goal.

Oversupply Risk Is Low, Even as Supply Pipeline Builds

The pipeline of space under construction reached a record high of more than 620 million square feet as of the second quarter of 2022. At the same time, supply chain bottlenecks delayed deliveries. Strong demand propped up the proportion of space pre-leased on completion—at roughly 65 percent as of the second quarter of 2022, compared with a historical average closer to 40 percent, according to JLL.

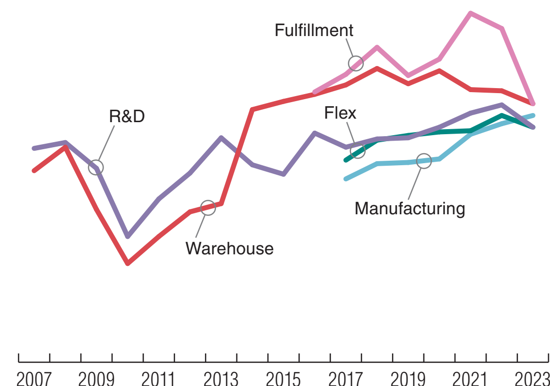
For now, delays in new supply and elevated pre-leasing are keeping oversupply risk in check. Markets with high levels of construction include Dallas, Atlanta, the Inland Empire, Indianapolis, and Phoenix. As supply begins to come online, rent growth is expected to decelerate—first, in untested submarkets with elevated pipelines. Higher-barrier locations, on the other hand, may sustain higher rent growth for longer.

Construction Is Battling Supply Chain Issues

Real estate developers across the United States are confronting rising construction costs. Steel, concrete, and roofing materials contribute up to 80 percent of typical shell costs. Market price surges since the end of 2019 for these, and other major categories, caused finished construction costs to spike by 50 percent.

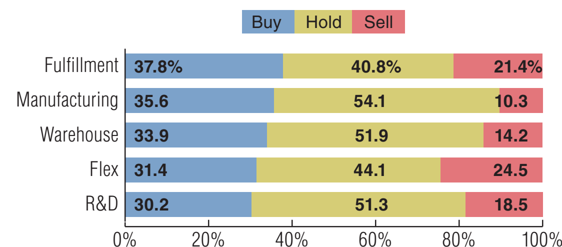
"Construction durations in the broader industry have increased by two to three months, on average, since 2019, due to longer material lead times and increasing contractor backlogs," according to a construction director at a large industrial owner. Advanced material procurement strategies and construction technology can resolve some ongoing construction issues. Developers are moving upstream in the value chain by leveraging direct partnerships with national material suppliers to pre-secure and prioritize long-lead building materials and mitigate material shortages where possible. Developers are also introducing modularized construction systems to expedite repeatable project elements, such as office tenant improvements and in-warehouse restrooms, which reduce on-site construction timelines. Finally, traditional means of construction

Exhibit 2-12 **Industrial/Distribution Investment Prospect Trends**

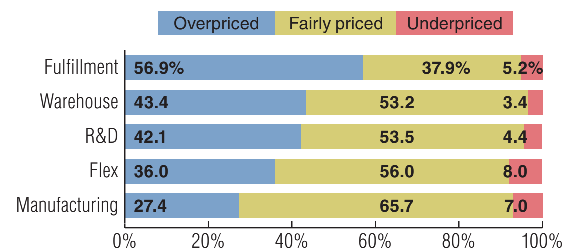


Source: *Emerging Trends in Real Estate* surveys.

Industrial/Distribution Buy/Hold/Sell Recommendations



Opinion of Current Industrial Pricing



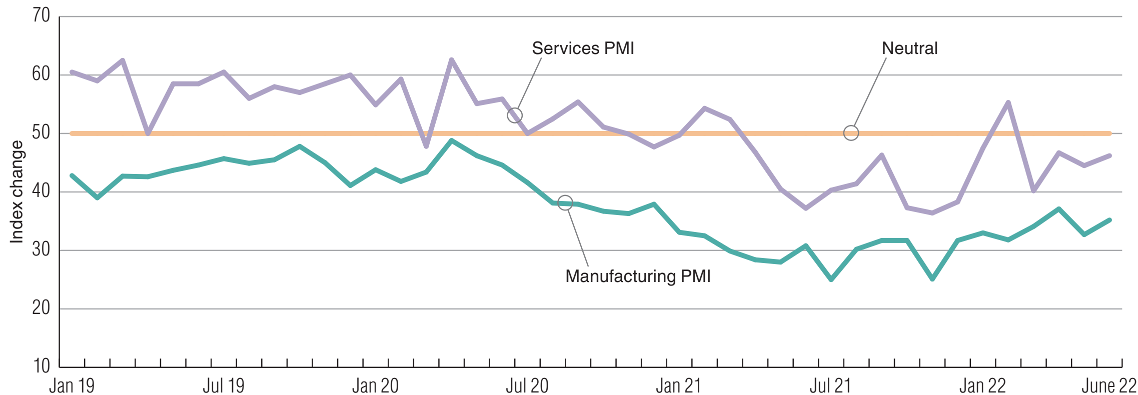
Source: *Emerging Trends in Real Estate 2023* survey.
Note: Based on U.S. respondents only.

execution are being improved by optimizing schedules directly with general contractors and trade partners in real time, before delays are felt.

Labor Challenges Persist

Industrial labor shortages continue to consternate users of logistics facilities. "Labor is always up amongst the top two things companies look at when they move into an area," according

Exhibit 2-13 **Industrial Inventory: Selected Sentiment Indexes, January 2019–June 2022**



Source: Institute for Supply Management (ISM); used with permission of ISM.

Note: PMI was formerly known as the Purchasing Managers Index. The Services PMI covers transport and communication, financial intermediaries, business and personal services, computing and IT, and hotels and restaurants.

to an expert at a commercial brokerage firm. Labor shortages intensified in rural areas because of local market overcrowding: rapid growth of logistics facilities heightened competition for an already-thin labor force.

Manufacturing relocation adds another layer of competition in smaller markets, where some companies are diversifying production locations by moving to secondary markets in the United States to offset risks with supply chain disruptions.

As labor continues to stress industrial real estate users, automation is expected to rise. Some industrial property owners and developers are using virtual-reality technology to train employees about safety and career advancement on site, and companies with robotic in-warehouse transportation are using it to solve labor shortages.

"This [technology] can save three times the walking time that a human being would need to cross through a warehouse," explains an industrial investment expert.

Automation Is Increasing Supply Chain Visibility and Efficiency

The modern economy requires technology for increasingly complex supply chain operations. In addition, supply chain disruptions increased the need for companies and governments to monitor the flow of goods. Increased scrutiny of supply chain externalities requires ways to measure metrics, such as carbon emissions and truck serial numbers. Without an infrastructure to track these statistics at scale, industrial real estate customers struggle with supply chain accountability, according to an industrial real estate investment expert. These factors are augmenting a growing field of technology focused on enhancing supply chain visibility.

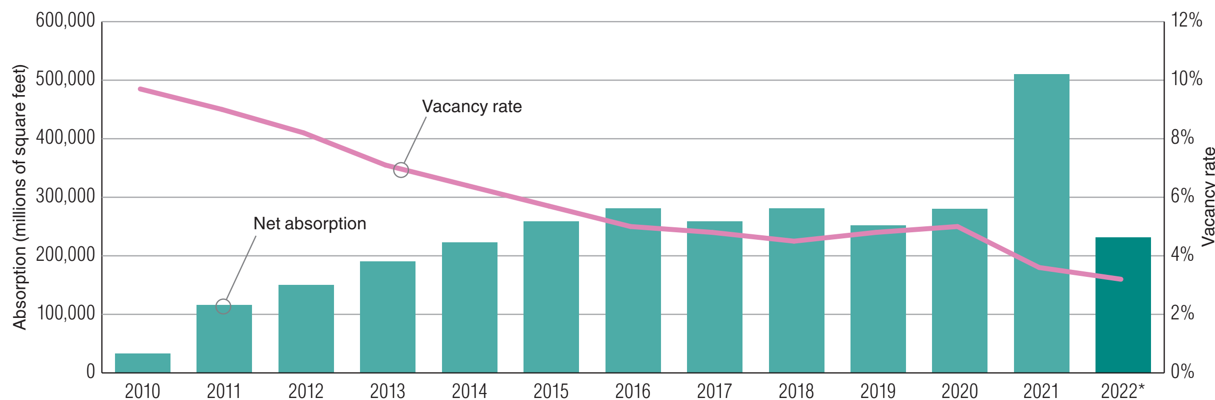
In the trucking industry, industrial real estate customers are focused on implementing autonomous trucks for middle-mile operations. Middle-mile routes—the transport between ports and warehouses—consist of stretches of open roads with limited human obstacles and pose the lowest barriers to autonomous adoption.

Industrial developers are also monitoring advancements in autonomous or remote-operated machinery with the potential to mitigate labor shortages and increase safety in some of the most injury-prone construction processes, which include heavy equipment operation, working from elevated lifts, or repetitive motions. Additional safety-related advancements that are in the startup phase and show promise include biometric and positioning sensors to monitor worker health and safety, geofencing positioned near hazards, and fall detection.

Investment Outlook: Rent Growth to Drive Future Returns

Real estate dealmaking has begun to slow as investors grow cautious and interest rates rise. Although a marked deceleration from the prior year's growth, the transaction volume for industrial warehouses increased by 11 percent year-over-year as of the second quarter of 2022, according to MSCI Real Assets. The deceleration reflects a slowing in smaller transactions. Rising financial costs and a growing spread between bid and ask prices could add hurdles to investment, thereby reducing

Exhibit 2-14 **Industrial Property Net Absorption and Vacancy Rate, 2010–2022**



Sources: CBRE, JLL, Cushman & Wakefield, Colliers, CoStar, CBRE-EA, Prologis Research.
* As of second quarter.

transaction volumes and new development in a rising interest rate environment.

Repricing is taking place across markets, with many sellers agreeing to renegotiate lower prices because of the interest rate environment. NCREIF's industrial cap rate, however, was still low at 3.3 percent for the second quarter of 2022. Cap rates could rise, but there is now more liquidity, pent-up demand, and stronger fundamentals compared with prior cycles, which should help shield against severe correction.

Even as capital market dynamics begin to shift, the return outlook for industrial is positive. Results from the *Emerging Trends* survey echo this sentiment, with respondents placing industrial/distribution at the top of the list for investment prospects for four of the last five years. A pullback in development means that rent growth could remain stronger for longer, given the strength of structural demand trends buoying future returns. According to research from MSCI Real Assets of surveyed industrial managers, in-place rents were 22 percent below spot market rents. This spread offers embedded net operating income growth for the foreseeable future.

Office: Desperately Seeking Clarity about Its Future

Into the third year of the COVID-19 pandemic, we should have clarity about the direction of the future workplace. However, what replaces the daily office grind remains murky and will not be resolved soon. Most companies are still experimenting to determine what works best for them in relation to what employees are willing to do. An industry consultant says: "We face a lot of uncertainty for the next three to five years. Everyone is still sorting this out." An executive at a large office development firm says, "I don't think anyone is at the point now where we can say with conviction, 'This is the new normal.'"

Some office-using firms have taken an extreme position, either going fully remote or hewing to the old school by requiring full-time attendance. But most have embraced a hybrid arrangement—some willingly because it is working for them and others begrudgingly to avoid a mass exodus of workers—and are experimenting with hybrid/remote work schemes and testing new amenities and designs. In the short term, hedging bets often involves reducing office space moderately, renewing leases for shorter amounts of time, and embracing flexible lease strategies such as coworking.

The sector's traditional long-term lease structures enable the extended experimental phase. Some executives hesitate to eliminate space they once acquired with pride, figuring that office space represents a small share of expenses. Others are dealing with bigger fires. "Businesses have a lot of problems now with the supply chain mess, demand shifts, geopolitical risk—office space is low on the list of issues to deal with," said one executive who advises companies on space. "We still have no idea how to manage a company where people work two to three days in the office. In many ways, it is easier to manage a workforce that is fully remote."

Continued on page 58.

Data Centers: A Resilient Real Estate Asset Class in High Demand

Data centers are essential infrastructure that keeps modern society functioning. Particularly post-pandemic, countless day-to-day functions in people's business and personal lives are processed in data centers. While demand for data center infrastructure has been growing for the last two decades, it has exploded in recent years, leading to some of the largest developments, leases, and transactions ever seen in the industry. As a result, the industry's supply/demand balance is somewhat strained, with vacancy at its lowest point in many major markets across North America.

A data center is a building that houses hundreds of cabinets full of servers that keep a company's digital infrastructure running. Streaming digital content, conducting electronic transactions, sending emails, using a smart thermostat, or scrolling through social media all involve the use of a data center. Given the immense cost of downtime, data centers are highly technical and employ infrastructure to keep things running. Facilities often feature power feeds from multiple substations, diverse connection points from fiber carriers, redundant battery backups and diesel generators, and robust cooling systems.

Companies typically prefer to outsource their data center needs rather than owning and operating their infrastructure, opting to lease capacity from data center providers or migrate their operations to the cloud. The migration to the cloud alone is a major factor in the explosive growth of the data center industry. To meet the demand for cloud infrastructure, leading cloud providers like Amazon, Google, and Microsoft are building some of the largest facilities or executing substantial leases from data center providers. Unlike traditional real estate assets, it is more accurate to measure data centers by power (kilowatts and megawatts) and not by square footage. While the physical space that a company occupies is part of its rental rate, the rate is generally structured according to the amount of power the company is using.

Because of the world's reliance on technology, the data center industry is more resilient in the face of economic downturns, enabling it to thrive in the midst of the COVID-19 pandemic. Quarantines forced companies to analyze their internal operations and bolster their existing digital infrastructure or shift legacy operations to digital platforms, further

Top North American Data Center Markets by Capacity

Source: datacenterHawk, datacenterhawk.com.
Note: Map depicts the 23 largest data center markets in North America, as measured by power used.

increasing their reliance on data centers. As a result, the industry witnessed a large spike in demand and development in 2020 and onward.

Demand for data center capacity occurs across North America but is most heavily concentrated in 10 primary markets: Atlanta, Chicago, Dallas, Los Angeles, Northern California, Northern New Jersey, Northern Virginia, Phoenix, Portland, and Toronto. Among these 10 markets, there is over 6,100 megawatts of colocation data center capacity commissioned or preleased, and over 9,250 megawatts planned for future development. This does not include the large amount of capacity owned and operated by hyperscale companies like Amazon, Google, Facebook, and Microsoft in those markets.

Trends in Data Center Supply

Influx of capital into the industry. Data centers are now seen as a distinct and valuable asset class, resulting in ample capital flowing in from equity groups. Business and portfolio-level investment is common, with groups like Digital Bridge, American Tower, Blackstone, KKR, and IPI Partners acquiring data center providers in multibillion-dollar transactions. Investors are also interested in individual assets, often acquiring stabilized enterprise data centers in sale-leaseback transactions.

Limited options for users with smaller requirements. Due to demand from hyperscale data center users (i.e., users with requirements exceeding 5 megawatts), North America's data center vacancy level is at its lowest point ever. With the size of transactions that occur nowadays, data center assets are quickly occupied by single tenants, leaving little capacity for users with smaller requirements. Some providers will even opt out of competing on transactions if the tenant is not a hyperscale company.

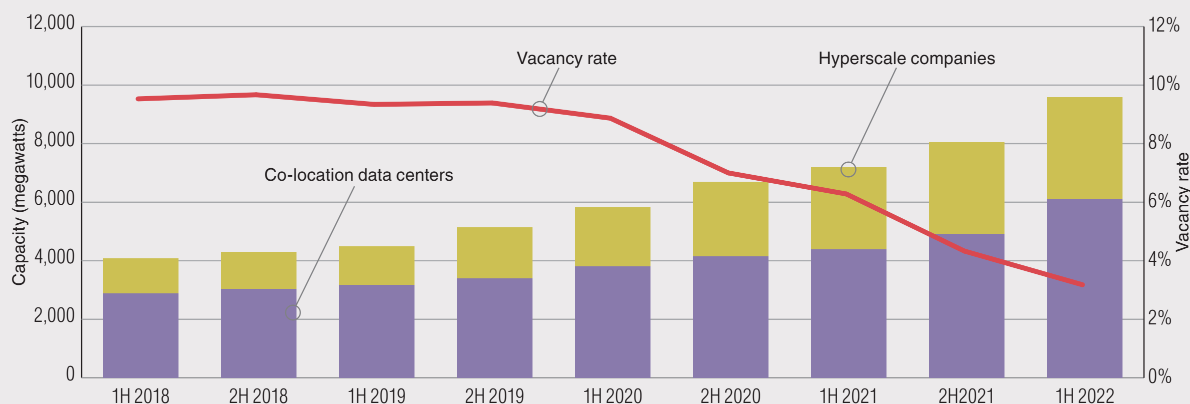
Trends in Data Center Demand

Data center requirements growing. Prior to 2017, leases above 5 megawatts were uncommon, and leases above 10 megawatts were rarely seen. Since then, however, the industry has witnessed a substantial increase in lease sizes, with leases often exceeding 10 megawatts and some exceeding 100 megawatts. While these leases were becoming more common, only five to 20 occurred annually in North America. In the first half of 2022, however, at least 30 transactions above 10 megawatts have occurred.

Uptick in demand from enterprise users. While hyperscale leasing accelerated during the pandemic, enterprise leasing (i.e., users with requirements between 500 kilowatts and 5 megawatts) slowed. The pandemic caused many companies to shift their focus internally and examine how to maintain their operations, putting their need for additional data center space on hold. With businesses opening back up, however, enterprise leasing is at an all-time high due to the backlog of expansion that was put on hold during the pandemic and the additional space that companies realized they needed during the pandemic.

—datacenterHawk

North American Data Center Capacity Growth and Vacancy Rates



Source: datacenterHawk, datacenterhawk.com.

Note: Unlike traditional real estate assets, data centers can be more accurately measured by power used (kilowatts and megawatts) than by square footage. While the physical space a company occupies is part of its rental rate, that rate is generally structured according to the amount of power the company uses.

Self-Storage Outlook Remains Optimistic Despite Inflation Headwinds

Self-storage properties are set to ride out the current turbulence, though not free of hurdles. The self-storage sector entered the second half of 2022 in a favorable position, emerging from the most difficult period of the COVID-19 crisis with record-low vacancy and sturdy rent growth. Historically, the property type has weathered economic headwinds well, and the sector has characteristics that should sustain its performance through high inflation and rising interest rates. Elevated living expenses continue to prompt household relocations, driving demand for storage units across many regions of the United States. Rising housing costs have also prompted some individuals to take on roommates, translating to a residential consolidation process that may generate additional self-storage demand as living spaces become more crowded. However, property performance could be hindered by new supply, since the pace of development is likely to accelerate. The Federal Reserve's tightening monetary policy is also complicating the transaction climate for investors, who maintain an otherwise positive outlook for the sector.

Migration boosts storage demand in high-growth metro areas, but also stokes inflation. Driven in part by a surge of cross-country relocations, self-storage vacancy in most major metropolitan areas fell to all-time lows in 2021. Lifestyle changes fostered by the pandemic built upon long-term demographic trends to drive population growth across the Sun Belt, a trend that is ongoing. Of this year's 10 fastest-growing major metro areas, nine are located in the U.S. Southeast or Southwest. The creation of self-storage demand associated with this migration will support continued year-over-year asking-rent increases, which surpassed 10 percent in some markets in the second quarter of 2022. However, the heightened consumer demand associated with these population gains is also propelling local inflation well above the national average, with Phoenix topping the list at 12.3 percent year-over-year price growth in June. Rising prices in many larger Sun Belt metro areas could push some would-be residents to shift to nearby markets with similar climates and a more stable cost of living. Satellite metro areas, such as Tucson and Fayetteville, North Carolina, posted self-storage rent growth more than double that of the national average. Major southern markets have also been historically popular with older Americans on fixed incomes, a demographic group that may increasingly opt to settle in exurban locales where their retirement savings will go further—an additional boon to storage use.

An uptick in household consolidation offers potential upside for self-storage. Following a multiyear high in household formation observed in 2021, the pace is set to slow this year as climbing living expenses shift some residential decision-making. Rising vacancies across all apartment classes in the second quarter of 2022 indicated an increase in household consolidation, where renters may opt to take on one or more roommates to manage costs. This process typically bolsters demand for storage units, as increasingly crowded living situations necessitate storage outside the home. Some residents may also downsize apartments, creating a similar motivation for additional storage space. Furthermore, the proportion of the 18- to 34-year-old cohort living with parents bumped up from

Self-Storage Construction Spending, January 2015–May 2022

Sources: Marcus & Millichap Research Services; U.S. Census Bureau.
Note: Spending is seasonally adjusted annual rate.

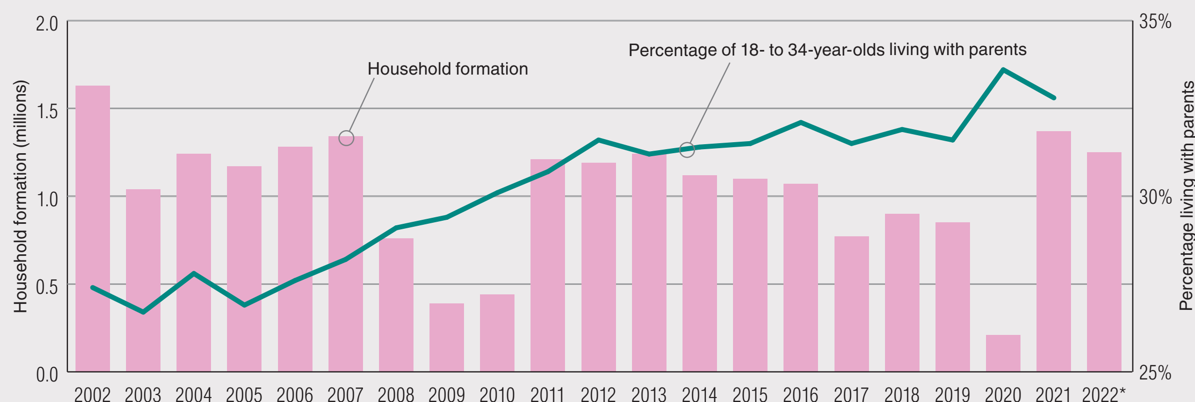
32 to 34 percent during the pandemic and has yet to revert to the pre–health crisis rate. Evolving economic concerns may keep this metric elevated for the foreseeable future as young adults stay at their family home to mitigate expenses. While fewer new households ultimately mean fewer potential new self-storage renters, this consolidation process can create new storage needs that may offset the slowdown in formation. Positive effects of these factors on self-storage demand, however, may be tempered by increased development activity expected during the forthcoming year.

Construction spending foreshadows accelerating supply additions in 2023. Self-storage completions have been steadily trending downward following a 2019 peak, when the nationwide two-year completion total exceeded 145 million square feet. However, the pace of stock expansion remains markedly elevated when compared with the earlier part of the previous decade, and early indicators suggest that the declining rate of supply growth will reverse next year. After hitting a half-decade low in early 2021, spending on new self-storage construction projects has reported consistent monthly increases thus far in 2022. While remaining well below the levels seen in 2017 and 2018, which precipitated the pre-pandemic development wave, this current uptick in spending implies that additional projects will break ground in the very near future. These forward indicators arrive as many major markets report upward-trending vacancy, though the more rapid stock expansions are geared toward chronically undersupplied metro areas. In addition, the aforementioned demand factors should mitigate the long-term upward impact to availability in even the more generously supplied markets, supporting a favorable revenue growth outlook.

Inflation draws buyers to self-storage, but Fed response creates capital market headwinds. Vacancy rates remaining consistently below historical averages, in tandem with recent rapid rent growth, are drawing buyers to self-storage properties. The sector also boasts advantages as inflation affects investor behavior and consumer sentiment. Contrasting other property types, where leases may be determined on a multiyear or even decade-long basis, asking rents on most storage agreements are calculated month to month, providing facility owners the opportunity to respond to market conditions more rapidly than proprietors of other asset classes. Though this advantage has attracted investment capital, keeping transaction velocity historically elevated through the first half of 2022, ongoing monetary shifts have presented some hurdles. Faced with the highest inflation recorded in four decades, the Federal Reserve has conducted multiple sharp rate hikes this year, increasing borrowing costs. Mounting debt service and difficulty gauging first-year returns amid a rising interest rate environment could weigh on trading activity moving forward. These trends have already influenced some institutional actors to pause acquisitions until additional clarity emerges. However, if inflation persists, more action on the part of the Federal Reserve could extend rate turbulence into 2023.

—Marcus & Millichap

Annual Household Formation and Percentage of 18- to 34-Year-Olds Living with Parents, 2002–2022



Sources: Marcus & Millichap Research Services; U.S. Census Bureau.
*Household formation forecast.

Continued from page 53.

In a topic with little consensus, there is agreement that generalizing is dangerous. Some functions such as computer programming or data entry are performed easily at home, while for other jobs personal interaction is critical to productivity. "There is no one-size-fits-all solution—not by company, not by industry, not by location. It all depends on the function within companies," said a senior research executive.

Little Consensus beyond Hybrid

The future of work is hybrid. Surveys indicate that the average office employee will work in person three to 3.5 days a week, reflecting the tug-of-war between employers and employees. Many employers want personnel in the office even more to instill culture and ease onboarding, and to increase collaboration and productivity. Pro-office voices are growing and companies—particularly in the financial sector—are increasingly demanding a full-time return to the office.

Employees, however, are happy to avoid time-consuming, expensive, and stressful commutes and to have flexibility to make daily schedules that permit a work/life balance. Flexible work schedules allow for more housing options, since commuting fewer days per week allows workers to choose housing further from the office—a significant benefit when housing costs have hit record levels. The taste of freedom gained during the pandemic will be difficult to take away. Firms, including Apple, that have tried to implement stricter in-office policies are getting pushback. "The longer people are away from the office, the harder it is to get them back," said one executive. "The biggest surprise for management teams is underestimating how hard it is to get people to go back."

More than a third of workers believe that companies demanding more office attendance are bluffing and will not act if employees do not comply, according to the recent Survey of Working Arrangements and Attitudes by WFH Research, an academic team that explores office issues. Workers feel that way because the labor shortage, especially in high-skill segments such as technology, gives them leverage.

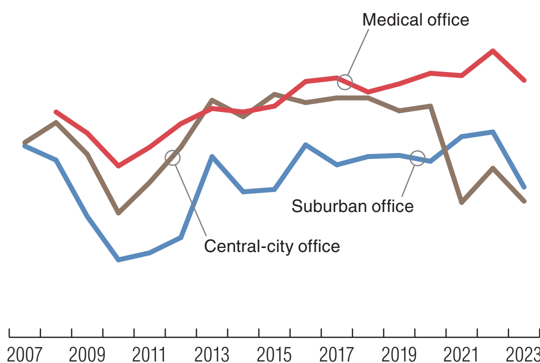
Would a recession change the dynamic? Some say yes. "Everyone's behavior is impacted by their wallet," said one office company executive. "Views about autonomy will change when unemployment is no longer 3 percent." Others disagree, noting that a recession could provide an excuse for companies to cut costs and reduce office space. "We're waiting on shoes to drop," said a commercial mortgage analyst. "For companies that are profitable, office space is not at the top of their mind, but in a downturn we might see some layoffs, which shifts the pressure to optimize expenses as it pertains to office space."

In the meantime, office usage has stabilized in the low–40 percent range nationally, though it varies significantly by location, according to card security firm Kastle Systems. "The question is what is going to unstick that," said an industry researcher.

Office as Destination

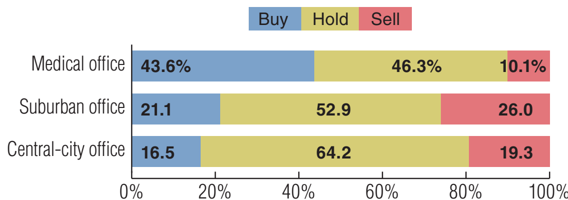
Office owners are dealing with the post-COVID paradigm on several levels. One crucial element is adjusting to changing demand of the physical space and office locations. Employers are putting thought and capital into improving the workplace experience. That involves not just healthy ventilation and lighting, enough space per person, fitness centers, food service, meeting rooms, outdoor shared areas, and quiet space to make

Exhibit 2-15 **Office Investment Prospect Trends**

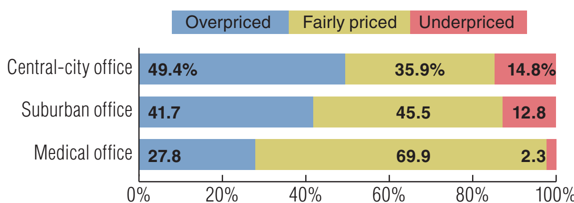


Source: *Emerging Trends in Real Estate* surveys.

Office Buy/Hold/Sell Recommendations



Opinion of Current Office Pricing



Source: *Emerging Trends in Real Estate 2023* survey.
Note: Based on U.S. respondents only.

phone calls, but also an array of services. For example, some employers have apps that help workers plan their day and physical requirements such as food, car service, or seat reservations while others provide concierge services.

"Companies should make the workplace a destination instead of an obligation," said a consultant at an architecture firm. This phenomenon is driving a bifurcation in performance between class A offices and class B/C offices. Demand for new buildings with the latest environmental standards and the newest amenities remains strong, while older buildings that lack desired amenities are losing ground.

Occupiers are voting with their feet and their wallets. JLL Research found that between the onset of COVID-19 and the second quarter of 2022, buildings delivered in 2015 or later had 86.8 million square feet of net absorption, while buildings older than that had negative net absorption of 246.5 million square feet. Most negative net absorption (195.5 million square feet) was in buildings erected during the 1980s and earlier. Meanwhile, CBRE Research found that buildings classified as "top-tier" garnered 3.8 percent rent growth in 2021 and 6.7 percent growth through two quarters in 2022, while buildings classified as "lower-tier" saw rents drop by 3.4 percent in 2021 and 1.1 percent through midyear 2022.

Experimenting with amenities and lease terms has helped revive the flex/coworking segment. "There's more of a corporate footprint in coworking; it provides more flexibility in terms such as lease length and amount of space—you can take a smaller footprint than you could elsewhere—and companies can pick up the amenities coworking has to offer," said a data firm executive. A bank executive said, "It allows us to provide amenity-rich space when we don't have critical mass in an area." The new emphasis on flexibility is enabling coworking to recover after being hard hit by the pandemic.

A related strategy, the "hub-and-spoke" model, which meant setting up remote offices in suburbs outside a central headquarters, has not gained traction. Few companies have a large-enough concentration of workers in any area away from a headquarters to justify an entire office. "No one's figured that out yet," said a senior researcher.

Impact on Capital

The overarching issue remains: how much will work-from-home (WFH) change demand for offices? Some industry players maintain that the new flexible work paradigm will be in the rearview mirror in a few years, since managers want workers in the office for reasons noted above and eventually will succeed in getting them back. Proponents also contend that for every company cutting space, they can point to others that are growing their office footprint. "Everybody is coming back to the office, it's just a matter of when," said one senior finance executive. "To me, the question is less about the lasting impact of COVID demand, and more the impact of the macro environment."

Pro-office proponents note that the total number of office-using jobs in the United States was 5 percent higher than pre-pandemic levels as of midyear 2022, and the growth is even higher in Sun Belt metro areas such as Austin, Atlanta, Dallas, Tampa, and Denver. The argument is that the reduction in demand caused by WFH will be offset by the growth in the number of office-using employees and the increased space taken up by design changes, i.e., more collaborative and open space. Not to mention that companies will be hard pressed to cut desks when on some days the entire workforce will be in the office. The idea that WFH will be a drag on office demand "is overrated. Looking at the data, the story is oversold," said one researcher.

Since the start of the pandemic, the U.S. office vacancy rate has increased by 200 to 300 basis points and sublease space has increased another 100 to 150 basis points—far from the forecasts of massive space cutbacks. Nationally, net absorption returned to positive levels in 2022. Much of the vacancy growth has been concentrated in gateway market downtowns such as New York City and San Francisco, where vacancy rates rose by 8 to 10 percentage points.

Suburban offices are faring better than downtown offices. Since early 2020, the office vacancy rate has shot up in downtowns while increasing only slightly in suburban areas. It's not that companies are moving offices from urban areas to the suburbs, but that fewer companies are downsizing in suburbs than in urban areas. "There [isn't] a flight to the suburbs; it is more that companies are making space adjustments in urban areas," said one industry researcher. Some of the suburban growth comes from coworking space that provides a harbor for employees to get away from home or work in small teams.

Whatever the location, a significant amount of office space is underused and potentially on the chopping block. Every corporate pronouncement about a return to the office has a corresponding announcement about permanent remote and/or hybrid options for employees. With daily office usage down from pre-pandemic levels, some researchers predict a drop in demand of anywhere from 10 to 25 percent. For example, a report by a New York University team forecasts that demand for Manhattan office space will plummet, prompting values to drop by 32 percent over the short term and by 28 percent over the long term. "Remote work really is a big and important deal,

Continued on page 64.

The Future Looks Bright for Medical Office

The U.S. health care system supports an insured population of more than 300 million people and represents over 18 percent of U.S. gross domestic product. The medical real estate that supports this industry generally falls into two categories: inpatient, or hospitals, and outpatient, or medical office buildings (MOBs). Occupied by medical tenants, MOBs are facilities where services and procedures are performed on an outpatient basis. These buildings may be on a hospital campus or attached to the hospital building. They may also be located out in the community in more convenient areas for patients to drive to. They might be occupied by practitioners of various types of specialties, ranging from urgent care to dialysis centers to ambulatory surgery centers and, of course, regular physician offices. They are generally purpose built for medical use and have features that attract medical tenants like a covered drop-off or a backup generator for emergency power.

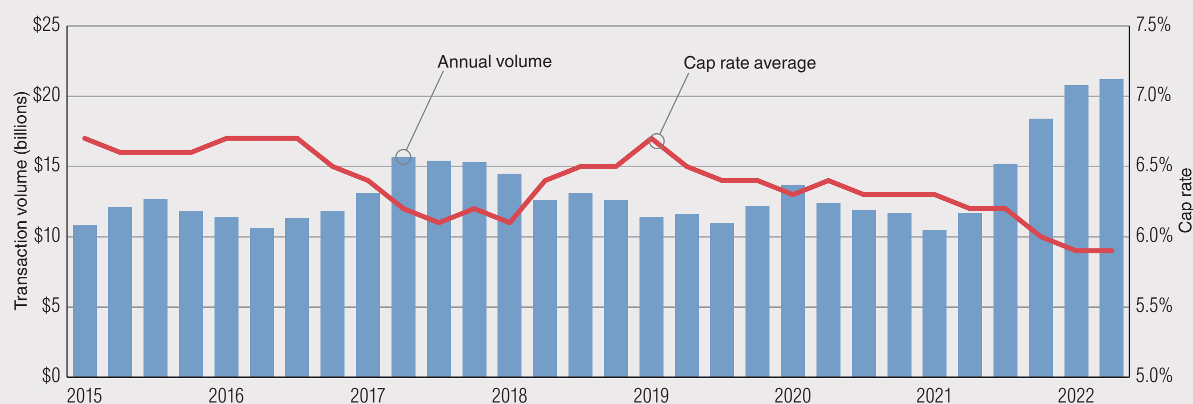
Due to the increasing number of insured people who followed the introduction of the Affordable Care Act of 2010, as well as an aging population, the already significant demand for medical services has continued to grow. In addition, advances in medical technologies have enabled the transfer of many inpatient procedures to lower-cost, more-efficient outpatient settings. The sector has also been shifting to a retail mindset, where hospital systems and providers look to attract new patients and build market share in new areas, contributing to the increased demand for high-quality medical space.

Tenants of medical office buildings tend to sign much longer lease terms than tenants of other types of commercial real estate—sometimes up to 15 or 20 years—and are much more likely to renew since moving too far away would jeopardize their local patient market share. This patient/provider dynamic and the increasing demand for space have resulted in remarkably stable performance across the sector. Renewal rates in the medical office sector are typically 80 percent or more and rent growth is very steady, typically ranging between 2 and 3 percent per year. These dynamics also translate into a long-term stable occupancy trend. Even in the wake of the financial crisis of 2008–2009, occupancy never fell below 90 percent. After the pandemic-related shutdowns, physician employment recovered remarkably fast and, despite the sudden halt of many services for a period, renewal rates increased.

Investors have also been shifting their view of the sector. Whereas previously it was considered so niche an investment that only specialists would invest in it, it is now recognized for how insulated it is and how resilient it is during market cycles.

With awareness of the fundamentals of MOBs increasing, sales volume has been growing dramatically over the last five years. Previously, most of the acquisition activity was attributable to health care–focused real estate investment trusts (REITs) and smaller, private investors. In recent

Medical Office Transaction Volume and Cap Rates, 1Q 2015–2Q 2022



Source: ©Revista, revistamed.com.

Note: Transaction volume is for trades valued at $2.5 million or more; figures are trailing 12 months, indicating annualized volume. Cap rate is average, trailing 12 months. Data believed to be accurate but not guaranteed and is subject to future revision.

years, many more institutional and diversified investors have entered the space. Transaction activity over the last year has grown to an average annual run rate exceeding $20 billion, with institutional private equity accounting for most of the activity. During this time, there has been significant compression in capitalization (cap) rates. Average MOB cap rates have compressed from above 6.5 percent in 2015 to below 6.0 percent in early 2022. Looking ahead, medical office transaction activity will face the same headwinds—rising interest rates, inflation, and a potential recession—as other real estate. However, with so many entities interested in investing and solid sector fundamentals, future activity will likely remain strong.

As of the end of 2021, there were over 36,000 MOBs in the United States comprising more than 1.6 billion square feet of space. This amounts to roughly $498 billion in market value. On a square footage basis, over half of the sector is owned by users of the real estate (hospitals, providers, and physician groups). The remainder is owned by REITs and private investors. This represents a substantial amount of opportunity for investors to take on more ownership.

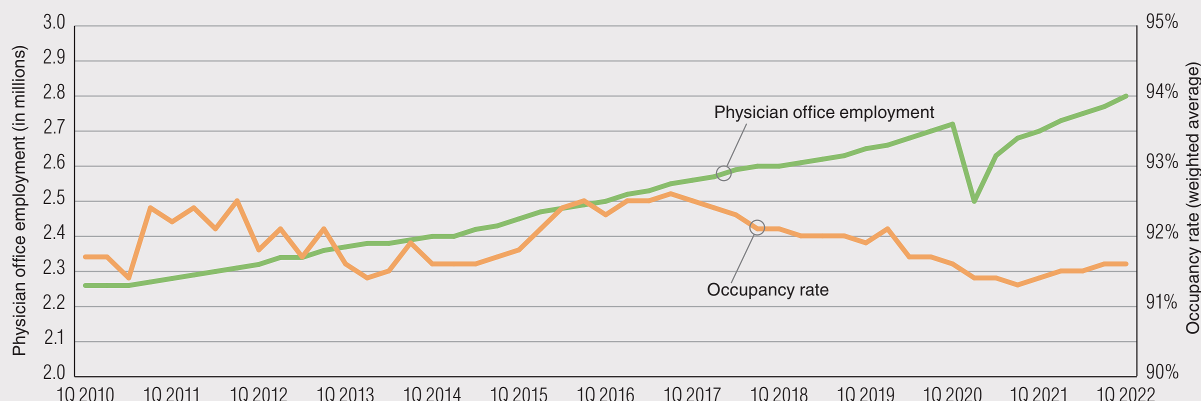
Inventory growth has remained stable for a number of years, with typical annual deliveries ranging from 1.5 to 2.0 percent of inventory. Most of the medical offices that are built are largely preleased before breaking ground; speculative construction is limited and geographically specific. Although hospitals and health systems continue to build and expand outpatient facilities on their hospital campuses, there is a growing focus on building off campus. In fact, 76 percent of the square feet started in the first half of 2022 was not on a hospital campus.

Historically, most of the construction activity has been self-developed by the hospital system or provider group; that has been shifting, however, with third-party developers accounting for more activity. Many of these projects developed by third parties are owned by the developer or partner investor. In 2021, 45 percent of outpatient square feet started was developed by third parties.

Looking ahead, many factors will continue to push demand for medical office space on an upward trajectory—the aging population and the growing number of insured people needing care; the increasing move by health systems and hospitals to locate services in more convenient, community-based areas; and advancements in health care technology and care delivery that require the space to support it. With reliable performance and very little speculative construction, combined with the availability of industry-specific data, medical office has been maturing into an attractive and stable commercial real estate asset class. This has captured the interest of the broader investment community, and their appetite for exposure has continued to grow. These dynamics bode well for the future and help insulate the sector against broader market cycles.

—RevistaMed

Physician Office Employment and Medical Office Building Occupancy, 2010–2022



Sources: U.S. Bureau of Labor Statistics; ©Revista, revistamed.com.

Note: Revista data believed to be accurate but not guaranteed and is subject to future revision.

Life Sciences

The life-sciences industry is flourishing amid record levels of venture capital funding, continued investments in research and development (R&D), and burgeoning investment in local ecosystems that will bolster long-term industry expansion in core clusters and emerging markets alike.

Commercial laboratory real estate has been in high demand as life-sciences companies expanded and scaled operations over the last two years, driven by record venture capital funding and strong revenue gains among select public companies. Real estate investors followed in similar fashion, targeting opportunities within the sector as the appetite for alternative real estate investment opportunities accelerated while the office sector outlook remained uncertain due to lagging return-to-office momentum.

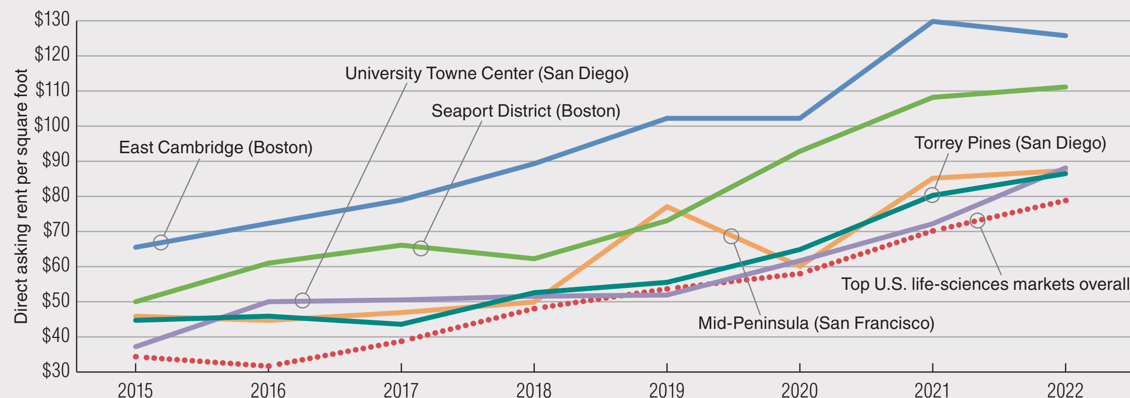
More recently, venture capital flows are being closely watched as macroeconomic choppiness continues to weigh on investors. Uncertain public market performance is driving conservative investment in 2022 compared with more aggressive activity in 2021 when venture capital flows to biotech and pharmaceutical startups hit all-time highs. Cash preservation and cautious expansion activity have colored the backdrop of real estate demand for lab space at midyear 2022. Nonetheless, the industry continues to thrive amid an environment of uncertainty because of its long-term promise.

Venture Capital on Solid Footing Despite Uncertain Macroeconomic Environment

Venture capital flows are a key driver of demand for lab space and are highly correlated with leasing activity; a capital event typically leads to a commercial lab lease transaction within six to nine months. In 2021, U.S.-based pharmaceutical and biotech startups received record levels of funding, totaling $45 billion, far exceeding the average of $15.3 billion annually from 2011 through 2020 and driving a significant increase in demand for lab space. Capital flows have cooled somewhat in 2022 but remain elevated against historical trends with year-to-date funding totaling $22 billion, above the $20 billion full-year total achieved in 2019.

While the COVID-19 pandemic may have shined a brighter light on the opportunity to invest in these startups, the industry had been gaining momentum prior to 2020. The convergence of science and technology has been the ultimate growth driver in this industry for the last decade, leading to quicker development of breakthrough drugs and innovative therapies. The added volume of funding served only to accelerate activity faster than what occurred before the pandemic. This cycle was marked by a stronger appetite for early-stage and preclinical startups, creating frothy

Top Life-Sciences Submarkets versus Top U.S. Life-Sciences Markets Overall, 2015–2022



Source: JLL Research. ©2022 Jones Lang LaSalle IP Inc. All rights reserved.

Note: Top U.S. life-sciences markets overall include Boston; San Diego; San Francisco Bay area; Greater Washington, D.C.; Research Triangle Park, North Carolina; Seattle; and Philadelphia, which represent 80 percent of the total U.S. life-sciences market.

market conditions while underscoring venture capitalists' appetite to invest in this innovative sector.

In the near term, investors will focus more on late-stage companies, or companies that have moved through phase-one or phase-two clinical trials, taking a more discerning approach while the focus remains on preserving cash amid an uncertain economic environment. Nonetheless, there is more capital to deploy than ever before as total fundraising among venture capital firms reached $120 billion in the first half of 2022, nearly matching the full-year fundraising efforts of 2021. This capital will drive continued company expansion, new company formation, and steady demand for lab space.

Attractive Property Fundamentals Drive Continued Real Estate Investment

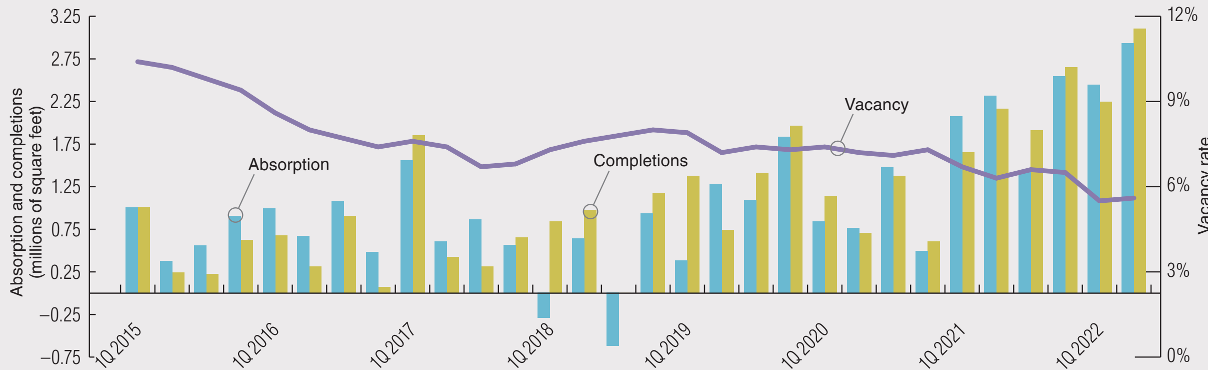
Real estate fundamentals remain very tight for lab space, despite accelerated development activity over the last two years. Aggregate leasing activity across the top life-sciences cluster markets1 reached a new high in 2021, exceeding 18 million square feet, or 15 percent of existing inventory. The momentum continued through midyear 2022, despite early indications of macroeconomic challenges playing out in some pockets. While 2021 was an unprecedented year in terms of real estate demand, it was more of an outlier driven by the sense of urgency that tenants felt that space was running out while they were flush with capital.

Developments underway or being converted totaled 26.8 million square feet at midyear 2022, 40.4 percent of which has been pre-leased. When planned and proposed projects are included, the volume of development swells to 70 million square feet. Many of these planned and proposed projects will not kick off until there is more certainty surrounding economic conditions or costs moderate amid high inflation. Speculative development has never been quite this active within the space. Due to rapid tenant growth, investors and developers had to move quickly to capture demand, especially given speed-to-market needs of growing companies. A majority of leasing activity was driven by expansions and new leases, accounting for 62 percent of leasing volume since the onset of the pandemic, reflecting overall industry growth trends.

The quantity of sublease space began to tick up in 2022 as uncertainty seeped into the market. By midyear 2022, sublease availability climbed to 2.1 percent of inventory, totaling 3.2 million square feet, and up 60 basis points from the most recent low in 2018 when sublease availability hit 1.5 million square feet. The volume of new development boosted overall lab inventory through this cycle, thus driving only a minimal increase in sublease availability on an overall basis. This recent sublease activity is not all unexpected, as the scarcity of space amid a competitive leasing environment last year drove some tenants to overcommit with intentions to release a portion of space to the sublease market for a short period of time, with plans to reabsorb following future expansion activity.

Continued next page.

Life-Sciences Real Estate Supply and Demand, Top U.S. Markets, 1Q 2015–1Q 2022



Source: JLL Research. ©2022 Jones Lang LaSalle IP Inc. All rights reserved.

Note: Top U.S. life-sciences markets include Boston; San Diego; San Francisco Bay area; Greater Washington, D.C.; Research Triangle Park, North Carolina; Seattle; and Philadelphia, which represent 80 percent of the total U.S. life-sciences market.

Lab real estate fundamentals remain relatively tight because of steady company formation and expansion over the last two years, easily keeping pace with robust development activity. The top life-sciences clusters in aggregate recorded lab vacancy of 5.6 percent at midyear 2022, reflective of tight market conditions. Market equilibrium is generally when vacancy is between 8 and 10 percent; some of the sublease space coming online is helping create opportunity for tenants trying to manage growth in a scarce real estate environment.

New development, scarcity of product, and active tenant demand trends drove rents to all-time highs across the commercial lab market. Asking rents increased 45.4 percent on an absolute basis from the first quarter of 2020 through midyear 2022, reaching an average of $79.08 per square foot on a triple-net (NNN) basis. The core life-sciences clusters saw rents soar well above the market average: Boston's East Cambridge saw NNN asking rates reach $125 per square foot at midyear 2022, an increase of 23 percent since 2019; San Diego's UTC corridor recorded the highest rate of acceleration, with rents increasing 69.7 percent since 2019 to an average NNN asking rate of $88.13 per square foot. The pace of rent growth is anticipated to slow amid a potential slowdown but remain strong overall.

Life Sciences Is a Resilient Long-Term Opportunity

Innovation is happening at a more rapid pace than ever before, opening up limitless possibilities for the advancement of medical and life sciences. Novel therapies within the realms of personalized and regenerative medicine will continue to scale, revolutionizing the industry. The seeds of growth begin with the research and development activities happening in innovative life-sciences market clusters, where science, technology, institutional support, and funding all meet to drive progress.

The most mature market clusters are generating the greatest level of demand and investment activity, but expansion into emerging markets is starting to take firmer hold. As institutions, universities, and local communities invest in the development of innovation communities, talent pipelines, and incubator space for growing startups, more markets will capture the growth of the life-sciences industry.

Top clusters have evolved over several decades, but emerging markets planting the seeds of industry infrastructure today will see the benefit over the long term. The convergence of science and technology is happening within innovation communities across markets, with pockets of growth emerging in Houston, Boulder, Atlanta, and Dallas, among others.

The long-term view on the life-sciences sector is quite positive. The advances in science, the continued flow of capital, and the development of ecosystems in markets outside the core clusters will bolster the industry's steady expansion over the long term.

—JLL

Continued from page 59.

and its effects are strongly felt in the office real estate sector," the report notes.

The ultimate impact of WFH on office demand is likely to fall somewhere between the extreme estimates, varying by location and property quality. Demand will be strong in growing markets with rapid job growth, and for A-quality assets. B/C-quality assets will see the biggest drop in occupancy and rents. Asking rent growth will remain weak, and expenses will continue to rise, so net income growth will turn negative in properties that are dated or in need of capital improvements.

Prices Softening

Coming at a time when rising interest rates and mortgage coupons have put a dent in transactions and pricing in all property types, investor concerns about the future of office count as a double whammy. Property values dropped 10 to 20 percent as of midyear 2022 and capitalization rates are likely to keep rising as interest rates, the cost of debt, and risk premiums all move higher. Office values will fall more than other property sectors such as multifamily in which rising rents counterbalance higher cap rates. Plus, debt is becoming more constrained as lenders and bond investors are wary of the potential for increased risk of default if office tenants downsize. "There is uncertainty in the cost and access to debt finance [for office]," noted one executive.

The *Emerging Trends* survey confirmed that industry participants are conflicted about pricing, favoring niche sectors such as medical office, and expecting that suburban offices will retain value better than center city offices.

Conversions to Rise, but . . .

As tenants eschew older, lower-quality stock, that means that more office buildings are candidates for conversion. Obsolete

office buildings around the country are being converted to multifamily, industrial, medical offices, life sciences, and other uses. States such as New York and New Jersey are exploring legislation to ease the entitlement process around conversions. It makes perfect sense in Manhattan, where the office vacancy rate has shot up in Midtown as tenants chase new buildings in Hudson Yards and housing is in critically short supply. For example, New York developers Silverstein Properties and Macklowe Properties are converting office towers to apartments, and Hines is converting a tower in Salt Lake City.

Even so, conversions remain sporadic relative to the new construction—nearly 150 million square feet of office space is under construction nationally, per Yardi Matrix—due to logistics. Conversions are costly and the stars need to be aligned with the right building configuration, floor plates, neighborhood amenities, and demand, not to mention considerations such as tax structure. Each conversion stands on its own. Notes Moody's Analytics: "The office-to-apartment conversion trend will likely be a minor one, unless office values and rents see some major, permanent decline after the pandemic. Finding an obsolete office building at the right price and asking rents, with high vacancy and the right floor plates to convert into an apartment building is great in theory, but hard to execute in today's market."

New Phase for Offices

It may be a cliché, but the pandemic exposed cracks and exacerbated trends as much as started them. Dissatisfaction with offices did not start in 2020. Worker satisfaction was at an all-time low in 2019 because of factors such as densification, small workspaces, and mismanaged seating. "Job one is to correct what was broken in the workplace," said the office consultant. "We need to get the topic out of cocktail banter and into science of how to create the best outcomes."

The key for office owners is to focus on facilitating the productivity of tenants' workforces by improving the health, safety, and functionality of buildings. "I think we who are now in the real estate industry must realize we are no longer selling a product but selling a service," said one analyst. "Those are different beasts. Any real estate investor that is not taking seriously the possibility that the market is being fundamentally upended is going to get a real shock. Office owners must understand the customer like never before; if not, they will have a problem."

Retail

It might be easy to assume that the consensus outlook for the retail sector in 2023 would be glum, given the outsized challenges that retail has faced in recent years and with economic uncertainty on the horizon. But instead, there is a general sense of wary optimism, though not without considerable concern about the direction of the overall economy.

A Shift from Structural to Cyclical Challenges

Not surprisingly, when market participants were asked about the greatest challenges facing retail ahead, economic conditions garnered the most responses. Oversupply and e-commerce followed, but we should note that those issues consistently led survey responses in recent years. "Obviously, we are all hyper-focused on the economy right now," one top real estate analyst told us. "But for years, the biggest challenges to retail real estate have been deep structural ones related to e-commerce. The question now is whether the pandemic accelerated a lot of those changes, with much pain, and if we are past the worst of the disruptions."

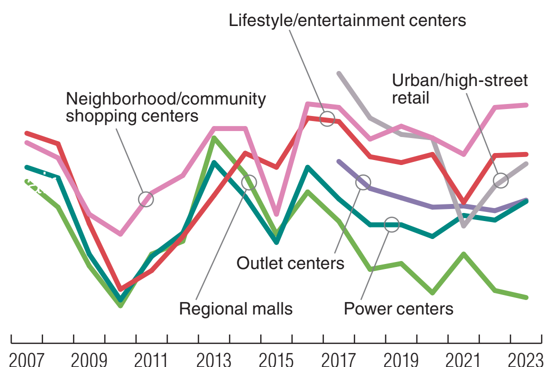
This shift in mind-set may be difficult to understand for those accustomed to the popular pre-pandemic narrative of "retail apocalypse." It reflects not just the depth of the challenges the sector has faced, but the strength of the rebound—albeit an uneven one—that has been taking place since 2021.

As one institutional landlord put it, "Retail has always had to adapt faster than other property types, simply because the consumer space is always evolving, and it is doing so at a faster pace than ever. But as much as those of us in the sector have spoken about retail resiliency in recent years, I am not sure many of us realized the true depth of that resiliency until the pandemic."

That resiliency is best demonstrated by the wild swing in retail demand that has occurred since 2020. The sector set records in terms of bankruptcies and closures in the wake of the pandemic. COVID-19 accelerated the demise of dozens of chains that had already been struggling. Other chains accelerated right-sizing plans, expanded already planned strategic closures, or withdrew from the marketplace completely.

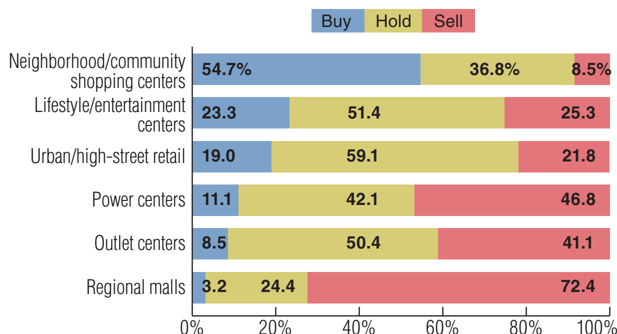
Meanwhile, the categories hit hardest were those that had been e-commerce-resistant bright spots of the retail landscape prior to the pandemic. Service retail from restaurants to fitness clubs and from experiential to entertainment concepts faced the greatest challenges. Though quick service restaurants (QSRs) with drive-throughs fared far better than their dine-in counterparts, more than 110,000 restaurants failed in the first six months of the pandemic alone. This sector would not see overall sales rebound until March 2021 as vaccines became widely available. For an industry dominated by small business (including franchisees) and already operating on narrow margins, COVID was an unprecedented disaster.

Exhibit 2-16 **Retail Investment Prospect Trends**

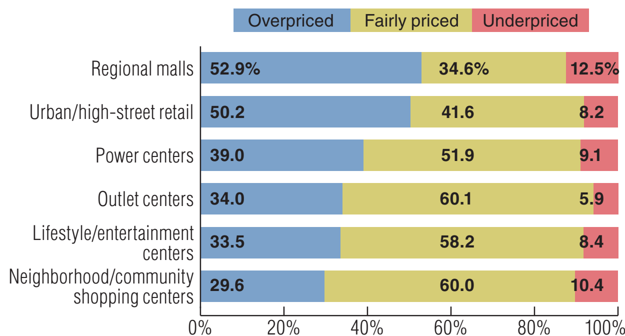


Source: *Emerging Trends in Real Estate* surveys.

Retail Buy/Hold/Sell Recommendations



Opinion of Current Retail Pricing



Source: *Emerging Trends in Real Estate 2023* survey.

Note: Based on U.S. respondents only.

Though a combination of government aid (PPP loans), operator grit, and landlord largesse kept the damage from being far worse, it is critical to remember that the pandemic disproportionately hammered small businesses across all retail sectors. For many large national credit chains, this would become an opportunity to aggressively grow market share heading deeper into 2021.

This was only further fueled by outsized spending. Monthly retail sales had averaged 2.9 percent annual growth in the 20 years preceding the pandemic. This metric turned negative for the first three months of lockdown. But consumers quickly reallocated dollars that would have gone toward services, travel, and entertainment elsewhere (those sectors would not see a rebound in spending until the arrival of vaccines).

The impact of an unprecedented $6 trillion in stimulus would only further fuel what would become a retail sales holiday. By March 2021, growth was in the double digits, averaging 22.6 percent over the next 14 months. Sales numbers only began to falter in May 2022 as the impact of inflation started to take a bite out of consumer spending.

The stimulus also led to a surge in asset prices from homes to equities; 2021's booming stock market led to a round of retail initial public offerings (IPOs), with multiple newly public retail concepts announcing robust growth plans. Business investment surged, as did new business formation. All these factors would spur retailers to their most aggressive growth levels in the better part of a decade.

This includes dollar stores and discounters, which have driven retail growth tallies for the better part of the last decade. But the automotive, convenience stores, cosmetics, fitness clubs/gyms, grocery, hobby stores, home furnishings, off-price apparel, pet concepts, shoe stores (athletic), and sporting goods categories have all accelerated expansion plans.

Grocery remains white-hot, with growth bolstered by aggressive expansion plans from newer market entrants like Amazon Fresh, Aldi, and Lidl. Off-price apparel has returned to robust growth, with players like Kohl's and Burlington experimenting with smaller-format stores to facilitate expansion into new markets. "Athleisure" and new digital-native apparel brands have ramped up brick-and-mortar growth even as department stores and many legacy players are still facing challenges. Perhaps most surprising of all is the massive surge in restaurant growth. Fueled by QSRs and new fast-casual concepts, major chains were poised to add as many as 7,000 units through midyear 2023. Dominant players like Starbucks, Chipotle, Chick-fil-A,

McDonald's, and Dunkin have all ramped up growth, and intensified competition for coffee, chicken, and new Asian concepts is expected.

Of course, not all retail sectors are in growth mode. Theaters remain deeply challenged and we anticipate consolidation ahead. Retail banking continues to deal with digital disruption, driving less need for overall branches and smaller footprints. Drugstore chains are reducing store counts, though online pharmacy has yet to emerge as a major disrupter. Department stores, particularly outside of the luxury sphere, still largely need to downsize and evolve their models to remain relevant. But 2021 saw the lowest number of retail chain closures since 2018. Announced closure plans for 2022 (if they hold) could account for the lowest numbers in a decade. New store openings have significantly outpaced closures since 2021 (the market recorded its strongest occupancy growth numbers in five years and this pattern should hold through the remainder of 2022).

Can Retail's Recent Rebound Withstand a Recession?

The real question is whether the strong rebound can hold heading into 2023 as the economy—coming off stimulus-induced highs that also unleashed a whiplash of supply chain and labor disruption, 40-year high inflation, and growing concerns about a recession—can weather the storm. As one retail real estate analyst put it, "While there's still hope the Fed can engineer a soft landing, the real question for retail is how well it could weather a garden-variety recession and whether it would derail the sector's recovery."

As of 2022's midyear point, that recovery still appears to be in force. One leasing representative told us, "We're still seeing robust tenant activity, but deals are starting to take longer to get through committees. We're expecting things to slow down in the months ahead, but it hasn't happened yet." Meanwhile, a site selection specialist for a major QSR chain advised, "Our biggest challenge is still finding quality sites in our target markets. Class A space is in short supply. Most of what is available is substandard space."

According to the CoStar Group, by midyear 2022, national vacancy for community and neighborhood centers had fallen to 6.6 percent, well below the reading of 6.9 percent recorded in the fourth quarter of 2019. Likewise, power center vacancy in the United States fell below pre-pandemic levels as of the second quarter of 2022 (4.7 percent versus 5.3 percent). Unanchored strip center vacancy has followed a similar trend. But this rebound has been uneven; it has overwhelmingly favored class A projects, especially those in primary or high-population growth markets. Above all, it has favored the suburbs.

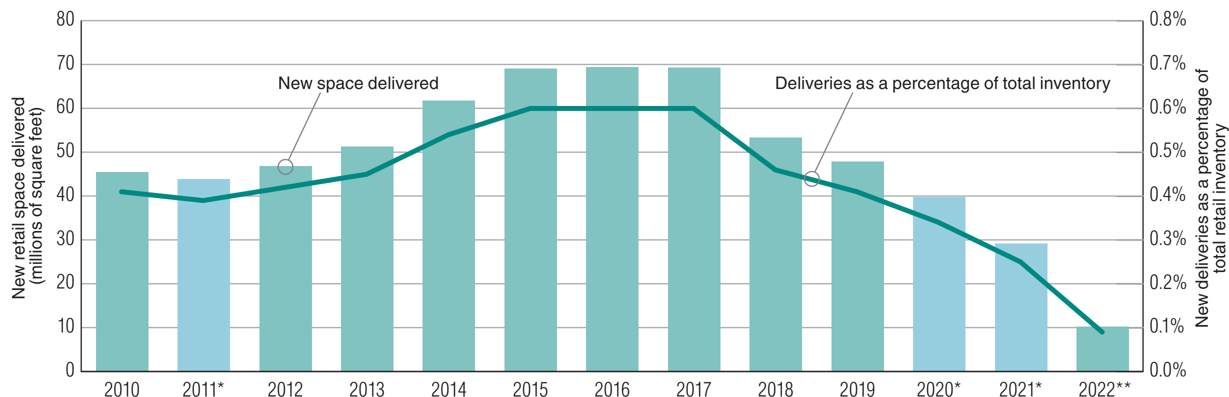
The pandemic accelerated many of the issues facing urban retail in high street or central business district (CBD) locations. With tourism levels still below pre-pandemic norms for many cities and a diminished pool of office workers, most (though not all) high street retail districts continue to struggle to return to previous foot traffic and sales levels. But the most pronounced issue for urban markets is that of ground-floor amenity retail in office towers. While workers continue to slowly trickle back to the office, daily occupancy levels remain 30 percent to 45 percent below pre-pandemic norms on any given day in most downtown markets. This space will remain challenged until either higher levels of daytime occupancy return or rent models are updated to deal with this new reality.

Meanwhile, the mall sector continues to face vacancy levels well above pre-pandemic readings. However, as one mall analyst told us, "It is important to remember that nowhere is the bifurcation in performance greater than in the mall world. Class A and trophy malls account for roughly one-third of the inventory, but 80 percent of the sales. Those properties have benefited from flight to quality as well as been the focus of nearly all the growth from new clicks-to-bricks (digital-native brands opening physical stores) and experiential concepts, as well as a substantial influx of food and beverage concepts."

The marked increase of clicks-to-bricks comes as welcome news, particularly to mall, lifestyle center, and high street landlords. Though a much-discussed trend in industry circles prior to the pandemic, it had accounted for little actual occupancy growth outside of a few key markets. That is no longer the case. Heightened online competition and rising customer acquisition costs in the digital arena are part of the story behind this acceleration. But we also see it as reflective of the natural evolution of retail in the "phygital age." As one REIT executive put it, "Clicks-to-bricks is finally driving real growth, and not just in the same handful of high street and trophy mall locations. It's only going to intensify going forward. The new formula for brands is to start online and inevitably most will need some sort of physical presence."

Though class B and C malls remain deeply challenged, another trend that the pandemic vastly accelerated has been the movement toward mixed-use redevelopment and densification. Of the roughly 1,300 malls in existence prior to the pandemic, over 500 are undergoing some level of mixed-use redevelopment. This ranges from full-scale reenvisioning of projects to replacing vacant department store space with multifamily, hospitality, or office or medical office. Since 2018, developers have demolished over 130 million square feet of space to make way for redevelopment. The lion's share of this stock consisted of vacant department store and mall space.

Exhibit 2-17 **New Retail Space Delivered and Deliveries as a Percentage of Total Retail Inventory**



Sources: CBRE Econometric Advisors; CoStar Group.

*Indicates market record at the time for lowest level of new construction to come on line.

**Through second quarter.

The other significant factor aiding the recovery of the retail sector has been historically low development levels. The sector has set records in this regard for three consecutive years and is on track to do it again in 2022. Less than 30 million square feet of new retail space came online in 2021, with the market on track to deliver roughly 20 million square feet in 2022. With roughly 11.87 billion square feet of total retail space in the United States, this reflects an increase in inventory of 0.25 percent. This metric has not surpassed the 0.60 percent level in 15 years. Nearly all new development has been in strong population growth areas in the form of retail's strongest-performing asset class, grocery-anchored centers.

Investment Outlook

Grocery-anchored assets and net lease retail opportunities have dominated the retail investment landscape for most of the past decade. Do not expect this to change in 2023. This year's *Emerging Trends* survey respondents overwhelmingly responded that the best opportunities in retail remain grocery-anchored community and neighborhood centers—particularly those in primary or high-population growth markets in the Sun Belt or Mountain states.

Meanwhile, net lease retail also remains in high demand, with survey participants particularly citing fast-food properties with drive-throughs, assuming that long-term leases are in place to gold standard, national credit tenants. The challenge one broker told us is one of available product: "Everyone is chasing the same thing."

Another investor told us, "Stand-alone retail and community centers are good opportunities, but don't have pricing discounts. Lifestyle centers are the best opportunities as they have a mix of high viability with low valuations."

There is also a growing tide of respondents looking for opportunistic plays that may arise from changes in the debt markets. While plenty of challenged assets remain across the wide spectrum of retail property types and geographies, the real question for these buyers is whether tighter debt markets will depress prices on high-quality assets.

Meanwhile, the trend of mixed-use redevelopment and densification playing out in the mall arena is likely to expand to other property types. Said one acquisitions director, "We are actively looking for class B properties in class A locations where there is an opportunity to repurpose lifestyle, power, even grocery-anchored centers to mixed-use live/work/play projects."

We anticipate an uptick in retail investment across the board in 2023. As one institutional investor told us, "Everyone is chasing industrial and multifamily, and there is greater uncertainty emerging around office. Retail pricing is going to offer better returns, but you need to know what you're doing. That said, I think there is greater clarity in retail now than there has been in a long time for investors."

Hotels

The lodging sector has made significant strides in its recovery since the height of the pandemic, highlighted by strong year-

over-year improvement in revenue per available room (RevPAR). The improvement in RevPAR was driven in large part by strong increases in average daily room rates. Increased levels of both leisure and group demand and—to a lesser extent—individual business travel have been instrumental in driving the recovery. According to STR data, monthly RevPAR had surpassed 2019 levels in every month from March through July 2022.

Following a soft first quarter 2022, group segment performance improved dramatically year-over-year, suggesting a slow but steady return toward pre-pandemic levels. The reemergence of in-person conferences and meetings, along with the beginnings of a return of the all-important midweek business traveler, has had a significant impact on recovery in the top 25 hotel markets across the United States. As a result, year-over-year improvement in key performance indicators has been significantly stronger in these top 25 markets relative to the rest of the United States.

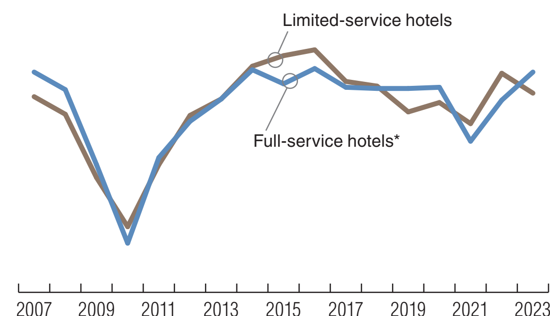
Midweek Travel Starts to Normalize

In the summers of 2020 and 2021, the leisure traveler was the primary driver of lodging's initial rebound, predominantly affecting drive-to markets and resort destinations; however, it is unclear whether this shift in demand will be permanent as international destinations continue to open back up and offer alternatives for the leisure traveler. These markets significantly increased in popularity during the pandemic due to their built-in outdoor activities (e.g., beach, mountains, and so on), which are conducive to social distancing. As international outbound travel continues to increase with domestic travelers becoming more comfortable taking bigger, longer-distance trips again, this previously built-up demand in drive-to leisure and resort destinations may be disrupted.

Midweek travel patterns have begun to show promising strides toward a more sustained recovery, largely propelled by the group and business segments. Airlines have reported that while they still lag pre-pandemic levels, corporate travel spending has reached its highest levels since the onset of the pandemic. That said, recent reductions in capacity by many major airlines, due to an inability to safely staff flights, may have a negative impact on the timing of recovery for hotels catering to corporate travel in major metro markets.

While many organizations and their employees have become accustomed to working remotely, they have also capitalized on the opportunity to reconvene in person to work more efficiently and maintain team chemistry. Organizations are also leveraging the return of in-person group meetings and conferences to

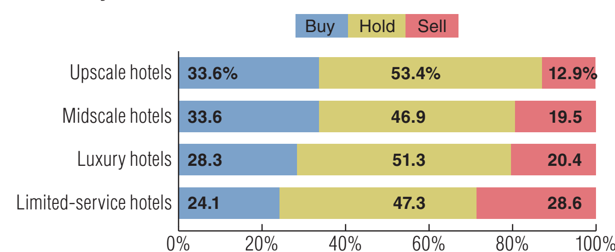
Exhibit 2-18 **Hotel Investment Prospect Trends**



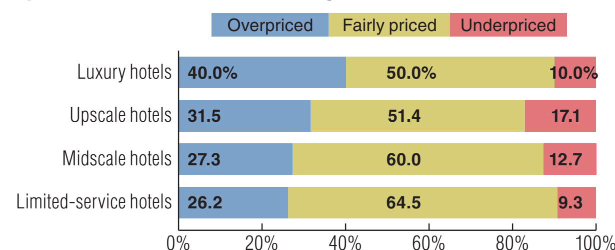
Source: *Emerging Trends in Real Estate* surveys.

*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 2023* survey.

Note: Based on U.S. respondents only.

connect with colleagues and clients, all in one place, for the first time in more than two years.

To date, remote work has reduced the frequency of traditional business travel; however, it has also blurred the lines between work and personal life, which, in turn, has blurred the lines between business and leisure travel. This has driven an increase

in a unique guest demographic—the "bleisure" traveler. Some people traveling for work have taken advantage of their newfound flexibility and now consider adding a few days, or even weeks, to their business trips to further explore a given destination, whether it be on their own, with a significant other, or with family. Similarly, workers with the ability to work entirely remotely may choose to stay in a destination for an extended period and work from there. This may end up helping to offset any potentially permanent fallout from traditional business travel demand.

Recovery in Top 25 Markets

Hotels in highly dense urban markets experienced the greatest decline and slowest initial rebound during the downturn. The initial uncertainty surrounding the pandemic, and the government's response, resulted in a dramatic shift in demand away from urban cores and toward drive-to leisure markets and resort destinations, which, as a result, rebounded the most quickly. With pandemic-related regulations and restrictions largely being phased out, urban markets are getting closer to fully reopened and experiencing recent surges in lodging demand, giving pricing power to the operators. So far, the resurgence in demand in these markets is attributed, in descending order, to leisure, group, and business travel.

Inbound international travel has contributed to the recovery in several of the top 25 markets and is expected to play an even larger part in the recovery through the remainder of 2022 and into 2023. The U.S. Travel Association predicts that international arrivals will total 47.9 million by the end of 2022 and 65 million by the end of 2023, representing 60 and 82 percent of 2019 inbound international traffic levels, respectively. The increase in international arrivals in 2022 represents a 117 percent increase over 2021.

Inbound international travel restrictions were lifted in early summer 2022, but the resultant positive impact on inbound travel is not expected to really emerge until at least the fourth quarter of 2022. While summer vacationing was a driver of strong hotel performance domestically for the second summer in a row, the return of inbound international travel will be a key driver in propelling the lodging sector's recovery through the fall months, the holiday season, and into 2023 for top gateway cities.

After recovery in smaller markets outpaced the top 25 markets in 2020 and 2021, the acceleration in performance has shifted back to the top 25. Performance in the top 25 markets is trending upward, although recovery is uneven across these markets. According to CoStar, New York, Boston, and Los Angeles have experienced the most robust year-over-year recovery so far in 2022, while markets such as San Francisco substantially lag pre-pandemic performance levels.

New York has benefited from increased demand in all areas, particularly the early stages of international and business travel in the first half of 2022, followed by international and domestic leisure over the summer months. Improvement in Los Angeles was propelled by a higher concentration of luxury rooms, which were able to maintain, or even exceed, pre-pandemic rates with less price-sensitive guests. Boston's demand resurgence took off in the second quarter of 2022, primarily driven by increased levels of leisure and group travel. CoStar reports that Boston's market RevPAR through the first half of 2022 reached 88 percent of 2019 levels.

San Francisco's struggles have been primarily tied to slower recovery in international traffic and recent changes in the tech workforce, the city's primary industry. Prior to the pandemic, travelers from China made up the majority of San Francisco's international visitations. With nonessential overseas travel still banned in China as of the late September 2022 publication of this report, it is uncertain when San Francisco will experience the same benefits from inbound international traffic as other markets. The outlook for business traffic in San Francisco also is unclear, as the tech workforce has largely shifted to hybrid and remote working models.

Condition of the Labor Market

In the early stages of the pandemic and prior to the rollout of vaccines, thousands of workers in the lodging industry lost their jobs through furloughs, layoffs, or permanent property closures. The industry had also historically relied on an immigrant workforce and international contract (temporary visa) workers, which was initially halted by government and international travel restrictions. This reduction in labor forced properties to adjust their operating models and scale back service offerings, most notably daily housekeeping, room service, and restaurant operations.

Following an efficient vaccine rollout nationwide, leisure travel recovered relatively quickly, driving occupancy and nightly room rates to levels that allowed properties to once again support an increased workforce. However, hotel employees did not return with nearly the same enthusiasm as travelers did. These former industry workers had found other jobs and, in many cases, higher pay, increased benefits, and greater scheduling flexibility.

More than two years later, the effects of the spontaneous displacement of these workers are still being felt in hotels across the United States. According to the Bureau of Labor Statistics,

July 2022 employment levels in the accommodations (lodging) sector remained 20 percent below February 2020 (pre-pandemic) levels. Hotel operators introduced incentives such as sign-on and referral bonuses, increased pay, and expanded benefits and scheduling flexibility, but they were still unable to attract an adequate number of employees to support the current consumer demand for lodging.

Higher costs of living further pushed hourly wage workers out of the primary markets, and it remains unclear if they will ever return. While urban markets are finally starting to see increased demand for lodging, operators are not able to keep up with the guest volume potential due to continued staffing shortages. Properties have raised room rates on the reduced demand they can support, while service offerings remain limited, tainting guest satisfaction and blurring some hotels' value proposition.

Capital Markets and Transactions

In the early months of 2022, buyers were eager to capitalize on the sector's performance recovery as weekly travel patterns started to normalize and urban markets started to show promising strides in recovery. The pent-up buyer demand had begun to translate to increased deal activity in the second half of 2021 and continued through mid-2022, with many institutional funds needing to place raised capital. According to Marcus & Millichap, in the 12-month period ending June 2022, the number of deals completed was up over 40 percent from the prior 12 months. Cap rates have compressed for both full-service and limited-service hotels since 2021, while prices across hotel asset classes have climbed more than 10 percent, as reported by MSCI Real Assets.

Although limited-service hotels represented the bulk of the sector's deal volume through most of the pandemic, deal flow for full-service hotels has started to bounce back, particularly with premium-branded assets in primary metro markets, as well as in resort locales. According to CoStar, transaction volume for full-service assets in the first half of 2022 increased 7 percent from the same period in 2021, compared with a 1 percent decrease in limited-service deal volume. If business travel continues to recover, the focus on full-service assets in historically successful metro markets is expected to increase, since these investments often offer more value-add levers for a buyer to pull.

Individual asset deals have also proved more favorable than portfolio deals. This trend is likely to continue as recovery timelines across individual markets remain uneven. Improvement in RevPAR is driving down delinquency rates, which, in turn, has decreased instances of distressed sales.

More recently, transaction activity has started to wane with the increased cost of debt fueled by higher interest rates. The Fed's implementation of tighter monetary policy has prompted lenders to adjust rates and widen spreads. With speculation of an impending recession, debt availability has become limited and heavily dependent on characteristics specific to both the asset and the borrower. In addition, lenders may become more averse to lodging assets in drive-to leisure destinations and more enthusiastic about assets in traditional gateway markets, if group and individual business travel continues to increase. Borrowers with a proven track record in hotel investment, as well as strong lender relationships, will have a competitive edge.

The impacts of climate change are becoming increasingly more apparent with the increased rate of natural disasters, flooding, and abnormal weather patterns. As a result, insurance premiums have risen in regions with high risk. These premiums have been more heavily factored into underwriting, affecting both debt and equity investment decisions in locations where these higher risks exist.

Markets to Watch

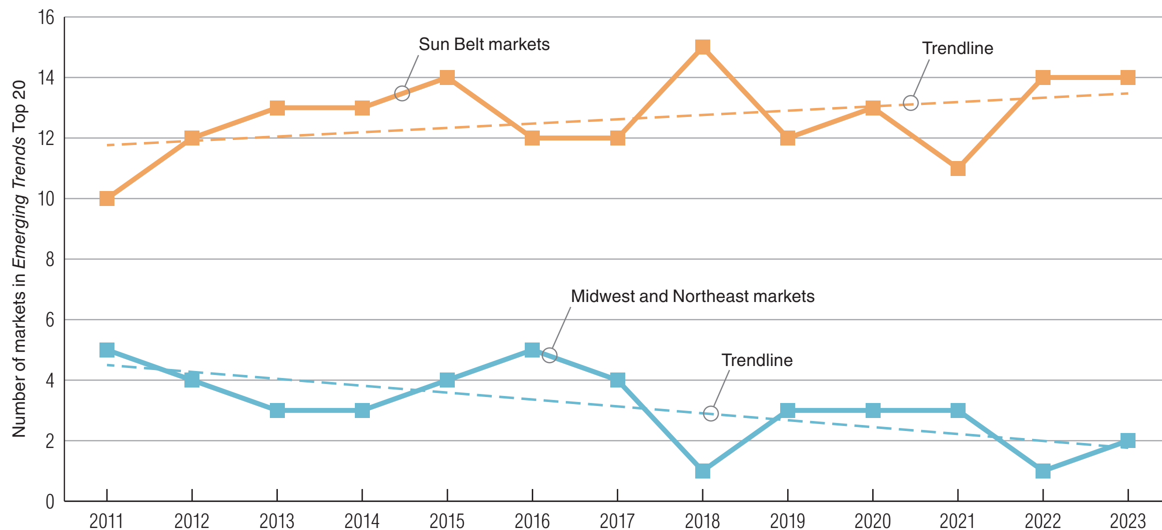
"There's always a new bull market somewhere. You've just got to go find it."

Our report this year highlights two sometimes-contradictory property market trends: aspects of the industry are "normalizing" or reverting closer to their pre-COVID patterns, while others appear to have sustained permanent shifts to a "new normal" as the pandemic induced changes in how and where we use different types of properties. These same patterns are playing out in how real estate professionals view prospects in the 80 markets tracked for this report.

Reflecting the "normalizing" trend, almost every market in the country received lower ratings for both investment and development prospects this year, illustrating that outlooks are darkening just about everywhere following the brief post-COVID exuberance shown in last year's survey across a variety of metrics. Similarly, some of the fastest-growing Sun Belt and other high-flying markets in recent years have faded a bit in the *Emerging Trends* standings, while many lower-rated markets are improving their relative status.

On the other hand, the pandemic seems to have reinforced some trends, notably the dominance of what we called the "Magnet" markets—many of which are in warmer Sun Belt regions—at the top of the *Emerging Trends* "Markets to Watch" standings, at the expense of the older and colder

Exhibit 3-1 **Warm versus Cold Climate Markets in *Emerging Trends*' 20 Highest-Rated Markets, 2011–2023**



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

U.S. Markets to Watch

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

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

Source: *Emerging Trends in Real Estate 2023* survey.

Exhibit 3-3 **Homebuilding Prospects**

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

Source: *Emerging Trends in Real Estate 2023* survey.

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

Mean

"Establishment" markets that used to lead in investor preferences. (The *Emerging Trends* market groupings are shown in the nearby chart and defined further in the sections below.)

Other trends that play out in the market ratings that follow are the challenges facing some booming markets as they mature into larger cities and the importance of housing affordability and infrastructure investment to continued economic growth.

Emerging Trends in Real Estate 2023 **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	Boutique Markets	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 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

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

Note: **Bold** type indicates the 20 highest-rated markets in *Emerging Trends in Real Estate 2023* survey for overall real estate prospects.

Changes in Attitudes, Changes in Latitudes

Befitting the changes in economic and market trends and outlooks that we have highlighted in this report, respondents to the *Emerging Trends* survey expressed substantial changes in market preferences. Many of the changes were relatively minor, and nine of the 10 highest-rated markets last year repeated this year (Miami moved in as Seattle moved out).

But there were some material changes over the year as about a quarter of markets moved up or down in rankings (i.e., relative ratings) by at least 10 places. And consistent with our "normalizing" trend, many of the markets near the top of the standings last year have fallen this year, while many previously lower-rate markets have risen: More than half (11) of the 20-highest rated markets in last year's survey fell in the rankings this year, although almost all by less than 10 places. Meanwhile, some of the markets that were found lower in the rankings in prior years are now finding more support. Thirteen of the 20-lowest rated markets in last year's survey rose in the rankings this year.

Some Like It Hot

Despite the modest drop in the Supernova ratings this year, *Emerging Trends* survey respondents still see the best prospects in Sun Belt metropolitan areas, which have been growing over time. The number of Sun Belt markets among the top 20 markets for "overall prospects" has increased from 10 in 2011 to 14 in each of the past two years. At the same time, the number of markets in cold-weather climates in the Northeast and Midwest has declined from five to just two (as shown in exhibit 3-1).

These climate preferences are even stronger at the top and bottom of the rankings. The average year-round high temperature among the five top-rated markets is a balmy 76 degrees, almost 20 degrees warmer than the 57-degree average in the bottom five markets. Warm temperatures, of course, are not enough to guarantee market success, nor is a cold climate necessarily disqualifying. Boston (average high temperature, 59 degrees) has ranked among the top 10 markets for the last six years, but Boston increasingly seems to be the outlier. No other northeastern or midwestern market has ranked in the top 10 in the

Exhibit 3-4 **Average Ranks by Market Category: 2023 versus 2022**

(Lower scores are better)

Group	Subgroup	Average Rank 2023	Average Rank 2022	Average Change in Rank	Change 2022–2023 Percentage of markets in category: % That Moved Up	% That Stayed Even	% That Moved Down
Magnets	Super Sun Belt	7.4	11.9	– 4.4	71%	14%	14%
	18-Hour Cities	23.9	21.9	+ 2.0	43%	0%	57%
	Supernovas	17.6	13.0	+ 4.6	0%	60%	40%
	All Magnets	**16.2**	**15.8**	**+ 0.3**	**42%**	**21%**	**37%**
The Establishment	Multitalented Producers	25.8	20.5	+ 5.3	0%	60%	40%
	Knowledge and Innovation Centers	29.0	29.8	– 0.8	50%	0%	50%
	Major Market Adjacent	32.8	33.8	– 1.0	58%	0%	42%
	All Establishment	**30.7**	**30.4**	**+ 0.3**	**56%**	**0%**	**44%**
Niche	Boutique	58.7	57.3	+ 1.4	57%	0%	43%
	Eds and Meds	53.9	58.3	– 4.4	75%	0%	25%
	Visitor and Convention Centers	48.1	50.3	– 2.1	63%	13%	25%
	All Niche	**51.0**	**54.3**	**– 3.3**	**69%**	**6%**	**25%**
Backbone	The Affordable West	67.2	58.0	+ 9.2	0%	0%	100%
	Determined Competitors	51.2	54.2	– 3.0	60%	0%	40%
	Reinventing	62.6	62.8	– 0.1	50%	13%	38%
	All Backbone	**60.7**	**59.1**	**+ 1.7**	**54%**	**8%**	**38%**

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).

Exhibit 3-5 **Population and Economic Growth by Market Category**

Group	Subgroup	Population Growth (CAGR)		Forecast Economic Growth (CAGR)	
		Recent 2019–2023	**Forecast 2023–2028**	**Total GMP 2023–2028**	**Per capita GDP 2023–2028**
Magnets	Super Sun Belt	1.1%	1.3%	3.7%	2.4%
	18-Hour Cities	0.4%	0.9%	3.2%	2.3%
	Supernovas	1.9%	1.6%	4.6%	2.9%
	All Magnets	**1.0%**	**1.2%**	**3.7%**	**2.4%**
The Establishment	Multitalented Producers	-0.4%	0.1%	2.2%	2.0%
	Knowledge and Innovation Centers	-0.8%	0.2%	1.9%	1.9%
	Major Market Adjacent	0.5%	0.5%	2.6%	2.2%
	All Establishment	**0.0%**	**0.3%**	**2.3%**	**2.0%**
Niche	Boutique	1.1%	0.7%	2.6%	1.8%
	Eds and Meds	0.5%	0.4%	2.4%	2.0%
	Visitor and Convention Centers	0.8%	1.1%	3.3%	2.3%
	All Niche	**0.7%**	**0.7%**	**2.7%**	**2.1%**
Backbone	The Affordable West	0.9%	0.9%	3.0%	2.1%
	Determined Competitors	1.2%	0.8%	2.9%	2.1%
	Reinventing	0.2%	0.1%	1.6%	1.5%
	All Backbone	**0.6%**	**0.4%**	**2.2%**	**1.8%**
Total, all *Emerging Trends* markets		0.5%	0.7%	2.7%	2.1%

Sources: Bureau of Economic Analysis, IHS Markit, and U.S. Census Bureau; compiled by Nelson Economics.

Note: CAGR = compound annual growth rate. GMP = gross metropolitan product.

previous two years, and only a scattering of others have placed over the past decade.

Growth Attracts

It's not heat and humidity that investors and developers seek in the Sun Belt markets, of course, but strong market prospects. And forecasts for population and especially economic growth show that are looking in the right places. Population and gross metro product (GMP) are both expected to grow far faster in the Magnet markets than just about anywhere else in the nation, particularly in the northern markets that constitute much of the Backbone markets.

Accordingly, the Magnets have maintained their dominance at the top of the *Emerging Trends* ratings. Although their average ranking slipped slightly this year, more markets moved up than down.

Growth is expected to be greatest in the Supernova subgroup but moderating from its recent torrid pace. For example, population growth is projected to slow from 1.9 percent annually over the last four years to 1.6 percent over the next five—still the highest of any subgroup but slower than before as these markets experience some growing pains that we highlighted in our trends chapter.

Also of note is that many of the Establishment markets that lost population during the pandemic are expected to reverse course and resume growth over the next few years. This growth will be slower than in our other market groups but represents the biggest increase from the recent past to the expected near term. This reversal perhaps accounts for the modest relative improvement in the 2023 ratings of the markets in this group.

Affordability Matters, Too

Quality of life and affordability also matter. Many of the markets that received relatively lower scores this year have inadequate infrastructure for their population size and growth, here measured by their transit availability score. The failure to adequately expand the regional infrastructure was a problem identified by local experts we interviewed and an impediment to future growth.

Housing affordability is another constraint on growth. For-sale housing is now less affordable (relative to local incomes) than the national average in the three market subgroups experiencing the most significant decline in ratings this year, including the Supernova markets, while rental housing is also less affordable than average (again, relative to incomes) in two of the three groupings. That is, a lower share of the local population can afford the median-priced home, whether for-sale or rental.

Ironically, the affordability challenges extend to a subgroup we call the Affordable West. These markets are, indeed, more affordable than the ultra-pricey West Coast markets, especially those in California. But population growth has outpaced housing development, pushing up home prices faster than local incomes. Much of the population growth in these markets has been fueled by the in-migration of households seeking more affordable housing, suggesting that growth could soon slow in some of these markets, absent an easing in home prices.

On the other hand, the three market subgroups that experienced the greatest relative rating improvements over the last year all have relatively affordable housing (a higher share of the local population can afford the median-priced home). This includes the large Super Sun Belt group, comprising markets such as Houston, Atlanta, and Dallas/Fort Worth. Though the cost of doing business in some of these metro areas has been rising, investors like the combination of housing affordability and strong population and economic growth.

Also gaining strongly this year are the highly affordable Eds and Meds markets. Six of the eight markets in this subgroup improved their relative rating—with Memphis and Pittsburgh each rising more than 10 places—and only one market fell modestly.

The situation is the opposite in many of the Establishment markets, which suffer from not only expensive housing but also high costs of doing business, in addition to slower growth. Continuing a longstanding *Emerging Trends* pattern, interest in the gateway markets is muted. Only three of the eight most expensive coastal markets rank among the top 20. This represents a significant comedown from a decade ago when these markets accounted for seven of the top 10 *Emerging Trends* markets.

Exhibit 3-6 **Quality-of-Life Metrics by Market Category**

Group	Subgroup	Housing Affordability		Transit Quality†	Cost of Doing Business††
		For-Sale*	Rental**		
Magnets	Super Sun Belt	47.3%	75.8%	3.48	102.8
	18-Hour Cities	41.7%	61.2%	4.78	109.8
	Supernovas	43.6%	78.9%	2.41	99.8
	All Magnets	45.0%	71.5%	3.76	104.7
The Establishment	Multitalented Producers	36.1%	49.7%	5.59	93.4
	Knowledge and Innovation Centers	32.4%	42.6%	6.34	119.4
	Major Market Adjacent	30.5%	45.0%	6.47	116.3
	All Establishment	32.1%	45.8%	6.39	115.5
Niche	Boutique	59.8%	88.2%	1.85	94.6
	Eds and Meds	56.2%	73.1%	4.05	62.6
	Visitor and Convention Centers	36.1%	76.9%	3.48	103.1
	All Niche	50.0%	77.1%	3.46	82.2
Backbone	The Affordable West	34.1%	65.2%	4.27	58.0
	Determined Competitors	60.9%	91.8%	2.01	93.6
	Reinventing	61.2%	88.4%	3.56	99.6
	All Backbone	55.5%	85.3%	3.46	89.6
Total, United States		44.0%	65.4%	3.97	100.0

Sources: IHS Markit and Urban Land Institute; compiled by Nelson Economics.

*Share of all homes likely affordable to a four-person family earning 120 percent of area median income (AMI). **Share of two-bedroom rentals likely affordable to a four-person family earning 80 percent of AMI.

†Ratings are on a scale of 0 to 10, with a higher value indicating better transit access. ††Costs relative to U.S. average, where U.S. = 100.0.

The More Things Change . . .

Real estate markets are ever dynamic and metropolitan economies even more so. The relative rankings of the markets tracked in *Emerging Trends* changed meaningfully this year as economic conditions in the United States appear to be heading for a slide. Nonetheless, many Magnet markets remain among the most favored, even if some of them have slipped a bit this year. At the same time, real estate professionals appear more willing to consider some markets that had been less in favor in recent years. The perpetual search for new opportunities ensures constant flux in how markets are viewed over time.

Grouping the Markets

After comprehensively reorganizing how we group our 80 geographic markets two years ago and a lighter refresh last year, we are continuing with the same groupings this year and turn our focus to how the various groups and some key markets have changed since our previous report. Additional demographic and economic data and more detailed descriptions of these market groups are available online, as listed at the end of this chapter.

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. 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 margin. Collectively, these markets account for almost one-third of the population base in the *Emerging Trends* coverage universe, the second-largest group in "Markets to Watch."

Super Sun Belt. These markets are large and diverse but still affordable, forming powerhouse economies that attract a wide range of businesses. Despite their large population bases, most are among the fastest-growing markets in the United States. 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. These metro areas collectively have the highest average rating of any subgroup, as it did last year.

18-Hour Cities. Metro areas in this category faired relatively well during the pandemic recession, a testament to their enduring appeal. Though growing less affordable over time, these medium-sized cities nonetheless continue to attract in-migration due to lifestyle, workforce quality, and development opportunities, according to ULI interviews. Measured by per capita GMP, workers here are the most productive of any subgroup in the fast-growing Magnets category. As a group, the 18-Hour Cities rate third highest among the 12 subgroups, though the average market ranking fell this year as four of the markets declined while three rose.

Supernovas. Like the astronomic source for its name, the five metro areas in the Supernova category markets have exploded into prominence over the past decade or so. All are smaller markets with 1 million to 2 million residents, but their defining attribute is their tremendous and sustained population and job growth, which are well above national averages. Despite their relatively modest sizes, all the Supernovas have above-average levels of economic diversity and white-collar employment, which explain their strong investor appeal and should help them sustain high growth in the years ahead.

Exhibit 3-7 **Population Size and Economic Output by Major Market Category**

	Magnets	Establishment	Niche	Backbone
Population (000s)				
Total	63,996	67,954	34,347	31,634
Average	3,368	3,398	1,493	1,757
Share of all *Emerging Trends* markets	32.3%	34.3%	17.4%	16.0%
GMP ($ Millions)				
Total	$4,015	$5,741	$1,957	$1,766
Average	$211.3	$287.1	$85.1	$98.1
Share of all *Emerging Trends* markets	29.8%	42.6%	14.5%	13.1%

Sources: Bureau of Economic Analysis, HIS Markit, and U.S. Census Bureau; compiled by Nelson Economics.

Note: GMP = Gross metropolitan product, a monetary measure of the value of all final goods and services produced within a metropolitan statistical area annually.

Nashville has repeated as the nation's top market, the first market to repeat atop the *Emerging Trends* table since San Francisco in 2013 and 2014, and Austin repeated as the fourth-highest-rating market. Nonetheless, the glow for this category has faded somewhat as their unfettered growth has invited some big-city problems like congestion and rising living costs. Last year's shooting star, Boise, fell sharply after two years in the top 20. Raleigh has continued its modest decline, from the top-rated market in 2021 to number six in the 2023 survey. But more broadly, the Supernovas appear to be suffering some growing pains, as discussed elsewhere in this report. Housing construction is not keeping pace with household growth, straining housing affordability, which has been one of the chief attractions.

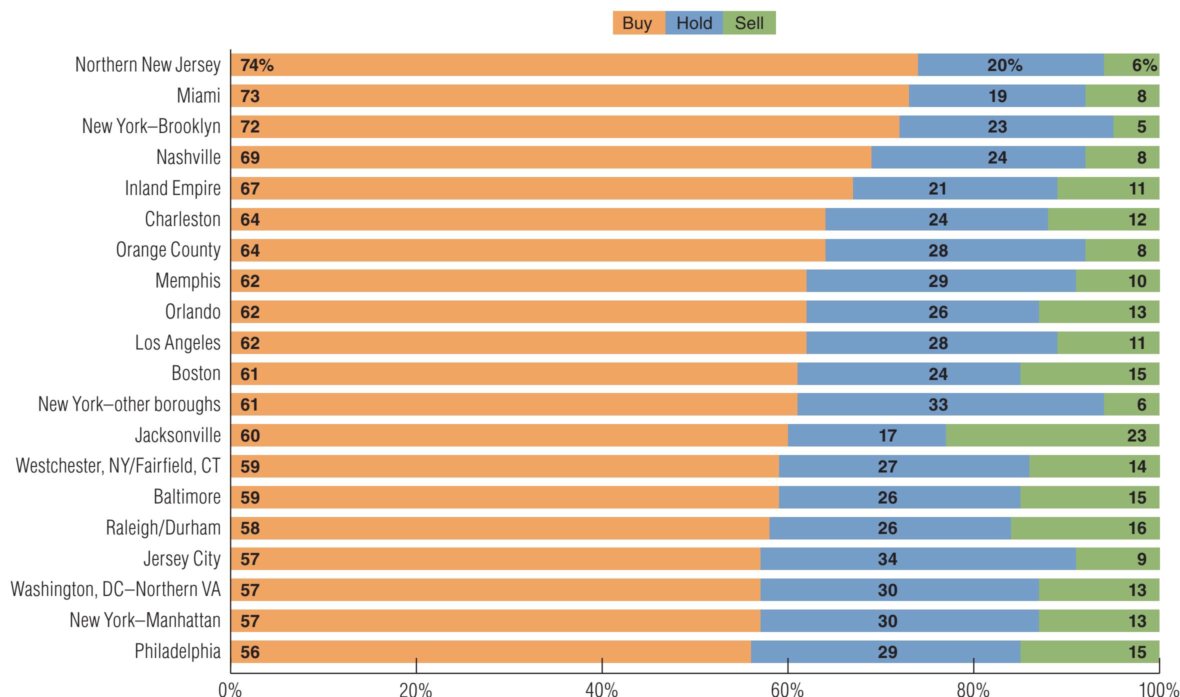
The Establishment

The Establishment markets have long been the nation's economic engines. The 20 markets in this category produce almost 43 percent of the GMP in the 80 *Emerging Trends* markets while accounting for only 34 percent of its population base. This primarily reflects the outsized contributions of the nation's gateway markets, which we refer to as the Knowledge and Innovation Centers.

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 metro areas of Chicago, Los Angeles, San Jose, and Seattle. Workers here tend to be productive, with per capita GMP ranking the second highest of any of the subgroups. Though their elevated cost of doing business and getting deals done limits their appeal for some real estate professionals, the Multitalented Producers

Exhibit 3-8 **U.S. Industrial Property Buy/Hold/Sell Recommendations**



Source: *Emerging Trends in Real Estate 2023* 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.

nonetheless continue to attract a disproportionate share of investment dollars.

Ratings for these markets have been volatile in recent years, primarily due to the changing fortunes of the tech sector, which figure heavily in these economies, especially Seattle and San Jose, which both tumbled in this year's ranking. Together, the ratings of these markets fell the second most of any category after improving more than any subgroup in the *Emerging Trends 2022* survey. This subgroup now rates the fourth highest, down one rung from last year.

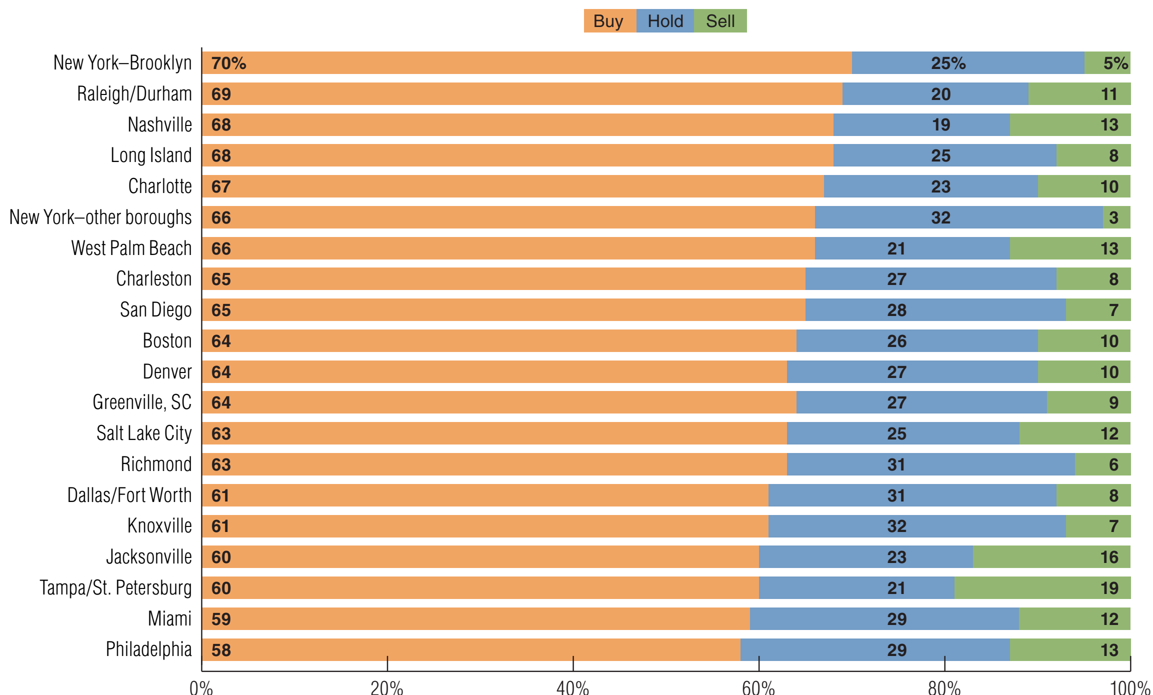
Knowledge and Innovation Centers. This grouping serves as the focus of intellectual capital in the economy, whether in social media (San Francisco), finance (Manhattan), biosciences (Boston), or think tanks (Washington, D.C.). With the most educated workforces in the United States, these innovation centers are by far the most productive, with per capita GMP more than twice that of any other subgroup—along with some of the most expensive housing in the country, along with the highest costs of doing business.

This group remains somewhat out of favor with investors relative to its former glory not long ago. Only Boston remains 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.

Major Market Adjacent. This 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. Moreover, several are or contain metropolitan statistical areas in their own right.

Many of these markets benefited from the out-migration from their neighboring CBDs during the pandemic, and their prospects have improved somewhat in the eyes of survey respondents. But here, too, there is a diversity in trends as seven of the 12 markets improved this year and five declined. Most of the improvement was registered in the New York metropolitan area, while the declining markets are mainly in California.

Exhibit 3-9 **U.S. Multifamily Property Buy/Hold/Sell Recommendations**



Source: *Emerging Trends in Real Estate 2023* 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.

Niche

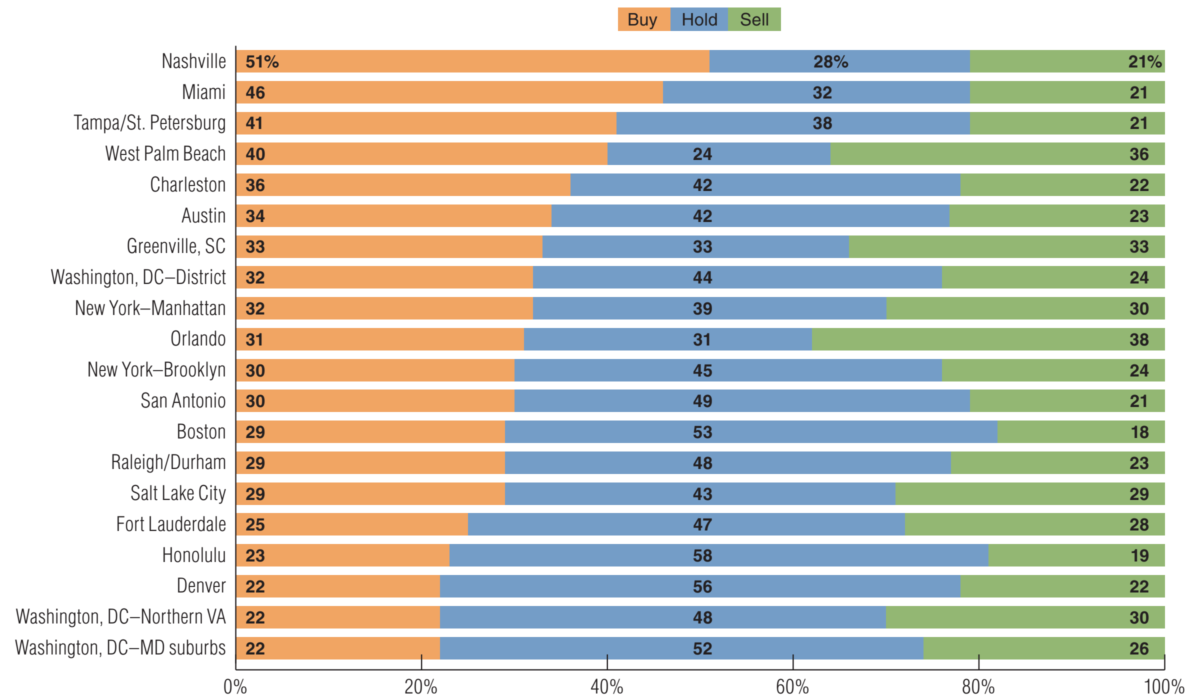
As befitting their moniker, Niche markets are generally smaller or less economically diverse than the Magnets and Establishment markets but typically have a dominant economic driver that supports stable economic growth. This group ranks third among the four major market groups in terms of investor outlooks but far behind the Magnet and Establishment groups.

Boutique Markets. These are smaller markets with lively downtowns; diversity in leisure, cultural, and natural/outdoor amenities; and 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. All have populations of less than 1 million, and all maintained their previous positive in-migration during the pandemic, indicating the appeal of these towns. Richmond remains the top-rated market in this subgroup, but this grouping experienced relatively lower overall scores this year.

Eds and Meds. Before the pandemic, Eds and Meds markets were envied for their desirable combination of stability (large universities) and growth (health care). COVID-19 initially dented their reputations as both education and medicine suffered disproportionately during the pandemic. However, demand for education and health care—and the facilities that house them—has resumed its growth. Ratings for these markets rose the most of any subgroup this year, tied with the Super Sun Belt markets.

Convention and Visitor 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. 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.

Exhibit 3-10 **U.S. Hotel Property Buy/Hold/Sell Recommendations**



Source: *Emerging Trends in Real Estate 2023* 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.

These markets all endured significant challenges resulting from COVID-related restrictions, particularly those that rely on air travel, business demand, or both. Several markets in this grouping staged a solid recovery over the last year, especially Deltona/Daytona and Virginia Beach/Norfolk, both of which improved more than 10 places in the rankings. But Honolulu and Charleston both suffered significant declines. Overall, ratings increased moderately.

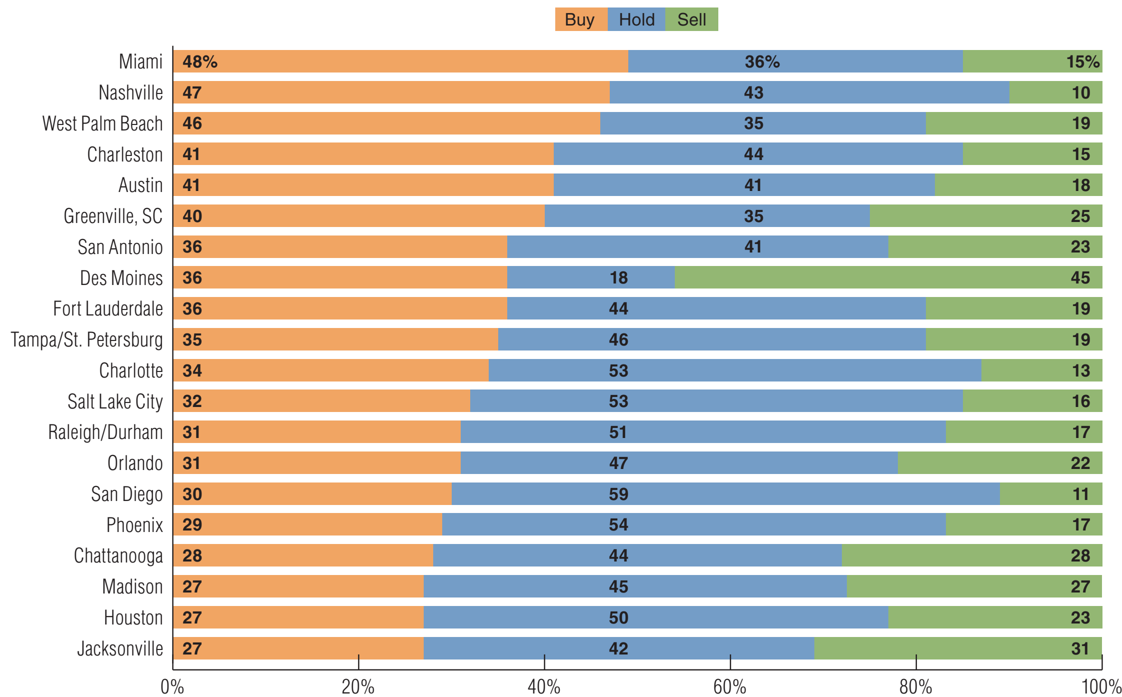
Backbone

The final group comprises a wide variety of interesting and enjoyable places to live and work. Though generally rated relatively lower in our surveys, many of these metro areas offer select investment development/redevelopment opportunities. 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 West Coast markets, 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. Nonetheless, affordability here is fading as this rapid population growth has pushed home prices relative to income higher than the national average. Investors seem to have soured on these markets, as each fell in the rankings this year. Overall, the ranking of this subgroup declined more than that of any other in the survey and now has the lowest overall rating.

Determined Competitors. These diverse markets tend to be strong ancillary locations in their regions, with several successfully revitalizing their downtowns and neighborhoods. These markets tend to be very affordable with a favorable quality of life. Significantly, all maintained positive population growth through the pandemic. Though population growth is expected to moderate in some of these markets, the overall ratings for this group rose strongly in this year's survey.

Exhibit 3-11 **U.S. Retail Property Buy/Hold/Sell Recommendations**

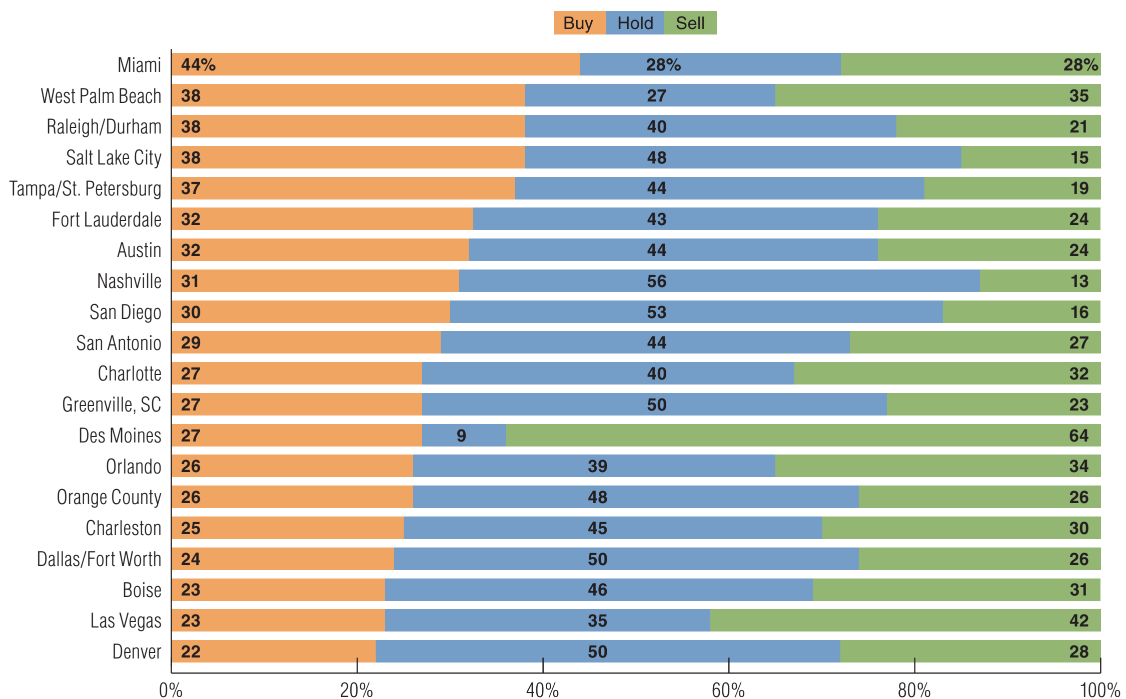


Source: *Emerging Trends in Real Estate 2023* survey.

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

Reinventing. Reinventing markets are eastern and midwestern cities 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. Though the economic rebound in most of these markets lags the national recovery, the federal government's stimulus programs have helped cushion the downturn. However, anemic population growth remains a problem. Overall, there was no material change in the outlook for these markets, in the view of *Emerging Trends* respondents, but Detroit showed a substantial improvement this year, continuing the gains first seen in *Emerging Trends 2021*.

Exhibit 3-12 **U.S. Office Property Buy/Hold/Sell Recommendations**



Source: *Emerging Trends in Real Estate 2023* 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.

Exhibit 3-13 **Local Market Perspective: Investor Demand**

Weak — Average — Strong

Market	Rating	Market	Rating
Austin	4.62	Knoxville	3.39
Nashville	4.42	San Jose	3.37
Dallas/Fort Worth	4.40	Philadelphia	3.33
Tampa/St. Petersburg	4.38	Long Island	3.32
Raleigh/Durham	4.28	Westchester, NY/Fairfield, CT	3.29
Charlotte	4.25	Kansas City, MO	3.26
Boston	4.23	Tallahassee	3.24
Miami	4.22	Cincinnati	3.21
Orlando	4.18	Norfolk	3.20
West Palm Beach	4.17	Pittsburgh	3.19
Atlanta	4.16	Madison	3.17
Fort Lauderdale	4.14	Minneapolis	3.13
Charleston	4.13	Gainesville	3.11
Denver	3.94	Chattanooga	3.09
New York–Brooklyn	3.91	Des Moines	3.09
San Diego	3.88	Oakland/East Bay	3.08
Washington, DC–Northern VA	3.88	Portland, ME	3.05
Salt Lake City	3.87	Honolulu	3.04
Phoenix	3.83	Sacramento	3.03
Seattle	3.81	Tacoma	2.96
Columbus	3.77	Birmingham	2.95
San Antonio	3.73	Tucson	2.89
Inland Empire	3.70	Spokane, WA/Coeur d'Alene, ID	2.87
Cape Coral/Fort Myers/Naples	3.70	Chicago	2.84
Orange County	3.67	Oklahoma City	2.82
Washington, DC–MD suburbs	3.66	San Francisco	2.82
Jacksonville	3.62	Detroit	2.78
Houston	3.61	Omaha	2.78
Los Angeles	3.61	Louisville	2.76
New York–Manhattan	3.61	Portland, OR	2.74
Greenville, SC	3.61	Memphis	2.74
Boise	3.60	St. Louis	2.74
Northern New Jersey	3.54	Providence	2.62
Jersey City	3.52	Cleveland	2.60
Washington, DC–District	3.50	Milwaukee	2.60
Indianapolis	3.45	Baltimore	2.55
New York–other boroughs	3.44	Albuquerque	2.55
Las Vegas	3.43	New Orleans	2.33
Deltona/Daytona	3.41	Hartford	2.17
Richmond	3.41	Buffalo	2.05

Source: *Emerging Trends in Real Estate 2023* survey.
Note: Ratings reflect perspective of local market participants.

Exhibit 3-14 **Local Market Perspective: Development/ Redevelopment Opportunities**

Weak — Average — Strong

Market	Rating	Market	Rating
Dallas/Fort Worth	4.04	Inland Empire	3.31
Nashville	4.00	Northern New Jersey	3.29
Tampa/St. Petersburg	4.00	Birmingham	3.29
Raleigh/Durham	3.98	Memphis	3.28
Miami	3.91	Washington, DC–District	3.27
Austin	3.86	Milwaukee	3.27
San Antonio	3.82	Seattle	3.26
Charlotte	3.81	Portland, ME	3.24
West Palm Beach	3.79	Gainesville	3.24
Atlanta	3.77	Norfolk	3.24
Fort Lauderdale	3.77	Washington, DC–MD suburbs	3.21
Orlando	3.77	Jersey City	3.21
Washington, DC–Northern VA	3.73	Pittsburgh	3.21
Kansas City, MO	3.72	Indianapolis	3.18
New York–other boroughs	3.70	New York–Manhattan	3.17
Houston	3.68	St. Louis	3.13
Salt Lake City	3.65	San Jose	3.12
Denver	3.63	Baltimore	3.09
Charleston	3.57	Westchester, NY/Fairfield, CT	3.09
Cape Coral/Fort Myers/Naples	3.57	Los Angeles	3.09
Jacksonville	3.55	Long Island	3.08
Cleveland	3.55	Columbus	3.08
San Diego	3.53	Omaha	3.08
Philadelphia	3.53	Oklahoma City	3.07
Des Moines	3.53	Chicago	3.06
New York–Brooklyn	3.52	Louisville	2.93
Phoenix	3.48	Minneapolis	2.89
Madison	3.48	Tucson	2.88
Richmond	3.46	Sacramento	2.88
Detroit	3.45	Spokane, WA/Coeur d'Alene, ID	2.87
Orange County	3.45	Albuquerque	2.84
Greenville, SC	3.44	Providence	2.81
Chattanooga	3.42	Tacoma	2.79
Cincinnati	3.42	New Orleans	2.79
Boston	3.37	Portland, OR	2.78
Boise	3.37	Oakland/East Bay	2.76
Knoxville	3.35	Buffalo	2.72
Deltona/Daytona	3.33	Honolulu	2.66
Tallahassee	3.33	Hartford	2.65
Las Vegas	3.31	San Francisco	2.40

Source: *Emerging Trends in Real Estate 2023* survey.
Note: Ratings reflect perspective of local market participants.

Exhibit 3-15 **Local Market Perspective: Local Economy**

Weak		Average		Strong

Market	Rating	Market	Rating
Austin	4.61	New York–other boroughs	3.54
Dallas/Fort Worth	4.53	Northern New Jersey	3.53
Nashville	4.42	Cincinnati	3.52
Raleigh/Durham	4.35	Westchester, NY/Fairfield, CT	3.47
Tampa/St. Petersburg	4.28	Jersey City	3.44
Charlotte	4.23	Los Angeles	3.44
Charleston	4.19	Norfolk	3.42
Fort Lauderdale	4.19	Las Vegas	3.41
West Palm Beach	4.17	Portland, ME	3.40
Miami	4.15	Philadelphia	3.39
Boston	4.13	Deltona/Daytona	3.39
Columbus	4.08	San Jose	3.38
Atlanta	4.08	Gainesville	3.38
Orlando	4.02	Tallahassee	3.33
San Antonio	4.00	Long Island	3.31
Denver	4.00	Spokane, WA/Coeur d'Alene, ID	3.30
Phoenix	3.99	Birmingham	3.26
Washington, DC–Northern VA	3.97	Pittsburgh	3.24
San Diego	3.93	Honolulu	3.22
Jacksonville	3.89	Sacramento	3.21
Salt Lake City	3.89	Omaha	3.20
Houston	3.88	Louisville	3.20
Greenville, SC	3.87	Oklahoma City	3.19
Orange County	3.85	Tucson	3.13
Boise	3.83	Milwaukee	3.09
Indianapolis	3.74	Detroit	3.05
New York–Brooklyn	3.74	Chicago	3.05
Washington, DC–District	3.71	Portland, OR	3.02
Seattle	3.69	Oakland/East Bay	3.02
Washington, DC–MD suburbs	3.69	Tacoma	2.96
Knoxville	3.68	Memphis	2.91
Chattanooga	3.67	St. Louis	2.90
Inland Empire	3.64	Albuquerque	2.89
Madison	3.62	San Francisco	2.89
Minneapolis	3.61	New Orleans	2.88
Cape Coral/Fort Myers/Naples	3.61	Providence	2.85
Richmond	3.61	Baltimore	2.85
Kansas City, MO	3.60	Cleveland	2.81
New York–Manhattan	3.55	Buffalo	2.56
Des Moines	3.54	Hartford	2.42

Source: *Emerging Trends in Real Estate 2023* survey.

Note: Ratings reflect perspective of local market participants.

Exhibit 3-16 **Local Market Perspective: Local Public and Private Investment**

Weak | | Average | | Strong

Market	Rating	Market	Rating
Nashville	3.88	Oklahoma City	3.25
Dallas/Fort Worth	3.86	Northern New Jersey	3.24
Raleigh/Durham	3.83	Portland, ME	3.21
Charlotte	3.80	Deltona/Daytona	3.20
Tampa/St. Petersburg	3.77	Tallahassee	3.20
Austin	3.68	Washington, DC–MD suburbs	3.20
Salt Lake City	3.66	Cleveland	3.19
West Palm Beach	3.66	Detroit	3.18
Boston	3.65	Long Island	3.17
Orlando	3.64	Pittsburgh	3.14
Miami	3.64	Gainesville	3.13
Charleston	3.63	St. Louis	3.13
San Antonio	3.63	Sacramento	3.13
Denver	3.62	Seattle	3.12
Kansas City, MO	3.57	Memphis	3.12
Washington, DC–Northern VA	3.56	Birmingham	3.11
Atlanta	3.51	San Jose	3.09
Fort Lauderdale	3.50	Inland Empire	3.09
Knoxville	3.50	Omaha	3.08
Houston	3.47	Norfolk	3.06
Des Moines	3.44	Milwaukee	3.00
Orange County	3.44	Louisville	3.00
Chicago	3.44	Minneapolis	3.00
Washington, DC–District	3.43	Providence	2.95
New York–other boroughs	3.43	Indianapolis	2.94
New York–Brooklyn	3.43	Tacoma	2.91
Boise	3.41	Spokane, WA/Coeur d'Alene, ID	2.90
Phoenix	3.40	Los Angeles	2.90
San Diego	3.39	Cincinnati	2.88
Philadelphia	3.33	Baltimore	2.87
Greenville, SC	3.30	Tucson	2.83
Jacksonville	3.30	Honolulu	2.78
Las Vegas	3.30	Oakland/East Bay	2.76
New York–Manhattan	3.28	Portland, OR	2.71
Cape Coral/Fort Myers/Naples	3.28	Columbus	2.69
Richmond	3.27	Albuquerque	2.63
Jersey City	3.27	Buffalo	2.63
Chattanooga	3.26	Hartford	2.57
Madison	3.25	San Francisco	2.52
Westchester, NY/Fairfield, CT	3.25	New Orleans	2.50

Source: *Emerging Trends in Real Estate 2023* survey.
Note: Ratings reflect perspective of local market participants.

Exhibit 3-17 **Local Market Perspective: Availability of Debt and Equity Capital**

Weak | | Average | | Strong

Market	Rating	Market	Rating
Austin	4.29	Richmond	3.48
Nashville	4.29	Cleveland	3.43
Tampa/St. Petersburg	4.17	San Jose	3.40
Dallas/Fort Worth	4.16	Las Vegas	3.38
Miami	4.15	Norfolk	3.38
Raleigh/Durham	4.10	Omaha	3.36
West Palm Beach	4.09	Madison	3.35
Charlotte	4.02	Boise	3.34
Orlando	4.00	Deltona/Daytona	3.29
Boston	3.96	Tallahassee	3.27
Des Moines	3.95	Detroit	3.25
Atlanta	3.95	Chattanooga	3.25
Washington, DC–Northern VA	3.93	Pittsburgh	3.20
Fort Lauderdale	3.89	Gainesville	3.19
Charleston	3.88	Cincinnati	3.16
Salt Lake City	3.86	Oakland/East Bay	3.15
San Diego	3.85	Columbus	3.14
New York–Manhattan	3.79	St. Louis	3.11
Denver	3.78	Honolulu	3.11
San Antonio	3.74	Sacramento	3.09
New York–Brooklyn	3.74	Milwaukee	3.08
Kansas City, MO	3.73	Birmingham	3.05
Jacksonville	3.72	Portland, ME	3.05
Cape Coral/Fort Myers/Naples	3.71	Memphis	3.00
Northern New Jersey	3.71	Indianapolis	3.00
Phoenix	3.68	Portland, OR	2.96
Inland Empire	3.68	Tacoma	2.88
Los Angeles	3.67	Louisville	2.86
Seattle	3.64	Tucson	2.85
Orange County	3.63	Chicago	2.84
Knoxville	3.63	Oklahoma City	2.81
Jersey City	3.63	San Francisco	2.81
New York–other boroughs	3.57	Providence	2.81
Philadelphia	3.55	Minneapolis	2.80
Houston	3.55	Albuquerque	2.79
Washington, DC–MD suburbs	3.54	Baltimore	2.77
Long Island	3.52	Spokane, WA/Coeur d'Alene, ID	2.73
Washington, DC–District	3.50	Buffalo	2.67
Westchester, NY/Fairfield, CT	3.50	Hartford	2.65
Greenville, SC	3.48	New Orleans	2.46

Source: *Emerging Trends in Real Estate 2023* survey.
Note: Ratings reflect perspective of local market participants.

Exhibit 3-18 **Economy**

	2023 population*			Population distribution (% of total population)				Business costs					2023 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	2023 real GMP per capita	Real GMP per capita 5-year projected annual change	2023 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	**334.21**	**8,334.0**	**0.5%**	**31%**	**27%**	**25%**	**18%**	**$59,134**	**2.0%**	**$53,617**	**2.0%**	**100.0**	**153,478**	**0.4%**	**1.0**	**1.0**	**1.0**	**1.0**
Albuquerque	0.92	33.3	0.7%	30%	28%	23%	18%	$45,251	1.9%	$46,246	1.9%	95.3	405	0.3%	1.0	0.9	0.9	1.0
Atlanta	6.29	380.7	1.2%	32%	29%	25%	14%	$65,031	2.4%	$54,122	2.1%	97.7	3,000	0.9%	0.9	1.3	0.8	1.0
Austin	2.47	266.8	2.1%	35%	31%	22%	12%	$71,747	3.4%	$59,334	2.3%	104.1	1,271	1.9%	0.9	1.4	0.9	1.1
Baltimore	2.84	41.6	0.3%	30%	27%	26%	18%	$66,443	2.2%	$57,443	2.4%	109.9	1,426	0.4%	1.1	1.0	0.8	0.9
Birmingham	1.18	19.9	0.3%	31%	27%	25%	17%	$49,992	1.9%	$52,522	2.2%	90.3	553	0.3%	0.8	0.9	1.0	0.9
Boise	0.84	86.1	2.0%	32%	29%	24%	16%	$44,242	3.2%	$49,325	2.0%	95.5	386	1.5%	1.0	1.0	1.3	1.0
Boston	4.89	106.7	0.4%	29%	28%	26%	18%	$93,021	2.0%	$70,934	2.2%	121.4	2,820	0.4%	1.3	1.3	0.8	0.9
Buffalo	1.15	(25.8)	-0.5%	27%	24%	27%	22%	$53,530	1.4%	$52,150	2.7%	98.1	549	0.0%	1.0	0.9	1.0	1.0
Cape Coral/Fort Myers/ Naples	1.23	114.1	1.8%	25%	23%	25%	27%	$43,797	2.9%	$66,664	2.4%	101.7	470	1.2%	0.8	0.9	1.1	1.5
Charleston	0.84	52.6	1.2%	31%	28%	25%	16%	$51,247	2.5%	$51,930	2.1%	98.3	390	1.0%	0.8	1.0	1.0	1.3
Charlotte	2.75	193.1	1.4%	32%	28%	25%	15%	$61,290	2.5%	$55,039	2.0%	97.0	1,306	1.1%	0.7	1.3	1.1	1.0
Chattanooga	0.57	15.9	0.5%	29%	26%	26%	19%	$49,945	1.5%	$49,582	2.1%	90.1	270	0.1%	0.8	0.8	1.4	1.1
Chicago	9.43	3.9	0.0%	31%	28%	25%	16%	$67,721	1.3%	$57,998	2.2%	103.5	4,702	0.1%	0.9	1.1	1.0	0.9
Cincinnati	2.25	46.1	0.4%	32%	27%	25%	17%	$61,140	2.0%	$56,627	2.4%	94.2	1,117	0.6%	0.9	1.0	1.1	1.0
Cleveland	2.07	8.3	0.1%	28%	26%	26%	21%	$58,858	1.2%	$55,720	2.1%	93.9	1,067	-0.1%	1.1	0.9	1.1	0.9
Columbus	2.18	85.5	0.8%	33%	29%	23%	14%	$58,478	2.2%	$53,762	2.1%	95.0	1,141	0.6%	0.9	1.1	0.8	0.9
Dallas/Fort Worth	8.08	602.6	1.4%	34%	30%	23%	13%	$68,312	2.3%	$54,685	1.8%	102.3	4,139	0.9%	0.8	1.3	1.0	0.9
Deltona/Daytona Beach	0.71	42.0	1.2%	26%	22%	27%	26%	$30,606	2.6%	$44,163	2.1%	99.3	219	0.5%	1.1	0.7	0.9	1.4
Denver	3.00	161.9	1.1%	29%	32%	24%	15%	$71,669	2.4%	$61,527	2.0%	110.7	1,592	0.7%	0.9	1.3	0.9	1.0
Des Moines	0.70	40.8	1.1%	34%	30%	23%	13%	$72,595	2.2%	$56,298	2.1%	95.8	385	0.9%	0.9	1.3	0.9	0.9
Detroit	4.35	9.3	0.0%	29%	26%	26%	19%	$56,144	1.5%	$53,102	2.3%	100.7	2,016	0.0%	0.9	1.2	1.2	0.8
Fort Lauderdale	1.94	104.8	1.1%	26%	28%	27%	19%	$54,130	1.9%	$47,341	1.9%	113.7	886	1.1%	0.8	1.3	0.7	1.0
Gainesville	0.30	10.5	0.7%	38%	24%	21%	17%	$48,980	1.9%	$47,644	2.3%	97.0	153	0.4%	1.1	0.8	0.5	0.9
Greenville, SC	0.96	35.7	0.7%	31%	25%	25%	19%	$45,312	1.7%	$47,069	1.8%	91.3	442	0.6%	0.8	1.0	1.4	1.0
Hartford	1.21	6.8	0.1%	29%	25%	26%	19%	$74,535	1.2%	$57,740	2.2%	109.7	633	-0.1%	1.0	1.0	1.1	0.7
Honolulu	0.99	6.3	0.1%	29%	27%	23%	20%	$57,858	1.4%	$47,355	2.4%	144.4	451	0.4%	0.8	0.8	0.6	1.5
Houston	7.42	549.0	1.4%	35%	30%	24%	12%	$67,588	2.3%	$54,593	2.1%	100.1	3,275	0.9%	0.8	1.0	1.3	1.0
Indianapolis	2.17	119.0	1.1%	33%	29%	24%	15%	$63,109	2.2%	$57,286	2.0%	95.4	1,131	0.7%	0.9	1.1	1.0	0.9
Inland Empire	4.73	244.9	1.0%	34%	28%	23%	14%	$38,044	2.7%	$40,832	2.3%	112.7	1,696	1.5%	0.9	0.6	1.0	1.1
Jacksonville	1.71	113.7	1.3%	30%	27%	26%	17%	$48,881	2.5%	$51,356	2.2%	100.2	778	1.3%	0.9	1.2	0.8	1.1
Jersey City	0.69	5.9	0.2%	31%	33%	24%	13%	$64,541	1.6%	$55,210	2.3%	118.5	284	-0.1%	0.8	1.3	0.4	0.8
Kansas City, MO	2.23	95.5	0.8%	32%	28%	24%	16%	$58,534	2.2%	$54,535	2.1%	96.6	1,104	0.7%	0.9	1.1	1.0	0.9
Knoxville	0.94	30.9	0.7%	29%	26%	26%	20%	$47,129	1.7%	$48,508	1.9%	90.5	425	0.3%	0.8	1.0	1.2	1.0
Las Vegas	2.35	141.6	1.2%	30%	30%	25%	16%	$49,484	2.8%	$49,833	2.4%	102.6	1,079	1.2%	0.7	1.0	0.8	2.4
Long Island	2.88	(25.8)	-0.2%	27%	25%	27%	20%	$62,393	2.1%	$65,852	2.7%	118.5	1,333	0.3%	1.2	0.8	0.9	0.9
Los Angeles	9.70	(43.0)	-0.1%	28%	30%	26%	16%	$76,977	2.1%	$56,608	2.6%	120.3	4,535	0.2%	1.3	1.0	0.8	1.1
Louisville	1.33	34.1	0.5%	30%	27%	26%	17%	$51,729	1.5%	$54,314	2.2%	91.1	678	0.4%	0.9	0.9	1.3	0.9
Madison	0.69	28.6	0.8%	33%	28%	24%	16%	$69,924	2.6%	$60,022	2.3%	98.4	416	0.9%	0.9	1.0	1.0	0.8
Memphis	1.35	22.4	0.3%	32%	28%	25%	15%	$52,613	1.6%	$50,440	2.0%	91.0	661	0.3%	0.8	0.8	0.8	0.8

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 3-18 **Economy**

	2023 population*			Population distribution (% of total population)				Business costs					2023 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	2023 real GMP per capita	Real GMP per capita 5-year projected annual change	2023 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	**334.21**	**8,334.0**	**0.5%**	**31%**	**27%**	**25%**	**18%**	**$59,134**	**2.0%**	**$53,617**	**2.0%**	**100.0**	**153,478**	**0.4%**	**1.0**	**1.0**	**1.0**	**1.0**
Miami	2.65	96.2	0.7%	27%	28%	27%	18%	$58,520	1.6%	$49,910	2.1%	113.7	1,254	0.7%	1.0	1.1	0.6	1.1
Milwaukee	1.56	3.8	0.0%	31%	27%	25%	17%	$59,166	1.7%	$57,602	2.4%	97.7	851	0.2%	1.2	0.9	1.3	0.8
Minneapolis/St. Paul	3.74	127.0	0.7%	31%	29%	25%	16%	$68,896	2.2%	$59,118	2.3%	101.8	2,024	0.7%	1.0	1.1	1.1	0.8
Nashville	2.09	145.9	1.4%	32%	29%	24%	14%	$65,767	2.7%	$58,392	2.2%	96.7	1,122	1.0%	1.0	1.2	1.0	1.1
New Orleans	1.26	7.5	0.1%	30%	28%	25%	18%	$59,075	1.4%	$52,817	2.2%	94.2	562	0.3%	1.1	0.8	0.8	1.4
New York–Brooklyn	2.60	45.0	0.3%	32%	30%	24%	15%	$36,697	1.8%	$41,948	2.9%	118.5	867	0.9%	2.2	0.5	0.5	0.5
New York–Manhattan	1.50	(31.6)	-0.4%	24%	36%	23%	17%	$451,047	1.8%	$172,005	2.6%	118.5	2,431	0.2%	1.2	1.9	0.2	0.7
New York–other boroughs	4.20	60.4	0.3%	30%	29%	25%	16%	$34,705	1.7%	$35,894	1.6%	118.5	1,217	0.7%	1.6	0.5	0.6	0.5
Northern New Jersey	4.25	77.7	0.4%	29%	25%	26%	20%	$61,485	1.6%	$57,237	1.8%	118.5	1,851	0.1%	1.1	1.0	0.8	0.7
Oakland/East Bay	2.79	73.2	0.5%	29%	29%	26%	17%	$78,627	2.2%	$68,419	1.4%	131.2	1,183	0.9%	1.1	1.0	1.3	0.9
Oklahoma City	1.47	68.3	0.9%	35%	28%	22%	15%	$56,228	2.4%	$50,331	2.2%	91.6	672	0.5%	0.9	0.8	1.0	1.1
Omaha	0.98	39.5	0.8%	34%	28%	23%	14%	$63,527	2.3%	$58,185	2.1%	97.0	508	0.6%	1.0	1.1	1.0	0.9
Orange County	3.15	61.6	0.4%	28%	29%	26%	17%	$77,832	2.3%	$62,180	2.4%	120.3	1,679	0.5%	0.9	1.2	1.2	1.1
Orlando	2.77	238.6	1.7%	31%	29%	24%	16%	$50,984	2.7%	$44,269	2.0%	102.5	1,378	1.6%	0.8	1.4	0.9	2.1
Philadelphia	6.25	94.6	0.3%	30%	27%	25%	18%	$65,964	1.9%	$60,221	2.2%	0.0	2,989	0.3%	1.3	1.0	0.8	0.8
Phoenix	5.12	433.0	1.6%	32%	28%	23%	17%	$51,335	2.8%	$46,960	1.8%	103.9	2,317	1.2%	1.0	1.3	1.0	1.0
Pittsburgh	2.35	7.5	0.1%	26%	25%	27%	22%	$61,493	1.9%	$59,069	2.3%	99.5	1,163	0.2%	1.2	1.0	1.0	0.9
Portland, ME	0.56	13.3	0.5%	25%	26%	27%	22%	$55,445	1.7%	$55,955	2.0%	103.4	297	0.1%	1.1	0.9	1.0	1.1
Portland, OR	2.54	94.2	0.7%	28%	31%	25%	16%	$63,748	2.1%	$54,478	2.1%	108.1	1,233	0.6%	0.9	1.0	1.3	0.9
Providence	1.68	22.4	0.3%	28%	26%	26%	19%	$49,007	1.4%	$51,868	2.1%	111.1	747	0.0%	1.2	0.8	1.0	1.0
Raleigh-Durham	2.80	195.6	1.4%	32%	28%	25%	15%	$61,840	2.8%	$55,912	2.0%	99.3	1,316	1.1%	1.1	1.1	1.0	0.9
Richmond	1.37	47.4	0.7%	30%	27%	25%	17%	$58,778	1.5%	$56,701	2.1%	95.6	685	0.7%	0.9	1.1	0.8	0.9
Sacramento	2.44	114.3	0.9%	32%	27%	24%	17%	$56,868	2.5%	$53,165	2.2%	115.4	1,076	1.0%	1.0	0.9	0.9	0.9
Salt Lake City	1.30	96.7	1.4%	35%	31%	22%	12%	$74,514	3.1%	$53,052	2.3%	99.2	789	1.2%	0.8	1.3	1.1	0.8
San Antonio	2.68	193.6	1.4%	33%	28%	24%	15%	$47,521	2.5%	$46,434	2.1%	96.8	1,115	1.1%	1.0	1.1	0.9	1.2
San Diego	3.28	54.2	0.3%	31%	29%	24%	16%	$71,254	2.3%	$55,639	2.5%	128.5	1,541	0.6%	0.9	1.1	1.1	1.1
San Francisco	1.52	11.8	0.2%	25%	31%	26%	18%	$212,848	1.6%	$119,414	2.1%	131.2	1,147	0.0%	1.2	1.9	0.6	0.9
San Jose	1.92	46.3	0.5%	31%	29%	25%	15%	$193,308	2.3%	$104,890	2.3%	129.8	1,150	0.2%	1.4	1.5	1.6	0.7
Seattle	3.12	130.3	0.8%	28%	33%	24%	15%	$118,988	2.7%	$71,689	2.3%	118.4	1,785	0.8%	1.2	1.2	1.2	0.9
Spokane, WA/Couer d'Alene, ID	0.81	45.3	1.1%	29%	27%	24%	19%	$42,090	1.7%	$44,600	1.8%	97.4	344	0.8%	1.1	0.8	1.0	1.0
St. Louis	2.80	17.4	0.1%	30%	27%	25%	18%	$57,157	1.5%	$57,085	2.3%	97.3	1,390	0.2%	1.1	1.0	1.0	0.9
Tacoma	0.94	43.3	0.9%	31%	30%	24%	15%	$45,311	1.6%	$44,706	2.0%	118.4	332	0.8%	1.0	0.7	1.1	1.0
Tallahassee	0.39	9.7	0.5%	37%	26%	22%	15%	$44,014	1.9%	$47,896	2.2%	96.2	193	0.5%	0.8	0.8	0.5	1.0
Tampa/St. Petersburg	3.31	176.6	1.0%	27%	26%	26%	21%	$48,430	2.3%	$49,039	2.0%	102.1	1,476	0.8%	0.9	1.3	0.9	1.0
Tucson	1.07	47.7	0.9%	29%	25%	23%	22%	$38,037	1.9%	$45,527	2.2%	95.6	394	0.7%	1.1	0.9	1.0	1.0
Virginia Beach/Norfolk	1.78	44.5	0.5%	32%	27%	25%	17%	$47,436	1.7%	$49,510	2.2%	96.5	790	0.5%	0.9	0.9	0.9	1.1
Washington DC–District	0.65	16.8	0.5%	27%	38%	21%	13%	$197,425	2.2%	$75,598	2.1%	117.5	783	0.7%	1.0	1.1	0.2	0.6
Washington DC–MD suburbs	1.35	41.0	0.6%	29%	27%	26%	17%	$73,562	2.5%	$69,430	2.5%	117.5	598	0.5%	1.0	1.3	0.7	0.8
Washington DC–Northern VA	4.38	201.8	0.9%	32%	30%	25%	13%	$65,105	2.7%	$64,177	2.2%	117.5	1,543	1.1%	1.1	1.5	0.6	1.1
West Palm Beach	1.52	78.2	1.0%	25%	24%	25%	26%	$54,780	2.1%	$72,469	2.1%	113.7	670	0.6%	0.9	1.2	0.7	1.3
Westchester, NY/Fairfield, CT	2.69	7.0	0.1%	31%	26%	26%	18%	$71,440	1.9%	$81,677	2.6%	118.8	1,136	0.3%	1.2	0.9	0.8	0.9

Exhibit 3-19 **Housing**

	Households		Single-family market metrics				General market metrics			Multifamily metrics			
Market	2023 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	**130,816.0**	**0.9%**	**66.1%**	**52.0%**	**1.03**	**65.3%**	**3.2**	**7.3%**	**128.0**	**34.0%**	**86**	**0.97**	**34.7%**
Albuquerque	381.9	1.2%	67.4%	50.1%	1.13	66.2%	3.6	5.4%	186.9	32.7%	96	1.13	33.8%
Atlanta	2,375.4	1.4%	64.2%	40.8%	1.04	67.5%	2.5	14.0%	86.6	35.8%	79	1.04	32.5%
Austin	960.0	2.6%	58.6%	49.3%	1.50	47.7%	2.8	8.2%	109.8	41.4%	64	1.50	52.3%
Baltimore	1,122.4	0.7%	66.6%	48.5%	0.99	47.0%	4.2	12.7%	162.0	33.4%	63	0.99	53.0%
Birmingham	481.3	0.4%	69.2%	58.1%	0.92	73.8%	0.1	6.8%	-	30.8%	93	0.92	26.2%
Boise	310.6	2.3%	71.0%	29.2%	1.76	70.8%	1.8	3.8%	90.2	29.0%	96	1.76	29.2%
Boston	1,927.1	0.7%	61.7%	30.9%	1.09	32.4%	5.0	14.2%	109.6	38.3%	41	1.09	67.6%
Buffalo	493.0	0.0%	66.1%	66.6%	0.92	77.6%	3.9	3.1%	130.5	33.9%	94	0.92	22.4%
Cape Coral/Fort Myers/ Naples	519.2	2.4%	73.5%	28.9%	1.21	69.4%	2.1	6.4%	129.6	26.5%	76	1.21	30.6%
Charleston/North Charleston	346.8	1.8%	66.8%	36.2%	1.06	69.5%	1.5	6.5%	111.1	33.2%	80	1.06	30.5%
Charlotte	1,090.2	1.7%	66.0%	63.0%	1.16	65.8%	2.2	7.3%	266.5	34.0%	86	1.16	34.2%
Chattanooga, TN/GA	233.6	0.8%	67.4%	59.0%	1.07	72.2%	1.2	3.9%	145.9	32.6%	95	1.07	27.8%
Chicago	3,714.8	0.4%	64.8%	59.5%	0.85	56.2%	5.1	13.8%	92.8	35.2%	73	0.85	43.8%
Cincinnati	898.6	0.8%	67.1%	76.4%	0.98	70.1%	2.5	5.2%	89.9	32.9%	92	0.98	29.9%
Cleveland	895.6	0.4%	64.7%	64.0%	0.88	83.6%	4.7	4.7%	55.7	35.4%	93	0.88	16.4%
Columbus	867.2	1.0%	61.8%	68.7%	1.04	60.4%	2.9	4.6%	133.3	38.2%	89	1.04	39.6%
Dallas/Fort Worth	2,982.4	1.7%	59.7%	56.6%	1.01	61.4%	2.8	8.9%	110.7	40.3%	75	1.01	38.6%
Deltona/Daytona Beach	301.0	1.7%	72.1%	49.0%	1.08	71.3%	2.4	9.5%	350.5	27.9%	40	1.08	28.7%
Denver	1,219.1	1.5%	64.8%	23.5%	1.40	53.7%	5.3	7.6%	98.3	35.2%	50	1.40	46.3%
Des Moines	283.6	1.5%	69.6%	65.9%	1.04	72.8%	2.6	2.5%	156.0	30.4%	88	1.04	27.2%
Detroit	1,783.1	0.5%	69.5%	57.2%	0.82	62.6%	2.8	7.3%	46.4	30.5%	89	0.82	37.4%
Fort Lauderdale†	782.1	1.1%	59.8%	50.4%	0.94	33.5%	5.2	10.6%	121.10	40.2%	56	0.94	66.5%
Gainesville	124.5	1.4%	59.5%	52.7%	0.97	51.2%	4.0	5.0%	720.0	40.5%	89	0.97	48.8%
Greenville, SC	389.8	1.1%	69.5%	57.4%	0.77	68.5%	0.9	4.5%	385.0	30.5%	92	0.77	31.5%
Hartford	491.4	0.5%	66.4%	66.2%	0.90	64.1%	3.9	5.1%	1299.1	33.6%	75	0.90	35.9%
Honolulu	336.3	0.5%	57.5%	16.1%	1.53	42.5%	6.4	10.6%	-	42.5%	34	1.53	57.5%
Houston	2,688.8	1.7%	60.9%	49.9%	0.91	70.8%	2.8	10.9%	105.3	39.1%	79	0.91	29.2%
Indianapolis	865.1	1.4%	65.7%	55.5%	1.03	69.2%	2.4	5.2%	194.8	34.3%	90	1.03	30.8%
Inland Empire	1,475.1	1.4%	64.1%	16.8%	1.40	81.8%	3.8	17.8%	101.6	35.9%	67	1.40	18.2%
Jacksonville	679.7	1.6%	65.3%	44.4%	1.07	63.1%	2.6	6.3%	118.3	34.7%	87	1.07	36.9%
Jersey City††	284.5	0.5%	51.6%	31.9%	1.11	27.0%	6.9	22.0%	126.3	48.4%	0	-	73.0%
Kansas City, MO/KS	897.1	1.1%	65.2%	69.3%	1.01	64.6%	2.3	3.7%	77.0	34.8%	87	1.01	35.4%
Knoxville	387.7	1.1%	69.2%	53.4%	1.11	67.5%	1.1	4.4%	475.8	30.8%	95	1.11	32.5%
Las Vegas	906.7	1.6%	54.8%	23.5%	1.30	82.3%	4.8	4.6%	92.7	45.2%	88	1.30	17.7%
Long Island††	972.2	0.4%	51.6%	31.9%	1.11	27.0%	6.9	22.0%	183.74	48.4%	0	-	73.0%
Los Angeles†††	3,393.6	0.2%	48.7%	17.6%	0.81	34.4%	6.2	13.4%	-	51.3%	34	0.81	65.6%
Louisville	550.2	0.9%	67.4%	55.0%	0.92	83.3%	2.9	4.0%	-24.1	32.6%	96	0.92	16.7%
Madison	299.2	1.1%	61.8%	41.9%	1.09	32.2%	3.0	3.7%	153.1	38.2%	72	1.09	67.8%
Memphis	539.6	0.6%	59.8%	33.2%	0.91	83.8%	2.3	3.9%	158.0	40.2%	33	0.91	16.2%
Miami+	988.0	0.7%	59.8%	50.4%	0.94	33.5%	5.2	10.6%	121.1	40.2%	56	0.94	66.5%

Sources: IHS Markit, and Urban Land Institute, 2022 Home Attainability Index.

— = data unavailable

*IHS Markit estimate for year-end 2023.

**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 0 to 10, with a higher value indicating better transit access.

Exhibit 3-19 **Housing**

	Households		Single-family market metrics				General market metrics			Multifamily metrics			
Market	2023 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	**130,816.0**	**0.9%**	**66.1%**	**52.0%**	**1.03**	**65.3%**	**3.2**	**7.3%**	**128.0**	**34.0%**	**86**	**0.97**	**34.7%**
Milwaukee	664.3	0.5%	59.8%	69.2%	0.98	66.4%	4.6	4.0%	105.1	40.2%	89	0.98	33.6%
Minneapolis/St. Paul	1,487.5	1.0%	70.4%	54.9%	1.05	45.4%	3.7	5.6%	111.4	29.6%	73	1.05	54.6%
Nashville	832.9	1.7%	65.6%	29.3%	1.25	70.9%	1.7	8.8%	141.7	34.4%	77	1.25	29.1%
New Orleans	517.8	0.6%	63.7%	47.8%	0.92	78.7%	3.4	8.3%	189.4	36.3%	89	0.92	21.3%
New York–Brooklyn††	1,018.6	0.6%	51.6%	31.9%	1.11	27.0%	6.9	22.0%	183.74	48.4%	0	-	73.0%
New York–Manhattan††	767.9	-0.1%	51.6%	31.9%	1.11	27.0%	6.9	22.0%	183.74	48.4%	0	-	73.0%
New York–other boroughs††	1,569.5	0.5%	51.6%	31.9%	1.11	27.0%	6.9	22.0%	183.74	48.4%	0	-	73.0%
Northern New Jersey††	1,590.0	0.7%	51.6%	31.9%	1.11	27.0%	6.9	22.0%	183.74	48.4%	0	-	73.0%
Oakland/East Bay††††	1,006.3	0.7%	55.0%	10.0%	1.69	18.7%	6.8	17.7%	102.36	45.0%	0	-	81.3%
Oklahoma City	580.8	1.2%	64.4%	64.1%	0.84	96.4%	1.7	3.9%	124.39	35.6%	97	0.84	3.6%
Omaha	391.5	1.1%	65.8%	69.8%	1.01	54.8%	2.7	2.8%	102.41	34.2%	87	1.01	45.2%
Orange County†††	1,075.9	0.6%	48.7%	17.6%	0.81	40.0%	6.2	13.4%	-	51.3%	0	-	60.0%
Orlando	1,054.4	1.8%	62.0%	36.2%	0.95	57.4%	3.3	8.2%	142.35	38.1%	77	0.95	42.6%
Philadelphia	2,472.3	0.7%	67.2%	59.9%	0.95	51.2%	5.3	11.5%	157.53	32.8%	72	0.95	48.8%
Phoenix	1,945.7	2.0%	64.4%	29.4%	1.29	75.0%	4.1	7.7%	78.06	35.6%	83	1.29	25.0%
Pittsburgh	1,030.1	0.3%	69.6%	61.8%	0.81	76.5%	3.3	8.1%	251.62	30.4%	90	0.81	23.5%
Portland, ME	243.7	0.9%	72.1%	43.3%	1.05	72.8%	1.7	6.2%	114.31	28.0%	73	1.05	27.2%
Portland, OR	1,021.3	1.2%	62.3%	25.6%	1.45	63.2%	6.1	7.6%	100.12	37.7%	67	1.45	36.8%
Providence	678.4	0.4%	62.0%	49.6%	1.33	88.3%	3.5	9.1%	149.82	38.0%	81	1.33	11.7%
Raleigh/Durham	840.9	1.9%	64.4%	56.1%	1.27	62.9%	2.8	6.3%	204.55	35.7%	85	1.27	37.1%
Richmond	549.1	1.1%	66.7%	63.2%	1.01	50.7%	2.4	5.2%	12.28	33.4%	86	1.01	49.3%
Sacramento	887.8	1.0%	61.2%	23.8%	1.47	80.3%	4.0	8.5%	76.00	38.8%	66	1.47	19.7%
Salt Lake City	460.1	1.7%	68.2%	40.6%	1.65	51.9%	6.6	4.0%	50.49	31.8%	84	1.65	48.1%
San Antonio	988.6	1.7%	62.8%	55.5%	1.03	56.3%	4.5	6.9%	127.62	37.2%	87	1.03	43.7%
San Diego	1,169.7	0.7%	53.9%	20.4%	1.69	44.3%	5.3	7.3%	137.83	46.1%	31	1.69	55.7%
San Francisco††††	643.2	0.0%	55.0%	10.0%	1.69	18.7%	6.8	17.7%	102.36	45.0%	17	1.69	81.3%
San Jose	677.4	0.4%	56.6%	9.9%	2.14	43.7%	6.4	10.9%	122.03	43.4%	14	2.14	56.3%
Seattle	1,642.6	1.3%	60.2%	32.3%	1.47	38.6%	5.1	12.3%	99.31	39.8%	44	1.47	61.4%
Spokane, WA/Couer d'Alene, ID	328.7	1.4%	67.8%	30.1%	1.85	61.2%	2.5	4.4%	148.63	32.2%	95	1.85	38.8%
St. Louis	1,171.1	0.5%	69.3%	51.2%	0.93	65.0%	3.8	5.7%	134.49	30.7%	89	0.93	35.0%
Tacoma	1,642.6	1.3%	60.2%	32.3%	1.47	38.6%	5.1	12.3%	99.31	39.8%	44	1.47	61.4%
Tallahassee	160.1	1.1%	58.2%	53.7%	0.80	48.9%	2.6	3.5%	161.46	41.8%	95	0.80	51.1%
Tampa/St. Petersburg	1,381.4	1.1%	65.8%	46.9%	0.97	71.9%	3.3	8.7%	105.65	34.2%	81	0.97	28.1%
Tucson	450.8	1.2%	64.0%	50.2%	1.23	77.5%	3.7	4.4%	98.56	36.0%	95	1.23	22.5%
Virginia Beach/Norfolk	707.9	0.9%	62.3%	31.4%	1.00	55.9%	3.2	5.9%	190.62	37.7%	84	1.00	44.1%
Washington DC–District†††††	301.1	0.9%	63.9%	41.5%	1.16	45.3%	5.5	17.3%	126.27	36.1%	32	-	54.7%
Washington DC–MD suburbs†††††	499.3	1.0%	63.9%	41.5%	1.16	45.3%	5.5	17.3%	126.27	36.1%	32	-	54.7%
Washington DC–Northern VA†††††	1,613.1	1.2%	63.9%	41.5%	1.16	45.3%	5.5	17.3%	126.27	36.1%	32	-	54.7%
West Palm Beach†	637.0	1.4%	59.8%	50.4%	0.94	53.0%	5.2	10.6%	121.10	40.2%	56	0.94	47.0%
Westchester, NY/Fairfield, CT	963.3	0.4%	66.7%	41.6%	1.50	36.0%	4.5	16.4%	150.95	33.3%	45	1.50	64.0%

†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 3-20 **Local Market Perspectives by Select Market Categories, as indicated by ULI Focus Groups**

Group	Subgroup	Top Two Market Advantages		Top Potential Disruptor
		For-Sale*	**Rental****	
Magnets	Super Sun Belt	Growth—demographic	Business-friendly environment	Political extremism
	18-Hour Cities	Growth—demographic	Quality of life	Housing—affordability and availability, and inflation—persistent higher rate (tie)
	Supernovas	Growth—economic	Quality of life	Housing—affordability and availability
	All Magnets	Growth—demographic	Growth—economic	Housing—affordability and availability
The Establishment	Multitalented Producers	Economic diversity	Desirable suburbs	Housing—affordability and availability
	Knowledge and Innovation Centers	Educational and/or training opportunities	Urban amenities	Housing—affordability and availability
	Major Market Adjacent	Desirable suburbs	Economic diversity	Housing—affordability and availability
	All Establishment	Urban amenities	Desirable suburbs	Housing—affordability and availability
Niche	Visitor and Convention Centers	Opportunities—investment	Opportunities—development	Inflation—persistent higher rate
	All Niche	Growth—economic	Opportunities—development	Housing—affordability and availability
Backbone	Determined Competitors	Cost of living	Opportunities—development	Inflation—persistent higher rate
	All Backbone	Cost of living	Desirable suburbs	Inflation—persistent higher rate

Note: Responses are provided for subgroups with eight or more focus group participants who completed the online intake form.

Emerging Trends in Canadian Real Estate

"Patience during this time of uncertainty will be a real virtue for 2023."

Canada's real estate industry has had a long and good run. Capital was plentiful; rents, valuations, and returns continued to rise across the industry; and Canada's stability and immigration trends have made the country an attractive place in which to invest. Then came 2022, with its mix of interest rate increases, high levels of inflation, and a geopolitical environment that has created uncertainty throughout the global economy. The result has been a significant disruption to the Canadian real estate market. But while the changing environment in 2022 has been a shock for some, the long-term outlook is positive, since the fundamental underpinnings of the Canadian property market remain strong. This is why now is the time to invest in solutions to create value beyond the short-term uncertainty.

In this year's report, we focus on three trends that are particularly salient for 2023 as financial, environmental, and social pressures converge:

- Navigating a period of price discovery amid rising challenges around costs and capital availability;
- Addressing urgent imperatives around environmental, social, and governance (ESG) matters; and
- Finding meaningful solutions to escalating concerns about housing affordability.

1. Costs and Capital: Navigating a Period of Price Discovery amid Major Market Shifts for Canadian Real Estate

"Things are changing so quickly. . . . Developers are not panicking, just pausing."

While overabundance of capital was a significant concern last year, the sentiment has changed in 2022, with some interviewees expecting continuing challenges in 2023. Whereas the concern previously was about too much capital creating even more competition for deals and pushing up prices for assets, the opposite is true now due in large part to a succession of interest rate increases by the Bank of Canada.

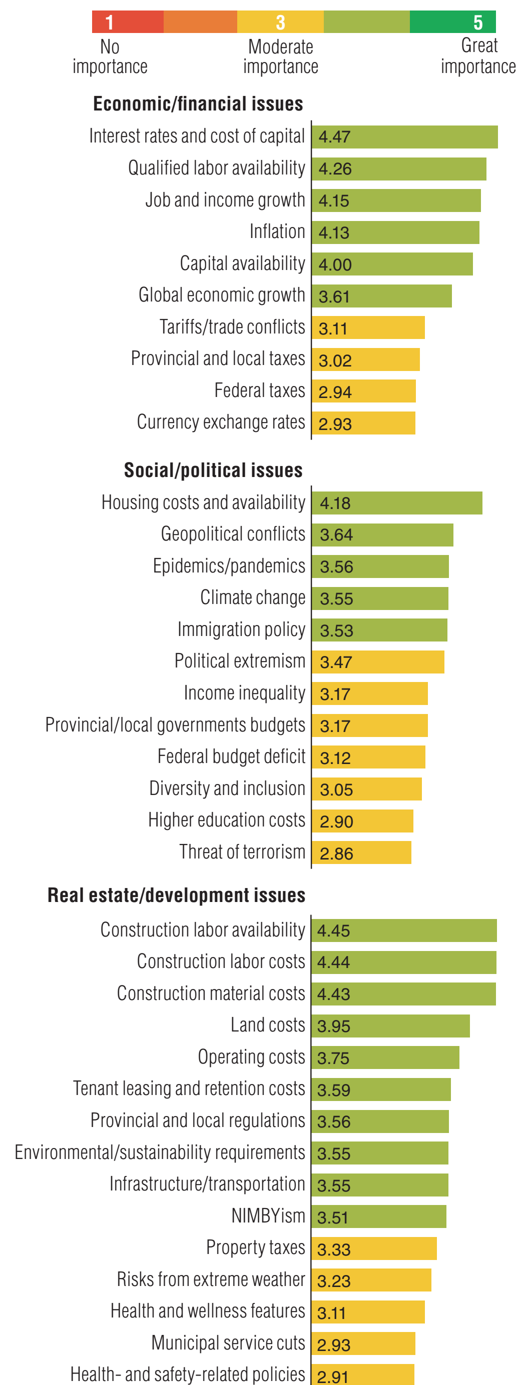
Lenders, according to interviewees, have been tightening borrowing requirements that, coming on top of higher financing costs, are making it harder for real estate companies to raise capital and move projects forward. This, in turn, is leading to reduced competition for deals during a period of price discovery as sellers and buyers find themselves at odds over pricing expectations and valuations as some real estate assets come under pressure.

We can see the impacts in our survey results, in which respondents identified interest rates and costs of capital as the top economic issue for real estate in 2023. We also saw a significant rise in the number of respondents saying that both equity capital and debt capital are undersupplied.

Pressure on Institutional Capital Increasing Uncertainty

While some interviewees suggested that capital is still available for top-quality borrowers or projects, other factors remain that may hinder the market for the time being. Consider, for example, institutional investors' allocations to real estate. While these have been rising in recent years, events in 2022 could reverse that trend. With the value of their equity portfolio holdings having declined, some may now have real estate allocations beyond their target portfolio ranges. And as it becomes harder to generate returns from real estate investments, investors may prefer the relative safety of fixed-income assets that rising interest rates have made more attractive.

Exhibit 4-1 **Importance of Issues for Real Estate in 2023**



Source: *Emerging Trends in Real Estate 2023* survey.

Note: Based on Canadian respondents only.

To be sure, the current environment offers relief from the intense bidding competition of recent years, which was also creating challenges for real estate companies. But for now, the heightened uncertainty is leading many players to stay on the sidelines as they wait to see where the market, particularly when it comes to pricing and valuations, settles. One interviewee noted their cautious approach when they said that they were "sticking to the fairway, not trying to clear the trees and skip the dogleg," when it comes to deployment decisions.

Cost Escalations amid Supply Chain Challenges and Labor Shortages

On top of concerns about the capital markets are supply chain shortages and delays as well as significant increases in costs for labor and materials. Labor issues have been a challenge for some time, but rising costs and shortages of inputs—including for key materials like steel—have added to the pressures. According to Statistics Canada, residential building costs were up 22.6 percent on a year-over-year basis in the first quarter of 2022. For nonresidential construction, cost increases were lower but still significant at 12.8 percent. Construction cost increases continued into the second quarter of 2022 amid inflationary pressures throughout the economy.

Rising labor shortages are exacerbating the challenges. According to Statistics Canada, construction job vacancies reached a record high in the first quarter of 2022 and were double the number of open positions during the same period in 2020. And then there is the impact of construction wages, which were up 6.6 percent in the first quarter of this year compared with the same period in 2021.

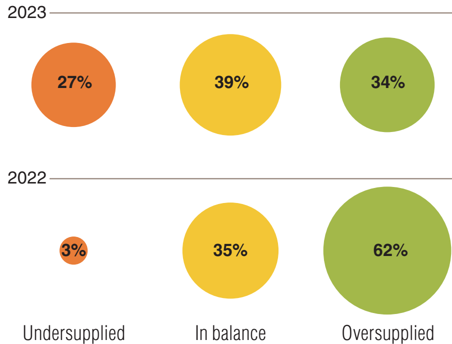
All of this has made completing projects on time and on budget even harder than in the past, and the situation is unlikely to improve in the foreseeable future. The shortage of trades labor is not expected to get better any time soon and construction technologies have yet to evolve to make up the difference in cost or productivity.

Adaptation Key as the Landscape Shifts for Canadian Real Estate

What does this mean for real estate companies? For some, it adds further to the need to take a pause on activity. There have been rising projections, for example, of developers delaying or potentially canceling condo projects as it becomes harder to make the numbers work in these challenging conditions. Others are trying to manage this by spacing out advanced sales of new housing units to ensure that prices reflect rising costs as a project moves forward. In some cases, companies are proactively shor-

Exhibit 4-2 **Real Estate Capital Market Balance Forecast, 2023 versus 2022**

Equity capital for investing



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

ing up liquidity—even at higher financing costs—as they look to reduce risk amid uncertainty about the availability of capital.

While challenging, an environment like this also presents opportunities. Companies with less leverage may be able to secure assets at more reasonable prices. And while some sources of financing may be less available than in the past, many interviewees predict that the private debt market will help fill some of the gap. The pause in the market is also a chance to explore solutions to some of the challenges that builders are facing. Some interviewees, for example, touted mass timber as a potential opportunity to get projects built faster, which is key in an environment of rising costs.

2. ESG Performance: A Critical Issue for Canadian Real Estate

"You can do ESG, and you can get a return."

Alternative materials like mass timber also offer important sustainability benefits, which brings us to another critical issue for Canada's real estate industry: ESG performance. There are many factors underpinning the ESG imperative, but a few issues in particular are driving the increased focus for real estate companies now. Key among them is the ability to attract capital. At a time when financing is both less available and more expensive, companies with a strong ESG track record will have an advantage in attracting investment from institutional players and sourcing new forms of capital—such as green bonds and sustainability-linked loans—that continue to grow in Canada.

While many Canadian real estate players have responded by increasing their focus on ESG strategies, expectations continue to rise in key areas, including when it comes to having robust commitments to address climate change. As we have seen in other areas of the world, investors are increasingly looking beyond whether a company has an ESG strategy to ask about plans to reach net-zero greenhouse gas emissions. And if a company does not have a net-zero strategy, they won't invest. But while Canadian real estate players can expect to start seeing similar requirements from their own investors, our interviewees showed that some companies have yet to fully embrace the net-zero imperative. According to PwC's 2022 global CEO Survey, just 19 percent of real estate executives said that their organization had made a commitment to net-zero greenhouse gas emissions.

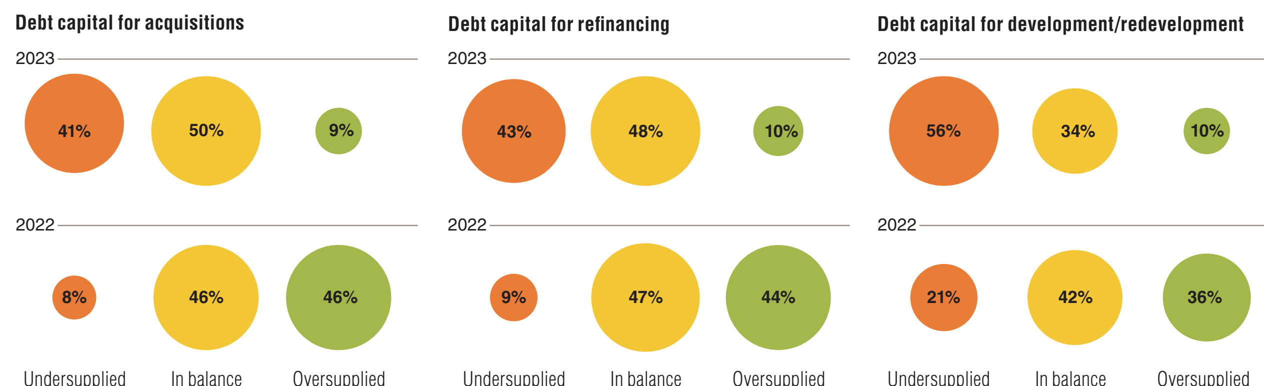
For some real estate companies, the temptation remains to be fast followers rather than leaders on matters like achieving net-zero emissions. One interviewee, for example, told us that they were waiting for other companies to do the heavy lifting on exploring and investing in the right technology investments to address ESG matters in real estate before following suit themselves. Others noted a tendency by some in the industry to downplay the importance of ESG matters in favor of a continued emphasis on quarterly financial performance. "Most private investors want to feel good about ESG but care more about profit," one interviewee told us.

But amid rising investor expectations and growing evidence that companies with strong ESG track records are expected to be more profitable in the medium to long term, we also saw plenty of evidence of a willingness by interviewees to address these issues more proactively than in the past. From exploring solutions to reduce embodied emissions related to building materials such as concrete to increasing the proportion of electric vehicle charging locations in residential developments, companies are taking action on climate change.

Navigating a Rising Imperative around Climate Disclosures

While some real estate companies are still figuring out their ESG and net-zero strategies, the imperative to act quickly goes well beyond investor expectations. This includes the evolving area of climate disclosures, which will increasingly affect both publicly owned and private real estate companies in Canada. In the United States, for example, the Securities and Exchange Commission (SEC) has proposed a new rule requiring issuers to disclose climate-related information, including details about greenhouse gas emissions and climate risks. This means that SEC issuers that are real estate tenants, investors, or lenders would have to report this information, including disclosures about assets in Canada. This would affect private Canadian real estate companies in a number of ways. For example, they can

Exhibit 4-3 **Real Estate Capital Market Balance Forecast, 2023 versus 2022**



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

expect requests from building tenants for information to help them meet their own SEC climate disclosure obligations.

The landscape for climate disclosures and reporting is also evolving quickly in Canada and internationally. The IFRS Foundation's International Sustainability Standards Board, for example, has been working on draft sustainability disclosure standards that set out detailed requirements in areas such as climate-related information and make reference to industry-based requirements for sectors like real estate. The Canadian Securities Administrators also is examining these issues, making ESG and sustainability reporting an even more urgent matter for real estate companies to address.

While reporting and disclosure obligations will be a critical driver of activity, many other factors are driving the ESG imperative, including its role in preserving and creating real estate value. It is important to consider, for example, key risks like climate-related property damage as well as tenant demands for low-carbon space. As one interviewee told us, avoiding obsolescence as a result of a building's carbon profile will be increasingly important for real estate owners, as will the upsides of having green properties that are more attractive to lenders, tenants, and buyers. A willingness to look at retrofitting buildings will also be key since avoiding emissions associated with new construction will be a critical part of the industry's contribution to achieving climate change goals.

Measuring the S Factor an Emerging ESG Focus for Canadian Real Estate Companies

While climate change issues remain a major focus of the ESG agenda, concern about social issues was an emerging issue for interviewees this year. An important consideration for many interviewees is the need to measure performance on key social issues like inclusion and diversity.

How, for example, do companies compare to their peers on matters like workforce representation, diversity at senior ranks, and pay equity? As employees, community members, and, in some cases, regulators increasingly look for data in these and other areas, real estate companies will need to have good processes in place to produce it. But as PwC Canada found in its 2022 analysis of ESG reporting practices of large public companies, many Canadian organizations have gaps in this area. The report found that while many companies disclosed policies and measurable targets around gender matters, they tended to be lacking when it came to transparency about other aspects of diversity.

The challenge for many real estate companies is the complexity of reporting on social matters like inclusion and diversity. Data may not be readily available or of sufficient quality, or it may lie in multiple systems across the organization. In some cases, key workforce inclusion and diversity data comes from areas of the business that have yet to develop best practices around metrics and reporting that functions like finance and accounting have long been leaders in.

Opportunities to Make Headway on Inclusion and Diversity Metrics and Reporting

The good news is that increasingly sophisticated tools are available to help organizations improve reporting on inclusion and diversity matters. These cloud-based solutions pull in data from disparate sources and connect teams across the organization to create a single source of truth about ESG matters like perfor-

mance on inclusion and diversity. They can also help automate many labor-intensive processes and increase the accuracy of the data presented, which is critical at a time of rising expectations around the quality of ESG reporting.

Digital tools, of course, are very helpful, but they are only one part of the journey to better reporting on social matters like inclusion and diversity. A critical first step is to link your efforts to your company's purpose and values, which is key to aligning the organization around what you are doing and making sure that everyone understands the reasons for it. Other foundational steps include defining your reporting strategy, such as what to report and to whom, as well as assessing which data you already have and what the gaps are that you need to address.

It is also important to think about compensation and incentives, which an increasing number of organizations are doing by tying executive pay to progress on inclusion and diversity metrics. For the real estate sector, this will likely be an area where there will be a need for industry associations to take a leading role in attracting and developing a more diverse workforce for companies to recruit from.

3. Housing Affordability: A Challenging Issue for Canada and a Significant Concern for Real Estate Companies

"In no jurisdiction in the world has affordable housing been solved with no incentives."

A key social issue for real estate, of course, is housing affordability. Housing costs and availability ranked as the top social/political issue among survey respondents this year, and it comes as no surprise as affordability matters continued to rise and reached crisis levels in some areas of Canada in 2022. We can see the evidence in RBC Economics' housing affordability index report, which showed that ownership costs as a percentage of median household income reached 59.3 percent for single-family homes at the start of 2022.

Moves by the Bank of Canada to raise interest rates as part of its bid to tackle inflation are having an impact on home prices. But higher interest rates will counteract the affordability impacts of any easing of home prices, at least for the time being. And overall affordability pressures are affecting other classes of residential real estate as rising interest rates and the resulting challenges faced by homebuyers in qualifying for financing under the mortgage stress test push many potential purchasers to try to rent a home instead. But with supply also constrained and getting even tighter in the rental market, rising rents are adding to the growing affordability crisis.

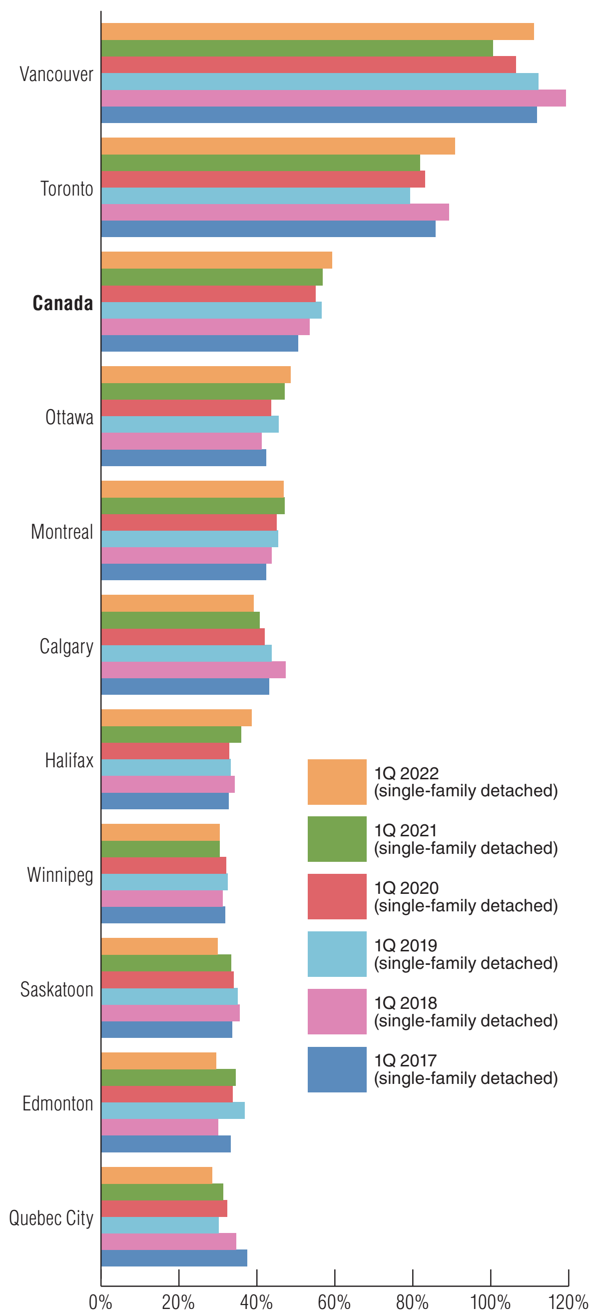
While the RBC's report noted that worsening affordability conditions would be particularly marked in relatively high-priced markets like Toronto and Vancouver, the challenges have been spreading across Canada as Canadians increasingly move to other communities—like suburbs and evolving 18-hour cities as well as small towns and rural areas—in search of cheaper places to live. Migration away from Canada's largest cities—which still tend to see population increases as a result of high rates of international immigration—has been a trend for some time, but the growth of remote working during the pandemic has exacerbated the move outwards and helped make affordability pressures more widespread. We can see the impacts in annual population estimates published earlier in 2022 from Statistics Canada. The findings, which cover annual population changes as of July 1, 2021, include the following:

- Toronto and Montreal saw the largest net migration losses to other regions of Ontario and Quebec, respectively, since at least 2001–2002.
- Net intraprovincial migration to rural areas increased across Canada.
- As further evidence of the growth of secondary cities and suburbs, the fastest-growing census metropolitan areas were Kelowna, British Columbia (2.6 percent), Oshawa, Ontario (2.3 percent), and Halifax (2 percent). These growth rates were well above the average of 0.5 percent across all census metropolitan areas.

We can also see evidence of these trends in international immigration statistics published by Statistics Canada. While international immigration is critical to the continuing growth of Canada's largest cities, it is also true that the share of permanent residents settling in regions like Toronto has been declining over time. Looking at Halifax, which is among the cities we have been watching in recent years for the impacts of changing migration trends, the opposite has happened. Its share of immigrants to Canada's census metropolitan areas rose to 1.4 percent in 2020–2021 from 0.5 percent in 2001–2002.

We can see the impacts of all these trends on housing affordability in places like Halifax. According to the RBC's latest report, the affordability measure for Halifax reached 38.6 percent for a single-family detached home, which was well above the long-term average of 31.6 percent for Halifax.

Exhibit 4-4 **Housing Affordability (Single-family detached)**



Source: RBC Economics, *Housing Trends and Affordability* reports, accessed July 21, 2022.

Note: The RBC Housing Affordability Measures show the proportion of median pre-tax household income that would be required to cover mortgage payments (principal and interest), property taxes, and utilities based on the benchmark market price for single-family detached homes and condo apartments, as well as for an overall aggregate of all housing types in a given market.

Supply Insufficient to Meet Housing Demand

The question, of course, becomes what to do about an affordability crisis as it spreads across Canada. Even if affordability eventually improves with falling housing prices, the reality is that the key issue underpinning the crisis is insufficient supply to meet high demand for all types of homes. Demand will continue to rise, especially as the Canadian government commits to higher immigration targets in the coming years and the country welcomes large numbers of temporary residents, like international students, who also need places to live. This means that even as homebuilding activity has been rising, tight market conditions have put pressures on affordability that are unlikely to ease significantly. As we noted, some interviewees are looking at pausing housing developments—often condo projects—as they deal with cost and financing challenges as well as softening demand due to rising interest rates. As that happens, and especially if projections of cancellations continue to materialize, the supply and affordability challenge will not go away even if the housing market cools for the time being.

And, as the Canada Mortgage and Housing Corp. (CMHC) noted earlier in 2022, the number of new units required to restore reasonable affordability levels is high. Taking into account a number of factors, including income and demographic trends, CMHC estimated that Canada would need to build an additional 3.5 million units to restore housing affordability by 2030. This number is above and beyond the 2.3 million units projected to be built between 2021 and 2030. The findings suggest that the country needs to build a total of 5.8 million homes over that time period, which is a high number considering that, according to CMHC's spring 2022 housing market outlook, there were only about 271,000 housing starts in Canada in 2021. These reports only reinforce the fact that what is truly driving the affordability crisis is a lack of supply and is a signal that Canada does not have the capacity to meet housing demand.

Addressing the Supply Issue from All Angles

More recent policy discussions and actions have acknowledged what needs to be done to address affordability. There has been increased recognition that supply is the crux of the challenge, and governments at all levels have announced efforts to address that. We have seen initiatives from higher levels of government to encourage faster development approvals by municipalities, new money to incentivize construction of affordable homes, and policy changes aimed at facilitating the building of modestly denser forms of housing, like duplexes, triplexes, and mid-rise buildings, in urban areas currently reserved for single-family units.

While the increased acknowledgment of the supply gap is positive and the initiatives in response are welcome, the actions fall

far short of what is necessary. For one, new funding to incentivize affordable housing is good, but it is not enough to make a serious dent in the problem. And without more consistent criteria around what we mean when we talk about affordability and affordable housing and how to tailor initiatives for groups with different needs—such as homeless Canadians, the working poor, and middle-income households—policies and programs will fail to address them effectively.

Governments also need to acknowledge the ways that their actions hinder affordability by adding significant costs onto the construction of new housing. In many communities, fees, charges, and taxes levied by different orders of government make up a very substantial portion of the cost of a new home. In December 2021, for instance, the Building Industry and Land Development Association released a study of the Greater Toronto Area housing market that noted that government-imposed taxes and fees account for as much as 24 percent of the price of a new home. And in some municipalities, plans are in the works to raise this significantly. This includes Toronto, where the city council recently passed a plan to raise residential development charges by 46 percent by 2024. Such actions, along with lengthy development approvals and other municipal policies, only add to homebuilding costs, which, in turn, worsens affordability. Governments also need to prioritize setting aside new land for development as well as more proactive efforts to facilitate the densification of some existing neighborhoods. These are just some of the changes required, but the central theme is a focus on having consistent alignment around increasing supply. And in many cases, that will require provincial policies to ensure consistency that has been lacking at the municipal level.

How Can the Industry Help?

To be sure, the development and broader real estate sectors have a role to play in helping address the crisis. Beyond concerns about societal trust and impacts on the industry's reputation, the issue also increases regulatory risk, especially when it comes to potential policy changes like rent controls and measures targeting investment in the housing market. The industry may have good arguments against such policies, but that does not mean that governments won't introduce them anyway.

Many interviewees say that they are ready and eager to help address affordability. As one interviewee told us: "We are not the enemy; we are part of the solution." So, what can the industry do?

For a few interviewees, there was a recognition of the good years they have been having, with one going as far as suggesting that the industry should prepare for a reset of profit expectations. Some interviewees noted modest actions they have been taking on their own, with one describing efforts to make a small number of units more accessible by modifying deposit structures. One interviewee discussed their efforts to increase efficiencies by shifting certain engineering and construction activities to happen earlier in the design process. Another interviewee emphasized the need for more collaborative partnerships among industry players, nonprofit organizations, and governments to deliver affordable housing. There are many examples of creative partnerships and approaches to building affordable homes in Canada that, with the right funding and incentives from governments, can make a difference if applied more broadly.

Labor Shortages Amplifying the Affordability Challenge

The other key issue is that even with better, more consistent, and more collaborative programs and policies focused on supply, labor shortages will impede significant progress on building more housing. As we noted, one of the big factors increasing development costs relates to the tight labor market, and demographic trends mean that that issue is not going away. While much has been made of the so-called great resignation and the notion that many Canadians are reevaluating their relationship with the workplace in the wake of the pandemic, Statistics Canada has shown that the labor force participation rate by those in the core-age cohort (people aged 25 to 54 years) remains in line with pre-pandemic trends. (In July 2022, in fact, it was above the rate for the same month in 2019.) One factor contributing to the tight labor market is retirements by those older than the core-age cohort, and with Canada's population aging, we can expect these demographic trends to add to the challenges experienced by sectors like the construction industry.

So, what can we do about this? A key action is to heed calls in reports like the one from Ontario's housing affordability task force to change immigration criteria to prioritize skilled-trades workers. Promoting the trades and attracting people from underrepresented and marginalized groups to work in this area also will help relieve these challenges over time.

Interviewees

3650 REIT
Malay Bansal

Adi Development Group
Tariq Adi

AEW Capital Management LP
Michael Acton
Michael Byrne
Sara Cassidy
Josh Heller

AGF Investments
Ash Lawrence

Alate Partners
Courtney Cooper

Alberta Investment Management Corporation
Paul Mouchakkaa
Ian Woychuk

Alignvest Management Corporation
Sanjil Shah

Aline Capital
Scott Williams

Alliance Global Advisors
Jennifer Stevens

Alliance Prével
Laurence Vincent

Alliance Residential Company
Bob Weston

Allied Properties Real Estate Investment Trust
Michael Emory

Almadev
Rafael Lazer

Almanac Realty Investors
Matthew Kaplan

Alston & Bird LLP
Jason Goode

Altree Developments
Zev Mandelbaum

American Constructors
Belinda Santolucito

American Realty Advisors
Stanley L. Iezman

Amica Senior Lifestyles
Christine Albinson

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

antonyslumbers.com
Antony Slumbers

Armco Capital Inc.
George Armoyan

The Armour Group Limited
Scott McCrea

Arnon Development Corporation Limited
Gillie Vered

Asana Partners
Sam Judd
Stefan Neudorff
Brian Purcell

Aspen Properties Ltd.
Rob Blackwell
Greg Guatto
Scott Hutcheson

Associated Bank
Shawn Bullock

AvalonBay Communities
David Gillespie

Avenue 31 Capital Inc.
Jennifer Murray
Michel Pilon

Avenue Living Asset Management
David Smith

Bain Capital
Benjamin Brady
Joe Marconi

Balch & Bingham LLP
Patrick W. Krechowski

Bank of America
Ada Chan

The Bank of Nova Scotia
Stephen Morson

Barclays Capital
P. Sheridan Schechner

Bard Consulting
Roy Schneiderman

Barron Collier Companies
Brian Goguen

Barton Malow Builders
James Morrison

Basis Investment Group LLC
Mark K. Bhasin

Bateh Real Estate Advisors
Tarik Bateh

Beedie Group
David Pearson

BentallGreenOak
Jonathan Epstein
Andrew Yoon

BentallGreenOak (Canada) Limited Partnership
Christina Iacoucci
Phil Stone

Berkshire Residential Investments
Gleb Nechayev
Eric Schrumpf

Billingsley Interests
Alan Billingsley

Blackstone
A.J. Agarwal
Janice Lin

Boardwalk REIT
Sam Kolias

Bosa Development Corporation
Clark Lee

Boston Properties
Mike LaBelle
Owen Thomas

BridgeInvest
Alex Horn

Brivia Management Inc.
Vincent Kou

Brookfield Properties
Ben Brown
Matthew McCafferty
Vicki Mullins
Travis Overall
Jan Sucharda
Malee Tobias

Brookfield Residential Properties Inc.
Thomas Lui

Brookline Bank
Joan Matera

BSB Design
Dan Swift

BTB Real Estate Investment Trust
Mathieu Bolté
Michel Leonard

BuyProperly Limited
Khushboo Jha

C.W. Urban
Darlene Carter

CA Health & Science Trust
Jesse Ostrow

Cabot Properties
Franz Colloredo-Mansfeld
Carey Herrlinger
Bradford Otis

Cadence Bank
Tim Williamson

Cadillac Fairview
Sal Iacono
Duncan Osborne

Caliber Companies
Chris Loeffler

CalSTRS
Michael McGowan

Camden Property Trust
James Flick

Cameron Development Corporation
Tina Naqvi-Rota

Canada Ici Capital Corporation
Brandon Kot

Canadian Apartment Properties REIT
Mark Kenney

Canderel Management Inc.
Shawn Hamilton
Brett Miller

Canyon Partners Real Estate LLC
Robin Potts

Capital Associates
Thomas Huff

Capital City Development Corporation
Alexandra Monjar

Capital One Bank
John Hope

Carmel Partners
Dennis Markus
Ron Zeff

Castle Hill Partners
John McKinnerney

CBRE
Lloyd E. Allen
Meade Boutwell
Brandon Forde
Justin Hirsch
Brandon Isner
Brandon McMenomy
Julie Whelan

CBRE Investment Management
Pam Boneham
Chuck Leitner

CenterSquare Investment Management LLC
Rob Holuba

Centric Architecture
Gina Emmanuel

Charter Properties
Eric M. Williams

Childress Klein
Landon Wyatt III

Choice Properties REIT
Mario Barrafato
Rael Diamond

Cirrus Asset Management Inc.
Steve Heimler

Citigroup
Thomas Flexner

City and County of San Francisco
Daniel Adams

City of Raleigh, North Carolina
Patrick O. Young

Clarion Partners
Jeb Belford
Hugh Macdonnell
Tim Wang

Codds Creek Capital
Ken Crockett

Colicchio Consulting
Phil Colicchio

Colliers International
Annie Labbé
Warren Wilkinson

Colliers Nashville
Janet Miller

Colonnade Bridgeport
Hugh Gorman

Columbia Business School
Leanne Lachman

Combined Properties Incorporated
Drew Faha
Steven Gothelf

Cominar
Adam Medeiros

CompassRock International
David Woodward

Compspring
Lisa Dilts

Concert Properties
Brian McCauley
Andrew Tong

Concord Group
Richard M. Gollis

Condor Properties Ltd.
Sam Balsamo
Nancy De Gasperis

The Conservatory Group
Mark Libfeld

Continental Properties
James H. Schloemer

Conundrum Capital Corporation
Daniel Argiros

Corporate Office Property Trust
Stephen Budorick
Todd Hartman
Anthony Mifsud

Cortland
Jason Kern

CoStar Group
Jan D. Freitag

CPM Texas
Dave Stauch

CRE Tax Planning LLC
Dawn Polin

Cremona Consulting
Sera Cremona

Cresleigh Homes
Robert Walter

Crombie REIT
Donald Clow

CrossMarc Services
John Crossman

Crow Holdings Capital
Cyndy Silverthorn

Crux Capital
Peter Aghar

CT REIT
Kevin Salsberg

CubeSmart
Christopher P. Marr

Cushing Terrell
Sheri Blattel

Cushman & Wakefield
Barrie Scardina
Rebecca Wells

Deka Immobilien Investment GmbH
Alexander Heijnk
Simona Vigneron

Dermody Properties
Kathleen S. Briscoe

Desjardins Gestion internationale d'actifs
Michel Bédard

Developing Solutions LLC
George J. Carfagno

Devmont
Sam Scalia

DIALOG
Mona Lovgreen

Dilweg
Kelsey Reside

Distrikt
Paul Simcox

DivcoWest
Gregg Walker

Doucet & Associates
Tracy A. Bratton

Downtown Austin Alliance
Michele Van Hyfte

Dream Unlimited
Jason Lester

Dunaway
Roberta Salas

Durum Properties Inc.
Jay Simmons

Eastdil Secured LLC
Miles Theodore
Michael Van Konynenburg

Eastern Bank
Matthew Osborne

Economical Mutual Insurance Company
Jayme Gualtieri

EDENS
Jodie McLean

ElmTree Funds
James G. Koman

EMBLEM Developments
Kash Pashootan

Emergent Research
Steve King

Empire Communities
Andrew Guizzetti

Empire Title LLC
Tayler Tibbitts

EOA Architects
Sheila Dial Barton

Equiton
Jason Roque

Equus Capital Partners
Arthur P. Pasquarella

Federal Realty
Jeff Berkes
Jeff Kreshek

Fengate Capital Management Ltd.
Jaime McKenna

Fiera Real Estate
Kathy Black

Fifield Companies
Joe Pitsor

FINFROCK
William A. Finfrock

First Horizon Bank
Christina Blackwell

First Merchants Bank
Rick Baer

First Southern Mortgage Corp.
Stephen Brink
Graham Gilreath

First Washington Realty
Daniel Radek

Fitzrovia Real Estate
Adrian Rocca

Focus Strategies Investment Banking
Terese Everson

FORE Institute, University of Denver, Burns School of Real Estate
Glenn Mueller

Forest Gate Financial Corp.
Daniel Marinovic

Forgestone Capital Management LP
Trevor Blakely

Franklin Street
Laura Gonzales

Freddie Mac
Steve Guggenmos

GarzaEMC
Rudy Garza

GEM Health Care Group Ltd.
Mahmood Hussain
Syed Hussain
John Yuan

Gemdale USA Corporation
Michael Krupa

Gensler
Diane Hoskins

Giarratana LLC
Tony Giarratana

GID
Gregory Bates
W. Jeffrey Beckham
Hisham Kade
Suzanne E. Mulvee
Thad D. Palmer

Gilbane Co.
Morgan Beam

The Glenview Corporation
Jake Shabinsky

Goldman Sachs
Alex Cheek
Nick O'Neill
Neil Wolitzer

Government of New Brunswick
Todd Selby

Green Cities
Molly Bordonaro

Green Mesa Capital LLC
Randy C. Norton

Green Street
Cedrik Lachance

Greenberg Traurig
Chuck Abrams

Greystar
Michael Joyce

Groupe Commercial AMT
Jérôme Jolicoeur

Grubb Properties
Clay Grubb

GWL Realty Advisors
Paul Finkbeiner

H.J. Russell & Company
Delilah Wynn-Brown

Hawkeye Partners
Bret Wilkerson

Hawkins Partners Inc. Landscape Architects
Kim Hawkins

Hazelview Investments
Michael Tsourounis

Heitman
Aki Dellaportas

Herity Limited
Brad Foster
Hugh Heron

Hersha Hospitality Trust
Ashish Parikh
Jay Shah

HH Fund
Tony Shen

High Street Logistics Properties
Robert Chagares
Andy Zgutowicz

Hilco Redevelopment Partners
Jason Gill

Hines
Mark Cover
Josh Scoville
David Steinbach

H.J. Russell & Company
Delilah Wynn-Brown

HKS Architects
Emir Tursic

Holladay Properties
Allen Arender

Homes by WestBay
Willy Nunn

Hopewell
Murray Degirolamo
Jason Kraatz
David Loo

Houlihan Lokey
Nick Way

Hughes Investments Inc.
Phil Hughes

Hullmark Development Ltd.
Jeff Hull

iA Financial Group
Claude Sirois

ICM Realty Group
John Courtliff

IDI Logistics
Chris Kazanowski
Shawn Warren

Immeuble populaire de Québec inc.
Michel Côté

Independence Title
Colin Parker

Industrious
Craig Robinson

Intercontinental Real Estate Corporation
Jessica Levin

Invesco Fixed Income
Kevin Collins
David Lyle

InvestPlus REIT
Domenic Mandato

Ivanhoé Cambridge Inc.
Michèle Hubert

Jamestown LP
Catherine Pfeiffenberger

Jayman Built
Aasit Amin

Jesta Group
Anthony O'Brien

JBG Smith Properties
Moina Banerjee
Steve Museles
Dave Paul
Angie Valdes

JLL
Jeff Coddington
James Cook
Mehtab Randhawa
Vineet Sahgal
Ryan Severino

John Burns Real Estate Consulting
John Burns

Kairos Asset Strategies
Rachel Lee

Katz, Sapper & Miller
Josh Malarsky

Kayne Anderson
John Wain

Kearny Real Estate Company
Hoonie Kang

KennMar
Allie Rosenbarger

KHP Capital Partners
Ben Rowe

Killam Apartment REIT
Philip Fraser
Dale Noseworthy
Robert Richardson

Kimco REIT
Glenn Cohen
Ross Cooper
Conor Flynn

Kin Capital Partners
Galia Feiler

KingSett Capital Inc.
Jon Love

Kiser Vogrin Design
Katie Rudowsky

KKR
Chris Lee

Kothari Group
Anupam Kothari

KTCivil
Jonathan Fleming

Lafayette Square
Onay Payne

Landsea Homes
Logan Kimble

LaSalle Investment Management
Alok Gaur
Jacques Gordon
Brad Gries

LCK
Dale Stigamier

Le Groupe Maurice Inc.
Francis Gagnon

Lee & Associates Charleston
Cameron Yost

Les immeubles Laberge Enr.
Charles Laberge

Les Immeubles Roussin Ltée.
Nathalie Roussin

Levcor Inc.
Justin Levine

Liberty Development Corporation
Marco Filice

Linneman Associates
Peter Linneman

Lionstone Investments
Andrew Bruce
Andrew Lusk

Lockehouse Retail Group
Steve Cutter

Low Tide Properties
David Ferguson

LOWE
Martin Caverly

Mack Real Estate Group

Madison Homes Limited
Miguel Singer

Mainstreet Equity Corp.
Trina Cui

Manulife
Maria Aiello

Manulife Investment Management Limited
Gregory Sweeney
Jeffrey C. Wolfe

Marcus & Millichap
Geoffrey Bedrosian
John Sebree

Marcus Partners
Paul Marcus

Markee Developments
Jason Marks

MarketStreet Enterprises
Dirk Melton

The Mathews Company
Bert Mathews
Jody Moody

Mattamy Homes
Brad Carr

MCAN Mortgage Corporation
Floriana Cipollone

McMillan Pazdan Smith Architecture
K.J. Jacobs

Melcor Developments
Naomi Stefura

Meridian Capital Group
Helen Hwang

Merlone Geier Partners
Heather Beal

Metlife Investment Management
Sara Queen

Metro Nashville Housing Division
Hannah Davis

Metrolinx
Michael Norton

Metrontario Group
Lawrie Lubin

Michelle Malanca Frey Consulting
Michelle Malanca Frey

Midtown Equities
Mehul J. Patel

Minto Communities USA
Mike Belmont

The Minto Group
Michael Waters

Moody's Analytics
Victor Calanog

Morgan Group
Andrew Grimm

Morgan Properties
Jason Morgan
Jonathan Morgan

Morguard Corporation
Paul Miatello

Mortgage Bankers Association
Jamie Woodwell

MSCI/Real Capital Analytics
Jim Costello

Multiplex Construction Canada Ltd.
Terry Olynyk

MURAL Real Estate Partners
Robin Zeigler

MW Builders Inc.
Su Jones

National Development
Brian Kavoogian

National Multifamily Housing Council
Douglas Bibby

Nelson\Nygaard Transportation Consultants
Lauren Mattern

New City Development
Isaac Bamgbose

New York Life Real Estate Investors
Brian Seaman
Ross Berry

New York University
Arpit Gupta

NewQuest Properties
Jay K. Sears

Nordblom Company
Kris Galetti

Norris Design
Matthew Taylor

Northcrest Developments
Derek Goring

Northern Trust
Brian Bianchi
David Dagley

NorthWest Healthcare Properties REIT
Shailen Chande

Northwood Ravin
Jeff Furman

Nuveen Global Cities REIT
Steve Hash

Nuveen Real Estate
Donna Brandin
Brian Eby
Jack Gay
Jason Hernandez
Chris McGibbon
Carly Tripp

OnPlace
Monica Onstad

Ontario Infrastructure and Lands Corporation
Michael Fedchyshyn

Ontario Real Estate Association
Tim Hudak

Opus Development Company
Ryan Carlie

Orchestra Partners
John Boone

Ownly
Jason Hardy

Oxford Properties
Michael Turner

Pacific Elm Properties
Billy Prewitt
John Rutledge

Pacific Urban Investors
Art Cole

Page
Sara Ibarra
Ryan Losch

Panattoni
Whitfield Hamilton

Pan-Canadian Mortgage Group Inc.
Joel McLean

Pangman Development Corporation
Kevin McKee

Parkwood Business Properties
Chris Meyer

Parmenter Realty Partners
John Davidson

Patterson Real Estate Advisory Group
Ken Grimes

Pebblebrook Hotel Trust
Thomas Fisher

Peerage Capital Canada Limited
Gavin Swartzman

PEG Companies
Robert Schmidt

Pensford Financial Group
J.P. Conklin

PGIM Real Estate
Stephen Bailey
Alyce Dejong
Joanna Mulford
Soultana Reigle
Jaime Zadra

Plymouth Industrial REIT Inc.
Anthony Saladino
Pen White
Jeff Witherell

Port of San Francisco
Diane Oshima

Porte Realty Ltd.
David Porte

PREA
Greg Mackinnon

Preferred Apartment Communities
John Isakson

Pretium Partners LLC
Zain Butt
Charles Himmelberg
Nishu Sood
Martin Young

Price Edwards & Company
Jim Parrack

Prima Capital Advisors
Nilesh Patel
Greg White

Prism Capital Partners LLC
Eugene Robert Diaz

Prologis
Chris Caton
Liz Dunn
Ricardo Gradillas
Todd Lewis
Hamid Moghadam
Kim Snyder

Public Sector Pension Investment Board
Carole Guerin
Luc McSween

Public Square
Clay Haynes

QuadReal Property Group Limited Partnership
Anthony Lanni

Quinn Residences
Richard Ross

RATIO.CITY Inc.
Monika Jaroszonek

RBC Capital Markets
Dan Giaquinto
David Switzer
David Tweedie
William Wong

RCLCO
Charles A. Hewlett

RCLCO Fund Advisors
Taylor Mammon

Real Property Association of Canada
Michael Brooks

RealPage
Jay Parsons

Realstar Management Partnership
Colin Martin

Regency Centers
Christopher Widmayer

The Regional Group
Sender Gordon
Kelly Rhodenizer

Regional Municipality of Durham
Lorraine Huinink

RentMonster
Brian Tunnell

Reuben, Junius & Rose LLP
Corie A. Edwards

Revera Inc.
Glen Chow
Kulbir Nijjer

Rice Management Company
Ryan M. LeVasseur

RioCan REIT
Andrew Duncan

Rivergate
Jay Massirman

R-LABS Canada Inc.
George Carras

RLJ Lodging Trust
Nikhil Bhalla
Leslie D. Hale

The RMR Group
Adam Portnoy

Rockpoint
Spencer Raymond

Rohit Group of Companies
Rohit Gupta

Rosen Consulting
Kenneth Rosen

The Roxborough Group
Marc Perin
Munezeh Wald

Roy-L Capital Corporation
Matthew Fishman

RVi Planning + Landscape Architecture
Jared Pyka

RXR
Mike Maturo
Mike O'Leary
Scott Rechler

Schneider Electric
Stuart Whiting

Seamon Whiteside & Associates
Chip Buchanan

Sienna Senior Living Inc.
Nitin Jain

Signature Development Group
Paul Nieto

Signorelli Company
John Montaquila

SilverCap Partners
John Scott Trotter

Silverstein Properties
Brian Collins

Skyline Investments
Adam Cohen
Robert Waxman

Slate Asset Management
Brandon Donnelly
Steve Hodgson
Lindsay Stiles

Sleiman Enterprises
Michael McNaughton

SmartCentres REIT
Rudy Gobin
Mitchell Goldhar

Snapbox Self Storage
Scott Hastings

The Sorbara Group of Companies
Edward Sorbara

Société de gestion COGIR S.E.N.C.
Mathieu Duguay

Sonesta International Hotels Corporation
John Murray

Southwest Properties Ltd.
Gordon Laing
Paul Murphy
Jim Spatz

Spirit Realty
Ken Heimlich

Stafford Developments
Jonathan Goldman

Starwood Capital Group
Ethan Bing
Anthony Murphy

Starwood Land Advisors
Mike Moser

STG Design
Jim Susman

Stiles Corporation
Scott MacLaren

Stillwater Capital
Clay Roby

Stockbridge
Terry Fancher
Seth Kemper
Stephen Pilch
Kristin Renaudin
Nicole Stagnaro

Stock Development
Keith Gelder

Strathallen
Cathal O'Connor

Structure Development
Sarah Andre

Structures
Dante Angelini
Heidi Cisneros

Suburban Land Reserve
David Cannon

The Sud Group
Adrian Rasekh
Elliott Sud

Summit Industrial Income REIT
Ross Drake
Dayna Gibbs

Summit Investors LLC
Greg Winchester

Sunstone Hotel Investors Inc.
Robert Springer

The Swig Company
Stephanie Ting

TA Realty
Randell Harwood
James Raisides
Sean Ruhmann

Tanzola Corp.
Greg Tanzola

Taylor Derrick Capital
Nick Etherington

Townline Homes Inc.
Rick Ilich
Dan Jekubik

Trammell Crow Company
Jim Casey
Matt Khourie

Trammell Crow Residential
Ken Valach

Transwestern Development Company
Ashley Grigsby
Doug Prickett

Trepp
Lonnie Hendry

Trez Capital
Vikram Rajagopalan

Tricon Residential Inc.
Gary Berman

Tridel Corporation
Bruno Giancola
Len Gigliotti

Triovest Realty Advisors Inc.
Prakash David
Ted Willcocks

Triple Group of Companies
Steve Apostolopoulos

Tristan Capital Partners
Douglas Poutasse

Truist
Andy Holland

UDR
Thomas W. Toomey

United Property Resource Corporation
Tim Blair

University Federal Credit Union
Jason Qunell

University of San Diego
Norm Miller

Urby
Dennis Giuliano

U.S. Bancorp Community Development Corporation
Kacey Cordes

USAA Real Estate
Will McIntosh

Vantage Point Development
Brannon Butler

Vential Investments
Dino P. Christoforakis

Veritas
Yat-Pang Au

The Viera Company
Todd J. Pokrywa

Village Green
Diane Batayeh

Virtu Investments
Ritesh Patel

The Vision Foundry
David Stoller

W.P. Carey
Jason Fox
Brooks Gordon
John Park
Toni Sanzone

Walton Street Capital
Raphael Dawson

Washington Capital
Sean Whitfield

Waterstone Properties Group Inc.
Herb Evers

Watson Land Company
Jeff Jennison

Westbank Corp.
Judy Leung

Weston Urban
Reeves Craig
Mark Jensen

WeWork
Nicholas Shya

White Oak Partners
Michael Menzer

Windmill Development Group
Ross Farris
Jeremy Reeds
Jeff Westeinde
Jonathan Westiende

Yardi Matrix
Peter Kolaczynski

Zelman & Associates
Dennis McGill

ZOM Living
Matthew Adler

Zonda
Nikolas Scoolis
Kristine Smale

Sponsoring Organizations

At PwC, our purpose—to build trust in society and solve important problems—is at the core of everything we do. It guides how we serve our clients, our people and the world. To help our clients build trust and deliver sustained outcomes, PwC provides professional services across two segments: Trust Solutions and Consulting Solutions. Within these segments we bring a range of capabilities to help organizations solve faster, solve more and realize more value. These capabilities include cloud and digital, deals, ESG, cybersecurity and privacy, governance/boards, risk, transformation, tax services and much more. Across our global network of more than 327,000 professionals in 155 countries, we are committed to advancing quality in everything we do.

Global Real Estate Leadership Team

R. Byron Carlock Jr.
U.S. Real Estate Leader
Dallas, Texas, U.S.A.

Frank Magliocco
Canadian Real Estate Leader
Toronto, Ontario, Canada

Thomas Veith
Global Real Estate Leader
Frankfurt, Germany

K.K. So
Asia Pacific Real Estate Leader
Hong Kong, China

Angus Johnston
European, Middle East & Africa Real Estate Leader
London, U.K.

www.pwc.com

The Urban Land Institute is a global, member-driven organization comprising more than 45,000 real estate and urban development professionals dedicated to advancing the Institute's mission of shaping the future of the built environment for transformative impact in communities worldwide.

ULI's interdisciplinary membership represents all aspects of the industry, including developers, property owners, investors, architects, urban planners, public officials, real estate brokers, appraisers, attorneys, engineers, financiers, and academics. Established in 1936, the Institute has a presence in the Americas, Europe, and Asia Pacific regions, with members in 80 countries.

The extraordinary impact that ULI makes on land use decision-making is based on its members sharing expertise on a variety of factors affecting the built environment, including urbanization, demographic and population changes, new economic drivers, technology advancements, and environmental concerns.

Peer-to-peer learning is achieved through the knowledge shared by members at thousands of convenings each year that reinforce ULI's position as a global authority on land use and real estate. In 2021 alone, 2,148 events were held in cities around the world.

Drawing on the work of its members, the Institute recognizes and shares best practices in urban design and development for the benefit of communities around the globe.

More information is available at uli.org. Follow ULI on Twitter, Facebook, LinkedIn, and Instagram.

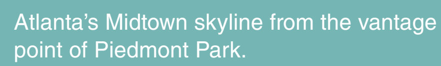
W. Edward Walter
Global Chief Executive Officer, Urban Land Institute

ULI Center for Real Estate Economics and Capital Markets

Anita Kramer
Senior Vice President
www.uli.org/capitalmarketscenter

Urban Land Institute
2001 L Street, NW
Suite 200
Washington, DC 20036-4948

202-624-7000
www.uli.org



Atlanta's Midtown skyline from the vantage point of Piedmont Park.

Emerging Trends in Real Estate® 2023

What are the best bets for investment and development in 2023? Based on insights from a select group of the most influential and experienced ULI members, this forecast will give you a heads-up on overarching trends that will affect real estate, where to invest, and which sectors and markets offer the best prospects. A joint undertaking of PwC and ULI, this 44th edition of *Emerging Trends* is the forecast that you can count on for no-nonsense, expert insight.

ULI is the largest network of cross-disciplinary real estate and land use experts who lead the future of urban development and create thriving communities across the globe. As a ULI member, you can connect with members around the world in Member Directory (members.uli.org), find ULI opportunities to lead and volunteer on Navigator (navigator.uli.org), and explore ULI's latest research and best practices on Knowledge Finder (knowledge.uli.org), including all the *Emerging Trends in Real Estate®* reports published since 2003. Visit uli.org/join to learn more about ULI's exclusive member benefits.

Highlights

- Tells you what to expect and what the expected best opportunities are.
- Elaborates on trends in the capital markets, including sources and flows of equity and debt capital.
- Indicates which property sectors are most promising and what the risk factors are.
- Provides rankings and assessments of a variety of specialty property types.
- Describes the impact of social and geopolitical trends on real estate.
- Explains how locational preferences are changing.
- Elucidates the increasingly important intersection of real estate and technology.

U.S. $49.95

ISBN 978-0-87420-481-0

www.uli.org

www.pwc.com